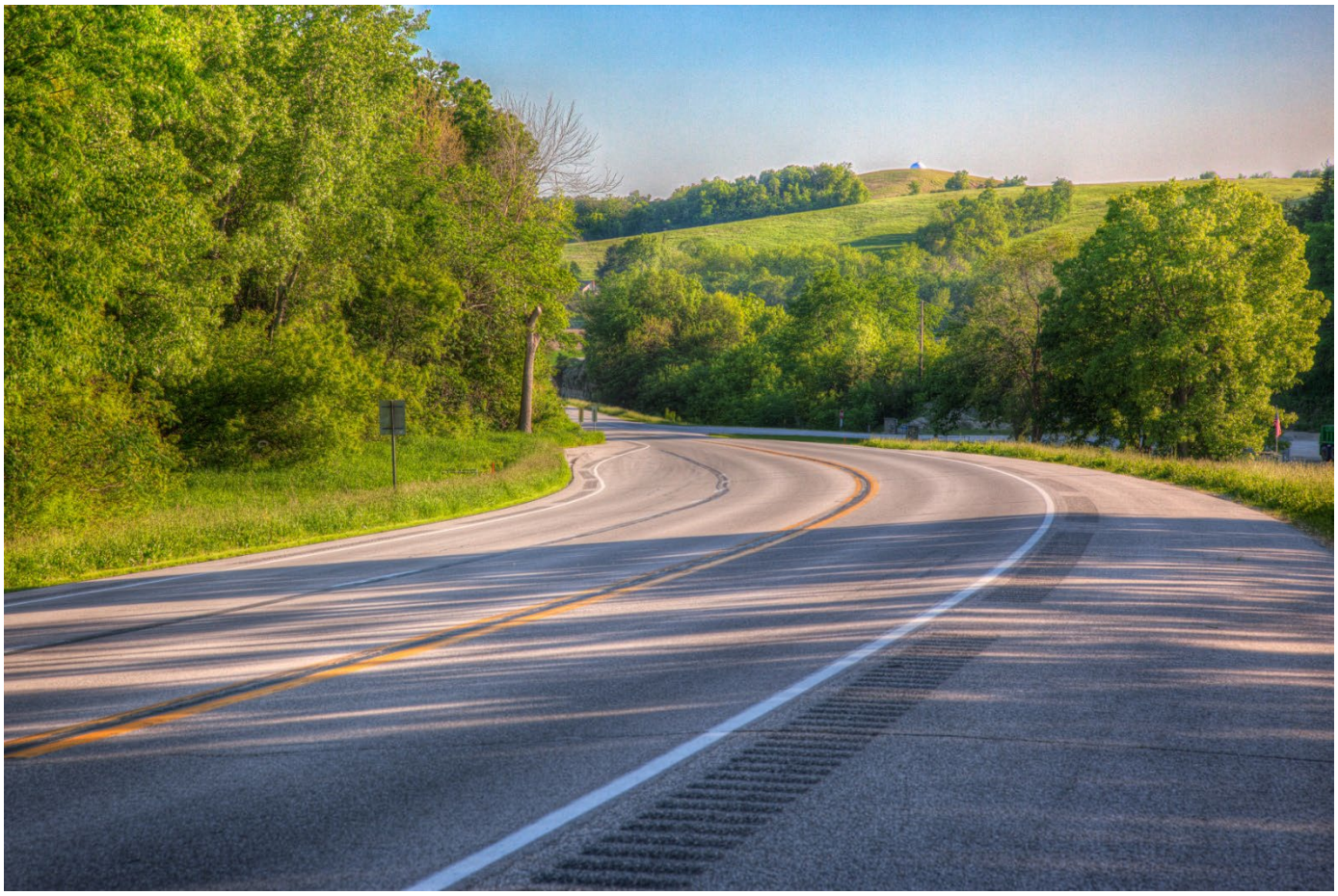
Traffic Safety Improvement Program

Site-Specific Category
FY 2027



Applications Received by August 15, 2025

Applications listed in alphabetical order by applicant.

Page No:	Applicant	Improvement	$$$		
			Total Project	Safety	Requested
3	Cedar County	Edgeline Treatments	$2,681,995	$326,854	$326,854
26	City of Burlington	Roundabout	$1,413,000	$556,500	$500,000
51	City of Clinton	Roundabout	$1,400,980	$1,274,980	$500,000
76	City of Clive	Roundabout	$1,946,000	$1,512,000	$500,000
98	City of Des Moines	4-3 Lane Conversion	$3,700,000	$2,070,000	$500,000
119	City of DeWitt	Reduced Conflict Intersection	$1,900,000	$821,180	$500,000
143	City of Fairfield	Traffic Signal Pedestrian Improvements	$373,000	$212,630	$212,630
168	City of Grimes	Roundabout	$2,120,000	$1,634,500	$500,000
191	City of Hiawatha	Roundabout and install raised medians	$1,270,143	$500,000	$500,000
217	City of Marion	Roundabout	$605,100	$500,000	$500,000
242	City of Marion	Install Offset Right Turn Lane	$465,970	$465,920	$465,920
262	City of Marion	Traffic Signal and Turn Lane Improvements	$617,250	$500,000	$500,000
287	City of Spencer-IDOT District 3	Roundabout	$5,200,000	$5,200,000	$500,000
311	City of Waterloo	Traffic Signal	$251,000	$251,000	$251,000
336	City of Waterloo	Traffic Signal and Turn Lane Improvements	$37,000	$37,000	$37,000
361	City of Waterloo	Roundabout	$1,200,000	$1,200,000	$500,000
381	Clayton County	Edgeline Treatments	$4,082,537	$656,186	$500,000
407	Dubuque County	Destination Lighting	$236,000	$236,000	$236,000
504	Fayette County	Edgeline Treatments	$1,543,387	$467,295	$497,295
523	Humboldt County	Advanced Rumble Strip Panels	$652,500	$652,500	$500,000
533	Iowa County	Realignment and Edgeline Treatments	$813,894	$719,894	$500,000
556	Jackson County	Realignment and Edgeline Treatments	$1,948,550	$819,420	$500,000
586	Plymouth County	Paved Shoulders and Flatten Foreslopes	$587,790	$524,890	$425,000
617	Washington County	Edgeline Treatments	$4,022,751	$1,141,394	$500,000
	Totals	**Projects**	$39,068,347	$23,352,463	$10,490,699

A1

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 8/11/2025

Location / Title of Project F58 Cedar/Muscatine Line – Durant PCC Reconstruction

Applicant Cedar County Secondary Roads

Contact Person Robert Fangmann Title Cedar County Engineer

Complete Mailing Address 400 Cedar St. Tipton, Iowa 52772

Phone (563) 886-6102 E-Mail engineer@cedarcounty.iowa.gov
(Area Code)

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s)

Contact Person Title

Complete Mailing Address

Phone E-Mail
(Area Code)

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	326,854
Total Project Cost	$	2,681,995
Safety Funds Requested	**$**	**326,854**

Additional Project Safety Documentation (when available):

☒ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan

☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan

☐ Iowa DOT TEAP Study or similar analysis and concept

☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
14623	F58 (Cedar/Muscatine line) - Durant	☐	☒		
		☐	☐		

A2
Rev. 07/23

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the Cedar County Secondary Roads

Signed: Robert D. Fangmann 8-12-2025
Signature Cedar County Engineer Date Signed

Robert D. Fangmann
Printed Name

Attest: Nicki Welch 8-12-25
Signature Date Signed

Nicki Welch
Printed Name

A3

RESOLUTION

RESOLUTION TO AUTHORIZE THE SUBMITTAL OF A TRAFFIC SAFETY FUND APPLICATION

WHEREAS, the Traffic Safety Fund program allows for the award of traffic safety funds to cities, counties and the IaDOT for roadway safety improvements, research studies and traffic control devices; and

WHEREAS, Safety is a major concern of the Cedar County Board of Supervisors and Highway Safety is a major aspect of safety; and

WHEREAS, funding is insufficient to provide all the available safety components on our county roadways; and

THEREFORE BE IT RESOLVED by the Board of Supervisors of Cedar County, Iowa that Robert D. Fangmann, County Engineer of Cedar County, Iowa, be and is hereby designated, authorized, and empowered on behalf of the Board of Supervisors of said County to submit a Traffic Safety Improvement Program Application to the Iowa Department of Transportation for safety funding on County Road F58 (Highway 927) from the Muscatine County Line to the Durant City Limits as part of the programmed project on County Road F58; and

BE IT FURTHER RESOLVED by the Board of Supervisors of Cedar County, Iowa that the County Engineer be authorized to sign the grant application and should funding be awarded that Cedar County will assume shared responsibility and ensure proper maintenance of any new or improved installations.

Passed and approved this 12th day of August, 2025.

Cedar County Board of Supervisors, Chairperson

Recommended:

Robert D. Fangmann
Cedar County Engineer

Attest:

Nicki Welch
Cedar County Auditor

M:\Safety Funds\2027 F58 TSIP\Cedar TSIP App resolution F58.docx

Safety Action Plan
Project Description for Roadway Segment Improvements

Risk Factor Points: 12

Project Name: Highway 927 between Green Acres Rd and 0.3 miles W of W 3RD AVE
Agency Name: Cedar County
Contact Name: Robert Fangmann
E-mail: rfangmann@cedarcounty.iowa.gov

Date: 7/16/25
Prepared By: AKT
Checked By: DJG

SEGMENT

Location Description

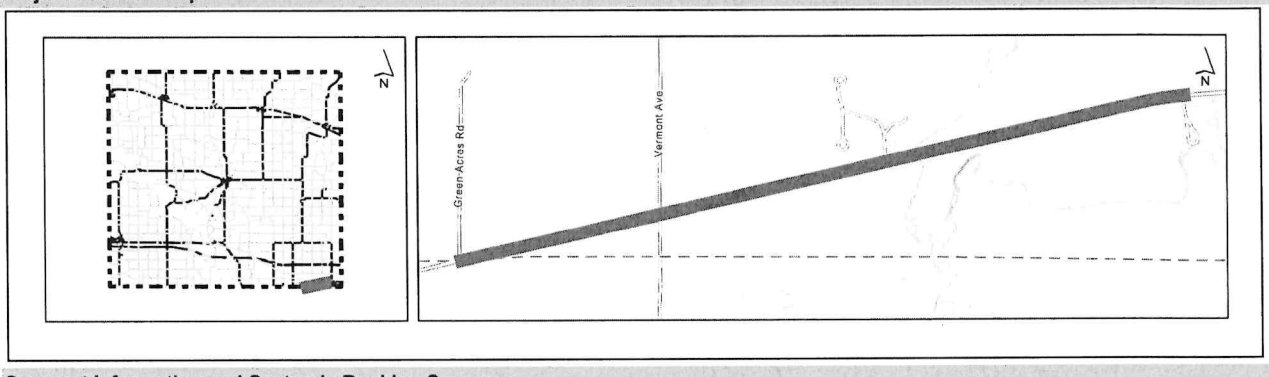
Road: **Highway 927**
From: **Green Acres Rd**
To: **0.3 miles W of W 3RD AVE**
Length (miles): **1.79**

Project is within an Underserved Community?†: No

GPS ID: 1232

This segment does not contain high scoring intersections.
This segment does not contain high scoring curves.

Project Location Maps



Segment Information and Systemic Ranking Summary

Systemic Ranking Summary	Value	Points
Average Daily Traffic (ADT)	2,850	6
Pavement | Shoulder Width (ft)	24' | 4'	0
Potential Crash Reduction (PCR)	High	2
Access Points per Mile	4.5	1
High Risk Curve Density/Mile	0.0	0
Avg. Pavement Condition (IRI)	131	1
Lane Departure Crashes	4	2
Total Risk Factor Points (21 max)		12

Other Information	
Paved Shoulder	No
Shoulder Width (ft)	4
Speed Limit (mph)	55
Lane Width (ft)	12
Number of Lanes	2
Edgeline Rumble Strips	No
Centerline Rumble Strips	No
Curves (L>100', R≤1,000')	0
Curves with Chevrons	0

Crash Data, 2014-2023	
Total Crashes	27
K and A Crashes	2
Lane Departure Crashes	4
Lane Departure K and A Crashes	2
Total Crash Rate (per HMVMT)	144.4
K and A Crash Rate (per HMVMT)	10.7

Opinion of Probable Cost (Countermeasure Selection Threshold Results)

Item Description	Quantity	Unit	Unit Price	Item Cost
Conduct Road Safety Audit (RSA)	0	EA	$ 40,000	$ -
Conduct Access Control Analysis	0	EA	$ 30,000	$ -
Install 4" Retroreflective Edgeline (Both Sides of Road)	0	MILE	$ 3,000	$ -
Install 6" Retroreflective Edgeline (Both Sides of Road)	**1.79**	**MILE**	**$ 6,000**	**$ 10,740**
Install 4" Retroreflective Centerline	**1.79**	**MILE**	**$ 3,000**	**$ 5,370**
Pave 2' Shoulder with Safety Edge (Both Sides of Road - Includes Earth Work)	**1.79**	**MILE**	**$ 150,000**	**$ 268,500**
Install Edgeline Rumble Strips (Both Sides of Road)	**1.79**	**MILE**	**$ 5,000**	**$ 8,950**
Install Centerline Rumble Strips	**1.79**	**MILE**	**$ 2,000**	**$ 3,580**
Review Curve and Provide Signage to Meet MUTCD and Iowa DOT Standards, if Needed	0	CURVE	$ 3,500	$ -
Review and Upgrade Curve Signage to Meet MUTCD and Iowa DOT Standards, if Needed	0	CURVE	$ 1,000	$ -
~~Clear and Grub (15 ft Both Sides of Road)**~~	~~1.79~~	~~MILE~~	~~$ 30,000~~	~~$ 53,700~~
Project Selection Decision Tree Systemic Improvements Subtotal:				$ ~~350,840~~

Continued on back of this page.

$297,140
10% contingency $ 29,714
Total: $326,854

** Unit price varies based on average roadside risk score.

Project Location Map Sources:
Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Kimley»Horn

B. Narrative for Cedar County F58 (Highway 927) TSIP Application

F58 (Highway 927) serves as a vital link between the towns of Durant and Wilton in the southeast corner of Cedar County. There is a golf course located along the highway along with a major subdivision adjacent to the course. This highway also serves numerous businesses and industries on the west side of Durant. As of the 2022 traffic study by the IDOT, it has an AADT range of 2310 to 3050 vehicles per day making it the second busiest highway under Cedar County's jurisdiction. The Iowa Interstate Railroad parallels this road segment as well. This segment of road also serves as the Local Secondary Alternative route for Interstate 80 emergency closures.

F58 (Highway 927) is a former state highway that was transferred to Cedar County by legislation action in 2003. It is an old 24' wide PCC road with numerous lifts of asphalt placed upon it and 6' granular shoulders. All of which occurred before the transfer of jurisdiction. Since receiving the road segment, the county has had to continuously patch and grind various sections of the road due to its deteriorating condition. It has a current speed limit of 55 mph and the signage meets or exceeds current MUTCD requirements. In 2018 the county replaced a narrow fracture critical bridge with a new 40' wide continuous concrete slab bridge to accommodate the increased traffic this road experiences.

In the past 5 years there have been a total of 16 reported accidents on this segment of roadway. Of those 16 accidents, 2 were ran off the road right, 1 was ran off the road left, 2 lost control and one distracted driver. Cedar County is developing a rehabilitation plan for the roadway in fiscal year 2027. As part of that rehabilitation, Cedar County is proposing to attempt to mitigate these types of accidents by paving a new 24' wide PCC pavement with 2' PCC paved shoulders along with the placement of a safety edge. We are also proposing to apply centerline and edgeline rumble strips along with 4" centerline markings and 6" edgeline markings as outlined in our 2025 Local Road Safety Plan. We are requesting TSIP funding in order to be able to afford these countermeasures. We are also planning on extending two box culverts to provide a better clear zone for the driving public that will be paid with farm to market funds.

C1

ESTIMATED ROADWAY QUANTITIES Run Date: 8/12/2025 Project Number: FM-C016(TBD)--55-16 (F58 PCC)				Opinion of Cost		
Item No.	Item Code	Item	Unit	Total	$/Unit	Total $
1	2102-2713070	EXCAVATION, CLASS 13, ROADWAY AND BORROW	CY	1,100.00	$14.00	$15,400.00
2	2107-0875000	COMPACTION WITH MOISTURE AND DENSITY CONTROL	CY	9,800.00	$1.80	$17,640.00
3	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	SY	29,500.00	$1.89	$55,755.00
4	2115-0100000	MODIFIED SUBBASE	CY	2,110.00	$45.00	$94,950.00
5	2115-0100200	MODIFIED SUBBASE, PLACE ONLY	CY	6,350.00	$14.00	$88,900.00
6	2121-7425010	GRANULAR SHOULDERS, TYPE A	TON	3,100.00	$25.00	$77,500.00
7	2122-5190009	PAVED SHLD, PCC, 9"	SY	4,200.00	$63.93	$268,500.00
8	2301-1033090	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 9 IN.	SY	25,200.00	$65.00	$1,638,000.00
9	2301-6911722	PORTLAND CEMENT CONCRETE PAVEMENT SAMPLES	LS	1	$3,000.00	$3,000.00
10	2301-7000110	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT THICKNESS (BY SCHEDULE)	EACH	29,484	$1.00	$29,484.00
11	2312-8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	TON	30	$25.00	$750.00
12	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	20	$25.00	$500.00
13	2316-0000110	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH	18,900	$1.00	$18,900.00
14	2401-6750001	REMOVALS, AS PER PLAN	LS	1	$6,000.00	$6,000.00
15	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	80	$20.00	$1,600.00
16	2415-2110404	PRECAST CONC BOX CULV, 4'X4'	LF	20	$450.00	$9,000.00
17	2415-2110507	PRECAST CONC BOX CULV, 5'X7'	LF	28	$500.00	$14,000.00
18	2415-2200404	PRECAST CONC BOX CULV ST END SEC, 4'X4'	EACH	2	$5,000.00	$10,000.00
19	2415-2200507	PRECAST CONC BOX CULV ST END SEC, 5'X7'	EACH	2	$6,000.00	$12,000.00
20	2507-6800061	REVETMENT, CLASS E	TON	60	$55.00	$3,300.00
21	2510-6745850	REMOVAL OF PAVEMENT	SY	568	$7.00	$3,976.00
22	2510-6750501	REMOVAL AND CRUSHING OF PAVEMENT	SY	25,200.00	$5.00	$126,000.00
23	2515-2475007	DRIVEWAY, P.C. CONCRETE, 7 IN.	SY	744.00	$68.00	$50,592.00
24	2515-6745600	REMOVAL OF PAVED DRIVEWAY	SY	176.00	$8.00	$1,408.00
25	2518-6910000	SAFETY CLOSURE	EACH	8	$150.00	$1,200.00
26	2526-8285000	CONSTRUCTION SURVEY	LS	1	$25,000.00	$25,000.00
27	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE SOLVENT	STA	251	$64.18	$16,110.00
28	2528-8445110	TRAFFIC CONTROL	LS	1	$10,000.00	$10,000.00
29	2528-8445113	FLAGGERS	EACH	20	$500.00	$10,000.00
30	2533-4980005	MOBILIZATION	LS	1	$60,000.00	$60,000.00
31	2548-0000200	MILLED SHLDR RUMBLE STRIP, PCC SURF	STA	189	$47.35	$8,950.00
32	2548-0000320	MILLED CENTERLINE RUMBLE STRIP, PCC SURF	STA	94.5	$37.88	$3,580.00
					TOTAL PROJECT COST	$2,681,995.00

7	2122-5190009	PAVED SHLD, PCC, 9"	SY	4,200.00	$63.93	$268,500.00
27	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE SOLVENT	STA	251	$64.18	$16,110.00
31	2548-0000200	MILLED SHLDR RUMBLE STRIP, PCC SURF	STA	189	$47.35	$8,950.00
32	2548-0000320	MILLED CENTERLINE RUMBLE STRIP, PCC SURF	STA	94.5	$37.88	$3,580.00
		10% Contingency	LS	1	29714	$29,714.00
					COST OF SAFETY IMPROVEMENTS WITH 2' SHOULDERS	$326,854.00

D.

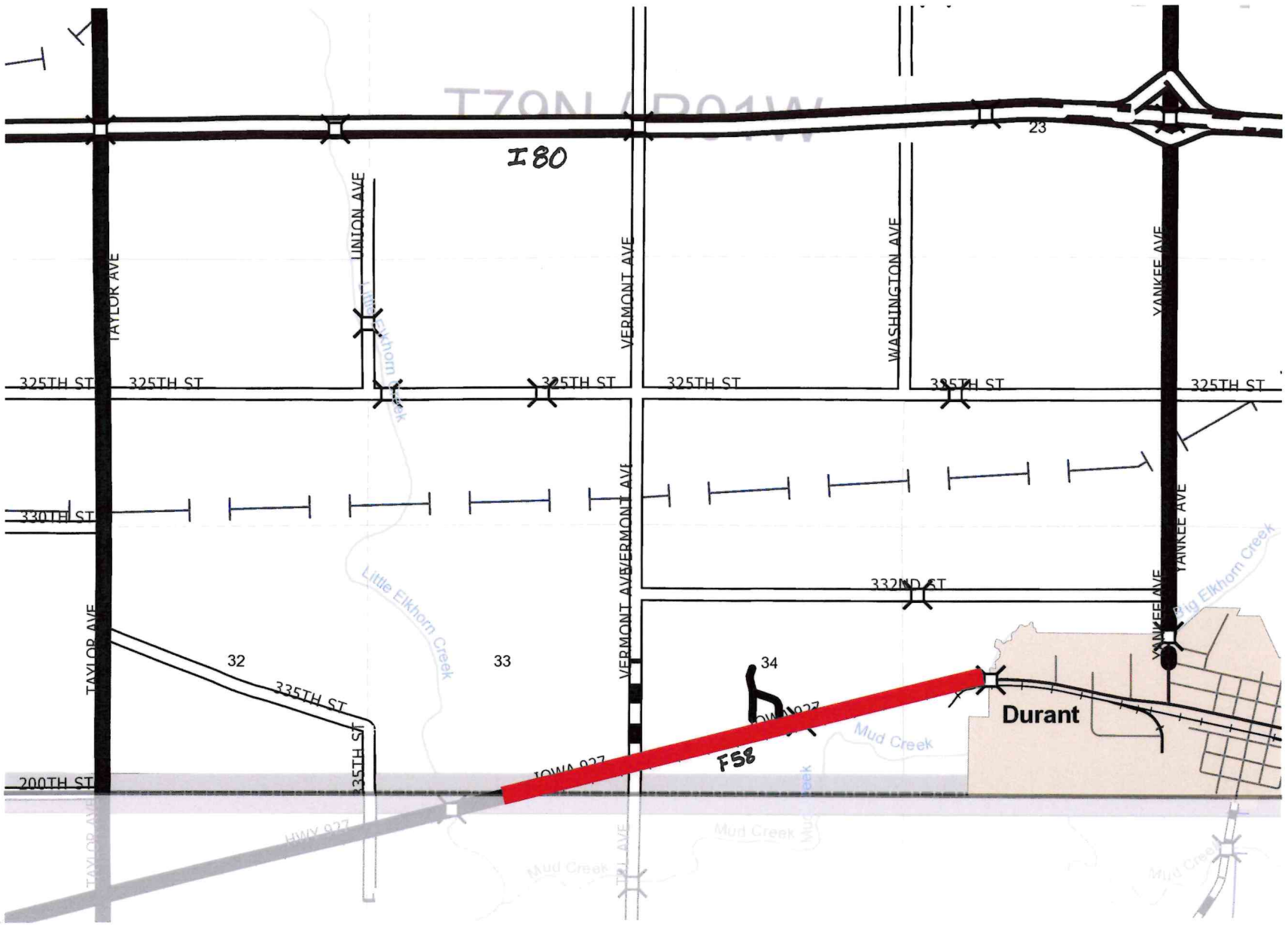
F58 Time Schedule

Plan Development

Concept Statement	2/17/2026
Preliminary Plans	5/19/2026
Check Plans	7/7/2026
Final Plans	8/18/2026
Letting	11/17/2026

Project Completion 11/13/2027

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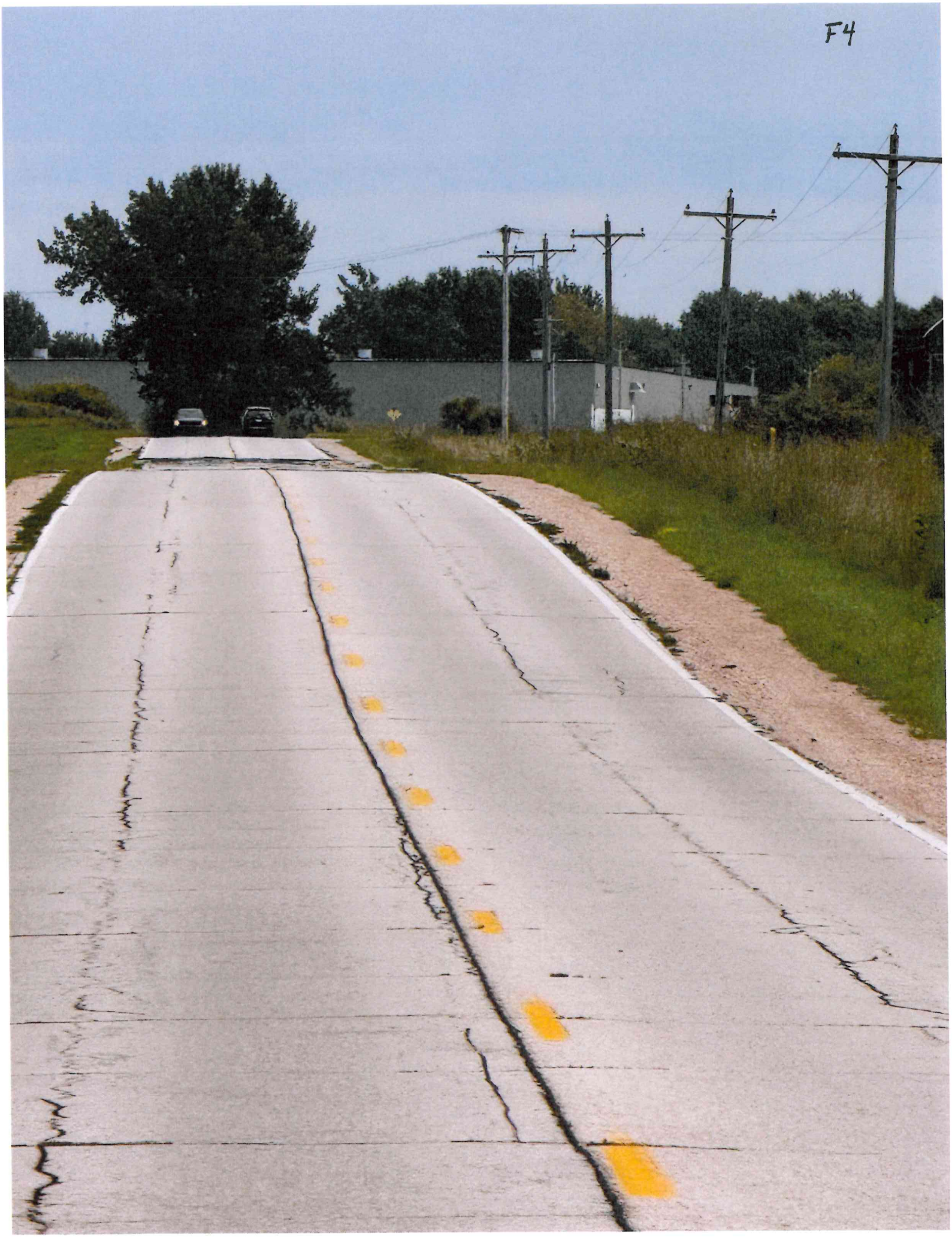
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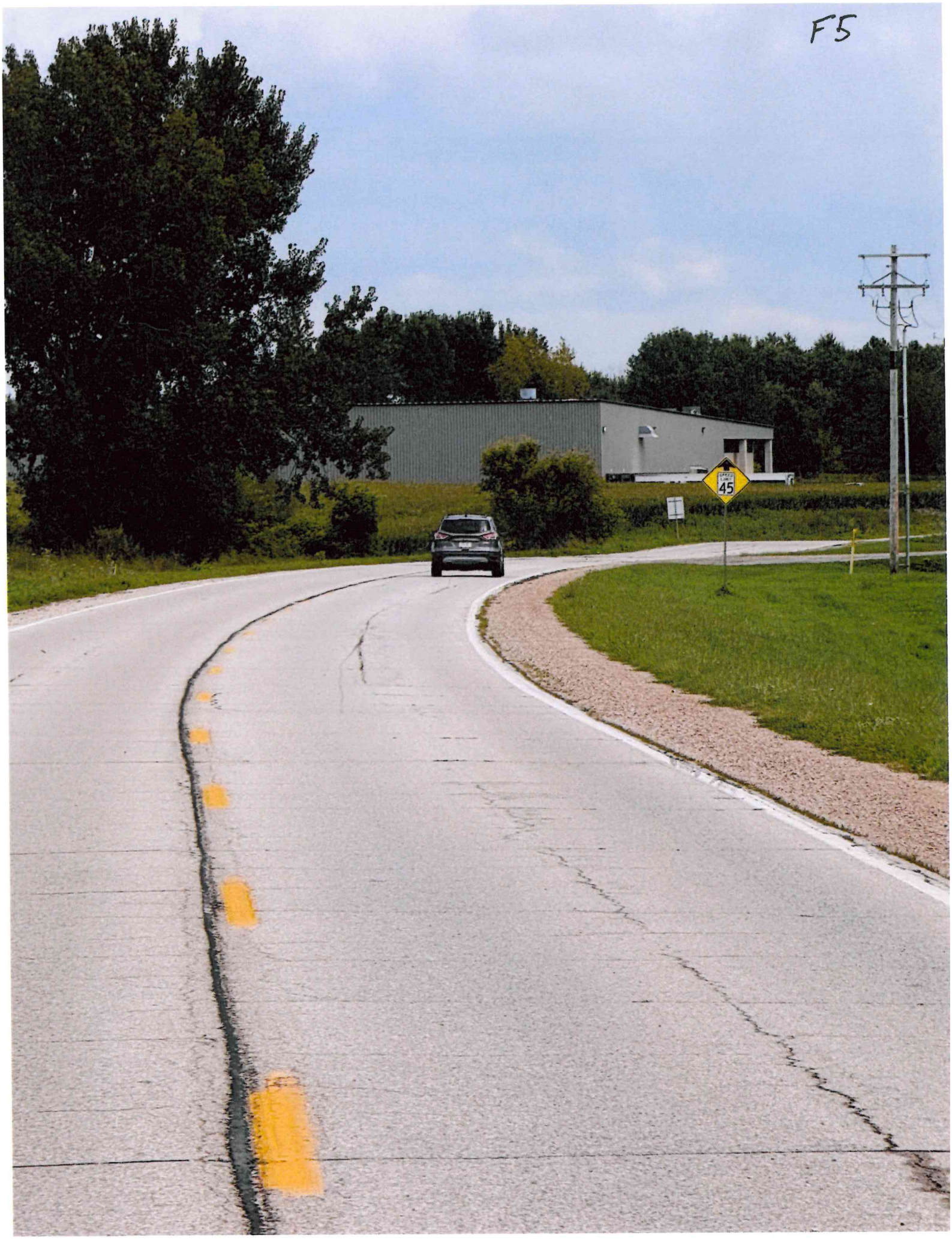


F2




F3


F4


F5
SPEED LIMIT
45

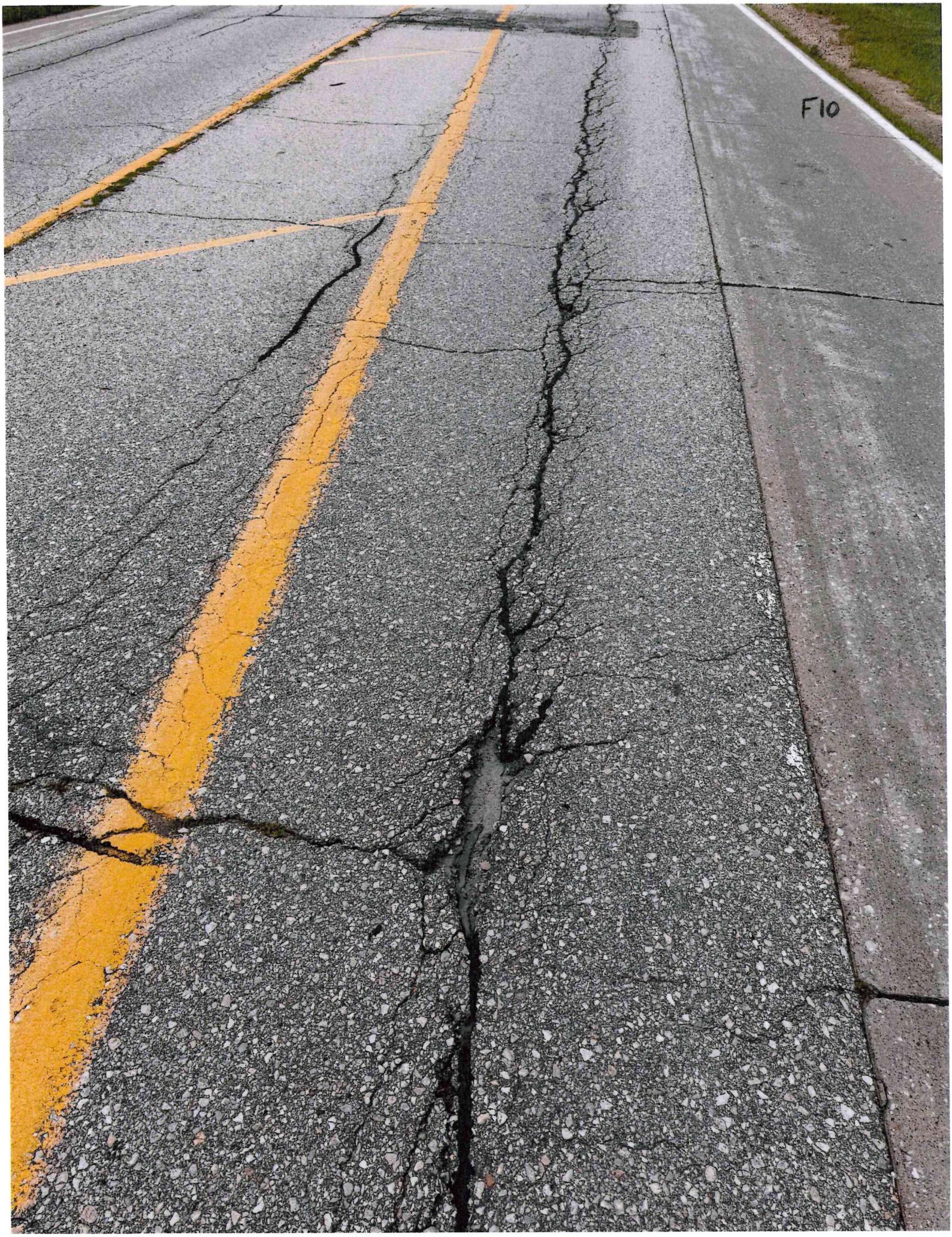

F6


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F8




F9

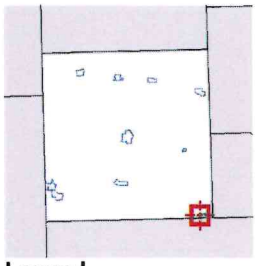

F10



Cedar/Muscatine Co. Line

Beacon™ Cedar County, IA





Legend

- **Roads**
- Interstate
- US Hwy
- US Hwy / County Hwy / Muni
- US Hwy / Muni
- State Hwy
- State Hwy / Muni
- <all other values>
- **Sections**

Parcel ID	012016353000080	**Alternate ID**	n/a	**Owner Address**	Durant Iron & Metal Corp
Sec/Twp/Rng	35-79-1	**Class**	C		2226 Hwy 927
Property Address		**Acreage**	2.28		PO Box 758
	FARMINGTON				Durant, IA 52747-0758
District	120 - FARMINGTON TWP/ DURANT SCH				
Brief Tax Description	PARC A NE SW S OF RR				
	(Note: Not to be used on legal documents)				

Date created: 8/12/2025
Last Data Uploaded: 8/11/2025 8:41:36 PM

Developed by SCHNEIDER GEOSPATIAL

I.

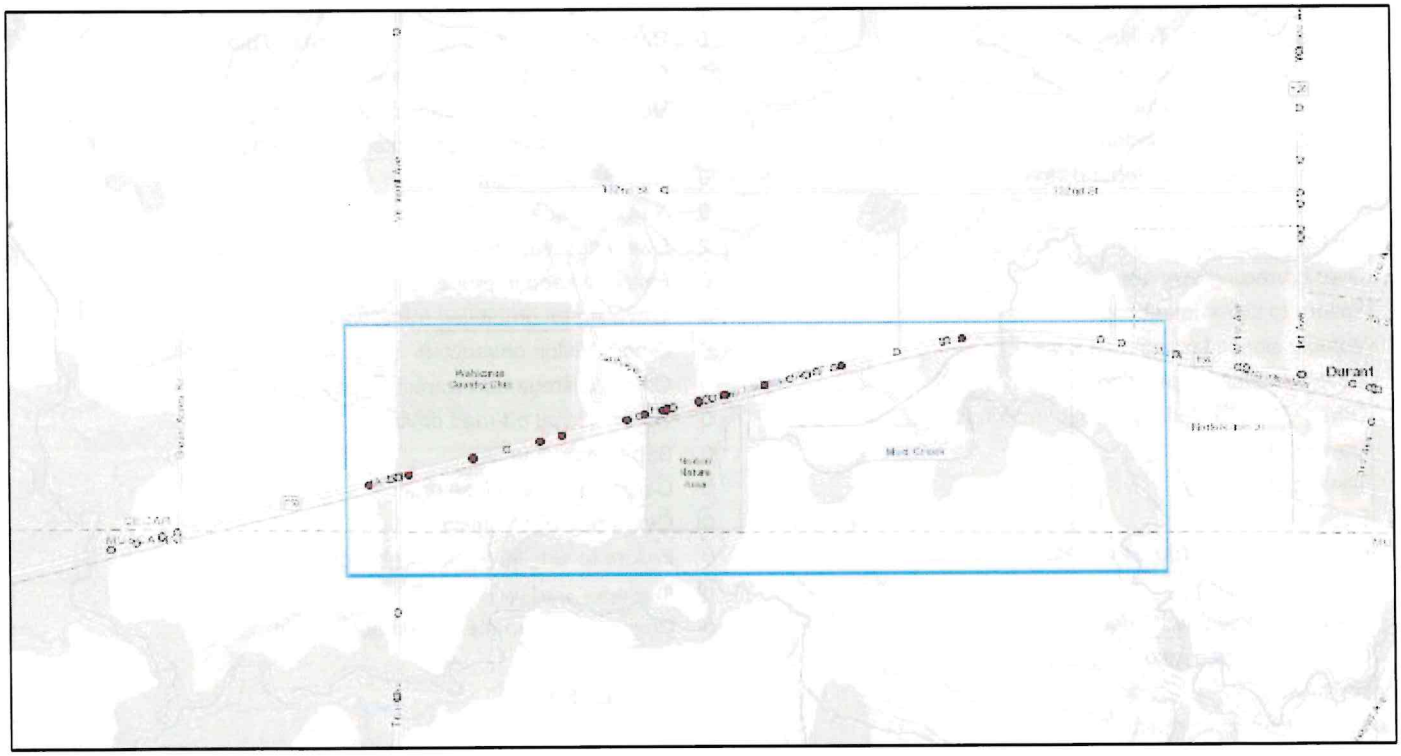
Iowa Crash Analysis Tool
Quick Report
2021-2025

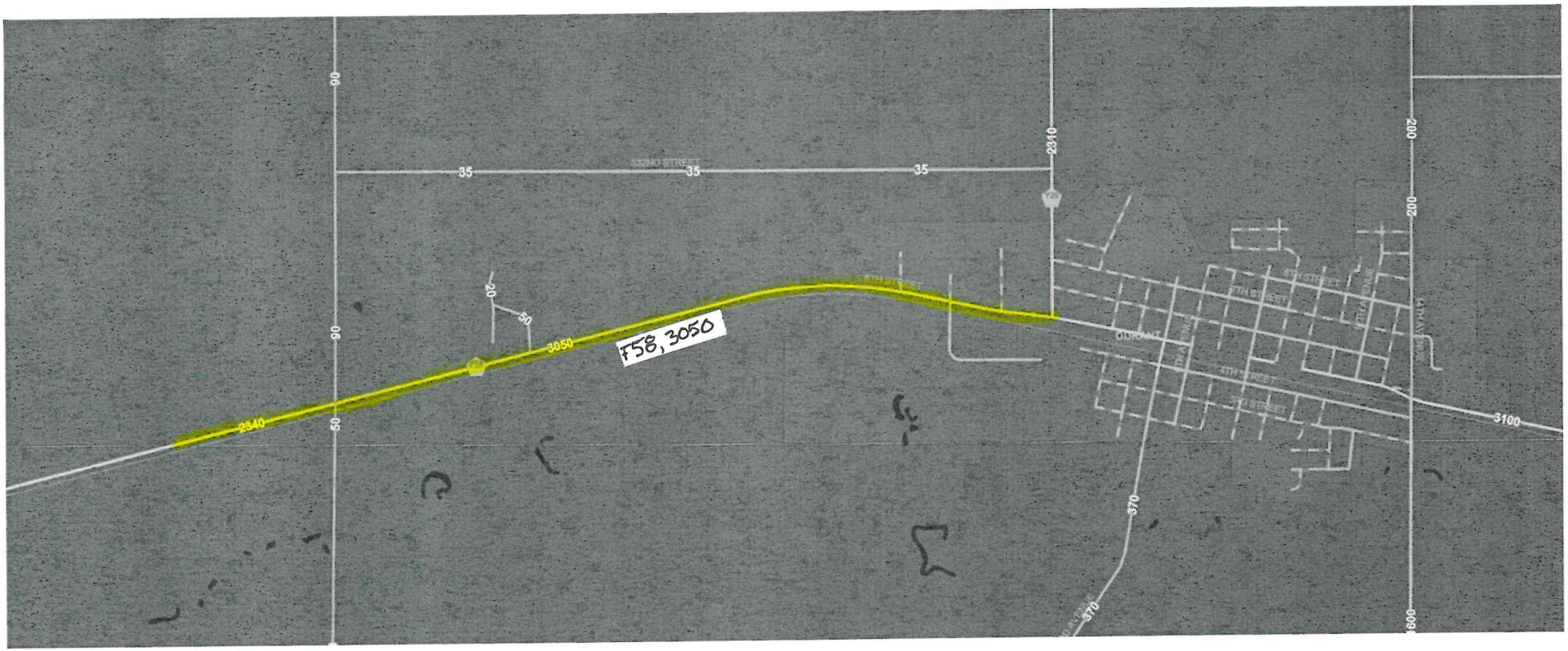
Crash Severity	16
Fatal Crash	0
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	1
Property Damage Only	14

Injury Status Summary	12
Fatalities	0
Suspected serious/incapacitating	1
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	1
Uninjured	0
Unknown	0
Not Reported	10

Property/Vehicles/Occupants	
Property Damage Total (dollars):	102,278.00
Average (per crash dollars):	6,392.38
Total Vehicles:	19.00
Average (per crash):	1.19
Total Occupants:	26.00
Average (per crash):	1.63

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.13
Major Injuries/Crash:	0.06
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.06




F58, 3050
3050
2340
2310
3100
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4.

IOWADOT

Safety Benefit-Cost Ratio

County:	Cedar	Prepared By:	Alex Anderson
Location:	F58 Musc./Cedar Co Line - Durant	Date Prepared:	8/11/2025
Proposed Improvements:	2' Shoulder widening w/ safety edge, edgeline and centerline rumble strips, 6" retroreflective edgelines and 4" retroreflective CL		
Estimated Improvement Cost:	$ 326,854		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 6,537

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	3
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	CRF 2:	CRF 3:	**Combined CRF**
CRF Value (%)	20	7	6	**24.9**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	24.9	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	1	24.9	**0.20**	**0.05**
Minor Injury (B)	$ 290,000		24.9	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	1	24.9	**0.20**	**0.05**
Property Damage Only (O)	$ 20,000	14	24.9	**2.80**	**0.70**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ 213,960**
Minor Injury (B)	**$ -**
Possible/Unknown Injury (C)	**$ 6,717**
Property Damage Only (O)	**$ 13,932**

Total Benefits and Costs

		Implementation Cost	$ 326,854
		Present Value of Maint.	$ 88,841
Present Value Benefits (Societal Benefits)	$ 3,465,358	Present Value Costs (Impl. and Maint. Costs)	$ 415,695
Present Value Net Return	$ 3,049,663		
Benefit Cost Ratio	**8.34**		

Form continues on next page

Application for
Traffic Safety Improvement Program Funding

Iowa Department of Transportation



Division Street and W. Burlington Avenue Roundabout
Burlington, Iowa

August 15, 2025

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 8/15/25

Location / Title of Project: Division Street & W Burlington Avenue Roundabout

Applicant: City of Burlington

Contact Person: Jesse Howe Title: Deputy Public Works Direct

Complete Mailing Address: 3510 Division St
Burlington, IA 52601

Phone: 319-753-8176 (Area Code) E-Mail: howej@burlingtoniowa.org

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s): _____

Contact Person: _____ Title: _____

Complete Mailing Address: _____

_____

Phone: _____ (Area Code) E-Mail: _____

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	1,413,000
Total Project Cost	$	556,500
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
SI_1860	Division St & W Burlington Ave	☒	☐	1.42	-0.05
		☐	☐		

Rev. 07/23

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Burlington

Signed: _____ 8/13/25
Signature Date Signed

Jesse Howe, PE
Printed Name - Deputy Public Works Director

Attest: Tammy Anderson 8/13/25
Signature Date Signed

Tammy Anderson
Printed Name

RESOLUTION NO. 2025-517

Meeting No. 39 Paper No. 11 Seconded By: Graham-Murray

AYES: ☑ Bailey ☑ Billups ☑ Graham-Murray ☑ Scott ☑ Weiss

NAYS: ☐ Bailey ☐ Billups ☐ Graham-Murray ☐ Scott ☐ Weiss

Introduced By: Scott

A RESOLUTION AUTHORIZING THE SUBMISSION OF A TRAFFIC SAFETY IMPROVEMENT PROGRAM (TSIP) GRANT APPLICATION FOR A ROUNDABOUT AT THE INTERSECTION OF DIVISION STREET AND W. BURLINGTON AVENUE

WHEREAS, the Iowa Department of Transportation has established the Traffic Safety Improvement Program (TSIP) and provides funding for locations where vehicular safety is a concern and documented; and

WHEREAS, said program allows for funding to be provided to local jurisdictions for eligible transportation projects or programs that will improve traffic safety at a specific site or corridor with a crash history; and

WHEREAS, the intersection of Division Street and W. Burlington Avenue has experienced persistent congestion and crash activity, warranting reconstruction as a modern roundabout to improve operations and reduce conflict points; and

WHEREAS, the City of Burlington intends to submit a TSIP application requesting up to $500,000 for partial funding of the project; and

WHEREAS, the City Council hereby commits to funding any remaining construction costs not covered by TSIP and to accepting and adequately maintaining the completed improvements;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BURLINGTON, IOWA: That the City Manager is hereby authorized to submit a TSIP grant application to the Iowa Department of Transportation for the proposed roundabout at Division Street and W. Burlington Avenue and to execute all necessary documentation in connection with said application.

APPROVED and ADOPTED this 4th day of August, 2025.

FILED - For Record

AUG - 4 2025

CITY CLERK'S OFFICE
BURLINGTON, IOWA

ATTEST:

Katie Music

Katie Music, CMC
City Clerk

Jon D. Billups
Mayor

COUNCIL ITEM MEMO

FOR: AUTHORIZATION TO SUBMIT A TRAFFIC SAFETY IMPROVEMENT PROGRAM (TSIP) GRANT APPLICATION FOR ROUNDABOUT IMPROVEMENTS AT DIVISION STREET AND W. BURLINGTON AVENUE

ITEM DETAILS:

Council Meeting Date:	August 4, 2025	**Memo Date:**	July 30, 2025
Department:	Public Works	**Presenter:**	Nick Macgregor
		Cover Sheet Author:	Jesse Howe
Budgeted Expense:	No		
Budgeted Funds	NA	**Final Cost (Grant Preparation/Submission):**	$6,000
Account Number:	TBD	**Funding Source:**	TBD

ITEM BACKGROUND & DESCRIPTION:

The City of Burlington seeks to enhance traffic safety and reduce crash rates at the intersection of Division Street and W. Burlington Avenue. Based on a review of historical crash data, this intersection has shown a sustained pattern of congestion and safety concerns. The City proposes to reconstruct the intersection as a modern roundabout to improve vehicle flow and reduce conflict points.

The Iowa Department of Transportation (IDOT) administers the Traffic Safety Improvement Program (TSIP), which provides funding to local governments for site-specific improvements with documented crash history and identified safety benefits. A formal application must be submitted by August 15, 2025, to be considered for the upcoming funding cycle. Grants may be awarded up to $500,000.

In addition to the safety benefits, this project may align with economic development opportunities related to the expansion of Western Smokehouse Partners. The Western Smokehouse Partners Development will likely qualify for the Iowa RISE program (Revitalize Iowa's Sound Economy). The TSIP funding could then be paired with RISE funds to support the roundabout construction. This layered funding approach has the potential to provide a completed project with minimal financial contribution from the City.

JUSTIFICATION / RECOMMENDATION:

Staff recommends authorizing the submission of a TSIP grant application for the proposed roundabout at Division Street and W. Burlington Avenue. The project targets a high-crash intersection and aligns with City goals to improve traffic safety.

FINANCIAL NARRATIVE OR ALTERNATIVES:

This is a one-time grant opportunity. If RISE funding is also secured through future development, the project could be delivered at little to no cost to the City. IF RISE funds are not obtained, the City could chose to return the TSIP funding or move forward with City funds. Without external funds, the project will likely be delayed or deferred permanently due to budget constraints.

Stephanie Stuecker

Stephanie Stuecker, Director of Administrative Services

NARRATIVE

A single lane roundabout is being proposed for the intersection of Division Street & W. Burlington Avenue in Burlington. The existing intersection is all-way stop controlled and located on the west side of Burlington. The intersection is in the middle of the Flint Ridge Business Park area which is approximately 50 percent developed. Development is expected to continue on the undeveloped parcels soon. An Amazon delivery warehouse was recently constructed about 1,000 feet south of the project location and Western Smokehouse Partners is planning to expand their capacity 30% at their facility about 1,300 feet south of the project location. The proposed roundabout at the project location is also the subject of a RISE grant application associated with the Western Smokehouse Partners expansion.

Existing Conditions

Per the Iowa DOT's Federal Functional Classification Map for Burlington (updated 7/21/25), Division Street is a collector and W. Burlington Avenue is a minor arterial. East of the intersection, Division Street is a three-lane urban road with a center two-way left turn lane and a 30-mph speed limit. West of the intersection, Division Street is a two-lane undivided urban road with a 35-mph speed limit. W. Burlington Avenue is a two-lane undivided urban road with a 35-mph speed limit both north and south of the intersection. Per the SUDAS Design Manual for low-speed curbed roads (design speed of 40 mph or less), the clear zone requirements for all legs are a minimum of 4 feet from back-of-curb (acceptable) to 6 feet from back-of-curb (preferred).

The intersection is currently all-way stop controlled with single left turn lanes provided on the Division Street approaches – no additional turn lanes are provided at the intersection. There are no existing sidewalks or trails at or near the intersection. There is an existing roundabout at the intersection of W. Burlington Avenue & West Avenue approximately 2,000 feet south of the project location.

Annual Average Daily Traffic (AADT) on Division Street is estimated to be 4,850 veh/day west of the intersection and 4,600 veh/day east of the intersection. The AADT on W. Burlington Avenue is estimated to be 3,980 veh/day north of the intersection and 6,300 veh/day south of the intersection.

Crash History

There were ten crashes reported at the Division Street & W. Burlington Avenue intersection in the five-year period from 2020 through 2024, resulting in 3 possible injuries. All ten crashes were broadsides with eight caused by a driver either failing to yield the right-of-way from a stop sign or running the stop sign. The remaining two were caused by driving too fast for conditions and driver distraction (exterior distraction).

The intersection is listed with a high potential crash reduction (PCR) for all crashes and a negligible PCR for severe crashes in the current Iowa DOT PCR database (2018-2022). The PCR for all crashes indicates a potential reduction of 1.4 crashes per year, which ranks as the 29th highest out of 5,255 undivided, low-speed, all-way stop control intersections.

Proposed Improvements

The roundabout is not being designed yet, but a concept has been developed (Attachment G) to illustrate right-of-way impacts and to create an order of magnitude cost estimate (Attachment C). A planning level estimate of roundabout functional geometry needs based on estimated AADTs indicates that a single-lane roundabout without any additional supplemental lanes is expected to operate acceptably.

The current concept for the single-lane roundabout includes an inscribed circle diameter of 140 feet and entry radii of 80 feet. Approach lane widths are 19 feet from the face of the splitter island curb to the face of the outside curb, and approach lanes widen slightly at the entry to 20-21 feet from face-to-face. The circulatory road width is 21.5 feet from face-to-face. The current concept would require minor ROW/easement acquisitions in all 4 corners of the intersection. The proposed concept would be able to utilize the same low-speed curbed road clear zone requirement of 4 feet (acceptable) and 6 feet (preferred). Crosswalks are planned to be included with the roundabout with landings.

Sidewalk/trail outside the roundabout is not planned to be included with the roundabout due to the lack of sidewalks at the existing intersection. However, cut-throughs in the splitter islands have been provided to accommodate potential future crosswalks if sidewalks/trails are added.

The project is expected to significantly improve safety at the intersection, while also improving traffic operations in this developing part of the City. All the existing crashes at the intersection from 2020 through 2024 were broadside crashes with eight of the ten crashes caused drivers failing to yield from the stop sign or running the stop sign. At roundabouts, especially single-lane roundabouts, broadside crashes are often significantly reduced or eliminated. If crashes do occur at roundabouts, they are normally less severe than at traditional intersections due to significantly lower speeds and shallower collision angles resulting from roundabout geometry.

Iowa DOT planning level crash reduction factors (CRFs) indicate that replacing an unsignalized intersection in an urban area with a roundabout would be expected to provide an average crash reduction of 45% for all crashes. For fatal and injury crashes, the expected crash reduction is 75%. The planned roundabout offers a significant safety improvement over the existing unsignalized intersection.

Based on discussions of current intersection operations with the City, if a roundabout is not constructed at the intersection, it is likely that the intersection will need to be signalized due to increasing traffic volumes.

ORDER OF MAGNITUDE COST OPINION

Safety related costs for this project were determined by comparison of two alternatives. The estimated construction cost of the preferred roundabout alternative was compared to estimated construction cost to signalize the intersection. A detailed cost opinion was not prepared for the traffic signal alternative, because it was assumed that a signal could be installed without additional roadway improvements. The estimated traffic signal cost was based on recent bids for new traffic signals.

Fifty percent of the additional cost to construct the roundabout was determined to be the safety cost, because the proposed roundabout will provide both safety and operational benefits compared to the traffic signal alternative. The below tables summarize estimated construction costs for the two alternatives, the resultant safety cost for the roundabout and proposed project funding sources.

Roundabout Safety Cost

Roundabout Alternative Construction Cost	$1,413,000
Traffic Signal Alternative Construction Cost	$300,000
Roundabout Alternative Additional Cost	$1,113,000
Safety Cost (50% of Roundabout Alternative Additional Cost)	**$556,500**

Proposed Project Funding Sources

TSIP Funding	$500,000
Potential RISE Funding (not yet secured) 80% of Remaining After TSIP	$842,400
City Funding 20% of Remaining After TSIP	$210,600
TOTAL	**$1,553,000**

A detailed cost opinion for the roundabout is provided on the following page.

OPINION OF PROBABLE PROJECT COSTS - TRAFFIC SAFETY IMPROVEMENTS FUNDING APPLICATION (08/15/2025)

SNYDER & ASSOCIATES

DIVISION STREET & W. BURLINGTON AVENUE ROUNDABOUT
BURLINGTON, IA
125.0497.08D

ITEM #	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL EXTENDED PRICE
1	Excavation, Class 10, Waste	3500	CY	$ 21	$ 73,500
2	Topsoil	1055	CY	$ 19	$ 20,045
3	Subgrade Stabilization Material, Polymer Grid	7669	SY	$ 4	$ 30,676
4	Modified Subbase	2556	CY	$ 54	$ 138,024
5	Special Compaction of Subgrade	16	STA	$ 1,000	$ 16,000
6	PCC Pavement, 8 In.	5741	SY	$ 75	$ 430,575
7	PCC Pavement, Median	1440	SY	$ 95	$ 136,800
8	Intake, SW-509	4	EA	$ 7,500	$ 30,000
9	Manhole Adjustment	5	EA	$ 2,860	$ 14,300
10	Subdrain, 6 In. Dia.	1094	LF	$ 21	$ 22,974
11	Storm Sewer Gravity Main, RCP, 18 In.	200	LF	$ 120	$ 24,000
12	Remove Storm Sewer Pipe	200	LF	$ 30	$ 6,000
13	Removal of Pavement	5561	SY	$ 12	$ 66,732
14	Removal of Intakes and Utility Accesses	4	EA	$ 1,500	$ 6,000
15	Driveway, PCC, 8 In.	300	SY	$ 93	$ 27,900
16	Removal of Paved Driveway	300	SY	$ 15	$ 4,500
17	Signs	1	LS	$ 8,200	$ 8,200
18	Painted Pavement Marking, Durable	18	STA	$ 200	$ 3,600
19	Traffic Control	1	LS	$ 5,000	$ 5,000
20	Mobilization	1	LS	$ 125,000	$ 125,000
21	Fire Hydrant Assembly, WM-201	1	EA	$ 6,000	$ 6,000
22	Removal of Hydrant	1	EA	$ 2,000	$ 2,000
23	Seeding and Fertilizing (Urban)	1	ACRE	$ 4,000	$ 4,000
24	Lighting	1	LS	$ 75,000	$ 75,000
25	Erosion Control	1	LS	$ 8,000	$ 8,000

Subtotal (Rounded):	$	1,284,826
Contingency (10% ±):	$	128,174
CONSTRUCTION TOTAL:	**$**	**1,413,000**
Other Project Costs		
ROW:	$	60,000.00
Private Utility Relocation:	$	80,000.00
TOTAL PROJECT COST:	**$**	**1,553,000.00**

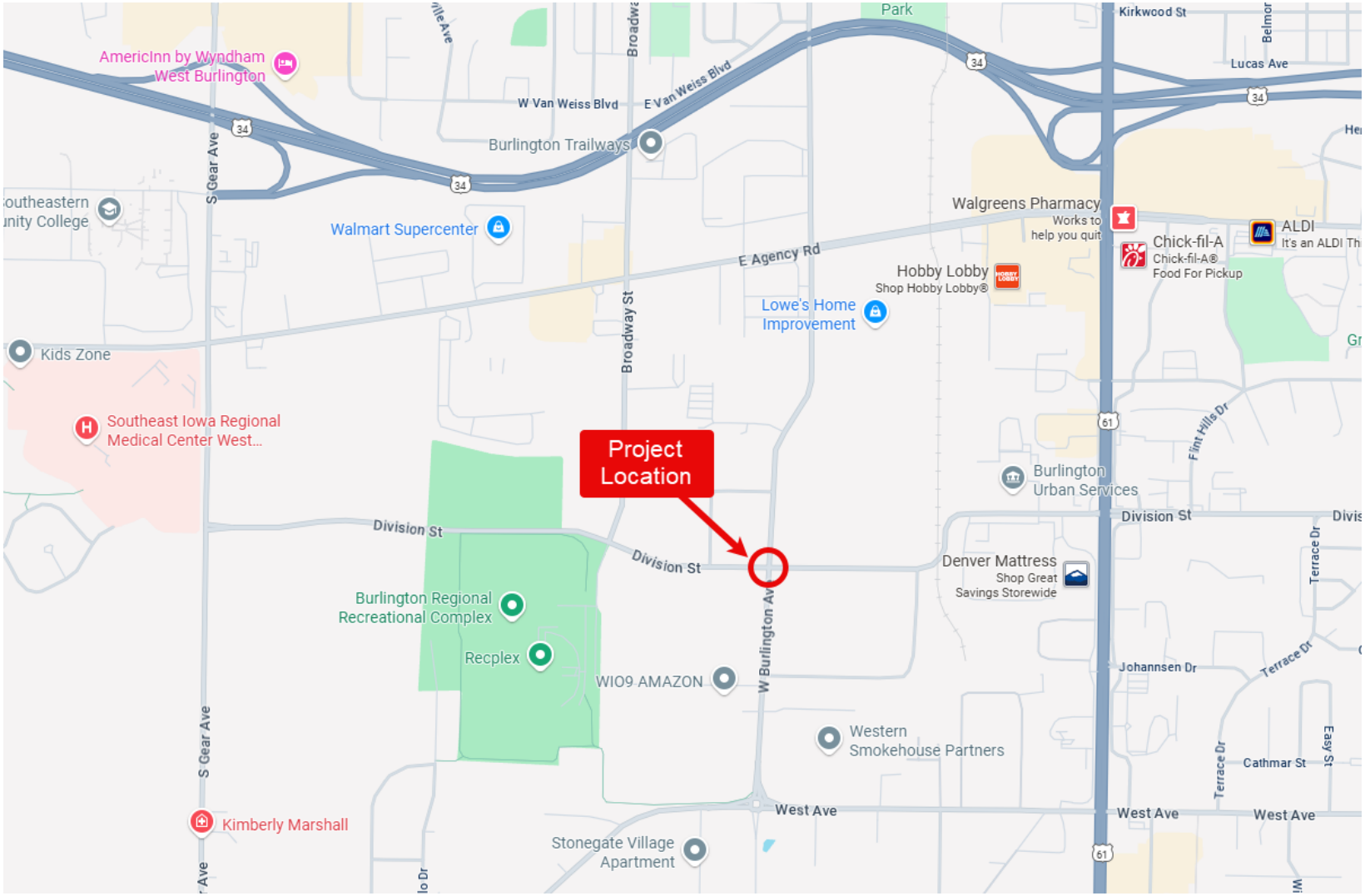
SCHEDULE

Following is the anticipated schedule of major project events for this project.

TSIP Funding Application	August 2025
TSIP Funding Award	January 2026
Design	January 2026 – June 2026
TSIP Agreement	March 2026
TSIP Funding Available	July 2026
Right-of-Way Acquisition Completed	October 2026
Project Letting	January 2027
Project Construction	Spring 2027 – Fall 2027
Project Completed	Fall 2027

MAP

Below is a map of a portion of Burlington with the Division St & W Burlington Ave intersection shown.



Project Location Map (Source: Google Maps)

SITE PICTURES



View of the intersection from the north
(Source: Google Street View)



View of the intersection from the east
(Source: Google Street View)



View of the intersection from the south
(Source: Google Street View)



View of the intersection from the west
(Source: Google Street View)

cnolan
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FEET
0
40
80

N

DIVISION STREET & W. BURLINGTON AVENUE

ROUNDABOUT CONCEPT

BURLINGTON, IOWA

SNYDER & ASSOCIATES, INC.
900 BELL DRIVE S.W.
CEDAR RAPIDS, IA 52404
319-362-9394 | www.snyder-associates.com

MARK	REVISION	DATE	BY
	TSIP	08/08/25	

Engineer: TPM	Checked By: TPM	Scale: 1" = 40'	
Technician: CJN	Date: 8/13/2025	T-R-S:	
Project No: 125.0497		Sheet EXH.1	

Sheet EXH.1
Project No: 125.0497



0
40
80
FEET

H

Sheet EXH.2
Project No: 125.0497

SNYDER & ASSOCIATES

DIVISION STREET & W. BURLINGTON AVENUE

EXISTING CONDITION

BURLINGTON, IOWA

SNYDER & ASSOCIATES, INC.
900 BELL DRIVE S.W.
CEDAR RAPIDS, IA 52404
319-362-9394 | www.snyder-associates.com

MARK	REVISION	DATE	BY
	TSIP	08/08/25	

Engineer: TPM	Checked By: TPM	Scale: 1" = 40'	
Technician: CJN	Date: 8/12/2025	T-R-S:	
Project No: 125.0497		Sheet EXH.2	

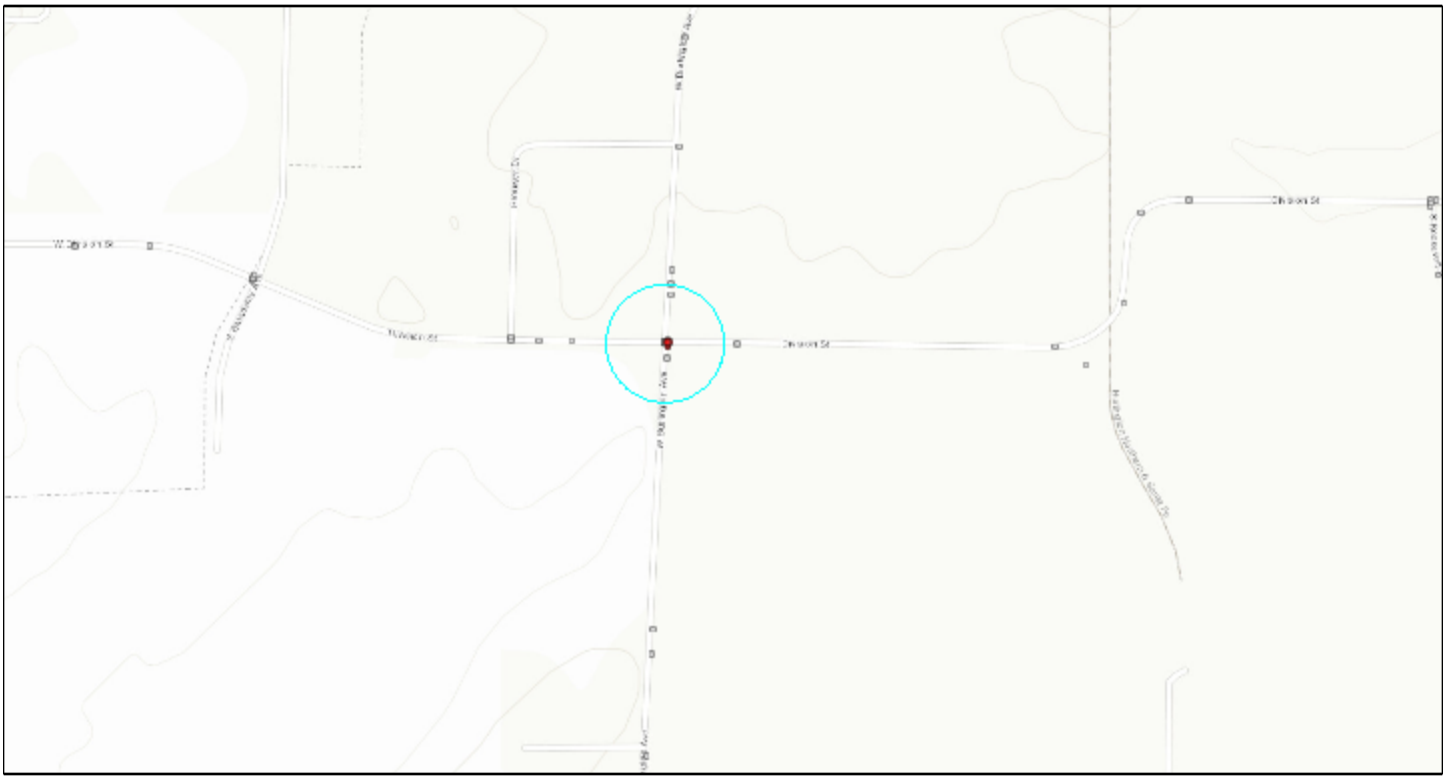
Iowa Crash Analysis Tool
Quick Report
2020-2024

Crash Severity	10
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	3
Property Damage Only	7

Injury Status Summary	4
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	3
Uninjured	0
Unknown	0
Not Reported	1

Property/Vehicles/Occupants	
Property Damage Total (dollars):	53,750.00
Average (per crash dollars):	5,375.00
Total Vehicles:	20.00
Average (per crash):	2.00
Total Occupants:	25.00
Average (per crash):	2.50

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.30
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.30



Iowa Crash Analysis Tool
Quick Report
2020-2024

Major Cause			10
Animal	0	Ran traffic signal	0
Ran stop sign	3	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	5	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	1
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	1	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Iowa Crash Analysis Tool
Quick Report
2020-2024

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Tuesday	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Wednesday	0	0	0	0	0	0	1	0	0	2	0	0	0	3
Thursday	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Friday	0	0	0	0	0	0	1	1	0	0	0	0	0	2
Saturday	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Total	0	0	0	0	1	1	3	1	0	2	1	1	0	10

Manner of Crash Collision	**10**
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	10
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	**10**
Dry	8
Wet	1
Ice/frost	1
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			**20**
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	20

Iowa Crash Analysis Tool
Quick Report
2020-2024

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	1	0	0	1
= 17	0	0	0	0	0
= 18	0	1	0	0	1
= 19	0	1	0	0	1
= 20	0	1	0	0	1
>= 21 and <= 24	1	0	0	0	1
>= 25 and <= 29	0	0	0	0	0
>= 30 and <= 34	0	1	0	0	1
>= 35 and <= 39	2	3	0	0	5
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	2	0	0	0	2
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	1	0	0	0	1
>= 60 and <= 64	0	1	0	0	1
>= 65 and <= 69	1	0	0	0	1
>= 70 and <= 74	1	0	0	0	1
>= 75 and <= 79	0	1	0	0	1
>= 80 and <= 84	0	1	0	0	1
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	8	11	1	0	20

Drug/Alcohol Related	**10**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	10

Alcohol Test Given	**20**
None	19
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

Drug Test Given	**20**
None	19
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

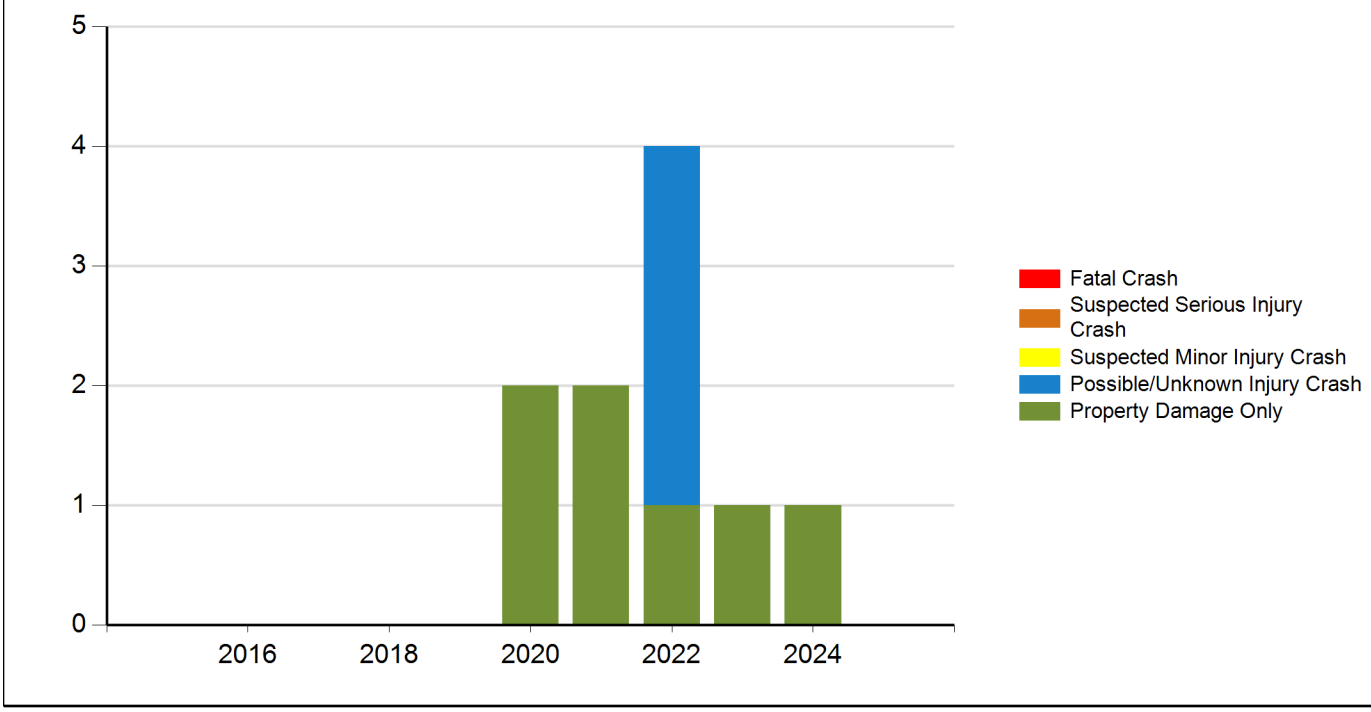
Drug Test Result	**20**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	20
Other	0

Iowa Crash Analysis Tool
Quick Report
2020-2024

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	2	2
2021	0	0	0	0	2	2
2022	0	0	0	3	1	4
2023	0	0	0	0	1	1
2024	0	0	0	0	1	1
2025	0	0	0	0	0	0
Total	0	0	0	3	7	10

Severity/Year

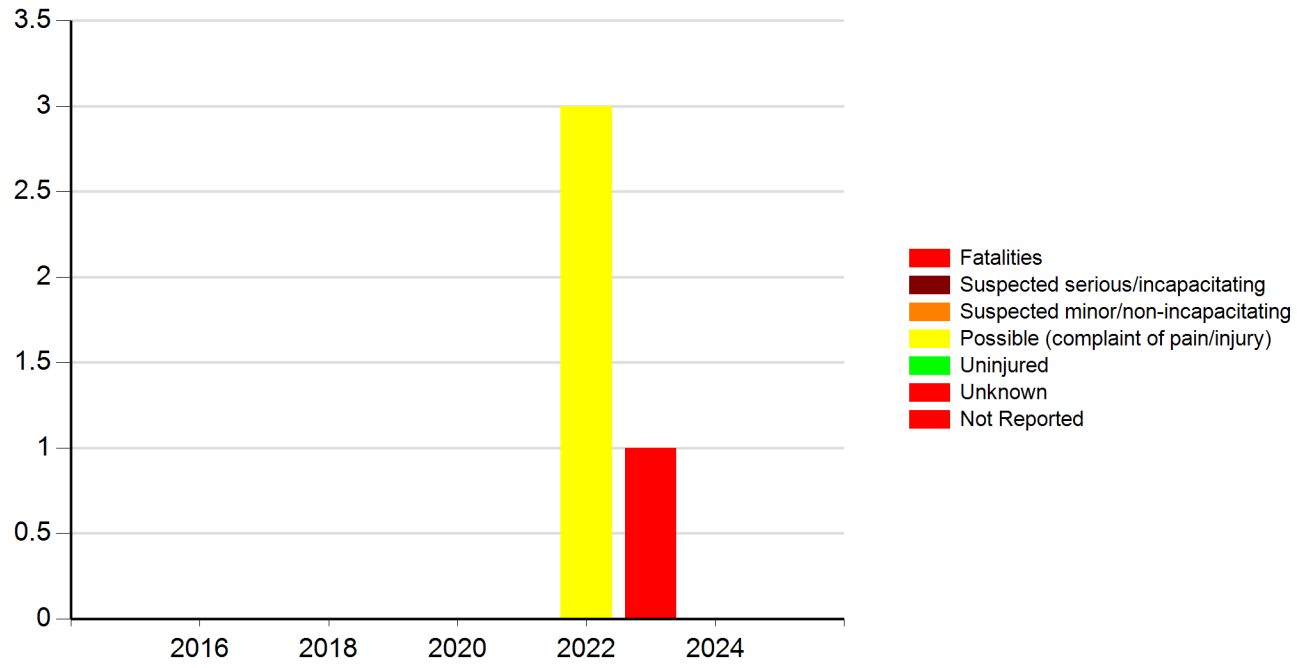


Iowa Crash Analysis Tool
Quick Report
2020-2024

Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	3	0	0	0	3
2023	0	0	0	0	0	0	1	1
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
Total	0	0	0	3	0	0	1	4

Injury Status/Year



Iowa Crash Analysis Tool
Quick Report
2020-2024

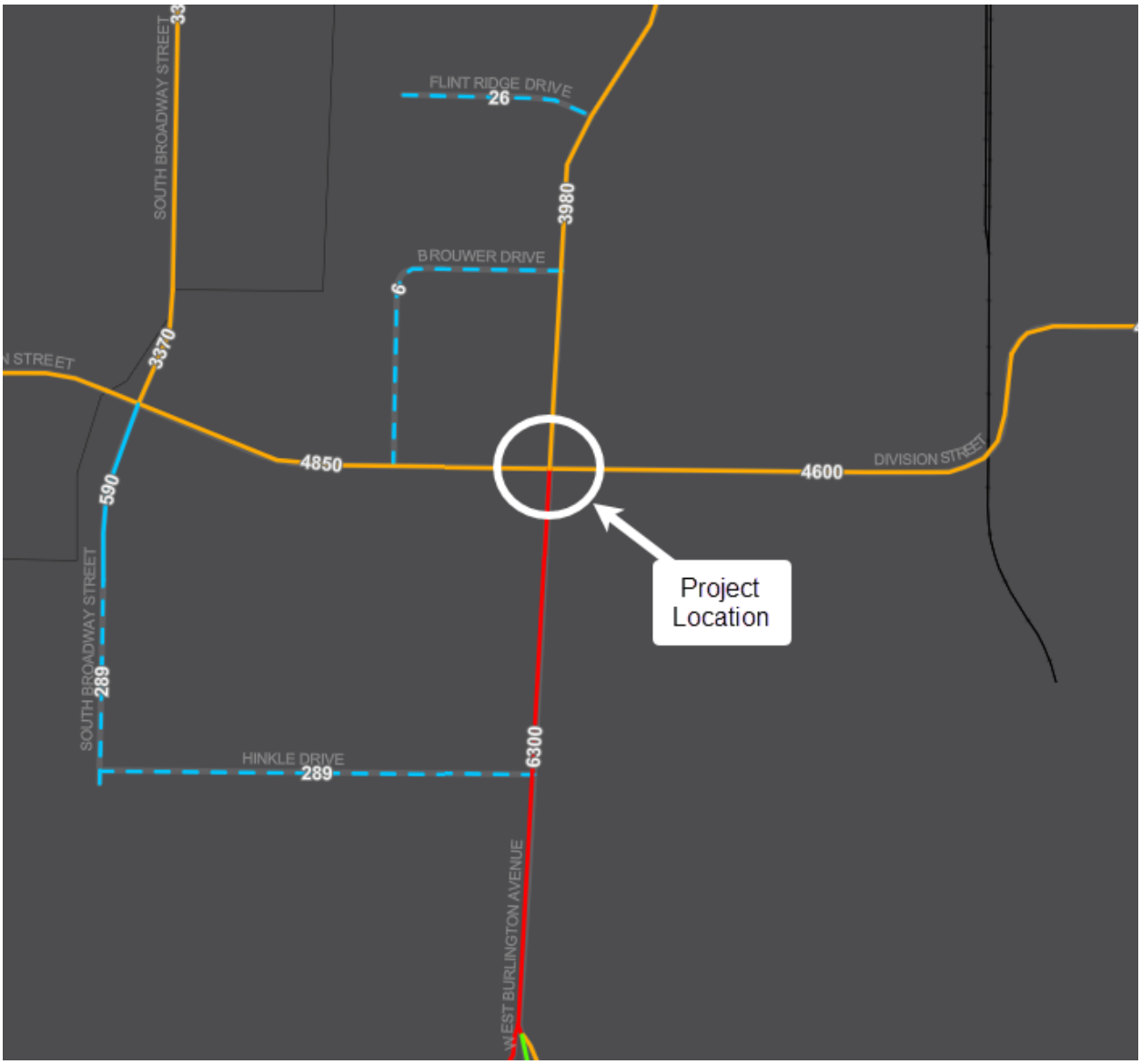
Meeting the following criteria

Jurisdiction: Statewide
Year: 2020, 2021, 2022, 2023, 2024
Map Selection: Yes
Filter: None

Analyst Information

TRAFFIC VOLUMES

The intersection of Division St & W Burlington Ave has not been specifically counted by the DOT or the City recently, so estimated annual average daily traffic from the DOT's interactive traffic data portal[1] was recorded. The estimated AADT in the area of the project location is shown below.



[1] https://experience.arcgis.com/experience/291d4e2c64cf490a95a6660b1349a088/page/Traffic-Volume

BENEFIT/COST ANALYSIS

As discussed in Section C, the safety cost for this project was estimated as 50% of the additional cost to construct the roundabout compared to a traffic signal, with the other 50% being related to operational benefits. Only construction funds are applicable to TSIP funds and the proposed roundabout will provide both safety and operational benefits compared to the traffic signal alternative. Therefore, $556,500 was used for the safety cost portion of the benefit/cost analysis.

Per the Iowa DOT Planning Level Crash Reduction Factor (CRF) List, the applicable CRF value for all crashes with constructing a roundabout at an unsignalized intersection is 45 in an urban area. This CRF was used for the analysis. The applicable CRF value for fatal and injury crashes is 75. This indicates that injury crash reduction benefits will likely be higher than shown in the analysis.

Five years of crash history (2020-2024) were used for the analysis. As shown in Section I, there were ten crashes in that period, all of which were broadside crashes. Broadside crashes are typically significantly reduced or eliminated when a traditional intersection is converted to a roundabout due the geometry of roundabouts forcing shallower collision angles.

The default annual traffic growth rate of 1% was used for the analysis. Though the intersection is within a growing commercial and industrial area of the City, there is not enough traffic volume history available at the intersection to support the use of a different growth rate.

The resulting benefit/cost ratio is 1.02/1. Additionally, it should be noted the intersection is listed by the Iowa DOT as having a high potential for crash reduction for all crashes, and the conversion to a roundabout directly addresses the existing crash patterns present at the intersection.

County:	Des Moines	Prepared By:	Snyder & Assoc.
Location:	Division St & W Burlington Ave	Date Prepared:	8/12/2025
Proposed Improvements:	Convert the current all-way STOP controlled intersection to a single lane roundabout.		
Estimated Improvement Cost:	$ 556,500		
Inflation on Crash Costs:	4%	Annual Maintenance: (% of Improvement Cost)	2%
Discount Rate:	4%		
Estimated Service Life:	20	Annual Maintenance Cost:	$ 11,130

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	45	**45.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	45.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	45.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	0	45.0	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	3	45.0	**0.60**	**0.27**
Property Damage Only (O)	$ 20,000	7	45.0	**1.40**	**0.63**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ -**
Possible/Unknown Injury (C)	**$ 36,450**
Property Damage Only (O)	**$ 12,600**

Total Benefits and Costs

		Implementation Cost	$ 556,500
		Present Value of Maint.	$ 151,260
Present Value Benefits (Societal Benefits)	$ 724,503	Present Value Costs (Impl. and Maint. Costs)	$ 707,760
Present Value Net Return	$ 16,743		
Benefit Cost Ratio	**1.02**		

Form continues on next page

County:	Des Moines	Prepared By:	Snyder & Assoc.
Location:	Division St & W Burlington Ave	Date Prepared:	8/12/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 8/14/2025

Location / Title of Project 16th Street NW / Mill Creek Parkway Roundabout

Applicant City of Clinton, Iowa

Contact Person Jason Craft Title City Engineer

Complete Mailing Address 611 South 3rd Street

Clinton, IA 52732

Phone (563)-244-3423 E-Mail jasoncraft@cityofclintoniowa.gov

(Area Code)

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s) _____

Contact Person _____ Title _____

Complete Mailing Address _____

_____

Phone _____ E-Mail _____

(Area Code)

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	1,274,980
Total Project Cost	$	1,400,980
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information

Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
SI_9648	16th Street NW & Mill Creek Parkway	☒	☐	2.516846	0.34651
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Clinton, Iowa

Signed: _____ 8/14/2025
Signature Date Signed

Scott Maddasion
Printed Name

8/14/2025

Attest: _____
Signature Date Signed

Krista Taplin
Printed Name

RESOLUTION NO. 2025-508

A RESOLUTION APPROVING OFFICIAL ENDORSEMENT OF FUNDING APPLICATION TO IOWA DEPARTMENT OF TRANSPORTATION FOR THE 2027 TRAFFIC SAFETY IMPROVEMENT PROGRAM FOR THE 16TH STREET NW & MILL CREEK PARKWAY ROUNDABOUT PROJECT

WHEREAS, the Iowa Department of Transportation is accepting applications for the Traffic Safety Improvement Program (TSIP) on August 15, 2025; and,

WHEREAS,the TSIP allows cities and counties throughout Iowa to apply for funding for traffic safety improvements on public roads under local jurisdiction; and,

WHEREAS, the crash history and traffic volumes along at 16th Street NW and Mill Creek Parkway indicate that construction of a Roundabout at the intersection would improve safety and efficiency of the roadway segment; and,

WHEREAS, the City Engineering Department has prepared a TSIP grant application in the amount of $500,000 to the Iowa DOT. The City of Clinton would incorporate local matching funds of $900,000 by the FY2027-2028 city budget.

THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CLINTON, IOWA that the that the City Council is supportive of the Traffic Safety Improvement Program Funding Application for the 16th Street NW and Mill Creek Parkway Roundabout Project in the amount of **$500,000**.

BE IT FURTHER RESOLVED BY THE CITY COUNCIL OF THE CITY OF CLINTON, IOWA that the City of Clinton will be fully responsible for the maintenance of all improvements constructed related to the proposed project.

This resolution is adopted by the City of Clinton and approved by the Mayor this 12 day of August 2025

Mayor

ATTEST:

Resolution NO. 2025-508 - A RESOLUTION APPROVING OFFICIAL ENDORSEMENT OF FUNDING APPLICATION TO IOWA DEPARTMENT OF TRANSPORTATION FOR THE 2027 TRAFFIC SAFETY IMPROVEMENT PROGRAM FOR THE 16TH STREET NW & MILL CREEK PARKWAY ROUNDABOUT PROJECT

TSIP PROJECT NARRATIVE
ROUNDABOUT AT
MILL CREEK PARKWAY &
16TH STREET NORTHWEST

August 13, 2025

Prepared by

Jason Craft, P.E.
City Engineer

Introduction

The Iowa Department of Transportation is accepting grant applications for Traffic Safety Improvements. All cities and counties are eligible to apply.

Objectively, one of the most dangerous intersections in Clinton is at 16th Street NW and Mill Creek Parkway. Crash rates at this intersections far exceed the statewide average, and would be eligible for funding of safety enhancements such as roundabouts.

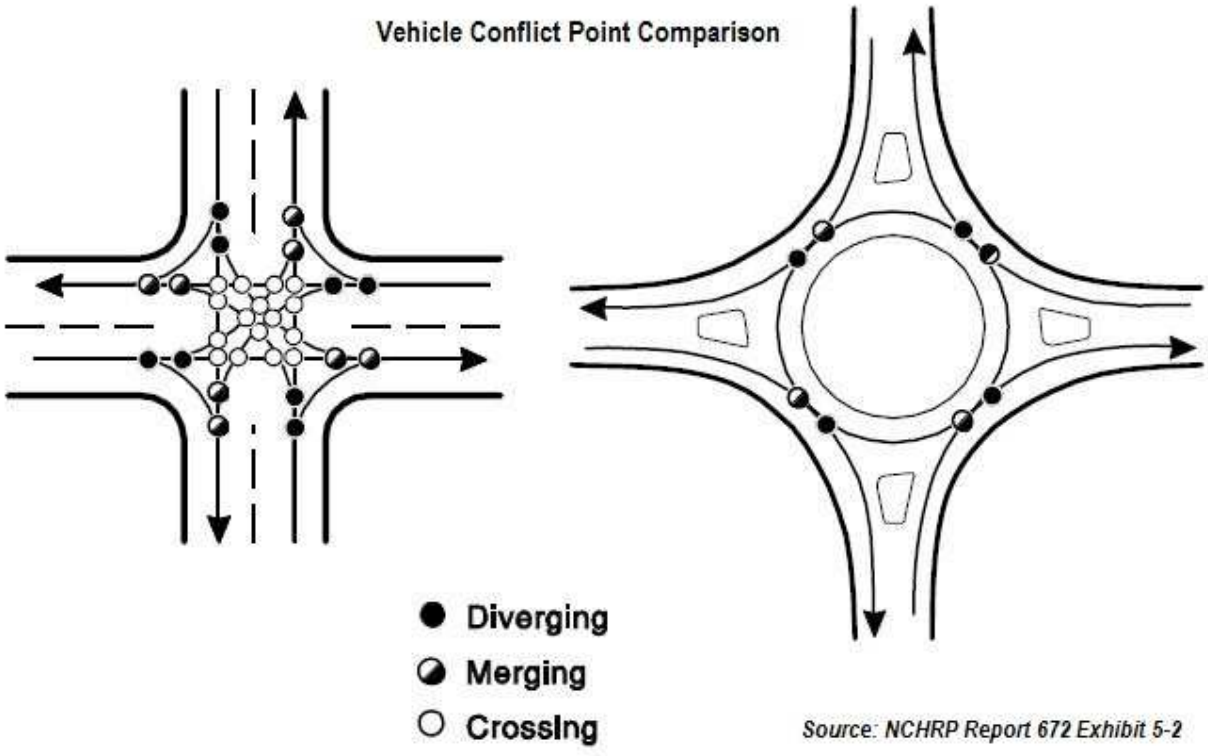
The objective of this narrative is to discuss the feasibility of converting the existing intersection of 16th Street NW and Mill Creek Parkway from a two-way stop to a roundabout.

Roundabouts

Roundabouts are among the safest options available for accident prone intersections. They are an intersection design used to reduce congestion, repair poor geometrics, and ultimately to improve intersection safety. It is an unquestioned fact that roundabouts WILL reduce accident rates as well as the injuries caused by these accidents. It is a proven fact that modern Roundabouts are safer, more efficient, and less costly than any other intersection design.

The FHWA Office of Safety has identified roundabouts as a Proven Safety Countermeasure because of their unique ability to reduce the types of crashes where people are seriously hurt or killed by 78-82%, when compared to stop controlled or signalized intersections, based on data available from the Federal Highway Administration. That's right, an average of 80% serious crash reduction!

"Why the reduction?" some people may ask. The following chart represents the reduction in conflict points from 32 at a typical intersection to only 8 at a roundabout.



Overview of Existing Conditions

The existing intersection at 16th Street NW and Mill Creek Parkway is a two-way stop control intersection, with vehicles stopping on each leg of 13th Avenue North. The speed limit of Mill Creek Parkway is 45 MPH, and the speed limit of 13th Avenue North is 35 MPH.

Traffic at this intersection has increased recently due to the construction of the middle school (before & after school) and the connection of 19th Avenue North to Mill Creek Parkway. This traffic increase has increased overall delay at the intersection.

Traffic Counts

The ADT traffic counts at this intersection are as follows, per Iowa DOT interactive traffic data website.

Intersection of Mill Creek Parkway & 16th St NW		
Street	Leg	ADT
Mill Creek Parkway	West Bound	6,890
Mill Creek Parkway	East Bound	5,900
16th Street NW	North Bound	2,200
16th Street NW	South Bound	1,780

The 8-hour volume on Mill Creek Parkway at this intersection is 485 vehicles per hour. The 8-hour volume on 16th Street NW during this same time is 100 vehicles per hour. This currently does not meet the signalization warrant for 8-hour traffic volume. A roundabout is a much better alternative to a traffic signal at this intersection, as high-speed collisions and the potential for injuries/fatalities would be reduced. With installation of a signal, there would still be risk for light running, which causes high speed collisions.

Peak Hour Traffic Counts are as follows:

PM PEAK TIME PERIOD	NORTHBOUND ON 16th Street NW			WESTBOUND ON Mill Creek Parkway			SOUTHBOUND ON 16th Street NW			EASTBOUND ON Mill Creek Parkway		
	L	S	R	L	S	R	L	S	R	L	S	R
4:00- 4:15	0	17	7	18	67	0	0	6	19	29	58	1
	0	0	0	0	1	0	0	0	0	0	0	0
4:15- 4:30	0	15	8	12	57	0	0	14	11	23	70	1
	0	0	0	0	0	0	0	0	0	0	1	0
4:30- 4:45	0	10	7	17	73	0	0	7	20	17	54	0
	0	0	0	0	1	0	0	0	0	0	0	0
4:45- 5:00	0	10	8	18	41	0	0	13	17	21	62	1
	0	0	0	0	0	0	0	0	0	0	2	0
TOTAL	0	52	30	65	240	0	0	40	67	90	247	3

School Traffic:
During school days, the traffic counts drastically increase at 16th Street NW, including left turning traffic from west bound to south bound and from north bound to west bound. There are up to 40 additional turns for each of these movements between 7:00-8:00 and from 3:00-4:00. The exact traffic counts can be gathered on August 25th, 2025 for DOT reference, and sent as a supplemental report.

Collision History

From January 1, 2020, through December 31, 2024, the intersection of 16th Street NW and Mill Creek Parkway had a total of 16 reported crashes. Of the 16 crashes, 10 crashes were caused by failure to yield right-of-way or ran STOP sign, which would have a high probability of avoidance if a roundabout were present instead of a stop sign. This is less than the previous 5-year period, which is likely just an anomaly. Crashes are not expected to decrease, with at least the potential for a major crash any year. The last fatality was in 2017.

The table below summarizes the reported crashes at the intersection by severity including injuries. The crash rate of the intersection is 1.04 crashes per million entering vehicles (MEV).

Year	Fatalities	Major Injuries	Minor Injuries	Possible Injuries	PDO	Total Crashes	Amount of Property Damage
Total	**0**	**4**	**5**	**5**	**9**	**16**	**$159,200**

The collisions are expected to continue on an increasing trend at this intersection, due to the growing amount of development on 13th Avenue North, the 19th Ave NW connection, and the overall increased traffic on Mill Creek Parkway. The construction of a roundabout would drastically reduce the amount of high speed collisions and potential injuries resulting from these crashes.

Considering collision history and traffic volumes and using a crash reduction factor of 44% (NCHRP Report 572: Applying Roundabouts in the United States, Rodegerdts et al., 2007), there would be an assumed 28 total avoided crashes over the next 20 years.

When applying this using the Iowa DOT Benefit Cost Analysis tools, the total present value of avoided crashes during this period is $24,735,616. At a total present cost of roundabout construction of $500,000, this yields a benefit/cost ration of 17.5 to 1, which makes this intersection a premium candidate for a roundabout. According to Iowa DOT staff, anything above a B/C ratio of 1:1 is a strong candidate to receive funding.

Crash Conclusions

Without improvements to this intersections, collisions are expected to continue on an increasing trend, due to the expected future development and increased traffic in the area. Roundabouts are the only proven method to improve the safety of these intersections. Construction of roundabouts would drastically reduce the amount of high speed collisions and corresponding injuries resulting from these crashes.

Compelling Roundabout Facts

1. Overall crash reduction of 72% (FHWA)
2. Overall injury reduction of 87% (FHWA)
3. Can be constructed to accommodate large truck traffic
4. Can be constructed to accommodate future growth to four lanes
5. Improves overall intersection delay by eliminating stop signs and red lights
6. Increases awareness and attentiveness of drivers when entering intersections

Conclusions & Recommendations

Through discussions with the Iowa DOT, it is our understanding that a roundabout at 16th Street NW & Mill Creek Parkway would be a great candidate for funding through the Iowa Traffic Safety Improvement Grant Program. Preliminary plans have been completed for this project already my MSA Engineering.

These projects would include modification of the existing two-way stop control intersection to a single-lane roundabout intersection. Adding traffic signals is not a good option, as it would not have a guaranteed positive effect on the traffic accidents at the intersection, and would actually decrease the overall delay time of the intersection. Roundabouts on Mill Creek Parkway will be much more desirable than a corridor of signals for many reasons, including safety concerns, delay issues, and operation and maintenance costs.

Our recommendation would be to apply for the upcoming Iowa DOT traffic safety grant on August 15, 2025. The city would very likely receive the full $500,000 funding, given the traffic counts, accident history, and injury history.

Planning Level Construction Cost Estimate

(Based on preliminary drawing, all quantities will change with final design)

16th St NW and Mill Creek Pkwy RAB

City of Clinton, Iowa

8/13/2025

Item	Approximate Quantity	Unit	Estimated Unit Price	Total Price
P.C. Concrete Pavement, 10"	5,600	SY	$ 90.00	$ 504,000.00
Median, P.C. Concrete, 6"	650	SY	$ 80.00	$ 52,000.00
P.C. Concrete Pavement, 14"	590	SY	$ 105.00	$ 61,950.00
Modified Subbase, 12"	10,200	SY	$ 15.00	$ 153,000.00
Curb and Gutter, P.C. Concrete, 1.5'	201	LF	$ 30.00	$ 6,030.00
Curb and Gutter, P.C. Concrete, 2.5'	2,400	LF	$ 35.00	$ 84,000.00
Excavation	1	LS	$ 75,000.00	$ 75,000.00
Storm Sewer/Drainage	1	LS	$ 100,000.00	$ 100,000.00
Traffic Control	1	LS	$ 40,000.00	$ 40,000.00
Lighting	1	LS	$ 65,000.00	$ 65,000.00
Mobilization (90% Safety)	1	LS	$ 85,000.00	$ 85,000.00
Other Items / Contingency (90% Safety)	1	LS	$ 175,000.00	$ 175,000.00
				$ 1,400,980.00
Design Engineering Remaining				$ 90,000.00
Construction Engineering & Admin				$ 70,000.00
			Estimated Total Cost	**$ 1,560,980.00**

SAFETY ITEMS	$	1,040,980.00
SAFETY SHARE ITEMS	$	234,000.00
NON SAFETY ITEMS	$	126,000.00
TOTAL SAFETY ITEMS	$	1,274,980.00

Project Schedule
Exhibit D - Timeline
16th Street NW Mill Creek Parkway

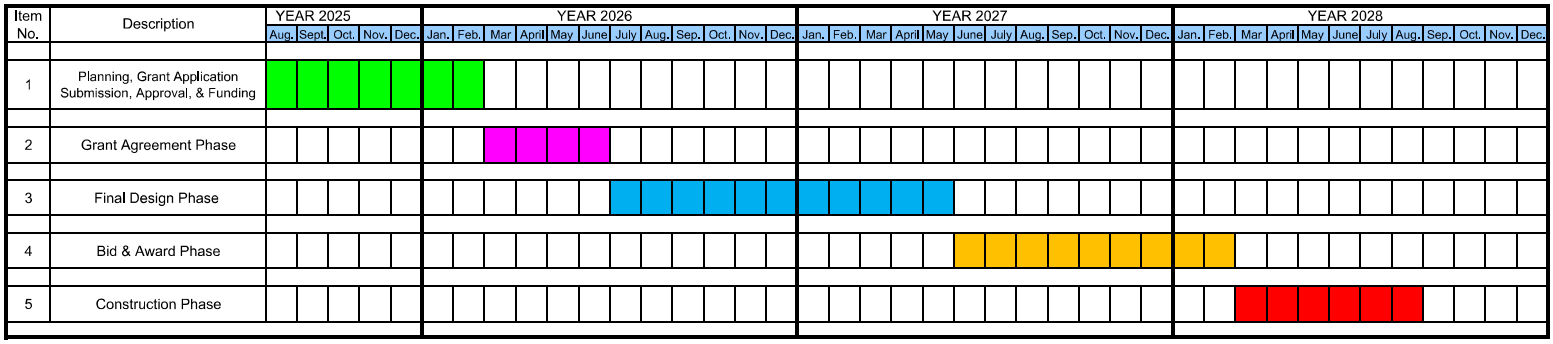
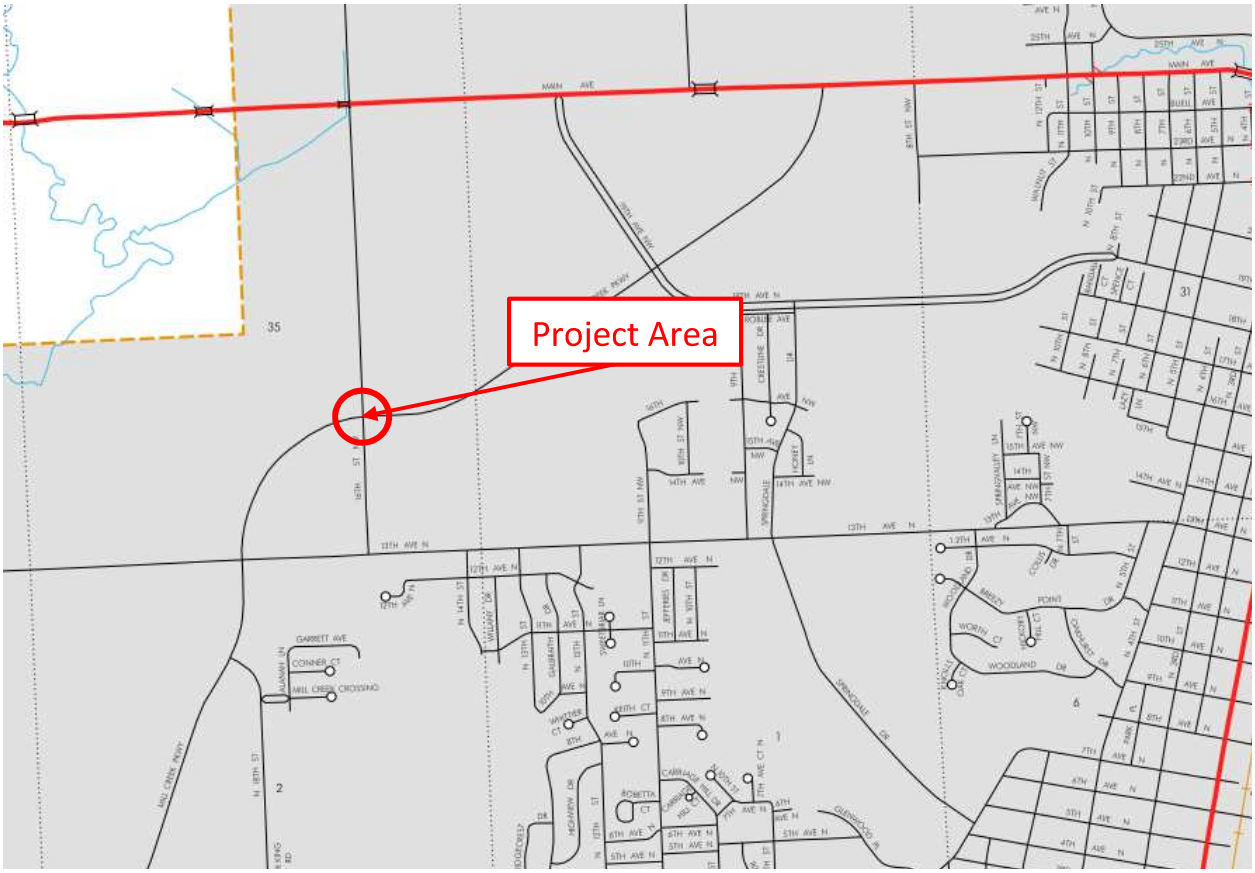


Exhibit E - Map



Area Map

Exhibit F – Pictures



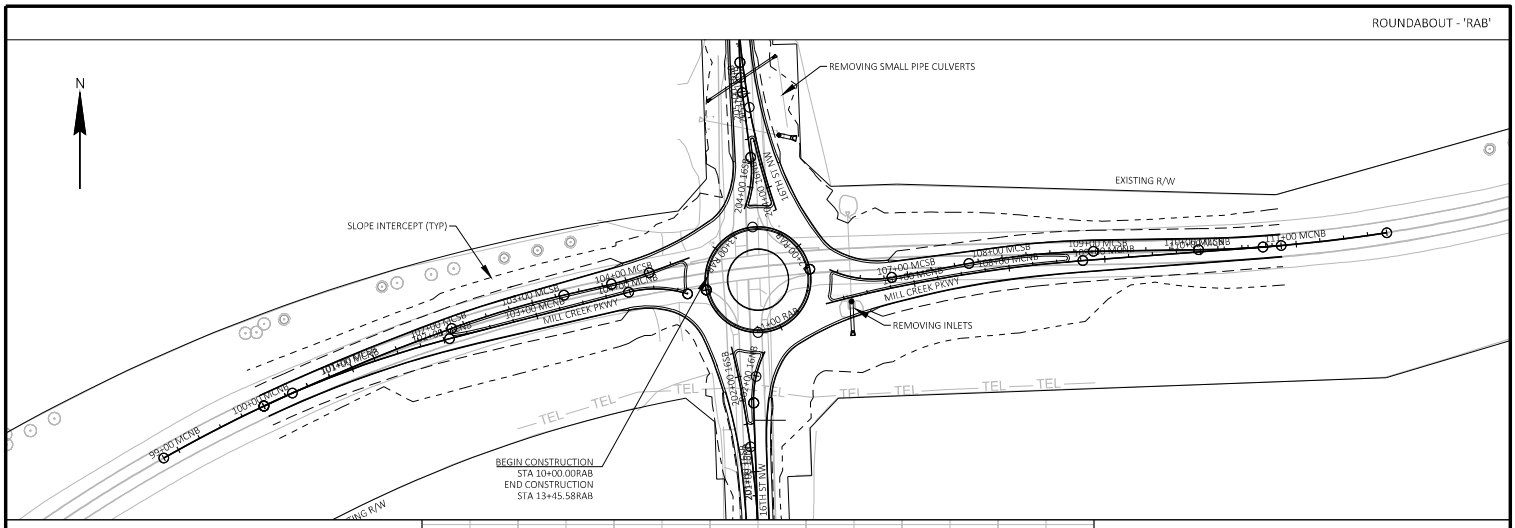
Figure 2- Looking West

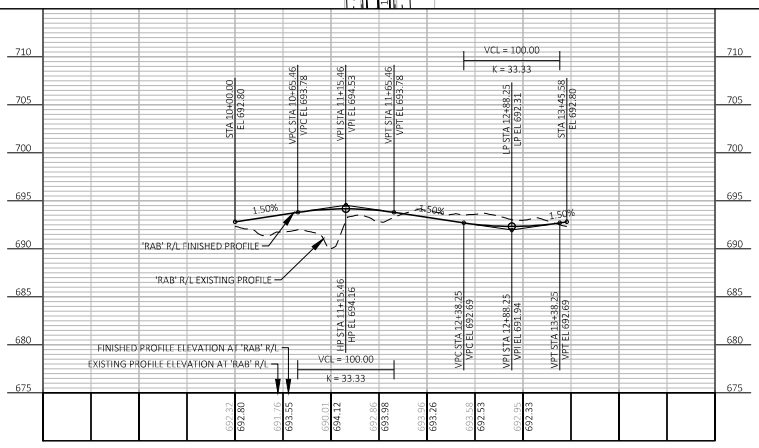
Exhibit F – Pictures



Figure 3- Looking South

ROUNDABOUT - 'RAB'





FILE NO.	ENGLISH	DESIGN TEAM	MSA PROFESSIONAL SERVICES	CLINTON COUNTY	PROJECT NUMBER	XXXX-XX-XX	SHEET NUMBER	D.1	REVISED

10:28:29 AM 6/13/2022 CONNOR GIRTEN G:\11\11924\1192400\7\CADD\C3D\11924007\SHEETS\050101-PP-16.DWG

Exhibit H – Aerial Photo



Crash Detail Report

20201172194	05/11/2020 16:11	MILL CREEK PKWY AND 16TH ST NW
County: Clinton	City: Clinton	

Major Cause: Ran stop sign

Roadway Type: Intersection: Other intersection

Severity:: Property Damage Only **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Property Damage Only **Property Damage:** $4,000 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	South	East	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Sport utility vehicle	Sport utility vehicle	
Driver Age:	53	42	
Driver Gender:	M	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Ran stop sign	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

20201175172	06/06/2020 11:32	MILL CREEK PKWY
County: Clinton	City: Clinton	

Major Cause: Followed too close

Roadway Type: Intersection: Four-way intersection

Severity:: Property Damage Only **Manner of Crash:** Rear-end (front to rear)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Property Damage Only **Property Damage:** $1,750 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	North	North	
Veh Action:	Movement essentially straight	Stopped in traffic	
Configuration:	Passenger van (seats < 9)	Passenger car	
Driver Age:	52	22	
Driver Gender:	M	F	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Followed too close	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

Crash Detail Report

20201176711	06/06/2020 11:33	16TH ST NW
County: Clinton	City: Clinton	

Major Cause: FTYROW: From stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Property Damage Only **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Property Damage Only **Property Damage:** $8,000 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	South	West	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Passenger car	Sport utility vehicle	
Driver Age:	71	21	
Driver Gender:	F	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	FTYROW: From stop sign	Failure to signal intentions	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

20201182819	07/23/2020 19:29	MILL CREEK PKWY AND 16TH ST NW
County: Clinton	City: Clinton	

Major Cause: FTYROW: Making left turn

Roadway Type: Intersection: Four-way intersection

Severity:: Suspected Minor Injury **Manner of Crash:** Rear-end (front to rear)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 2 **Weather Conditions:** Clear

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Suspected Minor Injury **Property Damage:** $5,000 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	South	South	
Veh Action:	Movement essentially straight	Turning left	
Configuration:	Passenger car	Sport utility vehicle	
Driver Age:	17	69	
Driver Gender:	M	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Followed too close	FTYROW: Making left turn	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

Crash Detail Report

20201193954	10/09/2020 16:04	MILL CREEK PKWY AND 16TH ST NW
County: Clinton	City: Clinton	

Major Cause: FTYROW: From stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Possible/Unknown Injury Crash **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 1 **Drug/Alc Involved:** None Indicated

Severity:: Possible/Unknown Injury Crash **Property Damage:** $13,500 **Number of Vehicles:** 3

	Unit 1	Unit 2	Unit 3
Init Trav Dir:	West	North	South
Veh Action:	Movement essentially straight	Movement essentially straight	Stopped in traffic
Configuration:	Passenger car	Sport utility vehicle	Passenger car
Driver Age:	32	75	49
Driver Gender:	M	F	F
Driver Cond:	Apparently normal	Apparently normal	Apparently normal
Driver Contr 1:	No improper action	FTYROW: From stop sign	No improper action
Driver Contr 2:	Not reported	Not reported	Not reported
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	None (no fixed object struck)

20211231816	03/17/2021 11:00	MILL CREEK PKWY AND 16TH ST NW
County: Clinton	City: Clinton	

Major Cause: Ran stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Suspected Minor Injury Crash **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 1 **Weather Conditions:** Clear

Possible Injuries: 1 **Drug/Alc Involved:** None Indicated

Severity:: Suspected Minor Injury Crash **Property Damage:** $10,000 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	South	West	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Sport utility vehicle	Four-tire light truck (pick-up)	
Driver Age:	83	47	
Driver Gender:	F	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Ran stop sign	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

Crash Detail Report

20211233083	03/28/2021 12:50	MILL CREEK PKWY
County: Clinton	City: Clinton	

Major Cause: Failed to keep in proper lane

Roadway Type: Feature: Non-junction/no special feature

Severity:: Suspected Minor Injury
Manner of Crash: Head-on (front to front)

Fatalities: 0
Surface Conditions: Dry

Major Injuries: 0
Light Conditions: Daylight

Minor Injuries: 2
Weather Conditions: Clear

Possible Injuries: 0
Drug/Alc Involved: Under Influence of Alcohol/Drugs/Medications

Severity:: Suspected Minor Injury
Property Damage: $10,000
Number of Vehicles: 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	South	North	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Passenger van (seats < 9)	Sport utility vehicle	
Driver Age:	42	69	
Driver Gender:	F	M	
Driver Cond:	Under the influence of alcohol	Apparently normal	
Driver Contr 1:	Failed to keep in proper lane	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

20211248127	06/30/2021 06:53	MILL CREEK PKWY AND 16TH ST NW
County: Clinton	City: Clinton	

Major Cause: Ran stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Possible/Unknown Injury
Manner of Crash: Broadside (front to side)

Fatalities: 0
Surface Conditions: Dry

Major Injuries: 0
Light Conditions: Daylight

Minor Injuries: 0
Weather Conditions: Fog, smoke, smog

Possible Injuries: 1
Drug/Alc Involved: None Indicated

Severity:: Possible/Unknown Injury
Property Damage: $3,300
Number of Vehicles: 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	North	East	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Passenger car	Passenger car	
Driver Age:	68	57	
Driver Gender:	F	F	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Ran stop sign	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

Crash Detail Report

20211272561	11/21/2021 01:42	MILL CREEK PKWY
County: Clinton	City: Clinton	

Major Cause: Ran off road - right

Roadway Type: Feature: Non-junction/no special feature

Severity:: Suspected Minor Injury
Manner of Crash: Sideswipe (opposite direction)

Fatalities: 0
Surface Conditions: Dry

Major Injuries: 0
Light Conditions: Dark - roadway not lighted

Minor Injuries: 2
Weather Conditions: Clear

Possible Injuries: 0
Drug/Alc Involved: Refused

Severity:: Suspected Minor Injury
Property Damage: $65,000
Number of Vehicles: 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	South	North	
Veh Action:	Leaving traffic lane	Movement essentially straight	
Configuration:	Passenger car	Four-tire light truck (pick-up)	
Driver Age:	42	35	
Driver Gender:	M	M	
Driver Cond:	Under the influence of alcohol	Apparently normal	
Driver Contr 1:	Lost control	No improper action	
Driver Contr 2:	Failed to keep in proper lane	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

20221284731	01/25/2022 15:55	16TH ST NW
County: Clinton	City: Clinton	

Major Cause: Driver Distraction: Manual operation of an electronic communication device

Roadway Type: Feature: Non-junction/no special feature

Severity:: Property Damage Only
Manner of Crash: Non-collision (single vehicle)

Fatalities: 0
Surface Conditions: Dry

Major Injuries: 0
Light Conditions: Daylight

Minor Injuries: 0
Weather Conditions: Clear

Possible Injuries: 0
Drug/Alc Involved: None Indicated

Severity:: Property Damage Only
Property Damage: $1,650
Number of Vehicles: 1

	Unit 1	Unit	Unit
Init Trav Dir:	North		
Veh Action:	Movement essentially straight		
Configuration:	Passenger car		
Driver Age:	22		
Driver Gender:	M		
Driver Cond:	Apparently normal		
Driver Contr 1:	Other		
Driver Contr 2:	Not reported		
Fixed Object:	Traffic sign support		

Crash Detail Report

20221309926	07/15/2022 20:00	16TH ST NW AND MILL CREEK PARKWAY
County: Clinton	City: Clinton	

Major Cause: FTYROW: From stop sign
Roadway Type: Intersection: Four-way intersection
Severity:: Property Damage Only
Manner of Crash: Broadside (front to side)
Fatalities: 0
Surface Conditions: Wet
Major Injuries: 0
Light Conditions: Dusk
Minor Injuries: 0
Weather Conditions: Rain
Possible Injuries: 0
Drug/Alc Involved: None Indicated
Severity:: Property Damage Only
Property Damage: $4,000
Number of Vehicles: 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	South	East	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Passenger car	Sport utility vehicle	
Driver Age:	17	34	
Driver Gender:	M	F	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	FTYROW: From stop sign	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

20221317563	09/01/2022 16:20	MILL CREEK PARKWAY/16TH ST NW
County: Clinton	City: Clinton	

Major Cause: Driver Distraction: Other interior distraction
Roadway Type: Intersection: Four-way intersection
Severity:: Property Damage Only
Manner of Crash: Rear-end (front to rear)
Fatalities: 0
Surface Conditions: Dry
Major Injuries: 0
Light Conditions: Daylight
Minor Injuries: 0
Weather Conditions: Clear
Possible Injuries: 0
Drug/Alc Involved: None Indicated
Severity:: Property Damage Only
Property Damage: $7,500
Number of Vehicles: 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	North	North	
Veh Action:	Movement essentially straight	Turning left	
Configuration:	Sport utility vehicle	Sport utility vehicle	
Driver Age:	16	34	
Driver Gender:	F	F	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Other	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

Crash Detail Report

20221333151	11/28/2022 10:34	16TH ST NW AND MILL CREEK PARKWAY
County: Clinton	City: Clinton	

Major Cause: FTYROW: From stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Property Damage Only **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Property Damage Only **Property Damage:** $5,500 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	East	North	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Sport utility vehicle	Passenger car	
Driver Age:	47	59	
Driver Gender:	M	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	No improper action	FTYROW: From stop sign	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

20231350338	03/02/2023 10:20	16TH ST NW AND MILL CREEK PARKWAY
County: Clinton	City: Clinton	

Major Cause: Ran stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Property Damage Only **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Cloudy

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Property Damage Only **Property Damage:** $3,000 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	North	East	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Four-tire light truck (pick-up)	Tractor/semi-trailer	
Driver Age:	77	18	
Driver Gender:	M	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Ran stop sign	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

Crash Detail Report

20231363504	05/24/2023 17:37	16TH ST NW AND MILL CREEK PARKWAY
County: Clinton	City: Clinton	

Major Cause: Ran stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Suspected Serious Injury **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 4 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Suspected Serious Injury **Property Damage:** $23,000 **Number of Vehicles:** 3

	Unit 1	Unit 2	Unit 3
Init Trav Dir:	South	West	West
Veh Action:	Movement essentially straight	Movement essentially straight	Movement essentially straight
Configuration:	Sport utility vehicle	Sport utility vehicle	Passenger car
Driver Age:	36	27	35
Driver Gender:	F	F	M
Driver Cond:	Apparently normal	Apparently normal	Apparently normal
Driver Contr 1:	Ran stop sign	No improper action	No improper action
Driver Contr 2:	Not reported	Not reported	Not reported
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	None (no fixed object struck)

20241437982	08/21/2024 15:54	MILLCREEK PARKWAY
County: Clinton	City: Clinton	

Major Cause: Driving too fast for conditions

Roadway Type: Intersection: Four-way intersection

Severity:: Property Damage Only **Manner of Crash:** Rear-end (front to rear)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Property Damage Only **Property Damage:** $4,000 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	East	East	
Veh Action:	Movement essentially straight	Turning left	
Configuration:	Passenger car	Passenger car	
Driver Age:	75	21	
Driver Gender:	F	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Driving too fast for conditions	No improper action	
Driver Contr 2:	Followed too close	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

Exhibit J – Traffic Counts (Peak Hour)

PM PEAK TIME PERIOD	NORTHBOUND ON			WESTBOUND ON			SOUTHBOUND ON			EASTBOUND ON			
	L	S	R	L	S	R	L	S	R	L	S	R	
3:45 - 4:00	0	17	7	18	67	0	0	6	19	29	58	1	222
	0	0	0	0	1	0	0	0	0	0	0	0	1
4:00 - 4:15	0	15	8	12	57	0	0	14	11	23	70	1	211
	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 - 4:30	0	10	7	17	73	0	0	7	20	17	54	0	205
	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 - 4:45	0	10	8	18	41	0	0	13	17	21	62	1	191
	0	0	0	0	0	0	0	0	0	0	2	0	2
TOTAL	0	52	30	65	240	0	0	40	67	90	247	3	834

These counts were taken on August 6, 2024. When school is in session, there are approximately 40-50 additional left turns from the west bound direction on Mill Creek Parkway during the peak hour.

The left turn lanes in westbound and eastbound direction are warranted during peak hours at this intersection while school is in session, at approximately 105 westbound left turns and 90 east bound left turns.

County:	Clinton	Prepared By:	ECIA
Location:	Mill Creek Parkway & 16th St. NW	Date Prepared:	7/8/2025
Proposed Improvements:	Roundabout		
Estimated Improvement Cost:	$ 1,400,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 1,000

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	44	**44.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	44.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	4	44.0	**0.80**	**0.35**
Minor Injury (B)	$ 290,000	5	44.0	**1.00**	**0.44**
Possible/Unknown Injury (C)	$ 135,000	5	44.0	**1.00**	**0.44**
Property Damage Only (O)	$ 20,000	9	44.0	**1.80**	**0.79**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ 1,513,600**
Minor Injury (B)	**$ 127,600**
Possible/Unknown Injury (C)	**$ 59,400**
Property Damage Only (O)	**$ 15,840**

Total Benefits and Costs

		Implementation Cost	$ 1,400,000
		Present Value of Maint.	$ 13,590
Present Value Benefits (Societal Benefits)	$ 25,353,031	Present Value Costs (Impl. and Maint. Costs)	$ 1,413,590
Present Value Net Return	$ 23,939,441		
Benefit Cost Ratio	**17.94**		

Form continues on next page

Application for

Transportation Safety Improvement Program

Iowa Department of Transportation



NE Alice's Rd & Berkshire Pkwy Roundabout

Clive, Iowa

August 15, 2025

Clive

Distinct by Nature

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** August 15, 2025

Location / Title of Project NE Alice's Rd & Berkshire Pkwy Roundabout

Applicant Clive, IA

Contact Person Jeff May Title Public Works Director

Complete Mailing Address 2123 NW 111th St

Clive, IA 50325

Phone (515) 223-6231 E-Mail jmay@cityofclive.com

(Area Code)

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s)

Contact Person Title

Complete Mailing Address

Phone E-Mail

(Area Code)

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	1,512,000
Total Project Cost	$	1,946,000
Safety Funds Requested	**$**	**500,000**

P

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
SI_104431	NE Alice's Rd & Berkshire Pkwy	☐	☒	0.2133	-0.0012

Rev. 07/23

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Clive

Signed: _____ August 15, 2025
Signature Date Signed

Vim Hagelie
Printed Name

Attest: _____ 8/15/2025
Signature Date Signed

Jon Cyson
Printed Name

RESOLUTION NO. 2025-222

A RESOLUTION AUTHORIZING THE CITY OF CLIVE, IOWA, TO MAKE AN APPLICATION TO THE IOWA DEPARTMENT OF TRANSPORTATION TRAFFIC SAFETY IMPROVEMENT PROGRAM (TSIP) FOR THE PARTIAL FUNDING OF THE ALICE'S ROAD CORRIDOR PROJECT AND FURTHER APPROVING THE APPLICATION WHICH OBLIGATES THE CITY TO MATCHING FUNDS FOR THE CONSTRUCTION OF SAID PROJECT

WHEREAS, the Iowa Department of Transportation has established the TSIP and provides funding for locations where vehicular safety is a concern and documented; and

WHEREAS, the Alice's Road Corridor Project has been identified where vehicular safety and traffic flow could be improved and funded by TSIP; and

WHEREAS, the proposed improvements, including construction of a roundabout at the Alice's Road and Berkshire Parkway intersection, will help reduce crashes in the project area and improve traffic operations.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CLIVE, IOWA:

1. The City Council supports and approves the application for Traffic Safety Improvement Program (TSIP) funding.

2. The City Council hereby commits to accepting and maintaining these improvements.

3. The Mayor is hereby authorized to execute the application and award agreement on behalf of the Clive City Council.

PASSED AND APPROVED this 24 day of July, 2025

CITY OF CLIVE, IOWA

By: John Edwards
John Edwards, Mayor

Attest:

Matthew D. Graham, City Clerk

1. NARRATIVE

A multilane roundabout is planned for the intersection of NE Alice's Rd & Berkshire Pkwy in Clive. The existing two-way stop controlled (TWSC) intersection is located in an area that has planned developments in the area. NE Alice's Rd is under construction, south of Douglas Pkwy, to widen from the existing two-lane roadway to a four-lane roadway with median and similar, multilane roundabout at the intersection of NE Alice's Rd & NE Boston Pkwy. A roundabout was selected as the preferred alternative for the NE Alice's Rd & Berkshire Pkwy intersection based on a lifecycle cost comparison analysis (LCCA) that compared a roundabout and signalized intersection alternative costs, including safety costs.

2. EXISTING CONDITIONS

Berkshire Pkwy is a two-lane urban street with no parking allowed on either side of the street. Berkshire Pkwy runs through a neighborhood development connecting residents to NE Alice's Rd, Douglas Pkwy, and Westgate Pkwy. Berkshire Pkwy has a posted speed limit of 25 miles per hour (mph). Berkshire Pkwy has an eight-foot wide trail located along the north side and a four-foot wide sidewalk located along the south side except for at the intersection with NE Alice's Rd.

The NE Alice's Rd corridor is a major collector with a posted speed limit of 35 mph that connects the adjacent residential neighborhood to the commercial developments along NE Alice's Rd south of NE Horizon Dr. It is a two-lane rural section at the intersection of NE Alice's Rd & Berkshire Pkwy. NE Alice's Rd is under construction south of Douglas Pkwy to be widened to a four-lane roadway with median and a four-lane roadway with median north of Meredith Dr.

3. TRAFFIC DATA

Traffic data was collected for the overall project in 2023, including at NE Alice's Rd & Berkshire Pkwy intersection. The Annual Average Daily Traffic (AADT) on NE Alice's Rd at the intersection was 7,800 vehicles per day (vpd) and 870 vpd on Berkshire Pkwy.

4. CRASH HISTORY

For the five years of crash analysis (2020-2024), this intersection has experienced 4 crashes. The crashes at the intersection of NE Alice's Rd & Berkshire Pkwy have been three broadside collisions and one side swipe. The major cause of these crashes is identified in police reports as being two accounts of Failure to yield right of way (FTYROW) while making a left turn, one account of FTYROW from a stop sign, and failed to keep in proper lane. The crashes at this intersection over this time resulted in two suspected minor/non-incapacitating injuries and 3 possible (complaints of pain/injury) injuries. With developable land in the area and increasing traffic volumes, crashes and crash severity are expected to increase. The LCCA projected a $128,000 20-year crash cost reduction for a roundabout compared to the signalized intersection alternative. The planned roundabout is expected to reduce crash potential, particularly for injury crashes.

Fortunately, speed has not been identified as a cause of crashes occurring at the intersection. With the proposed improvements to NE Alice's Rd, vehicular speeds could become a concern. A roundabout constructed at this intersection will provide traffic calming and reduce vehicular speeds at the intersection, reducing the potential severity of crashes.

5. PROPOSED IMPROVEMENTS

The proposed improvements for the NE Alice's Rd & Berkshire Pkwy intersection include converting the current TWSC intersection into a multilane (2x1) roundabout (Attachment G). The roundabout construction will be a portion of a larger construction project that will construct NE Alice's Rd to a four-lane corridor, sidewalk/trail construction and associated utility modifications from the Berkshire Pkwy intersection north to the Meredith Dr intersection.

The expected safety benefits for the proposed Roundabout compared to the alternative signal include the following:

- Reduction in head on and Broadside collisions for all directions due to roundabout geometry and median.
- Reduction in rear-end crashes near the intersection due to vehicles moving more freely through the Roundabout.
- Reduction of the potential for vehicles colliding with the signal poles and other fixed objects due to the reduction of fixed objects.
- Reduction in travel speeds through the intersection due to roundabout geometry

Iowa DOT planning level crash reduction factors (CRF) indicate that replacing an unsignalized intersection in an urban area with a roundabout would be expected to provide an average crash reduction of 45% for all crashes. For fatal and injury crashes, the expected crash reduction is 75%. When comparing the safety benefits of the roundabout to a signalized intersection which would be needed by 2060 would be an expected crash reduction of 20% for all crashes. For fatal and injury crashes, the expected crash reduction is 65%. The proposed roundabout alternative offers a significant safety improvement over the existing unsignalized intersection and the otherwise necessary signalized intersection.

Improvements to the NE Alice's Rd & Berkshire Pkwy intersection are a portion of the overall NE Alice's Rd project that is constructing NE Alice's Rd from the existing two-lane roadway to four-lane roadway with median. As previously indicated, NE Alice's Rd is currently under construction south of Douglas Pkwy, through 2026. This project will be constructed in 2027. The remaining portions of NE Alice's Rd will be constructed following in 2028 and 2029, including improvements to the NE Alice's Rd & Douglas Pkwy intersection.

OPINION OF PROBABLE PROJECT CONSTRUCTION COSTS

SNYDER & ASSOCIATES

Alice's Road - Phase 4
Alice's Road and Berkshire Parkway RAB
Clive, Iowa
123.1396.01
8/15/2025

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE	NOTES
1	Clearing and Grubbing	LS	1	$ 3,000.00	$ 3,000.00	
2	Topsoil, On-site	CY	3,000	$ 10.00	$ 30,000.00	
3	Excavation, Class 10	CY	8,000	$ 12.00	$ 96,000.00	
4	Soil Quality Restoration	SY	3,200	$ 10.00	$ 32,000.00	
5	Subgrade Preparation	SY	6,800	$ 3.00	$ 20,400.00	
6	Subgrade Treatment, Cement Stabilization	SY	6,800	$ 8.50	$ 57,800.00	
7	Subbase, Modified, 6"	SY	6,800	$ 12.00	$ 81,600.00	
8	Storm Sewer, Trenched, RCP, Less than 36"	LF	450	$ 75.00	$ 33,750.00	
9	Removal of Storm Sewer, RCP, Less than or Equal to 24"	LF	150	$ 15.00	$ 2,250.00	
10	Subdrain, Type 1, 6"	LF	4,200	$ 20.00	$ 84,000.00	
11	Subdrain Cleanout, Type A-1, 6"	EA	4	$ 700.00	$ 2,800.00	
12	Subdrain Outlets and Connections, CMP, 6"	EA	14	$ 350.00	$ 4,900.00	
13	Water Main, Trenched, PVC, 12"	LF	910	$ 65.00	$ 59,150.00	
14	Fitting	LB	100	$ 10.00	$ 1,000.00	
15	Valve, Gate, 12"	EA	1	$ 4,000.00	$ 4,000.00	
16	Fire Hydrant Assembly	EA	1	$ 6,500.00	$ 6,500.00	
17	Manhole, Type SW-401, 48"	EA	1	$ 5,000.00	$ 5,000.00	
18	Intake, Type SW-501	EA	3	$ 4,000.00	$ 12,000.00	
19	Intake, Type SW-506	EA	4	$ 8,000.00	$ 32,000.00	
20	Manhole Adjustment, Minor	EA	2	$ 3,000.00	$ 6,000.00	
21	Remove Intake	EA	3	$ 1,000.00	$ 3,000.00	
22	Pavement, PCC, 9"	SY	5,670	$ 75.00	$ 425,250.00	
23	Pavement, PCC, 9", Truck Apron	SY	300	$ 100.00	$ 30,000.00	
24	Removal of Sidewalk and Shared Use Path	SY	80	$ 10.00	$ 800.00	
25	Removal of Driveway	SY	100	$ 10.00	$ 1,000.00	
26	Shared Use Path, PCC, 6"	SY	450	$ 40.00	$ 18,000.00	
27	Special Subgrade Preparation for Shared Use Path	SY	450	$ 3.00	$ 1,350.00	
28	Sidewalk, PCC, 5"	SY	670	$ 75.00	$ 50,250.00	
29	Detectable Warnings	SF	280	$ 55.00	$ 15,400.00	
30	Driveway, Paved, PCC, 6"	SY	80	$ 55.00	$ 4,400.00	
31	Pavement Removal	SY	3,030	$ 11.00	$ 33,330.00	
32	Lighting	EA	11	$ 9,000.00	$ 99,000.00	*See Note 1
33	Light Pole Removal	EA	1	$ 1,500.00	$ 1,500.00	
34	RRFB Signals	EA	4	$ 20,000.00	$ 80,000.00	
35	Concrete Median, 6"	SY	310	$ 120.00	$ 37,200.00	
36	Painted Pavement Markings, Durable	STA	12.0	$ 400.00	$ 4,800.00	*See Note 2
37	Painted Symbols and Legends, Durable	EA	8	$ 500.00	$ 4,000.00	*See Note 2
38	Temporary Traffic Control	LS	1	$ 10,000.00	$ 10,000.00	*See Note 3
39	Signing	LS	1	$ 8,000.00	$ 8,000.00	
40	Erosion Control and Seeding	LS	1	$ 40,000.00	$ 40,000.00	
41	Roundabout Landscaping	LS	1	$ 65,000.00	$ 65,000.00	
42	Construction Survey	LS	1	$ 15,000.00	$ 15,000.00	
43	Mobilization	LS	1	$ 60,000.00	$ 60,000.00	

Notes

(1) Assumes Mid American to Furnish and Install
(2) Includes Grooving of Pavement
(3) Assumes Full Road Closure
(4) Does not include Utility related and landscaping items

Construction Subtotal:	$ 1,581,430.00	
Contingency (20%)	$ 316,570.00	
Construction Total:	$ 1,898,000.00	
Safety Construction Total:	$ 1,512,000.00	*See Note 4

Other RAB Project Costs

Right of Way:	$ 48,000.00	
TOTAL PROJECT COST:	**$ 1,946,000.00**	

PROPOSED PROJECT SCHEDULE
NE ALICE'S RD & BERKSHIRE PKWY ROUNDABOUT
CLIVE, IOWA

TSIP Application	August 2025
Iowa DOT Approval of TSIP	December 2025
TSIP Agreement	January 2026
Project Design and ROW Acquisition	Present-December 2026
Project Letting	January 2027
Project Construction	March-December 2027

8/7/2025
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SNYDER & ASSOCIATES

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NE ALICE'S RD & BERKSHIRE PKWY ROUNDABOUT

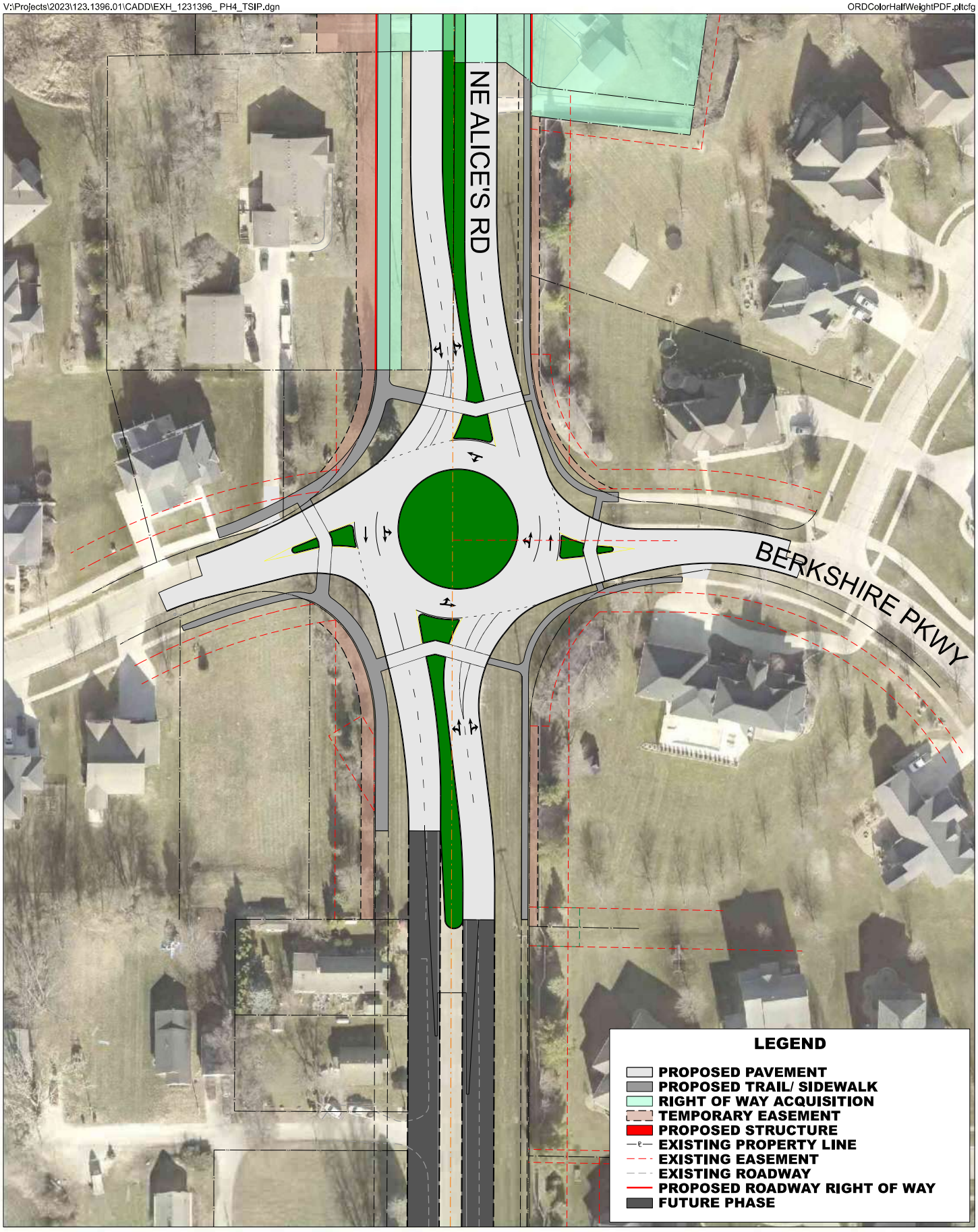
Alice's Road Reconstruction | Clive, Iowa | 08/15/2025

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PHOTOS
NE ALICE'S RD & BERKSHIRE PKWY INTERSECTION IMPROVEMENTS –
CLIVE, IOWA

NE Alice's Rd viewing North **At Berkshire Pkwy**	**NE Alice's Rd viewing South** **At Berkshire Pkwy**
	
Berkshire Pkwy viewing East **At NE Alice's Rd**	**Berkshire Pkwy viewing West** **At NE Alice's Rd**
	

8/8/2025
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FEET

NE ALICE'S RD & BERKSHIRE PKWY ROUNDABOUT

Alice's Road Reconstruction | Clive, Iowa | 08/15/2025

8/7/2025
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choover
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FEET

NE ALICE'S RD & BERKSHIRE PKWY ROUNDABOUT

Alice's Road Reconstruction | Clive, Iowa | 08/15/2025

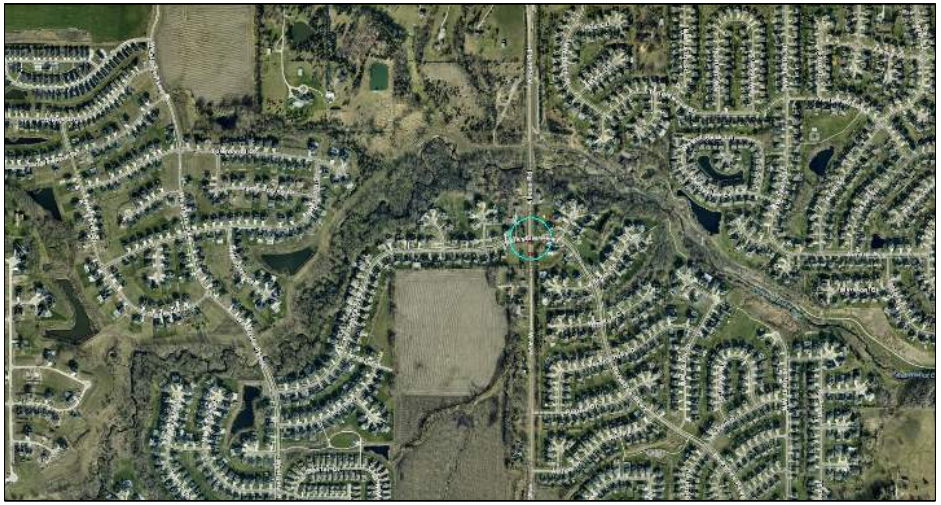
Iowa Crash Analysis Tool
Quick Report
2020-2024

Crash Severity	4
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	1
Property Damage Only	2

Injury Status Summary	5
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	2
Possible (complaint of pain/injury)	3
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	65,000.00
Average (per crash dollars):	16,250.00
Total Vehicles:	8.00
Average (per crash):	2.00
Total Occupants:	12.00
Average (per crash):	3.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	1.25
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.50
Possible/Unknown Injuries/Crash:	0.75



Iowa Crash Analysis Tool
Quick Report
2020-2024

Major Cause	4		
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	1	FTYROW: From yield sign	0
FTYROW: Making left turn	2	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	1
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Iowa Crash Analysis Tool
Quick Report
2020-2024

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	**Total**
Sunday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Monday	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Friday	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	2	1	0	0	0	4

Manner of Crash Collision	4
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	3
Sideswipe (same direction)	1
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	4
Dry	4
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			8
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	8

Iowa Crash Analysis Tool
Quick Report
2020-2024

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	1	0	0	1
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	0	0	0	0	0
>= 25 and <= 29	0	1	0	0	1
>= 30 and <= 34	1	1	0	0	2
>= 35 and <= 39	0	0	0	0	0
>= 40 and <= 44	0	1	0	0	1
>= 45 and <= 49	1	0	0	0	1
>= 50 and <= 54	1	1	0	0	2
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	3	5	0	0	8

Drug/Alcohol Related	4
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	4

Alcohol Test Given	8
None	8
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Given	8
None	8
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

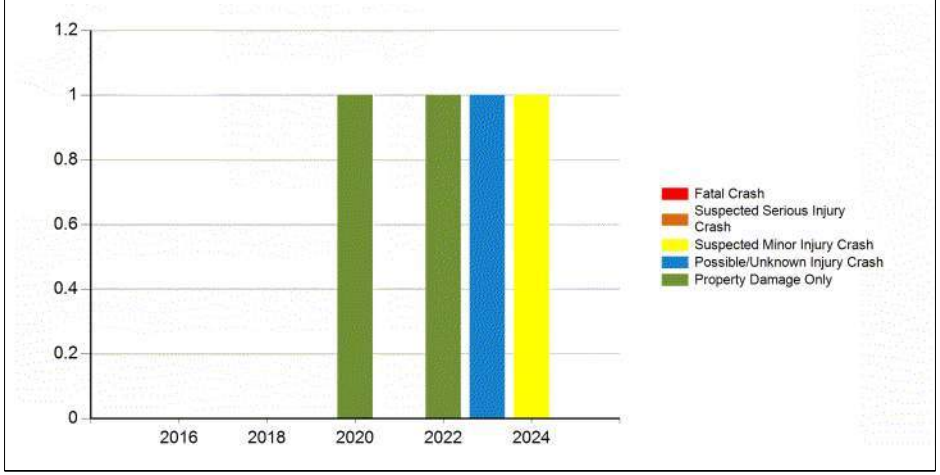
Drug Test Result	8
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	8
Other	0

Iowa Crash Analysis Tool
Quick Report
2020-2024

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	1	1
2021	0	0	0	0	0	0
2022	0	0	0	0	1	1
2023	0	0	0	1	0	1
2024	0	0	1	0	0	1
2025	0	0	0	0	0	0
Total	0	0	1	1	2	4

Severity/Year

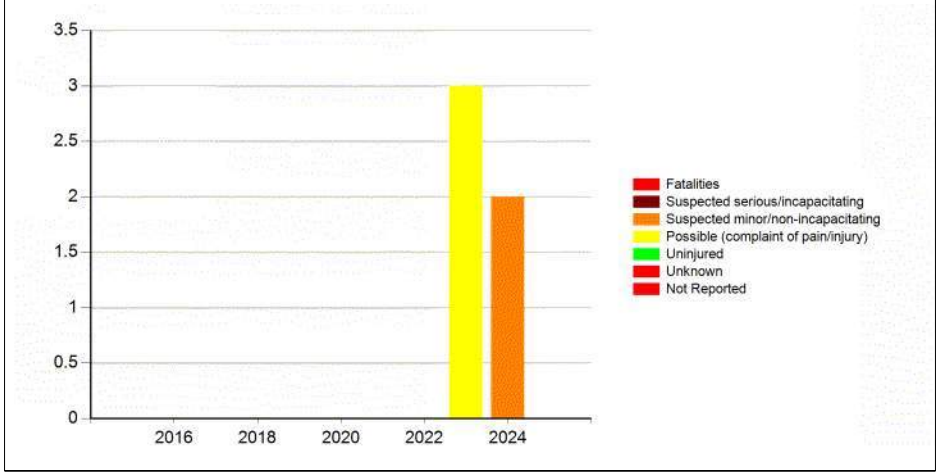


Iowa Crash Analysis Tool
Quick Report
2020-2024

Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	Total
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
2023	0	0	0	3	0	0	0	3
2024	0	0	2	0	0	0	0	2
2025	0	0	0	0	0	0	0	0
Total	0	0	2	3	0	0	0	5

Injury Status/Year



Snyder & Associates
2727 SW Snyder Blvd
Ankeny, IA 50023

ALICE'S RD & BERKSHIRE PKWY
NE Alice's Rd- NE Horizon to Meredith
Clive
123.1396.01

File Name : 24hr_tmc_Alices-Berkshire_2023-11-30
Site Code :
Start Date : 11/30/2023
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	ALICE'S RD From North					Berkshire Pkwy From East					ALICE'S RD From South					Berkshire Pkwy From West					
Start Time	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
12:00 AM	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	0	0	2	0	2	6
12:15 AM	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	4
12:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
12:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	3	0	0	3	0	0	0	0	0	2	6	0	0	8	0	0	4	0	4	15
01:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
01:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	3
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
02:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
03:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
04:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
04:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:30 AM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
04:45 AM	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	11
Total	0	8	0	0	8	1	0	0	0	1	0	6	0	0	6	1	0	1	0	2	17
05:00 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
05:15 AM	0	8	0	0	8	1	0	0	0	1	1	4	0	0	5	0	0	2	0	2	16
05:30 AM	0	9	0	0	9	0	0	1	0	1	0	10	0	0	10	0	1	0	0	1	21
05:45 AM	0	21	0	0	21	0	0	0	0	0	0	12	0	0	12	0	0	2	0	2	35
Total	0	41	0	0	41	1	0	1	0	2	1	29	0	0	30	0	1	4	0	5	78
06:00 AM	0	19	1	0	20	0	0	1	0	1	1	21	0	0	22	2	0	1	0	3	46
06:15 AM	0	16	0	0	16	0	0	3	0	3	0	19	1	0	20	1	0	3	0	4	43
06:30 AM	0	40	0	0	40	0	1	0	0	1	0	36	1	0	37	4	4	5	0	13	91
06:45 AM	3	54	0	0	57	2	0	2	0	4	1	41	0	0	42	1	0	2	0	3	106
Total	3	129	1	0	133	2	1	6	0	9	2	117	2	0	121	8	4	11	0	23	286
07:00 AM	1	50	0	0	51	1	0	3	0	4	3	46	0	0	49	1	0	6	0	7	111
07:15 AM	3	92	1	0	96	1	1	2	0	4	1	74	1	0	76	7	2	8	0	17	193
07:30 AM	1	121	1	0	123	2	0	2	0	4	2	82	1	0	85	7	4	16	0	27	239
07:45 AM	2	110	1	0	113	5	2	8	0	15	5	70	2	0	77	3	2	7	0	12	217
Total	7	373	3	0	383	9	3	15	0	27	11	272	4	0	287	18	8	37	0	63	760
08:00 AM	2	76	2	0	80	2	3	6	0	11	2	66	0	0	68	5	1	6	0	12	171
08:15 AM	1	52	0	0	53	1	1	3	0	5	2	53	1	0	56	7	5	8	0	20	134
08:30 AM	4	65	5	0	74	3	0	8	0	11	3	57	0	0	60	21	4	4	0	29	174
08:45 AM	1	78	6	0	85	1	2	2	0	5	7	59	0	0	66	2	1	3	0	6	162
Total	8	271	13	0	292	7	6	19	0	32	14	235	1	0	250	35	11	21	0	67	641

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ALICE'S RD & BERKSHIRE PKWY
NE Alice's Rd- NE Horizon to Meredith
Clive
123.1396.01

File Name : 24hr_tmc_Alices-Berkshire_2023-11-30
Site Code :
Start Date : 11/30/2023
Page No : 2

Groups Printed- Cars - Heavy Vehicles

	ALICE'S RD From North					Berkshire Pkwy From East					ALICE'S RD From South					Berkshire Pkwy From West					
Start Time	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
09:00 AM	3	41	1	0	45	2	2	1	0	5	1	54	0	0	55	1	3	2	0	6	111
09:15 AM	1	37	3	0	41	0	1	1	0	2	2	33	2	0	37	2	1	7	0	10	90
09:30 AM	2	32	1	0	35	0	2	0	0	2	1	44	1	0	46	1	2	6	0	9	92
09:45 AM	0	44	1	0	45	1	0	1	0	2	7	39	1	0	47	2	0	4	0	6	100
Total	6	154	6	0	166	3	5	3	0	11	11	170	4	0	185	6	6	19	0	31	393
10:00 AM	1	33	1	0	35	1	2	0	0	3	1	40	0	0	41	0	1	5	0	6	85
10:15 AM	2	42	1	0	45	1	1	3	0	5	5	40	1	0	46	0	0	0	0	0	96
10:30 AM	2	38	1	0	41	0	2	1	0	3	1	32	0	0	33	3	1	5	0	9	86
10:45 AM	0	41	3	0	44	0	0	1	0	1	0	44	0	0	44	2	1	1	0	4	93
Total	5	154	6	0	165	2	5	5	0	12	7	156	1	0	164	5	3	11	0	19	360
11:00 AM	0	35	1	0	36	2	2	0	0	4	2	50	1	0	53	1	2	1	0	4	97
11:15 AM	0	41	0	0	41	0	0	3	0	3	6	39	1	0	46	1	0	2	0	3	93
11:30 AM	1	50	1	0	52	1	2	1	0	4	3	56	1	0	60	3	1	8	0	12	128
11:45 AM	1	38	1	0	40	1	1	5	0	7	1	59	0	0	60	2	2	4	0	8	115
Total	2	164	3	0	169	4	5	9	0	18	12	204	3	0	219	7	5	15	0	27	433
12:00 PM	0	37	0	0	37	1	2	0	0	3	7	48	1	0	56	4	0	3	0	7	103
12:15 PM	0	50	1	0	51	0	0	4	0	4	8	52	1	0	61	0	1	4	0	5	121
12:30 PM	0	44	2	0	46	2	3	1	0	6	2	41	0	0	43	4	1	2	0	7	102
12:45 PM	1	53	4	0	58	0	2	2	0	4	3	41	1	0	45	2	1	3	0	6	113
Total	1	184	7	0	192	3	7	7	0	17	20	182	3	0	205	10	3	12	0	25	439
01:00 PM	6	47	3	0	56	2	3	0	0	5	6	48	1	0	55	1	2	2	0	5	121
01:15 PM	1	37	1	0	39	2	0	2	0	4	3	41	1	0	45	2	0	8	0	10	98
01:30 PM	1	48	2	0	51	2	0	4	0	6	3	55	2	0	60	1	2	5	0	8	125
01:45 PM	2	41	3	0	46	0	0	2	0	2	5	47	0	0	52	1	0	5	0	6	106
Total	10	173	9	0	192	6	3	8	0	17	17	191	4	0	212	5	4	20	0	29	450
02:00 PM	1	42	3	0	46	0	0	1	0	1	4	50	2	0	56	2	3	2	0	7	110
02:15 PM	0	42	1	0	43	1	1	2	0	4	5	36	1	0	42	0	1	3	0	4	93
02:30 PM	3	48	5	0	56	0	5	1	0	6	2	51	1	0	54	1	0	3	0	4	120
02:45 PM	2	51	2	0	55	1	3	0	0	4	4	62	0	0	66	1	1	4	0	6	131
Total	6	183	11	0	200	2	9	4	0	15	15	199	4	0	218	4	5	12	0	21	454
03:00 PM	3	42	1	0	46	2	0	6	0	8	6	94	2	0	102	5	2	3	0	10	166
03:15 PM	2	50	2	0	54	2	1	1	0	4	7	88	1	0	96	7	1	3	0	11	165
03:30 PM	4	73	6	0	83	0	4	5	0	9	4	90	1	0	95	5	1	7	0	13	200
03:45 PM	6	92	7	0	105	0	0	4	0	4	4	80	0	0	84	3	3	3	0	9	202
Total	15	257	16	0	288	4	5	16	0	25	21	352	4	0	377	20	7	16	0	43	733
04:00 PM	0	85	3	0	88	1	7	6	0	14	4	81	4	0	89	3	2	10	0	15	206
04:15 PM	4	87	3	0	94	0	7	4	0	11	4	107	2	0	113	4	3	2	0	9	227
04:30 PM	4	109	6	0	119	2	8	2	0	12	3	85	2	0	90	10	3	4	0	17	238
04:45 PM	2	109	7	0	118	1	4	4	0	9	9	87	2	0	98	2	3	6	0	11	236
Total	10	390	19	0	419	4	26	16	0	46	20	360	10	0	390	19	11	22	0	52	907
05:00 PM	4	94	7	0	105	1	3	2	0	6	7	112	2	0	121	6	4	5	0	15	247
05:15 PM	3	88	5	0	96	2	4	0	0	6	10	89	2	0	101	2	2	3	0	7	210
05:30 PM	3	66	4	0	73	1	7	5	0	13	9	79	2	0	90	3	1	5	0	9	185
05:45 PM	4	74	3	0	81	4	3	3	0	10	3	72	2	0	77	5	3	1	0	9	177
Total	14	322	19	0	355	8	17	10	0	35	29	352	8	0	389	16	10	14	0	40	819
06:00 PM	0	56	2	0	58	2	3	1	0	6	7	82	1	0	90	3	3	2	0	8	162
06:15 PM	0	71	4	0	75	0	3	2	0	5	3	51	1	0	55	5	1	9	0	15	150

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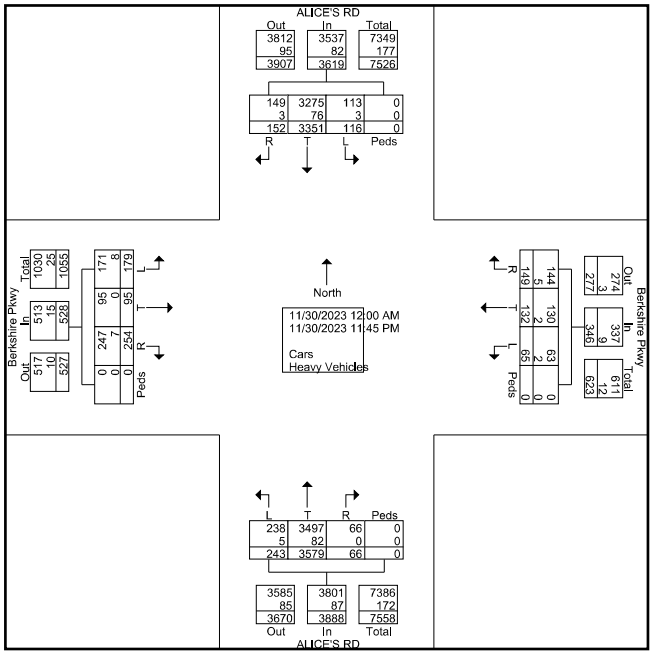
Groups Printed- Cars - Heavy Vehicles

	ALICE'S RD From North					Berkshire Pkwy From East					ALICE'S RD From South					Berkshire Pkwy From West					
Start Time	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 PM	1	50	4	0	55	0	2	1	0	3	2	51	0	0	53	2	1	5	0	8	119
06:45 PM	1	52	3	0	56	0	1	5	0	6	3	51	0	0	54	2	2	2	0	6	122
Total	2	229	13	0	244	2	9	9	0	20	15	235	2	0	252	12	7	18	0	37	553
07:00 PM	2	43	3	0	48	3	4	2	0	9	3	55	1	0	59	1	0	0	0	1	117
07:15 PM	8	39	1	0	48	0	2	0	0	2	3	79	4	0	86	0	0	4	0	4	140
07:30 PM	3	31	3	0	37	0	2	2	0	4	4	57	1	0	62	0	2	2	0	4	107
07:45 PM	1	27	1	0	29	0	3	2	0	5	1	42	1	0	44	1	2	3	0	6	84
Total	14	140	8	0	162	3	11	6	0	20	11	233	7	0	251	2	4	9	0	15	448
08:00 PM	2	21	0	0	23	1	1	4	0	6	1	33	0	0	34	1	0	1	0	2	65
08:15 PM	1	25	2	0	28	1	3	4	0	8	6	33	0	0	39	2	1	1	0	4	79
08:30 PM	2	16	7	0	25	0	2	1	0	3	4	41	1	0	46	3	2	0	0	5	79
08:45 PM	0	21	3	0	24	0	2	2	0	4	1	31	0	0	32	1	0	0	0	1	61
Total	5	83	12	0	100	2	8	11	0	21	12	138	1	0	151	7	3	2	0	12	284
09:00 PM	1	20	0	0	21	0	1	0	0	1	5	20	4	0	29	2	0	2	0	4	55
09:15 PM	1	14	4	0	19	0	1	1	0	2	5	26	1	0	32	0	1	0	0	1	54
09:30 PM	3	10	1	0	14	1	4	2	0	7	1	12	1	0	14	0	1	2	0	3	38
09:45 PM	1	6	0	0	7	0	2	1	0	3	2	19	1	0	22	0	0	1	0	1	33
Total	6	50	5	0	61	1	8	4	0	13	13	77	7	0	97	2	2	5	0	9	180
10:00 PM	0	10	0	0	10	0	1	0	0	1	0	15	1	0	16	0	1	0	0	1	28
10:15 PM	1	6	0	0	7	0	0	0	0	0	3	6	0	0	9	0	0	0	0	0	16
10:30 PM	0	10	0	0	10	0	2	0	0	2	2	7	0	0	9	1	0	0	0	1	22
10:45 PM	0	5	0	0	5	1	1	0	0	2	2	14	0	0	16	0	0	1	0	1	24
Total	1	31	0	0	32	1	4	0	0	5	7	42	1	0	50	1	1	1	0	3	90
11:00 PM	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
11:15 PM	1	2	1	0	4	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	8
11:30 PM	0	1	0	0	1	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	5
11:45 PM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
Total	1	11	1	0	13	0	0	0	0	0	2	16	0	0	18	1	0	0	0	1	32
Grand Total	116	3351	152	0	3619	65	132	149	0	346	243	3579	66	0	3888	179	95	254	0	528	8381
Apprch %	3.2	92.6	4.2	0		18.8	38.2	43.1	0		6.2	92.1	1.7	0		33.9	18	48.1	0		
Total %	1.4	40	1.8	0	43.2	0.8	1.6	1.8	0	4.1	2.9	42.7	0.8	0	46.4	2.1	1.1	3	0	6.3	
Cars	113	3275	149	0	3537	63	130	144	0	337	238	3497	66	0	3801	171	95	247	0	513	8188
% Cars	97.4	97.7	98	0	97.7	96.9	98.5	96.6	0	97.4	97.9	97.7	100	0	97.8	95.5	100	97.2	0	97.2	97.7
Heavy Vehicles	3	76	3	0	82	2	2	5	0	9	5	82	0	0	87	8	0	7	0	15	193
% Heavy Vehicles	2.6	2.3	2	0	2.3	3.1	1.5	3.4	0	2.6	2.1	2.3	0	0	2.2	4.5	0	2.8	0	2.8	2.3

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ALICE'S RD & BERKSHIRE PKWY
NE Alice's Rd- NE Horizon to Meredith
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File Name : 24hr_tmc_Alices-Berkshire_2023-11-30
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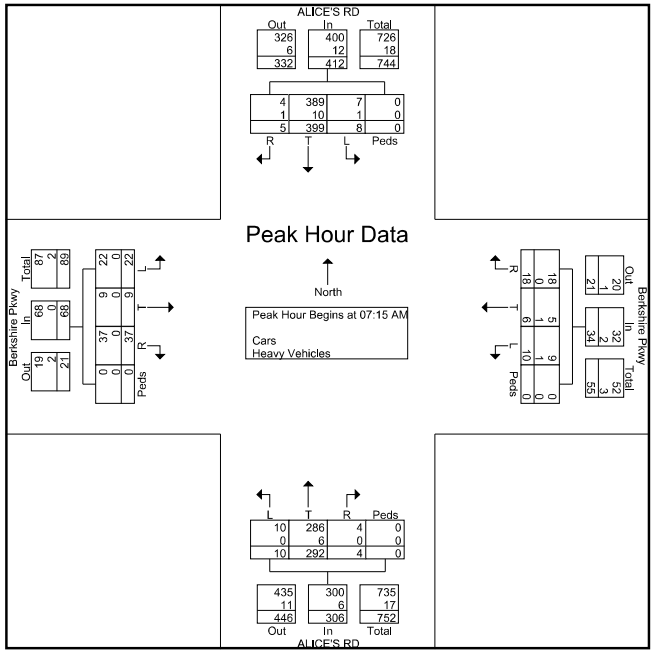


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ALICE'S RD & BERKSHIRE PKWY
NE Alice's Rd- NE Horizon to Meredith
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123.1396.01

File Name : 24hr_tmc_Alices-Berkshire_2023-11-30
Site Code :
Start Date : 11/30/2023
Page No : 5

	ALICE'S RD From North					Berkshire Pkwy From East					ALICE'S RD From South					Berkshire Pkwy From West					
Start Time	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	**3**	92	1	0	96	1	1	2	0	4	1	74	1	0	76	**7**	2	8	0	17	193
07:30 AM	1	**121**	1	0	**123**	2	0	2	0	4	2	**82**	1	0	**85**	7	**4**	**16**	0	**27**	**239**
07:45 AM	2	110	1	0	113	**5**	2	**8**	0	**15**	**5**	70	**2**	0	77	3	2	7	0	12	217
08:00 AM	2	76	**2**	0	80	2	**3**	6	0	11	2	66	0	0	68	5	1	6	0	12	171
Total Volume	8	399	5	0	412	10	6	18	0	34	10	292	4	0	306	22	9	37	0	68	820
% App. Total	1.9	96.8	1.2	0		29.4	17.6	52.9	0		3.3	95.4	1.3	0		32.4	13.2	54.4	0		
PHF	.667	.824	.625	.000	.837	.500	.500	.563	.000	.567	.500	.890	.500	.000	.900	.786	.563	.578	.000	.630	.858
Cars	7	389	4	0	400	9	5	18	0	32	10	286	4	0	300	22	9	37	0	68	800
% Cars	87.5	97.5	80.0	0	97.1	90.0	83.3	100	0	94.1	100	97.9	100	0	98.0	100	100	100	0	100	97.6
Heavy Vehicles	1	10	1	0	12	1	1	0	0	2	0	6	0	0	6	0	0	0	0	0	20
% Heavy Vehicles	12.5	2.5	20.0	0	2.9	10.0	16.7	0	0	5.9	0	2.1	0	0	2.0	0	0	0	0	0	2.4

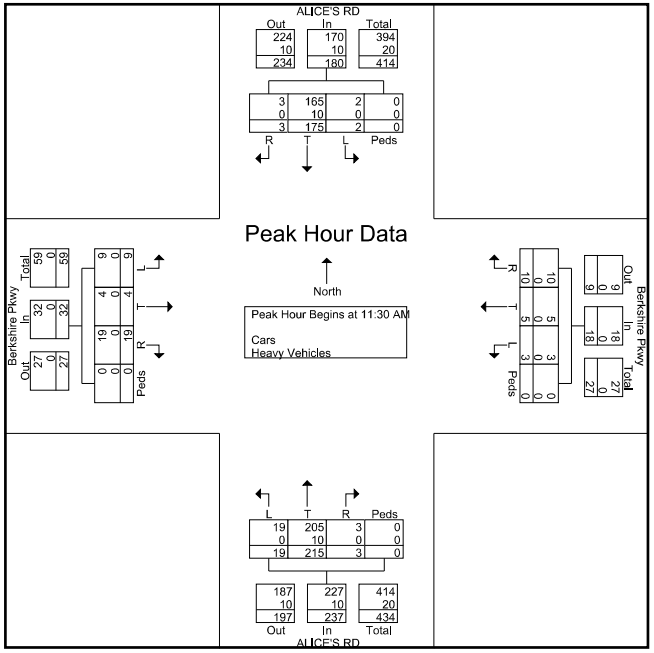


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ALICE'S RD & BERKSHIRE PKWY
NE Alice's Rd- NE Horizon to Meredith
Clive
123.1396.01

File Name : 24hr_tmc_Alices-Berkshire_2023-11-30
Site Code :
Start Date : 11/30/2023
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	ALICE'S RD From North					Berkshire Pkwy From East					ALICE'S RD From South					Berkshire Pkwy From West					
Start Time	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	**1**	**50**	**1**	0	**52**	**1**	**2**	1	0	4	3	56	**1**	0	60	3	1	**8**	0	**12**	**128**
11:45 AM	1	38	1	0	40	1	1	**5**	0	**7**	1	**59**	0	0	60	2	**2**	4	0	8	115
12:00 PM	0	37	0	0	37	1	2	0	0	3	7	48	1	0	56	**4**	0	3	0	7	103
12:15 PM	0	50	1	0	51	0	0	4	0	4	**8**	52	1	0	**61**	0	1	4	0	5	121
Total Volume	2	175	3	0	180	3	5	10	0	18	19	215	3	0	237	9	4	19	0	32	467
% App. Total	1.1	97.2	1.7	0		16.7	27.8	55.6	0		8	90.7	1.3	0		28.1	12.5	59.4	0		
PHF	.500	.875	.750	.000	.865	.750	.625	.500	.000	.643	.594	.911	.750	.000	.971	.563	.500	.594	.000	.667	.912
Cars	2	165	3	0	170	3	5	10	0	18	19	205	3	0	227	9	4	19	0	32	447
% Cars	100	94.3	100	0	94.4	100	100	100	0	100	100	95.3	100	0	95.8	100	100	100	0	100	95.7
Heavy Vehicles	0	10	0	0	10	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	20
% Heavy Vehicles	0	5.7	0	0	5.6	0	0	0	0	0	0	4.7	0	0	4.2	0	0	0	0	0	4.3

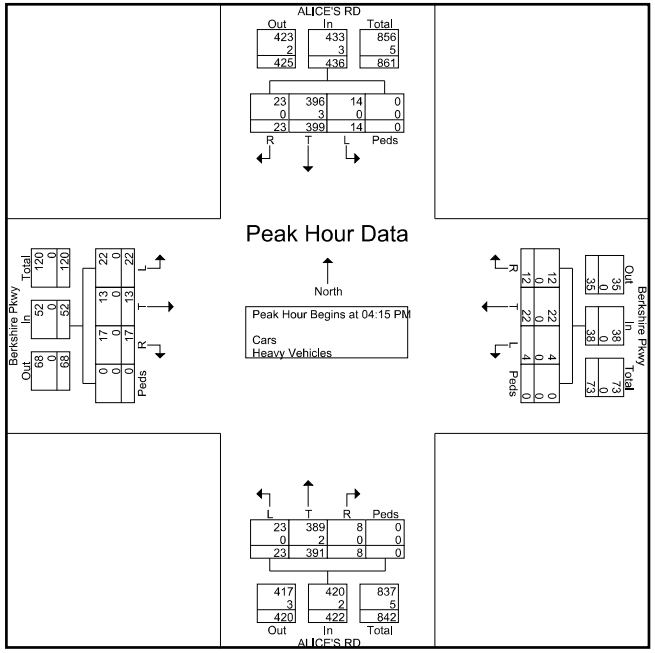


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File Name : 24hr_tmc_Alices-Berkshire_2023-11-30
Site Code :
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	ALICE'S RD From North					Berkshire Pkwy From East					ALICE'S RD From South					Berkshire Pkwy From West					
Start Time	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 11:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	**4**	87	3	0	94	0	7	**4**	0	11	4	107	**2**	0	113	4	3	2	0	9	227
04:30 PM	4	**109**	6	0	**119**	**2**	**8**	2	0	**12**	3	85	2	0	90	**10**	3	4	0	**17**	238
04:45 PM	2	109	**7**	0	118	1	4	4	0	9	**9**	87	2	0	98	2	3	**6**	0	11	236
05:00 PM	4	94	7	0	105	1	3	2	0	6	7	**112**	2	0	**121**	6	**4**	5	0	15	**247**
Total Volume	14	399	23	0	436	4	22	12	0	38	23	391	8	0	422	22	13	17	0	52	948
% App. Total	3.2	91.5	5.3	0		10.5	57.9	31.6	0		5.5	92.7	1.9	0		42.3	25	32.7	0		
PHF	.875	.915	.821	.000	.916	.500	.688	.750	.000	.792	.639	.873	1.00	.000	.872	.550	.813	.708	.000	.765	.960
Cars	14	396	23	0	433	4	22	12	0	38	23	389	8	0	420	22	13	17	0	52	943
% Cars	100	99.2	100	0	99.3	100	100	100	0	100	100	99.5	100	0	99.5	100	100	100	0	100	99.5
Heavy Vehicles	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
% Heavy Vehicles	0	0.8	0	0	0.7	0	0	0	0	0	0	0.5	0	0	0.5	0	0	0	0	0	0.5



BENEFIT/COST ANALYSIS
NE ALICE'S & BERKSHIRE INTERSECTION IMPROVEMENTS – CLIVE, IOWA

For the purposes of the benefit/cost analysis, an estimated improvement life of 20 years was selected. This is consistent with the Iowa DOT recommended TSIP service lives for roundabout improvements for a roadway segment

Converting NE Alice's Rd & Berkshire Pkwy to a roundabout will reduce the potential for all crashes. Based on the review of available data on the Iowa DOT Crash Reductions Factors website, a crash reduction factor (CRF) of 45 was applied for the proposed improvements.

Countermeasure	CRF	Source	Crash Type	Crash Severity	Area Type
Convert TWSC intersection to a roundabout	45	Iowa DOT (US-61)	All	All	Urban

An annual traffic growth rate of 2% was used for the analysis. The intersection is within a growing residential area and connects to a growing commercial area. Coordination was completed with the Des Moines Area MPO on determining potential growth along NE Alice's Rd. The Des Moines Area MPO estimated growth to be over 2% until the year 2050, so 2% annual traffic growth rate was utilized for this analysis.

The estimated safety improvement cost of this project is **$1,512,000** and the resultant benefit/cost (B/C) ratio is **0.35**. The estimated safety improvement costs include costs associated with removing and installing new pavement, pavement markings and signs, temporary traffic control, and mobilization. Crash rates and crash severity are likely to increase with the expected development and traffic growth if the proposed roundabout is not constructed.

County:	Dallas	Prepared By:	Snyder & Associate
Location:	Alices Rd & Berkshire Pkwy	Date Prepared:	8/8/2025
Proposed Improvements:	TWSC intersection converted to a two lane roundabout		
Estimated Improvement Cost:	$ 1,512,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 30,240

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	2.00%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	45	**45.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	45.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	45.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	1	45.0	**0.20**	**0.09**
Possible/Unknown Injury (C)	$ 135,000	1	45.0	**0.20**	**0.09**
Property Damage Only (O)	$ 20,000	2	45.0	**0.40**	**0.18**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ 26,100**
Possible/Unknown Injury (C)	**$ 12,150**
Property Damage Only (O)	**$ 3,600**

Total Benefits and Costs

		Implementation Cost	$ 1,512,000
		Present Value of Maint.	$ 410,971
Present Value Benefits (Societal Benefits)	$ 673,436	Present Value Costs (Impl. and Maint. Costs)	$ 1,922,971
Present Value Net Return	$ (1,249,536)		
Benefit Cost Ratio	**0.35**		

Form continues on next page

County:	Dallas	Prepared By:	Snyder & Associate
Location:	Alices Rd & Berkshire Pkwy	Date Prepared:	8/8/2025

User Input Required - Custom Values Used

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

Justification for deviation from default Traffic Growth Rate	2% traffic growth has been selected for this area based of a study including MPO projections, historical growth in the area, and locations for future development.

No change to Crash History

Application for FY2027 Traffic Safety Improvement Program (TSIP) Funding
Iowa Department of Transportation

(Site Specific)

Forest Avenue – Beaver Avenue to 19th Street

Corridor Improvements

Des Moines Engineering Department
Traffic and Transportation Division
Steve Naber, P.E.
City Engineer

August 15, 2025

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Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** August 13, 2025

Location / Title of Project: Forest Avenue – Beaver Avenue to 19th Street

Applicant: City of Des Moines

Contact Person: Calvin Miller Title: Engineering Administrative Manager

Complete Mailing Address: 400 Robert D Ray Drive
Des Moines, IA 50309-1891

Phone: (515) 283-4748 (Area Code) E-Mail: cbmiller@dmgov.org

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s): N/A

Contact Person: _____ Title: _____

Complete Mailing Address: _____

_____

Phone: _____ (Area Code) E-Mail: _____

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	2,070,000
Total Project Cost	$	3,700,000
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
☒ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
☐ Iowa DOT TEAP Study or similar analysis and concept
☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information

Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
4630	Beaver Avenue & Forest Avenue	☒	☐	2.803	0.221
SI_24650	34th Street & Forest Avenue	☒	☐	2.365	0.100
SI_28203	30th Street & Forest Avenue	☒	☐	3.026	0.257
SI_8531	21st Street & Forest Avenue	☒	☐	1.702	0.156
SI_164553	ML King Jr. Parkway & Forest Avenue	☒	☐	4.279	0.791
SI_85317	19th Street & Forest Avenue	☒	☐	5.732	0.932

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Des Moines, Iowa

Signed: Connie Boesen 8/4/25

Signature Date Signed

Connie Boesen, Mayor

Printed Name

Attest: Laura Baumgartner 8-4-25

Signature Date Signed

Laura Baumgartner, City Clerk

Printed Name

★ **Roll Call Number**
25-1022

Agenda Item Number
8

Date August 4, 2025

APPROVING THE FISCAL YEAR 2027 TRAFFIC SAFETY IMPROVEMENT PROGRAM (TSIP) APPLICATION TO THE IOWA DEPARTMENT OF TRANSPORTATION (IOWA DOT) FOR THE FOREST AVENUE IMPROVEMENT PROJECT

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DES MOINES, IOWA:

1. That the Fiscal Year 2027 Traffic Safety Improvement Program (TSIP) application for the Forest Avenue Improvement Project is approved and the Mayor is hereby authorized and directed to execute the application and the City Clerk to attest to the Mayor's signature.

2. The City Manager is authorized to submit applications to the Iowa DOT for TSIP Funds to cover a portion of the construction of the Forest Avenue Improvement Project.

3. The City understands that if the application is approved, the City will be responsible for any additional funds, if required, to complete the Project and the City will provide adequate resources to maintain the improvements for their useful life.

(Council Letter Number 25-291 attached)

Moved by Gatto to adopt. Second by Voss

FORM APPROVED: /s/ *Glenna K. Frank*
Glenna K. Frank
Deputy City Attorney

SLN PW Funding Source: 2025-2026 CIP, Page 129, Beaverdale to Downtown, ST278, G.O. Bonds

COUNCIL ACTION	YEAS	NAYS	PASS	ABSENT
BOESEN	✓			
COLEMAN	✓			
GATTO	✓			
MANDELBAUM	✓			
SIMONSON	✓			
VOSS	✓			
WESTERGAARD	✓			
TOTAL	7			

MOTION CARRIED APPROVED

Connie Boesen Mayor

CERTIFICATE

I, LAURA BAUMGARTNER, City Clerk of said City hereby certify that at a meeting of the City Council of said City of Des Moines, held on the above date, among other proceedings the above was adopted.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year first above written.

Laura Baumgartner City Clerk

Project Description

This project includes a four-to-three lane conversion of Forest Avenue from Beaver Avenue to 19th Street. The goal of this project is to right-size the street cross-section for the traffic volume, slow vehicle speeds, improve pedestrian and bicycle mobility, and improve safety outcomes for all street users.

This four-to-three lane conversion is part of a larger project on Forest Avenue from Beaver Avenue to 9th Street that includes an HMA mill & overlay and restriping for a new bicycle facility. This application pertains to Forest Avenue from Beaver Avenue to 19th Street and includes an HMA mill & overlay and restriping to provide a 3-lane cross-section with a travel lane in either direction, a center two-way left-turn lane, and buffered bike lanes. In the section from 23rd Street to Martin Luther King Jr Parkway, the street will be reduced to two lanes of traffic with buffered bike lanes and parking on the north side of the street.

The project will also include additional safety improvements such as retroreflective backplates, a center median for traffic calming along the Drake University Campus, enhanced pedestrian crossings with a median refuge island, and curb extensions from 23rd Street to Martin Luther King Jr. Parkway to shadow parking and calm traffic. For simplicity of this application, only the four-to-three lane conversion is considered in the Benefit-Cost Analysis.

The total project cost of the Forest Avenue project from Beaver Avenue to 9th Street is estimated to be approximately $3,700,000. The estimated cost of the safety improvements for the four-to-three lane conversion from Beaver Avenue to 19th Street is $2,070,000. A total of $500,000 is being requested from the State Traffic Safety Improvement Program (TSIP) funds.

Existing Conditions

Forest Avenue is an east-west, 4-lane undivided, minor arterial street from Beaver Avenue to 19th Street. From 19th Street to 9th Street, Forest Avenue is a 2-lane undivided residential street. The entire corridor extends through two neighborhoods, the Drake University campus, a neighborhood commercial area, past an elementary school, and neighborhood park. Below is a table summarizing the average daily traffic and existing/proposed cross-sections for each segment of the corridor.

Table B-1. ADT by Corridor Segment

Forest Avenue Segment	Average Daily Traffic (2022)	Segment Length (ft)	Existing Cross-Section	Proposed Cross-Section
Beaver Ave to 30th St	6,900	1,500	4-lane undivided	3-lanes with TWLTL & buffered bike lane
30th St to 23rd St	6,600	2,800	4-lane undivided	3-lanes with TWLTL/center median & buffered bike lane
23rd St to ML King Jr. Pkwy	5,300	1,200	4-lane undivided	2-lanes with buffered bike lane & parking on north side
ML King Jr. Pkwy to 19th St	4,400	350	4-lane undivided	3-lanes with TWLTL & buffered bike lane
19th St to 9th St**	3,000	3,600	2-lane undivided	2-lanes with conventional bike lane

**this portion of the project is not included in the TSIP Application

The adjacent land use is mixed use throughout the corridor. Forest Avenue runs through the Drake University Campus for six blocks, from 30th Street to 24th Street. Drake Stadium, the Knapp Center, a multi-purpose arena, and Mediacom Stadium, a shared facility between the University and Des Moines Public Schools, are also along the corridor.

The existing speed limit on Forest Avenue is 30 mph. There are signalized intersections along the corridor at 30th Street, 27th Street, 25th Street, Martin Luther King Jr. Parkway, and 19th Street. The traffic signals at the intersections of 25th Street and 27th Street are proposed to be replaced with this project. Additionally, there are signed, midblock,

pedestrian crossings near Drake Stadium and the Knapp Center. Parking along the corridor is inconsistent and varies between no parking, 2-hour parking, peak hour restricted, and no parking restrictions during any hours. Based on a corridor review of parking utilization most of the on-street parking is sparsely used and could be eliminated.

Project Justification and Proposed Concept

Forest Avenue is identified as a High Injury Network (HIN) corridor in the City of Des Moines' Vision Zero Transportation Safety Action Plan. The HIN identifies the streets in the City of Des Moines with the most significant crash risk for all modes of transportation. According to the Iowa DOT's Potential for Crash Reduction (PCR) for the timeframe of 2018-2022, 6 intersections along this corridor have a high PCR while 6 others (not listed below) have a medium PCR. Below is a summary of all the intersections with a high PCR along the corridor.

Table B-2. PCR by Corridor Segment

19th Street Intersection	All Crash PCR		Severe Crash PCR	
	Value	Rank*	Value	Rank*
Beaver Avenue & Forest Avenue	2.803	306	0.221	385
34th Street & Forest Avenue	2.365	388	0.1	1,054
30th Street & Forest Avenue	3.026	90	0.257	121
21st Street & Forest Avenue	1.702	628	0.156	637
ML King Jr. Parkway & Forest Avenue	4.279	58	0.791	20
19th Street & Forest Avenue	5.732	28	0.932	7

*Rank is Statewide out of 115,274 locations RED = High PCR YELLOW = Medium PCR

To address safety, a four-to-three lane conversion of the corridor is proposed. Based on the Iowa DOT's Planning-Level Crash Reduction Factor (CRF) list (RS-35), a road diet on this corridor would result in a 30% reduction of all crashes and crash severities. In addition to the reduction in crashes, this project would reduce traffic speeds, reduce conflict points at intersections, create space for a dedicated bike facility, and shorten pedestrian crossings near the Drake University Campus. This project creates a more community-focused, complete street that accommodates the needs of all users of the corridor.

In addition to the four-to-three lane conversion, this project will also include several other safety improvements. At all corridor traffic signals, backplates with retroreflective borders will be installed. Backplates with retroreflective borders are a FHWA proven safety countermeasure and have been shown to reduce all crashes by 15% according to the Crash Modification Clearinghouse (CMF ID: 1410).

This project will also include a center median along the Drake University Campus. This median will provide a refuge island for the existing pedestrian crossings at Drake Stadium and the Knapp Center, as well as a new proposed crossing near 29th Street. The median will also slow vehicle speeds through a high pedestrian activity area. From 23rd Street to Martin Luther King Jr. Parkway, parking will be maintained on the north side due to the mixed use and commercial uses in the area. Curb extensions will be provided on the north side of the street to shadow parking, calm traffic, and improve pedestrian crossings by shortening the crossing distances and increasing visibility. All these improvements are also supported by the City's Transportation Master Plan, MoveDSM, and our Vision Zero Transportation Safety Action.

For simplicity of this application, only the lane conversion from Beaver Avenue to 19th Street is considered in the Benefit-Cost Analysis. The total estimated cost of the entire project from Beaver Avenue to 9th Street is $3,700,000. The estimated cost of the safety improvements for the four-to-three lane conversion from Beaver Avenue to 19th Street is $2,070,000. Using the forementioned Iowa DOT planning level CRF, based on the Iowa DOT benefit-cost analysis spreadsheet, the estimated benefit cost for the four-to-three lane conversion is 10.79 (See Item L).

ITEMIZED BREAKDOWN OF ALL COSTS

Item C

PRELIMINARY ESTIMATE
FOREST AVENUE - BEAVER AVENUE TO 19TH STREET
DATE: 7/3/2025

				Forest Ave - Beaver Ave to 9th St		Forest Ave - Beaver Ave to 19th St 4-lane to 3-Lane Conversion	
ITEM NO.	ITEM	UNIT	UNIT PRICE	TOTAL PROJECT UNITS	TOTAL PROJECT AMOUNT	SAFETY IMPROVEMENTS UNITS	SAFETY IMPROVEMENTS AMOUNT
1	EARTHWORK	CY	$ 30	1500	$ 45,000	1500	$ 45,000
2	MILLING	SY	$ 4	49400	$ 197,600	37100	$ 148,400
3	PAVEMENT REMOVAL	SY	$ 25	1750	$ 43,750	1750	$ 43,750
4	PAVEMENT, HMA, 2"	TON	$ 125	6000	$ 750,000	4400	$ 550,000
5	CURB AND GUTTER, 2'-0"	LF	$ 55	440	$ 24,200	390	$ 21,450
6	CONCRETE MEDIAN	SY	$ 170	1500	$ 255,000	1500	$ 255,000
7	SIDEWALK, PCC, 6"	SY	$ 85	1225	$ 104,125	1125	$ 95,625
8	DETECTABLE WARNING	SF	$ 75	300	$ 22,500	300	$ 22,500
9	TRAFFIC SIGNAL MODIFICATIONS (30th Street)	LS	$ 50,000	1	$ 50,000	1	$ 50,000
10	TRAFFIC SIGNAL REMOVAL (25th Street & 27th Street)	EA	$ 25,000	2	$ 50,000	0	$ -
11	NEW TRAFFIC SIGNALS (25th Street & 27th Street)	EA	$ 300,000	2	$ 600,000	0	$ -
12	DURABLE PAVEMENT MARKINGS EPOXY	STA	$ 140	45	$ 6,300	41	$ 5,740
13	PERMANENT TAPE MARKINGS, PROFILE PAVEMENT MARKING TAPE	STA	$ 500	480	$ 240,000	350	$ 175,000
14	PAINTED SYMBOLS AND LEGENDS, DURABLE	EA	$ 250	80	$ 20,000	60	$ 15,000
15	TEMPORARY TRAFFIC CONTROL	LS	$ 200,000	1	$ 200,000	0.75	$ 150,000
16	MOBILIZATION	LS	8%	-	$ 185,000	-	$ 116,000
17	STORM SEWER MODIFICATIONS (20% of items 1-8)	LS	20%	-	$ 288,435	-	$ 100,923
				ESTIMATED CONSTRUCTION COSTS	$ 3,081,910		$ 1,794,388
				CONTINGENCY (20%)	$ 616,382		$ 269,158
				ESTIMATED TOTAL PROJECT COST	**$ 3,700,000**		
						ESTIMATED SAFETY-RELATED PROJECT COSTS	**$ 2,070,000**

Notes:
- Only work associated with the 4-to-3 lane conversion from Beaver Ave to 19th St is included in the safety improvements.
- Center Median and associated work is included in safety improvements because it is assumed necessary to the success of the road diet (traffic calming and improved pedestrian crossings)
- Curb Extensions and assocated work from 23rd St to ML King Jr. Pwky is included in safety improvements because it is assumed necessary for on-street parking (shadow parking and traffic calming)
- Traffic Signal Modifications at 30th Street to realign signal heads and detection is included in the safety improvement.
- Traffic Signal Replacements at 25th Street and 27th Street are not included in the safety improvement because it is not necessary for the 4-to-3 lane conversion. Traffic Signals at ML King Jr. Parkway and 19th Street will be replaced with a seperate project and are not included in this project.

Anticipated Funding Sources:

Safe Streets & Roads for All (SS4A) Federal Award	$2,960,000
SS4A Non-Federal Match (20%)	
Traffic Safety Improvement Program (TSIP)	$ 500,000
General Obligation Bonds	$ 240,000
Total	**$ 3,700,000**

TIME SCHEDULE

Item D

August 2025 – August 2026..... Preliminary Plan Design

August 2026 – November 2026 ..... Final Plan Preparation

January 2026 – August 2026..... Property Acquisition (as needed)

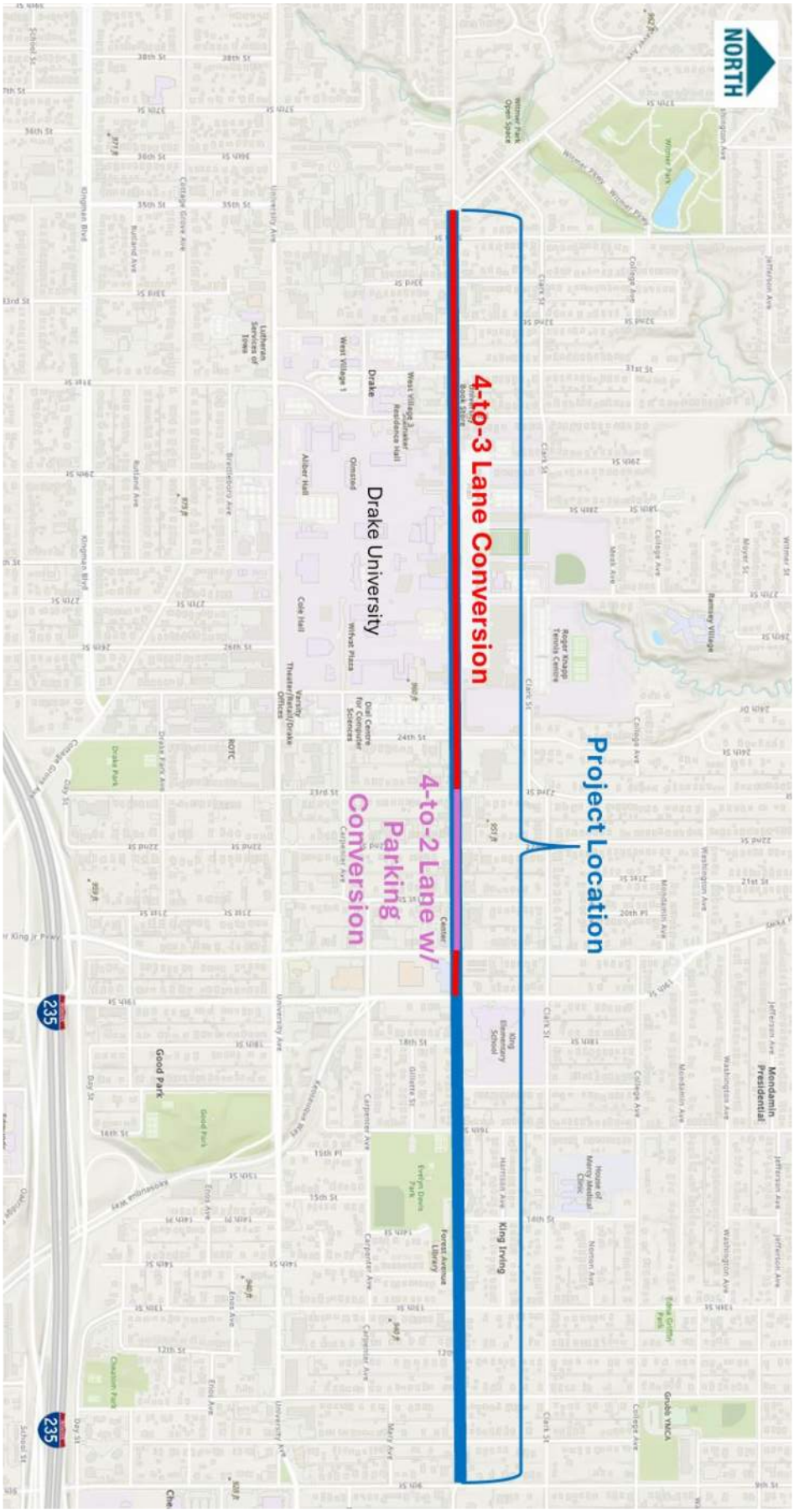
January 2026..... Iowa DOT Approval

Spring 2026 ..... TSIP Agreement

November 2026 – January 2027 ..... Plan Approval & Project Letting

March 2027 – June 2028 ..... Construction

MAP **Item E**


NORTH
4-to-3 Lane Conversion
4-to-2 Lane w/ Parking Conversion
Project Location
Drake University
Drake
Good Park
King Elementary School
King Irving
Forest Avenue Library
Mendamin Presidential
235
235

COLOR PICTURES

Item F



Forest Avenue between 32nd Street and 33rd Street – looking west



Forest Avenue between 27th Street and 29th Street (near Drake Stadium) – looking west

COLOR PICTURES

Item F



Forest Avenue between 22nd Street and 23rd Street – looking east



Forest Avenue near Martin Luther King Jr. Parkway – looking east

PLAN VIEW

Item G

BEAVER AVENUE

34TH STREET

33RD STREET

32ND STREET

31ST STREET

CASEY'S

PEGGY'S TAVERN

HABANERO'S

Future Phase NOT INCLUDED IN TSIP APPLICATION

LEGEND

- Mill & Overlay
- Concrete Median
- Concrete Pavement
- Truck Apron
- Sidewalk
- Bike Path

HORIZ SCALE: 1"=100'

0' 50' 100'

N

CONCEPT

FEBRUARY 2023

30TH STREET

29TH STREET

27TH STREET

DRAKE OT BUILDING

STUDIO ARTS HALL

DRAKE FIELDHOUSE

BULLDOGS

MCDONALD'S

CRAWFORD HALL

CARPENTER HALL

HERRIOTT HALL

HARVEY INGHAM HALL

DEPARTMENT OF BIOLOGY

PLAN VIEW

Item G



PLAN VIEW

Item G

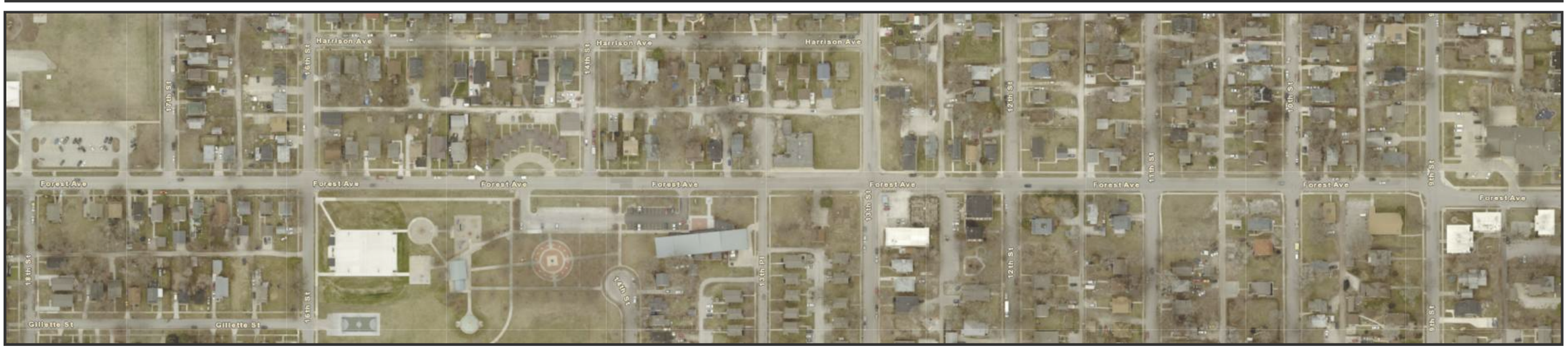


AERIAL PHOTOGRAPHY

Item H







ICAT CRASH SUMMARY OF MOTOR VEHICLE ACCIDENTS Item I

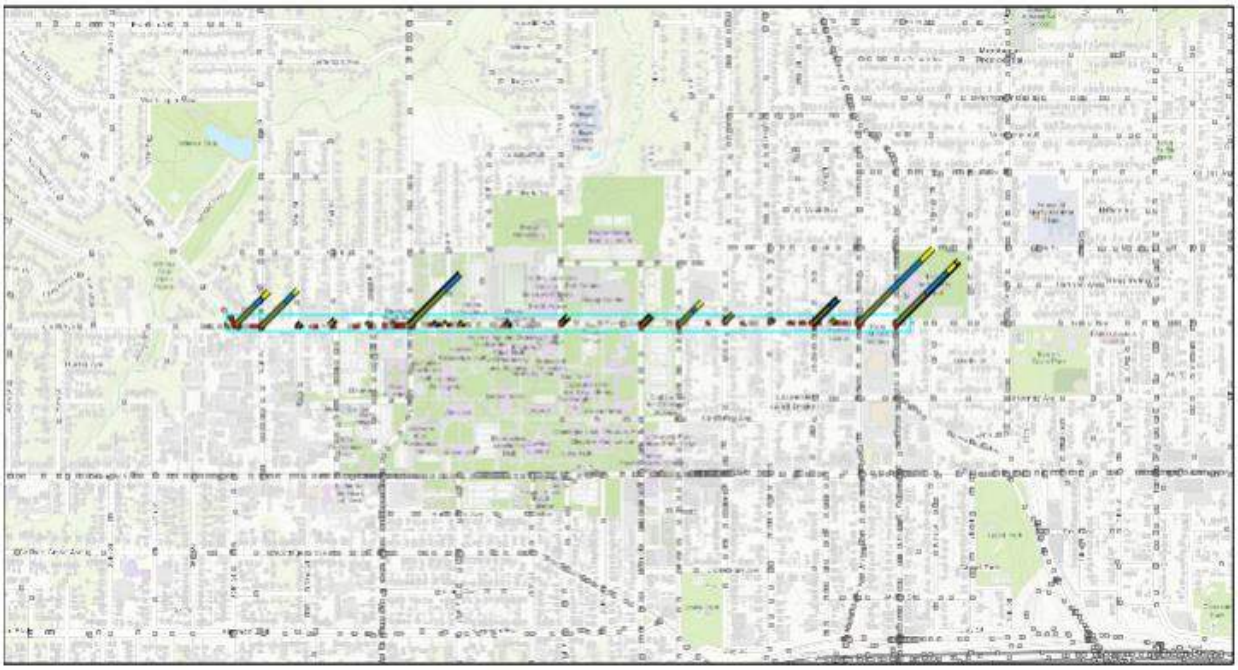
Iowa Crash Analysis Tool
Quick Report
2020-2024

Crash Severity	223
Fatal Crash	0
Suspected Serious Injury Crash	3
Suspected Minor Injury Crash	27
Possible/Unknown Injury Crash	65
Property Damage Only	128

Injury Status Summary	128
Fatalities	0
Suspected serious/incapacitating	3
Suspected minor/non-incapacitating	28
Possible (complaint of pain/injury)	48
Uninjured	0
Unknown	26
Not Reported	23

Property/Vehicles/Occupants	
Property Damage Total (dollars):	1,519,745.00
Average (per crash dollars):	6,815.00
Total Vehicles:	435.00
Average (per crash):	1.95
Total Occupants:	604.00
Average (per crash):	2.71

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.35
Major Injuries/Crash:	0.01
Minor Injuries/Crash:	0.13
Possible/Unknown Injuries/Crash:	0.22

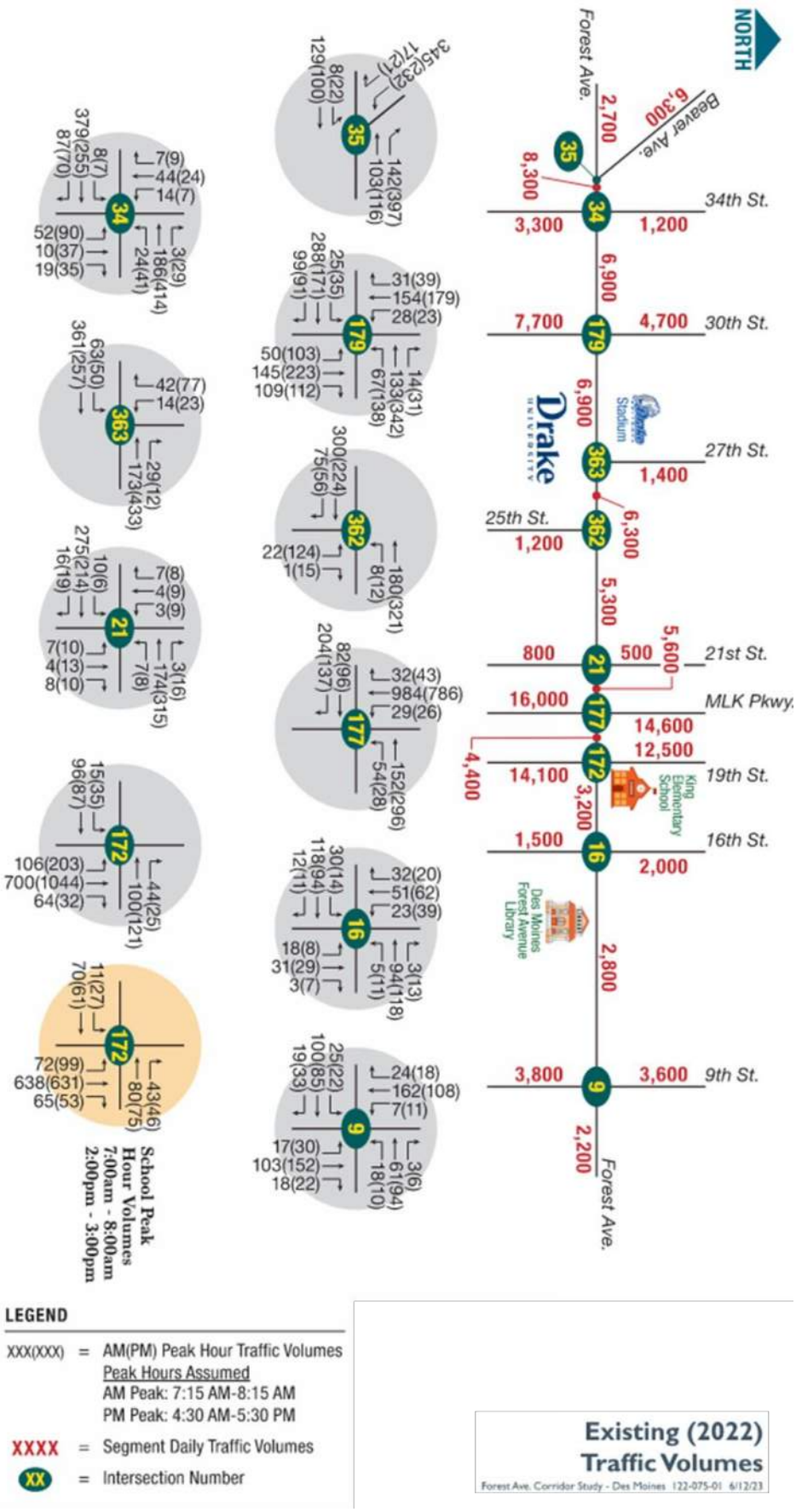


ICAT CRASH SUMMARY OF MOTOR VEHICLE ACCIDENTS Item I

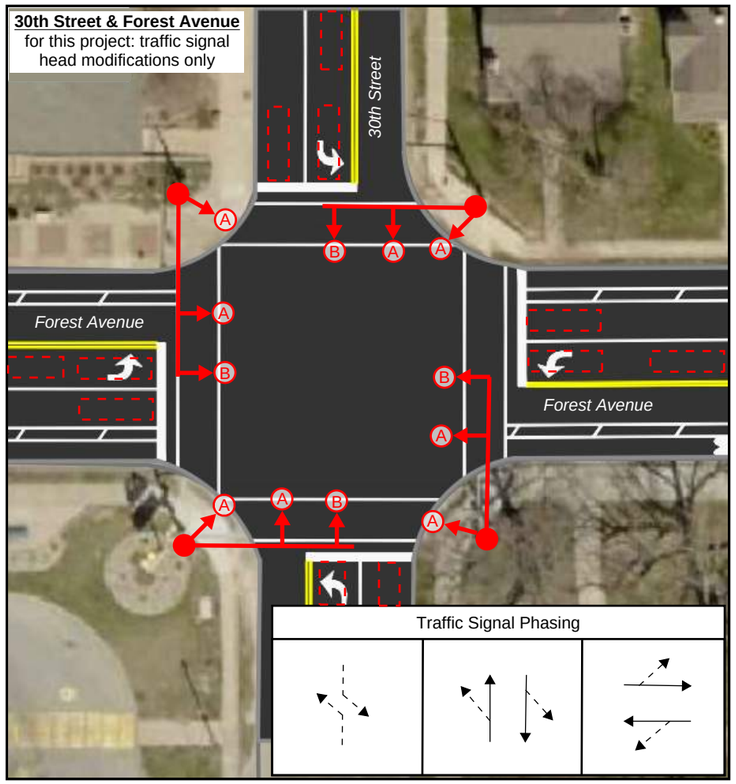
Iowa Crash Analysis Tool
Quick Report
2020-2024

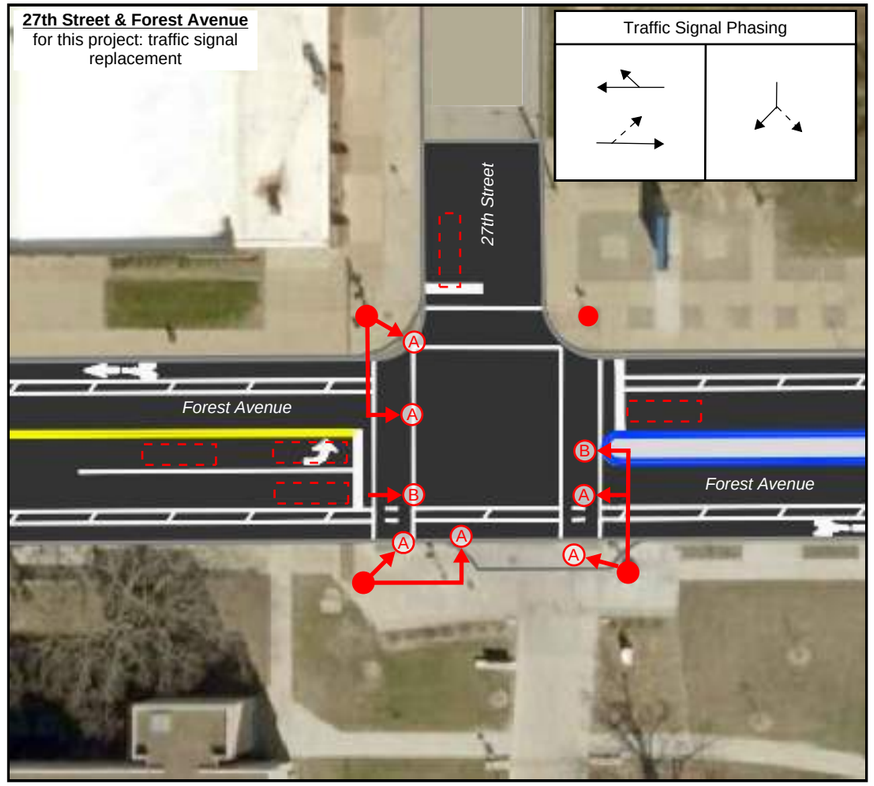
Major Cause			223
Animal	1	Ran traffic signal	43
Ran stop sign	12	Failed to yield to emergency vehicle	1
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	18	FTYROW: From yield sign	0
FTYROW: Making left turn	19	FTYROW: From driveway	4
FTYROW: From parked position	3	FTYROW: To pedestrian	1
FTYROW: Other	2	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	2
Exceeded authorized speed	3	Improper or erratic lane changing	4
Operating vehicle in an reckless/erratic/care...	12	Followed too close	14
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	1	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	10
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	1	Driver Distraction: Other interior distracti...	8
Driver Distraction: Exterior distraction	3	Ran off road - right	1
Ran off road - straight	0	Ran off road - left	1
Lost control	5	Swerving/Evasive Action	1
Over correcting/over steering	0	Failed to keep in proper lane	1
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	1
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	1	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	1	Other	9
Unknown	36	Not reported	0
Other: No improper action	4		

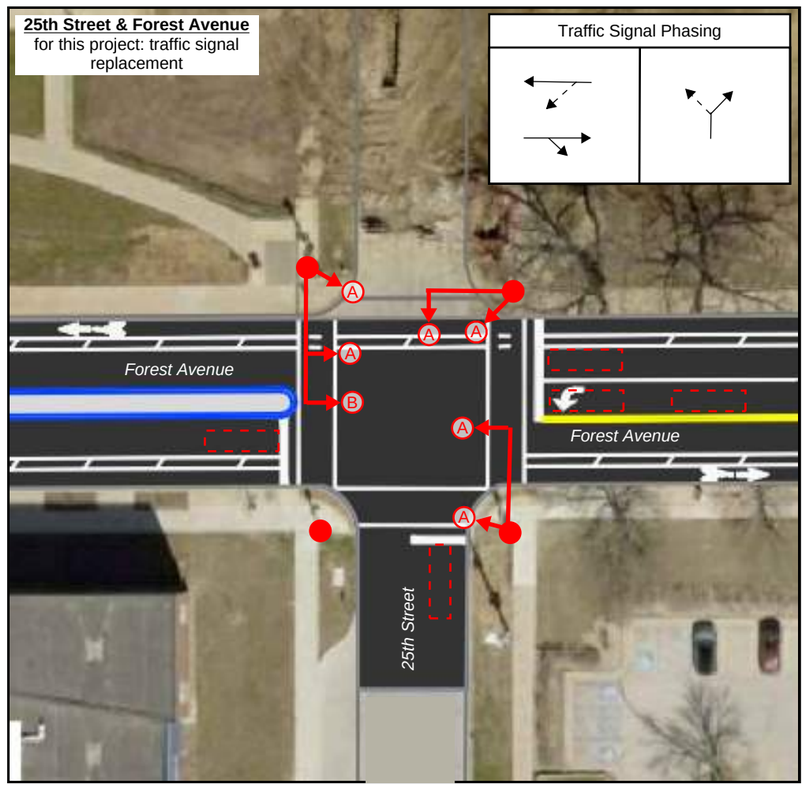
Manner of Crash Collision	223
Non-collision (single vehicle)	22
Head-on (front to front)	4
Rear-end (front to rear)	40
Angle (oncoming left turn)	18
Broadside (front to side)	105
Sideswipe (same direction)	25
Sideswipe (opposite direction)	2
Rear to rear	0
Rear to side	0
Not reported	0
Other	7
Unknown	0

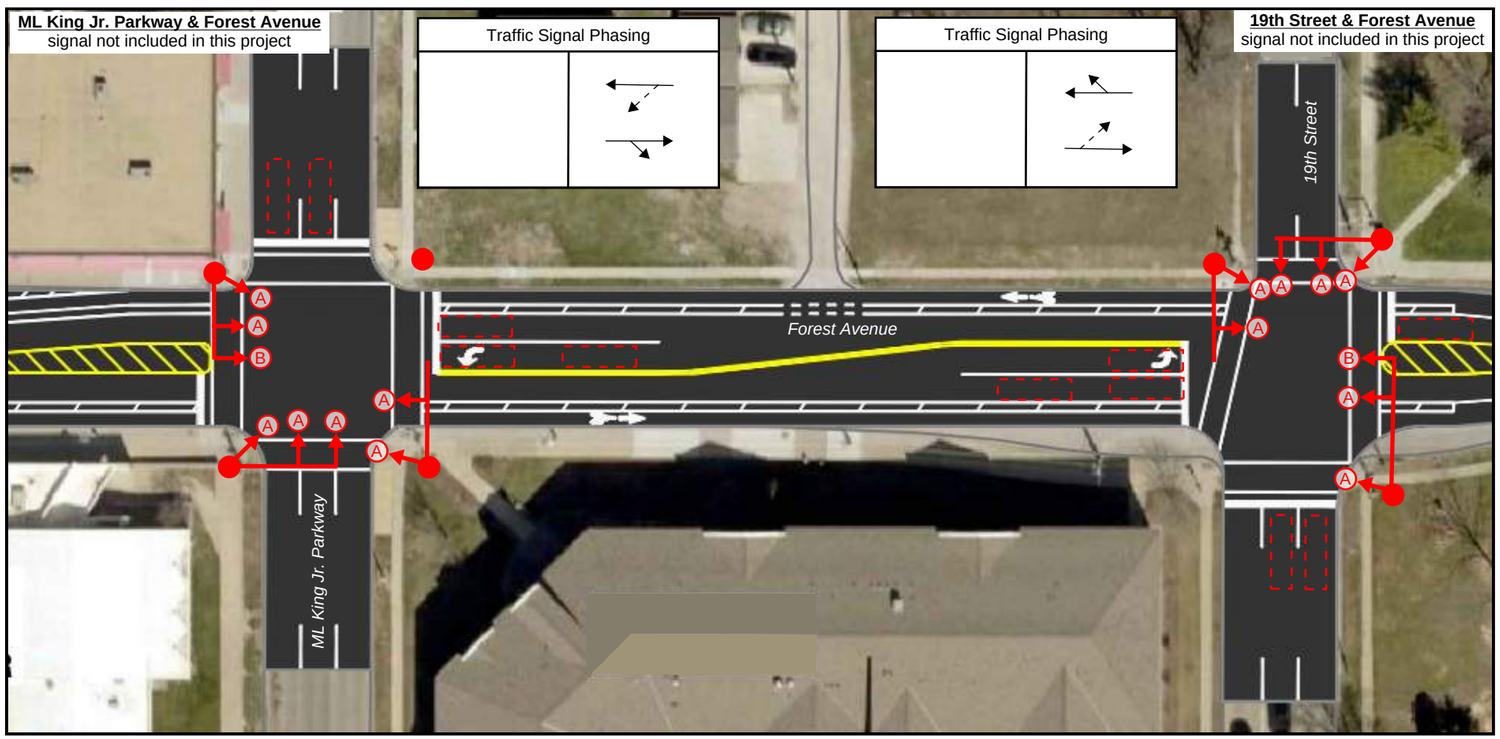

NORTH
Forest Ave.
Beaver Ave.
6,300
2,700
8,300
35
34th St.
3,300
1,200
6,900
7,700
4,700
179
30th St.
6,900
Drake University
Drake Stadium
363
27th St.
1,400
6,300
25th St.
1,200
362
5,300
800
500
5,600
21st St.
21
16,000
MLK Pkwy.
14,600
12,500
4,400
14,100
172
King Elementary School
19th St.
3,200
1,500
16
16th St.
2,000
Des Moines Forest Avenue Library
2,800
3,800
3,600
9
9th St.
2,200
Forest Ave.
LEGEND
XXX(XXX) = AM(PM) Peak Hour Traffic Volumes
Peak Hours Assumed
AM Peak: 7:15 AM-8:15 AM
PM Peak: 4:30 AM-5:30 PM
XXXX = Segment Daily Traffic Volumes
XX = Intersection Number
School Peak Hour Volumes
7:00am - 8:00am
2:00pm - 3:00pm
Existing (2022) Traffic Volumes
Forest Ave. Corridor Study - Des Moines 122-075-01 6/12/23

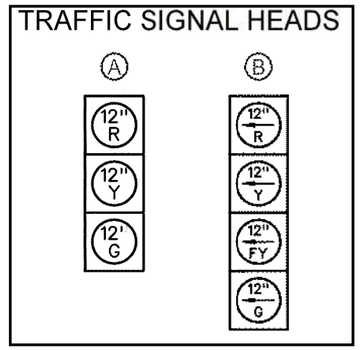
TRAFFIC SIGNALS











IOWA DOT — Safety Benefit-Cost Ratio

County:	Polk	Prepared By:	City of DSM
Location:	Forest Avenue	Date Prepared:	7/2/2025
Proposed Improvements:	4 to 3 lane conversion from Beaver Avenue to 19th Street		
Estimated Improvement Cost:	$ 2,070,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 41,400
Method Choice:	CRF Method		

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF	
CRF Value (%)	30	**30.0**	
Equivalent CMF	0.70		Is Dom. Com. Resd.
Combined CMF, if # used (DR)	0.70	0.70	TRUE
Combined CMF, if # used (Mult)	0.70		Is data entered befc
Pick Dom Com. Resd. Or Mult. Fo	0.70	0.70	FALSE

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	30.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	3	30.0	**0.60**	**0.18**
Minor Injury (B)	$ 290,000	27	30.0	**5.40**	**1.62**
Possible/Unknown Injury (C)	$ 135,000	65	30.0	**13.00**	**3.90**
Property Damage Only (O)	$ 20,000	128	30.0	**25.60**	**7.68**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ 774,000**
Minor Injury (B)	**$ 469,800**
Possible/Unknown Injury (C)	**$ 526,500**
Property Damage Only (O)	**$ 153,600**

Total Benefits and Costs

		Implementation Cost	$ 2,070,000
		Present Value of Maint.	$ 562,640
Present Value Benefits (Societal Benefits)	$ 28,417,362	Present Value Costs (Impl. and Maint. Costs)	$ 2,632,640
Present Value Net Return	$ 25,784,723		
Benefit Cost Ratio	**10.79**		

Form continues on next page

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** August 14, 2025

Location / Title of Project US30 and 300th Avenue DeWitt, Iowa

Applicant City of DeWitt

Contact Person Steve Lindner Title City Administrator

Complete Mailing Address DeWitt City Hall PO Box 407 DeWitt IA 52742

Phone 563-659-3811 (Area Code) E-Mail administrator@cityofdewittiowa.org

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s) _____

Contact Person _____ Title _____

Complete Mailing Address _____

Phone _____ (Area Code) E-Mail _____

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	1,900,000.00
Total Project Cost	$	1,900,000.00
Safety Funds Requested	**$**	**500,000.00**

Additional Project Safety Documentation (when available):

☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan

☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan

☒ Iowa DOT TEAP Study or similar analysis and concept (Traffic Impact Study (8/27/24) and Revision Technical Memo (5/28/25) from Anderson-Bogert)

☐ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
		☐	☐		
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of DeWitt

Signed: _____ 8/15/25
Signature Date Signed

Steve Lindner
Printed Name

Attest: Catherine M Benthin 8-15-2025
Signature Date Signed

Cathie Benthin
Printed Name

A

RESOLUTION NO. 2025 -88

RESOLUTION APPROVING THE SUBMITTAL OF AN APPLICATION TO THE IOWA DEPARTMENT OF TRANSPORTATION (IDOT) TRAFFIC SAFETY IMPROVEMENT PROGRAM (TSIP) FOR FUNDING TRAFFIC SAFETY IMPROVEMENTS TO THE US 30 AND 300th AVENUE INTERSECTION

WHEREAS, the IDOT has established the TSIP program that provides funding to local governments to assist in funding projects that improve traffic safety where warranted; and,

WHEREAS, the intersection of US 30 and 300th Avenue will be impacted by the extension of East Industrial Street and 300th Avenue; and,

WHEREAS, Anderson-Bogert, Civil Engineers, has reviewed the intersection improvements and conducted a traffic study on the intersection, including future traffic patterns; and,

WHEREAS, to alleviate safety concerns presented by IDOT pertaining to the intersection, Anderson-Bogert has proposed the construction of a Reduced Conflict Intersection (RCI) at US 30 and 300th Avenue; and,

WHEREAS, the TSIP program may assist in the funding of the RCI or other safety improvements at the US 30 and 300th Avenue intersection.

NOW, THEREFORE, IT IS RESOLVED by the City Council of the City of DeWitt, Iowa, that:

1. The City Council supports and approves the application for TSIP funding.
2. The City Council commits the necessary City funds for the project for design, engineering fees, and construction costs beyond the TSIP funding.
3. The City Council commits to accepting and maintaining the improvements funded by the TSIP funds at the US 30 and 300th Avenue intersection as necessary.

PASSED AND APPROVED this 4th of August 2025

STEVE HASENMILLER, MAYOR

ATTEST:

CATHERINE M. BENTHIN, CITY CLERK

B. Narrative – Need for R-Cut Intersection at 300th Avenue and US 30, DeWitt, Iowa

The intersection of 300th Avenue and US Highway 30, located at the east border of DeWitt, Iowa, presents future safety and operational concerns. US 30 is a four-lane divided highway serving as a primary east–west corridor across eastern Iowa, posted at 65 mph. Traffic volumes include a high percentage of heavy trucks and agricultural-related vehicles accessing nearby industries and farms. 300th Avenue is a rural two-lane road providing north–south connectivity between low-density residential, agricultural, and light industrial areas. Currently, the intersection operates as a full-access, at-grade crossing with median openings for direct left turns and through movements from 300th Avenue onto US 30.

The City of DeWitt is currently in the planning and design of a 150-acre extension to their business and industrial park (Crossroads Business Park). As a part of this project, the current East Industrial Street will be extended to 300th Avenue. With a newly connected access to US 30, via 300th Avenue, anticipated traffic volumes at the 300th Avenue and US 30 intersection are anticipated to increase substantially. Due to the industrial nature of the properties that will be developed in the extended industrial park, it expected that a high percentage of the anticipated traffic volume increase will be heavy truck traffic. Additionally, an existing connection to US 30 (at 330th Avenue), approximately 3 miles to the east has been known to have a history of crashes, including crashes with injuries and one crash with two fatalities. It is anticipated that either limiting access and/or increase to delays at the US 30 and 300th Avenue intersection will cause an increase in eastbound traffic at the US 30 and 330th Avenue intersection, which would increase safety concerns at that intersection.

The high-speed environment on US 30, combined with side-road traffic entering from a stop-controlled approach, creates dangerous conditions for left turns and through movements. Drivers on 300th Avenue must judge gaps in both directions, often with oncoming traffic approaching at or above 65 mph. The roadway geometry and limited acceleration distance restrict safe merging, especially for larger/slower vehicles. According to the Manual on Uniform Traffic Control Devices (MUTCD), intersection design and control should minimize conflict points and ensure adequate sight distance. While sight distance meets minimum standards, the high operating speeds reduce available decision time, increasing the likelihood of misjudgment.

The clear zone, as defined in the AASHTO design guidance, is constrained by roadside slopes and fixed objects, leaving little recovery space for errant vehicles. This is particularly hazardous for right-angle collisions, which carry high risk of severe injury or fatality.

The proposed **R-Cut (Restricted Crossing U-turn)** intersection would eliminate direct left turns and through movements from 300th Avenue. Instead, vehicles would turn right onto US 30, proceed to a designated median U-turn, and then merge into the opposite direction. This design reduces the number of conflict points from 32 in a conventional full-access intersection to as few as 14, significantly decreasing the risk of severe collisions. The R-Cut configuration maintains free-flow conditions on US 30, supports MUTCD-compliant signing and pavement markings, and aligns with current FHWA safety countermeasure recommendations. Additional roadway lighting is proposed to achieve high visibility for drivers maneuvering the intersection at night.

By removing direct crossing and left-turn maneuvers from the side road, the R-Cut design addresses the primary cause of severe crashes at rural high-speed intersections: high-speed, right-angle conflicts. The simplified traffic movements improve driver decision-making, reduce wait times, and allow safer merges into 65 mph traffic. With fewer conflict points, improved sight lines for right turns, and compliance with MUTCD guidance for intersection control devices, the R-Cut will improve safety performance and operational efficiency while maintaining corridor mobility.

Implementing this R-Cut at 300th Avenue and US 30 is a proactive, cost-effective measure that will protect motorists, support freight and agricultural movement, and enhance safety for all roadway users in the DeWitt area now and in the future.

C

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST CITY OF DEWITT - HWY 30-300TH ST RCI					PROJECT # 24150	DATE CREATED [illegible]	REV. DATE [illegible]
REF. NO.	ITEM CODE	BID ITEM DESCRIPTION	UNITS	ROADWAY QUANTITIES	TOTAL	PRICE	TOTAL COST
1	2102-0425070	SPECIAL BACKFILL	TON	1400	1400	$45.00	$63,000.00
2	2102-2625000	EMBANKMENT IN PLACE	CY	2000	2000	$36.00	$72,000.00
3	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	1600	1600	$10.00	$16,000.00
4	2105-8425015	TOPSOIL, STRIP, SALVAGE, AND SPREAD	CY	1100	1100	$12.00	$13,200.00
5	2115-0100000	MODIFIED SUBBASE	CY	2900	2900	$40.00	$116,000.00
6	2121-7425010	GRANULAR SHOULDERS, TYPE A	TON	1500	1500	$30.00	$45,000.00
7	2210-0475290	MACADAM STONE BASE	TON	1000	1000	$25.00	$25,000.00
8	2301-1033100	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 10 IN.	SY	10035	10035	$80.00	$802,800.00
9	2402-2720000	EXCAVATION, CLASS 20	CY	130	130	$20.00	$2,600.00
10	2417-1060024	CULVERT, CORRUGATED METAL ROADWAY PIPE, 24 IN. DIA.	LF	160	160	$60.00	$9,600.00
11	2417-5895024	BEVELED PIPE AND GUARD, 24 INCH	EA	4	4	$2,000.00	$8,000.00
12	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	3200	3200	$10.00	$32,000.00
13	2502-8221303	SUBDRAIN OUTLET, DR-303	EA	8	8	$180.00	$1,440.00
14	2510-6745850	REMOVAL OF PAVEMENT	SY	3900	3900	$10.00	$39,000.00
15	2523-0000100	LIGHTING POLES	EA	6	6	$7,000.00	$42,000.00
16	2523-0000200	ELECTRICAL CIRCUITS	LF	2000	2000	$30.00	$60,000.00
17	2523-0000310	HANDHOLES AND JUNCTION BOXES	EA	10	10	$1,750.00	$17,500.00
18	2523-0000400	CONTROL CABINET	EA	1	1	$15,000.00	$15,000.00
19	2524-6765210	REMOVAL OF TYPE A SIGN ASSEMBLY	EA	10	10	$200.00	$2,000.00
20	2524-9081290	CONCRETE FOOTING FOR BREAKAWAY SIGN POST, 2'-8" DIA. X 9'-0"	EA	14	14	$2,000.00	$28,000.00
21	2524-9276010	PERFORATED SQUARE STEEL TUBE POSTS	LF	1150	1150	$25.00	$28,750.00
22	2524-9276027	PERFORATED SQUARE STEEL TUBE POST ANCHOR, TRIANGULAR SLIP BASE ASSEMBLY	EA	64	64	$600.00	$38,400.00
23	2524-9290009	SIGN MOUNTING BRACKETS, SPECIAL	EA	19	19	$270.00	$5,130.00
24	2524-9325001	TYPE A SIGNS, SHEET ALUMINUM	SF	800	800	$40.00	$32,000.00
25	2524-9380001	TYPE B SIGNS, EXTRUDED ALUMINUM STRUCTURAL PANEL	SF	1000	1000	$40.00	$40,000.00
26	2527-9263209	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	150	150	$100.00	$15,000.00
27	2527-9270112	GROOVES CUT FOR PAVEMENT MARKINGS	STA	150	150	$90.00	$13,500.00
28	2528-8445110	TRAFFIC CONTROL	LS	1	1	$70,000.00	$70,000.00
29	2533-4980005	MOBILIZATION	LS	1	1	$70,000.00	$70,000.00
30	2601-2634100	MULCHING	AC	2	2	$2,500.00	$5,000.00
31	2601-2636043	SEEDING AND FERTILIZING (RURAL)	AC	2	2	$3,500.00	$7,000.00

SUBTOTAL:	$1,734,920.00
+10% CONTINGENCY:	$173,492.00
TOTAL:	**$1,908,412.00**

D

TIME SCHEDULE FOR THE PROPOSED PROJECT

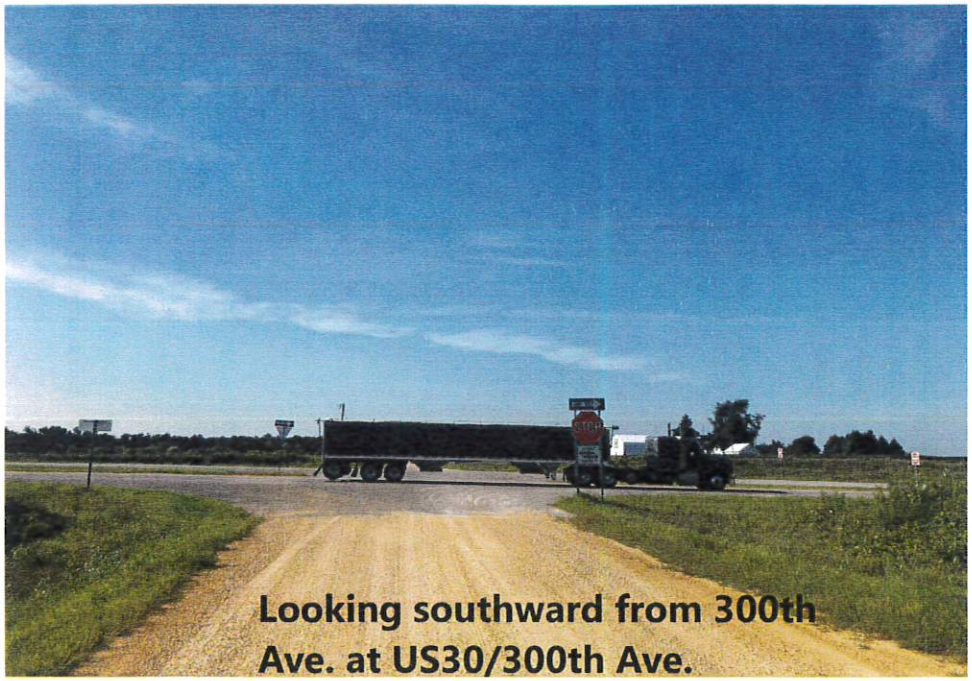
R-CUT at US 30 and 300th Avenue - DeWitt

August 15, 2025:	TSIP Application Due
January 2026:	TSIP Approval
July 1, 2026:	Funding Available
Fall 2026:	Letting for Project
Spring 2027:	Construction Starts
November 2027:	Substantial Completion of Project

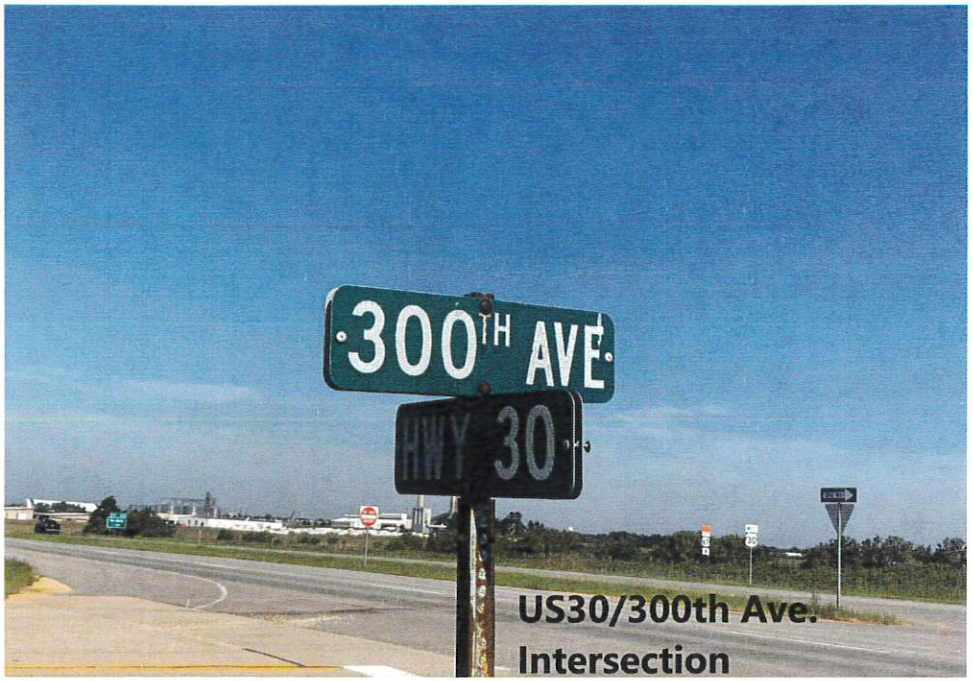

Project Area
E
20-1630-0000
20-1629-0000
20-1399-7147
20-1399-7145
18-0709-0000
18-0710-0000
18-0706-0000
3 AVE E
S 5 AVE E
20-0998-8576
20-0998-8450
NW 20-81-04
E INDUSTRIAL ST
INDUSTRIAL ST
NE 19-81-04
20-0998-8150
20-0998-8200
Industrial Park Second Add
NE 20-81-04
20-1399-7148
20-1399-7146
16 AVE E
18-0708-0200
NW 21-81-04
18-0711-0000
18-0704-0000
18-0708-0100
US HWY 30
US HWY 30
Lake Harmsen Sub
18-0695-0000
18-0697-0000
18-0685-0000
300 AVE
18-0712-0000
18-0714-0000
18-0715-0100
18-0721-0000
SW 21-81-04
18-0701-0000
SW 20-81-04
SE 20-81-04
SE 19-81-04
18-0715-0200
18-0720-0000
18-0713-0000
18-0716-0100
18-0700-0000
18-0694-0000
18-0696-0000
18-0698-0000
18-0703-0000
262 ST
18-0820-0100
18-0821-1000
18-1134-0750
Milota Sub
Foil Sub
NE 29-81-04
18-0821-2000
NW 28-81-04
NE 30-81-04
NW 29-81-04
Oak Hill
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18-0829-0000
18-0830-1020
18-0817-5020
18-0838-0000

N

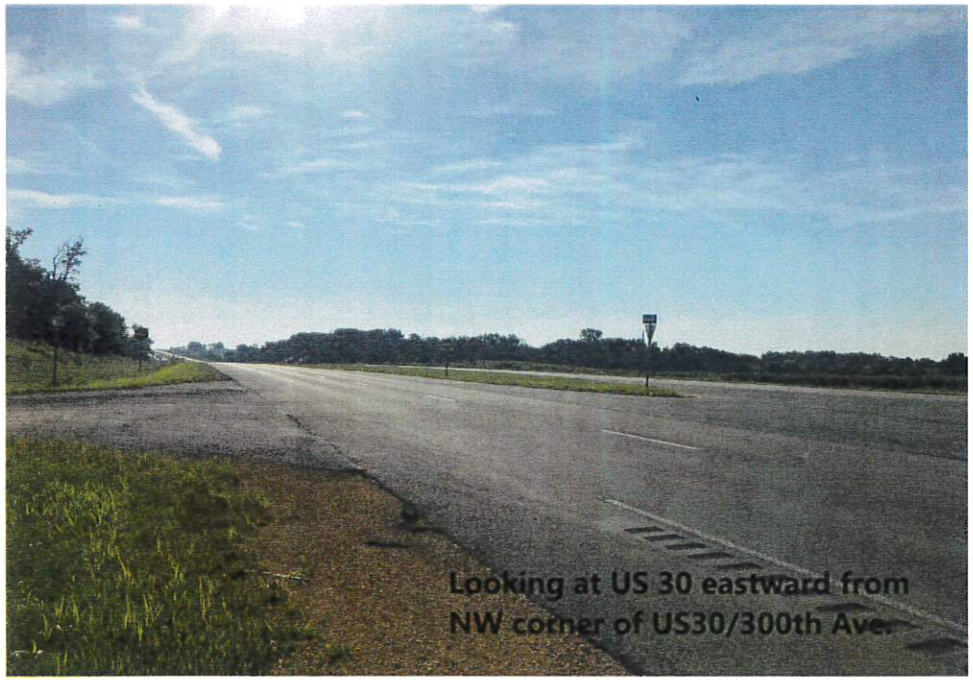
F



Looking southward from 300th Ave. at US30/300th Ave.



US30/300th Ave. Intersection



Looking at US 30 eastward from NW corner of US30/300th Ave.



Looking at US30 westward from NE corner of US30/300th Ave.

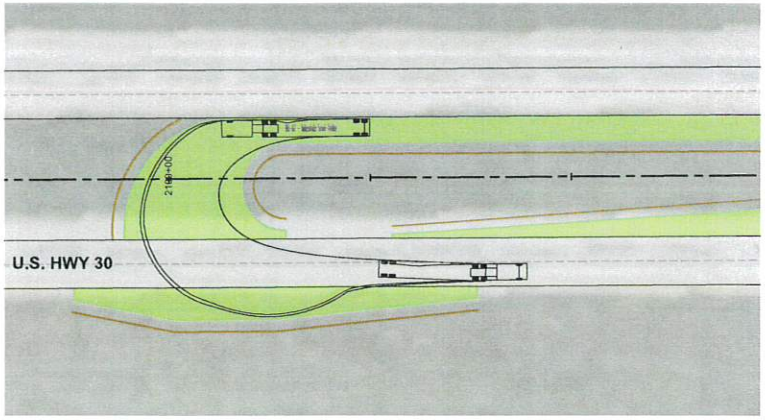
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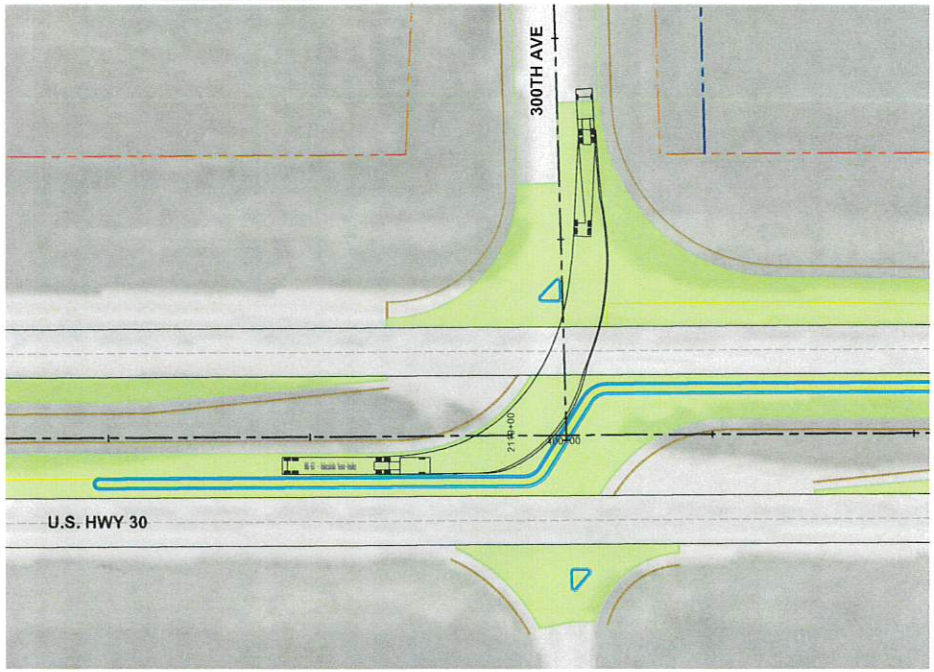


P:\24\150\DRAWINGS\DWG\24150 ZZ-99-TSIP-HWY30.DWG 8/13/2025 3:16:43 PM TROY CHRISTIANSON

origin design 800 556-4491	CITY OF DEWITT, IOWA	PROJECT NUMBER	TSIP EXHIBIT - US HWY 30 AND 300TH AVE	SHEET: EX 1	REV:

G



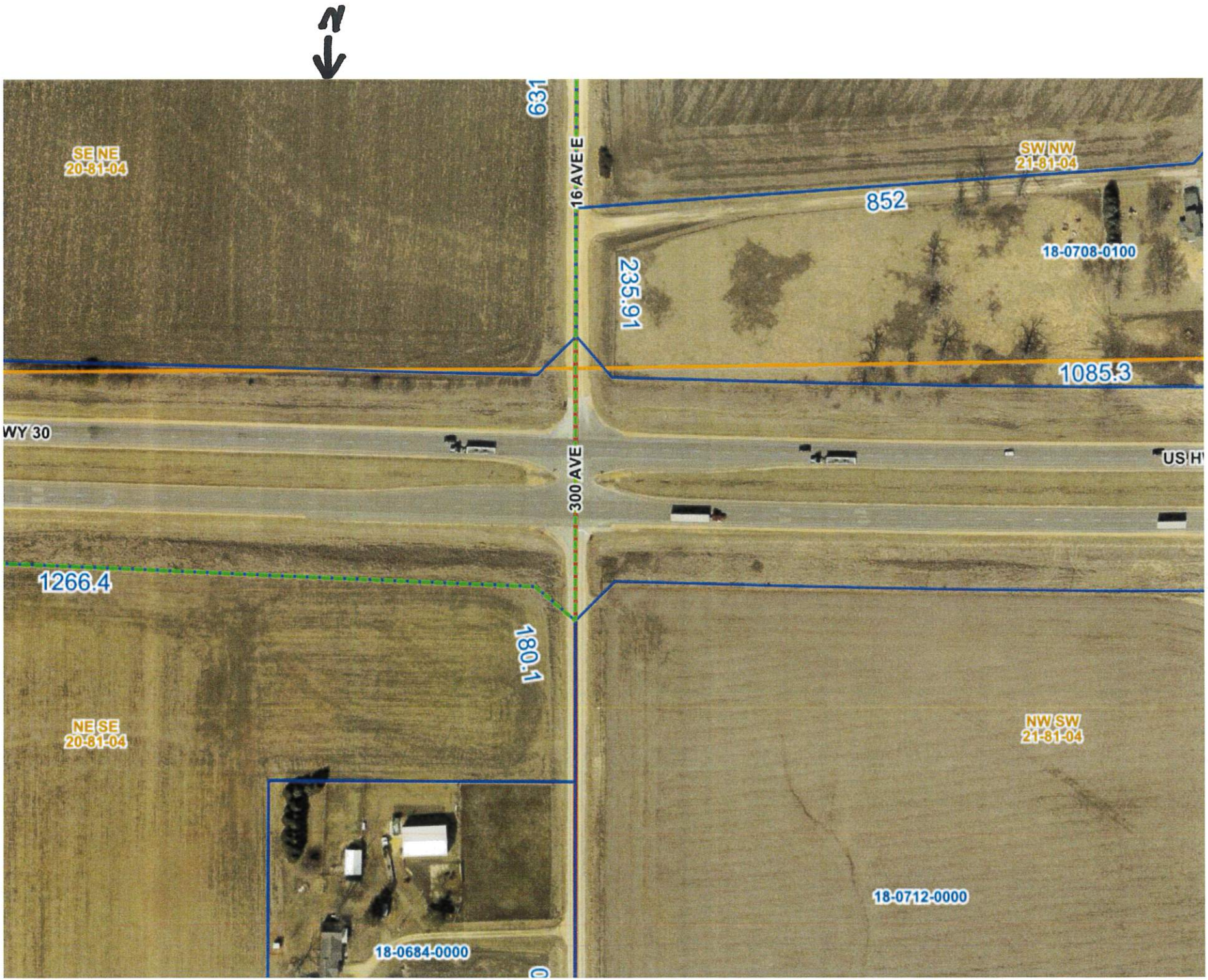


N

HORIZONTAL SCALE IN FEET
0 30 60
DRAWING MAY HAVE BEEN REDUCED

origin design 800 556-4491	CITY OF DEWITT, IOWA	PROJECT NUMBER	TSIP EXHIBIT - TURNING MOVEMENTS	SHEET: EX 2	REV:

P:\24\150\DRAWINGS\CIVIL\24150_ZZ-99-TSIP-HWY30-TURNINGMOVEMENTS.DWG 8/13/2025 3:16:45 PM TROY CHRISTIANSON


N
631
SE NE
20-81-04
16 AVE E
SW NW
21-81-04
852
18-0708-0100
235.91
1085.3
WY 30
300 AVE
US H
1266.4
1801
NE SE
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H

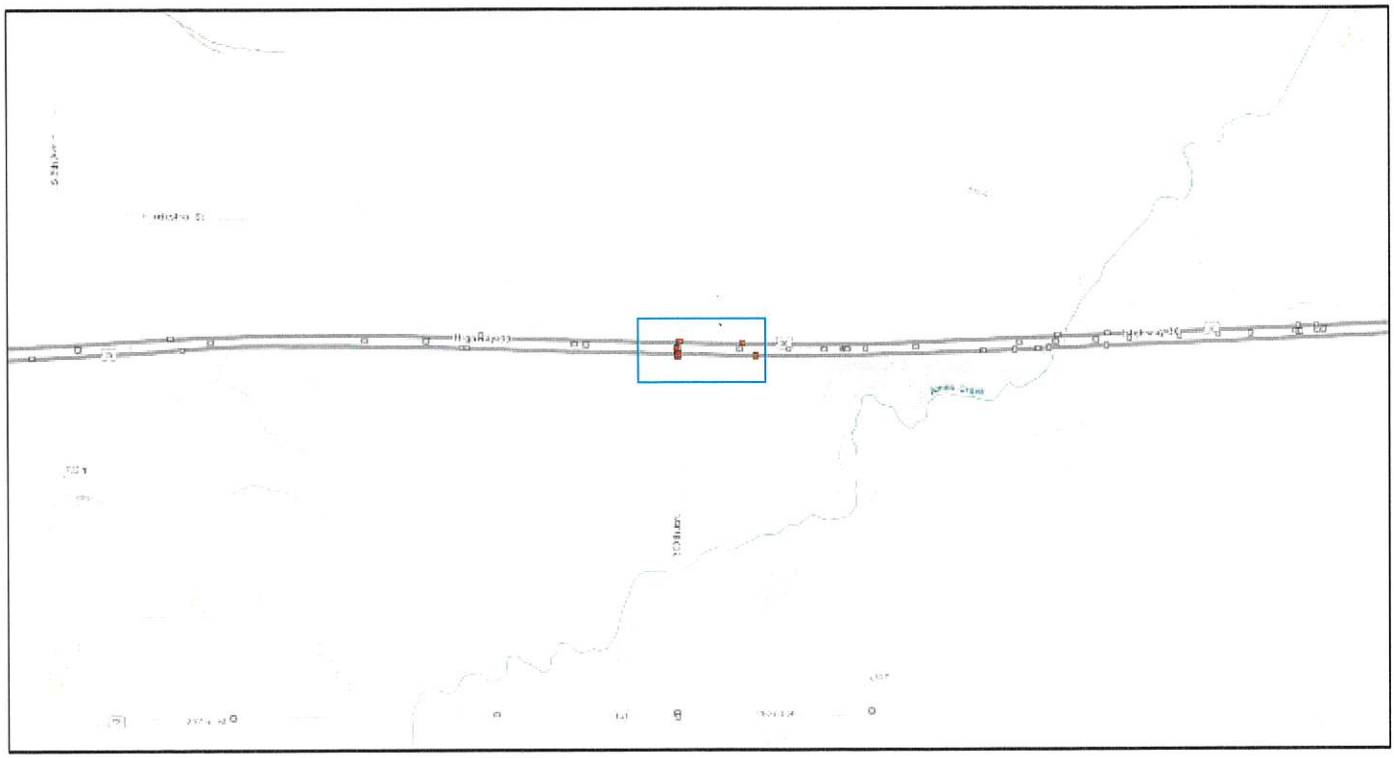
Iowa Crash Analysis Tool
Quick Report
2021-2025

Crash Severity	9
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	3
Property Damage Only	6

Injury Status Summary	7
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	3
Uninjured	0
Unknown	0
Not Reported	4

Property/Vehicles/Occupants	
Property Damage Total (dollars):	57,600.00
Average (per crash dollars):	6,400.00
Total Vehicles:	12.00
Average (per crash):	1.33
Total Occupants:	14.00
Average (per crash):	1.56

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.33
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.33



Major Cause			9
Animal	4	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	1	Followed too close	1
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	2
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	1	0	1	0	2
Monday	0	0	0	1	0	0	0	0	0	0	0	1	0	2
Tuesday	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Wednesday	0	0	0	0	0	1	0	0	0	0	0	1	0	2
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	0	1	0	0	0	0	0	0	0	1	0	2
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	1	0	1	0	1	0	4	0	9

Manner of Crash Collision	9
Non-collision (single vehicle)	5
Head-on (front to front)	0
Rear-end (front to rear)	2
Angle (oncoming left turn)	0
Broadside (front to side)	1
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	1
Other	0
Unknown	0

Surface Conditions	9
Dry	4
Wet	1
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	4
Other	0
Unknown	0

Fixed Object Struck			12
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	1	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	1
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	10

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	1	0	0	1
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	1	2	0	0	3
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	1	0	0	1
>= 21 and <= 24	1	0	0	0	1
>= 25 and <= 29	1	0	0	0	1
>= 30 and <= 34	1	0	0	0	1
>= 35 and <= 39	0	0	0	0	0
>= 40 and <= 44	1	1	0	0	2
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	1	0	0	0	1
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	1	0	0	0	1
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	7	5	0	0	12

Drug/Alcohol Related	9
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	9

Alcohol Test Given	12
None	12
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

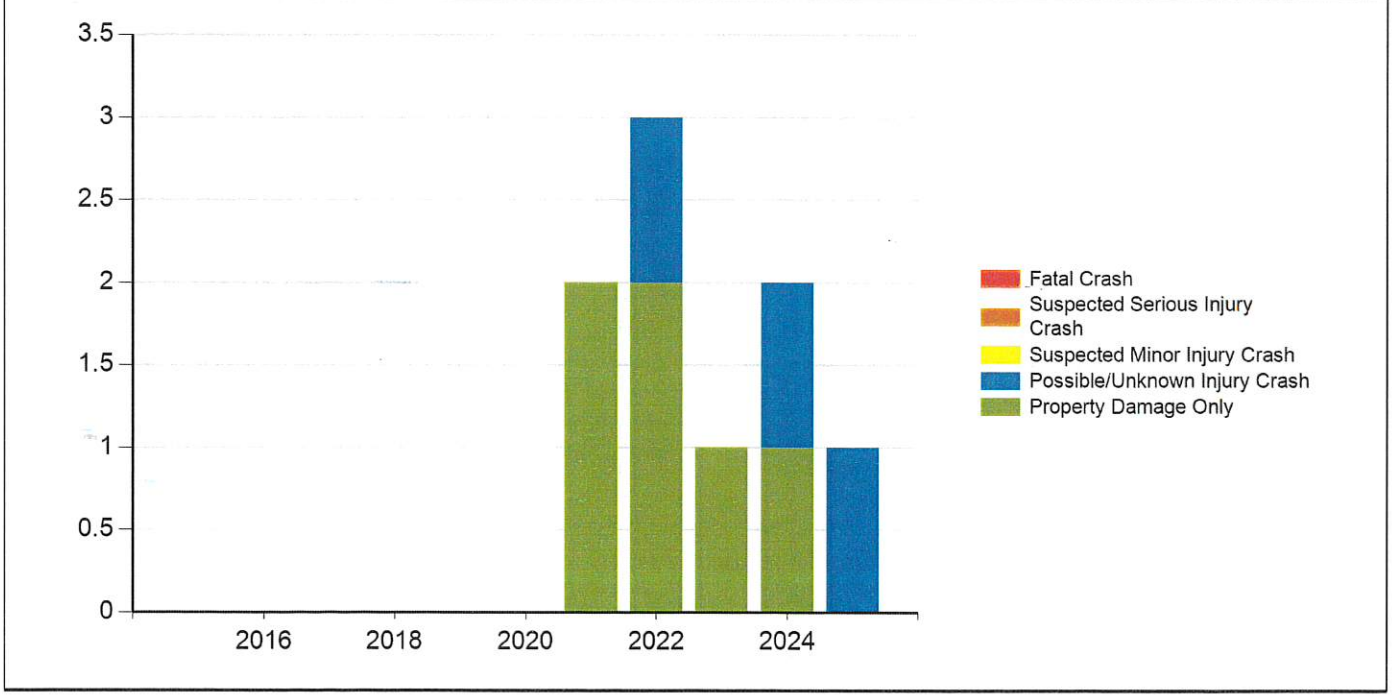
Drug Test Given	12
None	12
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	12
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	12
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	2	2
2022	0	0	0	1	2	3
2023	0	0	0	0	1	1
2024	0	0	0	1	1	2
2025	0	0	0	1	0	1
Total	0	0	0	3	6	9

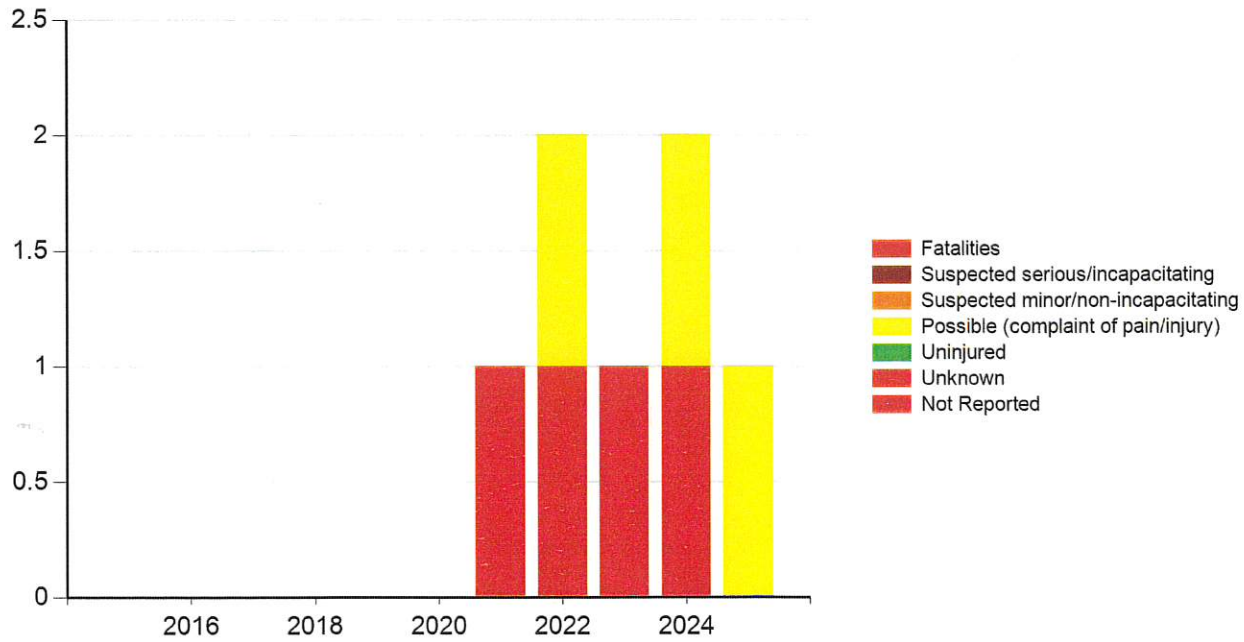
Severity/Year



Injury Status - Annual

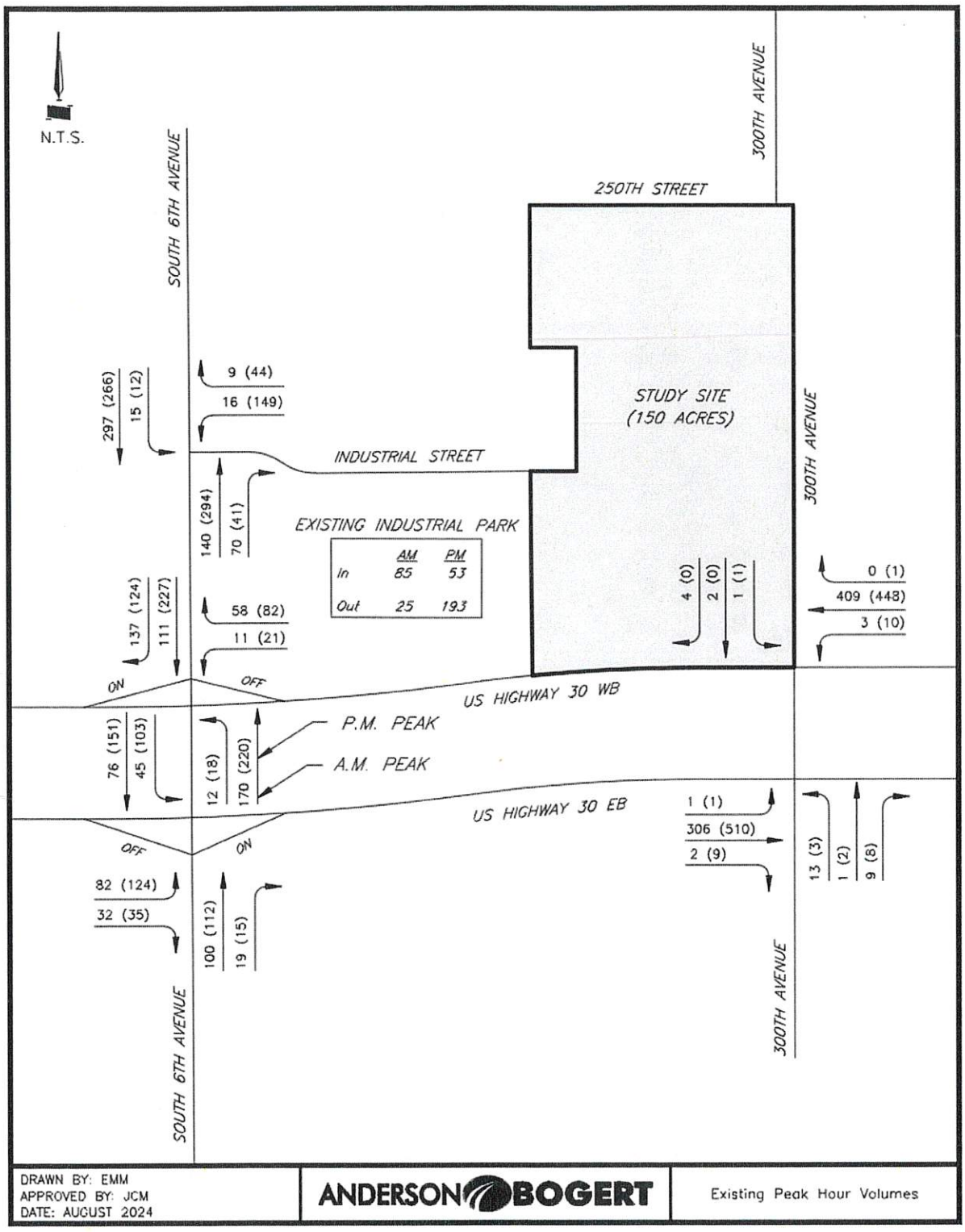
Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	1	1
2022	0	0	0	1	0	0	1	2
2023	0	0	0	0	0	0	1	1
2024	0	0	0	1	0	0	1	2
2025	0	0	0	1	0	0	0	1
Total	0	0	0	3	0	0	4	7

Injury Status/Year



J

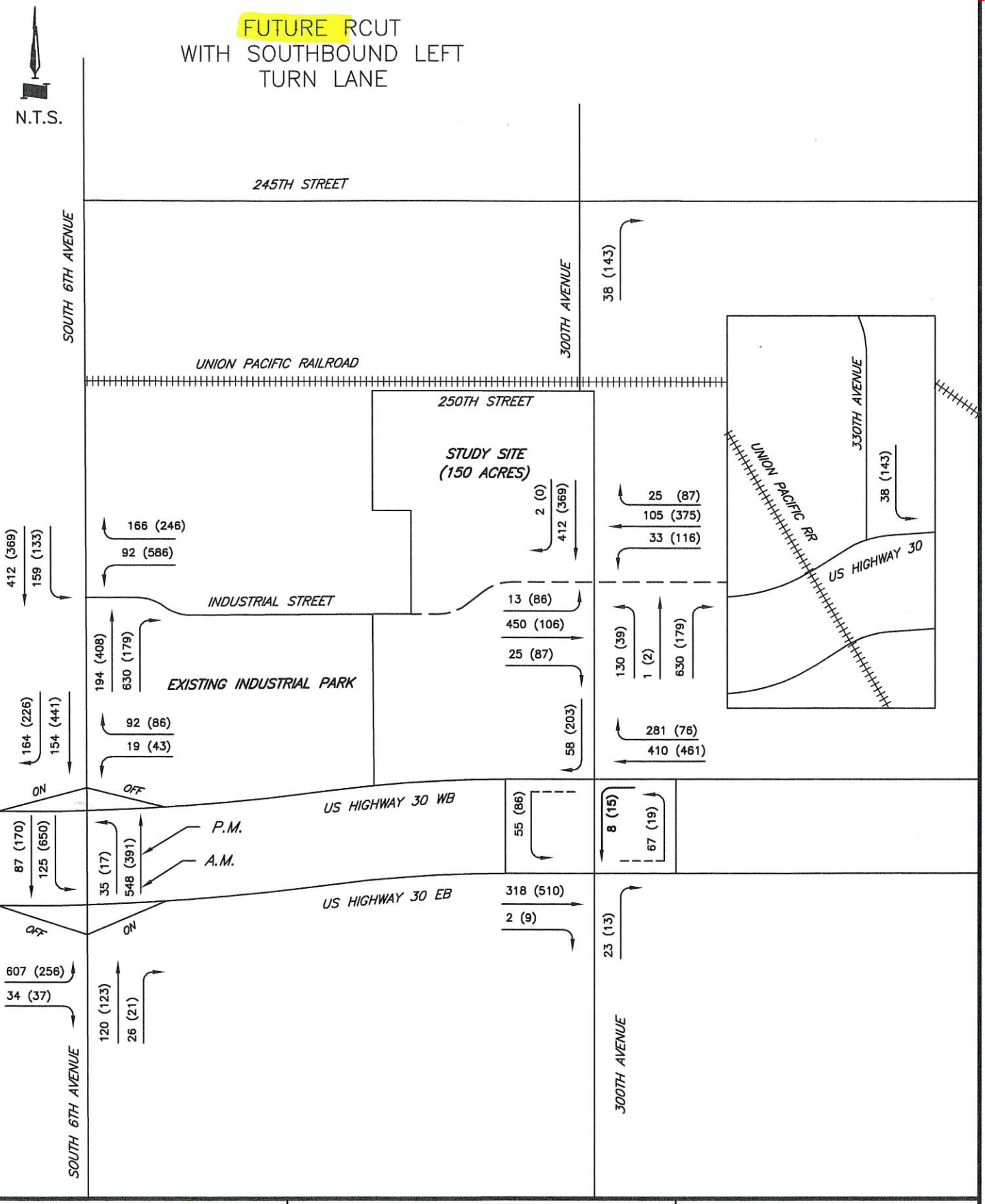
Figure 5 – Existing Peak Hour Volumes



J

FUTURE RCUT WITH SOUTHBOUND LEFT TURN LANE

N.T.S.



DRAWN BY: EMM APPROVED BY: JCM DATE: AUGUST 2025	ANDERSON BOGERT	RCUT – FUTURE VOLUMES

J


Iowa Traffic Data
IOWA | DOT
Average Traffic Volume
Traffic Collection
Turning Movement
Historical AADT
References
Average Annual Daily Traffic (AADT)
0 - 999
1000 - 1999
2000 - 4999
5000 or more
Click on a road for additional information. Secondary and Municipal Traffic available at inner zoom scales only.
Note: Estimated traffic volumes are shown as dashed lines.

County:		Prepared By:	
Location:		Date Prepared:	8/7/2025
Proposed Improvements:	Convert intersection into R-cut and add enhanced lighting		
Estimated Improvement Cost:	$ 1,900,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 38,000

Method Choice: Predictive Method

The Predictive Method uses the outputs from the Highway Safety Manual's Predicted or Expected crash tool. That tool accounts for changing risk due to increased traffic volumes, so a growth factor is not used in these calculations. For additional information, click the "Learn More" button.

Predictive Method

Existing Condition (All Crashes):	7.45	Location Characteristics:	Rural
Alternative (All Crashes):	3.23		Intersections Only

Percent Change in Crashes **56.64% reduction in crashes**

Iowa Crash Distribution 2017-2021

Crash Severity	Crash Distribution	Existing Condition	Alternative Expected	Crashes Saved Over Service	Crashes Saved Annually
Fatal (K)	1.45%	0.11	0.05	**0.06**	**0.00**
Serious Injury (A)	5.18%	0.39	0.17	**0.22**	**0.01**
Minor Injury (B)	15.60%	1.16	0.50	**0.66**	**0.03**
Possible/Unknown Injury (C)	19.12%	1.42	0.62	**0.81**	**0.04**
Property Damage Only (O)	58.65%	4.37	1.89	**2.47**	**0.12**

Crash Severity	Rounded Societal Costs	Annual Societal Benefit
Fatal (K)	$ 4,300,000	**$ 13,181**
Serious Injury (A)	$ 4,300,000	**$ 47,001**
Minor Injury (B)	$ 290,000	**$ 9,544**
Possible/Unknown Injury (C)	$ 135,000	**$ 5,446**
Property Damage Only (O)	$ 20,000	**$ 2,475**

County:
Location:

Prepared By:
Date Prepared: 8/7/2025

Total Benefits and Costs

			Implementation Cost	$ 1,900,000
			Present Value of Maint.	$ 516,432
Present Value Benefits (Societal Benefits)	$	1,055,260	Present Value Costs (Impl. and Maint. Costs)	$ 2,416,432
Present Value Net Return	$	(1,361,172)		
Benefit Cost Ratio		**0.44**		

Form continues on next page

County:
Location:

Prepared By:
Date Prepared: 8/7/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

Predictive Method in this tool does not use or customize Crash History or Traffic Growth Factor.

City of Fairfield

Connect. Create. Celebrate.





MAIN & BURLINGTON PEDESTRIAN IMPROVEMENTS

TRAFFIC SAFETY IMPROVEMENTS PROGRAM

FY 27 APPLICATION
AUGUST 15, 2025













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Transportation Traffic Safety Improvement Program Summary

Estimated Total Construction Cost: $373,000 **TSIP Eligible Costs:** 212,630

Applicant's Name: City of Fairfield

Schedule:

→ Receive funding confirmation ..... January 2026
→ Project Letting ..... November 17, 2026
→ Project Completion ..... June 2027

Location of Primary Road and Boundaries: Intersection of Main Street and Burlington Avenue (Iowa Highway 1 mile post 24.55)

Contact Person: Melanie Carlson, Public Works Director/City Engineer

Design Engineer: Marcus Clark, French-Reneker-Associates

Available Additional Project Safety Documentation:

- Local Road Safety Plan (March 2020) Project Information Sheet – See Page 21
- Traffic and Safety TEAP Study (March 2022)

A. Application

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 8/15/2025

Location / Title of Project: Main and Burlington Pedestrian Improvements

Applicant: City of Fairfield

Contact Person: Melanie Carlson Title: Public Works Director

Complete Mailing Address: 118 South Main Street

Fairfield, Iowa 52556

Phone: 641-472-6193 (Area Code) E-Mail: mcarlson@fairfieldiowa.gov

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s): _____

Contact Person: _____ Title: _____

Complete Mailing Address: _____

_____

Phone: _____ (Area Code) E-Mail: _____

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	212,630
Total Project Cost	$	373,000
Safety Funds Requested	**$**	**212,630**

Additional Project Safety Documentation (when available):

- ☒ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☒ Iowa DOT TEAP Study or similar analysis and concept
- ☐ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
		☐	☐		
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Fairfield

Signed: _____ 8/15/25
Signature Date Signed

Doug Reinert
Printed Name

Attest: Denise Estle 8-15-25
Signature Date Signed

Denise Estle
Printed Name

Council Supporting Resolution

RESOLUTION NO. 4389

A RESOLUTION SUPPORTING THE CITY'S APPLICATION FOR AN IOWA DEPARTMENT OF TRANSPORTATION TRAFFIC SAFETY IMPROVEMENT PROGRAM GRANT

WHEREAS, the City of Fairfield desires to improve the pedestrian/vehicle interaction at the intersection of Burlington Avenue and Main Street;

WHEREAS, the City of Fairfield Traffic and Safety TEAP Study (2022), the Local Road Safety Plan (2020), the Fairfield Forever Comprehensive Plan (2020), the Health Hometown Walkability Assessment (2019), and the Iowa Living Roadways Community Visioning (2015), identify and support a commitment to a walkable, bikeable, and overall welcoming downtown to visitors and citizens;

WHEREAS, the City acknowledges that if awarded, the City will be responsible for obtaining the matching funds necessary to complete the project within the required timeframe;

BE IT RESOLVED, that the City Council of the City of Fairfield, Iowa Fairfield authorizes, endorses, and supports an application for an Iowa Department of Transportation Traffic Safety Improvement Program Grant.

BE IT FURTHER RESOLVED, that the City Council of the City of Fairfield does commit to maintaining any funded improvements covered by this grant.

Dated this 11th day of August, 2025 at Fairfield, Iowa

CITY OF FAIRFIELD, IOWA

Connie Boyer, Mayor City of Fairfield

ATTEST:

Douglas S. Reinert, City Administrator

B. Narrative

The intersection of Main Street and Burlington Avenue has been a hub of activity for many years. As one of the four ninety-degree turns in Iowa Highway 1, the intersection has the potential for congestion and confusion. The intersection also serves as the gateway to the City's Central Business District, including the City's picturesque Central Park. Despite concerns of vehicle-pedestrian conflicts at this intersection, and recommendations from many outside sources, vocal community members believed that Central Park's signature midblock crosswalks were appropriate.

Unfortunately, a 2024 vehicle-pedestrian crash where a child was seriously injured forced the community to confront the difficult choice between preserving the Park's storied history and following modern safety recommendations. Luckily, we believe the proposed improvements will strike a balance, allowing the improvements to fit seamlessly into the downtown, while improving pedestrian access to the shops and downtown features that make Fairfield unique.

The proposed improvements include:

- → ***Adding crosswalks to the minor approaches, keeping the balance between highway vehicle traffic and pedestrian needs***
- → ***Adding curb extensions to shorten the crossing distance and make pedestrians more visible***
- → ***Add pedestrian countdown times to reassure pedestrians while crossing***
- → ***Add pedestrian push buttons with the possibility of a leading pedestrian interval***



FIGURE 1: MAIN & BURLINGTON LOOKING NORTH RENDERING FROM 2015 IOWA LIVING ROADWAYS VISIONING

Existing Conditions

The intersection includes Main Street in the north/south direction and Burlington Avenue in the east/west direction. The south leg of the intersection is approximately 57 feet wide, with parallel parking on the east side and angled parking on the west. On the south leg, the southbound lane is approximately 16 feet wide, while the northbound lane is 12 feet wide. The west leg of the intersection is 52 feet wide with three 12-foot lanes, parallel parking on the south side, and an 8-foot paved shoulder on the north. The south and west legs are part of Iowa Highway 1. The north leg is 74 feet wide with three 14-foot lanes and angled parking on both sides. The north leg consists of northbound one-way traffic (away from the intersection). The east leg is 68 feet wide with three 12-foot lanes, angled parking on the north side, and parallel parking on the south side. There are crosswalks only across the south and west legs. The northeast corner of the intersection is the City's Central Park, while the remaining three corners consist of commercial/retail buildings built up to the property line. Sidewalks are 10 to 15 feet wide. The speed limit is 25 miles per hour.



FIGURE 2: AERIAL VIEW OF MAIN AND BURLINGTON (NORTH TO THE LEFT)

Traffic Volume and Turning Movements

The annual average daily traffic (AADT) volumes and turning movements at the intersection are shown in the adjacent figure and were taken from the 2022 Iowa DOT Iowa Traffic Data.

Peak traffic volumes were developed as part of the 2022 TEAP study, using data collected on April 6, 2021. The April 6, 2021 numbers are included in Section J.

The traffic volumes in Section J also include pedestrian counts. Pedestrian counts are summarized below:

TABLE 1: PEDESTRIAN VOLUMES

	Peak Hour	Time
EB/WB	15	4:45 pm to 4:30 pm
NB/SB	19	5 pm to 5:45 pm

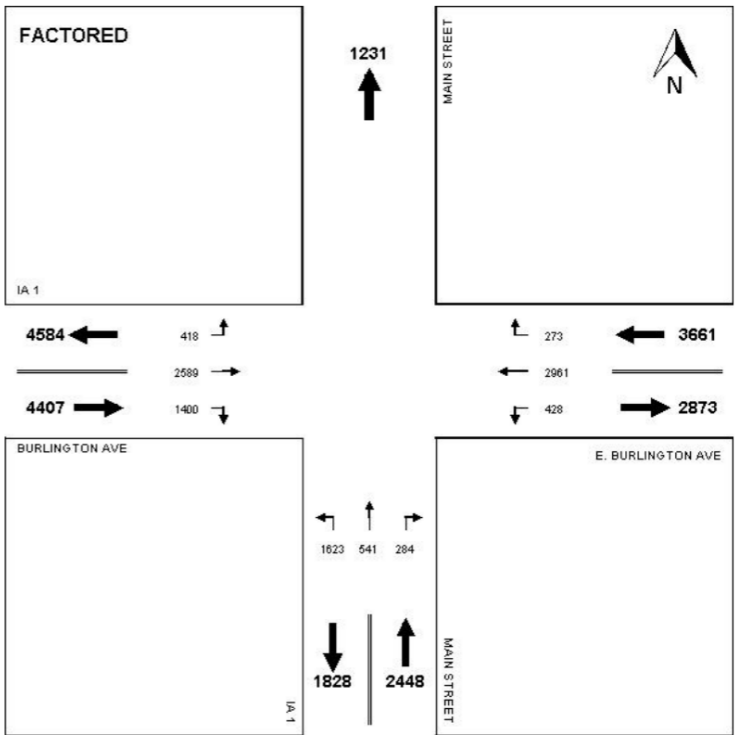


FIGURE 3: TRAFFIC VOLUMES & TURNING MOVEMENTS

Signal Timing

The current traffic signal consists of a 70-second cycle with 38 seconds in the east/west direction and 32 seconds for northbound traffic. Per the 2022 TEAP study, this provides a level of service C, with a max delay of 26.9 seconds in the eastbound leg during the PM peak.

With a longer east/west traffic cycle, the east/west pedestrian signals meet the recommended walk and pedestrian change intervals with 22 seconds of walk time and 17 seconds of flashing countdown. The pedestrian signals on the west leg have been a frequent source of complaints, and their timing helps explain users' dissatisfaction. The north/south pedestrian phase provides only 5 seconds of walk time, followed by a 14-second flashing countdown. Per MUTCD section 4, this signal should have a minimum of an additional 2 seconds of walk time and 1 second of flashing countdown.

The 2022 TEAP recommended further review of the current traffic signal timing at Main and Burlington.



FIGURE 4: NORTHBOUND CROSSWALK

The existing traffic signals are at least 50 years old and have exceeded their useful life. In the last two years, this intersection lost power three times; however, only two of those times were weather-related.

The City of Fairfield intends to apply for USTEP funds for signal and control box replacement, including a battery backup. Due to the proximity of existing buildings, the existing poles cause clear zone and line of sight issues. Nowhere else in Iowa DOT District 5, or possibly the State, do drivers and pedestrians face a similar configuration on a State roadway.

Crash History

Table 2 is a summary of the crash history for 2020 through 2024. The partial crash report is included in Section I, including the Fairfield Police Department Report for the serious injury crash.

TABLE 2: CRASH HISTORY 2020-2024

Crash Severity	Count (2020-2024)
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	1
Property Damage Only	7

Crash types included:

- 5 rear-end (front to rear)
- 3 single vehicle (1 struck the signal poles, 1 struck a building, 1 involved a pedestrian)
- 1 sideswipe

The purpose of the proposed safety improvements is to improve pedestrian safety. The following crash reduction factors (CRF) are proposed.

TABLE 3: CRASH REDUCTION FACTORS

CRF #	Existing Facility Type	Countermeasure Type	Countermeasure Name	Crash Type	CRF Value
BP-30	Pedestrian	Traffic Control	Install Pedestrian Countdown Timer	Vehicle / Pedestrian	45
3019	Stop Controlled		Install crosswalk on one minor approach	All	65
153	Minor Arterial		Prohibit On-street parking	All	20

Traffic and Safety Studies

Despite a longstanding desire to preserve Central Park and the downtown, City officials felt that the challenges posed by the downtown one-way streets and the State Highway made intersection improvements more complicated. While multiple outside consultant reviews—including four in the past decade—identified opportunities for change, it was the serious injury crash in 2024 that ultimately galvanized City officials and the community to agree on the need to improve the intersection.

The following studies have been completed over the last 10 years:

- *Iowa Living Roadways Community Visioning – 2015 by Flenker Land Architecture Consultants*
- *Healthy Hometown Walkability Assessment – 2019 by Wellmark*
  Relevant Recommendations:
  - Modify existing landscaping nodes to accommodate crosswalks
  - Install crosswalks at corners
  - Consider making the nodes larger
  - Countdown pedestrian signals

- *Local Road Safety Plan – 2020 by Kimly Horn*
  Relevant Recommendations:
    - Consider a leading pedestrian interval
    - Install pedestrian signals with Countdown timers and audible push buttons
    - Provide ADA-compliant ramps
- *City of Fairfield Traffic and Safety TEAP Study – 2022 by H R Green*

  In 2019, the City of Fairfield was selected to be one of the first seven cities to be participate in the Iowa DOT's Local Road Safety Program. The city was unfortunately selected due to its high percentage of fatal and serious injury crashes involving pedestrians and bicycles through the City.

C. Itemized Breakdown of Costs

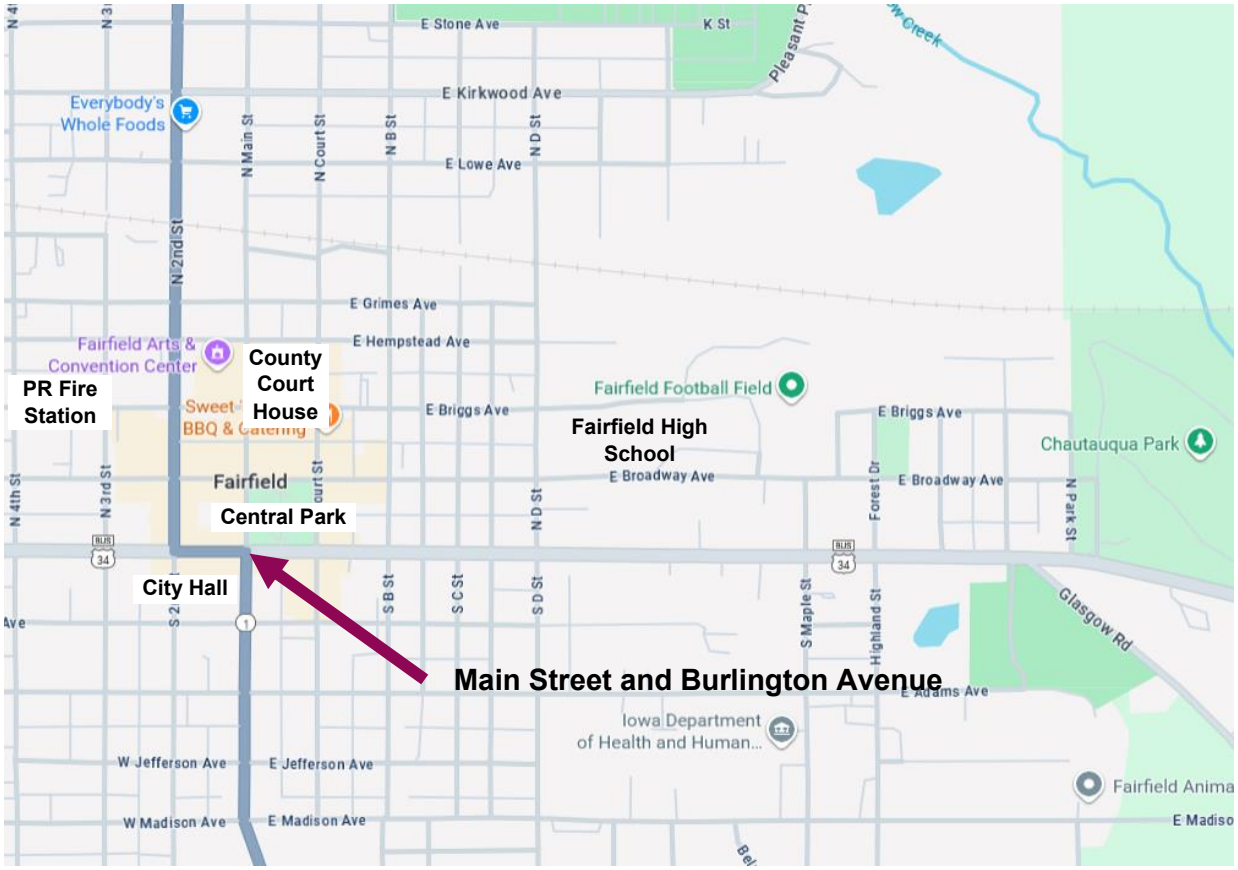
OPINION OF PROBABLE COSTS
PROPOSED PEDESTRIAN SAFETY IMPROVEMENTS
FAIRFIELD, IOWA
2025

Item No.	Description	Quantity		Unit Price	Extension
1	*Excavation, Class 10	100	C.Y.	$ 20.00	$ 2,000.00
2	*Subbase, Modified, 6-inch	115	S.Y.	$ 20.00	$ 2,300.00
3	Storm Sewer, Trenched, RCP, 15-inch	270	L.F.	$ 100.00	$ 27,000.00
4	Manhole, SW-401, 48"	2	Each	$ 7,000.00	$ 14,000.00
5	Intake,SW-501	6	Each	$ 6,000.00	$ 36,000.00
6	*Pavement, PCC, 10-inch, Class C, Reinforced	111	S.Y.	$ 130.00	$ 14,430.00
7	*Sidewalk, PCC, 6"	400	S.Y.	$ 120.00	$ 48,000.00
8	*Detectable Warning Panels	140	S.F.	$ 80.00	$ 11,200.00
9	*Pavement Removal	475	S.Y.	$ 20.00	$ 9,500.00
10	Full-Depth Patch, 10-Inch, For Storm Sewer	78	S.Y.	$ 140.00	$ 10,920.00
11	*Pedestrian Countdown, Pushbuttons and Pedastals	1	LS	$ 65,000.00	$ 65,000.00
12	*Painted Pavement Markings, Solvent/Waterborne	12	STA.	$ 850.00	$ 10,200.00
13	Temporary Traffic Control	1	L.S.	$ 10,000.00	$ 10,000.00
14	Mobilization	1	L.S.	$ 17,450.00	$ 17,450.00
15	Final Grading and Cleanup	1	L.S.	$ 5,000.00	$ 5,000.00
				Estimated Construction Costs	$ 283,000.00
				*Contegency	$ 50,000.00
				Design /EDC	$ 40,000.00
				Total	**$ 373,000.00**
				*TSIP Eligible	$ 212,630.00

D. Time Schedule

- → Submit TSIP application ..... August 15, 2025
- → Submit USTEP application ..... September 2025
- → Receive funding confirmation ..... January 2026
- → Complete final design ..... September 2026
- → Project Letting ..... November 17, 2026
- → Project Completion ..... June 2027

E. Project Location



F. Site Photos



NW Corner



SW Corner



WB Burlington



NB Main



On-street parking on Burlington



Main Street Looking South



CURB EXTENSION (PHOTO FROM NACTO)

NOTE: PCC PATCHING AND STORM SEWER NOT SHOWN FOR CLARITY

MAIN ST.

PEDESTRIAN PUSHBUTTON MOUNTED ON FUTRUE TRAFFIC SIGNAL (TYP.)

PEDESTRIAN PUSHBUTTON WITH PEDESTAL (TYP.)

ONLY

BURLINGTON AVE./HWY 1

BURLINGTON AVE.

REMOVE PARKING STALL

REMOVE PARKING STALL

FUTURE TRAFFIC SIGNAL (TYP.)

MAIN ST./HWY 1

LEGEND

- PROPOSED PCC PAVEMENT
- PROPOSED SIDEWALK
- DETECTABLE WARNING PANELS

0 10' 20'

DRAWING PATH\NAME: G:\2025\25034Fairfield\DRAWINGS\C3D\PR FFLD DOWNTOWN.dwg – TSIP SKETCH
PLOTTED: 08/14/25 – 9:51am – marcusc

MARK	REVISION DESCRIPTION	DATE	BY

FRENCH-RENEKER ASSOCIATES
ENGINEERS & SURVEYORS
1501 S. Main Street
Fairfield, IA 52556
phone: (641) 472-5145
email@french-reneker.com
www.french-reneker.com

PEDESTRIAN SAFETY IMPROVEMENTS

MAIN ST. & BURLINGTON AVE.

PROPOSED PEDESTRIAN IMPROVEMENTS
FAIRFIELD, IOWA
2025

DATE 8-6-25
PROJECT NO. 25-034
Copyright © 2025
SHEET 1 OF 1

I. ICAT Crash Summary of motor vehicle accidents

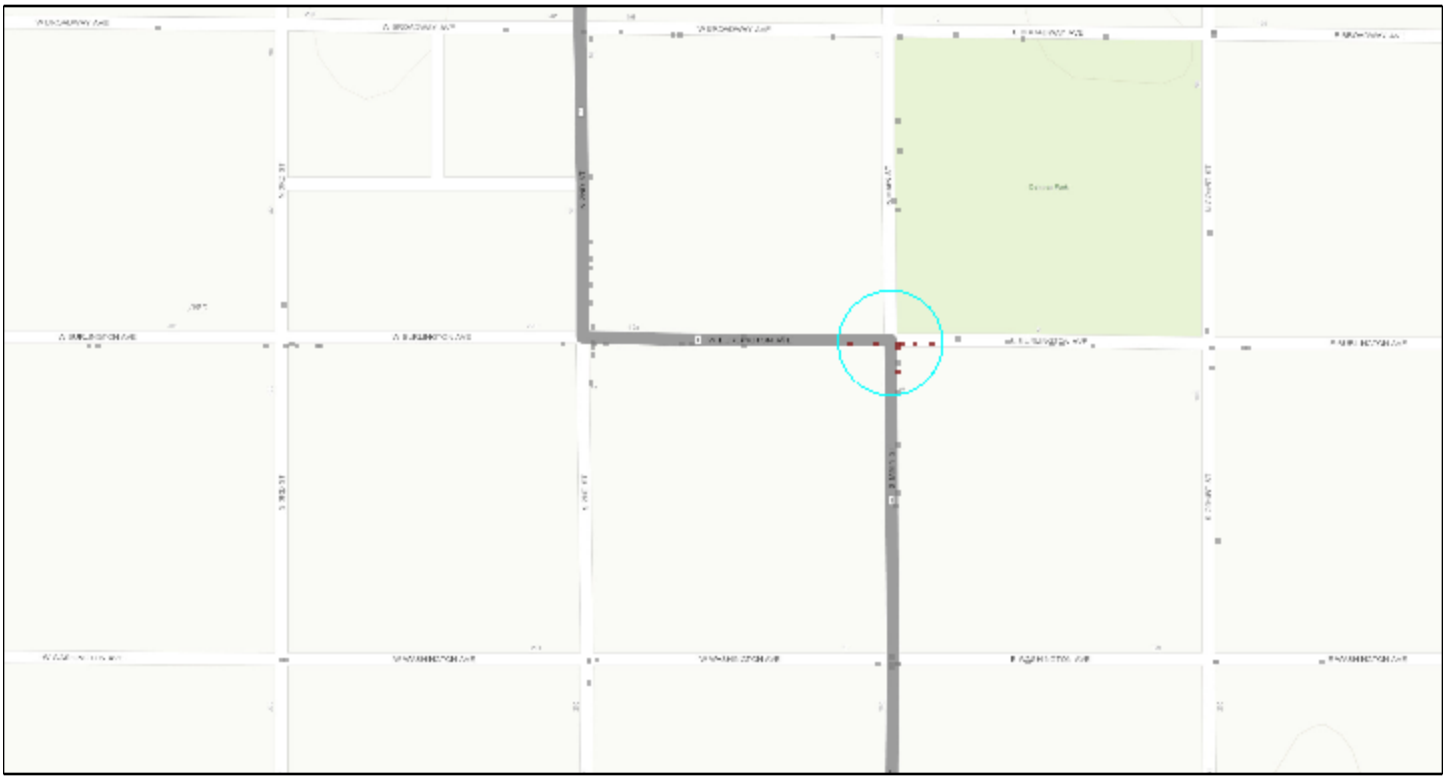
Iowa Crash Analysis Tool
Quick Report
2020-2024

Crash Severity	9
Fatal Crash	0
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	0
Property Damage Only	7

Injury Status Summary	5
Fatalities	0
Suspected serious/incapacitating	1
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	0
Uninjured	0
Unknown	0
Not Reported	3

Property/Vehicles/Occupants	
Property Damage Total (dollars):	36,750.00
Average (per crash dollars):	4,083.33
Total Vehicles:	15.00
Average (per crash):	1.67
Total Occupants:	16.00
Average (per crash):	1.78

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.22
Major Injuries/Crash:	0.11
Minor Injuries/Crash:	0.11
Possible/Unknown Injuries/Crash:	0.00



I. Fairfield Police Report of Serious Injury Crash

Fairfield Police Department
Initial Contact/Complaint Report

Case Number: PD2407253

Subject(s)	
VICTIM	[redacted]
OTHER	[redacted]
OTHER	[redacted]
ACCIDENT - DRIVER	[redacted]
REPORTING PARTY	[redacted]
REPORTING PARTY	[redacted]

Date / Time Reported:	Saturday, August 31, 2024 at 17:33 hrs.	
Officer Notified:	08/31/24 @ 17:35	**2 Minutes**
Officer Enroute:	08/31/24 @ 17:35	**0 Minutes**
Officer Arrived:	08/31/24 @ 17:36	**1 Minutes**
Officer Completed:	08/31/24 @ 18:02	**26 Minutes**

Received By	**Method Received**	**Category**	**Nature of Contact**
Alyson Hesseltine	911	Traffic Accident	Reportable P.I.

Location

MAIN/BURLINGTON Fairfield

Summary

Details/Narrative

MULTIPLE CALLS REGARDING A CHILD WHO HAS HAD A BICYCLE ACCIDENT IN THE MIDDLE OF THE ROADWAY, UNSURE WHAT KIND OF INJURIES HAVE BEEN SUSTAINED. CALLERS REPORTING THEY BELIEVE THE TIRE MAY HAVE POSSIBLY BLEW ON THE BIKE CAUSING THE CHILD TO FALL, AND CAUSING TRAFFIC TO BACK UP IN THE ROADWAY-AH

1737HRS [redacted] REPORTING SHE HAS STRUCK A CHILD ON A BICYCLE WHILE DRIVING HER TRUCK. CALLER STATES SHE DID NOT SEE THE CHILD IN THE ROADWAY AND DID NOT MEAN TO HIT THE GIRL. CALLER DISCONNECTED THE PHONE DUE TO OFFICERS BEING ON SCENE.

L.SB310
[redacted]

1751HRS TAKING JCQ'S RIG TO HOSPITAL

51-29 arrived on scene and located the 5 year old laying in the street with several adults around her. One of the adults was her father who was trying to keep the child still. 51-29 started to provide neck support until medical personal could take over. While waiting for medical staff 51-29 spoke to some

Case Number: PD2407253

of the bystanders and learned that the child was hit by a white truck that was parked a few feet away. Deputies gathered [redacted] information while other city units provided traffic control. Once medical units had taken over providing aid to the child 51-29 interviewed the mother of the child and [redacted] Both parties gave similar stories, that [redacted] drove through a red light and ran over the child. The mother of the child stated that [redacted] did not stop at the red light, and [redacted] stated that she stopped and then made a right on red. The child was taken emergent to JCHC and [redacted] was cited for failure to yield. A state accident report will be filed and the parents of the child will be given [redacted] insurance information. 51-29 will also attempt to locate camera footage of the accident to confirm if [redacted] stopped or not. If footage shows that she did not stop other citations will be issued. 51-29

09/01/24
51-29 spoke with the parents when they came in to get a copy of the state accident report. The mother gave additional statements about the accident. She stated that she saw her child get hit by the truck and that both the front and rear tires ran over her child. She also stated that she slapped the side of the truck several times in order to get the truck to stop. Neither parent thought that the truck was attempting to leave the scene. 51-29

09/05/24
Spoke with VayTek who advised that they had camera footage of the accident. The footage showed [redacted] stopping at the red light briefly and then she pulled forward to make her turn. The child started to cross the street when [redacted] pulled forward. The child was struck by the front of the truck, with the rear wheel rolling over top of her. [redacted] did not attempt to run or leave the scene. 51-29

Status	**Officer Assigned**
Open	Glenn Hackbarth

Citation Information

Defendant:	[redacted]		
Citation #:	286ARTH2408311754386		
Date/Time :	08/31/24 AT 17:33 HRS.		
Location:	MAIN/BURLINGTON, FAIRFIELD		
Charge:	FAIL TO OBEY STOP OR YIELD SIGN		
Statute:	321.322	**State/Local:** State	
Accident Related:	NO		
Notes:	FAIL TO OBEY YIELD SIGN		

J. Traffic Counts (April 6, 2021)

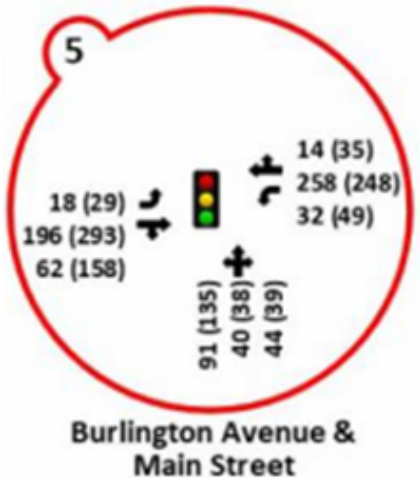
TOTAL

Time	Eastbound			Westbound			Northbound			Southbound			Peds	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	EB/WB	NB/SB
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	*0*	*0*
6:15 AM	0	12	4	3	23	0	11	2	2	0	0	0	*0*	*0*
6:30 AM	5	11	11	5	31	3	18	3	1	0	0	0	*0*	*0*
6:45 AM	1	21	8	5	48	1	19	4	6	0	0	0	*0*	*2*
7:00 AM	2	15	7	1	40	2	16	3	1	0	0	0	*0*	*0*
7:15 AM	5	26	19	3	47	1	16	1	4	0	0	0	*1*	*1*
7:30 AM	1	45	12	7	57	4	25	10	12	0	0	0	*1*	*0*
7:45 AM	4	52	14	10	71	1	27	11	16	0	0	0	*0*	*4*
8:00 AM	7	52	15	10	69	6	23	10	6	0	0	0	*0*	*1*
8:15 AM	6	47	21	5	61	3	16	9	10	0	0	0	*0*	*0*
8:30 AM	2	37	18	2	52	5	26	8	9	0	0	0	*1*	*0*
8:45 AM	5	36	17	16	50	7	21	15	9	0	0	0	*0*	*2*

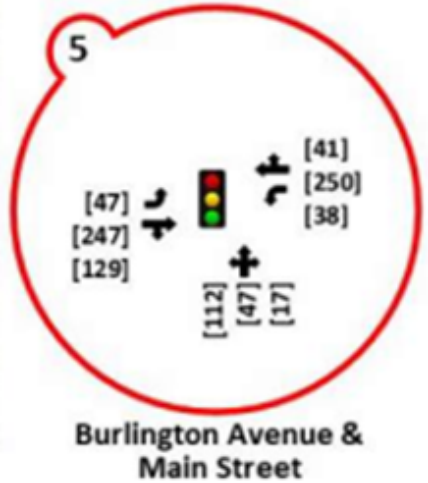
Time	Eastbound			Westbound			Northbound			Southbound			Peds	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	EB/WB	NB/SB
11:00 AM	8	50	24	10	61	6	28	11	10	0	0	0	*0*	*2*
11:15 AM	6	54	30	7	61	10	26	6	7	0	0	0	*1*	*3*
11:30 AM	9	55	22	6	65	8	33	20	7	0	0	0	*1*	*4*
11:45 AM	14	53	33	10	58	10	46	13	3	0	0	0	*1*	*3*
12:00 PM	13	58	29	7	62	5	30	13	5	0	0	0	*2*	*5*
12:15 PM	13	61	33	7	60	16	27	12	3	0	0	0	*3*	*2*
12:30 PM	5	59	36	10	65	13	26	8	6	0	0	0	*1*	*3*
12:45 PM	16	69	31	14	63	7	29	14	3	0	0	0	*1*	*4*

Time	Eastbound			Westbound			Northbound			Southbound			Peds	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	EB/WB	NB/SB
3:00 PM	6	64	32	16	69	4	22	10	9	0	0	0	*1*	*1*
3:15 PM	8	66	31	15	38	2	29	8	8	0	0	0	*3*	*9*
3:30 PM	10	57	33	6	80	5	25	15	11	0	0	0	*0*	*0*
3:45 PM	5	57	35	7	76	5	36	14	6	0	0	0	*2*	*3*
4:00 PM	6	62	40	13	71	5	26	9	10	0	0	0	*2*	*1*
4:15 PM	8	82	27	7	73	6	35	12	3	0	0	0	*1*	*1*
4:30 PM	2	62	37	16	67	3	23	9	6	0	0	0	*0*	*1*
4:45 PM	5	63	32	15	55	5	26	5	10	0	0	0	*8*	*1*
5:00 PM	6	70	41	7	72	9	36	9	11	0	0	0	*3*	*10*
5:15 PM	9	76	41	12	57	11	34	12	7	0	0	0	*1*	*4*
5:30 PM	9	84	44	15	64	10	39	12	11	0	0	0	*3*	*2*
5:45 PM	5	71	34	14	50	5	26	4	5	0	0	0	*1*	*3*

Peak AM [PM]



Peak Mid-day



K. 2022 TEAP Signal Warrant Analysis

Traffic Signal Warrant Analysis

Warrants 1 - 3 (Volume Warrants)

Project Name	Fairfield TEAP - Burlington Ave & Main St
Project/File #	171634.08
Scenario	Existing 2021

Intersection Information			
Major Street (E/W Road)	Burlington Avenue	Minor Street (N/S Road)	Main Street
Analyzed with	1 approach lane	Analyzed with	1 Approach Lane
Total Approach Volume	4914 vehicles	Total Approach Volume	1329 vehicles
Total Ped/Bike Volume	38 crossings	Total Ped/Bike Volume	72 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

Reduction applied to Volume Warrant thresholds due to isolated community.

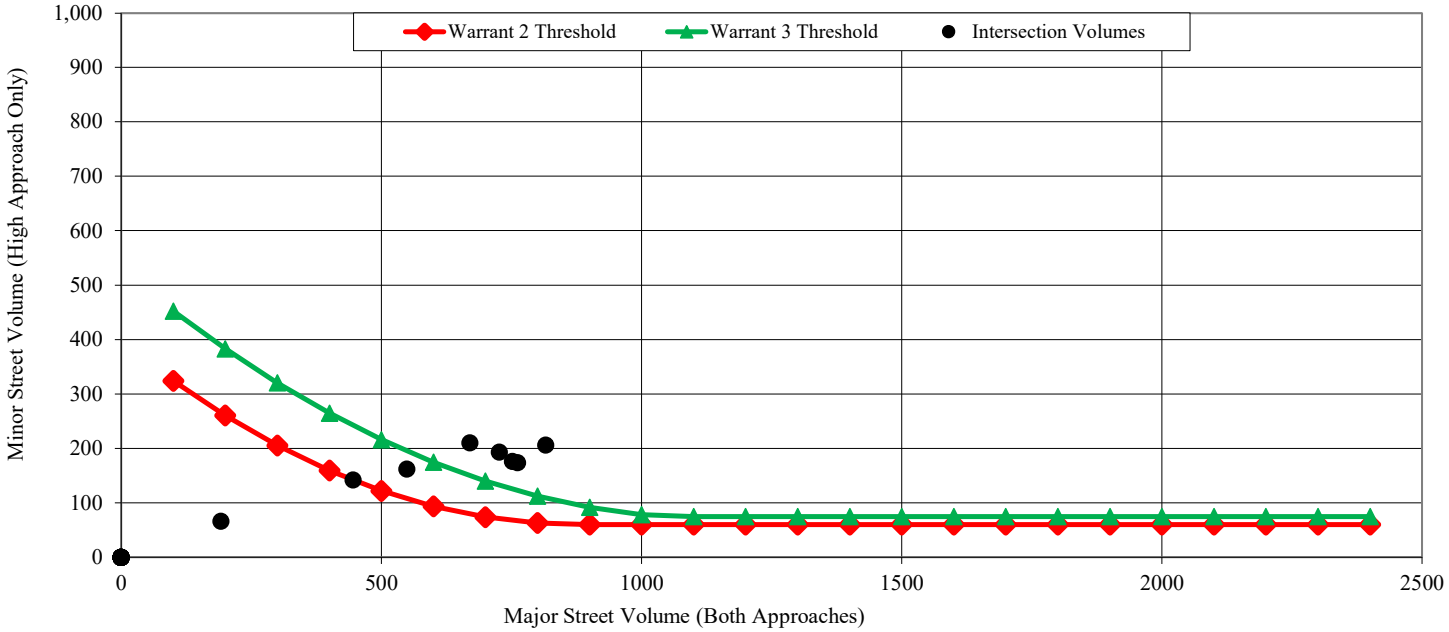
Warrant 1, Eight Hour Vehicular Volume			
	Condition A	**Condition B**	**Condition A+B***
Condition Satisfied?	**Not Satisfied**	**Not Satisfied**	**Not Satisfied**
Required values reached for	7 hours	6 hours	7 (Cond. A) & 7 (Cond. B)
Criteria - Major Street (veh/hr)	350	525	280 (Cond. A) & 420 (Cond. B)
Criteria - Minor Street (veh/hr)	105	53	84 (Cond. A) & 42 (Cond. B)

* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 2, Four Hour Vehicular Volume	
Condition Satisfied?	**Satisfied**
Required values reached for	7 hours
Criteria	See Figure Below

Warrant 3, Peak Hour Vehicular Volume		
	Condition A	**Condition B**
Condition Satisfied?	**Not Satisfied**	**Satisfied**
Required values reached for	1024 total, 212 minor, 1 delay	5 hours
Criteria - Total Approach Volume (veh in one hour)	650	See Figure Below
Criteria - Minor Street High Side Volume (veh in one hour)	100	
Criteria - Minor Street High Side Delay (veh-hrs)	4	

Figure 4C-2 (Warrant 2 - 70% Factor) & Figure 4C-4 (Warrant 3 - 70% Factor)



Traffic Signal Warrant Analysis

Warrants 4 to 6 (Pedestrian, School, Coordinated Systems)

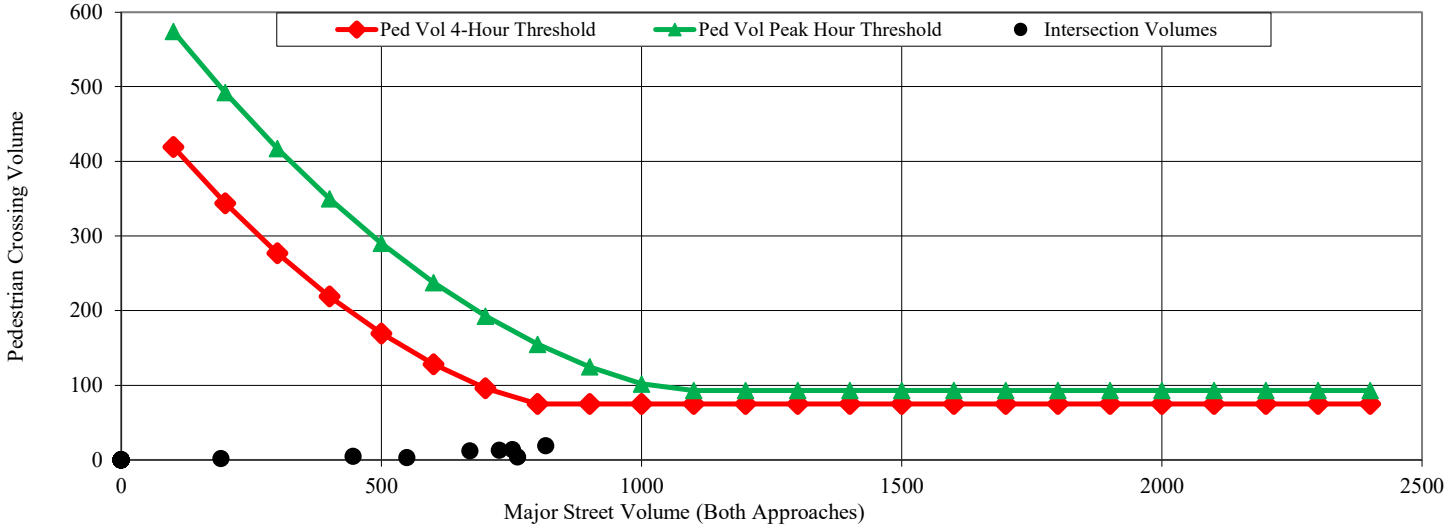
Project Name	Fairfield TEAP - Burlington Ave & Main St
Project/File #	171634.08
Scenario	Existing 2021

Intersection Information			
Major Street (E/W Road)	Burlington Avenue	Minor Street (N/S Road)	Main Street
Analyzed with	1 approach lane	Analyzed with	1 Approach Lane
Total Approach Volume	4914 vehicles	Total Approach Volume	1329 vehicles
Total Ped/Bike Volume	38 crossings	Total Ped/Bike Volume	72 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

Reduction applied to Pedestrian Warrant thresholds due to isolated community.

Warrant 4, Pedestrian Volume		
	Condition A - Four Hour Vol.	**Condition B - Peak Hour Vol.**
Condition Satisfied?	**Not Satisfied**	**Not Satisfied**
Required values reached for	0 hours	0 hours
Criteria - Min. Distance to Nearest Controlled Crossing	300 feet, unless progressive movement not impacted	
Criteria - Major Street Volume and Crossing Volume	See Figure Below	

Figure 4C-6 & Figure 4C-8 (Warrant 4 Four Hour & Peak Hour - 70% Factor)



Warrant 5, School Crossing	
Condition Satisfied?	**Not Examined**
Criteria - School Crossing Data	

Warrant 6, Coordinated Signal System	
Condition Satisfied?	**Not Satisfied**
Criteria - Coordinated Signal System	- If one-way, the adjacent traffic control signals are too far apart to provide the necessary degree of vehicular platooning.

Traffic Signal Warrant Analysis

Warrants 7-9 (Crash, Network, Rail Crossing)

Project Name	Fairfield TEAP - Burlington Ave & Main St
Project/File #	171634.08
Scenario	Existing 2021

Intersection Information			
Major Street (E/W Road)	Burlington Avenue	Minor Street (N/S Road)	Main Street
Analyzed with	1 approach lane	Analyzed with	1 Approach Lane
Total Approach Volume	4914 vehicles	Total Approach Volume	1329 vehicles
Total Ped/Bike Volume	38 crossings	Total Ped/Bike Volume	72 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

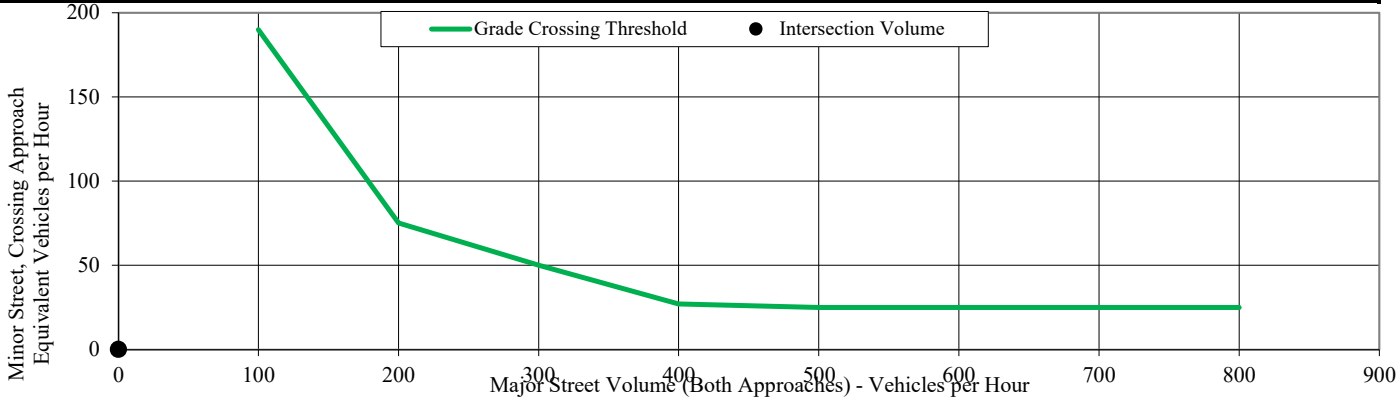
Reduction applied to Crash and Roadway Network Warrant thresholds due to high speed on Burlington Avenue.

Warrant 7, Crash Experience	
Condition Satisfied?	**Not Satisfied**
Required values reached for	Alternatives tried, 4 or less correctable crashes, 7 hours (Veh. Vol.), 0 hours (Ped 4-Hour), and 0 hours (Ped Peak Hour)
Criteria - Alternatives	Adequate trial has failed to reduce the crash frequency
Criteria - Reported Crashes (within 12-month period)	5 or more crashes susceptible to correction by a traffic control signal
Criteria - Major Street (veh/hr) - Minor Street (veh/hr)	From Warrant 1: 280 (Cond. A), 420 (Cond. B) From Warrant 1: 84 (Cond. A), 42 (Cond. B)
(Alternative Volume Requirement) Criteria - Pedestrian Volume	80 percent of the Pedestrian Volume Warrant requirements

Warrant 8, Roadway Network	
Condition Satisfied?	**Not Examined**
Required values reached for	
Criteria - Common Intersection of Two Major Routes	
Criteria - Existing or Immediately Projected Entering Volume	
Criteria - Warrants	
(Alternative Requirement) Criteria - Non-normal Business Day	

Warrant 9, Intersection Near a Grade Crossing	
Condition Satisfied?	**Not Examined**
Required values reached for	
Criteria - Alternatives	
Criteria - Max. Distance to Nearest Controlled Crossing	
Criteria - Major Street Volume and Crossing Volume	

Figure 4C-10 (Two or More Approach Lanes): Distance D = 70 feet



L. Benefit/Cost Ratio Worksheet

County:	Jefferson	Prepared By:	Marcus Clark
Location:	Hwy 1 and Burlignton Avenue	Date Prepared:	8/14/2025
Proposed Improvements:	Pedestrian Safety Improvements		
Estimated Improvement Cost:	$ 212,630		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 4,253

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	3
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	CRF 2:	CRF 3:	**Combined CRF**
CRF Value (%)	65	45	20	**48.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000		48.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	1	48.0	**0.20**	**0.10**
Minor Injury (B)	$ 290,000	1	48.0	**0.20**	**0.10**
Possible/Unknown Injury (C)	$ 135,000		48.0	**0.00**	**0.00**
Property Damage Only (O)	$ 20,000	7	48.0	**1.40**	**0.67**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ 413,182**
Minor Injury (B)	**$ 27,866**
Possible/Unknown Injury (C)	**$ -**
Property Damage Only (O)	**$ 13,452**

Total Benefits and Costs

		Implementation Cost	$ 212,630
		Present Value of Maint.	$ 47,282
Present Value Benefits (Societal Benefits)	$ 5,383,632	Present Value Costs (Impl. and Maint. Costs)	$ 259,912
Present Value Net Return	$ 5,123,720		
Benefit Cost Ratio	**20.71**		

Form continues on next page

County: Jefferson
Location: Hwy 1 and Burlignton Avenue
Prepared By: Marcus Clark
Date Prepared: 8/14/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

M. Local Road Safety Plan - Project Information Sheet

Local Road Safety Plan — **Signalized Intersection**

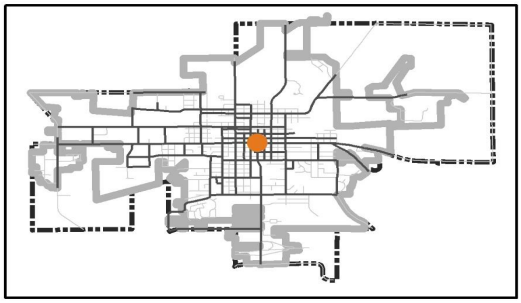
Project Description for Intersection Improvements — **Location Description** — **GPS ID: 274937**

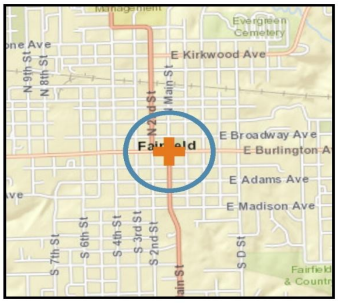
Project Name: IA 1/Burlington Ave & S Main St.
Agency Name: City of Fairfield
Contact Name: Carlson, Melanie
E-mail: mcarlson@fairfieldiowa.gov

Road: **IA 1/Burlington Ave**
Road: **S Main St.**

SICL Rank: **9**

Date: 4/30/19
Prepared By: DJG/DVM
Checked By: MMO







Opinion of Probable Cost (Short-Term Improvements)

Item Description	NB	SB	EB	WB	Quantity	Unit	Unit Price	Item Cost
Modify Signal Timing to Include a Leading Pedestrian Interval					1	INT	$ 3,000	$ 3,000
Replace Signal Head with 12-inch Lenses and Retroreflective Backplates					8	HEAD	$ 950	$ 7,600
Modify Signal Timing to Include Protected Left-Turn Phase	X				1	LEG	$ 3,000	$ 3,000

Short Term Improvements Subtotal:		$ 13,600
Mobilization: (% +/-)*	10%	$ 2,500
Traffic Control: (% +/-)	5%	$ 780
Contingency: (% +/-)	20%	$ 3,120
Estimated Short-Term Improvements Project Cost:		**$ 20,000**

Opinion of Probable Cost (Long-Term Improvements)

Item Description	NB	SB	EB	WB	Quantity	Unit	Unit Price	Item Cost
Provide ADA-Compliant Ramps†	X		X		2	LEG	$ 5,000	$ 10,000
Remove On-Street Parking	X				1	LEG	$ 1,000	$ 1,000
Stripe Northbound to Eastbound Right Turn Lane	X				1	LEG	$ 2,500	$ 2,500
Replace Pedestrian Signal with Countdown Timer and Audible Push Buttons	X		X		2	LEG	$ 1,000	$ 2,000

Long Term Improvements Subtotal:		$ 15,500
Mobilization: (% +/-)*	10%	$ 2,500
Traffic Control: (% +/-)	5%	$ 800
Contingency: (% +/-)	20%	$ 3,200
Estimated Long-Term Improvements Project Cost:		**$ 22,000**
Estimated Project Costs:		**$ 42,000**

†Based on visual observation, curb ramps did not appear to meet current ADA requirements. Coordinate with Iowa DOT on signal modifications

*Mobilization is 10% +/- of the subtotal with a minimum of $2,500 and a maximum of $75,000

Kimley»Horn

Local Road Safety Plan — **Signalized Intersection**

Project Description for Intersection Improvements — **Location Description** — **GPS ID: 274937**

Project Name: IA 1/Burlington Ave & S Main St.
Agency Name: City of Fairfield
Contact Name: Carlson, Melanie
E-mail: mcarlson@fairfieldiowa.gov

Road: **IA 1/Burlington Ave**
Road: **S Main St.**

SICL Rank: **9**

Date: 4/30/19

Prepared By: DJG/DVM
Checked By: MMO

Intersection Information	
Number of Approaches	3
Number of Paved Approaches	4
Major Street Volume	10,400
Minor Street Volume	5,100
Destination Lighting	Yes
Control Type	Signalized

Crash Severity	
K	0
A	0
B	2
C	1
O	9
Total	12

Crash Data, 2008-2017	
Total Crashes	12
K and A Crashes	0
Right Angle,Rear-end,or Turning Crashes	9
Total Nighttime Crashes	0
Nighttime/Daytime Crash Ratio**	0.0

Major Cause of Crashes***	
Ran Traffic Signal	3
FTYROW: Making left turn	2
FTYROW: From parked position	1
Made improper turn	1

Manner of Crashes***	
Rear-end (front to rear)	4
Broadside (front to side)	3
Sideswipe, same direction	2
Angle, oncoming left turn	2

** Nighttime/Daytime Crash Ratio = 3 x nighttime crashes/daytime crashes per Iowa DOT I.M. 2.110 Attachment A.
*** Major Cause and Manner of Crash are based on total crashes, and are listed for up to the top four categories.

Project Location Map Sources:
Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Opinion of Probable Construction Cost Disclaimer:
Kimley-Horn has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Kimley-Horn at this time and represent only Kimley-Horn's judgment as a design professional familiar with the construction industry. Kimley-Horn cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Project
The recommended improvements contained in this project description form were developed through a Geographic Information System (GIS) database risk assessment and project selection process, as specifically stated in our scope of services. Kimley-Horn has no control over the accuracy of the GIS databases nor the suitability of the specific improvements for the location, and has provided recommended improvements for consideration by the City Engineer. The City Engineer may use this project description form to aid in the selection and development of projects, but this project description form should not be used as the sole basis for the City Engineer's decision making process. We endeavored to research issues and constraints to the extent practical given the scope, budget, and schedule agreed to with the Client. Our assessment is based in large part on information provided to us by others (DOT, county staff, etc.) and therefore is only as accurate and complete as the information provided to us. No formal assessment was made for the improvement recommendations contained on this page, if in question, it is recommended that a study/analysis of this location be made to warrant the above indicated improvements. This project description form is based on our knowledge as of May 2019.

Back Page

Kimley»Horn

FIELD VISIT NOTES

274937 – IA 1/BURLINGTON AVE & S MAIN ST - Signalized

- General notes:
  - There are heavy northbound to westbound left turn movements at this intersection due to the Highway 1 path.
  - Pedestrian crossing is provided along the eastbound leg of the intersection, which impacts the northbound to westbound left turn movement. There are various pedestrian generators on both the north and south sides of the intersection (City Hall, utility company, library, shops and restaurants on the square).
  - Attendees noted that a lead pedestrian phase may be beneficial at this intersection.
  - Many ideas were discussed exploring the possibility of removing pedestrian conflicts. There are landscaped wedges on the corners of the square that would need modifications to create pedestrian facilities on other corners of the intersection.
  - Currently the pedestrian crossing signal along the eastbound leg beings flashing shortly after activating, with no indication of how much time is remaining for the pedestrian crossing.
  - The current pedestrian phase is not activated by a push button.
  - Based on visual observation, curb ramps did not appear to meet current ADA requirements.
  - Signal modifications should be coordinated with the Iowa DOT.
- Improvements:
  - Consider a leading pedestrian interval.
  - Replace the pedestrian signal with countdown timer and audible push buttons.
  - Provide ADA complaint ramps and pedestrian crossings.
  - Consider a protected northbound to westbound left turn phase.
  - Consider removal of on-street parking on the northbound approach to provide a dedicated northbound to eastbound right turn lane.
  - Upgrade signal heads to 12-inches and provide retroreflective backplates.

Application for

Transportation Safety Improvement Program



Iowa Department of Transportation

NE Beaverbrooke Boulevard and NE Gateway Drive Roundabout
Grimes, Iowa

August 15, 2025

GRIMES
A BRIGHT FUTURE

Rev. 07/23

Application for TRAFFIC CONTROL DEVICE
TSIP FUNDS

GENERAL INFORMATION **DATE:** 08/15/2025

Location / Title of Project NE Beaverbrooke Blvd & NE Gateway Dr roundabout

Applicant Grimes, IA

Contact Person Matt Ahrens Title City Engineer

Complete Mailing Address 101 NE Harvey Street

Grimes, Iowa

Phone 515-986-4050 E-Mail mahrens@grimesiowa.gov
(Area Code)

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s)

Contact Person Title

Complete Mailing Address

Phone E-Mail
(Area Code)

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	1,634,500
Total Project Cost	$	2,120,000
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
☐ Iowa DOT TEAP Study or similar analysis and concept
☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
4586	Intersection	☐	☒	0.2429	-0.0090
		☐	☐		

Rev. 07/23

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Grimes

Signed: _____ 8-15-25
Signature Date Signed

Matt Ahrens
Printed Name

Attest: _____ 8/15/25
Signature Date Signed

Evann Martin
Printed Name

RESOLUTION 07-1725 AUTHORIZING THE SUBMITTAL OF AN APPLICATION TO THE IOWA DEPARTMENT OF TRANSPORTATION FOR TRAFFIC SAFETY IMPROVEMENT PROGRAM (TSIP) FUNDING FOR THE NE BEAVERBROOKE BLVD AND NE GATEWAY DR ROUNDABOUT CONSTRUCTION PROJECT AND FURTHER APPROVING THE APPLICATION WHICH OBLIGATES THE CITY TO MATCHING FUNDS FOR THE CONSTRUCTION OF SAID PROJECT

Grimes Resolution No. 07-1725

WHEREAS, the Iowa Department of Transportation has established the TSIP and provides funding for locations where vehicular safety is a concern and documented; and

WHEREAS, the NE Beaverbrooke Blvd and NE Gateway Dr Roundabout Construction Project has been identified where vehicular safety and traffic flow could be improved and funded by TSIP; and

WHEREAS, the proposed improvements, including roundabout construction and removal of span-wire traffic signal, will help reduce crashes in the project area.

NOW, THEREFORE, IT IS HEREBY RESOLVED by the City Council of the City of Grimes, Iowa:

1. The City Council supports and approves the application for Traffic Safety Improvement Program (TSIP) funding.
2. The City Council hereby commits the additional City funds necessary for construction of the project beyond any TSIP funding.
3. The City Council hereby commits to accepting and maintaining these improvements.
4. The Mayor or City Engineer is hereby authorized to execute the application on behalf of the City.

PASSED and APPROVED on July 22, 2025.

Scott Mikkelsen
Scott Mikkelsen (Jul 30, 2025 15:17:43 CDT)

Scott Mikkelsen, Mayor

Attested:

Rachel Greving

Rachel Greving, City Clerk

NARRATIVE

A multilane roundabout is planned for the intersection of NE Beaverbrooke Boulevard & NE Gateway Drive in Grimes, IA. The existing intersection is located in the northeast portion of the City, approximately 750' west of IA 141 on NE Beaverbrooke Boulevard, in a rapidly developing commercial and residential area. A roundabout was selected as the preferred alternative based on past roundabout performance, safety and operational, in Grimes and is a continuation of other roundabouts located along NE Beaverbrooke Boulevard, west of the project intersection.

Existing Conditions

NE Beaverbrooke Boulevard is a divided four-lane collector road with raise median and left turn lanes at the NE Gateway Drive intersection. South of NE Beaverbrooke Boulevard, NE Gateway Drive is a three-lane local road with a two-way left turn lane. North of NE Beaverbrooke Boulevard, NE Gateway Drive is a two-lane local road. NE Beaverbrooke Boulevard provides access from IA 141 to a wide range of businesses and residential areas in the north portion of Grimes. NE Gateway Drive provides access to a wide range of businesses south of NE Beaverbrooke Boulevard. Due to operational and safety concerns, a temporary signal control was constructed in 2024 at the NE Beaverbrooke Boulevard and NE Gateway Drive intersection. An existing 10' wide multi-use trail is provided along the north side of NE Beaverbrooke Boulevard, and a 5' wide sidewalk is provided along the south side of NE Beaverbrooke Boulevard. An existing 10' wide multi-use trail is provided along the west side of NE Gateway Drive south of NE Beaverbrooke Boulevard, 5' wide sidewalk is provided on the east side of NE Gateway Drive south of NE Beaverbrooke Boulevard, and 5' wide sidewalk is provided on both sides of NE Gateway Drive north of NE Beaverbrooke Boulevard.

Roundabouts currently exist on NE Beaverbrooke Boulevard approximately 1,380' and 3,000' west of NE Gateway Drive. Existing roundabouts are also provided on NE Beaverbrooke Boulevard approximately 620' east of IA 141.

Posted speed limits on NE Beaverbrooke Boulevard are 35 mph. The posted speed limit on NE Gateway Drive south of NE Beaverbrooke Boulevard is 30 mph. The speed limit on NE Gateway Drive north of NE Beaverbrooke Boulevard is 25 mph. Annual Average Daily Traffic (AADT) on NE Beaverbrooke Boulevard east of NE Gateway Drive was 8,200 vehicles per day (vpd) in 2024. West of NE Gateway Drive, the 2024 NE Beaverbrooke Boulevard AADT was 7,300 vpd. The 2024 ADT on NE Gateway Drive south of NE Beaverbrooke Boulevard was 3,500 vpd. The 2024 ADT on NE Gateway Drive north of NE Beaverbrooke Boulevard was 2,300 vpd.

Crash History

In the three-year 2022-2024 period, there were 14 reported crashes at the NE Beaverbrooke Boulevard & NE Gateway Drive intersection, resulting in four possible injuries. Eight of these crashes were broadside crashes due to failure to yield right-of-way from a stop sign. Four of these crashes were angle (oncoming left turn) crashes due to failure to yield right-of-way making a left turn. With significant developable land in the area and increasing traffic volumes, crashes and crash severity are expected to increase if intersection improvements are not constructed.

NE Gateway Drive construction was completed in 2021 that connected NE Beaverbrooke Boulevard to IA 44, through a commercial region of Grimes. Traffic started utilizing NE Gateway Drive in late 2021, early 2022, so no crash history exists at the intersection prior to 2022. Therefore, the three-year crash history was selected for this application.

Proposed Improvements

Design of the planned roundabout is currently proceeding and the concept design (Attachment G) developed. The roundabout is planned to be a multilane (2x1) roundabout to preserve east-west lane continuity and accommodate future traffic growth. The center of the approximately 96' inscribed circle diameter (ICD) will be shifted north of the existing Beaverbrooke Boulevard centerline to minimize property impacts in the southwest and southeast quadrants of the intersection and utilize the available open land on the north side of the intersection. This will require reconstruction of all approaches to the roundabout.

The northbound approach will stay in one lane with the two-way left turn lane ending at a splitter island approximately 175' south of the intersection.

With lower speeds at a roundabout, clear zone requirements are minimal. According to the SUDAS Design Manual, the minimum clear zone for low-speed (40 mph or less Design Speed) is 6' preferred and 4' acceptable from back of curb.

Crosswalks for pedestrians and bicyclists will be provided at all four legs of the roundabout. With pedestrian refuge areas in the roundabout splitter islands and two-stage crossings, pedestrians only need to monitor low speed roundabout vehicular traffic from one direction at a time. 10' wide shared use trail is planned at the roundabout with connections to the trail and sidewalk as they exist heading away from the roundabout. RRFBs will be constructed to provide ADA/PROWAG compliant crossings for NE Beaverbrooke Boulevard.

The project is expected to significantly improve safety at the intersection, while also improving traffic operations in this growing part of the City. The majority of crashes at the intersection are broadside crashes due to drivers failing to yield at the STOP sign, prior to the temporary traffic signal installation. With a roundabout, speeds are significantly reduced, and broadside crashes are often eliminated. If roundabout crashes do occur, they are normally less severe sideswipe crashes associated with a merge.

Iowa DOT planning level crash reduction factors (CRF) indicate that replacing an unsignalized intersection in an urban area with a roundabout would be expected to provide an average crash reduction of 45% for all crashes. For fatal and injury crashes, the expected crash reduction is 75%. The planned roundabout offers a significant safety improvement over the existing unsignalized intersection and the alternative signalized intersection.

ORDER OF MAGNITUDE COST OPINION

Safety related costs for this project were determined by creating a detailed cost opinion and removing the construction related costs for utilities and landscaping. The proposed roundabout will provide both safety and operational benefits compared to other alternatives. The below tables summarize estimated construction costs, the resultant safety cost for the roundabout and proposed project funding sources.

Roundabout Safety Cost

Roundabout Alternative Construction Cost	$2,120,000
Safety Construction Cost	$1,634,500

Proposed Project Funding Sources

Traffic Safety Improvement Program Funding	$500,000
City Funding – Construction (Estimated)	$1,620,000
City Funding – Other Costs (Estimated)	$260,000
TOTAL	$2,380,000

Detailed cost opinion for the roundabout are provided on the following page.

OPINION OF PROBABLE PROJECT COSTS

SNYDER & ASSOCIATES

NE BEAVERBROOKE BLVD AND NE GATEWAY DR
CITY OF GRIMES
124.1502.01
8/15/2025

ITEM #	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE	NOTES
1	Clearing and Grubbing	LS	1	$ 5,000	$ 5,000	
2	Excavation, Class 10	CY	8000	$ 12	$ 96,000	
3	Subgrade Preparation	SY	8150	$ 3	$ 24,450	
4	Subgrade Treatment, Geogrid, Type 3	SY	1000	$ 6	$ 6,000	
5	Subbase, Modified, 6"	SY	8150	$ 12	$ 97,800	
6	Removal of Structure, Storm	EA	10	$ 1,500	$ 15,000	
7	Removal of Pipe, Storm	LF	1050	$ 30	$ 31,500	
8	Storm Sewer, Trenched, RCP, Less Than 36"	LF	1050	$ 80	$ 84,000	
9	Storm Sewer, Manhole	EA	4	$ 5,000	$ 20,000	
10	Storm Sewer, Intake	EA	10	$ 8,000	$ 80,000	
11	Subdrain	LF	2000	$ 20.00	$ 40,000	
12	Regional Detention Basin	LS	1	$ 50,000.00	$ 50,000	See Note 1
13	Manhole Adjustments	EA	2	$ 2,500	$ 5,000	
14	Fire Hydrant Relocation	EA	2	$ 5,000	$ 10,000	See Note 4
15	Water Main Relocation (Spot Location)	EA	2	$ 5,000	$ 10,000	
16	Pavement, PCC, 9"	SY	6350	$ 75	$ 476,250	
17	Pavement, Temporary Crossover (west side)	SY	425	$ 60	$ 25,500	See Note 2
18	Pavement, Median, PCC, 6" Dowelled (east side)	SY	85	$ 120	$ 10,200	See Note 2
19	Pavement, Median, PCC, 6"	SY	300	$ 100	$ 30,000	
20	Pavement, Truck Apron, Colored, 9" PCC	SY	425	$ 100	$ 42,500	
21	Pavement, PCC, 2.5' Wide Curb and Gutter	LF	385	$ 45.00	$ 17,325	
22	Shared Use Path, PCC, 6"	SY	1350	$ 50	$ 67,500	
23	Special Subgrade Preparation for Shared Use Path	SY	1800	$ 3	$ 5,400	
24	Detectable Warning	SF	350	$ 55	$ 19,250	
25	Pavement Removal	SY	6250	$ 12	$ 75,000	
26	Sidewalk Removal	SY	1300	$ 8	$ 10,400	
27	Painted Pavement Markings, Solvent/Waterborne	STA	60	$ 300	$ 18,000	See Note 6
28	Painted Pavement Markings, Symbols	EA	12	$ 300	$ 3,600	See Note 6
29	Lighting	EA	8	$ 9,000	$ 72,000	
30	RRFB Signals	EA	4	$ 20,000	$ 80,000	
31	Signing	LS	1	$ 15,000	$ 15,000	
32	Landscape Relocation	LS	1	$ 25,000	$ 25,000	
33	Roundabout Landscaping	LS	1	$ 40,000	$ 40,000	
34	Retaining Wall	LS	1	$ 25,000	$ 25,000	See Note 3
35	Temporary Traffic Control	LS	1	$ 40,000	$ 40,000	
36	Erosion Control and Final Seeding	LS	1	$ 50,000	$ 50,000	
37	Mobilization	LS	1	$ 50,000	$ 50,000	

Notes:
1. Assumes relocating Kwik Star detention
2. Needed to maintain traffic.
3. Assumes retaining wall needed to avoid business signs
4. Assume Existing Water Main can be protected.
5. 13,000 SF of ROW @ $20/SF
6. Includes Grooving
7. Does not include Utility related and landscaping items

Subtotal:	$ 1,770,000	
Contingency (20%):	$ 350,000	
CONSTRUCTION TOTAL:	$ 2,120,000	
SAFETY CONSTRUCTION TOTAL:	$ 1,634,500	See Note 7
Other Project Costs		
Right-of-Way:	$ 260,000	See Note 5
CONSTRUCTION TOTAL (ROUNDED):	**$ 2,380,000**	

PROPOSED PROJECT SCHEDULE
NE BEAVERBROOKE BLVD & NE GATEWAY DR ROUNDABOUT
GRIMES, IOWA

TSIP Application	August 2025
Iowa DOT Approval of TSIP	December 2025
TSIP Agreement	January 2026
Project Design and ROW Acquisition	Present-June 2026
Project Letting	July2026
Project Construction	August 2026-December 2027

8/12/2025
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SNYDER & ASSOCIATES

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NE BEAVERBROOKE BLVD & NE GATEWAY DRIVE INTERSECTION IMPROVEMENTS

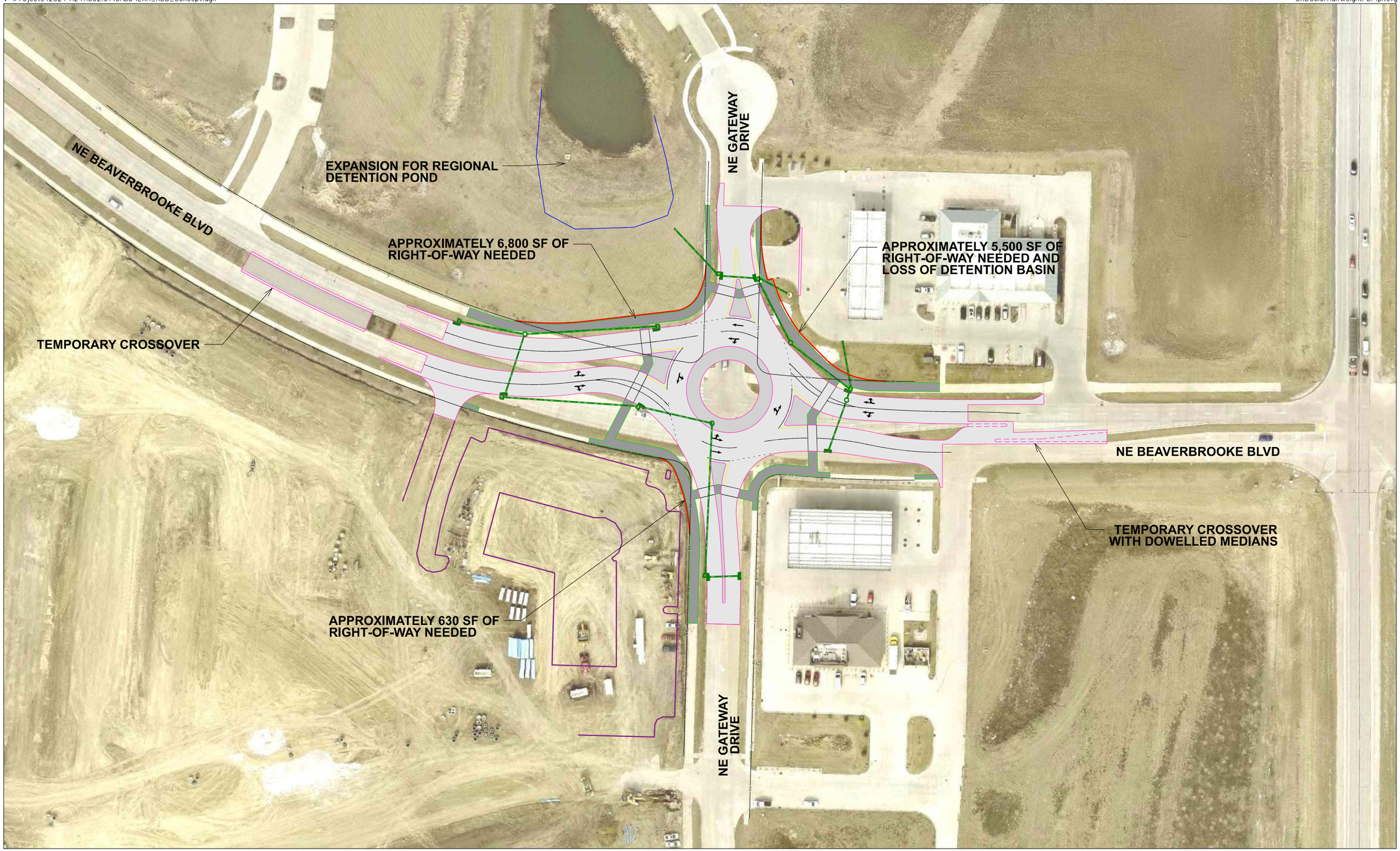
PROJECT LOCATION MAP

8/13/2025

PHOTOS
NE BEAVERBROOKE BLVD & NE GATEWAY DR INTERSECTION IMPROVEMENTS – GRIMES, IOWA

NE Beaverbrooke Boulevard viewing East At NE Gateway Drive	**NE Beaverbrooke Boulevard viewing West At NE Gateway Drive**
	
NE Gateway Drive viewing North At NE Beavebrooke Boulevard	**NE Gateway Drive viewing South At NE Beavebrooke Boulevard**
	

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NE BEAVERBROOKE BLVD & NE GATEWAY DRIVE INTERSECTION IMPROVEMENTS

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NE BEAVERBROOKE BLVD & NE GATEWAY DRIVE EXISTING INTERSECTION

8/5/2025

Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

Crash Severity	14
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	4
Property Damage Only	10

Injury Status Summary	4
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	4
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	119,000.00
Average (per crash dollars):	8,500.00
Total Vehicles:	30.00
Average (per crash):	2.14
Total Occupants:	43.00
Average (per crash):	3.07

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.29
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.29



Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	1	0	1	1	0	0	0	0	3
Monday	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Tuesday	0	0	0	1	1	1	0	0	0	0	0	0	0	3
Wednesday	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Thursday	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Friday	0	0	0	0	0	2	0	0	0	2	0	0	0	4
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	5	0	1	3	3	0	0	0	14

Month	14
January	1
February	1
March	0
April	1
May	2
June	1
July	2
August	2
September	2
October	1
November	1
December	0
Not reported	0

Lighting	14
Daylight	12
Darkness	2
Morning Twilight (dawn 30 minutes after sunri...	0
Evening Twilight (dusk 30 minutes before suns...	0
Unknown	0

Weather Conditions	14
Clear	11
Cloudy	3
Fog, smoke, smog	0
Freezing rain/drizzle	0
Rain	0
Sleet, hail	0
Snow	0
Blowing snow	0
Severe winds	0
Blowing sand, soil, dirt	0
Not reported	0
Other	0
Unknown	0

Contributing Circumstance - Environment	14
None apparent	14
Weather conditions	0
Visual obstruction	0
Non-motorist action	0
Glare	0
Animal in roadway	0
Severe crosswind	0
Not reported	0
Other	0
Unknown	0

Light Condition	14
Daylight	12
Dusk	0
Dawn	0
Dark - roadway lighted	2
Dark - roadway not lighted	0
Dark - unknown roadway lighting	0
Unknown	0
Not reported	0

Surface Conditions	14
Dry	13
Wet	0
Ice/frost	0
Snow	1
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

Major Cause			14
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	7	FTYROW: From yield sign	0
FTYROW: Making left turn	2	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	1
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	2
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	1
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	0		

Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

Manner of Crash Collision	14
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	1
Angle (oncoming left turn)	4
Broadside (front to side)	8
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	1
Unknown	0

Location of First Harmful Event	14
On roadway	13
Shoulder	0
Median	0
Roadside	0
Gore	0
Outside trafficway	0
In parking lane/zone	0
Continuous left turn lane	0
Separator	0
Not reported	0
Other	1
Unknown	0

Event Summary - Non-Collision **Total Vehicles: 30**

First Harmful	Most Harmful	Sequence 1st	2nd	3rd	4th	
0	0	0	0	0	0	Overturn/rollover
0	0	0	0	0	0	Jackknife
0	0	0	0	0	0	Non-contact vehicle (phantom)
0	0	0	0	0	0	Vehicle went airborne
0	0	0	0	0	0	Fell/jumped from vehicle

Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

Event Summary - Collision With						Total Vehicles: 30
		Sequence				
First Harmful	Most Harmful	1st	2nd	3rd	4th	
0	0	0	0	0	0	Thrown or falling object
0	0	0	0	0	0	Animal
0	0	0	0	0	0	Non-motorist (see non-motorist section - NOT ...
14	27	29	0	0	0	Vehicle in traffic
0	0	0	0	0	0	Re-entering roadway
0	1	1	0	0	0	Parked motor vehicle
0	0	0	0	0	0	Work zone maintenance equipment
0	0	0	0	0	0	Railway vehicle/train
0	0	0	0	0	0	Struck/struck by object/cargo/person from oth...
0	0	0	0	0	0	Other non-fixed object

Event Summary - Collision With Fixed Object						Total Vehicles: 30
		Sequence				
First Harmful	Most Harmful	1st	2nd	3rd	4th	
0	0	0	0	0	0	Bridge overhead structure
0	0	0	0	0	0	Bridge pier or support
0	0	0	0	0	0	Bridge/bridge rail parapet
0	0	0	0	0	0	Curb/island/raised median
0	0	0	0	0	0	Ditch
0	0	0	0	0	0	Embankment
0	0	0	0	0	0	Ground
0	0	0	0	0	0	Culvert/pipe opening
0	0	0	0	0	0	Guardrail - face
0	0	0	0	0	0	Guardrail - end
0	0	0	0	0	0	Concrete traffic barrier (median or right sid...
0	0	0	0	0	0	Other traffic barrier
0	0	0	0	0	0	Cable barrier
0	0	0	0	0	0	Impact attenuator/crash cushion
0	0	0	0	0	0	Utility pole/light support
0	0	0	0	0	0	Traffic sign support
0	0	0	0	0	0	Traffic signal support
0	0	0	0	0	0	Other post/pole/support
0	0	0	0	0	0	Fire hydrant
0	0	0	0	0	0	Mailbox
0	0	0	0	0	0	Tree
0	0	0	0	0	0	Landscape/shrubbery
0	0	0	0	0	0	Snow bank
0	0	0	0	0	0	Fence
0	0	0	0	0	0	Wall
0	0	0	0	0	0	Building
0	0	0	0	0	0	Other fixed object

Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

Event Summary - Miscellaneous Events						Total Vehicles: 30
		Sequence				
First Harmful	Most Harmful	1st	2nd	3rd	4th	
0	0	0	0	0	0	Fire/explosion
0	0	0	0	0	0	Immersion
0	0	0	1	0	0	Hit and run
0	0	0	0	0	0	Eluding law enforcement
0	0	0	0	0	0	Gas inhalation/asphyxiation
0	0	0	0	0	0	Vehicle out of gear/rolled

Fixed Object Struck			30
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	30

Drug/Alcohol Related	14
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	14

Non-Motorist Type	0
Pedestrian	0
Pedalcyclist (bicycle/tricycle/unicycle/pedal...	0
Pedalcycle passenger	0
In or on building	0
Horse and buggy	0
Skater, personal conveyance, wheelchair	0
Not reported	0
Other non-motorist	0
Unknown	0

Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

Road Classifiction	14
Interstate	0
US Route	0
Iowa Route	0
Secondary Road	0
Municipal Road	14
Institutional Road	0
Other	0
Unknown	0

Work Zone Type	0
Lane closure	0
Lane switch/crossover	0
Work on shoulder or median	0
Intermittent or moving work	0
Not reported	0
Other	0
Unknown	0

Work Zone Location	0
Before work zone warning sign	0
Advance warning area	0
Transition area	0
Within or adjacent to work activity	0
Termination area	0
Not reported	0
Other	0
Unknown	0

Work Zone Activity	0
Construction	0
Maintenance	0
Utility	0
Not reported	0
Other	0
Unknown	0

Workers Present	0
Workers only	0
No workers present	0
Workers and officer present	0
Law enforcement only	0
No one present	0
Not reported	0
Other	0
Unknown	0

Intersection Classification	4
Interstate - Interstate	0
Interstate - US Route	0
Interstate - IA Route	0
Interstate - Secondary	0
Interstate - Municipal	0
Interstate - Institutions	0
US Route - US Route	0
US Route - IA Route	0
US Route - Secondary	0
US Route - Municipal	0
US Route - Institutions	0
IA Route - IA Route	0
IA Route - Secondary	0
IA Route - Municipal	0
IA Route - Institutions	0
Secondary - Secondary	0
Secondary - Municipal	0
Secondary - Institutions	0
Municipal - Municipal	0
Municipal - Institutions	0
Institutions - Institutions	0
Not Indicated as an Intersection	4
Unlocated or Unknown	0

Contributing Circumstance - Road	14
None apparent	13
Surface condition (e.g., wet, icy)	1
Debris	0
Ruts/holes/bumps	0
Work Zone (roadway-related)	0
Slippery, loose, or worn surface	0
Obstruction in roadway	0
Traffic control obscured	0
Shoulders (none, low, soft, high)	0
Non-highway work	0
Traffic backup, prior crash	0
Traffic backup, regular congestion	0
Traffic backup, prior non-recurring incident	0
Disabled vehicle	0
Not reported	0
Other	0
Unknown	0

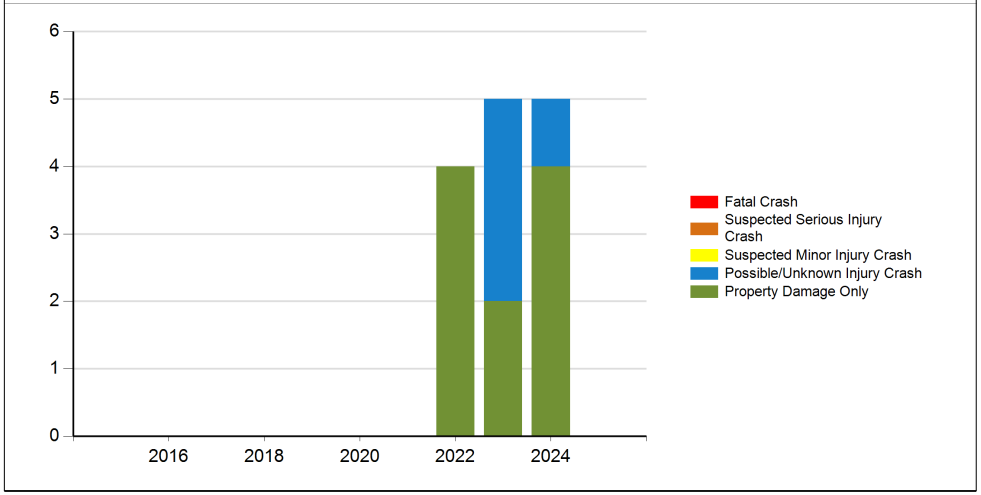
Work Zone Related	0
Yes	0
No	0
Unknown	0
Not reported	0

Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	0	0
2022	0	0	0	0	4	4
2023	0	0	0	3	2	5
2024	0	0	0	1	4	5
2025	0	0	0	0	0	0
Total	0	0	0	4	10	14

Severity/Year

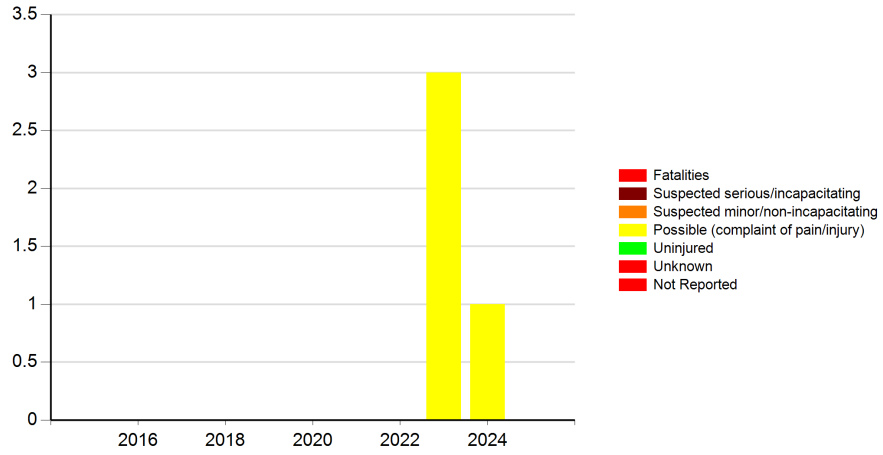


Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
2023	0	0	0	3	0	0	0	3
2024	0	0	0	1	0	0	0	1
2025	0	0	0	0	0	0	0	0
Total	0	0	0	4	0	0	0	4

Injury Status/Year



Iowa Crash Analysis Tool
Crash Characteristics
2022-2024

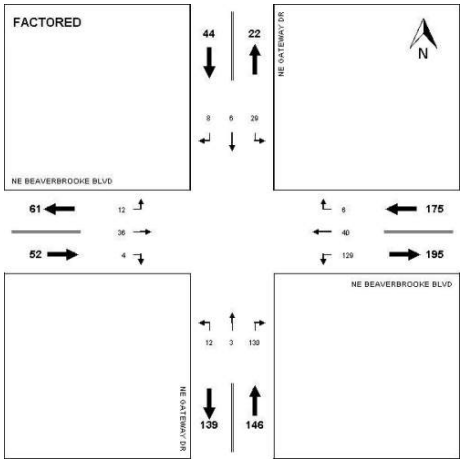
Meeting the following criteria

Jurisdiction: Statewide
Year: 2022, 2023, 2024
Map Selection: Yes
Filter: None

Analyst Information

Iowa Department of Transportation
Turning Movement Traffic Count Summary
Vehicle Type: Single-Unit

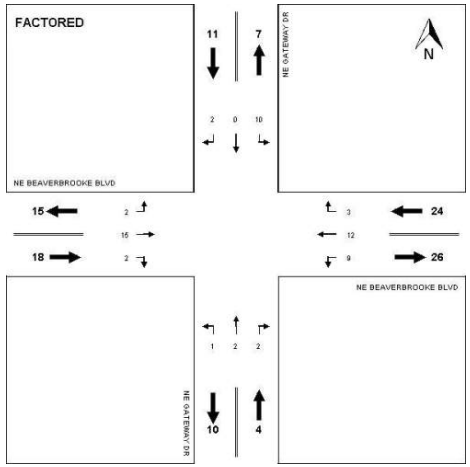
Station Number:	77311231099
Count Date:	Tuesday, April 09, 2024
County:	Polk
Location Description:	NE BEAVERBROOK BLVD & GATEWAY DR
Volume Factor:	0.906
Pass Class Factor:	0.952
SU Class Factor:	0.808
Combo Class Factor:	0.872



Raw Data Single-Unit		North			East			South			West		
		L	T	R	L	T	R	L	T	R	L	T	R
2024-04-09	00:00	0	0	0	0	0	0	0	0	0	0	0	0
	01:00	0	0	0	0	0	0	0	0	0	0	0	0
	02:00	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	1	0	0	0	1	0
	05:00	0	0	0	1	0	0	0	0	0	0	2	0
	06:00	3	0	0	5	3	0	0	0	0	0	0	0
	07:00	4	1	1	12	6	1	1	1	14	2	1	0
	08:00	5	0	3	17	8	1	1	1	19	1	2	0
	09:00	2	0	3	23	9	0	0	0	21	0	8	0
	10:00	2	0	0	22	4	1	0	1	21	1	5	0
	11:00	3	1	0	23	4	0	4	0	22	3	5	1
	12:00	7	2	3	16	5	0	2	0	21	2	3	2
	13:00	1	2	0	18	5	0	1	0	14	2	1	0
	14:00	2	1	0	18	3	1	0	0	18	1	6	0
	15:00	2	0	0	4	2	0	4	1	7	3	6	2
	16:00	0	1	0	0	1	1	0	0	1	0	1	0
	17:00	1	0	0	0	0	3	0	0	2	0	1	0
	18:00	2	0	0	0	0	0	0	0	1	0	1	0
	19:00	0	0	0	0	0	0	0	0	0	0	1	0
	20:00	1	0	0	0	0	0	1	0	0	0	0	0
	21:00	0	0	0	0	0	0	0	0	0	0	0	0
	22:00	1	0	0	0	0	0	0	0	0	0	0	0
	23:00	0	0	0	0	0	0	0	0	0	0	0	0
	Total	36	8	10	159	50	8	15	4	161	15	44	5

Iowa Department of Transportation
Turning Movement Traffic Count Summary
Vehicle Type: Combo-Unit

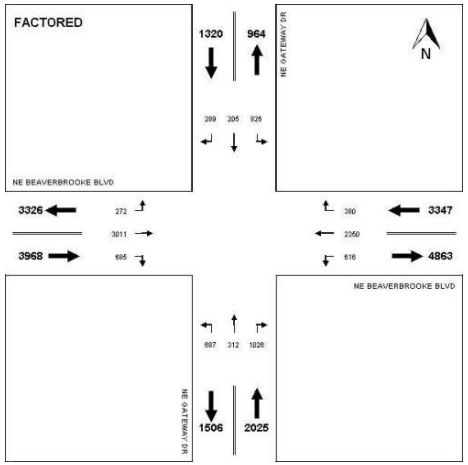
Station Number:	77311231099
Count Date:	Tuesday, April 09, 2024
County:	Polk
Location Description:	NE BEAVERBROOK BLVD & GATEWAY DR
Volume Factor:	0.906
Pass Class Factor:	0.952
SU Class Factor:	0.808
Combo Class Factor:	0.872



Raw Data Combo-Unit		North			East			South			West		
		L	T	R	L	T	R	L	T	R	L	T	R
2024-04-09	00:00	0	0	0	0	0	0	0	0	0	0	0	0
	01:00	0	0	0	0	0	0	0	0	0	0	0	0
	02:00	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	1	0	0	0	0	0	0	1	0	0	0	0
	06:00	0	0	0	0	0	0	0	0	0	0	0	0
	07:00	3	0	0	4	1	0	0	0	0	0	0	0
	08:00	1	0	0	2	2	0	0	0	1	0	1	0
	09:00	1	0	0	0	1	0	0	1	0	0	3	0
	10:00	2	0	0	0	2	1	0	0	0	0	4	0
	11:00	0	0	1	2	0	2	0	0	1	1	2	0
	12:00	2	0	0	1	3	0	0	0	0	0	1	2
	13:00	1	0	0	0	2	0	0	0	0	0	2	0
	14:00	0	0	1	0	0	1	0	0	0	1	1	0
	15:00	0	0	0	0	0	0	0	0	0	0	0	0
	16:00	0	0	0	0	0	0	1	0	0	0	2	0
	17:00	0	0	0	0	1	0	0	0	0	0	0	0
	18:00	0	0	0	0	2	0	0	0	0	0	1	0
	19:00	0	0	0	0	0	0	0	0	0	0	0	0
	20:00	0	0	0	0	0	0	0	0	0	0	0	0
	21:00	0	0	0	1	0	0	0	0	0	0	0	0
	22:00	0	0	0	0	0	0	0	0	0	0	0	0
	23:00	0	0	0	0	0	0	0	0	0	0	0	0
	Total	11	0	2	10	14	4	1	2	2	2	17	2

Iowa Department of Transportation
Turning Movement Traffic Count Summary
Vehicle Type: All Vehicles

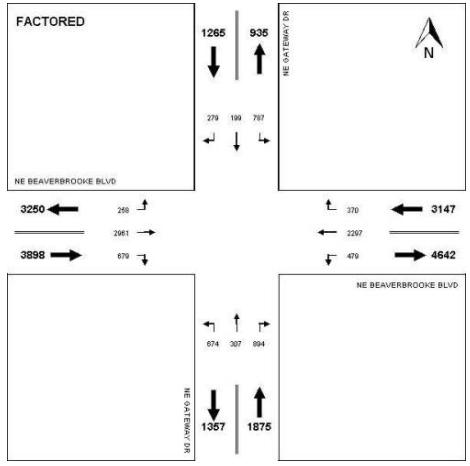
Station Number:	77311231099
Count Date:	Tuesday, April 09, 2024
County:	Polk
Location Description:	NE BEAVERBROOK BLVD & GATEWAY DR
Volume Factor:	0.906
Pass Class Factor:	0.952
SU Class Factor:	0.808
Combo Class Factor:	0.872



Raw Data All Vehicles		North			East			South			West		
		L	T	R	L	T	R	L	T	R	L	T	R
2024-04-09	00:00	2	3	1	0	15	3	2	2	1	1	12	1
	01:00	1	0	1	0	6	1	0	1	0	0	4	1
	02:00	2	0	0	0	6	1	0	0	0	0	3	0
	03:00	1	0	1	2	3	1	0	1	0	0	6	1
	04:00	9	3	1	1	1	2	1	0	0	0	38	5
	05:00	35	5	3	10	13	8	3	7	5	3	81	5
	06:00	85	12	8	22	63	7	12	11	8	11	230	22
	07:00	81	29	23	43	133	14	29	5	36	16	485	60
	08:00	78	17	19	54	115	15	32	10	47	25	235	55
	09:00	38	11	7	47	87	17	18	12	56	12	181	41
	10:00	35	9	17	43	96	15	29	12	52	10	126	25
	11:00	43	13	26	60	125	21	48	18	73	19	159	46
	12:00	60	12	22	50	137	28	37	30	86	28	141	44
	13:00	51	19	13	53	133	18	30	14	61	16	112	37
	14:00	42	16	14	47	151	13	36	19	72	15	126	36
	15:00	34	3	18	35	145	22	87	31	117	22	206	82
	16:00	63	16	31	42	226	35	108	30	140	21	234	58
	17:00	46	8	17	68	297	44	73	45	112	20	262	66
	18:00	67	9	27	41	214	39	60	22	82	24	192	55
	19:00	29	15	15	32	162	23	56	25	71	13	144	40
	20:00	29	7	18	10	161	32	28	14	46	16	109	22
	21:00	23	5	15	6	122	26	24	11	25	9	40	13
	22:00	13	4	4	5	48	10	10	6	10	5	23	5
	23:00	7	1	4	1	18	6	1	2	2	2	22	0
	Total	874	217	305	672	2477	401	724	328	1102	288	3171	720

Iowa Department of Transportation
Turning Movement Traffic Count Summary
Vehicle Type: Passenger

Station Number:	77311231099
Count Date:	Tuesday, April 09, 2024
County:	Polk
Location Description:	NE BEAVERBROOK BLVD & GATEWAY DR
Volume Factor:	0.906
Pass Class Factor:	0.952
SU Class Factor:	0.808
Combo Class Factor:	0.872



Raw Data Passenger		North			East			South			West		
		L	T	R	L	T	R	L	T	R	L	T	R
2024-04-09	00:00	2	3	1	0	15	3	2	2	1	1	12	1
	01:00	1	0	1	0	6	1	0	1	0	0	4	1
	02:00	2	0	0	0	6	1	0	0	0	0	3	0
	03:00	1	0	1	2	3	1	0	1	0	0	6	1
	04:00	9	3	1	1	1	2	0	0	0	0	37	5
	05:00	34	5	3	9	13	8	3	6	5	3	79	5
	06:00	82	12	8	17	60	7	12	11	8	11	230	22
	07:00	74	28	22	27	126	13	28	4	22	14	484	60
	08:00	72	17	16	35	105	14	31	9	27	24	232	55
	09:00	35	11	4	24	77	17	18	11	35	12	170	41
	10:00	31	9	17	21	90	13	29	11	31	9	117	25
	11:00	40	12	25	35	121	19	44	18	50	15	152	45
	12:00	51	10	19	33	129	28	35	30	65	26	137	40
	13:00	49	17	13	35	126	18	29	14	47	14	109	37
	14:00	40	15	13	29	148	11	36	19	54	13	119	36
	15:00	32	3	18	31	143	22	83	30	110	19	200	80
	16:00	63	15	31	42	225	34	107	30	139	21	231	58
	17:00	45	8	17	68	296	41	73	45	110	20	261	66
	18:00	65	9	27	41	212	39	60	22	81	24	190	55
	19:00	29	15	15	32	162	23	56	25	71	13	143	40
	20:00	28	7	18	10	161	32	27	14	46	16	109	22
	21:00	23	5	15	5	122	26	24	11	25	9	40	13
	22:00	12	4	4	5	48	10	10	6	10	5	23	5
	23:00	7	1	4	1	18	6	1	2	2	2	22	0
	Total	827	209	293	503	2413	389	708	322	939	271	3110	713

BENEFIT/COST ANALYSIS
NE BEAVERBROOKE BLVD & NE GATEWAY DR INTERSECTION IMPROVEMENTS –
GRIMES, IOWA

For the purposes of the benefit/cost analysis, an estimated improvement life of 20 years was selected. This is consistent with the Iowa DOT recommended TSIP service lives for roundabout improvements for a roadway segment

Converting NE Beaverbrooke Boulevard & NE Gateway Drive to a roundabout will reduce the potential for all crashes. Based on the review of available data on the Iowa DOT Crash Reductions Factors website, a crash reduction factor (CRF) of 45 was applied for the proposed improvements.

Countermeasure	CRF	Source	Crash Type	Crash Severity	Area Type
Convert TWSC intersection to a roundabout	45	Iowa DOT (US-61)	All	All	Urban

An annual traffic growth rate of 2% was used for the analysis. The intersection is within a growing commercial and residential area.

The estimated safety improvement cost of this project is **$1,634,500** and the resultant benefit/cost (B/C) ratio is 0.93 The estimated safety improvement costs include costs associated with removing and installing new pavement, pavement markings and signs, temporary traffic control, and mobilization. Crash rates and crash severity are likely to increase with the expected development and traffic growth if the proposed roundabout is not constructed.

IOWA DOT

Safety Benefit-Cost Ratio

County:	Polk	Prepared By:	Snyder & Associat
Location:	Grimes, IA	Date Prepared:	8/5/2025
Proposed Improvements:	NE Beaverbrooke Boulevard & NE Gateway Drive roundabout		
Estimated Improvement Cost:	$ 1,634,500		
Inflation on Crash Costs:	4%	Annual Maintenance: (% of Improvement Cost)	2%
Discount Rate:	4%		
Estimated Service Life:	20	Annual Maintenance Cost:	$ 32,690

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	2%
Number of CRFs:	1
Years of Crash History:	3

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	45	**45.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000		45.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000		45.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000		45.0	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	4	45.0	**1.33**	**0.60**
Property Damage Only (O)	$ 20,000	14	45.0	**4.67**	**2.10**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ -**
Possible/Unknown Injury (C)	**$ 81,000**
Property Damage Only (O)	**$ 42,000**

Total Benefits and Costs

		Implementation Cost	$ 1,634,500
		Present Value of Maint.	$ 444,268
Present Value Benefits (Societal Benefits)	$ 1,979,273	Present Value Costs (Impl. and Maint. Costs)	$ 2,078,768
Present Value Net Return	$ (99,495)		
Benefit Cost Ratio	**0.95**		

Form continues on next page

County:	Polk	Prepared By:	Snyder & Associat
Location:	Grimes, IA	Date Prepared:	8/5/2025

User Input Required - Custom Values Used

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

Justification for deviation from default Traffic Growth Rate	Significant developable land is present near the project intersection. Annual growth is expected to be higher than average.
Justification for deviation from default Crash History	Crash history for the intersection starts in 2022, after the connection of NE Gateway Drive to Highway 44 and development along NE Gateway Drive was occuring.

A. Application Certification with Resolution

Traffic Safety Improvement Program Application



Boyson Road Corridor Between Hawkeye Drive and Robins Road

Hiawatha, Iowa

August 15, 2025

A. Application Certification with Resolution

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** August 15, 2025

Location / Title of Project: Boyson Road from Hawkeye Drive to Robins Road

Applicant: City of Hiawatha

Contact Person: Jon Fitch Title: City Engineer

Complete Mailing Address: 101 Emmons Street
Hiawatha, IA 52233

Phone: (319) 393-1515 (Area Code) E-Mail: jfitch@hiawatha-iowa.com

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s):

Contact Person: Title:

Complete Mailing Address:

Phone: (Area Code) E-Mail:

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	500,000
Total Project Cost	$	1,270,143
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information

Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
157363	Boyson Rd (Hawkeye Dr to Robins Rd)	☒	☐	2.815	0.126
157227	Boyson Ct (Segment)	☐	☒	0.308	-1.165

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Hiawatha

Signed: _____ 05.15.2025
Signature Date Signed

Jon Fitch, City Engineer
Printed Name

Attest: _____ 5/21/25
Signature Date Signed

Kari Graber, City Clerk
Printed Name

A. Application Certification with Resolution

RESOLUTION NO. 25-091
City Council

RESOLUTION AUTHORIZING THE SUBMITTAL OF AN APPLICATION FOR THE IOWA DEPARTMENT OF TRANSPORTATION TRAFFIC SAFETY IMPROVEMENT PROGRAM (TSIP) FOR THE INTERSECTION OF BOYSON ROAD AND BOYSON COURT FOR IDOT TRAFFIC SAFETY IMPROVEMENT PROGRAM FUNDING

WHEREAS, the Iowa Department of Transportation has established the TSIP and provides funding for locations where vehicular safety is a concern and documented, and

WHEREAS, said program allows for funding to be provided to local jurisdictions for eligible transportation projects or programs that will improve traffic safety at a specific site or corridor with a crash history, and

WHEREAS, the City of Hiawatha has determined that be reconstructing the intersection of Boyson Road and Boyson Court as a roundabout will help reduce crashes, thus improving safety and operations, and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HIAWATHA, IOWA, THAT:

1. The City Council supports and approves the application for TSIP funding.
2. The City Council hereby commits the additional City funds necessary for construction of the project beyond any TSIP funding.
3. The City Council hereby commits to accepting and maintaining these improvements.
4. The Mayor is hereby authorized to execute the application on behalf of the City.

AYES: Jeff Cater, Rob Archibald, Bill Bennett, Ben Fiedler, Jill Weigel
NAYS: None

PASSED AND APPROVED this 21st day of May, 2025.

Steve Dodson, Mayor

ATTEST:

Kari Graber, City Clerk

Background

The City of Hiawatha is committed to enhancing the safety and efficiency of its transportation network. This application seeks funding for comprehensive safety improvements along the Boyson Road corridor, extending from Hawkeye Drive to Robins Road, a 0.25-mile segment. This minor arterial corridor had an ADT of 11,800 when traffic counts were collected in 2021. The project aims to address multiple safety concerns and improve overall traffic flow and pedestrian safety.

The Boyson Road corridor, from the eastern city limits to Miller Road, is a significant route for the City of Hiawatha. Recognizing its importance, the city is investing in making this corridor safer for all users. The City of Hiawatha improved the intersection of Boyson Road and N 12th Avenue to a roundabout in 2024. Additionally, the Iowa Department of Transportation (Iowa DOT) is contributing to these efforts with the construction of a new interchange at Boyson Road and Interstate 380 that includes reconstruction of the Boyson Road and N Center Point Road intersection. Construction of this project began in 2024. This interchange will further enhance the safety and connectivity of the corridor, supporting both local and regional traffic demands.

Crash History

The existing two-lane configuration, combined with increasing traffic volumes, has resulted in multiple annual crashes. From 2020 to 2024, there were 17 crashes, including 2 suspected minor injury crashes, 2 possible/unknown injury crashes, and 13 property damage-only incidents. The primary causes of these crashes were driver distraction, speeding, following too closely, and losing control. The crash types included 8 rear-end, 1 head-on, 1 same-direction sideswipe, 3 opposite-direction sideswipe, 2 non-collision, 1 rear to side, and 1 other type.

This segment of Boyson Road (ID 157363) between Hawkeye Drive and Robins Road, shown in Figure 1, was given a High PCR level for all crashes and a Medium PCR level for severe crashes. The existing roadway segment category is undivided lanes, low speed, and paved. The south leg of the proposed mini-roundabout, Boyson Court (Segment ID 157227) was given a Medium PCR level for all crashes and a Negligible PCR rating for severe crashes.

Figure 1: Potential for Crash Reduction (PCR) Map of the Boyson Road Corridor



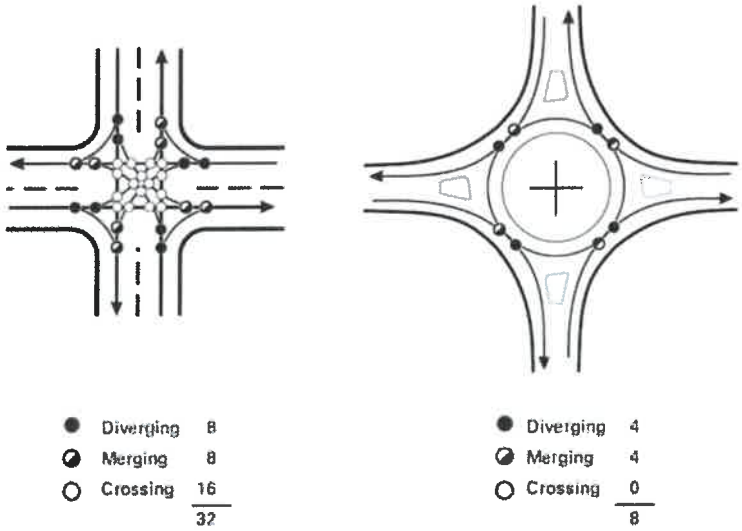
Source: Iowa Department of Transportation PCR Map

Proposed Improvements

The proposed project involves several key safety improvements along the entire Boyson Road corridor:

1. **Mini-Roundabout at Boyson Court**: Converting the Boyson Road and Boyson Court intersection from a Two-Way Stop-Controlled (TWSC) configuration to a mini roundabout. This will reduce conflict points and vehicular speeds, thereby decreasing the frequency and severity of crashes. Roundabouts are proven to reduce crash frequency by approximately 88%, according to studies cited by the Highway Safety Manual Clearinghouse. Pedestrian crossings at roundabouts through the raised splitter islands create a refuge allowing pedestrians to cross one direction of traffic at a time.

Figure 2: Stop Controlled Intersection Conflict Points Versus Roundabout Conflict Points



Source: Rhode Island Department of Transportation

2. **Smoothing Out the Reverse Curve**: Realigning Boyson Road to soften its curves and bring them up to current roadway standards. This will enhance vehicle control and reduce the risk of run-off-road crashes.

3. **Pedestrian Refuge at Cedar Valley Trail Crossing**: Installing a pedestrian refuge island at the Cedar Valley Trail crossing to provide a safe midpoint for pedestrians crossing Boyson Road. This will improve pedestrian safety and encourage walking and biking.

4. **Raised Medians Along the Corridor**: Adding raised medians to separate opposing traffic flows, reduce head-on collisions, and provide additional pedestrian refuge areas.

5. **Lighting Improvements:** With the construction of a mini roundabout at the intersection of Boyson Road and Boyson Court, new streetlights will be added, resulting in significant lighting improvement at this intersection. Drivers will have improved visibility of pedestrians, animals, and other roadway hazards.

Benefits

The proposed improvements are expected to significantly reduce the frequency and severity of vehicle crashes along the Boyson Road corridor. By converting the intersection to a roundabout, realigning the road, and adding pedestrian safety features, we anticipate a substantial decrease in conflict points and lower vehicular speeds, which are crucial factors in minimizing crash occurrences and their severity. The realignment of Boyson Road and the addition of curb and gutter will enhance vehicle control, while continuous sidewalks and improved crosswalks will create safer pedestrian pathways. The expansion of the trail network, including the integration of the Cedar Valley Trail and the forthcoming Dry Creek Trail, will further support non-motorized transportation and recreational activities, promoting a safer, healthier, and more connected community.

Conclusion

The Boyson Road corridor between Hawkeye Drive and Robins Road was given a High PCR rating for all crashes and Boyson Court was given a Medium PCR rating for all crashes. The comprehensive improvements discussed in this application are designed to create a safer, more efficient, and more accessible transportation corridor. By addressing existing safety issues and accommodating future traffic demands, the City of Hiawatha will enhance the overall quality of life for its residents and visitors. The integration of these enhancements aligns with our commitment to proactive safety measures.

By converting the intersection from a two-way stop-controlled configuration to a roundabout, we can expect a substantial decrease in conflict points and lower vehicular speeds, which are crucial factors in minimizing crash occurrences and their severity. Roundabouts have been shown to eliminate the potential for severe right-angle and left-turn head-on collisions, which are prevalent in stop-controlled intersections. With fewer conflict points and lower transit speeds, the likelihood of high-impact collisions is greatly reduced. According to studies referenced by Highway Safety Manual Clearinghouse, roundabouts can decrease crash frequency by approximately 88%, providing a safer environment for all road users.

The proposed realignment of Boyson Road to soften its curves, combined with the addition of curb and gutter, will enhance vehicle control and reduce the risk of run-off-road crashes. The proposed improvements will also help accommodate bicycle and pedestrian traffic, which is anticipated to increase with the development of the areas nearby and once the new section of Dry Creek Trail is constructed. The Dry Creek Trail will be constructed and connected to the existing Cedar Valley Trail, and to the Dry Creek Trail's existing section. The continuous sidewalks and improved crosswalks with enhanced lighting will create safer pedestrian pathways, encouraging walking and biking while reducing pedestrian-vehicle conflicts.

Estimated Project Cost

Project Name: Boyson Road between Hawkeye Drive and Robins Road
City of Hiawatha, Iowa

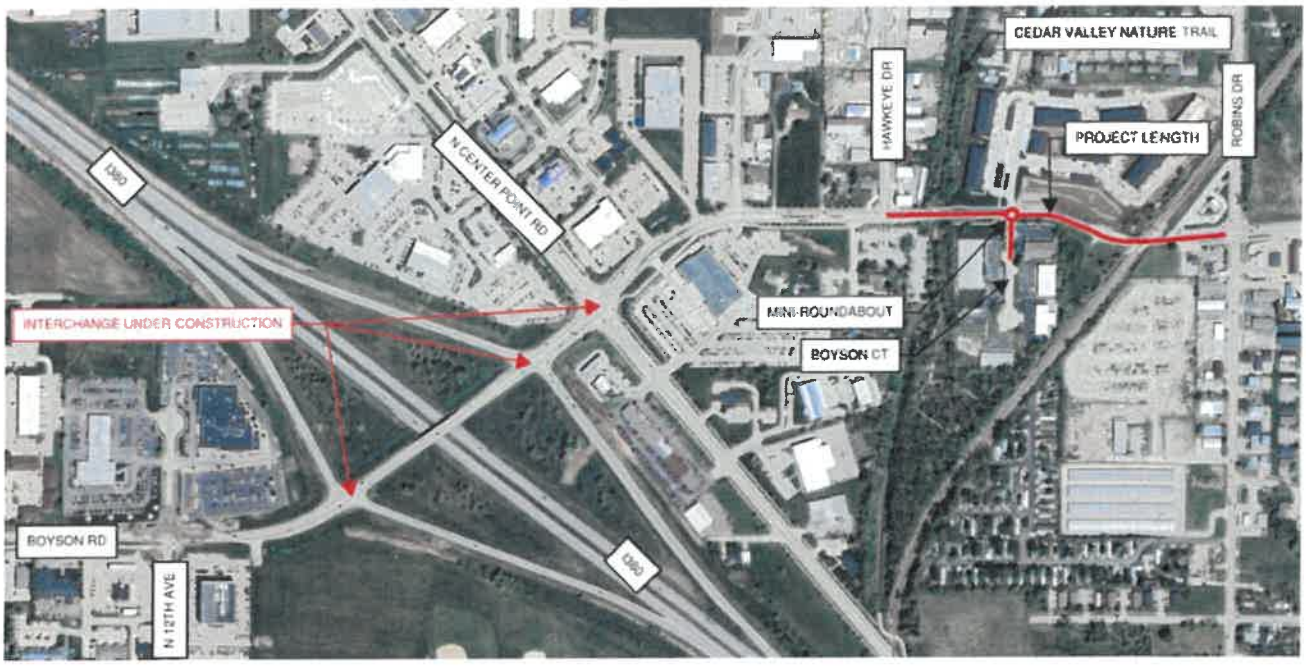
Item #	Item Description	Quantity	Unit	Unit $	Non-Safety Items $	Safety Items $
1	CLEAR+GRUBB	2.8	ACRE	$3,000		8,400.00
2	SPECIAL BACKFILL	1500	CY	$35		52,500.00
3	EXCAVATION, CL 10, RDWY+BORROW	2410	CY	$12		28,920.00
4	TOPSOIL	1900	CY	$11		20,900.00
6	GRANULAR MAT'L	500	TON	$27		13,500.00
7	MODIFIED SUBBASE	1150	CY	$35		40,250.00
8	MACADAM STONE BASE	400	TON	$35		14,000.00
10	STD/S-F PCC PAV'T, CL C CL 3, 6"	1280	SY	$42		53,760.00
11	STD/S-F PCC PAV'T, CL C CL 3, 7"	165	SY	$46		7,590.00
12	STD/S-F PCC PAV'T, CL C CL 3, 9"	4600	SY	$52		239,200.00
13	TEMPORARY PAV'T	120	SY	$69		8,280.00
15	PRECAST CONC BOX CULV, 7 FT. X 3 FT.	168	LF	$637	107,016.00	
16	PRECAST CONC BOX CULV ST END SEC, 7 FT. X 3 FT.	2	EACH	$3,631	7,262.00	
17	APRON, CONC, 15"	2	EACH	$926	1,852.00	
18	APRON, CONC, 18"	1	EACH	$1,158	1,158.00	
19	CULV, CONC ENT PIPE, 15"	30	LF	$75	2,250.00	
20	MANHOLE, SAN SWR, SW-303, 48"	1	EACH	$5,209	5,209.00	
21	INTAKE, SW-509	4	EACH	$5,209	20,836.00	
22	SUBDRAIN CLEANOUT	6	EACH	$926	5,556.00	
23	MANHOLE ADJUSTMENT, MAJOR	1	EACH	$1,158	1,158.00	
24	SUBDRAIN, STD, PERFORATED, 6"	1690	LF	$12	20,280.00	
25	STORM,15"	500	LF	$52	26,000.00	
26	STORM,21"	106	LF	$81	8,586.00	
27	STORM,36"	70	LF	$98	6,860.00	
28	RMV STORM SWR PIPE LE 36"	227	LF	$17	3,859.00	
29	RMV STORM SWR PIPE GT 36"	75	LF	$23	1,725.00	
30	SAN SWR G-MAIN, TRENCHED, PVC, 8"	40	LF	$46	1,840.00	
31	ENGINEER FABRIC	705	SY	$3	2,115.00	
32	EROSION STONE	56	TON	$35	1,960.00	
33	RMVL OF PAV'T	3140	SY	$9	28,260.00	
34	RMVL OF INTAKE+UTILITY ACCESS	1	EACH	$347	347.00	
35	RMVL OF RECREATIONAL TRAIL	48	SY	$7	336.00	
36	RECREATIONAL TRAIL, PCC, 6"	1045	SY	$42	43,890.00	
37	RMVL OF SIDEWALK	255	SY	$7	1,785.00	
38	SIDEWALK, PCC, 4"	285	SY	$41	11,685.00	
39	DETECTABLE WARNING - CURB RAMP	100	SF	$41	4,100.00	
40	RMVL OF PAVED DRIVEWAY	240	SY	$8		1,920.00
41	SAFETY CLOSURE	4	EACH	$232		928.00
42	RMV+REINSTALL SIGN	9	EACH	$174		1,566.00
43	PAINTED PAV'T MARK, DURABLE	10	STA	$58		580.00
44	PAINTED SYMBOL+LEGEND, DURABLE	7	EACH	$289		2,023.00
45	TRAFFIC CONTROL	1	LS	$20,000		20,000.00
46	MOBILIZATION	1	LS	$80,000		80,000.00
47	TRENCH COMPACTION TESTING	1	LS	$579		579.00
48	WATER MAIN, 8"	20	LF	$64	1,280.00	
49	WATER MAIN,12"	985	LF	$87	85,695.00	
50	FITTINGS BY COUNT, DIP, VARIOUS SIZES	4	EACH	$926	3,704.00	
51	WATER SERVICE STUB, COPPER, 3/4"	3	EACH	$1,158	3,474.00	
52	VALVE, GATE, DIP, 8"	1	EACH	$1,852	1,852.00	
53	VALVE, GATE, DIP, 12"	4	EACH	$2,547	10,188.00	
54	FIRE HYDRANT ASSEMBLY, WM-201	2	EACH	$4,052	8,104.00	
56	SITE RESORATION AND EROSION CONTROL	1	ACRE	$13,500		13,500.00
62	RAILROAD CROSSING IMPROVEMENTS	1	LS	$231,525	231,525.00	
	Construction Sub-Total				661,747.00	608,396.00
	Construction Total				**1,270,143.00**	

D. Timeline Schedule

The schedule proposed for the safety improvements at Boyson Road from Hawkeye Drive to Robins Road is as follows:

- **August 2025** – Submit for 2025 TSIP Funds.
- **November 2025** – Project is awarded TSIP funds.
- **January 2025 – November 2026** – Proceed with design of improvements.
- **July 2026** –TSIP funds are available.
- **February 2027** –Let Road project.
- **Spring 2027** – Construction begins.
- **Spring 2028** – Construction complete.

E. Project Location







Boyson Road 3-lane road section West of Hawkeye Drive



Boyson Road at Hawkeye Drive Intersection



Boyson Road 3-lane road section West of Hawkeye Drive



End of sidewalk south of Boyson Road and west of Boyson Court



Cedar Valley Trail across Boyson Road



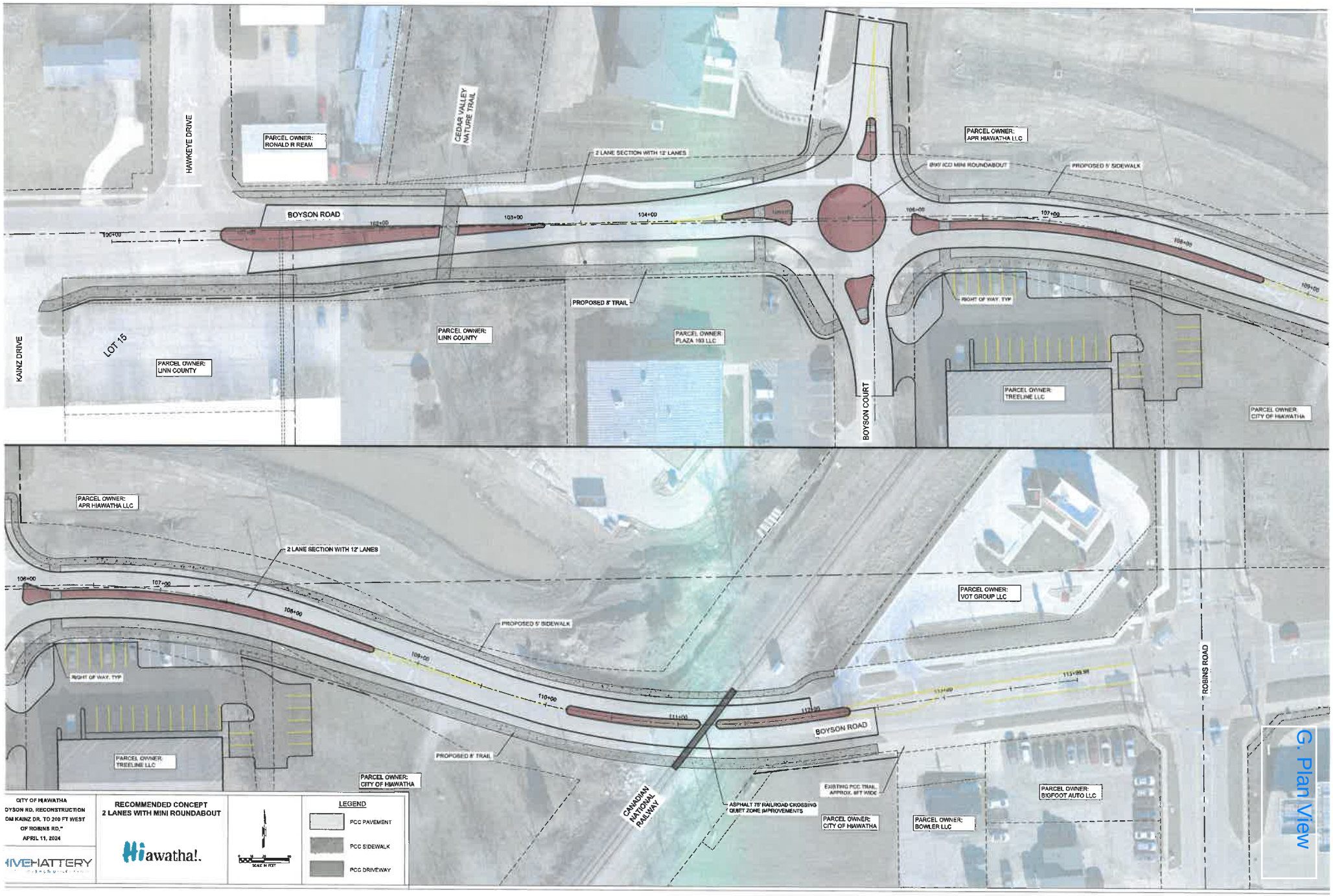
Boyson Road between Hawkeye Drive and railroad crossing



End of sidewalk east of Cedar Valley Trail, north of Boyson Road



Boyson Road 3-lane section west of Robins Rd


HAWKEYE DRIVE
CEDAR VALLEY NATURE TRAIL
PARCEL OWNER: RONALD R REAM
2 LANE SECTION WITH 12' LANES
@90° ICD MINI ROUNDABOUT
PROPOSED 5' SIDEWALK
PARCEL OWNER: APR HIAWATHA LLC
BOYSON ROAD
100+00
102+00
103+00
104+00
106+00
107+00
108+00
109+00
PROPOSED 8' TRAIL
RIGHT OF WAY, TYP
KAINZ DRIVE
LOT 15
PARCEL OWNER: LINN COUNTY
PARCEL OWNER: LINN COUNTY
PARCEL OWNER: PLAZA 193 LLC
BOYSON COURT
PARCEL OWNER: TREELINE LLC
PARCEL OWNER: CITY OF HIAWATHA
PARCEL OWNER: APR HIAWATHA LLC
2 LANE SECTION WITH 12' LANES
106+00
107+00
108+00
109+00
110+00
111+00
112+00
PROPOSED 5' SIDEWALK
RIGHT OF WAY, TYP
PARCEL OWNER: VOT GROUP LLC
ROBINS ROAD
BOYSON ROAD
PROPOSED 8' TRAIL
PARCEL OWNER: TREELINE LLC
PARCEL OWNER: CITY OF HIAWATHA
CANADIAN NATIONAL RAILWAY
ASPHALT 75' RAILROAD CROSSING QUIET ZONE IMPROVEMENTS
EXISTING PCC TRAIL, APPROX. 8FT WIDE
PARCEL OWNER: CITY OF HIAWATHA
PARCEL OWNER: BOWLER LLC
PARCEL OWNER: BIGFOOT AUTO LLC
CITY OF HIAWATHA
DYSON RD. RECONSTRUCTION
DM KAINZ DR. TO 200 FT WEST
OF ROBINS RD."
APRIL 11, 2024
RECOMMENDED CONCEPT
2 LANES WITH MINI ROUNDABOUT
Hiawatha!.
LEGEND
PCC PAVEMENT
PCC SIDEWALK
PCC DRIVEWAY
G. Plan View


CITY OF HIAWATHA
PROPOSED PROJECT
I-380

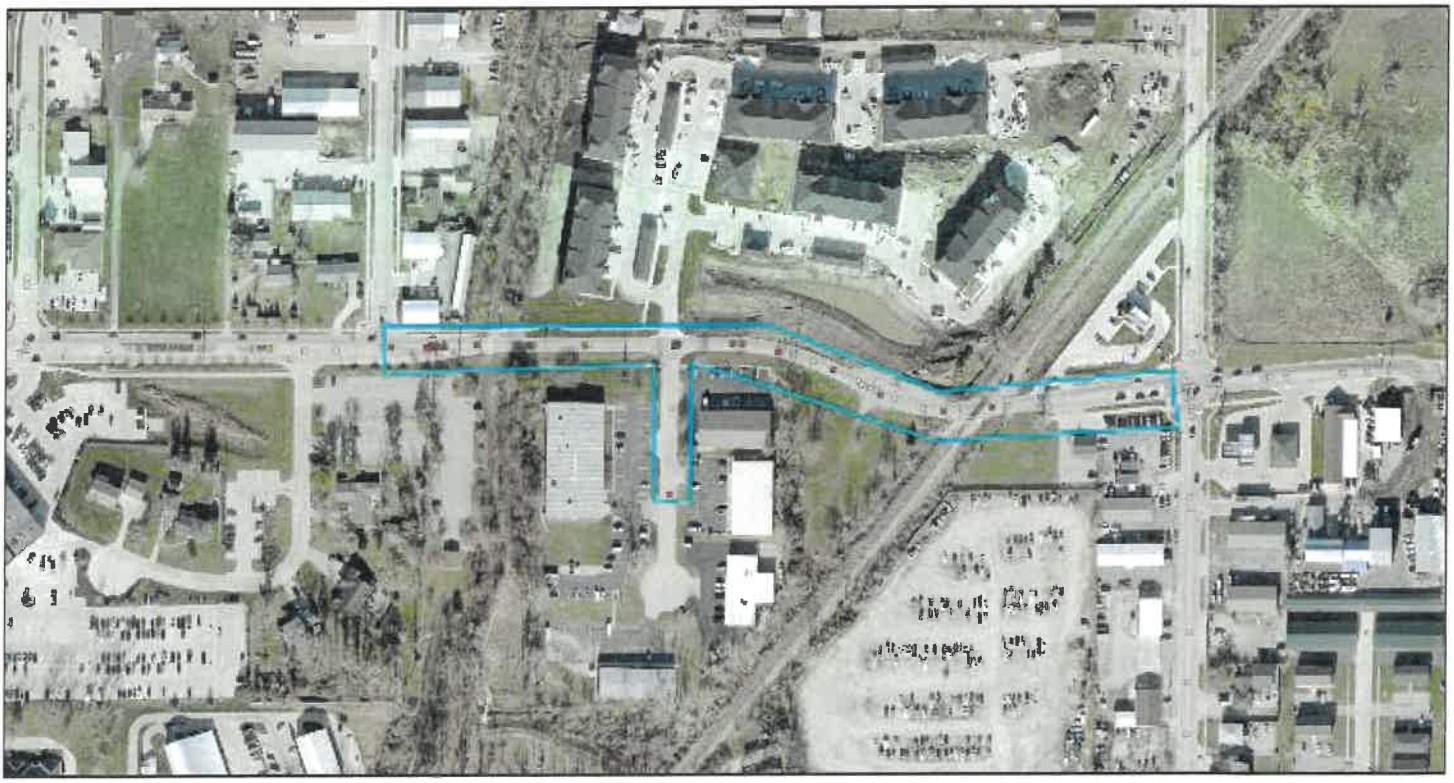
Iowa Crash Analysis Tool
Quick Report
2020-2024

Crash Severity	17
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	2
Possible/Unknown Injury Crash	2
Property Damage Only	13

Injury Status Summary	5
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	2
Possible (complaint of pain/injury)	2
Uninjured	0
Unknown	0
Not Reported	1

Property/Vehicles/Occupants	
Property Damage Total (dollars):	131,500.00
Average (per crash dollars):	7,735.29
Total Vehicles:	37.00
Average (per crash):	2.18
Total Occupants:	51.00
Average (per crash):	3.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.24
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.12
Possible/Unknown Injuries/Crash:	0.12



Major Cause			17
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	1
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	2
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	4
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	1
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	1
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	1
Driver Distraction: Exterior distraction	1	Ran off road - right	1
Ran off road - straight	0	Ran off road - left	0
Lost control	1	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	1
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	3
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Monday	0	0	0	0	1	0	0	0	1	0	0	1	0	3
Tuesday	0	0	0	0	1	0	1	1	2	0	0	0	0	5
Wednesday	0	0	0	2	0	0	0	0	1	1	0	0	0	4
Thursday	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Friday	0	0	0	0	0	1	1	0	0	0	0	0	0	2
Saturday	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	4	2	1	3	1	4	1	0	1	0	17

Manner of Crash Collision	17
Non-collision (single vehicle)	2
Head-on (front to front)	1
Rear-end (front to rear)	8
Angle (oncoming left turn)	0
Broadside (front to side)	0
Sideswipe (same direction)	1
Sideswipe (opposite direction)	3
Rear to rear	0
Rear to side	1
Not reported	0
Other	1
Unknown	0

Surface Conditions	17
Dry	15
Wet	0
Ice/frost	2
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			37
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	2	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	35

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	1	3	0	0	4
>= 25 and <= 29	2	3	0	0	5
>= 30 and <= 34	5	4	0	0	9
>= 35 and <= 39	1	1	0	0	2
>= 40 and <= 44	1	2	0	0	3
>= 45 and <= 49	1	4	0	0	5
>= 50 and <= 54	0	2	0	0	2
>= 55 and <= 59	0	6	0	0	6
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	11	25	1	0	37

Drug/Alcohol Related	17
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	17

Alcohol Test Given	37
None	36
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

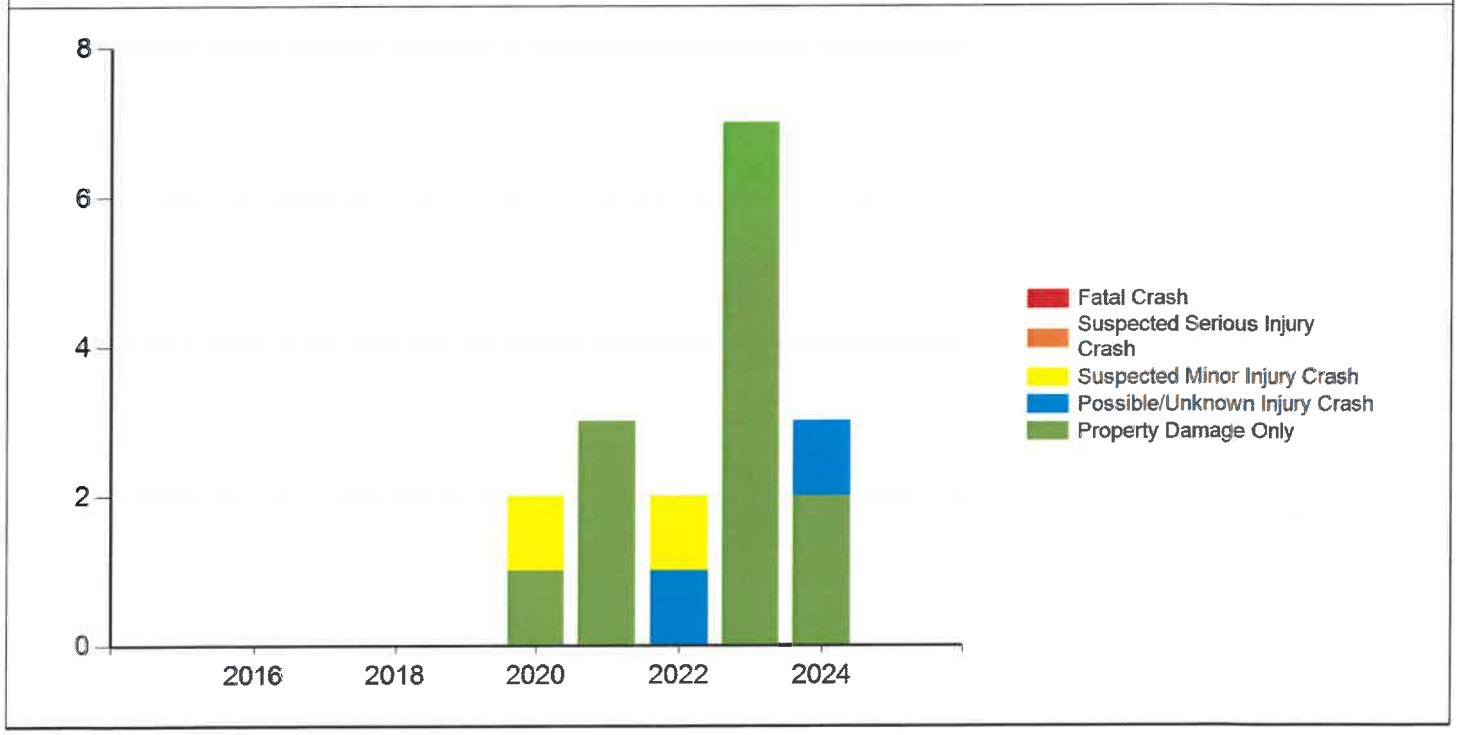
Drug Test Given	37
None	36
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

Drug Test Result	37
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	37
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	1	0	1	2
2021	0	0	0	0	3	3
2022	0	0	1	1	0	2
2023	0	0	0	0	7	7
2024	0	0	0	1	2	3
2025	0	0	0	0	0	0
Total	0	0	2	2	13	17

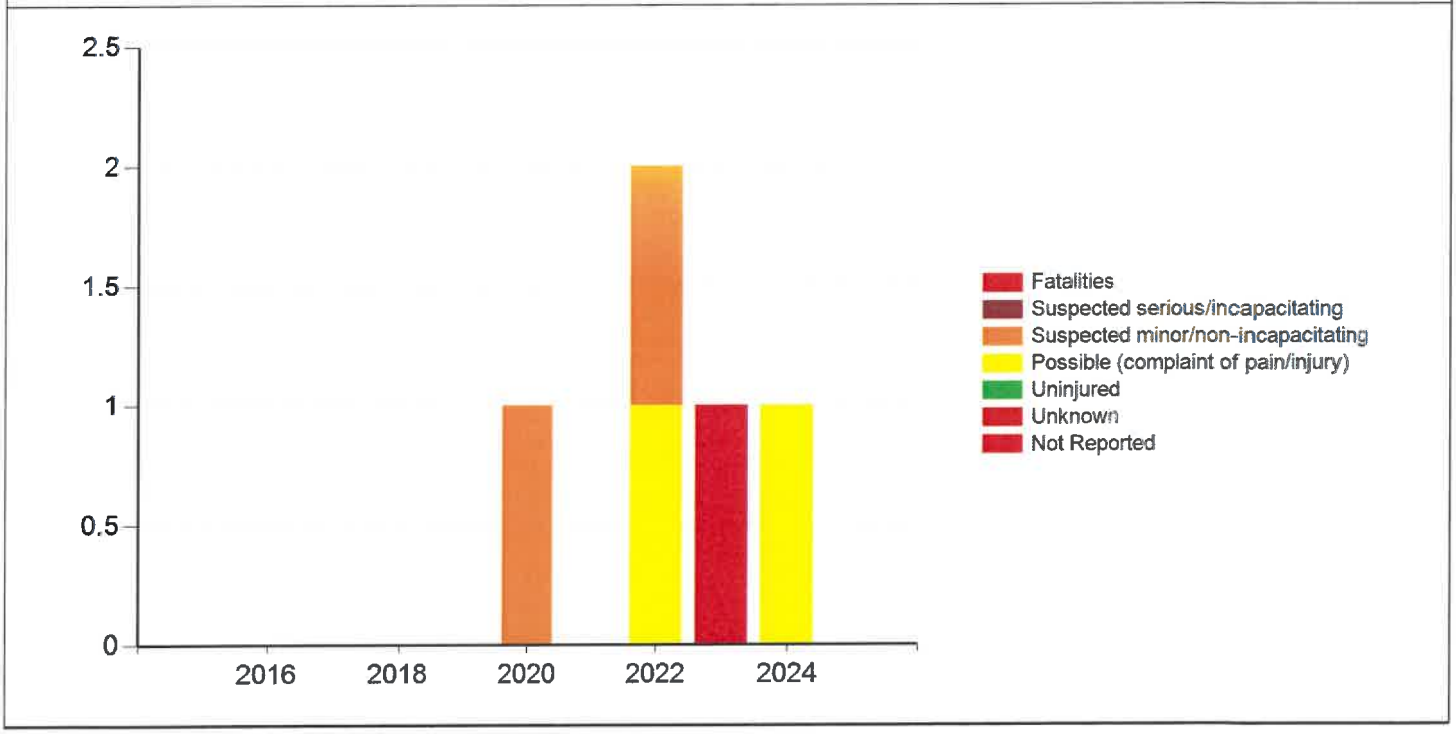
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	Total
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	1	0	0	0	0	1
2021	0	0	0	0	0	0	0	0
2022	0	0	1	1	0	0	0	2
2023	0	0	0	0	0	0	1	1
2024	0	0	0	1	0	0	0	1
2025	0	0	0	0	0	0	0	0
Total	0	0	2	2	0	0	1	5

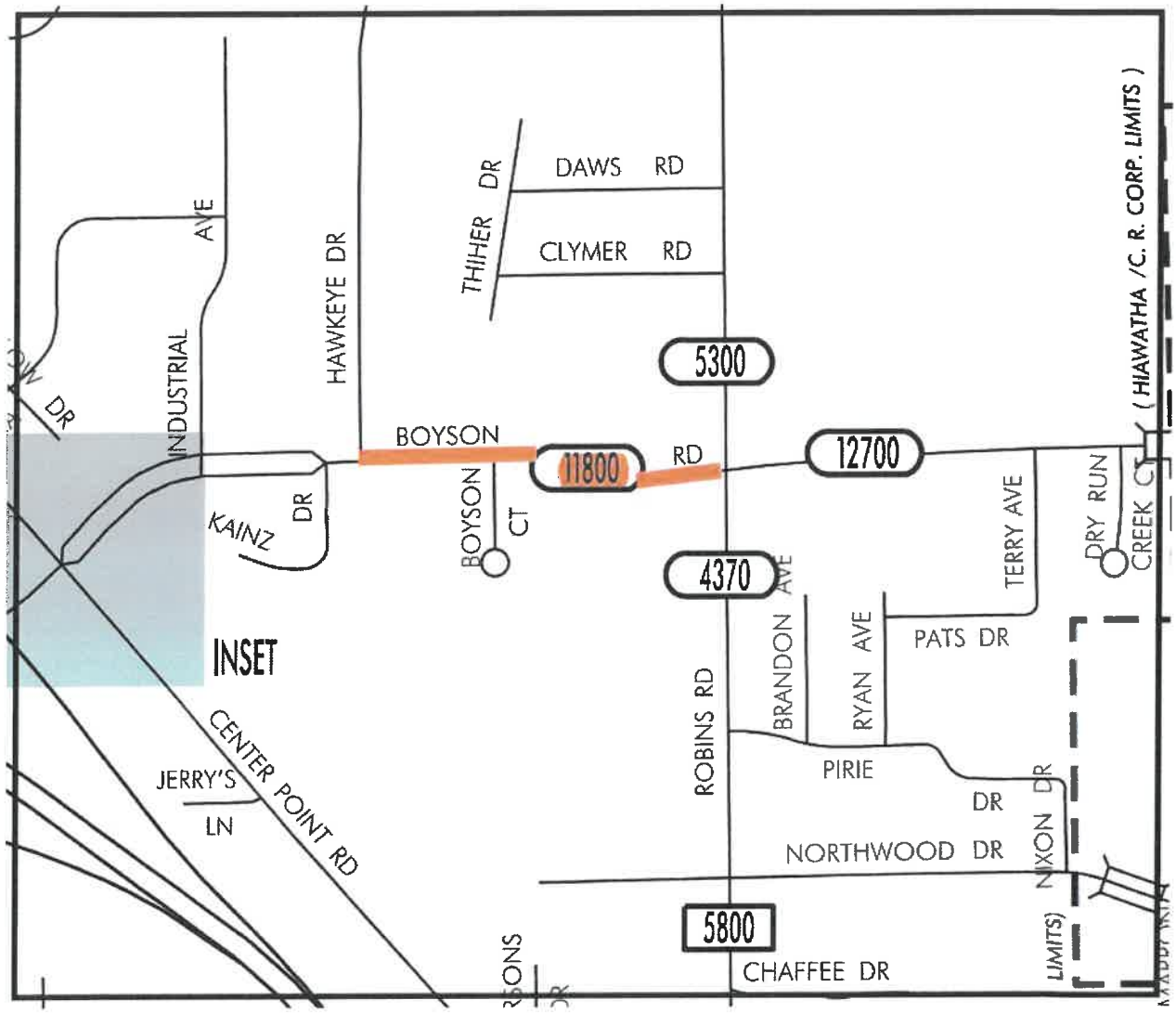
Injury Status/Year



Meeting the following criteria

Jurisdiction: Statewide
Year: 2020, 2021, 2022, 2023, 2024
Map Selection: Yes
Filter: None

Analyst Information



2021 Iowa DOT Traffic Map

Road Name	2021 Iowa DOT AADT
Boyson Road	11,800

K. Traffic Signal Layout, Type, Proposed Phasing, and Detector Locations

Not Applicable

County:	Linn	Prepared By:	Shive-Hattery
Location:	Boyson Road, from Hawkeye Drive to	Date Prepared:	8/15/2025
Proposed Improvements:	Convert Boyson Road and Boyson Court intersection from a two-way stop controlled (TWSC) configuration to a roundabout configuration.		
Estimated Improvement Cost:	$ 500,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 10,000

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF	
CRF Value (%)	75	**75.0**	
Equivalent CMF	0.25		Is Dom. Com. Resd.
Combined CMF, if # used (DR)	0.25	0.25	TRUE
Combined CMF, if # used (Mult)	0.25		Is data entered befc
Pick Dom Com. Resd. Or Mult. Fo	0.25	0.25	FALSE

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	75.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	75.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	2	75.0	**0.40**	**0.30**
Possible/Unknown Injury (C)	$ 135,000	2	75.0	**0.40**	**0.30**
Property Damage Only (O)	$ 20,000	13	75.0	**2.60**	**1.95**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ 87,000**
Possible/Unknown Injury (C)	**$ 40,500**

County: Linn
Location: Boyson Road, from Hawkeye Drive to
Property Damage Only (O) $ 39,000

Prepared By: Shive-Hattery
Date Prepared: 8/15/2025

Predictive Method

Existing Condition (All Crashes):
Alternative (All Crashes):
Percent Change in Crashes n/a

Location Characteristics: Please Select
Please Select
Iowa Crash Distribution 2017-2021

Crash Severity	Crash Distribution Based on Location Characteristics	Existing Condition Expected Crashes - Service Life	Alternative Expected Crashes - Service Life	Crashes Saved Over Service Life	Crashes Saved Annually
Fatal (K)	0.00%	0.00	0.00	**0.00**	**0.00**
Serious Injury (A)	0.00%	0.00	0.00	**0.00**	**0.00**
Minor Injury (B)	0.00%	0.00	0.00	**0.00**	**0.00**
Possible/Unknown Injury (C)	0.00%	0.00	0.00	**0.00**	**0.00**
Property Damage Only (O)	0.00%	0.00	0.00	**0.00**	**0.00**

Crash Severity	Rounded Societal Costs	Annual Societal Benefit
Fatal (K)	$ 4,300,000	$ -
Serious Injury (A)	$ 4,300,000	$ -
Minor Injury (B)	$ 290,000	$ -
Possible/Unknown Injury (C)	$ 135,000	$ -
Property Damage Only (O)	$ 20,000	$ -

Total Benefits and Costs

		Implementation Cost	$ 500,000
		Present Value of Maint.	$ 135,903
Present Value Benefits (Societal Benefits)	$ 2,459,323	Present Value Costs (Impl. and Maint. Costs)	$ 635,903
Present Value Net Return	$ 1,823,419		
Benefit Cost Ratio	**3.87**		

Form continues on next page

Version: Crash costs escalated from 2018

County: Linn
Location: Boyson Road, from Hawkeye Drive to

Prepared By: Shive-Hattery
Date Prepared: 8/15/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 8/15/2025

Location / Title of Project 29th Avenue and 31st Street Roundabout

Applicant City of Marion

Contact Person Greg Annis Title Project Manager

Complete Mailing Address 1225 6TH AVE, MARION, IA 52302

Phone 319-743-6340 E-Mail GANNIS@CITYOFMARION.ORG
(Area Code)

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s)

Contact Person Title

Complete Mailing Address

Phone E-Mail
(Area Code)

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	$500,000
Total Project Cost	$	$605,100
Safety Funds Requested	**$**	**$500,000**

Additional Project Safety Documentation (when available):

☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
☐ Iowa DOT TEAP Study or similar analysis and concept
☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
SI_128034	29th Ave and 31st Street	☐	☒	-0.165	0.10131

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the CITY OF MARION

Signed: _____ 8/13/25
Signature Date Signed

MICHAEL BARNHART
Printed Name

Attest: _____ 8/13/25
Signature Date Signed

Jacob Hahn
Printed Name

RESOLUTION NO. 32490

RESOLUTION AUTHORIZING THE SUBMITTAL OF AN APPLICATION FOR TRAFFIC SAFETY IMPROVEMENT PROGRAM (TSIP) FUNDING FOR THE INTERSECTION OF 29TH AVENUE AND 31ST STREET TO CONVERT THE INTERSECTION TO A MINI-ROUNDABOUT AND ASSOCIATED IMPROVEMENTS

WHEREAS, the Iowa Department of Transportation has established the TSIP and provides funding for locations where vehicular safety is a concern and documented; and

WHEREAS, the 29th Avenue and 31st Street intersection has been identified as a location where vehicular safety could be improved and funded by TSIP.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MARION, IOWA, that:

1. The City Council supports the application for TSIP funding.
2. The City Council hereby commits the additional City funds necessary for construction of the project beyond any TSIP funding, and;
3. The City Council hereby commits to accepting and maintaining these

Passed and approved on August 07, 2025.

Nicolas AbouAssaly, Mayor

ATTEST:
I, Rachel Bolender, City Clerk of the City of Marion, Iowa hereby certify that at a meeting of the City Council of said City, held on the above date, among other proceedings the above was adopted.

Rachel Bolender, City Clerk

Existing Conditions:
The intersection on 31st Street and 29th Avenue is a four leg two way stop controlled intersection. 29th Avenue is 49 feet from back of curb to back of curb. 29th Avenue has one lane of traffic in each direction with a shared center turn lane and is not stop controlled. There is a parking lane and painted bicycle lane on the north side with a painted bicycle lane on the south side. 29th Avenue is classified as a minor arterial in this section with a posted speed of 30 mph. 31st Street is the north/south roadway that is stop controlled. The south leg is 33 feet back of curb to back of curb with two painted 5-foot wide bicycle lanes and one lane of traffic in each direction. The north leg is 28 feet from back of curb to back of curb with one lane of traffic in each direction. 31st Street is classified as a collector street with a posted speed of 25 mph. The intersection is indicated as PCR Level Medium for severe crashes.

Proposed Concept:
The proposed project will construct a mini roundabout reconfigure the two-way stop controlled layout. The proposed project will also include sidewalk improvements and pedestrian crossings.

Safety Justification:
According to the Iowa Crash Analysis Tool (ICAT), in the last 5.5 years (2025-2019) 11 non-animal related crashes have occurred near the intersection including 9 injuries and 5 minor injuries. See Section I for the crash history summary. Of the 11 total crashes, 7 were results of vehicles turning onto 29th Street from 31st Street stop signs. These crashes would be eliminated with the installation of a roundabout.

An existing traffic study was performed by City staff in 2023 that indicated the intersection did not warrant 4-way stop control or signal at this intersection. This study summary can be seen on page 20.

Marion has successfully implemented roundabouts throughout the City. These installations have significantly decreased the number and severity of crashes.

MARION Public Works

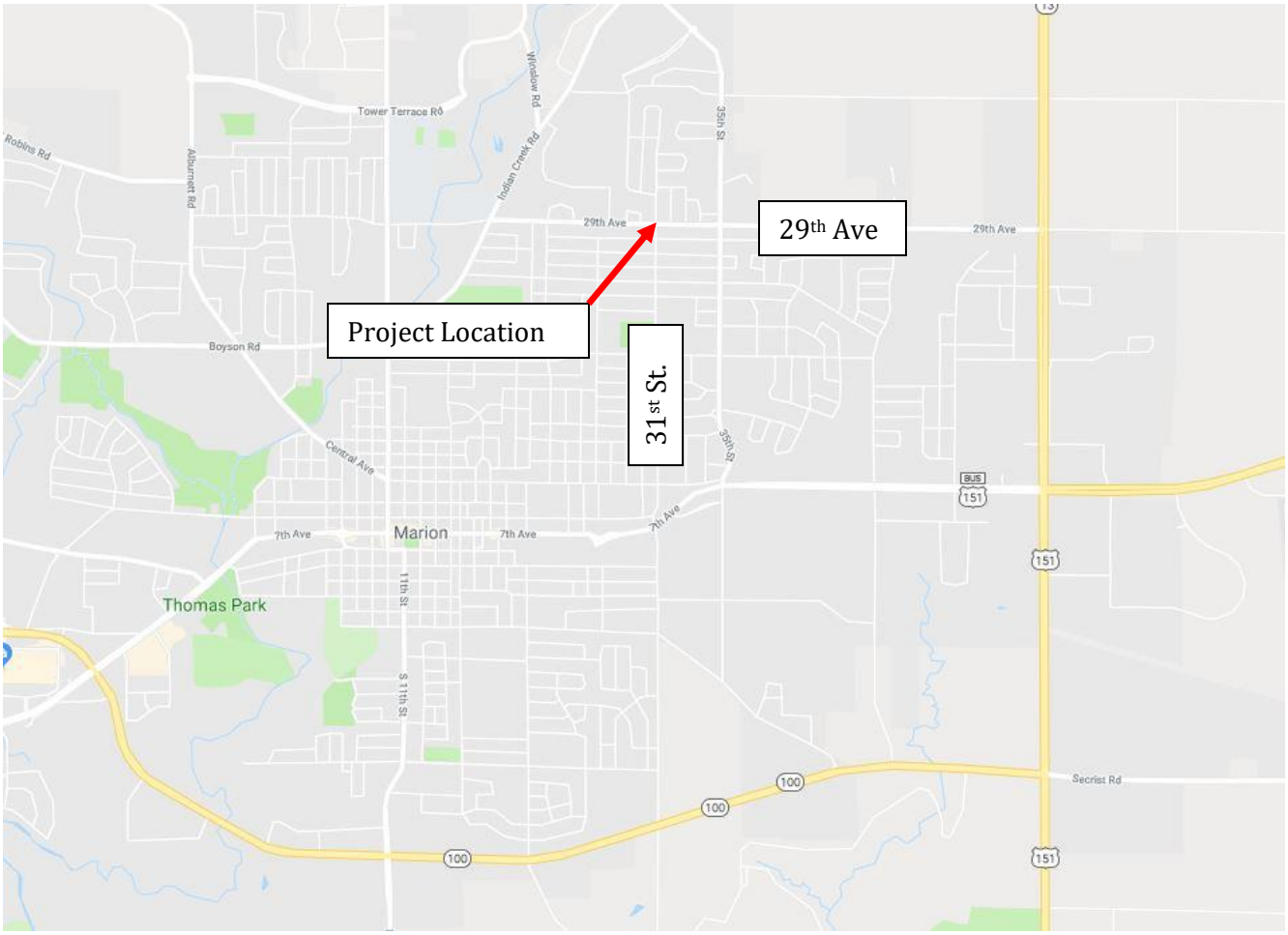
ESTIMATE OF PROBABLE COSTS

			DATE:		
			PROJECT:	31st St and 29th Ave Roundabout	
			LOCATION:	MARION, IOWA	
			TOTAL BUDGET AMOUNT:		
ITEM		EST QTY	UNIT	UNIT PRICE	COST
1	TOPSOIL, OFF-SITE	125	CY	$40.00	$ 5,000
2	BELOW GRADE EXCAVATION (CORE OUT)	75	CY	$55.00	$ 4,125
3	SUBGRADE PREPARATION	1648	SY	$2.00	$ 3,296
4	SUBGRADE TREATMENT, GEOGRID	1648	SY	$2.50	$ 4,120
5	SUBBASE, GRANULAR, 12 IN. THICK	1648	SY	$18.00	$ 29,664
6	COMPACTION TESTING	1	LS	$2,000.00	$ 2,000
7	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	250	CY	$45.00	$ 11,250
8	STORM SEWER MANHOLE, CLEANOUT	2	EA	$750.00	$ 1,500
9	REMOVE STORM STRUCTURE, CLEANOUT	2	EA	$400.00	$ 800
10	SUBDRAIN, 8 INCH	80	LF	$25.00	$ 2,000
11	MANHOLE ADJUSTMENT, MINOR	2	EA	$750.00	$ 1,500
12	PCC PAVEMENT, 8 IN.	1450	SY	$72.00	$ 104,400
13	CONCRETE MEDIAN, 8 IN.	472	SY	$150.00	$ 70,800
14	REMOVAL OF SIDEWALK	250	SY	$15.00	$ 3,750
15	REMOVAL OF DRIVEWAY	27	SY	$18.00	$ 486
16	SIDEWALK, PCC, 4 IN.	200	SY	$68.00	$ 13,600
17	PCC SIDEWALK RAMP, 6 IN.	90	SY	$72.00	$ 6,480
18	DETECTABLE WARNING	96	SF	$45.00	$ 4,320
19	PAINTED PAVEMENT MARKINGS, DURABLE (EPOXY)	27	STA	$200.00	$ 5,400
20	PAINTED SYMBOLS AND LEGENDS, DURABLE (EPOXY)	8	EA	$600.00	$ 4,800
21	GROOVES CUT FOR PAVEMENT MARKINGS	27	STA	$100.00	$ 2,700
22	GROOVES CUT FOR SYMBOLS AND LEGENDS	8	EA	$350.00	$ 2,800
23	TEMPORARY TRAFFIC CONTROL	1	LS	$10,000.00	$ 10,000
24	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, AND MULCHING, PERMANENT	1	ACRE	$6,000.00	$ 4,500
25	FILTER SOCK, 6 IN.	500	LF	$2.00	$ 1,000
26	TEMPORARY RECP, TYPE 2B	1000	SY	$3.00	$ 3,000
27	CONSTRUCTION SURVEY	1	LS	$10,000.00	$ 10,000
28	TRAFFIC SIGNS	12	EA	$500.00	$ 6,000
29	MOBILIZATION	1	LS	$25,000.00	$ 25,000
30	CONCRETE WASHOUT	1	LS	$750.00	$ 750
8001	Property Acquistion			$260,000.00	$260,000.00
				SUBTOTAL:	$ 605,100

MARION
Engineering Department

August 15, 2025:	Traffic Safety Improvement Program (TSIP) Submittal Deadline
January 2026:	Notice of Approval
September 2026:	Complete Project Design
October 2026:	Project Letting
Spring 2027:	Begin Construction
Fall 2027:	Complete Construction

MARION
Engineering Department



MARION
Engineering Department

Looking East on 29th Avenue



Looking West on 29th Avenue



MARION
Engineering Department

Looking North on 31st Street



Looking South on 31st Street



CITY OF MARION
ENGINEERING DEPARTMENT
MARION, IOWA

S:\ENGINEERING\PROJECTS\2025\29TH AVE 31ST ST MINI TSIP\CONCEPT PLAN.DWG

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Sheet Description: CONCEPT PLANS

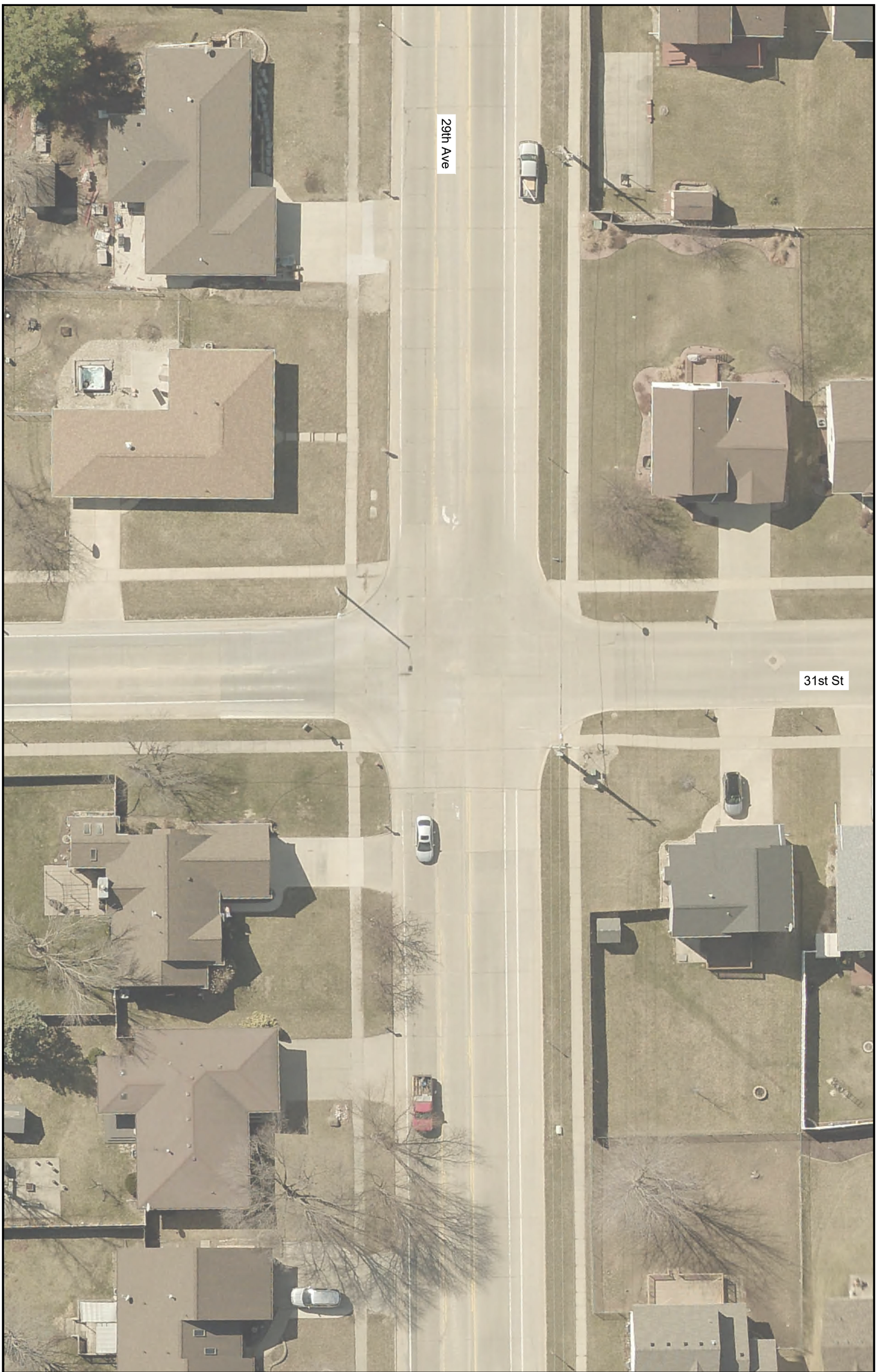
No.	Date:	Revisions

Project: 31ST STREET AND 29TH AVENUE ROUNDABOUT

Page G

Proj. No.

Drawn/Designed By:	Checked:	Reviewed:	Book:	Scale:
GWA	MDB	JAH		



Proj. No.	Page 1	Project: 31ST STREET AND 29TH AVENUE ROUNDABOUT	City of MARION	CITY OF MARION ENGINEERING DEPARTMENT MARION, IOWA	No.	Date:	Revisions	Sheet Description: AERIAL VIEW	
Drawn/Designed By: GWA	Checked: MDB	Reviewed: JAH	Book:	Scale:	S:\ENGINEERING\PROJECTS\2025\29TH AVE 31ST ST MINI TSIP\CONCEPT PLAN.DWG				8/12/2025 5:11 PM

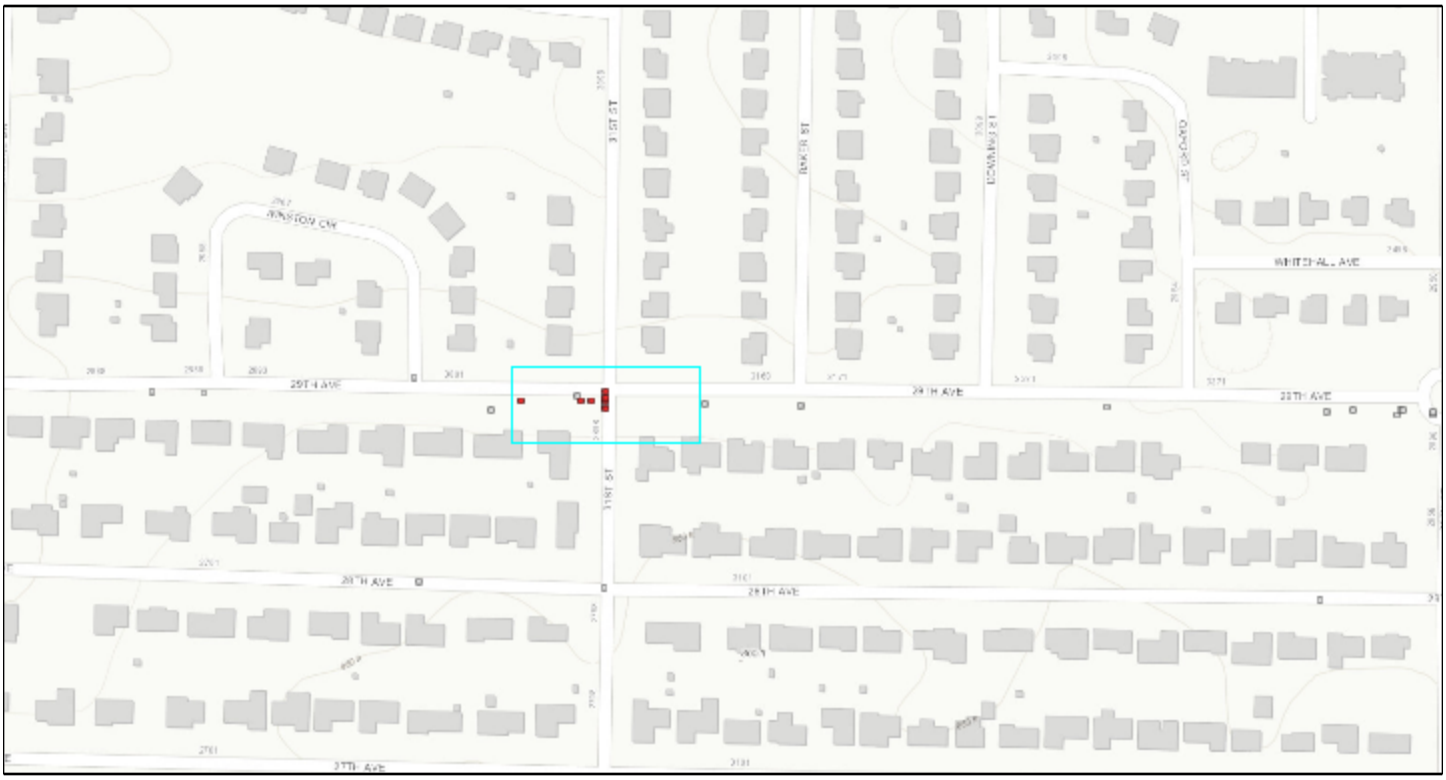
Iowa Crash Analysis Tool
Quick Report
2019-2025

Crash Severity	11
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	5
Possible/Unknown Injury Crash	2
Property Damage Only	4

Injury Status Summary	9
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	6
Possible (complaint of pain/injury)	3
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	127,000.00
Average (per crash dollars):	11,545.45
Total Vehicles:	21.00
Average (per crash):	1.91
Total Occupants:	28.00
Average (per crash):	2.55

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.82
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.55
Possible/Unknown Injuries/Crash:	0.27



Major Cause			11
Animal	0	Ran traffic signal	0
Ran stop sign	3	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	4	FTYROW: From yield sign	0
FTYROW: Making left turn	2	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	1
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	1		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Monday	0	0	0	0	0	0	0	0	1	0	1	0	0	2
Tuesday	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Wednesday	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Thursday	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Friday	0	0	0	0	0	0	0	2	2	0	0	0	0	4
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	1	3	3	1	1	0	0	11

Manner of Crash Collision	11
Non-collision (single vehicle)	1
Head-on (front to front)	0
Rear-end (front to rear)	1
Angle (oncoming left turn)	1
Broadside (front to side)	8
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	11
Dry	7
Wet	4
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			21
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	21

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	1	0	0	0	1
= 16	1	1	0	0	2
= 17	1	2	0	0	3
= 18	0	1	0	0	1
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	1	0	0	0	1
>= 25 and <= 29	1	0	0	0	1
>= 30 and <= 34	2	1	0	0	3
>= 35 and <= 39	1	0	0	0	1
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	1	1	0	0	2
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	3	0	0	0	3
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	1	0	0	0	1
>= 80 and <= 84	0	1	0	0	1
>= 85 and <= 89	1	0	0	0	1
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	14	7	0	0	21

Drug/Alcohol Related	**11**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	11

Alcohol Test Given	**21**
None	21
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

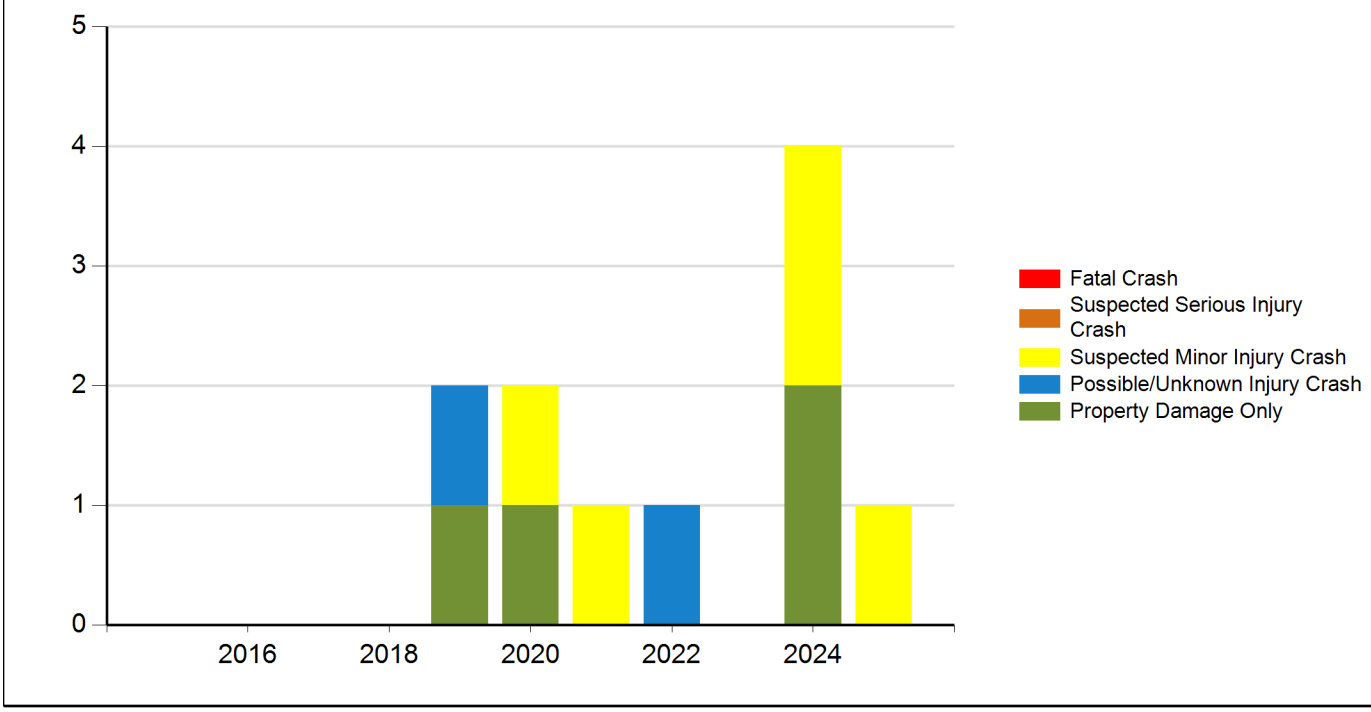
Drug Test Given	**21**
None	21
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**21**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	21
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	1	1	2
2020	0	0	1	0	1	2
2021	0	0	1	0	0	1
2022	0	0	0	1	0	1
2023	0	0	0	0	0	0
2024	0	0	2	0	2	4
2025	0	0	1	0	0	1
Total	0	0	5	2	4	11

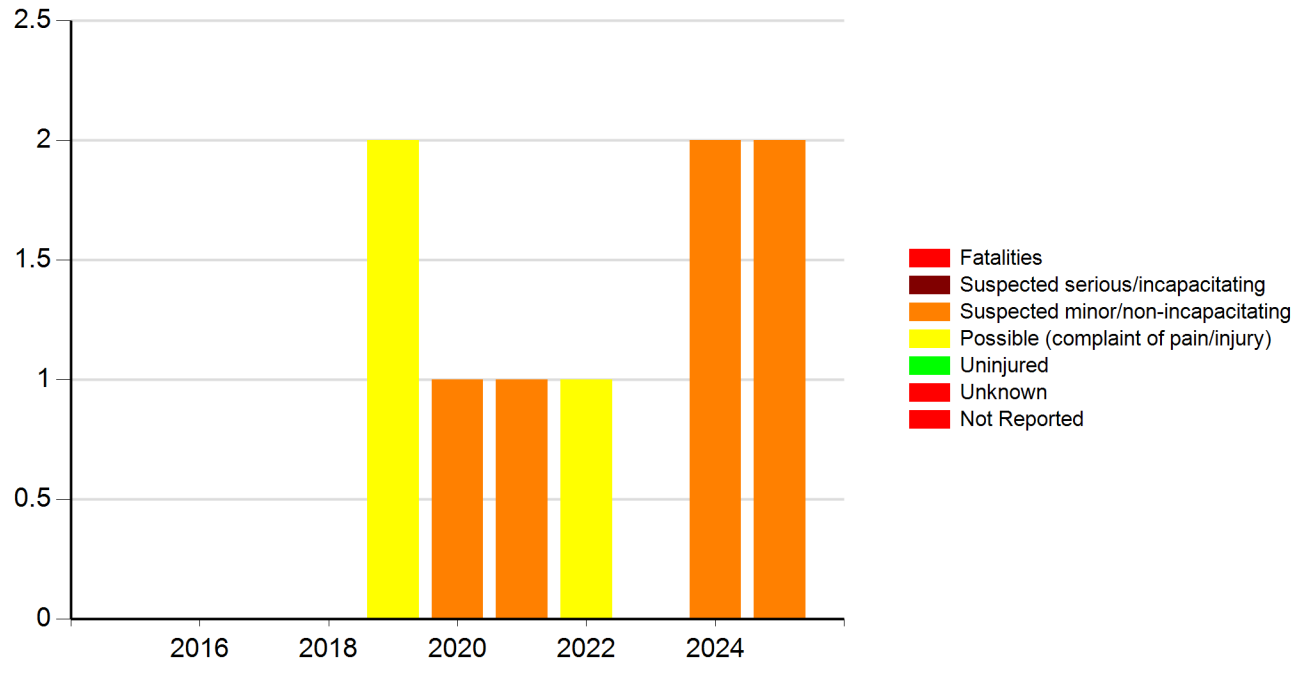
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	2	0	0	0	2
2020	0	0	1	0	0	0	0	1
2021	0	0	1	0	0	0	0	1
2022	0	0	0	1	0	0	0	1
2023	0	0	0	0	0	0	0	0
2024	0	0	2	0	0	0	0	2
2025	0	0	2	0	0	0	0	2
Total	0	0	6	3	0	0	0	9

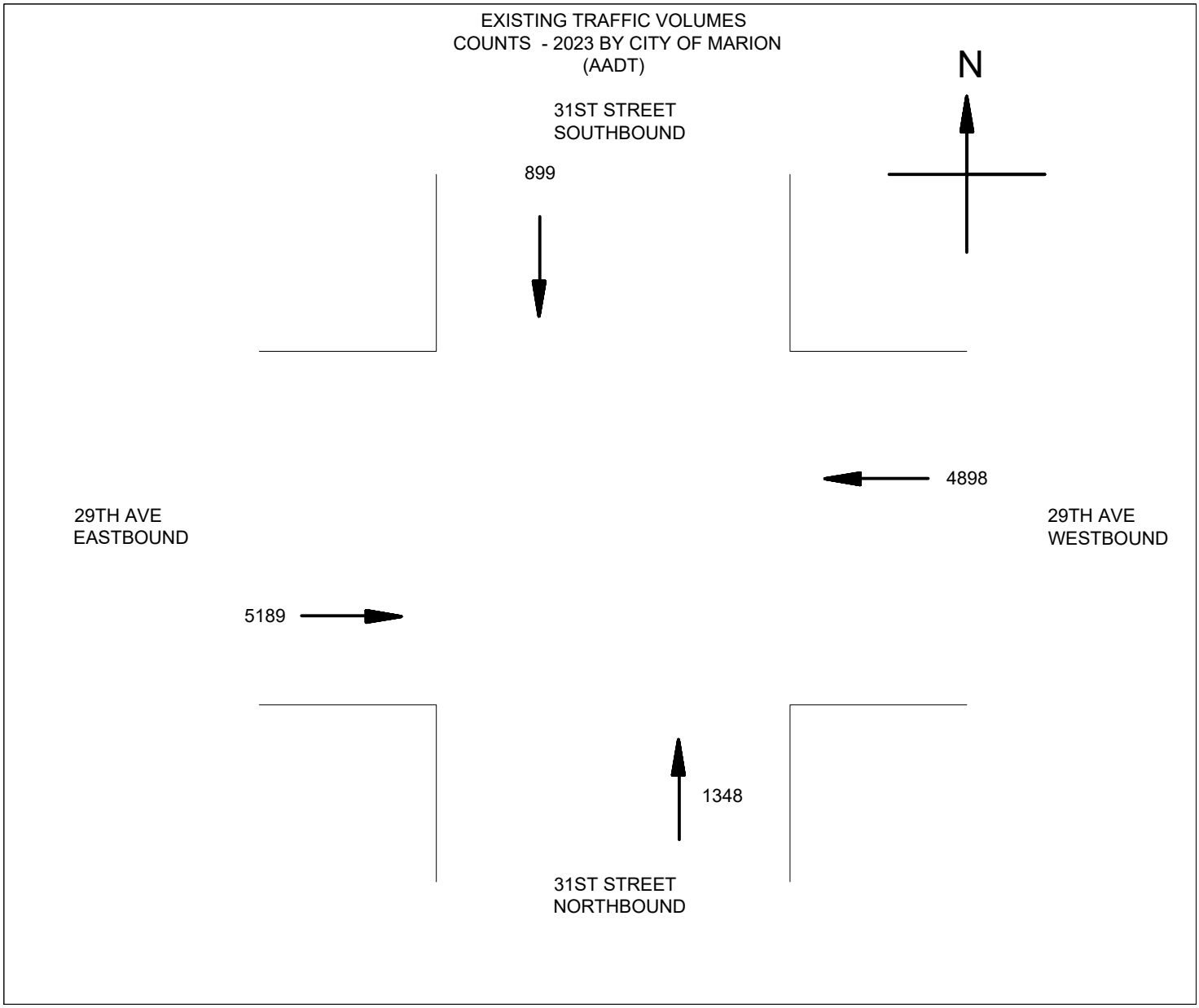
Injury Status/Year



Meeting the following criteria

Jurisdiction: Statewide
Year: 2019, 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information


EXISTING TRAFFIC VOLUMES
COUNTS - 2023 BY CITY OF MARION
(AADT)
N
31ST STREET
SOUTHBOUND
899
4898
29TH AVE
EASTBOUND
29TH AVE
WESTBOUND
5189
1348
31ST STREET
NORTHBOUND

County:	Linn	Prepared By:	Greg Annis
Location:	Marion, Iowa	Date Prepared:	8/13/2025
Proposed Improvements:	Mini Roundabout		
Estimated Improvement Cost:	$ 605,100		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 12,102

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	45	**45.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	45.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	45.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	5	45.0	**1.00**	**0.45**
Possible/Unknown Injury (C)	$ 135,000	2	45.0	**0.40**	**0.18**
Property Damage Only (O)	$ 20,000	4	45.0	**0.80**	**0.36**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ 130,500**
Possible/Unknown Injury (C)	**$ 24,300**
Property Damage Only (O)	**$ 7,200**

Total Benefits and Costs

		Implementation Cost	$ 605,100
		Present Value of Maint.	$ 164,470
Present Value Benefits (Societal Benefits)	$ 2,392,854	Present Value Costs (Impl. and Maint. Costs)	$ 769,570
Present Value Net Return	$ 1,623,284		
Benefit Cost Ratio	**3.11**		

Form continues on next page

County:	Linn	Prepared By:	Greg Annis
Location:	Marion, Iowa	Date Prepared:	8/13/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

MARION
Engineering Department

1225 6th Ave, Ste 200, Marion, Iowa 52302
www.cityofmarion.org

TAC memo

December 6, 2023

TO: Ryan Waller, City Manager, Mayor, and City Council
FROM: Michael D. Barkalow, P. E. & L.S.I., City Engineer
RE: City Council Meeting

The Traffic Advisory Committee has received and evaluated the request regarding the addition of a 4-way stop at the intersection of 29th Avenue and 31st Street.

- A petition was received that met the requirements of the "Policy Relating to Correspondence" and was received and referred to TAC.
- The report was delayed due to construction of major patchwork on 29th Avenue to collect data.
- 29th Avenue is a three-lane road (one lane in each direction with a center turn lane) along with parking on the north side and bike lanes on both sides. It is classified as a Minor Arterial on the Marion Major Streets Network. It has a speed limit of 30 miles per hour (mph)
- 31st Street north of 29th Avenue is a two-lane road (one lane in each direction) with parking on the west side and is classified as a local street. It has a speed limit of 25 mph.
- 31st Street south of 29th Avenue is a two-lane road (one lane in each direction) with no parking on either side of the street with marked bike lanes on both sides of the street and is classified as a collector. It has a speed limit of 25 mph.
- The intersection is a "4-way" intersection with stop control for northbound and southbound. Eastbound and westbound are free flowing.
- The intersection is lit by a light at the southwest quadrant of the intersection.
- The area is zoned mostly:
    - ROS: Recreation and Open Space
    - SR-2 Suburban, Medium-Density Single Family Residential
    - SR-3: Suburban, Medium-Density Single Family Residential
- Vehicular counts were done by Engineering staff using classifiers for all directions and were divided into 15- minute increments on 10.4.23.
- Per the IDOT Crash Analysis Tool (ICAT) there have been 8 crashes from 2018 to the latest records available at this intersection:

Date	Severity	Major Cause	Manner of Crash/Collision	Units Involved	Weather and Light Conditions
1.18.18	Property Damage	Backing	Rear-End	2	Dry and Daylight
6.25.18	Property Damage	Other	Other	2	Dry and Daylight
5.16.19	Property Damage	Failure to Yield	Broadside (front to side)	2	Dry and Daylight
7.15.19	Possible/Unknown	Failure to Yield	Broadside (front to side)	2	Dry and Daylight
7.16.20	Suspected Minor Injury	Ran Stop Sign	Broadside (front to side)	2	Dry and Daylight
12.11.20	Property Damage	Failure to Yield	Angle, oncoming left turn	2	Freezing drizzle and Dark
2.16.21	Suspected Minor Injury	Failure to Yield	Broadside (front to side)	2	Wet and Daylight
10.5.22	Possible/Unknown	Failure to Yield	Broadside (front to side)	2	Wet and Daylight

- TAC refers to the Manual on Uniform Traffic Control Devices (MUTCD) to determine the appropriate measures to take. The manual specifies standards by which traffic signs, road surface markings and signals are designed, installed and used so that when a user drives from state to state, things are set up the same, and do not vary by each municipality and state. Some specific items are based on an Engineering study, and some have standard

thresholds to determine if the situation meets warrants, in addition to Engineering judgement. For example, there is a set of warrants required when installing a traffic signal. MUTCD Chapter 4 details advantages and disadvantages of traffic control signals. Installing a traffic signal could create additional accidents than a different intersection type or traffic control type. There could also be unnecessary delay caused by the installation of the traffic signal when they are not warranted.

- Per Section 2B.07 Multiway Stop Applications the following criteria is used for warrants:
    - *A: Where traffic control signals are justified, the multiway stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*
        - In this case the warrant analysis for warrant 1A, 1B Combo A and B are not met per Chapter 4C Traffic Control Signal Needs Studies. (See table below) Therefore, this warrant is not met.
    - *B: A crash problem, as indicated by 5 or more reported crashes in a 12-month period that are susceptible to correction by a multiway stop installation. Such crashes include right- and left-turn collisions as well as right-angle collisions.*
        - In this case there are only 8 crashes over 5 years and no more than 2 in one year.
    - *C: Minimum volumes:*
    - *C.1: The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and*
        - This first condition is met for 15 hours however it also must meet the second requirement during the same periods of time for at least 8 hours.
    - *C.2: The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but*
        - There are two hours this condition is met which is less than 8, therefore does not apply.
    - *C.3: If the 85th percentile approach speed of the major-street traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the above values.*
        - Eastbound 29th Avenue 85th percentile speed was 38.22 mph. – Does not apply.
        - Westbound 29th Avenue 8th percentile speed was 37.85 mph. – Does not apply.
    - *D: Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*
        - C.1 is satisfied so this does not apply but even applying the reduction of warrants to 80 percent of the minimum values there is only 6 hours that C.1 and C.2 is met. – Does not apply
- Stop signs are generally not recommended on the higher volume legs of an intersection.
- Multi-way stop control is recommended where the volume of the traffic at the intersections is approximately equal. For this day 31st Street had a total traffic count of 2,247 whereas 29th Avenue had a total traffic count of 10,087. Therefore, the traffic on 31st Street is only 22% (~1/5) of the traffic on 29th Avenue.

Based on this information TAC makes the following recommendations:

1. Do not install a 4-way stop control.
2. Continue to study the intersection for the possibility of modifying the intersection to a mini roundabout, similar to the one just to the east at the intersection of 29th Avenue and 35th Street.

MARION
Engineering Department

MUTCD TRAFFIC SIGNAL WARRANT ANALYSIS

29th Ave and 31st Street

Location:	Marion, Iowa	**Date Data Taken:**	10/4/2023	**Wednesday**
Population:	41,000	**By:**	DLA	
Analysis By:	DLA	**Comment:**		

Roadway Data

	Major Street	**Minor Street**
Name:	29th Ave	31st St
Number of Approach Lanes:	1	1
85th Percentile Speed (mph):	30	25
North-South Street:		X

Correctable Collisions: 2 (Right Angle & Left Turn Type)

Hour Ending	Entering Traffic: 31st St NB	31st St SB	29th Ave EB	29th Ave WB	Total Entering Traffic	Major Street Total	Highest Minor Approach	Warrants: 1A	1B	Combo	2	3
0100	5	1	10	7	23	17	5					
0200	2	0	3	3	8	6	2					
0300	1	0	7	3	11	10	1					
0400	4	3	13	13	33	26	4					
0500	2	5	19	21	47	40	5					
0600	18	19	81	72	190	153	19					
0700	18	45	176	171	410	347	45					
0800	70	106	364	455	995	819	106		X			
0900	63	83	313	388	847	701	83					
1000	42	51	251	205	549	456	51					
1100	62	35	224	244	565	468	62					
1200	83	67	245	233	628	478	83					
1300	102	41	344	261	748	605	102					
1400	79	38	254	283	654	537	79					
1500	111	50	294	320	775	614	111					
1600	107	75	436	347	965	783	107		X			
1700	136	67	561	431	1195	992	136		X	X	X	
1800	195	72	531	450	1248	981	195	X	X	X	X	
1900	105	76	409	374	964	783	105		X			
2000	68	26	296	298	688	594	68					
2100	45	19	193	182	439	375	45					
2200	15	12	106	75	208	181	15					
2300	11	4	44	44	103	88	11					
2400	4	4	15	18	41	33	4					

Warrant Criteria

	Required Hourly Volume	
Warrant	**Major St**	**Minor St**
1A	500	150
1B	750	75
Combo A	400	120
Combo B	600	60
2&3	See Figures A & B	

	1A	1B	Combo	2	3
Hours Met	1	5	2	2	0
Hours Required	8	8	8	4	1
Warrant Met:	N	N	N	N	N

Phone (319) 743-6340 **mbarkalow@cityofmarion.org** Fax (319) 373-4260

MARION
Engineering Department

MUTCD TRAFFIC STOP SIGN WARRANT ANALYSIS

29th Ave and 31st Street

Location:	Marion, Iowa	**Date Data Taken:**	10/4/2023	**Wednesday**
Population:	41,000	**By:**	DLA	
Analysis By:	DLA	**Comment:**		

Roadway Data

	Major Street	**Minor Street**
Name:	29th Ave	31st St
Number of Approach Lanes:	1	1
85th Percentile Speed (mph):	30	25
North-South Street:		X

Correctable Collisions: 2 (Right Angle & Left Turn Type)

Hour	Entering Traffic				Total	Major	Minor	Warrants
	31st St		29th Ave		Entering	Street	Street	Stop
Ending	NB	SB	EB	WB	Traffic	Total	Total	
0100	5	1	10	7	23	17	6	
0200	2	0	3	3	8	6	2	
0300	1	0	7	3	11	10	1	
0400	4	3	13	13	33	26	7	
0500	2	5	19	21	47	40	7	
0600	18	19	81	72	190	153	37	
0700	18	45	176	171	410	347	63	
0800	70	106	364	455	995	819	176	X
0900	63	83	313	388	847	701	146	
1000	42	51	251	205	549	456	93	
1100	62	35	224	244	565	468	97	
1200	83	67	245	233	628	478	150	
1300	102	41	344	261	748	605	143	
1400	79	38	254	283	654	537	117	
1500	111	50	294	320	775	614	161	X
1600	107	75	436	347	965	783	182	X
1700	136	67	561	431	1195	992	203	X
1800	195	72	531	450	1248	981	267	X
1900	105	76	409	374	964	783	181	X
2000	68	26	296	298	688	594	94	
2100	45	19	193	182	439	375	64	
2200	15	12	106	75	208	181	27	
2300	11	4	44	44	103	88	15	
2400	4	4	15	18	41	33	8	

Warrant Criteria

	Required Hourly Volume		
Warrant	**Major St**	**Minor St**	
Stop	240	160	80%
	300	200	100%

Hours Met	6
Hours Required	8
Warrant Met:	N

Phone (319) 743-6340 **mbarkalow@cityofmarion.org** Fax (319) 373-4260

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 8/8/2025

Location / Title of Project IA 100 & 44th Street Intersection Improvements

Applicant City of Marion

Contact Person Taylor Chittick Title Project Engineer

Complete Mailing Address 1225 6th Ave, Marion, IA 52302

Phone 319-743-6340 E-Mail tchittick@cityofmarion.org
(Area Code)

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s)

Contact Person Title

Complete Mailing Address

Phone E-Mail
(Area Code)

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	459,920
Total Project Cost	$	465,970
Safety Funds Requested	**$**	**459,920**

Additional Project Safety Documentation (when available):

☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
☐ Iowa DOT TEAP Study or similar analysis and concept
☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
2593	IA 100 & 44th St	☒	☐	1.164	
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the CITY OF MARION

Signed: _____ 8/5/25

Signature Date Signed

MICHAEL BARNALOW

Printed Name

Attest: _____ 8/5/25

Signature Date Signed

Greg Annis

Printed Name

Existing Conditions:
The intersection of IA 100 and 44th Street is a three-legged, partial-stop intersection, with two through lanes in the uncontrolled eastbound and westbound directions. There is one dedicated left-turn lane for eastbound traffic on IA 100, providing approximately 90 feet of storage. It is anticipated that the DOT will extend this storage length in 2026. For southbound traffic on 44th Street, there is one right-turn lane and one left-turn lane, each offering about 55 feet of storage.

The posted speed limit at this intersection is 55 mph on IA 100 and 45 mph on 44th Street up to the stop sign. The design speed of the intersection is 60 mph, and the clear zones are anticipated to be a minimum of 30 feet with 6:1 foreslopes. This intersection is classified as PCR – All Level High.

Proposed Concept:
The proposed improvements include the addition of an offset right-turn lane for westbound traffic on IA 100. The scope of work will involve pavement widening and shoulder enhancements. These modifications aim to separate decelerating right-turning vehicles from the through traffic stream, while also improving visibility for drivers on the minor road. Improved traffic separation will facilitate safer and more efficient gap selection for southbound vehicles entering the intersection from 44th Street. The extents of this project should not impact the clear zone near the box culverts East of intersection.

Safety Justification:
Due to the variable speeds of traffic on IA 100, it can be difficult for southbound drivers to accurately judge when it is safe to enter the intersection. Additionally, there is no designated right-turn lane for westbound traffic, which can lead to vehicles decelerating while faster-moving vehicles approach from behind.

According to the Iowa Crash Analysis Tool (ICAT), there have been 27 reported non-animal-related crashes at or near this intersection over the past five years (2020–2024). Of these, one was a fatality, 8 failures to yield and 12 were rear-end collisions. Increasing the available intersection sight distance and providing greater separation between slower-moving and through traffic may help reduce the likelihood of future crashes.

From the Iowa DOT 2024 traffic counts, IA 100 had an ADT volume of 17,900 vehicles at the intersection. 44th Street had an ADT volume of 6200 vehicles north of the intersection in counts conducted in 2021.

C

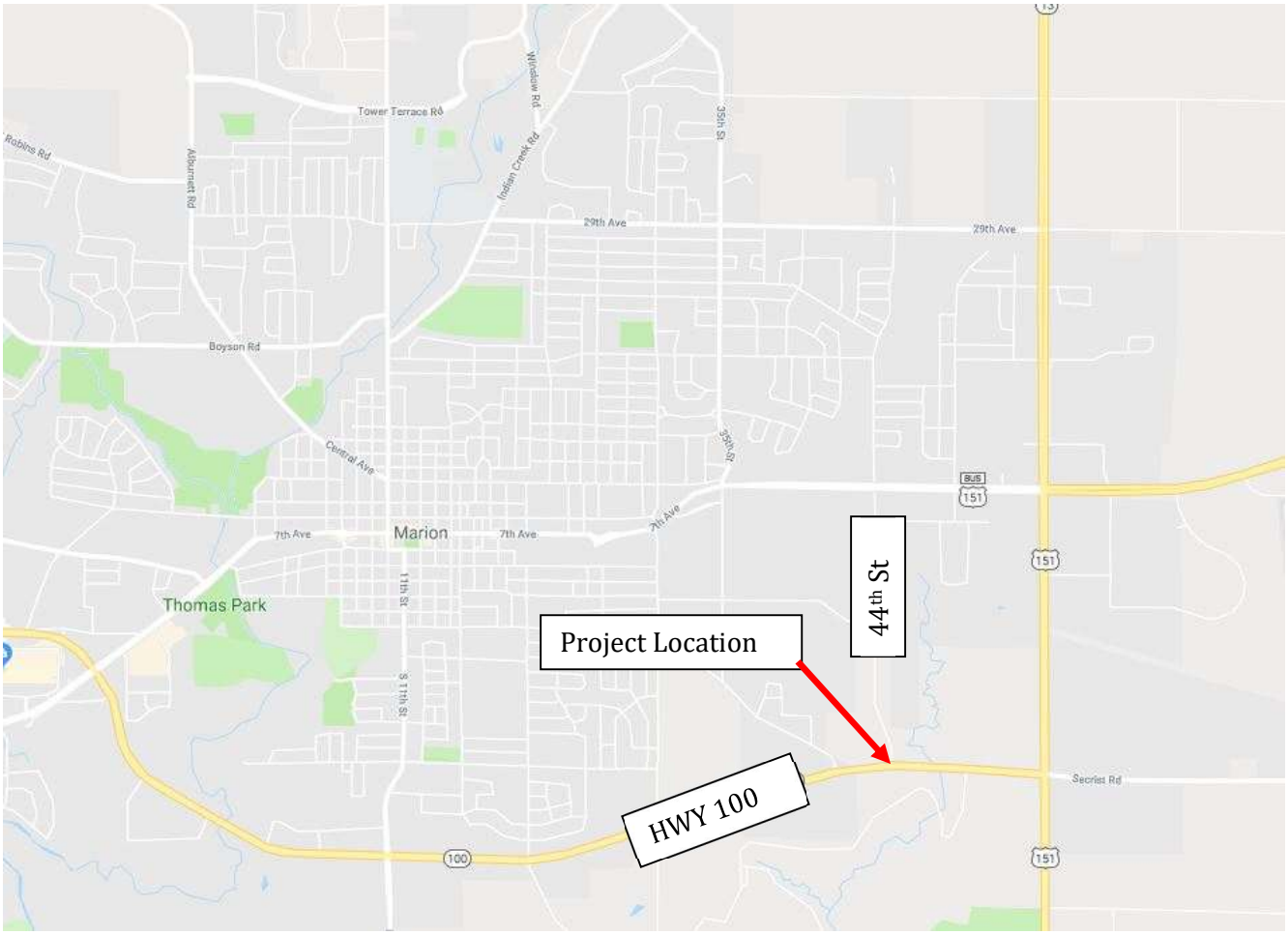
Highway 100/44th St Opinion of Probable Construction Costs							
ITEM NO.	ITEM	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TSIP NON PARTICIPATING	TSIP PARTICIPATING AMOUNT	
1	TOPSOIL, OFF-SITE, FURNISH AND SPREAD	427.07	CY	$ 50.00		$ 21,353.56	
2	EXCAVATION, CLASS 13, ROADWAY AND BORROW	800.00	CY	$ 25.00		$ 20,000.00	
3	BELOW GRADE EXCAVATION (CORE OUT)	234.06	SY	$ 50.00		$ 11,702.80	
4	SUBGRADE PREPARATION	2340.56	SY	$ 3.50		$ 8,191.96	
5	SUBBASE, MODIFIED 12"	2340.56	SY	$ 16.00		$ 37,448.96	
6	PAVEMENT, PCC, 10"	2340.56	SY	$ 100.00		$ 234,056.02	
7	GRANULAR SURFACING, SHOULDERS	304.62	TON	$ 40.00		$ 12,184.64	
8	PAVEMENT REMOVAL, 10"	117.02	SY	$ 20.00		$ 2,340.35	
9	PAINTED PAVEMENT MARKINGS, DURABLE, 6"	29.81	STA	$ 150.00		$ 4,471.50	
10	PAINTED SYMBOLS AND LEGENDS, DURABLE	4.00	EA	$ 250.00		$ 1,000.00	
11	PAVEMENT MARKINGS REMOVED	11.00	STA	$ 85.00		$ 935.00	
12	GROOVES CUT FOR PAVEMENT MARKINGS	29.81	STA	$ 15.00		$ 447.15	
13	GROOVES CUT FOR SYMBOLS AND LEGENDS	4.00	EA	$ 150.00		$ 600.00	
14	TEMPORARY TRAFFIC CONTROL	1.00	LS	$ 10,000.00		$ 10,000.00	
15	REMOVE AND REINSTALL TRAFFIC SIGNS	3.00	EA	$ 500.00		$ 1,500.00	
16	HYDRAULIC SEEDING, SEEDING, FERTILIZING, AND MULCHING, RURAL	0.53	AC	$ 6,000.00		$ 3,176.56	
17	SWPPP PREPARATION	1.00	LS	$ 2,500.00		$ 2,500.00	
18	SWPPP MANAGEMENT	1.00	LS	$ 3,500.00		$ 3,500.00	
19	SILT FENCE OR SILT FENCE DITCH CHECK	1200.00	LF	$ 2.00		$ 2,400.00	
20	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE	1200.00	LF	$ 0.25		$ 300.00	
21	CONSTRUCTION SURVEY	1.00	LS	$ 5,500.00	$ 5,500.00		
22	MOBILIZATION	1.00	LS	$ 30,000.00		$ 30,000.00	
23	CONCRETE WASHOUT	1.00	LS	$ 1,000.00		$ 1,000.00	
24	PORTABLE DYNAMIC MESSAGE SIGN(PDMS)	90.00	CDAY	$ 100.00		$ 9,000.00	
				SUBTOTAL	$ 5,500	$ 418,109	$ 423,609.00
				10% CONTINGENCY	$ 550	$ 41,811	$ 42,361.00
				TOTAL	$ 6,050	$ 459,920	$ 465,970.00

MARION
Engineering Department

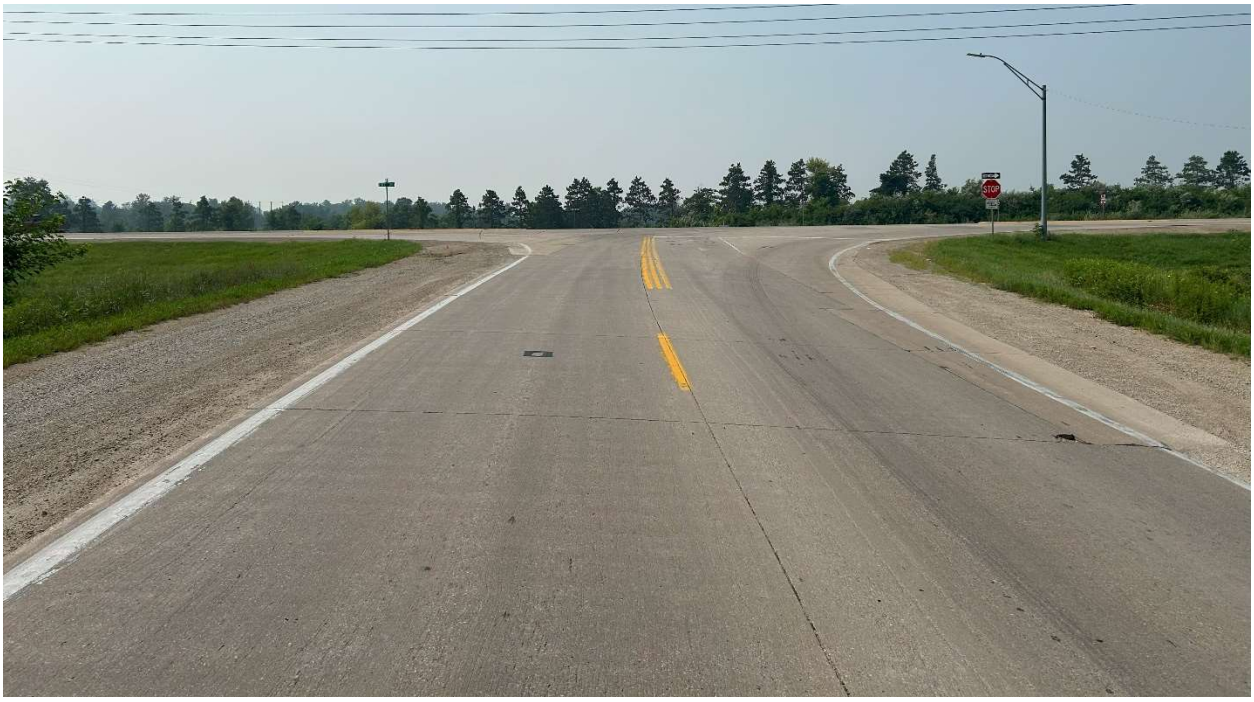
August 15, 2025:	Traffic Safety Improvement Program (TSIP) Submittal Deadline
January 2026:	Notice of Approval
September 2026:	Complete Project Design
October 2026:	Project Letting
Spring 2027:	Begin Construction
Fall 2027:	Complete Construction

MAP **E**

MARION
Engineering Department



MARION
Engineering Department



Looking South on 44th Street



Looking East on Highway 100

MARION
Engineering Department



Looking West on Highway 100

CITY OF MARION
ENGINEERING DEPARTMENT
MARION, IOWA

No.	Date:	Revisions

Sheet Description:
OFFSET RIGHT
TURN LANE CONCEPT

Project:
HWY 100 & 44TH ST

Page
G

Proj. No.
TBD

Drawn/Designed By:	Checked:	Reviewed:	Book:	Scale:	S:\ENGINEERING\PROJECTS\2025\HWY 100 & 44TH ST TSIP\OFFSET TURN LANE CONCEPT.DWG
TBD	MDB	JAH		1" = 100'	8/4/2025 4:58 PM



Proj. No. TBD	Page H	Project: HWY 100 & 44TH ST	City of MARION IOWA	CITY OF MARION ENGINEERING DEPARTMENT MARION, IOWA	No.	Date:	Revisions	Sheet Description: OFFSET RIGHT TURN LANE CONCEPT	
Drawn/Designed By: TBD	Checked: MDB	Reviewed: JAH	Book:	Scale: 1" = 100'	S:\ENGINEERING\PROJECTS\2025\HWY 100 & 44TH ST TSIP\OFFSET TURN LANE CONCEPT.DWG			7/30/2025 10:29 AM	

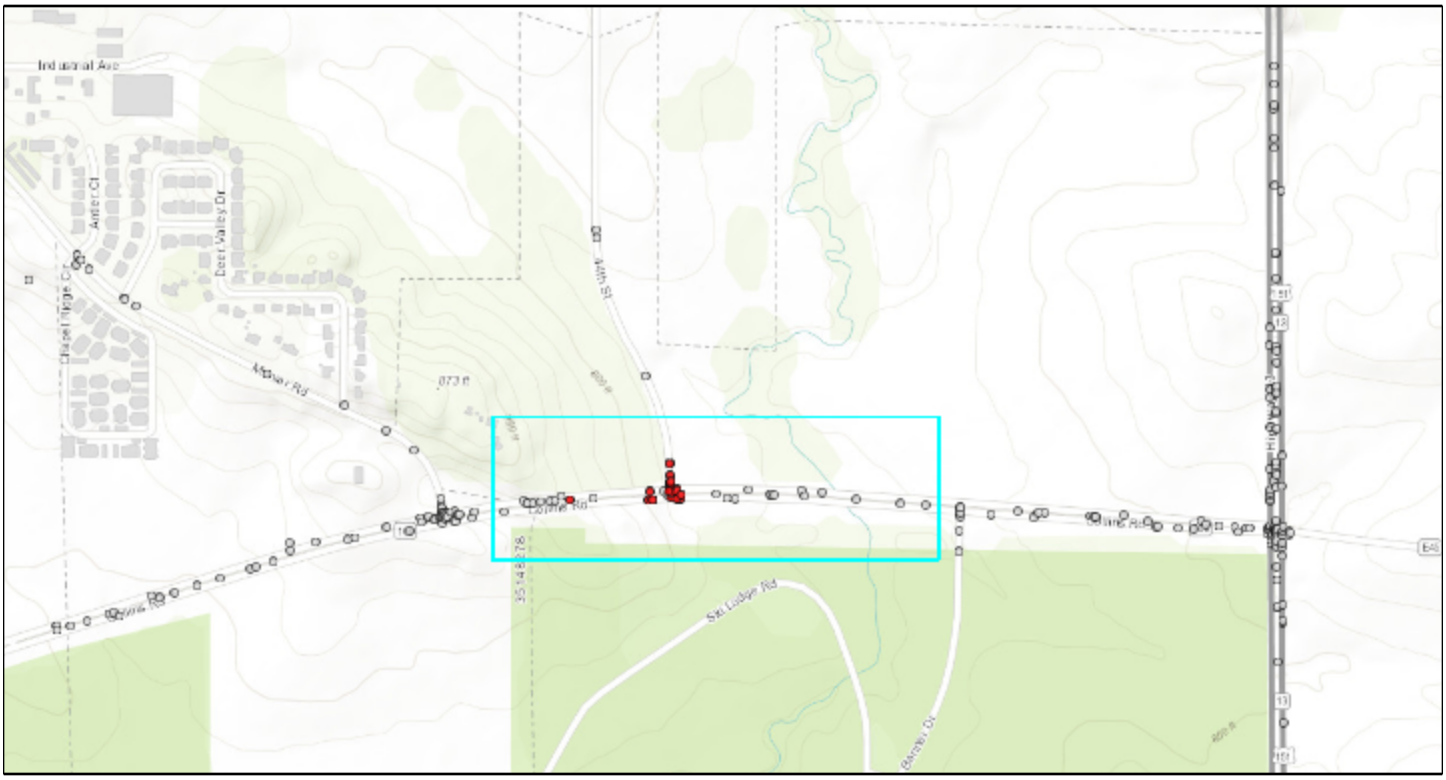
Iowa Crash Analysis Tool
Quick Report
2020-2024

Crash Severity	27
Fatal Crash	1
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	5
Possible/Unknown Injury Crash	5
Property Damage Only	15

Injury Status Summary	19
Fatalities	1
Suspected serious/incapacitating	3
Suspected minor/non-incapacitating	9
Possible (complaint of pain/injury)	5
Uninjured	0
Unknown	1
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	361,010.00
Average (per crash dollars):	13,370.74
Total Vehicles:	52.00
Average (per crash):	1.93
Total Occupants:	74.00
Average (per crash):	2.74

Average Severity	
Fatalities/Fatal Crash:	1.00
Fatalities/Crash:	0.04
Injuries/Crash:	0.63
Major Injuries/Crash:	0.11
Minor Injuries/Crash:	0.33
Possible/Unknown Injuries/Crash:	0.19



Major Cause			27
Animal	0	Ran traffic signal	0
Ran stop sign	1	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	5	FTYROW: From yield sign	0
FTYROW: Making left turn	3	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	1
Aggressive driving/road rage	0	Driving too fast for conditions	1
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	8
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	1
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	1	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	2	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	1	Other	3
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	1	0	1	1	1	1	0	0	0	0	0	5
Tuesday	0	0	0	0	0	1	0	1	0	1	0	0	0	3
Wednesday	0	0	0	1	0	0	0	0	1	0	1	0	0	3
Thursday	0	0	0	0	0	1	1	1	4	0	0	0	0	7
Friday	0	0	0	0	1	2	0	1	0	1	0	0	0	5
Saturday	0	0	0	0	0	0	0	2	1	0	1	0	0	4
Total	0	0	1	1	2	5	2	6	6	2	2	0	0	27

Manner of Crash Collision	27
Non-collision (single vehicle)	3
Head-on (front to front)	1
Rear-end (front to rear)	12
Angle (oncoming left turn)	2
Broadside (front to side)	6
Sideswipe (same direction)	1
Sideswipe (opposite direction)	1
Rear to rear	0
Rear to side	0
Not reported	0
Other	1
Unknown	0

Surface Conditions	27
Dry	21
Wet	4
Ice/frost	0
Snow	2
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			52
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	1	Embankment	0
Ground	0	Culvert/pipe opening	1
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	50

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	1	0	0	0	1
= 17	3	0	0	0	3
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	1	2	0	0	3
>= 21 and <= 24	0	3	0	0	3
>= 25 and <= 29	3	2	0	0	5
>= 30 and <= 34	3	4	0	0	7
>= 35 and <= 39	2	4	0	0	6
>= 40 and <= 44	3	3	0	0	6
>= 45 and <= 49	0	3	0	0	3
>= 50 and <= 54	1	1	0	0	2
>= 55 and <= 59	2	0	0	0	2
>= 60 and <= 64	0	1	0	0	1
>= 65 and <= 69	1	1	0	0	2
>= 70 and <= 74	1	2	0	0	3
>= 75 and <= 79	0	1	0	0	1
>= 80 and <= 84	0	1	0	0	1
>= 85 and <= 89	1	1	0	0	2
>= 90 and <= 94	0	1	0	0	1
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	22	30	0	0	52

Drug/Alcohol Related	**27**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	27

Alcohol Test Given	**52**
None	52
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

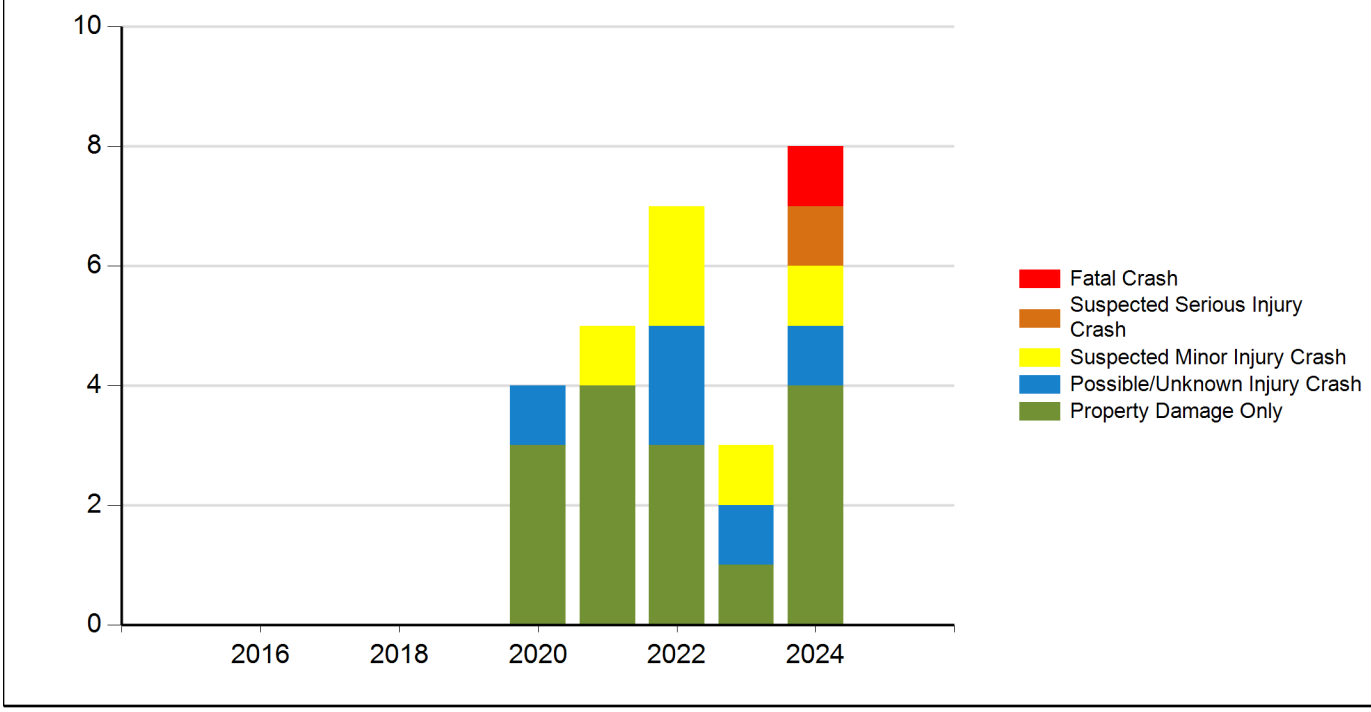
Drug Test Given	**52**
None	52
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**52**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	52
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	1	3	4
2021	0	0	1	0	4	5
2022	0	0	2	2	3	7
2023	0	0	1	1	1	3
2024	1	1	1	1	4	8
2025	0	0	0	0	0	0
Total	1	1	5	5	15	27

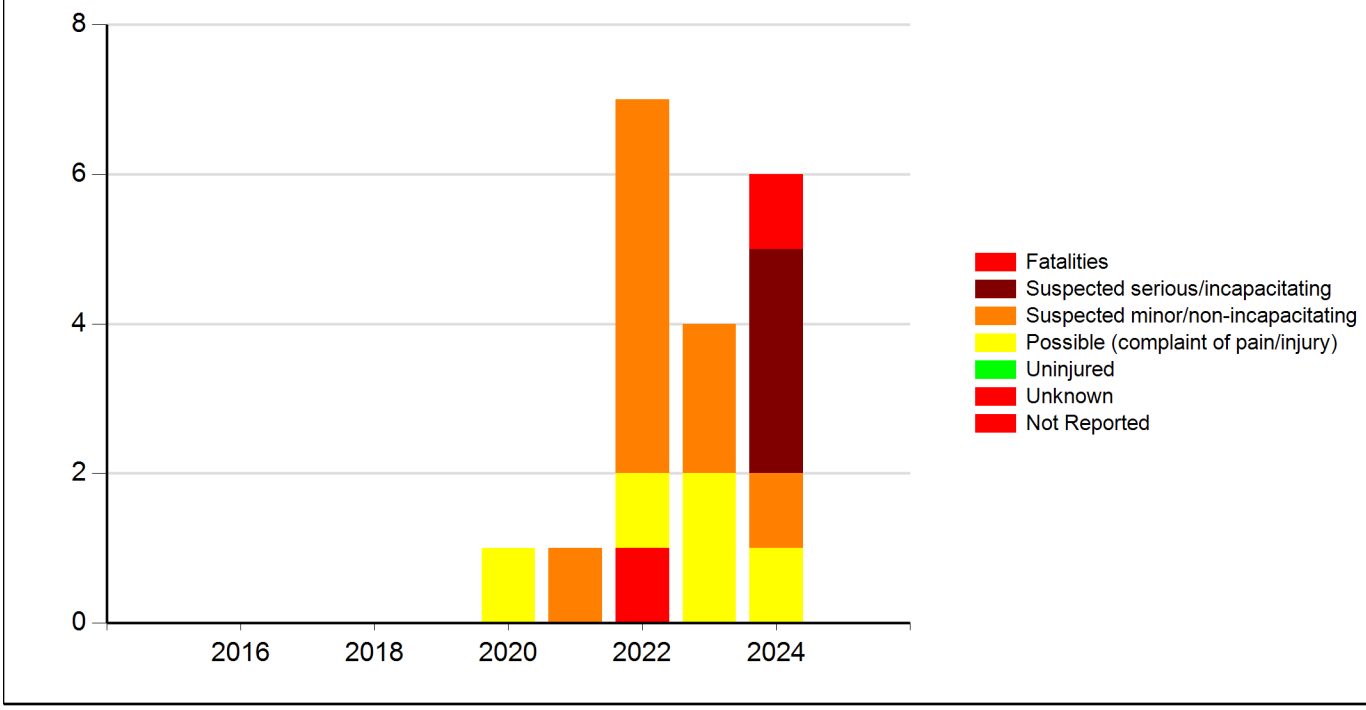
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	1	0	0	0	1
2021	0	0	1	0	0	0	0	1
2022	0	0	5	1	0	1	0	7
2023	0	0	2	2	0	0	0	4
2024	1	3	1	1	0	0	0	6
2025	0	0	0	0	0	0	0	0
Total	1	3	9	5	0	1	0	19

Injury Status/Year

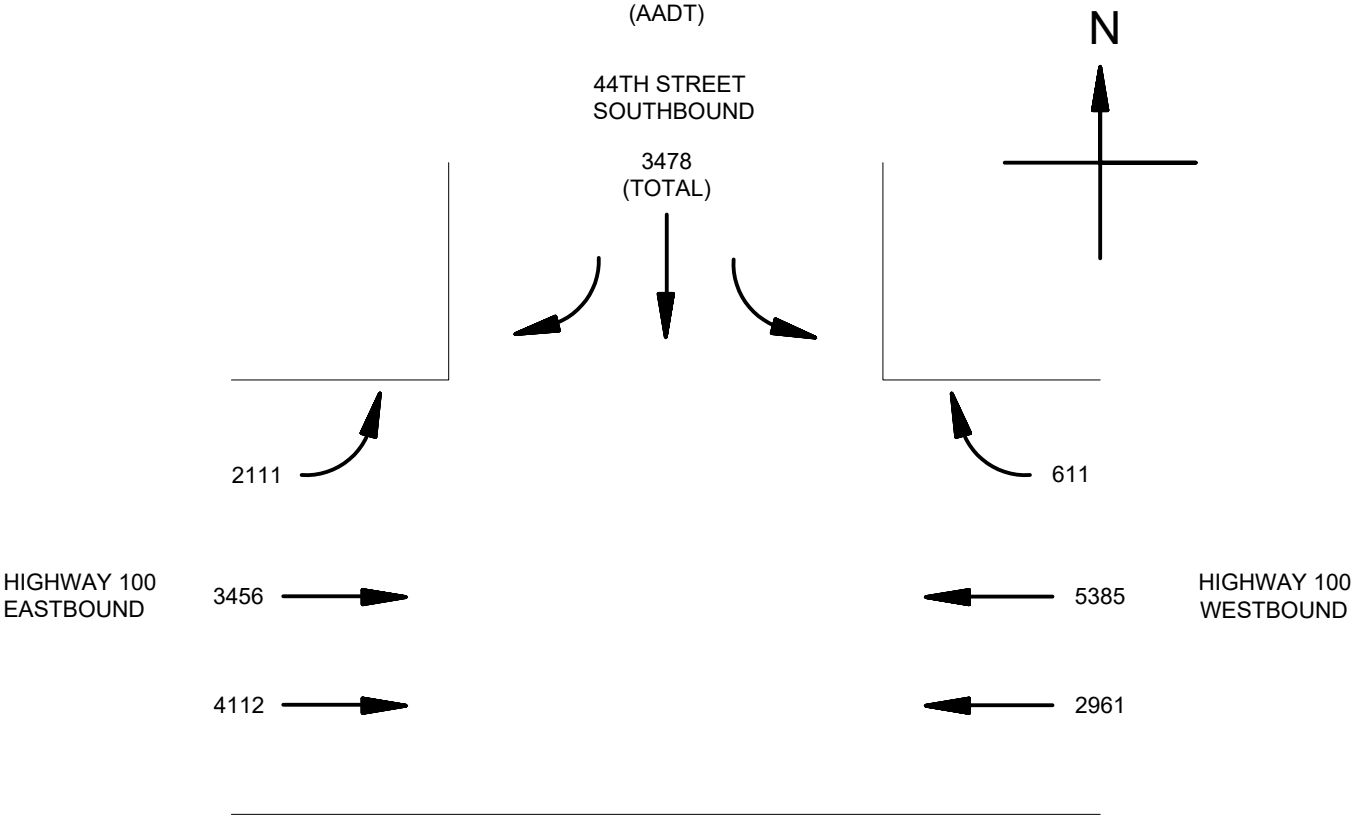


Meeting the following criteria

Jurisdiction: Statewide
Year: 2020, 2021, 2022, 2023, 2024
Map Selection: Yes
Filter: Non Animal-related

Analyst Information

EXISTING TRAFFIC VOLUMES
HIGHWAY 100 COUNTS - 2024 BY CITY OF MARION
44TH STREET COUNTS - 2021 BY IOWA DOT
(AADT)



County:	LINN	Prepared By:	CITY OF MARION
Location:	IA 100 AND 44TH ST	Date Prepared:	7/30/2025
Proposed Improvements:	INTERSECTION IMPROVEMENTS THAT INCLUDE ADDING AN OFFSET RIGHT TURN LANE AND GRANULAR SHOULDER		
Estimated Improvement Cost:	$ 465,970		
Inflation on Crash Costs:	4%	Annual Maintenance: (% of Improvement Cost)	2%
Discount Rate:	4%		
Estimated Service Life:	15	Annual Maintenance Cost:	$ 9,319

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	20	**20.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	1	20.0	**0.20**	**0.04**
Serious Injury (A)	$ 4,300,000	3	20.0	**0.60**	**0.12**
Minor Injury (B)	$ 290,000	9	20.0	**1.80**	**0.36**
Possible/Unknown Injury (C)	$ 135,000	5	20.0	**1.00**	**0.20**
Property Damage Only (O)	$ 20,000	1	20.0	**0.20**	**0.04**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ 172,000**
Serious Injury (A)	**$ 516,000**
Minor Injury (B)	**$ 104,400**
Possible/Unknown Injury (C)	**$ 27,000**
Property Damage Only (O)	**$ 800**

Total Benefits and Costs

		Implementation Cost	$ 465,970
		Present Value of Maint.	$ 103,617
Present Value Benefits (Societal Benefits)	$ 9,715,410	Present Value Costs (Impl. and Maint. Costs)	$ 569,587
Present Value Net Return	$ 9,145,823		
Benefit Cost Ratio	**17.06**		

Form continues on next page

County: LINN
Location: IA 100 AND 44TH ST
Prepared By: CITY OF MARION
Date Prepared: 7/30/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 7/28/2025

Location / Title of Project IA 13 & IA 100 INTERSECTION IMPROVEMENTS

Applicant CITY OF MARION

Contact Person JACOB HAHN Title DEPUTY CITY ENGINEER

Complete Mailing Address 1225 6TH AVE, MARION, IA 52302

Phone 319-743-6340 (Area Code) E-Mail JHAHN@CITYOFMARION.ORG

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s)

Contact Person Title

Complete Mailing Address

Phone (Area Code) E-Mail

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	500,000
Total Project Cost	$	617,250
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan

☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan

☒ Iowa DOT TEAP Study or similar analysis and concept

☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
232080	IA 100 E	☒	☐	2.125	
		☐	☐		

Rev. 07/23

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the CITY OF MARION

Signed: _____ 7/28/25
Signature Date Signed

MICHAEL D. HARLOW
Printed Name

Attest: _____ 7-28-25
Signature Date Signed

Jenni Stark
Printed Name

RESOLUTION NO. 32469

RESOLUTION AUTHORIZING THE SUBMITTAL OF AN APPLICATION FOR TRAFFIC SAFETY IMPROVEMENT PROGRAM (TSIP) FUNDING FOR THE INTERSECTION OF HIGHWAY 100 AND HIGHWAY 13 TO ADD AN EASTBOUND RIGHT TURN LANE, CONVERT A SHARED LEFT TURN AND THROUGH LANE TO A DEDICATED LEFT TURN LANE, AND ASSOCIATED IMPROVEMENTS (TRANS-26-004)

WHEREAS, the Iowa Department of Transportation has established the TSIP and provides funding for locations where vehicular safety is a concern and documented; and

WHEREAS, the Highway 100 and Highway 13 intersection has been identified as a location where vehicular safety could be improved and funded by TSIP.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MARION, IOWA, that:

1. The City Council supports the application for TSIP funding.
2. The City Council hereby commits the additional City funds necessary for construction of the project beyond any TSIP funding, and;
3. The City Council hereby commits to accepting and maintaining these

Passed and approved on July 17, 2025.

Nicolas AbouAssaly, Mayor

ATTEST:
I, Rachel Bolender, City Clerk of the City of Marion, Iowa hereby certify that at a meeting of the City Council of said City, held on the above date, among other proceedings the above was adopted.

Rachel Bolender, City Clerk

Existing Conditions:

The intersection of Highway's IA13 & IA100 is a large, four leg, signalized intersection with two through lanes in three of the four directions. There are two left turn lanes (one a shared left and thru) for eastbound traffic on IA 100 with about 200 feet of storage in the dedicated left turn lane. There are two left turn lanes for northbound traffic on IA 13 with about 400 feet of storage in each. For every other direction of traffic approaching the intersection there is one left turn bay. The left turn bays for southbound and westbound traffic are 105 feet and 80 feet, respectively. All left turn movements at this intersection are protected-only signal phasing. Due to the existing condition of the eastbound lanes having a shared left turn and thru lane, this results in eastbound and westbound traffic having split phasing that creates operational inefficiencies of the intersection. Right turn lanes exist for southbound and eastbound traffic. The posted speed limit of both highways on all sides of the intersection is 55 mph. The design speed for this intersection is 60 MPH, and clear zones are anticipated to be a minimum of 30' with 6:1 foreslopes. The west leg of the intersection (IA 100) is indicated as PCR-All Level High. The intersection itself is outside of Marion City limits, however, Marion operates the traffic signals under an agreement with IDOT.

Proposed Concept:

The proposed project will convert the eastbound shared left and thru lane into a left turn only lane, convert the eastbound right turn lane to a thru lane, and add a right turn lane. The proposed project will also lengthen the westbound left turn lane and include geometric improvements to the east leg to accommodate the lane reconfiguration of the eastbound traffic. Two traffic signals poles and mast arms will be replaced due to the reconfiguration, and all existing and proposed traffic signals will be upgraded to optimize signal timing and with planned interconnectivity with other signals along the highway corridor. Traffic signals will include retroreflective strips on the backplates. According to the TEAP Study dated February 2024 of this intersection and corridor, the implementation of these intersection improvements will allow for the eastbound and westbound movements to not have split phasing and will lead to better operational efficiencies of the intersection. There is sufficient right-of-way to complete the proposed improvements.

Safety Justification:

According to the Iowa Crash Analysis Tool (ICAT) over the past 5 years (2024-2020) there have been reported 50 non-animal related crashes at or within a relative proximity of this intersection. Of those 50 crashes, 38 were rear end collisions. Increasing the intersection efficiency while adding safety features like retroreflective strips on backplates may reduce the likelihood of future accidents.

From the Iowa DOT 2021 traffic counts, IA 13 had an ADT volume of 22,500 vehicles south of the intersection while IA 100 had an ADT volume of 17,100 vehicles west of the intersection.

Highway 13 / Highway 100
Opinion of Probable Construction Costs

ITEM NO.	ITEM	ESTIMATED QUANTITIY	UNIT	UNIT PRICE	TSIP NON PARTICIPATING	TSIP PARTICIPATING AMOUNT
1	Excavation, Class 10	2,000	CY	$25		$50,000
2	Granular Shoulder, Type B	600	TON	$30		$18,000
3	Subgrade Preparation	1,300	SY	$1		$1,300
4	Modified Subbase 12"	1,300	SY	$14		$17,550
5	Subdrain, 4" HDPE	800	LF	$15		$12,000
6	Subdrain Outlets	8	EA	$300		$2,400
7	Pavement, PCC 10"	1,100	SY	$70		$77,000
8	Pavement Removals	200	SY	$14		$2,800
9	Pavement Markings and Symbols Ren	1	LS	$2,000		$2,000
10	Pavement Markings and Symbols Gro	1	LS	$25,000		$25,000
11	Pavement Markings and Symbols	1	LS	$35,000		$35,000
12	Temporary Traffic Control	1	LS	$30,000		$30,000
13	Traffic Signal	1	LS	$225,000		$225,000
14	Traffic Signal Removal	1	LS	$20,000		$20,000
15	Mobilization	1	LS	$75,000		$75,000
16	Concrete Washout	1	LS	$1,000		$1,000
17	Relocate Sign & Posts	6	EA	$350		$2,100
18	Filter Socks	700	LF	$3		$2,100
19	Hydraulic Seeding, Seeding, Fertilizing	1	AC	$5,000		$5,000
19	Temporary RECP, Type 1B, Wood Ex	2,000	SY	$2		$4,000
20	Construction Survey	1	LS	$10,000	$10,000	
				TOTAL	**$10,000.00**	**$607,250.00**

MARION
Engineering Department

August 15, 2025: Traffic Safety Improvement Program (TSIP) Submittal Deadline

January 2026: Notice of Approval

September 2026: Complete Project Design

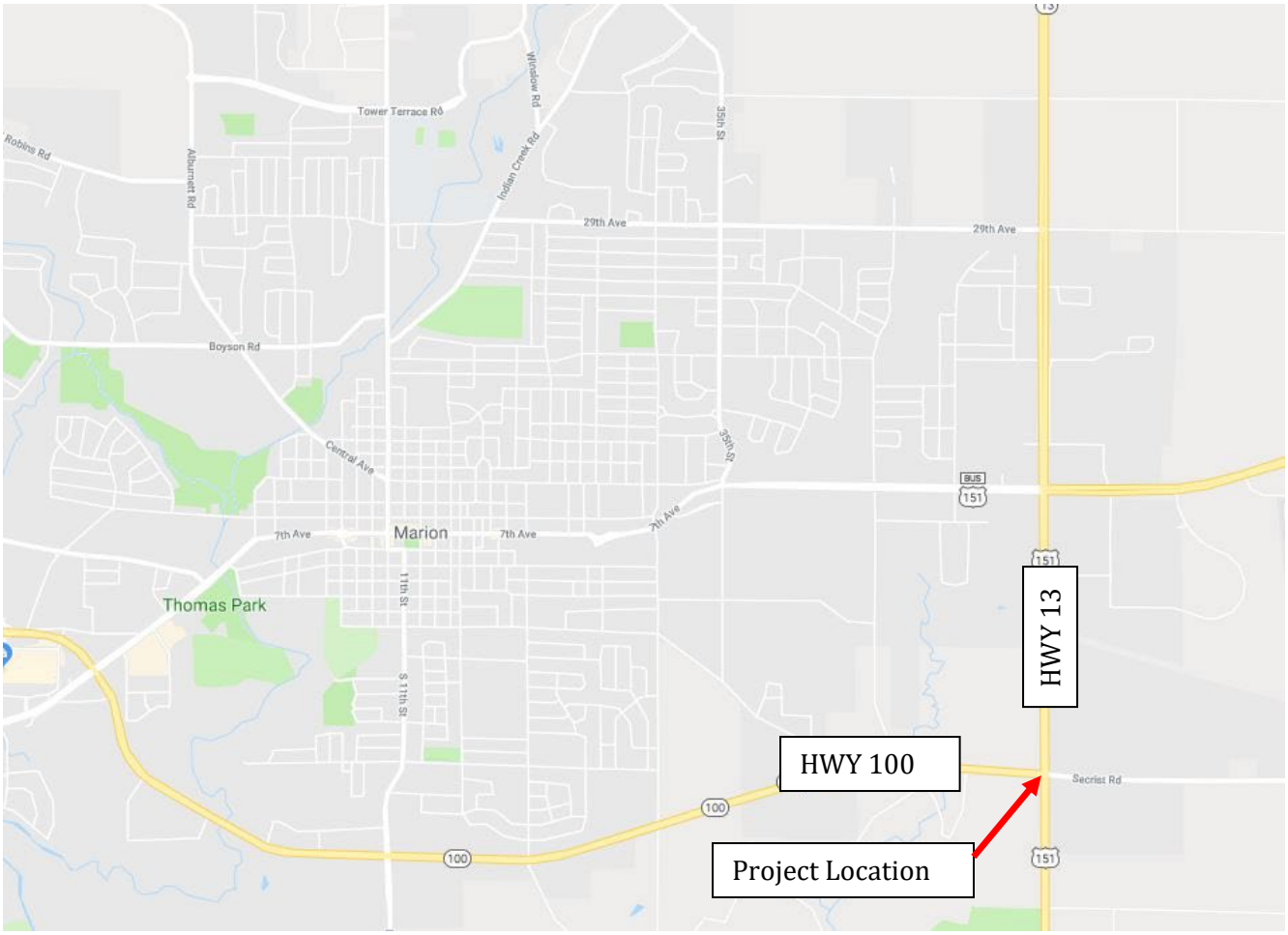
October 2026: Project Letting

Spring 2027: Begin Construction

Fall 2027: Complete Construction

MAP **E**

MARION
Engineering Department



MARION
Engineering Department



Looking North on Highway 13



Looking South on Highway 13

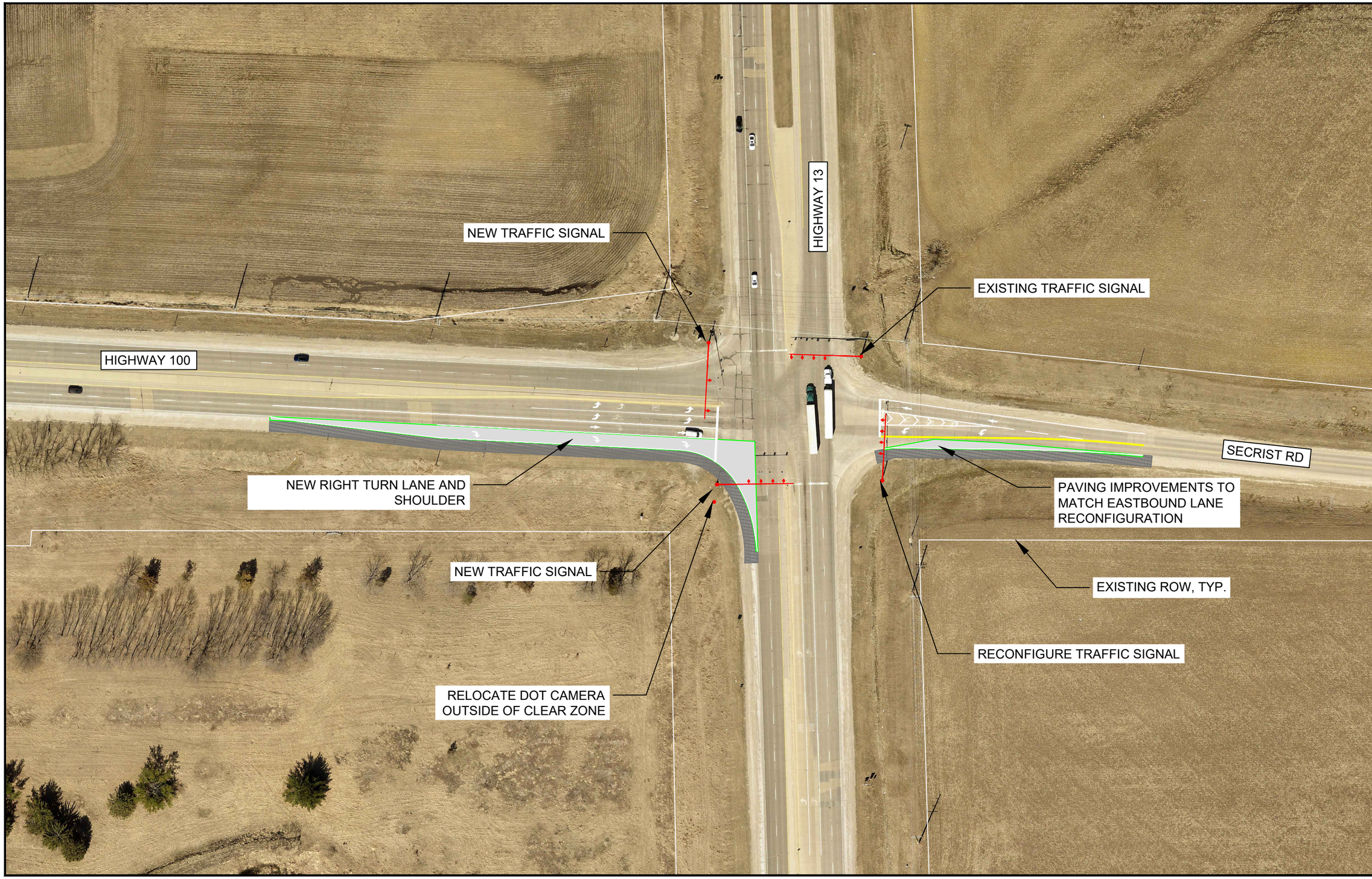
MARION
Engineering Department



Looking East on Highway 100



Looking West on Secrist Rd



CITY OF MARION
ENGINEERING DEPARTMENT
MARION, IOWA

Sheet Description: PLAN VIEW

No.	Date:	Revisions

Project: HWY 100 & HWY 13 INTERSECTION IMPROVEMENTS

Page G

Proj. No. P-01-26

Drawn/Designed By:	Checked:	Reviewed:	Book:	Scale:
SMK	JAH	MDB	smk2	1"=100'

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Proj. No. P-01-26	Page 1	Project: HWY 100 & HWY 13 INTERSECTION IMPROVEMENTS				CITY OF MARION ENGINEERING DEPARTMENT MARION, IOWA	No.	Date:	Revisions
									Sheet Description: AERIAL VIEW
Drawn/Designed By: SMK		Checked: JAH	Reviewed: MDB	Book: smk2	Scale: 1"=100'	S:\ENGINEERING\PROJECTS\2025\HWY 100 & HWY 13 TSIP\CONCEPT PLAN.DWG			7/2/2024 4:15 PM

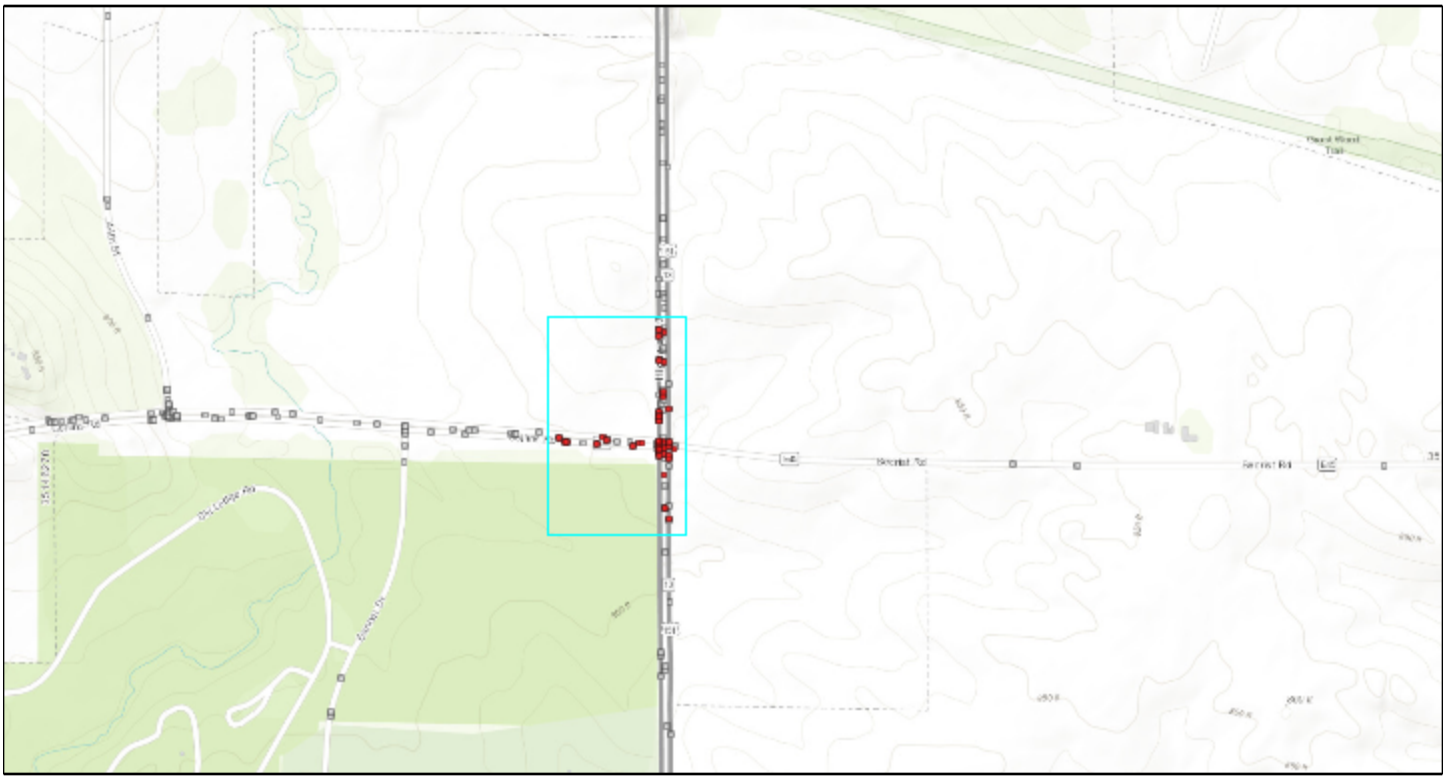
Iowa Crash Analysis Tool
Quick Report
2020-2024

Crash Severity	50
Fatal Crash	0
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	8
Property Damage Only	40

Injury Status Summary	14
Fatalities	0
Suspected serious/incapacitating	1
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	11
Uninjured	0
Unknown	0
Not Reported	1

Property/Vehicles/Occupants	
Property Damage Total (dollars):	419,205.00
Average (per crash dollars):	8,384.10
Total Vehicles:	107.00
Average (per crash):	2.14
Total Occupants:	144.00
Average (per crash):	2.88

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.26
Major Injuries/Crash:	0.02
Minor Injuries/Crash:	0.02
Possible/Unknown Injuries/Crash:	0.22



Major Cause			50
Animal	0	Ran traffic signal	4
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	1	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	3
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	2	Followed too close	30
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	1
Driver Distraction: Manual operation of an e...	1	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	1
Driver Distraction: Inattentive/lost in thou...	1	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	1
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	1
Over correcting/over steering	0	Failed to keep in proper lane	1
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	1	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	1		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Monday	0	0	0	4	0	1	2	1	2	0	0	0	0	10
Tuesday	0	0	0	3	1	0	0	3	0	0	0	0	0	7
Wednesday	0	0	0	2	1	1	3	1	1	0	0	0	0	9
Thursday	0	0	0	2	1	0	1	2	4	1	0	0	0	11
Friday	0	0	0	0	0	2	0	0	4	1	1	1	0	9
Saturday	0	0	0	1	0	1	0	0	1	0	0	0	0	3
Total	0	0	0	12	3	5	6	7	12	3	1	1	0	50

Manner of Crash Collision	50
Non-collision (single vehicle)	2
Head-on (front to front)	0
Rear-end (front to rear)	38
Angle (oncoming left turn)	1
Broadside (front to side)	4
Sideswipe (same direction)	5
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	50
Dry	38
Wet	9
Ice/frost	0
Snow	2
Slush	1
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			107
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	107

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	1	0	0	0	1
= 17	1	0	0	0	1
= 18	2	2	0	0	4
= 19	2	2	0	0	4
= 20	1	0	0	0	1
>= 21 and <= 24	2	3	0	0	5
>= 25 and <= 29	4	7	0	0	11
>= 30 and <= 34	1	12	0	0	13
>= 35 and <= 39	2	5	0	0	7
>= 40 and <= 44	6	11	0	0	17
>= 45 and <= 49	1	6	0	0	7
>= 50 and <= 54	4	6	0	0	10
>= 55 and <= 59	4	5	0	0	9
>= 60 and <= 64	4	9	0	0	13
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	1	1	0	0	2
>= 75 and <= 79	0	1	0	0	1
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	36	70	1	0	107

Drug/Alcohol Related	**50**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	50

Alcohol Test Given	**107**
None	106
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

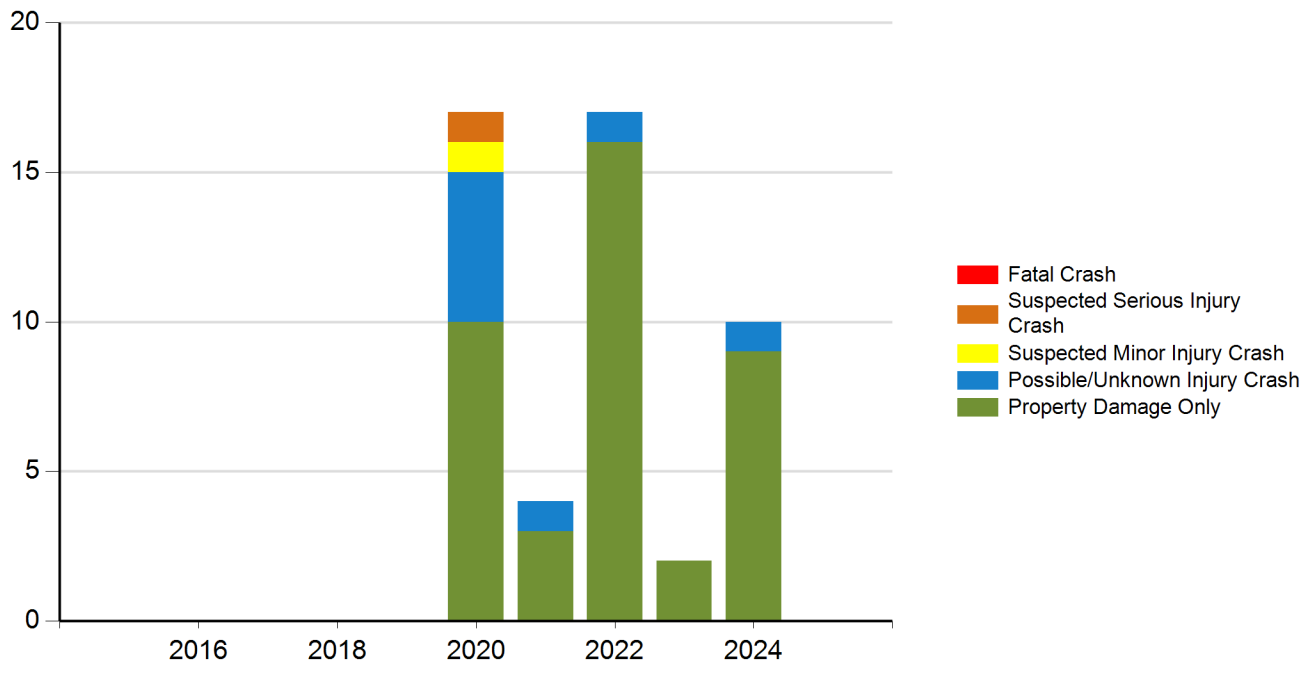
Drug Test Given	**107**
None	106
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

Drug Test Result	**107**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	107
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	1	1	5	10	17
2021	0	0	0	1	3	4
2022	0	0	0	1	16	17
2023	0	0	0	0	2	2
2024	0	0	0	1	9	10
2025	0	0	0	0	0	0
Total	0	1	1	8	40	50

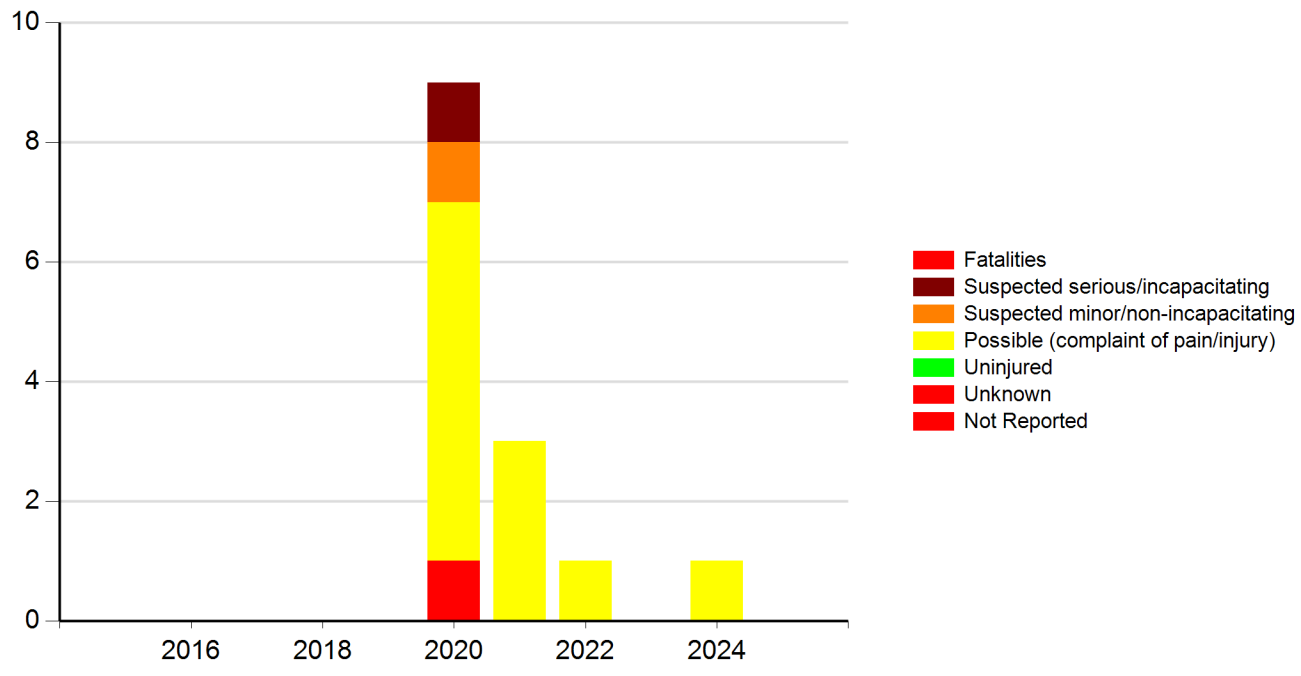
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	1	1	6	0	0	1	9
2021	0	0	0	3	0	0	0	3
2022	0	0	0	1	0	0	0	1
2023	0	0	0	0	0	0	0	0
2024	0	0	0	1	0	0	0	1
2025	0	0	0	0	0	0	0	0
Total	0	1	1	11	0	0	1	14

Injury Status/Year



Meeting the following criteria

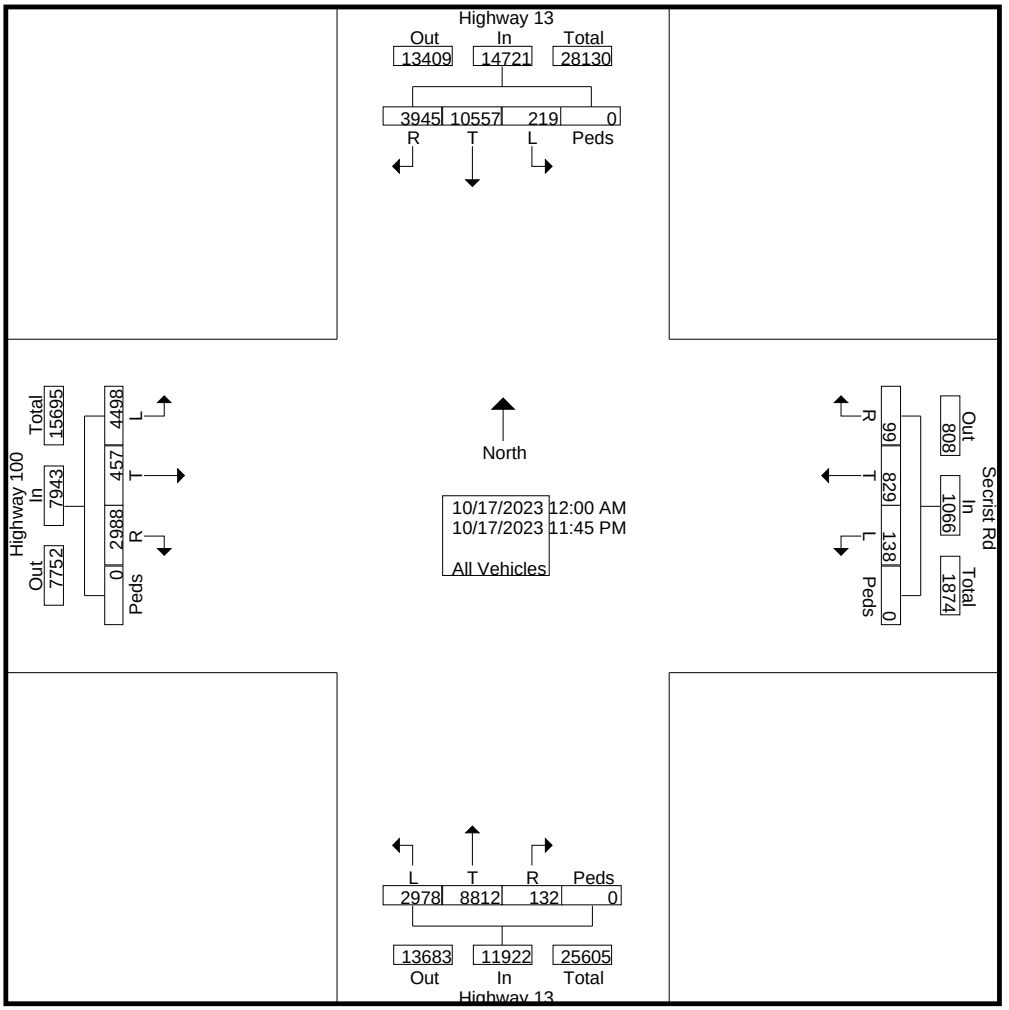
Jurisdiction: Statewide
Year: 2020, 2021, 2022, 2023, 2024
Map Selection: Yes
Filter: Drug/Alcohol Related (None Indicated); Non Animal-related

Analyst Information

Snyder & Associates
2727 SW Snyder Blvd
Ankeny, IA 50023

IA Highway 13 & IA Highway 100
IA 13 Corridor TEAP Study
Marion, IA
122.1000.01K

File Name : TMV-City_HWY13-HWY100_10-17-23
Site Code :
Start Date : 10/17/2023
Page No : 4



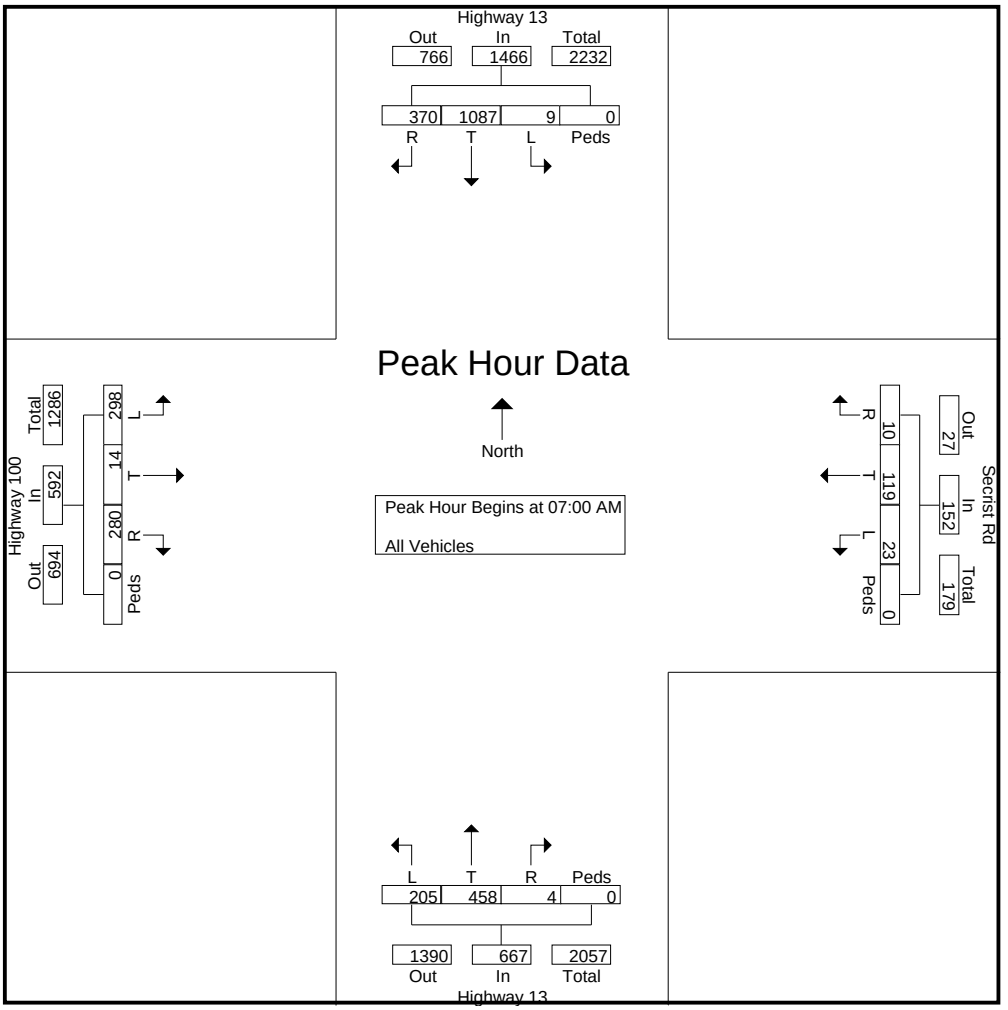
Snyder & Associates

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Ankeny, IA 50023

IA Highway 13 & IA Highway 100
IA 13 Corridor TEAP Study
Marion, IA
122.1000.01K

File Name : TMV-City_HWY13-HWY100_10-17-23
Site Code :
Start Date : 10/17/2023
Page No : 5

	Highway 13 Soutbound					Secrist Rd Westbound					Highway 13 Northbound					Highway 100 Eastbound					
Start Time	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	241	83	0	324	5	15	3	0	23	35	106	**1**	0	142	77	1	58	0	136	625
07:15 AM	**5**	282	79	0	366	4	32	**6**	0	42	**70**	**130**	1	0	**201**	76	3	63	0	142	751
07:30 AM	2	**290**	**115**	0	**407**	**8**	**37**	1	0	**46**	49	98	1	0	148	65	3	**83**	0	151	**752**
07:45 AM	2	274	93	0	369	6	35	0	0	41	51	124	1	0	176	**80**	**7**	76	0	**163**	749
Total Volume	9	1087	370	0	1466	23	119	10	0	152	205	458	4	0	667	298	14	280	0	592	2877
% App. Total	0.6	74.1	25.2	0		15.1	78.3	6.6	0		30.7	68.7	0.6	0		50.3	2.4	47.3	0		
PHF	.450	.937	.804	.000	.900	.719	.804	.417	.000	.826	.732	.881	1.00	.000	.830	.931	.500	.843	.000	.908	.956



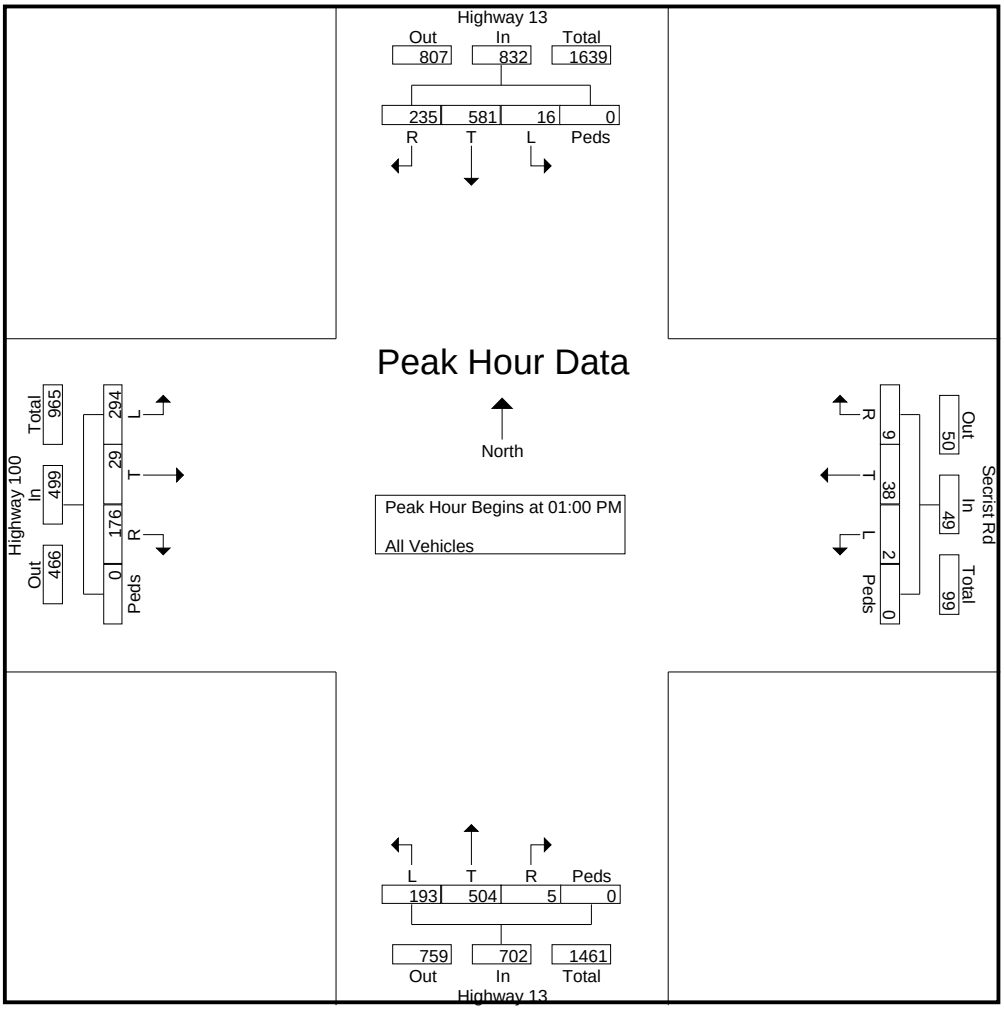
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IA Highway 13 & IA Highway 100
IA 13 Corridor TEAP Study
Marion, IA
122.1000.01K

File Name : TMV-City_HWY13-HWY100_10-17-23
Site Code :
Start Date : 10/17/2023

	Highway 13 Soutbound					Secrist Rd Westbound					Highway 13 Northbound					Highway 100 Eastbound					
Start Time	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	**7**	**156**	54	0	**217**	**1**	9	2	0	12	44	115	0	0	159	79	6	**55**	0	**140**	**528**
01:15 PM	3	140	52	0	195	1	7	**4**	0	12	47	**139**	**3**	0	**189**	**80**	4	41	0	125	521
01:30 PM	1	149	61	0	211	0	10	2	0	12	50	127	2	0	179	64	**12**	42	0	118	520
01:45 PM	5	136	**68**	0	209	0	**12**	1	0	**13**	**52**	123	0	0	175	71	7	38	0	116	513
Total Volume	16	581	235	0	832	2	38	9	0	49	193	504	5	0	702	294	29	176	0	499	2082
% App. Total																					
PHF	.571	.931	.864	.000	.959	.500	.792	.563	.000	.942	.928	.906	.417	.000	.929	.919	.604	.800	.000	.891	.986



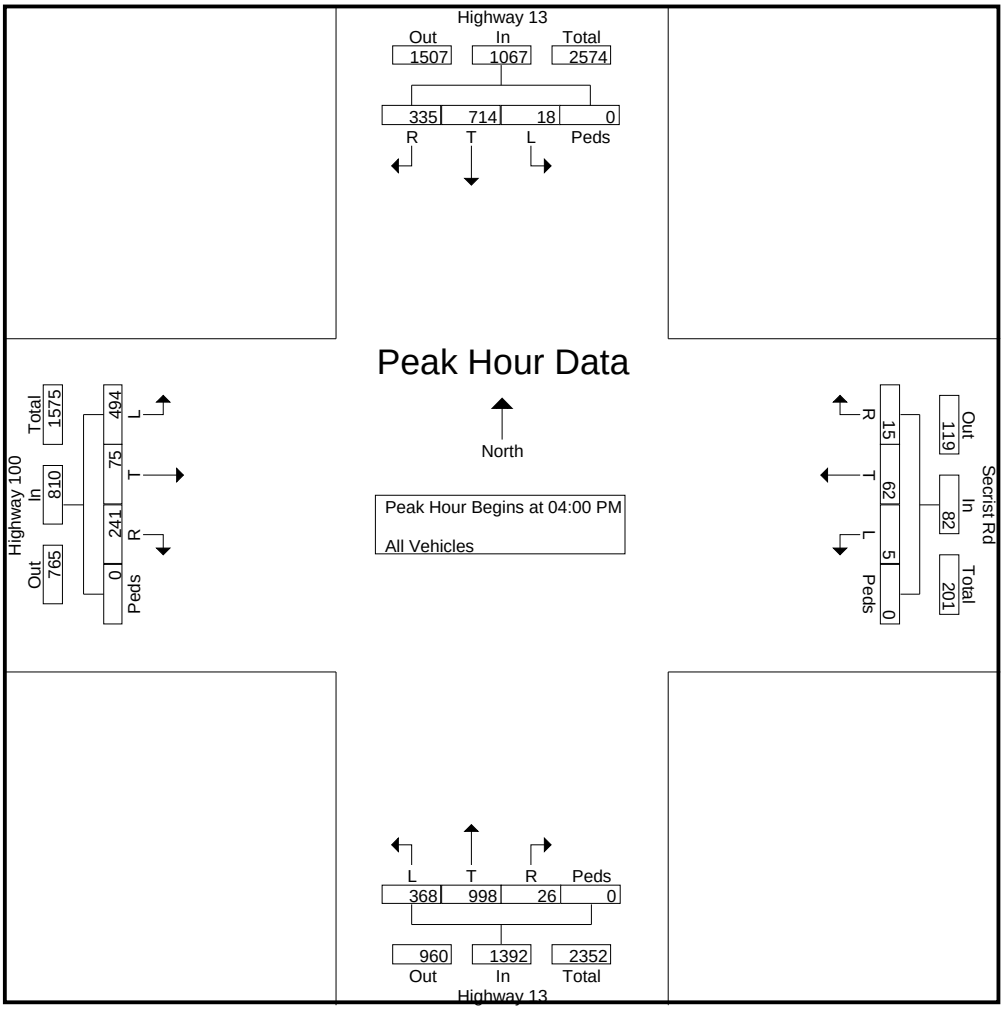
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File Name : TMV-City_HWY13-HWY100_10-17-23
Site Code :
Start Date : 10/17/2023

	Highway 13 Soutbound					Secrist Rd Westbound					Highway 13 Northbound					Highway 100 Eastbound					
Start Time	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	L	T	R	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 11:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	4	169	87	0	260	**2**	16	**5**	0	23	81	273	5	0	359	109	**21**	56	0	186	828
04:15 PM	**7**	188	83	0	278	1	13	2	0	16	97	242	5	0	344	**142**	15	61	0	**218**	**856**
04:30 PM	2	**213**	**103**	0	**318**	2	12	4	0	18	88	209	**11**	0	308	113	21	**62**	0	196	840
04:45 PM	5	144	62	0	211	0	**21**	4	0	**25**	**102**	**274**	5	0	**381**	130	18	62	0	210	827
Total Volume	18	714	335	0	1067	5	62	15	0	82	368	998	26	0	1392	494	75	241	0	810	3351
% App. Total																					
PHF	.643	.838	.813	.000	.839	.625	.738	.750	.000	.820	.902	.911	.591	.000	.913	.870	.893	.972	.000	.929	.979



NEW TRAFFIC SIGNAL

HIGHWAY 13

EXISTING TRAFFIC SIGNAL

HIGHWAY 100

SECRIST RD

DETECTION, TYP

NEW TRAFFIC SIGNAL

EXISTING ROW, TYP.

RECONFIGURE TRAFFIC SIGNAL

PROPOSED SIGNAL PHASING							
WB LEFT	EB THRU	SB LEFT	NB THRU	EB LEFT	WB THRU	NB LEFT	SB THRU
SECRIST	HWY 100	HWY 13	HWY 13	HWY 100	SECRIST	HWY 13	HWY 13
1	2	3	4	5	6	7	8

CITY OF MARION
ENGINEERING DEPARTMENT
MARION, IOWA

S:\ENGINEERING\PROJECTS\2025\HWY 100 & HWY 13 TSIP\CONCEPT PLAN.DWG

7/2/2024 4:48 PM

Sheet Description:
TRAFFIC SIGNAL LAYOUT

No.	Date:	Revisions

Project:
HWY 100 & HWY 13
INTERSECTION IMPROVEMENTS

Page
K

Proj. No.
P-01-26

Drawn/Designed By:	Checked:	Reviewed:	Book:	Scale:
SMK	JAH	MDB	smk2	1"=100'

County:	LINN	Prepared By:	CITY OF MARION
Location:	IA 13 AND IA 100	Date Prepared:	7/25/2025
Proposed Improvements:	INTERSECTION IMPROVEMENTS INCLUDING NEW TURN LANES AND REPALCEMENT & RECONFIGURATION OF TRAFFIC SIGNALS		
Estimated Improvement Cost:	$ 617,250		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 12,345

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	3
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	CRF 2:	CRF 3:	Combined CRF
CRF Value (%)	5	6	25	**26.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	26.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	1	26.0	**0.20**	**0.05**
Minor Injury (B)	$ 290,000	1	26.0	**0.20**	**0.05**
Possible/Unknown Injury (C)	$ 135,000	11	26.0	**2.20**	**0.57**
Property Damage Only (O)	$ 20,000	36	26.0	**7.20**	**1.87**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ 223,303**
Minor Injury (B)	**$ 15,060**
Possible/Unknown Injury (C)	**$ 77,117**
Property Damage Only (O)	**$ 37,390**

Total Benefits and Costs

		Implementation Cost	$ 617,250
		Present Value of Maint.	$ 137,256
Present Value Benefits (Societal Benefits)	$ 4,179,808	Present Value Costs (Impl. and Maint. Costs)	$ 754,506
Present Value Net Return	$ 3,425,302		
Benefit Cost Ratio	**5.54**		

Form continues on next page

County:	LINN	Prepared By:	CITY OF MARION
Location:	IA 13 AND IA 100	Date Prepared:	7/25/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** _____

Location / Title of Project: HSIPX-018-2(142)--3L-21 N US 18 Intersection in Spencer

Applicant: IDOT District 3

Contact Person: Jessica Felix, P.E. Title: D3 District Engineer

Complete Mailing Address: 6409 Gordon Drive
Sioux City, IA 51106

Phone: 712-202-6591 (Area Code) E-Mail: Jessica.Felix@iowadot.us

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s): City of Spencer

Contact Person: Steve Bomgaars Title: Mayor

Complete Mailing Address: 101 W 5th Street
Spencer, IA 51301

Phone: 712-580-7200 (Area Code) E-Mail: spencermayor@spenceriowacity.com

Co-Applicant(s): Clay County Secondary Roads

Contact Person: Cole Budach Title: Clay County Engineer

Complete Mailing Address: 300 West 4th Street, Suite 5
Spencer, IA 51301

Phone: 712-262-2825 (Area Code) E-Mail: claycountyengineer@claycounty.iowa.gov

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	5,200,000 HSIP – 3,525,000
Total Project Cost	$	5,200,000
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

☐ Project information sheet(s) or “Risk Score”>50% from County/City’s Local Road Safety Plan

☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
☐ Iowa DOT TEAP Study or similar analysis and concept
☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
721	US-18 and US-71 North Junction	☒	☐	High	High

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the Iowa Department of Transportation

Signed:  04/30/2025

Signature Date Signed

Jessica Felix

Printed Name

Attest:

Signature Date Signed

Printed Name

NARRATIVE [B]

Background: The Iowa Department of Transportation (IDOT) District 3, with the support of the City of Spencer and Clay County, is proposing the conversion of the existing north intersection of US-18 and US-71 on the north side of the City of Spencer. IDOT District 3 has proposed the construction of a roundabout based on the need to make operational and safety improvements to the intersection. The Potential for Crash Reduction (PCR) level is high (>1) and is high in the category ranking for Divided High Speed Partial Stop Controlled intersections.

The current intersection is a divided high-speed intersection with partial stop controls. Speeds approaching the intersection from all directions are posted at 55-mph. US-18 travelling east-west is a two-lane roadway and US-18/US-71 ifs a four-lane divided roadway with auxiliary turn lanes and median crossing. The through movements on US-71 are uncontrolled. All other movements, including all the turning movements are stop controlled.

Crash History: Between 2019 and 2023 there was one fatal crash and nine minor injury crashes. Additionally, there were five possible injury crashes and 15 property damage only crashes. In total there were 30 crashes in this five-year period.

Fourteen of the crashes had Failure to Yield Right-of-Way (FTYROW) from stop sign as the major cause. Another six crashes had Ran Stop Sign as the major cause of the crash. The most represented collision type is a Broadside (front to side) crash, followed by 4 Sideswipe crashes, 3 were non-collision crashes, 2 Rear End crashes, and 2 Angle crashes. The crash reduction from the construction of the roundabout results in a calculated Benefit/Cost Ratio of 2.99.

Project Proposal: The installation of the roundabout aligns with the Intersection Emphasis Area of Iowa's Five-Year Strategic Highway Safety Plan (SHSP) 2024-2028. The decision to install a roundabout is an engineering decision and is not a traffic control device decision governed by the MUTCD. All project signage will also meet the requirements of the MUTCD.

[C]

Estimate Items Report

Version D05-12/30/2024
Project PRJ-55384 PHASE-1

Item Number	Item Description	Units	Quantity	Cost Used	Suggested Cost	Line Total	Estimator Notes
Roadway Items					**SubTotal:**	**$5,220,683.03**	
2102-0425071	SPECIAL BACKFILL	CY	1,725.000	$37.25	$37.25	$64,254.18	
2102-2625001	EMBANKMENT-IN-PLACE, CONTRACTOR FURNISH	CY	19,150.000	$12.26	$12.26	$234,700.49	
2102-2710070	EXCAVATION, CL 10, RDWY+BORROW	CY	8,750.000	$7.13	$7.13	$62,390.13	
2102-2710090	EXCAVATION, CL 10, WASTE	CY	2,550.000	$11.77	$11.77	$30,023.96	
2105-8425015	TOPSOIL, STRIP, SALVAGE+SPREAD	CY	18,350.000	$6.60	$6.60	$121,023.76	
2115-0100000	MODIFIED SUBBASE	CY	7,550.000	$36.45	$36.45	$275,182.40	
2121-7425020	GRANULAR SHLD, TYPE B	TON	3,100.000	$22.33	$22.33	$69,218.97	
2122-5190095	PAVED SHLD, PCC, 9.5"	SY	3,100.000	$81.36	$81.36	$252,224.99	
2123-7450000	SHLD CONSTRUCTION, EARTH	STA	50.000	$315.64	$315.64	$15,781.85	
2123-7450020	SHLD FINISH, EARTH	STA	36.000	$242.46	$242.46	$8,728.59	
2301-1034095	STD/S-F PCC PAV'T, CL C CL 3I, 9.5"	SY	12,250.000	$70.00	$0.00	$857,500.00	
2301-1034135	STD/S-F PCC PAV'T, CL C CL 3I, 13.5"	SY	2,100.000	$90.00	$90.00	$189,000.00	
2301-4875006	MEDIAN, PCC, 6"	SY	1,200.000	$64.09	$64.09	$76,911.00	
2304-0100000	DETOUR PAV'T	SY	7,600.000	$71.33	$71.33	$542,115.60	
2312-8260050	GRANULAR SURF ON RD, CL A CR STONE	CY	3,300.000	$46.00	$46.00	$151,800.00	
2315-8275055	SURF, DRIVEWAY	TON	140.000	$36.77	$36.77	$5,148.14	
2416-0100024	APRON, CONC, 24"	EA	12.000	$1,584.17	$1,584.17	$19,010.02	
2416-0102236	APRON, LOW CLEARANCE CONC, EQUIV DIA 36"	EA	4.000	$2,503.73	$2,503.73	$10,014.93	
2416-1180024	CULV, CONC RDWY PIPE, 24"	LF	328.000	$98.32	$98.32	$32,249.98	
2416-1190236	CULV, LOW CLEAR CONC ENT PIPE,EQ DIA 36"	LF	20.000	$150.00	$0.00	$3,000.00	
2422-0360024	APRON, UNCL, 24"	EA	2.000	$412.15	$412.15	$824.31	
2510-6745850	RMVL OF PAV'T	SY	19,500.000	$9.24	$9.24	$180,201.45	
2511-0302600	RECREATIONAL TRAIL, PCC, 6"	SY	800.000	$81.91	$81.91	$65,525.12	
2511-6745900	RMVL OF SIDEWALK	SY	1,200.000	$9.89	$9.89	$11,863.68	
2511-7528101	DETECTABLE WARNING	SF	80.000	$47.02	$47.02	$3,761.26	
2512-1725256	CURB+GUTTER, PCC, 2.5'	LF	400.000	$40.04	$40.04	$16,017.88	
2512-1725306	CURB+GUTTER, PCC, 3.0'	LF	3,200.000	$56.63	$56.63	$181,222.72	
2514-0000200	RMVL OF CURB	STA	150.000	$2,650.64	$2,650.64	$397,596.36	
2515-2475008	DRIVEWAY, PCC, 8"	SY	1,550.000	$80.37	$80.37	$124,580.01	

Estimate Items Report

Version D05-12/30/2024
Project PRJ-55384 PHASE-1

Item Number	Item Description	Units	Quantity	Cost Used	Suggested Cost	Line Total	Estimator Notes
2515-6745600	RMVL OF PAVED DRIVEWAY	SY	1,450.000	$10.65	$10.65	$15,443.81	
PCT-000-000	MOBILIZATION (000-000)	% of Project	5,220,683.030	6.91%	6.91%	$360,749.20	
PCT-000-030-020	TEMPORARY TRAFFIC CONTROL (000-030-020)	% of Project	5,220,683.030	4.64%	4.64%	$242,239.69	
PCT-010-020-190	MISCELLANEOUS (010-020-190)	% of Project	5,220,683.030	10.00%	0.13%	$522,068.30	
PCT-010-050-010	STORM SEWER (010-050-010)	% of Project	5,220,683.030	1.50%	3.91%	$78,310.25	
					Total:	**$5,220,683.03**	

Schedule US-71 N Intersection		
D00	Pre-Design Concept	2/8/2024
D02	Design Field Exam	6/17/2024
D05	Turn-In	9/12/2024
L03	Letting	7/21/2026
C02	Construction Period	11/19/2027

US-71 North Intersection

TSIP Application

[E]

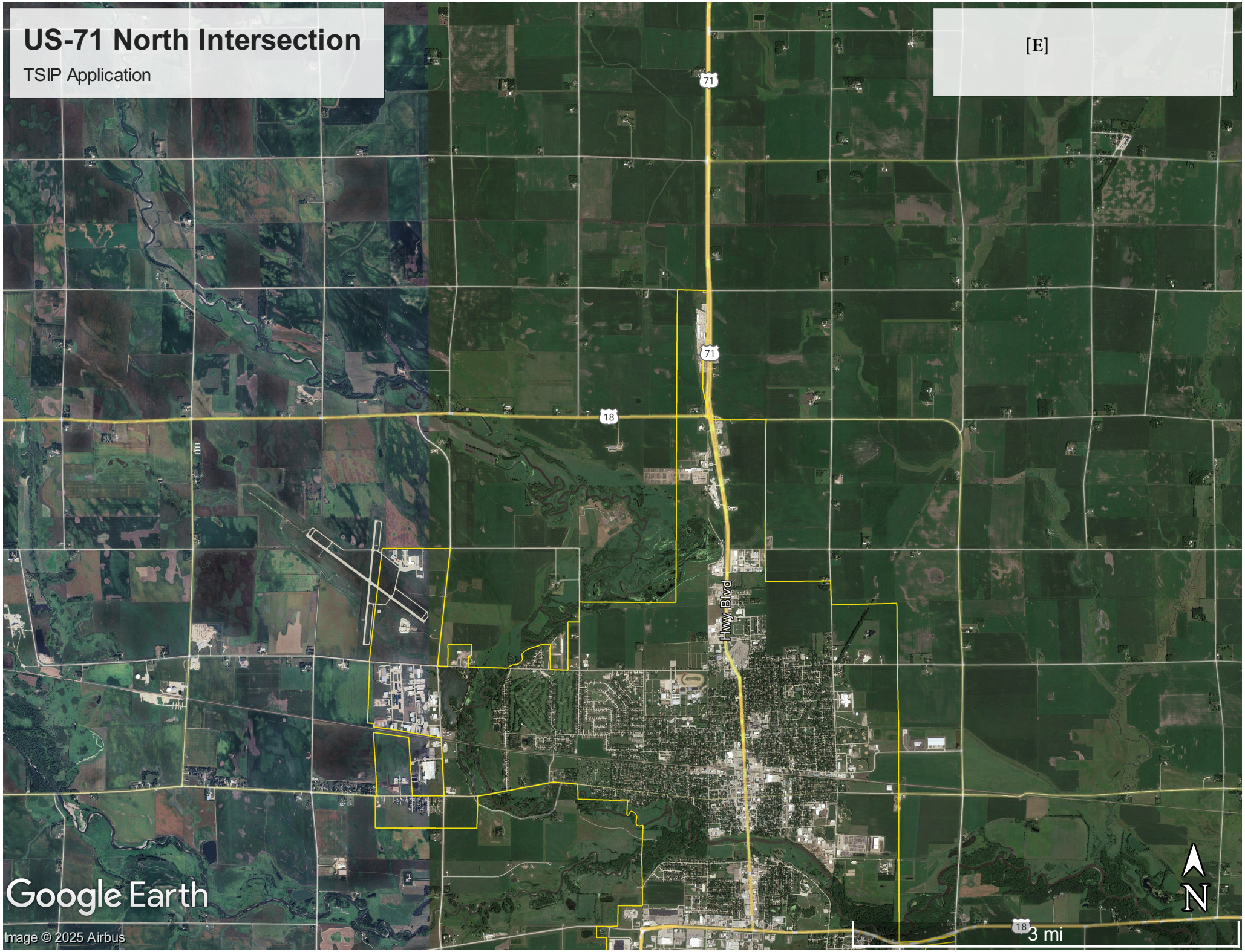




Figure 1: US-71 Facing North



Figure 2: US-71 Facing South



Figure 2: 44th Street Facing West



Figure 3: US-18 Facing East

[G]





Iowa Crash Analysis Tool
Quick Report
2019-2023

[I]

Crash Severity	30
Fatal Crash	1
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	9
Possible/Unknown Injury Crash	5
Property Damage Only	15

Injury Status Summary	23
Fatalities	2
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	12
Possible (complaint of pain/injury)	9
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	427,700.00
Average (per crash dollars):	14,256.67
Total Vehicles:	60.00
Average (per crash):	2.00
Total Occupants:	84.00
Average (per crash):	2.80

Average Severity	
Fatalities/Fatal Crash:	2.00
Fatalities/Crash:	0.07
Injuries/Crash:	0.70
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.40
Possible/Unknown Injuries/Crash:	0.30



Major Cause			30
Animal	1	Ran traffic signal	0
Ran stop sign	6	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	14	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	1
Operating vehicle in an reckless/erratic/care...	0	Followed too close	1
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	1
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	2
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	1
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	2
Unknown	0	Not reported	0
Other: No improper action	1		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	1	1	1	0	1	0	0	0	4
Monday	0	0	0	0	0	0	1	1	1	0	0	0	0	3
Tuesday	1	0	0	0	0	0	1	1	0	0	1	0	0	4
Wednesday	0	1	0	1	1	0	1	3	0	0	0	0	0	7
Thursday	0	0	0	1	0	0	2	0	1	0	0	0	0	4
Friday	0	0	0	1	1	0	1	0	1	1	0	0	0	5
Saturday	0	0	0	0	0	1	0	2	0	0	0	0	0	3
Total	1	1	0	3	2	2	7	8	3	2	1	0	0	30

Manner of Crash Collision	30
Non-collision (single vehicle)	3
Head-on (front to front)	0
Rear-end (front to rear)	2
Angle (oncoming left turn)	2
Broadside (front to side)	17
Sideswipe (same direction)	3
Sideswipe (opposite direction)	1
Rear to rear	0
Rear to side	0
Not reported	0
Other	2
Unknown	0

Surface Conditions	30
Dry	27
Wet	1
Ice/frost	1
Snow	1
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			60
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	3	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	1
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	2	None (no fixed object struck)	54

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	1	0	0	0	1
= 15	1	0	0	0	1
= 16	0	0	0	0	0
= 17	1	1	0	0	2
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	2	0	0	2
>= 21 and <= 24	2	1	0	0	3
>= 25 and <= 29	1	4	0	0	5
>= 30 and <= 34	2	3	0	0	5
>= 35 and <= 39	2	3	0	0	5
>= 40 and <= 44	1	1	0	0	2
>= 45 and <= 49	0	2	0	0	2
>= 50 and <= 54	0	2	0	0	2
>= 55 and <= 59	1	5	0	0	6
>= 60 and <= 64	1	5	0	0	6
>= 65 and <= 69	0	2	0	0	2
>= 70 and <= 74	0	6	0	0	6
>= 75 and <= 79	2	2	0	0	4
>= 80 and <= 84	1	2	0	0	3
>= 85 and <= 89	0	2	0	0	2
>= 90 and <= 94	0	1	0	0	1
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	16	44	0	0	60

Drug/Alcohol Related	**30**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	30

Alcohol Test Given	**60**
None	59
Blood	0
Urine	0
Breath	1
Vitreous	0
Refused	0
Not reported	0

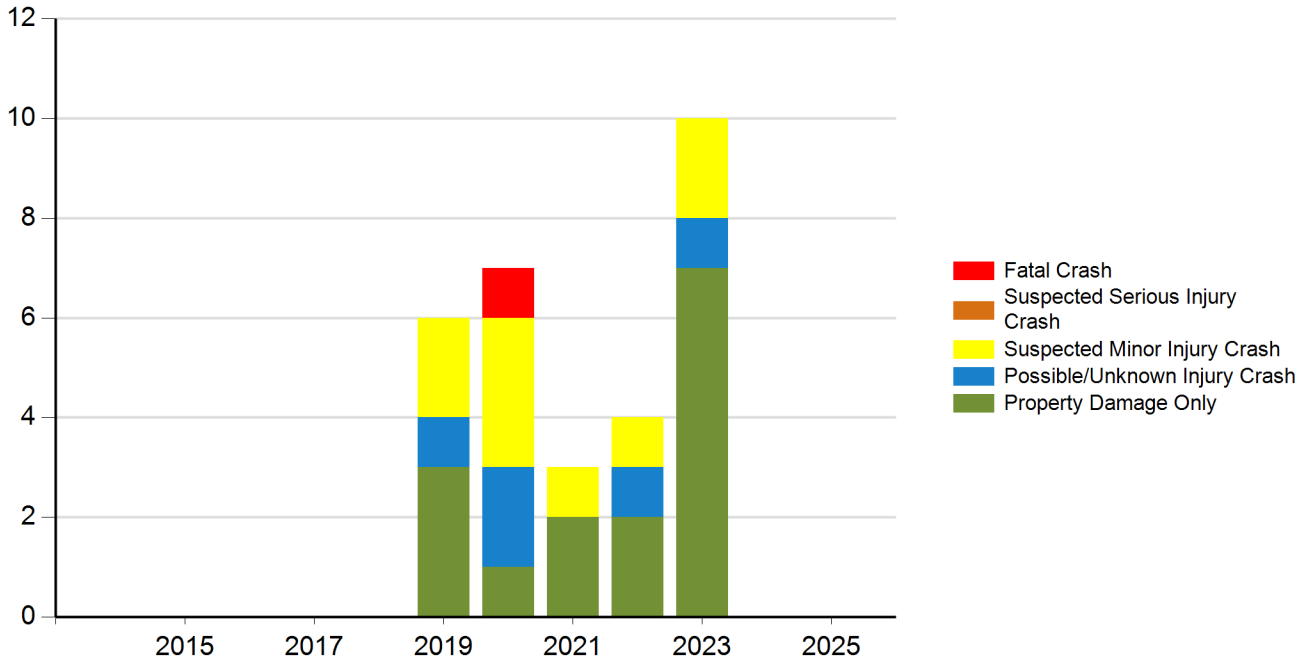
Drug Test Given	**60**
None	60
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**60**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	60
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	2	1	3	6
2020	1	0	3	2	1	7
2021	0	0	1	0	2	3
2022	0	0	1	1	2	4
2023	0	0	2	1	7	10
2024	0	0	0	0	0	0
2025	0	0	0	0	0	0
Total	1	0	9	5	15	30

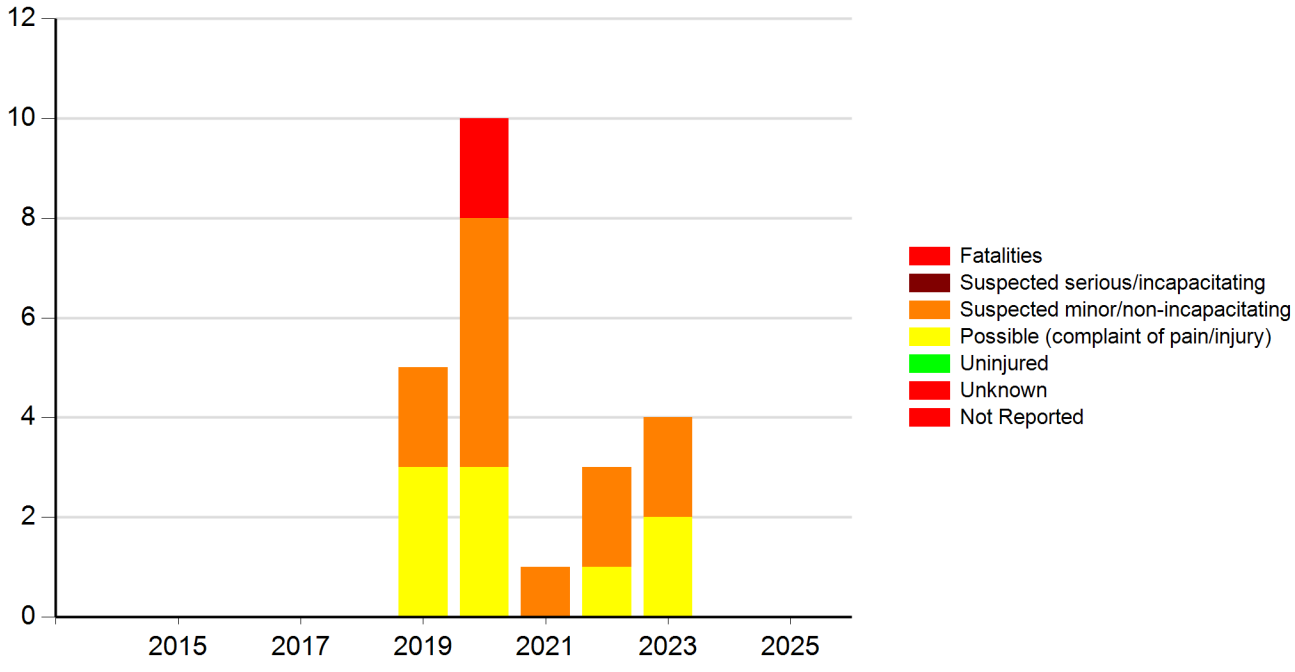
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	2	3	0	0	0	5
2020	2	0	5	3	0	0	0	10
2021	0	0	1	0	0	0	0	1
2022	0	0	2	1	0	0	0	3
2023	0	0	2	2	0	0	0	4
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
Total	2	0	12	9	0	0	0	23

Injury Status/Year



Meeting the following criteria

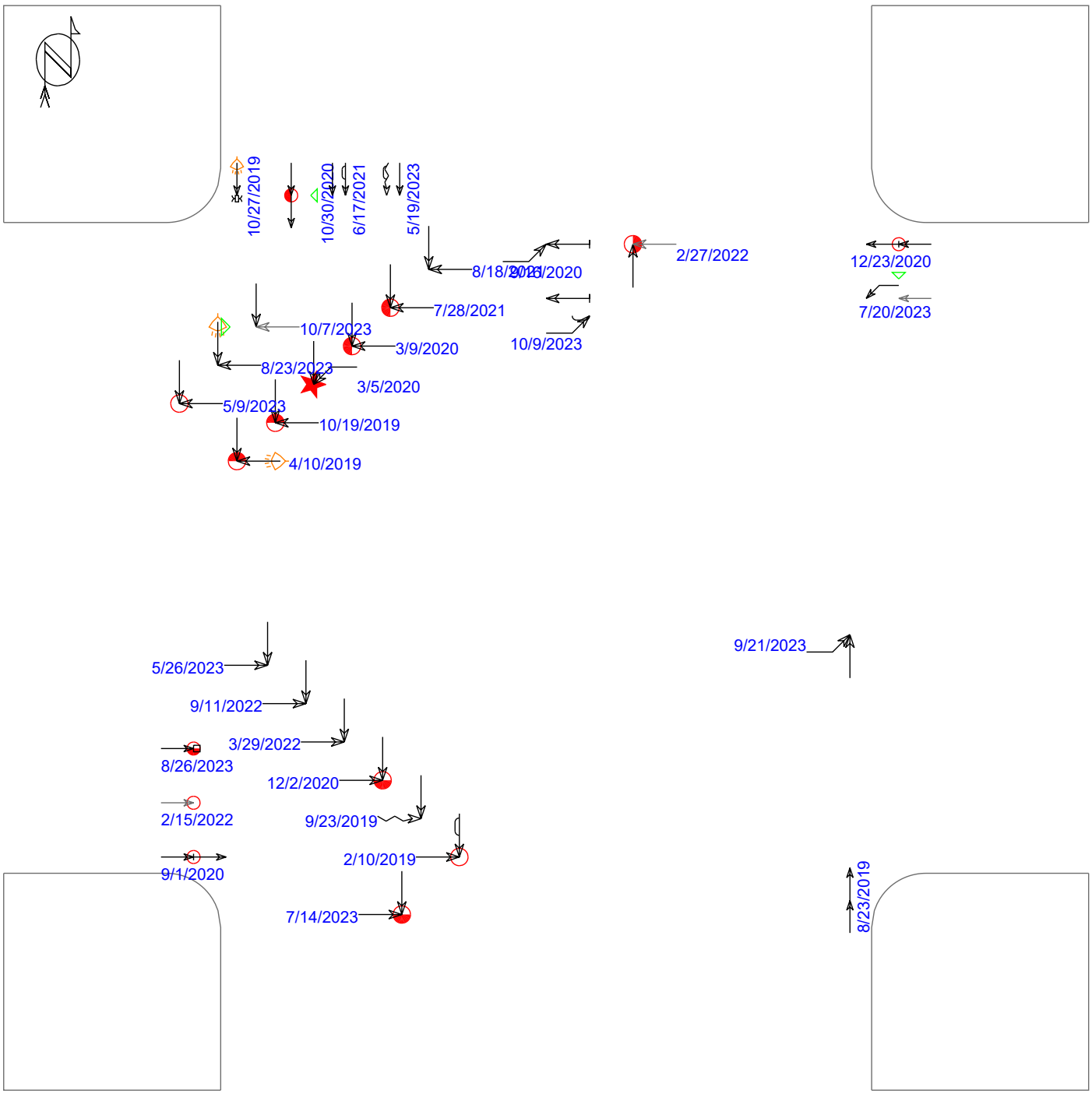
Jurisdiction: DOT Districts (District 3 (Northwest))
Year: 2019, 2020, 2021, 2022, 2023
Map Selection: Yes
Filter: None

Analyst Information

Collision Diagram

30 Crashes

Clear



Straight
Stopped
Unknown
Backing
Overtaking
Sideswipe

Parked
Erratic
Out of control
Right turn
Left turn
U-turn

Fatal
Major
Minor
Injury
Pedestrian
Bicycle

Fixed objects:

General
Signal
Tree
Pole
Curb
Animal

DUI
3rd vehicle
Nighttime

Crash Magic Online 3/5/2025

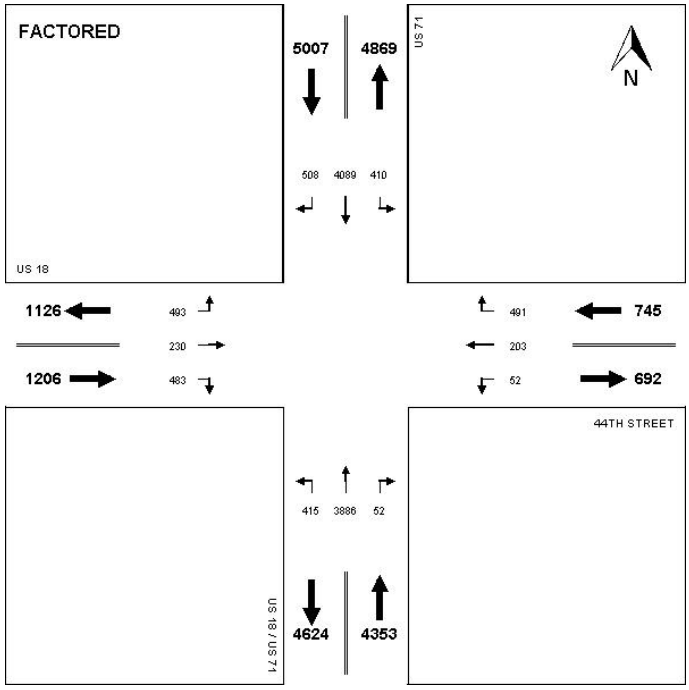
Crash Magic Online

Iowa Department of Transportation

Turning Movement Traffic Count Summary

Vehicle Type: All Vehicles

Station Number:	21431701099
Count Date:	Monday, June 05, 2023
County:	Clay
Location Description:	US 18, US 71, W 44TH ST & 320TH ST
Volume Factor:	0.899
Pass Class Factor:	0.919
SU Class Factor:	0.78
Combo Class Factor:	0.721



Raw Data All Vehicles		North			East			South			West		
		L	T	R	L	T	R	L	T	R	L	T	R
2023-06-05	00:00	5	15	2	1	3	6	1	9	0	0	2	6
	01:00	3	11	0	1	0	3	1	4	1	0	0	0
	02:00	1	14	0	0	0	1	1	8	2	3	0	0
	03:00	1	8	2	0	1	2	2	11	0	4	1	1
	04:00	3	31	1	0	3	13	6	32	0	5	4	4
	05:00	7	72	8	1	5	23	16	123	0	14	7	8
	06:00	16	142	56	3	19	30	28	165	0	24	15	25
	07:00	33	330	49	3	29	39	26	244	1	39	18	67
	08:00	26	279	39	4	12	28	29	251	2	34	16	47
	09:00	27	279	38	3	20	31	39	267	5	37	22	37
	10:00	28	277	39	4	16	38	26	232	3	32	21	36
	11:00	23	267	45	0	18	32	29	267	4	36	18	36
	12:00	36	281	28	4	26	30	27	310	6	40	20	37
	13:00	23	289	27	3	12	33	24	294	9	38	22	30
	14:00	40	314	41	2	20	30	32	304	2	39	18	39
	15:00	36	316	34	3	13	37	43	301	2	35	20	35
	16:00	38	406	34	9	13	39	43	414	7	58	25	41
	17:00	41	416	51	3	12	31	38	379	6	50	22	42
	18:00	21	259	16	3	9	35	15	199	5	22	7	18
	19:00	12	159	20	4	4	30	10	151	1	16	11	11
	20:00	18	142	21	3	5	11	11	105	0	13	6	12
	21:00	16	111	15	1	4	12	14	130	2	12	5	5
	22:00	2	74	6	0	3	15	7	84	0	7	1	7
	23:00	6	41	7	3	0	4	3	18	0	3	2	2
	Total	462	4533	579	58	247	553	471	4302	58	561	283	546

County:	Clay	Prepared By:	Justin Pottorff
Location:	US-18 and US-71 North Junction	Date Prepared:	3/5/2025
Proposed Improvements:	Intersection Improvments - Roundabout Construction		
Estimated Improvement Cost:	$ 5,200,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 104,000

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	85	**85.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	1	85.0	**0.20**	**0.17**
Serious Injury (A)	$ 4,300,000	0	85.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	9	85.0	**1.80**	**1.53**
Possible/Unknown Injury (C)	$ 135,000	5	85.0	**1.00**	**0.85**
Property Damage Only (O)	$ 20,000	15	85.0	**3.00**	**2.55**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ 731,000**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ 443,700**
Possible/Unknown Injury (C)	**$ 114,750**
Property Damage Only (O)	**$ 51,000**

Total Benefits and Costs

		Implementation Cost	$ 5,200,000
		Present Value of Maint.	$ 1,413,394
Present Value Benefits (Societal Benefits)	$ 19,799,393	Present Value Costs (Impl. and Maint. Costs)	$ 6,613,394
Present Value Net Return	$ 13,186,000		
Benefit Cost Ratio	**2.99**		

Form continues on next page

County:	Clay	Prepared By:	Justin Pottorff
Location:	US-18 and US-71 North Junction	Date Prepared:	3/5/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

CITY of SPENCER

101 West 5th Street • Spencer, IA 51301
Phone: 712.580.7200 • Fax: 712.580.7236
info@spenceriowacity.com
spenceriowacity.com

District 3
Iowa Department of Transportation
Re: TSIP Application

The City of Spencer strongly supports the IDOT project to build a roundabout at the intersection Highways 18 and 71 in north Spencer. We believe the construction of this project will greatly improve the safety of this intersection. The intersection at Highway 18 and 71 has been one of the most dangerous in the State of Iowa. The roundabout will provide commuters, vacationers, and commercial traffic a much safer route of travel. We thank the Iowa Department of Transportation for their work and cooperation on this project.

Sincerely,

Steven Bomgaars
Mayor
City of Spencer

CLAY COUNTY ENGINEER'S OFFICE
300 West 4th Street, Suite #5
Spencer, IA 51301
claycountyengineer@claycounty.iowa.gov
Phone: 712.262.2825
Fax: 712.262.4114

CLAY COUNTY IOWA

Cole Budach, P.E. – County Engineer
Mark Thompson – Assistant to Engineer
Jeff Wiemann – Engineer Technician
Aaron Rutter – Drainage Technician
Pam Doran – Office Manager

April 10, 2025

District 3
Iowa Department of Transportation (IDOT)
Re: TSIP Application

The Clay County Engineer and the Clay County Secondary Roads Department supports the Iowa Department of Transportation (IDOT) in their project to complete the conversion of the intersection of US-18 and US-71 on the northside of the City of Spencer to a roundabout. Clay County Secondary Roads has jurisdiction on the east leg of the proposed roundabout connection. This project will serve a significant public safety improvement, as the current intersection configuration has resulted in numerous vehicle crashes. It is our opinion that the roundabout will lead to reduced severity of crashes and a potential decrease in the total number of crashes. We also anticipate that the roundabout will lead to safer and more efficient traffic movement through the intersection from the existing stop-controlled intersections.

Additionally, Clay County recently completed a trail project which crosses the US-18 leg of the current intersection. A roundabout will lead to reduced speeds, which we believe will lead to safer crossings for the new pedestrian and bicycle traffic, that has historically not been in this area.

Cole M. Budach, PE
Clay County Engineer

Docusign Envelope ID: 3BF8B35F-FD0E-488A-B086-2EE0301F75BF

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Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 7/31/25

Location / Title of Project: Traffic Signalization of 1st St (US63) and Sycamore Street Intersection

Applicant: City of Waterloo – Traffic Operations Department

Contact Person: Tina Schellhorn Title: Associate Traffic Engineer

Complete Mailing Address: 625 Glenwood St.
Waterloo, Iowa 50703

Phone: (319)291-4440 (Area Code) E-Mail: Tina.Schellhorn@waterloo-ia.org

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s) _____

Contact Person _____ Title _____

Complete Mailing Address _____

_____

Phone _____ (Area Code) E-Mail _____

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	251,000
Total Project Cost	$	251,000
Safety Funds Requested	**$**	**251,000**

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information

Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
SI_125461	US63 & Sycamore St	☐	☒	High	Medium
		☐	☐		

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Rev. 07/23

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Waterloo, Iowa

Signed: DocuSigned by: Quentin Hart D0525D78AAC8449... — 8/4/2025

Signature — Date Signed

Quentin Hart

Printed Name

Attest: Signed by: Kelley Felchle FF60BC0FFBC64AB... — 8/4/2025

Signature — Date Signed

Kelley Felchle

Printed Name

Docusign Envelope ID: 22712857-437A-40B6-A2D7-572058FD0C05

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Prepared by LeAnn M. Even, Deputy City Clerk, City of Waterloo, 715 Mulberry Street, Waterloo, IA 50703, (319) 291-4323.

RESOLUTION NO. 2025-432

RESOLUTION APPROVING SUBMISSION OF TRAFFIC SAFETY IMPROVEMENT GRANT APPLICATION IN THE AMOUNT OF $251,000.00, FOR SIGNALIZATION OF NB US 63 (1ST STREET) AND SYCAMORE STREET INTERSECTION.

WHEREAS, the City of Waterloo recognizes the need to improve safety and traffic flow at the intersection of NB US 63 (1st Street) and Sycamore Street due to significant congestion and safety concerns; and

WHEREAS, the signalization of this intersection is an essential project that will enhance traffic management and reduce the likelihood of accidents; and

WHEREAS, the Iowa Department of Transportation provides financial support through the Traffic Safety Improvement Program Grant to fund eligible projects that improve road safety and efficiency; and

WHEREAS, the City of Waterloo desires to apply for said grant in the amount of $251,000.00 to facilitate the signalization project.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF WATERLOO, IOWA,

1. That the submission of a grant application to the Iowa Department of Transportation's Traffic Safety Improvement Program in the amount of $251,000.00 is hereby approved for the signalization project at the NB US 63 (1st Street) and Sycamore Street intersection.

2. That the Public Works Division Manager is hereby authorized to execute and submit the necessary application documents and to take any additional actions required to complete and administer any resulting grant contract.

PASSED AND ADOPTED this 4th day of August 2025.

DocuSigned by:
Quentin Hart
D0525D78AAC8449...
Quentin Hart, Mayor

ATTEST:

Signed by:
Kelley Felchle
FF60BC0FFBC64AB...
Kelley Felchle, City Clerk

SEAL

B. Narrative

Existing Conditions

Northbound Us 63 (1st Street) is a 3-lane one-way primary highway with 85th percentile speed of 42 mph. This location at its intersection with Sycamore Street experiences many right-angle crashes including injury crashes. Sycamore Street is controlled by stop signs. US 63 has no control. Sight distance deficiencies and number of approach lanes on US 63 are one of the reasons for such a high number of crashes. NB U.S. 63 (1st Street) has much higher traffic volumes. Side street corner sight distance is somewhat restricted by the crest of U.S. 63 bridge over Cedar River south of the intersection. The sight limitation exists after departing the stop sign until the vehicle gets very close to U.S. 63.

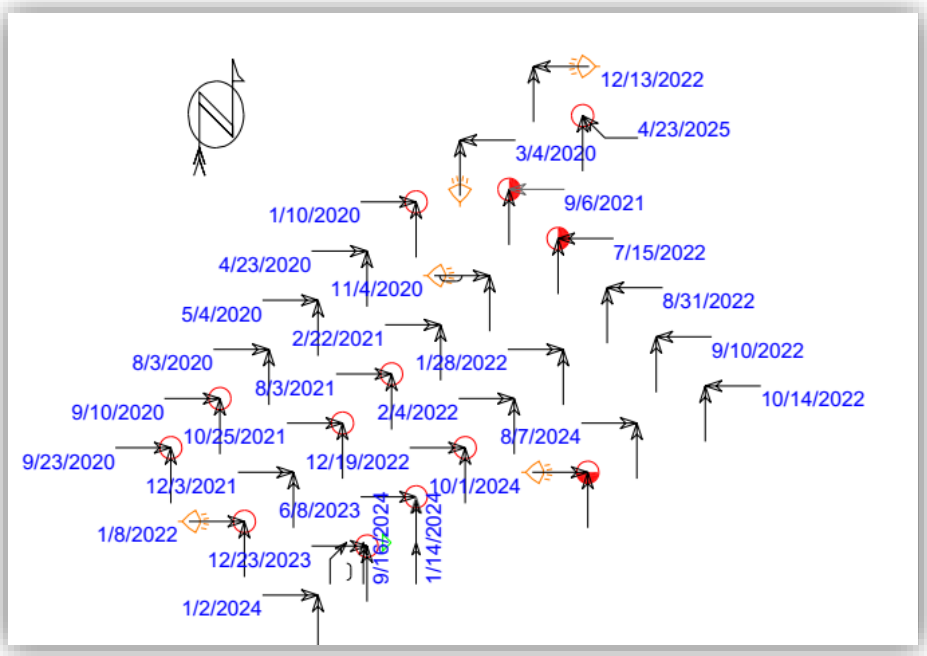


Exhibit 1: Collision Diagram

Proposed Concept

Based on the data traffic signalization is proposed. Properly installed signals are effective in reducing right angle crashes. The signals will be designed and timed to reduce or eliminate the chance of red light running.

Safety Justification

85th percentile speed on 63 approaching the intersection is 42 MPH. Accidents at this speed frequently result in injuries and could even cause fatalities. In about 5 years the intersection experienced 30 crashes resulting in 17 injuries. Of the 30 accidents, 28 were right angle collisions caused by stop sign violations. Properly designed and timed signals reduce right angle collisions. 3 approach lanes of U.S. 63 and high number of trucks cause instances of concealing view of a car in a far approach lane from side street. Traffic signals can assign proper and orderly right of way reducing the risk of crashes due to corner sign distance deficiencies. Proper advance warnings and on time signal visibility can help reduce risk of rearend crashes. 85th Percentile Speed on US 63 based of 7 days of speed data is 42 mph. Based on the crash, volume, and speed data MUTCD Warrant 7, Crash Experience is met.

B

Sycamore Street Approach				NB US 63	MUTCD Warrant 1 Condition Table 4C-1 (56%)	
Time	WB	EB	Highest	Approach	Met	Count
02:00 PM	65	52	65	458	Yes	1
03:00 PM	85	91	91	482	Yes	2
04:00 PM	93	109	93	454	Yes	3
05:00 PM	64	61	64	490	Yes	4
06:00 PM	34	26	34	331	FALSE	
07:00 PM	34	28	34	478	Yes	5
08:00 PM	15	10	15	288	FALSE	
09:00 PM	13	7	7	221	FALSE	
10:00 PM	7	9	9	169	FALSE	
11:00 PM	12	13	13	133	FALSE	
12:00 AM	6	7	7	84	FALSE	
01:00 AM	2	22	22	63	FALSE	
02:00 AM	8	1	8	55	FALSE	
03:00 AM	3	9	9	30	FALSE	
04:00 AM	12	17	17	74	FALSE	
05:00 AM	18	16	18	176	FALSE	
06:00 AM	40	23	40	302	FALSE	
07:00 AM	79	21	79	453	Yes	6
08:00 AM	65	41	65	332	FALSE	
09:00 AM	68	55	68	335	FALSE	
10:00 AM	91	56	91	429	Yes	7
11:00 AM	90	60	90	438	Yes	8
12:00 PM	85	74	85	450	Yes	9
01:00 PM	90	70	90	461	Yes	10

C

C. Itemized Breakdown of Costs

WATERLOO PROPOSED PROJECT AT 1ST STREET-SYCAMORE STREET INTERSECTION

No.	DESCRIPTION	QNTY	UNIT	COST	EXTENDED
1	COMBINATION LIGHTING-SIGNAL MAST ARM POLE	2	EA	$17,000	$34,000
2	COMBINATION LIGHTING-SIGNAL LONG ARM MAST ARM POLE	1	EA	$22,000	$22,000
3	PEDESTAL TRAFFIC SIGNAL POLE	1	EA	$3,000	$3,000
4	TRAFFIC SIGNAL CABINET	1	EA	$19,500	$19,500
5	ADAPTIVE TRAFFIC SIGNAL CONTROLLER WITH ATMS LICENSE	1	EA	$10,000	$10,000
6	RADAR DETECTION SYSTEM STOP BAR AND ADVANCE DETECTION	1	LS	$40,000	$40,000
7	VEHICULAR SIGNAL HEADS, WITH BACKPLATES AND BRACKETS	11	EA	$1,000	$11,000
8	ADDED COST FOR SNOW-MELT RED SIGNAL HEAD	3	EA	$150	$450
9	PEDESTRIAN SIGNAL HEADS, COMPLETE WITH BRACKETS	8	EA	$400	$3,200
10	PEDESTRIAN PUSH BUTTON	8	EA	$400	$3,200
11	PEDESTRIAN PUSH BUTTON POLE	2	EA	$1,800	$3,600
12	TRAFFIC MONITORING CAMERAS SYSTEM	1	LS	$8,800	$8,800
13	EMERGENCY PREEMPTION SYSTEM	1	LS	$8,000	$8,000
14	FIBER OPTIC CONNECTION	1	LS	$12,000	$12,000
15	CONDUITS, BORE	400	FT	$25	$10,000
16	RESTORE DISTURBED SURFACES	1	LS	$2,000	$2,000
17	WIRING	1	LS	$10,000	$10,000
18	HANDHOLES	1	EA	$550	$550
19	FIBER HANDHOLE	1	EA	$800	$800
20	SIGNAGE	1	LS	$1,500	$1,500
21	PAVEMENT MARKINGS	1	LS	$1,000	$1,000
22	LUMINAIRE	3	EA	$600	$1,800
23	ADVANCE WARNING SYSTEM, BE PREPARED TO STOP	1	LS	$10,000	$10,000
24	TRAFFIC CONTROL	1	LS	$10,000	$10,000
25	MOBILIZATION	1	LS	$12,600	$12,600
26	INCIDENTALS	1	LS	$2,000	$2,000
TOTAL					$241,000
CONTINGENCY					$10,000
GRAND TOTAL					**$251,000**

Safety Part of the Proposed Project	100 %	$251,000

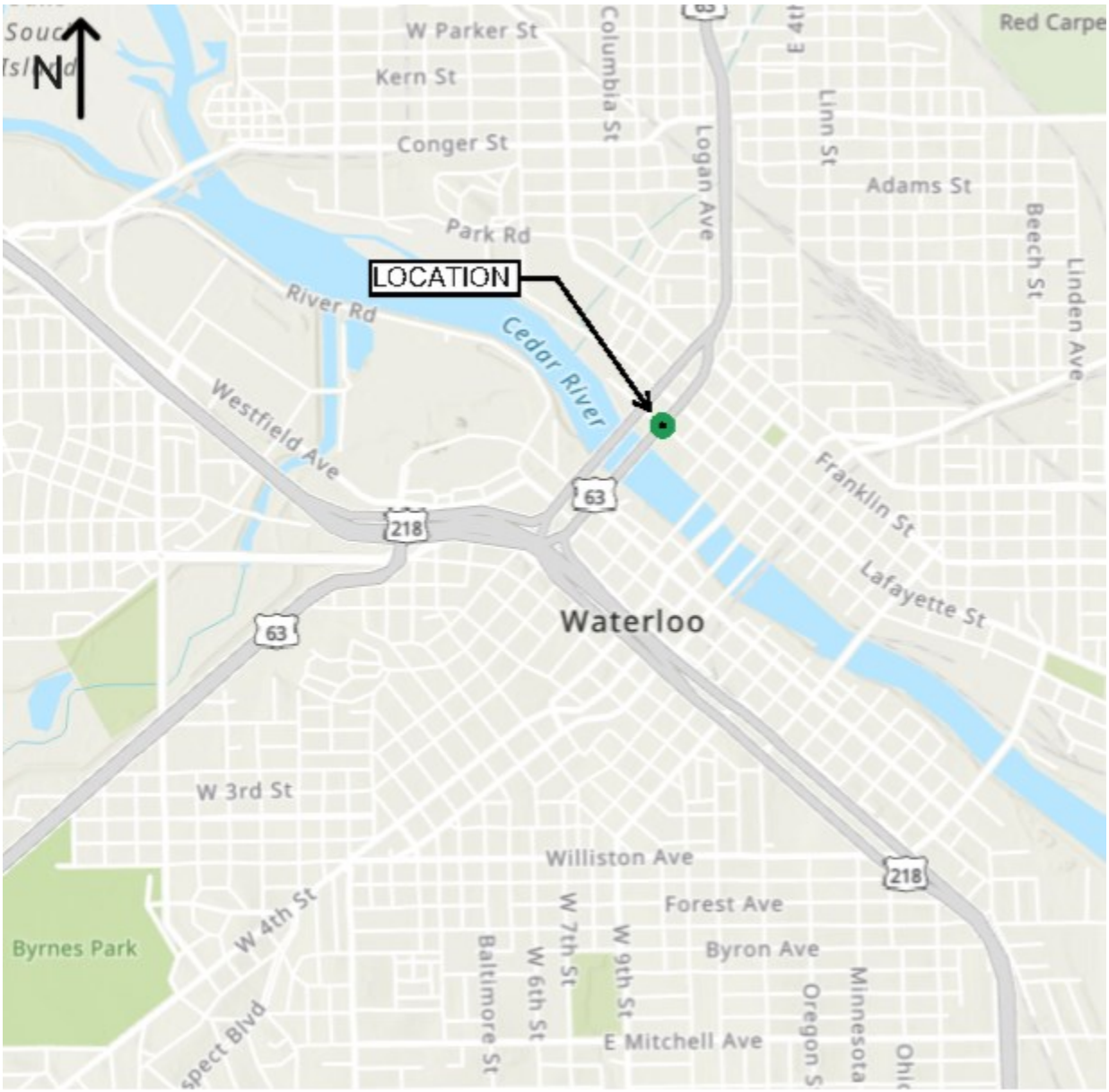
D. Project Schedule

PROJECT SCHEDULE

Funds Available	Jul-2026	
Check Plans	Jul-2026	Sep-2026
DOT Review	Sep-2026	Oct-2026
Final Plans	Nov-2026	
Project Letting and Award Including DOT Approvals	Nov-2026	Dec-2026
Construction	May-2027	Jan-2028

E

E. Map Identifying Location of Project



F. Project Site Images



EB on Sycamore St. at 1st St



WB on Sycamore St. at 1st St

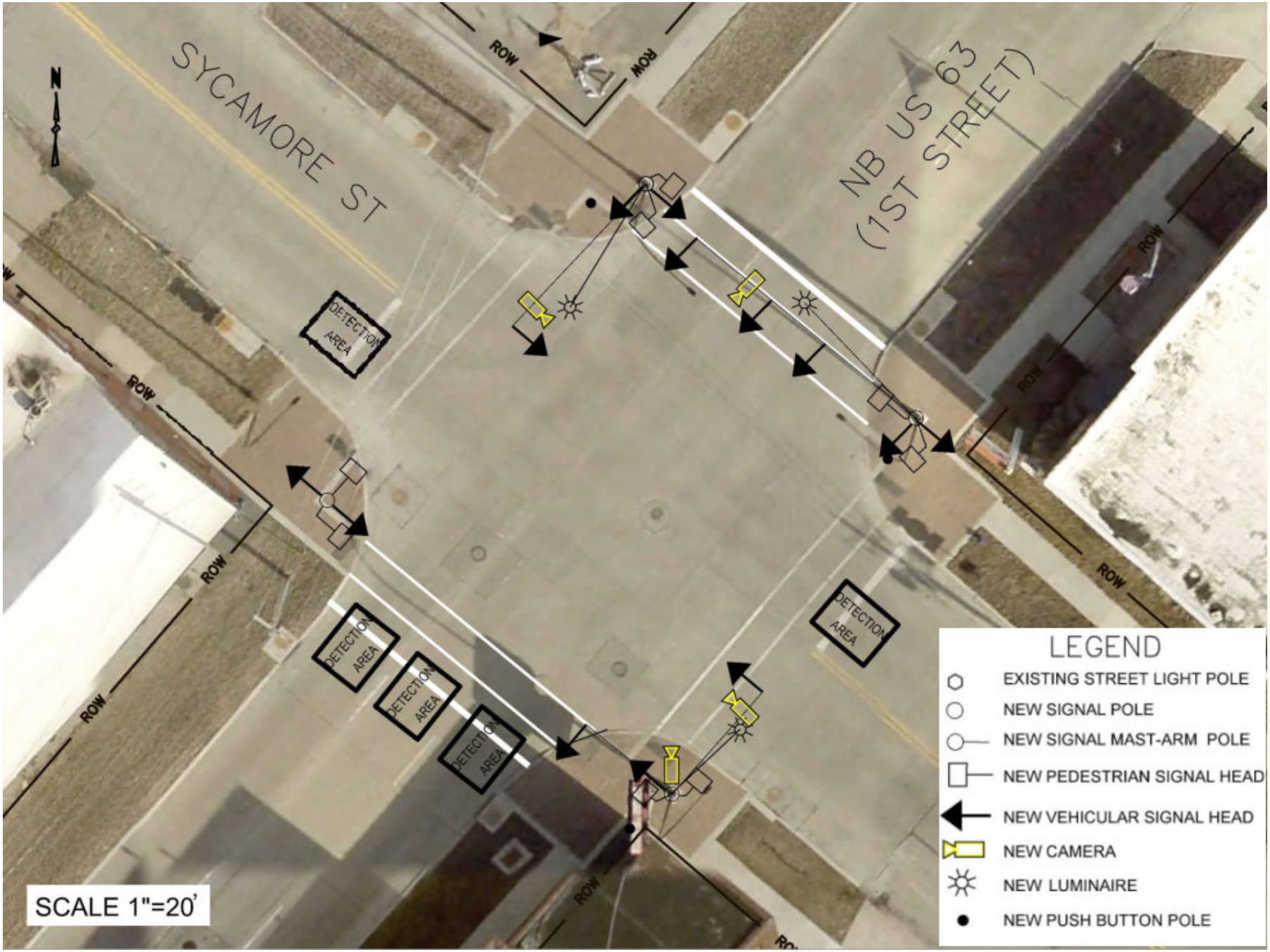
F. Continued



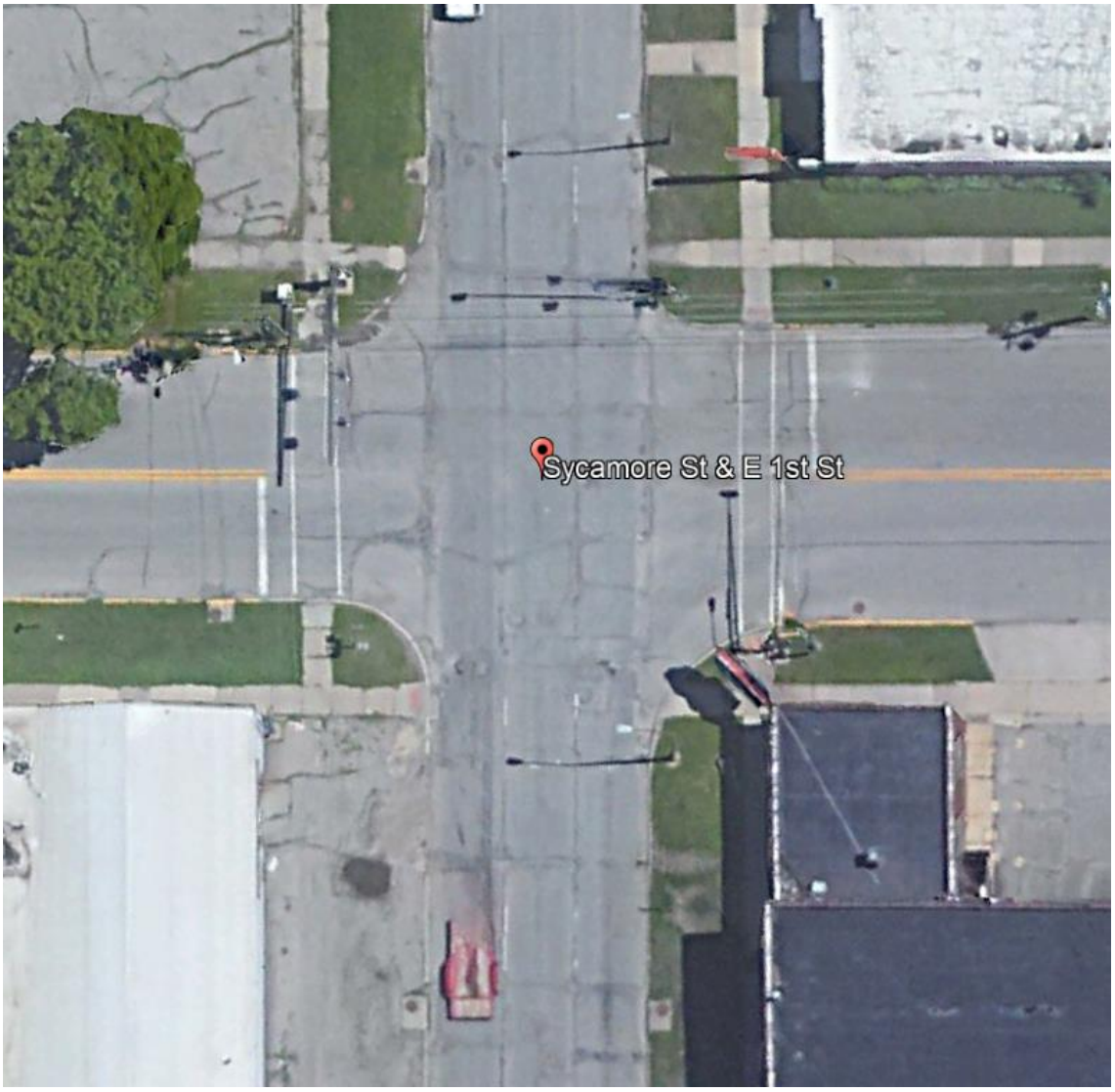
NB on 1st St at Sycamore St.

G. Plan View

G


SYCAMORE ST
NB US 63
(1ST STREET)
ROW
DETECTION AREA
SCALE 1"=20'
LEGEND
EXISTING STREET LIGHT POLE
NEW SIGNAL POLE
NEW SIGNAL MAST-ARM POLE
NEW PEDESTRIAN SIGNAL HEAD
NEW VEHICULAR SIGNAL HEAD
NEW CAMERA
NEW LUMINAIRE
NEW PUSH BUTTON POLE

H. Arial Photo



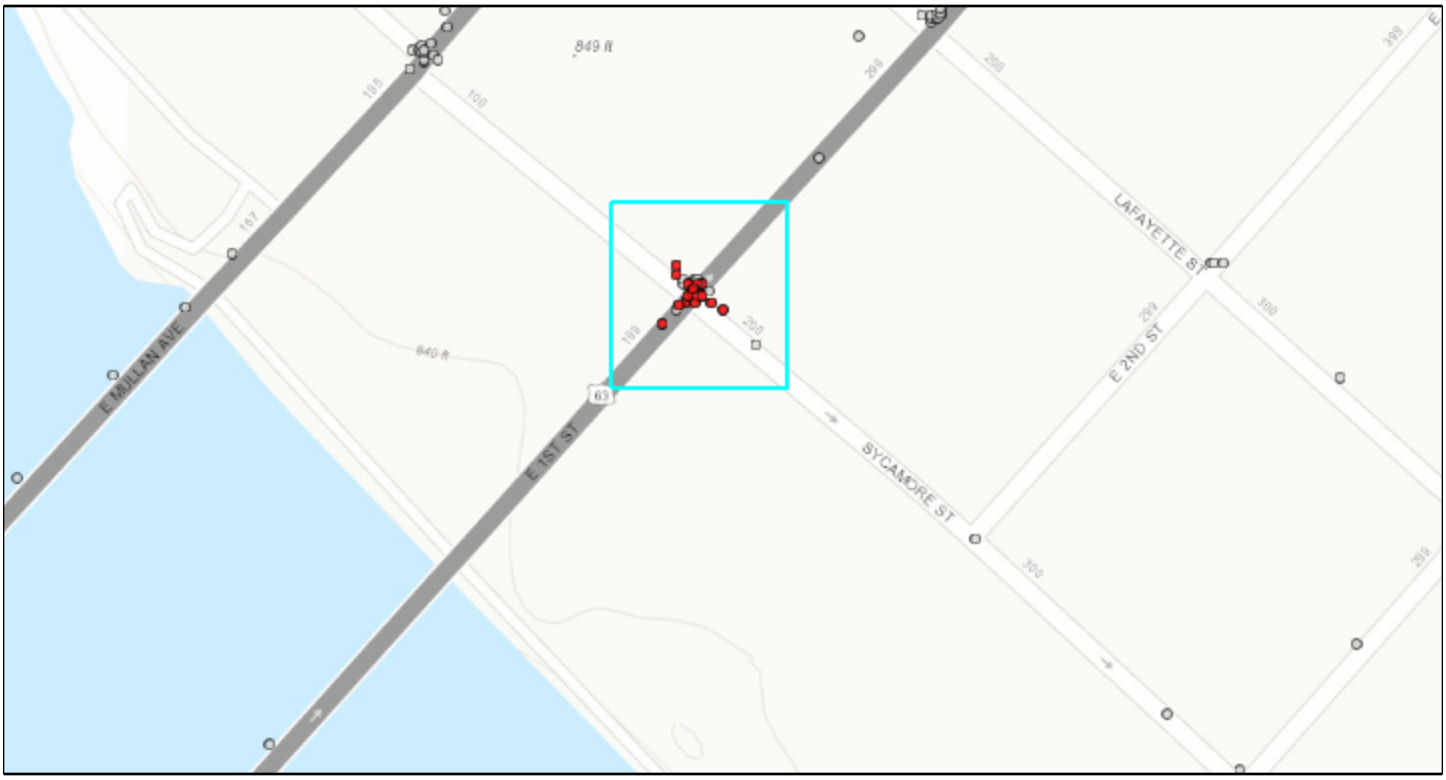
Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	30
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	3
Possible/Unknown Injury Crash	10
Property Damage Only	17

Injury Status Summary	17
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	4
Possible (complaint of pain/injury)	13
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	298,750.00
Average (per crash dollars):	9,958.33
Total Vehicles:	61.00
Average (per crash):	2.03
Total Occupants:	100.00
Average (per crash):	3.33

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.57
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.13
Possible/Unknown Injuries/Crash:	0.43



Major Cause			30
Animal	0	Ran traffic signal	0
Ran stop sign	19	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	9	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	1
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	1	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Iowa Crash Analysis Tool
Quick Report
2020-2025

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Monday	0	0	0	0	3	2	0	2	0	0	0	0	0	7
Tuesday	0	0	0	1	0	1	0	1	1	0	0	0	0	4
Wednesday	0	0	0	1	1	0	0	1	2	1	0	0	0	6
Thursday	0	0	0	1	0	1	0	0	1	0	0	0	0	3
Friday	0	0	0	0	1	0	3	1	1	0	0	0	0	6
Saturday	0	0	0	0	1	0	1	0	0	0	0	1	0	3
Total	0	0	0	3	6	4	5	5	5	1	0	1	0	30

Manner of Crash Collision	**30**
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	28
Sideswipe (same direction)	2
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	**30**
Dry	23
Wet	6
Ice/frost	0
Snow	1
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			**61**
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	1
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	2	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	58

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	3	5	0	0	8
>= 25 and <= 29	2	4	0	0	6
>= 30 and <= 34	4	4	0	0	8
>= 35 and <= 39	1	4	0	0	5
>= 40 and <= 44	3	4	0	0	7
>= 45 and <= 49	3	1	0	0	4
>= 50 and <= 54	2	1	0	0	3
>= 55 and <= 59	6	2	0	0	8
>= 60 and <= 64	2	2	0	0	4
>= 65 and <= 69	1	3	0	0	4
>= 70 and <= 74	2	0	0	0	2
>= 75 and <= 79	0	1	0	0	1
>= 80 and <= 84	1	0	0	0	1
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	30	31	0	0	61

Drug/Alcohol Related	**30**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	30

Alcohol Test Given	**61**
None	61
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

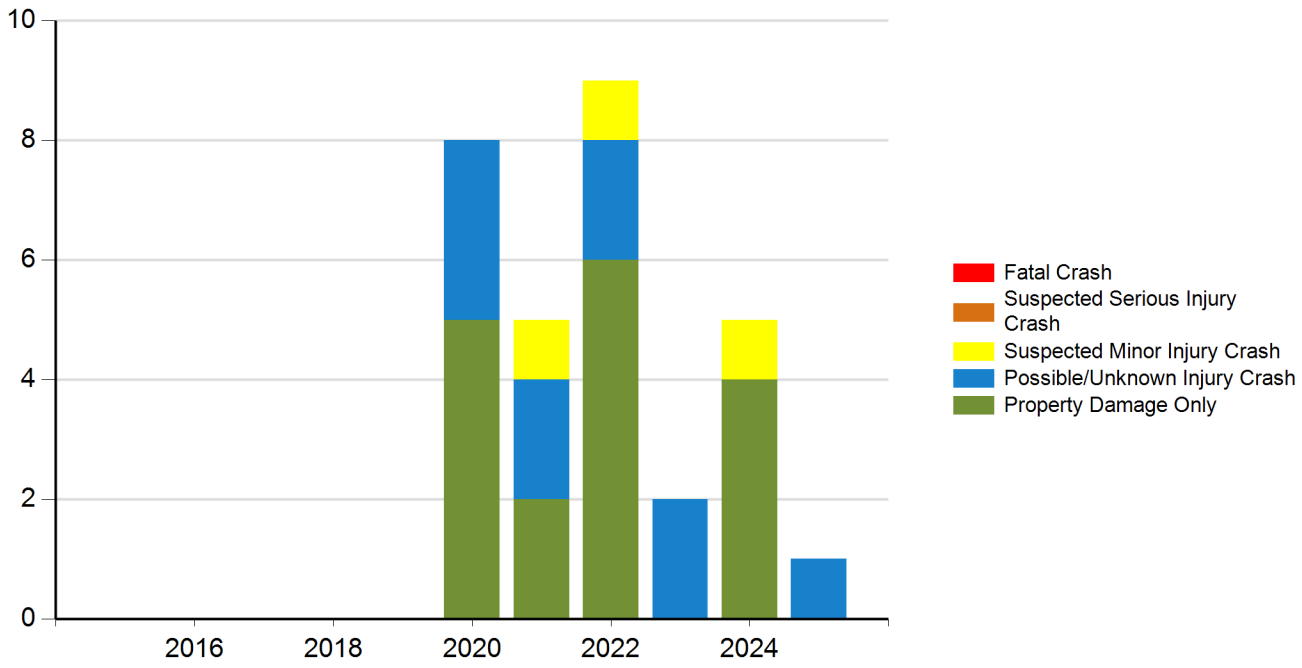
Drug Test Given	**61**
None	61
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**61**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	61
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	3	5	8
2021	0	0	1	2	2	5
2022	0	0	1	2	6	9
2023	0	0	0	2	0	2
2024	0	0	1	0	4	5
2025	0	0	0	1	0	1
Total	0	0	3	10	17	30

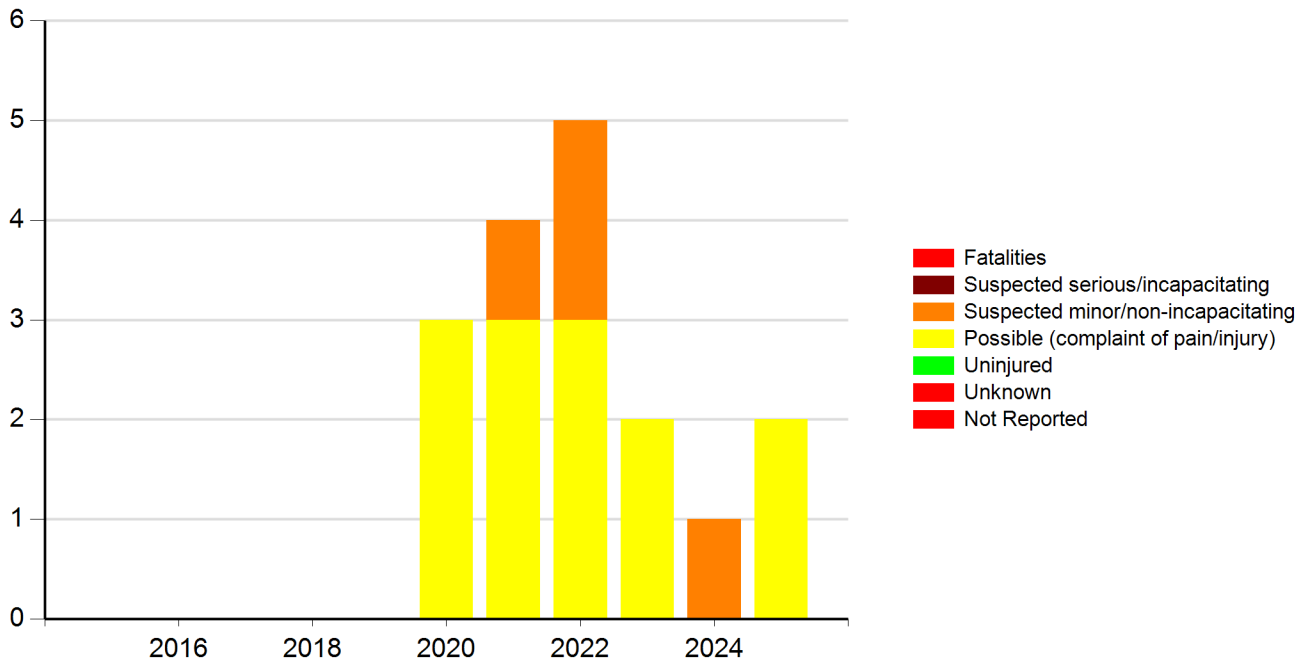
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	3	0	0	0	3
2021	0	0	1	3	0	0	0	4
2022	0	0	2	3	0	0	0	5
2023	0	0	0	2	0	0	0	2
2024	0	0	1	0	0	0	0	1
2025	0	0	0	2	0	0	0	2
Total	0	0	4	13	0	0	0	17

Injury Status/Year



118 Sycamore (west leg)

CITY OF WATERLOO TRAFFIC

625 GLENNWOOD STREET

WATERLOO, IOWA 50703

319-291-4440

Site Code: 00000001

Station ID:

Latitude: 0' 0.0000 South

Start	24-May-21		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB
12:00 AM	*	*	*	*	*	*	38	4	19	7	35	2	30	6	30	5
01:00	*	*	*	*	*	*	35	7	34	4	40	5	35	10	36	6
02:00	*	*	*	*	*	*	32	7	28	4	29	3	13	4	26	4
03:00	*	*	*	*	*	*	28	4	19	4	20	4	16	2	21	4
04:00	*	*	*	*	*	*	48	11	32	9	25	1	20	7	31	7
05:00	*	*	*	*	*	*	104	28	69	18	40	9	17	6	58	15
06:00	*	*	*	*	*	*	167	22	87	13	39	7	32	8	81	12
07:00	*	*	*	*	*	*	170	40	113	18	69	16	45	4	99	20
08:00	*	*	*	*	*	*	86	39	129	41	96	17	38	7	87	26
09:00	*	*	*	*	*	*	146	68	158	48	130	38	72	8	126	40
10:00	*	*	*	*	*	*	137	35	176	53	145	33	76	13	134	34
11:00	*	*	*	*	*	*	157	57	189	56	144	44	103	24	148	45
12:00 PM	*	*	*	*	*	*	145	43	212	65	199	61	124	20	170	47
01:00	*	*	*	*	*	*	128	47	212	61	240	39	114	31	174	44
02:00	*	*	*	*	241	61	134	42	207	45	201	47	125	21	182	43
03:00	*	*	*	*	245	57	137	51	267	59	191	29	115	29	191	45
04:00	*	*	*	*	270	74	166	66	224	46	144	24	90	15	179	45
05:00	*	*	*	*	237	40	129	34	196	49	138	26	100	18	160	33
06:00	*	*	*	*	147	33	90	19	141	40	123	28	97	10	120	26
07:00	*	*	*	*	136	19	121	19	101	16	101	30	86	10	109	19
08:00	*	*	*	*	116	15	75	14	108	17	72	15	70	13	88	15
09:00	*	*	*	*	93	11	57	15	76	7	75	13	45	2	69	10
10:00	*	*	*	*	55	11	44	4	75	18	56	5	67	7	59	9
11:00	*	*	*	*	44	6	52	8	56	7	38	9	36	3	45	7
Lane	0	0	0	0	1584	327	2426	684	2928	705	2390	505	1566	278	2423	561
Day	0		0		1911		3110		3633		2895		1844		2984	
AM Peak	-	-	-	-	-	-	07:00	09:00	11:00	11:00	10:00	11:00	11:00	11:00	11:00	11:00
Vol.	-	-	-	-	-	-	170	68	189	56	145	44	103	24	148	45
PM Peak	-	-	-	-	16:00	16:00	16:00	16:00	15:00	12:00	13:00	12:00	14:00	13:00	15:00	12:00
Vol.	-	-	-	-	270	74	166	66	267	65	240	61	125	31	191	47

CITY OF WATERLOO TRAFFIC

625 GLENNWOOD STREET
WATERLOO, IOWA 50703
319-291-4440

Site Code: 00000001
Station ID:

Latitude: 0' 0.0000 South

Start	31-May-21		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB
12:00 AM	18	2	27	8	34	5	42	10	*	*	*	*	*	*	30	6
01:00	18	8	19	6	37	14	41	10	*	*	*	*	*	*	29	10
02:00	12	0	18	3	29	3	28	4	*	*	*	*	*	*	22	2
03:00	9	1	20	5	34	5	21	4	*	*	*	*	*	*	21	4
04:00	15	4	24	10	33	6	40	10	*	*	*	*	*	*	28	8
05:00	22	2	99	24	98	13	102	14	*	*	*	*	*	*	80	13
06:00	25	2	127	23	190	26	169	37	*	*	*	*	*	*	128	22
07:00	40	10	169	34	217	37	200	28	*	*	*	*	*	*	156	27
08:00	42	6	190	48	200	55	184	53	*	*	*	*	*	*	154	40
09:00	59	11	207	60	187	62	200	63	*	*	*	*	*	*	163	49
10:00	98	26	190	65	208	62	*	*	*	*	*	*	*	*	165	51
11:00	102	21	192	51	210	57	*	*	*	*	*	*	*	*	168	43
12:00 PM	122	25	193	53	221	61	*	*	*	*	*	*	*	*	179	46
01:00	128	27	215	73	189	44	*	*	*	*	*	*	*	*	177	48
02:00	103	31	193	68	231	73	*	*	*	*	*	*	*	*	176	57
03:00	101	27	212	66	229	69	*	*	*	*	*	*	*	*	181	54
04:00	92	17	238	78	297	62	*	*	*	*	*	*	*	*	209	52
05:00	104	25	217	41	195	50	*	*	*	*	*	*	*	*	172	39
06:00	92	28	166	40	166	33	*	*	*	*	*	*	*	*	141	34
07:00	84	29	125	34	121	22	*	*	*	*	*	*	*	*	110	28
08:00	84	7	108	26	106	15	*	*	*	*	*	*	*	*	99	16
09:00	61	14	88	16	89	11	*	*	*	*	*	*	*	*	79	14
10:00	58	8	34	9	67	11	*	*	*	*	*	*	*	*	53	9
11:00	59	14	49	12	48	3	*	*	*	*	*	*	*	*	52	10
Lane	1548	345	3120	853	3436	799	1027	233	0	0	0	0	0	0	2772	682
Day	1893		3973		4235		1260		0		0		0		3454	
AM Peak	11:00	10:00	09:00	10:00	07:00	09:00	07:00	09:00	-	-	-	-	-	-	11:00	10:00
Vol.	102	26	207	65	217	62	200	63	-	-	-	-	-	-	168	51
PM Peak	13:00	14:00	16:00	16:00	16:00	14:00	-	-	-	-	-	-	-	-	16:00	14:00
Vol.	128	31	238	78	297	73	-	-	-	-	-	-	-	-	209	57

Comb. Total	1893	3973	6146	4370	3633	2895	1844	6438
ADT	ADT 3,198	AADT 3,198						

225 SYCAMORE STREET (East Leg)

	A	B	C	D	E
1	Combined				
2	Start Date: 5/26/2021				
3					
4	Number	Date	Time	WB	EB
5	1	5/26/2021	02:00 PM	82	49
6	2	5/26/2021	03:00 PM	82	78
7	3	5/26/2021	04:00 PM	81	84
8	4	5/26/2021	05:00 PM	62	51
9	5	5/26/2021	06:00 PM	44	26
10	6	5/26/2021	07:00 PM	18	19
11	7	5/26/2021	08:00 PM	19	20
12	8	5/26/2021	09:00 PM	15	12
13	9	5/26/2021	10:00 PM	14	9
14	10	5/26/2021	11:00 PM	7	14
15	11	5/27/2021	12:00 AM	5	9
16	12	5/27/2021	01:00 AM	2	15
17	13	5/27/2021	02:00 AM	10	3
18	14	5/27/2021	03:00 AM	4	11
19	15	5/27/2021	04:00 AM	9	15
20	16	5/27/2021	05:00 AM	20	13
21	17	5/27/2021	06:00 AM	38	16
22	18	5/27/2021	07:00 AM	92	164
23	19	5/27/2021	08:00 AM	73	141
24	20	5/27/2021	09:00 AM	66	222
25	21	5/27/2021	10:00 AM	55	308
26	22	5/27/2021	11:00 AM	68	345
27	23	5/27/2021	12:00 PM	72	170
28	24	5/27/2021	01:00 PM	79	134
29	25	5/27/2021	02:00 PM	65	52
30	26	5/27/2021	03:00 PM	85	91
31	27	5/27/2021	04:00 PM	93	109
32	28	5/27/2021	05:00 PM	64	61
33	29	5/27/2021	06:00 PM	34	26
34	30	5/27/2021	07:00 PM	34	28
35	31	5/27/2021	08:00 PM	15	10
36	32	5/27/2021	09:00 PM	13	7
37	33	5/27/2021	10:00 PM	7	9
38	34	5/27/2021	11:00 PM	12	13
39	35	5/28/2021	12:00 AM	6	7
40	36	5/28/2021	01:00 AM	2	22
41	37	5/28/2021	02:00 AM	8	1
42	38	5/28/2021	03:00 AM	3	9
43	39	5/28/2021	04:00 AM	12	17
44	40	5/28/2021	05:00 AM	18	16
45	41	5/28/2021	06:00 AM	40	23
46	42	5/28/2021	07:00 AM	79	21
47	43	5/28/2021	08:00 AM	65	41
48	44	5/28/2021	09:00 AM	68	55
49	45	5/28/2021	10:00 AM	91	56
50	46	5/28/2021	11:00 AM	90	60
51	47	5/28/2021	12:00 PM	85	74
52	48	5/28/2021	01:00 PM	90	70
53	49	5/28/2021	02:00 PM	90	83
54	50	5/28/2021	03:00 PM	90	104
55	51	5/28/2021	04:00 PM	92	91
56	52	5/28/2021	05:00 PM	67	60
57	53	5/28/2021	06:00 PM	52	35
58	54	5/28/2021	07:00 PM	21	25
59	55	5/28/2021	08:00 PM	28	23
60	56	5/28/2021	09:00 PM	18	20
61	57	5/28/2021	10:00 PM	17	21
62	58	5/28/2021	11:00 PM	11	19
63	59	5/29/2021	12:00 AM	6	10
64	60	5/29/2021	01:00 AM	4	15
65	61	5/29/2021	02:00 AM	11	8
66	62	5/29/2021	03:00 AM	5	11
67	63	5/29/2021	04:00 AM	5	17
68	64	5/29/2021	05:00 AM	10	18
69	65	5/29/2021	06:00 AM	11	8
70	66	5/29/2021	07:00 AM	26	21
71	67	5/29/2021	08:00 AM	24	22
72	68	5/29/2021	09:00 AM	52	22
73	69	5/29/2021	10:00 AM	51	41

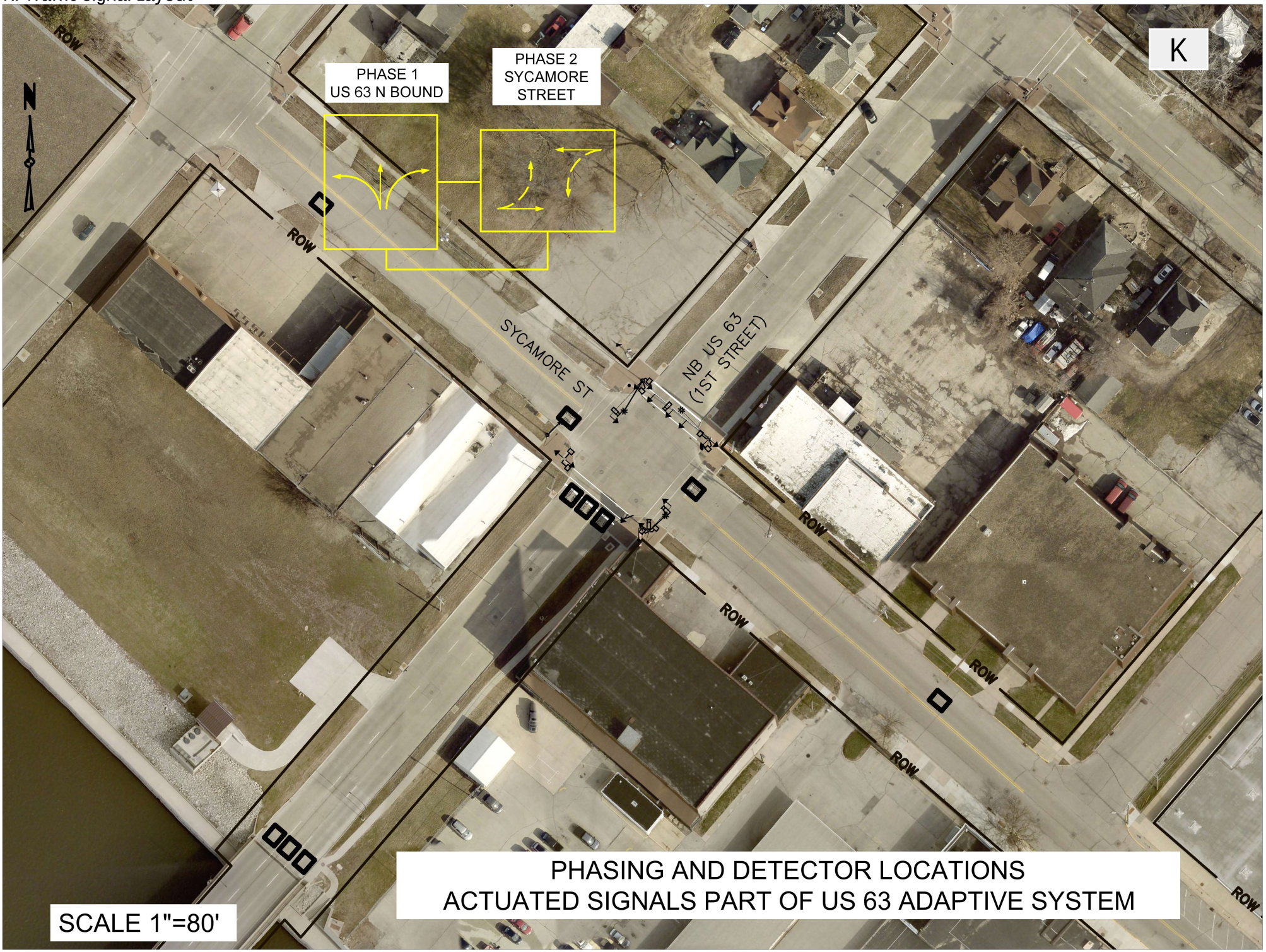
	A	B	C	D	E
74	70	5/29/2021	11:00 AM	89	38
75	71	5/29/2021	12:00 PM	132	69
76	72	5/29/2021	01:00 PM	86	105
77	73	5/29/2021	02:00 PM	94	99
78	74	5/29/2021	03:00 PM	53	92
79	75	5/29/2021	04:00 PM	39	50
80	76	5/29/2021	05:00 PM	36	37
81	77	5/29/2021	06:00 PM	40	30
82	78	5/29/2021	07:00 PM	29	23
83	79	5/29/2021	08:00 PM	21	11
84	80	5/29/2021	09:00 PM	19	16
85	81	5/29/2021	10:00 PM	13	16
86	82	5/29/2021	11:00 PM	8	9
87	83	5/30/2021	12:00 AM	2	9
88	84	5/30/2021	01:00 AM	3	6
89	85	5/30/2021	02:00 AM	6	2
90	86	5/30/2021	03:00 AM	3	7
91	87	5/30/2021	04:00 AM	7	2
92	88	5/30/2021	05:00 AM	6	9
93	89	5/30/2021	06:00 AM	5	6
94	90	5/30/2021	07:00 AM	5	6
95	91	5/30/2021	08:00 AM	7	11
96	92	5/30/2021	09:00 AM	11	10
97	93	5/30/2021	10:00 AM	20	19
98	94	5/30/2021	11:00 AM	30	19
99	95	5/30/2021	12:00 PM	32	26
100	96	5/30/2021	01:00 PM	37	33
101	97	5/30/2021	02:00 PM	28	27
102	98	5/30/2021	03:00 PM	27	23
103	99	5/30/2021	04:00 PM	25	17
104	100	5/30/2021	05:00 PM	31	19
105	101	5/30/2021	06:00 PM	16	19
106	102	5/30/2021	07:00 PM	13	12
107	103	5/30/2021	08:00 PM	17	16
108	104	5/30/2021	09:00 PM	5	1
109	105	5/30/2021	10:00 PM	6	13
110	106	5/30/2021	11:00 PM	3	8
111	107	5/31/2021	12:00 AM	1	1
112	108	5/31/2021	01:00 AM	3	2
113	109	5/31/2021	02:00 AM	3	3
114	110	5/31/2021	03:00 AM	4	10
115	111	5/31/2021	04:00 AM	5	1
116	112	5/31/2021	05:00 AM	4	6
117	113	5/31/2021	06:00 AM	7	3
118	114	5/31/2021	07:00 AM	8	7
119	115	5/31/2021	08:00 AM	12	6
120	116	5/31/2021	09:00 AM	16	11
121	117	5/31/2021	10:00 AM	25	22
122	118	5/31/2021	11:00 AM	24	17
123	119	5/31/2021	12:00 PM	33	35
124	120	5/31/2021	01:00 PM	31	24
125	121	5/31/2021	02:00 PM	33	21
126	122	5/31/2021	03:00 PM	28	26
127	123	5/31/2021	04:00 PM	19	22
128	124	5/31/2021	05:00 PM	21	20
129	125	5/31/2021	06:00 PM	28	22
130	126	5/31/2021	07:00 PM	32	18
131	127	5/31/2021	08:00 PM	11	11
132	128	5/31/2021	09:00 PM	17	7
133	129	5/31/2021	10:00 PM	11	15
134	130	5/31/2021	11:00 PM	8	14
135	131	6/1/2021	12:00 AM	4	4
136	132	6/1/2021	01:00 AM	2	7
137	133	6/1/2021	02:00 AM	11	0
138	134	6/1/2021	03:00 AM	4	16
139	135	6/1/2021	04:00 AM	9	11
140	136	6/1/2021	05:00 AM	20	28
141	137	6/1/2021	06:00 AM	47	21
142	138	6/1/2021	07:00 AM	100	35
143	139	6/1/2021	08:00 AM	80	63
144	140	6/1/2021	09:00 AM	92	71
145	141	6/1/2021	10:00 AM	92	64
146	142	6/1/2021	11:00 AM	85	56

J

1ST STREET (US 63 One-Way Approach)

	A	B	C	D	E
1	Combined				
2	Start Date: 5/26/2021				
3					
4	Number	Date	Time	NB	Direction 2
5	1	5/26/2021	02:00 PM	567	0
6	2	5/26/2021	03:00 PM	507	0
7	3	5/26/2021	04:00 PM	439	0
8	4	5/26/2021	05:00 PM	384	0
9	5	5/26/2021	06:00 PM	325	0
10	6	5/26/2021	07:00 PM	268	0
11	7	5/26/2021	08:00 PM	206	0
12	8	5/26/2021	09:00 PM	156	0
13	9	5/26/2021	10:00 PM	94	0
14	10	5/26/2021	11:00 PM	41	0
15	11	5/27/2021	12:00 AM	0	0
16	12	5/27/2021	01:00 AM	47	0
17	13	5/27/2021	02:00 AM	64	0
18	14	5/27/2021	03:00 AM	35	0
19	15	5/27/2021	04:00 AM	78	0
20	16	5/27/2021	05:00 AM	193	0
21	17	5/27/2021	06:00 AM	341	0
22	18	5/27/2021	07:00 AM	436	4
23	19	5/27/2021	08:00 AM	396	11
24	20	5/27/2021	09:00 AM	372	17
25	21	5/27/2021	10:00 AM	390	15
26	22	5/27/2021	11:00 AM	445	1
27	23	5/27/2021	12:00 PM	436	0
28	24	5/27/2021	01:00 PM	446	1
29	25	5/27/2021	02:00 PM	458	0
30	26	5/27/2021	03:00 PM	482	15
31	27	5/27/2021	04:00 PM	454	0
32	28	5/27/2021	05:00 PM	490	0
33	29	5/27/2021	06:00 PM	331	0
34	30	5/27/2021	07:00 PM	478	1
35	31	5/27/2021	08:00 PM	288	0
36	32	5/27/2021	09:00 PM	221	0
37	33	5/27/2021	10:00 PM	169	0
38	34	5/27/2021	11:00 PM	133	0
39	35	5/28/2021	12:00 AM	84	0
40	36	5/28/2021	01:00 AM	63	0
41	37	5/28/2021	02:00 AM	55	0
42	38	5/28/2021	03:00 AM	30	0
43	39	5/28/2021	04:00 AM	74	0
44	40	5/28/2021	05:00 AM	176	0
45	41	5/28/2021	06:00 AM	302	0
46	42	5/28/2021	07:00 AM	453	0
47	43	5/28/2021	08:00 AM	332	0
48	44	5/28/2021	09:00 AM	335	0
49	45	5/28/2021	10:00 AM	429	0
50	46	5/28/2021	11:00 AM	438	0
51	47	5/28/2021	12:00 PM	450	0
52	48	5/28/2021	01:00 PM	461	0
53	49	5/28/2021	02:00 PM	495	0
54	50	5/28/2021	03:00 PM	509	0
55	51	5/28/2021	04:00 PM	480	0
56	52	5/28/2021	05:00 PM	489	0
57	53	5/28/2021	06:00 PM	343	0
58	54	5/28/2021	07:00 PM	328	0
59	55	5/28/2021	08:00 PM	313	0
60	56	5/28/2021	09:00 PM	249	0
61	57	5/28/2021	10:00 PM	203	0
62	58	5/28/2021	11:00 PM	148	0
63	59	5/29/2021	12:00 AM	117	0
64	60	5/29/2021	01:00 AM	100	0
65	61	5/29/2021	02:00 AM	53	0
66	62	5/29/2021	03:00 AM	37	0
67	63	5/29/2021	04:00 AM	50	0
68	64	5/29/2021	05:00 AM	88	0
69	65	5/29/2021	06:00 AM	120	0
70	66	5/29/2021	07:00 AM	161	0
71	67	5/29/2021	08:00 AM	239	0
72	68	5/29/2021	09:00 AM	334	0
73	69	5/29/2021	10:00 AM	345	0
74	70	5/29/2021	11:00 AM	461	0
75	71	5/29/2021	12:00 PM	523	0
76	72	5/29/2021	01:00 PM	495	0
77	73	5/29/2021	02:00 PM	505	0
78	74	5/29/2021	03:00 PM	464	1
79	75	5/29/2021	04:00 PM	408	0
80	76	5/29/2021	05:00 PM	382	0
81	77	5/29/2021	06:00 PM	373	0
82	78	5/29/2021	07:00 PM	335	0
83	79	5/29/2021	08:00 PM	274	0
84	80	5/29/2021	09:00 PM	243	0
85	81	5/29/2021	10:00 PM	222	0
86	82	5/29/2021	11:00 PM	131	0
87	83	5/30/2021	12:00 AM	141	0
88	84	5/30/2021	01:00 AM	104	0
89	85	5/30/2021	02:00 AM	64	0
90	86	5/30/2021	03:00 AM	52	0
91	87	5/30/2021	04:00 AM	45	0
92	88	5/30/2021	05:00 AM	42	0
93	89	5/30/2021	06:00 AM	90	0
94	90	5/30/2021	07:00 AM	124	0
95	91	5/30/2021	08:00 AM	147	0
96	92	5/30/2021	09:00 AM	212	0
97	93	5/30/2021	10:00 AM	264	0
98	94	5/30/2021	11:00 AM	324	0
99	95	5/30/2021	12:00 PM	346	0
100	96	5/30/2021	01:00 PM	362	0
101	97	5/30/2021	02:00 PM	384	0
102	98	5/30/2021	03:00 PM	394	0
103	99	5/30/2021	04:00 PM	346	0
104	100	5/30/2021	05:00 PM	353	1
105	101	5/30/2021	06:00 PM	311	0
106	102	5/30/2021	07:00 PM	235	0
107	103	5/30/2021	08:00 PM	227	0
108	104	5/30/2021	09:00 PM	203	0
109	105	5/30/2021	10:00 PM	178	0
110	106	5/30/2021	11:00 PM	131	0
111	107	5/31/2021	12:00 AM	84	0
112	108	5/31/2021	01:00 AM	73	0
113	109	5/31/2021	02:00 AM	52	0
114	110	5/31/2021	03:00 AM	29	0
115	111	5/31/2021	04:00 AM	38	0
116	112	5/31/2021	05:00 AM	46	0
117	113	5/31/2021	06:00 AM	89	0
118	114	5/31/2021	07:00 AM	105	0
119	115	5/31/2021	08:00 AM	151	0
120	116	5/31/2021	09:00 AM	198	0
121	117	5/31/2021	10:00 AM	295	0
122	118	5/31/2021	11:00 AM	323	1
123	119	5/31/2021	12:00 PM	331	0
124	120	5/31/2021	01:00 PM	415	0
125	121	5/31/2021	02:00 PM	403	0
126	122	5/31/2021	03:00 PM	367	0
127	123	5/31/2021	04:00 PM	384	0
128	124	5/31/2021	05:00 PM	346	0
129	125	5/31/2021	06:00 PM	314	0
130	126	5/31/2021	07:00 PM	298	0
131	127	5/31/2021	08:00 PM	277	0
132	128	5/31/2021	09:00 PM	232	0
133	129	5/31/2021	10:00 PM	179	0
134	130	5/31/2021	11:00 PM	112	0
135	131	6/1/2021	12:00 AM	64	0
136	132	6/1/2021	01:00 AM	48	0
137	133	6/1/2021	02:00 AM	46	0
138	134	6/1/2021	03:00 AM	33	0
139	135	6/1/2021	04:00 AM	65	0
140	136	6/1/2021	05:00 AM	204	0
141	137	6/1/2021	06:00 AM	327	0
142	138	6/1/2021	07:00 AM	452	0
143	139	6/1/2021	08:00 AM	393	0
144	140	6/1/2021	09:00 AM	375	0
145	141	6/1/2021	10:00 AM	415	0
146	142	6/1/2021	11:00 AM	442	1

K. Traffic Signal Layout



County:	Black Hawk	Prepared By:	Mohammad Elahi
Location:	NB US 63 at Sycamore ST, Waterloo	Date Prepared:	7/29/2025
Proposed Improvements:	Replace 2-Way Stop Control with Traffic Signal Control		
Estimated Improvement Cost:	$ 251,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2.0%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 5,020

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	67	**67.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	67.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	67.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	4	67.0	**0.80**	**0.54**
Possible/Unknown Injury (C)	$ 135,000	13	67.0	**2.60**	**1.74**
Property Damage Only (O)	$ 20,000	17	67.0	**3.40**	**2.28**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ 155,440**
Possible/Unknown Injury (C)	**$ 235,170**
Property Damage Only (O)	**$ 45,560**

Total Benefits and Costs

		Implementation Cost	$ 251,000
		Present Value of Maint.	$ 68,223
Present Value Benefits (Societal Benefits)	$ 6,442,539	Present Value Costs (Impl. and Maint. Costs)	$ 319,223
Present Value Net Return	$ 6,123,316		
Benefit Cost Ratio	**20.18**		

Form continues on next page

County: Black Hawk
Location: NB US 63 at Sycamore ST, Waterloo
Prepared By: Mohammad Elahi
Date Prepared: 7/29/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

A

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 7/31/25

Location / Title of Project: Burton & Broadway Left Turn Lane Mast Arm

Applicant: City of Waterloo – Traffic Operations Department

Contact Person: Tina Schellhorn Title: Associate Traffic Engineer

Complete Mailing Address: 625 Glenwood St
Waterloo, Iowa 50703

Phone: (319)291-4440 (Area Code) E-Mail: Tina.schellhorn@waterloo-ia.org

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s): _____

Contact Person: _____ Title: _____

Complete Mailing Address: _____

_____

Phone: _____ (Area Code) E-Mail: _____

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	37,000
Total Project Cost	$	
Safety Funds Requested	**$**	**37,000**

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
2849	Broadway Street and Burton Avenue	☒	☐	high	negligable
		☐	☐		

Docusign Envelope ID: 3BF8B35F-FD0E-488A-B086-2EE0301F75BF

A

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Waterloo, Iowa

Signed: DocuSigned by: Quentin Hart D0525D78AAC8449... 8/4/2025

Signature Date Signed

Quentin Hart

Printed Name

Attest: Signed by: Kelley Felchle FF60BC0FFBC64AB... 8/4/2025

Signature Date Signed

Kelley Felchle

Printed Name

Docusign Envelope ID: 185AAEE1-57EE-495E-BBB0-208B2CAFC050

A

Prepared by LeAnn M. Even, Deputy City Clerk, City of Waterloo, 715 Mulberry Street, Waterloo, IA 50703, (319) 291-4323.

RESOLUTION NO. 2025-434

RESOLUTION APPROVING SUBMISSION OF AN IOWA DOT TRAFFIC SAFETY IMPROVEMENT PROGRAM GRANT APPLICATION IN THE AMOUNT OF $37,000.00 FOR A COMBINATION TRAFFIC SIGNAL MAST-ARM POLE AND THE ADDITION OF A LEFT TURN LANE FOR EASTBOUND TRAFFIC ON BROADWAY STREET AT BURTON AVENUE.

WHEREAS, the City of Waterloo is committed to enhancing roadway safety and the efficiency of its traffic management systems to better serve the community; and

WHEREAS, the proposed project consists of installing a combination traffic signal mast-arm pole and adding a left turn lane for eastbound traffic on Broadway Street at Burton Avenue to significantly improve traffic flow and reduce congestion; and

WHEREAS, the Iowa Department of Transportation (DOT) offers Traffic Safety Improvement Program grants to assist municipalities in funding projects that enhance traffic safety; and

WHEREAS, the City of Waterloo seeks to apply for a grant in the amount of $37,000.00 from the Iowa DOT to fund these traffic improvements.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF WATERLOO, IOWA,

1. That the submission of an Iowa DOT Traffic Safety Improvement Program Grant Application in the amount of $37,000.00 for the installation of a combination traffic signal mast-arm pole and the addition of a left turn lane for eastbound traffic on Broadway Street at Burton Avenue is hereby approved.

2. That the Public Works Division Manager is hereby authorized to execute and submit the necessary application documents and to take any additional actions required to complete and administer any resulting grant contract.

PASSED AND ADOPTED this 4th day of August 2025.

DocuSigned by:
Quentin Hart
D0525D78AAC8449...
Quentin Hart, Mayor

ATTEST:

Signed by:
Kelley Felchle
FF60BC0FFBC64AB...
Kelley Felchle, City Clerk

SEAL

B. Narrative

Project Description:
The City of Waterloo is seeking TSIP funding to replace steel signal infrastructure to facilitate the construction of dedicated left-turn lanes on Broadway St, a four-lane divided roadway with a median, at Burton Ave. The project involves road reconstruction along this corridor and widening the roadway at this intersection to accommodate left-turn lanes in both directions, improving safety and traffic operations along this corridor.

Existing Conditions & Safety Concerns:
Currently, Broadway St. operates as a four-lane minor arterial with a center median. At several intersections along this corridor, the existing median width is insufficient to accommodate dedicated left-turn lanes. As a result, left-turn movement is permitted.

Crash data collected over the past several years show that left-turn related collisions are a recurring issue directly related to the lack of protected left-turn movements. Drivers attempting to turn left from the through lanes are often struck by or involved in opposing-direction angle crashes.

Proposed Improvement:
The proposed project will widen Broadway St. at Burton Ave. to construct dedicated left-turn lanes. Key components of the project include:

- Pavement reconstruction
- Addition of dedicated left-turn lanes (both directions)
- Modifications to curb, gutter, and drainage as needed
- Restriping and signage updates
- Signal modifications (if warranted)
- Pedestrian ramp and crosswalk improvements, where applicable

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Safety Justification:
Dedicated left-turn lanes are a proven countermeasure that significantly reduces the risk of crashes by:

- Separating turning vehicles from through traffic

- Reducing conflict points at intersections
- Improving traffic flow and driver expectation
- Enhancing visibility and sight distance at approaches

The improvement aligns with FHWA's and Iowa DOT's emphasis on site Specific safety enhancements using well-documented, cost-effective treatments.

Estimated Project Cost & Funding Request:

- **Total Project Cost:** $5,093,214.40
- **TSIP Funds Requested:** $37,000.00

Conclusion:
The proposed project directly addresses an ongoing safety concern on an arterial corridor by providing dedicated space for turning vehicles. The addition of left-turn lanes will mitigate crash risk, reduce congestion, and improve the overall operation of Broadway St. This investment in roadway safety will benefit all users. The City of Waterloo respectfully requests TSIP funding to assist with this essential improvement.

C. Cost

C

FY 26 Broadway St Reconstruction Project					ENGINEERS OPINION OF COST	
DIVISION I - ROADWAY CONSTRUCTION						
BID ITEM	SUDAS SPECIFICATION * SEE SUPPLEMENTAL	DESCRIPTION	UNIT	SAN MARNAN DR QTY	UNIT BID PRICE	TOTAL BID PRICE
		DIVISION 2 - EARTHWORK				
1	2010-108-D-1 *	TOPSOIL, 4 INCHES, ON SITE	SY	30,000.0	$ 1.10	$ 33,000.00
2	2010-108-D-3 *	TOPSOIL, 4 INCHES, OFF SITE	SY	5,200.0	$ 3.85	$ 20,020.00
3	2010-108-E *	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	1,500.0	$ 8.80	$ 13,200.00
4	SEE EST. REF.	EXCAVATION, CLASS 10, WASTE	CY	10,000.0	$ 12.65	$ 126,500.00
5	2010-108-F *	EXCAVATION, CLASS 10, BELOW GRADE	CY	2,500.0	$ 12.65	$ 31,625.00
6	2010-108-G *	SUBGRADE PREPARATION	SY	47,000.0	$ 0.99	$ 46,530.00
7	2010-108-J *	SUBBASE, MODIFIED, 10 INCH	SY	47,000.0	$ 7.43	$ 348,975.00
8	IADOT 2121	GRANULAR SHOULDER, TYPE B, 4 INCH DEPTH	SY	11,000.0	$ 6.05	$ 66,550.00
				DIV. I - SUBTOTAL EARTHWORK =	$	686,400.00
		DIVISION 4 - SEWERS AND DRAINS - STORM				
		STORM SEWERS				
9	4020-108-A	STORM SEWER, TRENCHED, RCP 2000D, 24 INCH	LF	250.0	$ 302.50	$ 75,625.00
10	4020-108-A	STORM SEWER, TRENCHED, RCP 2000D, 18 INCH	LF	200.0	$ 275.00	$ 55,000.00
11	4020-108-A	STORM SEWER, TRENCHED, RCP 2000D, 15 INCH	LF	200.0	$ 275.00	$ 55,000.00
12	4020-108-D	REMOVAL OF STORM SEWER, RCP, LESS THAN OR EQUAL TO 36 INCH	LF	650.0	$ 33.00	$ 21,450.00
		SUBDRAINS				
13	4040-108-A *	SUBDRAIN, TYPE SP, 6 INCH	LF	12,400.0	$ 13.20	$ 163,680.00
14	4040-108-D *	SUBDRAIN OUTLET TO STRUCTURE, 6 INCH	EACH	30.0	$ 275.00	$ 8,250.00
15	4040-108-D *	SUBDRAIN OUTLET TO DITCH, 6 INCH	EACH	35.0	$ 330.00	$ 11,550.00
				DIV. I - SUBTOTAL SEWERS AND DRAINS - STORM =	$	390,555.00
		DIVISION 6 - STRUCTURES FOR SANITARY AND STORM SEWERS				
16	6010-108-B *	INTAKE, SW-505	EACH	1.0	$ 9,350.00	$ 9,350.00
17	6010-108-B *	INTAKE, SW-507	EACH	1.0	$ 7,700.00	$ 7,700.00
18	6010-108-E *	MANHOLE ADJUSTMENT, MINOR, SW-401, 48"	EACH	3.0	$ 825.00	$ 2,475.00
				DIV. I - SUBTOTAL STRUCTURES FOR SANITARY AND STORM SEWERS =	$	19,525.00
		DIVISION 7 - STREETS AND RELATED WORK				
		PCC PAVEMENT				
19	7010-108-A; 302 *	PAVEMENT, PCC, 9 INCH, C-SUD OR C-4, CL 3 AGG	SY	42,000.0	$ 51.50	$ 2,163,084.00
20	7010-108-I; 302 *	PCC PAVEMENT SAMPLES AND TESTING	LS	1.0	$ 5,500.00	$ 5,500.00
		SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS				
21	7030-108-E *	PCC SIDEWALK, 6-INCH, C-4	SY	350.0	$ 67.65	$ 23,677.50
22	7030-108-G *	DETECTABLE WARNINGS	SF	80.0	$ 71.50	$ 5,720.00
		PAVEMENT REHABILITATION				
23	7040-108-H *	PAVEMENT REMOVAL	SY	35,000.0	$ 2.20	$ 77,000.00
				DIV. I - SUBTOTAL STREETS AND RELATED WORK =	$	2,274,981.50
		DIVISION 8 - TRAFFIC CONTROL				
		TRAFFIC SIGNALS				
24	SEE EST. REF.	TRAFFIC SIGNALIZATION	LS	1.0	$ 950,000.00	$ 950,000.00
		PAVEMENT MARKINGS				
25	8020-108-B	PAINTED PAVEMENT MARKINGS, WATERBORNE	STA	375.00	$ 66.00	$ 24,750.00
26	8020-108-F	WET, RETROFLECTIVE REMOVABLE TAPE MARKINGS	STA	10.00	$ 143.00	$ 1,430.00
27	8020-108-G	PAINTED SYMBOLS AND LEGENDS, TEMPORARY	EACH	15.0	$ 110.00	$ 1,650.00
28	8020-108-H *	PRECUT SYMBOLS AND LEGENDS	EACH	10.0	$ 577.50	$ 5,775.00
29	8020-108-K	PAVEMENT MARKINGS REMOVED	STA	30.00	$ 121.00	$ 3,630.00
30	8020-108-L	SYMBOLS AND LEGENDS REMOVED	EACH	15.0	$ 137.50	$ 2,062.50
		TEMPORARY TRAFFIC CONTROL				
31	8030-108-A *	TEMPORARY TRAFFIC CONTROL	LS	1.0	$ 50,000.00	$ 50,000.00
32	8030-108-A *	PORTABLE DYNAMIC MESSAGE SIGNS	EACH / DAY	75.0	$ 110.00	$ 8,250.00
33	8030-2.02	DIRECTIONAL SIGNS, PER DETAILS	EACH	100.0	$ 104.50	$ 10,450.00
34	IADOT 2528-2518010	SAFTEY CLOSURE	EACH	30.0	$ 137.50	$ 4,125.00
				DIV. I - SUBTOTAL TRAFFIC CONTROL =	$	1,062,122.50
		DIVISION 9 - SITE WORK AND LANDSCAPING				
		SEEDING				
35	9010-108-B *	HYDRAULIC SEEDING, FERTILIZING AND MULCHING - TYPE 1	SY	35,200.0	$ 0.68	$ 24,006.40
		EROSION AND SEDIMENT CONTROL				
36	9040-108-N-1	SILT FENCE OR SILT FENCE DITCH CHECK, INSTALLATION	LF	8,000.0	$ 1.65	$ 13,200.00
37	9040-108-N-2 *	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF SEDIMENT	LF	1,000.0	$ 0.11	$ 110.00
38	9040-108-N-3	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE	LF	8,000.0	$ 0.11	$ 880.00
39	9040-108-Q-2 *	EROSION CONTROL MULCHING, HYDROMULCHING	SY	25,000.0	$ 0.29	$ 7,150.00
40	9040-108-T-1 *	INLET PROTECTION DEVICE, INSTALLATION, DROP-IN	EACH	2.0	$ 159.50	$ 319.00
41	9040-108-T-1 *	INLET PROTECTION DEVICE, INSTALLATION, SURFACE-APPLIED	EACH	10.0	$ 82.50	$ 825.00
42	9040-108-T-2 *	INLET PROTECTION DEVICE, MAINTENANCE	EACH	12.0	$ 27.50	$ 330.00
				DIV. I - SUBTOTAL SITE WORK AND LANDSCAPING =	$	46,820.40
		DIVISION 11 - MISCELLANEOUS				
43	11010-108-A	CONSTRUCTION SURVEY	LS	1.0	$ 30,800.00	$ 30,800.00
44	11020-108-A	MOBILIZATION	LS	1.0	$ 579,810.00	$ 579,810.00
45	11,050-108-A	CONCRETE WASHOUT	LS	1.0	$ 2,200.00	$ 2,200.00
				DIV. I - SUBTOTAL MISCELLANEOUS =	$	612,810.00
				TOTAL PROJECT COST (DIV. I) =	**$**	**5,093,214.40**

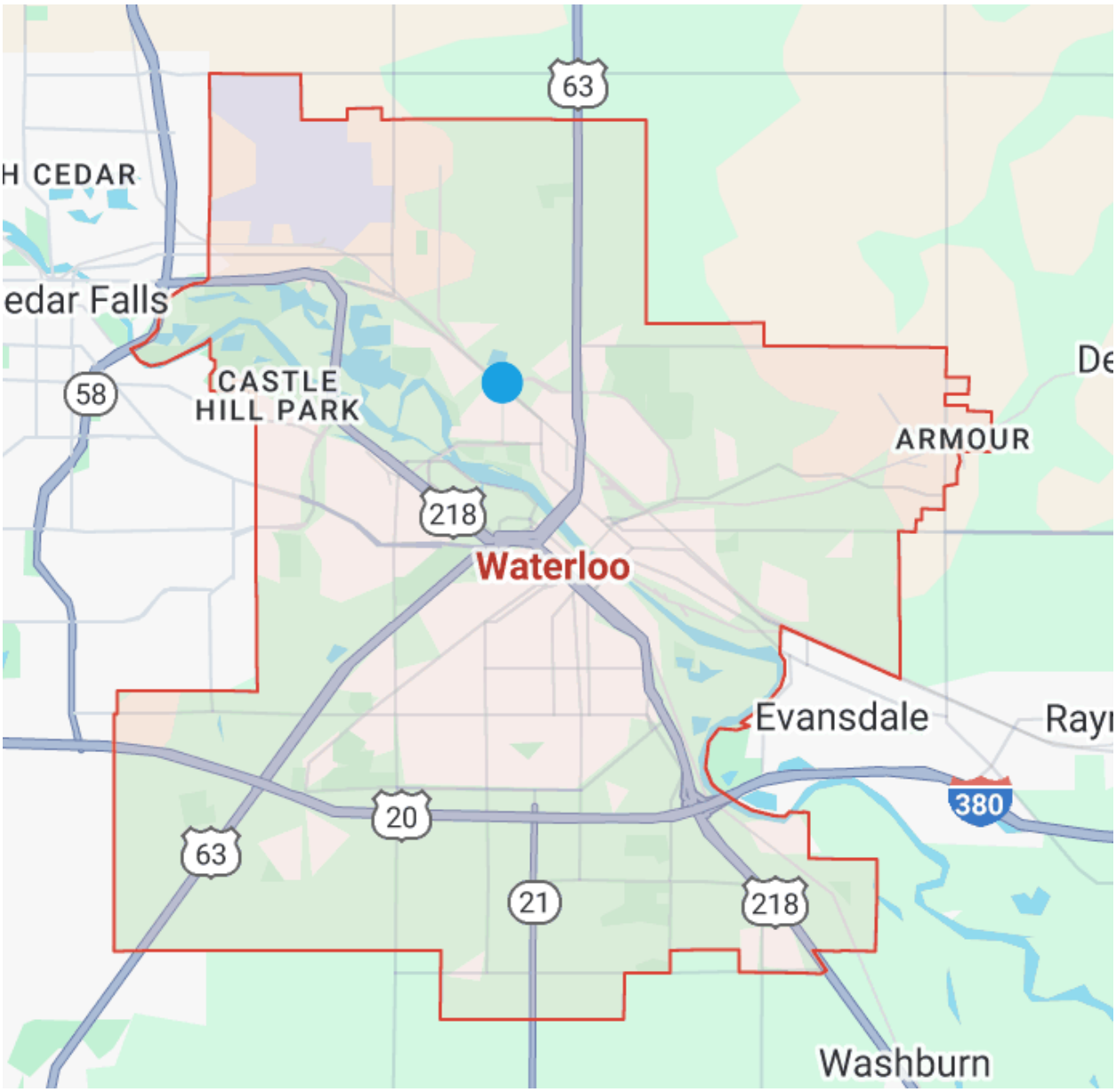
SAFETY IMPROVEMENT CONSTRUCTION RELATED COSTS - LEFT TURN LANES AT BURTON AVE						
SAF - 1	2010-108-E *	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	150.0	$ 8.80	$ 1,320.00
SAF -2	SEE EST. REF.	EXCAVATION, CLASS 10, WASTE	CY	300.0	$ 12.65	$ 3,795.00
SAF -3	2010-108-G *	SUBGRADE PREPARATION	SY	2,450.0	$ 0.99	$ 2,425.50
SAF - 4	2010-108-J *	SUBBASE, MODIFIED, 10 INCH	SY	2,450.0	$ 7.43	$ 18,191.25
SAF - 5	7010-108-A; 302 *	PAVEMENT, PCC, 9 INCH, C-SUD OR C-4, CL 3 AGG	SY	2,110.0	$ 51.50	$ 108,669.22
SAF - 6	SEE EST. REF.	TRAFFIC SIGNALIZATION	LS	1.0	$ 475,000.00	$ 475,000.00
SAF - 7	8020-108-B	PAINTED PAVEMENT MARKINGS, WATERBORNE	STA	10.00	$ 66.00	$ 660.00
SAF - 8	8020-108-H *	PRECUT SYMBOLS AND LEGENDS	EACH	6.0	$ 577.50	$ 3,465.00
				SAFETY IMPROVEMENT TOTAL COST =	**$**	**613,525.97**

D. Project Schedule

Project Schedule

Funds Awarded	Jan- 2026	
Final Plans	Feb 2026	
Funds Available	Jul-2026	
Construction	Apr-2026	Nov-2026

E. Map


63
H CEDAR
edar Falls
58
CASTLE
HILL PARK
ARMOUR
218
Waterloo
Evansdale
20
380
63
21
218
Washburn

F. Color Pictures of the Project Site



EB on Broadway St at Burton Ave.



WB on Broadway St at Burton Ave.

F. Cont.



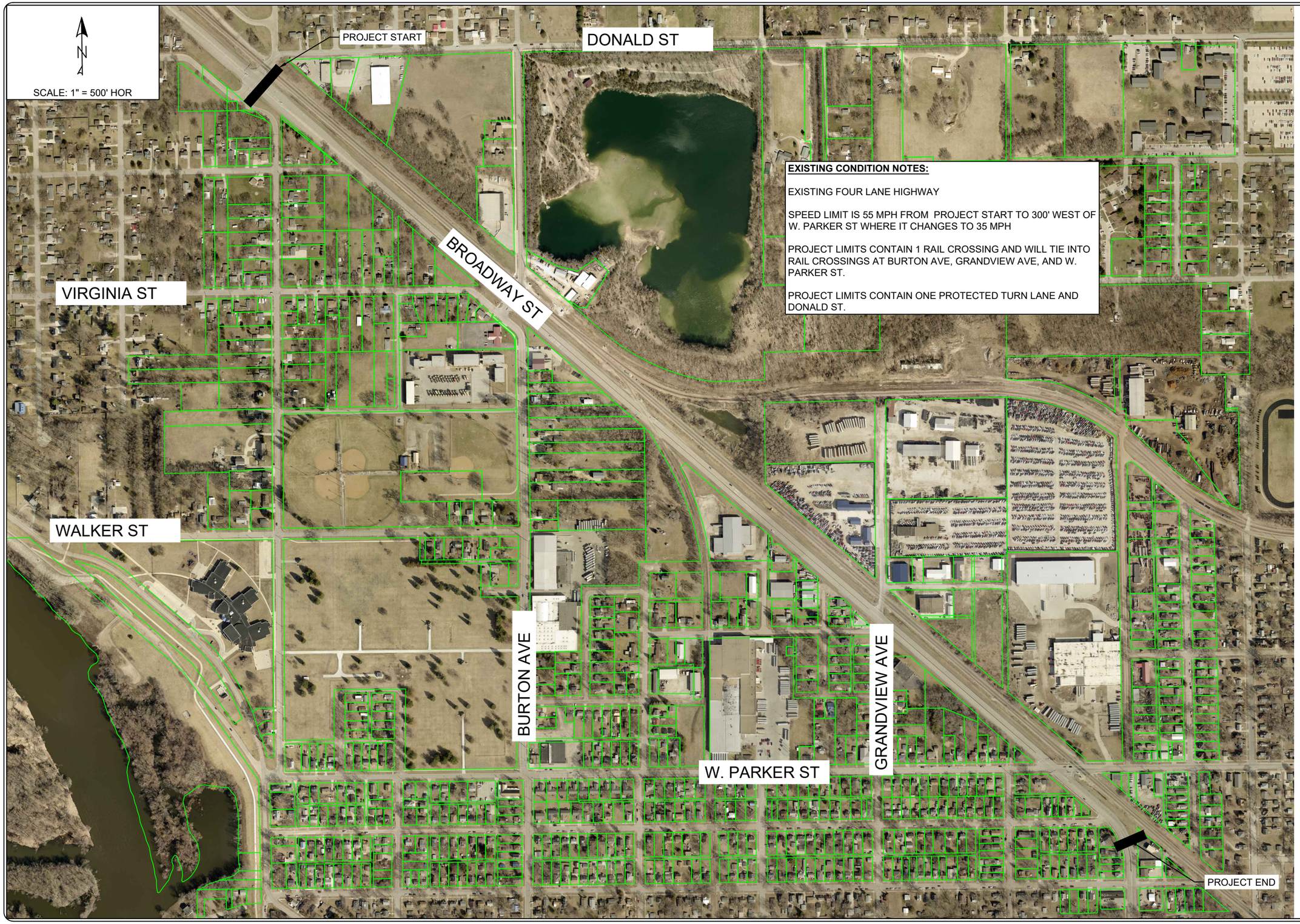
NB on Burton Ave. at Broadway St.



SB on Burton Ave. at Broadway St.

G.Plan View

G



EXISTING CONDITION NOTES:

EXISTING FOUR LANE HIGHWAY

SPEED LIMIT IS 55 MPH FROM PROJECT START TO 300' WEST OF W. PARKER ST WHERE IT CHANGES TO 35 MPH

PROJECT LIMITS CONTAIN 1 RAIL CROSSING AND WILL TIE INTO RAIL CROSSINGS AT BURTON AVE, GRANDVIEW AVE, AND W. PARKER ST.

PROJECT LIMITS CONTAIN ONE PROTECTED TURN LANE AND DONALD ST.

ITEM G - PLAN VIEW
EXISTING CONDITIONS

T.S.I.P APPLICATION
IOWA D.O.T.

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

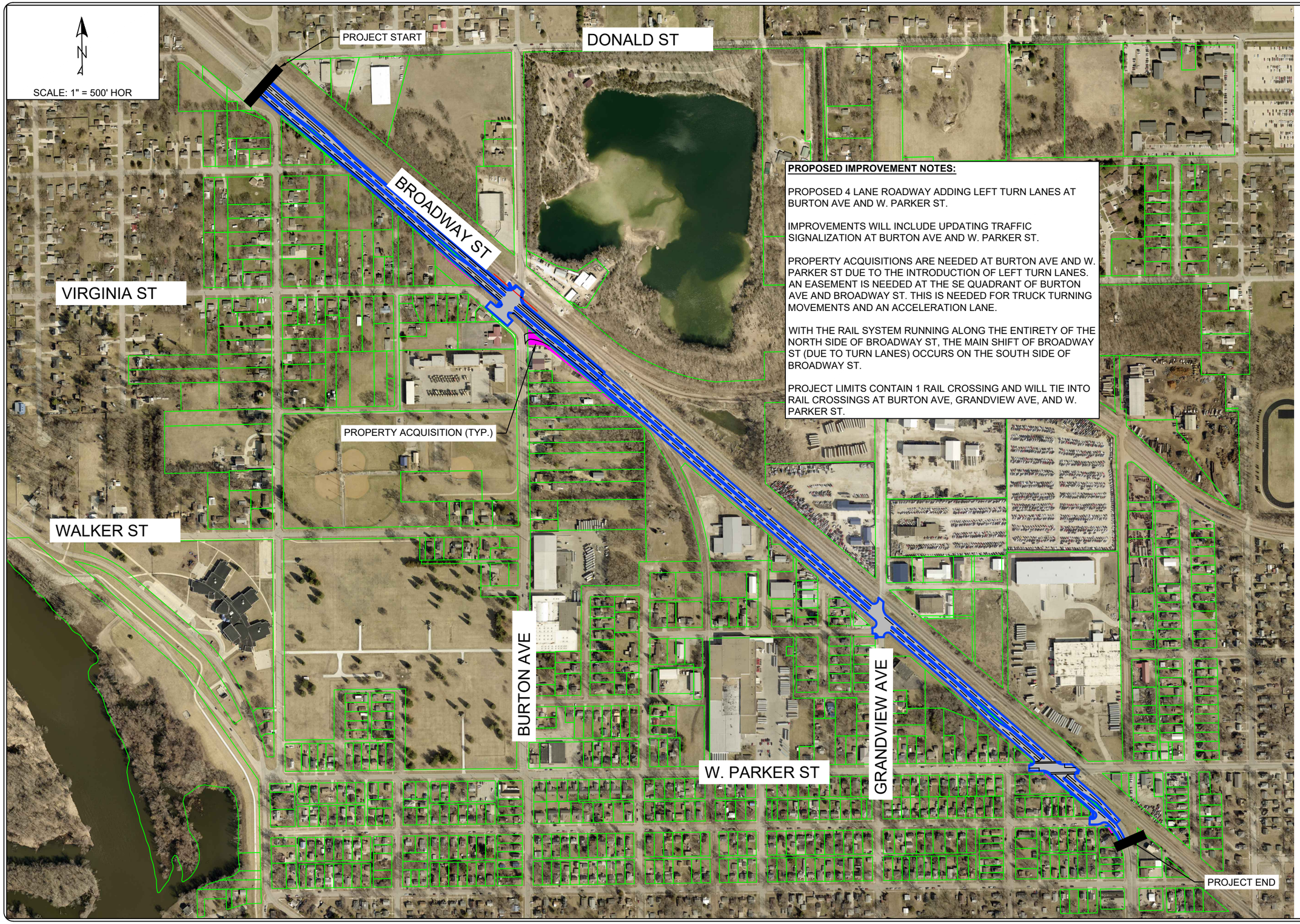
DATE: 8/7/2025

SHEET ####

L:\CONT 1116 - F.Y. 2025 PCC RECONSTRUCTION PROJECT\Broadway\BROADWAY - DONALD TO BURTON - TRUCK MOVEMENTS - South Shift.dwg 8/7/2025 3:06 PM

G. Cont.

G



PROPOSED IMPROVEMENT NOTES:

PROPOSED 4 LANE ROADWAY ADDING LEFT TURN LANES AT BURTON AVE AND W. PARKER ST.

IMPROVEMENTS WILL INCLUDE UPDATING TRAFFIC SIGNALIZATION AT BURTON AVE AND W. PARKER ST.

PROPERTY ACQUISITIONS ARE NEEDED AT BURTON AVE AND W. PARKER ST DUE TO THE INTRODUCTION OF LEFT TURN LANES. AN EASEMENT IS NEEDED AT THE SE QUADRANT OF BURTON AVE AND BROADWAY ST. THIS IS NEEDED FOR TRUCK TURNING MOVEMENTS AND AN ACCELERATION LANE.

WITH THE RAIL SYSTEM RUNNING ALONG THE ENTIRETY OF THE NORTH SIDE OF BROADWAY ST, THE MAIN SHIFT OF BROADWAY ST (DUE TO TURN LANES) OCCURS ON THE SOUTH SIDE OF BROADWAY ST.

PROJECT LIMITS CONTAIN 1 RAIL CROSSING AND WILL TIE INTO RAIL CROSSINGS AT BURTON AVE, GRANDVIEW AVE, AND W. PARKER ST.

ITEM G - PLAN VIEW
PROPOSED CONDITIONS

T.S.I.P APPLICATION
IOWA D.O.T.

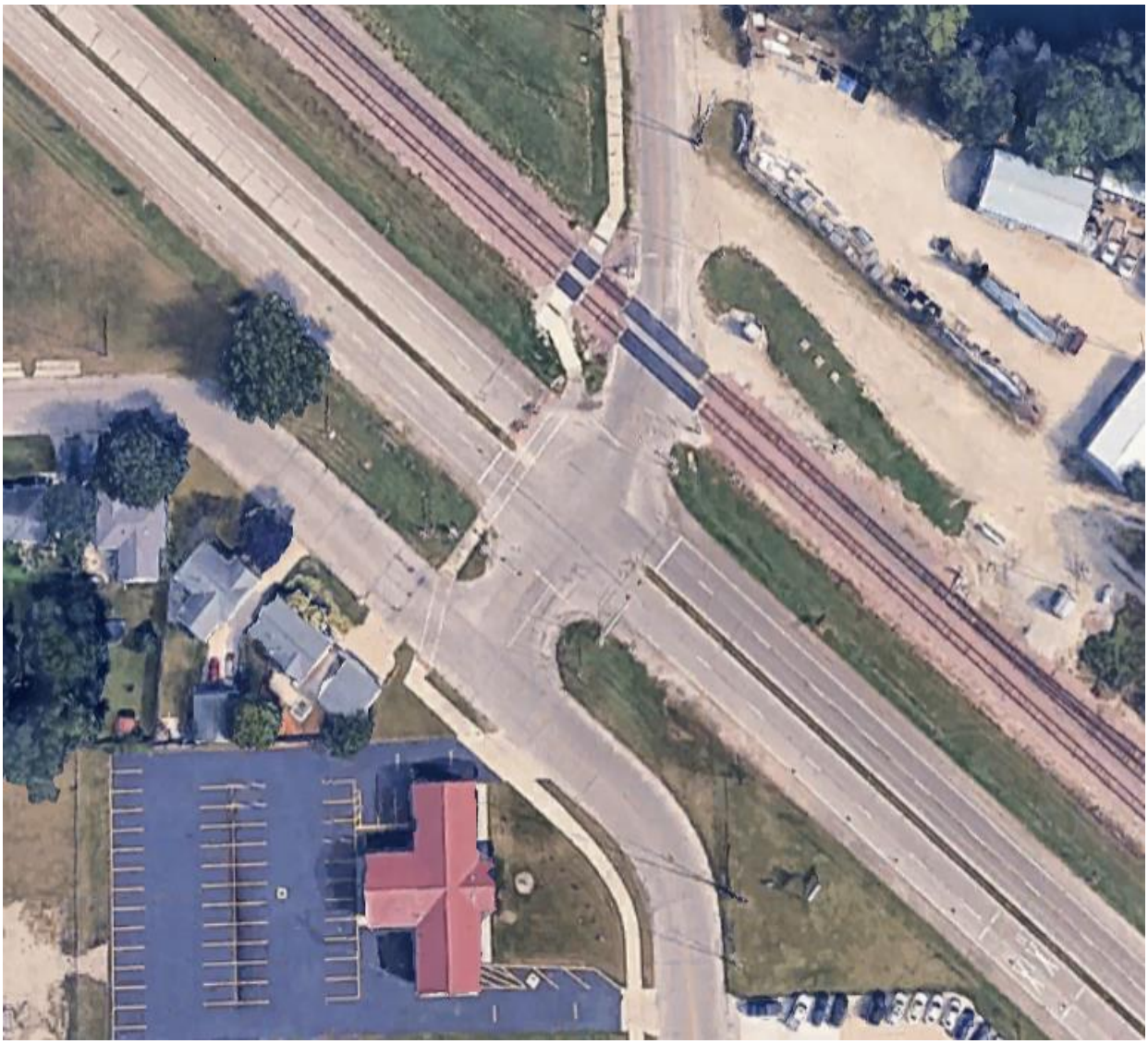
CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 8/7/2025

SHEET ####

L:\CONT 1116 - F.Y. 2025 PCC RECONSTRUCTION PROJECT\Broadway\BROADWAY - DONALD TO BURTON - TRUCK MOVEMENTS - South Shift.dwg 8/7/2025 3:06 PM

H. Aerial Photo



Broadway St. and Burton Ave. Intersection Aerial

I. ICAT Crash Summary

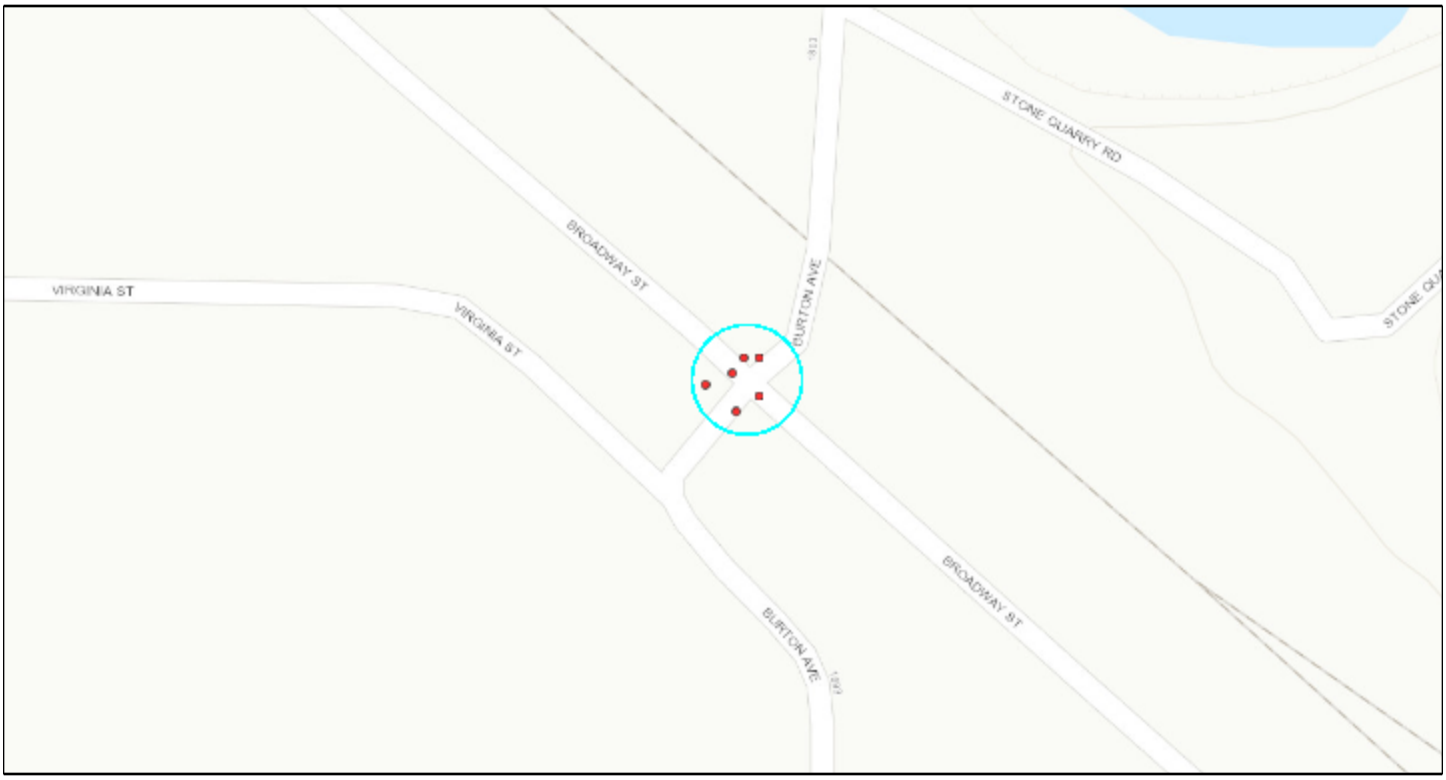
Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	9
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	2
Possible/Unknown Injury Crash	3
Property Damage Only	4

Injury Status Summary	6
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	3
Possible (complaint of pain/injury)	3
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	77,500.00
Average (per crash dollars):	8,611.11
Total Vehicles:	18.00
Average (per crash):	2.00
Total Occupants:	25.00
Average (per crash):	2.78

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.67
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.33
Possible/Unknown Injuries/Crash:	0.33



Major Cause			9
Animal	0	Ran traffic signal	2
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	3	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	2
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	1	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Monday	0	0	0	0	0	0	0	0	1	1	0	0	0	2
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	1	0	1	0	0	0	0	1	0	0	0	3
Friday	0	0	0	1	0	0	0	0	0	0	2	0	0	3
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	1	0	0	0	1	3	2	0	0	9

Manner of Crash Collision	9
Non-collision (single vehicle)	1
Head-on (front to front)	0
Rear-end (front to rear)	3
Angle (oncoming left turn)	1
Broadside (front to side)	3
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	1
Unknown	0

Surface Conditions	9
Dry	8
Wet	1
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			18
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	18

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	1	0	0	0	1
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	1	1	0	0	2
>= 21 and <= 24	1	2	0	0	3
>= 25 and <= 29	1	1	0	0	2
>= 30 and <= 34	1	0	0	0	1
>= 35 and <= 39	0	2	0	0	2
>= 40 and <= 44	1	0	0	0	1
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	0	1	0	0	1
>= 55 and <= 59	0	1	0	0	1
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	2	0	0	2
>= 70 and <= 74	0	1	0	0	1
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	6	11	1	0	18

Drug/Alcohol Related	**9**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	9

Alcohol Test Given	**18**
None	17
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

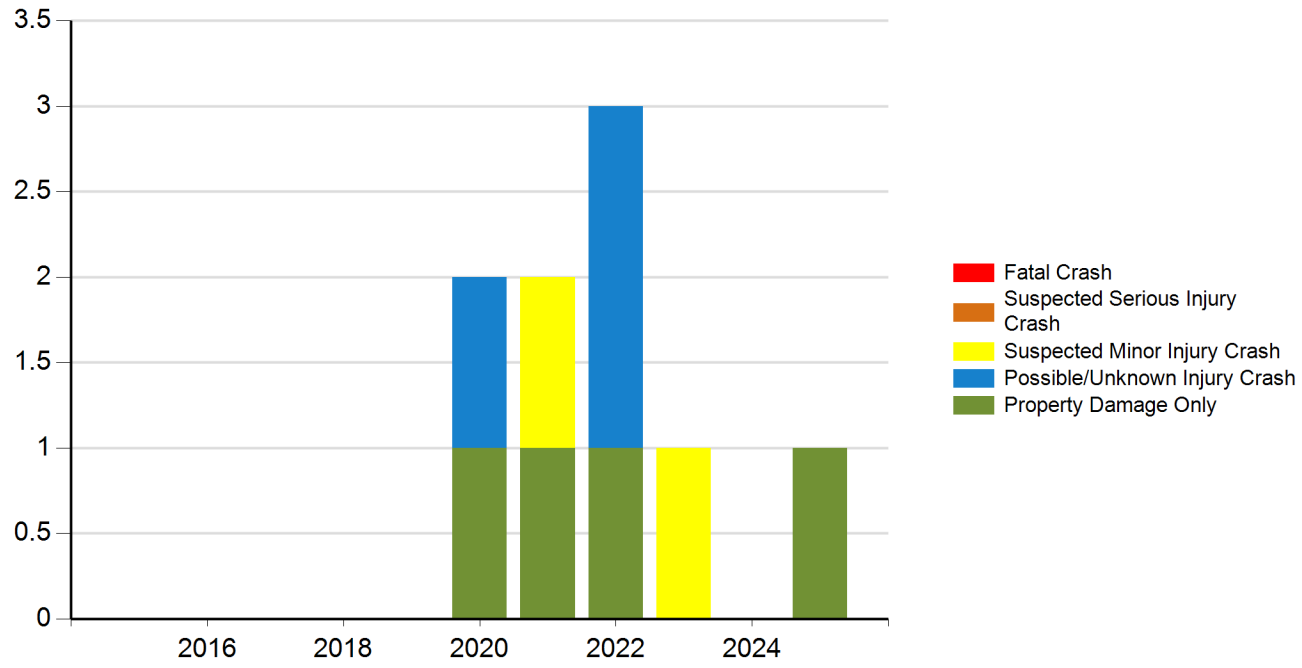
Drug Test Given	**18**
None	17
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

Drug Test Result	**18**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	18
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	1	1	2
2021	0	0	1	0	1	2
2022	0	0	0	2	1	3
2023	0	0	1	0	0	1
2024	0	0	0	0	0	0
2025	0	0	0	0	1	1
Total	0	0	2	3	4	9

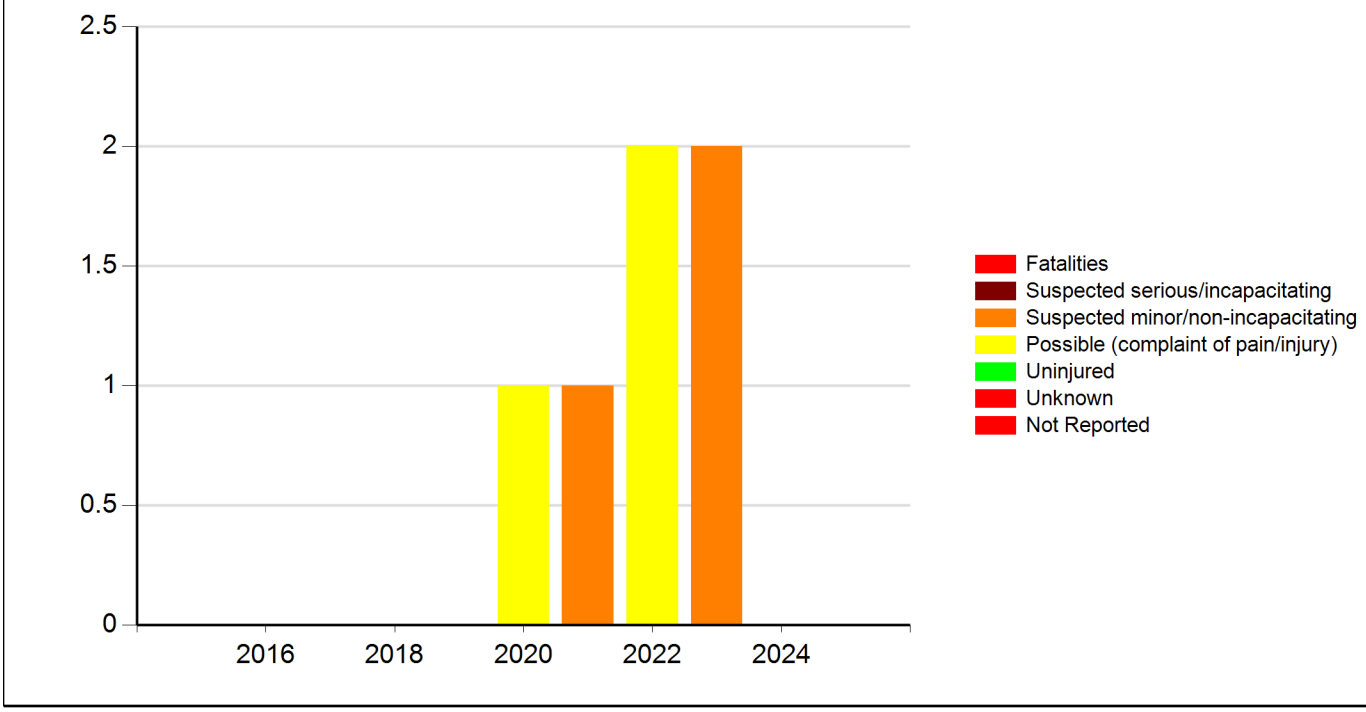
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	1	0	0	0	1
2021	0	0	1	0	0	0	0	1
2022	0	0	0	2	0	0	0	2
2023	0	0	2	0	0	0	0	2
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
Total	0	0	3	3	0	0	0	6

Injury Status/Year



J. Traffic Volumes and/or Turning Movement

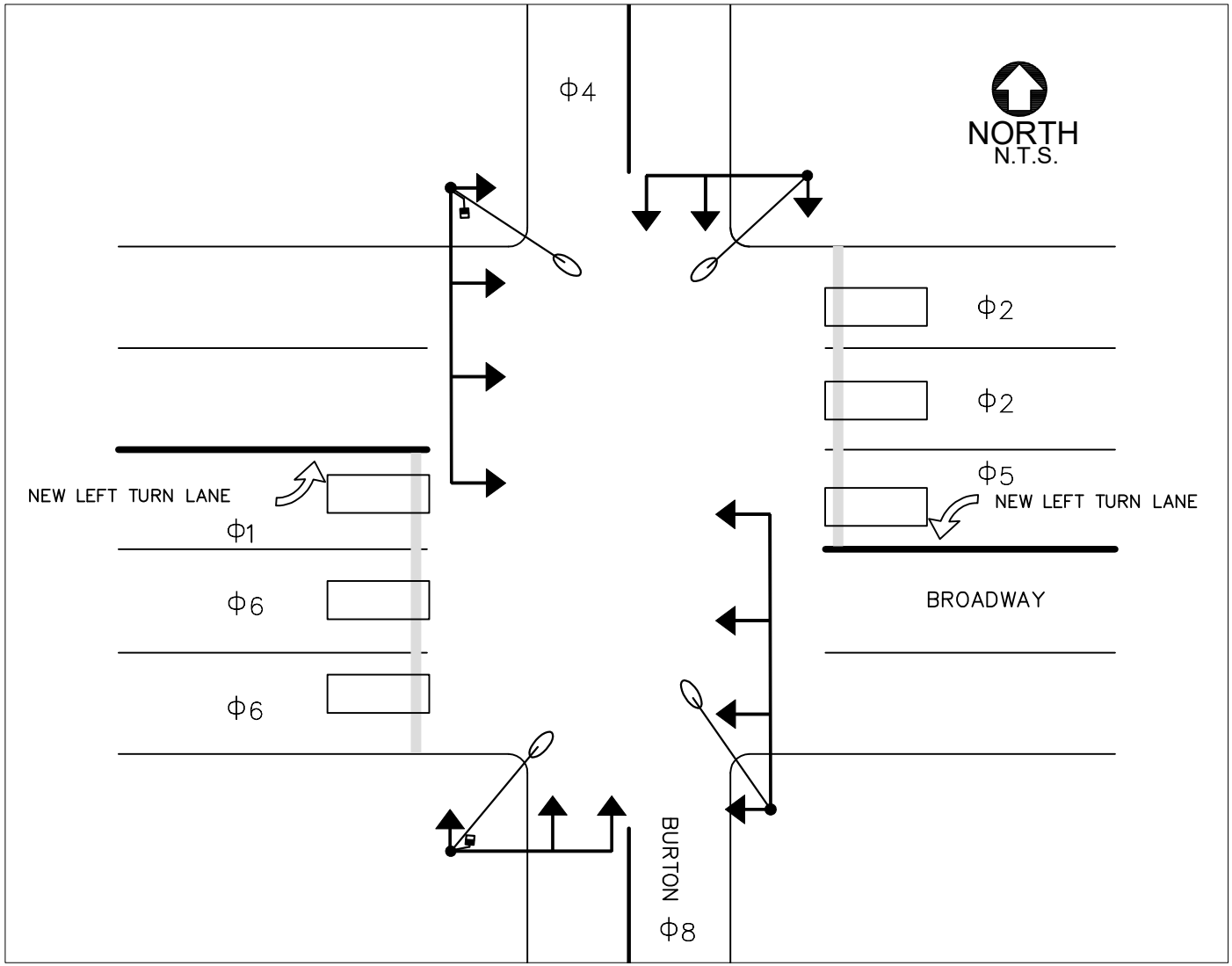
Date	9/13/2022
Intersection Name	Broadway Street & Burton Avenue
City	Waterloo
State	Iowa
Northbound Street	Burton Avenue
Southbound Street	Burton Avenue
Eastbound Street	Broadway Street
Westbound Street	Broadway Street

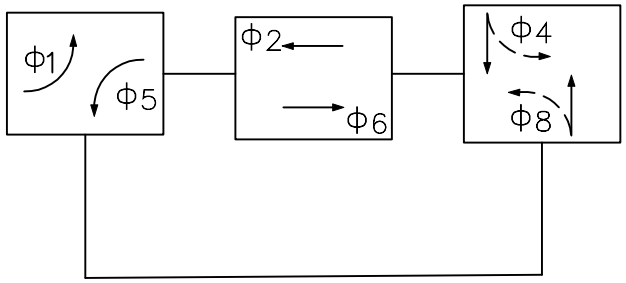
Cars

		Southbound						Westbound						Northbound						Eastbound						
Time	U Turns	Left Turns	Straight Through	Right Turns	15 Min Total	Hourly Total	U Turns	Left Turns	Straight Through	Right Turns	15 Min Total	Hourly Total	U Turns	Left Turns	Straight Through	Right Turns	15 Min Total	Hourly Total	U Turns	Left Turns	Straight Through	Right Turns	15 Min Total	Hourly Total	Intersection Hourly Total
6:00	0	0	7	1	8	52	0	0	16	2	18	131	0	2	8	0	10	56	0	1	14	3	18	113	352
6:15	0	1	13	0	14	57	0	0	24	4	28	142	0	2	5	1	8	59	0	0	21	4	25	129	387
6:30	0	3	11	0	14	69	0	1	33	5	39	136	0	3	15	0	18	66	1	2	29	2	34	140	411
6:45	0	7	9	0	16	74	0	5	33	8	46	130	0	5	14	1	20	74	0	6	25	5	36	141	419
7:00	0	5	7	1	13	74	0	0	25	4	29	123	0	1	12	0	13	76	0	1	31	2	34	156	429
7:15	0	8	17	1	26	74	0	0	16	6	22	113	0	1	13	1	15	79	0	2	30	4	36	153	419
7:30	0	3	15	1	19	68	0	1	27	5	33	113	0	3	22	1	26	78	0	0	32	3	35	149	408
7:45	0	5	11	0	16	59	0	4	31	4	39	101	0	1	19	2	22	70	0	0	42	9	51	145	375
8:00	0	5	8	0	13	63	0	1	17	1	19	84	0	3	11	2	16	60	0	0	27	4	31	123	330
8:15	0	4	15	1	20	67	0	1	19	2	22	83	0	1	10	3	14	52	0	1	27	4	32	120	322
8:30	0	2	7	1	10	60	0	1	18	2	21	77	0	3	14	1	18	57	0	1	29	1	31	117	311
8:45	0	5	14	1	20	63	0	3	15	4	22	91	0	1	11	0	12	51	0	3	22	4	29	114	319
9:00	0	5	11	1	17	52	0	2	13	3	18	97	0	0	5	3	8	54	0	1	22	5	28	109	312
9:15	0	4	9	0	13	51	0	2	11	3	16	121	0	4	11	4	19	64	0	0	21	8	29	98	334
9:30	0	6	4	3	13	58	0	3	27	5	35	128	0	2	10	0	12	62	0	0	24	4	28	96	344
9:45	0	5	4	0	9	60	0	1	22	5	28	118	0	1	9	5	15	70	0	0	23	1	24	95	343
10:00	0	6	10	0	16	60	0	5	33	4	42	112	0	1	15	2	18	69	0	0	14	3	17	92	333
10:15	0	3	15	2	20	65	0	5	14	4	23	91	0	6	11	0	17	61	0	2	20	5	27	104	321
10:30	0	4	8	3	15	64	0	1	19	5	25	97	0	2	13	5	20	62	0	2	25	0	27	101	324
10:45	0	4	5	0	9	70	0	3	14	5	22	105	0	2	11	1	14	52	0	0	18	3	21	104	331
11:00	0	7	13	1	21	81	0	2	16	3	21	111	0	0	10	0	10	55	0	2	24	3	29	119	366
11:15	0	8	9	2	19	86	0	2	21	6	29	125	0	1	12	5	18	66	0	0	24	0	24	125	402
11:30	0	4	17	0	21	84	0	1	29	3	33	129	0	0	8	2	10	74	0	0	27	3	30	126	413
11:45	0	4	15	1	20	68	0	0	23	5	28	129	0	3	12	2	17	79	0	1	31	4	36	129	405
12:00	0	5	21	0	26	62	0	5	25	5	35	132	0	3	13	5	21	77	0	2	29	4	35	127	398
12:15	0	6	11	0	17	53	0	2	23	8	33	124	0	3	17	6	26	78	0	0	21	4	25	119	374
12:30	0	1	3	1	5	55	0	4	25	4	33	119	0	4	9	2	15	69	0	3	28	2	33	130	373
12:45	0	2	10	2	14	64	0	2	26	3	31	124	0	4	8	3	15	79	0	2	30	2	34	119	386
13:00	0	2	14	1	17	66	0	2	18	7	27	130	0	3	14	5	22	88	0	1	26	0	27	110	394
13:15	0	4	14	1	19	59	0	2	16	10	28	150	0	1	13	3	17	81	0	5	30	1	36	129	419
13:30	0	2	11	1	14	65	0	6	25	7	38	149	0	4	17	4	25	82	0	0	20	2	22	132	428
13:45	0	5	11	0	16	93	0	3	28	6	37	150	0	4	18	2	24	85	0	0	23	2	25	160	488
14:00	0	3	7	0	10	100	0	3	38	6	47	156	0	1	12	2	15	87	0	5	36	5	46	177	520
14:15	0	8	16	1	25	122	0	3	17	7	27	160	0	5	10	3	18	91	0	2	31	6	39	182	555
14:30	0	16	24	2	42	135	0	1	32	6	39	187	0	4	22	2	28	89	0	3	41	6	50	195	606
14:45	0	8	15	0	23	141	0	2	33	8	43	197	0	6	17	3	26	94	0	1	36	5	42	225	657
15:00	0	8	22	2	32	148	0	3	39	9	51	185	0	4	13	2	19	97	0	0	43	8	51	233	663
15:15	0	13	25	0	38	159	0	6	43	5	54	187	0	3	12	1	16	110	0	2	41	9	52	233	689
15:30	0	17	31	0	48	147	0	4	41	4	49	177	0	3	25	5	33	106	0	0	75	5	80	221	651
15:45	0	9	21	0	30	137	0	2	24	5	31	185	0	1	25	3	29	100	0	0	48	2	50	197	619
16:00	0	14	28	1	43	129	0	4	43	6	53	194	0	4	21	7	32	88	0	1	43	7	51	193	604
16:15	0	9	16	1	26	108	0	2	35	7	44	184	0	3	9	0	12	86	0	1	36	3	40	192	570
16:30	0	10	26	2	38	96	0	3	47	7	57	169	0	3	17	7	27	95	0	0	49	7	56	193	553
16:45	0	6	15	1	22	80	0	3	31	6	40	137	0	6	10	1	17	82	0	0	40	6	46	175	474
17:00	0	7	14	1	22	72	0	5	30	8	43	127	0	2	26	2	30	75	0	2	40	8	50	164	438
17:15	0	2	12	0	14		1	2	22	4	29		0	4	16	1	21		0	2	35	4	41		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
74		17:30	0	4	17	1	22		0	3	18	4	25		0	5	8	1	14		0	0	32	6	38		
75		17:45	0	3	8	3	14		0	6	21	3	30		0	1	8	1	10		0	0	28	7	35		
76		18:00	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
77		18:15	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
78		18:30	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
79		18:45	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
80		19:00	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
81		19:15	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
82		19:30	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
83		19:45	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
84		20:00	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
85		20:15	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
86		20:30	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
87		20:45	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
88		21:00	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
89		21:15	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
90		21:30	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
91		21:45	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
92		22:00	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
93		22:15	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
94		22:30	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
95		22:45	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
96		23:00	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
97		23:15	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
98		23:30	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
99		23:45	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	
676		TOTAL		272	646	41	959			122	1216	243	1582			129	641	112	882			57	1463	195	1716		
677																											
678																											
679								SB		NB																	
680								959		941																	
681																											
682								SBR	SBT	SBL																	
683								41	646	272																	
684		WB	1386		EBL	57						243	WBR		1582	WB											
685					EBT	1463						1216	WBT														
686		EB	1716		EBR	195						122	WBL		1847	EB											
687								129	641	112																	
688								NBL	NBT	NBR																	
689																											
690																											
691								963		882																	
692								SB		NB																	

K. Proposed Signal Data





NEW SIGNAL HEAD

NEW POLE AND MAST ARM

DETECTION ZONE

NEW LUMINAIRE & EXTENSION

PEDESTRIAN SIGNAL HEAD

L. Benefit/Cost Ratio Worksheet

IOWADOT

County:	Black Hawk	Prepared By:	Tina Schellhorn
Location:	Waterloo, Iowa	Date Prepared:	8/8/2025
Proposed Improvements:	Reconstruct Broadway St. at Burton Ave. to add left turn lanes on Broadway St.		
Estimated Improvement Cost:	$ 613,526		
Inflation on Crash Costs:	4%	Annual Maintenance: (% of Improvement Cost)	2%
Discount Rate:	4%		
Estimated Service Life:	20	Annual Maintenance Cost:	$ 12,271

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	2
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	CRF 2:	Combined CRF
CRF Value (%)	25	25	**35.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	35.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	35.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	2	35.0	**0.40**	**0.14**
Possible/Unknown Injury (C)	$ 135,000	3	35.0	**0.60**	**0.21**
Property Damage Only (O)	$ 20,000	4	35.0	**0.80**	**0.28**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ 40,656**
Possible/Unknown Injury (C)	**$ 28,389**
Property Damage Only (O)	**$ 5,608**

Total Benefits and Costs

		Implementation Cost	$ 613,526
		Present Value of Maint.	$ 166,760
Present Value Benefits (Societal Benefits)	$ 1,102,669	Present Value Costs (Impl. and Maint. Costs)	$ 780,286
Present Value Net Return	$ 322,383		
Benefit Cost Ratio	**1.41**		

Form continues on next page

County:	Black Hawk	Prepared By:	Tina Schellhorn
Location:	Waterloo, Iowa	Date Prepared:	8/8/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** Feb 12, 2025

Location / Title of Project HAMMOND AVEUE AND RIDGEWAY AVENUE ROUNDABOUT

Applicant City of Waterloo

Contact Person Tina Schellhorn Title Associate Traffic Engineer

Complete Mailing Address 625 Glenwood St
2017005687
Waterloo, IA 50703

Phone (319)291-4440 E-Mail Tina.schellhorn@waterloo-ia.org
(Area Code)

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s)

Contact Person Title

Complete Mailing Address

Phone E-Mail
(Area Code)

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	1,200,000
Total Project Cost	$	1,200,000
Safety Funds Requested	$	**500,000**

Additional Project Safety Documentation (when available):

☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
☐ Iowa DOT TEAP Study or similar analysis and concept
☒ Project intersection or segment with High or Medium PCR Level (PCR-AII or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information

Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
2017005687	Hammond Avenue / Ridgeway Avenue	☐	☒	0.69	
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the City of Waterloo

Signed: Quentin Hart  8/5/2024

Signature Date Signed

Quentin Hart

Printed Name

Attest: Nancy Higby  8/5/2024

Signature Date Signed

Nancy Higby

Printed Name

A. Resolution

Prepared by LeAnn M. Even, Deputy City Clerk, City of Waterloo, 715 Mulberry Street, Waterloo, IA 50703, (319) 291-4323.

RESOLUTION NO. 2024-449

RESOLUTION APPROVING SUBMISSION OF AN IOWA DOT TRAFFIC SAFETY IMPROVEMENT PROGRAM GRANT APPLICATION IN THE AMOUNT OF $500,000.00, FOR INSTALLATION OF A ROUNDABOUT AT THE HAMMOND AVENUE INTERSECTION WITH RIDGEWAY AVENUE, AND COMMITTING TO IMPLEMENT THE PROJECT AND MAINTAIN IT FOR THE LIFE OF THE PROJECT.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF WATERLOO, IOWA, that submission of the Traffic Safety Improvement Grant application from the Iowa Department of Transportation, in the amount of $500,000.00, for installation of a roundabout at the Hammond Avenue intersection with Ridgeway Avenue, and committing to implement the project and maintain it for the life of the project, is hereby approved.

PASSED AND ADOPTED this 5th day of August 2024.

Quentin Hart DIGITALLY SIGNED

Quentin Hart, Mayor

ATTEST:

Nancy Higby DIGITALLY SIGNED

Nancy Higby, Deputy City Clerk

SEAL

B. Narrative

Existing Condition

Hammond Avenue is a two-lane urban roadway classified as a minor arterial with a 30 mph speed limit. Ridgeway Avenue is a two-lane urban roadway classified as a minor arterial with a 35 mph speed limit. The 2021 DOT traffic map shows an AADT on the north leg of Hammond Avenue of 9000, 9200 on the south leg of Hammond Avenue, 8900 on the west leg of Ridgeway Avenue, 7100 on the east leg of Ridgeway Avenue. Hammond Avenue is offset to the north and south of Ridgeway Avenue which creates a skewed intersection. At the intersection, there is an eastbound right turn lane and a channelized northbound right turn lane. The intersection is controlled by all way stop control.

Crash History

The intersection experiences a large number of crashes. Broadside (front to side) and rear-end crashesare the predominant type of crashes. A high number of crashes related to running a stop sign occur atthe intersection. The intersection is at capacity and a lot of the crashes are likely due to congestion andfrustrated drivers. A roundabout can reduce the crashes considerably.

Proposed Concept

A single lane roundabout is proposed. As per Section 2B.06-03 of 2023 MUTCD the type of traffic control used at an unsignalized intersection should be the least restrictive that provides appropriate levels of safety and efficiency for all road users. A roundabout can improve the safety of the intersection. A roundabout will reduce the number of conflict points at the intersection and improve traffic flow. Drivers entering a roundabout will have only one conflict point with circulating traffic. Drivers entering the existing intersection have multiple conflict points. Reducing the number of conflict points will increase safety. A roundabout will also improve the geometry of the skewed intersection. A traffic analysis has indicated that the proposed roundabout will increase the level of service in addition to improving safety.

C. Itemized Costs

Hammond Avenue / Ridgeway Avenue Roundabout - Preliminary Cost Estimate

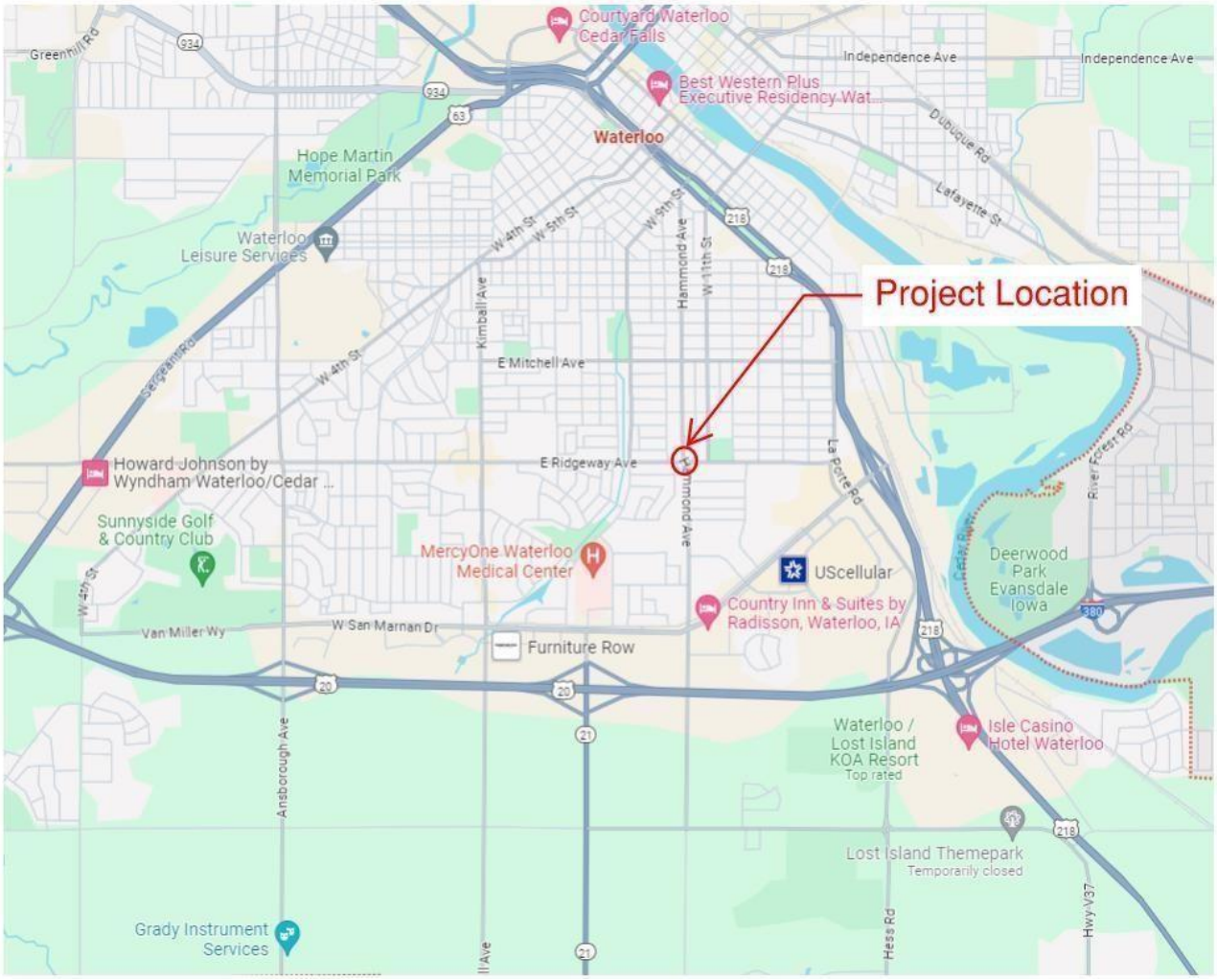
		Units	Unit Cost	Quantity	Total Cost
Removal of Pavement		SY	$16.00	3400	$54,400
Topsoil, Strip, Store, Spread		CY	$20.00	200	$4,000
Signage		LS	$2,500.00	1	$2,500
PCC Roadway		SY	$85.00	3533	$300,305
Curb and Gutter		LF	$45.00	2200	$99,000
Granular Subbase		SY	$12.00	3886	$46,636
Storm Sewer		LS	$50,000.00	1	$50,000
Sanitary Sewer		LS	$40,000.00	1	$40,000
Water Main		LS	$40,000.00	1	$40,000
Pavement Markings		LS	$12,000.00	1	$12,000
Street Lighting		EA	$10,000.00	20	$200,000
Topsoil		CY	$30.00	500	$15,000
Seeding		LS	$2,500.00	1	$2,500
Erosion Control		LS	$5,000.00	1	$5,000
Traffic Control		LS	$50,000.00	1	$50,000
Mobilization		LS	$15,000.00	1	$15,000
Contingencies	(10% of Construction Cost)	**LS**	$93,634.06	1	$93,634
Engineering					$125,000
				Total	**$1,154,975**
Total Safety				Rounded Total	**$1,200,000**
				TSIP Funds	**$500,000**
				City Funds	**$700,000**

D. Schedule

Preliminary Schedule

Funds Available	July 2025
Preliminary / Check plans	February 2026
Right of Way Acquisitions	May 2026
Final Plans	April-May 2026
Construction Letting	July 2026
Construction	July2026-July 2027
Completion	September 2027

E. Map


Project Location
Courtyard Waterloo Cedar Falls
Best Western Plus Executive Residency Wat...
Waterloo
Hope Martin Memorial Park
Waterloo Leisure Services
Independence Ave
Dubuque Rd
Lafayette St
W 5th St
W 4th St
Hammond Ave
W 11th St
Kimball Ave
E Mitchell Ave
E Ridgeway Ave
Howard Johnson by Wyndham Waterloo/Cedar ...
Sunnyside Golf & Country Club
MercyOne Waterloo Medical Center
UScellular
Country Inn & Suites by Radisson, Waterloo, IA
La Porte Rd
River Forest Rd
Deerwood Park Evansdale Iowa
Van Miller Wy
W San Marnan Dr
Furniture Row
Ansborough Ave
Waterloo / Lost Island KOA Resort
Top rated
Isle Casino Hotel Waterloo
Lost Island Themepark
Temporarily closed
Hess Rd
Hwy V37
Grady Instrument Services

F. Photos

NORTHBOUND APPROACH



EASTBOUND APPROACH



SOUTHBOUND APPROACH



WESTBOUND APPROACH



G. Plan View



whks
engineers + planners + land surveyors

N

0 80
FEET

H. Aerial



I. ICAT Crash Summary

Iowa Crash Analysis Tool
Quick Report
2019-2024

Crash Severity	21
Fatal Crash	0
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	6
Property Damage Only	14

Injury Status Summary	12
Fatalities	0
Suspected serious/incapacitating	1
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	5
Uninjured	0
Unknown	2
Not Reported	3

Property/Vehicles/Occupants	
Property Damage Total (dollars):	540,370.00
Average (per crash dollars):	25,731.90
Total Vehicles:	45.00
Average (per crash):	2.14
Total Occupants:	56.00
Average (per crash):	2.67

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.33
Major Injuries/Crash:	0.05
Minor Injuries/Crash:	0.05
Possible/Unknown Injuries/Crash:	0.24



Iowa Crash Analysis Tool
Quick Report
2019-2024

Major Cause			21
Animal	0	Ran traffic signal	0
Ran stop sign	4	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	5	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	1	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	3
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	1
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	2
Unknown	5	Not reported	0
Other: No improper action	0		

Iowa Crash Analysis Tool
Quick Report
2019-2024

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	1	0	0	1	1	0	0	3
Monday	0	0	1	1	0	0	1	0	0	0	0	0	0	3
Tuesday	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Wednesday	0	0	0	0	0	1	0	1	0	1	0	0	0	3
Thursday	0	0	0	1	0	1	0	1	0	1	0	0	0	4
Friday	0	0	0	0	0	0	1	2	0	1	0	0	0	4
Saturday	0	0	0	0	1	1	0	0	1	0	0	0	0	3
Total	0	0	1	3	1	3	3	4	1	4	1	0	0	21

Manner of Crash Collision	**21**
Non-collision (single vehicle)	1
Head-on (front to front)	2
Rear-end (front to rear)	5
Angle (oncoming left turn)	0
Broadside (front to side)	12
Sideswipe (same direction)	1
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	**21**
Dry	16
Wet	5
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			**45**
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	45

IOWA DOT

Iowa Crash Analysis Tool
Quick Report
2019-2024

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	1	0	0	0	1
= 17	0	0	0	0	0
= 18	1	1	0	0	2
= 19	1	0	0	0	1
= 20	1	0	0	0	1
>= 21 and <= 24	0	1	0	0	1
>= 25 and <= 29	1	2	0	0	3
>= 30 and <= 34	2	2	0	0	4
>= 35 and <= 39	1	1	1	0	3
>= 40 and <= 44	1	3	0	0	4
>= 45 and <= 49	3	3	0	0	6
>= 50 and <= 54	0	2	0	0	2
>= 55 and <= 59	2	1	0	0	3
>= 60 and <= 64	0	2	0	0	2
>= 65 and <= 69	3	1	0	0	4
>= 70 and <= 74	2	0	0	0	2
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	1	0	0	1
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	5	0	5
Total	19	20	6	0	45

Alcohol Test Given	45
None	38
Blood	1
Urine	0
Breath	1
Vitreous	0
Refused	0
Not reported	5

Drug Test Given	45
None	39
Blood	1
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	5

Drug Test Result	45
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	45
Other	0

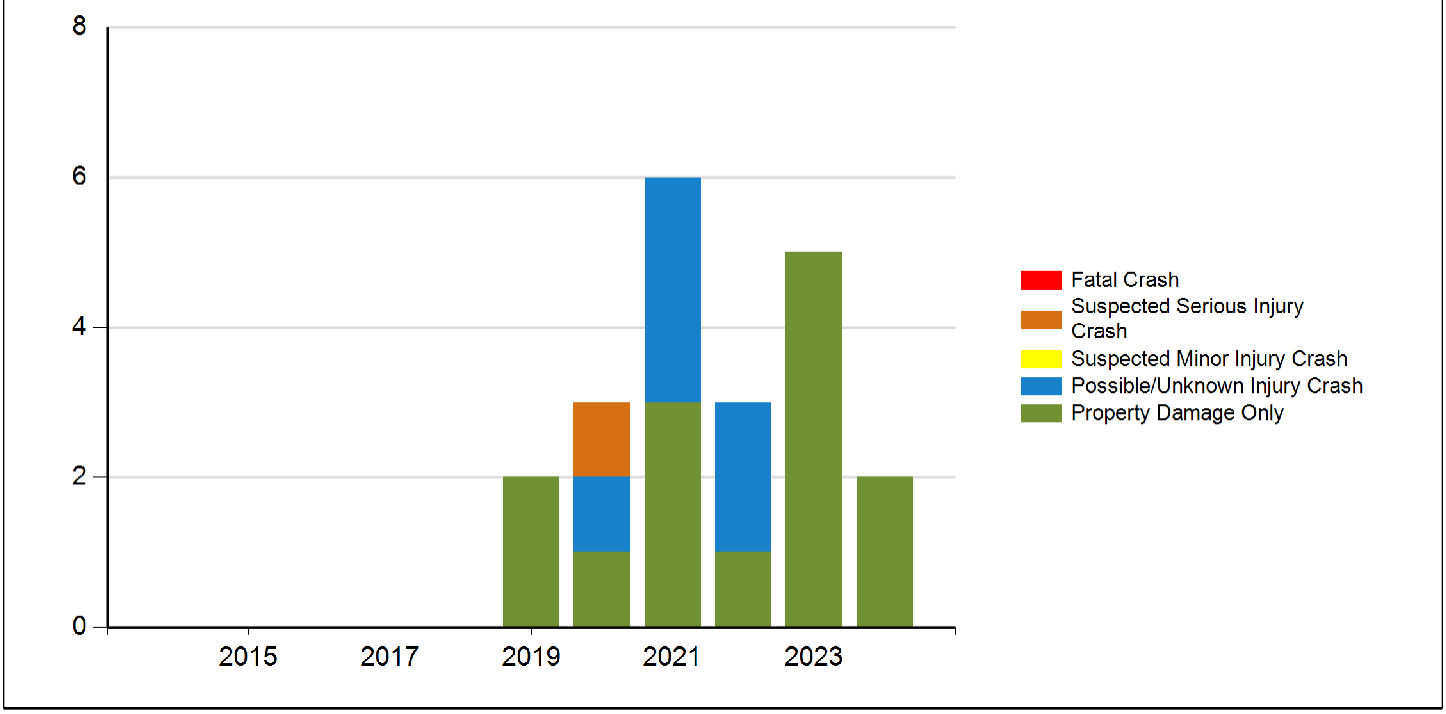
Drug/Alcohol Related	21
Drug	1
Alcohol (< Statutory)	0
Alcohol (Statutory)	1
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	19

Iowa Crash Analysis Tool
Quick Report
2019-2024

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	2	2
2020	0	1	0	1	1	3
2021	0	0	0	3	3	6
2022	0	0	0	2	1	3
2023	0	0	0	0	5	5
2024	0	0	0	0	2	2
Total	0	1	0	6	14	21

Severity/Year

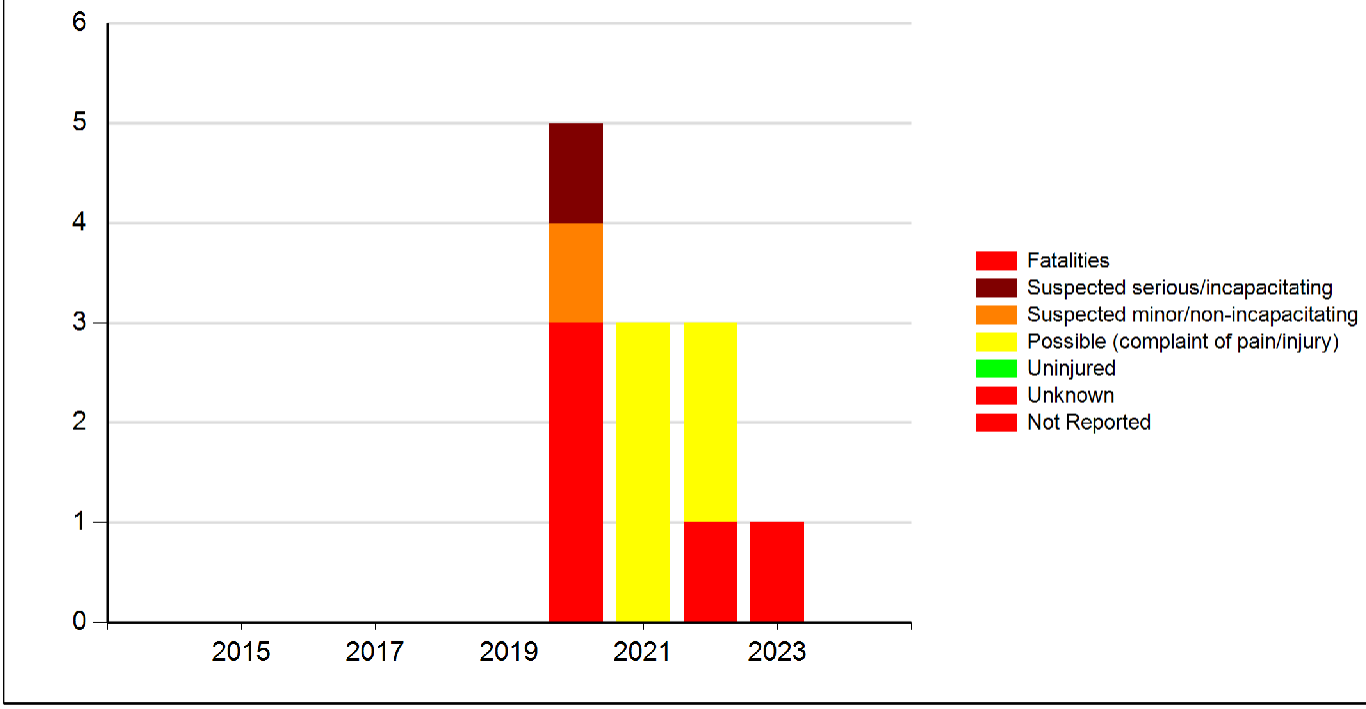


Iowa Crash Analysis Tool
Quick Report
2019-2024

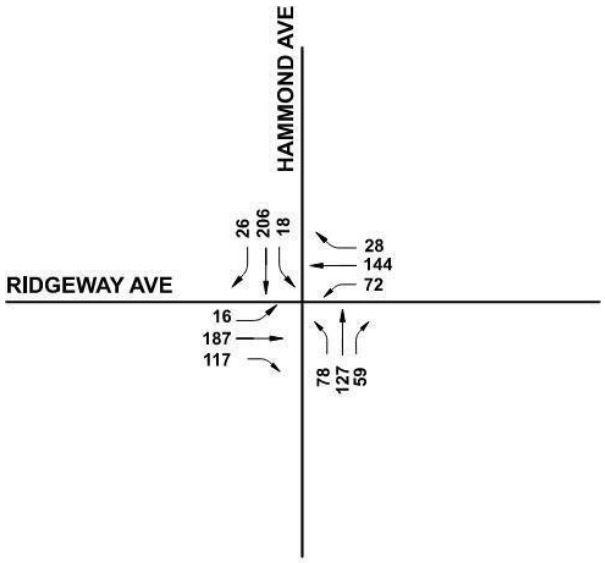
Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	1	1	0	0	1	2	5
2021	0	0	0	3	0	0	0	3
2022	0	0	0	2	0	1	0	3
2023	0	0	0	0	0	0	1	1
2024	0	0	0	0	0	0	0	0
Total	0	1	1	5	0	2	3	12

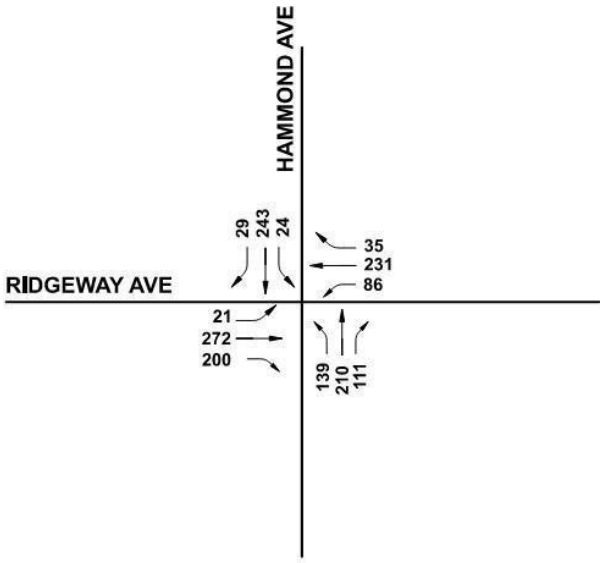
Injury Status/Year



J. Traffic Volumes



AM PEAK HOUR



PM PEAK HOUR

May 1, 2024 Turning Movement Counts

IOWADOT

L

County:	Black Hawk	Prepared By:	T. Schellhorn
Location:	Hammond Ave. & E. Ridgeway Ave	Date Prepared:	8/6/2024
Proposed Improvements:	Install a roundabout		
Estimated Improvement Cost:	$ 1,200,000		
Inflation on Crash Costs:	4%	Annual Maintenance: (% of Improvement Cost)	2%
Discount Rate:	4%		
Estimated Service Life:	20	Annual Maintenance Cost:	$ 24,000

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	45	**45.0**

Crash Severity	Rounded Societal Costs	Crash History	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
		0			
Fatal (K)	$ 4,200,000	1	45.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,200,000	0	45.0	**0.20**	**0.09**
Minor Injury (B)	$ 280,000	6	45.0	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 130,000	14	45.0	**1.20**	**0.54**
Property Damage Only (O)	$ 20,000		45.0	**2.80**	**1.26**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ 378,000**
Minor Injury (B)	**$ -**
Possible/Unknown Injury (C)	**$ 70,200**
Property Damage Only (O)	**$ 25,200**

Total Benefits and Costs

		Implementation Cost	$ 1,200,000
		Present Value of Maint.	$ 326,168
Present Value Benefits (Societal Benefits)	$ 6,992,452	Present Value Costs (Impl. and Maint. Costs)	$ 1,526,168
Present Value Net Return	$ 5,466,285		
Benefit Cost Ratio	**4.58**		

IOWADOT

County:
Location: Hammond Ave. & E. Ridgeway Ave

Prepared By: T. Schellhorn
Date Prepared: 8/6/2024

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 8/13/2025

Location / Title of Project: B45/Pleasant Ridge Reconstruction

Applicant: Clayton County

Contact Person: Casey Stickfort Title: County Engineer

Complete Mailing Address: 600 Gunder Road, Suite 14
Elkader, Iowa 52043

Phone: 563-245-1782 (Area Code) E-Mail: cstickfort@claytoncountyia.gov

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s):

Contact Person: Title:

Complete Mailing Address:

Phone: (Area Code) E-Mail:

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	656,186
Total Project Cost	$	4,082,537
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☒ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☐ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
		☐	☐		
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the CLAYTON COUNTY BOARD OF SUPERVISORS

Signed: Doug Reimer 8/14/25

Signature Date Signed

DOUG REIMER

Printed Name

Attest: Jennifer Garms 8/14/2025

Signature Date Signed

JENNIFER GARMS

Printed Name

RESOLUTION #23-2025
TRAFFIC SAFETY IMPROVEMENT PROGRAM
GRANT APPLICATION FOR CLAYTON ROAD SAFETY IMPROVEMENTS

WHEREAS, the Board of Supervisors of Clayton County is empowered under authority of Iowa Code Section 306.4 to operate and manage the Secondary Road System; and

WHERAS, the State of Iowa has available Grant funds associated with the Traffic Safety Improvement Program up to a maximum of $500,000 per location and any project cost above the maximum award shall be paid by the local agency; and

WHEREAS, the Clayton County Engineer recommends application for funding of Paved Shoulders, Safety Edge, Rumble Strips, and Painted Pavement Markings project on a portion of Pleasant Ridge Road (B45) north of Marquette, Iowa

NOW, THEREFORE BE IT RESOLVED, by the Board of Supervisors of Clayton County, Iowa that they declare support for and endorsement of the Grant Application for said project. The Board further endorses the submittal of such application for grant funding and assures that the County will adequately maintain such improvements within the Clayton County Secondary Road System and directs the County Engineer to pursue available funding for said project.

Roll Call:

Steve Doeppke	aye
Ray Peterson	absent
Doug Reimer	aye

PASSED AND ADOPTED this 14th day of August 2025.

SEAL OF THE COUNTY OF CLAYTON, IOWA

Doug Reimer

Doug Reimer, Board of Supervisors Chair

Jennifer Garms

Attest: Jennifer Garms, Clayton County Auditor

Narrative:

Clayton County is applying for Traffic Safety Improvement Program (TSIP) funding to improve the safety of a 1.3-mile corroder along B45/Pleasant Ridge north of Marquette.

The corridor as-is today was constructed in 1970 and resurfaced in 2003. The roadway cross section is 22' wide with 2' wide shoulders. Guardrails are located just outside of the shoulders making little to no room for vehicles to safely pull off in case of an emergency. The topography is challenging to navigate with steep grades (8%+), low site distances and horizontal curves making up 100% of the route.

Clayton County is planning to reconstruct the corridor with safety as one of the top project goals. To reach this goal, widening the roadway to increase site distances and allow for wider shoulders is planned. Like most County's, funding for road improvements is limited. Due to this fact, enhanced safety features are overlooked. In this case, TSIP provides funds for these enhanced safety features. If awarded, the funds will be used for paved shoulders, shoulder rumble strips, edge drop off and 6" wide painted pavement markings.

The corridor is vital to our local and state economy, connecting two communities and a school district, Monona and Marquette. The corridor carries a mixture of use such as grain trucks, daily commuters and tourism. The route has a traffic count of 810 VPD.

The corridor's posted speed is 45mph and 35mph due to site distances. The horizontal curves are signed with the required warning signs, reduced speeds, and chevrons as per MUTCD.

Clayton County is seeking TSIP Funds to provide the following safety improvements:

- 4' paved shoulders along horizontally curves and 2' paved shoulders on tangents
- Edge rumble strips
- 6" white edgeline pavement markings.
- Safety Edge

These improvements are expected to reduce the number of lane departure accidents, provide additional strength to the pavement edge and help with driver comfort. The proposed improvements will also help with maintenance efforts like snow removal and shoulder maintenance.

The project benefit/cost ratio is estimated at 0.37 however, more crashes are believed to have taken place that are not reported. If approved, the 4' wide paved shoulder with shoulder rumble strips will aid in reducing these crashes. The most recent Safety Action Plan – July 2025 - lists this corridor as the top segment for added safety improvements in Clayton County.

C.

Clayton County Secondary Roads
Estimated Opinion of Probable Cost
B45/Pleasant Ridge Reconstruction - 1.2 Miles

Division 2 Safety Portion of the Project includes 4' wide paved PCC shoulders along entire project length, shoulder rumble strips, safety edge and 6" wide edge pavement markings.

NO.	BID ITEM DESCRIPTION	UNITS	DIVISION 1 - COUNTY QUANTITIES	DIVISION 2 - SAFETY QUANTITIES	UNIT PRICE	DIVISION 1 - COUNTY TOTAL	DIVISION 2 - SAFETY TOTAL	TOTAL COST
1	Clearing and Grubbing	ACRE	0.6		$ 4,500.00	$ 2,914.13	$ -	$2,914
2	Excavation, Class 10, Roadway and Borrow (CUT)	CY	16,524.7		$ 4.33	$ 71,552.12	$ -	$71,552
3	Excavation, Class 12, Boulders or Rock Fragments	CY	2,900		$ 51.00	$ 147,898.98	$ -	$147,899
4	Presplitting of Rock Cut	SY	1,395		$ 32.00	$ 44,624.96	$ -	$44,625
5	Topsoil, Strip, Salvage and Spread	CY	7,322		$ 28.00	$ 205,024.52	$ -	$205,025
6	Modified Subbase (Haul & Spread, 4" Thick)	CY	3,758	1,503	$ 30.00	$ 112,752.50	$ 45,101.00	$157,854
7	Granular Shoulders, Type B	TON	113		$ 28.00	$ 3,157.07	$ -	$3,157
8	Paved Shoulder, P.C. Concrete, 8 IN.	SY		6,443	$ 70.00	$ -	$ 451,010.00	$451,010
9	Milled Shoulder Rumble Strips, PCC	STA		1,408	$ 22.00	$ -	$ 30,976.00	$30,976
10	Macadam Stone Base	TON	10,470	4,188	$ 30.00	$ 314,096.25	$ 125,638.50	$439,735
11	Standard or Slip-Form PCC, Class 3 Durability (8 IN)	SY	15,750		$ 60.00	$ 944,973.33	$ -	$944,973
12	Surfacing, Driveway, Class A (Haul & Spread, 6")	TON	85		$ 28.00	$ 2,377.70	$ -	$2,378
13	Excavation, Class 20	CY	1,220		$ 20.00	$ 24,394.07	$ -	$24,394
14	Structural Concrete (RCB Culvert Extension)	CY	177		$ 850.00	$ 150,641.25	$ -	$150,641
15	Reinforcing Steel, Epoxy Coated (RCB Culvert Extension)	LB	31,210		$ 2.00	$ 62,419.50	$ -	$62,420
16	Culvert, Concrete Roadway, 24in Dia	LF	352		$ 100.00	$ 35,200.00	$ -	$35,200
17	Culvert, Concrete Roadway, 48in Dia	LF	64		$ 250.00	$ 16,000.00	$ -	$16,000
18	Removal of Steel Beam Guardrail	LF	7,571		$ 12.00	$ 90,848.40	$ -	$90,848
19	Steel Beam, Guardrail	LF	5,547		$ 38.00	$ 210,792.46	$ -	$210,792
20	Steel Beam Guardrail Barrier Transition Section (LS-626)	EACH	10		$ 3,600.00	$ 36,000.00	$ -	$36,000
21	Revetment, Class E	TON	83		$ 50.00	$ 4,137.00	$ -	$4,137
22	Revetment, Class C	TON	608		$ 20.00	$ 12,150.00	$ -	$12,150
23	Engineering Fabric	SY	575		$ 3.50	$ 2,012.89	$ -	$2,013
24	Removal of Pavement	SY	15,750		$ 15.00	$ 236,243.33	$ -	$236,243
25	Remove and Reinstall Sign as Per Plan	EACH	60		$ 410.00	$ 24,600.00	$ -	$24,600
26	Painted Symbols and Legends, Waterborne or Solvent-Based	STA		173	$ 20.00	$ -	$ 3,460.00	$3,460
27	Safety Closures	EACH	8		$ 200.00	$ 1,600.00	$ -	$1,600
28	Traffic Control	LS	1		$ 45,000.00	$ 45,000.00	$ -	$45,000
29	Mobilization (5%)	LS	1		$ 176,733.20	$ 176,733.20	$ -	$176,733
30	Mulching	ACRE	7.7		$ 600.00	$ 4,611.04	$ -	$4,611
31	Seeding and Fertilized	ACRE	7.7		$ 850.00	$ 6,532.30	$ -	$6,532
32	Silt Fence	LF	5,154		$ 1.75	$ 9,020.20	$ -	$9,020
33	Removal of Silt Fence	LF	5,154		$ 1.00	$ 5,154.40	$ -	$5,154
34	Rock Check Dam	LF	2,070		$ 25.00	$ 51,750.00	$ -	$51,750
					SUBTOTAL	$3,055,211.60	$656,185.50	$3,711,397
					10% CONTINGENCY	$305,521.16	$65,618.55	$371,140
					ESTIMATED CONSTRUCTION COST	**$3,360,732.76**	**$721,804.05**	**$4,082,537**

Dated: 8/13/2025

D

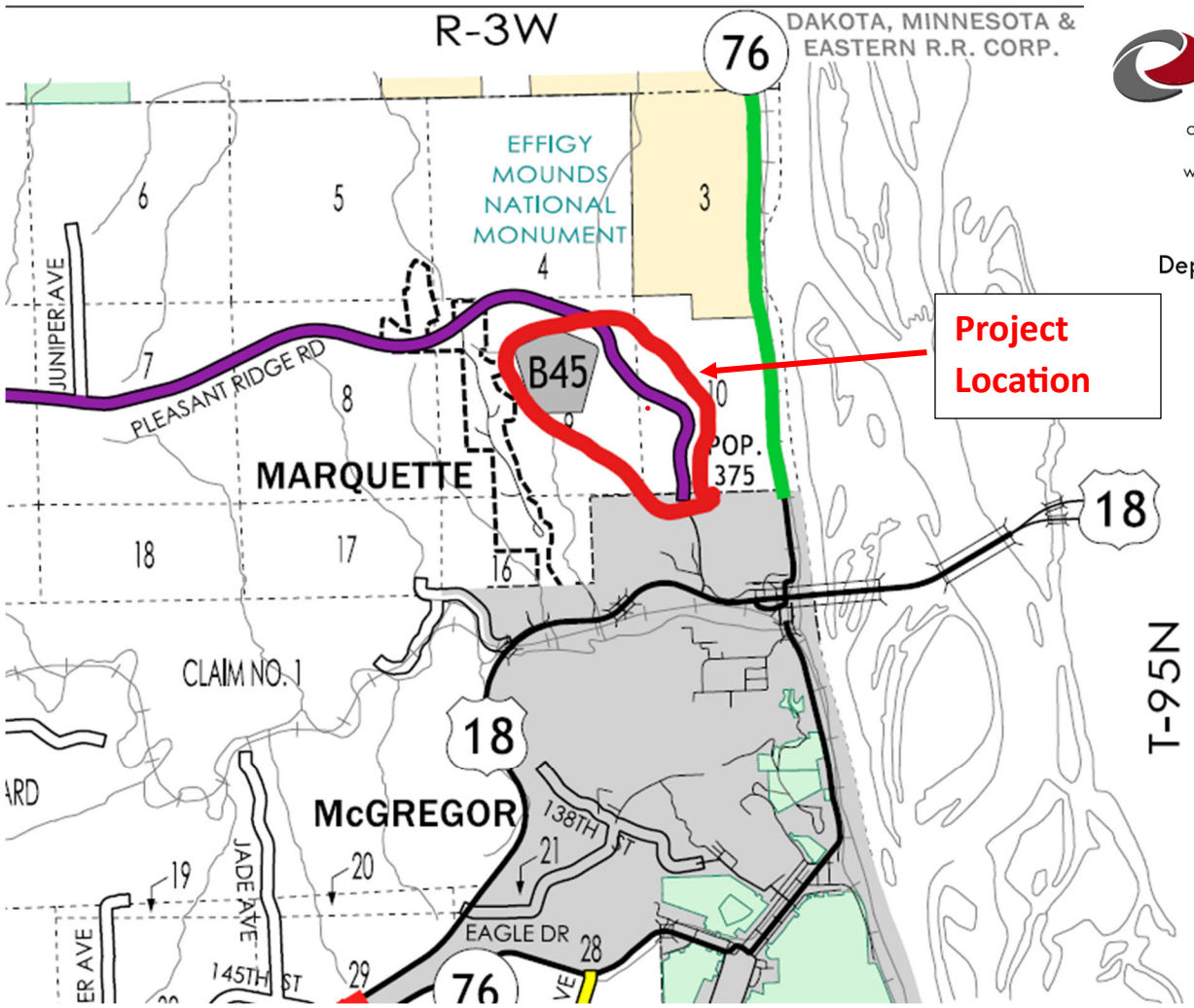
Proposed Project Schedule

B45/Pleasant Ridge Reconstruction

Submittal of Application:	August, 2025
Funding Approval:	February, 2026
Project Letting:	January, 2027
Construction Completion:	November, 2027
Project Closeout:	March, 2028

E

Location Map



FEDERAL FUNCTIONAL CLASSIFICATION MAP

CLAYTON COUNTY

IOWA

Prepared By

IOWADOT

OFFICE OF SYSTEMS PLANNING
Phone: (515) 239-1664
WWW.IOWADOT.GOV/MAPS

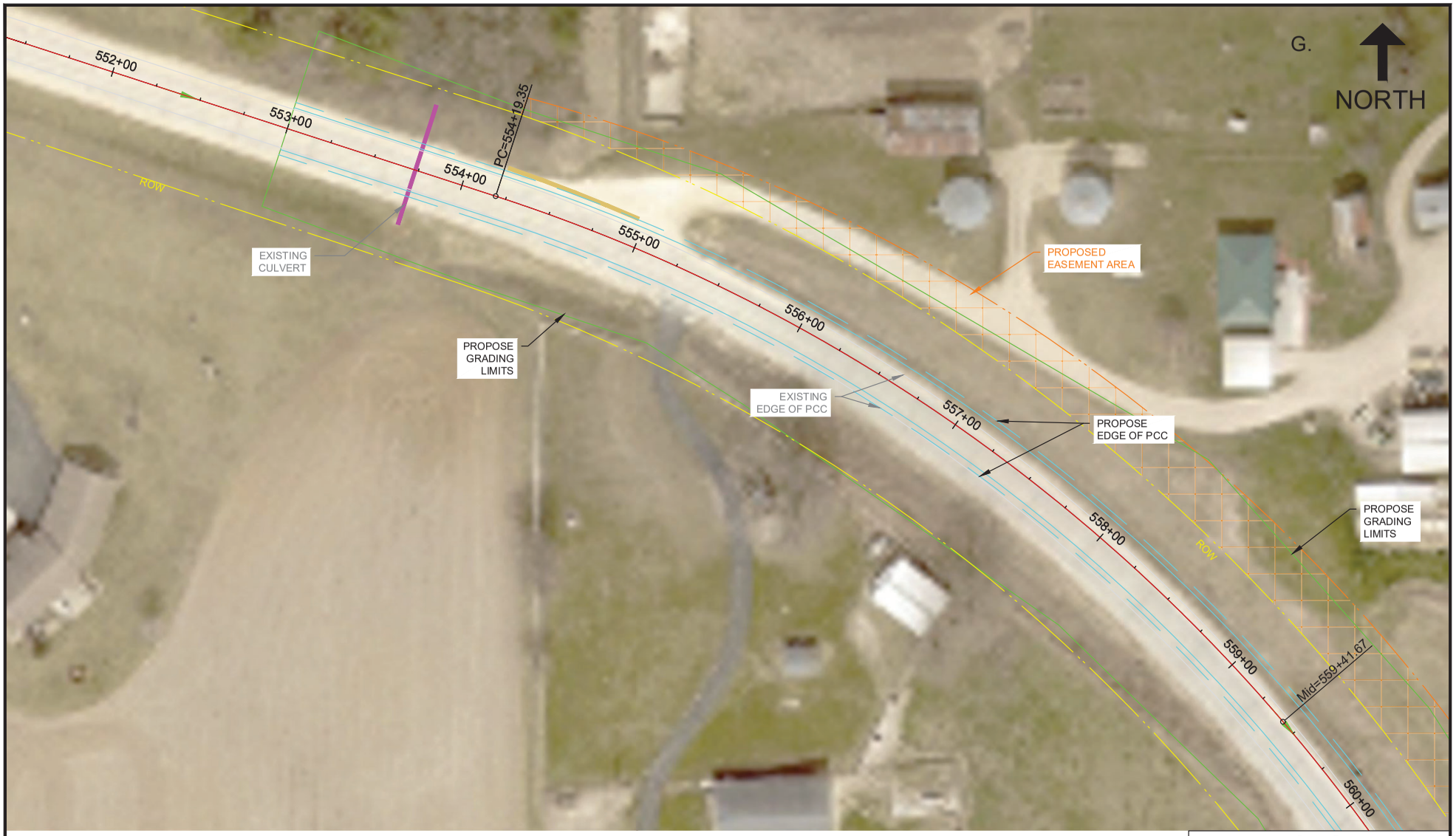
In Cooperation With
United States
Department of Transportation

December 19. 2014

Exhibit F : Color Pictures of the Project Site







NOTE: Right-Of-Way is Approximate

Design For
B45 - PAVING & GRADING

PLAN & PROFILE VIEW

STATION: 585+00 DATE: JULY 2025
CLAYTON COUNTY

	CLAYTON COUNTY	PROJECT NUMBER: STP-S-C022(112)--5E-22	SHEET D.1



NOTE: Right-Of-Way is Approximate

Design For
B45 - PAVING & GRADING

PLAN & PROFILE VIEW

STATION:585+00 DATE: JULY 2025
CLAYTON COUNTY

	CLAYTON COUNTY	PROJECT NUMBER: STP-S-C022(112)--5E-22	SHEET D.2



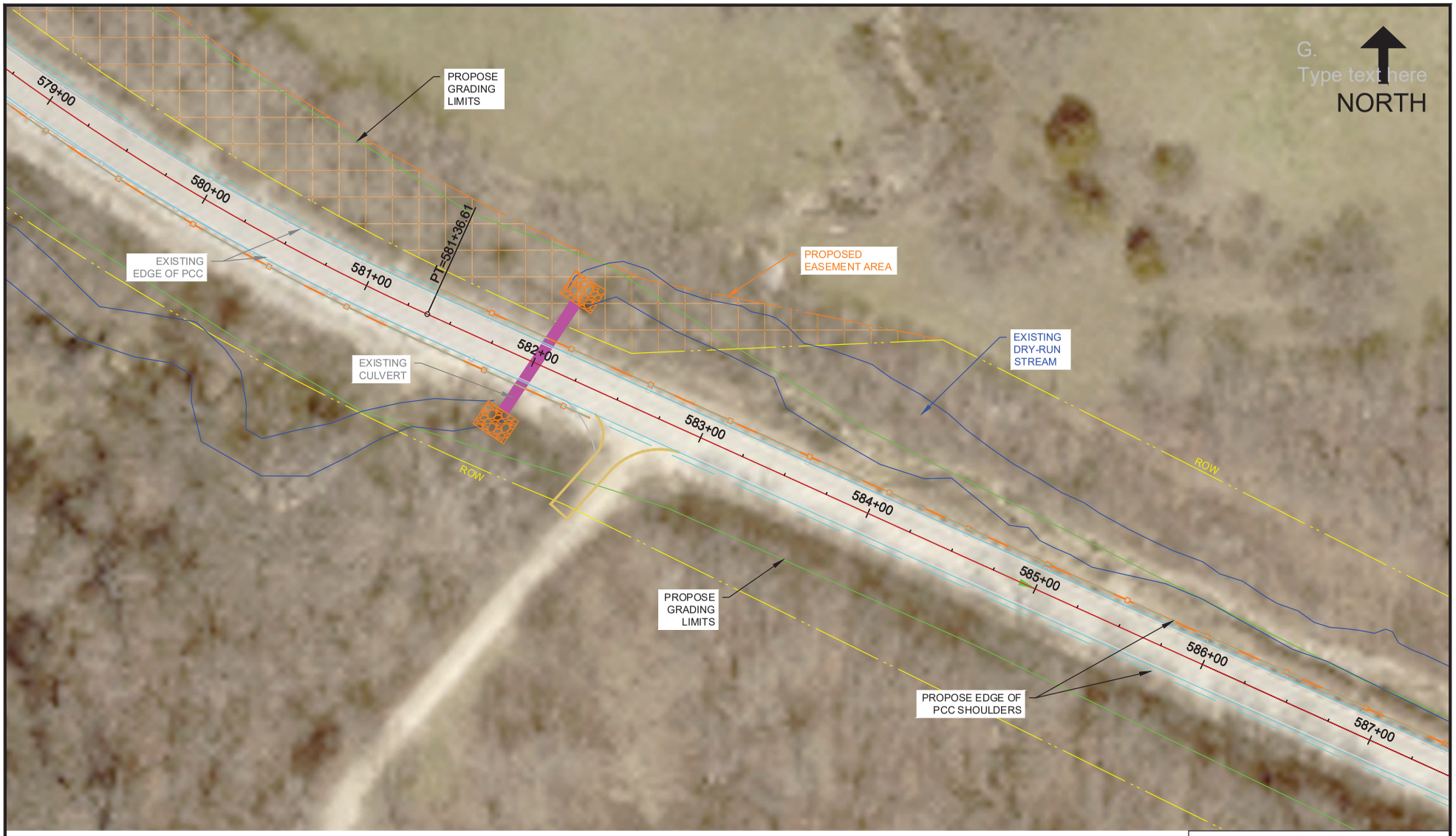
NOTE: Right-Of-Way is Approximate

Design For
B45 - PAVING & GRADING

PLAN & PROFILE VIEW

STATION: 585+00 DATE: JULY 2025
CLAYTON COUNTY

	CLAYTON COUNTY	PROJECT NUMBER: STP-S-C022(112)--5E-22	SHEET D.3



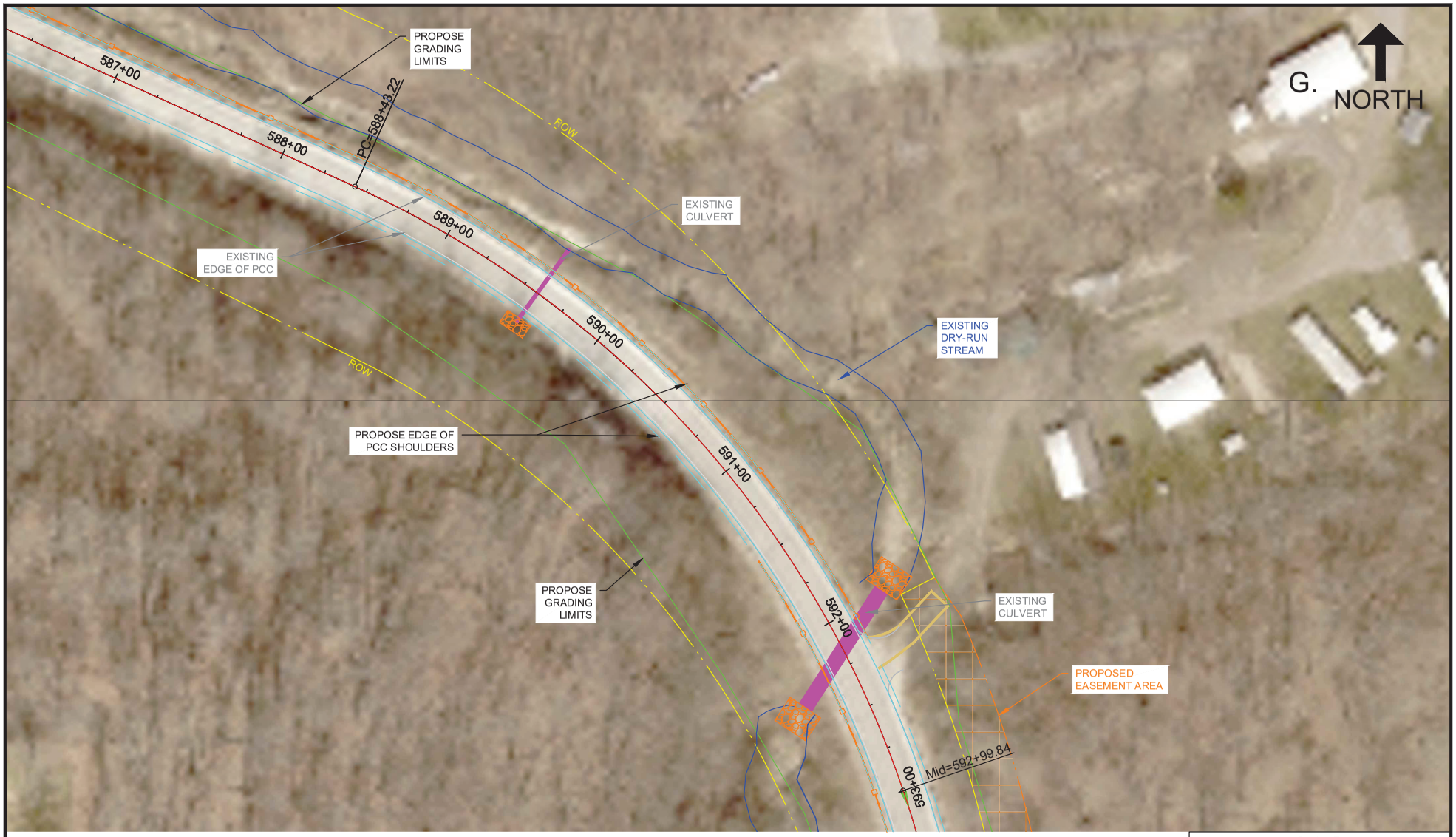
NOTE: Right-Of-Way is Approximate

Design For
B45 - PAVING & GRADING

PLAN & PROFILE VIEW

STATION: 585+00 DATE: JULY 2025
CLAYTON COUNTY

	CLAYTON COUNTY	PROJECT NUMBER: STP-S-C022(112)--5E-22	SHEET D.4



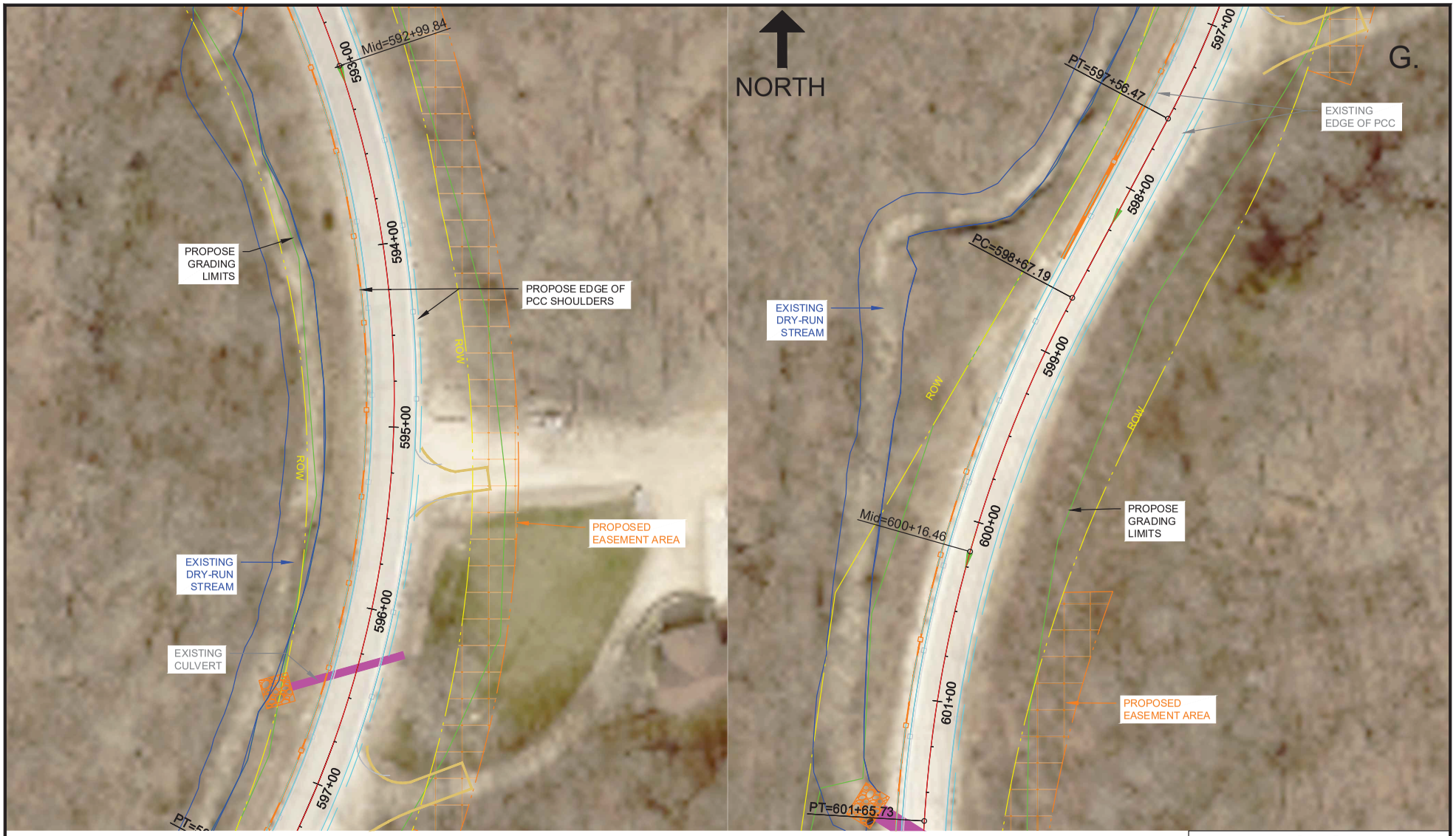
NOTE: Right-Of-Way is Approximate

Design For
B45 - PAVING & GRADING

PLAN & PROFILE VIEW

STATION: 585+00 DATE: JULY 2025
CLAYTON COUNTY

CLAYTON COUNTY	PROJECT NUMBER: STP-S-C022(112)--5E-22	SHEET D.5



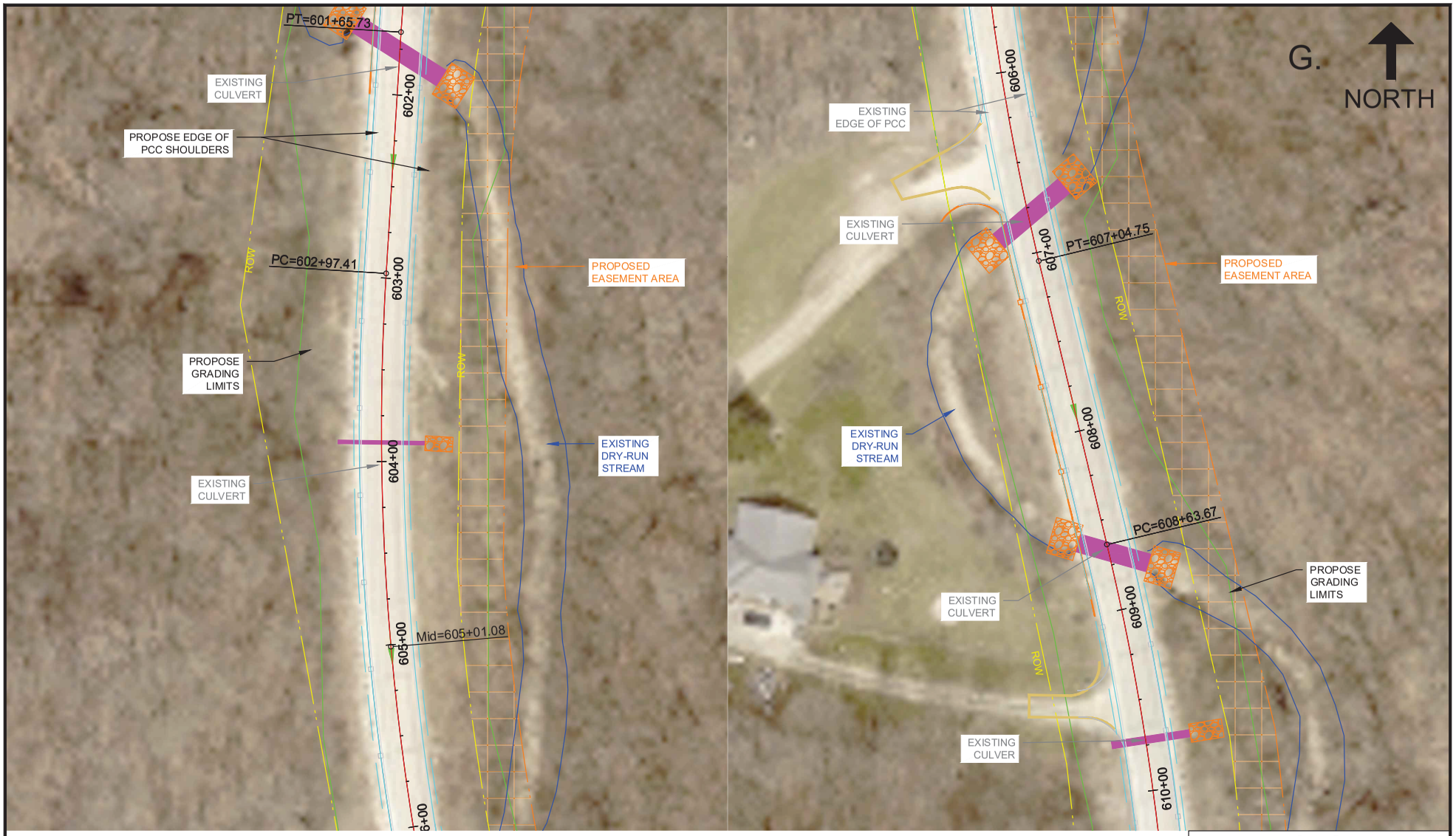
NOTE: Right-Of-Way is Approximate

Design For
B45 - PAVING & GRADING

PLAN & PROFILE VIEW

STATION: 585+00 DATE: JULY 2025
CLAYTON COUNTY

	CLAYTON COUNTY	PROJECT NUMBER: STP-S-C022(112)--5E-22	SHEET D.6



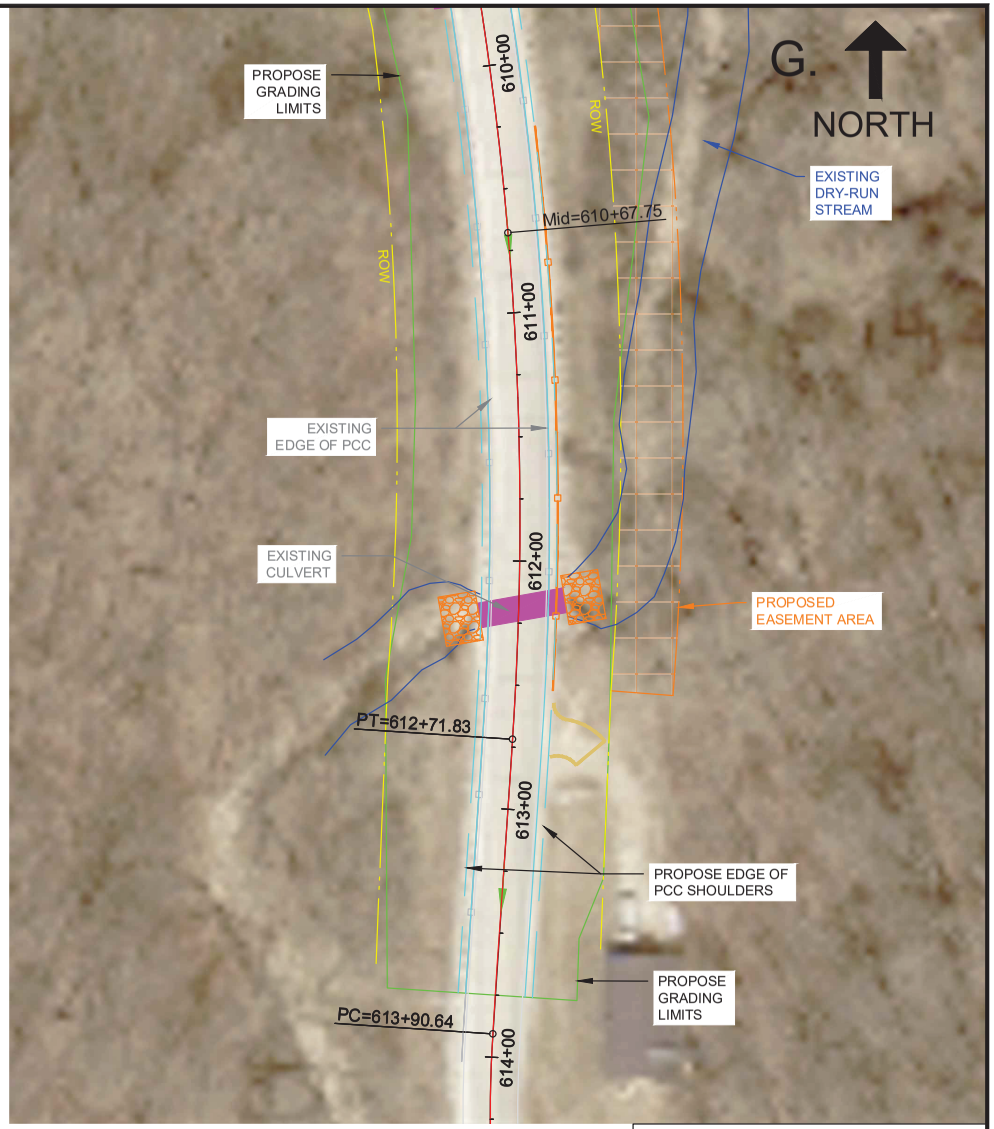
NOTE: Right-Of-Way is Approximate

Design For
B45 - PAVING & GRADING

PLAN & PROFILE VIEW

STATION: 585+00 DATE: JULY 2025
CLAYTON COUNTY

	CLAYTON COUNTY	PROJECT NUMBER: STP-S-C022(112)--5E-22	SHEET D.7



NOTE: Right-Of-Way is Approximate

Design For
B45 - PAVING & GRADING

PLAN & PROFILE VIEW

STATION: 585+00 DATE: JULY 2025
CLAYTON COUNTY

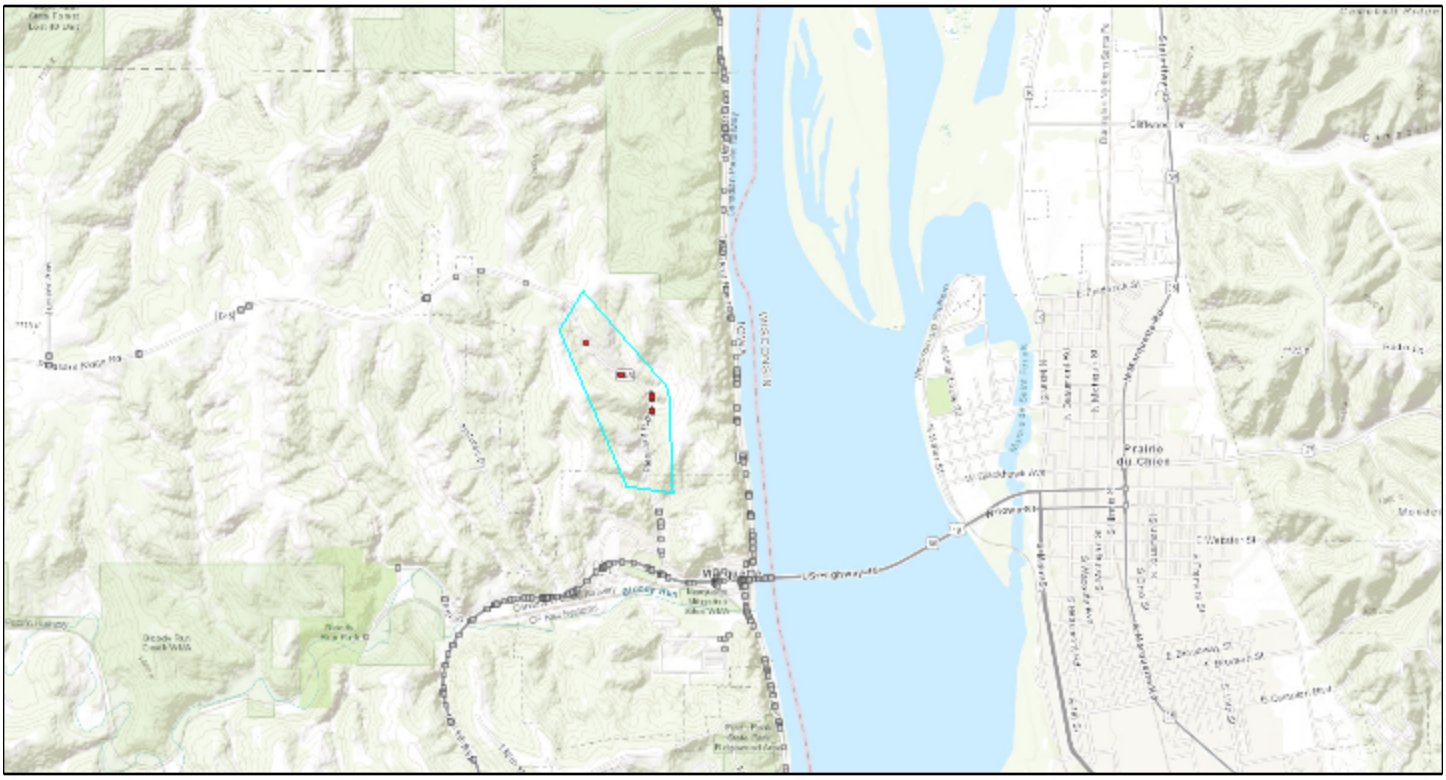
Iowa Crash Analysis Tool
Quick Report
2015-2025

Crash Severity	6
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	1
Property Damage Only	4

Injury Status Summary	3
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	1
Uninjured	0
Unknown	0
Not Reported	1

Property/Vehicles/Occupants	
Property Damage Total (dollars):	42,500.00
Average (per crash dollars):	7,083.33
Total Vehicles:	8.00
Average (per crash):	1.33
Total Occupants:	10.00
Average (per crash):	1.67

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.33
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.17
Possible/Unknown Injuries/Crash:	0.17



Major Cause			6
Animal	1	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	1
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	1
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	1
Lost control	1	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	1		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	0	0	1	0	0	1	0	2
Friday	0	0	0	0	1	0	0	0	0	0	0	1	0	2
Saturday	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	1	0	0	0	2	0	0	3	0	6

Manner of Crash Collision	6
Non-collision (single vehicle)	4
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	1
Sideswipe (same direction)	0
Sideswipe (opposite direction)	1
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	6
Dry	4
Wet	0
Ice/frost	0
Snow	1
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	1
Other	0
Unknown	0

Fixed Object Struck			8
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	1	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	2	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	5

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	1	0	0	1
= 17	0	0	0	0	0
= 18	1	0	0	0	1
= 19	1	0	0	0	1
= 20	0	1	0	0	1
>= 21 and <= 24	0	1	0	0	1
>= 25 and <= 29	0	0	0	0	0
>= 30 and <= 34	0	0	0	0	0
>= 35 and <= 39	0	0	0	0	0
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	1	0	0	0	1
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	1	0	0	0	1
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	4	3	1	0	8

Drug/Alcohol Related	**6**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	1
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	5

Alcohol Test Given	**8**
None	6
Blood	0
Urine	1
Breath	0
Vitreous	0
Refused	0
Not reported	1

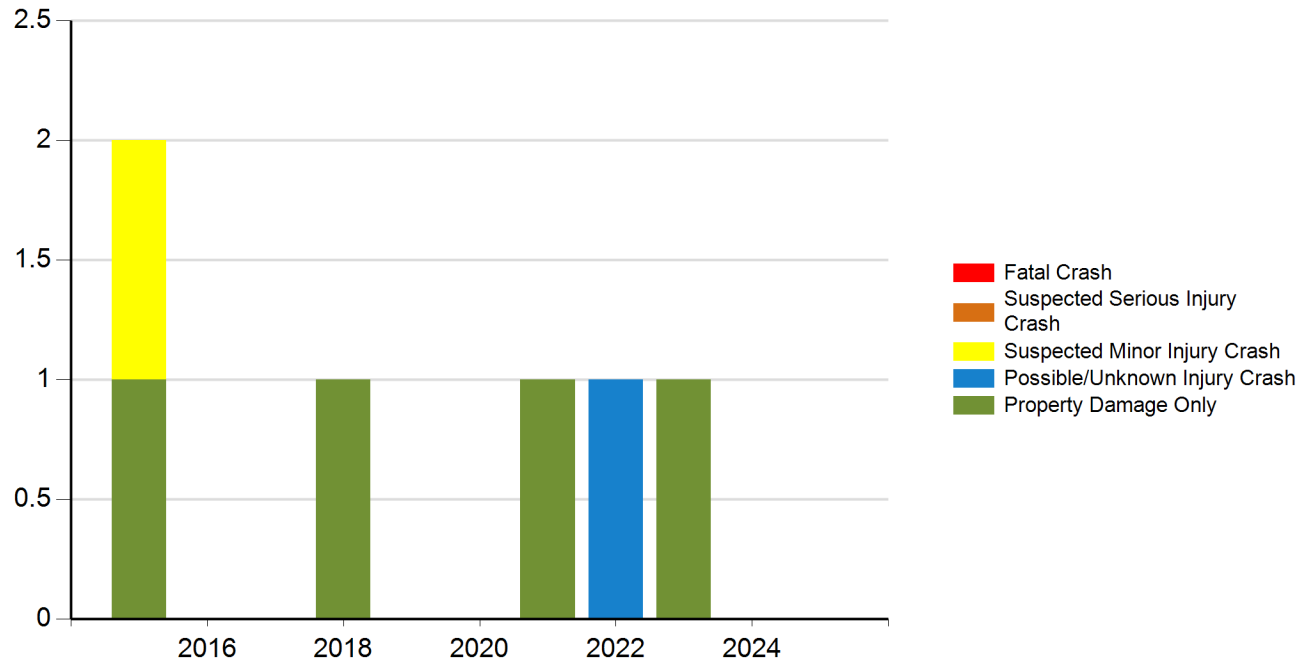
Drug Test Given	**8**
None	6
Blood	0
Urine	1
Breath	0
Vitreous	0
Refused	0
Not reported	1

Drug Test Result	**6**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	6
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	1	0	1	2
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	1	1
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	1	1
2022	0	0	0	1	0	1
2023	0	0	0	0	1	1
2024	0	0	0	0	0	0
2025	0	0	0	0	0	0
Total	0	0	1	1	4	6

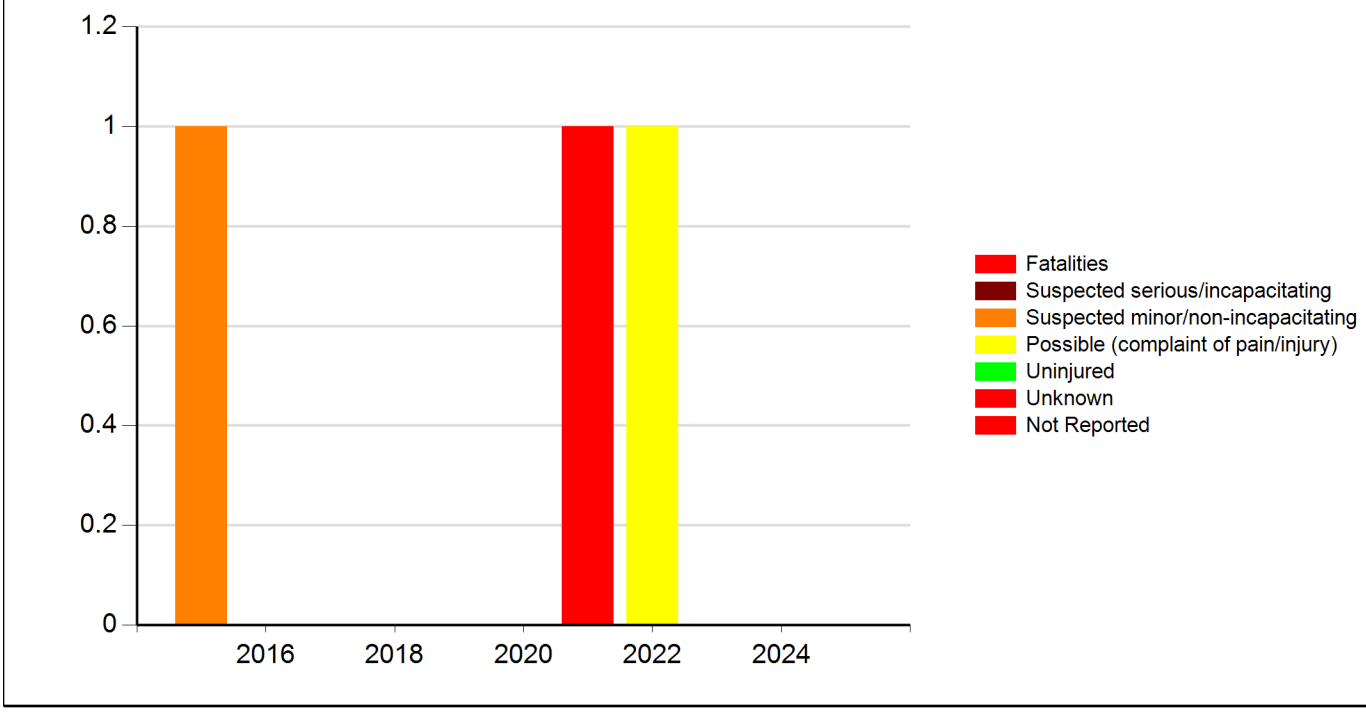
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	1	0	0	0	0	1
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	1	1
2022	0	0	0	1	0	0	0	1
2023	0	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	1	3

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Clayton)
Year: 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

J

TRAFFIC FLOW MAP OF CLAYTON COUNTY IOWA

Prepared By

IOWADOT

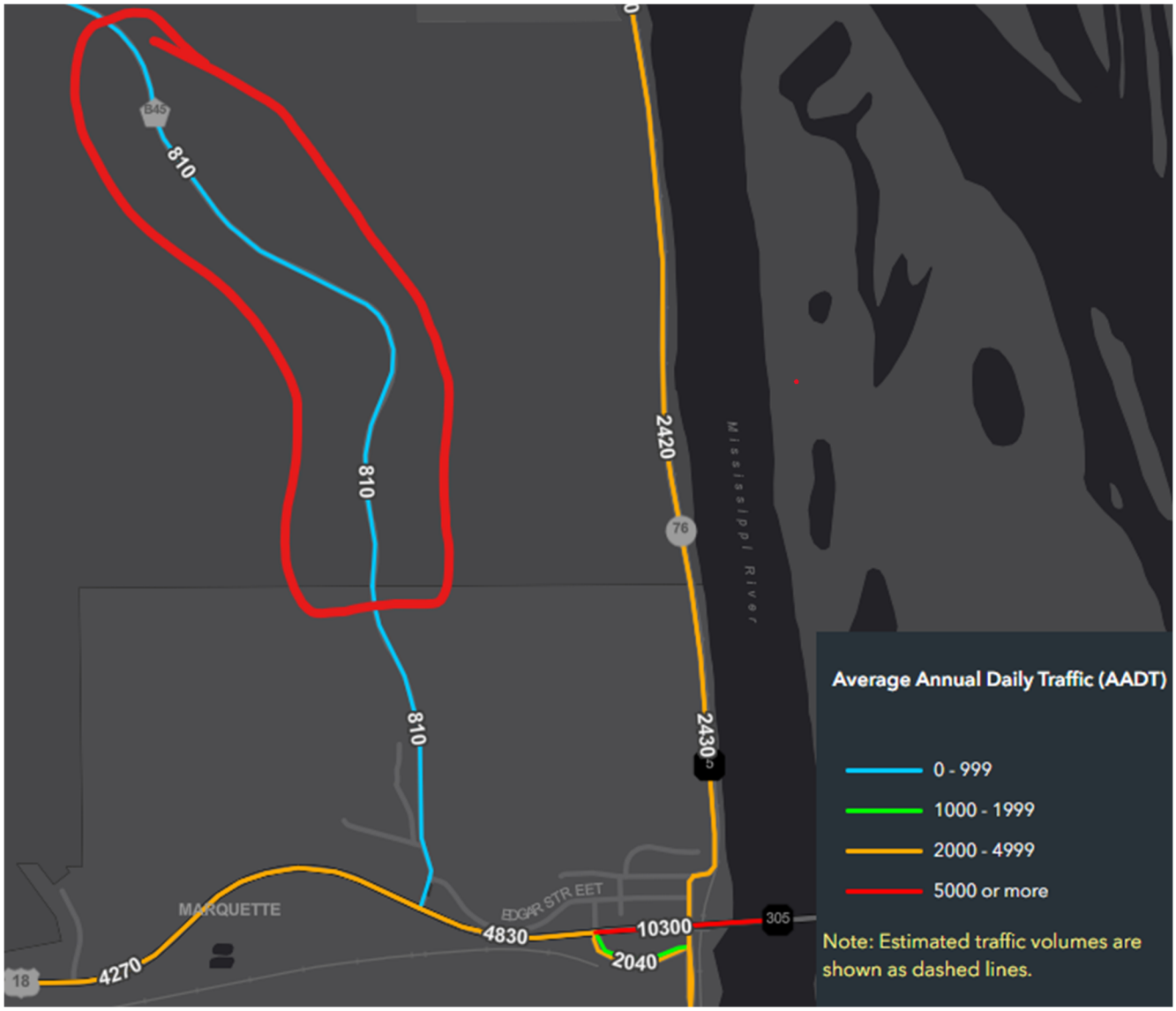
SYSTEMS PLANNING BUREAU
Phone: (515) 239-1664
WWW.IOWADOT.GOV/MAPS

In Cooperation With
United States
Department of Transportation

JANUARY 1, 2022

MILES 0 1 2 3 4
KILOMETERS 0 1 2 3 4 5 6

2021 ANNUAL AVERAGE DAILY TRAFFIC HISTORICAL DATA



County:	Clayton	Prepared By:	Casey Stickfort
Location:	Pleasant Ridge/B45 N. of Marquette	Date Prepared:	8/13/2025
Proposed Improvements:	Paved shoulders, Shoulder Rumble Strips, 6" Painted Edge Lines and Safety Edge		
Estimated Improvement Cost:	$ 656,186		
Inflation on Crash Costs:	4%	Annual Maintenance: (% of Improvement Cost)	2%
Discount Rate:	4%		
Estimated Service Life:	20	Annual Maintenance Cost:	$ 13,124

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	3
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	CRF 2:	CRF 3:	**Combined CRF**
CRF Value (%)	15	7	6	**22.3**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000		22.3	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000		22.3	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	1	22.3	**0.20**	**0.04**
Possible/Unknown Injury (C)	$ 135,000	1	22.3	**0.20**	**0.04**
Property Damage Only (O)	$ 20,000	2	22.3	**0.40**	**0.09**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ 12,939**
Possible/Unknown Injury (C)	**$ 6,023**
Property Damage Only (O)	**$ 1,785**

Total Benefits and Costs

		Implementation Cost	$ 656,186
		Present Value of Maint.	$ 178,356
Present Value Benefits (Societal Benefits)	$ 306,442	Present Value Costs (Impl. and Maint. Costs)	$ 834,542
Present Value Net Return	$ (528,100)		
Benefit Cost Ratio	**0.37**		

Form continues on next page

County: Clayton
Location: Pleasant Ridge/B45 N. of Marquette
Prepared By: Casey Stickfort
Date Prepared: 8/13/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 7/21/2025

Location / Title of Project: Destination Lighting at various intersections

Applicant: Dubuque County

Contact Person: Russell Weber, P.E. Title: Dubuque County Engineer

Complete Mailing Address: 1225 Seippel Road
Dubuque, IA 52002

Phone: 563-557-7283 (Area Code) E-Mail: Russell.weber@dubuquecountyiowa.gov

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s):

Contact Person: Title:

Complete Mailing Address:

Phone: (Area Code) E-Mail:

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	236,000.00
Total Project Cost	$	236,000.00
Safety Funds Requested	**$**	**236,000.00**

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☒ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information

Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
2656	US 151 and Monastery Road/D41	☒	☐	1.0308	0.70965
2650	US 151 and Sundown Road	☒	☐	1.6995	0.11450

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
57396	D 41 and Sundown Road/Y21	☐	☒	0.4946	-0.0143
146614	Y 35 and Tanzanite Drive	☐	☒	0.5061	-0.0065

Rev. 07/23

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the Dubuque County Road Department

Signed: _____ 7/21/2025

Signature Date Signed

Russell Weber, P.E.

Printed Name

Attest: Harley V. Pothoff 07/21/2025

Harley V. Pothoff (Jul 21, 2025 14:58 CDT)

Signature Date Signed

Harley Pothoff, Board Chair

Printed Name

RESOLUTION 25- 142

WHEREAS, Dubuque County recognizes there is a large crash reduction factor (CRF) for intersections that have destination lighting; and

WHEREAS, the cost of destination lighting at intersections is low when considering the benefit to safety it provides; and

WHEREAS, all selected road intersections have an accident history, many of the accidents occurred in nighttime hours; and

WHEREAS, Dubuque County is seeking the necessary funding for this destination lighting project implementation by applying for a IDOT Traffic Safety Improvement Program (TSIP) grant; and

WHEREAS, upon completion, the Dubuque County Road Department will be responsible for adequately maintaining and paying for operating costs of the lighting.

NOW THEREFORE, the Dubuque County Board of Supervisors hereby approve filing this grant application for funds through the Traffic Safety Improvement Program to fund a destination lighting at various intersections project.

Resolution adopted this 21st day of July, 2025.

Harley V. Pothoff
Harley V. Pothoff (Jul 21, 2025 14:58 CDT)

Harley V Pothoff, Chairperson

ATTEST:

Keith Lucy

Keith Lucy, Dubuque County Auditor

B.

Narrative

Dubuque County is applying for Traffic Safety Improvement Program Funding (TSIP) to pay for 100% of the cost for destination lighting at various intersections in Dubuque County.

Dubuque County recognizes there is a large crash reduction factor (CRF) for destination lighting. The cost of destination lighting at intersections is low when considering the benefit to safety it provides.

The roads at the intersections that were chosen as candidates for lighting all have traffic counts of greater than 1,000 vehicles per day, except for Clay Hill Rd. The IA 3 & Clay Hill intersection was chosen as a candidate because the majority of Clay Hill Road has a traffic count of greater than 1,000 vehicles per day, and the IA 3 & Clay Hill intersection is near the Heritage Trail. Heritage Trail is frequently used by pedestrians and bicyclists. Each of the intersections has an accident history. Many of the accidents occurred during nighttime hours.

All the intersection locations would require a new base, pole, mast arm, light, wiring, and coordination with the electric utility provider. Dubuque County's rugged terrain often makes it difficult to achieve preferred clear zones. For added safety and service life of the destination lighting, Dubuque County prefers to require breakaway bases and metal poles be used.

Any work required in Iowa DOT right-of-way, or use of Iowa DOT right-of-way will be coordinated with the appropriate District 6 contacts.

A table on the next sheet lists the intersections by priority. It also provides information about speed limits, clear zones, traffic counts, and information about the proposed improvement.

FY 2026 TSIP - Site Specific Application							
Intersection Summary - Destination Lighting							
	Intersection Characteristics				**Proposed Improvement**		
Location - Intersection (Type) Major Road Minor Road	**Roadway Type**	**Speed Limit (mph)**	**AADT (2021)**	**Preferred Clear Zone**	**Horizontal Clearance (ft)**	**Benefit Cost Ratio**	**New Pole**
US 151 / Skyline Rd / Monastery Rd							
US 151	Primary	65	2800	42	60	810.69	x
Skyline Rd / Monastery Rd	Secondary	55 / 40	1270 / 1290	24 / 14	24 / 24		
US 151 / Sundown Rd / Driscoll Rd							
US 151	Primary	65	4750	42	60	341.65	x
Sundown Rd / Driscoll Rd	Secondary	55 / 45	2540 / 250	30 / 14	24 / 24		
Sundown Rd / Monastery Rd							
Sundown Rd	Secondary	55	4080	30	65	25.19	x
Monastery Rd	Secondary	50	1300	20	20		
Kennedy Rd / Rupp Hollow Rd							
Kennedy Rd	Secondary	35	3680	16	49	22.61	x
Rupp Hollow Rd	Secondary	35	2140	16	16		
Old Highway Rd / Sundown Rd (South)							
Old Highway Rd	Secondary	45	2710	26	39	20.03	x
Sundown Rd (South)	Secondary	35	2230	16	16		
N Cascade Rd / N English Rd							
N Cascade Rd	Secondary	45	2310	26	43	18.73	x
N English Rd	Secondary	45	1040	20	20		
S John Deere Rd / Tanzanite Dr							
S John Deere Rd	Secondary	45	7800	28	36	13.89	x
Tanzanite Dr	Secondary	25	3800	16	16		
Old Highway Rd / Sundown Rd (North)							
Old Highway Rd	Secondary	25	3050	16	48	10.01	x
Sundown Rd (North)	Secondary	35	1320	14	16		
IA 3 / Clay Hill Rd							
IA 3	Primary	50	1710	26	38	2.58	x
Clay Hill Rd	Secondary	35	750	14	18		

C.

Itemized Breakdown of all Costs

Dubuque County plans on preparing a set of plans for the installation of destination lighting. The project will be let for bid.

FY 2027 TSIP - Site Specific Application			
Cost Estimate - Destination Lighting			
	Quantity	Unit Price	Total
Install Pole Base, Breakaway Metal Pole with Mast Arm and Light	11	$15,000.00	$165,000.00
Wiring and Coordination with Electric Utility Provider	11	$5,000.00	$55,000.00
Contingency (10%)	1	$16,000.00	$16,000.00
		Total	$236,000.00

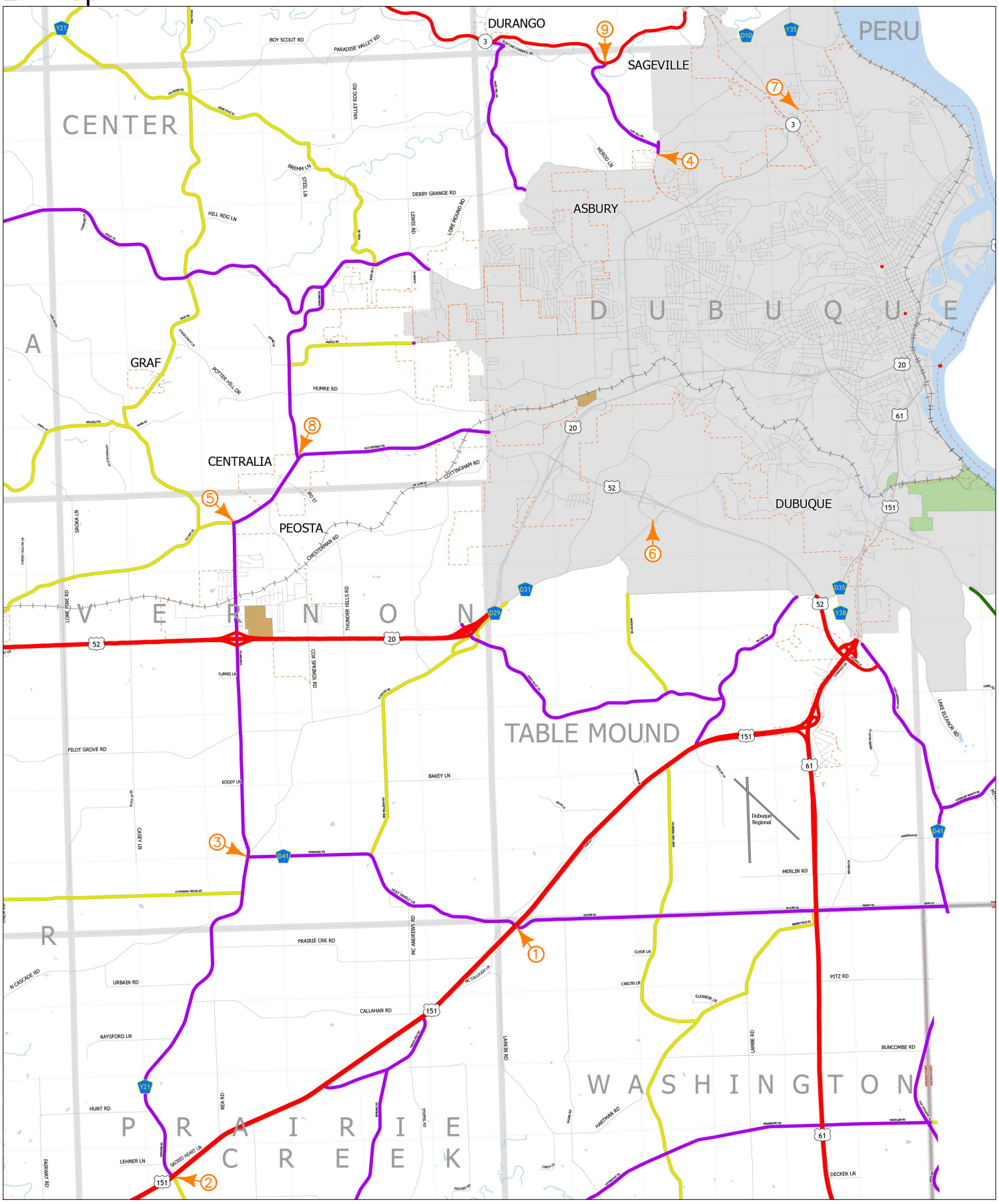
D.

Time Schedule

TSIP Application Due	August 15, 2025
TSIP Award Notification	January, 2026
TSIP Funding Available	July 1, 2026
Plan Letting Date	July 21, 2026
Begin Installation	August, 2026
Complete Installation	November, 2026

E. Map

Proposed Locations of Destination Lighting



F. Color Pictures

Location 1: US 151 & Skyline Rd & Monastery Rd



Location 2: US 151 & Sundown Rd & Driscoll Rd



Location 3: Sundown Rd & Monastery Rd



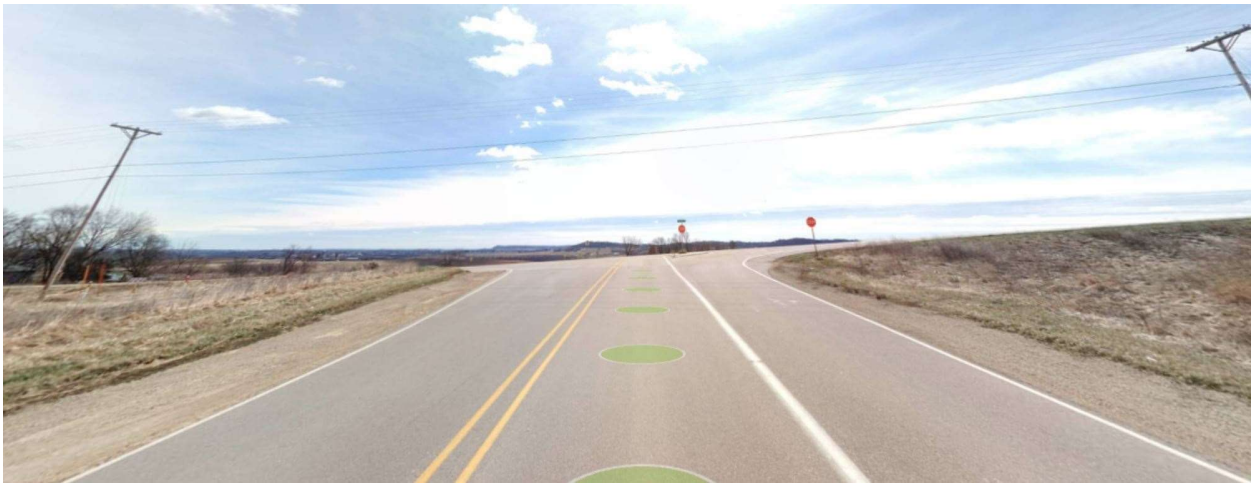
Location 4: Kennedy Rd & Rupp Hollow Rd



Location 5: Old Highway Rd & Sundown Rd (South)



Location 6: North Cascade Rd & N English Rd



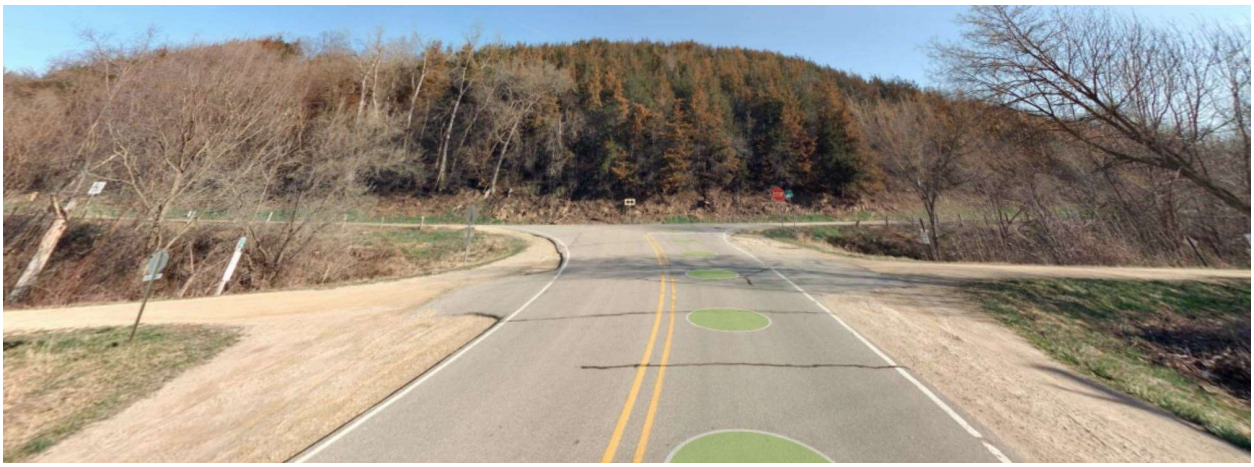
Location 7: S John Deere Rd - Tanzanite Dr



Location 8: Old Highway Rd - Sundown Rd (North)

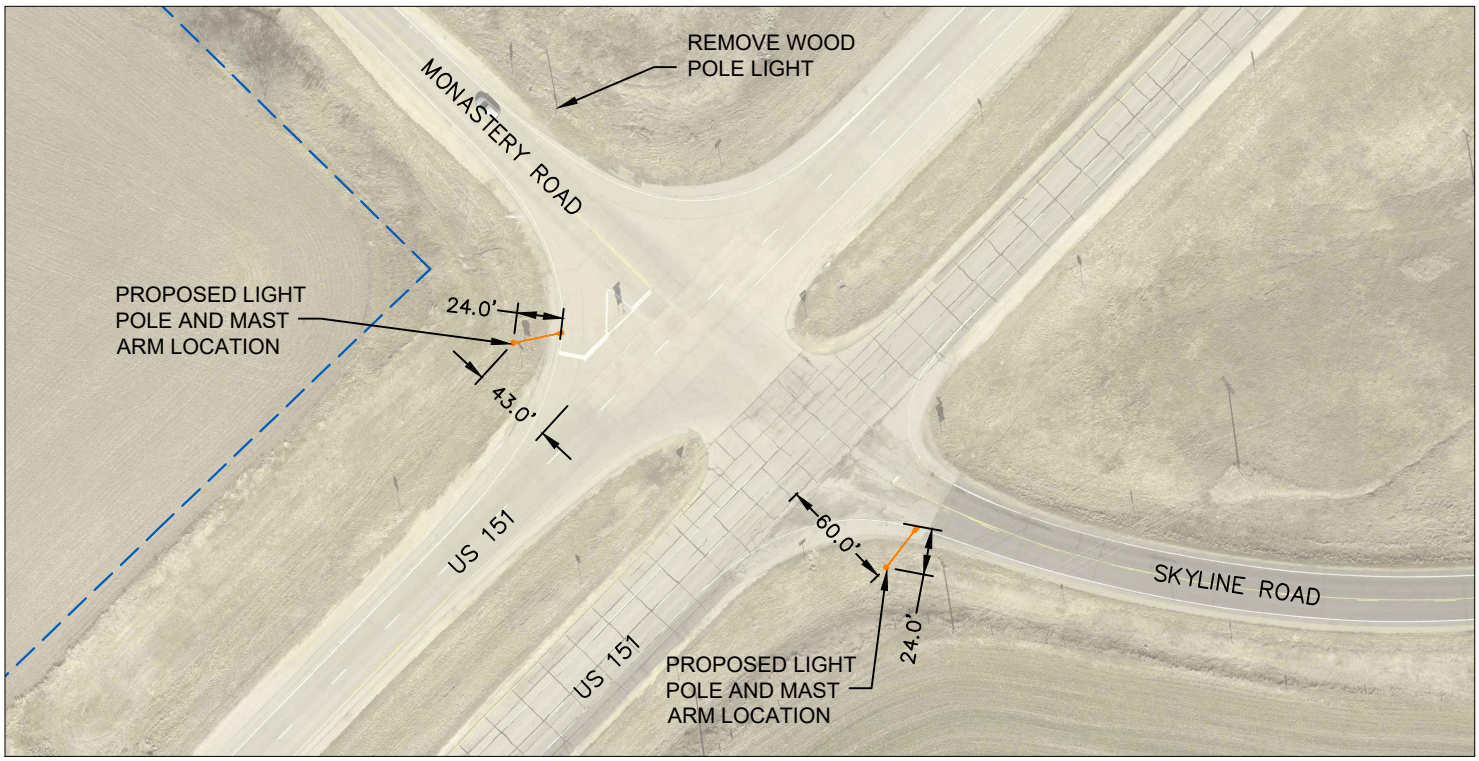


Location 9: IA 3 - Clay Hill Rd

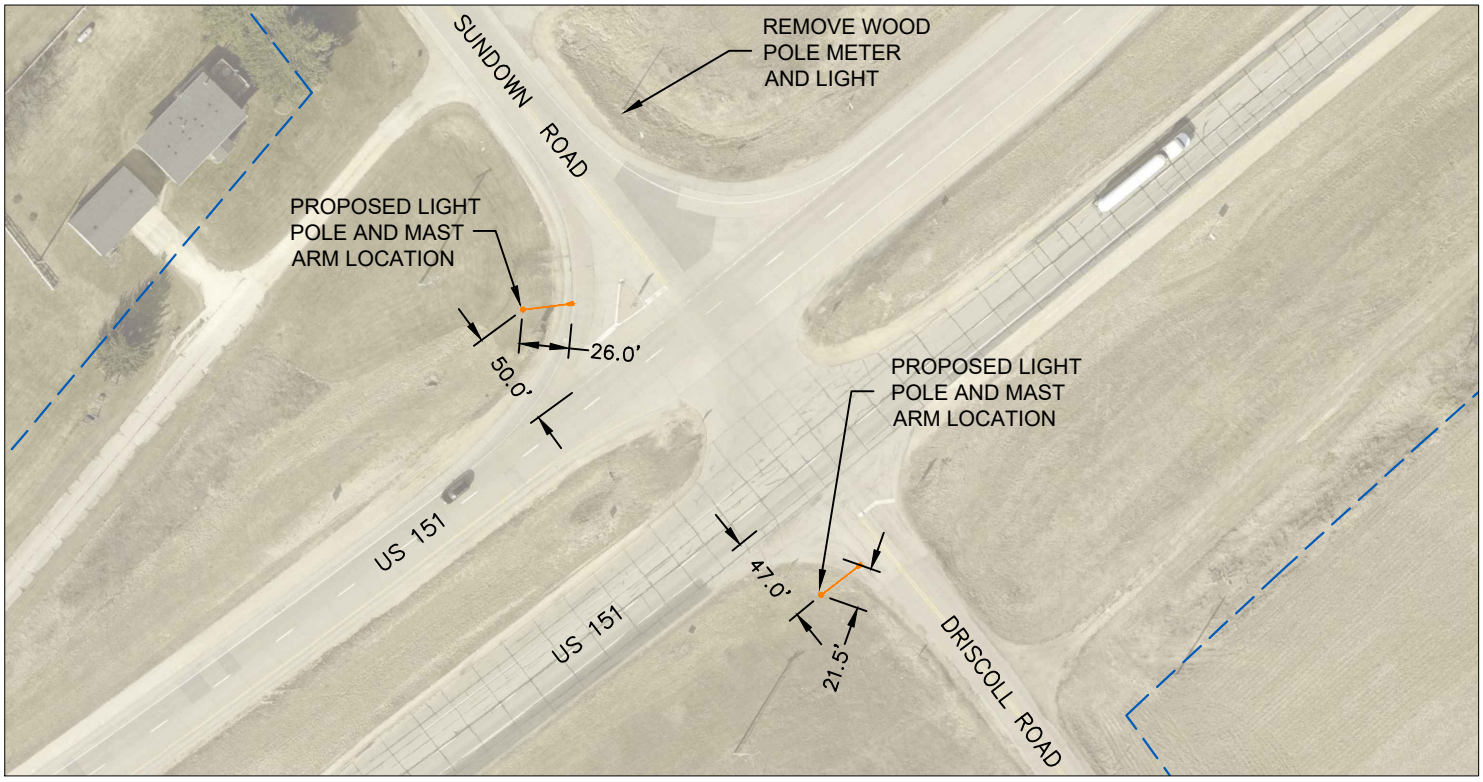


G & H. PLAN VIEW & AERIAL PHOTOGRAPH

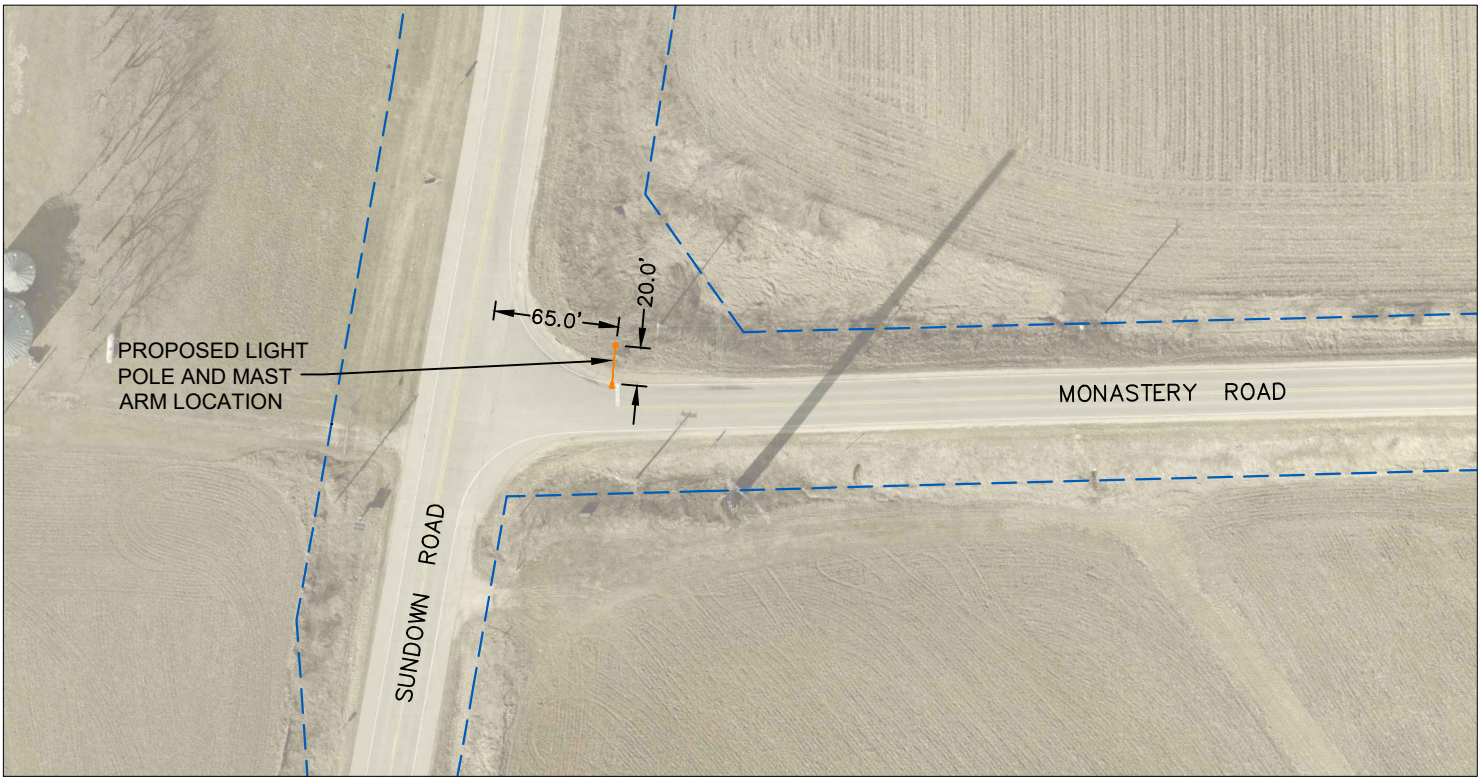
LOCATION 1: US 151 & Skyline Road



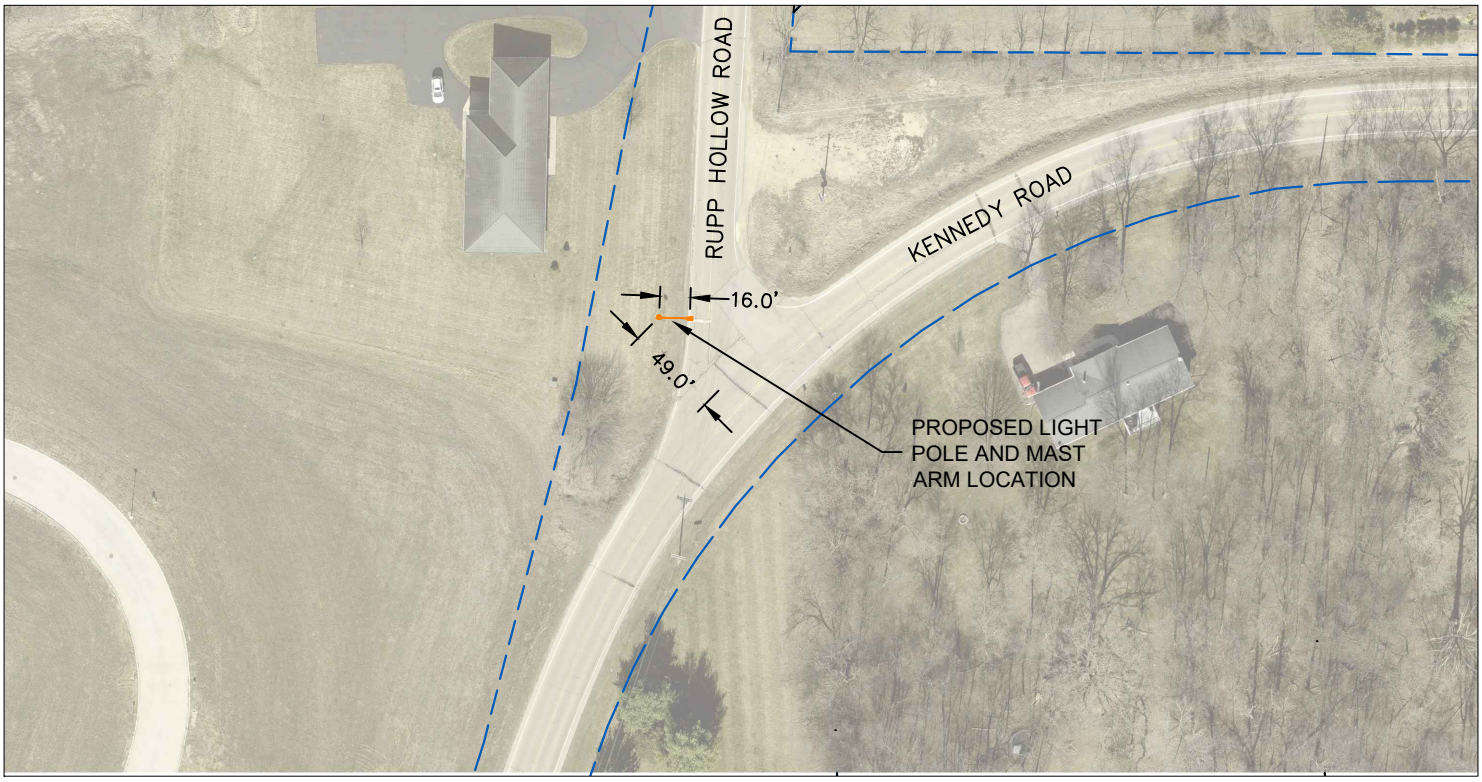
LOCATION 2: US 151 & Sundown Road & Driscoll Road



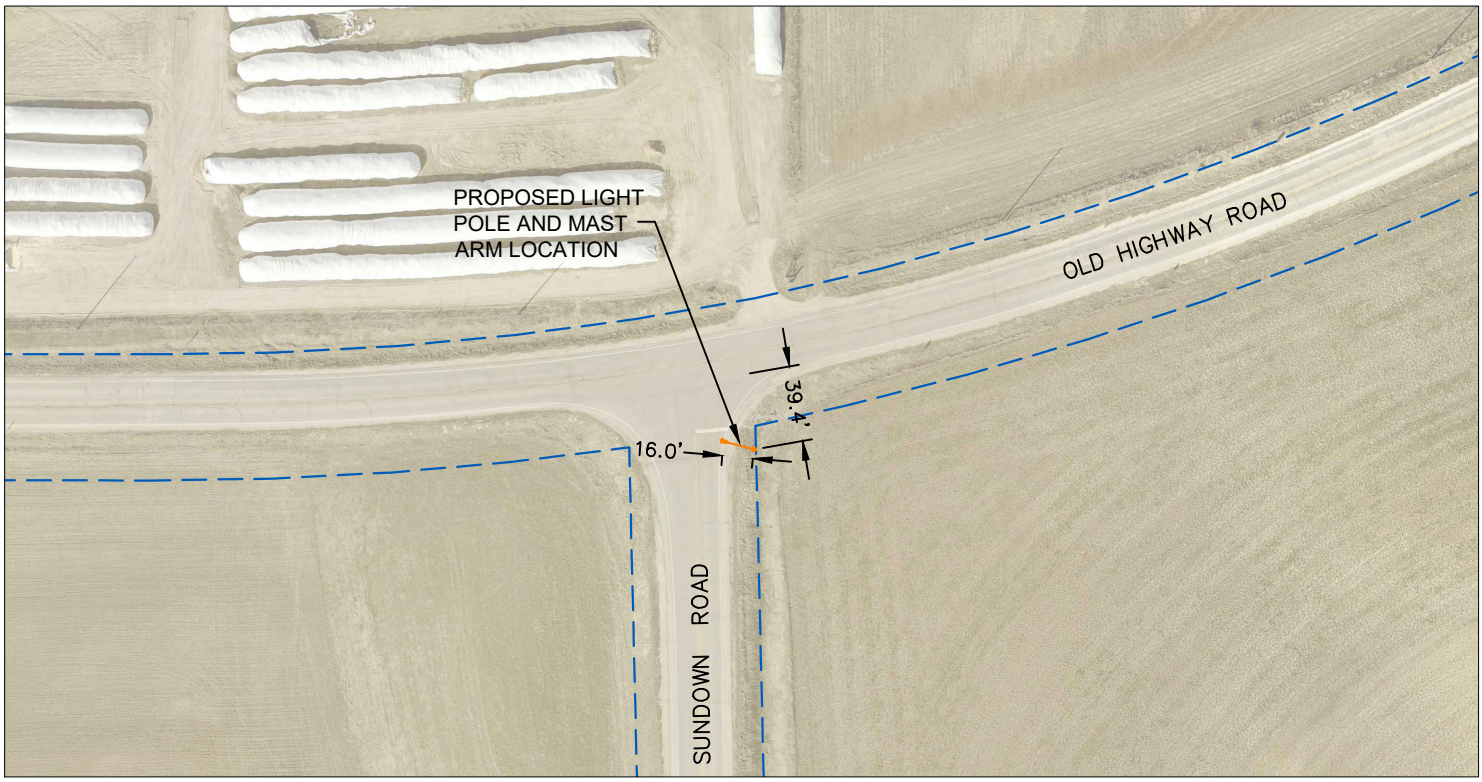
LOCATION 3: Sundown Road & Monastery Road



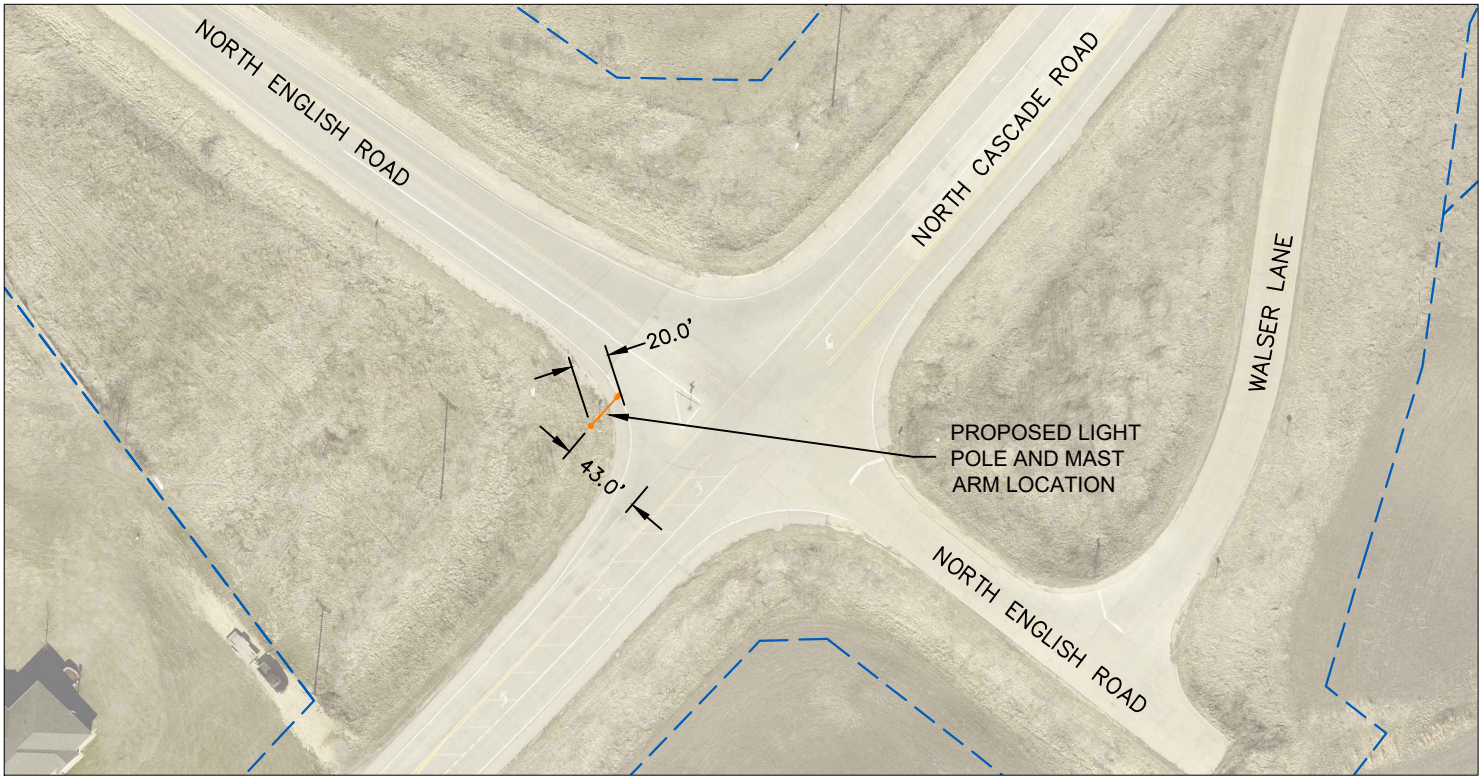
LOCATION 4: Kennedy Road & Rupp Hollow Road



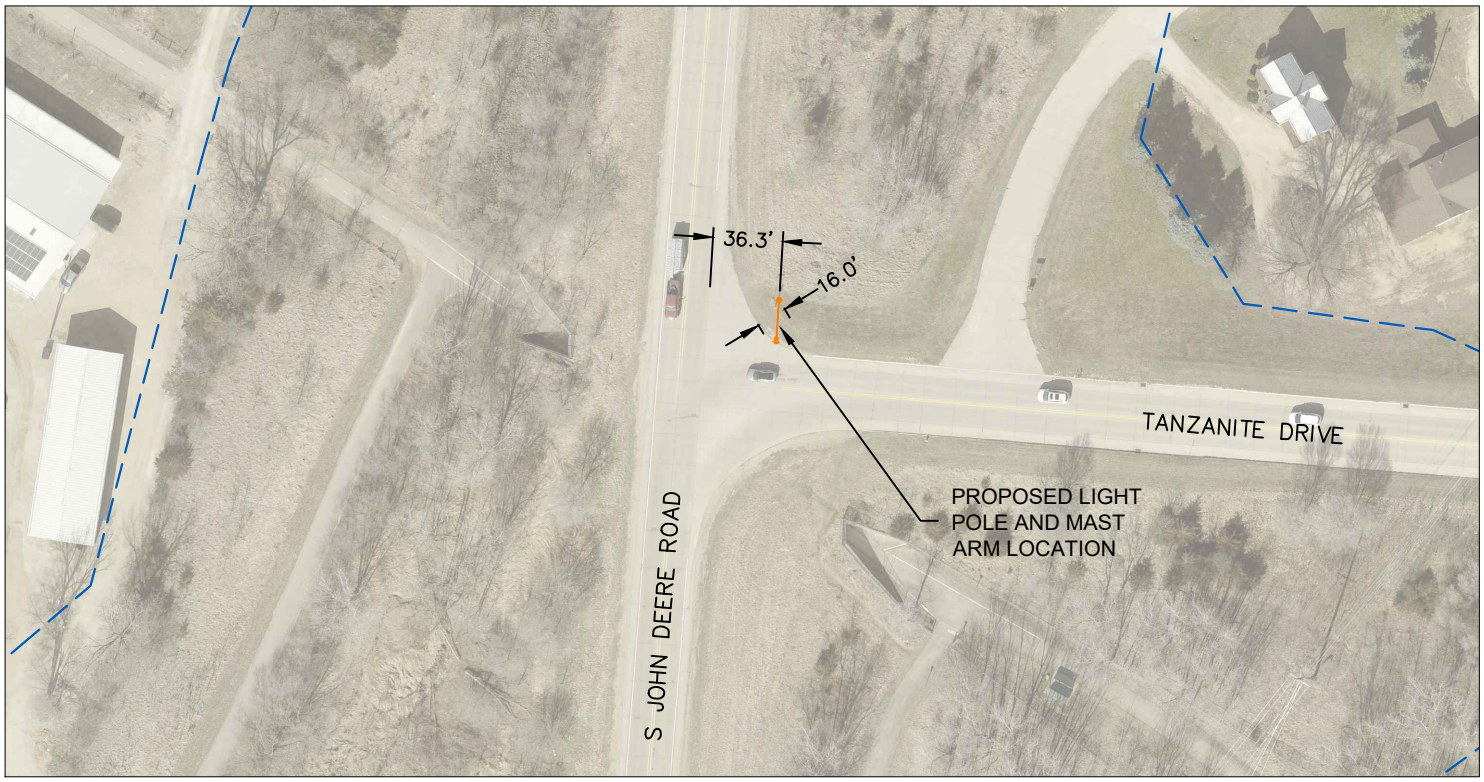
LOCATION 5: Old Highway Road & Sundown Road (South)



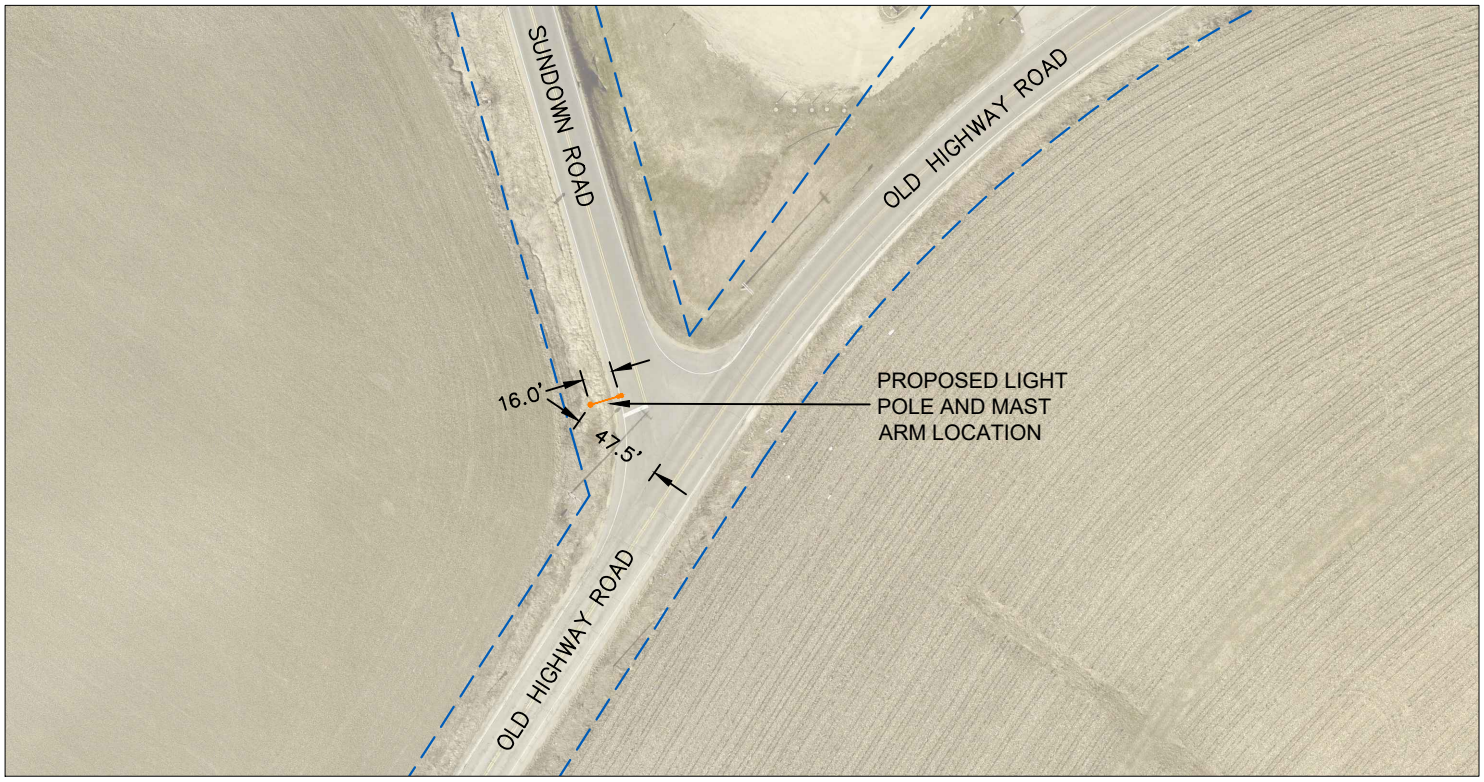
LOCATION 6: North Cascade Road & North English Road



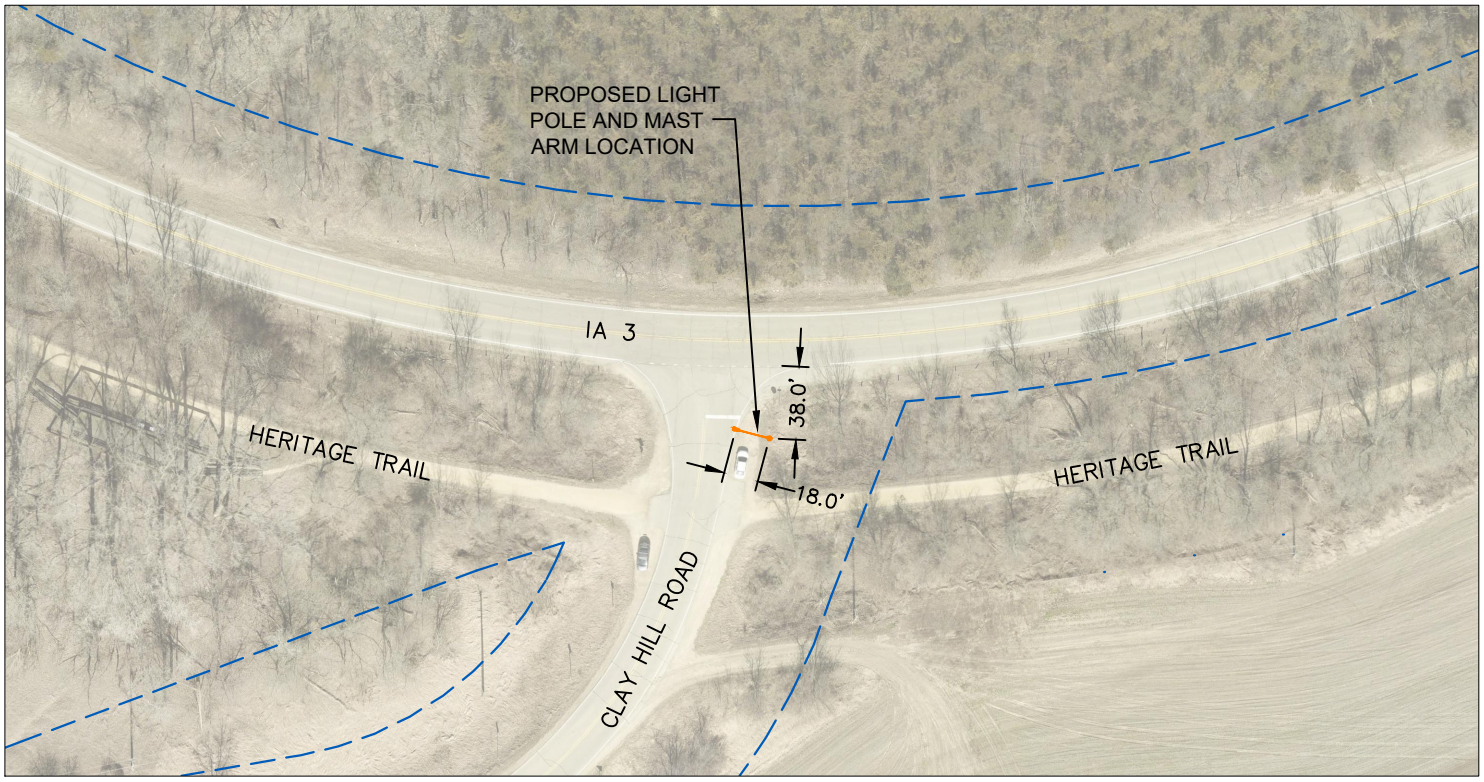
LOCATION 7: S John Deere Road & Tanzanite Drive



LOCATION 8: Old Highway Road & Sundown Road (North)



LOCATION 9: A 3 & Clay Hill Intersection



I.

ICAT Crash Summary of Motor Vehicle Accidents

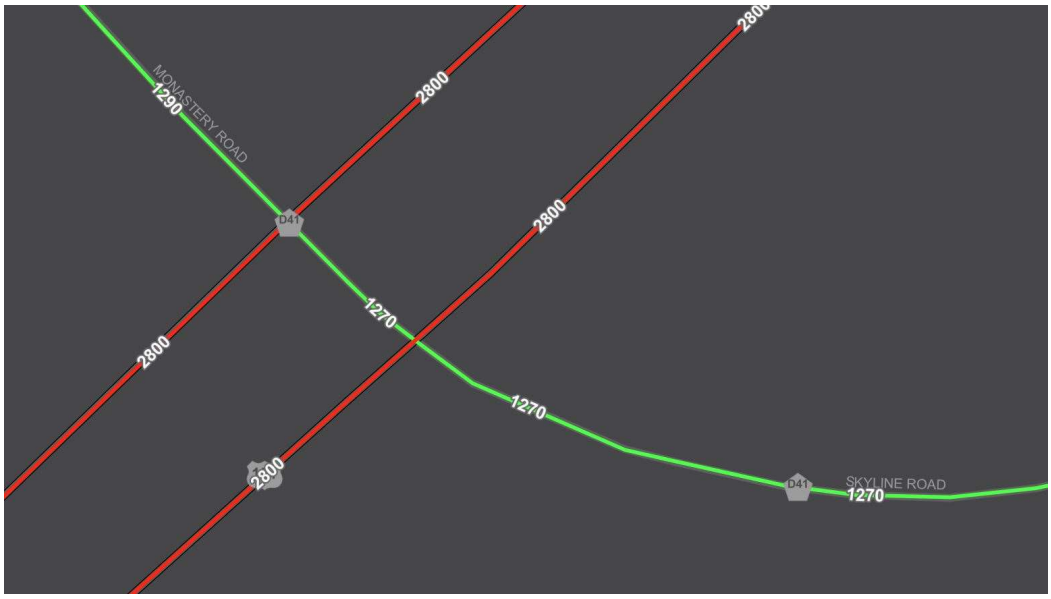
A PDF document is attached in the Appendix section of this application including ICAT data for each intersection location.

J.

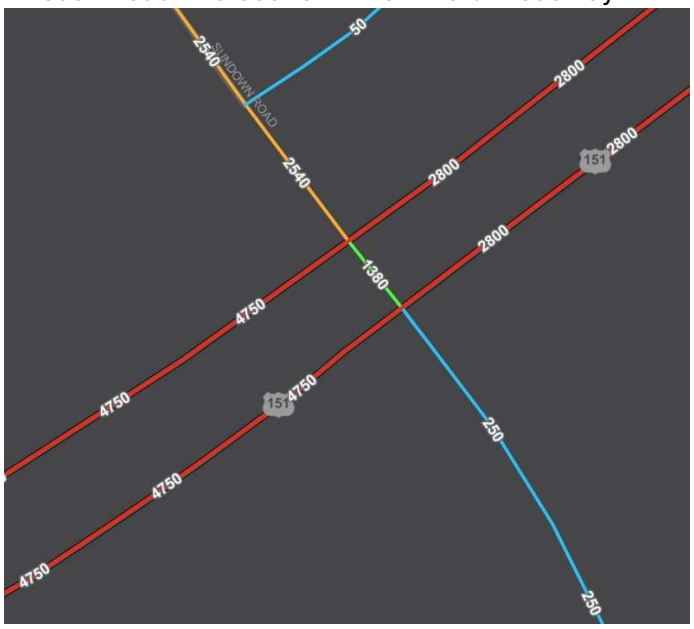
Traffic Volumes

The traffic volumes shown for each location were taken from the Iowa Traffic Data online interactive map. Iowa Traffic Data

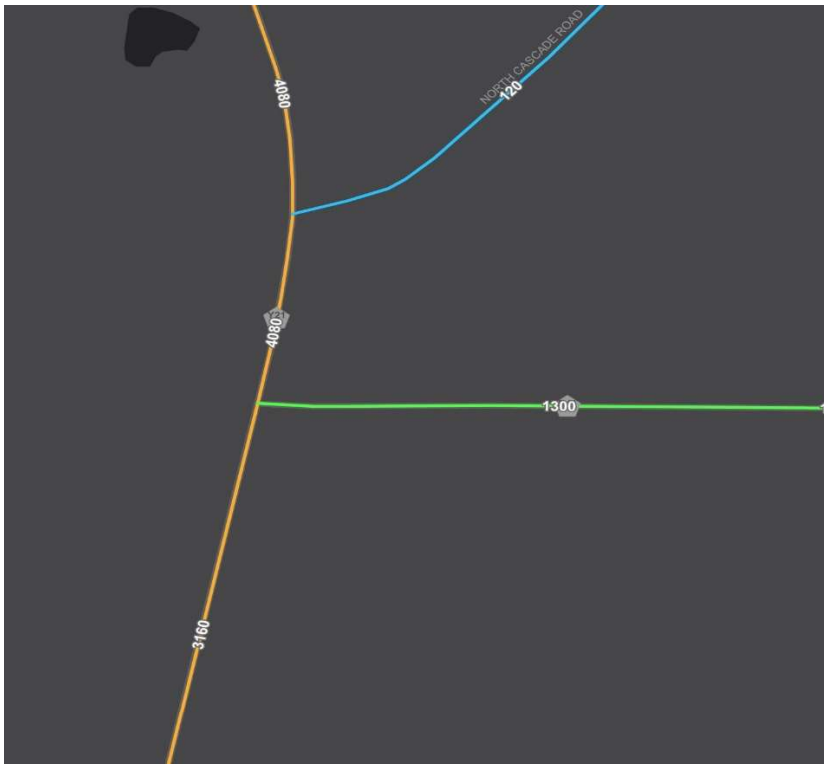
Location 1: US 151 - 2023 Directional Total AADT = 2800 Vehicles
Skyline Road Intersection - 2021 Total Roadway AADT = 1270 Vehicles
Monastery Road Intersection - 2021 Total Roadway AADT = 1290 Vehicles



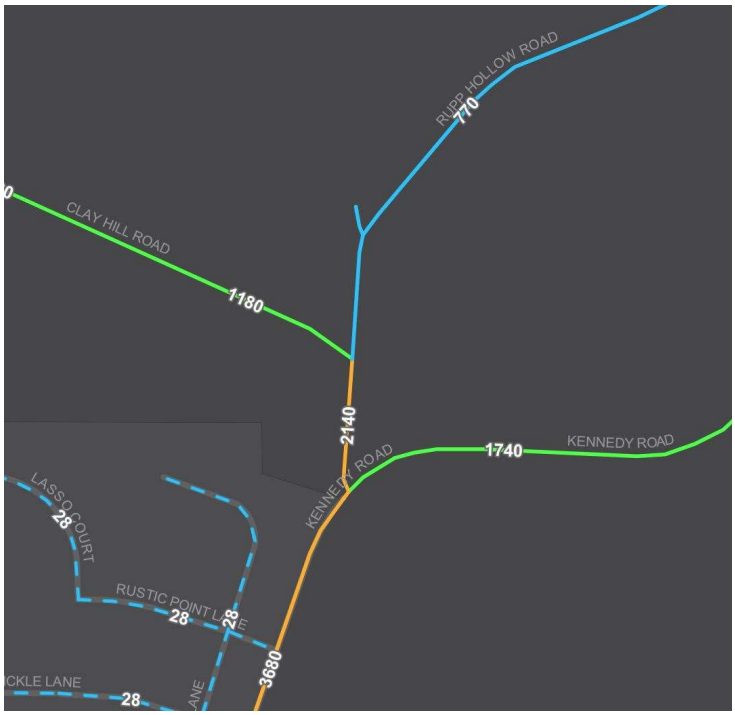
Location 2: US 151 - 2023 Directional Total AADT = 4750 Vehicles
Sundown Road Intersection - 2021 Total Roadway AADT = 2540 Vehicles
Driscoll Road Intersection - 2021 Total Roadway AADT = 250 Vehicles



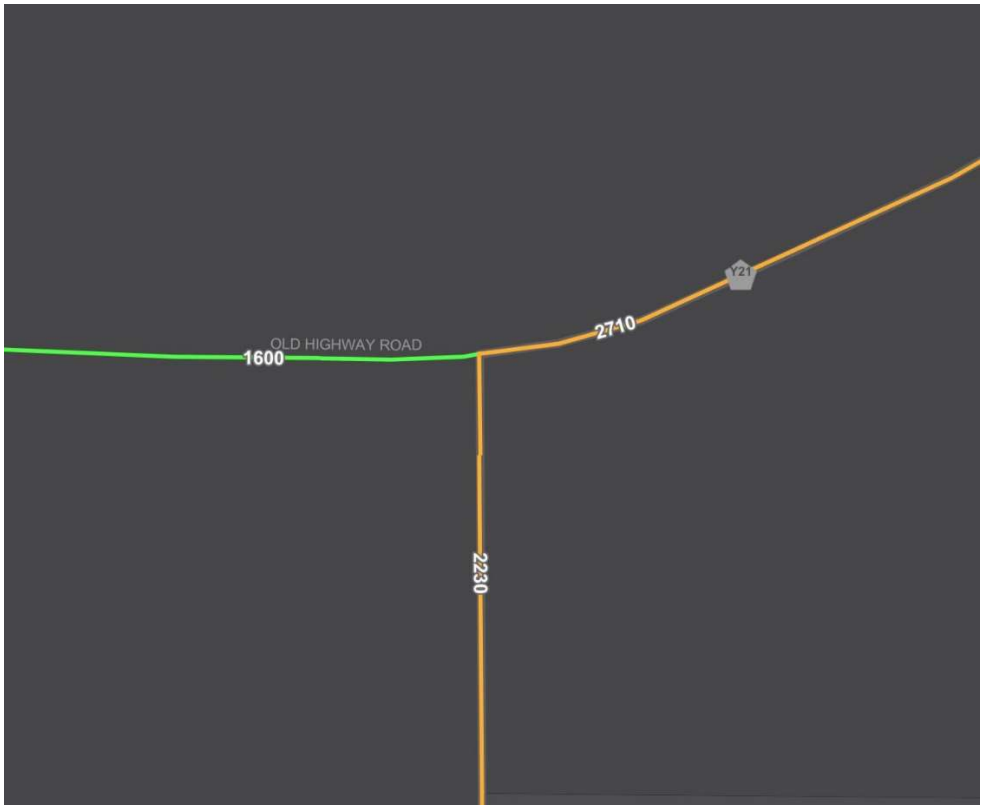
Location 3: Sundown Road - 2021 Total Roadway AADT = 4080 Vehicles
Monastery Road - 2021 Total Roadway AADT = 1300 Vehicles



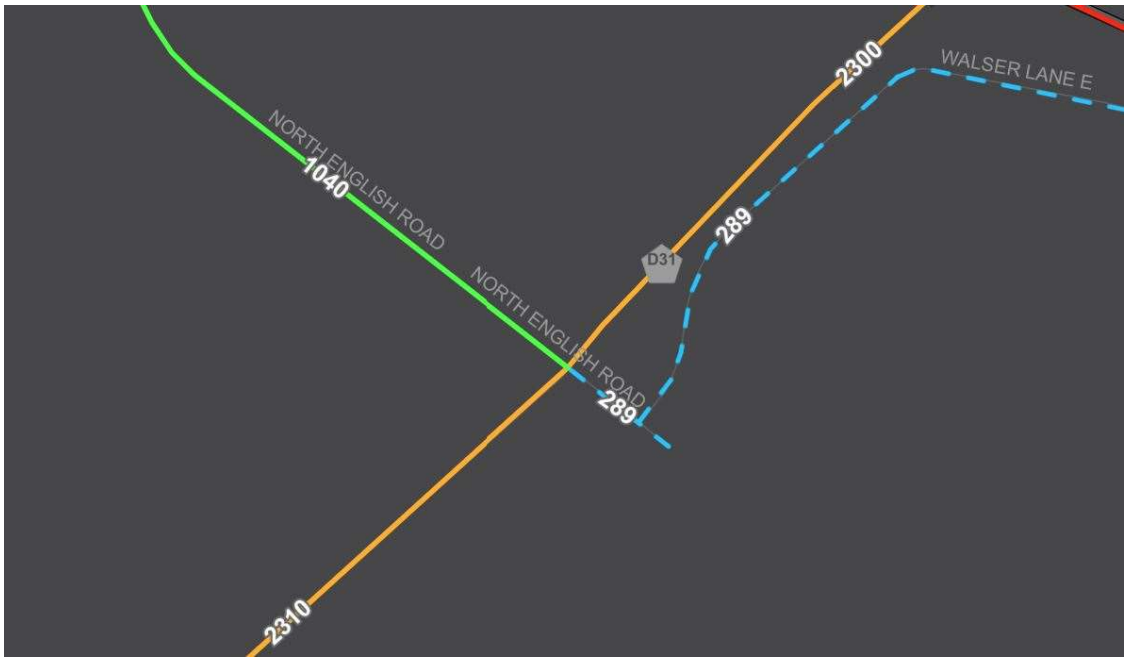
Location 4: Kennedy Road - 2021 Total Roadway AADT = 3680 Vehicles
Rupp Hollow Road - 2021 Total Roadway AADT = 2140 Vehicles



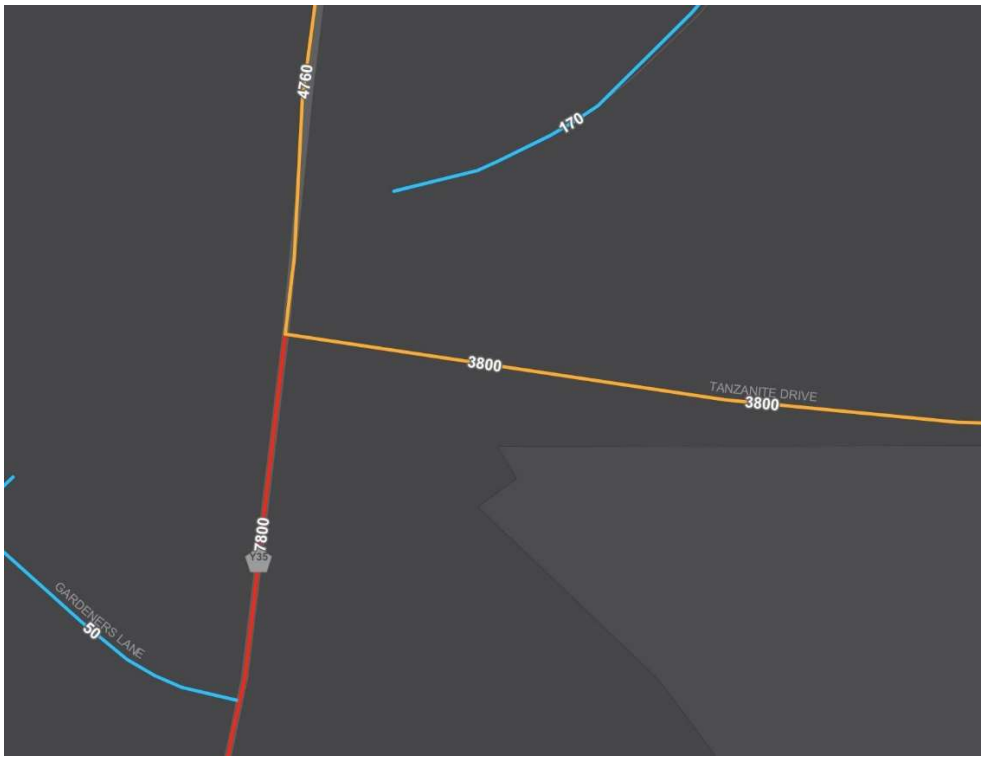
Location 5: Old Highway Road - 2021 Total Roadway AADT = 2710 Vehicles
Sundown Road (South) - 2021 Total Roadway AADT = 2230 Vehicles



Location 6: North Cascade Road - 2021 Total Roadway AADT = 2310 Vehicles
North English Road - 2021 Total Roadway AADT = 1040 Vehicles



Location 7: S JohnDeere Road - 2021 Total Roadway AADT = 7800 Vehicles
Tanzanite Drive - 2021 Total Roadway AADT = 3800 Vehicles



Location 8: Old Highway Road - 2021 Total Roadway AADT = 3050 Vehicles
Sundown Road (North) - 2021 Total Roadway AADT = 1320 Vehicles



Location 9: IA 3 - 2023 Total AADT = 1710 Vehicles

Clay Hill Road - 2021 Total Roadway AADT = 750 Vehicles



L.

Benefit/Cost ratio worksheet

A PDF document is attached in the Appendix section of this application including Benefit-Cost analysis for each intersection location.

APPENDIX

Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	13
Fatal Crash	3
Suspected Serious Injury Crash	2
Suspected Minor Injury Crash	3
Possible/Unknown Injury Crash	3
Property Damage Only	2

Injury Status Summary	26
Fatalities	4
Suspected serious/incapacitating	2
Suspected minor/non-incapacitating	9
Possible (complaint of pain/injury)	11
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	355,401.00
Average (per crash dollars):	27,338.54
Total Vehicles:	26.00
Average (per crash):	2.00
Total Occupants:	44.00
Average (per crash):	3.38

Average Severity	
Fatalities/Fatal Crash:	1.33
Fatalities/Crash:	0.31
Injuries/Crash:	1.69
Major Injuries/Crash:	0.15
Minor Injuries/Crash:	0.69
Possible/Unknown Injuries/Crash:	0.85



Major Cause			13
Animal	0	Ran traffic signal	0
Ran stop sign	3	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	6	FTYROW: From yield sign	1
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	1	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	1		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Monday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Wednesday	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Thursday	0	0	0	0	0	0	3	0	0	0	0	0	0	3
Friday	0	0	0	0	0	0	0	0	0	1	1	0	0	2
Saturday	0	0	0	0	0	0	1	0	0	0	0	1	0	2
Total	0	0	0	2	0	0	6	1	1	1	1	1	0	13

Manner of Crash Collision	13
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	13
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	13
Dry	10
Wet	2
Ice/frost	0
Snow	1
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			26
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	3	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	1
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	22

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	1	2	0	0	3
= 20	0	0	0	0	0
>= 21 and <= 24	1	4	0	0	5
>= 25 and <= 29	2	3	0	0	5
>= 30 and <= 34	0	2	0	0	2
>= 35 and <= 39	1	0	0	0	1
>= 40 and <= 44	1	0	0	0	1
>= 45 and <= 49	0	1	0	0	1
>= 50 and <= 54	0	1	0	0	1
>= 55 and <= 59	0	3	0	0	3
>= 60 and <= 64	0	1	0	0	1
>= 65 and <= 69	0	1	0	0	1
>= 70 and <= 74	1	0	0	0	1
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	1	0	0	1
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	7	19	0	0	26

Drug/Alcohol Related	**13**
Drug	3
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	10

Alcohol Test Given	**26**
None	23
Blood	3
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

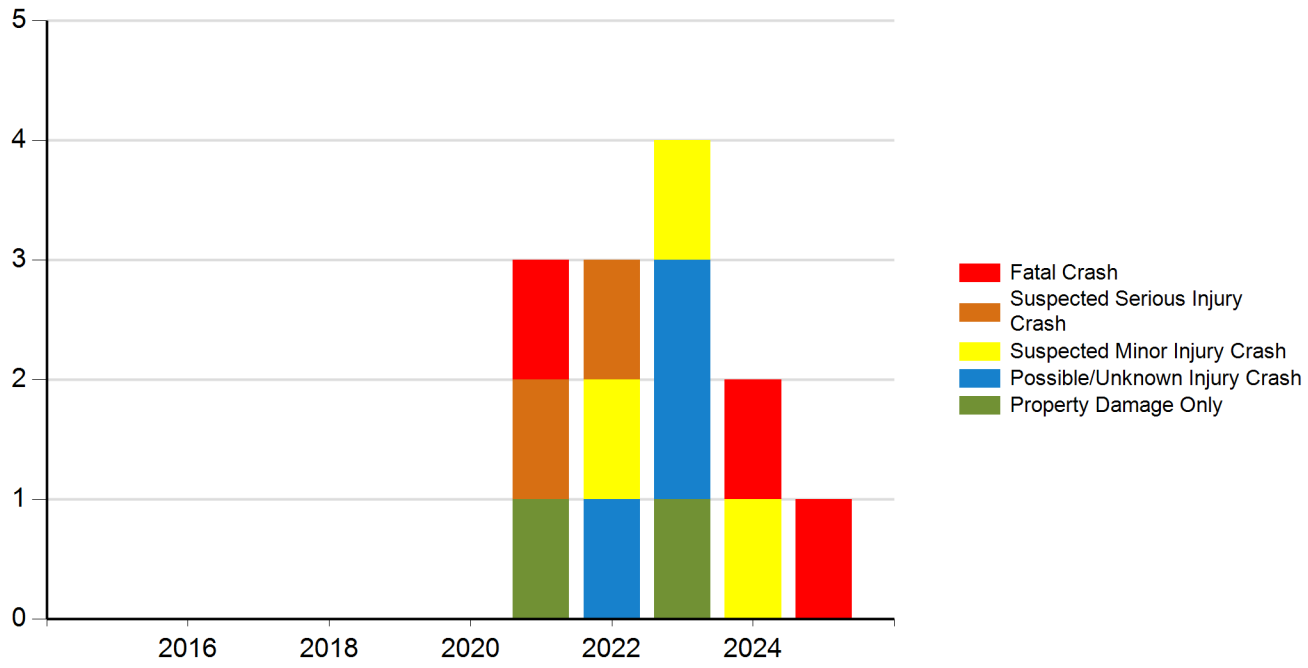
Drug Test Given	**26**
None	22
Blood	3
Urine	1
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**26**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	26
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	1	1	0	0	1	3
2022	0	1	1	1	0	3
2023	0	0	1	2	1	4
2024	1	0	1	0	0	2
2025	1	0	0	0	0	1
Total	3	2	3	3	2	13

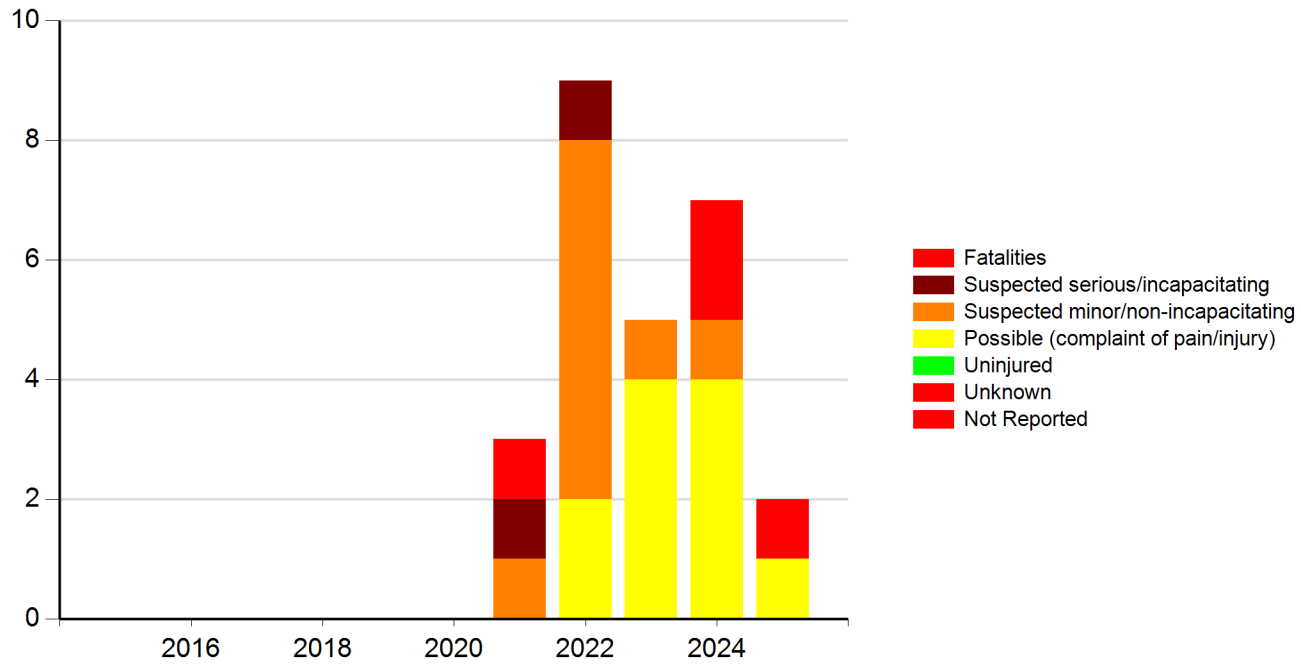
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	1	1	1	0	0	0	0	3
2022	0	1	6	2	0	0	0	9
2023	0	0	1	4	0	0	0	5
2024	2	0	1	4	0	0	0	7
2025	1	0	0	1	0	0	0	2
Total	4	2	9	11	0	0	0	26

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Dubuque)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

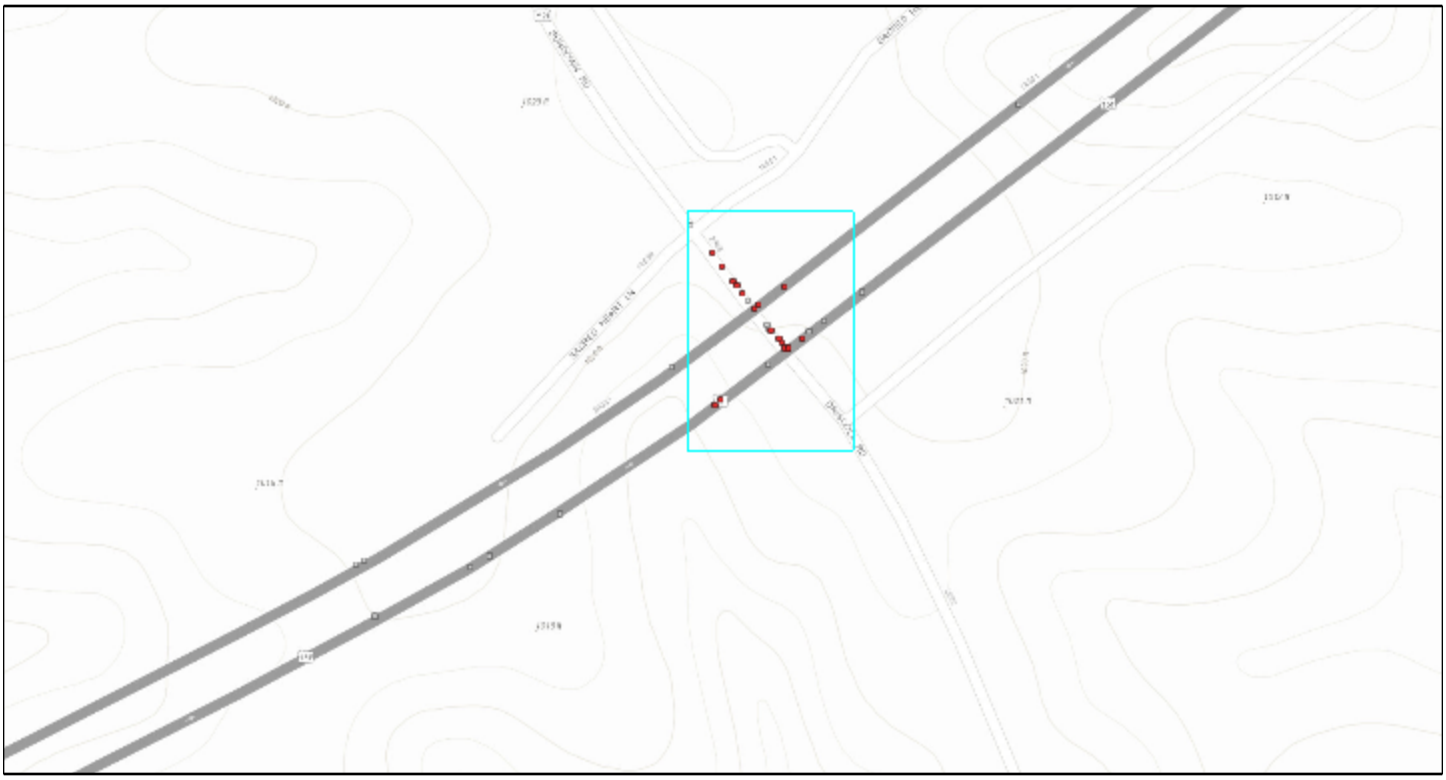
Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	20
Fatal Crash	0
Suspected Serious Injury Crash	2
Suspected Minor Injury Crash	2
Possible/Unknown Injury Crash	1
Property Damage Only	15

Injury Status Summary	9
Fatalities	0
Suspected serious/incapacitating	2
Suspected minor/non-incapacitating	3
Possible (complaint of pain/injury)	3
Uninjured	0
Unknown	0
Not Reported	1

Property/Vehicles/Occupants	
Property Damage Total (dollars):	207,520.00
Average (per crash dollars):	10,376.00
Total Vehicles:	39.00
Average (per crash):	1.95
Total Occupants:	60.00
Average (per crash):	3.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.40
Major Injuries/Crash:	0.10
Minor Injuries/Crash:	0.15
Possible/Unknown Injuries/Crash:	0.15



Major Cause			20
Animal	0	Ran traffic signal	0
Ran stop sign	1	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	2	FTYROW: From yield sign	4
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	1
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	7
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	1	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	1	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	1
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	1		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	1	1	1	0	0	0	0	3
Monday	0	0	0	1	0	1	0	0	2	0	0	0	0	4
Tuesday	0	0	0	1	1	0	0	0	0	0	0	0	0	2
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	2	0	1	0	0	0	0	0	3
Friday	0	0	0	1	0	1	0	1	2	0	0	0	0	5
Saturday	0	0	0	0	0	1	0	1	0	1	0	0	0	3
Total	0	0	0	3	1	5	1	4	5	1	0	0	0	20

Manner of Crash Collision	20
Non-collision (single vehicle)	1
Head-on (front to front)	0
Rear-end (front to rear)	9
Angle (oncoming left turn)	1
Broadside (front to side)	6
Sideswipe (same direction)	2
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	1
Unknown	0

Surface Conditions	20
Dry	16
Wet	2
Ice/frost	2
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			39
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	1
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	38

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	1	0	0	0	1
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	1	0	0	0	1
= 20	1	0	0	0	1
>= 21 and <= 24	1	1	0	0	2
>= 25 and <= 29	2	0	0	0	2
>= 30 and <= 34	4	3	0	0	7
>= 35 and <= 39	4	1	0	0	5
>= 40 and <= 44	1	0	0	0	1
>= 45 and <= 49	0	3	0	0	3
>= 50 and <= 54	1	0	0	0	1
>= 55 and <= 59	2	0	0	0	2
>= 60 and <= 64	3	1	0	0	4
>= 65 and <= 69	1	2	0	0	3
>= 70 and <= 74	1	2	0	0	3
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	2	0	0	2
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	1	0	1
Total	23	15	1	0	39

Drug/Alcohol Related	**20**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	20

Alcohol Test Given	**39**
None	38
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

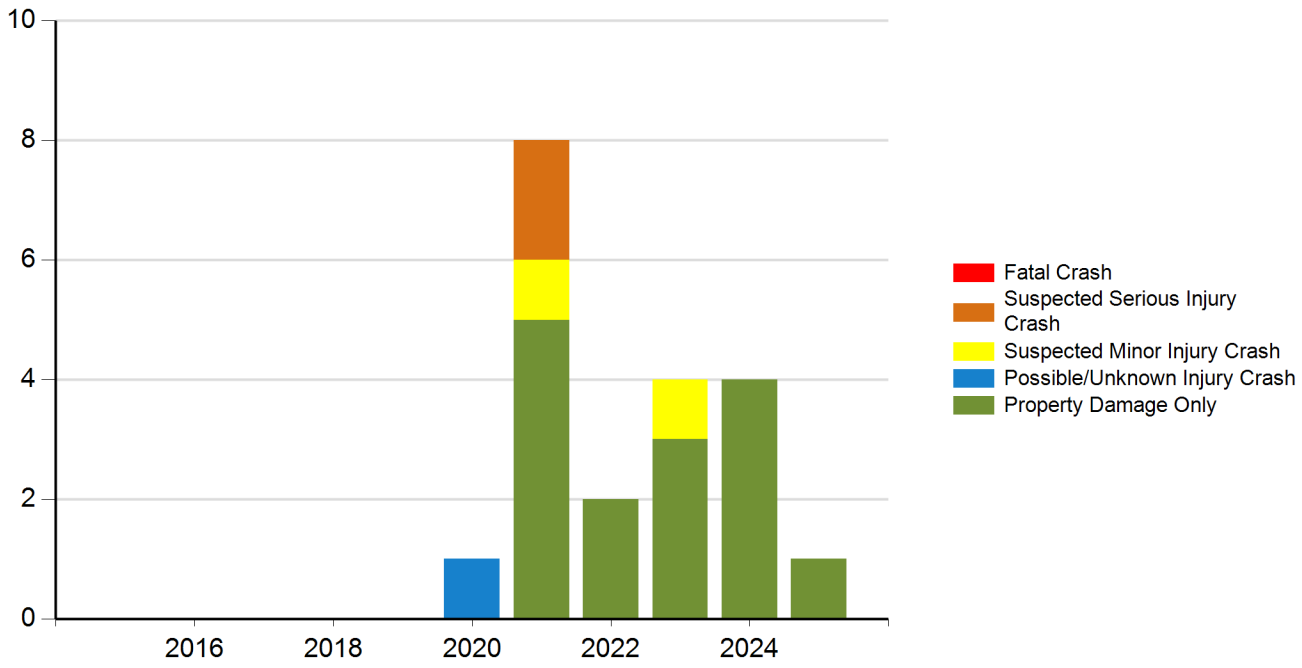
Drug Test Given	**39**
None	38
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	1

Drug Test Result	**39**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	39
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	1	0	1
2021	0	2	1	0	5	8
2022	0	0	0	0	2	2
2023	0	0	1	0	3	4
2024	0	0	0	0	4	4
2025	0	0	0	0	1	1
Total	0	2	2	1	15	20

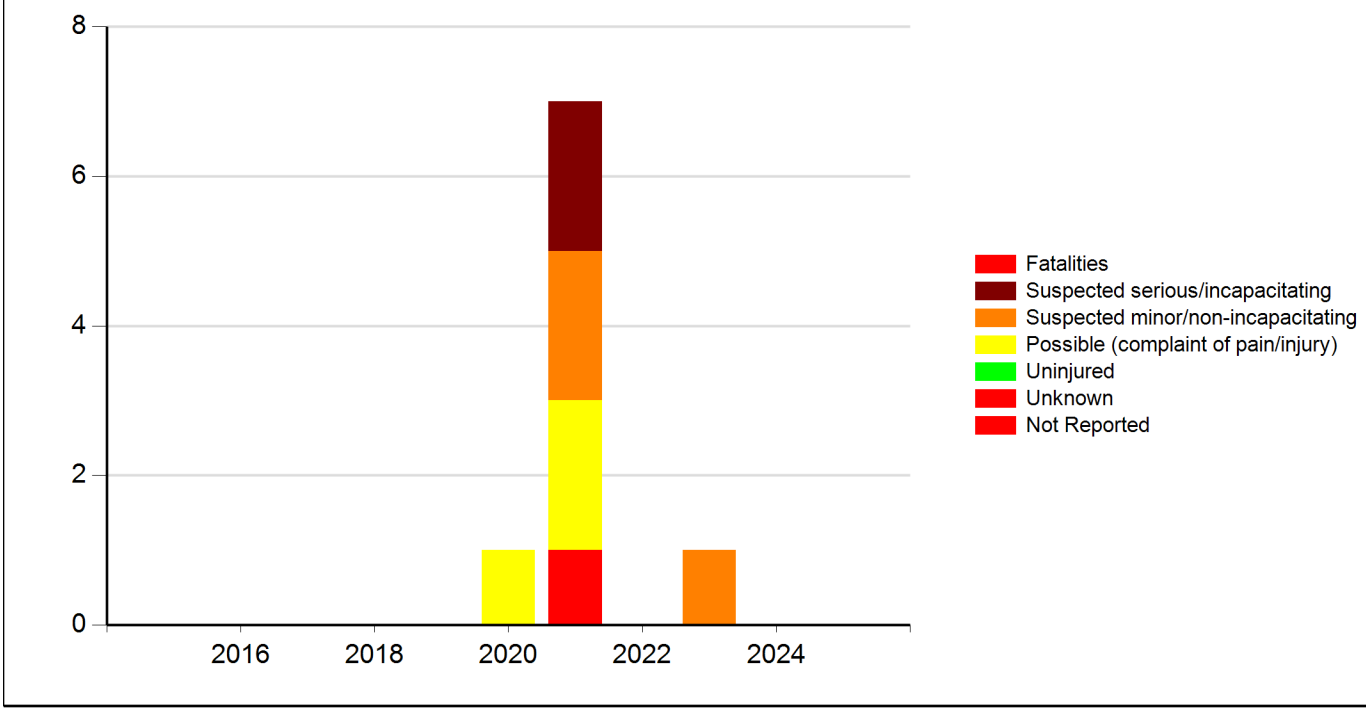
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	1	0	0	0	1
2021	0	2	2	2	0	0	1	7
2022	0	0	0	0	0	0	0	0
2023	0	0	1	0	0	0	0	1
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
Total	0	2	3	3	0	0	1	9

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Dubuque)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	8
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	2
Property Damage Only	6

Injury Status Summary	2
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	2
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	105,000.00
Average (per crash dollars):	13,125.00
Total Vehicles:	17.00
Average (per crash):	2.13
Total Occupants:	17.00
Average (per crash):	2.13

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.25
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.25



Major Cause			8
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	1	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	5
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	1	Swerving/Evasive Action	1
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Tuesday	0	0	0	2	0	0	0	2	0	0	0	0	0	4
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	1	0	1	0	0	0	0	2
Friday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	0	1	3	2	0	0	0	0	8

Manner of Crash Collision	**8**
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	7
Angle (oncoming left turn)	1
Broadside (front to side)	0
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	**8**
Dry	8
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			**17**
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	17

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	1	0	0	1
= 18	1	0	0	0	1
= 19	0	1	0	0	1
= 20	0	1	0	0	1
>= 21 and <= 24	0	1	0	0	1
>= 25 and <= 29	0	0	0	0	0
>= 30 and <= 34	0	1	0	0	1
>= 35 and <= 39	2	3	0	0	5
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	1	0	0	0	1
>= 50 and <= 54	1	0	0	0	1
>= 55 and <= 59	2	1	0	0	3
>= 60 and <= 64	1	0	0	0	1
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	8	9	0	0	17

Drug/Alcohol Related	**8**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	8

Alcohol Test Given	**17**
None	17
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

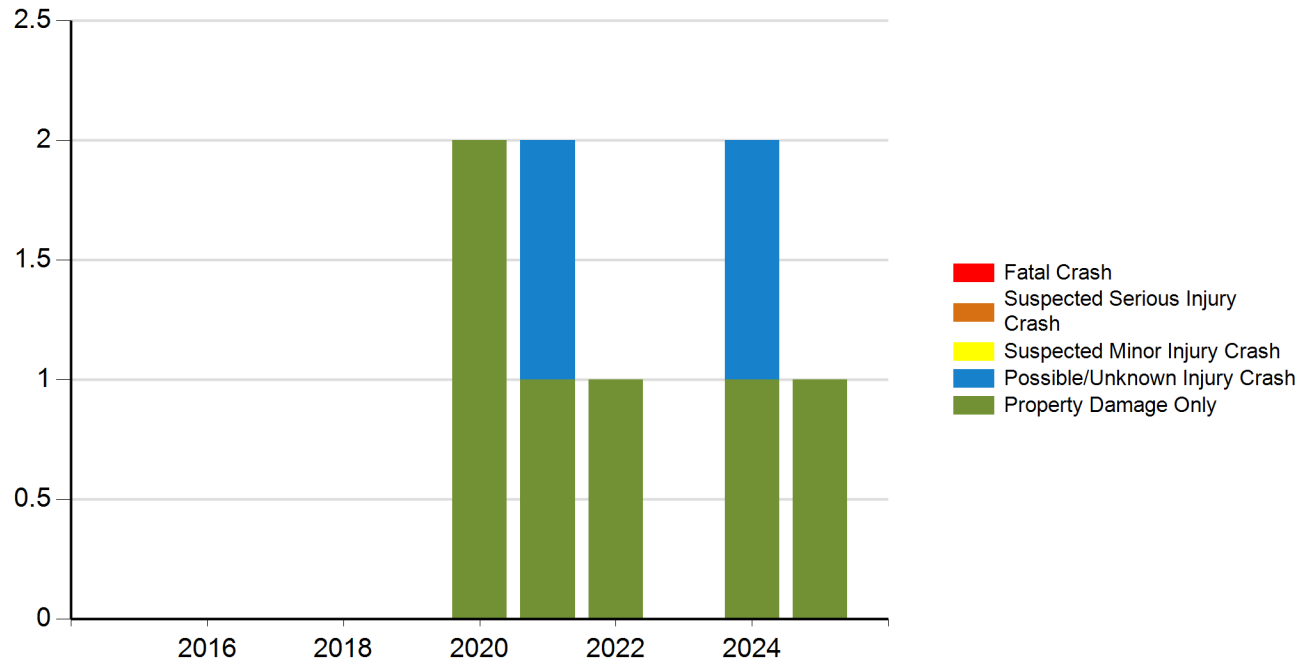
Drug Test Given	**17**
None	17
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**17**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	17
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	2	2
2021	0	0	0	1	1	2
2022	0	0	0	0	1	1
2023	0	0	0	0	0	0
2024	0	0	0	1	1	2
2025	0	0	0	0	1	1
Total	0	0	0	2	6	8

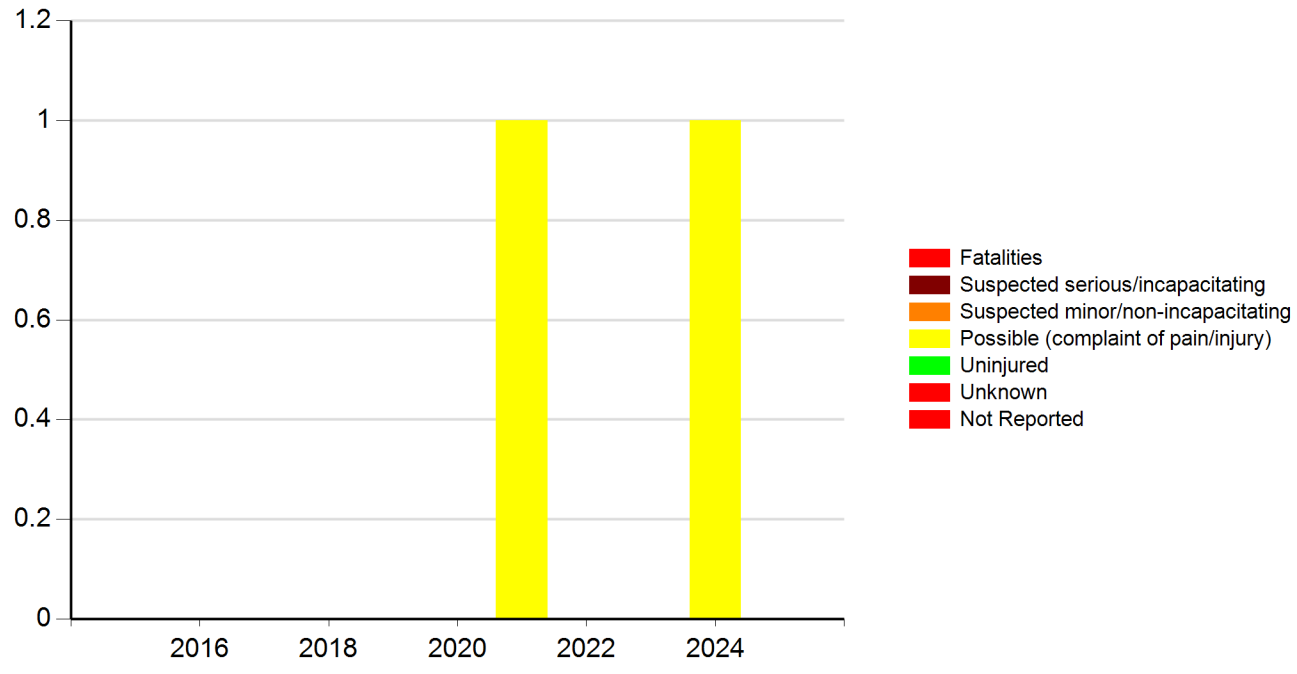
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	1	0	0	0	1
2022	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0
2024	0	0	0	1	0	0	0	1
2025	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	0	0	2

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Dubuque)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	4
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	0
Property Damage Only	3

Injury Status Summary	1
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	0
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	47,000.00
Average (per crash dollars):	11,750.00
Total Vehicles:	8.00
Average (per crash):	2.00
Total Occupants:	13.00
Average (per crash):	3.25

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.25
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.25
Possible/Unknown Injuries/Crash:	0.00



Major Cause			4
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	2
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	1
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	1
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	1	0	1	0	0	2
Thursday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Friday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	2	0	1	0	0	4

Manner of Crash Collision	4
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	2
Angle (oncoming left turn)	1
Broadside (front to side)	0
Sideswipe (same direction)	0
Sideswipe (opposite direction)	1
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	4
Dry	3
Wet	1
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			8
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	8

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	1	0	0	0	1
= 17	0	1	0	0	1
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	1	0	0	0	1
>= 25 and <= 29	0	0	0	0	0
>= 30 and <= 34	0	0	0	0	0
>= 35 and <= 39	2	0	0	0	2
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	1	0	0	0	1
>= 65 and <= 69	0	1	0	0	1
>= 70 and <= 74	1	0	0	0	1
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	6	2	0	0	8

Drug/Alcohol Related	**4**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	4

Alcohol Test Given	**8**
None	8
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

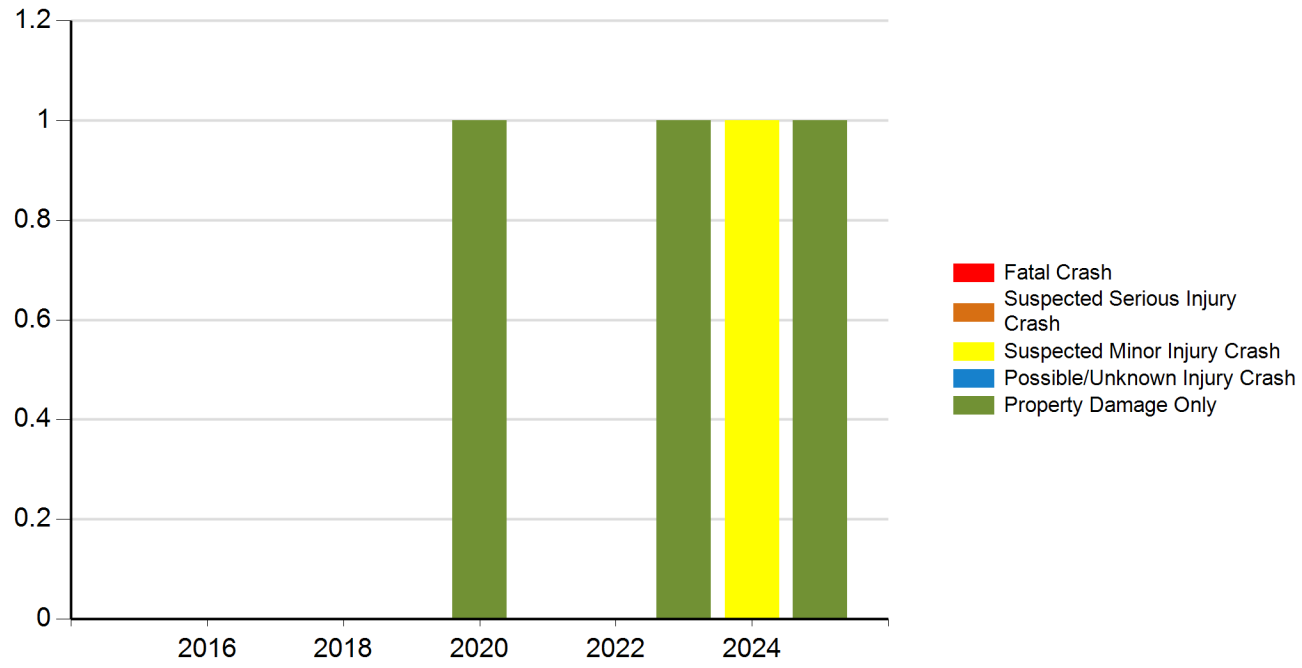
Drug Test Given	**8**
None	8
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**8**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	8
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	1	1
2021	0	0	0	0	0	0
2022	0	0	0	0	0	0
2023	0	0	0	0	1	1
2024	0	0	1	0	0	1
2025	0	0	0	0	1	1
Total	0	0	1	0	3	4

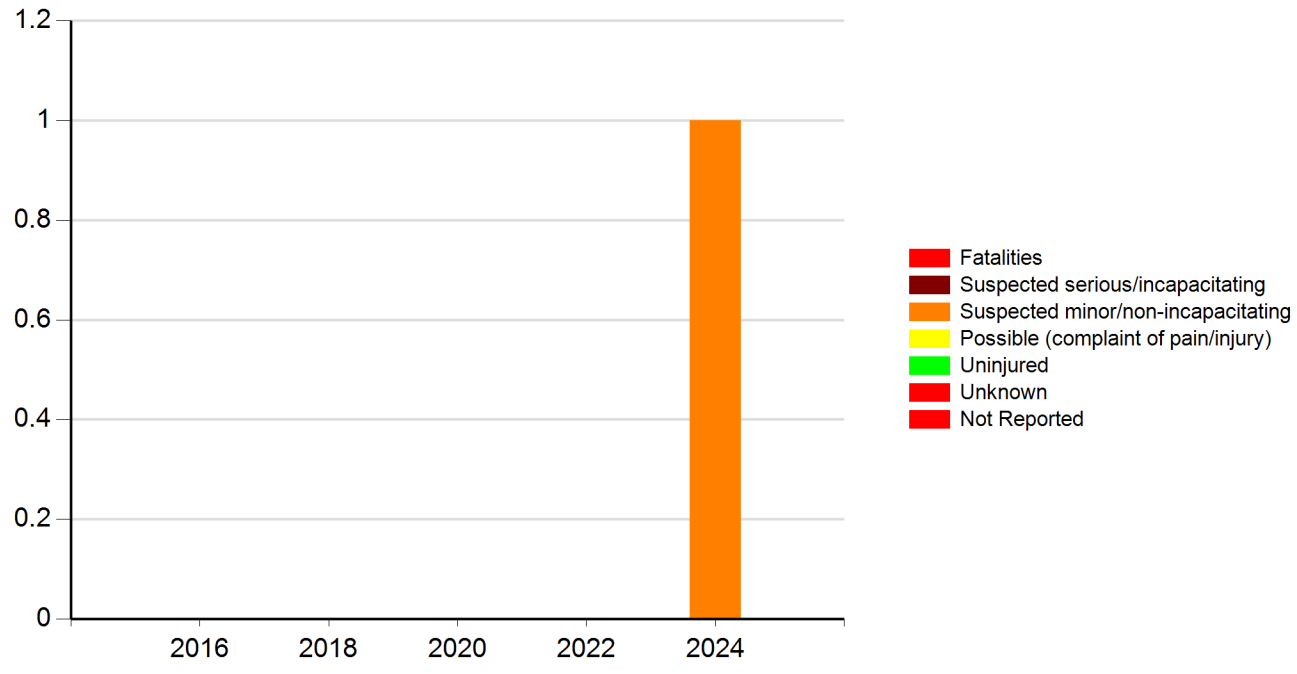
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0
2024	0	0	1	0	0	0	0	1
2025	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	1

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Dubuque)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	2
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	0
Property Damage Only	1

Injury Status Summary	2
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	0
Uninjured	0
Unknown	0
Not Reported	1

Property/Vehicles/Occupants	
Property Damage Total (dollars):	83,500.00
Average (per crash dollars):	41,750.00
Total Vehicles:	4.00
Average (per crash):	2.00
Total Occupants:	4.00
Average (per crash):	2.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.50
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.50
Possible/Unknown Injuries/Crash:	0.00



Major Cause			2
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	1	Followed too close	1
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Monday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	1	0	0	0	0	2

Manner of Crash Collision	**2**
Non-collision (single vehicle)	1
Head-on (front to front)	0
Rear-end (front to rear)	1
Angle (oncoming left turn)	0
Broadside (front to side)	0
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	**2**
Dry	2
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			**4**
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	1
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	3

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	1	0	0	1
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	1	0	0	0	1
>= 25 and <= 29	0	0	0	0	0
>= 30 and <= 34	0	0	0	0	0
>= 35 and <= 39	0	0	0	0	0
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	2	0	2
Total	1	1	2	0	4

Drug/Alcohol Related	**2**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	2

Alcohol Test Given	**4**
None	2
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	2

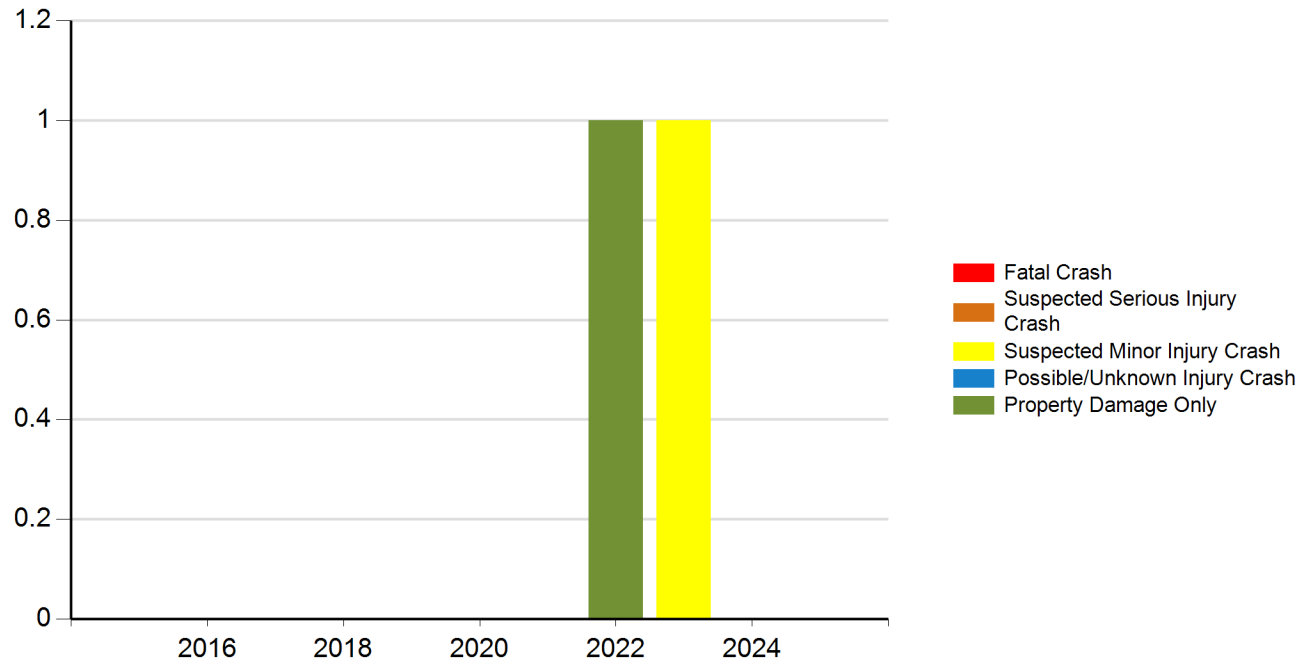
Drug Test Given	**4**
None	2
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	2

Drug Test Result	**4**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	4
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	0	0
2022	0	0	0	0	1	1
2023	0	0	1	0	0	1
2024	0	0	0	0	0	0
2025	0	0	0	0	0	0
Total	0	0	1	0	1	2

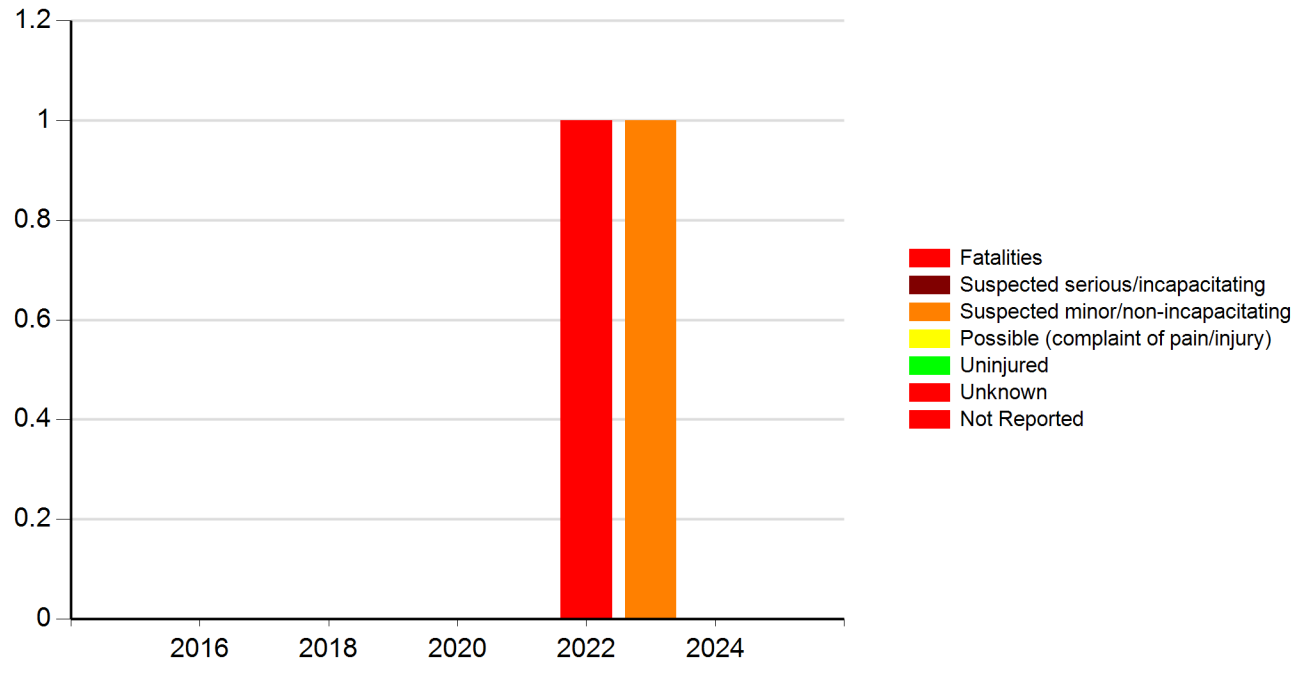
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	1	1
2023	0	0	1	0	0	0	0	1
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	1	2

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Dubuque)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

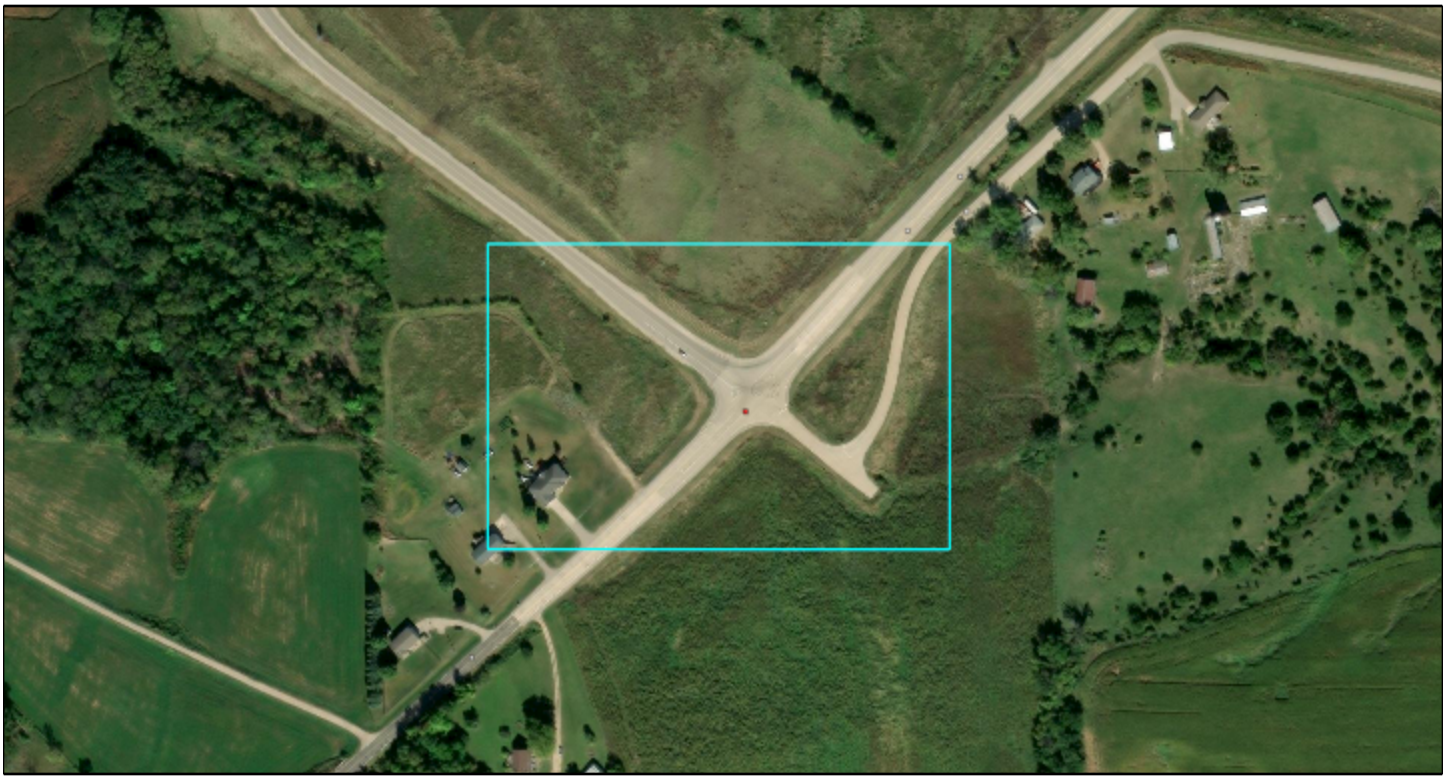
Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	1
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	0
Property Damage Only	0

Injury Status Summary	3
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	2
Possible (complaint of pain/injury)	1
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	45,000.00
Average (per crash dollars):	45,000.00
Total Vehicles:	2.00
Average (per crash):	2.00
Total Occupants:	4.00
Average (per crash):	4.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	3.00
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	2.00
Possible/Unknown Injuries/Crash:	1.00



Major Cause			1
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0	0	1

Manner of Crash Collision	1
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	1
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	1
Dry	1
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	2		
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	2

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	0	0	0	0	0
>= 25 and <= 29	0	1	0	0	1
>= 30 and <= 34	0	1	0	0	1
>= 35 and <= 39	0	0	0	0	0
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	0	2	0	0	2

Drug/Alcohol Related	**1**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	1

Alcohol Test Given	**2**
None	2
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

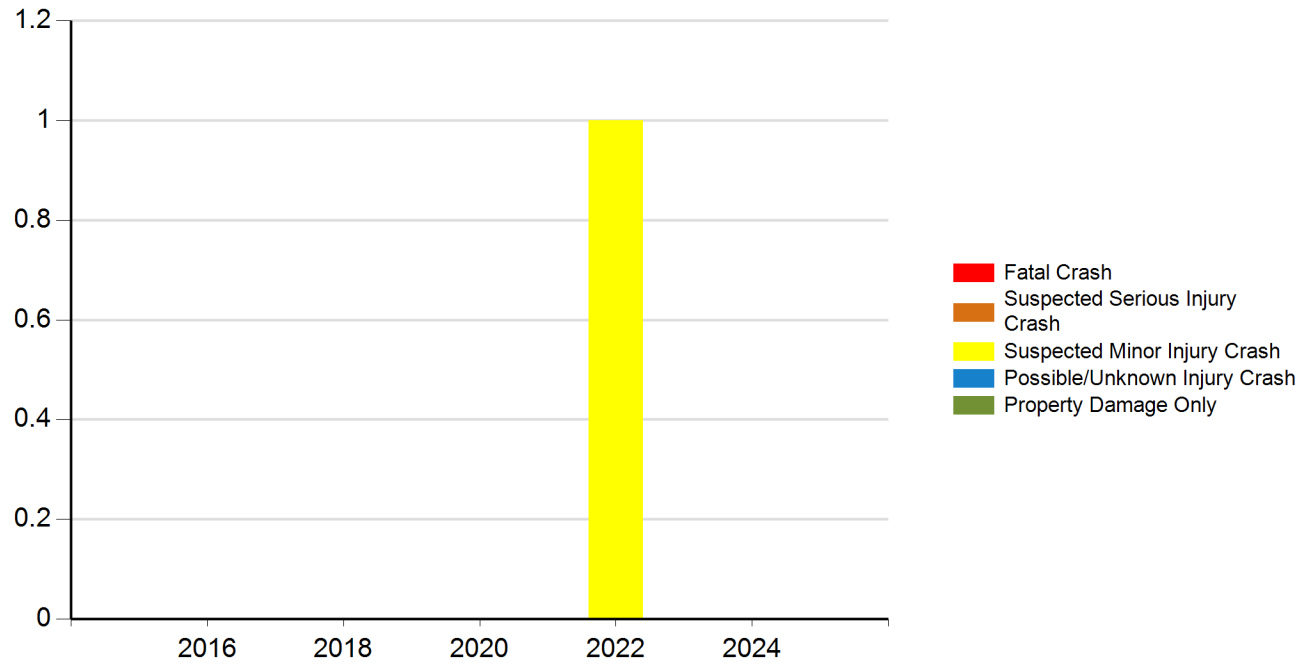
Drug Test Given	**2**
None	2
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**2**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	2
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	0	0
2022	0	0	1	0	0	1
2023	0	0	0	0	0	0
2024	0	0	0	0	0	0
2025	0	0	0	0	0	0
Total	0	0	1	0	0	1

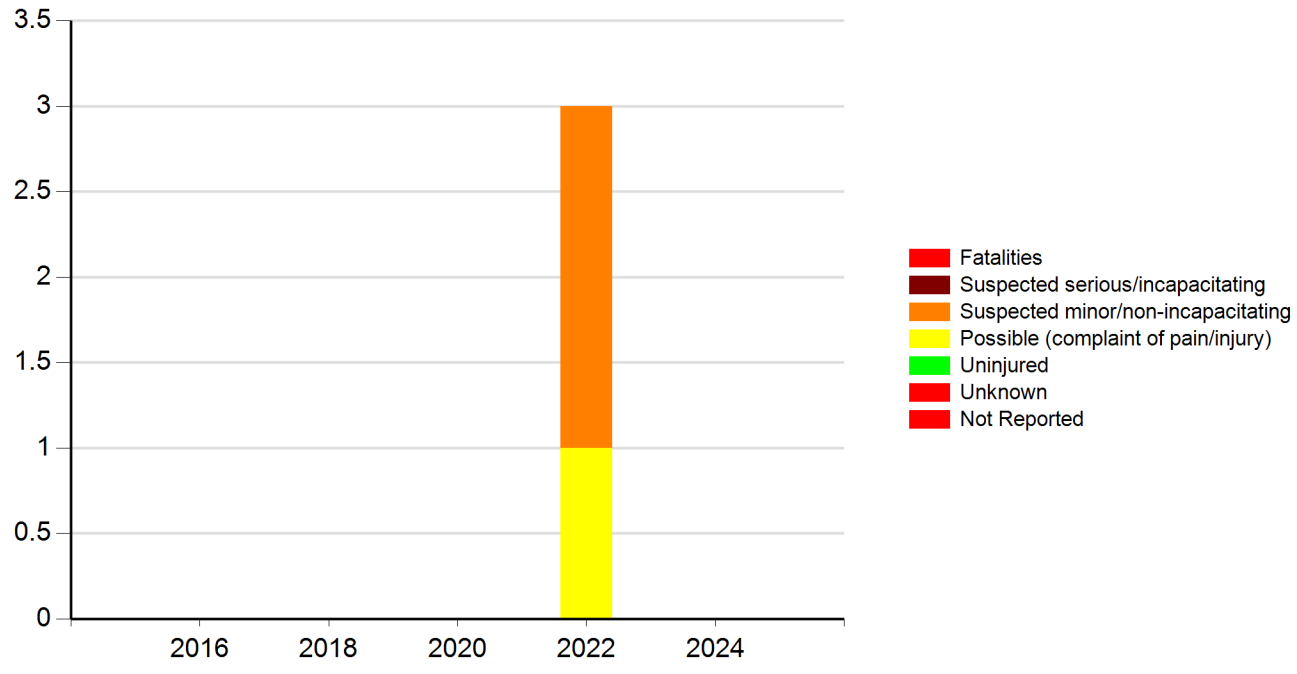
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	2	1	0	0	0	3
2023	0	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
Total	0	0	2	1	0	0	0	3

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Dubuque)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	5
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	1
Property Damage Only	4

Injury Status Summary	1
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	1
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	35,208.00
Average (per crash dollars):	7,041.60
Total Vehicles:	8.00
Average (per crash):	1.60
Total Occupants:	8.00
Average (per crash):	1.60

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.20
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.20



Major Cause			5
Animal	0	Ran traffic signal	0
Ran stop sign	1	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	1	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	1
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	1
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	1	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Monday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	1	0	0	0	1	0	0	0	0	0	0	2
Saturday	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	1	0	0	0	1	0	1	0	1	1	0	5

Manner of Crash Collision	**5**
Non-collision (single vehicle)	2
Head-on (front to front)	1
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	2
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	**5**
Dry	3
Wet	0
Ice/frost	0
Snow	2
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck			**8**
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	1	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	1	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	6

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	0	0	0	0	0
>= 25 and <= 29	0	1	0	0	1
>= 30 and <= 34	0	1	0	0	1
>= 35 and <= 39	0	1	0	0	1
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	1	0	0	1
>= 50 and <= 54	0	1	0	0	1
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	0	1	0	0	1
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	1	0	0	0	1
>= 80 and <= 84	0	1	0	0	1
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	1	7	0	0	8

Drug/Alcohol Related	**5**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	2
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	3

Alcohol Test Given	**8**
None	6
Blood	0
Urine	0
Breath	2
Vitreous	0
Refused	0
Not reported	0

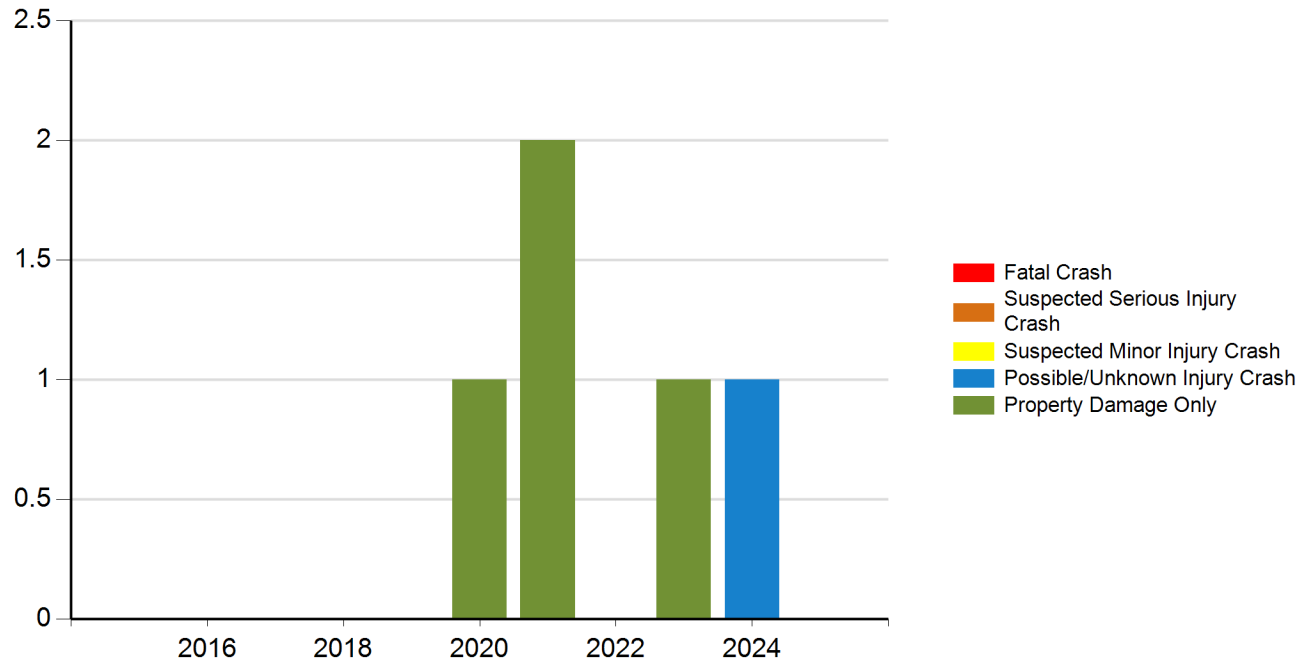
Drug Test Given	**8**
None	8
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**8**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	8
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	1	1
2021	0	0	0	0	2	2
2022	0	0	0	0	0	0
2023	0	0	0	0	1	1
2024	0	0	0	1	0	1
2025	0	0	0	0	0	0
Total	0	0	0	1	4	5

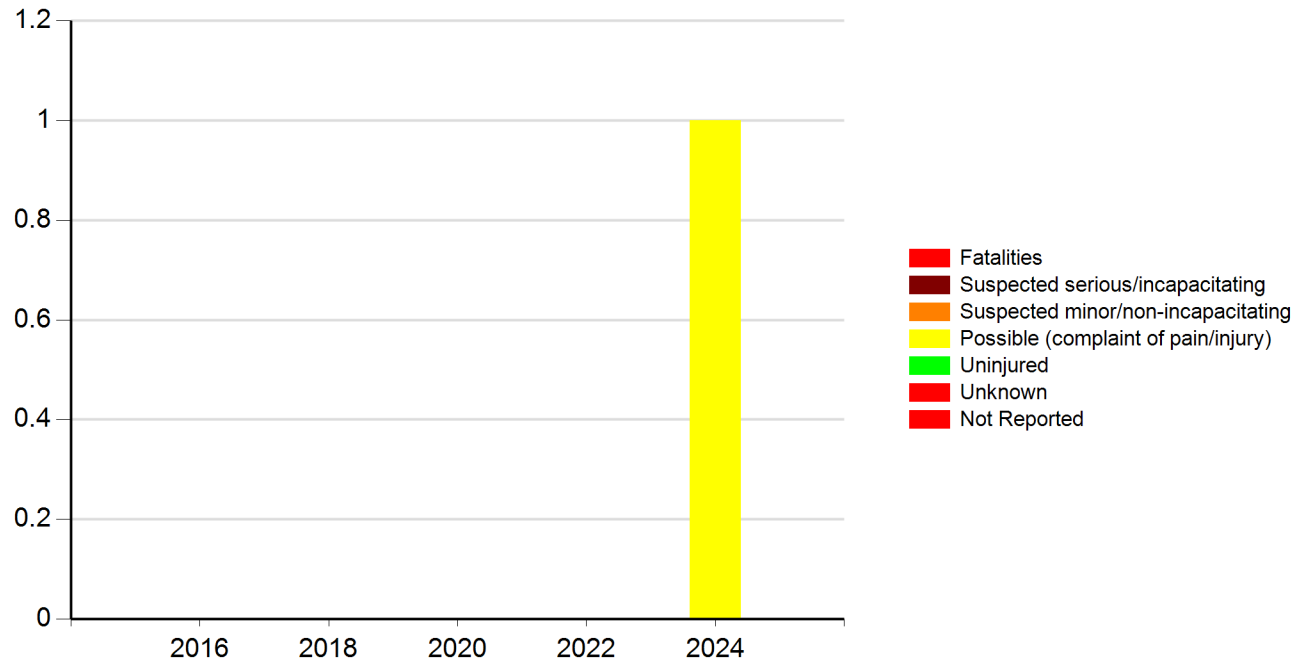
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0
2024	0	0	0	1	0	0	0	1
2025	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	1

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Dubuque)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	2
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	1
Property Damage Only	1

Injury Status Summary	2
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	2
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	15,000.00
Average (per crash dollars):	7,500.00
Total Vehicles:	3.00
Average (per crash):	1.50
Total Occupants:	4.00
Average (per crash):	2.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	1.00
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	1.00



Major Cause			2
Animal	0	Ran traffic signal	0
Ran stop sign	1	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	1	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Monday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saturday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	1	0	0	0	0	0	0	0	1	0	0	0	0	2

Manner of Crash Collision	2
Non-collision (single vehicle)	1
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	0
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	1
Unknown	0

Surface Conditions	2
Dry	2
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	3		
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	1	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	2

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	1	0	0	0	1
>= 21 and <= 24	0	0	0	0	0
>= 25 and <= 29	0	0	0	0	0
>= 30 and <= 34	0	1	0	0	1
>= 35 and <= 39	0	0	0	0	0
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	0	1	0	0	1
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	1	2	0	0	3

Drug/Alcohol Related	**2**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	2

Alcohol Test Given	**3**
None	3
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

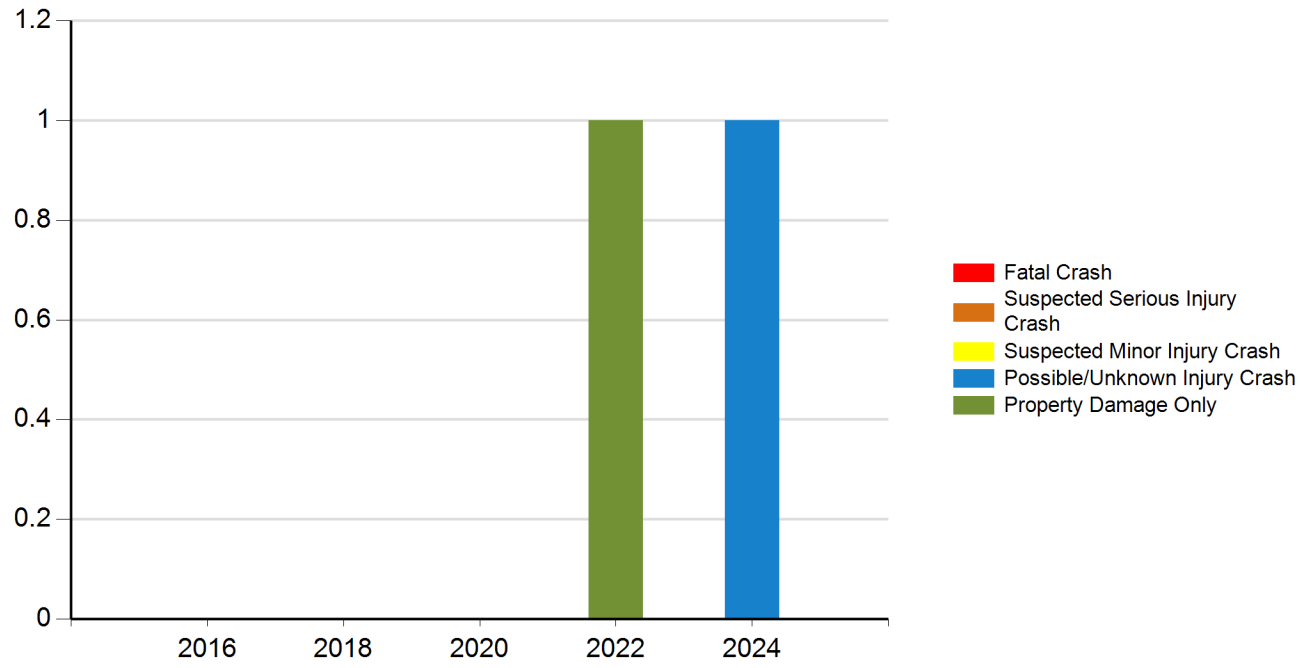
Drug Test Given	**3**
None	3
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**3**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	3
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	0	0
2022	0	0	0	0	1	1
2023	0	0	0	0	0	0
2024	0	0	0	1	0	1
2025	0	0	0	0	0	0
Total	0	0	0	1	1	2

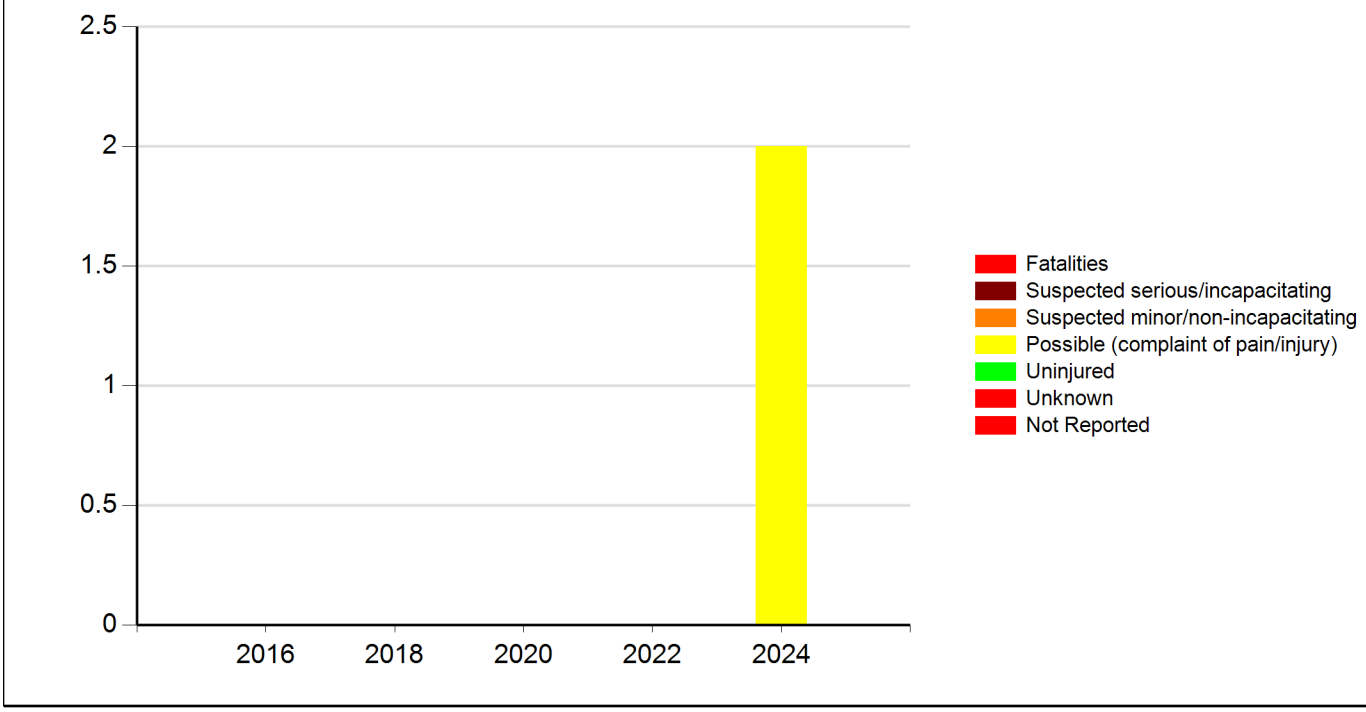
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0
2024	0	0	0	2	0	0	0	2
2025	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	0	0	2

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Dubuque)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

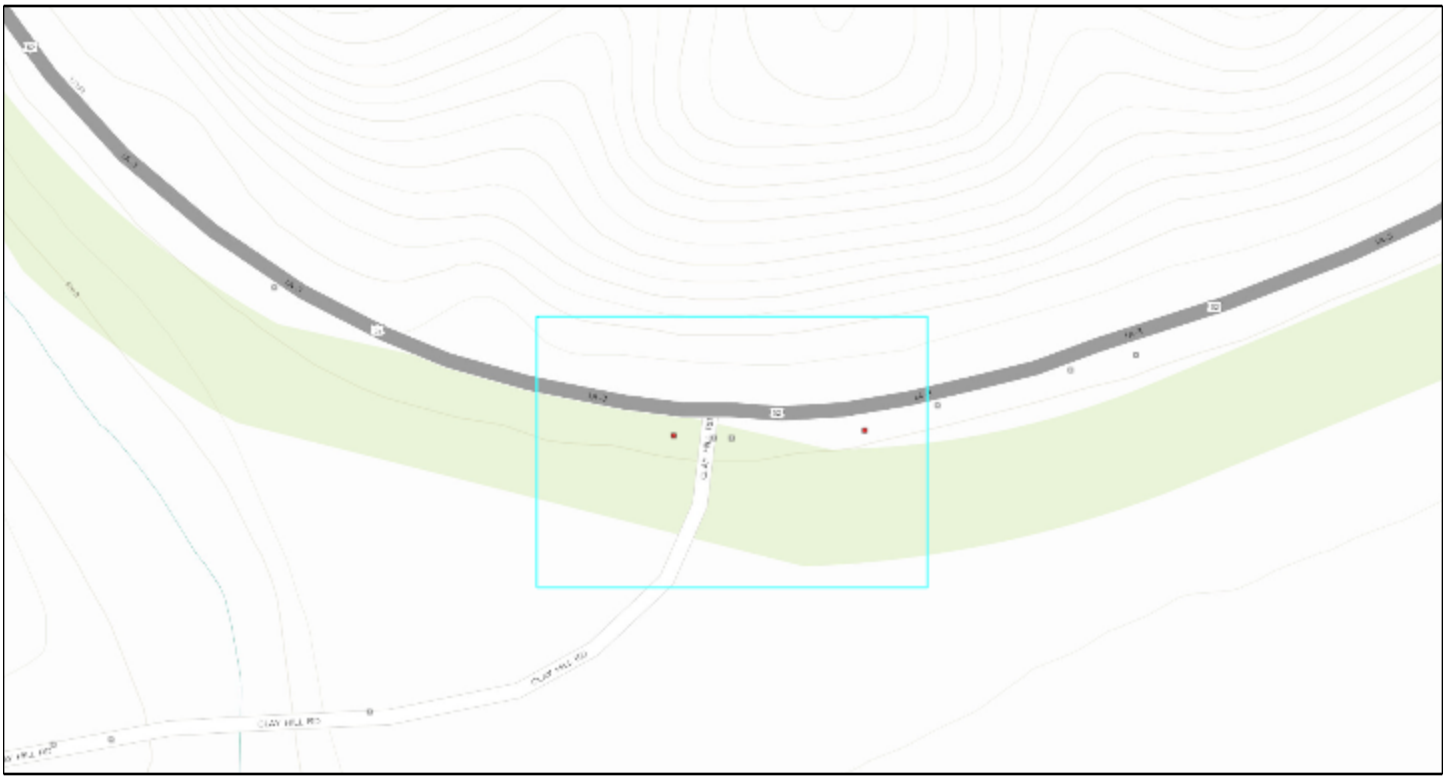
Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	2
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	0
Property Damage Only	2

Injury Status Summary	1
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	0
Uninjured	0
Unknown	0
Not Reported	1

Property/Vehicles/Occupants	
Property Damage Total (dollars):	12,000.00
Average (per crash dollars):	6,000.00
Total Vehicles:	3.00
Average (per crash):	1.50
Total Occupants:	10.00
Average (per crash):	5.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.00
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.00



Major Cause			2
Animal	1	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	1
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	2

Manner of Crash Collision	**2**
Non-collision (single vehicle)	1
Head-on (front to front)	0
Rear-end (front to rear)	1
Angle (oncoming left turn)	0
Broadside (front to side)	0
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	**2**
Dry	1
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	1
Other	0
Unknown	0

Fixed Object Struck			**3**
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	3

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	1	0	0	1
>= 21 and <= 24	0	0	0	0	0
>= 25 and <= 29	0	0	0	0	0
>= 30 and <= 34	1	0	0	0	1
>= 35 and <= 39	0	0	0	0	0
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	0	1	0	0	1
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	1	2	0	0	3

Drug/Alcohol Related	**2**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	2

Alcohol Test Given	**3**
None	3
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

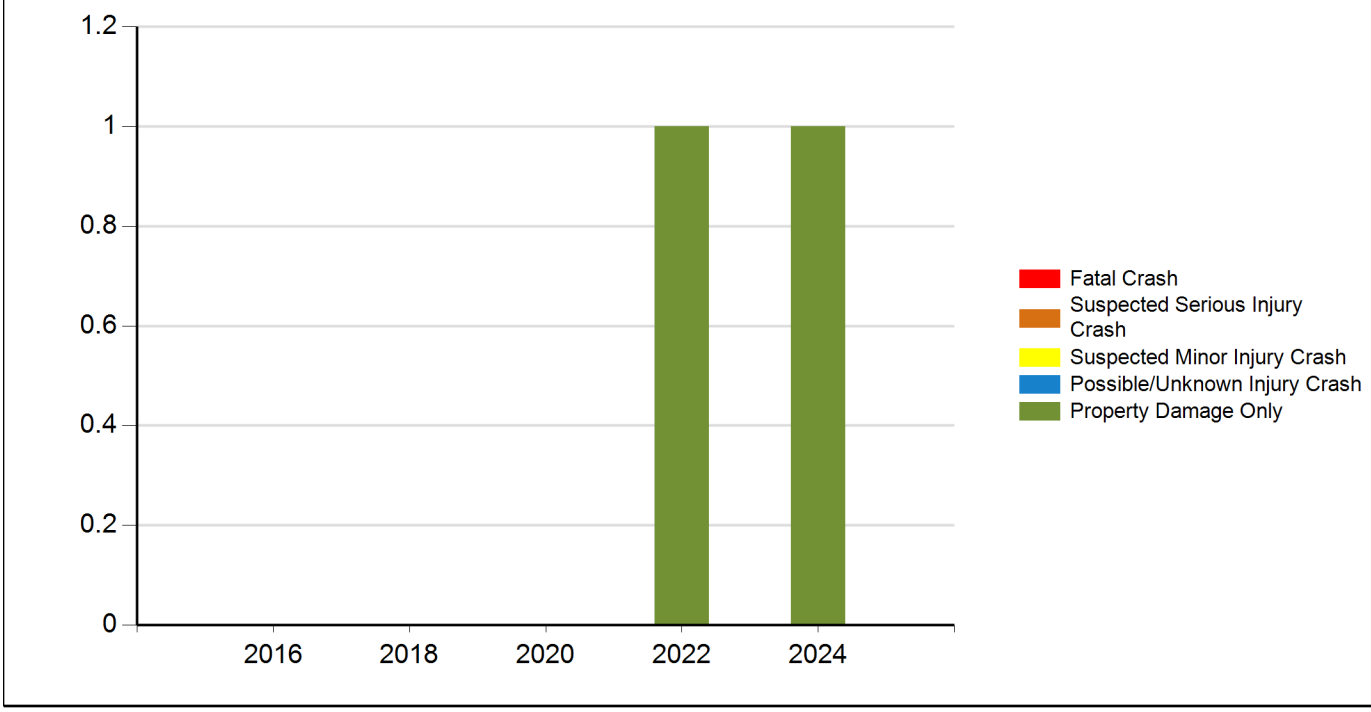
Drug Test Given	**3**
None	3
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**3**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	3
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	0	0
2022	0	0	0	0	1	1
2023	0	0	0	0	0	0
2024	0	0	0	0	1	1
2025	0	0	0	0	0	0
Total	0	0	0	0	2	2

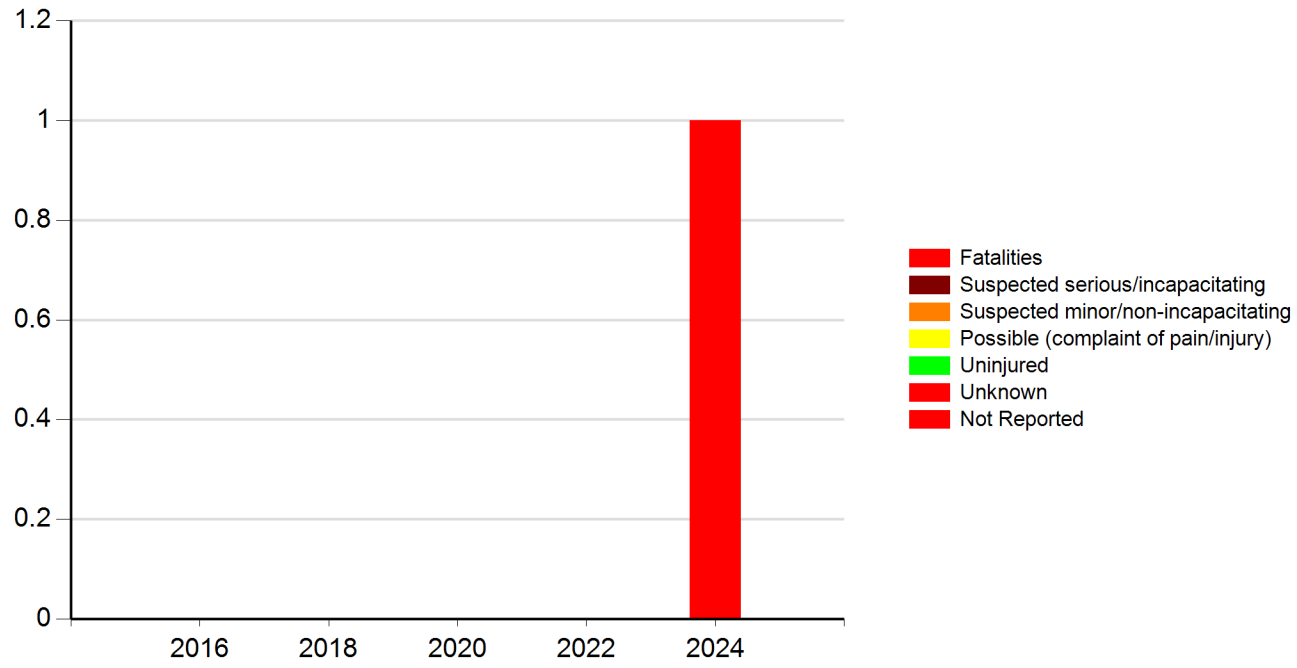
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	1	1
2025	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Dubuque)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

County:	Dubuque	Prepared By:	Wyatt Anderson
Location:	US 151 - Skyline Rd - Monastery Rd	Date Prepared:	6/18/2025
Proposed Improvements:	Destination Light		
Estimated Improvement Cost:	$ 30,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 300

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:		Combined CRF	
CRF Value (%)	50		**50.0**	
Equivalent CMF	0.50			Is Dom. Com. Resd. Valid?
Combined CMF, if # used (DR)	0.50		0.50	TRUE
Combined CMF, if # used (Mult)	0.50			Is data entered before # CRF picked?
Pick Dom Com. Resd. Or Mult. For	0.50		0.50	FALSE

Crash Severity	Rounded	Crash History	CRF (from	Crash History -	Crashes Saved
Fatal (K)	$ 4,300,000	3	50.0	**0.60**	**0.30**
Serious Injury (A)	$ 4,300,000	2	50.0	**0.40**	**0.20**
Minor Injury (B)	$ 290,000	3	50.0	**0.60**	**0.30**
Possible/Unknown Injury (C)	$ 135,000	3	50.0	**0.60**	**0.30**
Property Damage Only (O)	$ 20,000	2	50.0	**0.40**	**0.20**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ 1,290,000**
Serious Injury (A)	**$ 860,000**
Minor Injury (B)	**$ 87,000**
Possible/Unknown Injury (C)	**$ 40,500**
Property Damage Only (O)	**$ 4,000**

Total Benefits and Costs

		Implementation Cost	$ 30,000
		Present Value of Maint.	$ 3,336
Present Value Benefits	$ 27,024,759	Present Value Costs	$ 33,336
Present Value Net Return	$ 26,991,424		
Benefit Cost Ratio	**810.69**		

Form continues on next page

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

County:	Dubuque	Prepared By:	Wyatt Anderson
Location:	US 151 - Sundown - Driscoll	Date Prepared:	6/18/2025
Proposed Improvements:	Destination Light		
Estimated Improvement Cost:	$ 30,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 300

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF	
CRF Value (%)	50	**50.0**	
Equivalent CMF	0.50		Is Dom. Com. Resd. Valid?
Combined CMF, if # used (DR)	0.50	0.50	TRUE
Combined CMF, if # used (Mult)	0.50		Is data entered before # CRF picked?
Pick Dom Com. Resd. Or Mult. For	0.50	0.50	FALSE

Crash Severity	Rounded	Crash History	CRF (from	Crash History -	Crashes Saved
Fatal (K)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	2	50.0	**0.40**	**0.20**
Minor Injury (B)	$ 290,000	2	50.0	**0.40**	**0.20**
Possible/Unknown Injury (C)	$ 135,000	1	50.0	**0.20**	**0.10**
Property Damage Only (O)	$ 20,000	15	50.0	**3.00**	**1.50**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ 860,000**
Minor Injury (B)	**$ 58,000**
Possible/Unknown Injury (C)	**$ 13,500**
Property Damage Only (O)	**$ 30,000**

Total Benefits and Costs

		Implementation Cost	$ 30,000
		Present Value of Maint.	$ 3,336
Present Value Benefits	$ 11,389,133	Present Value Costs	$ 33,336
Present Value Net Return	$ 11,355,797		
Benefit Cost Ratio	**341.65**		

Form continues on next page

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

County:	Dubuque	Prepared By:	Wyatt Anderson
Location:	Sundown Rd - Monastery Rd	Date Prepared:	6/18/2025
Proposed Improvements:	Destination Light		
Estimated Improvement Cost:	$ 15,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 300

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:		Combined CRF	
CRF Value (%)	50		**50.0**	
Equivalent CMF	0.50			Is Dom. Com. Resd. Valid?
Combined CMF, if # used (DR)	0.50		0.50	TRUE
Combined CMF, if # used (Mult)	0.50			Is data entered before # CRF picked?
Pick Dom Com. Resd. Or Mult. For	0.50		0.50	FALSE

Crash Severity	Rounded	Crash History	CRF (from	Crash History -	Crashes Saved
Fatal (K)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	0	50.0	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	2	50.0	**0.40**	**0.20**
Property Damage Only (O)	$ 20,000	6	50.0	**1.20**	**0.60**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$** -
Serious Injury (A)	**$** -
Minor Injury (B)	**$** -
Possible/Unknown Injury (C)	**$ 27,000**
Property Damage Only (O)	**$ 12,000**

Total Benefits and Costs

		Implementation Cost	$ 15,000
		Present Value of Maint.	$ 3,336
Present Value Benefits	$ 461,962	Present Value Costs	$ 18,336
Present Value Net Return	$ 443,626		
Benefit Cost Ratio	**25.19**		

Form continues on next page

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

County:	Dubuque	Prepared By:	Wyatt Anderson
Location:	Kennedy Rd - Rupp Hollow Rd	Date Prepared:	6/18/2025
Proposed Improvements:	Destination Light		
Estimated Improvement Cost:	$ 15,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 300

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF	
CRF Value (%)	50	**50.0**	
Equivalent CMF	0.50		Is Dom. Com. Resd. Valid?
Combined CMF, if # used (DR)	0.50	0.50	TRUE
Combined CMF, if # used (Mult)	0.50		Is data entered before # CRF picked?
Pick Dom Com. Resd. Or Mult. For	0.50	0.50	FALSE

Crash Severity	Rounded	Crash History	CRF (from	Crash History -	Crashes Saved
Fatal (K)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	1	50.0	**0.20**	**0.10**
Possible/Unknown Injury (C)	$ 135,000	0	50.0	**0.00**	**0.00**
Property Damage Only (O)	$ 20,000	3	50.0	**0.60**	**0.30**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$** -
Serious Injury (A)	**$** -
Minor Injury (B)	**$ 29,000**
Possible/Unknown Injury (C)	**$** -
Property Damage Only (O)	**$ 6,000**

Total Benefits and Costs

		Implementation Cost	$ 15,000
		Present Value of Maint.	$ 3,336
Present Value Benefits	$ 414,581	Present Value Costs	$ 18,336
Present Value Net Return	$ 396,245		
Benefit Cost Ratio	**22.61**		

Form continues on next page

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

County:	Dubuque	Prepared By:	Wyatt Anderson
Location:	Old Highway Rd - Sundown Rd (South	Date Prepared:	6/18/2025
Proposed Improvements:	Destination Light		
Estimated Improvement Cost:	$ 15,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 300

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:		Combined CRF	
CRF Value (%)	50		**50.0**	
Equivalent CMF	0.50			Is Dom. Com. Resd. Valid?
Combined CMF, if # used (DR)	0.50		0.50	TRUE
Combined CMF, if # used (Mult)	0.50			Is data entered before # CRF picked?
Pick Dom Com. Resd. Or Mult. For	0.50		0.50	FALSE

Crash Severity	Rounded	Crash History	CRF (from	Crash History -	Crashes Saved
Fatal (K)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	1	50.0	**0.20**	**0.10**
Possible/Unknown Injury (C)	$ 135,000	0	50.0	**0.00**	**0.00**
Property Damage Only (O)	$ 20,000	1	50.0	**0.20**	**0.10**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$** -
Serious Injury (A)	**$** -
Minor Injury (B)	**$ 29,000**
Possible/Unknown Injury (C)	**$** -
Property Damage Only (O)	**$ 2,000**

Total Benefits and Costs

		Implementation Cost	$ 15,000
		Present Value of Maint.	$ 3,336
Present Value Benefits	$ 367,200	Present Value Costs	$ 18,336
Present Value Net Return	$ 348,865		
Benefit Cost Ratio	**20.03**		

Form continues on next page

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

County:	Dubuque	Prepared By:	Wyatt Anderson
Location:	N Cascade Rd - N English Rd	Date Prepared:	6/18/2025
Proposed Improvements:	Destination Light		
Estimated Improvement Cost:	$ 15,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 300

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF	
CRF Value (%)	50	**50.0**	
Equivalent CMF	0.50		Is Dom. Com. Resd. Valid?
Combined CMF, if # used (DR)	0.50	0.50	TRUE
Combined CMF, if # used (Mult)	0.50		Is data entered before # CRF picked?
Pick Dom Com. Resd. Or Mult. For	0.50	0.50	FALSE

Crash Severity	Rounded	Crash History	CRF (from	Crash History -	Crashes Saved
Fatal (K)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	1	50.0	**0.20**	**0.10**
Possible/Unknown Injury (C)	$ 135,000	0	50.0	**0.00**	**0.00**
Property Damage Only (O)	$ 20,000	0	50.0	**0.00**	**0.00**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$** -
Serious Injury (A)	**$** -
Minor Injury (B)	**$ 29,000**
Possible/Unknown Injury (C)	**$** -
Property Damage Only (O)	**$** -

Total Benefits and Costs

		Implementation Cost	$ 15,000
		Present Value of Maint.	$ 3,336
Present Value Benefits	$ 343,510	Present Value Costs	$ 18,336
Present Value Net Return	$ 325,174		
Benefit Cost Ratio	**18.73**		

Form continues on next page

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

County:	Dubuque	Prepared By:	Wyatt Anderson
Location:	S John Deere Rd - Tanzanite Dr	Date Prepared:	6/18/2025
Proposed Improvements:	Destination Light		
Estimated Improvement Cost:	$ 15,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 300

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF	
CRF Value (%)	50	**50.0**	
Equivalent CMF	0.50		Is Dom. Com. Resd. Valid?
Combined CMF, if # used (DR)	0.50	0.50	TRUE
Combined CMF, if # used (Mult)	0.50		Is data entered before # CRF picked?
Pick Dom Com. Resd. Or Mult. Foı	0.50	0.50	FALSE

Crash Severity	Rounded	Crash History	CRF (from	Crash History -	Crashes Saved
Fatal (K)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	0	50.0	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	1	50.0	**0.20**	**0.10**
Property Damage Only (O)	$ 20,000	4	50.0	**0.80**	**0.40**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$** -
Serious Injury (A)	**$** -
Minor Injury (B)	**$** -
Possible/Unknown Injury (C)	**$ 13,500**
Property Damage Only (O)	**$ 8,000**

Total Benefits and Costs

		Implementation Cost	$ 15,000
		Present Value of Maint.	$ 3,336
Present Value Benefits	$ 254,671	Present Value Costs	$ 18,336
Present Value Net Return	$ 236,336		
Benefit Cost Ratio	**13.89**		

Form continues on next page

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

County:	Dubuque	Prepared By:	Wyatt Anderson
Location:	Old Highway Rd - Sundown Rd (North	Date Prepared:	6/18/2025
Proposed Improvements:	Destination Light		
Estimated Improvement Cost:	$ 15,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 300

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF	
CRF Value (%)	50	**50.0**	
Equivalent CMF	0.50		Is Dom. Com. Resd. Valid?
Combined CMF, if # used (DR)	0.50	0.50	TRUE
Combined CMF, if # used (Mult)	0.50		Is data entered before # CRF picked?
Pick Dom Com. Resd. Or Mult. For	0.50	0.50	FALSE

Crash Severity	Rounded	Crash History	CRF (from	Crash History -	Crashes Saved
Fatal (K)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	0	50.0	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	1	50.0	**0.20**	**0.10**
Property Damage Only (O)	$ 20,000	1	50.0	**0.20**	**0.10**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$** -
Serious Injury (A)	**$** -
Minor Injury (B)	**$** -
Possible/Unknown Injury (C)	**$ 13,500**
Property Damage Only (O)	**$ 2,000**

Total Benefits and Costs

		Implementation Cost	$ 15,000
		Present Value of Maint.	$ 3,336
Present Value Benefits	$ 183,600	Present Value Costs	$ 18,336
Present Value Net Return	$ 165,265		
Benefit Cost Ratio	**10.01**		

Form continues on next page

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

County:	Dubuque	Prepared By:	Wyatt Anderson
Location:	IA 3 - Clay Hill Rd	Date Prepared:	6/18/2025
Proposed Improvements:	Destination Light		
Estimated Improvement Cost:	$ 15,000		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	15	Annual Maintenance Cost:	$ 300

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF	
CRF Value (%)	50	**50.0**	
Equivalent CMF	0.50		Is Dom. Com. Resd. Valid?
Combined CMF, if # used (DR)	0.50	0.50	TRUE
Combined CMF, if # used (Mult)	0.50		Is data entered before # CRF picked?
Pick Dom Com. Resd. Or Mult. For	0.50	0.50	FALSE

Crash Severity	Rounded	Crash History	CRF (from	Crash History -	Crashes Saved
Fatal (K)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	0	50.0	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	0	50.0	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	0	50.0	**0.00**	**0.00**
Property Damage Only (O)	$ 20,000	2	50.0	**0.40**	**0.20**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$** -
Serious Injury (A)	**$** -
Minor Injury (B)	**$** -
Possible/Unknown Injury (C)	**$** -
Property Damage Only (O)	**$ 4,000**

Total Benefits and Costs

		Implementation Cost	$ 15,000
		Present Value of Maint.	$ 3,336
Present Value Benefits	$ 47,381	Present Value Costs	$ 18,336
Present Value Net Return	$ 29,045		
Benefit Cost Ratio	**2.58**		

Form continues on next page

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** July 14, 2025

Location / Title of Project: Canoe Rd Pavement Rehab, City of Clermont to City of Elgin

Applicant: Fayette County

Contact Person: Luke Bowdish Title: Assistant Engineer

Complete Mailing Address: 114 N. Vine Street
West Union, IA

Phone: (563) 422-3552 (Area Code) E-Mail: lbowdish@co.fayette.ia.us

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s): _____

Contact Person _____ Title _____

Complete Mailing Address _____

_____

Phone _____ (Area Code) E-Mail _____

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	467,295
Total Project Cost	$	1,543,387
Safety Funds Requested	**$**	**467,295**

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☐ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
		☐	☐		
		☐	☐		

Rev. 07/23

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the Fayette County Board of Supervisors

Signed: _____ 7-14-25
Signature Date Signed

Bruce T. Lethmann
Printed Name

Attest: _____ 7/14/25
Signature Date Signed

Lori Mowers
Printed Name

Narrative:

Fayette County is applying for Traffic Safety Improvement Program funding to improve the safety of Canoe Road (W51) from the City of Clermont to the City of Elgin.

Canoe Road has an existing 22' wide HMA pavement with granular shoulders approximately 3'-5' wide throughout and is in the advanced stages of deterioration making it difficult to maintain. White edge line cannot be maintained on the existing pavement due to the deterioration of the pavement edges. The topography is rolling. The large hills and frequent "gully washers" make repairing edge of pavement drop-offs a continuous task. The narrow shoulders and 3:1 or steeper foreslopes, as well as a shared use pedestrian trail off the Southbound lane shoulder within the County right-of-way leave little to no room for recovery for vehicles that leave the travelled roadway. The road is posted 55 mph and has a traffic count of 1510 vpd. The project will also add a right and left turn lanes to the school facility entrance that has been a source of traffic incidents over the years. The proposed safety improvements will be constructed in conjuction with an HMA overlay project on Cedar Road.

We are seeking safety funds to add 2' HMA paved shoulders (4' around curves), shoulder rumble strips, safety edge and 6" painted pavement markings to Cedar Road. Work would be completed in conjunction with an HMA overlay project on Canoe Rd. The HMA shoulders, paint striping, and shoulder rumble strips are expected to substantially decrease the number of run-off-the-road/lane departure crashes. The safety edge will help drivers recover more readily when they do run onto the shoulder.

Canoe Rd connects the communities of Elgin and Clermont. This area has the County's highest concentration of Amish people. The Safety improvements will benefit this highly vulnerable road user as they heavily transit this area via horse and buggy. The mumble strips are more horse friendly compared to regular rumble stripes and will help separate this low speed shoulder traffic from high speed vehicles.

Additional safety countermeasures including an additional 2' of paved shoulder (4' total) funded locally to enhance the benefit beyond what is directly funded by TSIP.

This project has substantial benefit for the cost with a benefit/cost ratio of 6.94:1.

TSIP Cost Estimate - Canoe Rd 2025

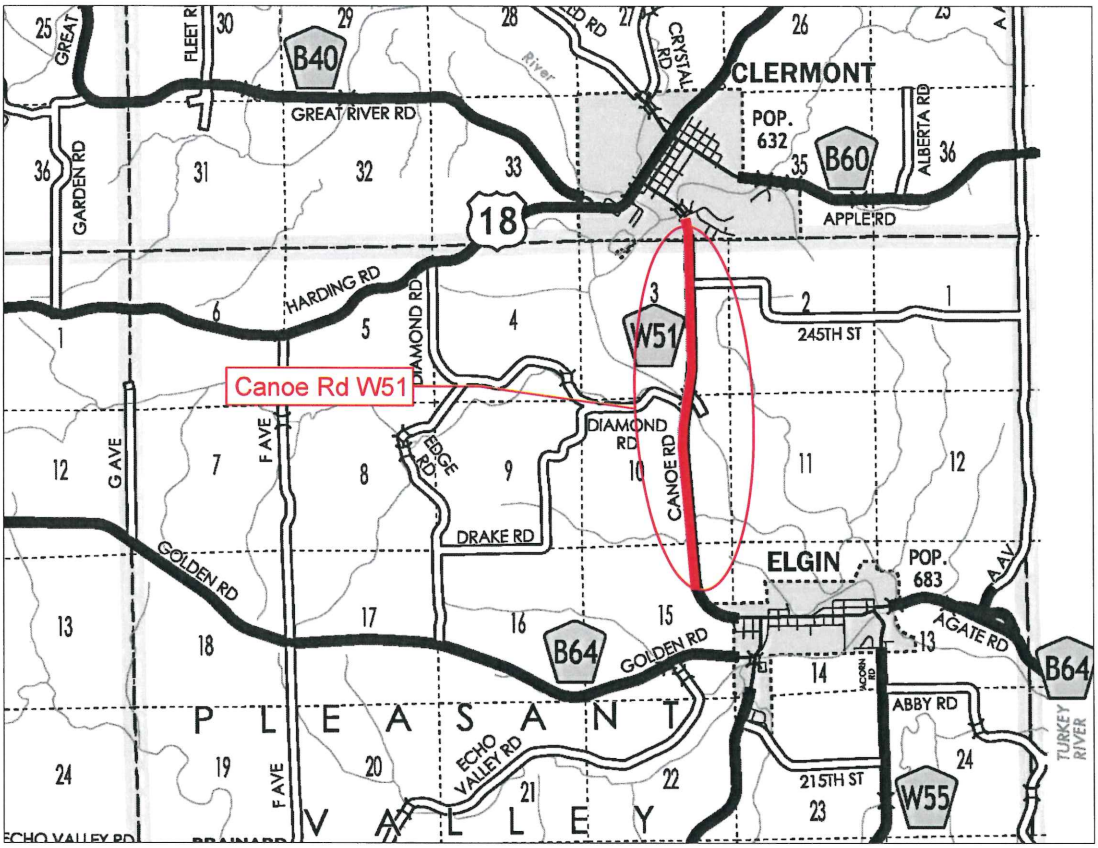
Item Code	Description	Unit	Qty	Unit Price	Total Cost
2213-2713300	Excavation, Class 13 For Widening	CY	1,449.93	$15.00	$21,748.89
2213-8200000	Base Widening, HMA Mixture	TON	2,877.38	$52.00	$149,623.66
2303-1032500	HMA Intermediate Course 1/2 inch	TON	959.13	$62.00	$59,465.81
2303-1033500	HMA Surface Standard Traffic 1/2 inch	TON	959.13	$52.00	$49,874.55
2303-1258283	Asphalt Binder, PG 58-28S	TON	115.10	$600.00	$69,057.07
2527-9263109	Pavement Marking, Waterborne or Solvent Based	STA	140.40	$30.00	$4,212.00
2533-4980005	Mobilization	Lump	1.00	$50,000.00	$50,000.00
2599-9999017	Sinusoidal Centerline Rumble Strips, HMA Surface	STA	140.03	$150.00	$21,004.50
2599-9999017	Sinusoidal Shoulder Rumble Strips, HMA Surface	STA	282.06	$150.00	$42,309.00
				Total	$467,295.48

Time Shedule

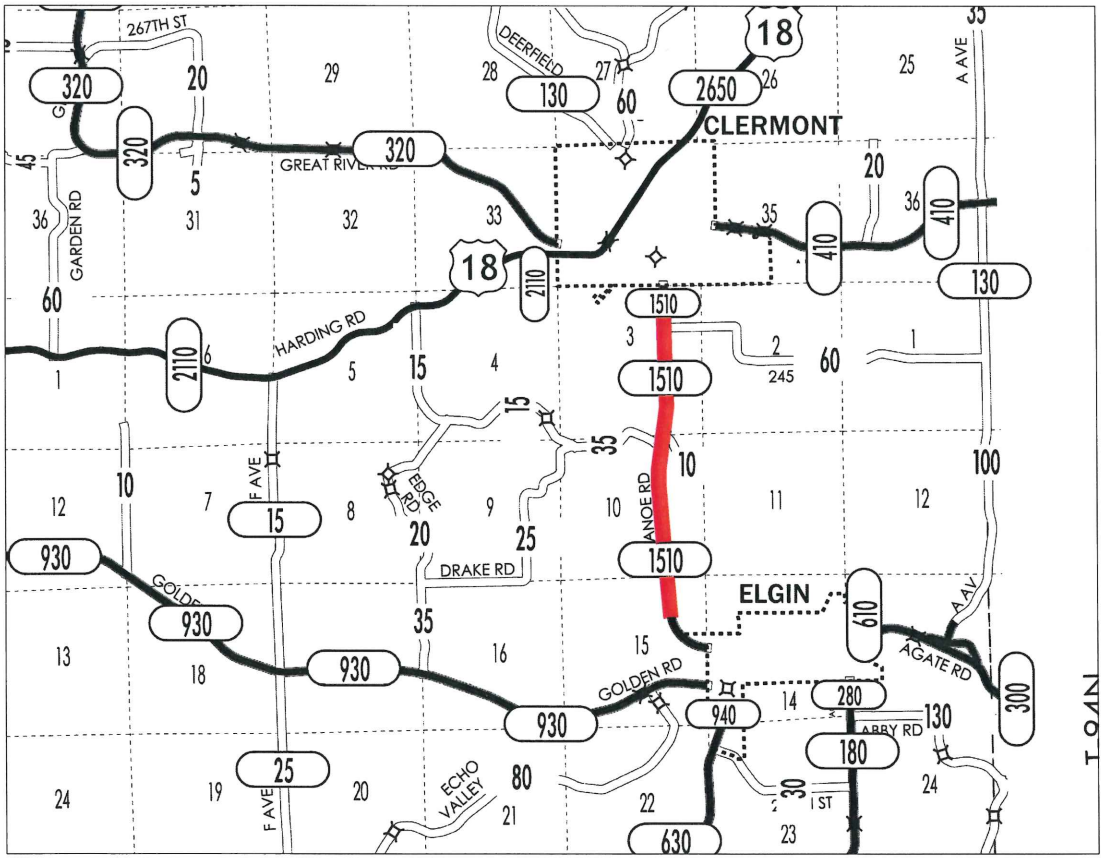
Canoe Road Corridor Improvements

Submittal of Application:	**August, 2025**
TSIP Grant Approval:	**November, 2025**
Project Approval:	**January, 2026**
Project Letting Date:	**Fall/Winter 2026/2027**
Construction Completed:	**Fall 2027**
Project Closeout:	**Winter 2027**

E



J



2021 Annual Average Daily Traffic

NOT TO SCALE

FAYETTE COUNTY	Proposed TSIP Paved Shoulder/Traffic Count Map


2015/01/01


2025/07/10


2025/07/10


2025/07/10


2025/07/10


2025/07/10


2025/07/10

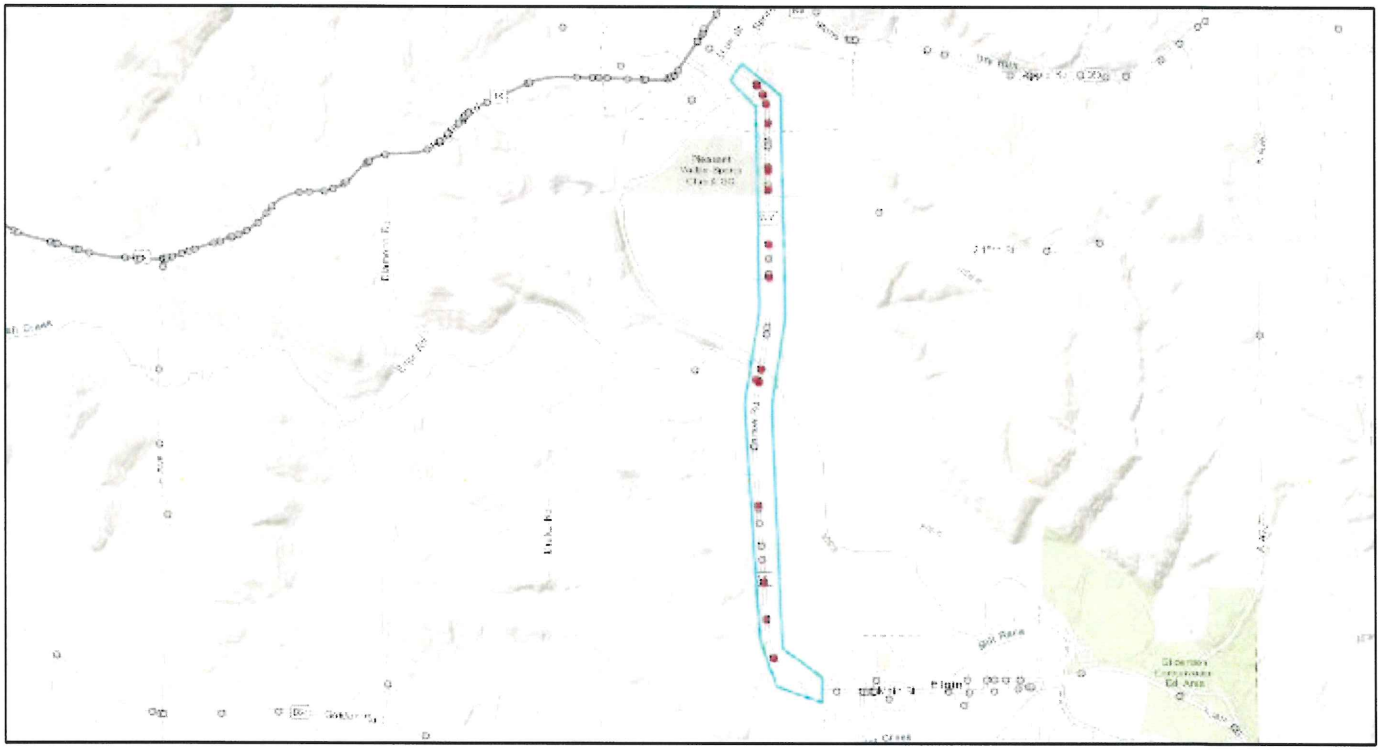
Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	17
Fatal Crash	0
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	5
Possible/Unknown Injury Crash	1
Property Damage Only	10

Injury Status Summary	16
Fatalities	0
Suspected serious/incapacitating	1
Suspected minor/non-incapacitating	6
Possible (complaint of pain/injury)	1
Uninjured	0
Unknown	0
Not Reported	8

Property/Vehicles/Occupants	
Property Damage Total (dollars):	138,100.00
Average (per crash dollars):	8,123.53
Total Vehicles:	18.00
Average (per crash):	1.06
Total Occupants:	20.00
Average (per crash):	1.18

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.47
Major Injuries/Crash:	0.06
Minor Injuries/Crash:	0.35
Possible/Unknown Injuries/Crash:	0.06



Major Cause			17
Animal	9	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	1
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	1
Driver Distraction: Exterior distraction	0	Ran off road - right	4
Ran off road - straight	0	Ran off road - left	0
Lost control	1	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	1
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Monday	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Tuesday	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Wednesday	0	0	0	0	1	0	1	0	0	0	1	1	0	4
Thursday	0	0	1	1	0	0	0	0	2	1	0	1	0	6
Friday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saturday	1	0	0	0	0	0	1	0	0	1	0	0	0	3
Total	1	0	1	1	1	1	2	1	4	2	1	2	0	17

Manner of Crash Collision	17
Non-collision (single vehicle)	10
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	1
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	6
Other	0
Unknown	0

Surface Conditions	17
Dry	9
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	8
Other	0
Unknown	0

Fixed Object Struck			18
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	2	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	1	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	2	Landscape/shrubbery	0
Snow bank	0	Fence	1
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	12

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	Total
< 14	0	0	0	0	0
= 14	0	0	0	0	0
= 15	0	0	0	0	0
= 16	0	0	0	0	0
= 17	0	0	0	0	0
= 18	0	1	0	0	1
= 19	0	0	0	0	0
= 20	0	1	0	0	1
>= 21 and <= 24	0	1	0	0	1
>= 25 and <= 29	1	2	0	0	3
>= 30 and <= 34	3	0	0	0	3
>= 35 and <= 39	0	2	0	0	2
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	1	0	0	0	1
>= 55 and <= 59	0	1	0	0	1
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	2	0	0	0	2
>= 70 and <= 74	0	1	0	0	1
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	2	0	0	0	2
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	9	9	0	0	18

Drug/Alcohol Related	17
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	1
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	1
Refused	1
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	14

Alcohol Test Given	18
None	15
Blood	1
Urine	0
Breath	2
Vitreous	0
Refused	0
Not reported	0

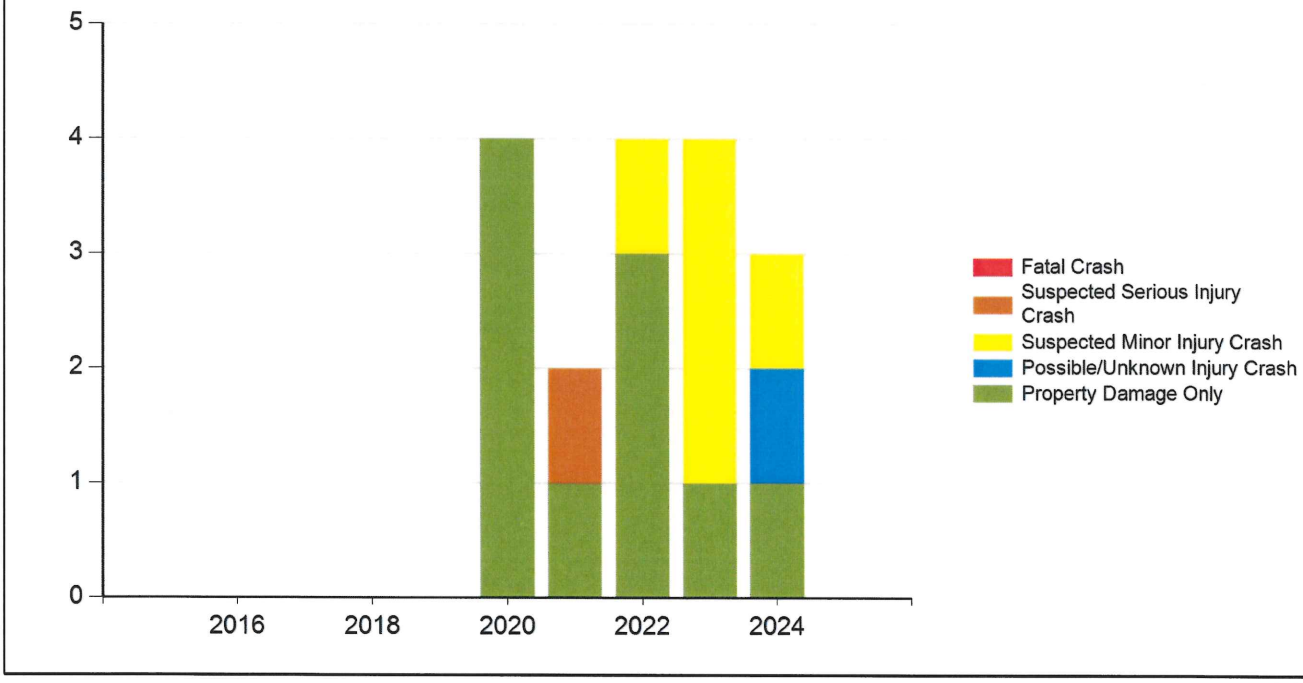
Drug Test Given	18
None	16
Blood	0
Urine	1
Breath	0
Vitreous	0
Refused	1
Not reported	0

Drug Test Result	18
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	18
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	4	4
2021	0	1	0	0	1	2
2022	0	0	1	0	3	4
2023	0	0	3	0	1	4
2024	0	0	1	1	1	3
2025	0	0	0	0	0	0
Total	0	1	5	1	10	17

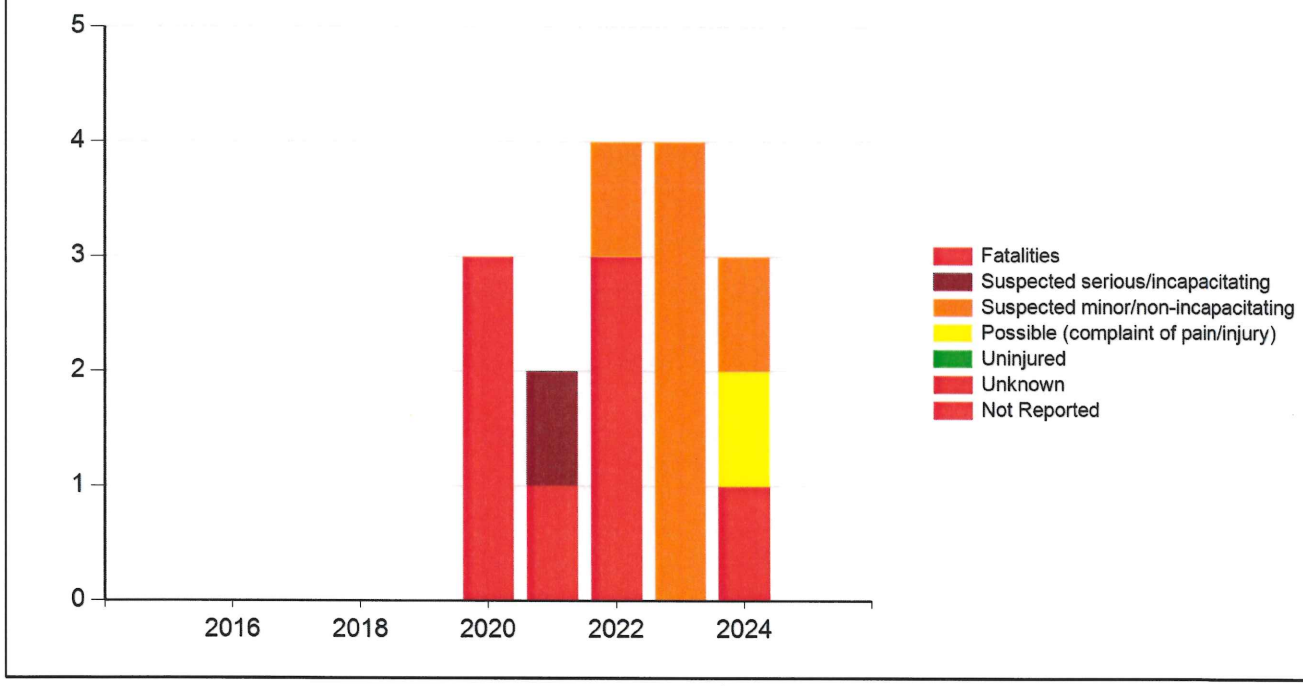
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	Total
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	3	3
2021	0	1	0	0	0	0	1	2
2022	0	0	1	0	0	0	3	4
2023	0	0	4	0	0	0	0	4
2024	0	0	1	1	0	0	1	3
2025	0	0	0	0	0	0	0	0
Total	0	1	6	1	0	0	8	16

Injury Status/Year



Meeting the following criteria

Jurisdiction: Counties (Fayette)
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

County:	Fayette	Prepared By:	Luke Bowdish
Location:	Canoe Rd	Date Prepared:	6/26/2025
Proposed Improvements:			
Estimated Improvement Cost:	$ 467,295		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 9,346

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	3
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	CRF 2:	CRF 3:	**Combined CRF**
CRF Value (%)	20	4	6	**22.9**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000		22.9	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	1	22.9	**0.20**	**0.05**
Minor Injury (B)	$ 290,000	5	22.9	**1.00**	**0.23**
Possible/Unknown Injury (C)	$ 135,000	1	22.9	**0.20**	**0.05**
Property Damage Only (O)	$ 20,000	10	22.9	**2.00**	**0.46**

Crash Severity	Annual Societal Benefit
Fatal (K)	$ -
Serious Injury (A)	$ **197,342**
Minor Injury (B)	$ **66,545**
Possible/Unknown Injury (C)	$ **6,196**
Property Damage Only (O)	$ **9,179**

Total Benefits and Costs

		Implementation Cost	$ 467,295
		Present Value of Maint.	$ 127,014
Present Value Benefits (Societal Benefits)	$ 4,124,887	Present Value Costs (Impl. and Maint. Costs)	$ 594,309
Present Value Net Return	$ 3,530,577		
Benefit Cost Ratio	**6.94**		

Form continues on next page

County: Fayette
Location: Canoe Rd

Prepared By: Luke Bowdish
Date Prepared: 6/26/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

No change to Traffic Growth Rate

No change to Crash History

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 8-12-2025

Location / Title of Project ADVANCED RUMBLE STRIP PANELS

Applicant HUMBOLDT COUNTY

Contact Person BEN LOOTS Title COUNTY ENGINEER

Complete Mailing Address 2221 220TH STREET

HUMBOLDT IA 50548

Phone 515-332-2366 (Area Code) E-Mail BLOOTS@HUMBOLDTCOUNTY.IOWA.GOV

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s) _____

Contact Person _____ Title _____

Complete Mailing Address _____

_____

Phone _____ (Area Code) E-Mail _____

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	652,500
Total Project Cost	$	652,500
Safety Funds Requested	$	500,000

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☐ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information

Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
		☐	☐		
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the HUMBOLDT COUNTY

Signed: Ben Loots — 8-12-2025
Signature — Date Signed

BEN LOOTS
Printed Name

Attest: David Powell — 8-12-25
Signature — Date Signed

DAVID POWELL
Printed Name

HUMBOLDT COUNTY BOARD OF SUPERVISORS

Resolution #2025-0811

A RESOLUTION ENDORSING A GRANT APPLICATION FOR TRAFFIC SAFETY IMPROVEMENT PROGRAM FUNDING (TSIP).

WHEREAS, the Iowa Department of Transportation through the Traffic Safety Improvement Program provides funding for various TSIP eligible projects; and

WHEREAS, the Board of Supervisors of Humboldt County hereby endorses the proposed project Paved full depth concrete rumble strips at multiple locations in Humboldt County, Iowa and;

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF SUPERVISORS THAT:

1. The County hereby commits initial funds as required by the Iowa Department of Transportation Traffic Safety Improvement Program.
2. The County hereby commits to adequately maintain the completed project for its intended public use for a minimum of 10 years following project completion.
3. The County Board of Supervisors hereby authorizes Ben Loots, Humboldt County Engineer to sign the project agreement on behalf of Humboldt County and carry the project to completion.

PASSED AND APPROVED THIS 11 DAY OF August, 2025.

AYES: Reimers, Loney, Rassmussen, Carpenter

NAYS: _____

OTHER: pedersen - Absent

xo Bruce Reimers

Chairman

Humboldt County Board of Supervisors

Attest: Trish Erickson

Trish Erickson, Humboldt County Auditor

Loots, Ben

From: Jason Nielsen <Jason@tenpointconstruction.com>
Sent: Wednesday, August 13, 2025 7:57 AM
To: Loots, Ben
Subject: Humboldt County Rumble Strip program

Ben,

For 8" PCC rumble strips.

Items included:
By SY price
By Count price
Rumble Strip (in full depth patch)
Traffic Control
Mobilization
Flaggers

Approx. unit price would be $7,250 / rumble strip.

Jason Nielsen | Project Manager/Estimator
P: 712 263-5181 **C:** 712 269-3181 **F:** 712 263-4513
Ten Point Construction Co., Inc
2212 HWY 59
Denison, Iowa 51442
jason@tenpointconstruction.com

B. Narrative

Humboldt County Secondary Road Department is applying for Transportation Safety Improvement (TSIP) funds for approximately 90 site specific improvements. The proposed improvements consist of full depth removal of the existing HMA and placing 8" PCC, rumble strip panels at various locations county wide.

Humboldt County Secondary Roads is responsible for the engineering, construction, and maintenance of the county's Secondary Road System. This system includes 721 miles of rural roads, of which 205 miles are hard surfaced. Located on these roads are 73 bridges over 20 feet in length, and hundreds of smaller drainage structures.

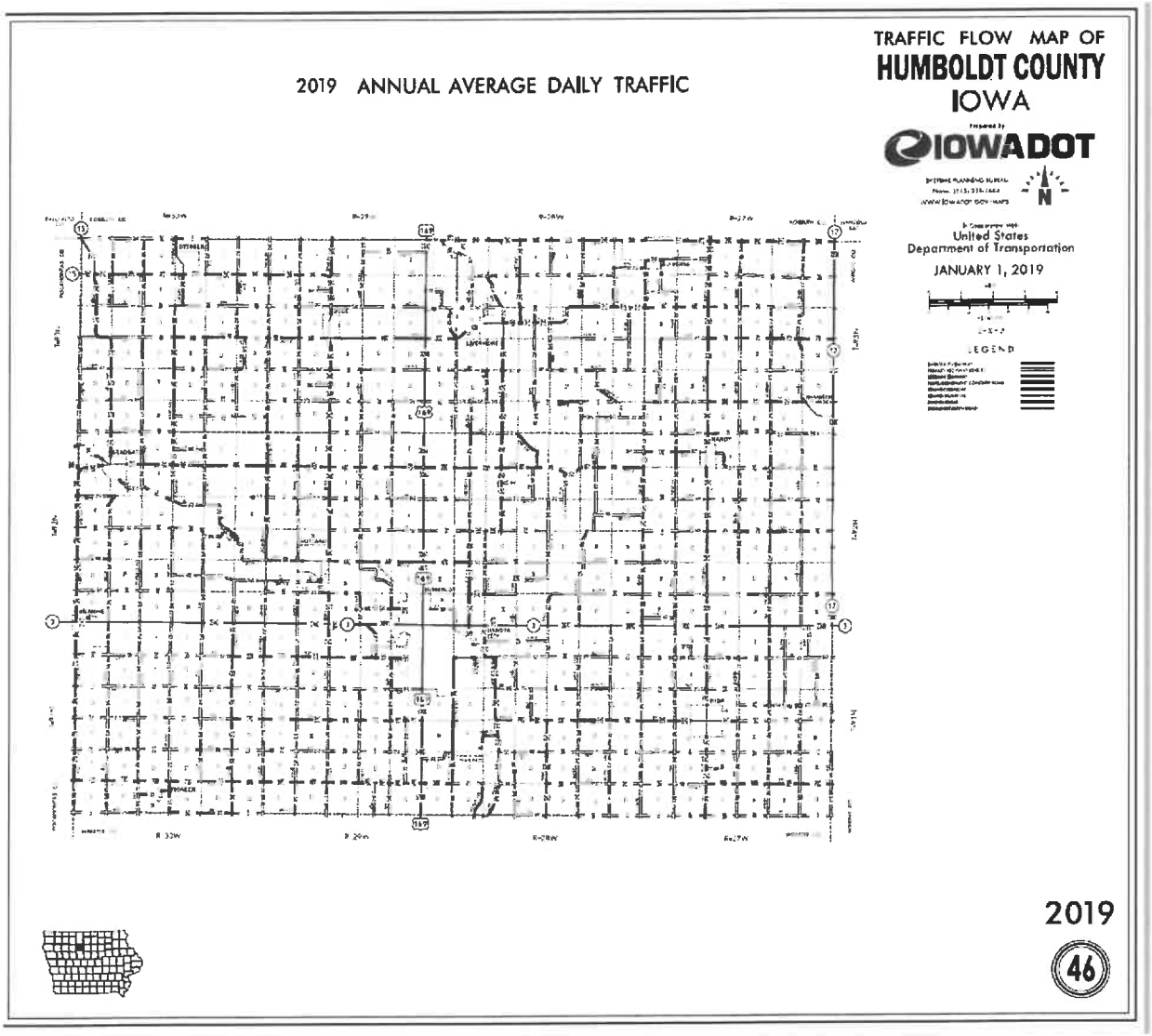
Humboldt County is requesting TSIP funding for the cost of these improvements to the locations listed.

C. Cost breakdown (see attachment)

D. Time Schedule

- TSIP Application Due — August 15, 2025
- TSIP Award Notification — January, 2026
- Proposed letting — April 1, 2026
- TSIP Funding Available — July 1, 2026
- Completion by date — November, 2026

E. Map



G. Plan View (See Attachment)

H. Aerial Photograph – N/A

I. ICAT Crash Summary – (See Attachment)

J. Traffic Volumes – See 2019 IDOT Traffic Volumes for Humboldt County (next page)

K. Traffic Sign Layout – N/A

L. Benefit/Cost Ratio – (See Attachment)

County:	Humboldt	Prepared By:	Ben Loots
Location:	Rumble Strip Installation	Date Prepared:	8/12/2025
Proposed Improvements:	Installation of roughly 90 transverse rumble strips panels PV-10		
Estimated Improvement Cost:	$ 652,500		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 13,050

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	1
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	Combined CRF
CRF Value (%)	13	**13.0**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	2	13.0	**0.40**	**0.05**
Serious Injury (A)	$ 4,300,000	2	13.0	**0.40**	**0.05**
Minor Injury (B)	$ 290,000	0	13.0	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	1	13.0	**0.20**	**0.03**
Property Damage Only (O)	$ 20,000	0	13.0	**0.00**	**0.00**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ 223,600**
Serious Injury (A)	**$ 223,600**
Minor Injury (B)	**$ -**
Possible/Unknown Injury (C)	**$ 3,510**
Property Damage Only (O)	**$ -**

Total Benefits and Costs

		Implementation Cost	$ 652,500
		Present Value of Maint.	$ 177,354
Present Value Benefits (Societal Benefits)	$ 6,657,305	Present Value Costs (Impl. and Maint. Costs)	$ 829,854
Present Value Net Return	$ 5,827,451		
Benefit Cost Ratio	**8.02**		

Form continues on next page

County: Humboldt
Location: Rumble Strip Installation
Prepared By: Ben Loots
Date Prepared: 8/12/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

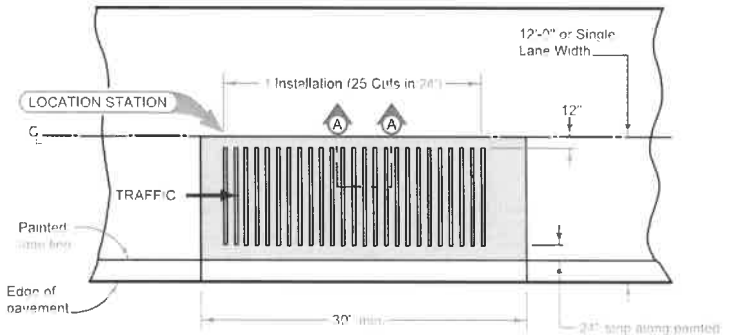
No change to Traffic Growth Rate

No change to Crash History

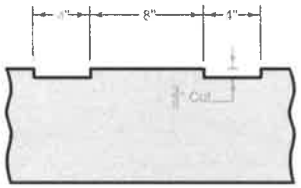
DESIGNER INFO

Construct rumble strip panel prior to opening to traffic.

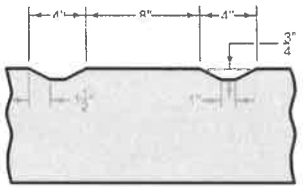
Refer to the contract documents for pavement patching and jointing information.



PLAN



SECTION A-A
(RUMBLE STRIP CUT IN PAVEMENT)



SECTION A-A
(RUMBLE STRIP PLACED IN PLASTIC P.C. CONCRETE)

Possible Contract Items:
- CD Joint Assembly
- CT Joint
- Patches, Full-Depth Finish, by Area
- Patches, Full-Depth Finish, by Count
- Rumble Strip Panel (In Full Depth Patch)
- Rumble Strip Panel (PCC Surface)
- Rumble Strip Panel (HMA Surface)

Possible Tabulations:
- 102-6C
- 112-7

IOWADOT

REVISION 3 04-21-20

STANDARD ROAD PLAN

PV-10

SHEET 1 of 1

REVISIONS: Changed 16" strip of normal pavement surface to 24".

APPROVED BY DESIGN METHODS ENGINEER

RUMBLE STRIP PANEL FOR INTERSECTION APPROACH

Rumble Strip panel locations

roadway	nearest intersection	google maps link
P19	C49	https://maps.app.goo.gl/pQL9FwvRR1w7kMwj6
274th st	C49	https://maps.app.goo.gl/Rxs4NCihnt7VSsuv6
274th st	P23	https://maps.app.goo.gl/MUJ6dUXyoHe6vKaG9
280th st	P29	https://maps.app.goo.gl/GbUMMzjz83GPC7vTA
P29	C49	https://maps.app.goo.gl/MC2a96SmoMHSgC8g6
P29	C49	https://maps.app.goo.gl/MkeAZPx3dNx7xsgX8
P29	Hwy 3	https://maps.app.goo.gl/FFxAhuzCAs1CCSds9
C46	P29	https://maps.app.goo.gl/J23ZPXnhSjCRSbM57
C46	Hwy 169	https://maps.app.goo.gl/pzkjy3kV4Twf7FAU7
C44	P29	https://maps.app.goo.gl/KCLhX5evea8v8rrC9
P33	C44	https://maps.app.goo.gl/AELPTLubBmFQEFkG8
P33	Hwy 3	https://maps.app.goo.gl/WKksbYTnE333VmxcA
P33	Hwy 3	https://maps.app.goo.gl/qQiiV8xdkpEcEQF76
C49	Hwy 169	https://maps.app.goo.gl/ShHB1xi8CmKm6NBZ6
Gotch pk rd	C49	https://maps.app.goo.gl/e8g3Pcq9zdaxnrWw9
Georgia	C29	https://maps.app.goo.gl/JDyokdMscYsWNC7Y8
Georgia	C26	https://maps.app.goo.gl/JVNQBaQFd5BYAuk49
P20	C26	https://maps.app.goo.gl/L4PkEWy46Prox5Rb6
P19	C26	https://maps.app.goo.gl/DRh7z7f4KTJA4KU5A
165th	C26	https://maps.app.goo.gl/D9u98bjUmCfQZnZJ6
C26	P19	https://maps.app.goo.gl/qmUxVGsruce5Wcb4A
P19	Hwy 15	https://maps.app.goo.gl/uZk3H4Sta3SHfe648
P20	C20	https://maps.app.goo.gl/EK59p2pTnwah6qam8
P30	C20	https://maps.app.goo.gl/KtSbZ1XtLZzRtkL97
C18	P20	https://maps.app.goo.gl/9V2e5bTVoQZhBUoRA
C20	Hwy 169	https://maps.app.goo.gl/pi8J9EcSSqXRpx7E7
C20	Hwy 169	https://maps.app.goo.gl/yYZBNgBJUGnKEcPL9
C12	Hwy 169	https://maps.app.goo.gl/YVWkqi4dLT9j94kp9
P56	C12	https://maps.app.goo.gl/qgp2UbHiRJnepo2C9
P56	C20	https://maps.app.goo.gl/uns7qqwrRFmymEmY7
P63	C20	https://maps.app.goo.gl/hYBYqKBmGaBKZecT6
C20	P66	https://maps.app.goo.gl/GsvzMSTabFPUNL4t6
C20	P66	https://maps.app.goo.gl/2zLwfZocXPAji8uy5
C20	hwy 17	https://maps.app.goo.gl/b67SdtLEPuueYz7c6
C29	Hwy 169	https://maps.app.goo.gl/yemY12PWQFkeHpB29
C29	P56	https://maps.app.goo.gl/5fnhUeWe5S7DL5Kb8
210th	P56	https://maps.app.goo.gl/hQzzSDGJmQwgw1kH7
P56	Hwy 3	https://maps.app.goo.gl/CZVQcBxTQuG5fX6u5
P56	Hwy 3	https://maps.app.goo.gl/NsYFW2H5hDgQJeA58
Lone Tree	230th	https://maps.app.goo.gl/fWcWaYJmQR3gebLE9
C54	P66	https://maps.app.goo.gl/h3CLvUk3gvKw29cs9
P63	Hwy 3	https://maps.app.goo.gl/Q945FVQiCFCLZV2g8
C30	P66	https://maps.app.goo.gl/KQyCKEhKYcfip2yx6
C30	Hwy 17	https://maps.app.goo.gl/udttbJjA1oPLdsd48

Exhibit A

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** June 4, 2025

Location / Title of Project F46 Curve and Intersection Realignment near T Ave

Applicant Iowa County Secondary Roads

Contact Person Nick Amelon Title Iowa County Engineer

Complete Mailing Address 953 Franklyn Ave.

Marengo, IA 52301

Phone (319) 936-7283 E-Mail namelon@iowacounty.iowa.gov
(Area Code)

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s) _____

Contact Person _____ Title _____

Complete Mailing Address _____

_____

Phone _____ E-Mail _____
(Area Code)

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	719,894
Total Project Cost	$	813,894
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

- ☒ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☐ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
		☐	☐		
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the Iowa County Secondary Roads

Signed: _____ 6/13/25
Signature Date Signed

Kevin Heitshusen
Printed Name

Attest: _____ 6/13/25
Signature Date Signed

Brandy Enochson
Printed Name

RESOLUTION NO. 2025-06-13 A

RESOLUTION APPROVING IOWA COUNTY PARTICIPATION IN THE IOWA DEPARTMENT OF TRANSPORTATION TRAFFIC SAFETY IMPROVEMENT PROGRAM.

WHEREAS, Safety is a major concern of Iowa County Board of Supervisors and Highway Safety is a major aspect of safety, and

WHEREAS, funding is insufficient to provide all appropriate safety components on our roadways, and

WHEREAS, the Iowa County Board of Supervisors has identified the curve on F46, at the intersection with T Ave, as a location where vehicular safety could be improved and funded with the TSIP grant, and

NOW THEREFORE, be it resolved by the board of Supervisor to apply for safety funding on County Road F46 for curve and intersection realignment near T Ave. It is also assured by the Iowa County Board of Supervisors that any funded improvements will be adequately maintained.

Passed this 13 day of June 2025.

Kevin Heitshusen
Board of Supervisors
Iowa County

ATTEST:

Brandy Enochson, County Auditor

Exhibit B

Traffic Safety Improvement Program (TSIP) Funds Narrative

B.1 Project Location

On County Road F46, near the intersection with T Ave, which is located approximately 3 miles east of Williamsburg, IA.

B.2 Existing Conditions

County Road F46 is the connecting route for local traffic from Williamsburg (the largest town in Iowa County) to Iowa City. The road is currently PCC with a 22' width and 5' to 7' granular shoulders. F46 runs east and west and is mostly straight and is signed for 55 mph, but there are two sharp curves ("S-curves") near the intersection of T Ave. The S-curves are signed for 35 mph, but traffic does not always recognize the drastic speed reduction requirement and there have been multiple lane departures in the past 10 years, several of which have led to fatalities. There

F46 was first designed in 1954, in 1999 a 4" asphalt overlay was placed over 6" of PCC. The clear zone varies along the project length but is free of objects. The majority of existing foreslopes range from 3.5:1 to 3.0:1, but can reach 2.5:1 in certain locations. All signs are currently installed according to MUTCD requirements.

B.3 Safety Action Plan

This stretch of F46 has been identified on Iowa County's Safety Action Plan numerous times. The curve, intersection with T Ave, **and** this segment of F46 have all been identified as possible safety concerns. (Please see Exhibit I, part C for details from our Safety Action Plan.)

B.4 Proposed Concept on F46

Iowa County will realign and pave 0.35 miles of F46 near T Ave. The realignment will be designed such that traffic can maintain 55 mph throughout the curves. Iowa County will surface the new roadway with asphalt, widen the roadway from 11' lanes to 12' lanes, mill centerline and edge line rumble strips, and add a safety edge. The wider lanes should help reduce lane departures and help accommodate the wider implements. The centerline strips will help prevent vehicles from crossing the centerline, reducing head on collisions. The edge line rumble strips will help prevent lane departures. Adding a safety edge will help vehicles that leave the travel portion from overcorrecting

From 2019-2023 lane departures were the most common causes for fatal crashes in Iowa (Iowa Strategic Highway Safety Plan). Over the past 11 years there have been 10 accidents on this half-mile stretch of F46. Five of the accidents were lane departures, two of which resulted in fatalities. Realignment of the road along with wider lanes, rumble strips, and a safety edge will unquestionably reduce the amount of lane departures on this portion of roadway.

A crash analysis and benefit/cost calculation has been performed for the proposed safety improvements. Using the data from 2019-2024, calculations show a benefit/cost ratio of over 13.74:1. The predicted savings indicate that this would be extremely worthwhile appropriation of funding. Considerations for funding for these improvements is greatly appreciated.

B.5 Proposed Concept on T Ave

T Ave is a north/south gravel road that intersects with F46 in the middle of the S-curves. T Ave would need to be re-graded about 500 feet in each direction such that the intersection meets safety requirements of the Iowa DOT.

Exhibit C

ESTIMATED ROADWAY QUANTITIES Run Date: 06/02/2025

Project Number: F46 S-Curves at T Ave

Item No.	Item	Unit	Safety Qty.	Unit Price	Total Costs	Total Safety Costs
1	CLEARING AND GRUBBING	UNIT	1	$10,000	$10,000	
2	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	20,000	$7	$140,000	$140,000
3	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	5,100	$7	$35,700	$35,700
4	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	SY	5,500	$4	$20,900	$20,900
5	MODIFIED SUBBASE	CY	1,750	$50	$87,500	$87,500
6	GRANULAR SHOULDERS, TYPE B	TON	500	$30	$15,000	$15,000
7	CLEANING AND PREPARATION OF BASE	MILE	0	$1,000	$350	$350
8	HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 3/4 IN. MIX	TON	1,150	$65	$74,750	$74,750
9	HOT MIX ASPHALT STANDARD TRAFFIC, INTERMEDIATE COURSE, 3/4 IN. MIX	TON	1,000	$50	$50,000	$50,000
10	HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, NO SPECIAL	TON	450	$50	$22,500	$22,500
11	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC	TON	156	$740	$115,440	$115,440
12	HOT MIX ASPHALT PAVEMENT SAMPLES	LS	1	$3,500	$3,500	$3,500
13	GRANULAR SURFACE ON ROADWAY, CLASS A	TON	500	$35	$17,500	$17,500
14	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	150	$11	$1,650	$1,650
15	APRONS, CONCRETE, 36 IN. DIA.	EACH	4	$2,000	$8,000	$8,000
16	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D	LF	150	$190	$28,500	$28,500
17	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	LF	150	$40	$6,000	$6,000
18	ENGINEERING FABRIC	SY	50	$5	$250	$250
19	REVETMENT, CLASS E	TON	30	$60	$1,800	$1,800
20	REMOVAL OF PAVEMENT	SY	4,300	$9	$38,700	$38,700
21	SAFETY CLOSURE	EACH	4	$500	$2,000	$2,000
22	CONSTRUCTION SURVEY	LS	1	$40,000	$40,000	
23	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	70	$17	$1,190	$1,190
24	TRAFFIC CONTROL	LS	1	$15,000	$15,000	$15,000
25	MOBILIZATION	LS	1	$40,000	$40,000	
26	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE	STA	52	$23	$1,196	$1,196
27	MILLED CENTERLINE RUMBLE STRIPS, HMA SURFACE	STA	26	$18	$468	$468
28	SILT FENCE	LF	2,000	$4	$8,000	$8,000
29	SILT FENCE FOR DITCH CHECKS	LF	2,000	$5	$10,000	$10,000
30	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	2,000	$2	$4,000	$4,000
31	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	2,000	$5	$10,000	$10,000
32	MOBILIZATIONS, EROSION CONTROL	EACH	8	$500	$4,000	
				Total =	**$813,894**	**$719,894**
						(max of $500,000)

SOURCES AND AMOUNTS OF FUNDS FOR PROJECT

TRANSPORATION SAFETY IMPROVEMENT (TSIP) FUNDS:	$500,000
IOWA COUNTY FARM-TO-MARKET FUNDS:	$313,894
TOTAL ANTICIPATED FUNDS:	$813,894

Exhibit D

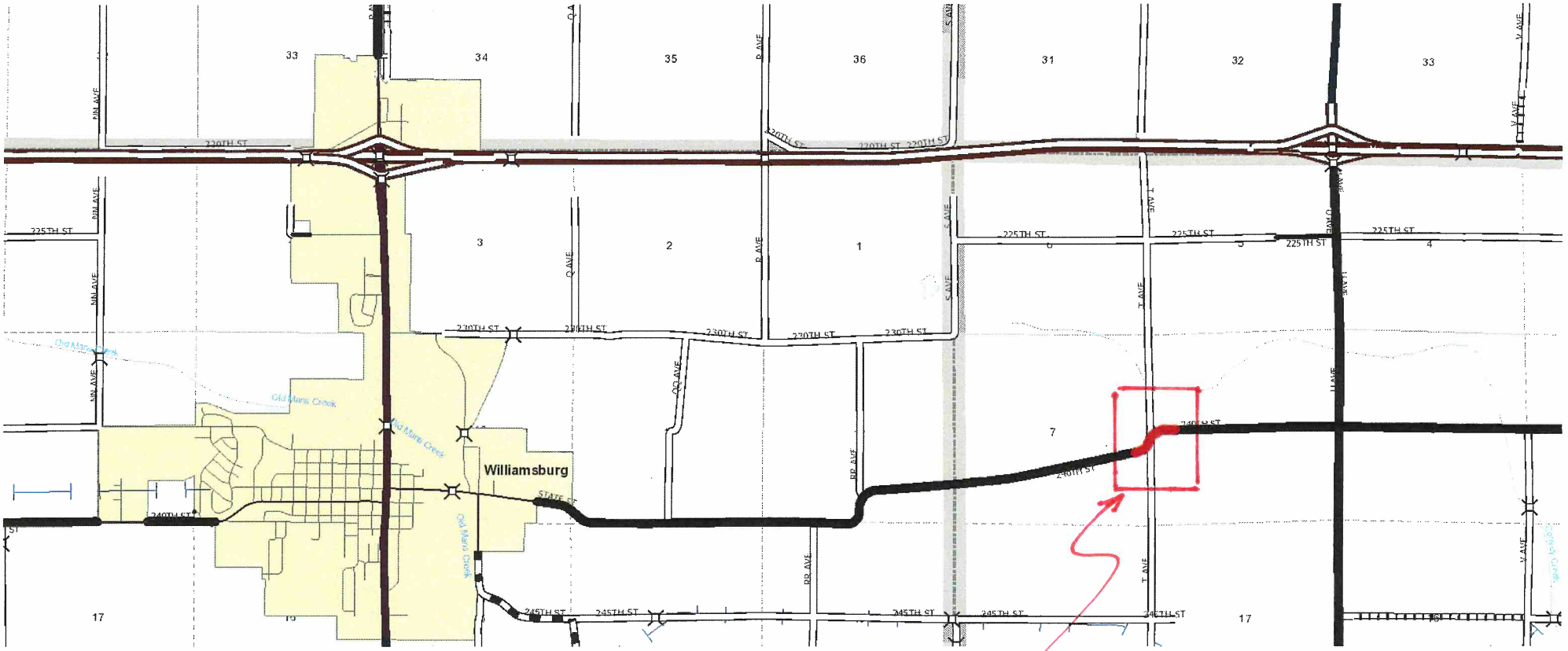
Time Schedule

The schedule proposed for the project is as follows:

Submittal of TSIP Application	August 2025
Start Project Design	August 2025 – December 2025
Anticipated Approval of TSIP Funds	January 2026
Concept Statement	March 2026
Safety Funds become Available	July 2026
Preliminary Plans	September 2026
Final Project Design	December 2026
Project Letting	March 2027
Construction Phase	July 2027 – November 2027
Project Completions	November 2027

This is a "Major Project," please see IM 3.010 for Project Development Critical Path

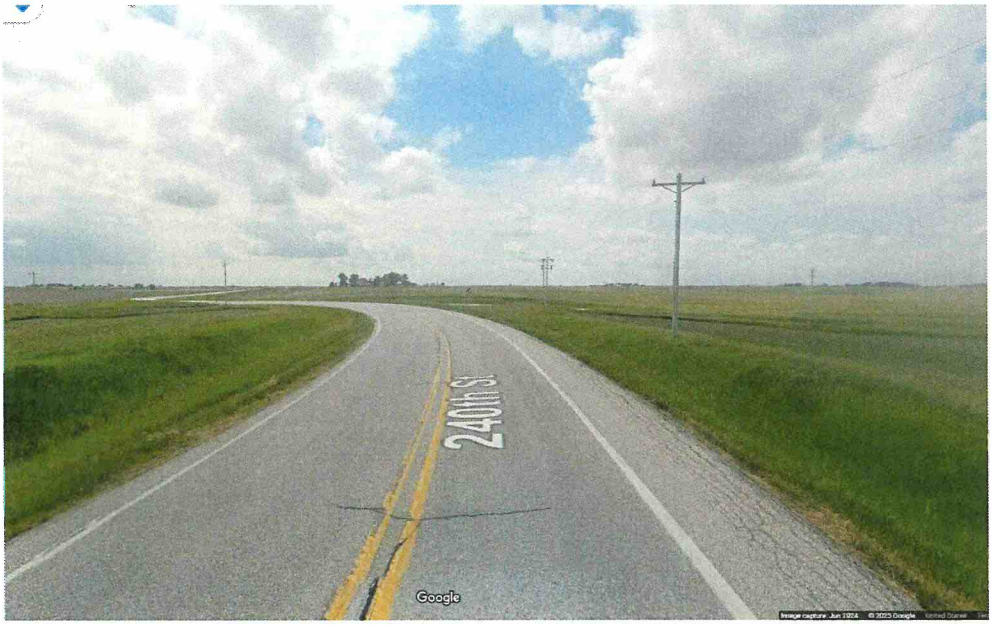
Exhibit E


Williamsburg
Old Mans Creek
STATE ST
220TH ST
225TH ST
230TH ST
240TH ST
245TH ST
Q AVE
R AVE
S AVE
T AVE
RR AVE
SITE
LOCATION



GOING WEST, ROAD LOOKS STRAIGHT

1



GOING WEST. ONCE YOU CAN SEE OVER THE CREST ROAD TAKES SEVERE TURN

2



GOING WEST. SITE OF 2 FATAL ACCIDENTS.

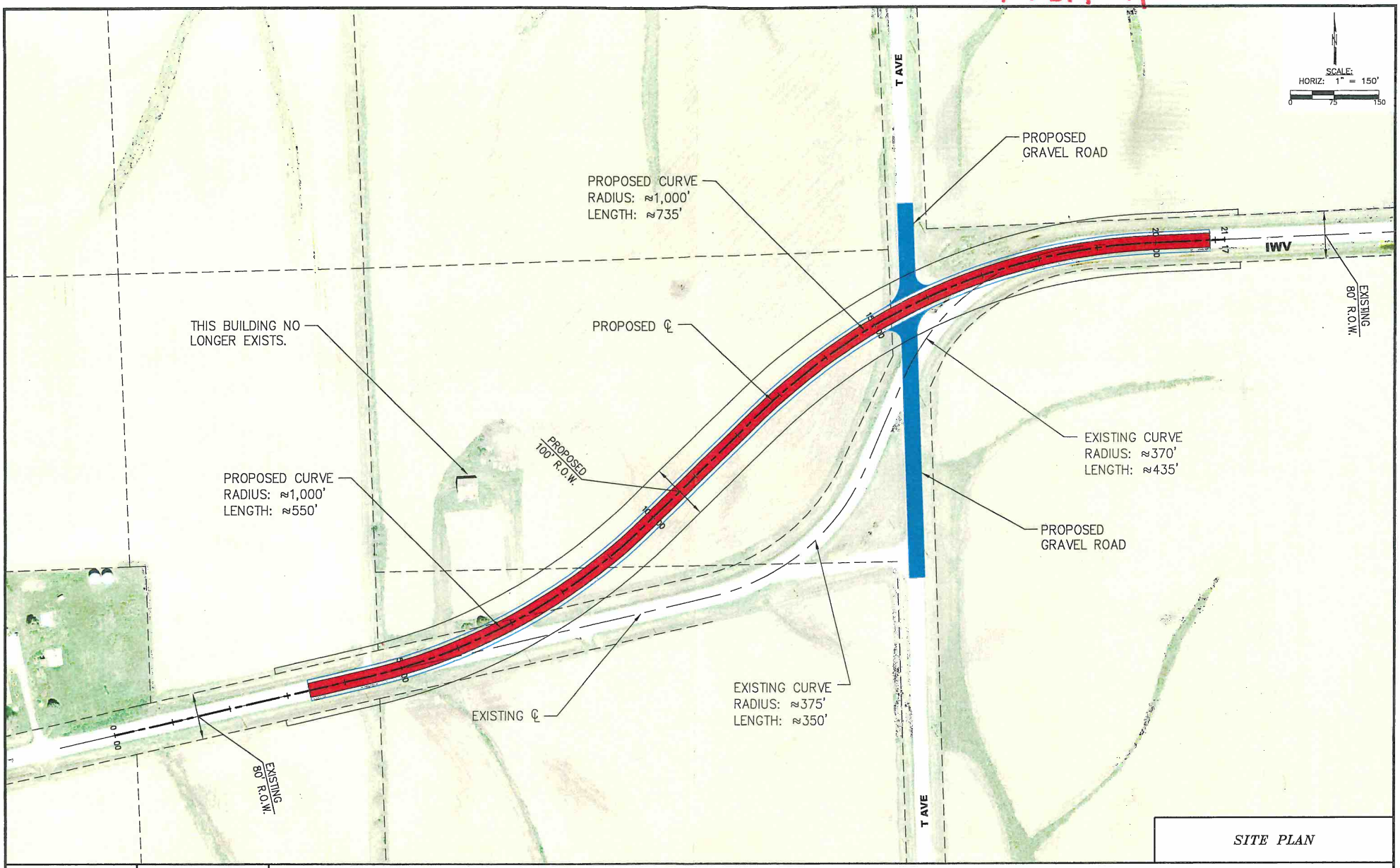
3



GOING EAST. TIGHT CURVE.

4

Exhibit H



SITE PLAN

DRAWN BY: MPA DRAWING DATE: 06/10/2025	REVISED BY: DATE:	*IOWA COUNTY*	PROJECT NUMBER: *IWV CURVE REALIGNMENT*	SHEET NO. 1

Exhibit I
Part A

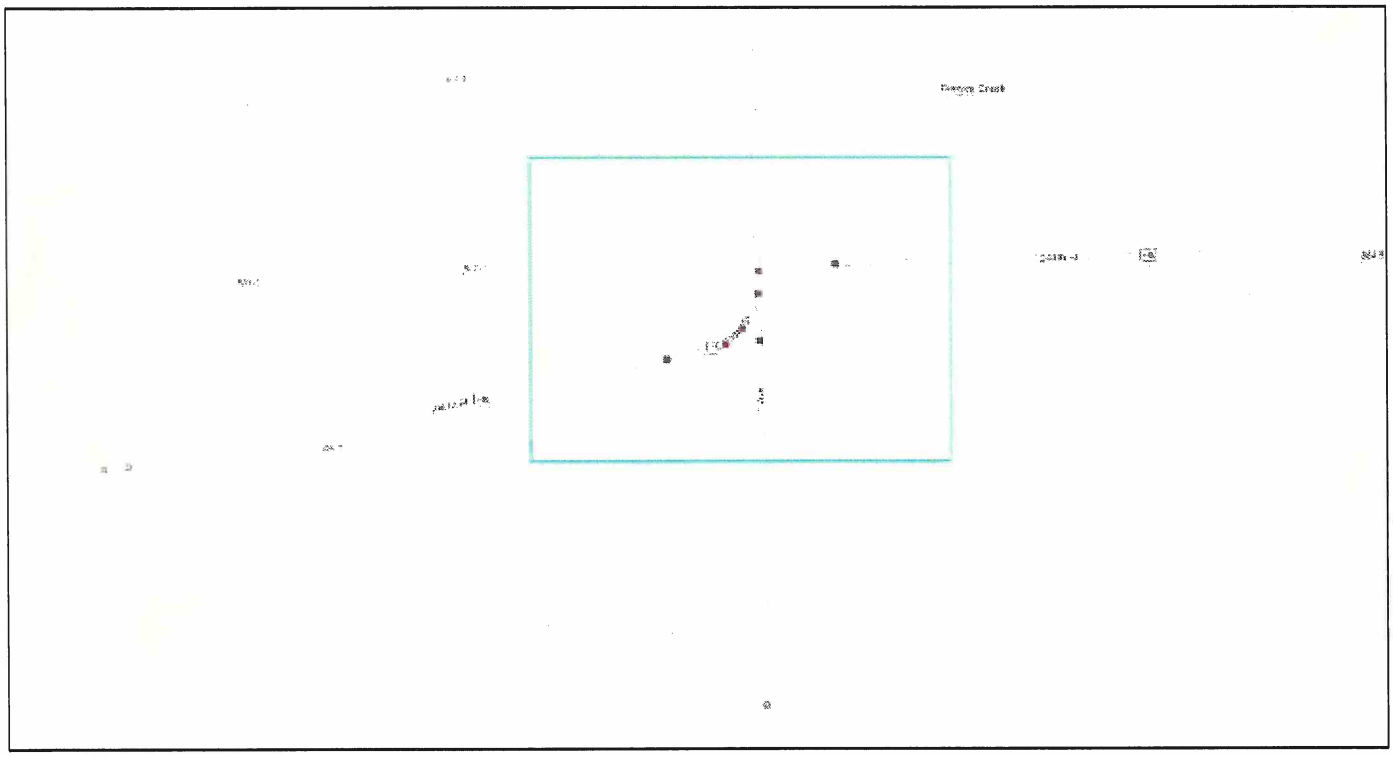
Iowa Crash Analysis Tool
Quick Report
2015-2025 (10 Year)

Crash Severity	10
Fatal Crash	2
Suspected Serious Injury Crash	2
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	1
Property Damage Only	4

Injury Status Summary	7
Fatalities	2
Suspected serious/incapacitating	2
Suspected minor/non-incapacitating	2
Possible (complaint of pain/injury)	1
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	44,200.00
Average (per crash dollars):	4,420.00
Total Vehicles:	12.00
Average (per crash):	1.20
Total Occupants:	16.00
Average (per crash):	1.60

Average Severity	
Fatalities/Fatal Crash:	1.00
Fatalities/Crash:	0.20
Injuries/Crash:	0.50
Major Injuries/Crash:	0.20
Minor Injuries/Crash:	0.20
Possible/Unknown Injuries/Crash:	0.10



Major Cause			10
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	1	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	1
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	1
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	1
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	3
Ran off road - straight	1	Ran off road - left	2
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2015	0	1	0	0	0	1
2016	0	0	1	1	2	4
2017	1	0	0	0	1	2
2018	0	0	0	0	1	1
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	0	0
2022	0	0	0	0	0	0
2023	1	0	0	0	0	1
2024	0	1	0	0	0	1
2025	0	0	0	0	0	0
Total	2	2	1	1	4	10

Severity/Year

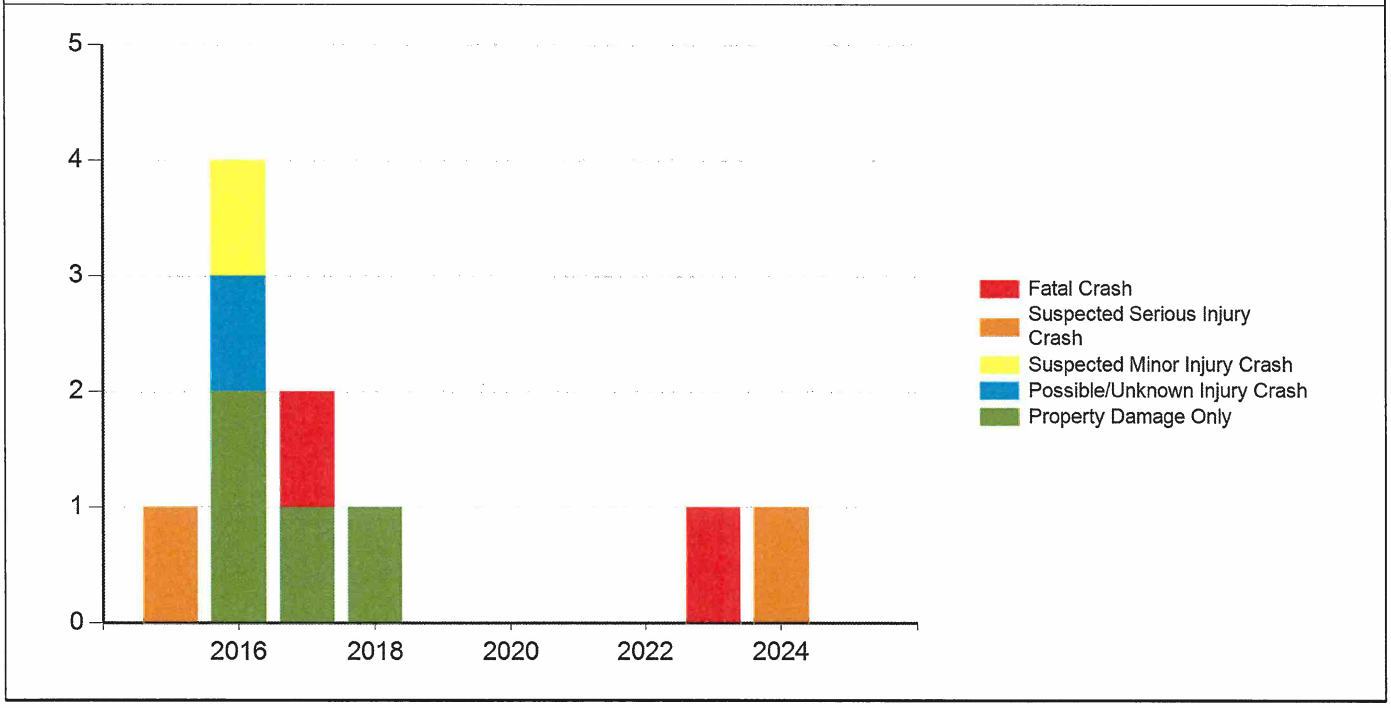


Exhibit I part B

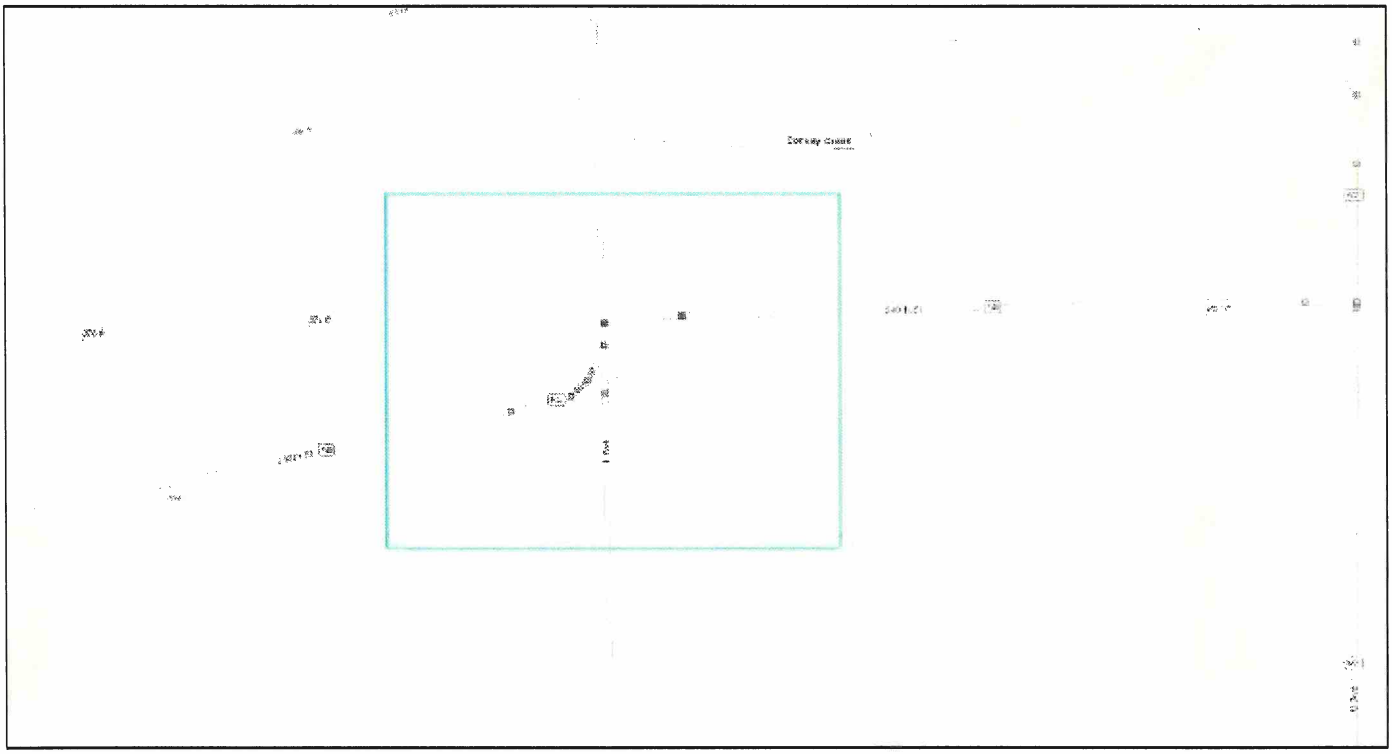
Iowa Crash Analysis Tool
Quick Report
2020-2024 (5 Year)

Crash Severity	2
Fatal Crash	1
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	0
Property Damage Only	0

Injury Status Summary	3
Fatalities	1
Suspected serious/incapacitating	1
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	0
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	6,600.00
Average (per crash dollars):	3,300.00
Total Vehicles:	2.00
Average (per crash):	1.00
Total Occupants:	3.00
Average (per crash):	1.50

Average Severity	
Fatalities/Fatal Crash:	1.00
Fatalities/Crash:	0.50
Injuries/Crash:	1.00
Major Injuries/Crash:	0.50
Minor Injuries/Crash:	0.50
Possible/Unknown Injuries/Crash:	0.00



Major Cause			2
Animal	0	Ran traffic signal	0
Ran stop sign	0	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	0	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	1
Ran off road - straight	0	Ran off road - left	1
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Exhibit I
Part C

Safety Action Plan
Project Description for Curve Improvements

Risk Factor Points: 17

Project Name: Curve 4445 on 240TH STREET
Agency Name: Iowa County
Contact Name: Nicholas Amelon
E-mail: namelon@iowacounty.iowa.gov

Date: 6/5/25
Prepared By: AKT
Checked By: DJG

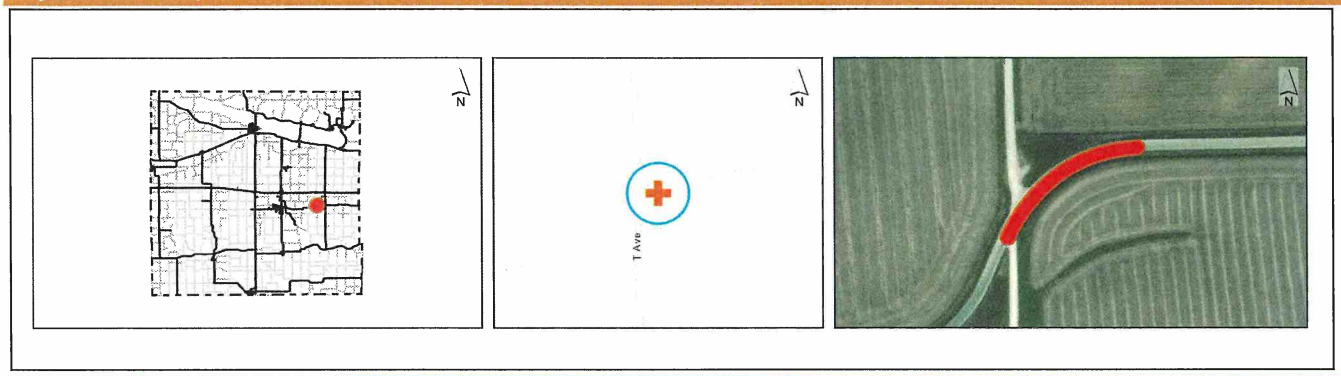
CURVE

Location Description

Road: **240TH STREET**
Length (feet): **440** Length (Miles): **0.08**
Closest City: **Williamsburg**
Project is within an Underserved Community?†: No
GPS ID: **4445**

This curve is located within the following high scoring segment: GPS ID 4148

Project Location Maps



Curve Information and Systemic Ranking Summary

Systemic Ranking Summary	Value	Points
Average Daily Traffic (ADT)	695	5
Curve Radius (ft)	414	4
Shoulder Width (ft)	5	2
Avg. Pavement Condition (IRI)	119	1
Intersections | Driveways	1 | 0	3
K or A Crash	3	2
Total Risk Factor Points (21 max)		**17**

Other Information	
Paved Shoulder	No
Shoulder Width (ft)	5
Speed Limit (mph)	55
Lane Width (ft)	12
Number of Lanes	2
Edgeline Rumble Strips	No
Centerline Rumble Strips	No
Existing Curve Chevrons	Yes

Crash Data, 2014-2023	
Total Crashes	5
K and A Crashes	3
Lane Departure Crashes	4
Lane Departure K and A Crashes	3
Total Crash Rate (per HMVMT)	2,463.8
K and A Crash Rate (per HMVMT)	1,478.3

Opinion of Probable Cost (Countermeasure Selection Threshold Results)

Item Description	Quantity	Unit	Unit Price	Item Cost
Install 4" Retroreflective Edgeline (Both Sides of Road)	0	MILE	$ 3,000	$ -
Install 6" Retroreflective Edgeline (Both Sides of Road)	**0.08**	**MILE**	**$ 6,000**	**$ 480**
Install 4" Retroreflective Centerline	**0.08**	**MILE**	**$ 3,000**	**$ 240**
Pave 2' Shoulder with Safety Edge (Both Sides of Road)	**0.08**	**MILE**	**$ 150,000**	**$ 12,000**
Install Edgeline Rumble Strips (Both Sides of Road)	**0.08**	**MILE**	**$ 5,000**	**$ 400**
Install Centerline Rumble Strips	0	MILE	$ 2,000	$ -
Review Curve and Provide Signage to Meet MUTCD and Iowa DOT Standards, if Needed	0	CURVE	$ 3,500	$ -
Review and Upgrade Curve Signage to Meet MUTCD and Iowa DOT Standards, if Needed	**1**	**CURVE**	**$ 1,000**	**$ 1,000**
Clear and Grub (15 ft Both Sides of Road)	**1**	**CURVE**	**$ 5,000**	**$ 5,000**
			Project Selection Decision Tree Systemic Improvements Subtotal:	$ 19,120

Continued on back of this page.

†USDOT Equitable Transportation Community (Disadvantage Indicator)
‡Climate and Economic Justice Screening Tool

Project Location Map Sources:
Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Kimley»Horn

Safety Action Plan
Project Description for Intersection Improvements

Risk Factor Points: 14

INTERSECTION

Project Name: F46 & T Ave
Agency Name: Iowa County
Contact Name: Nicholas Amelon
E-mail: namelon@iowacounty.iowa.gov

Date: 6/5/25
Prepared By: AKT
Checked By: DJG

Location Description

Road: **F46**
Road: **T Ave**
Closest City: **Williamsburg**

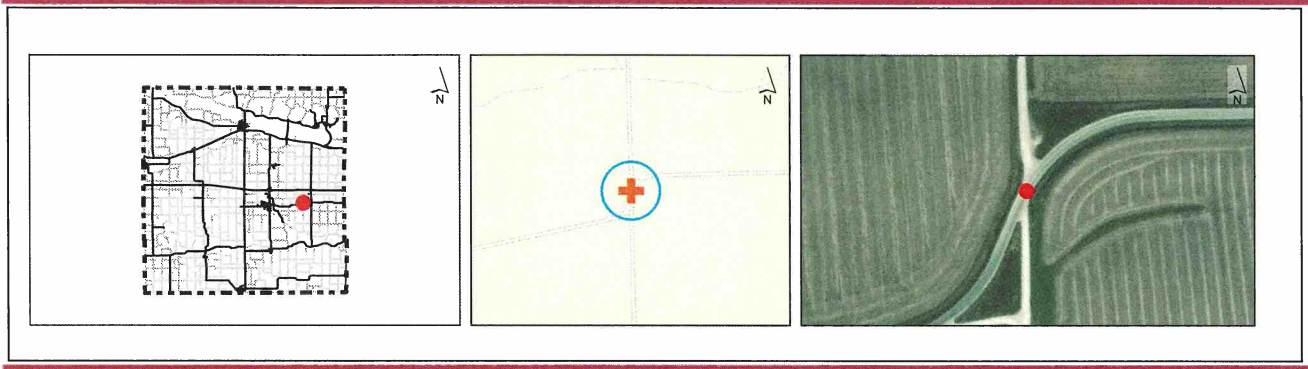
Project is within an Underserved Community?†: No

GPS ID: 39703

This intersection is located on the following high scoring segment: GPS ID 4148

County to coordinate with local agency to implement improvements that are on right-of-way that is not under control of the County.

Project Location Maps



Intersection Information and Systemic Ranking Summary

Systemic Ranking Summary	Value	Points
Distance from Previous Stop	< 1.5 mi	0
Approach Angle (Degrees)	35	4
Intersection within Curve	Yes	4
Daily Entering Vehicles	920	2
Minor Street Volume	45	1
Roads/Driveways within 250 Feet	0	0
K or A Crashes	3	2
Number of Approaches	4	1
Potential Crash Reduction (PCR)	Negligible	0
Total Risk Factor Points (24 max)		**14**

Other Information	
Number of Approaches	4
Number of Paved Approaches	2
Major ADT	860
Minor ADT	45
Destination Lighting	No
Transverse Rumble Strips (Number of Approaches)	0
Control Type	Two-way stop

Crash Data, 2014-2023	
Total Crashes	5
K and A Crashes	3
Right Angle,Rear-end,or Turning Crashes	1
Total Nighttime Crashes	2
Nighttime/Daytime Crash Ratio*	2.0

Opinion of Probable Cost (Countermeasure Selection Threshold Results)

Item Description	Quantity	Unit	Unit Price	Item Cost
Coordinate with Local Jurisdiction on Signal Modifications	0	EA	$ 2,500	$ -
Signal Warrant Analysis to Consider Removal of Signal	0	EA	$ 5,000	$ -
Intersection Configuration Evaluation (ICE)	0	EA	$ 25,000	$ -
Implement Results of ICE	0	EA	$ 750,000	$ -
All-Way Stop Analysis and Converting Two-Way Stop to All-Way Stop	0	EA	$ 5,000	$ -
All-Way Stop Analysis and Removal of Stop Signs on Major Approaches	0	EA	$ 5,000	$ -
Install Destination Lighting	0	EA	$ 5,500	$ -
Upgrade Signs and Pavement Markings	0	LEG	$ 2,200	$ -
Upgrade Signs (Unpaved Approaches)	**2**	**LEG**	**$ 1,100**	**$ 2,200**
Install Second Stop Sign and Stop Ahead Sign	0	LEG	$ 1,500	$ -
Install Solar-Powered Flashing Beacon or LED Flashing Lights on Stop Sign	0	EA	$ 2,500	$ -
Install Transverse Rumble Strips	0	LEG	$ 2,500	$ -
Install Intersection Warning Signs and Advance Street Name Plaques on Major Approaches	0	LEG	$ 1,200	$ -
Clear and Grub within Sight Triangle	**4**	**LEG**	**$ 5,000**	**$ 20,000**
			Project Selection Decision Tree Systemic Improvements Subtotal:	$ 22,200

Continued on back of this page.

* Nighttime/Daytime Crash Ratio = 3 x nighttime crashes/daytime crashes per Iowa DOT I.M. 2.110 Attachment A.
†USDOT Equitable Transportation Community (See back page)
‡Climate and Economic Justice Screening Tool (See back page)

Project Location Map Sources:
Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Kimley»Horn

Safety Action Plan
Project Description for Roadway Segment Improvements

Risk Factor Points: 9

SEGMENT

Project Name: 240TH STREET between 0.5 miles W of QQ Ave and JOHNSON IOWA RD
Agency Name: Iowa County
Contact Name: Nicholas Amelon
E-mail: namelon@iowacounty.iowa.gov

Date: 6/5/25
Prepared By: AKT
Checked By: DJG

Location Description

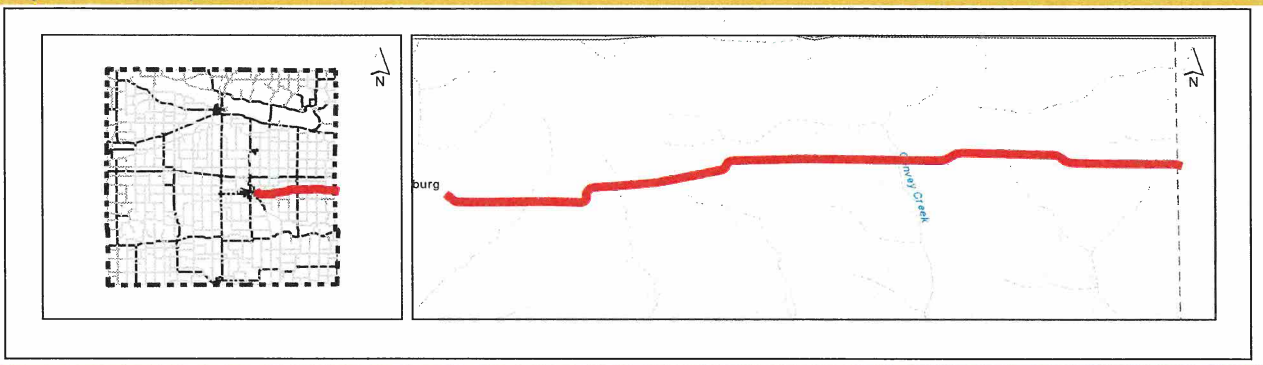
Road: **240TH STREET**
From: **0.5 miles W of QQ Ave**
To: **JOHNSON IOWA RD**
Length (miles): **8.25**

Project is within an Underserved Community?† No

GPS ID: **4148**

This segment contains the following high scoring intersection: GPS ID 39703
This segment contains the following high scoring curves: GPS IDs 4389, 4392, 4441, 4445, 4522

Project Location Maps



Segment Information and Systemic Ranking Summary

Systemic Ranking Summary	Value	Points
Average Daily Traffic (ADT)	700	4
Pavement | Shoulder Width (ft)	24' | 5'	0
Potential Crash Reduction (PCR)	Negligible	0
Access Points per Mile	6.2	1
High Risk Curve Density/Mile	0.7	1
Avg. Pavement Condition (IRI)	103	1
Lane Departure Crashes	23	2
Total Risk Factor Points (21 max)		**9**

Other Information	
Paved Shoulder	No
Shoulder Width (ft)	5
Speed Limit (mph)	55
Lane Width (ft)	12
Number of Lanes	2
Edgeline Rumble Strips	No
Centerline Rumble Strips	No
Curves (L>100', R≤1,000')	6
Curves with Chevrons	5

Crash Data, 2014-2023	
Total Crashes	52
K and A Crashes	7
Lane Departure Crashes	23
Lane Departure K and A Crashes	5
Total Crash Rate (per HMVMT)	248.2
K and A Crash Rate (per HMVMT)	33.4

Opinion of Probable Cost (Countermeasure Selection Threshold Results)

Item Description	Quantity	Unit	Unit Price	Item Cost
Conduct Road Safety Audit (RSA)	1	EA	$ 40,000	$ 40,000
Conduct Access Control Analysis	0	EA	$ 30,000	$ -
Install 4" Retroreflective Edgeline (Both Sides of Road)	0	MILE	$ 3,000	$ -
Install 6" Retroreflective Edgeline (Both Sides of Road)	8.25	MILE	$ 6,000	$ 49,500
Install 4" Retroreflective Centerline	8.25	MILE	$ 3,000	$ 24,750
Pave 2' Shoulder with Safety Edge (Both Sides of Road - Includes Earth Work)	0	MILE	$ 150,000	$ -
Install Edgeline Rumble Strips (Both Sides of Road)	8.25	MILE	$ 5,000	$ 41,250
Install Centerline Rumble Strips	8.25	MILE	$ 2,000	$ 16,500
Review Curve and Provide Signage to Meet MUTCD and Iowa DOT Standards, if Needed	1	CURVE	$ 3,500	$ 3,500
Review and Upgrade Curve Signage to Meet MUTCD and Iowa DOT Standards, if Needed	5	CURVE	$ 1,000	$ 5,000
Clear and Grub (15 ft Both Sides of Road)**	8.25	MILE	$ 30,000	$ 247,500
			Project Selection Decision Tree Systemic Improvements Subtotal:	$ 428,000

Continued on back of this page.

** Unit price varies based on average roadside risk score.

Project Location Map Sources:
Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Kimley»Horn

Exhibit J

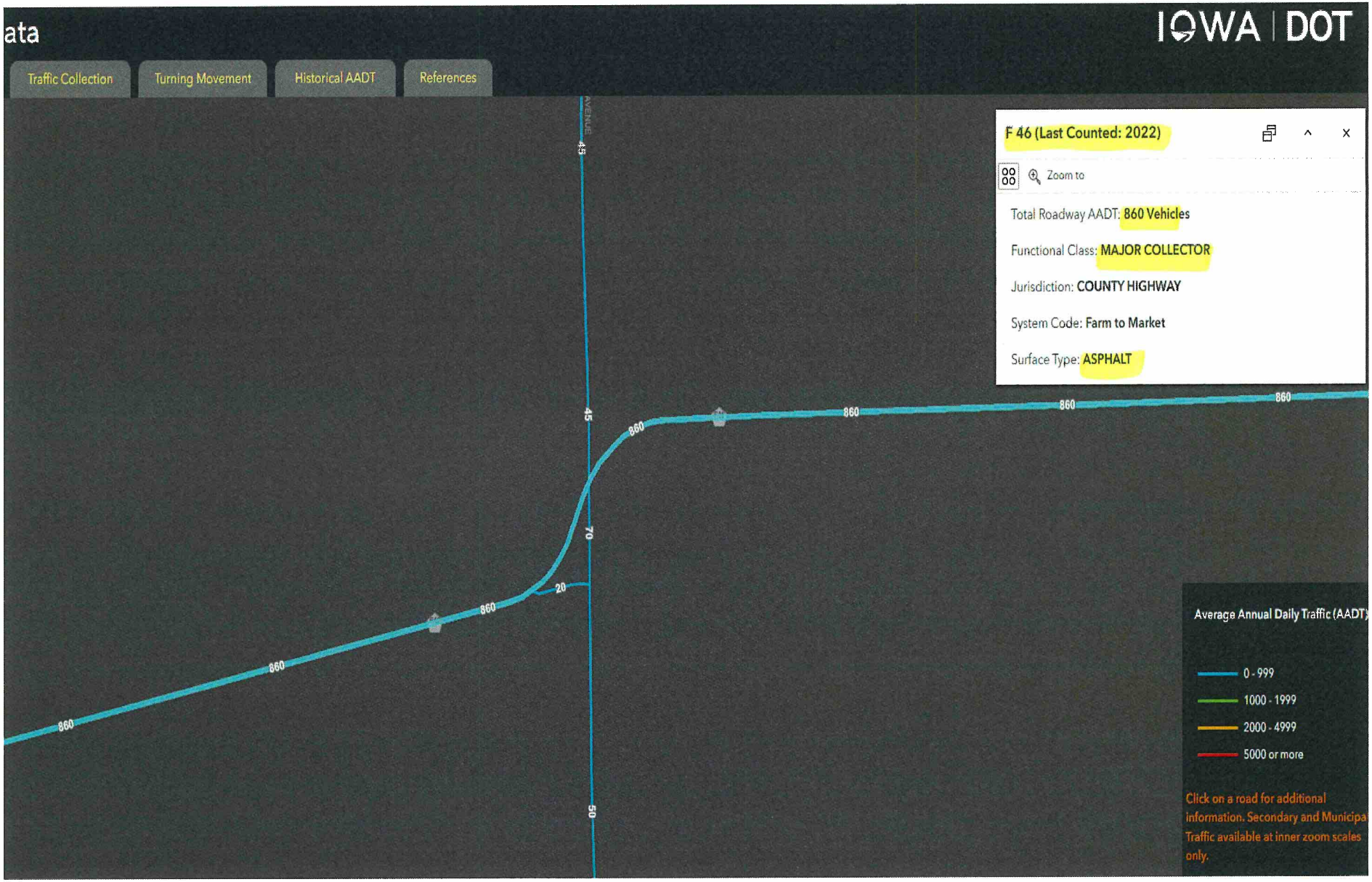

ata
IOWA | DOT
Traffic Collection
Turning Movement
Historical AADT
References
F 46 (Last Counted: 2022)
Zoom to
Total Roadway AADT: 860 Vehicles
Functional Class: MAJOR COLLECTOR
Jurisdiction: COUNTY HIGHWAY
System Code: Farm to Market
Surface Type: ASPHALT
860
45
70
20
50
Average Annual Daily Traffic (AADT)
0 - 999
1000 - 1999
2000 - 4999
5000 or more
Click on a road for additional information. Secondary and Municipa
Traffic available at inner zoom scales only.

Exhibit L

IOWADOT

Safety Benefit-Cost Ratio

County:	Iowa County	Prepared By:	Nick Amelon
Location:	F46 & T Ave	Date Prepared:	6/4/2025
Proposed Improvements:	Realign a portion a F46, Widen lanes from 11 ft to 12 ft, add centerline and edge line rumble strips		
Estimated Improvement Cost:	$ 719,894		
Inflation on Crash Costs:	4%	Annual Maintenance: (% of Improvement Cost)	2%
Discount Rate:	4%		
Estimated Service Life:	20	Annual Maintenance Cost:	$ 14,398

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	3
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	CRF 2:	CRF 3:	Combined CRF	
CRF Value (%)	45.27	31.33	23.65	**49.5**	
Equivalent CMF	0.55	0.69	0.76		Is Dom. Com. Resd.
Combined CMF, if # used (DR)	0.55	0.59	0.50	0.50	TRUE
Combined CMF, if # used (Mult)	0.55	0.38	0.29		Is data entered befc
Pick Dom Com. Resd. Or Mult. Fo	0.55	0.59	0.50	0.50	FALSE

Crash Severity	Societal Costs	(Total):	above)	Annual Avg	Annually
Fatal (K)	$ 4,300,000	1	49.5	**0.20**	**0.10**
Serious Injury (A)	$ 4,300,000	1	49.5	**0.20**	**0.10**
Minor Injury (B)	$ 290,000	0	49.5	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	0	49.5	**0.00**	**0.00**
Property Damage Only (O)	$ 20,000	0	49.5	**0.00**	**0.00**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ 425,737**
Serious Injury (A)	**$ 425,737**
Minor Injury (B)	**$ -**
Possible/Unknown Injury (C)	**$ -**
Property Damage Only (O)	**$ -**

Total Benefits and Costs

		Implementation Cost	$ 719,894
		Present Value of Maint.	$ 195,672
Present Value Benefits (Societal Benefits)	$ 12,576,861	Present Value Costs (Impl. and Maint. Costs)	$ 915,566
Present Value Net Return	$ 11,661,295		
Benefit Cost Ratio	**13.74**		

Form continues on next page

County: Iowa County
Location: F46 & T Ave

Prepared By: Nick Amelon
Date Prepared: 6/4/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs	This is the crash data for the last 5 years. During the last 10 years there were 10 total crashes; 2 Fatal, 2 Serious Injury, 1 Minor Injury, 1 Unknown Injury, and 4 Property Damage Only.
No change to Discount Rate	
No change to Maintenance Costs	

Method-Specific Customizations

EXPLAINATION OF CRF RATING FOR CHANGE OF HORIZONTAL ALIGNMENT

Crash Modification Factors Clearinghouse #1

CMF ID	Description	CRF Value
10302	Change Horizontal Alignment	53.89
	Total	**53.89**

$$CRF = 100 * \left(1 - \frac{e^{\left[\left(\frac{464.66}{R_{proposed}}\right) - 0.309 * NC_{proposed} + \left(\frac{610.78 * NC_{proposed}}{R_{proposed}}\right)\right]}}{e^{\left[\left(\frac{464.66}{R_{existing}}\right) - 0.309 * NC_{existing} + \left(\frac{610.78 * NC_{existing}}{R_{existing}}\right)\right]}}\right)$$

$R_{proposed}$ = proposed horizontal curve radius (ft)

$NC_{proposed}$= proposed indicator for normal crown (=1 if normal crown; 0 if superelevated)

$R_{existing}$ = existing horizontal curve radius (ft)

$NC_{existing}$ = existing indicator for normal crown (=1 if normal crown; 0 if superelevated

Crash Modification Factors Clearinghouse #1

CMF ID	Description	CRF Value
7563	Change Horizontal Alignment from R1 to R2	36.65
	Total	**36.65**

$$CRF = 100 * \left(1 - e^{\left(273.899 * \left(\frac{1}{R2} - \frac{1}{R1}\right)\right)}\right)$$

Overall Average **45.27**

EXPLAINATION OF CRF RATING FOR COMBINING SAFETY EDGE AND LANE WIDENING

DOT CRF List

CRF Number	Countermeasure Type	CRF Value
RS-31	Install Safety Edge	6
RS-40	Increase Lane Width	4
	Total	**10**

Crash Modification Factors Clearinghouse #1

CMF ID	Description	CRF Value
10285	Install Safety Edge Treatment with 1-2 ft. Lane Widening	35
	Total	**35**

Crash Modification Factors Clearinghouse #2

CMF ID	Description	CRF Value
10283	Install Safety Edge Treatment with 1-2 ft. Lane Widening	49
	Total	**49**

Overall Average **31.33**

Due to a wide range of values I used the Overall Average in the Cost Benefit Ratio calculations.

EXPLAINATION OF CRF RATING FOR CENTERLINE RUMBLE STRIPS

DOT CRF List

CRF Number	Countermeasure Type	CRF Value
RS-12	Install Centerline Rumble Strips & Edgeline/Shoulder Rumble Strips	20
	Total	**20**

Crash Modification Factors Clearinghouse #1 - #3

CMF ID	Description	CRF Value
6974	Install Centerline and Shoulder Rumble Strips	29.8
6975	Install Centerline and Shoulder Rumble Strips	32.1
6850	Install Centerline and Shoulder Rumble Strips	20
	Total	**27.3**

Overall Average **23.65**

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** 8/12/2025

Location / Title of Project 395th Avenue Rehabilitation

Applicant Jackson County

Contact Person Jayden Scheckel Title County Engineer

Complete Mailing Address 201 W Platt St

Maquoketa, IA 52060

Phone (563)-652-4782 E-Mail jscheckel@jacksoncounty.iowa.gov
(Area Code)

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s) _____

Contact Person _____ Title _____

Complete Mailing Address _____

_____

Phone _____ E-Mail _____
(Area Code)

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	819,420
Total Project Cost	$	1,948,550
Safety Funds Requested	**$**	**500,000**

Additional Project Safety Documentation (when available):

- ☒ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☐ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
		☐	☐		
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the Jackson County Board of Supervisors

Signed: _____ 8/12/25
Signature Date Signed

Don Schwenker
Printed Name

Attest: Alisa Smith 8-12-25
Signature Date Signed

Alisa Smith
Printed Name

Jackson County Secondary Roads
201 West Platt Street
Maquoketa, IA 52060
Phone 563-652-4782 Fax 563-652-4244
Jayden Scheckel, P.E. Jackson County Engineer

August 12, 2025

TSIP Application – Site Specific
395th Avenue Safety Improvements

Narrative

Jackson County is applying for TSIP funding for safety improvements on a 1.5 mile stretch of 395th Avenue. Safety improvements include 2' paved shoulders, centerline and shoulder rumbles, VRAM in centerline rumble locations, 6" wide pavement markings, and also the realignment of 395th Avenue at the intersection with 308th Street to eliminate a horizontal curve.

Existing Conditions

395th Avenue is currently a full depth HMA roadway primarily on ½" seal coat and lignin sulfonate treated subbase. There is a portion of 395th Avenue that is full depth HMA on choke stone and macadam stone base. The depths of the HMA vary throughout the 1.5 mile length and are shown in the typical sections of the supporting documents. The existing condition of the HMA is in poor condition. The AADT of the 1.5 mile stretch of 395th Avenue ranges from 900-670 vpd according to the Iowa DOT Traffic Data Maps.

395th Avenue Segments	Speed Limit	AADT
• STA 177+06 to STA 200+00	25 mph	900 vpd
• STA 200+00 to STA 267+94	40 mph	670 vpd

Proposed Concept

The proposed concept for 395th Avenue will include 2' paved shoulders throughout project, centerline and shoulder rumbles in the 40 mph speed limit, VRAM in the centerline rumble locations, 6" pavement markings throughout project, and the realignment of 395th Avenue at the intersection with 308th Street to eliminate a horizontal curve.

Justification

The 2' paved shoulders will provide recovery area for drivers leaving the travel lanes. The 6" wide pavement markings will improve visibility of edgelines and centerline markings. The shoulder and centerline rumbles will alert drivers who inadvertently leave the travel lane to help reduce both run-off-road crashes and head-on crashes. The VRAM underneath the centerline rumbles will help limit pavement deterioration at the centerline joint.

The realignment of 395th Avenue at the intersection with 308th Street will eliminate a horizontal curve and also increase sight distance. When eastbound on 308th Street and approaching 395th Avenue, it is difficult to see southbound traffic on 395th Avenue due to the existing horizontal curve, crops planted up to the existing right-of-way, and vehicles traveling faster than the posted speed limit. This intersection also has had a fatal accident in the last 5 years. By realigning 395th Avenue, not only will a horizontal curve be eliminated, but the roadway profile grade can be adjusted to provide improved sight distance.

Cost Estimate

The cost estimate of the proposed improvements, both safety items and non-safety items is provided in the supporting documents. From the estimate, the safety items total to $819,420 and non-safety items total to $1,129,130. The safety funds being requested for this project are $500,000.

Time Schedule

The project is proposed for fiscal year 2027 with construction anticipated to be completed by the end of fall 2027.

ENGINEER'S ESTIMATE OF PROBABLE COSTS

395TH AVE IMPROVEMENTS
PROJECT LIMITS/DESCRIPTION/PHASE (IF NECESSARY)
CITY, STATE

Division 1: TSIP Items
Division 2: Non-TSIP Items

DATE: 8/8/2025

ESTIMATE YEAR: ***2025***

PROJECT #:

CONSTRUCTION YEAR: ***2027***

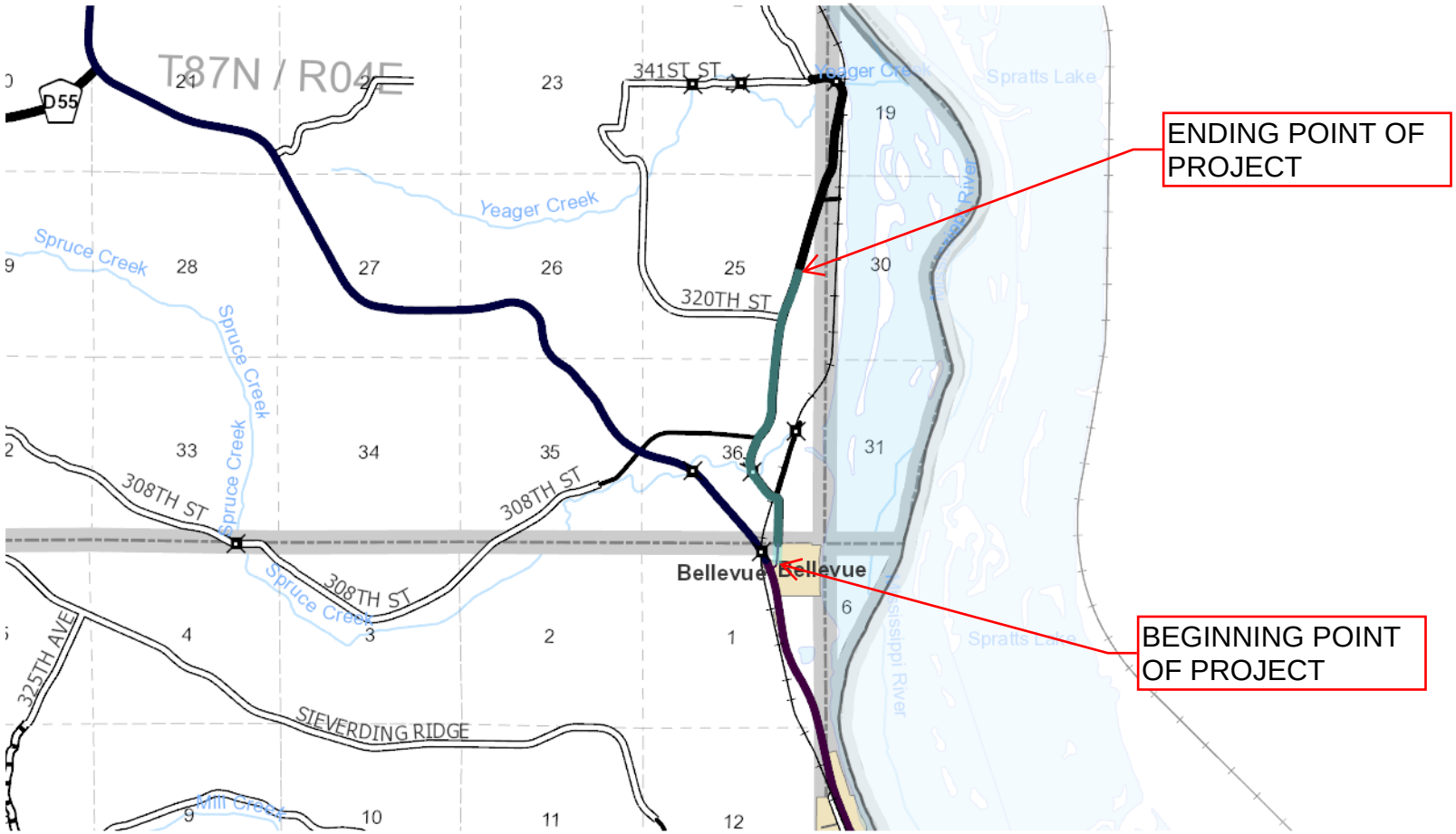
ITEM NO.	DESCRIPTION	DIVISION 1 QUANTITY	DIVISION 2 QUANTITY	UNIT	UNIT PRICE	DIV 1 PRICE	DIV 2 PRICE
2102-2713070	EXCAVATION, CLASS 13, ROADWAY AND BORROW	3700		CY	$ 15	$ 55,500	$ -
2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	6127		SY	$ 5	$ 30,635	$ -
2116-0000100	FULL DEPTH RECLAMATION	2127	9666	SY	$ 5	$ 10,635	$ 48,330
2116-0000300	MINERAL STABILIZING AGENT	145	655	TON	$ 210	$ 30,450	$ 137,550
2121-7425020	GRANULAR SHOULDERS, TYPE B		2965	TON	$ 30	$ -	$ 88,950
2210-0475105	CHOKE STONE BASE	2000		TON	$ 40	$ 80,000	$ -
2210-0475290	MACADAM STONE BASE	4000		TON	$ 35	$ 140,000	$ -
2214-5145150	PAVEMENT SCARIFICATION		8790	SY	$ 5	$ -	$ 43,950
2301-1033080	STANDARD OR SLIP FORM PCC PAVEMENT, CLASS C, CLAS	340		SY	$ 70	$ 23,800	$ -
2303-000100	HOT MIX ASPHALT STANDARD TRAFFIC, WEDGE, LEVELIN	470	555	TON	$ 70	$ 32,900	$ 38,850
2303-1031500	HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 1/	1305	2175	TON	$ 70	$ 91,350	$ 152,250
2303-1033500	HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE	940	2175	TON	$ 70	$ 65,800	$ 152,250
2303-1258283	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC	220	390	TON	$ 700	$ 154,000	$ 273,000
2303-9095010	VOID REDUCING ASPHALT MEMBRANE	6794		LF	$ 5	$ 33,970	$ -
2416-1541136	REMOVE AND REINSTALL RIGID PIPE CULVERT GREATER T		320	LF	$ 200	$ -	$ 64,000
2510-6745850	REMOVAL OF PAVEMENT	4920		SY	$ 10	$ 49,200	$ -
2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVI	272		STA	$ 25	$ 6,800	$ -
2527-9270111	GROOVES CUT FOR PAVEMENT MARKINGS	136		STA	$ 35	$ 4,760	$ -
2528-8445110	TRAFFIC CONTROL		1	LS	$ 30,000	$ -	$ 30,000
2533-4980005	MOBILIZATION		1	LS	$ 100,000	$ -	$ 100,000
2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA	136		STA	$ 50	$ 6,800	$ -
2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE)	112		GAL	$ 10	$ 1,120	$ -
2548-0000310	MILLED CENTERLINE RUMBLE STRIPS, HMA	68		STA	$ 25	$ 1,700	$ -
		ESTIMATED DIVISION 1 CONSTRUCTION SUBTOTAL				*$ 819,420*	*$ -*
		ESTIMATED DIVISION 2 CONSTRUCTION SUBTOTAL					*$ 1,129,130*
		TOTAL ESTIMATED PROJECT COST:					**$ 1,948,550**

Disclaimers & Assumptions

1 This estimate of probable cost is approximate. Actual construction bids may vary significantly from this estimate due to timing of bids,constructual schedule restraints, labor rate increases, material increases, or other factors beyond the control of the estimator.

Completed By:

8:00 AM, Mon, Jan 6, 2025



Feature Key

Earth | Gravel | Seal Coat | County Pavement | State Pavement

Divided Hwy | Water | City | Township | Railroad

Bridge | E27 County Hwy | 175 State Hwy | 6 US Hwy

N

Miles

0 1/2 1 2

Generated by ICEASB Map Server (150 dpi)



Southbound on 395th Avenue approaching intersection of 308th Street. This is the curve that is proposed to be eliminated



Eastbound on 308th Street looking north on 395th Avenue.



Existing condition of HMA pavement on 395th Avenue



Existing condition of HMA pavement on 395th Avenue



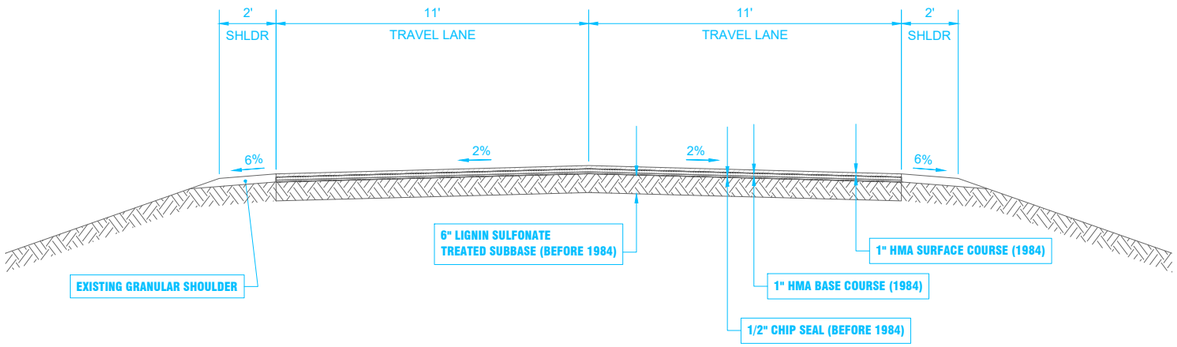
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FISCAL YEAR: .	DRAWN BY: .	.	.	.	.
	DESIGNED BY: .	.	.	.	.
	CHECKED BY: .	.	.	.	.

PLOT DATE: ----, N:\Funding\RAISE\FY25_395th Ave\FY25 RAISE_395th Ave.dwg

JACKSON COUNTY SECONDARY ROADS
201 West Platt Street, Maquoketa IA 52060
Phone: 563-652-4782
Email: jceng@jacksoncounty.iowa.gov
Web: https://jacksoncounty.iowa.gov

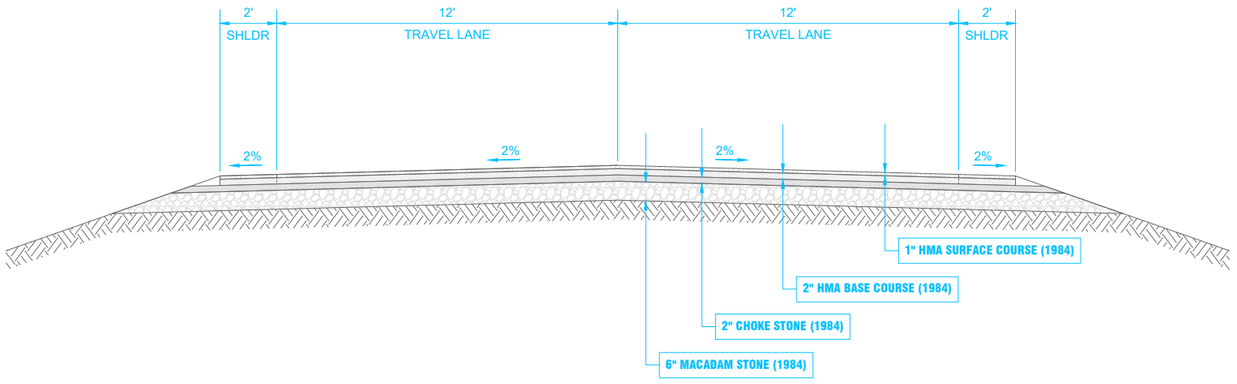
JACKSON COUNTY

PROJECT NUMBER	SHEET NAME	SHEET NO.
DGA-C049()--XT-49	**395TH AVE EXHIBIT**	**----**



395TH AVENUE
EXISTING TYPICAL SECTION

STATION FROM	STATION TO
177+06	200+00



395TH AVENUE
EXISTING TYPICAL SECTION

STATION FROM	STATION TO
200+00	216+60

		NO.	DATE	REVISION	BY
FISCAL YEAR: 2027	DRAWN BY: JLS	.	.	.	.
	DESIGNED BY: JLS	.	.	.	.
	CHECKED BY: .	.	.	.	.

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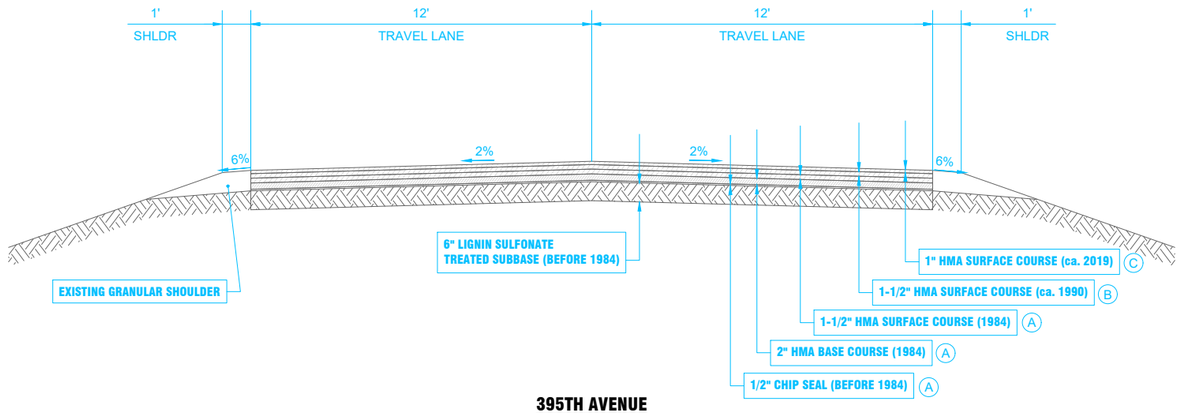
JACKSON COUNTY SECONDARY ROADS
201 West Platt Street, Maquoketa IA 52060
Phone: 563-652-4782
Email: jceng@jacksoncounty.iowa.gov
Web: https://jacksoncounty.iowa.gov

JACKSON COUNTY

PROJECT NUMBER
FM-C049()--55-49

SHEET NAME
EXISTING TYPICAL SECTIONS

SHEET NO.
B.01



395TH AVENUE
EXISTING TYPICAL SECTION

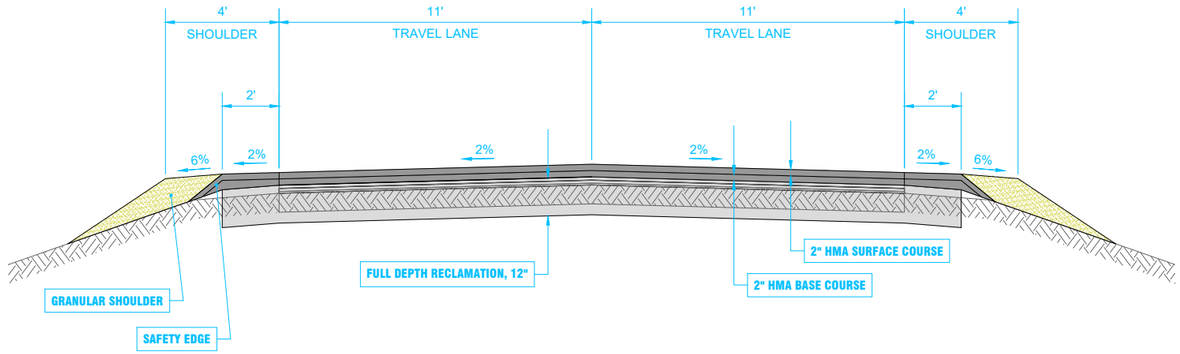
	STATION FROM	STATION TO
A	216+60	230+00
B	230+00	254+50
C	254+50	267+94

		NO.	DATE	REVISION	BY
FISCAL YEAR: 2027	DRAWN BY: JLS	.	.	.	.
	DESIGNED BY: JLS	.	.	.	.
	CHECKED BY: .	.	.	.	.

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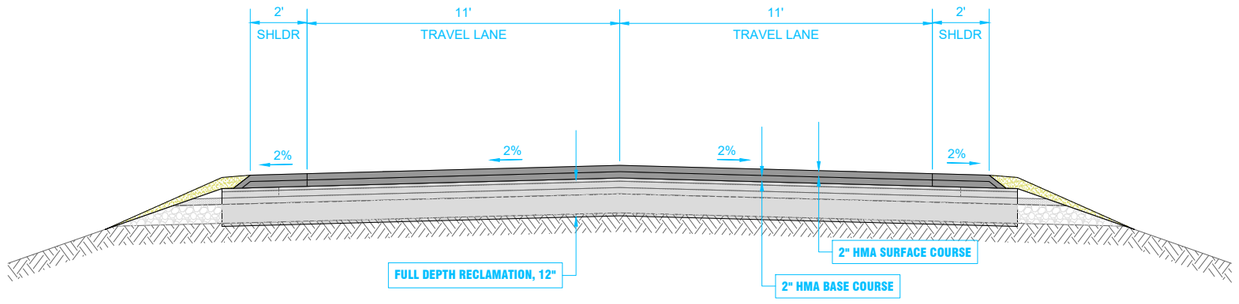
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JACKSON COUNTY	PROJECT NUMBER	SHEET NAME	SHEET NO.
	FM-C049()--55-49	EXISTING TYPICAL SECTIONS	B.02



395TH AVENUE
PROPOSED TYPICAL SECTION

STATION FROM	STATION TO
177+06	200+00



395TH AVENUE
PROPOSED TYPICAL SECTION

STATION FROM	STATION TO
200+00	216+60

		NO.	DATE	REVISION	BY
FISCAL YEAR: 2027	DRAWN BY: JLS	.	.	.	.
	DESIGNED BY: JLS	.	.	.	.
	CHECKED BY: .	.	.	.	.

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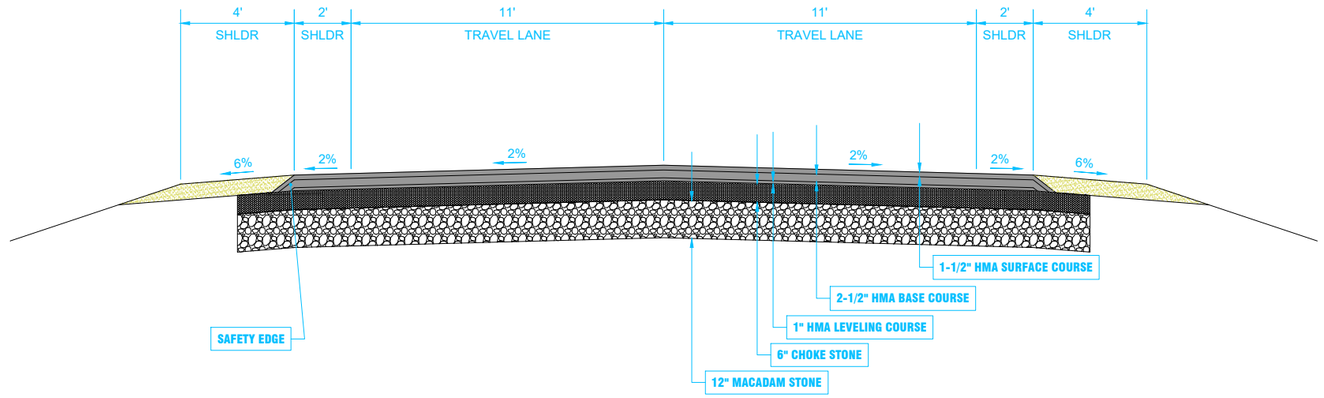
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JACKSON COUNTY

PROJECT NUMBER
FM-C049()--55-49

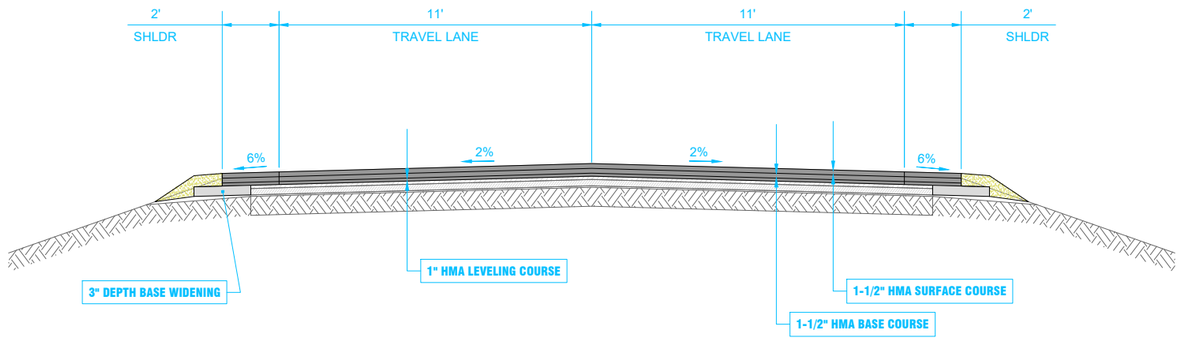
SHEET NAME
PROPOSED TYPICAL SECTIONS

SHEET NO.
B.03



395TH AVENUE
PROPOSED REALIGNMENT TYPICAL SECTION

STATION FROM	STATION TO
216+60	234+98



395TH AVENUE
PROPOSED MILL & FILL TYPICAL SECTION

STATION FROM	STATION TO
234+98	267+94

		NO.	DATE	REVISION	BY
FISCAL YEAR: 2027	DRAWN BY: JLS	.	.	.	.
	DESIGNED BY: JLS	.	.	.	.
	CHECKED BY: .	.	.	.	.

PLOT DATE: ----, N:\Safety\TSIP Applications\FY27_395th Avenue\FY27 TSIP_395th Ave.dwg

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JACKSON COUNTY

PROJECT NUMBER
FM-C049()--55-49

SHEET NAME
PROPOSED TYPICAL SECTIONS

SHEET NO.
B.04

Iowa Crash Analysis Tool
Quick Report
2020-2025

Crash Severity	2
Fatal Crash	1
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	0
Possible/Unknown Injury Crash	0
Property Damage Only	1

Injury Status Summary	1
Fatalities	1
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	0
Possible (complaint of pain/injury)	0
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	13,500.00
Average (per crash dollars):	6,750.00
Total Vehicles:	3.00
Average (per crash):	1.50
Total Occupants:	4.00
Average (per crash):	2.00

Average Severity	
Fatalities/Fatal Crash:	1.00
Fatalities/Crash:	0.50
Injuries/Crash:	0.00
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.00
Possible/Unknown Injuries/Crash:	0.00



Major Cause			2
Animal	0	Ran traffic signal	0
Ran stop sign	1	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	1	FTYROW: From yield sign	0
FTYROW: Making left turn	0	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	0
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	0	Not reported	0
Other: No improper action	0		

Time of Day/Day of Week

Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Friday	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Saturday	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	1	0	0	0	0	0	1	0	0	2

Manner of Crash Collision	2
Non-collision (single vehicle)	1
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	0
Broadside (front to side)	1
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

Surface Conditions	2
Dry	1
Wet	1
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	0
Other	0
Unknown	0

Fixed Object Struck	3		
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	0	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	1	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	2

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	0	0	0	0
= 14	0	1	0	0	1
= 15	0	0	0	0	0
= 16	0	1	0	0	1
= 17	0	0	0	0	0
= 18	0	0	0	0	0
= 19	0	0	0	0	0
= 20	0	0	0	0	0
>= 21 and <= 24	0	0	0	0	0
>= 25 and <= 29	0	0	0	0	0
>= 30 and <= 34	0	0	0	0	0
>= 35 and <= 39	0	0	0	0	0
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	0	0	0	0
>= 50 and <= 54	0	0	0	0	0
>= 55 and <= 59	0	0	0	0	0
>= 60 and <= 64	0	1	0	0	1
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	0	0	0	0	0
>= 80 and <= 84	0	0	0	0	0
>= 85 and <= 89	0	0	0	0	0
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	0	0	0
Total	0	3	0	0	3

Drug/Alcohol Related	**2**
Drug	0
Alcohol (< Statutory)	0
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	2

Alcohol Test Given	**3**
None	3
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

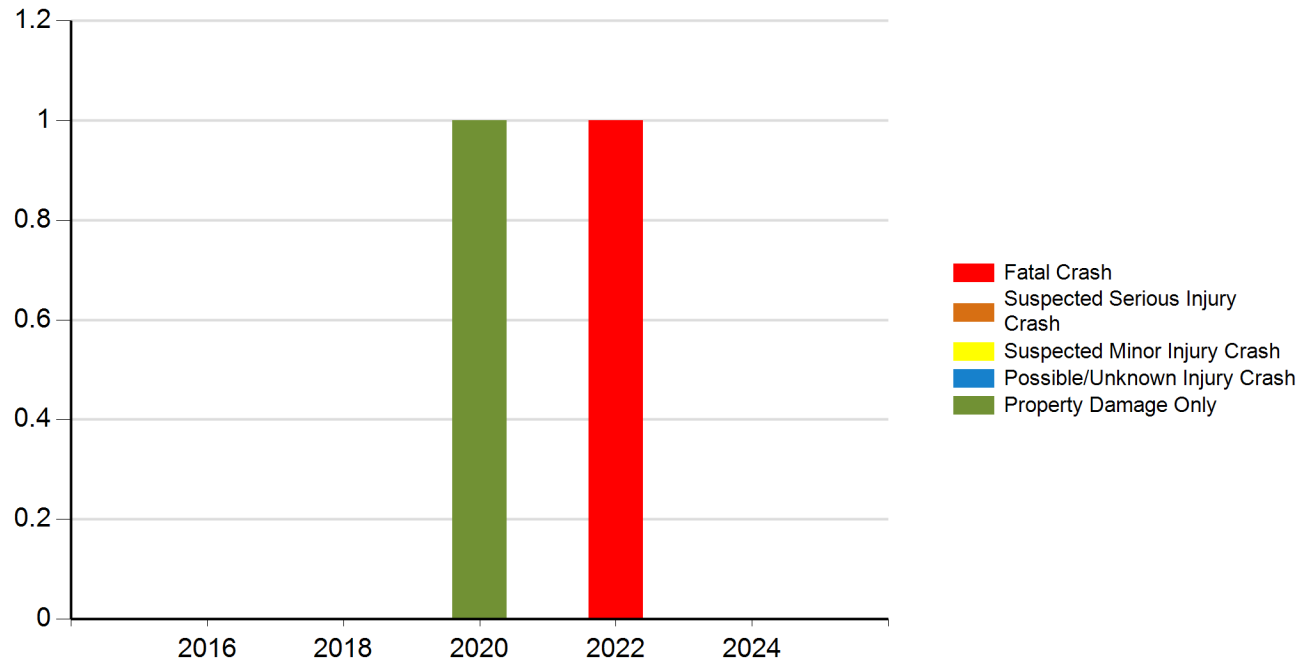
Drug Test Given	**3**
None	3
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	0

Drug Test Result	**3**
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	3
Other	0

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	**Total**
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	1	1
2021	0	0	0	0	0	0
2022	1	0	0	0	0	1
2023	0	0	0	0	0	0
2024	0	0	0	0	0	0
2025	0	0	0	0	0	0
Total	1	0	0	0	1	2

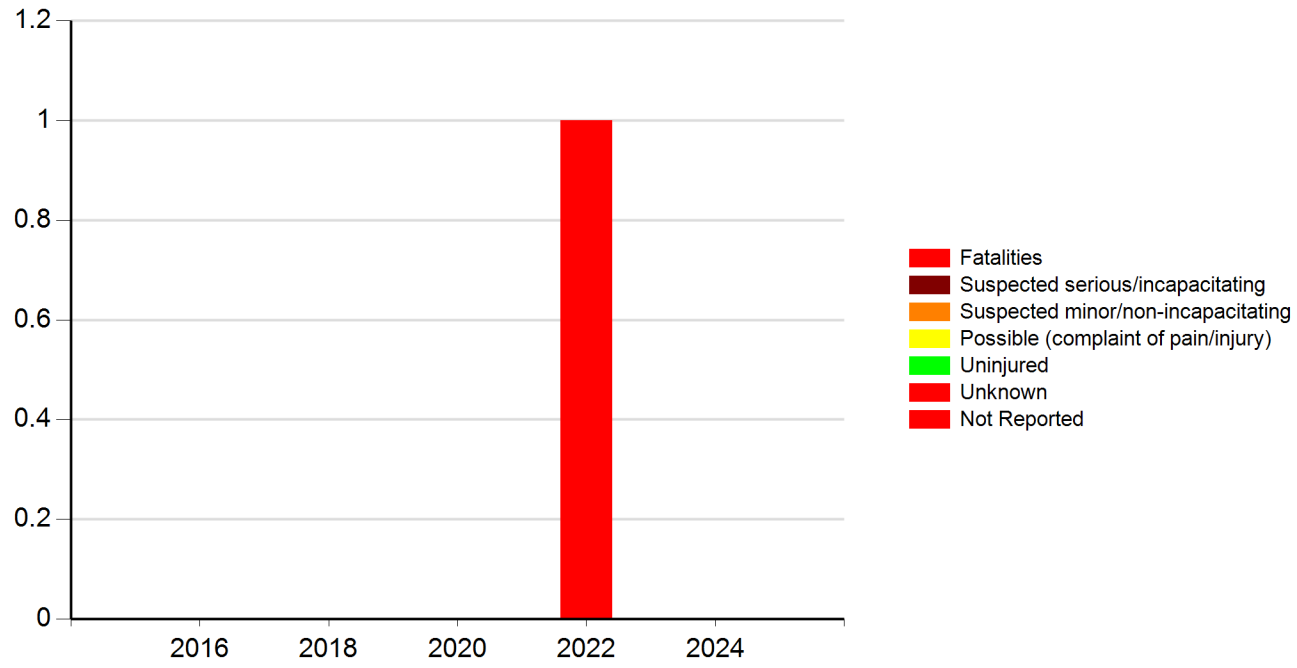
Severity/Year



Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	1	0	0	0	0	0	0	1
2023	0	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	1

Injury Status/Year



Meeting the following criteria

Jurisdiction: Statewide
Year: 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

395th Ave Crash History

County:	Jackson	Prepared By:	Jayden Scheckel
Location:	395th Avenue	Date Prepared:	8/12/2025
Proposed Improvements:	Realign horizontal curve, 2' paved shoulders, shoulder and centerline rumbles, safety edge, 6" pavement markings		
Estimated Improvement Cost:	$ 819,420		
Inflation on Crash Costs:	4%	Annual Maintenance: (% of Improvement Cost)	2%
Discount Rate:	4%		
Estimated Service Life:	20	Annual Maintenance Cost:	$ 16,388

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	3
Years of Crash History:	5

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	CRF 2:	CRF 3:	**Combined CRF**
CRF Value (%)	20	7	6	**24.9**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	1	24.9	**0.20**	**0.05**
Serious Injury (A)	$ 4,300,000	0	24.9	**0.00**	**0.00**
Minor Injury (B)	$ 290,000	0	24.9	**0.00**	**0.00**
Possible/Unknown Injury (C)	$ 135,000	0	24.9	**0.00**	**0.00**
Property Damage Only (O)	$ 20,000	1	24.9	**0.20**	**0.05**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ 213,960**
Serious Injury (A)	**$ -**
Minor Injury (B)	**$ -**
Possible/Unknown Injury (C)	**$ -**
Property Damage Only (O)	**$ 995**

Total Benefits and Costs

		Implementation Cost	$ 819,420
		Present Value of Maint.	$ 222,724
Present Value Benefits (Societal Benefits)	$ 3,175,047	Present Value Costs (Impl. and Maint. Costs)	$ 1,042,144
Present Value Net Return	$ 2,132,903		
Benefit Cost Ratio	**3.05**		

Form continues on next page

County: Jackson
Location: 395th Avenue
Prepared By: Jayden Scheckel
Date Prepared: 8/12/2025

No Input Necessary - No Custom Values In Use

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

6.1.6. Final Project Sheets

After addressing the comments from the county, the project sheets for segments, intersections, and curves were finalized. These project sheets are included in **Appendix B2, Appendix C2,** and **Appendix D2.**

Project Recommendations Disclaimer

The recommended improvements contained in the project sheets were developed through a system-wide GIS database risk assessment, as described previously. Kimley-Horn could not confirm or control the accuracy of the GIS databases nor the suitability of the specific improvements for the location. Our team provided recommended improvements for consideration by the County Engineer. Site surveys were not conducted at the specific locations detailed in the project sheets.

The County Engineer may use these project sheets as part of due diligence, but these project sheets should not be used as the sole basis for the County Engineer's decision-making. The County Engineer can make changes to the prepared project sheets using discretion for each individual location. Kimley-Horn endeavored to research issues and constraints to the extent practical given the project's scope, budget, and schedule. This assessment is largely based on information provided by others (Iowa DOT, County staff, etc.) and therefore is only as accurate and complete as the information provided.

6.2. Segments

The methodology described in **Section 6.1** was followed for county-wide analysis of roadway segments based on the determined risk factors. The road segment limits were determined based on relevant roadway attribute changes along a roadway including pavement width, shoulder width, and street name.

6.2.1. Risk Factor Summary

Each county paved road segment is assigned risk factor points based on the following seven roadway attributes:

- **Traffic Volume (ADT):** The daily average number of vehicles along the roadway segment. The average daily traffic (ADT) for all segments within the county were compared to assign higher risk factor points to segments with higher ADTs.
- **Pavement and Shoulder Width:** The width of pavement and shoulders were used to assign risk factor points to each segment. Segments with narrower pavement and shoulder widths were assigned more risk factor points. **Table 13** further describes the number of points assigned for various width combinations. No differentiation in scoring was given to the shoulder type (paved vs. gravel).
- **Access Density:** Risk factor points were assessed based on the number of driveways and/or intersections per mile. Segments with higher access densities were assigned more points.
- **Curve Density:** The number of curves per mile with a radius less than 1,000 feet and with a length greater than 100 feet. Segments with a higher curve density were assigned more risk factor points.
- **Pavement Condition:** The average of the recorded roughness indices for the length of the segment. Segments with an IRI value over 95 could potentially cause safety concerns and were assigned risk factor points. Per the FHWA, roadways with IRI values less than 95

are considered "good" condition, 95-170 are "acceptable," and less than 170 are "poor". Risk factor points were assigned to roadways with acceptable or poor ratings. Research has shown that a rougher ride can contribute to loss of control of a vehicle, particularly when braking or turning.

- **Crash Experience:** The number of lane departure crashes for each segment in the county was reviewed to assign risk factor points to segments where there was a history of lane departure crashes.
- **Potential for Crash Reduction (PCR):** PCR is a value that estimates the potential for safety improvements at a location based on the difference between the predicted average number of crashes per year and the actual number of crashes per year at comparable locations in the same category.

Recommendations were only made where segments were greater than 0.5 miles in length and where the posted speed limit was 40 miles per hour (mph) or higher. This was agreed upon based on the nature of the recommendations, which are more applicable to rural roadway segments, and to provide segments of sufficient length to justify mobilization of construction/maintenance crews and equipment.

Table 13 shows the risk factors for the SAP projects. The maximum possible risk factor score for a segment is 21 points.

Table 13 - Segment Risk Factor Scores

Risk Factor	Measurement	Points	Max Points Available
Traffic volume	Average Daily Traffic (ADT)	0: ADT percentile is 0%-14.3%	6
		1: ADT percentile is 14.3%-28.6%	
		2: ADT percentile is 28.6%-42.9%	
		3: ADT percentile is 42.9%-57.1%	
		4: ADT percentile is 57.1%-71.4%	
		5: ADT percentile is 71.4%-85.7%	
		6: ADT percentile is 85.7%-100%	
Pavement and shoulder width	Pavement and shoulder width in feet (ft)	0: Pavement width ≥ 22 ft and shoulder width ≥ 2 ft	4
		0: Pavement width > 18 ft and < 22 ft, and shoulder width ≥ 4 ft	
		2: Pavement width ≥ 22 ft and shoulder width < 2 ft	
		2: Pavement width > 18 ft and < 22 ft and shoulder width ≥ 2 ft and < 4 ft	
		2: Pavement width ≤ 18 ft and shoulder width ≥ 4 ft	
		4: Pavement width > 18 ft and < 22 ft, and shoulder width < 2 ft	
		4: Pavement width ≤ 18 ft and shoulder width < 4 ft	
Potential for Crash Reduction (PCR)	Iowa DOT PCR level definition for all crashes	0: High (less than 0.2)	2
		1: Medium (0.2 to 0.99)	
		2: Negligible (1 or greater)	

Risk Factor	Measurement	Points	Max Points Available
Access density	Number of intersections and driveways per mile (driveway location per 911 address database)	0: Bottom fourth of the access density Crash Modification Factor (CMF) *	3
		1: Second lowest fourth of the access density CMF *	
		2: Second highest fourth of the access density CMF *	
		3: Top fourth of the access density CMF *	
Curve density	Number of curves per mile with a radius less than 1,000 ft	0: Segments with no curves	2
		1: Curve density percentile is 1%-50% of segments with curves	
		2: Curve density percentile is more than 50% of segments with curves	
Pavement condition	Average International Roughness Index (IRI)	0: Less than 95	2
		1: 95 to 170	
		2: More than 170	
Crash experience	Presence of a lane departure crash	0: No lane departure crashes	2
		2: One or more lane departure crashes	
Total available points			**21**

* Access density CMF equation as presented in the HSM (Equation 13-7)

6.2.2. Risk Factor Rankings

Segment risk factor ranking calculations were performed on all county paved roadway segments (greater than 0.5 miles in length and with posted speed limits of 40 mph or greater). The results of the rankings are shown in **Figure 21. Figure 22** and shows the location and summary of risk factor ranking of each of the roadway segments analyzed within the SAP. Segments were identified as high, medium-high, medium-low, or low based on the risk factor points they received. These categories were determined by comparing the scores of the segments against each other. If a segment was manually selected by the County to include as a prioritized segment, it is automatically categorized as a high-risk segment.

6.2.3. Prioritized Segment Recommendations

Project sheets were developed for segment locations with the greatest amount of risk factor points. The segments for which project sheets were developed (those with the greatest amount of risk factor points) are summarized in **Table 14** and the project sheets are included in **Appendix B2**. Also included in the table are the high-scoring intersections and high-scoring curves that fall within the segments.

Table 14 - Prioritized Segment Recommendations

GPS ID	Segment	Segment Length (miles)	Risk Factor Points	High Scoring Intersections (GPS ID)	High Scoring Curves (GPS ID)	Estimated Project Cost
4219	Hurstville Road between Pershing Road and US 61	2	13	40413, 40553	7654	$510,000
4D225	200th Avenue between 1st Street and 400 feet south of US-61 Southeast Ramp/Loop	1	13			$172,000
4241	418th Avenue between 418 Avenue/16th Street and IA 64/Highway 64	1	13	112294	7925	$162,000
4236	395th Avenue between 800 feet northeast of US 52 and 341 Street	3	13		7901	$787,000
4207	113th Avenue between Gatez Dr and Co Rd D61/Bellevue-Cascade Rd	1	12			$106,000
4248*	500th Avenue between South County Line and 1300 feet south of Centennial Street	1	11			-
4245	435th Avenue between 600 feet northeast of Miles Street and US 52	10	11	40594, 40712	7936, 7939, 7950	$2,572,000
4277	West Bellevue-Cascade Road between Jones County Limit and Bernard Road	4	11			$998,000
4208	Caves Road between US 61 and 150th Street	7	11		7499, 7590	$1,859,000
4263	Rockdale Road between Co Road Y53/Hurstville Road & 63 Street and IA 62	4	10	40553	7672	$1,037,000
4242	418th Avenue between 0.5 miles northeast of 105th Street and 16th Street	1	9	112294		$243,000
Total (11 Segments)†						**$8,446,000**

*Segment removed at the request of the County Engineer. No project sheets will be developed.
†Total cost excludes segments that are no longer prioritized.

Safety Action Plan
Project Description for Roadway Segment Improvements

Risk Factor Points: 13

Project Name: 395TH AVENUE between 800 feet NE of US 52 and 341 ST
Agency Name: Jackson County
Contact Name: Jayden Scheckel
E-mail: jceng@jacksoncounty.iowa.gov

Date: 5/22/25
Prepared By: FJC
Checked By: DJG

SEGMENT

Location Description

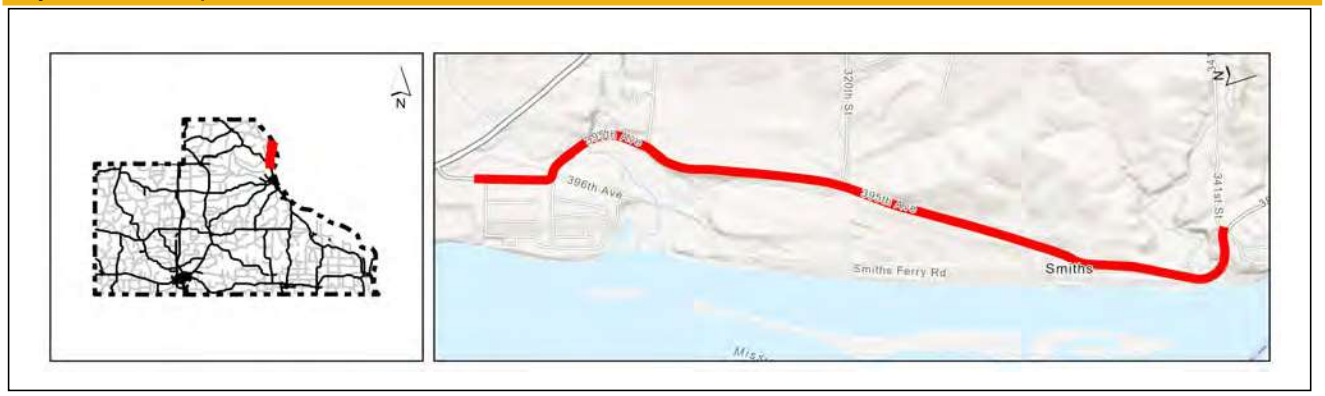
Road: **395TH AVENUE**
From: **800 feet NE of US 52**
To: **341 ST**
Length (miles): **2.81**

Project is within an Underserved Community?†: No

GPS ID: 4236

This segment does not contain high scoring intersections.
This segment contains the following high scoring curve: GPS ID 7901

Project Location Maps



Segment Information and Systemic Ranking Summary

Systemic Ranking Summary	Value	Points
Average Daily Traffic (ADT)	**450**	**4**
Pavement | Shoulder Width (ft)	**24' | 1'**	**2**
Potential Crash Reduction (PCR)	**Negligible**	**0**
Access Points per Mile	**12.1**	**3**
High Risk Curve Density/Mile	**0.4**	**1**
Avg. Pavement Condition (IRI)	**164**	**1**
Lane Departure Crashes	**2**	**2**
Total Risk Factor Points (21 max)		**13**

Other Information	
Paved Shoulder	**No**
Shoulder Width (ft)	**1**
Speed Limit (mph)	**55**
Lane Width (ft)	**12**
Number of Lanes	**2**
Edgeline Rumble Strips	**No**
Centerline Rumble Strips	**No**
Curves (L>100', R≤1,000')	**1**
Curves with Chevrons	**0**

Crash Data, 2014-2023	
Total Crashes	**3**
K and A Crashes	**1**
Lane Departure Crashes	**2**
Lane Departure K and A Crashes	**1**
Total Crash Rate (per HMVMT)	**64.3**
K and A Crash Rate (per HMVMT)	**21.4**

Opinion of Probable Cost (Countermeasure Selection Threshold Results)

Item Description	Quantity	Unit	Unit Price	Item Cost
Conduct Road Safety Audit (RSA)	0	EA	$ 40,000	$ -
Conduct Access Control Analysis	0	EA	$ 30,000	$ -
Install 4" Retroreflective Edgeline (Both Sides of Road)	0	MILE	$ 3,000	$ -
Install 6" Retroreflective Edgeline (Both Sides of Road)	**2.81**	**MILE**	**$ 6,000**	**$ 16,860**
Install 4" Retroreflective Centerline	**2.81**	**MILE**	**$ 3,000**	**$ 8,430**
Pave 2' Shoulder with Safety Edge (Both Sides of Road - Includes Earth Work)	0	MILE	$ 150,000	$ -
Install Edgeline Rumble Strips (Both Sides of Road)	**2.81**	**MILE**	**$ 5,000**	**$ 14,050**
Install Centerline Rumble Strips	**2.81**	**MILE**	**$ 2,000**	**$ 5,620**
Review Curve and Provide Signage to Meet MUTCD and Iowa DOT Standards, if Needed	**1**	**CURVE**	**$ 3,500**	**$ 3,500**
Review and Upgrade Curve Signage to Meet MUTCD and Iowa DOT Standards, if Needed	0	CURVE	$ 1,000	$ -
Clear and Grub (15 ft Both Sides of Road)**	**2.81**	**MILE**	**$ 30,000**	**$ 84,300**
			Project Selection Decision Tree Systemic Improvements Subtotal:	$ 132,760

Continued on back of this page.

** Unit price varies based on average roadside risk score.

Project Location Map Sources:
Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Kimley»Horn

Safety Action Plan
Project Description for Roadway Segment Improvements

Risk Factor Points: 13



Project Name: 395TH AVENUE between 800 feet NE of US 52 and 341 ST
Agency Name: Jackson County
Contact Name: Jayden Scheckel
E-mail: jceng@jacksoncounty.iowa.gov

Date: 5/22/25
Prepared By: FJC
Checked By: DJG

SEGMENT

Opinion of Probable Cost (Additional Potential Improvements)

GPS ID: 4236

There are a variety of other safety improvements that could be considered that were not included on the front page of the project sheet due to availability of data, the need for site-specific information, and/or the appetite for the countermeasure to be deployed throughout the county. The following countermeasures could be considered appropriate by the county and included below as additional potential improvements.

Item Description	Quantity	Unit	Unit Price	Item Cost
Flatten and Widen Foreslopes (both sides of road)	**2.81**	**MILE**	**$ 85,000**	**$ 238,850**
On-Pavement Marking for Speed Control		EA	$ 3,000	$ -
Delineate Roadside Hazard (tree or utility pole) with Retroreflective Tape		EA	$ 100	$ -
Guardrail		FOOT	$ 80	$ -
Post-Mounted Delineators		MILE	$ 5,000	$ -
Retroreflective Strips on Chevron Sign Posts		CURVE	$ 500	$ -
Transverse Rumble Strips Prior to Curve		CURVE	$ 5,000	$ -
Remove/Relocate Object in Hazardous Location		EA	$ 1,000	$ -
Superelevation Correction on Curve		CURVE	$ 50,000	$ -
Install High Friction Surface Treatment (HFST) on Curve		CURVE	$ 50,000	$ -
Speed Activated Flasher on Chevron Sign		EA	$ 4,000	$ -
Other: Pave 1' Shoulder with Safety Edge and Reduce Lane Width by 1' (Both Sides of Road – Includes Earth Work)	**2.81**	**MILE**	**$ 75,000**	**$ 210,750**
Other:				
Other:				
Other:				

Additional Potential Improvements Subtotal:		$ 449,600
Project Selection Decision Tree Systemic Improvements Subtotal:		$ 132,760
Subtotal:		$ 582,360
Mobilization: (% +/-)*	10%	$ 58,240
Traffic Control: (% +/-)	5%	$ 29,280
Contingency: (% +/-)	20%	$ 117,120
Estimated Project Cost		**$ 787,000**

*Mobilization is 10% +/- of the subtotal with a minimum of $2,500 and a maximum of $75,000

†Note on Underserved Communities Indicator:
As part of the SS4A program an Underserved Community shares the same definition as an Area of Persistent Poverty (APP). According to the Bipartisan Infrastructure Law, an area is defined as an APP if it meets the following criteria: (A) the County consistently had greater than or equal to 20 percent of the population living in poverty in all three of the following datasets: the 1990 decennial census, the 2000 decennial census; and the most recent (2023, for the purposes of this report) Small Area Income Poverty Estimates; OR (B) the Census Tract has a poverty rate of at least 20 percent as measured by the 2014-2018 5-year data series available from the American Community Survey of the Bureau of the Census; OR (C) any territory or possession of the United States.

Opinion of Probable Construction Cost Disclaimer:
Kimley-Horn has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Kimley-Horn at this time and represent only Kimley-Horn's judgment as a design professional familiar with the construction industry. Kimley-Horn cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Project Description Form Disclaimer:
The recommended improvements contained in this project description form were developed through a Geographic Information System (GIS) database risk assessment and project decision tree selection process, as specifically stated in our scope of services. Kimley-Horn has no control over the accuracy of the GIS databases nor the suitability of the specific improvements for the location, and has provided recommended improvements for consideration by the County Engineer. The County Engineer may use this project description form to aid in the selection and development of projects, but this project description form should not be used as the sole basis for the County Engineer's decision making process. Kimley-Horn endeavored to research issues and constraints to the extent practical given the scope, budget, and schedule agreed to with the Client. The assessment is based in large part on information provided to us by others (DOT, county staff, etc.) and therefore is only as accurate and complete as the information provided to us. No formal assessment was made for the improvement recommendations contained on this page. If in question, it is recommended that a study/analysis of this location be made to warrant the above indicated improvements. This project description form is based on our knowledge as of July 2024.

End of Project Description

Back Page

Rev. 07/23

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** August 12, 2025

Location / Title of Project K-42 From Hwy 3 north 1 mile

Applicant Plymouth County

Contact Person Thomas Rohe Title County Engineer

Complete Mailing Address P.O. Box 1227

Le Mars, Iowa 51031

Phone 712-546-4559 (Area Code) E-Mail trohe@plymouthcountyiowa.gov

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s) N.A.

Contact Person _____ Title _____

Complete Mailing Address _____

_____

Phone _____ (Area Code) E-Mail _____

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	524,890
Total Project Cost	$	587,790
Safety Funds Requested	**$**	**425,000**

Additional Project Safety Documentation (when available):

- ☒ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☐ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
		☐	☐		
		☐	☐		

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the Plymouth County Board Of Supervisors

Signed: Don Kass 08/12/25

Signature Date Signed

Don Kass, Chairman

Printed Name

Attest: Stacey Feldman 8/12/2025

Signature Date Signed

Stacey Feldman, Auditor

Printed Name

B: Narrative

K-42 From Hwy 3 North 1 Mile

This section of roadway was graded in the early 1950's with a 28 ft. top and 2:1 foreslopes on an 80 ft. right of way. The roadway was then paved in 1955 as an asphalt road. The grade line of this roadway follows the existing topography and vertical curve designs are essentially at 30-45 mph. See sheets G for road profile.

This mile of roadway is built on 80 ft. right of way and has a 22 ft. wide pavement surface. The shoulders are only 3 ft. wide. This roadway services the Town of Brunsville and the north central area of Plymouth County. Our County is heavily agricultural with grain elevators at Brunsville and Craig in this area and many hog confinements in the central part of the county. In addition K-42 is a major north/south corridor moving grain to the ethanol plant at Merrill and also serves as a north/south route for traffic connecting onto Hwy 75 and servicing markets to the south in Hinton and Sioux City.

The main safety concern on this mile of roadway is the narrow shoulder width on a narrow right of way. The traffic is approximately 1090 VPD (2023) and the issue we have are the edge ruts that develop because of the 11 ft. pavement and the narrow shoulders. Our program includes an overlay on this roadway in 2026 and it is our desire to place a 2-3 ft. paved shoulder on this road to accommodate the truck traffic, wider agricultural traffic and prevention of edge ruts.

The proposed project will reconstruct the shoulders, foreslopes and ditch bottoms. The shoulder width will be widened from 3 ft. to 8 ft. The foreslopes will be flattened from 2:1 to 3:1. Approximately 2-3 ft. of the shoulder will be paved with the resurfacing in 2026 providing a wider pavement width that will accommodate the agricultural and truck traffic.

There are also three box culverts and two metal culverts on this mile. These structures will be widened which will provide clear zone meeting todays standards.

The overlay of this roadway will be placed in 2026 and the design is for a 7 inch concrete overlay with 2-3 ft. paved shoulders. Although this overlay is not part of the shoulder grading at this time, I would hope that some consideration be given for the safety aspect of a partially paved shoulder and the elimination of potential accidents. Many run off the road accidents that we see in our county are due to edge ruts.

There are two components to this project request. One is the shoulder widening and culvert extensions while the second is to reconstruct the intersection at 170th St.. This intersection originally had a rail line going thru the intersection with turn lanes at the SE and SW corners. A layout can be viewed on sheet G-1. The rail line was eventually removed and the turn lane at the SW Corner was also removed. Our plan is to reconstruct this intersection by removing the turn lane at the SE Corner and widening the radius of each intersection leg in order to made all turning movements at 90 degrees and large enough to accommodate large trucks. See sheets G-1 for final design.

C: Cost

The estimated cost of this project is $ 587,790 of which $ 425,000 is being requested for the safety work associated with the project. A breakdown can be seen on the spread sheet on exhibit "C".

D: Time Schedule

This project, if approved, would be let in the spring of 2026 with construction during the 2026 construction season prior to the overlay project.

E: Map

See the enclosed map showing roadway location

F: Color Pictures

Enclosed

G: Plan View

Plan profile sheet is enclosed.

G-1 – Intersection View, 1964 Layout, 2026 Design

H: Aerial Photo of the site as per Exhibit "H".

I: Crash Summary Report – Exhibit "I".

J: Recent Traffic Volumes – Exhibit "J".

A map showing the traffic count of this roadway by IDOT for 2015 is enclosed.

K: Signals - NA

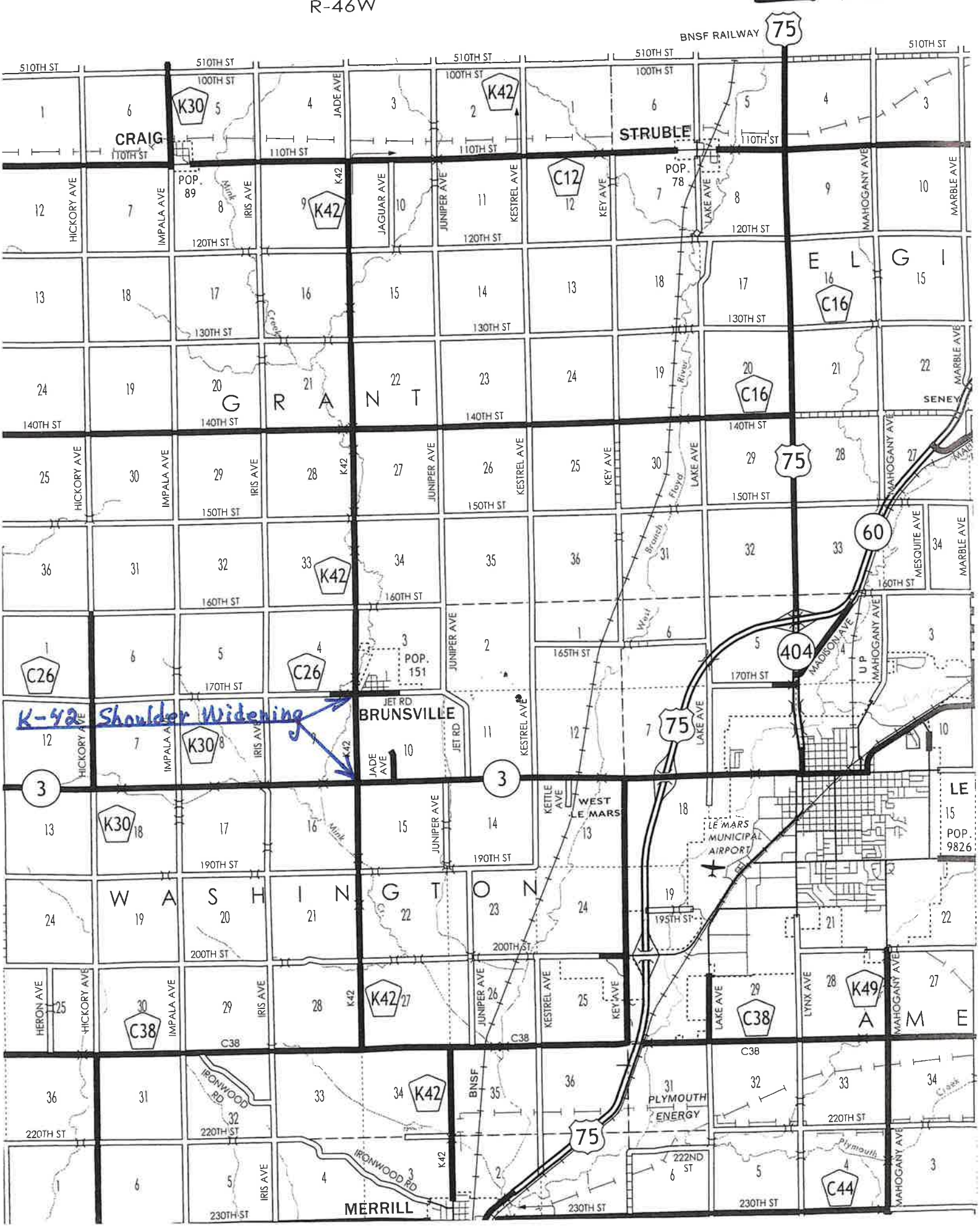
L: B/C Worksheet – We have not provided a B/C Worksheet for this project as the CRF values do not lend much support for widening shoulders and we have not had a fatality to drive the B/C analysis higher. I firmly believe we should put more emphasis on shoulders and pavement widening in order to eliminate edge ruts and provide a safer roadway.

PLYMOUTH COUNTY

ENGINEER'S ESTIMATE

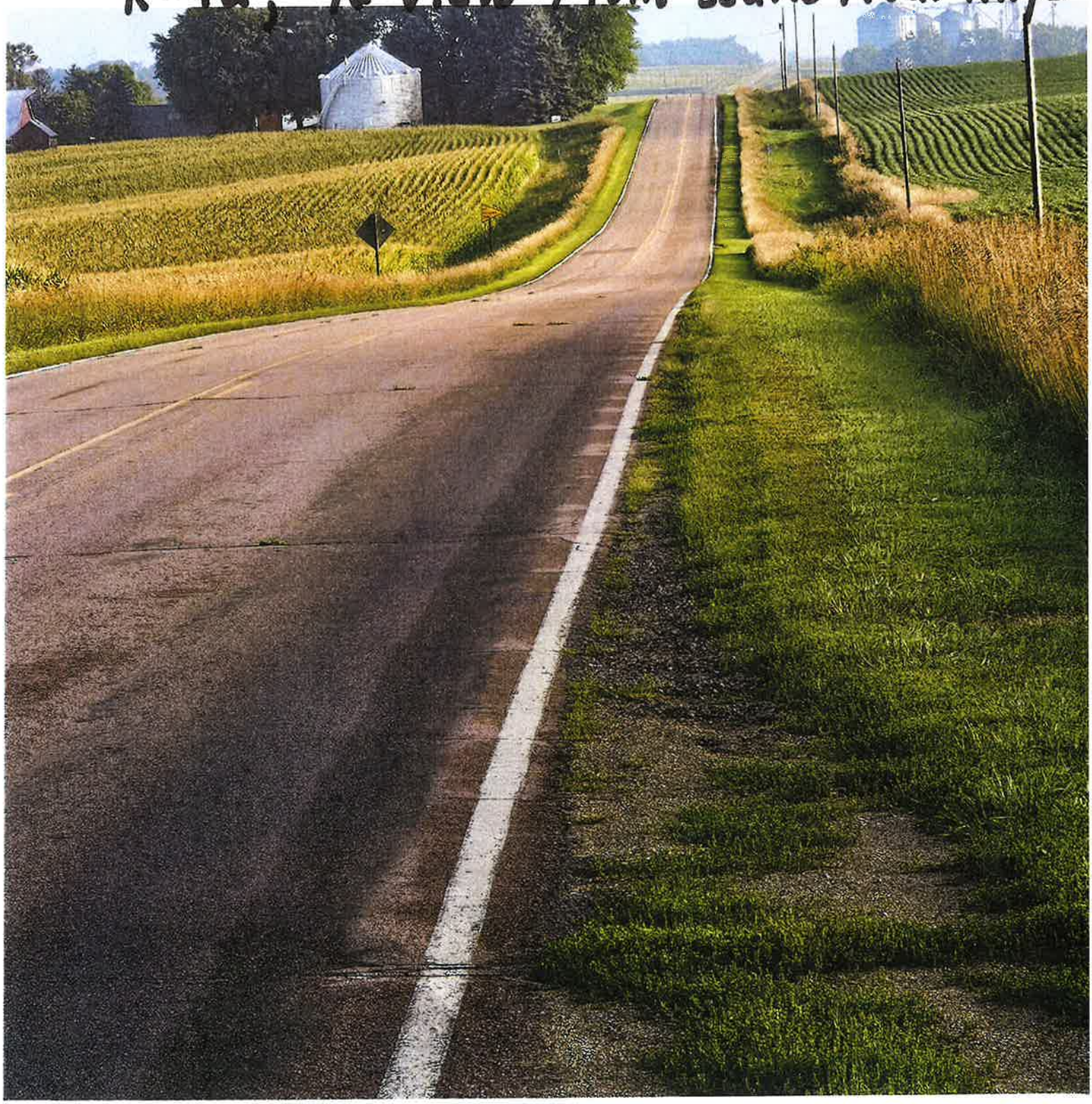
Kind of Work	Shoulder Widening		**County**	PLYMOUTH				
Proj	**LFM-Shoulders 2025**	K-42 From Hwy 3 noth 1 mile		**Date**	8/11/2025			
						Safety Work		
Item No.	**Item**	**Quantity**	**Units**	**Unit Price**	**Amount**	**Quantity**	**Amount**	
1	EXCAV. CL. 10, RDWY & BORROW	26818	C.Y.	$10.00	$ 268,180.00	26818	268,180.00	
2	Topsoil- Strip, Salvage & Respread	5671	C.Y.	$10.00	$ 56,710.00	5671	56,710.00	
3	TRAFFIC CONTROL	1	LS	$25,000.00	$ 25,000.00			
4	Mobilization	1	LS	$ 20,000.00	$ 20,000.00			
5	Silt Fence	1200	LF	$4.00	$ 4,800.00			
6	Mobilization -Erosion Control	1	Each	$500.00	$ 500.00			
7	Culvert Extensions	5	Each	$35,000.00	$ 175,000.00	5	175,000.00	
8	Intersection Reconstruction	1	LS	$25,000.00	$ 25,000.00		25,000.00	
9	Seeding	6.3	Ac	$2,000.00	$ 12,600.00			
10								
11								
12								
13				TOTAL	$ 587,790.00		$ 524,890.00	
14					Project Total			
15								
16						Amount Requested		
17				Safety Shoulder Widening			**$425,000.00**	

E.


R-46W
R-45W
BNSF RAILWAY
75
510TH ST
100TH ST
110TH ST
120TH ST
130TH ST
140TH ST
150TH ST
160TH ST
165TH ST
170TH ST
190TH ST
195TH ST
200TH ST
220TH ST
222ND ST
230TH ST
CRAIG
STRUBLE
POP. 89
POP. 78
POP. 151
POP. 9826
BRUNSVILLE
JET RD
WEST LE MARS
LE MARS MUNICIPAL AIRPORT
PLYMOUTH ENERGY
MERRILL
SENEY
GRANT
ELGIN
WASHINGTON
AME
K-42 Shoulder Widening
K30
K42
C12
C16
C26
C38
K49
C44
404
60
3
HICKORY AVE
IMPALA AVE
IRIS AVE
JADE AVE
JAGUAR AVE
JUNIPER AVE
KESTREL AVE
KEY AVE
LAKE AVE
MAHOGANY AVE
MARBLE AVE
MESQUITE AVE
MADISON AVE
KETTLE AVE
LYNX AVE
HERON AVE
IRONWOOD RD
BNSF
UP
Mink Creek
West Branch Floyd River
Plymouth Creek

F.

K-42, N View From South Near Hwy 3



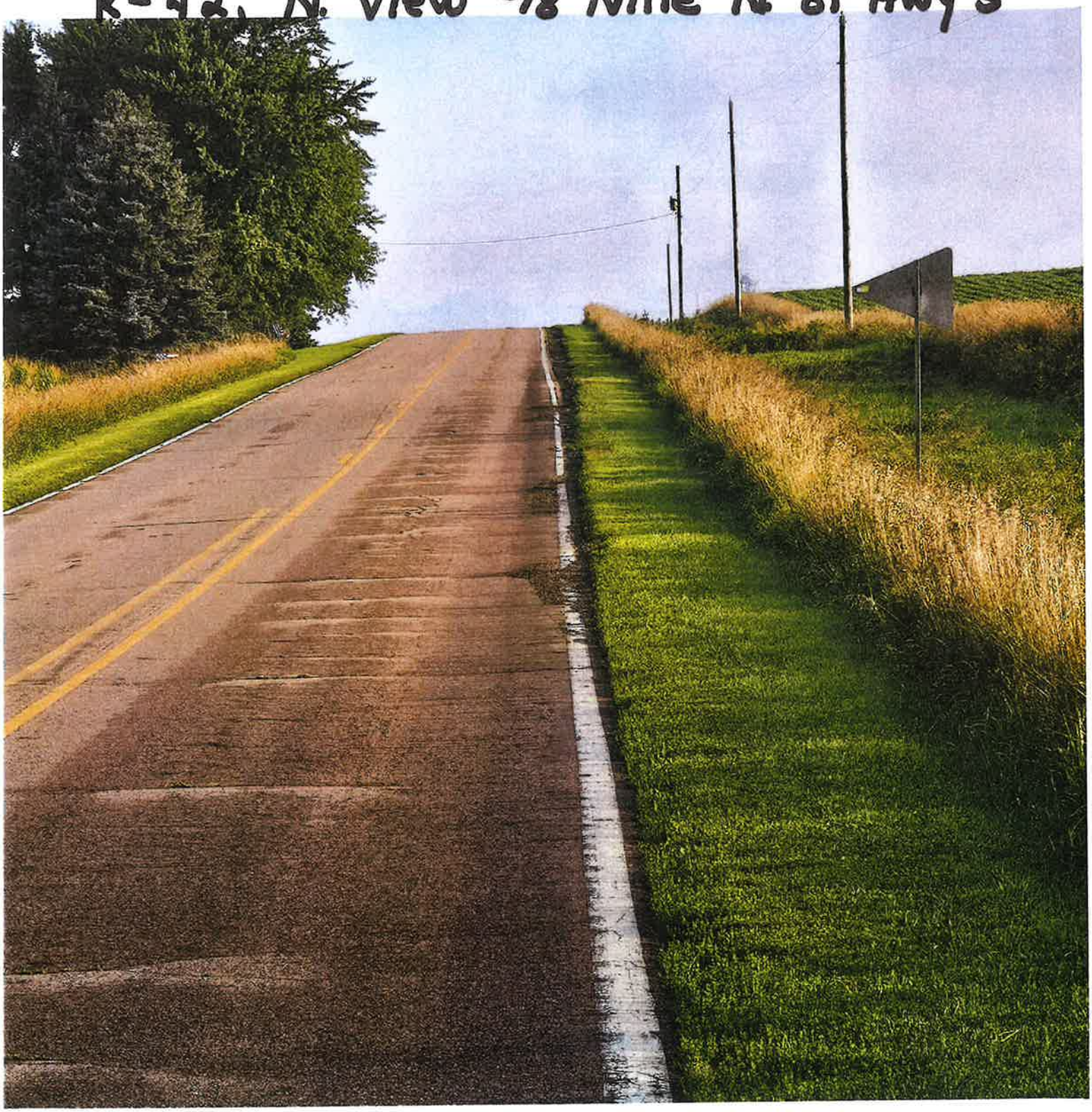
F.

K-42, N. View 1/4 Mile N. of Hwy 3



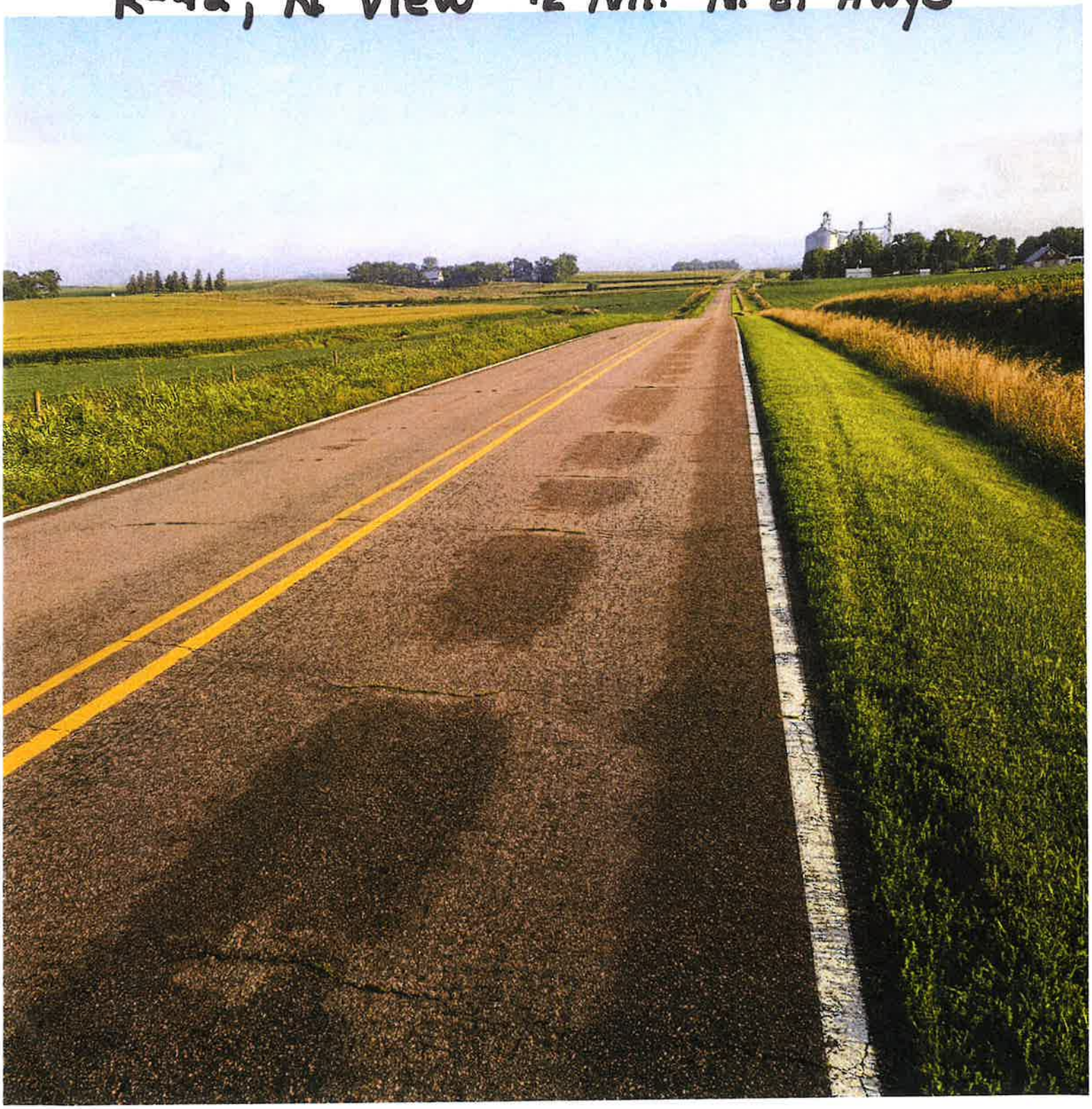
F.

K-42, N. View 3/8 Mile N of Hwy 3



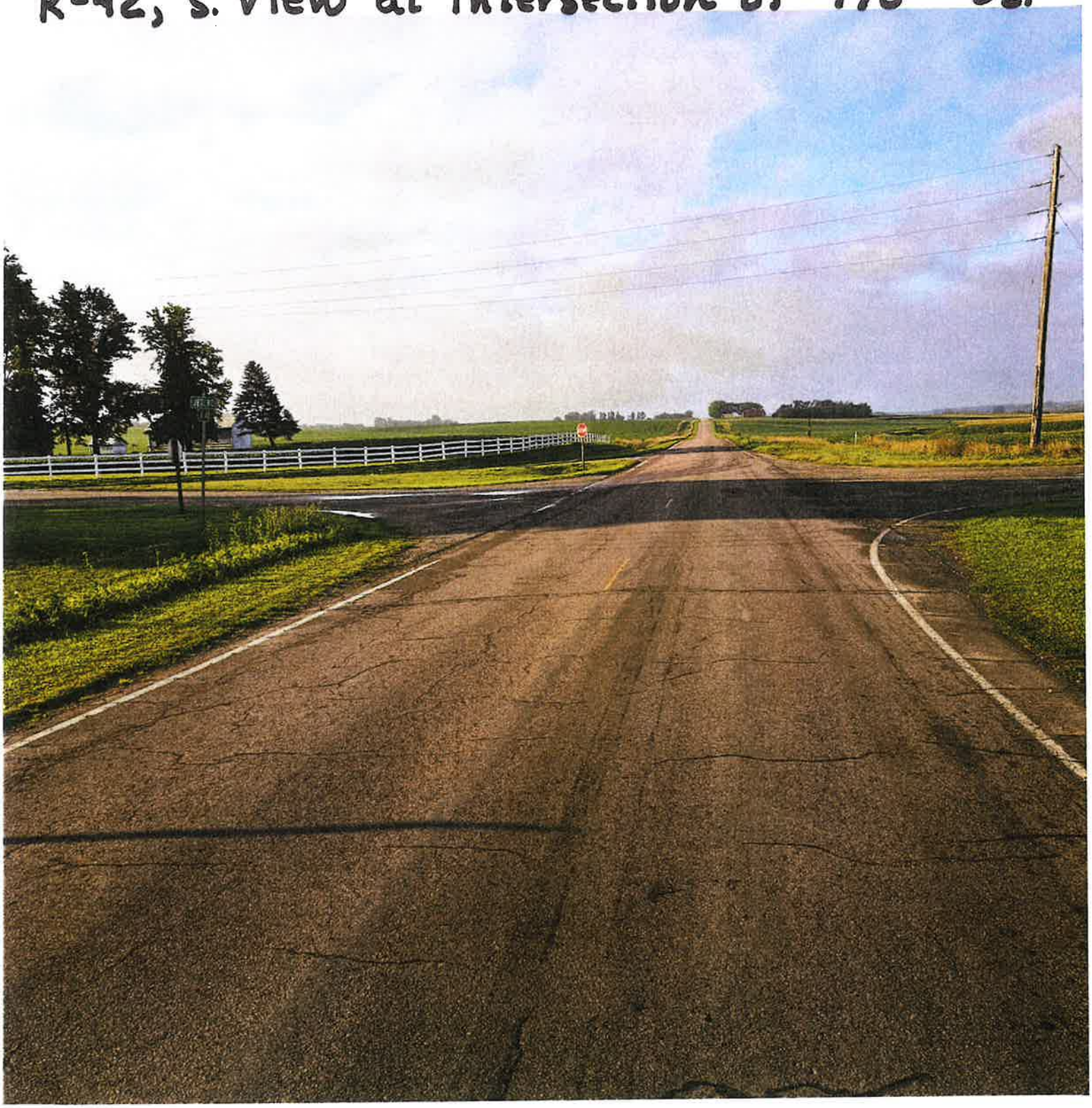
F.

K-42, N View ½ Mi. N. of Hwy3



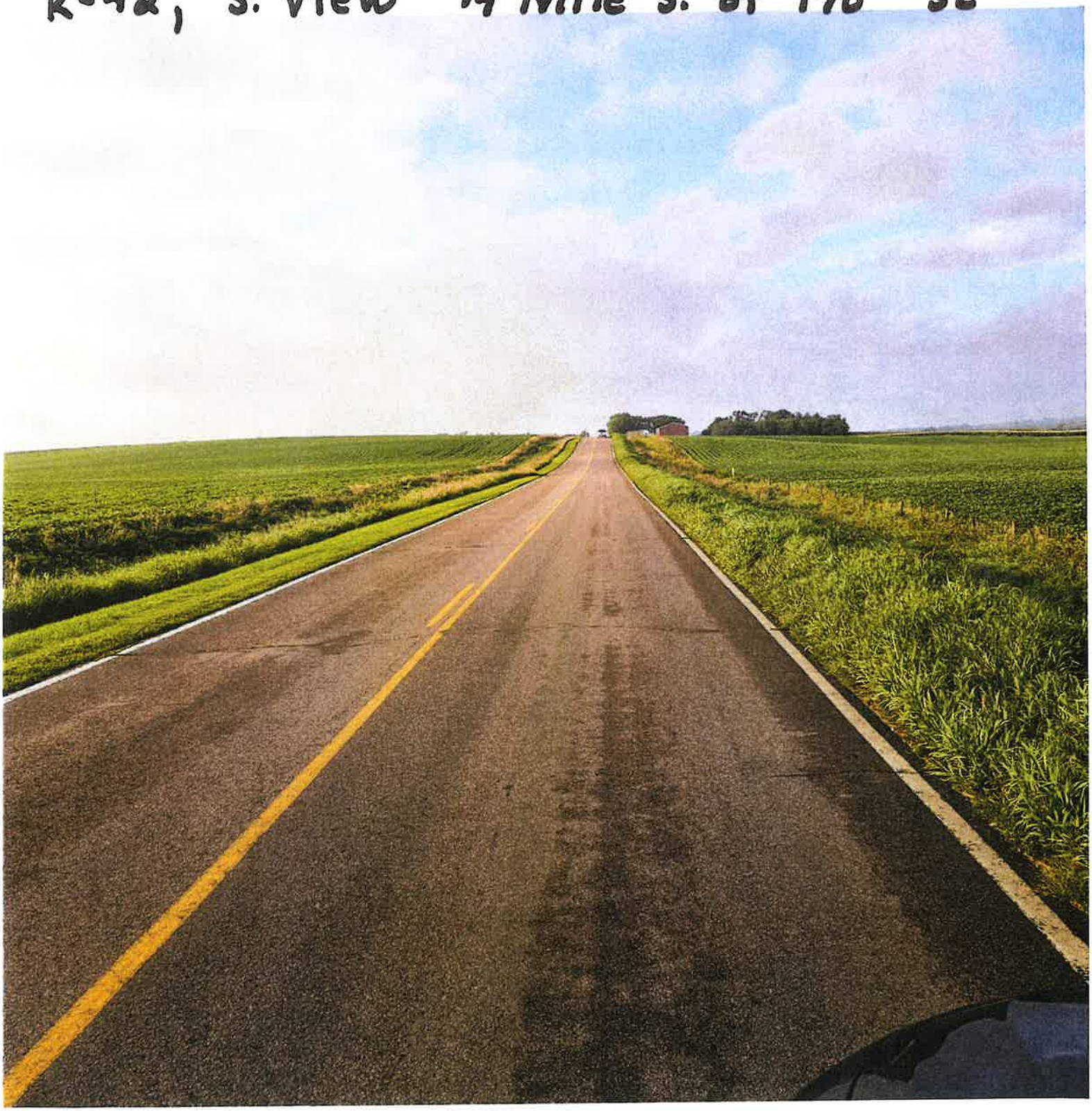
F.

K-42, S. View at intersection of 170th St.



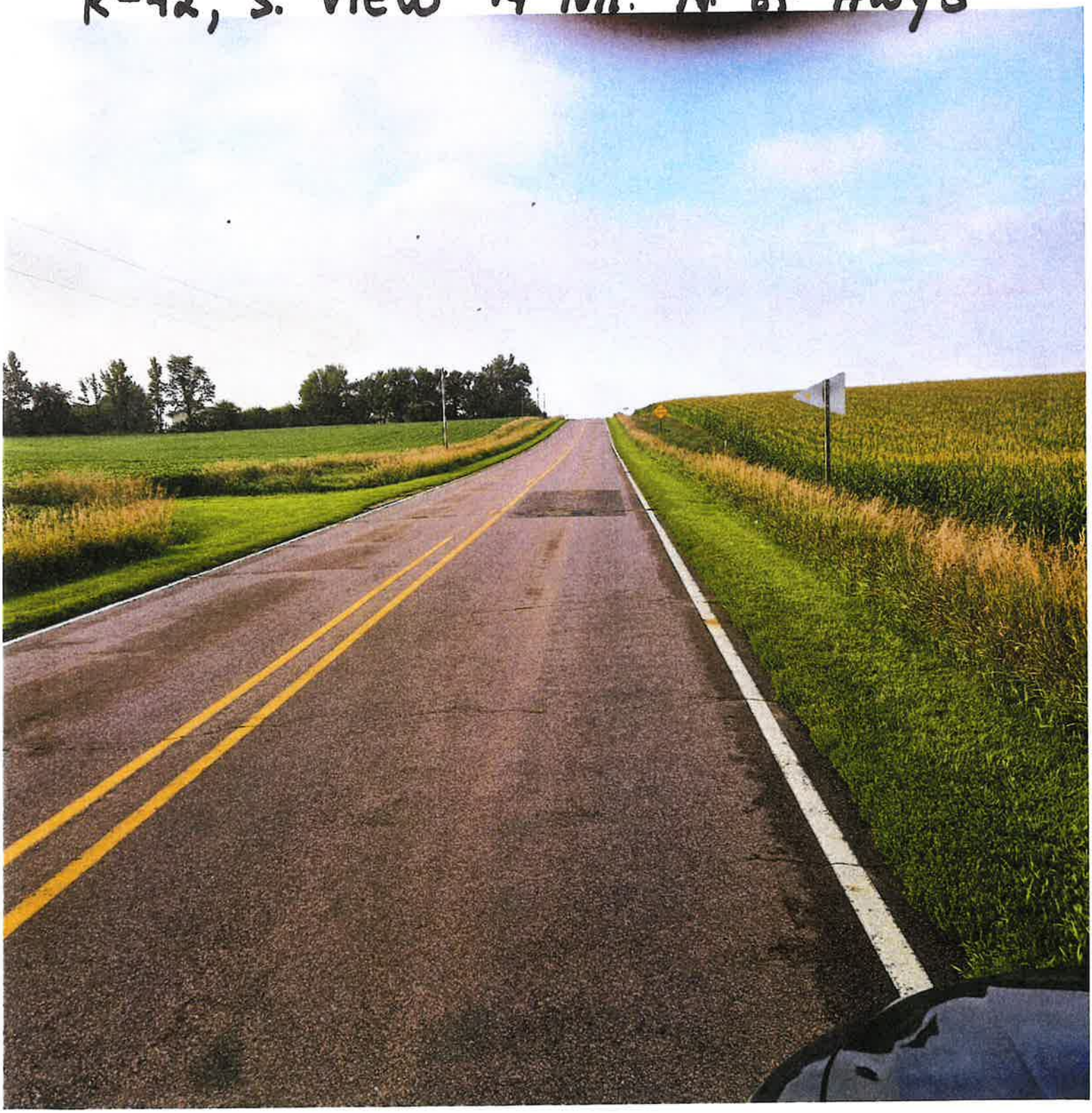
E.

K-42, S. View ¼ Mile S. of 170th St



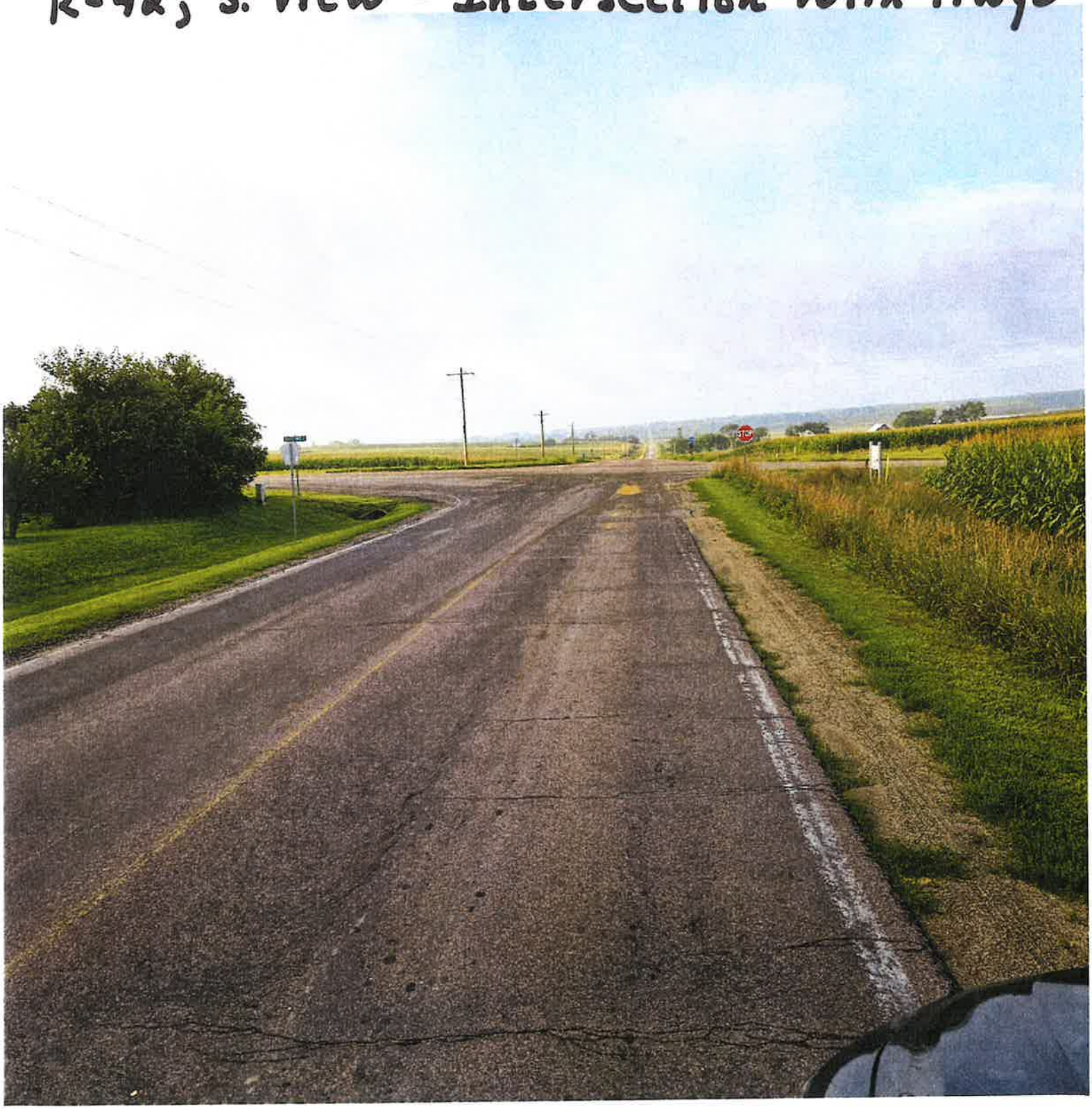
F.

K-42, S. View ¼ Mi. N. of Hwy 3

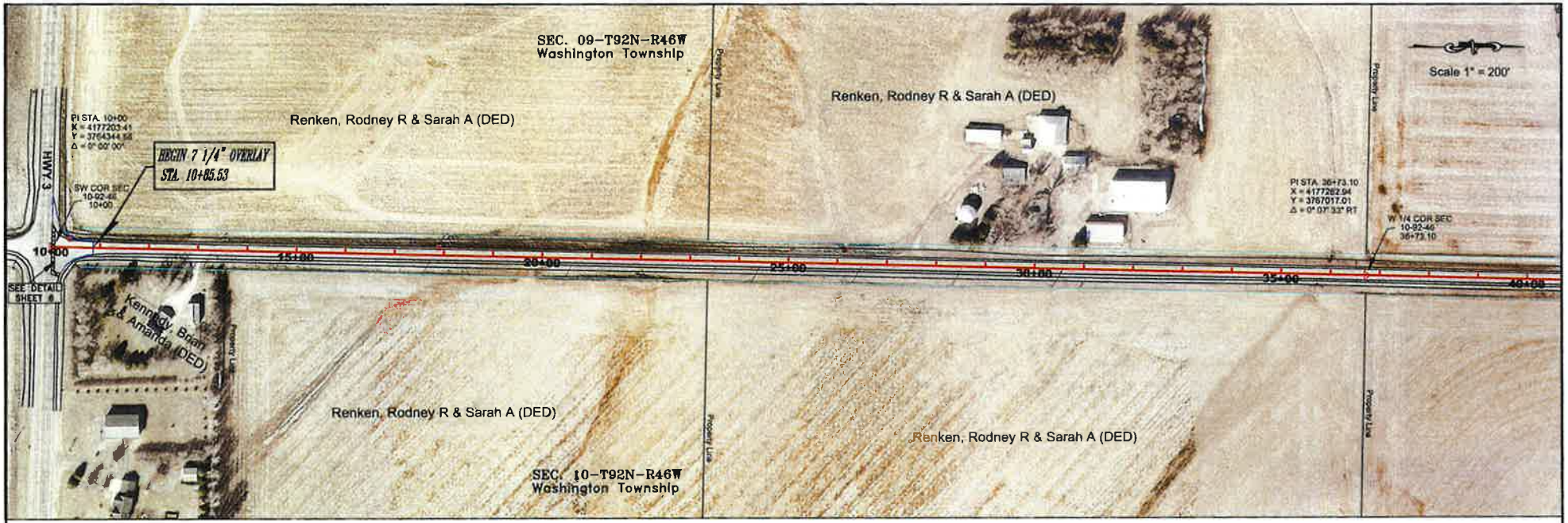


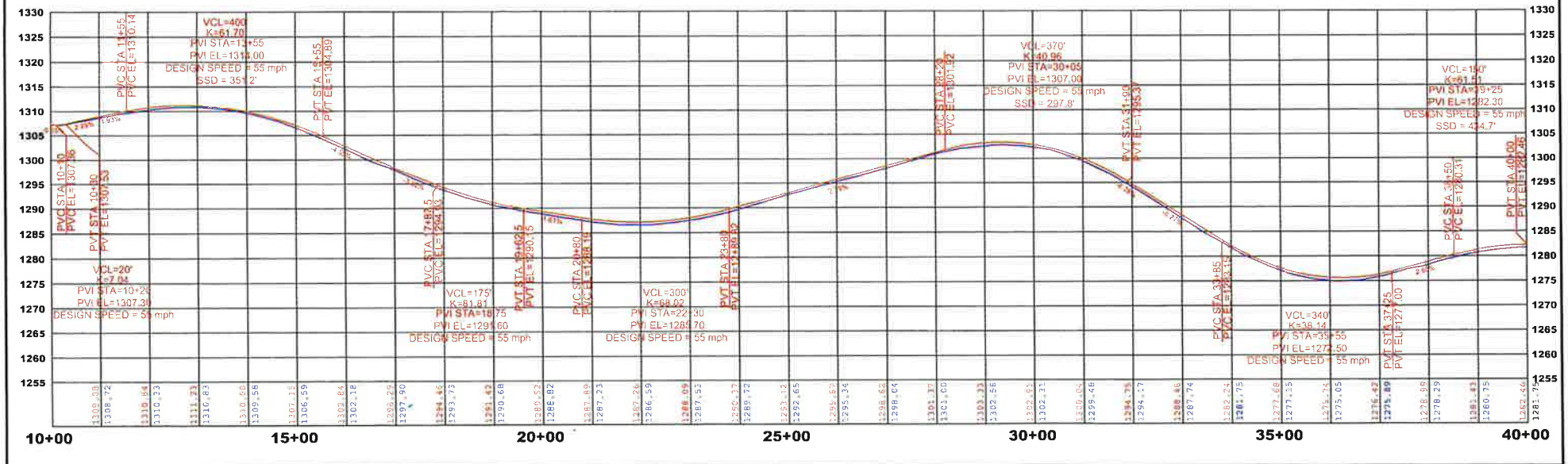
F.

K-42, S. View - Intersection With Hwy3

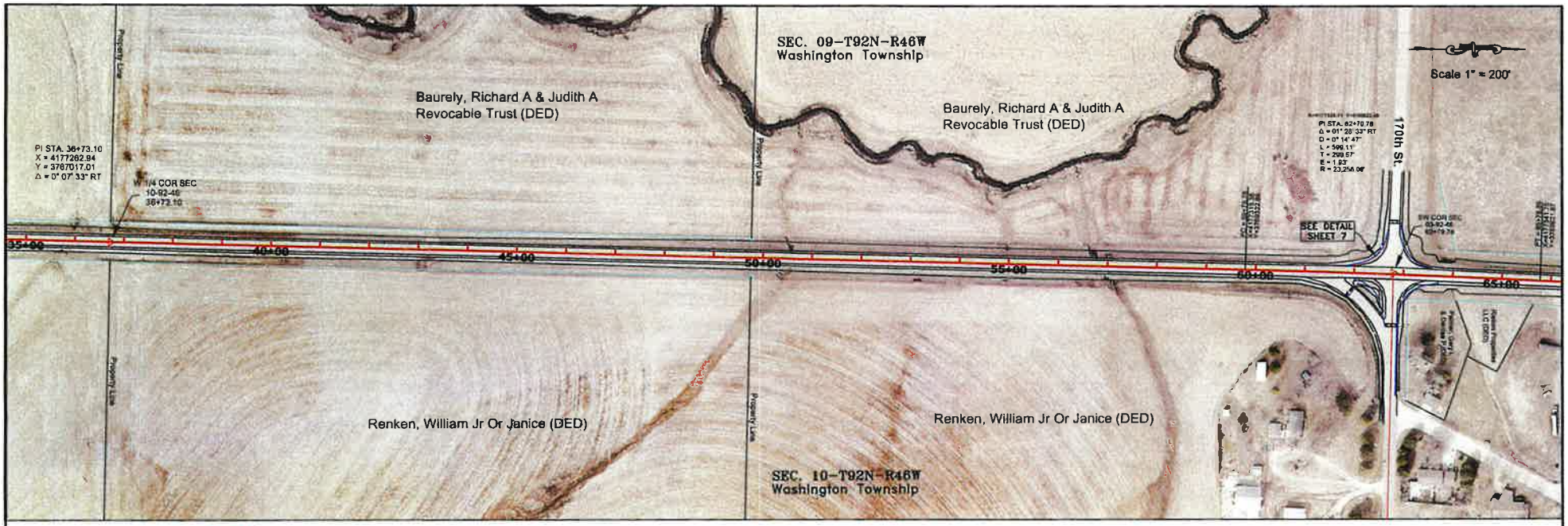


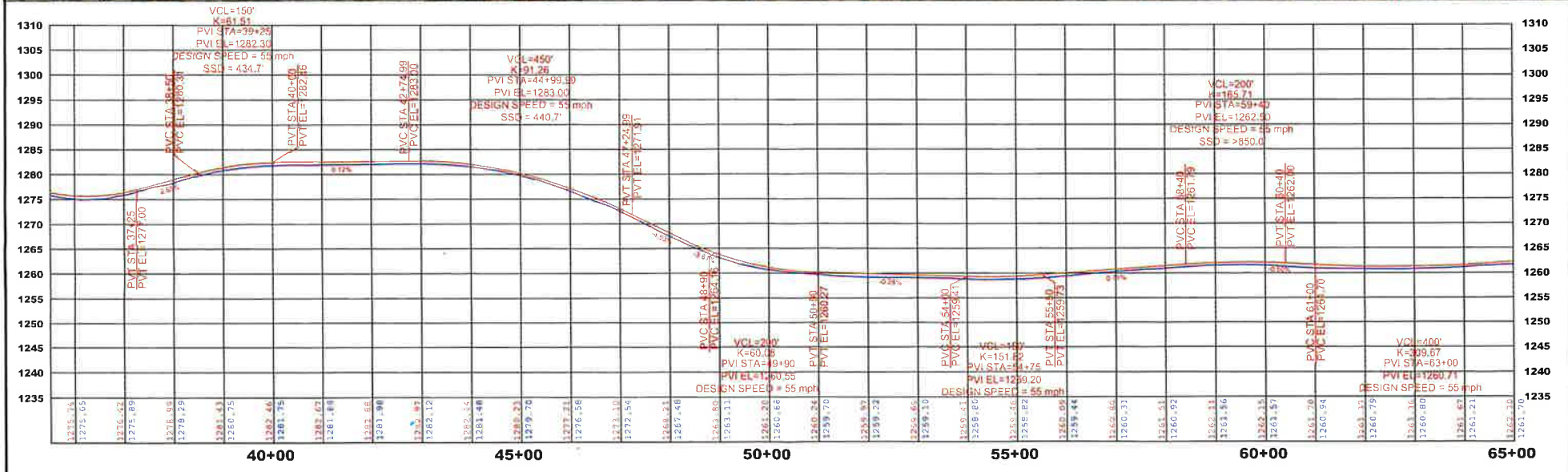
G.


SEC. 09-T92N-R46W
Washington Township
Renken, Rodney R & Sarah A (DED)
Renken, Rodney R & Sarah A (DED)
Scale 1" = 200'
PI STA. 10+00
K = 4177203.41
Y = 3764344.58
Δ = 0° 00' 00"
BEGIN 7 1/4" OVERLAY
STA. 10+85.53
SW COR SEC
10-92-46
10+00
HWY 3
SEE DETAIL SHEET 8
Kennedy, Brian & Amanda (DED)
Renken, Rodney R & Sarah A (DED)
Renken, Rodney R & Sarah A (DED)
SEC. 10-T92N-R46W
Washington Township
PI STA. 36+73.10
X = 4177282.94
Y = 3767017.01
Δ = 0° 01' 33" RT
W 1/4 COR SEC
10-92-46
36+73.10
10+00
15+00
20+00
25+00
30+00
35+00
40+00

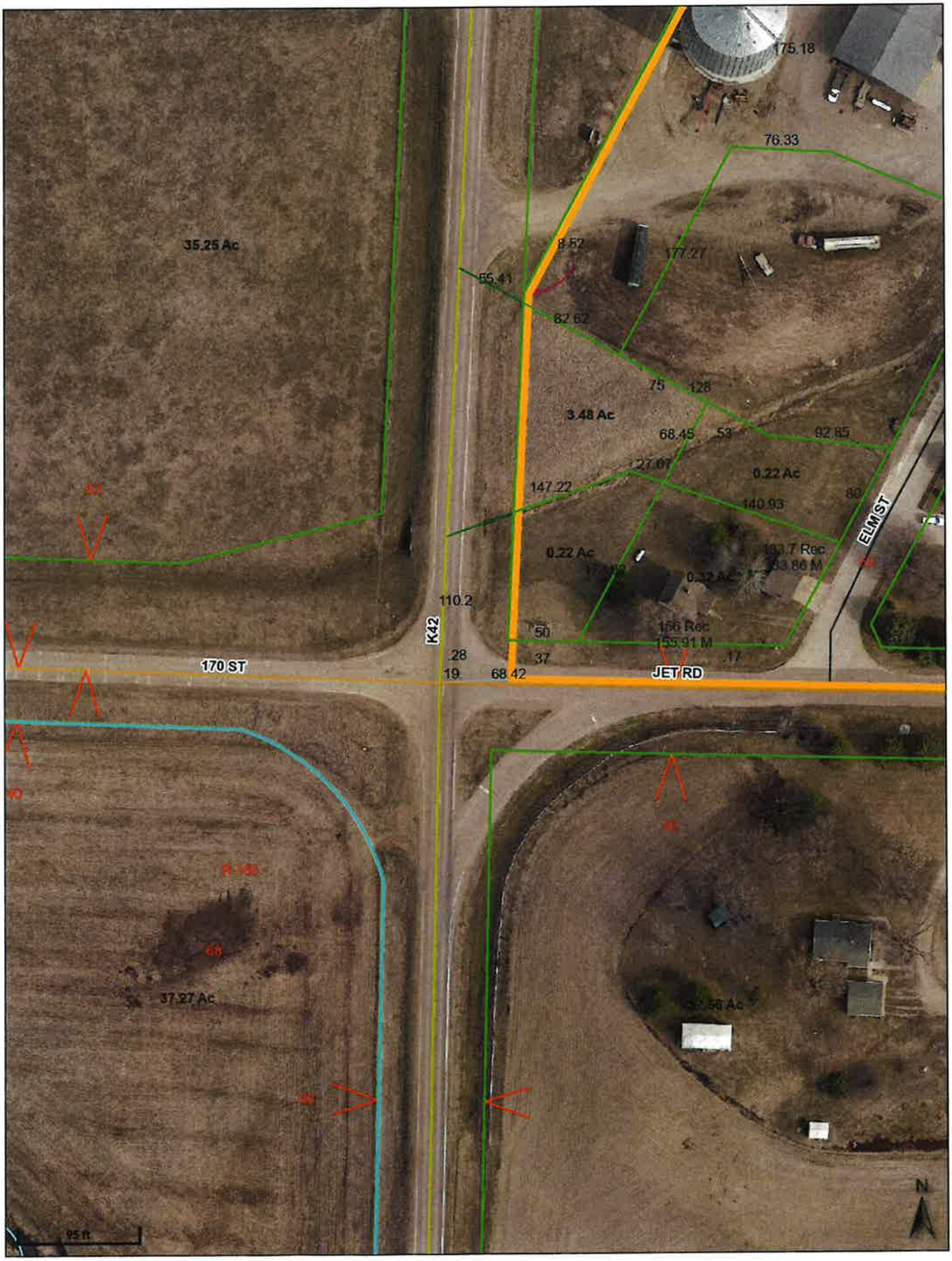

VCL=400'
K=61.70
PVI STA=13+55
PVI EL=1314.00
DESIGN SPEED = 55 mph
SSD = 351.2'
VCL=20'
K=7.04
PVI STA=10+25
PVI EL=1307.30
DESIGN SPEED = 55 mph
VCL=175'
K=81.81
PVI STA=18+75
PVI EL=1291.60
DESIGN SPEED = 55 mph
VCL=300'
K=68.02
PVI STA=22+30
PVI EL=1285.70
DESIGN SPEED = 55 mph
VCL=370'
K=40.96
PVI STA=30+05
PVI EL=1307.00
DESIGN SPEED = 55 mph
SSD = 297.8'
VCL=340'
K=38.14
PVI STA=35+55
PVI EL=1272.50
DESIGN SPEED = 55 mph
VCL=150'
K=41.51
PVI STA=39+25
PVI EL=1282.30
DESIGN SPEED = 55 mph
SSD = 434.7'
1330
1325
1320
1315
1310
1305
1300
1295
1290
1285
1280
1275
1270
1265
1260
1255
10+00
15+00
20+00
25+00
30+00
35+00
40+00

G.

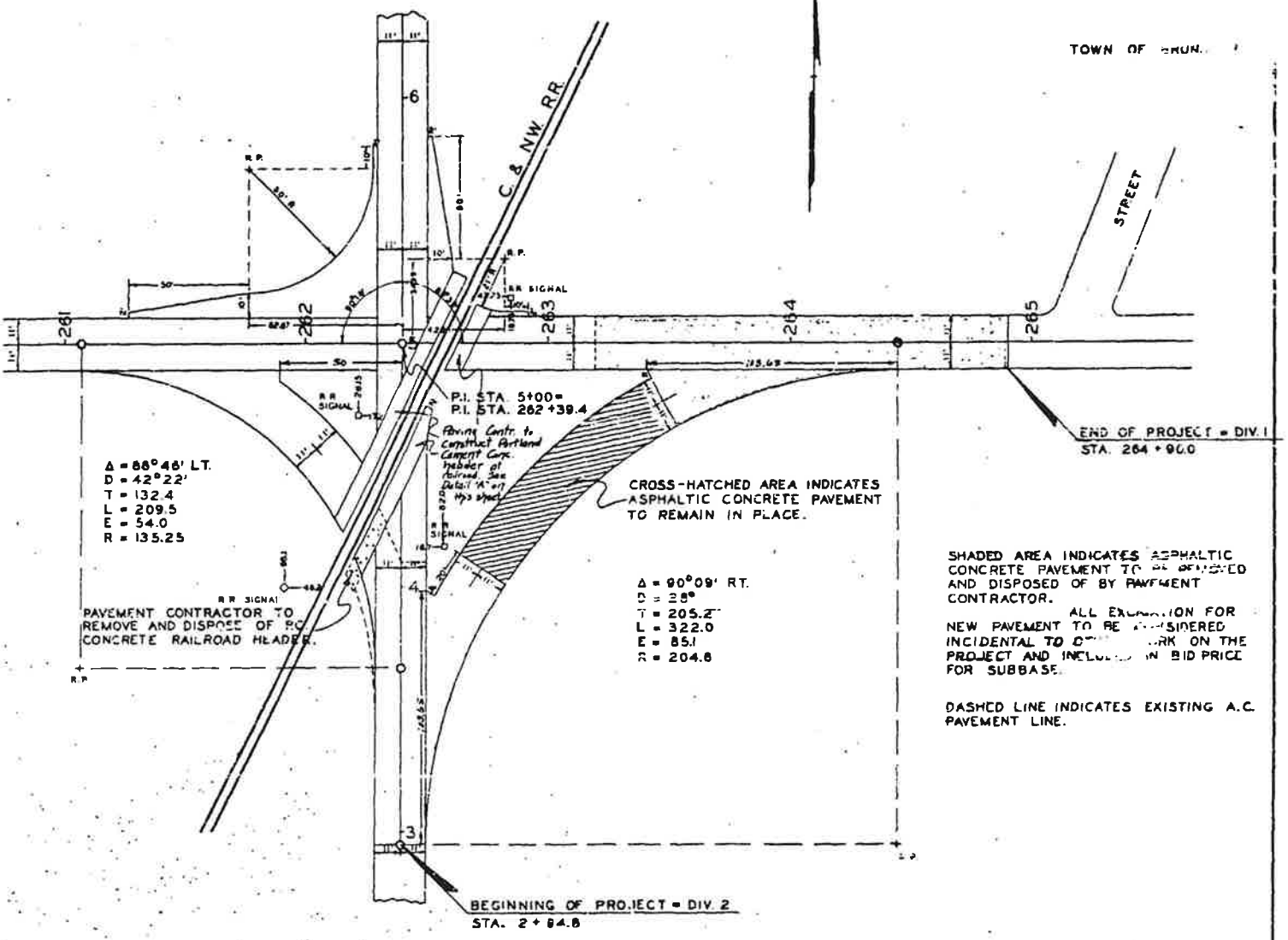

SEC. 09-T92N-R46W
Washington Township
Baurely, Richard A & Judith A
Revocable Trust (DED)
Baurely, Richard A & Judith A
Revocable Trust (DED)
Scale 1" = 200'
PI STA. 36+73.10
X = 4177262.84
Y = 3787017.01
Δ = 0° 07' 33" RT
W 1/4 COR SEC
10-92-46
36+72.10
170th St.
SEE DETAIL
SHEET 7
35+00
40+00
45+00
50+00
55+00
60+00
65+00
Renken, William Jr Or Janice (DED)
Renken, William Jr Or Janice (DED)
SEC. 10-T92N-R46W
Washington Township


VCL=150'
K=61.51
PVI STA=39+25
PVI EL=1282.30
DESIGN SPEED = 55 mph
SSD = 434.7'
PVC STA 38+50
PVC EL=1280.38
PVT STA 40+00
PVT EL= 1282.46
PVC STA 42+74.99
PVC EL= 1283.00
VCL=450'
K=91.26
PVI STA=44+99.99
PVI EL=1283.00
DESIGN SPEED = 55 mph
SSD = 440.7'
PVT STA 47+24.99
PVT EL=1277.91
PVT STA 37+25
PVT EL=1277.00
PVC STA 48+99
PVC EL=1264.46
VCL=200'
K=60.08
PVI STA=49+90
PVI EL=1260.55
DESIGN SPEED = 55 mph
PVT STA 50+90
PVT EL=1260.27
PVC STA 54+00
PVC EL=1259.41
VCL=185'
K=151.82
PVI STA=54+75
PVI EL=1259.20
DESIGN SPEED = 55 mph
PVT STA 55+40
PVT EL=1259.75
VCL=200'
K=165.71
PVI STA=59+40
PVI EL=1262.50
DESIGN SPEED = 55 mph
SSD = >850.0'
PVC STA 58+40
PVC EL=1261.19
PVT STA 60+40
PVT EL=1262.00
PVC STA 61+00
PVC EL=1260.70
VCL=400'
K=209.67
PVI STA=63+00
PVI EL=1260.71
DESIGN SPEED = 55 mph
1310
1305
1300
1295
1290
1285
1280
1275
1270
1265
1260
1255
1250
1245
1240
1235
40+00
45+00
50+00
55+00
60+00
65+00

G-1


175.18
76.33
35.25 Ac
8.52
177.27
55.41
82.62
75
128
3.48 Ac
68.45
53
92.85
27.07
0.22 Ac
147.22
140.93
80
ELM ST
0.22 Ac
193.7 Rec
183.86 M
110.2
K42
50
156 Rec
155.91 M
28
37
17
19
68.42
170 ST
JET RD
40
R-198
68
37.27 Ac
95 ft
N

G-1



SHADED AREA INDICATES ASPHALTIC CONCRETE PAVEMENT TO BE REMOVED AND DISPOSED OF BY PAVEMENT CONTRACTOR.

ALL EXCAVATION FOR NEW PAVEMENT TO BE CONSIDERED INCIDENTAL TO CONSTRUCTION WORK ON THE PROJECT AND INCLUDED IN BID PRICE FOR SUBBASE.

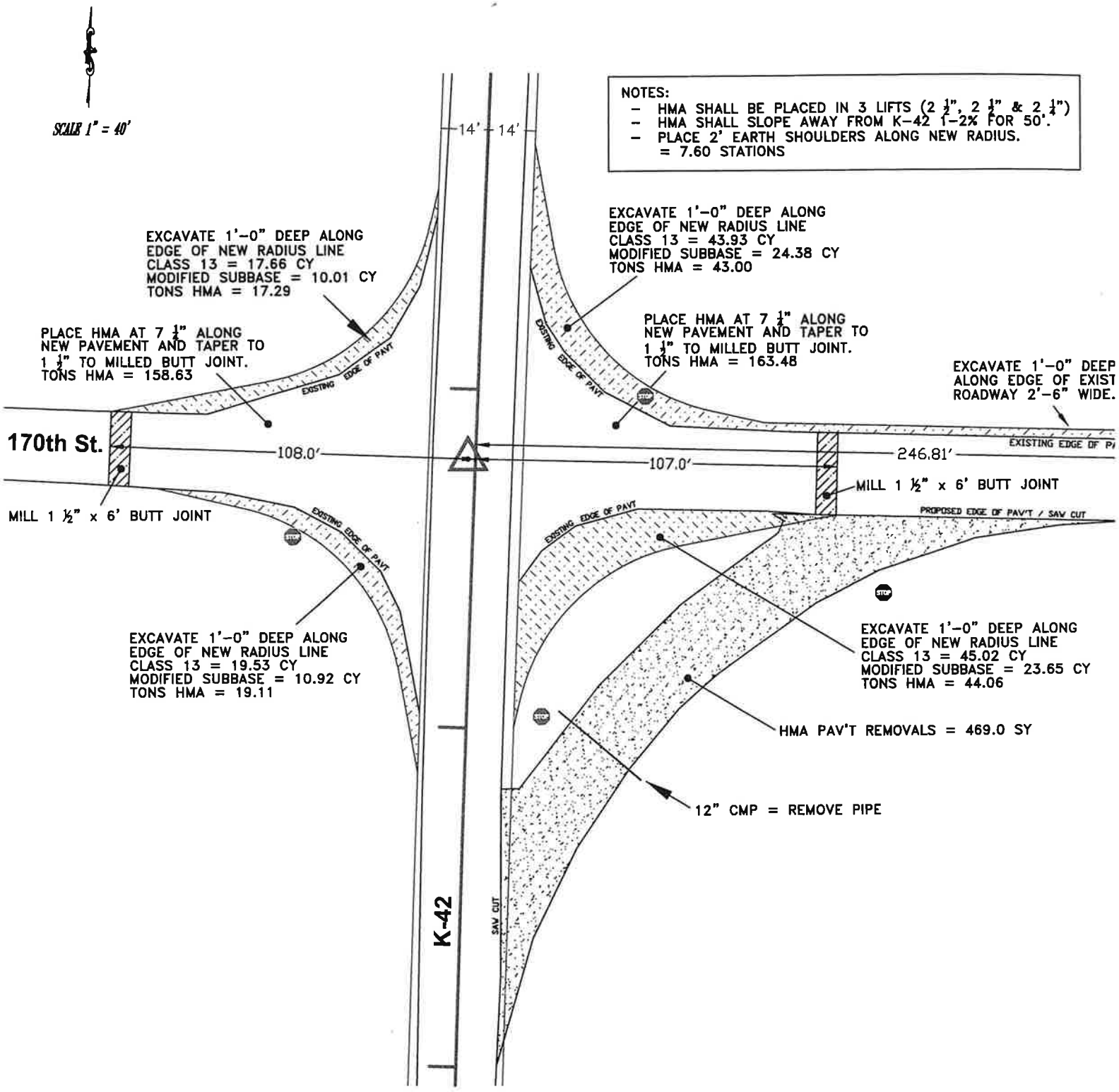
DASHED LINE INDICATES EXISTING A.C. PAVEMENT LINE.

DETAIL OF INTERSECTION AT P.I. STA. 5+00 = STA. 262+39.4
SCALE: 1" = 30'

Z:/File
Project History
1964
AE-264

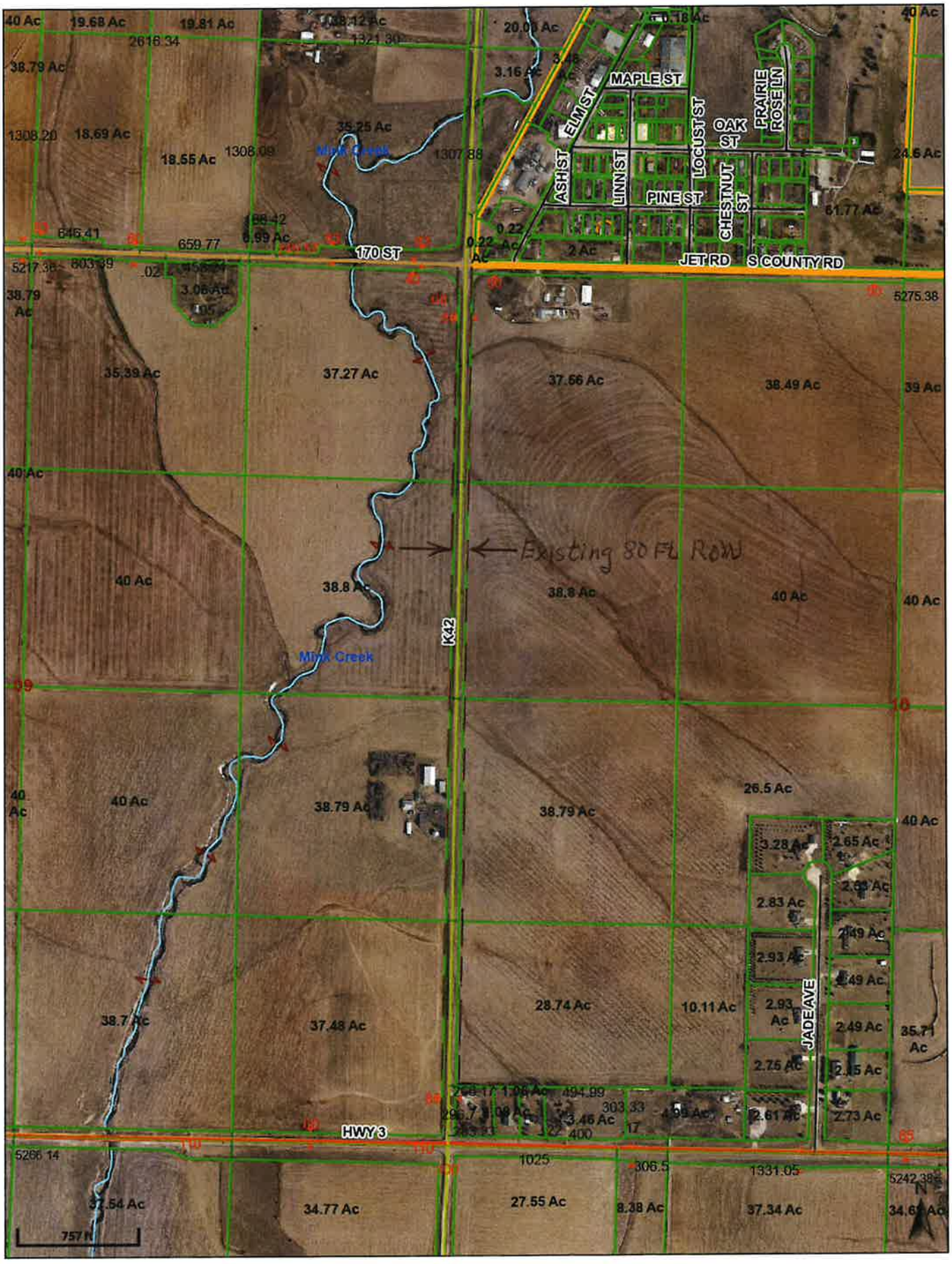
MICROFILM

G-1



INTERSECTION RADIUS DETAILS
170TH ST. AT STATION 62+79.78

H.


MAPLE ST
ELM ST
ASH ST
LINN ST
LOCUST ST
OAK ST
PRAIRIE ROSE LN
PINE ST
CHESTNUT ST
JET RD
S COUNTY RD
170 ST
K42
HWY 3
JADE AVE
Mink Creek
Mink Creek
Existing 80 FL ROW
40 Ac
19.68 Ac
19.81 Ac
38.79 Ac
35.25 Ac
18.69 Ac
18.55 Ac
24.6 Ac
61.77 Ac
5275.38
35.39 Ac
37.27 Ac
37.66 Ac
38.49 Ac
39 Ac
38.8 Ac
38.79 Ac
26.5 Ac
35.71 Ac
28.74 Ac
10.11 Ac
37.48 Ac
27.55 Ac
8.38 Ac
37.34 Ac
757 ft
N

I.

Crash Detail Report

20241402315	01/09/2024 11:00	K42 AND IA 3 E
County: Plymouth	City:	

Major Cause: Ran stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Suspected Minor Injury — **Manner of Crash:** Broadside (front to side)

Fatalities: 0 — **Surface Conditions:** Snow

Major Injuries: 0 — **Light Conditions:** Daylight

Minor Injuries: 1 — **Weather Conditions:** Cloudy

Possible Injuries: 0 — **Drug/Alc Involved:** None Indicated

Severity:: Suspected Minor Injury — **Property Damage:** $215,000 — **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	South	West	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Tractor/semi-trailer	Tractor/semi-trailer	
Driver Age:	37	48	
Driver Gender:	M	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Ran stop sign	No improper action	
Driver Contr 2:	Driving too fast for conditions	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

20241429477	06/26/2024 15:56	K42 AND IA 3 E
County: Plymouth	City:	

Major Cause: Ran stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Property Damage Only — **Manner of Crash:** Broadside (front to side)

Fatalities: 0 — **Surface Conditions:** Dry

Major Injuries: 0 — **Light Conditions:** Daylight

Minor Injuries: 0 — **Weather Conditions:** Clear

Possible Injuries: 0 — **Drug/Alc Involved:** None Indicated

Severity:: Property Damage Only — **Property Damage:** $27,000 — **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	West	North	
Veh Action:	Movement essentially straight	Movement essentially straight	
Configuration:	Four-tire light truck (pick-up)	Passenger car	
Driver Age:	38	75	
Driver Gender:	F	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	No improper action	Ran stop sign	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

I.

Crash Detail Report

20221304493	06/10/2022 15:14	K42 AND IA 3 E
County: Plymouth	City:	

Major Cause: Ran stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Property Damage Only **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Property Damage Only **Property Damage:** $25,000 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	West	South	
Veh Action:	Movement essentially straight	Turning left	
Configuration:	Tractor/semi-trailer	Passenger car	
Driver Age:	31	86	
Driver Gender:	M	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Swerved to avoid: vehicle, object,	Ran stop sign	
Driver Contr 2:	Not reported	FTYROW: From stop sign	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

20221307617	06/29/2022 08:17	K-42/ JET RD(COUNTY RD)
County: Plymouth	City:	

Major Cause: FTYROW: From stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Possible/Unknown Injury **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 1 **Drug/Alc Involved:** None Indicated

Severity:: Possible/Unknown Injury **Property Damage:** $50,000 **Number of Vehicles:** 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	West	South	
Veh Action:	Turning left	Movement essentially straight	
Configuration:	Tractor/semi-trailer	Sport utility vehicle	
Driver Age:	64	31	
Driver Gender:	M	F	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	FTYROW: From stop sign	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	Ditch	

I.

Crash Detail Report

20191102041	**03/01/2019 17:12**	K042/K42 AND 170TH ST AND JET RD
County: Plymouth	**City:**	

Major Cause: FTYROW: From stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Property Damage Only **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Cloudy

Possible Injuries: 0 **Drug/Alc Involved:** None Indicated

Severity:: Property Damage Only **Property Damage:** $13,000 **Number of Vehicles:** 2

	Unit	Unit	Unit
Init Trav Dir:			
Veh Action:			
Configuration:			
Driver Age:			
Driver Gender:			
Driver Cond:			
Driver Contr 1:			
Driver Contr 2:			
Fixed Object:			

20191126466	**07/31/2019 18:07**	K042/K42 MEASURING 15 FEET SOUTH FROM K042/K42 AND 170TH ST AND JET RD
County: Plymouth	**City:**	

Major Cause: Ran stop sign

Roadway Type: Intersection: Four-way intersection

Severity:: Possible/Unknown Injury **Manner of Crash:** Broadside (front to side)

Fatalities: 0 **Surface Conditions:** Dry

Major Injuries: 0 **Light Conditions:** Daylight

Minor Injuries: 0 **Weather Conditions:** Clear

Possible Injuries: 2 **Drug/Alc Involved:** None Indicated

Severity:: Possible/Unknown Injury **Property Damage:** $5,177 **Number of Vehicles:** 2

	Unit	Unit	Unit
Init Trav Dir:			
Veh Action:			
Configuration:			
Driver Age:			
Driver Gender:			
Driver Cond:			
Driver Contr 1:			
Driver Contr 2:			
Fixed Object:			

I.

Crash Detail Report

20171019228	**12/03/2017 21:10**	STATE 3/IOWA 3 MEASURING 200 FEET WEST FROM K042/K42 AND STATE 3/IOWA 3
County: Plymouth	**City:**	

Major Cause: Animal

Roadway Type: Feature: Non-junction/no special feature

Severity:: Property Damage Only

Manner of Crash: Non-collision (single vehicle)

Fatalities: 0

Surface Conditions: Dry

Major Injuries: 0

Light Conditions: Dark - roadway not lighted

Minor Injuries: 0

Weather Conditions: Clear

Possible Injuries: 0

Drug/Alc Involved: None Indicated

Severity:: Property Damage Only

Property Damage: $3,000

Number of Vehicles: 1

	Unit	Unit	Unit
Init Trav Dir:			
Veh Action:			
Configuration:			
Driver Age:			
Driver Gender:			
Driver Cond:			
Driver Contr 1:			
Driver Contr 2:			
Fixed Object:			

20181058333	**06/17/2018 05:50**	K042/K42 AND 170TH ST AND JET RD MEASURING 1649 FEET SOUTH FROM K042/K42
County: Plymouth	**City:**	

Major Cause: Animal

Roadway Type: Not reported

Severity:: Property Damage Only

Manner of Crash: Not reported

Fatalities: 0

Surface Conditions: Not reported

Major Injuries: 0

Light Conditions: Not reported

Minor Injuries: 0

Weather Conditions: Not reported

Possible Injuries: 0

Drug/Alc Involved: None Indicated

Severity:: Property Damage Only

Property Damage: $4,500

Number of Vehicles: 1

	Unit	Unit	Unit
Init Trav Dir:			
Veh Action:			
Configuration:			
Driver Age:			
Driver Gender:			
Driver Cond:			
Driver Contr 1:			
Driver Contr 2:			
Fixed Object:			

I.

Crash Detail Report

2015891965	11/27/2015 14:00	K042/K42 MEASURING 2161 FEET NORTH FROM STATE 3/IOWA 3 AND K042/K42
County: Plymouth	City:	

Major Cause: Ran off road - right

Roadway Type: Feature: Non-junction/no special feature

Severity:: Possible/Unknown Injury Crash

Manner of Crash: Non-collision (single vehicle)

Fatalities: 0

Surface Conditions: Ice/frost

Major Injuries: 0

Light Conditions: Daylight

Minor Injuries: 0

Weather Conditions: Clear

Possible Injuries: 1

Drug/Alc Involved: None Indicated

Severity:: Possible/Unknown Injury Crash

Property Damage: $1,750

Number of Vehicles: 1

	Unit 1	Unit	Unit
Init Trav Dir:	South		
Veh Action:	Movement essentially straight		
Configuration:	Sport utility vehicle		
Driver Age:	42		
Driver Gender:	F		
Driver Cond:	Unknown		
Driver Contr 1:	Lost control		
Driver Contr 2:	Not reported		
Fixed Object:	Tree		

20160949742	11/02/2016 10:45	K042/K42 MEASURING 3303 FEET NORTH FROM STATE 3/IOWA 3 AND K042/K42
County: Plymouth	City:	

Major Cause: Followed too close

Roadway Type: Feature: Non-junction/no special feature

Severity:: Possible/Unknown Injury Crash

Manner of Crash: Sideswipe (same direction)

Fatalities: 0

Surface Conditions: Dry

Major Injuries: 0

Light Conditions: Daylight

Minor Injuries: 0

Weather Conditions: Cloudy

Possible Injuries: 1

Drug/Alc Involved: None Indicated

Severity:: Possible/Unknown Injury Crash

Property Damage: $18,000

Number of Vehicles: 2

	Unit	Unit	Unit
Init Trav Dir:			
Veh Action:			
Configuration:			
Driver Age:			
Driver Gender:			
Driver Cond:			
Driver Contr 1:			
Driver Contr 2:			
Fixed Object:			

I.

Crash Detail Report

2014779254	01/11/2014 00:30	K042/K42 MEASURING 1349 FEET NORTH FROM STATE 3/IOWA 3 AND K042/K42
County: Plymouth	**City:**	

Major Cause: Ran off road - left

Roadway Type: Feature: Non-junction/no special feature

Severity:: Suspected Minor Injury

Manner of Crash: Non-collision (single vehicle)

Fatalities: 0

Surface Conditions: Ice/frost

Major Injuries: 0

Light Conditions: Dark - roadway not lighted

Minor Injuries: 1

Weather Conditions: Clear

Possible Injuries: 0

Drug/Alc Involved: None Indicated

Severity:: Suspected Minor Injury

Property Damage: $5,050

Number of Vehicles: 1

	Unit 1	Unit	Unit
Init Trav Dir:	North		
Veh Action:	Movement essentially straight		
Configuration:	Sport utility vehicle		
Driver Age:	28		
Driver Gender:	M		
Driver Cond:	Unknown		
Driver Contr 1:	Lost control		
Driver Contr 2:	Not reported		
Fixed Object:	None (no fixed object struck)		

2015891025	11/20/2015 07:42	STATE 3/IOWA 3 AND K042/K42
County: Plymouth	**City:**	

Major Cause: Driving too fast for conditions

Roadway Type: Intersection: Four-way intersection

Severity:: Property Damage Only

Manner of Crash: Rear-end (front to rear)

Fatalities: 0

Surface Conditions: Snow

Major Injuries: 0

Light Conditions: Daylight

Minor Injuries: 0

Weather Conditions: Snow

Possible Injuries: 0

Drug/Alc Involved: None Indicated

Severity:: Property Damage Only

Property Damage: $5,000

Number of Vehicles: 2

	Unit 1	Unit 2	Unit
Init Trav Dir:	South	East	
Veh Action:	Slowing/stopping (deceleration)	Turning left	
Configuration:	Four-tire light truck (pick-up)	Tractor/semi-trailer	
Driver Age:	31	70	
Driver Gender:	M	M	
Driver Cond:	Apparently normal	Apparently normal	
Driver Contr 1:	Driving too fast for conditions	No improper action	
Driver Contr 2:	Not reported	Not reported	
Fixed Object:	None (no fixed object struck)	None (no fixed object struck)	

I.

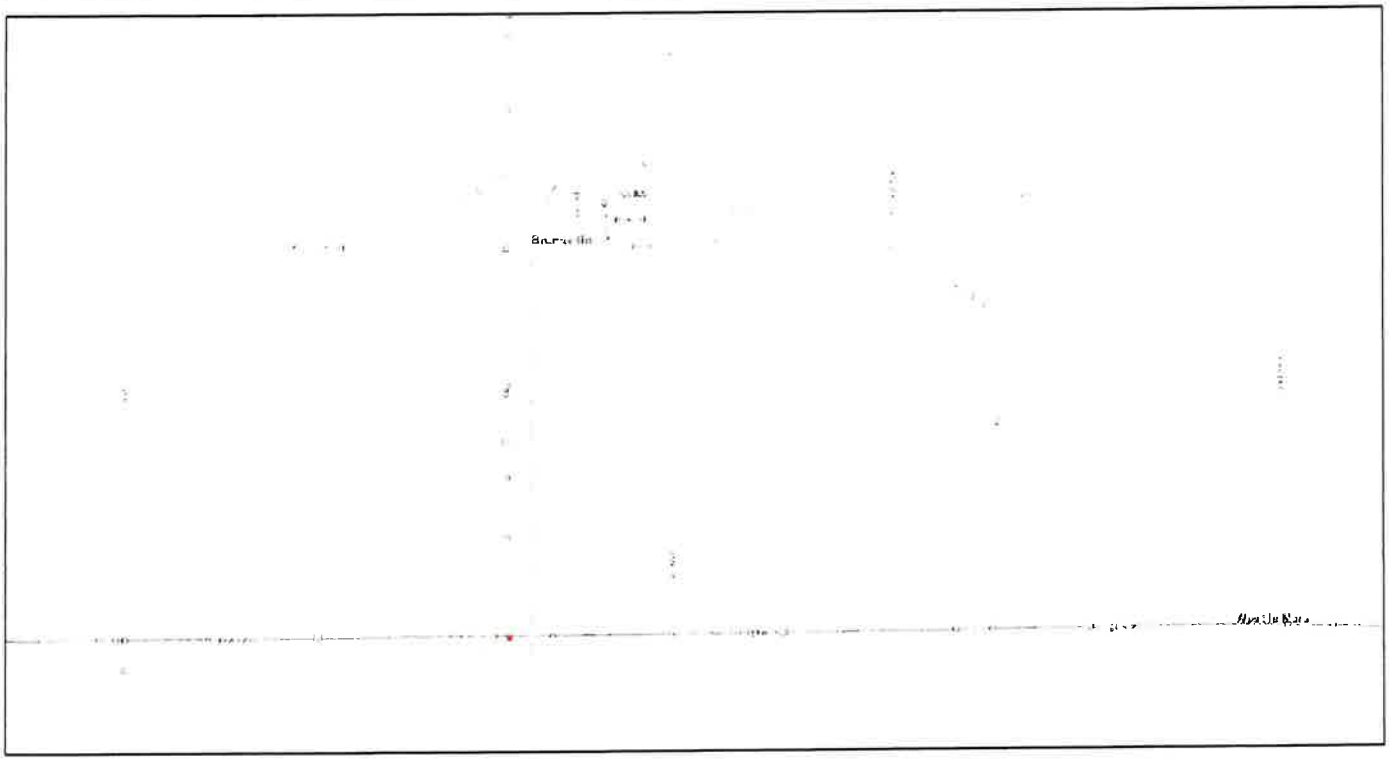
Iowa Crash Analysis Tool
Quick Report
2024

Crash Severity	2
Fatal Crash	0
Suspected Serious Injury Crash	0
Suspected Minor Injury Crash	1
Possible/Unknown Injury Crash	0
Property Damage Only	1

Injury Status Summary	1
Fatalities	0
Suspected serious/incapacitating	0
Suspected minor/non-incapacitating	1
Possible (complaint of pain/injury)	0
Uninjured	0
Unknown	0
Not Reported	0

Property/Vehicles/Occupants	
Property Damage Total (dollars):	242,000.00
Average (per crash dollars):	121,000.00
Total Vehicles:	4.00
Average (per crash):	2.00
Total Occupants:	4.00
Average (per crash):	2.00

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.50
Major Injuries/Crash:	0.00
Minor Injuries/Crash:	0.50
Possible/Unknown Injuries/Crash:	0.00



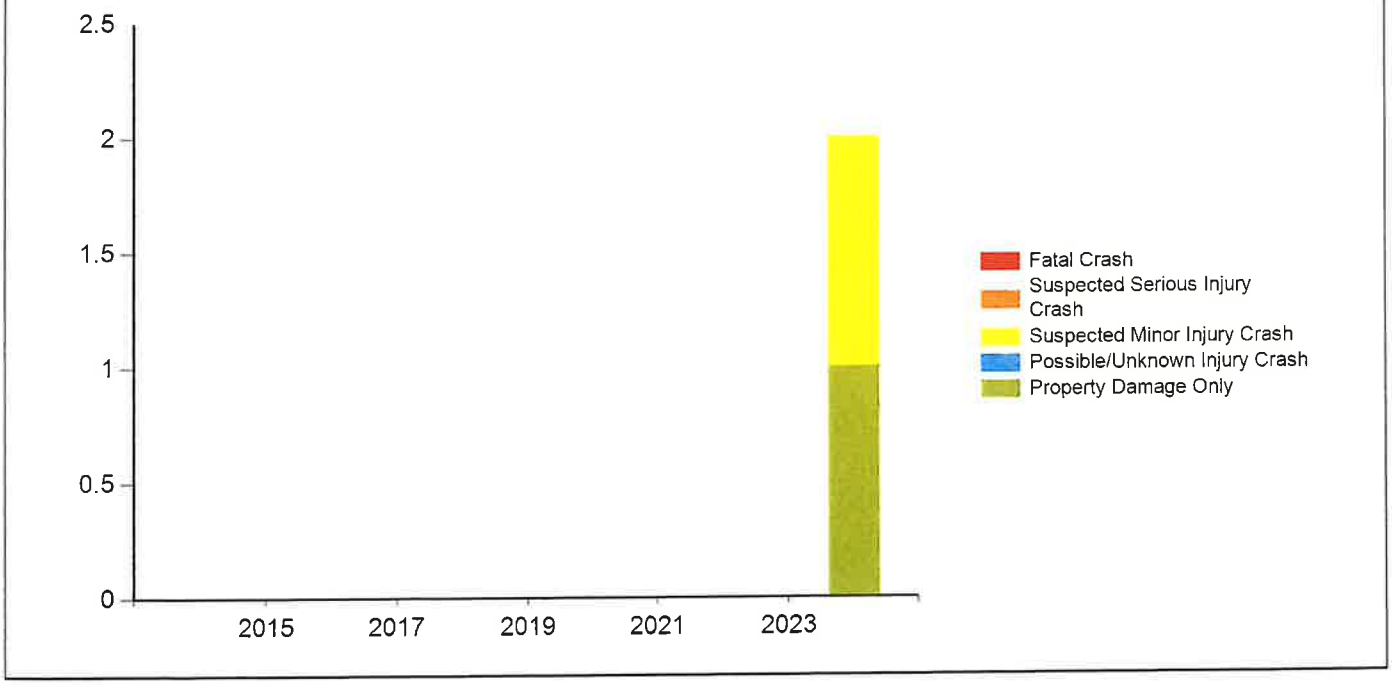
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Iowa Crash Analysis Tool
Quick Report
2024

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	0	0	0	0	0	0
2020	0	0	0	0	0	0
2021	0	0	0	0	0	0
2022	0	0	0	0	0	0
2023	0	0	0	0	0	0
2024	0	0	1	0	1	2
Total	0	0	1	0	1	2

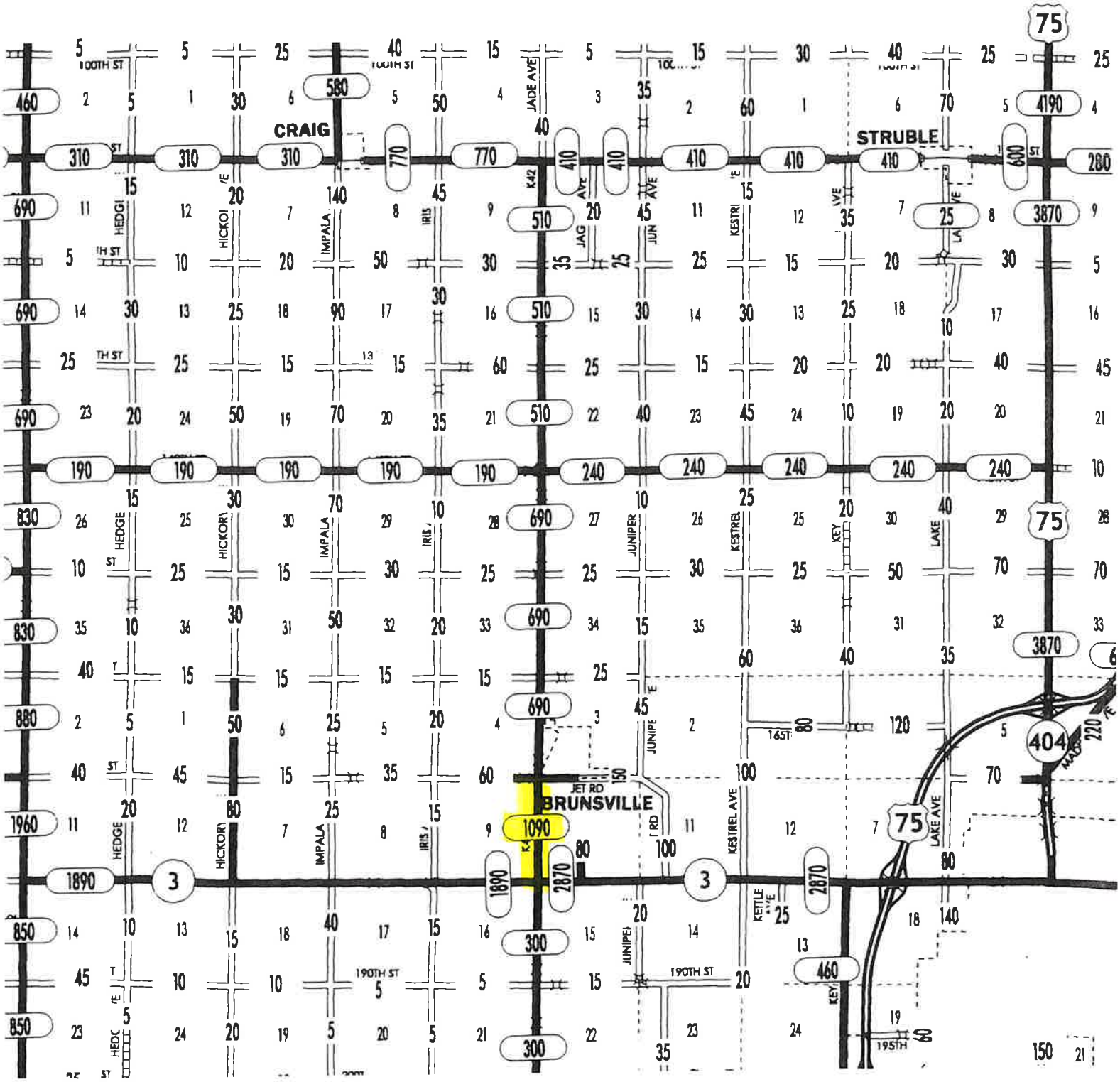
Severity/Year



2023 ANNUAL AVERAC

HISTORICAL ANNUAL A

R-46W



6.2.3. Prioritized Segment Recommendations

Project sheets were developed for segment locations with the greatest amount of risk factor points. The segments for which project sheets were developed (those with the greatest amount of risk factor points) are summarized in **Table 14** and the project sheets are included in **Appendix B2**. Also included in the table are the high-scoring intersections and high-scoring curves that fall within the segments.

Table 14 - Prioritized Segment Recommendations

GPS ID	Segment	Segment Length (miles)	Risk Factor Points	High Scoring Intersections (GPS ID)	High Scoring Curves (GPS ID)	Estimated Project Cost
7198	C80 between K22 and US 75	3	14	63542 64045	71, 84, 88	$172,000
7145	**K18 between Big Sioux River and South County Line**	**6**	**13**	**63410**		**$1,494,000**
7149	K22 between CR C60 and IA 3	11	13	63523		$2,354,000
7209	**C60 between South Ridge Road and Pine Avenue**	**7**	**13**	**63523**		**$1,785,000**
7148	K22 between Deerfield Drive and C60	5	13	63523, 63537, 63542	56, 59	$1,406,000
7195	**L14 between South County Limits/100th Street and East 1st Street**	**2**	**12**			**$103,000**
7180	K49 between South County Line and Le Mars	14	12			$2,315,000
7221	**C38 between Cedar Avenue and Keystone Avenue**	**17**	**12**			**$4,165,000**
7225	190th Street between 16th Avenue East and Oyens Avenue	4	12			$254,000
7150	**K22 between IA 3 and 100th Street**	**7**	**11**			**$1,195,000**
7194	L14 between IA 3 and 510th Street	7	11			$404,000
7220	**C38 between 0.4 miles W of Lake Avenue and Almond Avenue**	**17**	**11**			**$4,285,000**
9538**	K42 between IA 3 and Brunsville	1	10			$365,000
7208	**C60 between 600ft E Of NCenter Street and 0.3 miles W Of Oyens Avenue**	**12**	**10**	**63507**	**122**	**$3,374,000**
7163	K42 between Northside Court and C38	2	8			$500,000
Total (15 Segments)						**$24,171,000**

**Segment added at the request of the County Engineer.

WASHINGTON COUNTY, IOWA

Transportation Safety Improvement Program

FY2026 Grant Application – Site Specific

Prepared by:
Washington County Engineer's Office
210 West Main Street, Washington, IA 52353

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GRANT APPLICATION

Rev. 07/23

IOWA DOT

Application for SITE-SPECIFIC TSIP FUNDS

GENERAL INFORMATION **DATE:** August 11, 2025

Location / Title of Project W38 Shoulders – IA 92 to 170th Street

Applicant Washington County

Contact Person Jacob Thorius Title County Engineer

Complete Mailing Address 210 W Main Street

Washington, IA 52353

Phone (319) 653-7731 (Area Code) E-Mail jthorius@washingtoncounty.iowa.gov

If more than one highway authority is involved in this project, please indicate and fill in the information below (use additional sheets if necessary).

Co-Applicant(s) N/A

Contact Person N/A Title N/A

Complete Mailing Address N/A

Phone N/A (Area Code) E-Mail N/A

PLEASE COMPLETE THE FOLLOWING PROJECT INFORMATION:

Funding Amount

Total Safety Cost	$	1,141,394.12
Total Project Cost	$	4,022,751.32
Safety Funds Requested	**$**	**500,000.00**

Additional Project Safety Documentation (when available):

- ☐ Project information sheet(s) or "Risk Score">50% from County/City's Local Road Safety Plan
- ☐ FHWA SS4A Safety Action Plan or similar comprehensive transportation safety plan
- ☐ Iowa DOT TEAP Study or similar analysis and concept
- ☐ Project intersection or segment with High or Medium PCR Level (PCR-All or PCR-Severe) from the Iowa DOT Potential for Crash Reduction (PCR) web-based map tool https://pcr.iowadot.gov/

Potential for Crash Reduction (PCR) Information					
Intersection ID (1234567890) or Segment ID (1234)	Intersection or Segment	PCR Level High	PCR Level Medium	PCR-All value	PCR-Severe value
		☐	☐		
		☐	☐		

A. APPLICATION CERTIFICATION

Rev. 07/23

APPLICATION CERTIFICATION FOR PUBLIC AGENCY

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating public agency(ies). I understand the attached resolution(s), where applicable, binds the participating public agency(ies) to assume responsibility for any additional funds, if required, to complete the project. In addition, the participating public agency(ies) agrees to maintain any new or improved public streets or roadways for a minimum of five years.

I understand that, although this information is sufficient to secure a commitment of funds, a firm contract between the applicant and the Department of Transportation is required prior to the authorization of funds.

Representing the County of Washington

Signed: _____ 8/11/2025
Signature Date Signed

Jacob Thorius
Printed Name

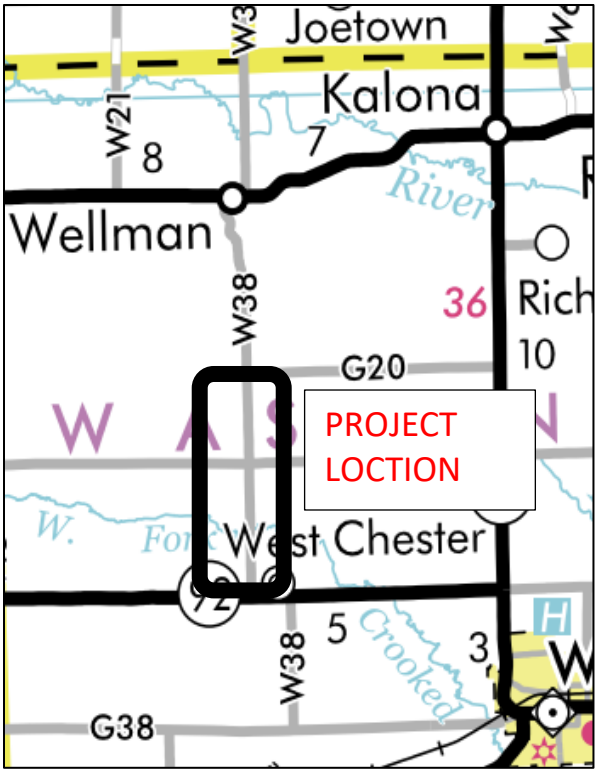
Attest: _____ 8/11/2025
Signature Date Signed

Kathy Dolan
Printed Name

B. PROJECT NARRATIVE

Summary

Washington County is applying for TSIP Funds to improve the safety of an approximate 5.0-mile stretch of County Road W38 by adding paved shoulders, centerline and shoulder rumble strips and grooved in pavement markings.



Existing Conditions

County Highway W38 used to be IA 114 and connects Wellman to Hwy 92 and points further south in Washington County. This road was overlayed with concrete in 1981. Currently the road is 22' wide with 7' granular shoulders. Because of the age and built-up geometry, the foreslopes are 2:1 in most places, making the road unforgiving for vehicles that leave the road. The road is a connector route for traffic from the south and carries a considerable amount of farm traffic to the grain elevator located in Wellman. The current traffic count in the project area averages 700 AADT and is the only paved road south out of Wellman.

Safety Problem

The poor geometry and narrowness of the road contributes to accidents; with a variety of crash types, including single vehicle run off the road crashes. The heavy agricultural and truck traffic that utilizes the road also tend to drift onto the gravel shoulders, creating edge ruts, which is another common contributor to crashes on the road. Once a tire of the vehicle drops off the pavement the driver has to deal with an edge rut and traveling at a high speed on granular surfacing. When drivers correct this, they often over correct and cross out into the oncoming lane of traffic. The County works on a regular basis to address the edge rut as part of its routine maintenance program, but that becomes difficult in the winter and creates another conflict point for the traveling public when they encounter the large slow moving maintenance equipment. The County's recently updated 2025 Local Road Safety Plan (see Section M) identified this road segment as benefiting from paved shoulders and shoulder rumbles.

In addition to the documentable accidents, County staff have observed many "near miss" accidents that were avoided by chance. Since these are typically lane cross over situations, their potential for grave collisions is significant.

Proposed Project

Washington County is proposing to widen the travel lanes by 1', add 4' paved shoulders with sinusoidal rumble strips, sinusoidal centerline rumble strips and grooved in pavement markings. TSIP funds are requested to assist in paying for these proposed safety improvements. These countermeasures have proven effective in reducing accidents and eliminating edge ruts elsewhere in Washington County and across Iowa.

C. ITEMIZED BREAKDOWN OF ALL COSTS

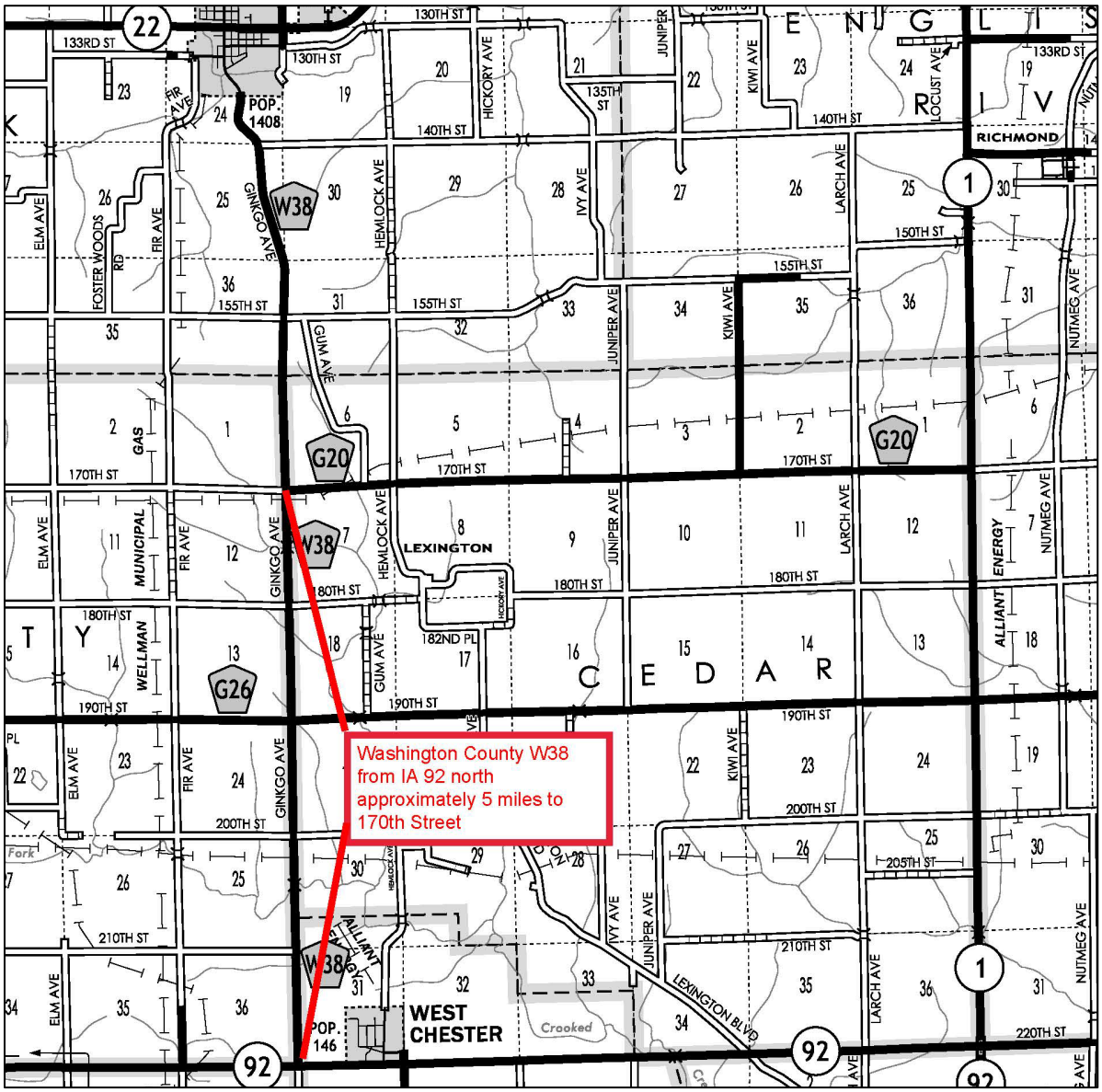
ITEM	BID ITEM	DESCRIPTION	UNIT	OVERLAY + GRAVEL SHOULDER	OVERLAY + SAFETY SHOULDER	ENGINEER ESTIMATE	TOTAL ORIGINAL PROJECT	TOTAL SAFETY PROJECT
1	2102-0425070	SPECIAL BACKFILL	TON	336	476	28.02	9,414.72	13,337.52
2	2102-2625000	EMBANKMENT-IN-PLACE	CY	150	150	17.00	2,550.00	2,550.00
3	2105-8425005	TOPSOIL, FURNISH AND SPREAD	CY	0	0	27.36	0.00	0.00
4	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	12,012	1,848	30.00	360,360.00	55,440.00
5	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	528	528	250.00	132,000.00	132,000.00
6	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING	CY	0	3,911	19.27	0.00	75,367.11
7	2213-7100400	RELOCATION OF MAIL BOXES	EACH	10	10	275.00	2,750.00	2,750.00
8	2301-1034080	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE	SY	1,467	2,134	53.50	78,484.50	114,169.00
9	2310-5151040	PORTLAND CEMENT CONCRETE OVERLAY, FURNISH ONLY	CY	14,015	23,570	120.00	1,681,777.78	2,828,444.44
10	2310-5151045	PORTLAND CEMENT CONCRETE OVERLAY, PLACEMENT ONL	SY	63,067	91,734	4.00	252,268.00	366,936.00
11	2310-8300550	PAVEMENT INTERLAYER GEOTEXTILE	SY	65,933	65,933	3.40	224,172.20	224,172.20
12	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	500	500	28.38	14,190.00	14,190.00
13	2510-6745850	REMOVAL OF PAVEMENT	SY	1,467	1,467	10.00	14,670.00	14,670.00
14	2515-6745600	REMOVAL OF PAVED DRIVEWAY	SY	0	0	10.00	0.00	0.00
15	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT	STA	0	290	26.00	0.00	7,540.00
16	2527-9270112	GROOVES CUT FOR PAVEMENT MARKINGS	STA	0	528	30.09	0.00	15,887.52
17	2528-8445110	TRAFFIC CONTROL	LS	1	1	10,000.00	10,000.00	10,000.00
18	2533-4980005	MOBILIZATION	LS	1	1	75,000.00	75,000.00	75,000.00
19	2548-0000200	MILLED SHOULDER RUMBLE STRIPS, PCC SURFACE	STA	0	528	60.00	0.00	31,680.00
20	2548-0000320	MILLED CENTERLINE RUMBLE STRIPS, PCC SURFACE	STA	0	264	56.43	0.00	14,897.52
21	2601-2634100	MULCHING	ACRE	10	10	700.00	6,790.00	6,790.00
22	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	10	10	1,000.00	9,700.00	9,700.00
23	2601-2636044	SEEDING AND FERTILIZING (URBAN)	ACRE	0	0	2,000.00	0.00	0.00
24	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	10	10	400.00	3,880.00	3,880.00
25	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URB	ACRE	0	0	1,500.00	0.00	0.00
26	2602-0000020	SILT FENCE	LF	500	500	3.00	1,500.00	1,500.00
27	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DIT	LF	50	50	1.00	50.00	50.00
28	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	1	1	600.00	600.00	600.00
29	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1	1	1,200.00	1,200.00	1,200.00
Total							**2,881,357.20**	**4,022,751.32**

TOTAL ESTIMATE COST OF PROPOSED SAFETY IMPROVEMENTS =	**1,141,394.12**

D. TIME SCHEDULE

	2025					2026											2027
Phase	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Application Phase																	
Design Phase																	
Bid and Award																	
Construction Phase																	

E. PROJECT LOCATION



F. COLOR PICTURES



Photo 1: Typical section with edge rutting.

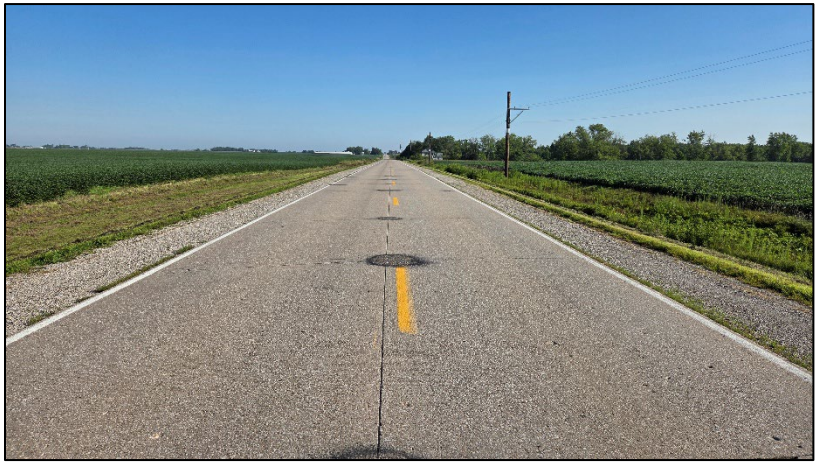


Photo 2: Typical view of roadway.



Photo 3: Typical view with share the road signage.

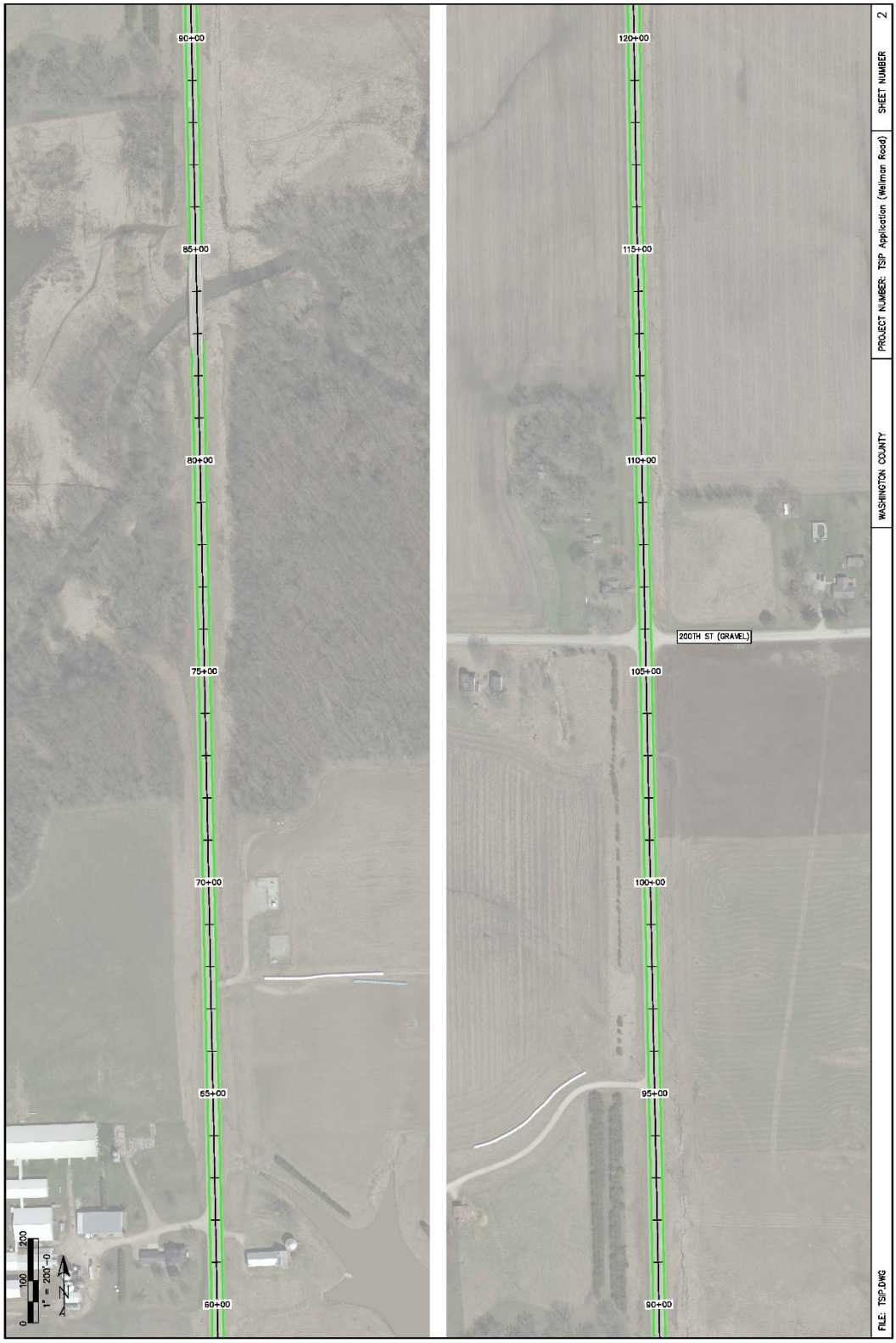


Photo 4: Typical view (note width of rutting).

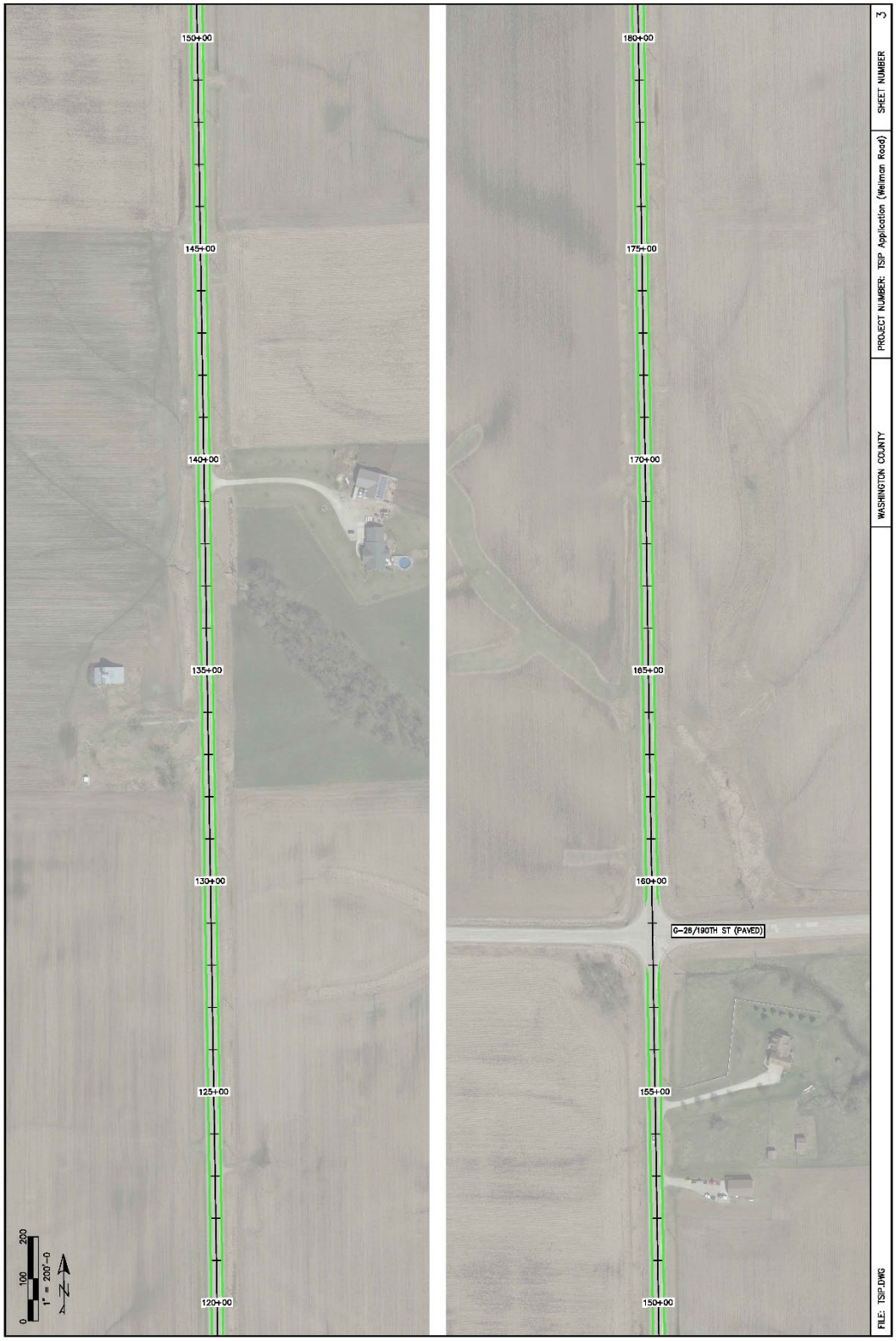
G. PLAN VIEW (NOTE: All work to be completed within existing ROW.)



G. PLAN VIEW (cont.)



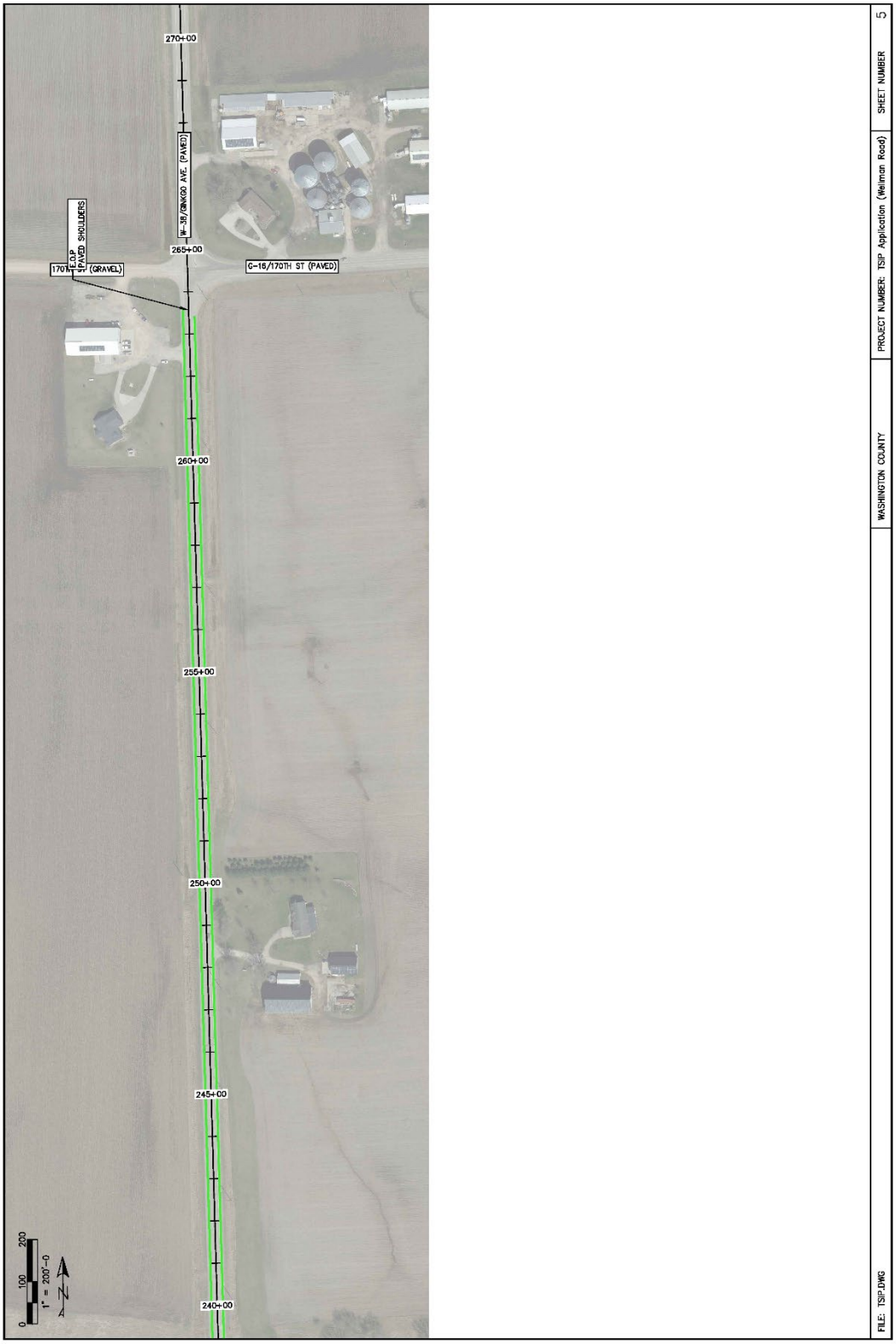
G. PLAN VIEW (cont.)



G. PLAN VIEW (cont.)



G. PLAN VIEW (cont.)



H. AERIAL PHOTOGRAPH



Project begins on W-38 (Ginkgo Avenue) at the IA 92 and goes north approximately 5.0 miles to G-20 (170th Street).

I. ICAT CRASH SUMMARY

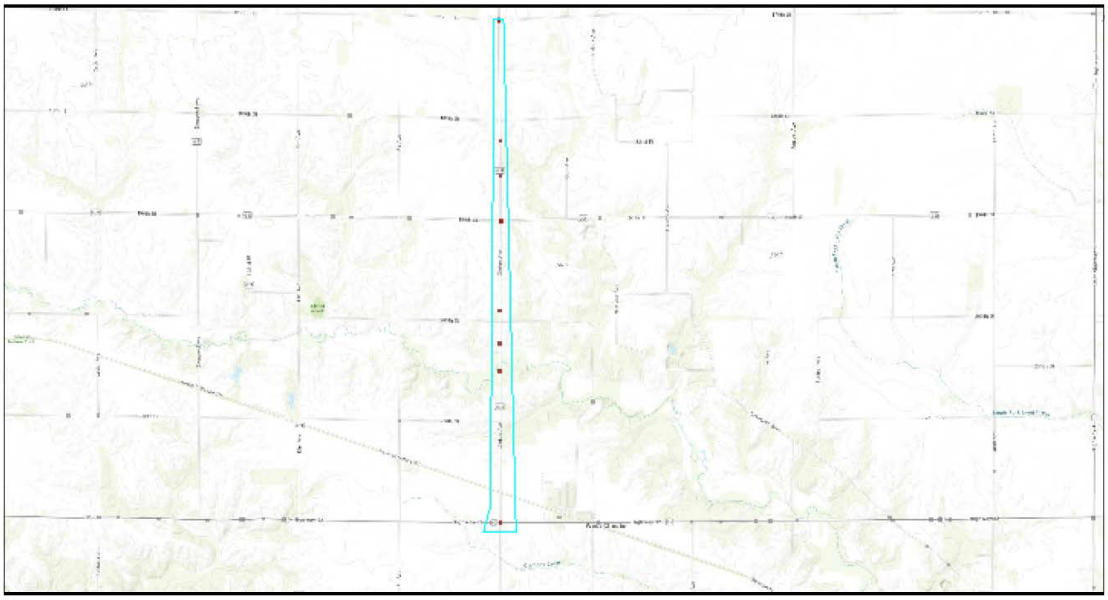
Iowa Crash Analysis Tool
Quick Report
2015-2025

Crash Severity	14
Fatal Crash	0
Suspected Serious Injury Crash	1
Suspected Minor Injury Crash	2
Possible/Unknown Injury Crash	0
Property Damage Only	11

Injury Status Summary	7
Fatalities	0
Suspected serious/incapacitating	1
Suspected minor/non-incapacitating	4
Possible (complaint of pain/injury)	0
Uninjured	0
Unknown	0
Not Reported	2

Property/Vehicles/Occupants	
Property Damage Total (dollars):	396,424.00
Average (per crash dollars):	28,316.00
Total Vehicles:	22.00
Average (per crash):	1.57
Total Occupants:	33.00
Average (per crash):	2.36

Average Severity	
Fatalities/Fatal Crash:	0.00
Fatalities/Crash:	0.00
Injuries/Crash:	0.36
Major Injuries/Crash:	0.07
Minor Injuries/Crash:	0.29
Possible/Unknown Injuries/Crash:	0.00



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I. ICAT CRASH SUMMARY (cont.)

Iowa Crash Analysis Tool
Quick Report
2015-2025

Major Cause			14
Animal	4	Ran traffic signal	0
Ran stop sign	5	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	1	FTYROW: From yield sign	0
FTYROW: Making left turn	1	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	0	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	0
Crossed median (divided)	0	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	0
Exceeded authorized speed	0	Improper or erratic lane changing	0
Operating vehicle in an reckless/erratic/care...	0	Followed too close	0
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	0
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	0	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	0	Ran off road - right	2
Ran off road - straight	0	Ran off road - left	0
Lost control	0	Swerving/Evasive Action	0
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	0	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	0
Unknown	1	Not reported	0
Other: No improper action	0		

08/12/2025 2 of 7

I. ICAT CRASH SUMMARY (cont.)

IOWA DOT

Iowa Crash Analysis Tool
Quick Report
2015-2025

Time of Day/Day of Week														
Day of Week	12 AM to 2 AM	2 AM to 4 AM	4 AM to 6 AM	6 AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	6 PM to 8 PM	8 PM to 10 PM	10 PM to 12 AM	Not reported	Total
Sunday	1	0	0	0	0	0	0	0	0	1	0	0	0	2
Monday	0	0	0	2	0	0	1	1	1	0	0	0	0	5
Tuesday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Wednesday	0	0	0	0	0	0	0	1	0	1	0	0	0	2
Thursday	0	0	0	0	1	0	0	0	0	0	2	0	0	3
Friday	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Saturday	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	2	1	0	1	2	3	2	2	0	0	14

Manner of Crash Collision	14
Non-collision (single vehicle)	5
Head-on (front to front)	0
Rear-end (front to rear)	0
Angle (oncoming left turn)	1
Broadside (front to side)	6
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	1
Other	1
Unknown	0

Surface Conditions	14
Dry	13
Wet	0
Ice/frost	0
Snow	0
Slush	0
Mud/dirt	0
Water (standing or moving)	0
Sand	0
Oil	0
Gravel	0
Not reported	1
Other	0
Unknown	0

Fixed Object Struck			22
Bridge overhead structure	0	Bridge pier or support	0
Bridge/bridge rail parapet	0	Curb/island/raised median	0
Ditch	1	Embankment	0
Ground	0	Culvert/pipe opening	0
Guardrail - face	0	Guardrail - end	0
Concrete traffic barrier (median or right sid...	0	Other traffic barrier	0
Cable barrier	0	Impact attenuator/crash cushion	0
Utility pole/light support	0	Traffic sign support	0
Traffic signal support	0	Other post/pole/support	0
Fire hydrant	0	Mailbox	0
Tree	0	Landscape/shrubbery	0
Snow bank	0	Fence	0
Wall	0	Building	0
Other fixed object	0	None (no fixed object struck)	21

08/12/2025 3 of 7

I. ICAT CRASH SUMMARY (cont.)

IOWA DOT

Iowa Crash Analysis Tool
Quick Report
2015-2025

Driver Age/Driver Gender					
Driver Age - 5 year Bins	Female	Male	Not reported	Unknown	**Total**
< 14	0	1	0	0	1
= 14	0	0	0	0	0
= 15	1	0	0	0	1
= 16	1	1	0	0	2
= 17	1	0	0	0	1
= 18	0	0	0	0	0
= 19	0	1	0	0	1
= 20	1	0	0	0	1
>= 21 and <= 24	0	2	0	0	2
>= 25 and <= 29	0	1	0	0	1
>= 30 and <= 34	0	0	0	0	0
>= 35 and <= 39	2	1	0	0	3
>= 40 and <= 44	0	0	0	0	0
>= 45 and <= 49	0	1	0	0	1
>= 50 and <= 54	0	1	0	0	1
>= 55 and <= 59	1	1	0	0	2
>= 60 and <= 64	0	0	0	0	0
>= 65 and <= 69	0	0	0	0	0
>= 70 and <= 74	0	0	0	0	0
>= 75 and <= 79	1	0	0	0	1
>= 80 and <= 84	0	1	0	0	1
>= 85 and <= 89	0	1	0	0	1
>= 90 and <= 94	0	0	0	0	0
>= 95	0	0	0	0	0
Not reported	0	0	0	0	0
Unknown	0	0	2	0	2
Total	8	12	2	0	22

Drug/Alcohol Related	14
Drug	0
Alcohol (< Statutory)	1
Alcohol (Statutory)	0
Drug and Alcohol (< Statutory)	0
Drug and Alcohol (Statutory)	0
Refused	0
Under Influence of Alcohol/Drugs/Medications	0
None Indicated	13

Alcohol Test Given	22
None	15
Blood	0
Urine	0
Breath	2
Vitreous	0
Refused	0
Not reported	5

Drug Test Given	22
None	17
Blood	0
Urine	0
Breath	0
Vitreous	0
Refused	0
Not reported	5

Drug Test Result	17
Negative	0
Cannabis	0
Central Nervous System depressants	0
Central Nervous System stimulants	0
Hallucinogens	0
Inhalants	0
Narcotic Analgesics	0
Dissociative Anesthetic (PCP)	0
Prescription Drug	0
Not reported	17
Other	0

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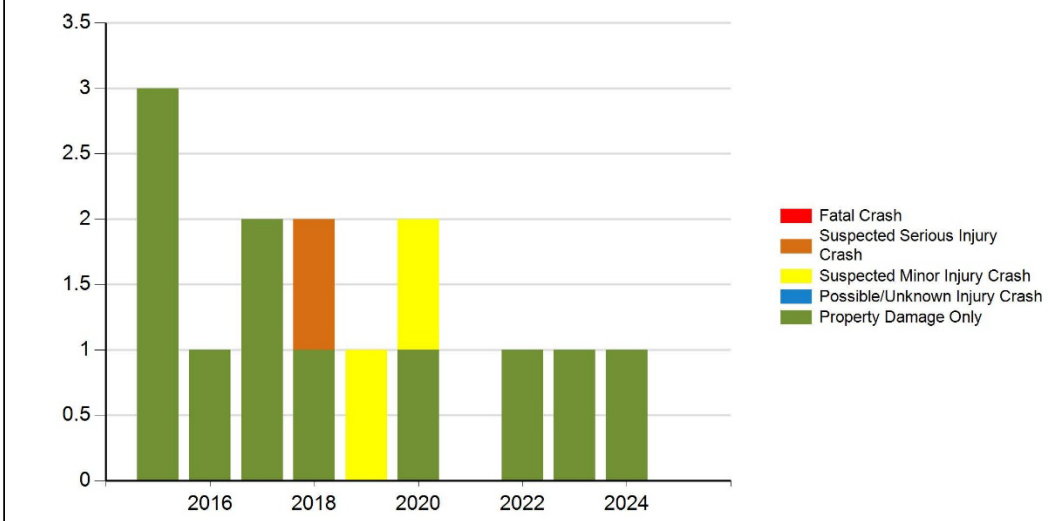
I. ICAT CRASH SUMMARY (cont.)

Iowa Crash Analysis Tool
Quick Report
2015-2025

Crash Severity - Annual

Crash Year	Fatal Crash	Suspected Serious Injury Crash	Suspected Minor Injury Crash	Possible/Unknown Injury Crash	Property Damage Only	Total
2015	0	0	0	0	3	3
2016	0	0	0	0	1	1
2017	0	0	0	0	2	2
2018	0	1	0	0	1	2
2019	0	0	1	0	0	1
2020	0	0	1	0	1	2
2021	0	0	0	0	0	0
2022	0	0	0	0	1	1
2023	0	0	0	0	1	1
2024	0	0	0	0	1	1
2025	0	0	0	0	0	0
Total	0	1	2	0	11	14

Severity/Year



08/12/2025 5 of 7

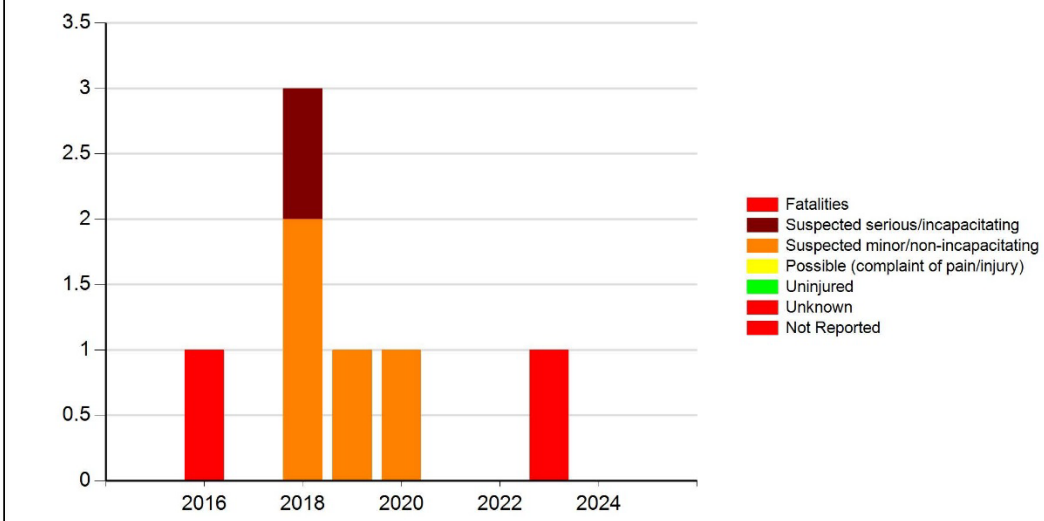
I. ICAT CRASH SUMMARY (cont.)

Iowa Crash Analysis Tool
Quick Report
2015-2025

Injury Status - Annual

Crash Year	Fatalities	Suspected serious/incapacitating	Suspected minor/non-incapacitating	Possible (complaint of pain/injury)	Uninjured	Unknown	Not Reported	**Total**
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	1	1
2017	0	0	0	0	0	0	0	0
2018	0	1	2	0	0	0	0	3
2019	0	0	1	0	0	0	0	1
2020	0	0	1	0	0	0	0	1
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	1	1
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
Total	0	1	4	0	0	0	2	7

Injury Status/Year



08/12/2025 6 of 7

I. ICAT CRASH SUMMARY (cont.)

Iowa Crash Analysis Tool
Quick Report
2015-2025

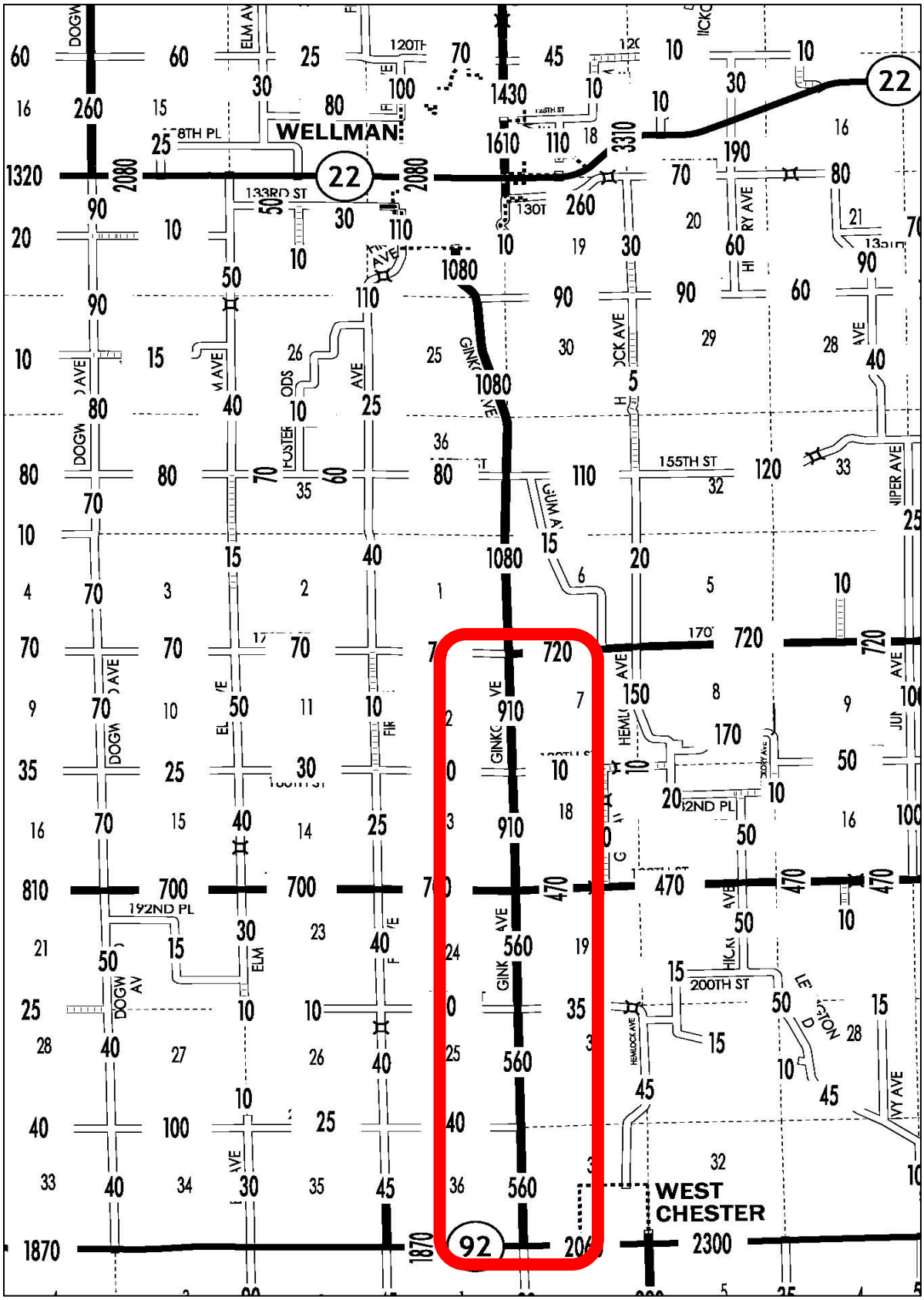
Meeting the following criteria

Jurisdiction: Counties (Washington)
Year: 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025
Map Selection: Yes
Filter: None

Analyst Information

08/12/2025 7 of 7

J. RECENT TRAFFIC VOLUME (2018 AADT from the Iowa DOT)



K. SIGNALS (NO Signals Proposed)

L. BENEFIT/COST RATIO WORKSHEET

IOWADOT

Safety Benefit-Cost Ratio

County:	Washington	Prepared By:	Jacob Thorius, PE
Location:	W38 Shoulders - IA 92 to 170th Stree	Date Prepared:	8/11/2025
Proposed Improvements:	Widen lanes from 11 feet to 12 feet, add 4 foot paved shoulders with rumble strips, centerline rumble strips & grooved pavement markings		
Estimated Improvement Cost:	$ 1,141,394		
Inflation on Crash Costs:	4%	Annual Maintenance:	2%
Discount Rate:	4%	(% of Improvement Cost)	
Estimated Service Life:	20	Annual Maintenance Cost:	$ 22,828

Method Choice: CRF Method

The Crash Reduction Factor (CRF) Method applies one to three CRFs to historical crashes to estimate reductions in future crashes. Crash Modification Factors (CMFs) can be converted to CRFs. For additional information, click the "Learn More" button.

Crash Reduction Factor (CRF) Method

Traffic Growth Factor:	1%
Number of CRFs:	3
Years of Crash History:	10

Combined CRF (Dominant Common Residuals Method)

Iowa DOT's preferred methodology for combining CRFs is Dominant Common Residuals, since it is more conservative than the other options.

	CRF 1:	CRF 2:	CRF 3:	Combined CRF
CRF Value (%)	4	20	7	**23.6**

Crash Severity	Rounded Societal Costs	Crash History (Total):	CRF (from above)	Crash History - Annual Avg	Crashes Saved Annually
Fatal (K)	$ 4,300,000	0	23.6	**0.00**	**0.00**
Serious Injury (A)	$ 4,300,000	1	23.6	**0.10**	**0.02**
Minor Injury (B)	$ 290,000	2	23.6	**0.20**	**0.05**
Possible/Unknown Injury (C)	$ 135,000	0	23.6	**0.00**	**0.00**
Property Damage Only (O)	$ 20,000	11	23.6	**1.10**	**0.26**

Crash Severity	Annual Societal Benefit
Fatal (K)	**$ -**
Serious Injury (A)	**$ 101,494**
Minor Injury (B)	**$ 13,690**
Possible/Unknown Injury (C)	**$ -**
Property Damage Only (O)	**$ 5,193**

Total Benefits and Costs

		Implementation Cost	$ 1,141,394
		Present Value of Maint.	$ 310,238
Present Value Benefits (Societal Benefits)	$ 1,778,041	Present Value Costs (Impl. and Maint. Costs)	$ 1,451,632
Present Value Net Return	$ 326,409		
Benefit Cost Ratio	**1.22**		

Form continues on next page

Version: Crash costs escalated from 2018

Version 1.1
Page 1 of 2

L. BENEFIT/COST RATIO WORKSHEET

IOWADOT

Safety Benefit-Cost Ratio

County:	Washington	Prepared By:	Jacob Thorius, PE
Location:	W38 Shoulders - IA 92 to 170th Stree	Date Prepared:	8/11/2025

User Input Required - Custom Values Used

General Customizations

No change to Crash Costs

No change to Discount Rate

No change to Maintenance Costs

Method-Specific Customizations

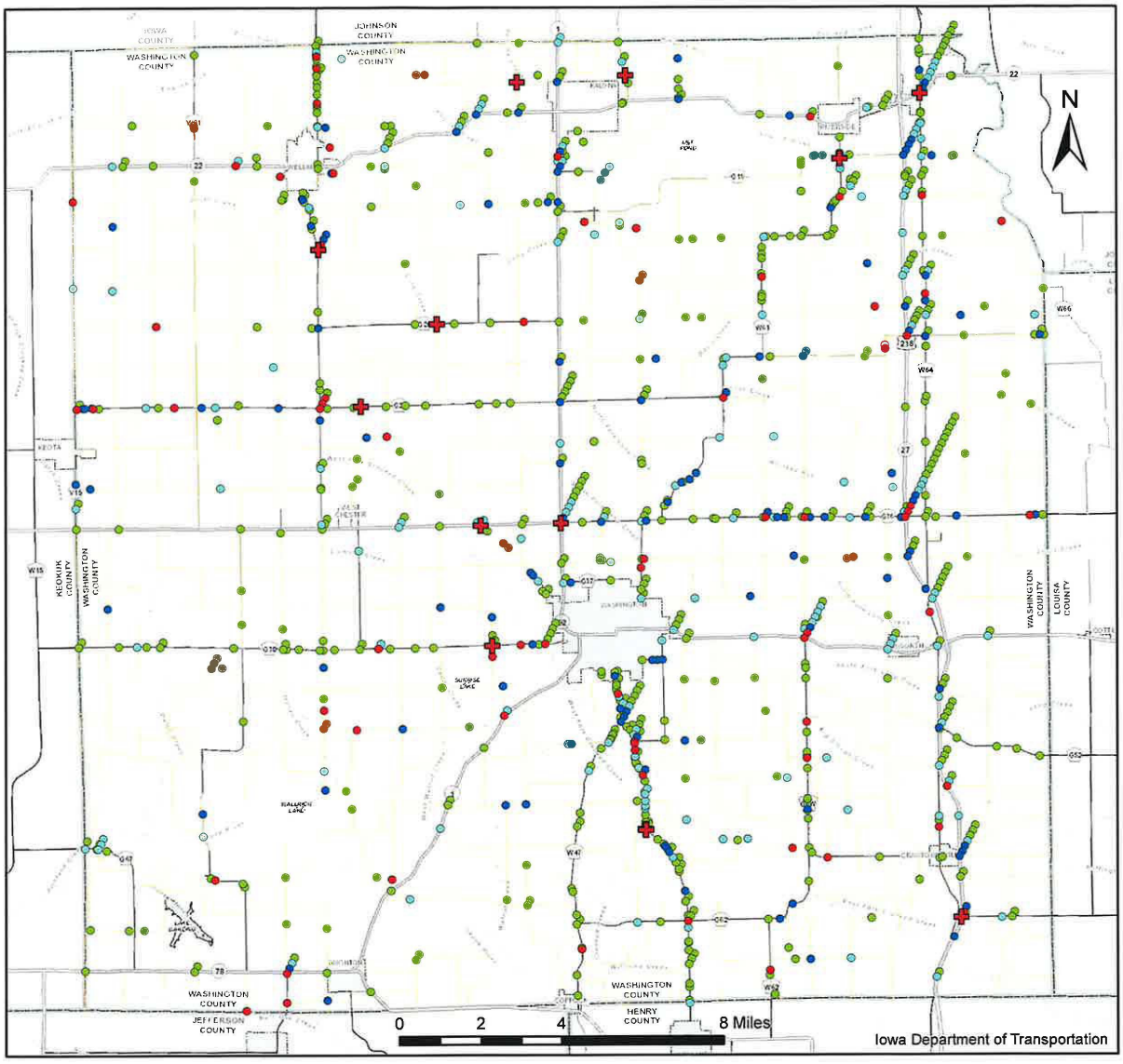
No change to Traffic Growth Rate

Justification for deviation from default Crash History	A 10 year crash history was used to show the greater history of crashes on this stretch of road. This change resulted in nearly tripling the number of crashes experienced and shows a greater history of run off the road and crossing the centerline crashes, which the safety improvement project is trying to address. In addition, in reviewing A Crash Severity map for Washington County from 2005-2014, prepared by CTRE with information from the Iowa DOT crash database, we count at least 14 more crashes along this corridor.

Version: Crash costs escalated from 2018

Version 1.1
Page 2 of 2

L. BENEFIT/COST RATIO WORKSHEET



All Secondary Road Crashes in Washington County, Iowa
2005–2014

Crash Severity

- Fatal (13)
- Major Injury (76)
- Minor Injury (129)
- Possible/Unknown Injury (152)
- Property Damage Only (550)

- Primary Roads
- Paved Secondary Roads
- Unpaved Secondary Roads

Disclaimer:
The information contained in this report was derived from the Aug 15, 2015 Iowa Department of Transportation crash database. If errors or odd cases are found, please communicate the case number or send a printed crash report to Michael Pawlovich, Iowa DOT, Office of Traffic and Safety, (Michael.Pawlovich@dot.iowa.gov, 515.239.1428). Since the database is actively being updated, edited, and reviewed, some of the fatality totals may differ from the Fatality Analysis Reporting System (FARS).

M. LOCAL ROAD SAFETY PLAN RECOMMENDATIONS

Safety Action Plan
Project Description for Roadway Segment Improvements

Risk Factor Points: 12

Project Name: GINKGO AVENUE between IA 92 and 0.3 miles S of 1ST ST
Agency Name: Washington County
Contact Name: Jacob Thorius
E-mail: jthorius@washingtoncounty.iowa.gov

Date: 7/9/25
Prepared By: FJC
Checked By: DJG

SEGMENT

Location Description

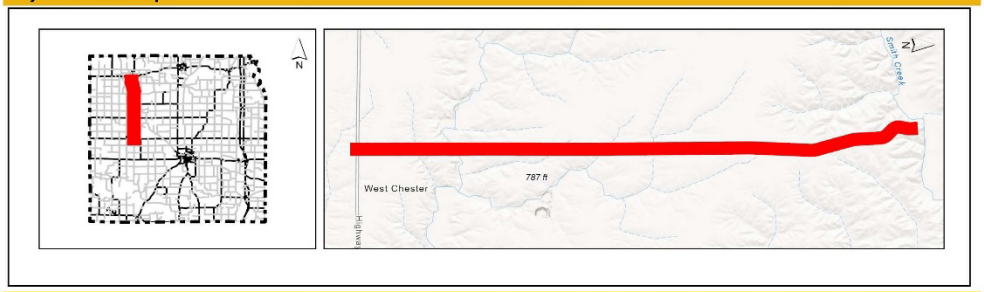
Road: **GINKGO AVENUE**
From: **IA 92**
To: **0.3 miles S of 1ST ST**
Length (miles): **8.54**

Project is within an Underserved Community?: No

GPS ID: 8709

This segment contains the following high scoring intersection: GPS ID 81690
This segment contains the following high scoring curves: GPS IDs 4603, 4608

Project Location Maps



Segment Information and Systemic Ranking Summary

Systemic Ranking Summary	Value	Points
Average Daily Traffic (ADT)	710	5
Pavement | Shoulder Width (ft)	22' | 6'	0
Potential Crash Reduction (PCR)	Medium	1
Access Points per Mile	6.0	1
High Risk Curve Density/Mile	0.1	1
Avg. Pavement Condition (IRI)	218	2
Lane Departure Crashes	11	2
Total Risk Factor Points (21 max)		**12**

Other Information	
Paved Shoulder	No
Shoulder Width (ft)	6
Speed Limit (mph)	55
Lane Width (ft)	11
Number of Lanes	2
Edgeline Rumble Strips	No
Centerline Rumble Strips	No
Curves (L>100', R≤1,000')	1
Curves with Chevrons	5

Crash Data, 2014-2023	
Total Crashes	28
K and A Crashes	3
Lane Departure Crashes	11
Lane Departure K and A Crashes	2
Total Crash Rate (per HMVMT)	126.1
K and A Crash Rate (per HMVMT)	13.5

Opinion of Probable Cost (Countermeasure Selection Threshold Results)

Item Description	Quantity	Unit	Unit Price	Item Cost
Conduct Road Safety Audit (RSA)	0	EA	$ 40,000	$ -
Conduct Access Control Analysis	0	EA	$ 30,000	$ -
Install 4" Retroreflective Edgeline (Both Sides of Road)	**8.54**	**MILE**	**$ 3,000**	**$ 25,620**
Install 6" Retroreflective Edgeline (Both Sides of Road)	0	MILE	$ 6,000	$ -
Install 4" Retroreflective Centerline	**8.54**	**MILE**	**$ 3,000**	**$ 25,620**
Pave 2' Shoulder with Safety Edge (Both Sides of Road - Includes Earth Work)	0	MILE	$ 150,000	$ -
Install Edgeline Rumble Strips (Both Sides of Road)	**8.54**	**MILE**	**$ 5,000**	**$ 42,700**
Install Centerline Rumble Strips	**8.54**	**MILE**	**$ 2,000**	**$ 17,080**
Review Curve and Provide Signage to Meet MUTCD and Iowa DOT Standards, if Needed	0	CURVE	$ 3,500	$ -
Review and Upgrade Curve Signage to Meet MUTCD and Iowa DOT Standards, if Needed	**5**	**CURVE**	**$ 1,000**	**$ 5,000**
Clear and Grub (15 ft Both Sides of Road)**	**8.54**	**MILE**	**$ 30,000**	**$ 256,200**
			Project Selection Decision Tree Systemic Improvements Subtotal:	$ 372,220

Continued on back of this page.

** Unit price varies based on average roadside risk score.

Project Location Map Sources:
Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Front Page

Kimley»Horn

Safety Action Plan
Project Description for Roadway Segment Improvements

Risk Factor Points: 12

Project Name: GINKGO AVENUE between IA 92 and 0.3 miles S of 1ST ST
Agency Name: Washington County
Contact Name: Jacob Thorius
E-mail: jthorius@washingtoncounty.iowa.gov

Date: 7/9/25
Prepared By: FJC
Checked By: DJG

SEGMENT

Opinion of Probable Cost (Additional Potential Improvements)

GPS ID: 8709

There are a variety of other safety improvements that could be considered that were not included on the front page of the project sheet due to availability of data, the need for site-specific information, and/or the appetite for the countermeasure to be deployed throughout the county. The following countermeasures could be considered appropriate by the county and included below as additional potential improvements.

Item Description	Quantity	Unit	Unit Price	Item Cost
Flatten and Widen Foreslopes (both sides of road)		MILE	$ 85,000	$ -
On-Pavement Marking for Speed Control		EA	$ 3,000	$ -
Delineate Roadside Hazard (tree or utility pole) with Retroreflective Tape		EA	$ 100	$ -
Guardrail		FOOT	$ 80	$ -
Post-Mounted Delineators		MILE	$ 5,000	$ -
Retroreflective Strips on Chevron Sign Posts		CURVE	$ 500	$ -
Transverse Rumble Strips Prior to Curve		CURVE	$ 5,000	$ -
Remove/Relocate Object in Hazardous Location		EA	$ 1,000	$ -
Superelevation Correction on Curve		CURVE	$ 50,000	$ -
Install High Friction Surface Treatment (HFST) on Curve	**2**	**CURVE**	**$ 50,000**	**$ 100,000**
Speed Activated Flasher on Chevron Sign		EA	$ 4,000	$ -
Other: Pave 2' Shoulder with Safety Edge (Both Sides of Road - Includes Earth Work)	**5**	**MILE**	**$ 150,000**	**$ 750,000**
Other:				
Other:				
Other:				
Additional Potential Improvements Subtotal:				$ 850,000
Project Selection Decision Tree Systemic Improvements Subtotal:				$ 372,220
Subtotal:				$ 1,222,220
Mobilization: (% +/-)*			10%	$ 75,000
Traffic Control: (% +/-)			5%	$ 61,156
Contingency: (% +/-)			20%	$ 244,624
Estimated Project Cost				**$ 1,603,000**

*Mobilization is 10% +/- of the subtotal with a minimum of $2,500 and a maximum of $75,000

†Note on Underserved Communities Indicator:
As part of the SS4A program an Underserved Community shares the same definition as an Area of Persistent Poverty (APP). According to the Bipartisan Infrastructure Law, an area is defined as an APP if it meets the following criteria: (A) the County consistently had greater than or equal to 20 percent of the population living in poverty in all three of the following datasets: the 1990 decennial census, the 2000 decennial census; and the most recent (2023, for the purposes of this report) Small Area Income Poverty Estimates; OR (B) the Census Tract has a poverty rate of at least 20 percent as measured by the 2014-2018 5-year data series available from the American Community Survey of the Bureau of the Census; OR (C) any territory or possession of the United States.

Opinion of Probable Construction Cost Disclaimer:
Kimley-Horn has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Kimley-Horn at this time and represent only Kimley-Horn's judgment as a design professional familiar with the construction industry. Kimley-Horn cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Project Description Form Disclaimer:
The recommended improvements contained in this project description form were developed through a Geographic Information System (GIS) database risk assessment and project decision tree selection process, as specifically stated in our scope of services. Kimley-Horn has no control over the accuracy of the GIS databases nor the suitability of the specific improvements for the location, and has provided recommended improvements for consideration by the County Engineer. The County Engineer may use this project description form to aid in the selection and development of projects, but this project description form should not be used as the sole basis for the County Engineer's decision making process. Kimley-Horn endeavored to research issues and constraints to the extent practical given the scope, budget, and schedule agreed to with the Client. The assessment is based in large part on information provided to us by others (DOT, county staff, etc.) and therefore is only as accurate and complete as the information provided to us. No formal assessment was made for the improvement recommendations contained on this page. If in question, it is recommended that a study/analysis of this location be made to warrant the above indicated improvements. This project description form is based on our knowledge as of July 2024.

End of Project Description

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