

# Main-McVay Transit Study Most Promising Transit Solutions

*DRAFT*

*DECEMBER 2014*

*A collaborative study between:*



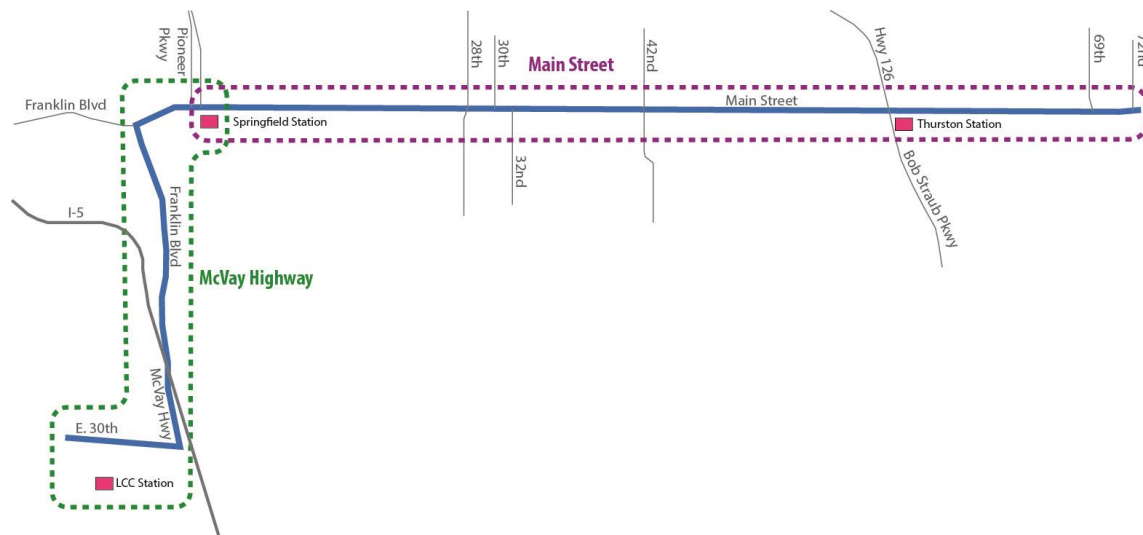


# 1 Introduction/Summary of Most Promising Transit Solutions

The Main-McVay Transit Study is intended to identify the most appropriate and promising transit solutions for the Main-McVay Corridor and determine if those solutions should be advanced as a project or projects in the Corridor. Through an iterative screening process, decisions have been made to focus on bus-based options (Enhanced Bus and Bus Rapid Transit) and to identify the various elements of transit solutions that would best meet the needs of the Corridor. Elements of the Most Promising Transit Solutions are described in Section 2. The “No-Change” Option will be carried forward on any subsequent studies. All of the study reports are available at the City of Springfield Transportation Planning Department, LTD’s Glenwood Administration Building, and on the project website (<http://ourmainstreetspringfield.org/main-mcvay-transit-improvement-study/>). This document consolidates the decisions that have been made on each element into recommended comprehensive transit solutions for the Corridor.

The Main-McVay Corridor is composed of the Main Street and McVay Highway segments (Figure 1.1-1). Given the diverse characteristics of these two segments in development patterns, population and employment density, and current transit service, recommendations for the most promising transit solutions are broken out by segment.

**Figure 1.1-1. Main Street and McVay Highway Corridor Segments**



Source: Cameron-McCarthy. 2014.

## Summary of Recommended Most Promising Transit Solutions

The recommended range of Most Promising Transit Solutions for the Main-McVay Corridor, based on the recommended transit elements, is summarized in Table 1.1-1. The most promising solutions are indicated with a green dot, while a red dot indicates an option that is not promising or viable at this time.

An orange dot indicates a solution that, while not recommended as the primary option, can be reconsidered should conditions or circumstances change.

A more complete description of the recommended Most Promising Transit Solutions is included in Section 3.

**Table 1.1-1. Recommend Most Promising Transit Solutions by Segment**

Options	Main Street Segment	McVay Highway Segment
No-Change (Existing Service)	●	●
Enhanced Bus	●	●
BRT	●	●

The **No-Change Option** is carried forward for both the Main Street and McVay Highway Segments.

**Enhanced Bus Options** are carried forward for both the Main Street and McVay Highway segments.

**BRT on Main Street** as an extension of the current Franklin EmX is carried forward.

**BRT on McVay Highway** is not a promising solution at this time. This option can be reconsidered should sufficient new development materialize within the Corridor.

## 2 Elements of the Most Promising Transit Solutions

Decisions have been made on the most appropriate elements of potential Enhanced Bus and BRT options. These individual decisions were combined to form complete transit solutions for the Main Street and McVay Highway Segments. Decisions on the various elements are summarized in Table 2.1-1.

**Table 2.1-1. Decisions on Transit Elements**

Options	Advanced	Eliminated
<b>BRT Station Spacing</b>		
Station Spacing Option 1: Stations routinely spaced less than 1/3 mile apart		●
Station Spacing Option 2: Stations spaced approximately 1/3 mile apart (can vary depending on adjacent uses)	●	
Station Spacing Option 3: Stations routinely spaced more than 1/3 mile apart		●
<b>SAC Recommendation: Option 2.</b> The 1/3 mile station spacing has been recommended as the most appropriate option for possible BRT service in the Corridor. This option provides the best balance between access and travel time savings. Note that the stop spacing is an average distance between stops and that stops more or less than 1/3 mile apart can be implemented based on adjacent land uses and activity centers.		
<b>BRT Routing: Main Street East, Eastern Terminus</b>		
East Main Option 1: Thurston Station (with connector service east of 58 <sup>th</sup> Street))	●	

Options	Advanced	Eliminated
East Main Option 2A: Thurston High School – All Trips (with connector service east of 58 <sup>th</sup> Street)		●
East Main Option 2B: Thurston High School – Selected Trips (with connector service east of 58 <sup>th</sup> Street))	●	
East Main Option 3: Thurston Road to 69 <sup>th</sup>		●
East Main Option 4: Main to 72 <sup>nd</sup>		●
<b>SAC Recommendation: Option 2B.</b> The option which extends the service to Thurston High School for a limited number of trips that meet key school start and end times has been determined to be the best option, assuming a safe and convenient routing and station location near the high school can be established. If not, it is recommended that Option 1: Thurston Station is be used as the eastern terminus for all trips.		
<b>BRT Routing: Main Street Downtown</b>		
Downtown Routing Option 1: Main Street / South A Couplet		●
Downtown Routing Option 2: South A Street (eastbound and westbound)	●	
Downtown Routing Option 3A: South A Street west of 10th; Couplet east of 10th	●	
Downtown Routing Option 3B: South A Street west of 14th; Couplet east of 14th		●
<b>SAC Recommendation: Option 3A.</b> The “Combination Option” using 10th Street was determined to be the best option. This option provides equivalent access as Option 1: Main Street/South A Couplet, but eliminates bus travel through the most congested part of downtown Springfield. Option 2 that uses South A Street for both eastbound and westbound service was suggested by SAC and the Main Street Vision Project Manager to be retained as a back-up option, since it may provide an opportunity for a higher level of lane exclusivity and may fit better with the Main Street vision.		
<b>BRT Routing: McVay South</b>		
South McVay Option 1: McVay Highway (west side of I-5)	●	
South McVay Option 2: Old Franklin (east side of I-5)	●	
South McVay Option 3: Haul Road (east side of I-5)		●
<b>SAC Recommendation: Option 1 and Option 2.</b> Since there was little in the analysis to differentiate the McVay Highway and Old Franklin Options, it was determined that both the McVay Highway and Old Franklin routing options should be carried forward. The SAC also recommended that exploration be conducted on an option that would use a private underpass of Interstate 5 and new roadway on the west side of Interstate 5. Note that these options are based on assumed BRT service on the McVay Highway Segment. Should BRT service on that segment not be pursued, the McVay South routing question is moot. It has been assumed that Enhanced Bus would use the existing bus routing.		
<b>Enhanced Bus Options</b>		
Enhanced Bus Option 1: Main Street	●	
Enhanced Bus Option 2: McVay Highway	●	
Enhanced Bus Option 3: Main Street Express		●
Enhanced Bus Option 4: Freeway Express		●
Enhanced Bus Option 5: Main-McVay		●

Options	Advanced	Eliminated
---------	----------	------------

**SAC Recommendation: Option 1 and Option 2.** Enhanced Bus options on both the Main Street and McVay Highway segments are predicted to lead to an increase in ridership by 2035 and a reduction in operating costs with few adverse impacts on the natural or built environment. Option 3: Main Street Express would add considerable operating cost without a commensurate increase in ridership. Option 4: Freeway Express has minimal impact of the corridor. Option 5: Main-McVay, which would link the Main Street and McVay Highway segments with Enhanced Bus service, could not be done on a consistent basis due to the different service frequencies and service spans of the two segments. However, if both Options 1 and 2 are implemented, linking the two routes at the Springfield Station whenever possible would be beneficial by eliminating transfers for some trips.

#### BRT Service Options

BRT Service Option 1: Franklin-Gateway; Main-McVay		●
BRT Service Option 2: Franklin-Main; Gateway-McVay	●	
BRT Service Option 3: Franklin-Gateway; Main; McVay		●
BRT Service Option 4: Franklin-Main; Gateway; McVay		●
BRT Service Option 4A: Franklin-Main; Gateway	●	
BRT Service Option 4B: Franklin; Gateway-McVay		●

**SAC Recommendation: Option 4A, with Option 2 retained for possible reconsideration depending on the timing and extent of development in the McVay Segment.** Option 4, as outlined, did not allow for the independent evaluation of the Main Street and McVay Highway Segments, therefore, this option was split into Options 4A and 4B. Option 4A extends the Franklin EmX to Main Street with Gateway EmX operating independently (starting and ending at the Springfield Station). A Main Street BRT is feasible due to high ridership and operating compatibility with the Franklin EmX. The Franklin-Main Street link creates a logical east-west EmX line, especially when considering the extension of the Franklin line to west Eugene. A McVay Highway BRT would more than double LTD's operating cost on that segment and may not have sufficient ridership to meet Small Starts eligibility requirements<sup>1</sup>. The SAC recommended that, should new development in Glenwood and the LCC basin materialize within the corridor planning process to the extent that the viability of a McVay Highway BRT route is positively impacted, BRT service in the corridor should be reconsidered as an extension of the Gateway EmX. Otherwise, the McVay Highway Segment should be considered for future BRT service, with that decision to be triggered by the corridor meeting development thresholds.

#### BRT Lane Configurations

Lane Configuration Option 1: Low Exclusivity		●
Lane Configuration Option 2: Moderate Exclusivity	●	
Lane Configuration Option 3: High Exclusivity		●

**SAC Recommendation Option 2, with consideration given to pedestrian and bicycle facilities, including safety and comfort issues.** The Moderate Exclusivity option is advanced because it provides the greatest degree of flexibility in meeting the transit operating needs while also addressing potential impacts. The Low Exclusivity and High Exclusivity Options provide less flexibility in the consideration of transit priority treatments. Low Exclusivity may not provide the level of transit priority to adequately address congestion delays. High Exclusivity has the greatest potential environmental impact and property and business impact. The SAC recommendation stressed

<sup>1</sup> The Federal Transit Administration Small Starts Program provides up to 80% of the funding (\$75 million maximum) for qualifying fixed guideway and corridor projects that have a total project cost of not more than \$225 million. Projects are rated and compete with other projects from around the country for available funding.

**Options**

**Advanced**

**Eliminated**

the need to consider impacts on pedestrian and bicycle access, safety and comfort when developing lane configuration options.

### 3 Most Promising Transit Solutions

The recommended range of Most Promising Transit Solutions, summarized in Table 3.1-1 below, are formed as a combination of the various design elements that have been determined to be most appropriate for the corridor.

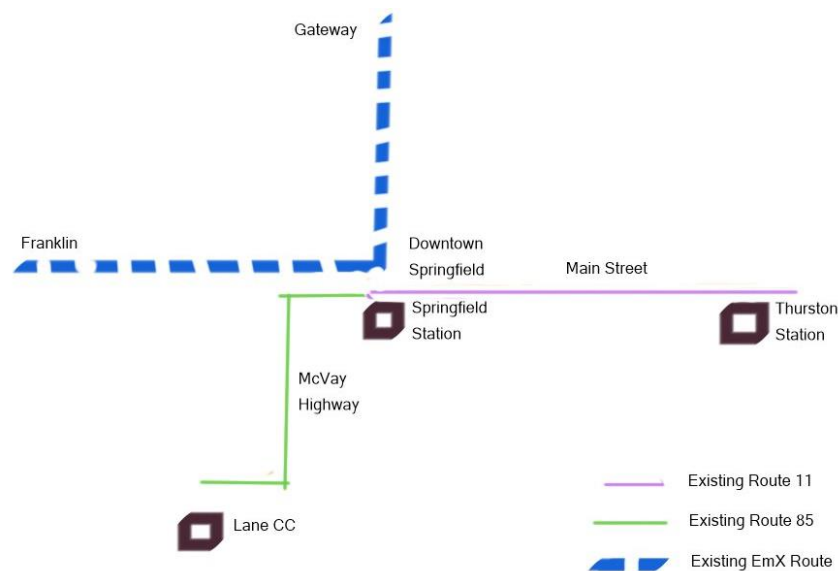
**Table 3.1-1. Recommend Most Promising Transit Solutions by Segment**

Options	Main Street Segment	McVay Highway Segment
No-Change (Existing Service)	●	●
Enhanced Bus	●	●
BRT	●	●

#### No-Change Option (Existing Service)

The option to continue existing bus service (shown in Figure 3.1-1), called the No-Change Option, will be carried forward to compare project options to a future scenario that does not make major changes in existing transit service. Under this option, there is no change to existing service connections, lane configurations, routing, termini, or station locations. Future bus service changes would be consistent with the service and operational adjustments typically made by LTD to maintain service quality.

**Figure 3.1-1. Existing Bus Service on the Main-McVay Corridor**



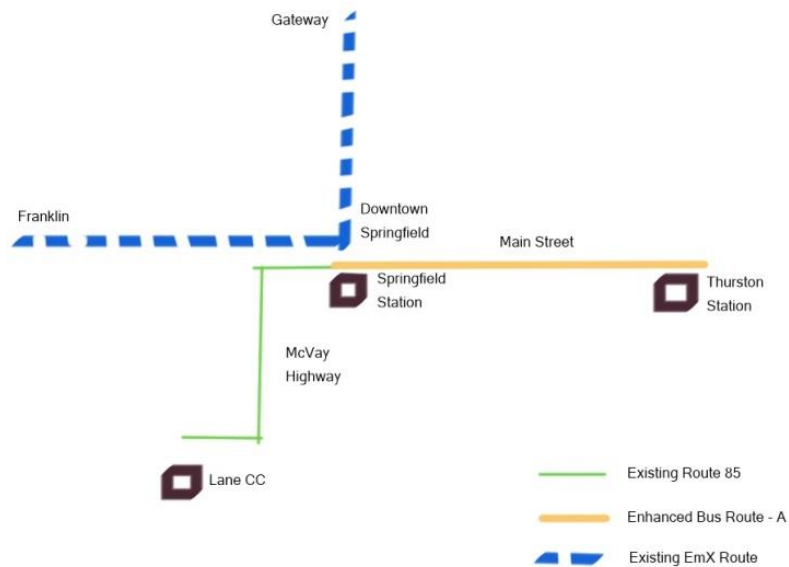
Source: Cameron McCarthy. 2014.

## Enhanced Bus

Enhanced Bus Options for both the Main Street and McVay Highway Segments are advanced as Most Promising Transit Solutions.

The Main Street Enhanced Bus Option would replace the existing #11 Thurston Route with Enhanced Bus service; #85 LCC/Springfield and other routes would be unchanged (Figure 3.1-2). This option is anticipated to increase Corridor ridership by approximately 6 percent and may reduce operating costs if faster travel times can be achieved.

**Figure 3.1-2. Enhanced Bus – Main Street**



Source: Cameron McCarthy, 2014.

The McVay Highway Enhanced Bus Option would replace #85 LCC / Springfield Route with Enhanced Bus service; #11 Thurston and other routes would be unchanged (Figure 3.1-3). This option is anticipated to increase Corridor ridership by approximately 2 percent and may reduce operating costs if faster travel times can be achieved.

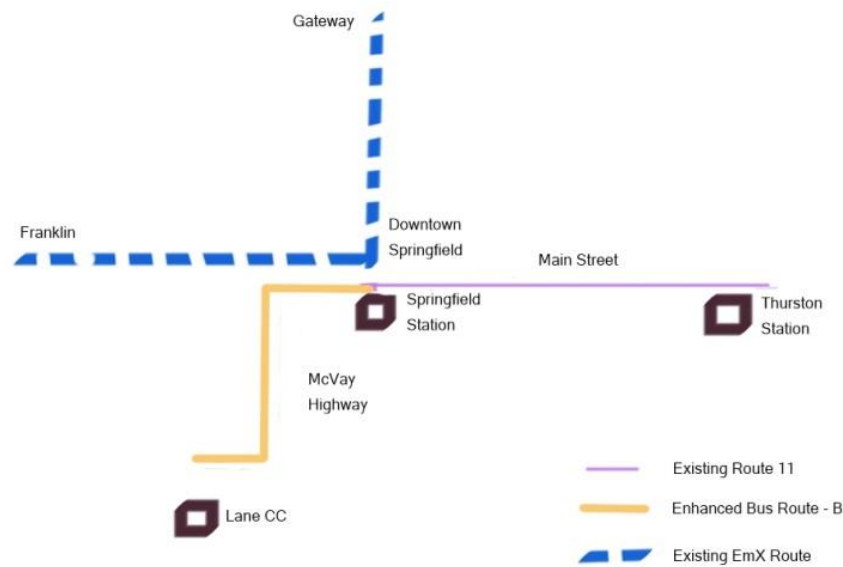
While this study did not develop specific design solutions, the basic concepts for the Enhanced Bus Options for both the Main Street and McVay Highway segments have been developed. Enhanced Bus characteristics on both segments generally include the following:

- **Enhanced Bus replaces existing service:** Existing regular bus service would be replaced by Enhanced Bus service on both segments. Service frequency would be the same as existing service frequency.
- **Right-of-Way:** Additional right-of-way would not be required, except at some queue-jump locations.



- **Transit signal priority (TSP):** The Enhanced Bus service would use TSP at signalized intersections between the Springfield Station and Thurston Station, with the extent of priority to be determined through subsequent study.
- **Enhanced Stops:** Stop locations would generally be in the same as the current stop locations but some stops at would be enhanced to include amenities such as passenger shelters, benches, and passenger information. Limited sidewalk infill would occur. Enhanced stop locations would be determined based on adjacent land uses, higher boarding levels, and coordination with recommendations from other plans and projects.
- **Queue-Jumps:** Queue-jumps will be included at up to one selected congested intersection per travel direction for each segment.

**Figure 3.1-3. Enhanced Bus – McVay Highway**

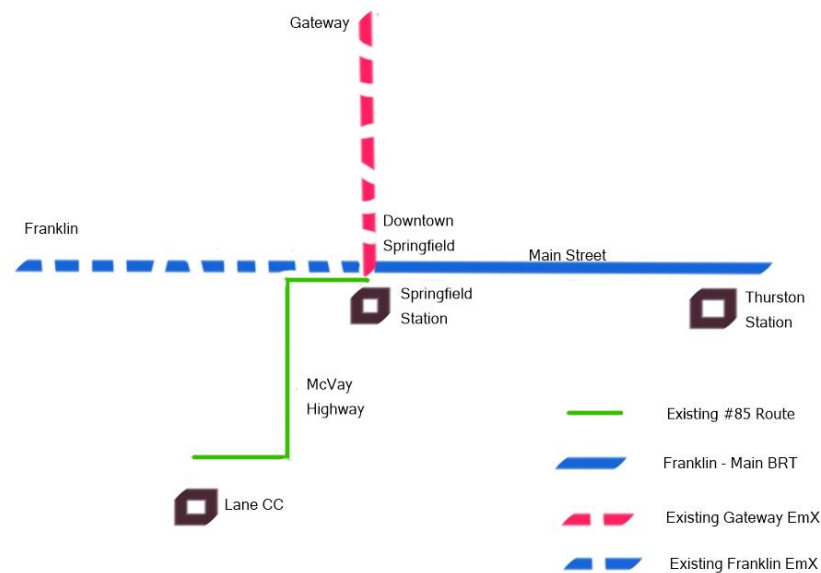


Source: Cameron McCarthy. 2014.

### BRT on Main Street Segment

BRT on the Main Street Segment would be an extension of the Franklin EmX line east of the Springfield Station on Main Street (Figure 3.1-4). The Gateway EmX would operate independently, starting and ending at the Springfield Station. The Franklin-Main Street link creates a logical east-west EmX line because of the compatible operating needs (frequency of service and ridership), and a Main Street BRT would likely reduce LTD operating costs due to faster service. Additionally, this linked route is anticipated to have a high percentage of through-routing passengers (eliminating the need for a transfer) and, with the extension of the Franklin line to west Eugene, is anticipated to increase ridership by approximately 12 percent. This Franklin-Main BRT option is very likely to meet FTA Small Starts requirements.

**Figure 3.1-4. BRT on Main Street Segment**



Source: Cameron McCarthy. 2014.

While this study did not develop specific design solutions, the basic conceptual elements of a Main Street BRT have been determined. These include:

- **BRT replaces existing service:** The BRT line on Main Street would replace current service provided by the #11 Thurston route. Connections to other service would be made at the Springfield Station, Thurston Station, and potentially, other locations along Main Street.
- **Transit signal priority (TSP):** The BRT service would use TSP at signalized intersections between the Springfield Station and Thurston Station, with the extent of priority to be determined through subsequent study.
- **Stops spaced approximately every 1/3 mile:** This is regarded as a general (average) stop spacing; stops could be closer or farther apart than 1/3 mile depending on adjacent land uses and signalized pedestrian crossing locations. Specific stop locations have not been finalized.
- **Enhanced stops and stations (similar to current EmX):** Every BRT stop would be developed as an EmX style station, similar to the existing EmX system. Station amenities include raised platforms, shelters, benches, real-time passenger information, ticket vending machines, and, potentially, public art.
- **Alignment from Springfield Station to Thurston Station, with selected trips (approximately 6) extended to Thurston High School:** The service would extend the current Franklin EmX east from the Springfield Station to the Thurston Station. Some trips that meet school start and end times may be extended to Thurston High School, depending on identifying a safe and convenient option for a bus turnaround in the vicinity of the high school. If a feasible turnaround is not identified, all trips would terminate at the Thurston Station.
- **Neighborhood connector service to serve neighborhoods east of Thurston Station:** The current #11 Thurston route extends east of 58<sup>th</sup> Street, providing service to Thurston Road, 69<sup>th</sup>

Street, and Main Street. Under the BRT service option, transit service east of 58<sup>th</sup> would be provided by neighborhood buses. Routing for the neighborhood service could match the existing Route #11 loop, or it could also serve other areas, including neighborhoods east of 69<sup>th</sup> Street and/or south of Main Street. Riders on the neighborhood service would transfer at the Springfield Station for destinations west of 58<sup>th</sup> Street.

- **Westbound routing in downtown Springfield using Main Street to 10<sup>th</sup> to South A:** The westbound BRT service would use Main Street to 10<sup>th</sup> Street, and then jog down to South A Street to access the Springfield Station. Since South A Street is a one-way eastbound street, the BRT service between 5<sup>th</sup> and 10<sup>th</sup> Streets would use a contraflow lane.
- **Eastbound routing in downtown Springfield to use South A to Main Street:** The eastbound BRT service would use South A Street between 5<sup>th</sup> Street and the point where South A Street joins Main Street in the vicinity of 21<sup>st</sup> Street.
- **Option for both eastbound and westbound routing to use South A:** Under this option, both the eastbound and westbound service would use South A Street between 5<sup>th</sup> Street and where South A joins Main Street in the vicinity of 21<sup>st</sup> Street. This option is carried forward and could be pursued if it is determined that the two-way service on South A provides greater opportunity for exclusive lane treatments, and that the travel time advantage offsets the advantage of Main Street stop locations for the westbound service.
- **Moderate level of lane exclusivity:** The BRT service would be a combination of exclusive transit lanes and mixed traffic, with the details of the design to be determined in as part of subsequent study. This option is advanced because it provides the greatest degree of flexibility in meeting the transit operating needs while best addressing potential impacts.

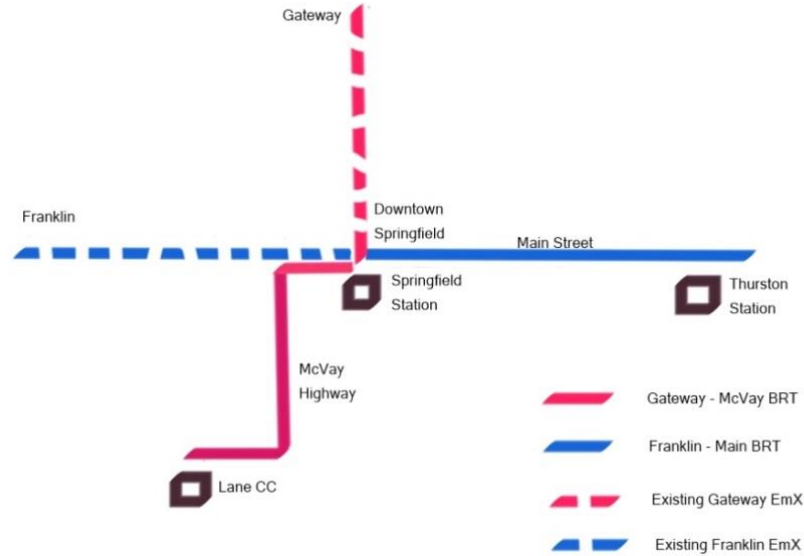
## BRT on McVay Highway Segment

BRT on the McVay Highway Segment is not recommended at this time. A McVay Highway BRT would more than double LTD's operating cost on that segment and may not have sufficient ridership to meet Small Starts eligibility requirements.

There is the expectation that development along the McVay Highway segment may increase significantly in the future. There are plans for more intensive development in Glenwood and possible development in the LCC basin. Should this new development materialize during the corridor planning process to the extent that the viability of a McVay Highway BRT route is positively impacted, BRT service in the corridor should be reconsidered. Otherwise, the McVay Highway Segment should be considered for future BRT service, with that decision to be triggered by the corridor meeting development thresholds. Should a McVay Highway BRT be pursued as part of this or a subsequent project, it would operate as an extension of the Gateway EmX, as shown on Figure 3.1-5.

If a BRT McVay Highway option is advanced, both the McVay Highway and Old Franklin routing options should be considered for the south portion of McVay Highway. Additionally, the SAC suggested that additional consideration be given to other routing options that may not be as constrained.

**Figure 3.1-5. BRT Option 2 – Franklin-Main and Gateway-McVay**



Source: Cameron McCarthy, 2014.

## 4 Project Team Recommendations

**Project Team Recommendation #1:** Advance the options as identified and described in this report as the range of Most Promising Transit Solutions for the Main Street and McVay Highway Segments.

**Project Team Recommendation #2:** Recommend that LTD and the City of Springfield conduct further study of the range of Most Promising Transit Solutions with the intent of identifying the Locally Preferred Solutions for the Main Street and McVay Highway Segments.

## 5 Next Steps

The identification of the range of Most Promising Transit Solutions for the Main-McVay Corridor completes this Main-McVay Transit Study. The LTD Board and the Springfield City Council will decide in March and April 2015 whether to advance the range of Most Promising Transit Solutions for further study.