



## MEMORANDUM

**TO:** Mayor and Council

**FROM:** Howard S. Lazarus, P.E., Director, Public Works Department 

**DATE:** August 1, 2014

**SUBJECT:** Resolution No. 20140626-070 – West Avenue from 3<sup>rd</sup> Street to 7<sup>th</sup> Street

On June 26, 2014, Council passed Resolution No. 20140626-070 directing the City Manager to explore a capital improvement project related to the streetscape, sidewalk, and utility lines on West Avenue between 3<sup>rd</sup> Street and 7<sup>th</sup> Street, including burial of utilities, enhancement of the streetscape, and construction of a connected sidewalk. The City Manager was further directed to work with stakeholders and report back to Council on the Austin Energy customers that would be impacted by the utility relocation including a statement about the impact to each, cost estimates for the work, funding options, and alternatives to constructing a switchgear on a 20'x 20' pad on developable land within the corridor in connection with burial of the electric utility lines.

Public Works has coordinated with Austin Energy, Austin Water Utility, Austin Transportation Department, Watershed Protection and Planning and Development Review regarding this resolution. This memo describes the options for a capital improvement project on West Avenue between 3<sup>rd</sup> Street and 7<sup>th</sup> Street, including the funding requirements.

### Austin Energy

In order for the overhead facilities along West Avenue between 3<sup>rd</sup> and 7<sup>th</sup> Streets to be placed underground, the following would be required:

1. Frank & Angie's Pizzeria and Lucy's Retired Surfer Bar & Restaurant would need to change from single phase 120/240V service to single phase 120/208V service. This is a fairly straightforward procedure as long as the customer does not have any equipment specifically requiring 240V service and the installed meter base can accept a 5th terminal for proper meter reading. If either of these conditions cannot be met, an electrician and the property owner must correct the issue.

2. Several customers would need to be converted from a 120/208V overhead service to a 120/208V underground network service feed. This would require expansion of the underground network both north and south of 6th Street and West Avenue. Austin Energy (AE) would then use a secondary riser to re-feed the existing overhead secondary. Customers affected would include:
  - Traffic Signal at 5th and West Avenue
  - Favorite Liquor
  - Law Office of Russell Frost
  - 700 Rio Grande Building

This work may impact additional customers, which would be determined after AE performs further research and determines final pole locations. Please also note that items 1 and 2 would leave secondary wire installed overhead along West Avenue in several locations. To completely remove all AE overhead facilities, each customer converted from either 120/240V or 120/208V overhead would require buried conduit from its service point to an AE network facility. New service wire would then be installed by an electrician from the existing service to an AE facility. The AE network grid would also need further expansion to feed each customer.

3. AE would need to set new poles in City of Austin right-of-way between 7th and 8th Street. We would attempt to set the poles at property lines, but the amount of poles needed may make this approach unfeasible. Consequently, setting a pole in close proximity to the front of a residence is a possibility. AE would mount air switches and power cable risers on those poles. Anchoring the poles may also prove difficult due to the guy length required; therefore, Austin Energy may investigate using self-supporting structures which would increase cost.
4. AE would also have to install a new duct line extending from 6½ West Avenue to 8th Street. Manholes and pull boxes would be placed at specific locations to facilitate power cable risers and service conversions.

The work outlined above would negate the need for switchgear on private property.

The minimum clearances for AE duct banks in the Network area are:

- Minimum of 36” of cover in City of Austin right-of-way
- 2’ minimum separation between AE facilities and all other facilities

Based on AE’s very preliminary design and scope of work analysis, the estimated cost would be approximately \$650,000. Any changes in pole locations or duct installations would increase the cost significantly. AE’s estimate does not include: (i) the conduit each customer must install if converted to underground service, (ii) the service wire upgrade if needed, (iii) the cost for customer electricians to allow a voltage change, or (iv) the overhead removal in the alley at 5½ West Avenue. AE assumes the developer will still remove this overhead line to allow for Occupational Safety and Health Administration (OSHA), National Electrical Safety Code (NESC) and City of Austin required clearances. AE has provided the developer a quote to perform that work. AE does not currently have any identified funding to perform this work.

### **Public Works/Drainage**

The pavement on West Avenue between 3<sup>rd</sup> Street and 7<sup>th</sup> Street is in fair to good condition. Public Work's Service Plan currently includes a seal coat to be performed in FY 2016. However, if a CIP is undertaken in the area to support potential development, it would likely require drainage improvements estimated at approximately \$1M. There is currently no funding identified to address these drainage improvements.

### **Austin Water Utility**

There is currently a 12-inch waterline line in West Avenue between 3rd Street and 7th Street. This line connects to water services and fire services and connects to other lines at 7th Street, the 6th Street alley, 6th Street, 5th Street, a Fire Line North of Shoal Creek, a Fire Line North of 3rd Street and 3rd Street. This pipe was installed with three recent projects dating from 2010, 2004, and 2003 and is in new condition. The depth of this pipe varies from 2 to 7 feet.

There is also a 20-inch waterline running from 3rd Street to 6th Street. The line supports the overall system capacity in the downtown area. This line connects to other lines at 6th Street, the 5th Street alley, 5th Street, a Fire Line North of 3rd Street and 3rd Street. This 20-inch water line dates from the 1930s. The depth of the pipe is not known but is estimated to be between 3 and 7 feet. In addition to these larger lines, there are 2-inch and 4-inch services that run along West Avenue and in the alleys.

The wastewater lines in West Avenue and associated alleys are sized 6-inch to 8-inch and in general run the length of West Avenue from near 4th street to 7th street with intersections at most of the major street crossings as well as several alleyways. In addition, a 15-inch wastewater line comes from the west side of 6th street, travels south on West Avenue, and heads east on 5th Street. The majority of these existing wastewater lines are in the range of 5 to 10 feet below grade. Even though the age of several of these existing wastewater lines dates back to the 1930s, with the exception of the 6" wastewater line north of 6<sup>th</sup> Street, recent television inspection has found them to be in fair to decent condition. The 6" wastewater line from 6<sup>th</sup> Street to 7<sup>th</sup> Street is in poor condition and should be replaced if a project is undertaken in this area.

There are currently no plans to replace any of AWU's existing water or wastewater lines on West Avenue. If a CIP is undertaken, the existing water and wastewater lines would need to be adjusted to avoid conflicts with the new underground electrical lines and it is probable that many of the existing lines would need to be relocated. Due to the age of many of these existing lines, there is a high likelihood that any lines not relocated could be damaged during construction. Therefore, it would be prudent to consider replacing these older existing lines as part of the street reconstruction. A very preliminary cost estimate of the required relocations and replacements is approximately \$1.3M. There is currently no funding identified or available to replace or relocate the existing lines.

### **Great Streets**

We estimate that the Great Streets improvements that would be constructed as part of a potential CIP would cost approximately \$2.4M. There are currently no Great Streets funds to contribute to this project.

**Funding**

The total cost estimate for this work is approximately \$5.35M. As this is a planning level estimate, it is customary to assume a margin of error of -25% to +50%, which results in a cost estimate in the range of \$4M to \$8M. This project is not currently included in any department's CIP plan and thus does not have an identified funding source. The street work could be paid for with future bond funds or with current bond funds by placing other projects on hold.

If you have questions or require additional information, please do not hesitate to contact me.

cc: Marc A. Ott, City Manager  
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