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MEMORANDUM

CASS COUNTY COMMISSION

**Highway
Department**

Jason Benson, P.E.
County Engineer

Richard S. Sieg
Superintendent

Thomas B. Soucy, P.E.
Design and Construction
Engineer

TO: Cass County Commission
FROM: Jason Benson, Cass County Engineer
DATE: December 5, 2014
SUBJECT: Agenda Item for December 15, 2014 Commission Meeting:
Safety Project Requests for the NDDOT 2016-2019
Highway Safety Improvement Program (HSIP).

The purpose of the HSIP program is to achieve a significant reduction in traffic fatalities and serious injuries on public roads through the implementation of infrastructure-related highway safety improvements. These improvements are focused on reducing lane-departure and intersection related crashes.

In June 2014, Cass County receive the final report on the Local Roads Safety Program. This program identified specific intersections and curves that can be enhanced with low cost safety improvements. The primary improvements include enhanced signing for curves and intersection lighting. These safety funds are a total of \$290,640, of which the 90% Federal share is \$261,576 and the 10% local Cass County share is \$29,064. This would include the installation of intersection lighting of \$255,000 for 25 lights at 15 intersections. It also includes improved chevron signing at six curves for \$35,640. This funding would be for the installation cost of these safety features. Cass County would assume the long term maintenance cost. For the chevron signs, this maintenance would include routine repair or replacement. Sign replacement would be approximately every 10 years at \$50 per sign. The maintenance on the intersection lighting would be approximately \$20 per month per light or about \$6,000 per year.

Once this grant application is submitted, we can expect the funding would be available for construction in 2016-2018.

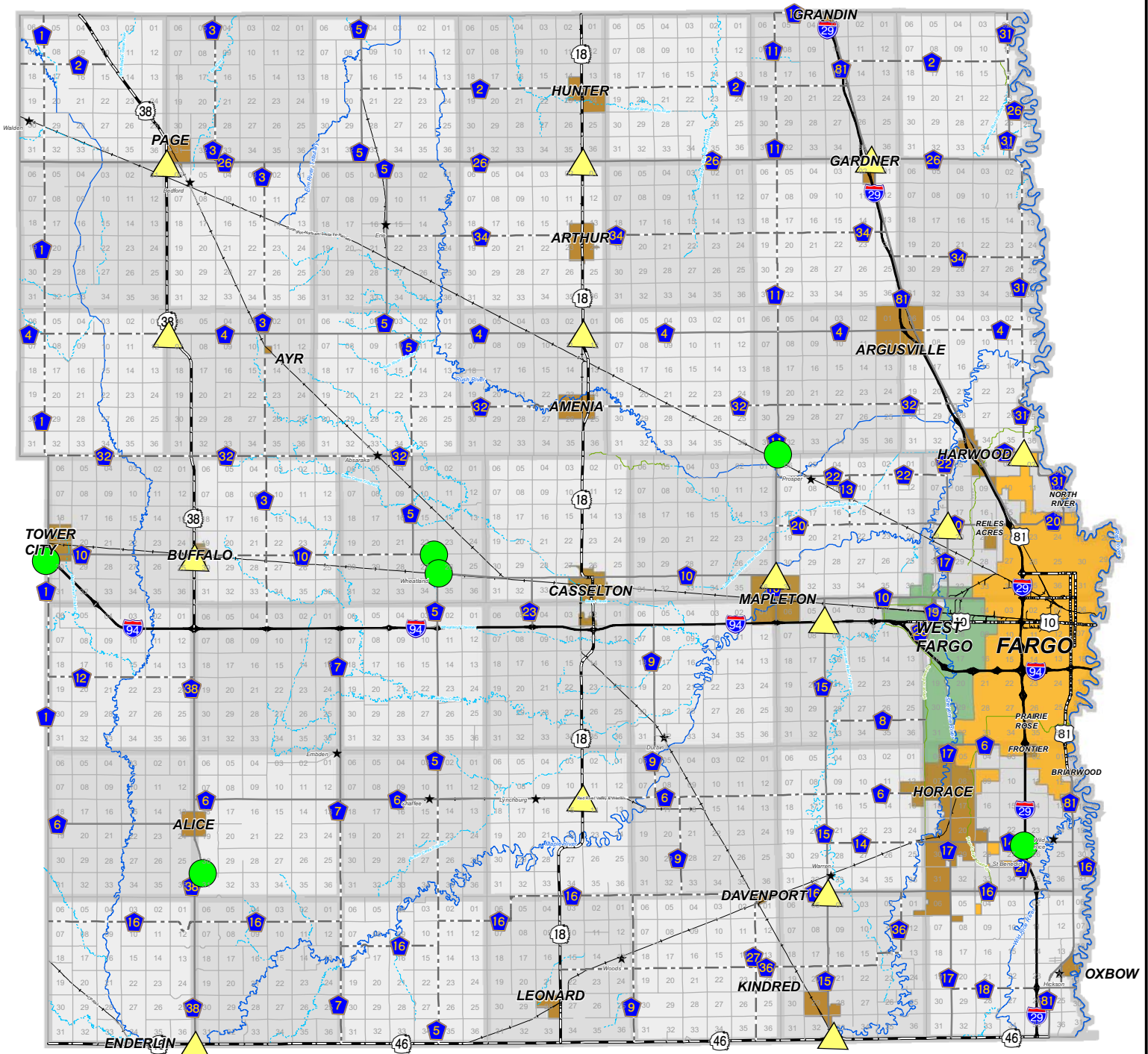
SUGGESTED MOTION: Approve the application for Safety Project Requests for the NDDOT 2016-2019 Highway Safety Improvement Program.

1201 Main Avenue West
West Fargo, North Dakota
58078-1301

701-298-2370
Fax: 701-298-2395

Cass County Highway Department

HSIP Project Application Locations



Jason Benson
County Engineer, P.E.

Richard Sieg
Highway Superintendent

Prepared by
Cass County Highway Dept.
December 2014



Cass County Hwy. Dept.
1201 Main Ave. W
West Fargo, ND 58078

(701) 298-2370

Web: <http://www.casscountynd.gov>

Email: highway@casscountynd.gov



Miles

Projects

Curve Improvement

Intersection Improvement

Disclaimer: As with all public information derived from variable sources, this data may contain errors or faults. Therefore, Cass County does not provide any warranty express or implied, as to the accuracy of this data. The recipient is encouraged to make an independent investigation of verification of the data. If an error is found, it is requested the County Engineer be advised of the particulars so the data can be examined and corrected. THIS MAP IS NOT A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (08-2011)

CASS 10

Curves on Cass from Intersection with Cass 5 to Intersection with Stevens St

Agency Name: Cass County
Contact Name: Jason Benson

ND DOT District: 8
Telephone Number: 701-298-2372

Email Address: bensonj@casscountynd.gov

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description (Corridor Containing Curves)

Start: Intersection with Cass 5 End: Intersection with Stevens St Facility Type: 2-lane ADT: 360 Road Type Rural Paved County Road Cass	Lane Width: 12' Speed Limit: High Shoulder Width: 0' Shoulder Type: None Length (miles): 1.6 Rumble Installed: None	SHSP Emphasis Area (check all that apply) <input type="checkbox"/> Reduce Alcohol Impaired Driving <input type="checkbox"/> Increase the Use of Safety Restraints for all Occupants <input type="checkbox"/> Younger Driver/Older Driver Safety <input type="checkbox"/> Curb Aggressive Driving <input checked="" type="checkbox"/> Improvements to Address Lane Departure Crashes <input type="checkbox"/> Enhancing Emergency Medical Capabilities to Increase Survivability <input type="checkbox"/> Improve Intersection Safety
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Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

Curve ID	K	A	Radius (ft)	ADT	Intersection on Curve	Visual Trap	Risk Ranking	Proximity or Existing Chevrons	High Priority Segment + Critical Radius	Sign Improvement Project	Shoulder Paving Project	Shoulder Rumble Strip Project	Advance Horizontal Alignment Warning Sign	Advisory Speed Plaque
010A	0	0	1192	360	Yes	Yes	****	x	x	Chevron	-	-	-	-

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

Ranking Criteria

Criteria	Curves are selected for project if:
Severe Crashes > 0	- 3 or more *s
Radius 500 to 1200	- x in Proximity or Existing Chevron column
ADT 30 to 1000000	- x in High Priority Segment + Critical Radius column
Intersection on Curve Yes	
Visual Trap Yes	

Describe Proposed Safety Improvements

Description	Type	Unit Cost	Quantity	Total cost	Notes -
Chevrons	Proactive	\$3,960 per curve	1	\$3,960	
Arrow Board Only	Proactive	\$1,200 per curve	0	\$0	
Advance Warning Sign/Speed Advisory Plaque	Proactive	\$1,440 per curve	0	\$0	
Shoulder Rumble Strip	Proactive	\$3,600 per mile	.0 miles	\$0	
Shoulder Paving	Proactive	\$44,400 per mile	.0 miles	\$0	
				\$3,960	

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$3,564
Local Match (10% of Total project cost)	\$396
*Total Project Cost	\$3,960

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Reference Number	ID Number
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Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 2
Segment ID: 10.04
Date: 6/13/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Cass 10

Curves on Cass from Intersection with Stevens St to Intersection with ND 18 (Langer Ave N)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description (Corridor Containing Curves)

Start: Intersection with Stevens St Lane Width: 12'
End: Intersection with ND 18 (Langer Ave N) Speed Limit: High
Facility Type: 2-lane Shoulder Width: 5'
ADT: 345 Shoulder Type: Gravel
Road Type Rural Paved Length (miles): 6.2
County Road Cass Rumble Installed: None

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

Curve ID	K	A	Radius (ft)	ADT	Intersection on Curve	Visual Trap	Risk Ranking	Proximity or Existing Chevrons	High Priority Segment + Critical Radius	Sign Improvement Project	Shoulder Paving Project	Shoulder Rumble Strip Project	Advance Horizontal Alignment Warning Sign	Advisory Speed Plaque
010B	0	0	742	345	Yes	No	***	-	x	Chevron	Inside/Outside	Inside/Outside	x	45

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

Ranking Criteria

Criteria	Curves are selected for project if:
Severe Crashes > 0	- 3 or more *s
Radius 500 to 1200	- x in Proximity or Existing Chevron column
ADT 30 to 1000000	- x in High Priority Segment + Critical Radius column
Intersection on Curve Yes	
Visual Trap Yes	

Describe Proposed Safety Improvements

Description	Type	Unit Cost	Quantity	Total cost	Notes -
Chevrons	Proactive	\$3,960 per curve	1	\$3,960	<i>APB</i>
Arrow Board Only	Proactive	\$1,200 per curve	0	\$0	
Advance Warning Sign/Speed Advisory Plaque	Proactive	\$1,440 per curve	1	\$1,440	
Shoulder Rumble Strip	Proactive	\$3,600 per mile	.2 miles	\$630	
Shoulder Paving	Proactive	\$44,400 per mile	.2 miles	\$7,769	
				\$13,799	

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$12,419
Local Match (10% of Total project cost)	\$1,380
*Total Project Cost	\$13,799

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 3
Segment ID: 10.05
Date: 6/13/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Cass 11

Curves on Cass from Intersection with Cass 20 to Intersection with Cass 32

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description (Corridor Containing Curves)

Start: Intersection with Cass 20
End: Intersection with Cass 32
Facility Type: 2-lane
ADT: 240
Road Type Rural Paved
County Road Cass

Lane Width: 12'
Speed Limit: High
Shoulder Width: 6'
Shoulder Type: Paved
Length (miles): 4.9
Rumble Installed: None

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

Curve ID	K	A	Radius (ft)	ADT	Intersection on Curve	Visual Trap	Risk Ranking	Proximity or Existing Chevrons	High Priority Segment + Critical Radius	Sign Improvement Project	Shoulder Paving Project	Shoulder Rumble Strip Project	Advance Horizontal Alignment Warning Sign	Advisory Speed Plaque
011A	0	0	1080	240	No	No	*	-	x	Chevron	-	Inside/Outside	x	50
011B	0	0	1559	240	No	No		-	-	-	-	-	-	-

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

Ranking Criteria

Criteria	Curves are selected for project if:
Severe Crashes > 0	- 3 or more *s
Radius 500 to 1200	- x in Proximity or Existing Chevron column
ADT 10 to 1000000	- x in High Priority Segment + Critical Radius column
Intersection on Curve Yes	
Visual Trap Yes	

Describe Proposed Safety Improvements

Description	Type	Unit Cost	Quantity	Total cost	Notes
Chevrons	Proactive	\$3,960 per curve	1	\$3,960	
Arrow Board Only	Proactive	\$1,200 per curve	0	\$0	
Advance Warning Sign/Speed Advisory Plaque	Proactive	\$1,440 per curve	1	\$1,440	
Shoulder Rumble Strip	Proactive	\$3,600 per mile	.1 miles	\$195	
Shoulder Paving	Proactive	\$44,400 per mile	.0 miles	\$0	
				\$5,595	

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$5,036
Local Match (10% of Total project cost)	\$560
*Total Project Cost	\$5,595

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (08-2011)

Curves on Cass from Intersection with Cass 16 to Intersection with Cass 14

Cass 21

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description (Corridor Containing Curves)

Start: Intersection with Cass 16 End: Intersection with Cass 14 Facility Type: 2-Lane ADT: 29 Road Type Rural Paved County Road Cass	Lane Width: ' Speed Limit: 0 Shoulder Width: 0' Shoulder Type: None Length (miles): 2.0 Rumble Installed: #N/A	SHSP Emphasis Area (check all that apply) <input type="checkbox"/> Reduce Alcohol Impaired Driving <input type="checkbox"/> Increase the Use of Safety Restraints for all Occupants <input type="checkbox"/> Younger Driver/Older Driver Safety <input type="checkbox"/> Curb Aggressive Driving <input checked="" type="checkbox"/> Improvements to Address Lane Departure Crashes <input type="checkbox"/> Enhancing Emergency Medical Capabilities to Increase Survivability <input type="checkbox"/> Improve Intersection Safety
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Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

Curve ID	K	A	Radius (ft)	ADT	Intersection on Curve	Visual Trap	Risk Ranking	Proximity or Existing Chevrons	High Priority Segment + Critical Radius	Sign Improvement Project	Shoulder Paving Project	Shoulder Rumble Strip Project	Advance Horizontal Alignment Warning Sign	Advisory Speed Plaque
021A	0	0	943	29	No	No	*	-	x	Chevron	-	Inside/Outside	x	50

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

Ranking Criteria

Criteria	Curves are selected for project if:
Severe Crashes > 0	- 3 or more *s
Radius 500 to 1200	- x in Proximity or Existing Chevron column
ADT 30 to 1000000	- x in High Priority Segment + Critical Radius column
Intersection on Curve Yes	
Visual Trap Yes	

Describe Proposed Safety Improvements

Description	Type	Unit Cost	Quantity	Total cost	Notes -
Chevrons	Proactive	\$3,960 per curve	1	\$3,960	<i>AB</i>
Arrow Board Only	Proactive	\$1,200 per curve	0	\$0	
Advance Warning Sign/Speed Advisory Plaque	Proactive	\$1,440 per curve	1	\$1,440	
Shoulder Rumble Strip	Proactive	\$3,600 per mile	.1 miles	\$233	
Shoulder Paving	Proactive	\$44,400 per mile	.0 miles	\$0	
				\$5,633	

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$5,070
Local Match (10% of Total project cost)	\$563
*Total Project Cost	\$5,633

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Cass 38

Curves on Cass from South Border of Cass County to Intersection with 45th St SE

Agency Name: Cass County
Contact Name: Jason Benson

ND DOT District: 8
Telephone Number: 701-298-2372

Email Address: bensonj@casscountynd.gov

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description (Corridor Containing Curves)

Start: South Border of Cass County
End: Intersection with 45th St SE
Facility Type: 2-lane
ADT: 382
Road Type Rural Paved
County Road Cass

Lane Width: 12'
Speed Limit: High
Shoulder Width: 0'
Shoulder Type: None
Length (miles): 9.2
Rumble Installed: #N/A

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012

5 years

Curve ID	K	A	Radius (ft)	ADT	Intersection on Curve	Visual Trap	Risk Ranking	Proximity or Existing Chevrons	High Priority Segment + Critical Radius	Sign Improvement Project	Shoulder Paving Project	Shoulder Rumble Strip Project	Advance Horizontal Alignment Warning Sign	Advisory Speed Plaque
038A	0	0	1408	382	No	No	*	-	-	-	-	-	-	-
038B	0	0	1063	382	Yes	No	***	-	x	Chevron	-	-	x	50
038C	0	0	2004	382	No	No	*	x	-	Chevron	-	-	-	-

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

Ranking Criteria

Criteria	Curves are selected for project if:
Severe Crashes > 0	- 3 or more *
Radius 500 to 1200	- x in Proximity or Existing Chevron column
ADT 30 to 1000000	- x in High Priority Segment + Critical Radius column
Intersection on Curve Yes	
Visual Trap Yes	

Describe Proposed Safety Improvements

Description	Type	Unit Cost	Quantity	Total cost	Notes
Chevrons	Proactive	\$3,960 per curve	2	\$7,920	
Arrow Board Only	Proactive	\$1,200 per curve	0	\$0	
Advance Warning Sign/Speed Advisory Plaque	Proactive	\$1,440 per curve	1	\$1,440	
Shoulder Rumble Strip	Proactive	\$3,600 per mile	.0 miles	\$0	
Shoulder Paving	Proactive	\$44,400 per mile	.0 miles	\$0	
				\$9,360	

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$8,424
Local Match (10% of Total project cost)	\$936
*Total Project Cost	\$9,360

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 7
Segment ID: 38.01
Date: 6/13/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Curves on Cass from About 0.3. miles south of 34th St SE to Intersection with 132nd Ave SE (on curve)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description (Corridor Containing Curves)

Start: About 0.3. miles south of 34th St SE
End: Intersection with 132nd Ave SE (on cu)
Facility Type: 2-lane
ADT: 163
Road Type Rural Paved
County Road Cass

Lane Width: 12'
Speed Limit: High
Shoulder Width: 0'
Shoulder Type: None
Length (miles): 4.1
Rumble Installed: None

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

Curve ID	K	A	Radius (ft)	ADT	Intersection on Curve	Visual Trap	Risk Ranking	Proximity or Existing Chevrons	High Priority Segment + Critical Radius	Sign Improvement Project	Shoulder Paving Project	Shoulder Rumble Strip Project	Advance Horizontal Alignment Warning Sign	Advisory Speed Plaque
001A	0	0	999	163	No	No	*	-	x	Chevron	-	-	x	50
001B	0	0	1263	163	Yes	No	*	-	-	-	-	-	-	-
001C	0	0	186	163	Yes	No	*	-	-	-	-	-	-	-
001D	0	0	990	163	Yes	Yes	***	-	x	Chevron	-	-	x	50
001E	0	0	1194	163	Yes	Yes	***	-	x	Chevron	-	-	-	-

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

Ranking Criteria

Criteria	Curves are selected for project if:
Severe Crashes > 0	- 3 or more *s
Radius 500 to 1200	- x in Proximity or Existing Chevron column
ADT 70 to 1000000	- x in High Priority Segment + Critical Radius column
Intersection on Curve Yes	
Visual Trap Yes	

Describe Proposed Safety Improvements

Description	Type	Unit Cost	Quantity	Total cost	Notes -
Chevrons	Proactive	\$3,960 per curve	3	\$11,880	
Arrow Board Only	Proactive	\$1,200 per curve	0	\$0	
Advance Warning Sign/Speed Advisory Plaque	Proactive	\$1,440 per curve	2	\$2,880	
Shoulder Rumble Strip	Proactive	\$3,600 per mile	.0 miles	\$0	
Shoulder Paving	Proactive	\$44,400 per mile	.0 miles	\$0	
				\$14,760	

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$13,284
Local Match (10% of Total project cost)	\$1,476
*Total Project Cost	\$14,760

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Reference Number	ID Number
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Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 1
Segment ID: 1.02
Date: 6/13/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Cass 15 Agency Name: **Cass County** ND DOT District: **8**
 Contact Name: **Jason Benson** Telephone Number: **701-298-2372**
 Email Address: **bensonj@casscountynd.gov**

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description


Configuration: T	Traffic Control Device: Thru-STOP	<input type="checkbox"/>	SHSP Emphasis Area (check all that apply)
Configuration (2): Undivided	Street Lights: No	<input type="checkbox"/>	Reduce Alcohol Impaired Driving
Urban/Rural: Rural	Flashers: No	<input type="checkbox"/>	Increase the Use of Safety Restraints for all Occupants
County: Cass	Major Entering ADT: 2110	<input type="checkbox"/>	Younger Driver/Older Driver Safety
Entering ADT: 2948	Minor Entering ADT: 838	<input type="checkbox"/>	Curb Aggressive Driving
		<input type="checkbox"/>	Improvements to Address Lane Departure Crashes
		<input type="checkbox"/>	Enhancing Emergency Medical Capabilities to Increase Survivability
		<input checked="" type="checkbox"/>	Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

	Total	Angle	K+A
Crashes	1	0	0
Rate (per MVM)	0.2	0.0	0.0

	Value	Critical	Risk Ranking
Skew	Yes	Yes	★
On/Near Curve	Yes	Yes	★
Development	No	Yes	
Near RR Crossing	Yes	Yes	★
Distance from previous STOP	Yes	Yes	★
Volume Cross Product	Yes	≥60,000	★
Total Crashes	1	>0	★



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes - .
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	1	\$60,000.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	1	\$10,200.00	<i>MB</i>
Upgrade Stop Sign	\$540 per sign	1	\$540.00	
Upgrade Junction Sign	\$540 per sign	1	\$540.00	
Upgrade Stop Ahead Sign	\$600 per sign	1	\$600.00	
Upgrade Stop Ahead Marking	\$600 per marking	1	\$600.00	
Upgrade Stop Bar	\$360 per marking	1	\$360.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$72,840.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)	Proposed Year of Construction
Federal Funds \$65,556	
Local Match (10% of Total project cost) \$7,284	
*Total Project Cost \$72,840	

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

44th St SE (Cass 6) & 155th Ave (ND 18)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 1073
Entering ADT: 1395 Minor Entering ADT: 323

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

	Total	Angle	K+A
Crashes	3	1	1
Rate (per MVM)	1.2	0.4	0.4

	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	Yes	Yes	*
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	3	>0	*



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes - WB approach is gravel.
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	
Upgrade Stop Sign	\$540 per sign	2	\$1,080.00	
Upgrade Junction Sign	\$540 per sign	2	\$1,080.00	
Upgrade Stop Ahead Sign	\$600 per sign	2	\$1,200.00	
Upgrade Stop Ahead Marking	\$600 per marking	1	\$600.00	
Upgrade Stop Bar	\$360 per marking	2	\$720.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$25,080.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds \$22,572
Local Match (10% of Total project cost) \$2,508
***Total Project Cost \$25,080**

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 2
Intersection ID: 6.04
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

18th St SE (Cass 26) & Cass 81

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 393
Entering ADT: 638 Minor Entering ADT: 245

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

	Total	Angle	K+A
Crashes	1	0	0
Rate (per MVM)	0.9	0.0	0.0

	Value	Critical	Risk Ranking
Skew	Yes	Yes	*
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	1	>0	*



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes -
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	
Upgrade Stop Sign	\$540 per sign	2	\$1,080.00	
Upgrade Junction Sign	\$540 per sign	2	\$1,080.00	
Upgrade Stop Ahead Sign	\$600 per sign	2	\$1,200.00	
Upgrade Stop Ahead Marking	\$600 per marking	2	\$1,200.00	
Upgrade Stop Bar	\$360 per marking	2	\$720.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$25,680.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds \$23,112
Local Match (10% of Total project cost) \$2,568
***Total Project Cost \$25,680**

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 5
Intersection ID: 81.01
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

34th St SE/Main St (Cass 10) & 139th Ave SE (ND 38)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 928
Entering ADT: 1030 Minor Entering ADT: 102

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012

5 years

	Total	Angle	K+A
Crashes	0	0	0
Rate (per MVM)	0.0	0.0	0.0

	Value	Critical	Risk Ranking
Skew	Yes	Yes	*
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	Yes	Yes	*
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	0	>0	



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes -
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	APB
Upgrade Stop Sign	\$540 per sign	2	\$1,080.00	
Upgrade Junction Sign	\$540 per sign	2	\$1,080.00	
Upgrade Stop Ahead Sign	\$600 per sign	2	\$1,200.00	
Upgrade Stop Ahead Marking	\$600 per marking	1	\$600.00	
Upgrade Stop Bar	\$360 per marking	1	\$360.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$24,720.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds \$22,248
Local Match (10% of Total project cost) \$2,472
***Total Project Cost \$24,720**

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
 SFN 59959 (06-2011)

40th Ave NW (Cass 20) & 69th St N (Cass 17)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
 Configuration (2): Undivided Street Lights: No
 Urban/Rural: Rural Flashers: No
 County: Cass Major Entering ADT: 1528
 Entering ADT: 2153 Minor Entering ADT: 625

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012

5 years

	Total	Angle	K+A
Crashes	6	2	2
Rate (per MVM)	1.5	0.5	0.5



	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	6	>0	*

Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes -
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	1	\$60,000.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	
Upgrade Stop Sign	\$540 per sign	2	\$1,080.00	
Upgrade Junction Sign	\$540 per sign	2	\$1,080.00	
Upgrade Stop Ahead Sign	\$600 per sign	2	\$1,200.00	
Upgrade Stop Ahead Marking	\$600 per marking	2	\$1,200.00	
Upgrade Stop Bar	\$360 per marking	2	\$720.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$85,680.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$77,112
Local Match (10% of Total project cost)	\$8,568
*Total Project Cost	\$85,680

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
 NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 9
 Intersection ID: 17.04
 Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

54th St SE (ND 46) & 139th Ave SE (Cass 38)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: T Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 1618
Entering ADT: 1833 Minor Entering ADT: 215

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

	Total	Angle	K+A
Crashes	2	2	0
Rate (per MVM)	0.6	0.6	0.0

	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	2	>0	*



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes - EB approach is gravel
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	1	\$10,200.00	
Upgrade Stop Sign	\$540 per sign	1	\$540.00	
Upgrade Junction Sign	\$540 per sign	1	\$540.00	
Upgrade Stop Ahead Sign	\$600 per sign	1	\$600.00	
Upgrade Stop Ahead Marking	\$600 per marking	1	\$600.00	
Upgrade Stop Bar	\$360 per marking	1	\$360.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$12,840.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$11,556
Local Match (10% of Total project cost)	\$1,284
*Total Project Cost	\$12,840

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409

NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 12
Intersection ID: 38.01
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

48th St SE (Cass 16) & 165th Ave (Cass 15)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 745
Entering ADT: 1445 Minor Entering ADT: 700

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

	Total	Angle	K+A
Crashes	1	1	0
Rate (per MVM)	0.4	0.4	0.0

	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	1	>0	*



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes - EB approach is gravel
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	
Upgrade Stop Sign	\$540 per sign	4	\$2,160.00	
Upgrade Junction Sign	\$540 per sign	4	\$2,160.00	
Upgrade Stop Ahead Sign	\$600 per sign	4	\$2,400.00	
Upgrade Stop Ahead Marking	\$600 per marking	4	\$2,400.00	
Upgrade Stop Bar	\$360 per marking	4	\$1,440.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$30,960.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$27,864
Local Match (10% of Total project cost)	\$3,096
*Total Project Cost	\$30,960

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

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Intersection ID: 15.02
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

35th St SE (Cass 10) & 163rd Ave SE (Cass 11)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: T Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 770
Entering ADT: 1135 Minor Entering ADT: 365

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

	Total	Angle	K+A
Crashes	3	2	0
Rate (per MVM)	1.4	1.0	0.0

	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	3	>0	*



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes -
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	1	\$10,200.00	
Upgrade Stop Sign	\$540 per sign	1	\$540.00	
Upgrade Junction Sign	\$540 per sign	1	\$540.00	
Upgrade Stop Ahead Sign	\$600 per sign	1	\$600.00	
Upgrade Stop Ahead Marking	\$600 per marking	1	\$600.00	
Upgrade Stop Bar	\$360 per marking	1	\$360.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$12,840.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds \$11,556
Local Match (10% of Total project cost) \$1,284
***Total Project Cost \$12,840**

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 17
Intersection ID: 10.06
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

25th St SE (Cass 4) & 155th Ave (ND 18)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 1370
Entering ADT: 1885 Minor Entering ADT: 515

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

	Total	Angle	K+A
Crashes	2	1	0
Rate (per MVM)	0.6	0.3	0.0



	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	2	>0	*

Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes - WB approach is gravel
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	1	\$60,000.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	
Upgrade Stop Sign	\$540 per sign	2	\$1,080.00	
Upgrade Junction Sign	\$540 per sign	2	\$1,080.00	
Upgrade Stop Ahead Sign	\$600 per sign	2	\$1,200.00	
Upgrade Stop Ahead Marking	\$600 per marking	2	\$1,200.00	
Upgrade Stop Bar	\$360 per marking	2	\$720.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$85,680.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$77,112
Local Match (10% of Total project cost)	\$8,568
*Total Project Cost	\$85,680

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 18
Intersection ID: 4.05
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

37th St SE & 165th Ave (Cass 15)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 653
Entering ADT: 750 Minor Entering ADT: 98

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

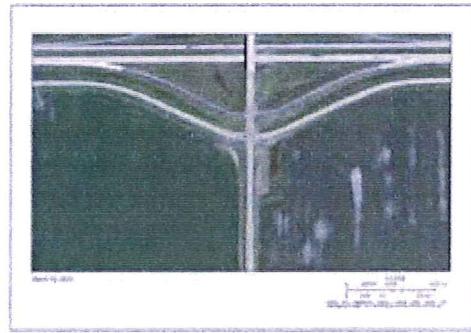
Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012

5 years

	Total	Angle	K+A
Crashes	1	0	0
Rate (per MVM)	0.7	0.0	0.0

	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	Yes	Yes	*
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	No	Yes	
Volume Cross Product	Yes	≥60,000	*
Total Crashes	1	>0	*



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes -
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	
Upgrade Stop Sign	\$540 per sign	2	\$1,080.00	
Upgrade Junction Sign	\$540 per sign	2	\$1,080.00	
Upgrade Stop Ahead Sign	\$600 per sign	2	\$1,200.00	
Upgrade Stop Ahead Marking	\$600 per marking	2	\$1,200.00	
Upgrade Stop Bar	\$360 per marking	2	\$720.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$25,680.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds \$23,112
Local Match (10% of Total project cost) \$2,568
***Total Project Cost \$25,680**

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 21
Intersection ID: 15.03
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

76th Ave N (Cass 22) & 173rd Ave SE (Cass 31)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: T Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 1240
Entering ADT: 1303 Minor Entering ADT: 63

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

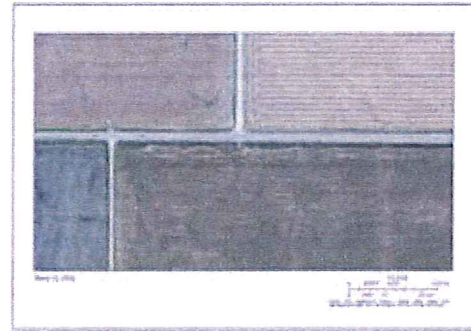
Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012

5 years

	Total	Angle	K+A
Crashes	1	2	0
Rate (per MVM)	0.4	0.8	0.0

	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	1	>0	*



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes -
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	1	\$10,200.00	MPB
Upgrade Stop Sign	\$540 per sign	1	\$540.00	
Upgrade Junction Sign	\$540 per sign	1	\$540.00	
Upgrade Stop Ahead Sign	\$600 per sign	1	\$600.00	
Upgrade Stop Ahead Marking	\$600 per marking	0	\$0.00	
Upgrade Stop Bar	\$360 per marking	1	\$360.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$12,240.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$11,016
Local Match (10% of Total project cost)	\$1,224
*Total Project Cost	\$12,240

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 22
Intersection ID: 22.06
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

18th St SE (Cass 26) & 138th St SE (ND 38)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 643
Entering ADT: 1075 Minor Entering ADT: 433

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

	Total	Angle	K+A
Crashes	1	0	0
Rate (per MVM)	0.5	0.0	0.0

	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	1	>0	*



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes -
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	JPB
Upgrade Stop Sign	\$540 per sign	2	\$1,080.00	
Upgrade Junction Sign	\$540 per sign	2	\$1,080.00	
Upgrade Stop Ahead Sign	\$600 per sign	2	\$1,200.00	
Upgrade Stop Ahead Marking	\$600 per marking	2	\$1,200.00	
Upgrade Stop Bar	\$360 per marking	2	\$720.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$25,680.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$23,112
Local Match (10% of Total project cost)	\$2,568
*Total Project Cost	\$25,680

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 23
Intersection ID: 26.01
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

25th St SE (Cass 4) & ND 38

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 453
Entering ADT: 658 Minor Entering ADT: 205

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

	Total	Angle	K+A
Crashes	0	0	0
Rate (per MVM)	0.0	0.0	0.0

	Value	Critical	Risk Ranking
Skew	Yes	Yes	*
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	No	Yes	
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	0	>0	



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes -
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	
Upgrade Stop Sign	\$540 per sign	2	\$1,080.00	
Upgrade Junction Sign	\$540 per sign	2	\$1,080.00	
Upgrade Stop Ahead Sign	\$600 per sign	2	\$1,200.00	
Upgrade Stop Ahead Marking	\$600 per marking	1	\$600.00	
Upgrade Stop Bar	\$360 per marking	2	\$720.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$25,080.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds \$22,572
Local Match (10% of Total project cost) \$2,508
***Total Project Cost \$25,080**

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 26
Intersection ID: 4.01
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

34th St SE (Cass 10) & 139th Ave SE (ND 38)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: T Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 923
Entering ADT: 1135 Minor Entering ADT: 213

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

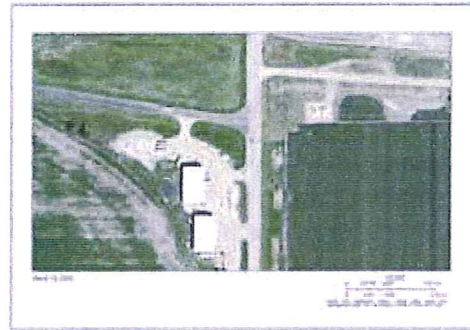
Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012

5 years

	Total	Angle	K+A
Crashes	0	0	0
Rate (per MVM)	0.0	0.0	0.0

	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	Yes	Yes	*
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	0	>0	



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes - .
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	0	\$0.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	1	\$10,200.00	JMB
Upgrade Stop Sign	\$540 per sign	1	\$540.00	
Upgrade Junction Sign	\$540 per sign	1	\$540.00	
Upgrade Stop Ahead Sign	\$600 per sign	1	\$600.00	
Upgrade Stop Ahead Marking	\$600 per marking	1	\$600.00	
Upgrade Stop Bar	\$360 per marking	1	\$360.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$12,840.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$11,556
Local Match (10% of Total project cost)	\$1,284
*Total Project Cost	\$12,840

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409

NDDOT Reserves All Objections

Project suggested for agency's consideration.

Page: 27
Intersection ID: 10.01
Date: 5/14/2014

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

18th St SE (Cass 26) & 155th St SE (ND 18)

Agency Name: Cass County
Contact Name: Jason Benson
Email Address: bensonj@casscountynd.gov

ND DOT District: 8
Telephone Number: 701-298-2372

Please attach a location map(s). You may use additional sheets to further describe your project.

Location Description

Configuration: X Traffic Control Device: Thru-STOP
Configuration (2): Undivided Street Lights: No
Urban/Rural: Rural Flashers: No
County: Cass Major Entering ADT: 1138
Entering ADT: 1803 Minor Entering ADT: 665

- SHSP Emphasis Area (check all that apply)
- Reduce Alcohol Impaired Driving
 - Increase the Use of Safety Restraints for all Occupants
 - Younger Driver/Older Driver Safety
 - Curb Aggressive Driving
 - Improvements to Address Lane Departure Crashes
 - Enhancing Emergency Medical Capabilities to Increase Survivability
 - Improve Intersection Safety

Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012

5 years

	Total	Angle	K+A
Crashes	0	0	0
Rate (per MVM)	0.0	0.0	0.0

	Value	Critical	Risk Ranking
Skew	No	Yes	
On/Near Curve	No	Yes	
Development	No	Yes	
Near RR Crossing	Yes	Yes	*
Distance from previous STOP	Yes	Yes	*
Volume Cross Product	Yes	≥60,000	*
Total Crashes	0	>0	***



Describe Proposed Safety Improvements

Description	Unit Cost	Units	Cost	Notes - .
Roundabout	\$3,000,000 per intersection	0	\$0.00	
Directional Median	\$900,000 per intersection	0	\$0.00	
Mainline Dynamic Warning Sign	\$60,000 per intersection	1	\$60,000.00	
Close Median	\$30,000 per intersection	0	\$0.00	
Installing Street Lights	\$10,200 per street light	2	\$20,400.00	
Upgrade Stop Sign	\$540 per sign	2	\$1,080.00	
Upgrade Junction Sign	\$540 per sign	2	\$1,080.00	
Upgrade Stop Ahead Sign	\$600 per sign	2	\$1,200.00	
Upgrade Stop Ahead Marking	\$600 per marking	2	\$1,200.00	
Upgrade Stop Bar	\$360 per marking	2	\$720.00	
Review Signs and CST	\$2,940 per intersection	0	\$0.00	
			\$85,680.00	

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

Project Cost Estimate (attach detailed copy)

Proposed Year of Construction

Federal Funds	\$77,112
Local Match (10% of Total project cost)	\$8,568
*Total Project Cost	\$85,680

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

NDDOT Central Office Only

Project Accepted? Yes No Reference Number ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

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Intersection ID: 26.02
Date: 5/14/2014