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MEMORANDUM

TO: Eileen M. Donoghue, City Manager EMD

FROM: Diane N. Tradd, Assistant City Manager/DPD Director

DATE: April 14, 2014

SUBJECT: MOTION OF 3/10/20 BY COUNCILOR MERCIER REQUEST CITY MANAGER INVESTIGATE FEASIBILITY OF CONSTRUCTING PARKING GARAGE IN PLACE OF FILL UNDER REHABILITATED LORD OVERPASS

Subsurface parking garages are often installed in urban areas as a way to maximize parking availability in a constrained urban environment. A local example of this is the parking garage below the Boston Common. Given the lack of parking in and around the Hamilton Canal Innovation District (HCID), as the Lord Overpass project design development progressed from a bridge replacement project to a fill project, the Department of Planning and Development (DPD) considered whether it was feasible to place parking below the roadway.

The design of an underground parking structures is very complex, as it must sustain lateral earth loads, loads from adjacent buildings/roadways, and loads from a park, plaza, or building, or in this instance, a roadway with dynamic loading, constructed above. Locating the entrance and exit was also challenging at this location. Initial estimates concluded that approximately 150 spaces might be created. A 2-story underground garage with 550 spaces recently constructed at CitySquare in Worcester for $35M results in an average of $63,600/space. Typically, the cost of subsurface parking is estimated between $50,000-$65,000/space, depending on the complexity of the design. The subsurface parking garage would have added approximately $7.5M -$9.7M to the cost of the Lord Overpass project. By comparison, the HCID garage currently being constructed will provide 900 spaces for a cost of $37M, which is $41,000 per space.

In order to make subsurface parking feasible and cost effective, the space above the parking would ideally be utilized by a revenue-generating purpose. Since this is not possible at this location, DPD decided against pursuing subsurface parking below the Lord Overpass.

As of March 2020, the Lord Overpass Reconstruction is underway. Phase 1 efforts began with tree clearing and site preparation. It would be very difficult and costly to make design revisions at this point in the project. Any changes to the design would require significant effort by the design consultant, which would necessitate a contract amendment and would result in a change order from the contractor. The Transportation Engineer recommends against any further design changes, now that construction has begun.

NV/ns
cc: Natasha Vance, PE, Transportation Engineer