

NC  
FILE

16

RECEIVED-DOCKETING DIV

2012 MAY 22 PM 2:45

**Public Utilities  
Commission of Ohio**

PUCO

# Memo

**To:** Docketing Division  
**From:** George Martin, Grade Crossing Planner, Rail Division *gmd*  
**Re:** In the matter of the authorization of Norfolk Southern Railway to install an active grade crossing warning device in Pickaway County  
**Date:** May 22, 2012

The Ohio Rail Development Commission (ORDC) has authorized funding for Norfolk Southern Railway (NS) to install new mast mounted flashing lights and roadway gates at Emerson Rd/TR 48, Pickaway Township, near Kingston, Pickaway County, DOT# 481409F. This crossing was surveyed on January 24, 2012 under the Commission's hazard ranking program and was found to warrant the upgrade.

The project will be paid for with federal funds, and is actual cost. As the plans and estimates have already been submitted and approved, staff requests an Entry with completion of the project in nine months. Construction may commence at once. Staff requests that the following language be incorporated in the Entry:

**It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work. This work includes, but is not limited to:**

**Any ancillary work to make the warning devices function as designed and visible to the roadway user, and**

**MUTCD compliance, including minor roadway work if necessary.**

A suggested case coding and heading would be:

PUCO Case No. 12- *1454* -RR-FED In the matter of the authorization of Norfolk Southern Railway to install an active grade crossing warning device in Pickaway County

C: Legal Department

Please serve the following parties of record

Ms Susan Kirkland

Ohio Rail Development Commission

1980 West Broad St, 2<sup>nd</sup> Floor

Columbus, Oh 43223

Ms Cayela Wimberly

Norfolk Southern Railway

1200 Peachtree St, Box 123

Atlanta, Ga 30309

Pickaway Township Trustees

27905 Caldwell Rd

Circleville, Oh 43113

South Central Power Company

PO Box 250

Lancaster, Oh 43130

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

**TO:** Leah Thomas-Dalton, Rail Division Chief, PUCO  
**FROM:** Susan Kirkland, Manager, Safety Section, ORDC  
**BY:** Joe Reinhardt, Project Manager, ORDC  
**SUBJECT:** Pickaway County, Emerson Road, TR48  
DOT 481409F, Norfolk Southern  
**DATE:** May 22, 2012

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The Public Utilities Commission of Ohio (PUCO) established a diagnostic survey at the subject location on Emerson Road. The Ohio Rail Development Commission (ORDC) attended the review. The Diagnostic Team recommended the improvement of warning devices to flashing lights and roadway gates. Copies of the diagnostic review form and the plan and estimate are attached.

PE has already been provided by the railroad. ORDC approves the site plans and estimates as provided. Please issue a construction-only order for the project outlined above. 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.

It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work. This work includes, but is not limited to:

- any ancillary work to make warning devices function as designed and visible to the roadway user, and
- MUTCD compliance – including minor roadway work if necessary.

Thank you for your assistance with these matters.

Attachment: Diagnostic Review  
Plan & Estimate

c: George Martin, PUCO  
ORDC Project Manager (file)



# OHIO RAIL DEVELOPMENT COMMISSION

1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JAMES G. BRADLEY, ORDC CHAIRMAN

May 22, 2012

Ms. Cayela Wimberly  
Public Projects Engineer  
1200 Peach Street, Box 123  
Atlanta, Ga. 30309

RE: Pickaway County, Emerson Road, TR48, DOT# 481409F  
PID# 92939, NS Project 10.1358

Dear Ms. Wimberly:

The plan and estimate dated May 15, 2012, for the referenced project has been reviewed and is acceptable. NS may proceed with the construction of the proposed grade crossing warning system in accordance with the abbreviated plan. This authorization is made with the stipulation and understanding that the 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. Reimbursement of eligible actual cost is limited to \$271,292.00. Additional costs must be approved in writing by the Ohio Rail Development Commission (ORDC) prior to being incurred. Emergency verbal authorizations by ORDC may be permitted and will be confirmed by ORDC in writing within ten (10) business days of the verbal approval.

This authorization is contingent upon NS accepting the following instructions:

1. NS's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Joe Reinhardt, ORDC, [joe.reinhardt@dot.state.oh.us](mailto:joe.reinhardt@dot.state.oh.us) email and to the Public Utilities Commission of Ohio at [George.martin@puc.state.oh.us](mailto:George.martin@puc.state.oh.us). NS's project foreman will also notify the same of any stops and re-starts of the work activity and of the date work was completed for the project.
2. NS will arrange for utilities to be located at the project site by the Ohio Utilities Protection Service (OUPS) prior to any construction activities at the site. Utilities that are not participating members of the service must be contacted directly by NS.
3. NS's project foremen will notify Joe Reinhardt at 614-580-7728 (telephone) or [joe.reinhardt@dot.state.oh.us](mailto:joe.reinhardt@dot.state.oh.us) (email) of any changes in the scope of work, cost overruns, material changes, etc. which are not included in the approved plan and estimate and secure approval of same before the work is performed.
4. NS will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed Encumbrance Estimate to reference when billing.

5. NS will furnish two (2) copies of the final all-inclusive bill to ORDC stating the exact dates of starting and completing work, the initial and final dates of construction and location where the accounts may be audited.

Thank you for your assistance with these matters.

Sincerely,

  
Joseph Reinhardt  
Project Manager

C: Leah Thomas-Dalton, Rail Division Chief, PUCO  
George Martin, PUCO, Grade Crossing Planner  
ORDC (file)

Attachment: 1 (encumbrance estimate)

STATE OF OHIO  
**PURCHASE ORDER**  
 OHIO DEPARTMENT OF TRANSPORTATION

P.O. DATE: 2/23/2012

ODOT P.O. NUMBER: 579917

DOCUMENT CNTE  
TYPE:

CHANGE ORDER: RR

OAKS P.O. NUMBER: 0000053677

PID NUMBER	CONTRACT/SIB/OIH		CONTROL BOARD NBR	DOC. AMOUNT	
92939	DOTC17069-1			\$300,000.00	
PROJECT NBR.	SIB LOAN NBR.	AGREEMENT NBR.	COUNTY	ROUTE	SECTION
			PIC	EME	ROAD

**VENDOR INFORMATION:**

NAME: NORFOLK SOUTHERN CORPORAT

OAKS VENDOR 00000859  
NUMBER:

ADDRESS: PO BOX 116944

ADDRESS CODE: 001

CITY, STATE: ATLANTA, GA

ZIP CODE: 30368-6944

2012 FEB 29 AM 9:20

RECEIVED  
ORDC**DESCRIPTION:**

RAILROAD CROSSING PROTECTION

LINE NBR	FUND	FISCAL YEAR	SAC	SPRC	RCAT	ACTIVITY	ACCOUNT CODE
01	7002	2012	4FP7	0006	NOCC	0071	573067
ELIGIBILITY		FAN		STATE JOB NBR		LINE AMOUNT	
E		DOT1E120 000332		467175		\$300,000.00	

THE DIRECTOR OF BUDGET AND MANAGEMENT HEREBY CERTIFIES THAT THERE IS A BALANCE IN THE APPROPRIATION NOT ALREADY OBLIGATED TO PAY EXISTING OBLIGATIONS IN AN AMOUNT AT LEAST EQUAL TO THE PORTION OF THE CONTRACT, AGREEMENT, OBLIGATION, RESOLUTION OR ORDER TO BE PERFORMED IN THE CURRENT FISCAL YEAR.

STATE OF OHIO  
PURCHASE ORDER

PAGE: 1 of 1

OHIO DEPARTMENT OF TRANSPORTATION

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PROJECT NBR	SIB LOAN NBR	AGREEMENT NBR	COUNTY	ROUTE	SECTION
			PIC	EME	ROAD

VENDOR INFORMATION:

NAME: NORFOLK SOUTHERN CORPORAT

OAKS VENDOR 0000085980  
NUMBER:

ADDRESS: PO BOX 116944

ADDRESS CODE: 001

CITY, STATE: ATLANTA, GA

ZIP CODE: 30368-6944

DESCRIPTION:

RAILROAD CROSSING PROTECTION

LINE NBR	FUND	FISCAL YEAR	SAC	SPRC	RCAT	ACTIVITY	ACCOUNT CODE
01	7002	2012	4FP7	0006	NOCC	0071	573067
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## Diagnostic Review Team Survey

Date: 1/24/2012

### Location Data

Street or Road Name: Emerson Road			
Route/Road Number (i.e. Twp., Co., SR or US) TR 48		US DOT No.: 481409F	
County: Pickaway (PIC)	Township: Pickaway Twp	City: (In or Near) Kingston	
Railroad Name: NS	Railroad Division: LAKE	Branch/Line Name: Columbus DIST	
Nearest RR Timetable Station: Circleville		RR Milepost: 671.1	

### On-Site Review Team

(Include: Name - Organization - Phone Number - Email)

1. JOE REINHARDT - OPRC - 614.580.7728 - joe.reinhart@state.dot.oh.us Joe Reinhardt
2. George Martin - PUCO - 614.752.9107 - George.Martin@puc.state.oh.us GEORGE MARTIN
3. Mark Martin - Pickaway Twp - 740.412.3414 Mark E. Martin
4. Daryl Rittinger - Pickaway Twp - 740.207.0112 Daryl Rittinger
5. Dave Rittinger - Pickaway Twp - 714.207.0414 David Rittinger
6. JEFF CASTO - PUCO - 614.301.5412 - jcasto@puc.state.oh.us JEFF CASTO
7. MICHAEL I ADAMS NPS NY
8. \_\_\_\_\_
9. \_\_\_\_\_

### Existing Traffic Control Devices

Type of Warning Devices	Installed?		Quantity/Comments
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2 - Good
'Stop' Signs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2 - Good
'Stop Ahead' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Pavement Markings (condition?)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2 - Good
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 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	Number:
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 type="checkbox"/> Yes	<input checked="" 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	



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	259	Date Run: 1/9/2012
Railroad Data		
Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	24	
< 1 per day		
Day thru trains	12	
Night thru trains	12	
Daytime switching movements	0	
Nighttime switching movements	0	
Total number of tracks		
Number of main tracks	2	
Number of other tracks	0	
Maximum train speed	60	
Typical train speed		
Amtrak		
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Can one train block the motorists' view of another train at crossing? <input checked="" type="checkbox"/> Yes (Explain below) <input type="checkbox"/> No		
Can one or more tracks be eliminated through the crossing? <input type="checkbox"/> Yes <input checked="" 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)		
Roadway Data		
Local Highway Authority:		Pickaway Twp
Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	286 (2008)	
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:	27 ft.	
Number of highway lanes	2	
Urban or Rural	Rural	
Vehicle Speed: _____ MPH	55	
School Bus Operation: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes 4 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 type="checkbox"/> No If no, deficient approach(es) _____		

Quadrant <u>NE</u> 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 <u>SW</u> 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: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is sidewalk present? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is there a nearby intersection that could cause queuing over the crossing? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, Distance _____ Is this intersection signalized? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Are the signals currently interconnected with the existing crossing warning devices? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Is there a 'Do not Stop on Track' sign? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is a roadway improvement project (e.g. widening, turn lanes, nearby new or upgraded traffic signal, sidewalk) planned at or near this location in the foreseeable future? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, Improvement type _____ Lead Agency _____ Timeline/completion _____	
Is it the consensus of the Diagnostic Review Team that this is a potential closure project? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Explain reasons: _____	
<b>Type of Development</b>	
<input checked="" type="checkbox"/> Open Space <input type="checkbox"/> Industrial <input type="checkbox"/> Residential	<input type="checkbox"/> Institutional <input type="checkbox"/> Commercial Location of nearby schools: _____
<b>Utility Information</b>	
Is commercial power available? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <span style="float: right; font-family: cursive;">SOUTH CENTRAL POWER COMPANY</span> Utility Provider (Company Name) <u>Unknown</u> Phone Number <u>800-282-5064</u> Nearest Available Power Source <u>Power is at crossing</u> What other utilities are present? _____ (add locations to sketch) _____ Is(are) there potential utility conflict(s) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown Comments: _____	

## Potential Red Flags / Project Challenges

Traffic Signal Preemption (include traffic signal intersection name and LHA with jurisdiction over traffic signal, if known):

Crossing Consolidation or Closure:

Real Estate or ROW:

Culverts / Drainage / Ballast Conditions:

Roadway and/or Sidewalks:

Circuitry (e.g. reaches out to other crossings, specific needs, etc.):

Environmental:

Other:

n/a

## 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	NE & SW (8'3")
<input type="checkbox"/> AFLS / Gates / Cants	
<input checked="" type="checkbox"/> Bells / number	ONE
<input type="checkbox"/> Upgrade circuitry / type	
<input type="checkbox"/> Sidelights	
<input type="checkbox"/> Guardrail Needed	
<input type="checkbox"/> Install/Replace curb	
<input checked="" type="checkbox"/> Bungalow placement & offset from rail & highway	TOUGH CALL / Design Decision
<input type="checkbox"/> Other (define)	

### Comments:

CRIB WALL Needed for Bungalow house if it is placed on the SE Quad. Tough called with the train signals locations NORTH of ROADWAY

- ☐ Install/upgrade traffic signal preemption
- ☐ No improvements needed
- ☐ Other (define)

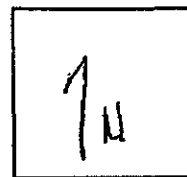
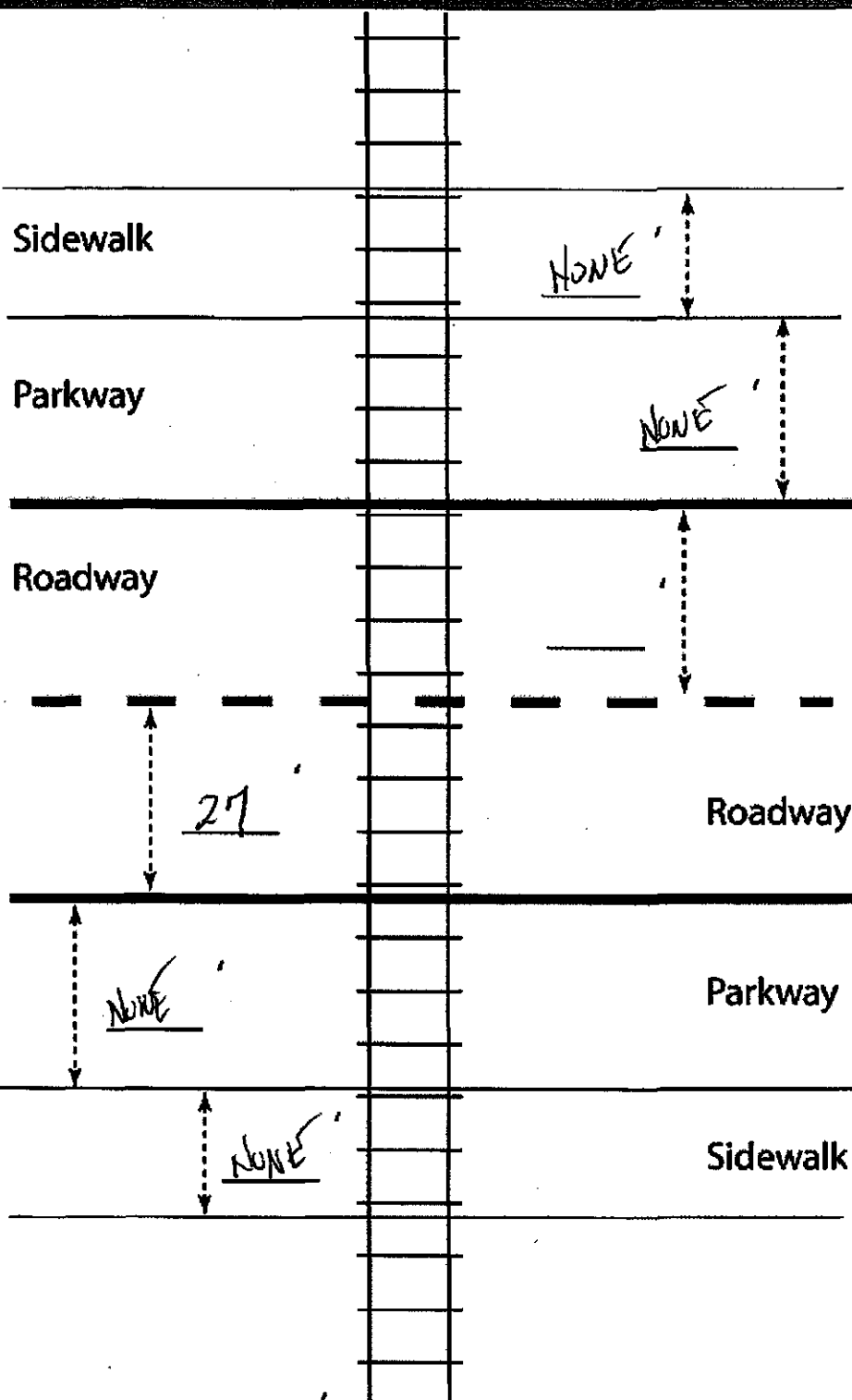
Acknowledgement of Recommendations (each entity represented at the diagnostic must have at least one signature acknowledgement):

*Gus Minter*  
*Joe Richards*

*Michael J. Adams*  
*Mark Martin*

*Paul Pettigrew*  
*David Pettigrew*

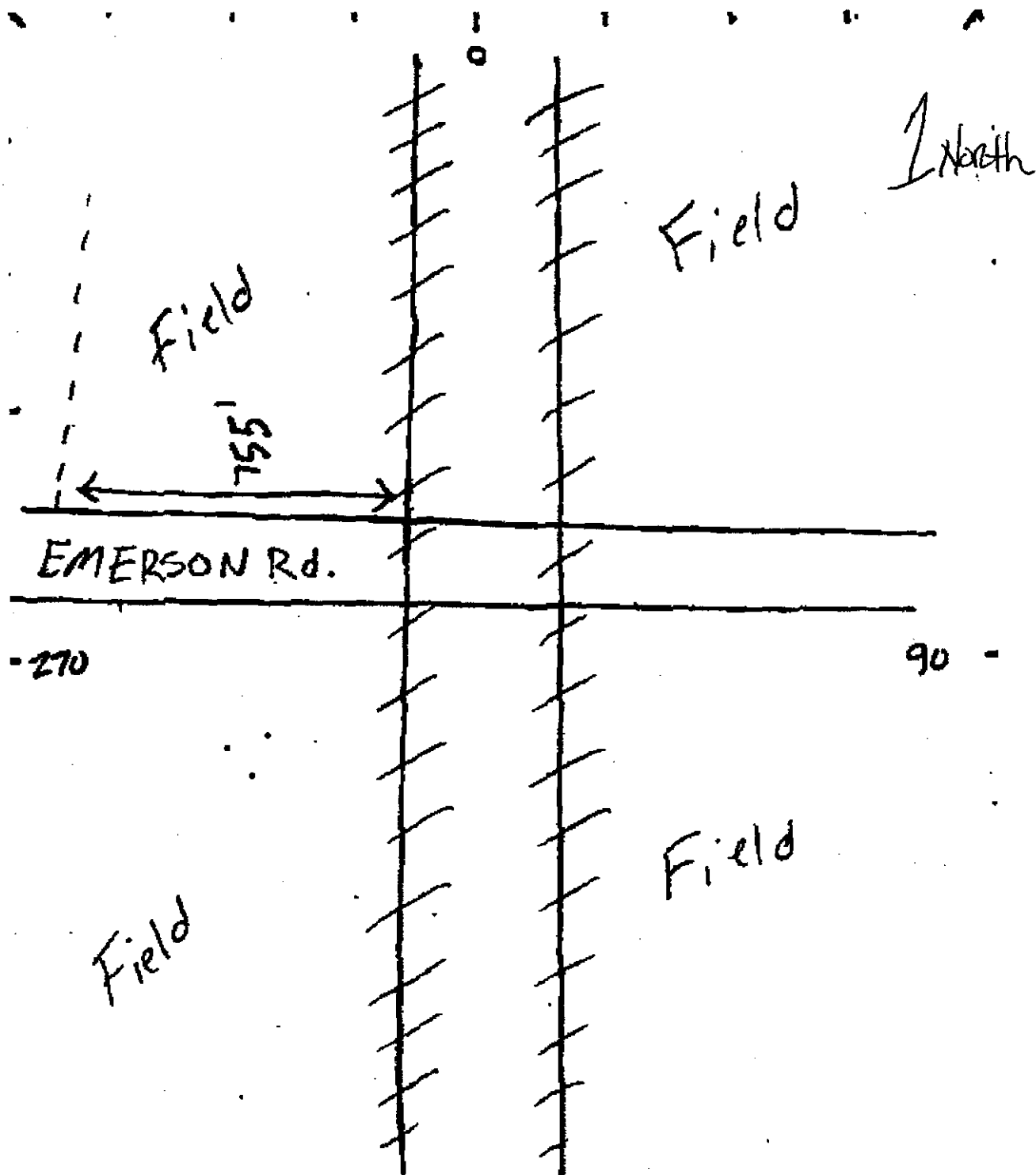
# Field Dimensions



Show North Direction

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

Measurements by: *[Signature]*



**TABLE I****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.

