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**Public Utilities  
Commission of Ohio**

09-995 RR- FED

# Memo

RECEIVED-DOCKETING DIV

2009 OCT 27 PM 1:38

PUCO

**To:** Docketing Division  
**From:** George Martin, Grade Crossing Planner, Rail Division *GM*  
**Re:** American Recovery and Reinvestment Act of 2009 (ARRA) Project- Wheeling & Lake Erie Railway Corridor Project, City of Hartville & Surrounding Area, Portage & Stark Counties  
**Date:** October 7, 2009

The Ohio Rail Development commission (ORDC) has encumbered funding provided by the American Recovery and Reinvestment Act of 2009 (ARRA) to upgrade the following crossings to flashing lights and roadway gates:

Portage County, Manning Rd, TR 2, Suffield Township, DOT# 472-632K

Stark County, Maple St, SR 619, Village of Hartville, DOT# 472-624T

Stark County, N. Prospect Ave., CR 56, Village of Hartville, DOT# 472-625A

The crossings were surveyed on March 17, 2009 and were found to warrant the upgrades. The surveys also determined that Maple St and N Prospect Ave should be interconnected with highway traffic signals and will require railroad preemption.

These projects are actual cost. ARRA reimbursable costs shall not exceed \$600,000. Any costs above the ARRA funding will be reimbursed from ORDC's Safety Fund to a cap of \$1,250,000. Should the costs exceed this amount due to the traffic preemption, ARRA funding requested under separate cover may be used.

Staff requests an Entry with the following language included due to reporting requirements for federal reimbursement:

## ARRA FUNDED PROJECT

**Funding for this contract has been provided through the ARRA, and is subject to the reporting and operational requirements of ARRA. Each contractor, including the railroad and both prime and subcontractors, are subject to audit by federal or state authorities. Failure to comply with terms herein may result in cancellation, termination or suspension of the contract, in whole or in part.**

Staff requests that the Entry direct the Wheeling & Lake Erie Railway (WE) to submit site plans and cost estimates to the Commission and ORDC within 90 days. **ORDC is requesting that the Commission issue an 18 month order for completion due the traffic preemption and the significant coordination needed with the Village of Hartville.** Upon approval of the plans and

estimates by ORDC construction may commence. Staff agrees that the engineering and preemption requirements necessitated make these projects very complicated. As such, staff agrees with the request and recommends that the railroad be granted an 18-month time period within which to complete these projects.

C:Legal Department

Please serve the following parties of record

Ms Susan Kirkland

Ohio Rail Development Commission

1980 West Broad St

Columbus, Oh 43223

Mr Dan Reinsel

Wheeling & Lake Erie Railway

100 E First St

Brewster, Oh 44613

Suffield Township Trustees

2150 May Rd


Suffield, Oh 44260

Mayor Edsel R. Tucker

202 W Maple st

Hartville, Oh 44632

**OHIO RAIL DEVELOPMENT COMMISSION  
INTER-OFFICE COMMUNICATION**

**TO:** Leah Thomas-Dalton, Chief, Rail Division, PUCO  
**FROM:** Susan Kirkland, Manager, Safety Section, ORDC   
**SUBJECT:** American Recovery and Reinvestment Act of 2009 (ARRA) Project  
Grade Crossing Warning Device Projects  
Portage and Stark Counties, WLE Corridor City of Hartville & Surrounding Area  
**DATE:** October 26, 2009

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The Ohio Rail Development Commission (ORDC) has identified the above mentioned rail corridor to have the grade crossings upgraded to flashing light signals and roadway gates through funding provided by the American Recovery and Reinvestment Act of 2009 (ARRA). Specifically, these crossings are:

Portage County, Manning Road, TR2	DOT# 472 632K
Stark County, Maple Street, SR619	DOT# 472 624T
Stark County, N. Prospect Avenue, CR56	DOT# 472 625A

The ORDC has secured ARRA funding for the projects under the following terms and conditions:

The projects shall be completed in compliance with Agreement No. 00001-A dated September 17, 1990, entered into by the State of Ohio and the Wheeling and Lake Erie Railway Company (WLE) to cover the general terms and conditions to be satisfied in the implementation of the State of Ohio Grade Crossing Warning Program, including but not limited to Title 1 of Chapter 23 of the United States Code; and the attached letter agreement dated May 8, 2009.

The ARRA reimbursable costs shall not exceed \$600,000, which includes \$25,000 for Preliminary Engineering and \$575,000 for construction and related activities. Any costs above and beyond the \$600,000 of ARRA funding shall be reimbursed from the ORDC's Safety funding at 100% of costs incurred to a cap of \$1,250,000, or, should the cost overruns be due to the required preemption, ARRA funding requested under a separate project for preemption of grade crossing and highway traffic signals may be used.

The ORDC conducted formal diagnostic reviews at locations on March 17, 2009; PUCO was represented at the reviews. Copies of the diagnostic review forms are attached to this memo. Please have copies of the review forms added to the PUCO formal docket and distribute copies of the forms to the WLE with the PUCO Order. In addition, it was determined that two of the crossings, Maple Street and N. Prospect Avenue, are or should be interconnected with highway traffic signals and will require railroad preemption due to the proximity of an intersection with

traffic signals to the grade crossing. Due to this complicating factor and the need for significant coordination with the local highway authority, the City of Hartville, we request an 18 month order as opposed to the standard one year order.

As part of the PUCO Order for the warning device improvements at the three locations it is important that the following language be incorporated into the text. This language is critical to the ARRA reporting requirements for Federal reimbursement.

**ARRA FUNDED PROJECT**

Funding for this contract has been provided through the ARRA, and is subject to the reporting and operational requirements of ARRA. Each contractor, including the railroad and both prime and subcontractors, are subject to audit by federal or state authorities. Failure to comply with the terms herein may result in cancellation, termination or suspension of the contract, in whole or in part.

For informational purposes, a copy of the letter agreement and additional ARRA terms is attached to this memo, along with Form FHWA-1589, the form railroads and contractors will be using to fulfill the additional ARRA reporting requirements. Tom Burns, Stimulus Coordinator for the ORDC will be the point of contact for any ARRA-related questions. His number is 614-644-0293, or he may be reached via email at [Thomas.burns@dot.state.oh.us](mailto:Thomas.burns@dot.state.oh.us).

Lastly, as with all ORDC authorizations, this construction authorization is made with the stipulation and understanding that any field work needs prior approval before the work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

Thank you for your assistance with these matters,

c: Mr. Dan Reinsel, Signal and Communication Supervisor, WLE Railway Company  
Mr. Rob Graham, Contract City Engineer, ME Companies  
Ms. Debbie Weaver, Senior Traffic Engineer, ME Companies  
Mr. Joe Glinski, Federal Highway Administration  
Mr. Scott Booker, P.E., Director of Public Projects, CTC  
Ms. Heather L. McColeman, PE, ODOT Tiger Team  
M. Forte, Project Manager, ORDC (project files)  
T. Burns, Stimulus Coordinator, ORDC

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## Diagnostic Review Team Survey

Date: 3.17.09

<b>Location Data</b>			
Street or Road Name: <b>MANNING RD</b>			
Route/Road Number (i.e., Twp), Co., SR or US) <b>Z</b>		(Include SLM if State or US route)	
AAR-DOT No.: <b>472 632K</b>			
County: <b>POR</b>	Township: <b>SUFFIELD</b>	City: (In or Near) <b>HARTVILLE</b>	
Railroad Name: <b>WE</b>	Railroad Division: <b>(SUB) CLEVELAND LINE</b>	Branch/Line (Sub) Name: <b>CLEVELAND LINE</b>	
Nearest RR Timetable Station: <b>HARTVILLE</b>		RR Milepost: <b>44.5</b>	

<b>On-Site Review Team</b>		
(Include: Name - Organization - Phone Number)		
1.	<b>MIKE FORTÉ</b>	<b>ORDG</b> <b>614-644-0283</b>
2.	<b>Scott McBroom</b>	<b>Suffield Rd. Dept.</b> <b>330-628-4974</b>
3.	<b>DAVE DOLEN</b>	<b>SUFFIELD TWP</b> <b>330-687-4974</b>
4.	<b>Robert Reustle</b>	<b>WCO</b> <b>614-466-1150</b>
5.	<b>DAN REINSEL</b>	<b>WLE</b> <b>330-767-7202</b>
6.	<b>Bryan Ford</b>	<b>Portage County Engineer</b> <b>330-296-6911</b>
7.		
8.		
9.		

<b>Existing Traffic Control Devices</b>			
Type of Warning Devices	Installed?		Quantity/Comments
Advance Warning Signs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1 NO E.B.</b>
'Stop' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'Stop Ahead' Signs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>NA</b>
Pavement Markings	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Crossbucks	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>BUCKEYE - 2</b>
Number of Tracks Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Inventory Tags	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Cantilever Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Side Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Automatic Gates	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Bells	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Sidewalk Gate Arms	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'No Turn' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Other	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

<b>Safety Data (Obtain crash reports, if possible, prior to review)</b>
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	Initial Information (from database)	Revised
Number & dates of crashes in previous 5 years	1 (7-17-07)	
Hazard Ranking	145 Date Run: 3-4-09	
<b>Railroad Data</b>		
Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	3	4
< 1 per day		
Day thru trains	1	2
Night thru trains		2
Daytime switching movements		
Nighttime switching movements	2	
Total number of tracks	1	
Number of main tracks		1
Number of other tracks	<del>1</del> <del>PASSING</del>	
Maximum train speed		25
Typical train speed		10
Amtrak	N	
If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If multiple tracks, can two trains occupy crossing at the same time? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Can one train block the motorists' view of another train at crossing? <input type="checkbox"/> Yes (Explain below) <input type="checkbox"/> No		
Are there other track(s) crossing this same roadway within 100 ft of this crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, Crossing DOT # (if different) _____		
If yes, distance _____ (take measurement between track centerlines at closest point along roadway)		
<b>Roadway Data</b>		
Local Highway Authority: SUFFIELD TWP		
Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	1585 (2006)	
Highway paved	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface:	<input checked="" type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Other <u>+ CHIP/SEAL</u>	
Roadway width:	20 ft.	
Number of highway lanes	2	
Urban or Rural		
Vehicle Speed:	35 MPH	
School Bus Operation:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes 10 Amount	
Hazardous Materials Trucks:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes ? Amount	
Shoulders:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is the shoulder surfaced?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is there existing guardrail along roadway in crossing vicinity?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is stopping site distance adequate? (See Table 2)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, deficient approach(es) _____	
Quadrant _____ Curb and Gutter:	Quadrant _____ Curb and Gutter:	
<input type="checkbox"/> Functional (Curb height = 4" or more)	<input type="checkbox"/> Functional (Curb height = 4" or more)	
<input type="checkbox"/> Non-functional (Curb height = Less than 4")	<input type="checkbox"/> Non-functional (Curb height = Less than 4")	
<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None	

Pedestrians: ☒ No ☐ Yes

Is sidewalk present? ☒ No ☐ Yes

Is there a nearby intersection that could cause queuing over the crossing? ☒ No ☐ Yes

If yes,  
Distance \_\_\_\_\_

Is this intersection signalized? ☐ No ☐ Yes

Are the signals currently interconnected with the existing crossing warning devices? ☐ No ☐ Yes

Is it the consensus of the Diagnostic Review Team that this is a potential closure project? ☒ No ☐ Yes

Explain reasons:

### Type of Development

- ☐ Open Space ☐ Institutional
- ☐ Industrial ☐ Commercial
- ☒ Residential

Location of nearby schools:

FIELD 3MI.

### Utility Information

Is commercial power available? ☐ No ☒ Yes

Utility Provider (Company Name) 1ST ENERGY

Phone Number \_\_\_\_\_

Nearest Available Power Source AT XING

What other utilities are present? CABLE PHONE

Is there potential utility conflict(s) ☐ Yes ☒ No ☐ Unknown

### Diagnostic Team Recommendations

	Quadrants Needed
<input checked="" type="checkbox"/> Install/upgrade active devices	
<input type="checkbox"/> Automatic Flashing Lights (AFLS)	
<input type="checkbox"/> AFLS / Cants	
<input checked="" type="checkbox"/> AFLS / Gates	
<input type="checkbox"/> AFLS / Gates / Cants	
<input type="checkbox"/> Upgrade circuitry	
<input type="checkbox"/> Sidelights	
<input type="checkbox"/> Guardrail Needed	
<input type="checkbox"/> Install/Replace curb	
<input type="checkbox"/> Other (define)	
Comments:	
<input type="checkbox"/> Install/upgrade traffic signal preemption	
<input type="checkbox"/> No improvements needed	
<input type="checkbox"/> Other (define)	

### Field Dimensions



Show North  
Direction

Crossing Angle 
 ☐ 0-29° 
 ☐ 30-59° 
 ☒ 60-90° 
 Measured in \_\_\_\_\_ Quadrant?

Measurements by: MDF

## Field Sketch

Crossing Angle ☐ 0-29° ☐ 30-59° ☐ 60-90° Measured in \_\_\_\_\_ Quadrant?

Sketch by: \_\_\_\_\_

TABLE 1

## Clearing Sight Distances

Maximum Authorized Train Speed	Distance (dT) Along Railroad from Crossing (ft)
1 - 10	240
15	360
20	480
25	600
30	720
35	840
40	960
45	1080
50	1200
55	1320
60	1440
65	1560
70	1680
75	1800
80	1920
85	2040
90	2160

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

## Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers and level single track 90 degree crossings; and may need to be adjusted for multiple tracks, skewed crossings or approaches on grades.

Clearing Sight Distance is to be measured in each vehicle travel direction at non-gated crossings as viewed from a point 25 feet from centerline of nearest track in the center of whichever travel lane is nearest the direction along track being measured.

Table 2

## Stopping Sight Distances

Highway Vehicle Speed	Distance (dH) Along Roadway from Crossing (ft)
0	n/a
5	50
10	70
15	105
20	135
25	180
30	225
35	280
40	340
45	410
50	490
55	570
60	660
65	760
70	865

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

## Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers on dry level pavements.

Stopping Sight Distance is to be measured on each roadway approach to crossing from stop bar.



## Diagnostic Review Team Survey

Date: 3.17.09

<b>Location Data</b>			
Street or Road Name: <u>E. MAPLE ST.</u>			
Route/Road Number (i.e. Twp., Co., SR or US) <u>619</u>		(include SLM if State or US route) <u>4.70</u>	
AAR-DOT No.: <u>472 624T</u>			
County: <u>STA</u>	Township:	City: (In or Near) <u>HARTVILLE</u>	
Railroad Name: <u>WE</u>	Railroad Division: <u>SUB. CLEVELAND</u>	Branch/Line Name: <u>CLEVELAND LINE</u>	
Nearest RR Timetable Station: <u>HARTVILLE</u>		RR Milepost: <u>47.35</u>	

<b>On-Site Review Team</b>		
(Include: Name - Organization - Phone Number)		
1.	<u>MIKE FORTE</u>	<u>ORDC</u> <u>614-644-0283</u>
2.	<u>Ed Tucker, Mayor Village of Hartville</u>	<u>330-877-9222</u>
3.	<u>Rob Graham, Village Engineer (M-E Companies)</u>	<u>330-491-9000</u>
4.	<u>Robert Reinsel</u>	<u>PUCD</u> <u>614-466-1150</u>
5.	<u>DAN Reinsel</u>	<u>WLE</u> <u>330-767-7202</u>
6.		
7.		
8.		
9.		

<b>Existing Traffic Control Devices</b>			
Type of Warning Devices	Installed?		Quantity/Comments
Advance Warning Signs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>2</u>
'Stop' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'Stop Ahead' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Pavement Markings	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>FADED</u>
Crossbucks	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>2</u>
Number of Tracks Signs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<u>NA</u>
Inventory Tags	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>1</u>
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>1</u>
Cantilever Flashing Lights	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Number: <u>2</u> Length: <u>8'</u>
Side Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Automatic Gates	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Bells	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>1</u>
Sidewalk Gate Arms	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'No Turn' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Other	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>TRAFFIC LIGHTS, *</u>

**Safety Data (Obtain crash reports, if possible, prior to review)**

	Initial Information (from database)	Revised
Number & dates of crashes in previous 5 years	0	
Hazard Ranking	929 Date Run: 3-4-09	
<b>Railroad Data</b>		
Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	4 4	4
< 1 per day		
Day thru trains	2	
Night thru trains	2	
Daytime switching movements		
Nighttime switching movements		
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks		
Maximum train speed		25
Typical train speed		10
Amtrak	N	
If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If multiple tracks, can two trains occupy crossing at the same time? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Can one train block the motorists' view of another train at crossing? <input type="checkbox"/> Yes (Explain below) <input type="checkbox"/> No		
Are there other track(s) crossing this same roadway within 100 ft of this crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, Crossing DOT #(if different) _____		
If yes, distance _____ (take measurement between track centerlines at closest point along roadway)		
<b>Roadway Data</b>		
Local Highway Authority: VILLAGE OF HARTVILLE		
Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	11,200 ('06)	
Highway paved	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface: <input checked="" type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____		
Roadway width: 28 ft.		
Number of highway lanes	2	
Urban or Rural		
Vehicle Speed: 25 MPH		
School Bus Operation: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes _____ Amount		
Hazardous Materials Trucks: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes ? Amount		
Shoulders: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is the shoulder surfaced? <input type="checkbox"/> No <input type="checkbox"/> Yes		
Is there existing guardrail along roadway in crossing vicinity? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is stopping site distance adequate? (See Table 2) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, deficient approach(es) _____		
Quadrant <u>NE</u> Curb and Gutter:	Quadrant <u>SW</u> Curb and Gutter:	
<input checked="" type="checkbox"/> Functional (Curb height = 4" or more)	<input type="checkbox"/> Functional (Curb height = 4" or more)	
<input type="checkbox"/> Non-functional (Curb height = Less than 4")	<input type="checkbox"/> Non-functional (Curb height = Less than 4")	
<input type="checkbox"/> None	<input checked="" type="checkbox"/> None	

Pedestrians: ☐ No ☒ Yes

Is sidewalk present? ☐ No ☒ Yes

Is there a nearby intersection that could cause queuing over the crossing? ☐ No ☒ Yes

If yes,  
Distance 105'

Is this intersection signalized? ☐ No ☒ Yes

Are the signals currently interconnected with the existing crossing warning devices? ☒ No ☐ Yes

Is it the consensus of the Diagnostic Review Team that this is a potential closure project: ☒ No ☐ Yes

Explain reasons:

### Type of Development

- ☐ Open Space ☐ Institutional
- ☐ Industrial ☒ Commercial
- ☒ Residential

Location of nearby schools:

LAKE  $\frac{1}{4}$  MI.

### Utility Information

Is commercial power available? ☐ No ☒ Yes

Utility Provider (Company Name) OH. ED.

Phone Number \_\_\_\_\_

Nearest Available Power Source AT CROSSING

What other utilities are present? SEWERS, PHONE + CABLE, GAS

Is there potential utility conflict(s) ☒ Yes ☐ No ☐ Unknown

### Diagnostic Team Recommendations

	Quadrants Needed
<input checked="" type="checkbox"/> Install/upgrade active devices	
<input type="checkbox"/> Automatic Flashing Lights (AFLS)	
<input type="checkbox"/> AFLS / Cants	
<input type="checkbox"/> AFLS / Gates	
<input checked="" type="checkbox"/> AFLS / Gates / Cants	1 CANT - NE
<input type="checkbox"/> Upgrade circuitry	
<input type="checkbox"/> Sidelights	
<input type="checkbox"/> Guardrail Needed	
<input checked="" type="checkbox"/> Install/Replace curb	VILLAGE - SW
<input type="checkbox"/> Other (define)	

Comments:

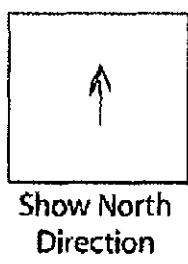
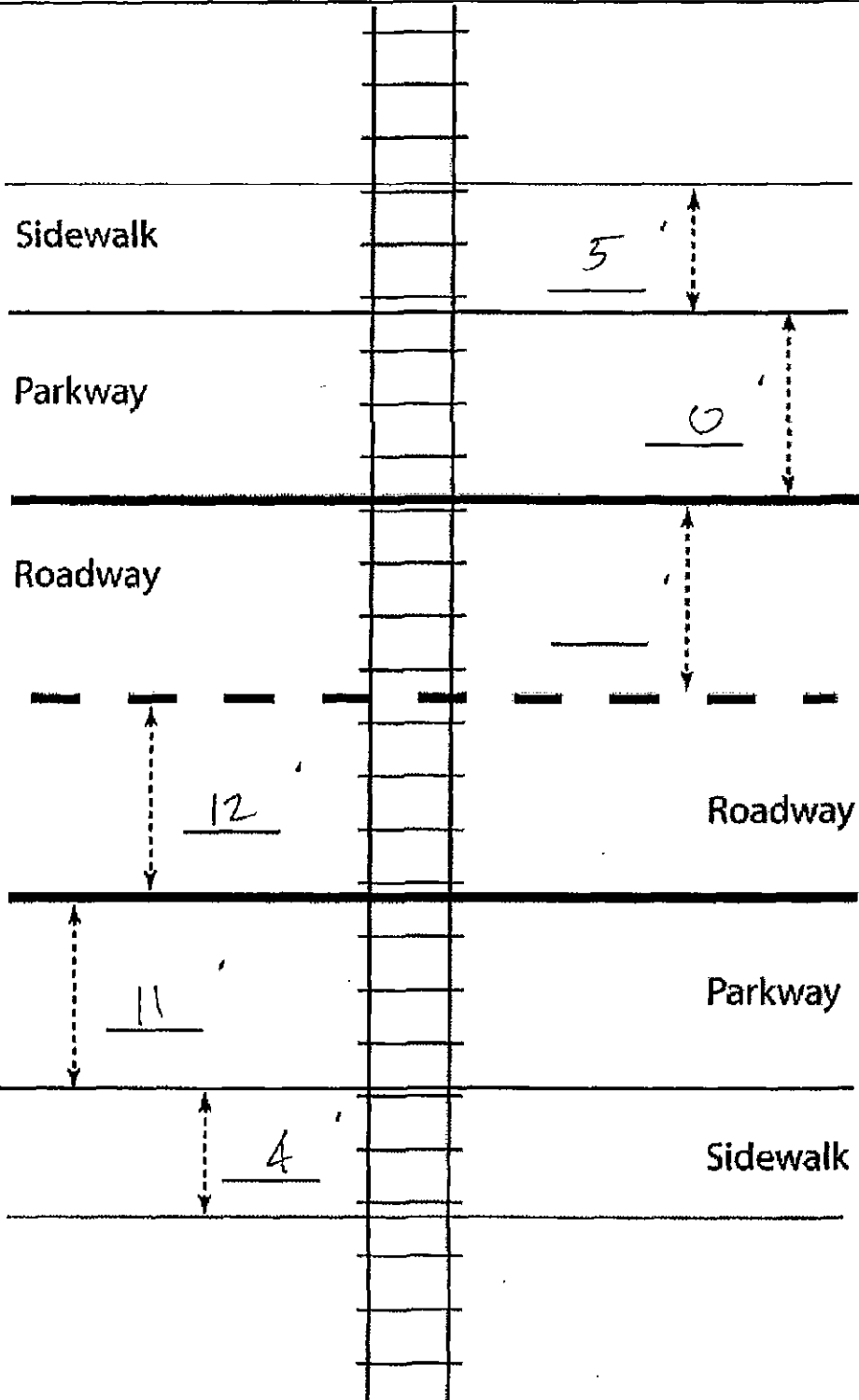
☒ Install/upgrade traffic signal preemption

☐ No improvements needed

☒ Other (define)

GUARDRAIL

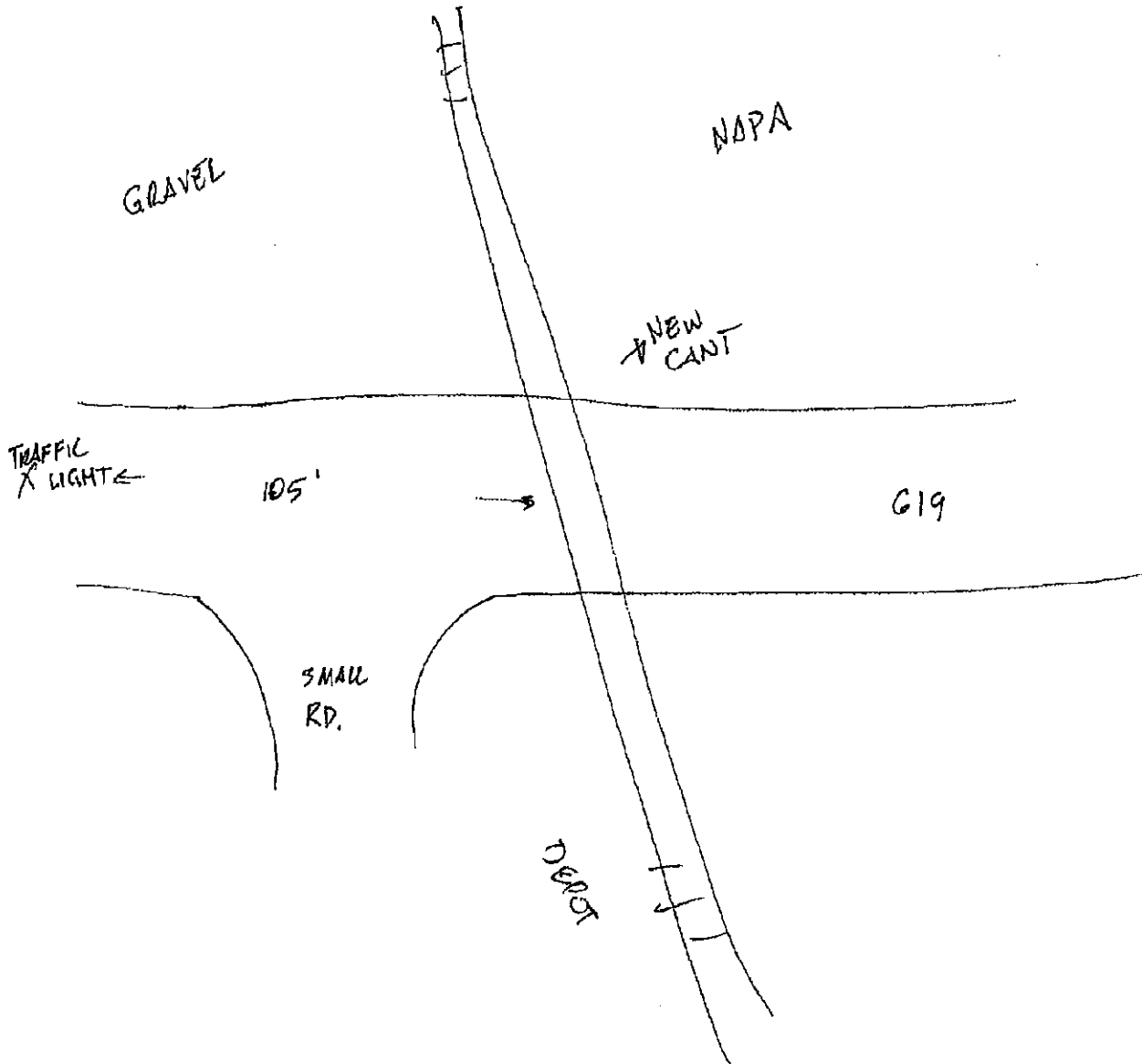
### Field Dimensions



Crossing Angle ☐ 0-29° ☐ 30-59° ☒ 60-90° Measured in NW Quadrant?

Measurements by: MDY

# Field Sketch



Crossing Angle ☐ 0-29° ☐ 30-59° ☐ 60-90° Measured in \_\_\_\_\_ Quadrant?

Sketch by: MDF



TABLE 1

**Clearing Sight Distances**

Maximum Authorized Train Speed	Distance (dT) Along Railroad from Crossing (ft)
1 - 10	240
15	360
20	480
25	600
30	720
35	840
40	960
45	1080
50	1200
55	1320
60	1440
65	1560
70	1680
75	1800
80	1920
85	2040
90	2160

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

**Notes:**

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers and level single track 90 degree crossings; and may need to be adjusted for multiple tracks, skewed crossings or approaches on grades.

Clearing Sight Distance is to be measured in each vehicle travel direction at non-gated crossings as viewed from a point 25 feet from centerline of nearest track in the center of whichever travel lane is nearest the direction along track being measured.

Table 2

**Stopping Sight Distances**

Highway Vehicle Speed	Distance (dH) Along Roadway from Crossing (ft)
0	n/a
5	50
10	70
15	105
20	135
25	180
30	225
35	280
40	340
45	410
50	490
55	570
60	660
65	760
70	865

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

**Notes:**

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers on dry level pavements.

Stopping Sight Distance is to be measured on each roadway approach to crossing from stop bar.



## Diagnostic Review Team Survey

Date: 3.17.09

Location Data			
Street or Road Name: N. PROSPECT AVE			
Route/Road Number (i.e. Twp., Co., SR or US)		AAR-DOT No.: 472 625A	
County: STARK	Township:	City: (or Near) HARTVILLE	
Railroad Name: WE	Railroad Division:	Branch/Line Name:	
Nearest RR Timetable Station: HARTVILLE		RR Milepost: 47.31	
On-Site Review Team			
(Include: Name - Organization - Phone Number)			
1. MIKE FORTÉ	ORDC	614.644.0283	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
Existing Traffic Control Devices			
Type of Warning Devices	Installed?		Quantity/Comments
Advance Warning Signs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
'Stop' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'Stop Ahead' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Pavement Markings	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Crossbucks	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
Number of Tracks Signs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
Inventory Tags	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
Cantilever Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Side Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Automatic Gates	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Bells	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Sidewalk Gate Arms	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'No Turn' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Other	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	TRAFFIC LIGHT
Safety Data (Obtain crash reports, if possible, prior to review)			

	Initial Information (from database)	Revised
Number & dates of crashes in previous 5 years	0	
Hazard Ranking	1667	Date Run: 3-4-09
<b>Railroad Data</b>		
Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	4	
< 1 per day		
Day thru trains	2	
Night thru trains	2	
Daytime switching movements		
Nighttime switching movements		
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks		
Maximum train speed	25	25
Typical train speed		10
Amtrak	N	
If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If multiple tracks, can two trains occupy crossing at the same time? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Can one train block the motorists' view of another train at crossing? <input type="checkbox"/> Yes (Explain below) <input type="checkbox"/> No		
Are there other track(s) crossing this same roadway within 100 ft of this crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, Crossing DOT # (if different) _____		
If yes, distance _____ (take measurement between track centerlines at closest point along roadway)		
<b>Roadway Data</b>		
Local Highway Authority: VILLAGE OF HARTVILLE		
Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	4400 (2006)	
Highway paved	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface: <input checked="" type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____		
Roadway width: 424 ft.		
Number of highway lanes	2	
Urban or Rural		
Vehicle Speed: 25 MPH		
School Bus Operation: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes _____ Amount		
Hazardous Materials Trucks: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes _____ Amount		
Shoulders: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		
Is the shoulder surfaced? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is there existing guardrail along roadway in crossing vicinity? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is stopping site distance adequate? (See Table 2) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, deficient approach(es) _____		
Quadrant _____ Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None	Quadrant _____ Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None	

Pedestrians: ☐ No ☒ Yes

Is sidewalk present? ☒ No ☐ Yes

Is there a nearby intersection that could cause queuing over the crossing? ☐ No ☒ Yes

If yes,  
Distance 168'

Is this intersection signalized? ☐ No ☒ Yes

Are the signals currently interconnected with the existing crossing warning devices? ☒ No ☐ Yes

Is it the consensus of the Diagnostic Review Team that this is a potential closure project: ☒ No ☐ Yes

Explain reasons:

### Type of Development

- ☐ Open Space ☐ Institutional  
☐ Industrial ☒ Commercial  
☐ Residential

Location of nearby schools:

LAKE Y4M

### Utility Information

Is commercial power available? ☐ No ☒ Yes

Utility Provider (Company Name) DH. ED.

Phone Number \_\_\_\_\_

Nearest Available Power Source AT XING.

What other utilities are present? <sup>(STORM)</sup> SEWER, GAS, PHONE, CABLE

Is there potential utility conflict(s) ☐ Yes ☐ No ☐ Unknown

### Diagnostic Team Recommendations

	Quadrants Needed
<input checked="" type="checkbox"/> Install/upgrade active devices	
<input type="checkbox"/> Automatic Flashing Lights (AFLS)	
<input type="checkbox"/> AFLS / Cants	
<input type="checkbox"/> AFLS / Gates	
<input checked="" type="checkbox"/> AFLS / Gates / Cants	<u>JERRY ARM</u>
<input type="checkbox"/> Upgrade circuitry	
<input checked="" type="checkbox"/> Sidelights	<u>&amp; SE</u>
<input type="checkbox"/> Guardrail Needed	
<input type="checkbox"/> Install/Replace curb	
<input checked="" type="checkbox"/> Other (define)	<u>INTERCONNECT</u>

Comments:

☒ Install/upgrade traffic signal preemption

☐ No improvements needed

☐ Other (define)

### Field Dimensions

↑

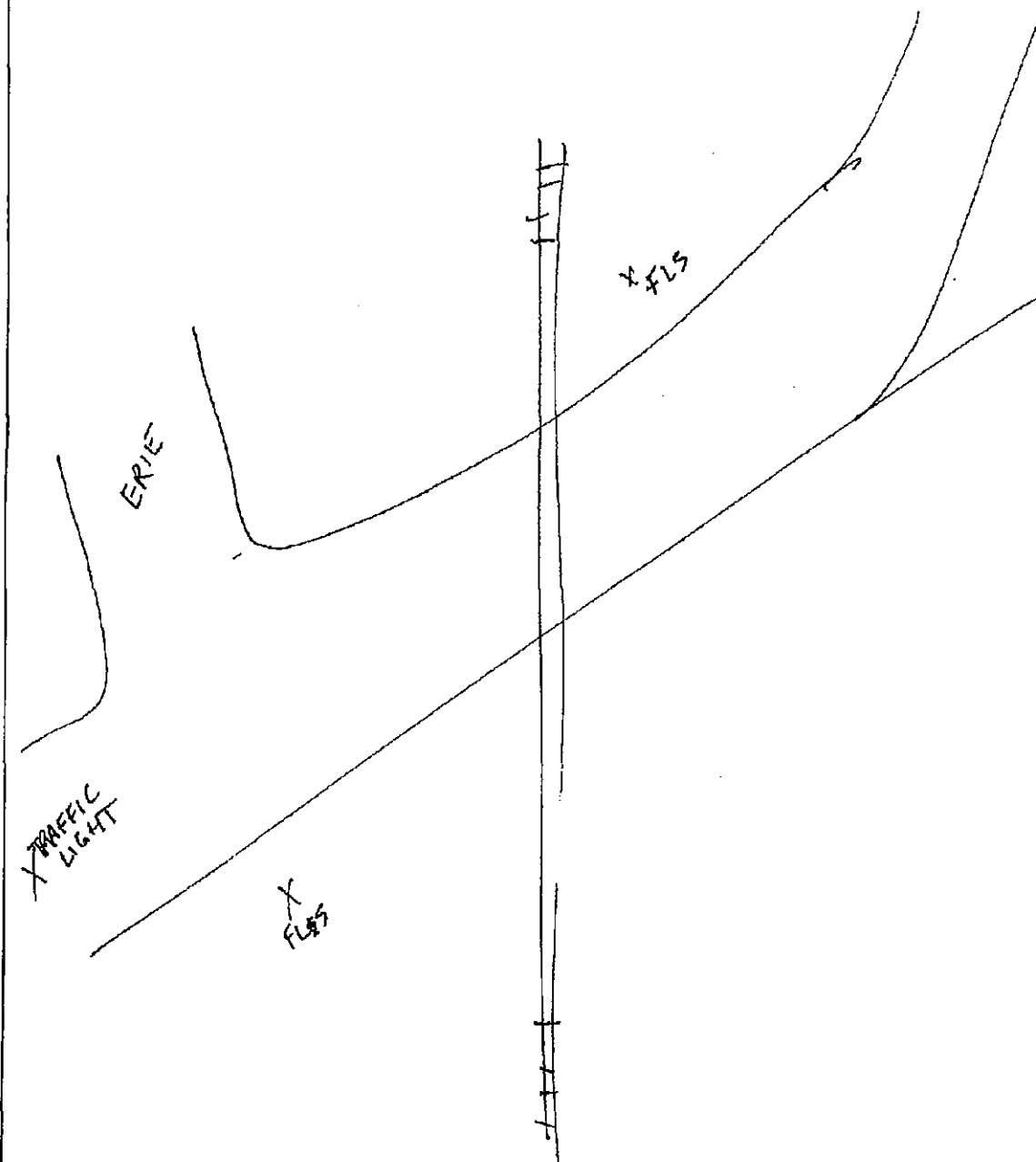
Show North  
Direction

Crossing Angle ☐ 0-29° ☐ 30-59° ☒ 60-90°

Measured in SW Quadrant?

Measurements by: MDK

# Field Sketch



Crossing Angle ☐ 0-29° ☐ 30-59° ☐ 60-90° Measured in \_\_\_\_\_ Quadrant?

Sketch by: \_\_\_\_\_

TABLE 1

## Clearing Sight Distances

Maximum Authorized Train Speed	Distance (dT) Along Railroad from Crossing (ft)
1 - 10	240
15	360
20	480
25	600
30	720
35	840
40	960
45	1080
50	1200
55	1320
60	1440
65	1560
70	1680
75	1800
80	1920
85	2040
90	2160

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

## Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers and level single track 90 degree crossings; and may need to be adjusted for multiple tracks, skewed crossings or approaches on grades.

Clearing Sight Distance is to be measured in each vehicle travel direction at non-gated crossings as viewed from a point 25 feet from centerline of nearest track in the center of whichever travel lane is nearest the direction along track being measured.

Table 2

## Stopping Sight Distances

Highway Vehicle Speed	Distance (dH) Along Roadway from Crossing (ft)
0	n/a
5	50
10	70
15	105
20	135
25	180
30	225
35	280
40	340
45	410
50	490
55	570
60	660
65	760
70	865

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

## Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers on dry level pavements.

Stopping Sight Distance is to be measured on each roadway approach to crossing from stop bar.