



HISTORIC  
FRANKLIN  
TENNESSEE

ITEM #8  
WRKS 01/11/2011

## MEMORANDUM

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January 5, 2011

TO: Board of Mayor and Aldermen

FROM: Eric S. Stuckey, City Administrator *ES*  
Eric J. Gardner, P.E., Director of Engineering  
Carl Baughman, Traffic/Transportation Engineer

SUBJECT: Discussion of Appropriate Traffic Control at McEwen Drive & Wilson Pike (TN252)

### Purpose

The purpose of this memorandum is to provide the Board of Mayor and Aldermen (BOMA) with information to consider upgrading the traffic control at this three-legged intersection where McEwen Drive ends at Wilson Pike.

### Background

This item was discussed at the December 14, 2010 Work Session and subsequently deferred later that night at the BOMA meeting. The Board raised concerns about the turning movements of larger vehicles and the impact that would have on the functionality of this intersection. Before voting on the item, the aldermen requested staff to review the turning movements and ensure that large vehicles could maneuver the turns without negatively impacting vehicles traveling in the other direction.

Large vehicles traveling east on McEwen Drive that turn right onto Wilson Pike must swing into the westbound McEwen Drive lane as well as the northbound Wilson Pike lane. Southbound vehicles on Wilson Pike turning right onto McEwen Drive must swing into the northbound Wilson Pike lane. Without improving the lane widths and radii, these vehicle movements occur as currently posted, in a 3-way stop condition or in a signalized condition. To keep the intersection functioning properly, staff must make sure that the stop bars are positioned correctly to eliminate conflicts when large vehicles must swing into opposing lanes. If this ordinance is approved, the stop bars will be located based off the attached turning movement sketches.

Currently, McEwen Drive is the only STOP-controlled approach to the intersection. The speed limit on Wilson Pike is 40 mph and on McEwen Drive is 30 mph. A citizen concern about safety received in May prompted a traffic investigation which is summarized in the attached memo dated June 3, 2010. Based on that data the City supplied TDOT with materials indicating that all-way stop control is warranted, as well as traffic signalization. When both types of traffic controls are concurrently warranted, sometimes the all-way stop is installed as an interim condition until signalization can be installed. TDOT has responded that they have no objection to the all-way stop installation. They also have no objection to a signal installation, but recommend that a northbound left turn lane be installed with the signal. The left turn lane and signalization recommendation is in line with that of the Breezeway School Traffic Impact Study. Per the Interlocal Agreement with the Williamson County School Board (COF Contract 2010-0125) the County will fund these improvements and then release the signal to the City for ownership.



**Options**

Option 1 – Approve an Ordinance to install an all-way stop at the three legs of this intersection. As the school seeks to open in August 2011 the all-way stop would be in effect from about January through the activation of the signal.

Option 2 – No action, the intersection has a moderate safety record based on the number of crashes here, although there was one injury crash earlier in 2010.

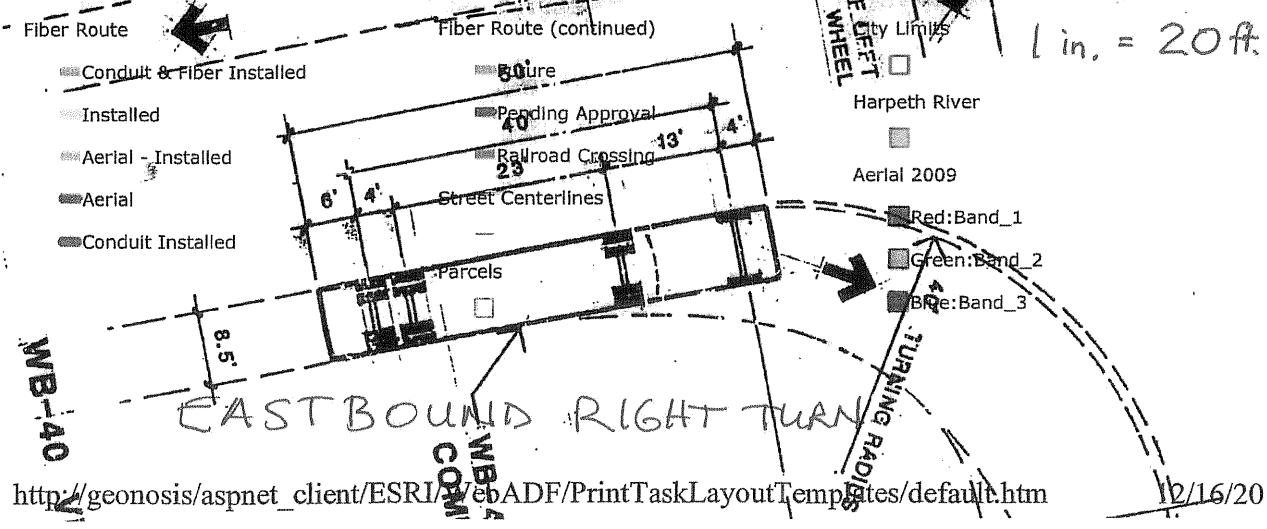
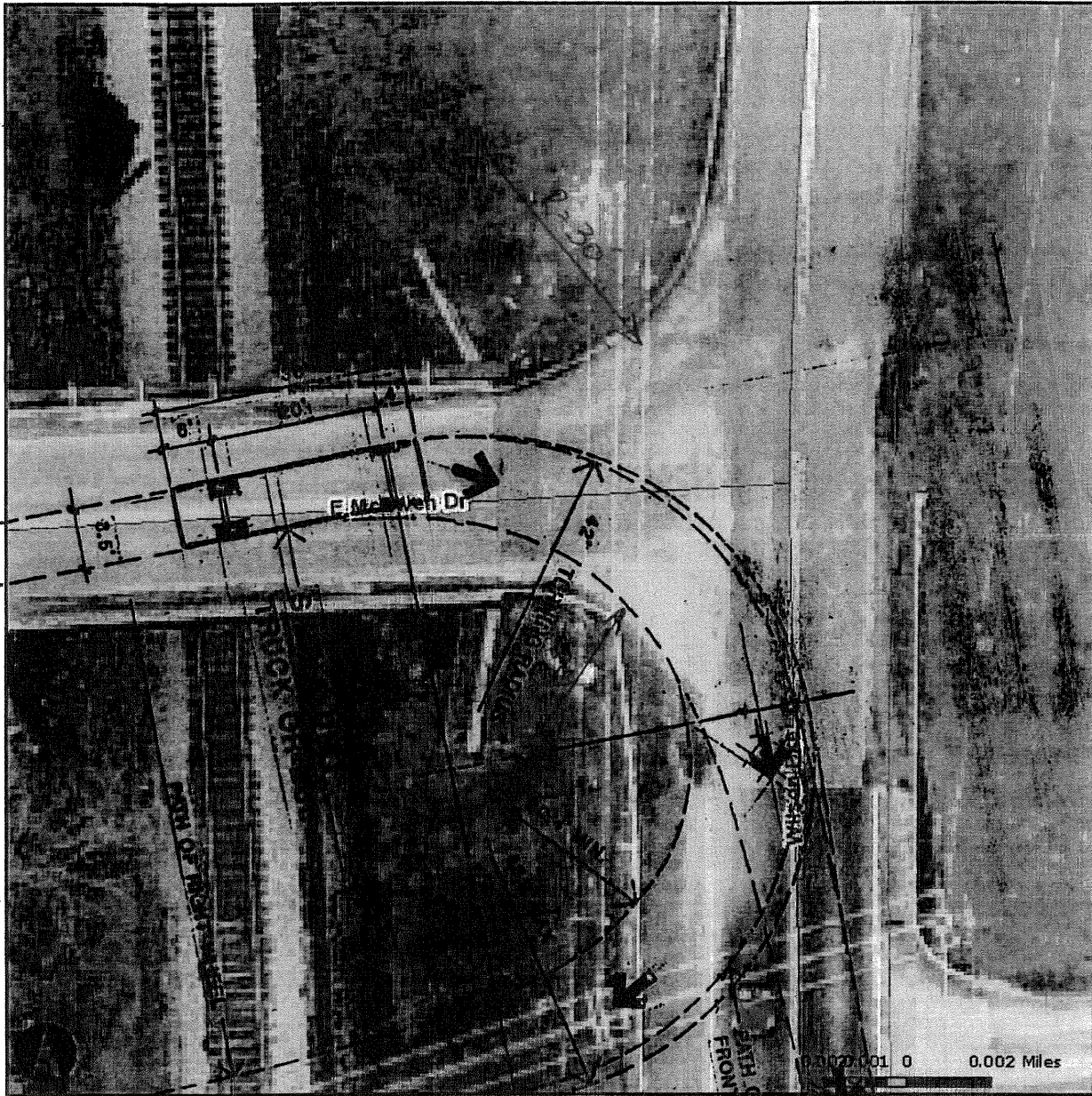
**Financial Impact**

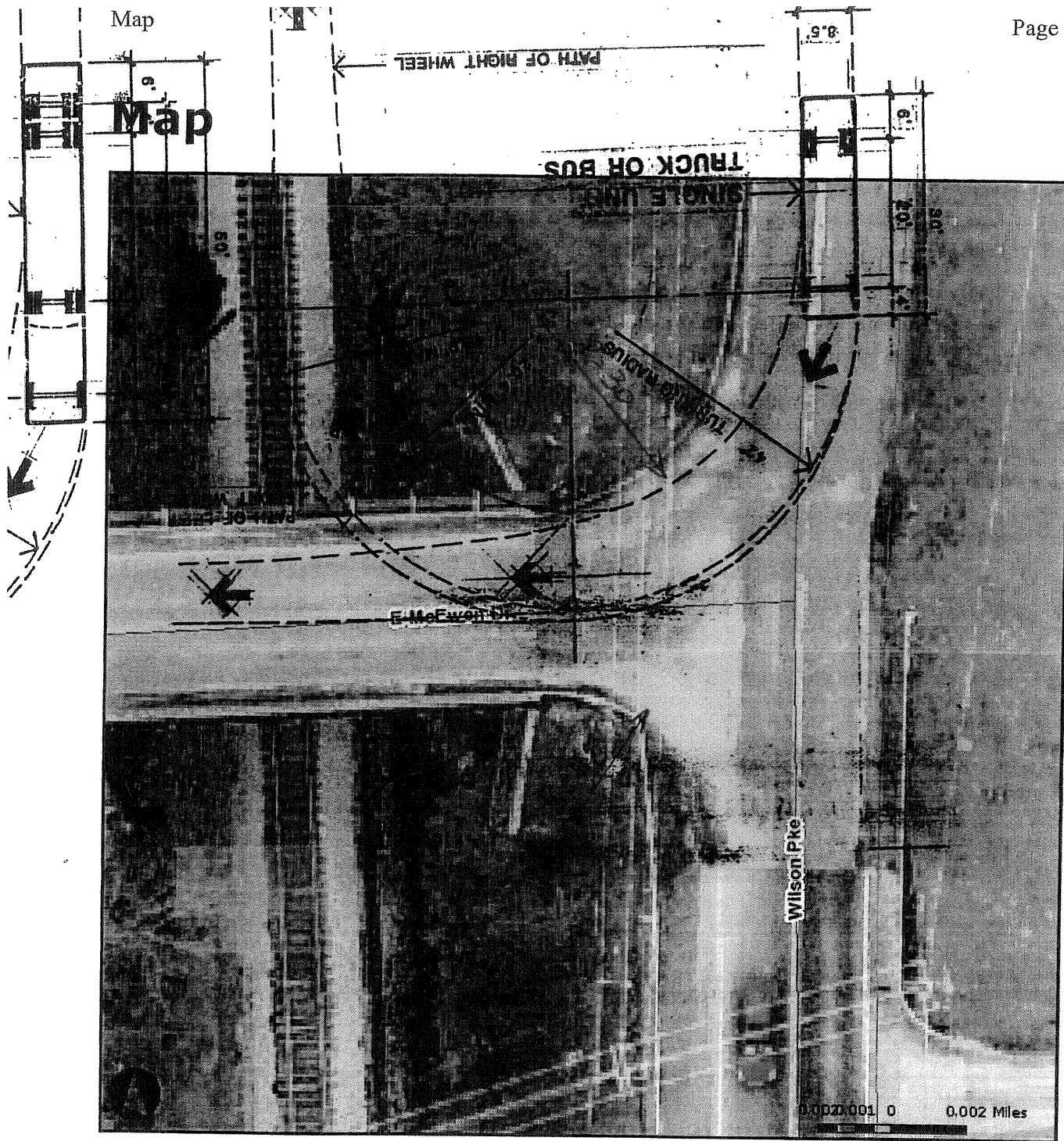
The Street Department would bear the cost to manufacture, install and maintain the signs. We recommend that flashing red beacons be placed above the new STOP signs on Wilson Pike for up to two months from installation. Special STOP AHEAD signing with red flags should also be placed on Wilson Pike in advance of the intersection. The peak hour critical vehicle delay (McEwen Drive) will decrease from approximately 375 seconds to approximately 150 seconds; average vehicle delay (overall intersection) will change from about 90 seconds to 120 seconds.

**Recommendation**

Staff recommends Option 1. Even though the overall intersection average vehicle delay worsens, it would add safety to the right-of-way situation here and prepare the motoring public for the eventual signalization. A side benefit would be safety during the signal construction.

# Map





Fiber Route

- Conduit & Fiber Installed
- Installed
- Aerial - Installed
- Aerial
- Conduit Installed

Fiber Route (continued)

- Future
- Pending Approval
- Railroad Crossing
- Street Centerlines
- Parcels

City Limits



Harpeth River



Aerial 2009

Red: Band\_1

Green: Band\_2

Blue: Band\_3

1 in. = 20 ft.

# SOUTHBOUND RIGHT TURN