

# LOCAL ROAD RAILWAY SAFETY

January 25, 2018



## PUBLIC AT-GRADE CROSSINGS STATEWIDE

<http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/PublicGradeCrossingInventoryByStateCounty.aspx>



PUBLIC AT GRADE MOTOR VEHICLE CROSSINGS BY COUNTY AND PRINCIPAL WARNING DEVICE  
FOR: All Counties Co., NORTH DAKOTA  
TYPE OF CROSSING: All Crossings  
Railroad: All Railroads

County	Total	PRINCIPAL WARNING DEVICE							
		None	Cross buckle	Stop signs	Special warning	Flashing lights	Gates	Four Quad Gates	Quiet Zone
ADAMS	40	4	26	1			9		0
BARNES	89	1	58	2			28		0
BENSON	61		52	1		1	7		0
BILLINGS	7		3				4		0
BOTTINEAU	71	1	66	1			3		0
BOWMAN	19		12	1			6		0
BURKE	114	1	101				12		0
BURLEIGH	86	4	54	3		1	24	3	3
CASS	286	4	199	4			73	4	14
CAVALIER	103	2	97				4		0
DICKY	82	1	76				5		0
DIVIDE	55		53				2		0
EDDY	47	1	38				8		0
EMMONS	9		9						0
FOSTER	74	1	58				15		0
GOLDEN VALLEY	14	1	5	1			1	6	2
GRAND FORKS	143	2	100	4			3	34	3
GRIGGS	23		18				5		0
KIDDER	19		12	1			6		0
LA MOURE	80		73	1			1	5	0
LOGAN	43	4	34	2			1	2	0
MCHENRY	133	4	104	6			19		0
MCINTOSH	6		5				1		0
MCKENZIE	10		8				2		0
MCLEAN	110	4	91	6			9		0
MERCER	26	1	17	1			7		0
MORTON	47	2	20	3			1	21	1
MOUNTRAIL	73	1	51	2			19		0
NELSON	82	1	70	1			10		0
OLIVER	6		4	1			1		0
PEMBINA	96		89				1	6	0
PIERCE	57	2	48				6		0
RANSBY	78		63				1	13	0
RANSOM	72		59	1			12		0
RENVILLE	47	3	40				2		0
RICHLAND	162	1	119	3			39		0
ROLETTE	7		6				1		0
SARGENT	106		98				8		0
SHERIDAN	7		7						0
SLOPE	3		2	1					0
STARK	39	1	22	1			15		1
STEELE	44		38				6		0
STUTSMAN	125	1	99				1	24	0
TOWNER	58	2	50				1	5	0
TRAILL	76	1	56	1			2	16	0
WALSH	216	1	186	2			27		0
WARD	184	4	122	5			51		6
WELLS	79	3	62	1			13		0
WILLIAMS	38		23	1			14		0
<b>TOTAL</b>	<b>3,453</b>	<b>-61</b>	<b>2,706</b>	<b>58</b>	<b>1</b>	<b>17</b>	<b>606</b>	<b>4</b>	<b>34</b>
							<b>617</b>		

# ANNUAL MEMO

September 2017

North Dakota Counties with Rail

The North Dakota Department of Transportation (NDDOT) is requesting your assistance to identify locations within your jurisdiction where highway/rail crossing safety could be improved. The information provided should contain the location of the grade crossing by street or road name and the distance and direction to the nearest town(s). Please be specific about your concern or suggestion for improvement.

NDDOT has annual federal funds available for safety enhancement projects at approximately 15 to 18 rail/highway at-grade crossings. These funds are used for the installation of active warning devices (e.g. flashing light signals with gates), crossing signs, and crossing surface improvements. The funding breakdown for the actual cost of a project is as follows:

Federal funds – 90%	County Road Authority – 10%
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Crossing concerns or suggestions can be forwarded by email to: [jstyron@nd.gov](mailto:jstyron@nd.gov), or by mail to:

*Jim Styron, Rail Planner*  
 Planning/Asset Management Division  
 North Dakota Department of Transportation  
 608 East Boulevard Avenue  
 Bismarck, North Dakota 58505-0700

Please mail or email your concerns or suggestions before January 30, 2018, so we can include it in our annual review process. If you have sent concerns in the past, be assured that it has been incorporated in our prioritization of statewide crossings.

If you have a roadway project that involves a rail crossing, please contact me.

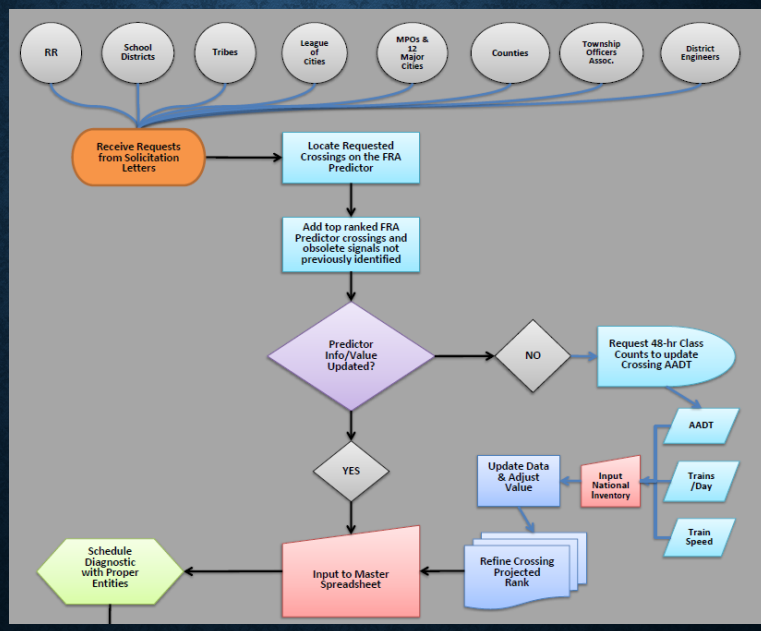
Thank you in advance for your cooperation.

Respectfully,

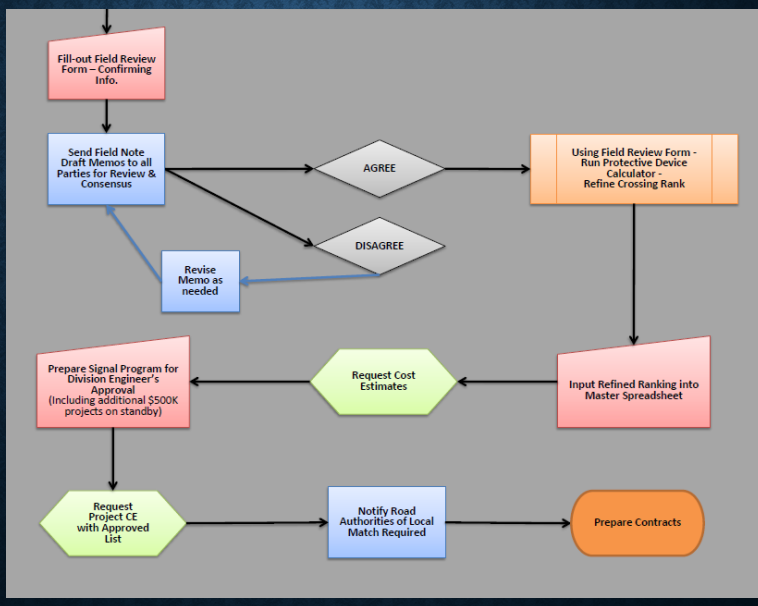
*J. Styron*  
 JIM STYRON - RAIL PLANNER



## CROSSING PROGRAM PROCESS - A



# CROSSING PROGRAM PROCESS - B



# FRA PREDICTOR OUTPUT

Updated 12/26/2017

**PUBLIC HIGHWAY-RAIL CROSSINGS RANKED BY PREDICTED ACCIDENTS PER YEAR AS OF 12/31/2016\***

\*Num of Collisions: Most recent year is partial year (data is not for the complete calendar year) unless Accidents per Year is 'AS OF DECEMBER 31'.

RANK	PREM COLLS.	CROSSING	RR	STATE	COUNTY	CITY	ROAD	NUM OF COLLISIONS					DATE	NOT	NOT	PBL	BUY	ADDT		
								16*	15	14	13	12							CHD	PER
1	0.095356	070810H	BNFF	ND	CASS	FARGO	8THST	1	0	0	0	0	FQ	68	2	35	YES	4	4,300	
2	0.084646	070809H	BNFF	ND	CASS	FARGO	BROADWAY	0	0	0	1		FQ	68	2	35	YES	2	4,673	
3	0.083074	09320F	BNFF	ND	MOUNTRAIL	ROSS	main rd or 5	0	0	1	0		OT	40	4	79	NO	2	300	
4	0.075648	071103U	BNFF	ND	CASS	CASSELLTON	LANIER AV/ND	0	0	0	1		FQ	52	2	60	YES	2	3,315	
5	0.074253	070820F	BNFF	ND	CASS	FARGO	27THST N	0	0	0	1		OT	68	2	60	YES	2	1,900	
6	0.073602	093077F	BNFF	ND	WARD	MINOT	27THST SE	0	0	0	1		OT	34	2	60	YES	2	5,440	
7	0.069764	091717F	BNFF	ND	WARD	BERTHOLD	380THST NW	0	2	0	0		2018/STEP	GT	40	2	79	NO	2	10
8	0.065232	090934F	FCD	ND	WARD	BURLINGTON	RR/pub DR	0	0	1	0	2		SS	1	1	49	NO	2	20 ?
9	0.062243	073009F	BNFF	ND	CASS	FARGO	9THST EAST	0	0	1	0		OT	68	2	60	NO	2	600	
10	0.057910	093344F	BNFF	ND	WILLIAMS	TIOGA	101ST AVENHW	0	0	0	1		2018/STEP	GT	40	2	79	NO	2	110 ✓
11	0.057010	093812L	FCD	ND	RICHLAND	MANITADOR	89THST SE	0	0	0	0	2		2	2	1	49	NO	2	30 ✓
12	0.055436	071250F	BNFF	ND	STUTSMAN	JAMESTOWN	2ND AVENUE	1	0	0	0		OT	20	2	35	YES	2	1,963	
13	0.054514	093315F	BNFF	ND	MOUNTRAIL	ROSS	66TH AVENHW	0	1	0	0		2018/STEP	GT	40	2	79	NO	2	80 ✓
14	0.054452	080739F	BNFF	ND	GRAND FORKS	GRAND FORKS	32ND AVES	0	0	1	1		OT	14	2	70	YES	1	90	
15	0.054046	071108D	BNFF	ND	CASS	CASSELLTON	3RD AV	0	0	0	1		OT	52	2	60	NO	2	370	
16	0.054015	093348D	FCD	ND	MOUNTRAIL	NEWTOWN	CMC 3125	0	0	1	1		GT	40	4	2	40	NO	2	310
17	0.053966	081542F	BNFF	ND	WILLIAMS	WILLISTON	130TH AVENHW	0	1	0	0		GT	40	2	60	NO	2	105	
18	0.051204	100431A	BNFF	ND	WARD	SURKEY	12THST NE	0	1	0	0		25	4	1	60	NO	2	2008 count	
19	0.047770	093299F	BNFF	ND	MOUNTRAIL	PALEEMO	L-3131	0	0	0	1		OT	40	2	79	YES	2	240	
20	0.046898	081283H	BNFF	ND	GRAND FORKS	GRAND FORKS	3RD ST	0	0	0	1		OT	10	1	20	YES	3	1,985	
21	0.045114	070807A	BNFF	ND	CASS	FARGO	4THST N	0	0	0	0		FQ	68	2	35	YES	4	6,400	
22	0.044665	081283H	BNFF	ND	GRAND FORKS	GRAND FORKS	4THST	1	0	0	0		OT	10	1	20	YES	2	2,365	



# DIAGNOSTIC REVIEW

**Diagnostic Team:**

- Local Road Authority
- Operating RR
- NDDOT

### NDDOT RAIL SECTION DIAGNOSTIC CHECKLIST

NAME	AGENCY	PHONE	EMAIL ADDRESS

Date of Diagnostic: \_\_\_\_\_ Existing Warning Device: \_\_\_\_\_ FRA Ranking: \_\_\_\_\_  
 LOCATION (NEAR/IN): \_\_\_\_\_ COUNTY: \_\_\_\_\_  
 PURPOSE OF DIAGNOSTIC: New Signal Install \_\_\_\_\_ Signal Upgrade \_\_\_\_\_ Signal Relocation \_\_\_\_\_ Closure \_\_\_\_\_  
 Pedestrian Application \_\_\_\_\_ Surface Upgrade \_\_\_\_\_ LED's only \_\_\_\_\_ Circuitry Upgrade only \_\_\_\_\_  
 5 YEAR CRASH HISTORY: Number? \_\_\_\_\_ Type? \_\_\_\_\_

RAILROAD INFORMATION	ROAD AUTHORITY INFORMATION
DOT#: _____ LS: _____ MP: _____ TRACK: main/branch/sideline/elevator/other: TPD: _____ SPEED: _____ RETROREFLECTIVE CROSSBUCK PADDES AND 2" STRIP PRESENT: Y / N SIDE LIGHTS NEEDED? (IN quadrant) _____ NEW INSTALL - BUNGALOW LOCATION: (pick quadrant) NW NE SE SW CURB CUT NEEDED FOR BUNGALOW ACCESS: Y/N POWER AVAILABLE: Y / N OVERHEAD LINE INTERFERENCE W/ GATE ARMS: Y / N SURFACE TYPE: Concrete Timber Rubber Asphalt Other: _____ SURFACE CONDITION: Good Fair Poor	HIGHWAY/ROADWAY NAME: _____ FUNCTIONAL CLASSIFICATION: _____ ROAD MATERIAL: Paved / Gravel Speed: _____ ADOT: _____ Year _____ Need Request: _____ ADVANCE WARNING: Y / N STOP BAR: Y / N PAVEMENT MARKINGS: Y / N TRAFFIC TYPE: BUS ROUTE: Y / N If Yes, amount? _____ SIGHT DISTANCE ISSUES? Y / N If Yes, explain: _____ SWITCH QUADRANT? NW NE SE SW Existing Sidewalk? Y / N Evidence of Foot/Bike? Y / N

**FIELD SKETCH**

**SUMMARY & ANALYSIS**

Possible safety measures?


Team Concern:


Overall Evaluation:

23 USC § 409 Documents  
NDDOT Reserves All Objections



# BUILDING THE ANNUAL RAIL SAFETY PROGRAMS

### PROTECTIVE DEVICES CALCULATOR

Item	Description	Value	Points
1	FRA Prediction ALDT	0	0
2	DOT #	0	0
3	Accident Prediction Value	0	0
4	Was a recommendation/observation documented by the railroad company?	(Y/N)	0
5	Was a recommendation/observation documented from a City, County, School District (Official or NOT Official)?	(Y/N)	0
6	Was a recommendation/observation documented from a member of the public?	(Y/N)	0
7	How many school buses cross this crossing per day?	0-1000	0
8	Proximity to Schools?	0-1000	0
9	Hazardous Material Trucks or on a Hazardous Truck Route?	(Y/N)	0
10	Does Amtrak use this Crossing?	(Y/N)	0
11	Is this crossing located within a mile from an Urban Development, or densely populated area? (2750 population)	(Y/N)	0
12	Highway Speed (Enter an "X" in the Appropriate box):	40 MPH 55 MPH 65 MPH	0
13	How many Quadrants in the Crossing have Visual Obstructions? (Enter an "X" in the Appropriate Quadrant Box):	0 1 2 3 4	0
14	Including both track and roadway, how many vertical curves exist near the crossing? (0-4 max)	0-4	0
15	Slew Angle at crossing (greater the angle from 90 degrees, the greater the risk) (Enter an "X" in the Appropriate Box):	0-25 26-45 46-60	0
16	Is the crossing in close proximity to an intersection? If so - what type? Consider ADA ADD on intersecting roadway as High Volume. Consider ADA ADD on intersecting roadway as High Speed. (Enter an "X" in the Appropriate Box for both Volume & Speed)	High Volume High Speed Low Volume Low Speed	0
17	Miscellaneous Item of Concern - identify the discussed item of concern by the team:	Weight (1 to 100)	0
<b>PROPOSING SCORE</b>			<b>0</b>

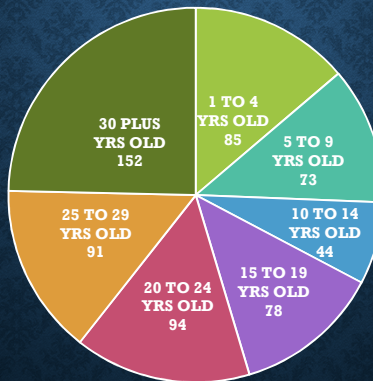
### RAIL/HWY CROSSING SURFACE CALCULATOR

Item	Description	Value	Points
1	LOCATION DESCRIPTION	DOT #	0
2	ADOT	ADOT	0
3	TRAINS PER DAY	0	0
4	EXPOSURE RATE	0	0
5	HIGHWAY FUNCTIONAL CLASSIFICATION OR ROADWAY	40 MPH 55 MPH 65 MPH 70 MPH 80 MPH 90 MPH 100 MPH	0
6	LOCAL MATCH PERCENTAGE TO BE PROVIDED?	0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%	0
7	Posted Highway Speed	30-45 MPH 45-55 MPH 55-65 MPH 65-75 MPH 75-85 MPH 85-95 MPH 95-105 MPH	0
8	Is the crossing on a slope?	0% 1% 2% 3% 4% 5% 6% 7% 8% 9% 10%	0
9	Are multiple tracks present?	1 2 3 4 5 6 7 8 9 10	0
10	What is the condition of the crossing surface?	ASPH CONCR GRAVEL DIRT	0
11	How many inches are the 80 panels ABOVE or BELOW the roadway approaches?	0-20	0
12	Is the crossing surface sagging in conjunction with a State or Federal Aid Project that would create a height difference?	(Y/N)	0
13	Is the percentage of truck traffic over the crossing greater than 15%?	(Y/N)	0
14	Is the crossing a part of a Safe Routes to School project or pedestrian crossing?	(Y/N)	0
15	Is the crossing bumped per Figure 50 below?	(Y/N)	0
16	Discretionary Item of Concern - identify the discussed item of concern: SURFACE TYPE, CONDITION WITH LOW SPEEDS	range 0-100	0
<b>PROPOSING SCORE</b>			<b>0</b>



# AGING SIGNAL SYSTEMS

Total Aging Signal System in ND



## THANK YOU!

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Planning/Rail Section  
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