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Ruthanne Fuller
Mayor

MEMORANDUM

DATE: May 30, 2024

TO: Marc Laredo, City Council President
City Council

FROM: Barney Heath, Director, Department of Planning and Development
Jennifer Caira, Deputy Director, Department of Planning and Development
Jenn Martin, Director of Transportation Planning

RE: **#189-24 Approval of the 75% design of the Washington Street Pilot**
HER HONOR THE MAYOR requesting approval of the 75% design of the
Washington Street Pilot

MEETING: June 3, 2024

CC: City Council
Jonathan Yeo, Chief Operating Officer
James McGonagle, Commissioner of Public Works
Ned Codd, Director of Transportation Operations

At the May 15, 2024, Public Facilities meeting, City Councilors requested that pre-pilot baseline data as well as more frequent post- implementation data be gathered as part of the Pilot evaluation check-ins to be provided to the full City Council at regular intervals.

The budget for the actual construction for the Pilot is currently set at \$2.7 million and will be funded with American Rescue Plan Act (ARPA) funds. And while the current working 75% construction budget estimate is approximately \$1.5 million, the final construction costs will be determined when bids are accepted later this year. In addition to constructing the pilot as designed, we are planning to include a contingency amount in the construction contract that would allow for approved changes to be made post-implementation.

HSH estimates the cost of each data collection effort to be approximately \$50,000 starting in 2024 and increasing to approximately \$70,000 per effort in 2028. Assuming an average of \$60,000 for each data collection, collecting the full set of data quarterly would cost approximately \$240,000 per year. To collect additional baseline quarterly data along with quarterly data for 3 years post-implementation would cost approximately \$935,000.

Data collection is important to monitor the success of the project, however given the cost associated we recommend collecting more frequent data at the beginning of the pilot, to identify potential issues early on. After the first year of implementation, annual data collection should be sufficient, however additional data can be collected if specific concerns arise or there is a change to conditions in this stretch of Washington Street. Depending upon the particular concern, additional data collection may not need to include everything outlined below and could be less expensive.

Assuming sufficient funds remain, we propose four data collection points before the ARPA funds expire on December 31, 2026, for a total of approximately \$240,000:

- September 2024, updated baseline data
- Three months post- completion
- Six-month post construction
- One year post completion

We anticipate continuing annual data collection in Years 2 and 3 post-completion at an annual cost of approximately \$60,000.

The data collection included in this estimate is outlined below.

TRAFFIC COUNTS

HSH collected traffic volumes in January and February of 2023. For each data collection effort requested, HSH is able to implement the following count program for a new baseline and post-pilot implementation comparison. For post-pilot implementation, HSH is able to collect the same count program and complete the data comparison that is outlined below.

HSH is able to take 13-hour turning movement counts (TMCs) for the signalized intersections of Washington Street/Chestnut Street, Washington Street/Lowell Avenue, and Washington Street/Walnut Street. HSH will collect weekday peak period (7:00 – 10:30 a.m. and 3:00 – 6:00 p.m.) TMCs for the unsignalized study area intersections of Washington Street/Davis Court, Washington Street/Dunstan Street, Washington Street/Armory Street, Washington Street/Trader Joe's Driveway, Washington Street/Cross Street, Washington Street/Parsons Street, Washington Street/Eddy Street, Washington Street/Harrington Street, Washington

Street/Brookside Street, Washington Street/Walker Street, and Washington Street/Brooks Avenue. TMCs include vehicles, pedestrians, and bicycles moving through the intersection.

For each requested traffic count program, HSH is able to review and summarize the TMCs to determine the a.m. and p.m. peak hour vehicle, bicycle, and pedestrian volumes, the peak hour factors, and heavy vehicle percentage per movement.

HSH is also able to collect continuous data on Washington Street, intersecting side streets, and adjacent alternative routes. The cost estimate includes seven-day weekday automated traffic recorders (ATRs) on Washington Street at three locations. 48-hour weekday ATRs are included in the cost estimate on Watertown Avenue (one location) and Austin Street (one location). 48-hour weekday ATRs are also included on Lowell Avenue (two locations) and Chestnut Street (one location) to compare to pre-pilot ATR data. 24-hour ATRs are included along Walnut Street, Dunstan Street, Harrington Street, Brookside Avenue, Eddy Street, Cross Street, and Brooks Avenue. HSH will use video data collection methods to measure the post-pilot implementation bicycle volumes along Washington Street. ATRs will collect travel speeds on Washington Street, intersecting streets, and potential diversion routes.

For each requested data collection traffic count program, HSH will review and summarize the ATR data to provide a summary of average daily traffic (ADT) on all collected roadways and develop daily traffic variation charts for each ATR. HSH will also determine the average, 85th percentile, and maximum recorded speeds for vehicles on Washington Street.

To capture ridership at Massachusetts Bay Transportation Authority (MBTA) bus routes within the project limits, HSH is able to record boardings and alightings at the MBTA bus stops on Washington Street between Chestnut Street and Lowell Avenue on one weekday between 7:00 a.m. and 6:00 p.m. For the requested pre-pilot implementation and the post pilot implementation data collection efforts, HSH will provide a summary of the total boardings and alightings at each bus stop within the project area for a typical weekday within the three-month analysis period.

TRAFFIC OBSERVATIONS

HSH is able to perform traffic observations that overlap with the traffic count data collection period over the course of three days, with two staff members on site during the weekday a.m. and p.m. peak periods (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.). This would include detailed traffic and queueing observations at the intersections of Washington Street/Chestnut Street, Washington Street/Lowell Avenue, Washington Street/Walnut Street, Washington Street/Davis Court, Washington Street/Dunstan Street, Washington Street/Armory Street, Washington Street/Trader Joe's Driveway, Washington Street/Cross Street, Washington Street/Parsons Street, Washington Street/Eddy Street, Washington Street/Harrington Street, Washington Street/Brookside Street, Washington Street at Walker Street, and Washington Street/Brooks Avenue and the major driveways located at 1250 Washington Street, 1232 Washington Street, 1231 Washington Street, and 1089 Washington Street. Field observations

will also include vehicle travel time collection for the project limits in both directions during both weekday peak hours for three runs in each direction.

HSH is able to provide a qualitative summary of traffic observations at the intersections and along the corridor, as well as graphical representations of the average observed queues for the weekday a.m. and p.m. peak hours.

PARKING STUDY

As part of their data collection effort, HSH is able to perform a parking study along the Washington Street corridor (from Chestnut Street to Lowell Avenue) to measure parking utilization for up to eight hours on two average weekdays and for up to four hours for two weekend days. HSH is able to analyze and summarize the data collected in field to determine the average parking utilization by block for each hour of the day, and for a daily average.

CONDUCT SAFETY ANALYSIS

HSH is able to collect, tabulate, and analyze crash data within the project limits and create a crash data summary table, and collision diagrams. HSH will document trends and causes based on this data. HSH will update the collision diagrams, as required. HSH will compare post-implementation trends, number of crashes, and number of injuries/fatality crashes to pre pilot information at an annual level. Crash data for less than one year should not be compared to pre-pilot information as it is not statistically significant, but the quarterly data will still be collected and reviewed.