## Memo

To:	Docketing Division
From:	George Martin, Grade Crossing Plannel, Rail Division
Re:	PUCO Case No. 12-2436-RR-RCP
Date:	October 12, 2012

By Attorney Examiner Entry dated September 13, 2012, staff was directed to conduct a diagnostic review of the Holland-Sylvania Rd grade crossing, DOT# 509457F, City of Toledo, Lucas County, and file a response to the request of Norfolk Southern Railway for the installation of a cantilever at the crossing by October 15, 2012.

On October 11, 2012, staff conducted the review of the grade crossing with staff from the City of Toledo, the Lucas County Engineer's office, Norfolk Southern Railway, and the Ohio Rail Development Commission. The review (attached) concluded that nothing in the Manual of Uniform Traffic Control Devices precludes the installation of a cantilever at this location.

RECEIVED-DOCKETING DIV

**C: Legal Department** 

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Diagnostic Review Team Survey						
	C	Date: 10/11 2012				
Location Data						
Street or Road Name:	AN CYINA HA BD					
Boute/Boad Number (Le		AAR-DOT				
Twp., Co., SR or US )	(include SLM if State or US route)	No: 509457F				
County: LUCAS	Township: SYLVANIA City: (In or Near)	TOLEDO				
Railroad NS	Railroad Division: DEADBORD	Branch/Line CHICAGO				
Nearest RR Timetable Station: TOLENO		RR Milepost: 295,15				
On-Site Review Team						
A ludu Name Origination Th						
(Include: Name - Organization - Ph	$1 \rightarrow 1$ $1 \rightarrow 1$ $1 \rightarrow 1$	07				
1. COCOL MINICIN	J 1-000 014 132 11	G 7 & 7				
2. TVILKE FUKTE	OKUC 614:214	F1601				
3. Doug Jales	NS 317-850	- 6478				
4. MIKE FREEDY	NS 734-904-	3699				
5 JED Camabell	115 734.288.	2142				
6 GARY STRICT	1 Con astrikh. 410- 2	245-1201				
- Doui Maril	L 1 4 AS CO SAME (119) 71	2 - 4 5 4 m				
Tai QL	W W W W WIGH	$\frac{5}{12}$				
8. <u>VDEL GIERMO</u>	u (414)4+	01,3080				
9						
10						
<b>Existing Traffic Control</b>	Devices					
Type of Warning Devic	ces /Installed?	Quantity/Comments				
Advance Warning Signs		2-				
'Stop' Signs						
'Stop Ahead' Signs						
Pavement Markings		<u>L</u>				
Crossbucks		2				
Inventory Tags		2-				
Interconnected Highway Traffic S	Signal Yes PNo					
Mast-Mounted Flashing Lights	Yes No	2-				
Cantilever Flashing Lights		Number: Length:				
Side Lights						
Automatic Gates		Number: 2 Length:				
Bells						
Sidewalk Gate Arms						
'No Turn' Signs		· · · · · · · · · · · · · · · · · · ·				
In anoration floored by the in anoral						
Other						

Safety Data (Obtain crash repo	rts, if possible, prior to review)							
	Initial Information (from database)	Revised						
Number & dates of crashes in previous 5 years	1 5/16/2009 FATALY 7 PG	KEST KIAN						
Hazard Ranking 965	Date Run: 18 9 12							
Railroad Data		Agente Agenti and a second and						
Railroad Characteristics	Initial Information (from database)	Revised						
Total trains per day	/00	PROBABLY HIGHER						
< I per day								
Day thru trains	50							
Night thru trains	50							
Daytime switching movements								
Nighttime switching movements								
Total number of tracks	2	· · · · · · · · · · · · · · · · · · ·						
Number of main tracks	2							
Number of other tracks								
Maximum train speed								
Typical train speed	60							
Amtrak	<u>YE5</u>	//						
If non-gated crossing, is clearing sight distan	ce adequate in all quadrants? (See Table 1)	TYes No N/A GATES						
If multiple tracks, can two trains occupy cro	ssing at the same time? Yes No	· · · · · · · · · · · · · · · · · · ·						
Can one train block the motorists' view of a	Can one train block the motorists' view of another train at crossing? 🔀 Yes (Explain below) 🛛 🗌 No							
Are there other track(s) crossing this same roadway within 100 ft of this crossing? Yes Are No								
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res ANO						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different) If yes, distance (take mea	roadway within 100 ft of this crossing?	(es DNO st point along roadway)						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res ANO st point along roadway)						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different) If yes, distance (take mea Roadway Data Local Highway Authority: (Who maintains this roadway!)	roadway within 100 ft of this crossing?	res No st point along roadway)						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res No st point along roadway) Revised						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing? $\Box$ is surement between track centerlines at closes $\frac{City}{DF} = TOLEDO$ Initial Information (from database)	res Revised						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res No st point along roadway) Revised /(6,000 2012 Yes No						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res No st point along roadway) Revised /(6,000 2012 Vres No						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res No st point along roadway) Revised ////////////////////////////////////						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res Revised Revised /6,000 2012 VYes No 36 WITH J/2 CURB & GUTT						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res Revised Revised /6,000 2012 Pres No 36 WITH 2/2 CURB & GUTT 						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res Revised Revised /6,000 2012 VYes No 36 WITH J/2 CURB & GUTT 						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res Pro st point along roadway) Revised /6,000 2012 Pres No 36 WITH J/2 CURB & GUTT 						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res Dino st point along roadway) Revised //6,000 2012 VYes No 36 WITH J/2 CURB & GUTT 						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res Revised Revised /6,000 2012 Yes No 36 With 21/2 Cuille & Guitt 						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res Dino st point along roadway) Revised ///// ///////////////////////////////						
Are there other track(s) crossing this same If yes, Crossing DOT #(if different)	roadway within 100 ft of this crossing?	res Pro st point along roadway)  Revised  (6,000 2012  Yres No  36 WITH 2% CURB & GUT						

Quadrant <u>IN W</u>	Quadrant					
Curb and Gutter: 🔀 Functional (Curb height = 4" or more)	Curb and Gutter: 🔂 Functional (Curb height = 4" or more)					
Non-functional (Curb height ≈ Less than 4")	Non-functional (Curb height = Less than 4")					
None	None					
Pedestrians: No XYes						
Is sidewalk present: 2 No U Tes						
Is there a hear by intersection that could cause queding over the c	ANGOLA KOMS					
Distance	ALS INTERPORTING INI)					
Is this intersection signalized? 🔲 No 🛛 🖉 Tes	PL A INKA					
Are the signals currently interconnected with the existing crossi	ng warning devices? XNo Yes					
is it the consensus of the Diagnostic Review Team that this is a po Explain reasons:	tential closure project Mino					
	MAJOK ALTERY.					
Type of Development						
Open Space Institutional Location of nearby	v schools:					
Industrial Commercial	1 2011 2					
Residential						
Utility Information						
Is commercial power available? 🗌 No 🛛 🖉 Yes						
$\frac{1}{100} = \frac{1}{100} = \frac{1}$						
Utility Provider (Company Name) TOLEDO EDISON	Phone Number					
Utility Provider (Company Name) TBLEDO DO 150N	Phone Number					
Utility Provider (Company Name) <u>TBUERO</u> DO 156 N Nearest Available Power Source <u>AT</u> CLOSSING	Phone Number					
Utility Provider (Company Name) <u>TBCORO</u> <u>DBISON</u> Nearest Available Power Source <u>AT</u> <u>CLOSSING</u> What other utilities are present? <u>UG</u> <u>CAS</u> , <u>STDC</u>	Phone Number					
Utility Provider (Company Name) <u>TBUERO</u> DO 156 N Nearest Available Power Source <u>AT</u> CLOSSING What other utilities are present? <u>UG</u> CAS, STOR Is there potential utility conflict(s) Yes No Un	Phone Number <u>M SENGE, TELEPHONE &amp; WATER</u> known					
Utility Provider (Company Name) <u>TBCORD</u> DO 156 N Nearest Available Power Source <u>AT</u> CLOSSING What other utilities are present? <u>UG</u> CAS, STOR Is there potential utility conflict(s) Yes No Un Diagnostic Team Recommendations	Phone Number <u>M SENGE, TELEPHONE &amp; WATER</u> known					
Utility Provider (Company Name) <u>TBUERO</u> DO 156 N Nearest Available Power Source <u>AT</u> CLOSSING What other utilities are present? <u>UG</u> CAS, STOC Is there potential utility conflict(s) Yes No Un Diagnostic Team Recommendations	Phone Number M M known Quadrants Needed					
Utility Provider (Company Name) <u>TBUERO</u> <u>DOISON</u> Nearest Available Power Source <u>AT</u> <u>CLOSSING</u> What other utilities are present? <u>UG</u> <u>CAS</u> , <u>STOR</u> Is there potential utility conflict(s) <u>Yes</u> <u>No</u> <u>Un</u> Diagnostic Team Recommendations	Phone Number M SENGLI TELEATONE & WATER known Quadrants Needed Quadrants Needed CANTILENER ON NERTH					
Utility Provider (Company Name)       TBLSHO       TBLSHO       TBLSHO         Nearest Available Power Source       AT       CL055/N6         What other utilities are present?       U6       CAS, STOC         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONS         Automatic Flashing Lights (AFLS)       ST       ST	Phone Number M_SENSELTEREATIONE & WATER known Quadrants Needed Quadrants Needed Quadrants Needed CANTILENER ON NORTH DE OF CROSSING DUE TO NUMM HUDGUNG PROJECT					
Utility Provider (Company Name)       TBLSHO       TBLSHO       TBLSHO         Nearest Available Power Source       AT       CLOSSING         What other utilities are present?       UG       GAS, STOR         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONS         Automatic Flashing Lights (AFLS)       ST         AFLS / Cants       Rop	Phone Number M SENGLI TELEATONE & WATER known Quadrants Needed CANTILENER ON NORTH DE OF CROSSING DUE TO DWAY WIDGAING TROJECT.					
Utility Provider (Company Name)       TBLSHO       TBLSHO       TBLSHO         Nearest Available Power Source       AT       CLOSSING         What other utilities are present?       UG       CAS, STOR         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONS         Automatic Flashing Lights (AFLS)       ST         AFLS / Cants       Rop         AFLS / Gates       Rop	Phone Number M_SENSA, TSASAHANG & WATER iknown Quadrants Needed Quadrants Needed CANTILLICR ON NORTH DS OF CROSSILLODUE TO NWAY WIDENING TROJECT.					
Utility Provider (Company Name)       TBLSAD       TBLSAD         Nearest Available Power Source       AT       CLDSSING         What other utilities are present?       UG       CAS, STOC         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONS         Automatic Flashing Lights (AFLS)       ST         AFLS / Cants       Rop         AFLS / Gates / Cants       Upgrade circuitry	Phone Number M SENGLI TELEPHONE & WATER known Quadrants Needed Quadrants Needed CANTILENER ON NERTH DE OF CROSSING DUE TO NWAY WIDENING TROSPECT.					
Utility Provider (Company Name)       TBLGAD       TBLGAD       TBLGAD         Nearest Available Power Source       AT       CLDSSING         What other utilities are present?       UG       CAS, STOR         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONE       ONE         Automatic Flashing Lights (AFLS)       ST       AFLS / Cants       Rop         AFLS / Gates       AFLS / Gates       Install/upgrade circuitry       Sidelights	Phone Number M_SENSA, TSASAHANS & WATER iknown Quadrants Needed Quadrants Needed CANTILLICR ON NORTH DS OF CROSSILLODUS TO NWAY WIDENING PROJECT.					
Utility Provider (Company Name)       TBLGAD       TBLGAD       TBLGAD         Nearest Available Power Source       AT       CLDSSING         What other utilities are present?       UG       GAS, STOC         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONS         Automatic Flashing Lights (AFLS)       ST         AFLS / Cants       Rop         AFLS / Gates / Cants       Upgrade circuitry         Sidelights       Guardrail Needed	Phone Number M SENGLI TELEATANE & WATER known Quadrants Needed Quadrants Needed Quadrants Needed CANTILENER ON NERTH DE OF CROSSILLEDUE TO NWAY WIDEAING TROSTET.					
Utility Provider (Company Name)       TBLGAD       TBLGAD       TBLGAD         Nearest Available Power Source       AT       CLDSSING         What other utilities are present?       UG       GAS, STOC         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONE       ONE         Automatic Flashing Lights (AFLS)       ST       AFLS / Gates       ONE         AFLS / Gates       Rop       AFLS / Gates / Cants       Rop         Sidelights       Guardrail Needed       Install/Replace curb       Only	Phone Number M_SENGLI TELEATONE & WATER Iknown Quadrants Needed Quadrants Needed CANTILLICE ON NOWITH DE OF CROSSINGDUE TO NWAY WIDENING TROSTET.					
Utility Provider (Company Name)       TBLGAO       TBLGAO       TBLGAO         Nearest Available Power Source       AT       CLOSSING         What other utilities are present?       UG       GAS, STOC         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONS         Automatic Flashing Lights (AFLS)       ST         AFLS / Cants       Rop         AFLS / Gates / Cants       Upgrade circuitry         Sidelights       Guardrail Needed         Install/Replace curb       Other (define)	Phone Number M SENSEL TELEATOR & WATER known Quadrants Needed Quadrants Needed Quadrants Needed CANTILENER ON NORTH DE OF CROSSING ON NORTH DE OF CROSSING TROSTET.					
Utility Provider (Company Name)       TBLGAD       TBLGAD       TBLGAD         Nearest Available Power Source       AT       CLDSSING         What other utilities are present?       UG       GAS, STOR         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONE       ONE         Automatic Flashing Lights (AFLS)       ST       ST         AFLS / Cants       Rop       AFLS / Gates       Rop         Oligende circuitry       Sidelights       Guardrail Needed       Install/Replace curb       Other (define)         Comments:       Other (define)       Comments:       Comments:       Comments:	Phone Number M_SENSA, TEAEAHANE & WATER Iknown Quadrants Needed Quadrants Needed CANTILLIER ON NORTH DE OF CROSSINGDUE TO NWAY WIDENING TROSTECT.					
Utility Provider (Company Name)       TBLEND       TBLEND       TBLEND         Nearest Available Power Source       AT       CLDSSINC         What other utilities are present?       UG       GAS, STOC         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       Install/upgrade active devices       DNS         Automatic Flashing Lights (AFLS)       ST         AFLS / Cants       Rop         AFLS / Gates       Install/upgrade circuitry         Sidelights       Guardrail Needed         Install/Replace curb       Other (define)         Comments:       Comments:	Phone Number M SEWER, TEREAHONE & WATER known Quadrants Needed Qu					
Utility Provider (Company Name)       TOLENO       TOLENO         Nearest Available Power Source       AT       CLOSSING         What other utilities are present?       UG       CAS, STOR         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONE       ONE         Install/upgrade active devices       ONE       STOR         Automatic Flashing Lights (AFLS)       ST       AFLS / Cants         AFLS / Gates       Rop       AFLS / Gates       Rop         Sidelights       Guardrail Needed       Install/Replace curb       Other (define)         Comments:       Install/upgrade traffic signal preemption       Install/upgrade traffic signal preemption	Phone Number M SENSA, TEAEAHANE & WATER known Quadrants Needed Quadrants Needed CANTILWER ON NERTH DE OF CROSSING DUE TO NWAY WIDENING PROJECT.					
Utility Provider (Company Name)       TOLENO       TOLENO         Nearest Available Power Source       AT       CLOSSING         What other utilities are present?       UG       CAS, STOC         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       ONS         Automatic Flashing Lights (AFLS)       Sr         AtLS / Cants       Rop         AFLS / Gates       ONS         Upgrade circuitry       Sidelights         Guardrail Needed       Install/Replace curb         Other (define)       Comments:	Phone Number M SEWGG, TELEPHANE & WATER known Quadrants Needed Quadrants Needed CANTILWER ON NERTH DE EF CRESSING DUE TO NWAY WIDENING PROSECT.					
Utility Provider (Company Name)       TOUGLO       TOUGLO       TOUSLO         Nearest Available Power Source       AT       UL055/N6         What other utilities are present?       UG       GAS, "STOC         Is there potential utility conflict(s)       Yes       No       Un         Diagnostic Team Recommendations       Mo       Un         Diagnostic Team Recommendations       Mo       Un         Diagnostic Team Recommendations       STOC         Automatic Flashing Lights (AFLS)       ST         AFLS / Cants       Rop         AFLS / Gates       Rop         Sidelights       Guardrail Needed         Install/Replace curb       Other (define)         Comments:       Other (define)	Phone Number M_SENSA, TSUSAHANS & WATER known Quadrants Needed Quadrants Needed Quadrants Needed ANTILWSR ON NGATH DE OF CROSSING DUE TO NWAY WIDSWING TROSTET.					

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Field Sketch				
ð	ANGOLA PS	M N		
OVERITERAD O UTILITIES HAVE	ht the televent the televent			
ANREADY BEEN RAISED/RELUCATED DUE TO ROADWAY 72059CT.	exection (1) ADDIA PA			
	Houmed - Sylu			
Crossing Angle 0-29° 30-59° 860-90° Measured	in <u>SW</u> Quadrant?			
Sketch by: 2M				

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## TABLE I

## Table 2

Highway Vehicle Speed

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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			

Clearing Sight Distances

## Stopping Sight Distances

Distance (dH) Along Roadway

from Crossing (ft)

n/a

50

70 105

135

180

225

280

340

410

490

570

660

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 5foot 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 a<del>pproaches on gr</del>ades.

Clearing Sight Distance is to be measured in each vehicle scavel 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.

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

Notes:

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