

DRAFT Concrete Lane Costs and Risks

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DATE: March 29, 2016

This memo documents some of the potential costs and risks to consider as the City of Eugene and LTD discuss the City's requirement to construct concrete lanes for all areas where EmX buses operate in mixed traffic.

Current Assumptions

- In areas where EmX buses operate in exclusive right-of-way (queue jumps, BAT or bus-only lane), the project would include the construction costs and impact analysis of full depth reconstruction to concrete for the exclusive lane.
- In areas where EmX buses operate in mixed traffic, the project would only include the construction costs and impact analysis of full depth reconstruction to concrete at stations including dwell pads adjacent to stations.
- All corridors include both exclusive running way and mixed traffic segments. EmX on Highway 99 and 30th Avenue/LCC operate primarily in mixed traffic. EmX on River Road operates primarily in exclusive right-of-way. EmX on Coburg is mixed between exclusive right-of-way and mixed traffic.

Attributes of Full-Depth Reconstruction

When lanes are reconstructed in concrete, they will require full-depth reconstruction. In addition to the costs of full-depth reconstruction, the following items will have implications for cost and impact:

- **Stormwater.** Where the roadway is reconstructed, the City or ODOT (depending on jurisdiction) would require treatment of all stormwater in the contributing impact area.
- **ADA.** All intersections that the reconstructed segment passes through will need to be improved to full ADA compliance including curb ramps and signal improvements.
- **Utilities.** Where the roadway is reconstructed, we could impact utilities and/or incur private utility coordination, construction and schedule risk.
- **Construction impacts.** As the project footprint expands, the impacts and duration of construction will also expand including business access impacts.
- **Analysis and design costs.** As the project footprint expands, the cost of design and environmental analysis will increase. This could impact the cost of and schedule for completing the AA.
- **Maintenance.** The maintenance responsibilities and assumptions could be different for concrete lanes as compared to mixed traffic operations.

Order of Magnitude Cost Difference

The cost of full reconstruction is roughly 3-5 times the per mile cost of reconstruction only at stations. Generally, the per mile cost of converting an existing lane to a concrete BRT lane might be \$5-8 million.

The per mile cost of running primarily in mixed traffic with EmX stations and some restriping of lanes might be about \$1-2 million. This cost is only for civil elements and does not include contingency costs.

The cost differential becomes significant when multiplied by the round trip lane miles in each corridor. For example, the Highway 99 Corridor is approximately 5.5 miles one-way. The cost to construct concrete lanes for the round trip distance of 11 miles is approximately \$66M for concrete lanes versus \$22M for concrete reconstruction only at stations.