



Quiet Zone Evaluation for Huron, Ohio



Introduction

The City of Huron (Agency), in its effort to explore the possibility of prohibiting the sounding of train horns along the Norfolk Southern Railroad (Railroad) through their community, requested CTC, Inc. (CTC) to conduct an evaluation to determine the feasibility and approximate cost associated with creating a new quiet zone through Huron, Ohio.

In 2005, the Federal Railroad Administration (FRA) issued 49 CFR Parts 222 and 229, the *Final Rule on Use of Locomotive Horns at Highway-Rail Grade Crossings* (Final Rule). The purpose of the rule is to mandate a federal requirement for the sounding of locomotive horns at all public highway-rail grade crossings. The rule also establishes both minimum and maximum decibel levels for the locomotive horns themselves. While the purpose of the rule was to require the sounding of locomotive horns, it also created a methodology by which communities could create quiet zones.

In accordance with the Final Rule, locomotive horn sounding is not required if each public highway-rail grade crossing is equipped with Supplemental Safety Measures (SSMs) within the proposed quiet zone. SSMs are safety measures that have been determined by the FRA to adequately compensate for the lack of a locomotive horn. Examples of SSMs include:

- Temporary Closure (can only be used in a Partial Quiet Zone)
- Four-quadrant gate systems installed with or without vehicle detection
- Gates with non-transversable median barriers at least 100 feet in length on each side (60 feet if parallel roads or commercial driveways are present)
- Gates with channelization devices at least 100 feet in length on each side (60 feet if parallel roads or commercial driveways are present)
- One-way streets with gates that completely close off the roadway
- Permanent Closure

Another possibility for use as a treatment in lieu of a SSM is the Wayside Horn System (WHS). The WHS may be used either within or outside of a quiet zone as a one-for-one replacement for the train horn. The WHS is a traffic control device that is mounted at the highway-rail grade crossing and interconnected to the railroad's grade crossing warning system. It is required to sound at a minimum level of 92 dB measured 100 feet along the roadway approach from the nearest track (49 CFR 222, Appendix E, 4). Many communities have implemented this technology as a means of reducing train horn noise levels.

In addition, locomotive horn sounding is not required within highway-rail grade crossing corridors that have a Quiet Zone Risk Index (QZRI) at or below the Nationwide Significant Risk Threshold (NSRT) or the Risk Index with Horns (RIWH). Definitions of each of these terms are listed below:

Quiet Zone Risk Index (QZRI) is the average risk in the proposed quiet zone taking into consideration the increased risk caused by the lack of train horns and the reductions in risk attributable to the installation of SSMs or Alternative Safety Measures (ASMs).

Nationwide Significant Risk Threshold (NSRT) represents a number reflecting a measure of risk, calculated on a nationwide basis, which reflects the average level of risk to the motoring public at public highway-rail grade crossings equipped with flashing lights and gates and at which locomotive horns are sounded.

Risk Index with Horns (RIWH) represents the average initial amount of risk in the proposed quiet zone with the train horn sounding.

Highway-rail grade crossing corridors that have a $QZRI \leq NSRT$ or $RIWH$ have been deemed, by the FRA, to constitute categories of highway-rail grade crossings that do not present a significant risk with respect to loss of life or serious personal injury or that fully compensate for the absence of the warning provided by the locomotive horn. As a result, communities with highway-rail grade crossing corridors that meet either of these standards may silence the locomotive horn within the crossing corridor if all other applicable quiet zone requirements have been met.

Please note, the establishment of a quiet zone does not result in total elimination of all train horn noise. The Final Rule allows for the locomotive engineer to sound the locomotive horn to provide a warning to vehicle operators, animals, pedestrians, trespassers or crews on other trains in an emergency situation if, in the locomotive engineer's sole judgment, such action is appropriate in order to prevent imminent injury, death or property damage. In addition, nothing in the rule prohibits the use of the locomotive horn in the following situations:

1. When a wayside horn is malfunctioning.
2. When active grade crossing devices have malfunctioned and use of the horn is required.
3. When grade crossing warning systems are temporarily out of service during inspection, maintenance or testing of the systems.
4. When the SSM, modified SSMs or engineered SSMs no longer comply with the requirements of the rule or as approved by the FRA.
5. There is no restriction for the sounding of the locomotive horn for the purposes of highway-rail crossing safety such as, to announce the approach to roadway workers under chapter 49 or required purposes under railroad operating rules.

The City should make every effort to educate the public through public meetings, website, and news articles that some trains will sound horns after the quiet zone is established. CTC's experience has also indicated that it takes approximately 30-45 days for all railroad engineers to become familiar with a new quiet zone and cease blowing the train horns on a consistent basis. The agency should make the public aware of the "grace period" needed once the quiet zone is established.

Proposed Quiet Zone Corridor

The Agency is interested in determining the improvements required and the approximate cost to create a new quiet zone along Norfolk Southern Railroad, Dearborn Subdivision located near the downtown area of Huron, Ohio. The proposed quiet zone corridor is shown in Figure 1. The Railroad runs approximately 96 trains per day at speeds up to 69 mph on this subdivision through the city of Huron, Ohio. The highway-rail grade crossings that were evaluated are described in the table below.

Table 1. Proposed Quiet Zone Crossings

Street or Road Name	DOT No.	Railroad Milepost (MP)	Subdivision	Nearest Parallel Street
Berlin Road	524054E	231.12	Dearborn	Cleveland Rd/SH6
River Road	524055L	231.92	Dearborn	Cleveland Rd/SH6
Main Street	524056T	232.42	Dearborn	Jefferson St
Williams Street	524057A	232.50	Dearborn	Bogart Rd
Rye Beach Road	524059N	234.24	Dearborn	Sawmill Parkway



Figure 1. Overall View of Proposed Quiet Zone

The limits of the proposed quiet zone will extend from MP 230.87 to MP 234.49 for an actual quiet zone length of 3.62 miles. However, due to the location of adjacent crossings within the corridor, the effective length of the proposed quiet zone will be significantly longer. The closest highway-rail grade crossing west of the proposed quiet zone is US 6 at MP 235.00. The closest highway-rail grade crossing east of the proposed quiet zone is SR 61 at MP 228.62. As a result, the effective length of the proposed quiet zone will be approximately 5.88 miles.

Summary of Quiet Zone Safety Improvement Options

CTC conducted a field review of the grade crossings within the proposed Huron quiet zone on the afternoon of July 7, 2015. The purpose of the review was to evaluate proposed crossings for basic quiet zone requirements and review quiet zone concepts with Agency representatives in preparation for the agency team meeting and future diagnostic meeting with the Railroad and the FRA. Options available to the Agency for the creation of the quiet zone were presented after the field evaluation. Factors considered in the evaluation were safety, compliance with the FRA rules, public acceptance and budgetary constraints for the implementation of the proposed quiet zone.

As recommended in 49 CFR 222, Appendix F the crossings proposed for inclusion in a quiet zone should be reviewed in the field by a diagnostic team composed of railroad personnel, public

safety or law enforcement, engineering personnel from the State Agency responsible for grade crossing safety and other concerned parties. A diagnostic meeting will be conducted in the future once the agency has determined the safety improvements planned for each crossing and identified the funding. In the meantime, on July 8, 2015 an agency team, consisting of representatives from the Agency, FRA, and CTC reviewed each of the highway-rail grade crossings in the proposed quiet zone for consideration of the options for the approved SSMs as provided in 49 CFR 222, Appendix A. The agency team members in attendance were:

- Andy White, City Manager
- Mike Spafford, Assistant to the City Manager
- Gene Esser, City Engineer (OHM Advisors)
- Doug Green, City Engineer (OHM Advisors)
- Evelyn Hendricks, FRA Grade Crossing Manager
- Tim Oster, CTC, Inc.

The Final Rule, Appendix A to Part 222 A, provides a list of approved supplementary safety measures (SSMs) that may be installed at each crossing within a quiet zone for risk reduction credit. Each SSM has been assigned an effectiveness rate which is defined as a number between zero and one which represents the reduction of the likelihood of a collision at a public highway-rail grade crossing as a result of the installation of an SSM or ASM when compared to the same crossing equipped with conventional active warning systems of flashing lights and gates. Zero effectiveness means that the SSM or ASM provides no reduction in the probability of a collision, while an effectiveness rating of one means that the SSM or ASM is totally effective in eliminating collision risk. The effectiveness rate for SSMs are as follows:

<u>Approved Supplemental Safety Measure (SSM)</u>	<u>Effectiveness Rate</u>
Temporary or Permanent Closure of a crossing	1.00
One-Way Street with Gates	0.82
Gates with Medians (Non-Traversable curbs)	0.80
Four Quadrant Gate System with presence detection	0.77
Gates with Channelization devices	0.75

The results of that evaluation are shown as follows:

- P - Preferred Supplemental Safety Measure
- O - Optional Supplemental Safety Measure
- U - Undesirable (due to public acceptability or budget constraints)

Table 2. Supplemental Safety Measures Options

Street or Road Name	DOT No.	Crossing Closure	Four-Quadrant Gate System	Concrete/Channelization Median Barrier	One- Way Street	Wayside Horn System
Berlin Road	524054E	U	U	P	U	O
River Road	524055L	U	U	P	U	O
Main Street	524056T	U	O	P	U	U
Williams Street	524057A	P	O	O	U	U
Rye Beach Road	524059N	U	U	P	U	U

This review also determined if the existing railroad active grade crossing warning devices meet the minimum requirements for establishment of a quiet zone. The rule requires that each public highway-rail grade crossing in the quiet zone must be equipped with flashing lights and gates, constant warning time device and power out indicator in accordance with 49 CFR Subpart C 222.35(3)(b). The following table provides the results of that review:

Table 3. Active Grade Crossing Warning Devices

Street or Road Name	DOT No.	Flashing Lights, Gates and Bells	Constant Warning Time Devices	Power Out Indicator
Berlin Road	524054E	✓	✓	✓
River Road	524055L	✓	✓	✓
Main Street	524056T	✓	✓	✓
Williams Street	524057A	✓	✓	✓
Rye Beach Road	524059N	✓	✓	✓

The above reference data was obtained from the Federal Railroad Administration (FRA) website inventory forms. If it is determined later that any of this data is inaccurate, the proposed project cost may be adversely affected due to increased railroad equipment upgrades.

An overview of each crossing and discussion of the evaluation are described below.

Berlin Road - DOT No. 524054E

The Berlin Road crossing, located at railroad milepost 231.12, is the eastern most crossing of the proposed quiet zone. Berlin Road is a two lane roadway crossing over two main line tracks. The roadway is approximately 24 feet wide and constructed of asphalt composition with no curb and gutter. The crossing is constructed with an asphalt crossing with asphalt pavement between tracks. There is private driveway approximately 30 feet south of the southeast gate and private grass driveway access located just 15 south of the crossing inside the northbound gate.



Figure 2. Berlin Road - Aerial View

The agency review team considered the approved SSM options provided in 49 CFR 222, Appendix A and agreed with the Agency's preference for this location to install non-traversable concrete median barriers. The required median length of 100 feet would require one private driveway and the grass driveway access to the private property to be a right-in and right-out only. The agency will discuss this option with the owner to determine if the installation of the median is acceptable. It was also noted that the mailbox for the home is located on the east side of the street. As a result, the proposed median would prevent picking up their mail from the car driver side window as witnessed during our field inspection.

The team recommended that concrete median barriers be 160 feet in length to the south and 160 feet to the north, one foot wide and 7 inches high. The additional 60 feet in length above the FRA requirement for both approaches is due to the angle of the crossing which places the existing gate tips approximately 75 feet from the nearest rail. The team recommended the

additional median between the gate and the crossing to improve the safety and prevent drivers from accessing the street behind the existing gates. The proposed median to the south includes one private driveway located 30 feet from the railroad gate. Although this is allowed under the FRA train horn rule, the resident will have a right-in and right-out only and there is no safe turnaround existing in the area to provide access north towards downtown area. Therefore, the team proposed the installation of a traffic round-about approximately 250 feet from the crossing to provide a safe and convenient method for the resident to get to downtown area.

Should the plans for the installation of the median and round-about be determined not to be a feasible solution, a wayside horn system is the alternative recommendation by the team. The installation of the wayside horn system requires an interconnection with the railroad equipment for proper operation.

The following signs and pavement markings will need to be installed to comply with 49 CFR 222.35(c) and MUTCD:

- W10-1 Advance Warning signs with W10-9 No Train Horn plaques will be installed on each approach.
- New stop lines prior to each gate and railroad pavement markings.

River Road - DOT No. 524055L

The River Road crossing is located at railroad milepost 231.92 and is the next crossing to the west of Berlin Road. River Road is a two lane roadway crossing over two main line tracks. The roadway is approximately 24 feet wide with 5 foot bike lanes on both approaches. The roadway is asphalt composition with no curb and gutter on the approaches to the crossing. The crossing is an asphalt crossing surface with asphalt pavement between the tracks. The crossing is located approximately 260 feet south of the stop controlled intersection at Cleveland Road/SH 6. There is a commercial gravel driveway adjacent to the crossing in the southwest quadrant that provides access to a local business.



Figure 3. River Road - Aerial View

The agency review team considered the approved SSM options provided in 49 CFR 222, Appendix A and agreed with the Agency's preferred option to install non-traversable concrete median barriers. The proposed median lengths are 100 feet to the north and 60 feet to the south. There is a commercial driveway located less than 10 feet from the railroad gate to the south of the crossing. The team proposed that the driveway be relocated to a minimum of 60 feet south of the existing gate which would result in the median qualifying as a SSM. The relocation of the driveway will require the acquisition of adjacent property to accommodate the new driveway and the construction of approximately 100 feet of gravel/asphalt road. This solution depends on the willingness of both private property owners to facilitate the relocation of the driveway. The City will evaluate the feasibility of relocating the commercial driveway to provide the required 60 foot median length.

Should the plans for the installation of the median be determined not to be a feasible solution, a wayside horn system is the alternative recommendation by the team.

The following signs and pavement markings will need to be installed to comply with 49 CFR 222.35(c) and MUTCD:

- W10-1 and Advance Warning signs with W10-9 No Train Horn plaques will be installed on each approach.
- New stop lines prior to each gate and railroad pavement markings

Main Street - DOT No. 524056T

The Main Street crossing is located at railroad milepost 232.42 and is the next crossing to the west of the River Road crossing. Main Street is a two lane roadway crossing over two main line tracks between River Road to the east and Williams Street to the west. The roadway is approximately 24 feet wide with a 5 foot shoulder to the west. The street is asphalt composition with no curb and gutter on the approaches to the crossing. There are commercial driveways just to the north of the crossing in the northwest and northeast quadrants. The crossing is an asphalt crossing surface with asphalt pavement between the tracks.

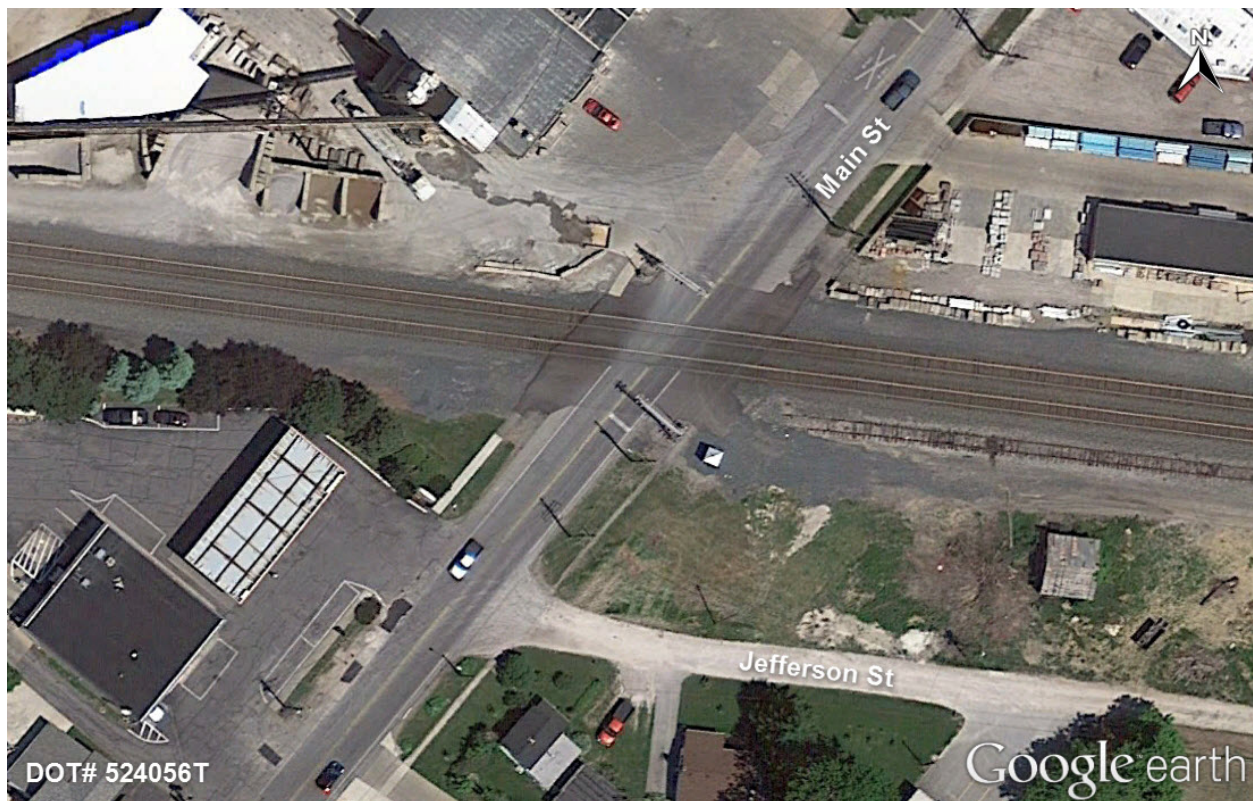


Figure 4. Main Street - Aerial View

The agency review team considered the approved SSM options provided in 49 CFR 222, Appendix A and agreed with the Agency's preferred option to install non-traversable concrete median barriers. The proposed median lengths are 60 feet to the north and 75 feet to the south. There is a commercial driveway located approximately 90 feet to the south that limits the length of the median to the south but does qualify as SSM. However, commercial driveways located on both sides of the Main Street to the north that provide access for the Huron Cement Company prohibits the installation of a SSM compliant median under existing conditions. The agency will discuss the proposal with the business owner to determine if the installation of the median and the installation of sixty feet of curb to reduce the existing driveway length is acceptable to the business owner. If business owner approves the plan, a SSM compliant median 60 feet in length will be installed along with curb and gutter to define the driveway access in the northwest

quadrant. Curb and gutter will be installed in the northeast quadrant to eliminate the existing concrete driveway access to the gated storage area.

Should the plans for the installation of the median not be a feasible solution, a four quadrant gate system is the alternative recommendation by the team.

The following signs and pavement markings will need to be installed to comply with 49 CFR 222.35(c) and MUTCD:

- W10-1 Advance Warning signs and W10-9 No Train Horn plaques will need to be installed on each approach on Main Street.
- New stop lines prior to each gate and railroad pavement markings.

Williams Street - DOT No. 524057A

The Williams Street crossing is located at railroad milepost 232.50, just west of the Main Street crossing. Williams Street is a two lane roadway crossing over two main line tracks. The roadway is approximately 26 feet wide and constructed of asphalt composition. The crossing is an asphalt crossing surface with asphalt pavement between the tracks. There are commercial driveways located in the southeast quadrant approximately 20 feet south of the gate and on both sides of the street north of the crossing.

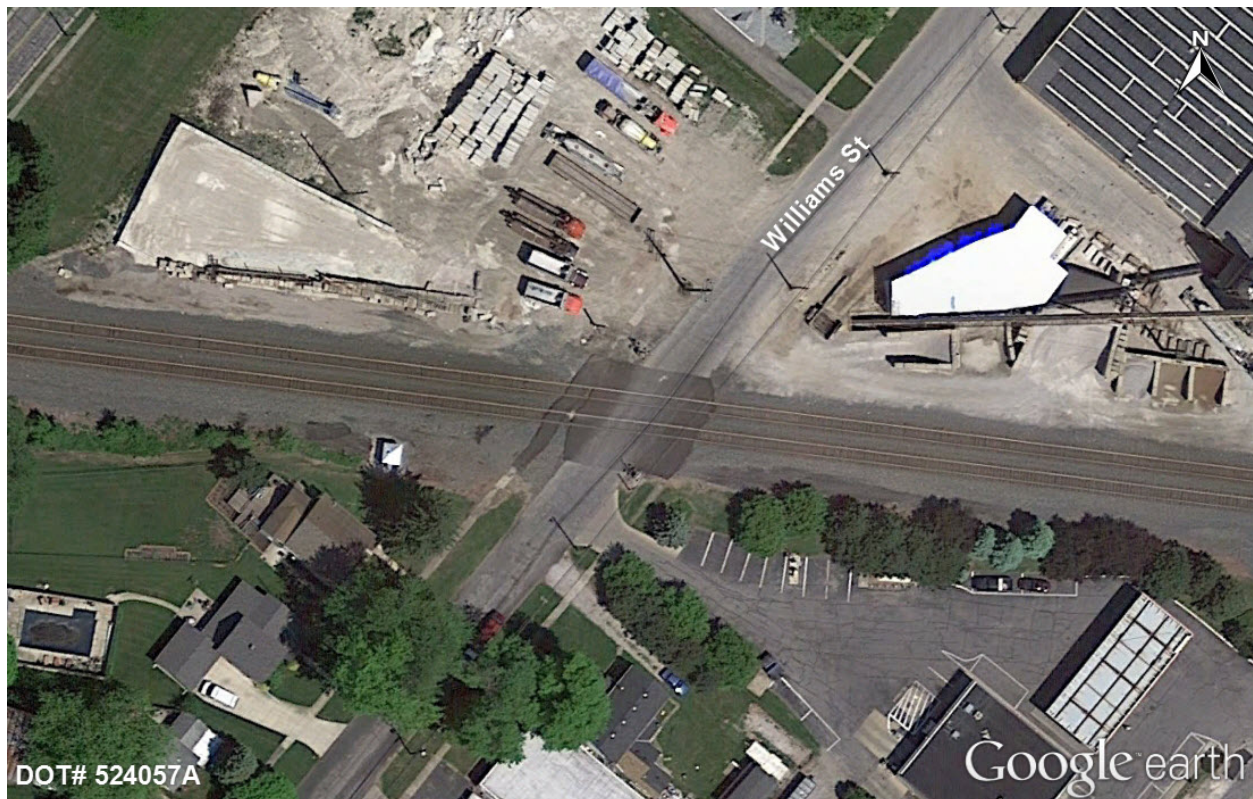


Figure 5. Williams Street - Aerial View

The agency review team considered the approved SSM options provided in 49 CFR 222, Appendix A and agreed with the Agency's preferred option of permanent closure of this crossing. Specific requirements for the permanent closure will require additional analysis by the city and railroad once approval is obtained to permanently close the crossing. However, at a minimum, all pavement should be removed from railroad right of way and Type III barricades (or equivalent) installed on both approaches to prevent vehicle access to the area. Additional fencing, barriers, etc. may be required to prevent pedestrian access to the area. The railroad will remove all railroad signal equipment and crossing panels.

The diagnostic team agreed with the Agency that if permission to close crossing is not obtained, then the preferred quiet zone treatment would be the installation of a four quadrant gate system

Additionally with The following signs and pavement markings will need to be installed to comply with 49 CFR 222.35(c) and MUTCD:

- W10-1 Advance Warning signs and W10-9 No Train Horn plaques will need to be installed on each approach on Danville Road.
- New stop lines prior to each gate and railroad pavement markings.

Rye Beach Road - DOT No. 524059N

The Rye Beach Road crossing is located at railroad milepost 234.24 and is the western most crossing in the proposed quiet zone. Rye Beach Road is a two lane roadway crossing over two main line tracks. The roadway is approximately 24 feet wide and is asphalt composite with no curb and gutter. The crossing is constructed with an asphalt crossing with asphalt pavement between tracks.



Figure 6. Rye Beach Road - Aerial View

The agency review team considered the approved SSM options provided in 49 CFR 222, Appendix A and agreed with the Agency's preference for this location for a non-traversable concrete median barrier. The team recommended that concrete median barriers be 100 feet in length to the south and 100 feet to the north which will qualify as a SSM. The minimum median height of 7 inches is recommended and the team proposed a 1 foot median. Since this is the best option and requires no additional railroad or public involvement for approval, the team did not recommend any other options for this location.

The team also recommended the sidewalk located on the east of the crossing that currently terminates at the railroad right of way be extended through the railroad crossing and include detectable warning on the sidewalks near the crossing. This will require the railroad to extend the width of the asphalt crossing.

City staff stated that the city limit line is located along the centerline of Rye Beach Road and the other half of the street is located in the adjoining township. Therefore, this quiet zone

crossing is located in two agency jurisdictions and must have cooperation of both agency (See 49 CFR 222.37 (a)). Therefore, CTC will provide an example of a letter that needs to be completed and signed by the adjacent jurisdiction supporting the quiet zone and delegating the authority to establish the quiet zone to the City of Huron.

The following signs and pavement markings will need to be installed to comply with 49 CFR 222.35(c) and MUTCD:

- W10-1 Advance Warning signs with W10-9 No Train Horn plaques will be installed on each approach.
- New stop lines prior to each gate and railroad pavement markings.

Summary of Estimated Quiet Zone Safety Improvement Costs

The tables below summarize the proposed quiet zone improvements and approximate costs for each crossing location. These are budget estimates only to evaluate alternatives for planning purposes only. Specific detailed cost estimates should be obtained from railroad, traffic engineering firms, and construction contractors once the agency has determined the final quiet zone plan.

Therefore, three alternatives are provided for comparison of cost and types of quiet zone methods that are available to the City for establishing the quiet zone.

- Option A - SSMs at all crossings Concrete Medians/Closure Williams St
- Option B - SSMs at all crossings Concrete Medians/4 Quad Gates/Wayside Horns
- Option C - Four-Quadrant Gate Systems at all crossings
- Option D - Option A with joint private driveway at Berlin Road

Option A - Supplemental Safety Measures (SSM) at each crossing Concrete Medians/Williams Closure/Traffic Circle at Berlin Rd

Option A includes the agency preferred treatments for each location which includes the closure of Williams Street, the installation of SSM-compliant concrete medians at Berlin Road, River Road, Main Street and Rye Beach Road. This options includes the creation of a joint driveway for private owners to the west of the crossing to allow the northern most owner to access Berlin and make a left turn towards Huron at the end of the new concrete median. This will require the cooperation of both private owners and their willingness of the owner to the south to provide driveway easement for

The advantages of this option are as follows:

- Lower construction cost
- Lower yearly maintenance cost
- No railroad construction agreement for signal upgrades
- Timeline for establishment of quiet zone under city control (no railroad upgrades required)
- Timeline for establishment of quiet zone reduced significantly compared to other options

The disadvantage for this option is the amount of public and private support and cooperation that will be needed to accomplish several of the proposed treatments. This option would require public and private support for the following:

- Proposed closure of Williams Street
- Proposed relocation of private drive at River Road (two property owners)
- Proposed right-in and right out for resident located south of crossing at Berlin Road.

The estimated construction and maintenance cost for this option is as follows:

Table 4. Details of Approximate Quiet Zone Costs OPTION A

Street or Road Name	DOT No.	Proposed Improvement	Approximate Cost
Berlin Road	524054E	Install concrete median (Approximately 320 feet) (1) 12 inches wide by 7 inches in height by 160 feet in length for both approaches.	\$24,000
		Construction of Traffic Circle south of crossing (Design and Construction)	\$200,000
		Advance Warning Signs/Pavement Markings	\$3,000
		Railroad Flagging Cost (estimated \$1000 per day)	\$5,000
River Road	524055L	Install concrete median (approximately 200 feet) (2) 12 inches wide by 7 inches in height by 100 feet in length for both approaches.	\$15,000
		Relocate Driveway (including right of way acquisition)	\$75,000
		Advance Warning Signs/Pavement Markings	\$3,000
		Railroad Flagging Cost (estimated \$1000 per day)	\$2,000
Main Street	524056T	Install concrete median (Approximately 140 feet) (1) 4 foot wide by 7 inches in height by 60 feet in length to the north and (1) 4 foot wide by 7 inches in height by 80 feet in length to the south.	\$40,000
		Advance Warning Signs/Pavement Markings	\$3,000
		Railroad Flagging Cost (estimated \$1000 per day)	\$4,000
Williams Street	524057A	Permanent Closure - install end of street treatment, barricades, and fencing; provide emergency vehicle turn-a-round	\$50,000
Rye Beach Road	524059N	Install concrete median (Approximately 200 feet) (1) 12 inches wide by 7 inches in height by 100 feet in length for both approaches. (median north of crossing will widen to match pavement striping)	\$15,000
		Install approximately 200 feet of sidewalk (includes additional railroad crossing surface)	\$35,000
		Advance Warning Signs/Pavement Markings	\$3,000
		Railroad Flagging Cost (estimated \$1000 per day) - 5 days for sidewalk plus 2 days for median	\$7,000
Other Costs		Quiet Zone Consultant	\$30,000
		Street Engineering Design (Medians/Signs/Pavement Marking Layouts)	\$20,000
		Traffic Counts for five crossings	\$750
		Norfolk Southern (NS) Administrative Fee	\$5,200
		SUB-TOTAL	\$539,950
		Railroad Contribution for Williams Closure	TBD
		ORDC Contribution for Williams Closure	TBD

Table 5. Summary of Approximate Quiet Zone Maintenance Costs OPTION A

Street or Road Name	DOT No.	Proposed Improvement	Approximate Cost
Berlin Road	524054E	Concrete median	\$100
		Traffic Circle	\$1,000
		Railroad Fees	\$2,000
		Advance Warning Signs/Pavement Markings	\$200
River Road	524055L	Concrete median	\$100
		Railroad Fees	\$2,000
		Advance Warning Signs/Pavement Markings	\$200
Main Street	524056T	Concrete median	\$100
		Railroad Fees	\$2,000
		Advance Warning Signs/Pavement Markings	\$200
Williams Street	524057A	Permanent Closure (Fence and Barricades)	\$500
Rye Beach Road	524059N	Concrete median	\$100
		Railroad Fees	\$2,000
		Advance Warning Signs/Pavement Markings	\$200
		TOTAL	\$10,700

Option B – Supplemental Safety Measures (SSM) at each crossing Concrete Median/4 Quad Gates/Wayside Horn Systems

This option includes the installation of SSM-compliant concrete median at Rye Beach Road, the installation of 4-Quadrant Gate Systems at Williams Street and Main Street and the installation of Wayside Horn Systems at Berlin Road and River Road. This options requires railroad upgrades at 4 of the 5 crossings which increases the cost of the quiet zone and the amount of time needed to complete the quiet zone. Once the diagnostic meeting is held and quiet zone improvements agreed upon, the railroad may take as long as 18-24 months to complete the agreement process, design and construction of the proposed improvements.

The estimated construction and maintenance cost for this option is as follows:

Table 5. Details of Approximate Quiet Zone Costs OPTION B

Street or Road Name	DOT No.	Proposed Improvement	Approximate Cost
Berlin Road	524054E	Install Wayside Horn System.	\$100,000
		Railroad Circuit Upgrade for Wayside Horn Interconnection	\$50,000
		Railroad Flagging Cost (estimated \$1000 per day)	\$8,000
		Advance Warning Signs/Pavement Markings	\$3,000
River Road	524055L	Install Wayside Horn System.	\$110,000
		Railroad Circuit Upgrade for Wayside Horn Interconnection	\$75,000
		Railroad Flagging Cost (estimated \$1000 per day)	\$8,000
		Advance Warning Signs/Pavement Markings	\$3,000
Main Street	524056T	Install 4-Quad Gate System with vehicle presence detection	\$500,000
		Advance Warning Signs/Pavement Markings	\$3,000
Williams Street	524057A	Install 4-Quad Gate System with vehicle presence detection	\$500,000
		Advance Warning Signs/Pavement Markings	\$3,000
Rye Beach Road	524059N	Install concrete median (Approximately 200 feet) (1) 12 inches wide by 7 inches in height by 100 feet in length for both approaches. (median north of crossing will widen to match pavement striping)	\$15,000
		Install approximately 200 feet of sidewalk (includes additional railroad crossing surface)	\$35,000
		Advance Warning Signs/Pavement Markings	\$3,000
		Railroad Flagging Cost (estimated \$1000 per day) - 5 days for sidewalk plus 2 days for median	\$7,000
Other Costs		Quiet Zone Consultant	\$30,000
		Street Engineering Design (Medians/Signs/Pavement Marking Layouts)	\$10,000
		Traffic Counts for each crossing	\$750
		Norfolk Southern (NS) Administrative Fee	\$5,200
		TOTAL	\$1,468,950

Table 5. Summary of Approximate Quiet Zone Maintenance Costs OPTION B

Street or Road Name	DOT No.	Proposed Improvement	Approximate Cost
Berlin Road	524054E	Wayside Horn System.	\$1,000
		Railroad Circuit Upgrade for Wayside Horn Interconnection	\$4,000
		Advance Warning Signs/Pavement Markings	\$200
River Road	524055L	Wayside Horn System.	\$1,000
		Railroad Circuit Upgrade for Wayside Horn Interconnection	\$4,000
		Advance Warning Signs/Pavement Markings	\$200
Main Street	524056T	4-Quad Gate System with vehicle presence detection	\$10,000
		Advance Warning Signs/Pavement Markings	\$200
Williams Street	524057A	Install 4-Quad Gate System with vehicle presence detection	\$10,000
		Advance Warning Signs/Pavement Markings	\$200
Rye Beach Road	524059N	Concrete median	\$100
		TOTAL	\$30,900

Option C - Installation of Four-Quadrant Gates

This option includes the installation of SSM-compliant four-quadrant gates with vehicle presence detection at Berlin Rd, River Rd, Main St, and Williams St; Rye Beach Road will have a concrete median treatment.

The advantages for this option are as follows:

- Provides a SSM compliant treatment at each location which would not require an application for FRA approval.
- Does not require the purchase of additional right-of-way

The disadvantages are as follows:

- High initial capital cost
- On-going yearly maintenance cost paid to the railroad for the life of the quiet zone

Requires railroad construction and maintenance agreement which lengthens the amount of time required to implement the quiet zone. Once the diagnostic meeting is held and quiet zone improvements agreed upon, the railroad may take as long as 18-24 months to complete the agreement process, design and construction of the proposed improvements.

Table 5. Details of Approximate Quiet Zone Costs OPTION C

Street or Road Name	DOT No.	Proposed Improvement	Approximate Cost
Berlin Road	524054E	Install 4-Quad Gate System with vehicle presence detection	\$500,000
		Advance Warning Signs/Pavement Markings	\$3,000
River Road	524055L	Install 4-Quad Gate System with vehicle presence detection	\$500,000
		Advance Warning Signs/Pavement Markings	\$3,000
Main Street	524056T	Install 4-Quad Gate System with vehicle presence detection	\$500,000
		Advance Warning Signs/Pavement Markings	\$3,000
Williams Street	524057A	Install 4-Quad Gate System with vehicle presence detection	\$500,000
		Advance Warning Signs/Pavement Markings	\$3,000
Rye Beach Road	524059N	Install concrete median (Approximately 200 feet) (1) 12 inches wide by 7 inches in height by 100 feet in length for both approaches. (median north of crossing will widen to match pavement striping)	\$15,000
		Install approximately 200 feet of sidewalk (includes additional railroad crossing surface)	\$35,000
		Advance Warning Signs/Pavement Markings	\$3,000
		Railroad Flagging Cost (estimated \$1000 per day) - 5 days for sidewalk plus 2 days for median	\$7,000
Other Costs		Quiet Zone Consultant	\$30,000
		Street Engineering Design (Medians/Signs/Pavement Marking Layouts)	\$10,000
		Traffic Counts for each crossing	\$750
		Norfolk Southern (NS) Administrative Fee	\$5,200
		TOTAL	\$2,117,950

Table 5. Summary of Approximate Quiet Zone Maintenance Costs OPTION C

Street or Road Name	DOT No.	Proposed Improvement	Approximate Cost
Berlin Road	524054E	4-Quad Gate System with vehicle presence detection	\$10,000
		Advance Warning Signs/Pavement Markings	\$200
River Road	524055L	4-Quad Gate System with vehicle presence detection	\$10,000
		Advance Warning Signs/Pavement Markings	\$200
Main Street	524056T	4-Quad Gate System with vehicle presence detection	\$10,000
		Advance Warning Signs/Pavement Markings	\$200
Williams Street	524057A	Install 4-Quad Gate System with vehicle presence detection	\$10,000
		Advance Warning Signs/Pavement Markings	\$200
Rye Beach Road	524059N	Concrete median	\$100
		Advance Warning Signs/Pavement Markings	\$200
		TOTAL	\$41,100

Option D - Berlin Road Joint Private Driveways

This option is identical to Option A except it does not include a traffic circle. This option replaces the traffic circle with a joint private driveway to allow the resident to access north bound Berlin Road (See conceptual layout in Appendix A). This option requires the support of both local residents, one allowing an easement through his property and the second agreeing to the additional access provided to accommodate a left turn from his property. The estimated cost of providing this new asphalt driveway including the cost of easement is \$50,000 compared to the estimate cost of the traffic circle of \$200,000.

Therefore, the total estimated construction cost for Option D is \$389,950 with an estimated yearly maintenance cost of \$9,700. (Refer to Table 2 for details)

Summary of Quiet Zone Options

CTC has performed an evaluation of the Agency preferences, the agency review team's comments and the estimated cost for establishing the quiet zone and has determined that should the Agency desire, Option A as outlined above, would be the preferred option to establish a 24 hour quiet zone. This option allows the Agency to utilize the public authority designation method for the quiet zone using SSMs at every crossing. This quiet zone process includes submission of a Notice of Intent, with SSMs at each crossing and a Notice of Establishment.

However, the preferred Option A requires the cooperation of several local residents for additional right of way needed to complete the proposed safety improvements. If the city is unable to garner that support, Option B provides for safety improvements that do not require additional right of way, but does include a significant increase in railroad involvement and crossing upgrade cost.

The following table provides a summary of cost for each option as outlined in detail above.

Table 2. Summary of Quiet Zone Construction and Maintenance Cost

Option	Berlin Road	River Road	Main Street	Williams Street	Rye Beach Road	Other Costs	Estimated Total Cost	Estimated Yearly Maintenance Cost
A	\$232,000	\$95,000	\$47,000	\$50,000	\$60,000	\$55,950	\$539,950	\$10,700
B	\$161,000	\$196,000	\$503,000	\$503,000	\$60,000	\$45,950	\$1,468,950	\$30,900
C	\$503,000	\$503,000	\$503,000	\$503,000	\$60,000	\$45,950	\$2,117,950	\$41,000
D	\$82,000	\$95,000	\$47,000	\$50,000	\$60,000	\$55,950	\$389,950	\$9,700

Pedestrian Treatments

The estimated quiet zone construction and maintenance cost listed above does not included any additional pedestrian treatments with the exception of the extension of the existing sidewalk at Rye Beach Road.

The Final Rule minimum requirements for a quiet zone (Part 222.35) states that each public highway-rail grade crossing that is subjected to pedestrian traffic and equipped with one or more bells shall retain those bells in working condition. Therefore, any additional safety improvements for pedestrian traffic at a crossing will be determined by the public agency and/or the diagnostic team during the on-site diagnostic meeting at each crossing. In many cases where there is a low volume of pedestrian traffic, the existing flashing lights and existing bells may be determined to provide adequate pedestrian warning and the team may have no additional recommendations. There are other safety treatments that may be considered by the agency and/or the diagnostic team and they may include, but are not limited to the following:

- Extension/addition of sidewalks through the railroad right of way
- Extension of railroad surface to accommodate sidewalk(s)
- Addition of detectable warning on sidewalks
- Addition of signs and pavement markings for pedestrians
- Installation of mast flashers with bell in non-gate quadrants
- Installation of pedestrian flashing lights and gates with emergency exit gate
- Installation of fencing to channel pedestrians and prevent trespassing
- Installation of electronic second train coming sign(s)

The actual cost for the installation of the safety measures above will vary and are site specific. However, the following estimated additional cost can be used for budgeting and comparison of major safety improvement options:

<u>Description</u>	<u>Estimated Cost</u>
Pedestrian Flashing Lights and Gates (Minimum two gates per crossing)	\$30,000-40,000 ea.
Emergency exit gates	\$1500 - \$2500 ea.
Fencing	\$50 - \$100 per foot
Extension of Railroad Surface	\$1200-\$1500 per foot
Second Train Coming Electronic Sign	\$15,000
Railroad Interconnection Circuits	\$15,000-\$50,000

The agency and/or diagnostic team should consider all options related to pedestrian safety within the quiet zone. The team should consider existing treatments, the amount of pedestrian and train traffic through the crossing, proposed development, crash history, and the experience of team members when making recommendations to implement additional pedestrian safety improvements. Although additional improvements may not be recommended, the diagnostic notes should reflect the team had no additional recommendations for pedestrian treatments as part of the quiet zone implementation.

Quiet Zone Implementation Process

Once the Agency has made the determination to proceed with implementation of the quiet zone, there is a sequence of events that must occur. Those events are described below.

USDOT Grade Crossing Inventory Updates - Existing Conditions

The Agency will be required to update USDOT Grade Crossing Inventory Forms for each of the highway-rail grade crossings within the limits of the proposed quiet zone to reflect the existing conditions. The current USDOT Grade Crossing Inventory Forms for each location do not accurately reflect the existing conditions and are included, for reference purposes, in Appendix C. An average daily traffic count for affected roadways will be required. Once the Agency has collected traffic data for all crossings located in the quiet zone, the grade crossing inventory can be updated.

Notice of Intent to Create a New Quiet Zone

The purpose of the Notice of Intent (NOI) is to provide notice to the railroads operating over the public highway-rail grade crossings within the quiet zone, the highway or traffic control authority or law enforcement authority having jurisdiction over vehicular traffic at grade crossings within the quiet zone, the State agency responsible for highway and road safety that the Agency is planning on creating a new quiet zone. The NOI provides an opportunity for the railroads and the agencies to give input to the Agency during the quiet zone development process. The agencies and railroads will be given sixty days to provide information and comments to the public agency.

The NOI must contain the following information:

1. A list of each public highway-rail grade crossing, private highway-rail grade crossing, and pedestrian crossing within the proposed quiet zone. The crossings are to be identified by both the U.S. DOT Crossing Inventory Number and the street or highway name.
2. A statement of the time period within which the restrictions would be in effect on the routine sounding of train horns (i.e., 24 hours or from 10 p.m. to 7 a.m.).
3. A brief explanation of the Agency's tentative plans for implementing improvements within the proposed quiet zone.
4. The name and title of the person who will act as the point of contact during the quiet zone development process and how that person can be contacted.
5. A list of the names and addresses of each party that will receive a copy of the NOI.

The Agency must provide the written NOI, by certified mail, return receipt requested to the Railroad(s) and Ohio Department of Transportation (ODOT). Although it is not required by the rule, it is recommended to also send a copy of the NOI to the Associate Administrator of the Federal Railroad Administration. If the Agency receives comments within the sixty day period, assistance from the FRA may be required to resolve any of the issues raised. Since we will include the Railroad and the FRA in the planning process, it is not anticipated that there will be any issues raised during the NOI process.

Diagnostic Team Review

The agency review team review conducted on July 8, 2015 provided the information necessary to develop a plan and budgetary costs for proposed improvements throughout the quiet zone. Although a diagnostic team inspection is not required, it is highly recommended to allow the railroad, FRA, and state DOT the opportunity to be involved from the beginning and provide recommendations during the design process and prevent issues from occurring late in the process. This is also the time when project details can be finalized with all stakeholders involved in the decision making process. The diagnostic team must, at a minimum, consist of representatives from the Railroad, ODOT and the Agency. It is also recommended to include a representative from the FRA to ensure that the proposed quiet zone meets all the necessary requirements.

Implementation of Improvements

Upon conclusion of the diagnostic team review, specific recommendations will be developed and responsibility for work to be done will be defined. The following steps are required for implementation of the improvement plan.

1. The Agency must enter into a preliminary engineering agreement with the Railroad authorizing preparation of plans and estimates for the proposed improvements to be performed by the Railroad. (This information was provided to the Agency by the Railroad during the diagnostic meeting).
2. The Railroad will prepare project agreements, plans and estimates for approval and execution by the Agency.
3. Once the agreements have been fully executed, the Railroad will begin assembling the material and schedule proposed improvements.
4. Upon completion of improvements by the Railroad, the Agency will place all of the appropriate signing as required in the implementation plan.

NOTE: See Appendix D for project process outline provided by Norfolk Southern

USDOT Grade Crossing Inventory Updates - After Improvements

The Agency will also be required to update USDOT Grade Crossing Inventory Forms for each of the highway-rail grade crossing within the limits of the proposed quiet zone to reflect the conditions after the proposed improvements. The Grade Crossing Inventory Forms will be included as part of the Notice of Quiet Zone Establishment to be filed.

Notice of Quiet Zone Establishment

The purpose of the Notice of Quiet Zone Establishment is to provide a means for the Agency to formally advise affected parties that a new quiet zone is being established. The Agency must provide written notice, by certified mail, return receipt requested, to the following:

1. Norfolk Southern Railroad
2. City of Huron Police Department
3. ODOT
4. Associate Administrator for the FRA

The Notice of Establishment must contain the following information:

1. The date upon which the quiet zone will be established, but in no event shall the date be earlier than 21 days after the date of the mailing.
2. A list of each public highway-rail grade crossing and private highway-rail grade crossing within the quiet zone, identified by both U.S. DOT National Highway-Rail Grade Crossing Inventory Number and street or highway name.
3. A specific reference to the regulatory provision that provides the basis for quiet zone establishment. For example, if the improvements are completed as proposed, the appropriate regulatory provision is § 222.39(a)(1). This indicates that the quiet zone is established by Public Authority Designation utilizing an SSM treatment the only public highway-rail grade crossing in the corridor.
4. A statement affirming that the State agency responsible for grade crossing safety and all affected railroads were provided an opportunity to participate in the diagnostic team review as required under § 222.25 (private crossings). The Notice of Quiet Establishment shall also include a list of recommendations by the diagnostic team.
5. A statement of the time period within which restrictions on the routine sounding of the locomotive horn will be imposed (i.e., 24 hours or from 10 p.m. until 7 a.m.)
6. An accurate and complete Grade Crossing Inventory Form for each public highway-rail grade crossing and private highway-rail grade crossing within the quiet zone that reflects the conditions existing at the crossing before any new SSMs or ASMs were implemented.
7. An accurate, complete and current Grade Crossing Inventory Form for each public highway-rail grade crossing and private highway-rail grade crossing within the quiet zone that reflects SSMs and ASMs in place upon establishment of the quiet zone. SSMs and ASMs that cannot be fully described on the Inventory Form shall be separately described.
8. A statement affirming that the Notice of Intent was provided in accordance with the rule. This statement shall also state the date on which the Notice of Intent was mailed.
9. The name and title of the person responsible for monitoring compliance with the requirements of this part and the manner in which that person can be contacted.
10. A list of the name and address of each party that is receiving a copy of the Notice of Quiet Establishment.
11. A statement signed by the chief executive officer of each public authority participating in the establishment of the quiet zone, in which the chief executive officer shall certify that the information submitted by the public authority is accurate and complete to the best of his/her knowledge and belief.

Quiet Zone Creation and Continuation

Once the Notice of Quiet Zone Establishment has been filed properly, the quiet zone will be created on the establishment date described in the notice. It will then be the Agency's responsibility to maintain all the appropriate signs, pavement markings, and medians as well as the sight distance improvements for the crossings. The Railroad will maintain the flashing lights and gates at the affected crossings. The project agreement will define cost responsibility associated with the Railroad's maintenance.

Between 4½ and 5 years after the date of the quiet zone establishment notice, the Agency must:

1. Affirm in writing to the Associate Administrator that the SSMs implemented within the quiet zone continue to conform to the requirements of appendix A of this part. Copies of such affirmation must be provided by certified mail, return receipt requested, to the parties identified in § 222.43(a)(3) of this part; and

2. Provide to the Associate Administrator an up-to-date, accurate, and complete Grade Crossing Inventory Form for each public highway-rail grade crossing and private highway-rail grade crossing within the quiet zone. This will include up-to-date traffic counts at the affected roadways.

This affirmation must be submitted every 4½ to 5 years thereafter.

APPENDIX A

CONCEPTUAL CROSSING LAYOUTS

QUIET ZONE OPTIONS

OPTIONS A & C
(OPTION B = WAYSIDE HORN SYSTEM)

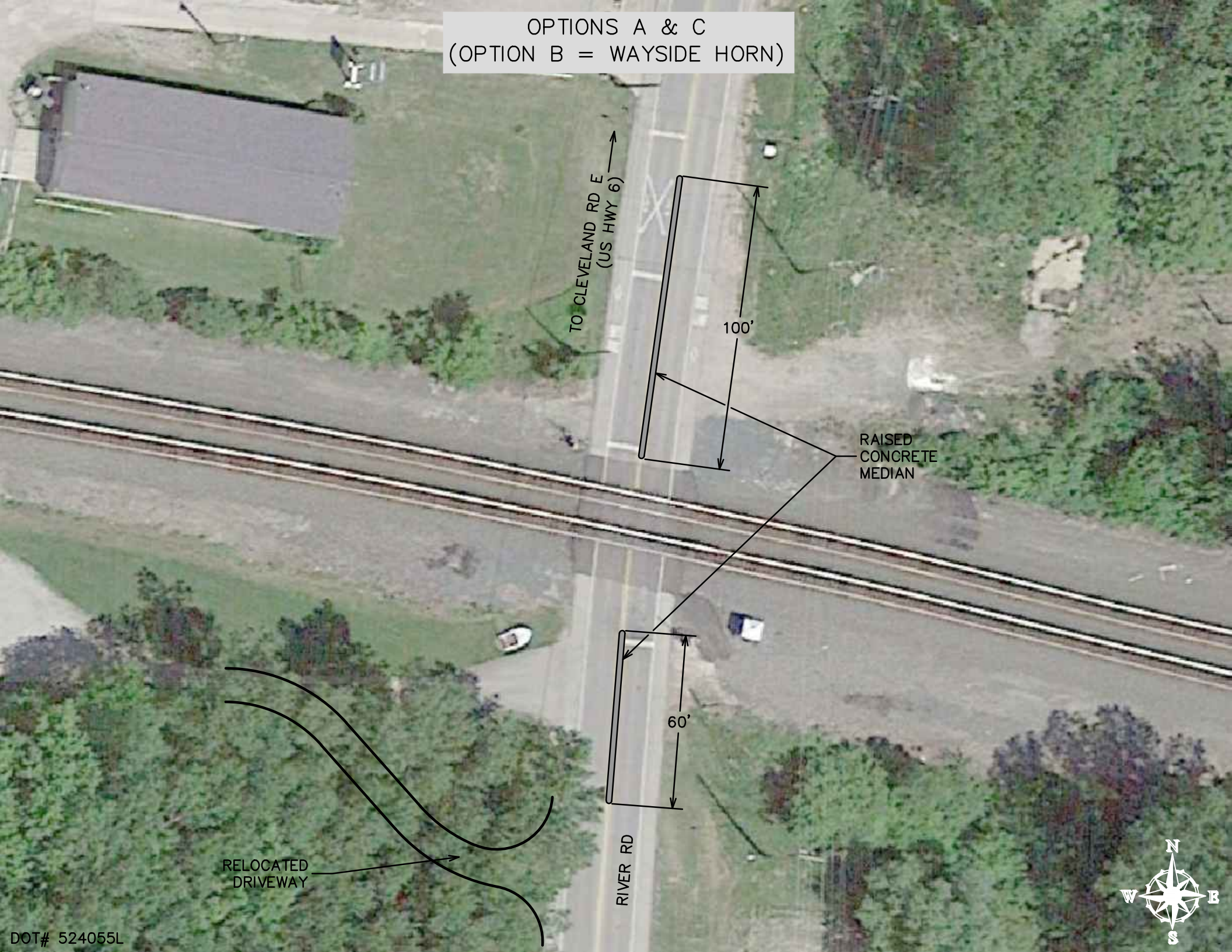
RAISED
CONCRETE
MEDIAN

BERLIN RD

PROPOSED
ROUND-A-BOUT



OPTIONS A & C
(OPTION B = WAYSIDE HORN)



TO CLEVELAND RD E
(US HWY 6)

100'

RAISED
CONCRETE
MEDIAN

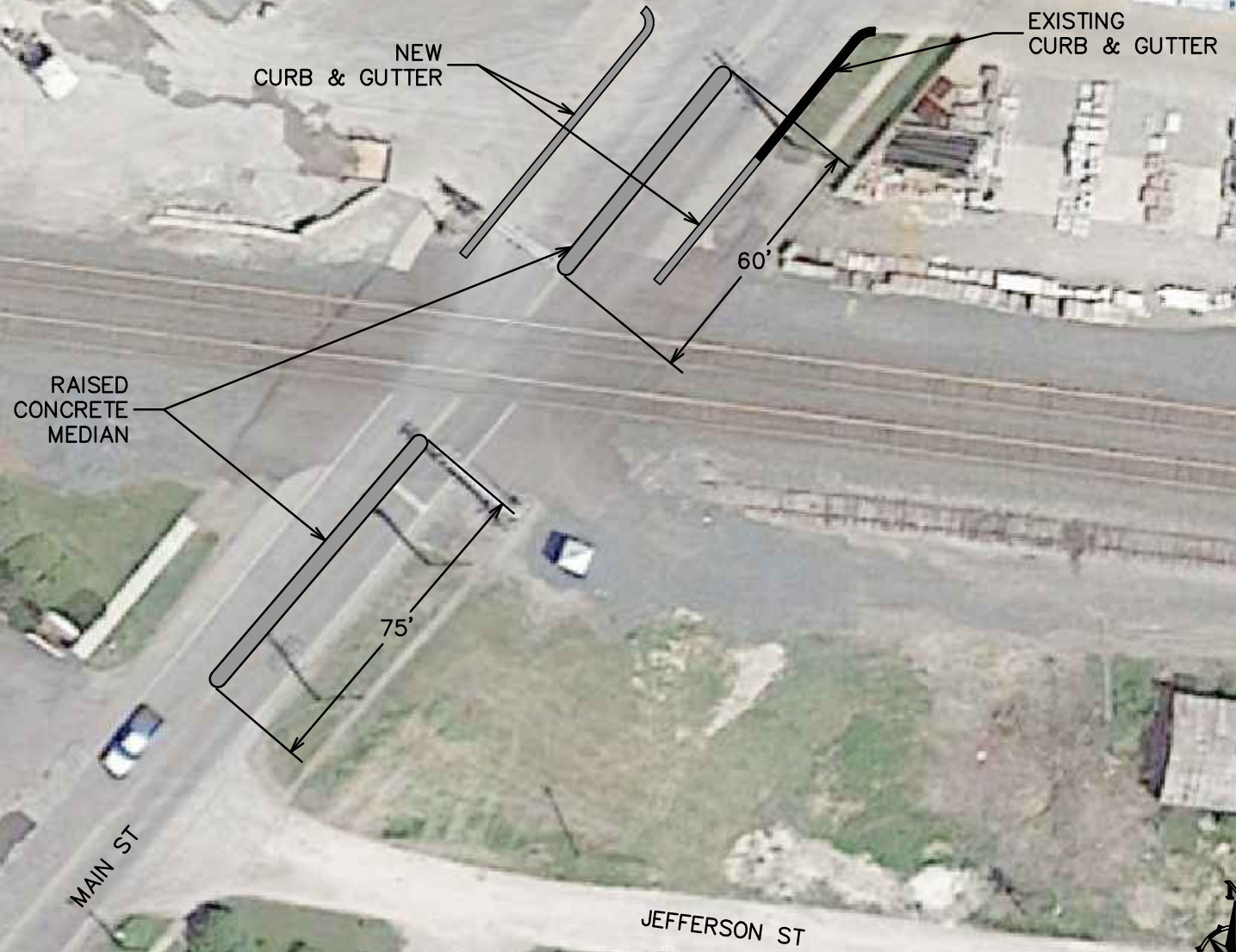
60'

RIVER RD

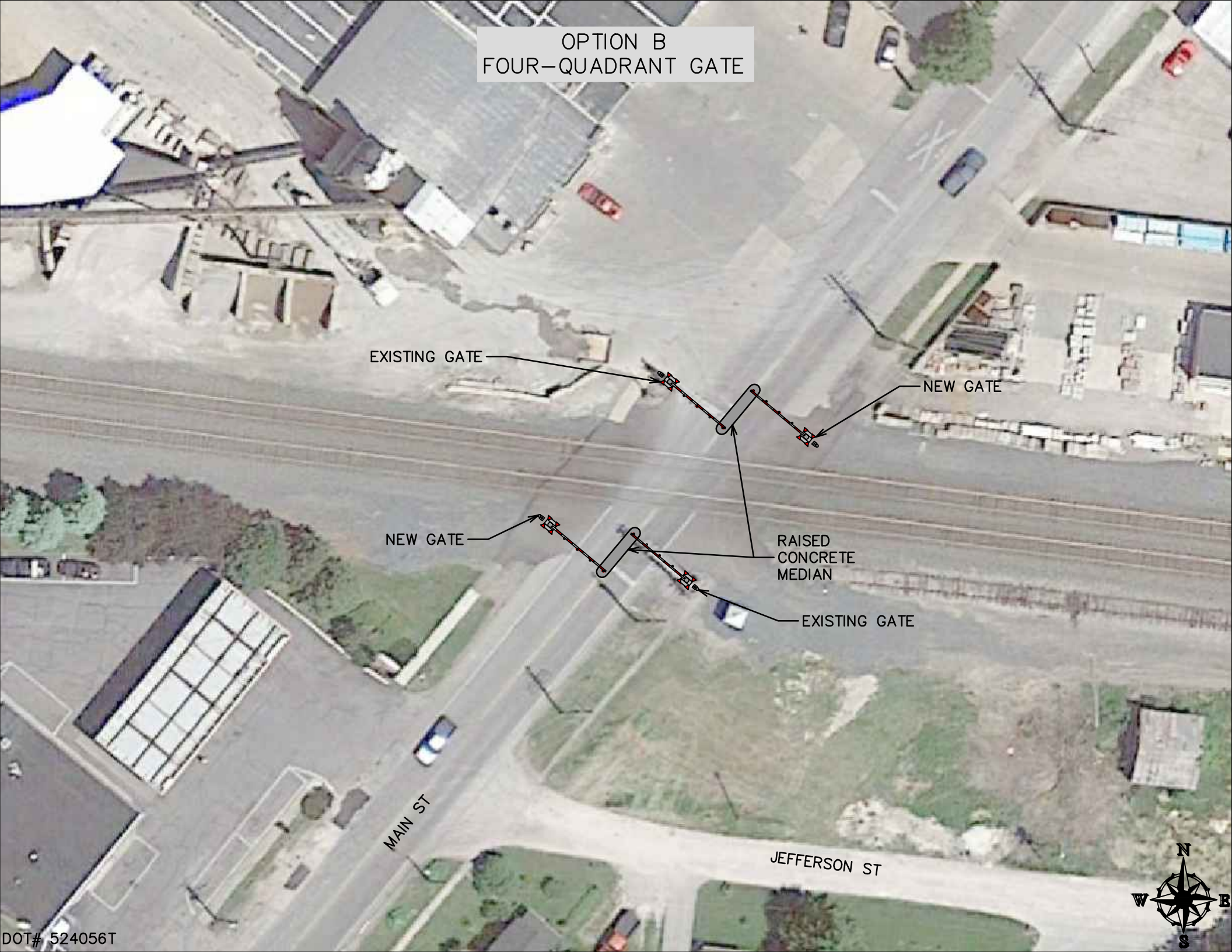
RELOCATED
DRIVEWAY



OPTION A
CONCRETE MEDIANS



OPTION B
FOUR-QUADRANT GATE



OPTION C
NON SSM CONCRETE MEDIANS



NEW
CURB & GUTTER

EXISTING
CURB & GUTTER

RAISED
CONCRETE
MEDIAN

30'

75'

MAIN ST

JEFFERSON ST



OPTION A
CLOSURE

PROPOSED
EMERGENCY
VEHICLE
TURN-AROUND

REMOVE ASPHALT
FROM CROSSING
AND ALL RAILROAD
EQUIPMENT

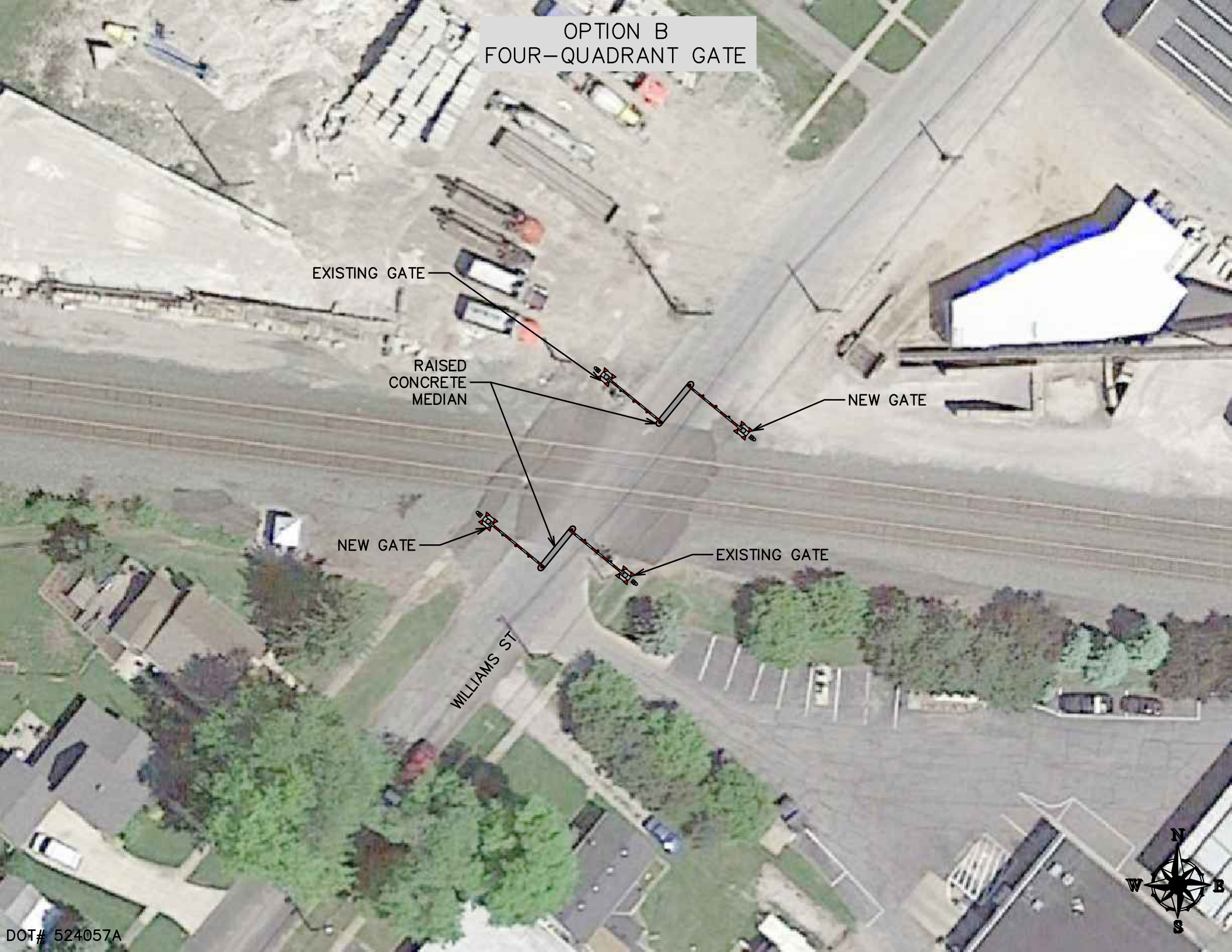
TYPE III
BARRICADE

WILLIAMS ST

PROPOSED
EMERGENCY
VEHICLE
TURN-AROUND



OPTION B
FOUR-QUADRANT GATE



EXISTING GATE

RAISED
CONCRETE
MEDIAN

NEW GATE

NEW GATE

EXISTING GATE

WILLIAMS ST



OPTION C
NON SSM CONCRETE MEDIANS

RAISED
CONCRETE
MEDIAN

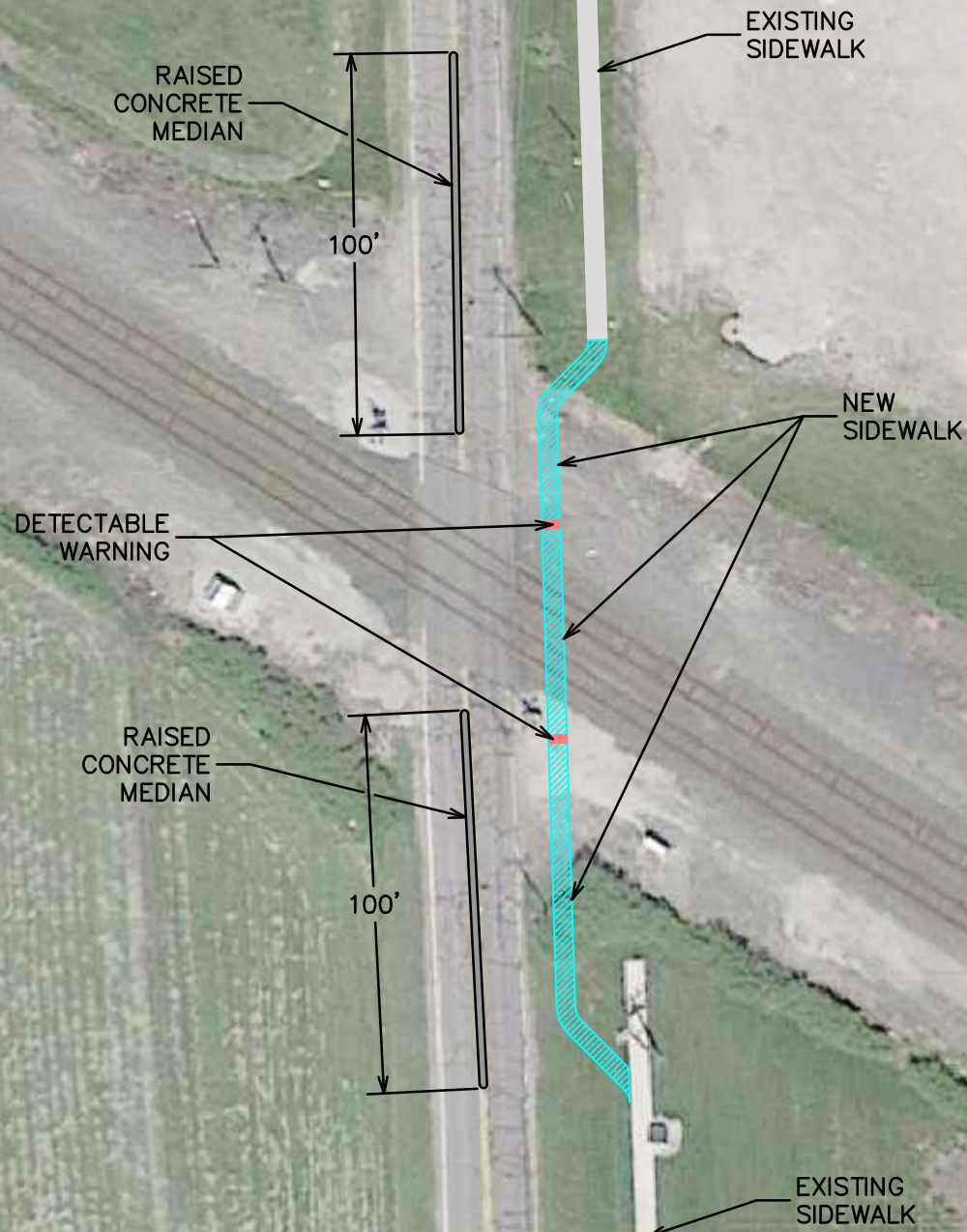
30'

50'

WILLIAMS ST



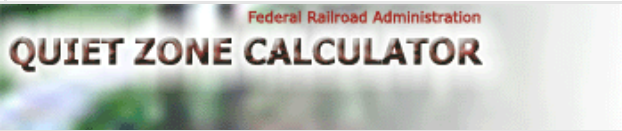
OPTIONS A, B, & C
CONCRETE MEDIAN



APPENDIX B

QUIET ZONE CALCULATIONS

Print This Page



QUIET ZONE CALCULATOR

[Home](#) | [Help](#) | [Contact](#) | [logoff qz@ctcinc.com](#)

[Cancel](#)

Change Scenario: CITY OF HU_45435

[Continue](#)

Create New Zone

Manage Existing Zones

Log Off

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the [MODIFY](#) Button

Step 2: Select proposed warning device or SSM. Then click the [UPDATE](#) button. To generate a spreadsheet of the values on this page, click on [ASM](#) button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the SELECT button is shown at the bottom right side of this page. Note that the SELECT button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the SELECT button

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
524054E	BERLIN RD	2219	Gates	0	13	10,439.80	MODIFY
524055L	RIVER RD	1743	Gates	0	13	9,417.72	MODIFY
524056T	MAIN ST	7529	Gates	0	0	57,734.35	MODIFY
524057A	WILLIAMS ST	1497	Gates	0	0	48,384.09	MODIFY
524059N	RYE BEACH RD	4582	Gates	0	13	11,251.12	MODIFY

* Only Public At Grade Crossings are listed.

ALERT: Quiet Zone qualifies because QZRI is less than Risk Index with Horns.

Click for [Supplementary Safety Measures \[SSM\]](#)

Click for ASM spreadsheet: [ASM](#) * Note: The use of ASMs requires an application to and approval from the FRA.

Summary

Proposed Quiet Zone:	City of Huron 20150624-2
Type:	New 24-hour QZ
Scenario:	CITY OF HU_45435
Estimated Total Cost:	\$45,000.00
Nationwide Significant Risk Threshold:	14347 .00
Risk Index with Horns:	31374.3
Quiet Zone Risk Index:	27445.42
<div style="border: 1px solid #ccc; padding: 5px; display: inline-block; background-color: #f0f0f0;"> Select </div>	

APPENDIX C

FRA INVENTORY FORMS

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 01 / 01 / 2014	B. Reporting Agency <input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input type="checkbox"/> Other	C. Reason for Update (Select only one) <input checked="" type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction	D. DOT Crossing Inventory Number 524054E
---	--	--	--

Part I: Location and Classification Information

1. Primary Operating Railroad Norfolk Southern Railway Company [NS]		2. State OHIO		3. County ERIE	
4. City / Municipality <input checked="" type="checkbox"/> In <input type="checkbox"/> Near HURON		5. Street/Road Name & Block Number BERLIN RD (Street/Road Name) * (Block Number)		6. Highway Type & No.	
7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR			8. Do Other Railroads Operate Over Your Track at Crossing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Specify RR ATK		
9. Railroad Division or Region <input type="checkbox"/> None DEARBORN		10. Railroad Subdivision or District <input type="checkbox"/> None 503600		11. Branch or Line Name <input type="checkbox"/> None CHICAGO LINE	
12. RR Milepost 0231.12 (prefix) (nnnn.nnn) (suffix)		13. Line Segment *			
14. Nearest RR Timetable Station * HURON		15. Parent RR (if applicable) <input type="checkbox"/> N/A		16. Crossing Owner (if applicable) <input type="checkbox"/> N/A	
17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.		19. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	
20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		21. Type of Train <input type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter <input type="checkbox"/> Transit <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Tourist/Other		22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0	
23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard					
24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Provide Crossing Number			25. Quiet Zone (FRA provided) <input checked="" type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused Date Established		
26. HSR Corridor ID <input type="checkbox"/> N/A		27. Latitude in decimal degrees (WGS84 std: nn.nnnnnnn) 41.3834105		28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnnn) -82.5367427	
29. Lat/Long Source <input type="checkbox"/> Actual <input type="checkbox"/> Estimated		30.A. Railroad Use *			
30.B. Railroad Use *				31.A. State Use *	
30.C. Railroad Use *				31.B. State Use *	
30.D. Railroad Use *				31.C. State Use *	
30.E. Railroad Use *				31.D. State Use *	
32.A. Narrative (Railroad Use) *			32.B. Narrative (State Use) *		
33. Emergency Notification Telephone No. (posted) 800-453-2530		34. Railroad Contact (Telephone No.) 800-946-4744		35. State Contact (Telephone No.) 614-466-0407	

Part II: Railroad Information

1. Estimated Number of Daily Train Movements				
1.A. Total Day Thru Trains (6 AM to 6 PM) 46	1.B. Total Night Thru Trains (6 PM to 6 AM) 46	1.C. Total Switching Trains 2	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day <input type="checkbox"/> How many trains per week?
2. Year of Train Count Data (YYYY)		3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 69 3.B. Typical Speed Range Over Crossing (mph) From 45 to 60		
4. Type and Count of Tracks Main 2 Siding Yard Transit Industry				
5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None				
6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		7.A. Event Recorder <input type="checkbox"/> Yes <input type="checkbox"/> No		7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 01/01/2014		PAGE 2		D. Crossing Inventory Number (7 char.) 524054E	
Part III: Highway or Pathway Traffic Control Device Information					
1. Are there Signs or Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2. Types of Passive Traffic Control Devices associated with the Crossing			
2.A. Crossbuck Assemblies (count) 2		2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None <input checked="" type="checkbox"/> W10-1 <input type="checkbox"/> W10-3 <input type="checkbox"/> W10-11 <input type="checkbox"/> W10-2 <input type="checkbox"/> W10-4 <input type="checkbox"/> W10-12	
2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count _____) <input type="checkbox"/> No		2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None		2.G. Channelization Devices/Medians <input type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None	
2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.I. ENS Sign (I-13) Displayed <input type="checkbox"/> Yes <input type="checkbox"/> No		2.J. Other MUTCD Signs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____	
2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.L. LED Enhanced Signs (List types)			
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)					
3.A. Gate Arms (count) Roadway 2 Pedestrian _____		3.B. Gate Configuration <input type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Resistance <input type="checkbox"/> 3 Quad <input type="checkbox"/> Median Gates <input type="checkbox"/> 4 Quad		3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane 0 <input type="checkbox"/> Incandescent Not Over Traffic Lane 0 <input type="checkbox"/> LED	
3.D. Mast Mounted Flashing Lights (count of masts) 2 <input type="checkbox"/> Incandescent <input type="checkbox"/> LED <input type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included		3.E. Total Count of Flashing Light Pairs 4		3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) ____/____/____ <input type="checkbox"/> Not Required	
3.G. Wayside Horn <input type="checkbox"/> Yes Installed on (MM/YYYY) ____/____/____ <input type="checkbox"/> No		3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		3.I. Bells (count) 1	
3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None				3.K. Other Flashing Lights or Warning Devices Count 0 Specify type _____	
4.A. Does nearby Hwy Intersection have Traffic Signals? <input type="checkbox"/> Yes <input type="checkbox"/> No		4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs		4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	
5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____		6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input type="checkbox"/> None			
Part IV: Physical Characteristics					
1. Traffic Lanes Crossing Railroad <input type="checkbox"/> One-way Traffic <input type="checkbox"/> Two-way Traffic Number of Lanes 2 <input type="checkbox"/> Divided Traffic		2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input type="checkbox"/> Yes <input type="checkbox"/> No		5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/____ Width * _____ Length * _____ <input type="checkbox"/> 1 Timber <input checked="" type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____			
6. Intersecting Roadway within 500 feet? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Approximate Distance (feet) _____		7. Smallest Crossing Angle <input checked="" type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input type="checkbox"/> 60° - 90°		8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Part V: Public Highway Information					
1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input checked="" type="checkbox"/> (03) Federal AID, Not NHS <input type="checkbox"/> (08) Non-Federal Aid		2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input checked="" type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local		3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 4. Highway Speed Limit _____ MPH <input type="checkbox"/> Posted <input type="checkbox"/> Statutory	
7. Annual Average Daily Traffic (AADT) Year 2006 AADT 002219		8. Estimated Percent Trucks 04 %		9. Regularly Used by School Buses? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Average Number per Day 0	
10. Emergency Services Route <input type="checkbox"/> Yes <input type="checkbox"/> No					
Submission Information - This information is used for administrative purposes and is not available on the public website.					
Submitted by _____ Organization _____ Phone _____ Date _____ Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.					

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 01 / 01 / 2014	B. Reporting Agency <input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input type="checkbox"/> Other	C. Reason for Update (Select only one) <input checked="" type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction	D. DOT Crossing Inventory Number 524055L
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Part I: Location and Classification Information

1. Primary Operating Railroad Norfolk Southern Railway Company [NS]		2. State OHIO		3. County ERIE	
4. City / Municipality <input checked="" type="checkbox"/> In <input type="checkbox"/> Near HURON		5. Street/Road Name & Block Number RIVER RD (Street/Road Name) * (Block Number)		6. Highway Type & No.	
7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR			8. Do Other Railroads Operate Over Your Track at Crossing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Specify RR ATK		
9. Railroad Division or Region <input type="checkbox"/> None DEARBORN		10. Railroad Subdivision or District <input type="checkbox"/> None 503600		11. Branch or Line Name <input type="checkbox"/> None CHICAGO LINE	
12. RR Milepost 0231.92 (prefix) (nnnn.nnn) (suffix)		13. Line Segment *		14. Nearest RR Timetable Station *	
15. Parent RR (if applicable) <input type="checkbox"/> N/A		16. Crossing Owner (if applicable) <input type="checkbox"/> N/A		17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private	
18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.		19. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over		20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input type="checkbox"/> No	
21. Type of Train <input type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter		22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0		23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard	
24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Provide Crossing Number			25. Quiet Zone (FRA provided) <input checked="" type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused Date Established		
26. HSR Corridor ID <input type="checkbox"/> N/A		27. Latitude in decimal degrees (WGS84 std: nn.nnnnnnn) 41.3887483		28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnnn) -82.5503565	
29. Lat/Long Source <input type="checkbox"/> Actual <input type="checkbox"/> Estimated		30.A. Railroad Use *		31.A. State Use *	
30.B. Railroad Use *		31.B. State Use *		30.C. Railroad Use *	
31.C. State Use *		30.D. Railroad Use *		31.D. State Use *	
32.A. Narrative (Railroad Use) *			32.B. Narrative (State Use) *		
33. Emergency Notification Telephone No. (posted) 800-453-2530		34. Railroad Contact (Telephone No.) 800-946-4744		35. State Contact (Telephone No.) 614-466-0407	

Part II: Railroad Information

1. Estimated Number of Daily Train Movements				
1.A. Total Day Thru Trains (6 AM to 6 PM) 46	1.B. Total Night Thru Trains (6 PM to 6 AM) 46	1.C. Total Switching Trains 2	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day How many trains per week? <input type="checkbox"/>
2. Year of Train Count Data (YYYY)		3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 69 3.B. Typical Speed Range Over Crossing (mph) From 45 to 60		
4. Type and Count of Tracks Main 2 Siding Yard Transit Industry				
5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None				
6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		7.A. Event Recorder <input type="checkbox"/> Yes <input type="checkbox"/> No		7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 01/01/2014		PAGE 2		D. Crossing Inventory Number (7 char.) 524055L	
Part III: Highway or Pathway Traffic Control Device Information					
1. Are there Signs or Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2. Types of Passive Traffic Control Devices associated with the Crossing			
2.A. Crossbuck Assemblies (count) 2		2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None <input checked="" type="checkbox"/> W10-1 <input type="checkbox"/> W10-3 <input type="checkbox"/> W10-11 <input type="checkbox"/> W10-2 <input type="checkbox"/> W10-4 <input type="checkbox"/> W10-12	
2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count _____) <input type="checkbox"/> No		2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None		2.G. Channelization Devices/Medians <input type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None	
2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.I. ENS Sign (I-13) Displayed <input type="checkbox"/> Yes <input type="checkbox"/> No		2.J. Other MUTCD Signs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____	
2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.L. LED Enhanced Signs (List types)			
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)					
3.A. Gate Arms (count) Roadway 2 Pedestrian _____		3.B. Gate Configuration <input type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Resistance <input type="checkbox"/> 3 Quad <input type="checkbox"/> Median Gates <input type="checkbox"/> 4 Quad		3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane 0 <input type="checkbox"/> Incandescent Not Over Traffic Lane 0 <input type="checkbox"/> LED	
3.D. Mast Mounted Flashing Lights (count of masts) 2 <input type="checkbox"/> Incandescent <input type="checkbox"/> LED <input type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included		3.E. Total Count of Flashing Light Pairs 4		3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) ____/____/____ <input type="checkbox"/> Not Required	
3.G. Wayside Horn <input type="checkbox"/> Yes Installed on (MM/YYYY) ____/____/____ <input type="checkbox"/> No		3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		3.I. Bells (count) 0	
3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None				3.K. Other Flashing Lights or Warning Devices Count 0 Specify type _____	
4.A. Does nearby Hwy Intersection have Traffic Signals? <input type="checkbox"/> Yes <input type="checkbox"/> No		4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs		4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	
5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____		6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input type="checkbox"/> None			
Part IV: Physical Characteristics					
1. Traffic Lanes Crossing Railroad <input type="checkbox"/> One-way Traffic <input type="checkbox"/> Two-way Traffic Number of Lanes 2 <input type="checkbox"/> Divided Traffic		2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input type="checkbox"/> Yes <input type="checkbox"/> No		5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/____ Width * _____ Length * _____ <input type="checkbox"/> 1 Timber <input checked="" type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____			
6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) -75		7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90°		8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Part V: Public Highway Information					
1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input checked="" type="checkbox"/> (03) Federal AID, Not NHS <input type="checkbox"/> (08) Non-Federal Aid		2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input checked="" type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local		3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Highway Speed Limit _____ MPH <input type="checkbox"/> Posted <input type="checkbox"/> Statutory		5. Linear Referencing System (LRS Route ID) *			
6. LRS Milepost *		7. Annual Average Daily Traffic (AADT) Year 2006 AADT 001743			
8. Estimated Percent Trucks 04 %		9. Regularly Used by School Buses? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Average Number per Day 0		10. Emergency Services Route <input type="checkbox"/> Yes <input type="checkbox"/> No	
Submission Information - This information is used for administrative purposes and is not available on the public website.					
Submitted by _____ Organization _____ Phone _____ Date _____ Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.					

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 01 / 01 / 2014	B. Reporting Agency <input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input type="checkbox"/> Other	C. Reason for Update (Select only one) <input checked="" type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction	D. DOT Crossing Inventory Number 524056T
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Part I: Location and Classification Information

1. Primary Operating Railroad Norfolk Southern Railway Company [NS]		2. State OHIO		3. County ERIE	
4. City / Municipality <input checked="" type="checkbox"/> In <input type="checkbox"/> Near HURON		5. Street/Road Name & Block Number MAIN ST (Street/Road Name) * (Block Number)		6. Highway Type & No. SR13-7.	
7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR			8. Do Other Railroads Operate Over Your Track at Crossing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Specify RR ATK		
9. Railroad Division or Region <input type="checkbox"/> None DEARBORN		10. Railroad Subdivision or District <input type="checkbox"/> None 503600		11. Branch or Line Name <input type="checkbox"/> None CHICAGO LINE	
12. RR Milepost 0232.42 (prefix) (nnnn.nnn) (suffix)					
13. Line Segment *		14. Nearest RR Timetable Station HURON		15. Parent RR (if applicable) <input type="checkbox"/> N/A	
16. Crossing Owner (if applicable) <input type="checkbox"/> N/A					
17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private	18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.	19. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Type of Train <input type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter <input type="checkbox"/> Transit <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Tourist/Other	22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0
23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard					
24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Provide Crossing Number			25. Quiet Zone (FRA provided) <input checked="" type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused Date Established		
26. HSR Corridor ID <input type="checkbox"/> N/A	27. Latitude in decimal degrees (WGS84 std: nn.nnnnnnn) 41.3897048		28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnnn) -82.5597531		29. Lat/Long Source <input type="checkbox"/> Actual <input type="checkbox"/> Estimated
30.A. Railroad Use *			31.A. State Use *		
30.B. Railroad Use *			31.B. State Use *		
30.C. Railroad Use *			31.C. State Use *		
30.D. Railroad Use *			31.D. State Use *		
32.A. Narrative (Railroad Use) *			32.B. Narrative (State Use) *		
33. Emergency Notification Telephone No. (posted) 800-453-2530		34. Railroad Contact (Telephone No.) 800-946-4744		35. State Contact (Telephone No.) 614-466-0407	

Part II: Railroad Information

1. Estimated Number of Daily Train Movements				
1.A. Total Day Thru Trains (6 AM to 6 PM) 46	1.B. Total Night Thru Trains (6 PM to 6 AM) 46	1.C. Total Switching Trains 2	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day <input type="checkbox"/> How many trains per week? _____
2. Year of Train Count Data (YYYY)		3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 69 3.B. Typical Speed Range Over Crossing (mph) From 45 to 60		
4. Type and Count of Tracks Main 2 Siding Yard Transit Industry				
5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None				
6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		7.A. Event Recorder <input type="checkbox"/> Yes <input type="checkbox"/> No		7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 01/01/2014		PAGE 2		D. Crossing Inventory Number (7 char.) 5240561	
Part III: Highway or Pathway Traffic Control Device Information					
1. Are there Signs or Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2. Types of Passive Traffic Control Devices associated with the Crossing			
2.A. Crossbuck Assemblies (count) 2		2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None <input checked="" type="checkbox"/> W10-1 <input type="checkbox"/> W10-3 <input type="checkbox"/> W10-11 <input type="checkbox"/> W10-2 <input type="checkbox"/> W10-4 <input type="checkbox"/> W10-12	
2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count _____) <input type="checkbox"/> No		2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None		2.G. Channelization Devices/Medians <input type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None	
2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.I. ENS Sign (I-13) Displayed <input type="checkbox"/> Yes <input type="checkbox"/> No		2.J. Other MUTCD Signs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____	
2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.L. LED Enhanced Signs (List types)			
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)					
3.A. Gate Arms (count) Roadway 2 Pedestrian _____		3.B. Gate Configuration <input type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Resistance <input type="checkbox"/> 3 Quad <input type="checkbox"/> Median Gates <input type="checkbox"/> 4 Quad		3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane 2 <input type="checkbox"/> Incandescent Not Over Traffic Lane 0 <input type="checkbox"/> LED	
3.D. Mast Mounted Flashing Lights (count of masts) 2 <input type="checkbox"/> Incandescent <input type="checkbox"/> LED <input type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included		3.E. Total Count of Flashing Light Pairs 4		3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) _____/____/____ <input type="checkbox"/> Not Required	
3.G. Wayside Horn <input type="checkbox"/> Yes Installed on (MM/YYYY) ____/____/____ <input type="checkbox"/> No		3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		3.I. Bells (count) 0	
3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None				3.K. Other Flashing Lights or Warning Devices Count 0 Specify type _____	
4.A. Does nearby Hwy Intersection have Traffic Signals? <input type="checkbox"/> Yes <input type="checkbox"/> No		4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs		4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	
5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____		6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input type="checkbox"/> None			
Part IV: Physical Characteristics					
1. Traffic Lanes Crossing Railroad <input type="checkbox"/> One-way Traffic <input type="checkbox"/> Two-way Traffic Number of Lanes 2 <input type="checkbox"/> Divided Traffic		2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input type="checkbox"/> Yes <input type="checkbox"/> No		5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/____ Width * _____ Length * _____ <input type="checkbox"/> 1 Timber <input checked="" type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____			
6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) -75		7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90°		8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Part V: Public Highway Information					
1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input checked="" type="checkbox"/> (03) Federal AID, Not NHS <input type="checkbox"/> (08) Non-Federal Aid		2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input checked="" type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local		3. Is Crossing on State Highway System? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4. Highway Speed Limit _____ MPH <input type="checkbox"/> Posted <input type="checkbox"/> Statutory		5. Linear Referencing System (LRS Route ID) *			
6. LRS Milepost *		7. Annual Average Daily Traffic (AADT) Year 2006 AADT 007529			
8. Estimated Percent Trucks 06 %		9. Regularly Used by School Buses? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Average Number per Day 2		10. Emergency Services Route <input type="checkbox"/> Yes <input type="checkbox"/> No	
Submission Information - This information is used for administrative purposes and is not available on the public website.					
Submitted by _____ Organization _____ Phone _____ Date _____ Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.					

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 01 / 01 / 2014	B. Reporting Agency <input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input type="checkbox"/> Other	C. Reason for Update (Select only one) <input checked="" type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction	D. DOT Crossing Inventory Number 524057A
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Part I: Location and Classification Information

1. Primary Operating Railroad Norfolk Southern Railway Company [NS]		2. State OHIO		3. County ERIE	
4. City / Municipality <input checked="" type="checkbox"/> In <input type="checkbox"/> Near HURON		5. Street/Road Name & Block Number WILLIAMS ST (Street/Road Name) * (Block Number)		6. Highway Type & No.	
7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR			8. Do Other Railroads Operate Over Your Track at Crossing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Specify RR ATK		
9. Railroad Division or Region <input type="checkbox"/> None DEARBORN		10. Railroad Subdivision or District <input type="checkbox"/> None 503600		11. Branch or Line Name <input type="checkbox"/> None CHICAGO LINE	
12. RR Milepost 0232.50 (prefix) (nnnn.nnn) (suffix)					
13. Line Segment *		14. Nearest RR Timetable Station *		15. Parent RR (if applicable) <input type="checkbox"/> N/A	
16. Crossing Owner (if applicable) <input type="checkbox"/> N/A					
17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.		19. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	
20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		21. Type of Train <input type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter		22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0	
23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard					
24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Provide Crossing Number			25. Quiet Zone (FRA provided) <input checked="" type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused Date Established		
26. HSR Corridor ID <input type="checkbox"/> N/A		27. Latitude in decimal degrees (WGS84 std: nn.nnnnnnn) 41.3898188		28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnnn) -82.5611897	
29. Lat/Long Source <input type="checkbox"/> Actual <input type="checkbox"/> Estimated					
30.A. Railroad Use *			31.A. State Use *		
30.B. Railroad Use *			31.B. State Use *		
30.C. Railroad Use *			31.C. State Use *		
30.D. Railroad Use *			31.D. State Use *		
32.A. Narrative (Railroad Use) *			32.B. Narrative (State Use) *		
33. Emergency Notification Telephone No. (posted) 800-453-2530		34. Railroad Contact (Telephone No.) 800-946-4744		35. State Contact (Telephone No.) 614-466-0407	

Part II: Railroad Information

1. Estimated Number of Daily Train Movements				
1.A. Total Day Thru Trains (6 AM to 6 PM) 46	1.B. Total Night Thru Trains (6 PM to 6 AM) 46	1.C. Total Switching Trains 2	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day How many trains per week? <input type="checkbox"/>
2. Year of Train Count Data (YYYY)		3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 69 3.B. Typical Speed Range Over Crossing (mph) From 45 to 60		
4. Type and Count of Tracks Main 2 Siding Yard Transit Industry				
5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None				
6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		7.A. Event Recorder <input type="checkbox"/> Yes <input type="checkbox"/> No		7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 01/01/2014		PAGE 2		D. Crossing Inventory Number (7 char.) 524057A	
Part III: Highway or Pathway Traffic Control Device Information					
1. Are there Signs or Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2. Types of Passive Traffic Control Devices associated with the Crossing			
2.A. Crossbuck Assemblies (count) 2		2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None <input checked="" type="checkbox"/> W10-1 <input type="checkbox"/> W10-3 <input type="checkbox"/> W10-11 <input type="checkbox"/> W10-2 <input type="checkbox"/> W10-4 <input type="checkbox"/> W10-12	
2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count _____) <input type="checkbox"/> No		2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None		2.G. Channelization Devices/Medians <input type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None	
2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.I. ENS Sign (I-13) Displayed <input type="checkbox"/> Yes <input type="checkbox"/> No			
2.J. Other MUTCD Signs Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____		2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.L. LED Enhanced Signs (List types)	
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)					
3.A. Gate Arms (count) Roadway 2 Pedestrian _____		3.B. Gate Configuration <input type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Resistance <input type="checkbox"/> 3 Quad <input type="checkbox"/> Median Gates <input type="checkbox"/> 4 Quad		3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane 0 <input type="checkbox"/> Incandescent Not Over Traffic Lane 0 <input type="checkbox"/> LED	
3.D. Mast Mounted Flashing Lights (count of masts) 2 <input type="checkbox"/> Incandescent <input type="checkbox"/> LED <input type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included		3.E. Total Count of Flashing Light Pairs 4			
3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) _____/_____/_____ <input type="checkbox"/> Not Required		3.G. Wayside Horn <input type="checkbox"/> Yes Installed on (MM/YYYY) ____/____/_____ <input type="checkbox"/> No		3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.I. Bells (count) 1		3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None			
3.K. Other Flashing Lights or Warning Devices Count 0 Specify type _____					
4.A. Does nearby Hwy Intersection have Traffic Signals? <input type="checkbox"/> Yes <input type="checkbox"/> No		4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs		4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	
5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____		6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input type="checkbox"/> None			
Part IV: Physical Characteristics					
1. Traffic Lanes Crossing Railroad Number of Lanes 2 <input type="checkbox"/> One-way Traffic <input type="checkbox"/> Two-way Traffic <input type="checkbox"/> Divided Traffic		2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input type="checkbox"/> Yes <input type="checkbox"/> No		5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/_____ <input type="checkbox"/> 1 Timber <input checked="" type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____			
6. Intersecting Roadway within 500 feet? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Approximate Distance (feet) _____		7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90°		8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Part V: Public Highway Information					
1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input type="checkbox"/> (03) Federal AID, Not NHS <input checked="" type="checkbox"/> (08) Non-Federal Aid		2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input checked="" type="checkbox"/> (7) Local		3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Highway Speed Limit _____ MPH <input type="checkbox"/> Posted <input type="checkbox"/> Statutory		5. Linear Referencing System (LRS Route ID) *			
6. LRS Milepost *					
7. Annual Average Daily Traffic (AADT) Year 2006 AADT 001497		8. Estimated Percent Trucks 03 %		9. Regularly Used by School Buses? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Average Number per Day 0	
10. Emergency Services Route <input type="checkbox"/> Yes <input type="checkbox"/> No					
Submission Information - This information is used for administrative purposes and is not available on the public website.					
Submitted by _____ Organization _____ Phone _____ Date _____ Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.					

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 01 / 01 / 2014	B. Reporting Agency <input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input type="checkbox"/> Other	C. Reason for Update (Select only one) <input checked="" type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction	D. DOT Crossing Inventory Number 524059N
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Part I: Location and Classification Information

1. Primary Operating Railroad Norfolk Southern Railway Company [NS]		2. State OHIO		3. County ERIE	
4. City / Municipality <input checked="" type="checkbox"/> In <input type="checkbox"/> Near HURON		5. Street/Road Name & Block Number RYE BEACH RD (Street/Road Name) * (Block Number)		6. Highway Type & No. CR122	
7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR			8. Do Other Railroads Operate Over Your Track at Crossing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Specify RR ATK		
9. Railroad Division or Region <input type="checkbox"/> None DEARBORN		10. Railroad Subdivision or District <input type="checkbox"/> None 503600		11. Branch or Line Name <input type="checkbox"/> None CHICAGO LINE	
12. RR Milepost 0234.24 (prefix) (nnnn.nnn) (suffix)					
13. Line Segment *		14. Nearest RR Timetable Station * HURON		15. Parent RR (if applicable) <input type="checkbox"/> N/A	
16. Crossing Owner (if applicable) <input type="checkbox"/> N/A					
17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.		19. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	
20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		21. Type of Train <input type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter <input type="checkbox"/> Transit <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Tourist/Other		22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0	
23. Type of Land Use <input checked="" type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard					
24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Provide Crossing Number			25. Quiet Zone (FRA provided) <input checked="" type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused Date Established		
26. HSR Corridor ID <input type="checkbox"/> N/A		27. Latitude in decimal degrees (WGS84 std: nn.nnnnnnn) 41.4003405		28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnnn) -82.5911590	
29. Lat/Long Source <input type="checkbox"/> Actual <input type="checkbox"/> Estimated					
30.A. Railroad Use *			31.A. State Use *		
30.B. Railroad Use *			31.B. State Use *		
30.C. Railroad Use *			31.C. State Use *		
30.D. Railroad Use *			31.D. State Use *		
32.A. Narrative (Railroad Use) *			32.B. Narrative (State Use) *		
33. Emergency Notification Telephone No. (posted) 800-453-2530		34. Railroad Contact (Telephone No.) 800-946-4744		35. State Contact (Telephone No.) 614-466-0407	

Part II: Railroad Information

1. Estimated Number of Daily Train Movements				
1.A. Total Day Thru Trains (6 AM to 6 PM) 46	1.B. Total Night Thru Trains (6 PM to 6 AM) 46	1.C. Total Switching Trains 2	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day <input type="checkbox"/> How many trains per week?
2. Year of Train Count Data (YYYY)		3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 69 3.B. Typical Speed Range Over Crossing (mph) From 45 to 60		
4. Type and Count of Tracks Main 2 Siding Yard Transit Industry				
5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None				
6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		7.A. Event Recorder <input type="checkbox"/> Yes <input type="checkbox"/> No		7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 01/01/2014		PAGE 2		D. Crossing Inventory Number (7 char.) 524059N	
Part III: Highway or Pathway Traffic Control Device Information					
1. Are there Signs or Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2. Types of Passive Traffic Control Devices associated with the Crossing			
2.A. Crossbuck Assemblies (count) 2		2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None <input checked="" type="checkbox"/> W10-1 <input type="checkbox"/> W10-3 <input type="checkbox"/> W10-11 <input type="checkbox"/> W10-2 <input type="checkbox"/> W10-4 <input type="checkbox"/> W10-12	
2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count _____) <input type="checkbox"/> No		2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None		2.G. Channelization Devices/Medians <input type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None	
2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.I. ENS Sign (I-13) Displayed <input type="checkbox"/> Yes <input type="checkbox"/> No		2.J. Other MUTCD Signs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____	
2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input type="checkbox"/> No		2.L. LED Enhanced Signs (List types)			
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)					
3.A. Gate Arms (count) Roadway 2 Pedestrian _____		3.B. Gate Configuration <input type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Resistance <input type="checkbox"/> 3 Quad <input type="checkbox"/> Median Gates <input type="checkbox"/> 4 Quad		3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane 0 <input type="checkbox"/> Incandescent Not Over Traffic Lane 0 <input type="checkbox"/> LED	
3.D. Mast Mounted Flashing Lights (count of masts) 2 <input type="checkbox"/> Incandescent <input type="checkbox"/> LED <input type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included		3.E. Total Count of Flashing Light Pairs 4		3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) _____/_____/_____ <input type="checkbox"/> Not Required	
3.G. Wayside Horn <input type="checkbox"/> Yes Installed on (MM/YYYY) ____/____/_____ <input type="checkbox"/> No		3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		3.I. Bells (count) 0	
3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None				3.K. Other Flashing Lights or Warning Devices Count 0 Specify type _____	
4.A. Does nearby Hwy Intersection have Traffic Signals? <input type="checkbox"/> Yes <input type="checkbox"/> No		4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs		4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	
5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____		6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input type="checkbox"/> None			
Part IV: Physical Characteristics					
1. Traffic Lanes Crossing Railroad <input type="checkbox"/> One-way Traffic <input type="checkbox"/> Two-way Traffic Number of Lanes 2 <input type="checkbox"/> Divided Traffic		2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input type="checkbox"/> Yes <input type="checkbox"/> No		5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/_____ <input type="checkbox"/> 1 Timber <input checked="" type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____			
6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) -75		7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90°		8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Part V: Public Highway Information					
1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input checked="" type="checkbox"/> (03) Federal AID, Not NHS <input type="checkbox"/> (08) Non-Federal Aid		2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input checked="" type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local		3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Highway Speed Limit _____ MPH <input type="checkbox"/> Posted <input type="checkbox"/> Statutory		5. Linear Referencing System (LRS Route ID) *			
6. LRS Milepost *		7. Annual Average Daily Traffic (AADT) Year 2006 AADT 004582			
8. Estimated Percent Trucks 04 %		9. Regularly Used by School Buses? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Average Number per Day 0		10. Emergency Services Route <input type="checkbox"/> Yes <input type="checkbox"/> No	
Submission Information - This information is used for administrative purposes and is not available on the public website.					
Submitted by _____ Organization _____ Phone _____ Date _____ Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.					

APPENDIX D

NORFOLK SOUTHERN RAILROAD QUIET ZONE PROJECT GUIDELINES

QUIET ZONE INFORMATION



Locomotive horns enhance safety at highway-rail crossings by warning of approaching trains. The Federal Railroad Administration requires horns be sounded where trains approach public grade crossings. An exception is where a public authority has created a valid “quite zone.”

The rule was published in the Federal Register April 27, 2005, Volume 70, No. 80, beginning on page 21,888.

Learn more about the [locomotive horn rule](#).

Community request to establish a new quiet zone

All requirements of the FRA rule must be met to establish a new quiet zone, including submitting a written notification to initiate the process. Proposed quiet zones involving NS public grade crossings should be submitted to:

W.L. (Bill) Barringer
Norfolk Southern Corporation
Director Grade Crossing Safety
1200 Peachtree St. N.E., Box 36
Atlanta GA 30309-0036

To implement safety enhancements to comply with Part 222 involving active warning devices at crossings, contact the NS Communications & Signal Department. Upgrades will be performed under NS' direction, and the city will cover costs of installation and maintenance.

For more info:

Stephen Wimberly
Administrator Highway Grade Crossings
Norfolk Southern Corporation
1200 Peachtree St. N.E.
Atlanta GA 30309

A \$2,800 quiet zone administrative handling fee applies. Requesting parties will be responsible for payment before completion of NS' review.

Costs of quiet zone safety measures

NS' primary concern at rail-highway grade crossings is safety. The company will assist communities as necessary, but the responsible public authority must fully comply with federal rules. Public authorities pay for preliminary engineering, construction, maintenance, and replacement of active warning devices or their components installed at crossings to meet quiet zone standards. Public authorities must enter into a contract guaranteeing reimbursement to the railroad 30 days after railroad work is completed. Costs to install safety measures vary. Examples include:

Four-Quadrant Gate Systems - \$300,000 to \$500,000

Basic Active Warning System including flashing lights and gates, constant warning time, power out indicator, and cabin - \$185,000 to \$400,000

Basic Interconnect - \$5,000 to \$15,000-

Annual Maintenance - \$4,000 to \$10,000

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- Initial Contact by Quiet Zone Requestor (Prior to or with Notice of Intent).
- Railroad reply with information and determine payment of Administrative Fee.

- Railroad Personnel can meet on site as necessary.
- Preparation for Preliminary Engineering including creation of a Preliminary Engineering Agreement (PEA) to be forwarded to Requestor.
- After full execution of PEA begin Preliminary Engineering to determine cost.
- Send Preliminary Engineering, which includes an Estimated Cost, to Requestor for Review and Approval.
- After receiving approval of Preliminary Engineering, create an QZ Agreement to cover Project installation, cost and maintenance and forward to Requestor.
- After full execution of project QZ Agreement return copy with request to be notified when the Project is Authorized for Construction.
- After Authorization for Construction, begin the process for installation of the project, which may take several months depending on complexity.

Also, under CFR 49 Part 222.35 (3)(b) the Warning devices must meet current MUTCD Standards (Part 8) as follows:

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Length as specified

8 inches or 12 inches

17 ft. MIN. clearance above crown of roadway

Edge of the traffic control device that is nearest to the roadway

30 inches

RAILROAD CROSSROAD

2 TRACKS

15 inches

7.5 ft. MIN. 9.5 ft. MAX.

4.25 ft. MAX. 25.4 inches MAX.

Counterweight (see Note 1)

Minimum of three red lights positioned as appropriate for approaching traffic

3.5 ft. MIN. 4.5 ft. MAX.

2 ft.

4 inches MAX. above ground level (see Note 2)

Crown of the roadway

*For locating this reference line on an approach that does not have a curb, see Section 8C.01

Notes:

1. Where gates are located in the median, additional median width may be required to provide the minimum clearance for the counterweight supports.
2. The top of the signal foundation should be no more than 4 inches above the surface of the ground and should be at the same elevation as the crown of the roadway. Where site conditions would not allow this to be achieved, the shoulder side slopes should be re-graded or the height of the signal post should be adjusted to meet the 17-foot vertical clearance requirement.