

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Bi-State Development Agency of the Missouri-Illinois District, a
body corporate and politic created and existing by reason of a
joint compact between the States of Missouri and Illinois,
Petitioner,

vs.

Illinois Commerce Commission,
Respondent.

Petition for Exception to the Horn Sounding Requirements of 625
ILCS 5/18c-7402(2)(a) with respect to the Agency's operation of
Metro link in St. Clair County, Illinois.

T02-0036

ORDER

By the Commission:

On April 10, 2002, Bi-State Development Agency of the Illinois-Missouri District ("Bi-State" or Petitioner), filed its PETITION FOR EXCEPTION TO REQUIREMENTS OF 625 ILCS 5/18c-7402(2)(a) with the Illinois Commerce Commission ("Commission") naming therein the Commission as Respondent. Bi-State requests an Order of the Commission granting permission to continue to operate the MetroLink Light Rail System ("MetroLink") along its alignment in St. Clair County, Illinois, pursuant to its current safety and operating guidelines, that Petitioner be excused from sounding a whistle warning ¼ mile prior to at-grade railroad crossings as currently required by the requirements of 625 ILCS 5/18c-7402(2)(a) and for any such further relief as the Commission deems necessary.

Pursuant to the rules and regulations of the Commission, this matter came on for hearing on May 15, 2002, before a duly authorized Administrative Law Judge of the Commission at its office in Springfield, Illinois. At the hearing, an appearance was entered by counsel for Bi-State. A representative of the Commission's Rail Safety Section staff ("Staff") was present and participated in the hearing. Witnesses for the petitioner offered testimony in support of the petition. At the conclusion of the hearing on May 15, 2002, the matter was marked "Heard and Taken."

Petitioner is a body corporate and politic created and existing by reason of a joint compact between the states of Illinois and Missouri, as codified at 45 ILCS

100, et seq. and 70.370 Mo. Rev. Stat., et seq. Bi-State has constructed and operates a light rail alignment providing passenger service between Lambert Airport located in St. Louis County, Missouri, through the City of St. Louis, across the Mississippi River, through East St. Louis, Illinois, to the Southwestern Illinois College campus located in St. Clair County, Illinois. There are 23 at-grade crossings in Missouri and Illinois, with 14 at-grade crossings located in St. Clair County, Illinois, with the remaining nine crossings located in the State of Missouri. Bi-State operates over 1,600 MetroLink light rail passenger train trips along the previously described alignment on a weekly basis. The majority of MetroLink trips are operated Monday through Friday, with a reduced schedule on Saturday and Sunday. During morning and evening rush hours and certain special events, 21 to 25 two-car trains may be operating on the 34.4-mile alignment between Lambert Airport and Southwestern Illinois College. Due to operating over smaller gage track, there is no freight train or Amtrak passenger train traffic on Bi-State's rail line.

Three of the at-grade crossings in St. Clair County, were constructed prior to 1993 and have been in continuous operation since 1993 in connection with Phase 1 of the MetroLink alignment, which extends from Lambert Airport, St. Louis, Missouri, to Fifth and Missouri Avenues in East St. Louis, Illinois. Each of the three at-grade crossings in Illinois constructed prior to 1993 were inspected and approved by the Missouri Division of Motor Carrier and Railway Safety in connection with Phase 1 of the project. By Form 3 Petitions, required to be submitted by Bi-State per Commission Orders in Dockets T01-0011, T01-0012, and T01-0013, Bi-State sought Commission review and approval of Bi-State's compliance with the safety requirements for the construction of Phase 2 of the project that extends from Fifth and Missouri Avenues in East St. Louis, Illinois, to Southwestern Illinois College campus located in St. Clair County, Illinois. By X-Resolutions adopted by the Commission on April 26 and April 27, 2001, the Commission authorized Bi-State's construction and use of eleven at-grade crossings located in St. Clair County, Illinois.

As previously mentioned, the first three at-grade crossings in the City of East St. Louis have been in existence since 1993. The subject crossings are located at Main Street, 4th Street, and Broadway Street. Bi-State, which operates MetroLink, presented its executive director who testified that a total of three accidents have occurred at the crossings in Missouri and Illinois. Two of the accidents occurred in Missouri and the third involved a motorist trying to elude a police pursuit and ran into the train at the 15th Street crossing in East St. Louis, Illinois. None of the accidents have occurred at the three originally established crossings in Illinois in 1993. MetroLink has requested that the Commission grant a variance from its whistle requirements and grant permission to MetroLink to be excused from sounding a train horn at the Main Street, 4th Street, and Broadway Street crossings. It is the opinion of MetroLink that due to the three aforementioned crossings being (1) equipped with cantilever mounted automatic flashing light signals and gates controlled by constant warning time circuitry, (2)

all but the 4th Street and Main Street crossings being equipped with some type of median barrier (4th Street and Main Street are one-way streets where the gates extend across the entire roadway and a median barrier is not necessary), and (3) there have been less than three accidents (actually, no accidents) over the last five years, the crossings should be excused from the whistle requirement in the Illinois Vehicle Code. The aforementioned statistics meet or exceed the criteria as set forth in the Illinois Vehicle Code 625 ILCS 5/18c-7402(2)(a) and Bi-State requests relief from said statute by being granted a variance as allowed by 625 ILCS 5/18c-7403.

Bi-State testified at the May 15, 2002, hearing, that in order to reasonably and sufficiently ensure the safety and protection of the public at each of the Illinois MetroLink at-grade crossings, including the three at-grade crossings in use prior to 1993 and not subject of Commission Orders in Docket T01-0011, T01-0012, and T01-0013, cantilever mounted automatic flashing light signals, gates, and warning bells have been installed to alert vehicular traffic of an oncoming train. All Illinois MetroLink crossings, except Main Street and 4th Street, which are one-way streets, are equipped with concrete medians or Quik-curb median barriers to aid in the prevention of motorists from driving around lowered gates. The warning devices are activated when a train is 25 to 30 seconds away from entering each crossing. The current time sequence for all MetroLink crossings is as follows:

- At 25 to 30 seconds before a light rail vehicle enters a grade crossing, the bells and lights at the crossing are activated by the approach of a train.
- Within 3 to 4 seconds after the bells and warning lights at the crossing are activated, the crossing gate begins to lower from a 90° position to a horizontal position. This process takes approximately 11 to 12 seconds.
- 10 to 15 seconds before a light rail vehicle enters a grade crossing, the crossing gate is in the full horizontal position.
- 25 to 30 seconds after the bells and warning lights first were activated at the crossing, the light rail vehicle enters the crossing.

The distance from the crossing that the gates are activated is dependent on train speed (i.e. at 55 mph.), the gates are activated at approximately 2,600 feet, whereas at 25 mph. the gates are activated at approximately 1,400 feet to ensure that the warning lights and bells are activated 25 to 30 seconds before the light rail train enters the crossing and the crossing gate is in the horizontal position 10 to 15 seconds before the light rail train enters the crossing.

In addition, another operation safety feature is all light rail operators are required to adhere to certain safety rules prior to entering a crossing. First, MetroLink operates with an abbreviated horn signal in Illinois and Missouri since

1993. The horn signal currently being used by MetroLink is two long horn blasts, with the first blast made at approximately 300 feet from a crossing. The second long horn blast must be completed as the light rail train enters the crossing. An operator is permitted, pursuant to Bi-State rules, to make only one long horn blast if the operator is certain that there are no vehicles or pedestrians at or approaching the crossing, said blast is to be made at approximately 300 feet before entering the crossing. Intersections with restricted visibility require two long horn blasts. Secondly, the grade crossing signals include lunar indicators facing the approaching light rail train to advise the operator of the train whether the crossing gate and signals are operating properly. If a solid lunar indicator is displayed, the crossing is clear of obstructions, and it can be visually confirmed that the gates are in the horizontal position for a maximum of 5 seconds and properly protecting the crossing, the operator may proceed at maximum timetable speed. If a solid lunar signal is not present or is flashing, the train operator must stop the train before entering the grade crossing and contact Bi-State MetroLink Central Control. Once it is determined that the crossing is safe, the light rail train may enter the grade crossing at a restricted speed, sounding its horn and/or bell until the front of the train completely occupies the grade crossing.

There has been only one (1) accident along the Illinois portion of the MetroLink line. It occurred at the 15th street crossing in East St. Louis, when an automobile being pursued by the police drove around the activated and lowered gates and struck the light rail train broadside after the train had occupied the crossing.

In support of its position that it should be excused from the Commission's whistle requirements due to the difference in the type of light rail trains that Bi-State operates compared to a standard freight train or passenger train, Bi-State further testified that the light rail trains have three braking systems. The specifications for deceleration rates (stopping distances) for light rail trains are as follows:

- As mentioned previously, light rail trains have three types of brakes: (1) dynamic; (2) disc; and (3) track;
- Under normal operating conditions, dynamic brakes are used for stopping;
- The disc brakes are used as parking brakes;
- The track brakes are used with the other braking systems to stop the light rail trains in case of an emergency;
- Full service/dead man brakes equal 3 miles/hour/second ("mphps");
- Full service with track brakes equals 3.5 mphps;

- Emergency brake rate (including track brakes) is equal to or greater than 5.5 mphs.

Bi-State is not aware of any Federal Transit Administration regulations pertaining the sounding of warning whistles prior to at-grade crossings.

Staff has reviewed the aforementioned testimony and has held discussions with Bi-State after the hearing on May 15, 2002, concerning braking distances and stopping times and staff recommends that Bi-State light rail train operators sound whistle (horn) warnings in the manner and at the locations as further described in Findings (3a, 3b, and 3c). The aforementioned tables developed by staff are derived from data contained in Petitioner's Exhibit 2, titled St. Louis LRV Braking Distances and Stopping Times, utilizing the braking mode listing in the center column marked "Full Service Brake w/Track". Staff's recommendations are based upon the speed of the train and the deceleration rate in mph/sec. Staff also strongly recommends that Bi-State be required to maintain the medians, including the Quik Curb type medians, to insure the integrity of the curbs to prevent the circumnavigation of the crossing gates. Therefore, staff has no objection to the entry of an Order granting a variance from the whistle requirements as contained in 625 ILCS 5/18c-7402(2)(a) as long as the aforementioned staff recommendations, as contained in Findings (3a, 3b, and 3c) of this Order, are incorporated therein.

Staff has no objection to Bi-State being excused from sounding its whistle warning at the, Main Street, 4th Street, and Broadway Street crossings in Illinois. The three crossings meet the minimum criteria as set forth by the Commission in past Dockets where railroads have been excused from sounding a whistle warning unless, in the judgment of the train engineer, public safety requires that a the train horn be sounded to alert a motorist of an approaching train.

On June 20, 2002, an Administrative Law Judge's Proposed Order was served on the parties. Staff filed a Brief On Exceptions To Proposed Order and Bi-State filed a Petitioner's Reply Brief On Exceptions To Proposed Order, which have been considered in this Order.

The Commission, having given due consideration to the entire record herein, finds that:

- 1) the Commission has jurisdiction of the parties hereto and the subject matter herein;
- 2) the recitals of fact as set forth in the prefatory portion of this Order are true and correct and are hereby adopted as findings of fact;

- 3) Bi-State should be excused from sounding a warning whistle at the Main Street, 4th Street, and Broadway Street crossings (the first three crossings in Illinois that have been in existence since 1993); this excusal should not be construed as prohibiting Bi-State from sounding its warning whistle at the any of the crossings at the discretion of the train engineer and when public safety requires same;
- 4) for the eleven remaining at-grade crossings in Illinois, Bi-State should be granted a variance from sounding a warning whistle as required by the Commission's 625 ILCS 5/18c-7402(2)(a) and be granted permission to sound whistle warnings on its light rail system in the manner as recommended by staff in the tables (a, b, and c) herein below; Bi-State shall also install whistle posts at the locations as set forth in (a, be, and c) herein below;
 - a) For trains operating between 46 and 55 mph (80.69 fps) will require the horn to be sounded beginning at 700 feet from the crossing in the following manner. Whistle posts will be required at the 700-foot location.

1st Blast	Horn Duration	2nd Blast	Horn Duration	3rd Blast	Horn Duration
	2 Second		2 Seconds		Continuous
700'	8.3 to 6.3 Sec.	400'	5 to 3 Sec.	150'	Continuous

*the aforementioned table will apply to all subject crossings except at the Missouri Avenue, St. Louis Avenue, and Martin Luther King Avenue crossings where the distance between the crossings is less than 700 feet; at these three crossings, staff recommends that the following two horn blast sequence be followed pertaining to the sounding of a train horn at the three crossings; whistle posts will be required to be posted at 400-foot locations from the crossings:

*1st Blast	Horn Duration	2nd Blast	Horn Duration
	2 Seconds		
400'	5 to 3 Sec.	150'	Continuous

- b) For trains operating between 36 to 45 mph (66.02 fps) will require the horn to be sounded beginning at 500 feet from the crossing in the following manner. Whistle posts will be required at the 500-foot location.

1st Blast	Horn Duration	2nd Blast	Horn Duration	3rd Blast	Horn Duration
	2 Second		2 Seconds		Continuous
500'	7.6 to 5.6 Sec.	300'	4.5 to 2.5 Sec.	100'	Continuous

- c) For trains operating between 0 and 35 mph, the sounding of a whistle warning can commence at 300' from a crossing and Bi-State can use the current horn durations. Whistle posts will be required at the 300-foot location.
- 5) Bi-State shall be required to maintain at its expense the whistle posts and crossing medians, except at the one-way streets, at its crossings in the State of Illinois;

IT IS THEREFORE ORDERED by the Commission that Bi-State be excused from sounding a warning whistle at the Main Street, 4th Street, and Broadway Street at-grade crossings as required by the Commission's 625 ILCS 5/18c-7402(2)(a). However, this excusal should not be construed as prohibiting Bi-State from sounding a warning whistle at the any of the crossings at the discretion of the train engineer and/or when public safety requires that a horn blast be sounded.

IT IS FURTHER ORDERED that Bi-State be, and it is hereby, required and directed to sound a whistle warning at its remaining eleven at-grade crossings in the State of Illinois in the manner as described in the tables of Findings (4a, 4b, and 4c) herein.

IT IS FURTHER ORDERED that Bi-State be, and it is hereby, required and directed to install, at its expense, whistle posts in the location as described in the Finding (4a, 4b, and 4c) herein at the eleven at-grade crossings and hereafter maintain the whistle posts at its expense.

IT IS FURTHER ORDERED that Bi-State be, and it is hereby required and directed to hereinafter maintain at its expense, the median barriers at all its crossings on the MetroLink light rail line in Illinois, except those crossings located on one-way streets.

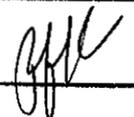
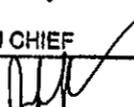
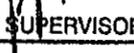
IT IS FURTHER ORDERED that the whistle posts hereinbefore required shall be installed within thirty (30) days from the date of this Order.

IT IS FURTHER ORDERED that Bi-State shall file a written notice with the Commission within five (5) days of the completion of the work herein required.

IT IS FURTHER ORDERED that Bi-State can petition the Commission after the five-year period has expired and request to be excused from sounding a whistle warning at any of the crossings that have had less than three accidents over the five year period.

IT IS FURTHER ORDERED that subject to Section 18c-2201 and 18c-2206 of the Law, this is a final decision of the Commission, subject to Administrative Review Law.

By the Commission this 7th day of August, 2002.

JUDGE	
SECTION CHIEF	
ORDERS SUPERVISOR	



Chairman