

Introduced by _____ Council Bill No. R 46-08

A RESOLUTION

authorizing the City Manager to file a request with the Missouri Department of Transportation to change the status of the Columbia Terminal Railroad's (COLT's) highway-rail crossing at U.S. 63.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF COLUMBIA, MISSOURI, AS FOLLOWS:

SECTION 1. The City Manager is hereby authorized to file a request with the Missouri Department of Transportation to change the status of the Columbia Terminal Railroad's (COLT's) highway-rail crossing at U.S. 63 to EXEMPT status in conjunction with installation of an additional vehicle detection and warning system at the crossing.

ADOPTED this _____ day of _____, 2008.

ATTEST:


City Clerk

Mayor and Presiding Officer

APPROVED AS TO FORM:

City Counselor

Source:

TO: City Council
FROM: City Manager and Staff 
DATE: February 19, 2008
RE: Interim Safety Improvements at the US 63 Highway-Rail Crossing

Water & Light



John Glascock

Fiscal Impact

YES

NO

Other Info.

EXECUTIVE SUMMARY: Staff has prepared for Council consideration a Resolution authorizing the City Manager to request that the Missouri Department of Transportation (MoDOT) change the status of the Columbia Terminal Railroad's (COLT's) highway-rail crossing at US 63 to EXEMPT status in conjunction with the installation of an additional vehicle detection and warning system at the crossing.

DISCUSSION: The COLT's highway-rail crossing with US 63 has been in service since US 63 was constructed in the middle 1980s. Since that time, highway traffic has changed considerably at that location. Due to some recent accidents, the change in traffic, and public interest, engineers from MoDOT have performed a recent traffic and conflict study at the highway-rail crossing as shown on the attached Exhibit "A". MoDOT found that highway traffic has increased from about 10,800 vehicles per day in 2001 to about 22,500 vehicles per day in 2006. In addition, there have been 18 accidents in the five year period of 2002 to 2006 compared to only 8 accidents for the prior five year period. Finally, MoDOT found that about 10 vehicles per hour per direction are required to stop at the crossing. By law, school buses and trucks carrying certain hazardous materials are required to stop at all railroad crossings. These stopping vehicles produce significant opportunities for conflict with other motorists.

Railroad traffic at the crossing consists of 1 or 2 trains per day during the period March through December and 3 or 4 trains per week during the winter months. Trains operate at a maximum speed of 25 mph over the crossing.

Given the highway and railroad traffic characteristics, MoDOT has proposed placing the crossing in EXEMPT status. This would eliminate the requirement that school buses and hazardous materials trucks stop at the highway-rail crossing. As some buses and trucks will continue to stop at the crossing regardless of the EXEMPT status, MoDOT proposes to install an additional vehicle detection and warning system that will give motorists an indication of stopped or slow moving vehicles at the crossing on variable message boards placed in advance of the crossing. The system will also provide additional warning to motorists when a train is present at the crossing.

The proposed vehicle detection and warning system and change in crossing status is intended to be an interim measure until a railroad bridge can be constructed over US 63. Thus, MoDOT's proposal does not jeopardize or otherwise impede the implementation of the best method to eliminate the

hazards associated with the highway-rail crossing at US 63.

Generally, railroads are not in favor of exempting railroad crossings for railroad safety reasons. However, given the heavy highway traffic, the light railroad traffic, and the presence of the rail activated flashing lights, MoDOT's proposal is compelling from a public safety perspective. At their February meeting, the Railroad Advisory Board considered the MoDOT proposal and recommended that the City Council authorize the City Manager to request that the US 63 highway-rail crossing be placed in EXEMPT status in conjunction with the installation of the additional vehicle detection and warning system.

RECOMMENDED COUNCIL ACTION: Adoption of a resolution authorizing the City Manager to request that the Missouri Department of Transportation change the status of the Columbia Terminal Railroad's crossing with US 63 to EXEMPT status in conjunction with the installation of an additional vehicle detection and warning system at the crossing.

CJ/jmm



MEMORANDUM

Missouri Department of Transportation

Traffic
District 5

TO: File

FROM: Jason Sommerer, EI
Senior Traffic Studies Specialist

DATE: January 29, 2008

SUBJECT: US 63 at Colt Railroad Crossing
Traffic Study Summary

Crash History

Northbound	1997 to 2001 (5 years)			2002 to 2006 (5 years)		
	Day	Night	Total	Day	Night	Total
Fatal	1	0	1	0	0	0
Injury	2	0	2	3	1	4
PDO	1	0	1	5	1	6
Total	4	0	4	8	2	10

Southbound	1997 to 2001 (5 years)			2002 to 2006 (5 years)		
	Day	Night	Total	Day	Night	Total
Fatal	0	0	0	0	0	0
Injury	3	0	3	5	1	6
PDO	0	1	1	2	0	2
Total	3	1	4	7	1	8

*PDO = Property Damage Only

Traffic Volume

AADT	1997	2001	2006
Northbound	4,976	5,258	11,079
Southbound	5,270	5,568	11,432

*AADT – Average Annual Daily Traffic

Conflict Study

Data Collected 01/09/2008 and 01/10/2008

Averages per Hour from 6:30 am to 6:30 pm	Vehicles that Stopped	Vehicles that should have Stopped	Sudden Lane Change or Avoiding Maneuver	Trains (EB)	Trains (WB)
Northbound	7	2	1	0	0
Southbound	7	3	2	0	0

*Train traffic of approximately 1 to 2 trains per day is typical from March through December

Countermeasures

- Crash Reduction – **Low** – Dynamic Vehicle Warning System
 - Radar detection of slow moving and stopped vehicles to trigger flashing lights on advance warning signs
 - Approximate Cost - \$20,000 to \$25,000 per direction
 - \$40,000 to \$50,000 total
 - Relative Benefit-Cost Comparison for this Study
 - Cost – **minor**
 - Benefit – **minor**
- Crash Reduction – **Median** – Vehicle Exemption at Crossing
 - Exemption for vehicles so trucks and busses are not required to stop at the crossing.
 - Existing Sight Distance at the Crossing (minimum required stopping sight distance at 70 mph is 730 feet)
 - Northbound
 - 2,232 feet for an eastbound train
 - 1,146 feet for a westbound train
 - Southbound
 - 1,100 feet for an eastbound train
 - 1,506 feet for a westbound train
 - Approximate Cost – none (equipment and material only)
 - Relative Benefit-Cost Comparison for this Study
 - Cost – **none** (equipment and material only)
 - Benefit – **major**
- Crash Reduction – **Median** – Vehicle Exemption and Warning System
 - Exemption for vehicles and the dynamic vehicle warning system for when the train is present and if some trucks/busses continue to stop at the crossing.
 - Approximate Cost - \$20,000 to \$25,000 per direction
 - \$40,000 to \$50,000 total
 - Relative Benefit-Cost Comparison for this Study
 - Cost – **minor**
 - Benefit – **major**
- Crash Reduction – **High** – Railroad Bridge Overpass
 - Grade-separated structure to completely remove the train-vehicle conflict
 - Approximate Cost – \$5,500,000
 - Relative Benefit-Cost Comparison for this Study
 - Cost – **major**
 - Benefit – **major**

Other Considerations

Speed Limit Reduction

Reduction in vehicle speed is always a safety improvement. However, simply reducing the posted speed limit has proven to be one of the least effective methods at reducing vehicle speeds. When setting speed limits, MoDOT follows the widely accepted method of setting the speed limit as close as practical to the 85th Percentile Speed, the speed at which 85% of drivers are traveling at or below. In the absence of nearly continuous enforcement, a lower posted speed limit does very little to reduce overall vehicle speed. While a small number of motorists may reduce their speed, this actually creates a more dangerous situation, by increasing the speed differential (the difference in speed between slow and fast moving vehicles). In addition, if motorists perceive the posted speed limit to be unrealistically low, they may disregard the speed postings completely (both in the affected area, and for all speed limit signs in general), which could increase the speed differential even more.

A speed study in January 2008 found the 85th percentile speed for northbound traffic to be 76 mph. If the speed limit were reduced just 5 mph to 65 mph, we would be making illegal, an activity that over 70% of drivers consider to be safe and prudent (that is, driving above 65 mph). Also, the main concern in this area is not vehicle speed, by itself. It is more driver inattention and the unexpected occurrence of trucks and busses stopped in the driving lanes of a high-speed, rural expressway. A reduction in the posted speed limit would do nothing to address this concern.