DATE: September 9, 2019

TO: Honorable Mayor and Members of the City Council through City Manager

FROM: Dan St. John, F.ASCE – Director, Public Works & Utilities
Jeff Stutsman, P.E. – Senior Civil Engineer

SUBJECT: Resolution Accepting Completion of the Traffic Signal Video Detection Replacement Portion of Project C16101823, Pavement Restoration 18/19, by DC Electric Group, Inc.

RECOMMENDATION

It is recommended that the City Council adopt the attached Resolution Accepting Completion of the Traffic Signal Video Detection Replacement Portion of Project C16101823, Pavement Restoration 18/19, by DC Electric Group, Inc.

BACKGROUND

This project includes the full reconstruction of Sonoma Mountain Parkway from Corona Road to Campus Circle South including the section from Wyndham Way to East Washington Street. The Traffic Signal Video Detection Replacement Project was the first phase of the Pavement Restoration 18/19 CIP project, C16101823. To prepare for the upcoming paving project it was determined that the existing traffic signal control equipment needed to be upgraded. Replacing the existing in-ground vehicle inductive-loop detectors with vehicle detection cameras (VDC) allows for the functionality of the traffic signals before, during and after construction. This signal upgrade was consistent with the City’s efforts to upgrade its older inductive-loops with VDCs at signal intersections.

The proposed action supports the City Council Goal #85 – “Improve traffic safety through proactive education, engineering, and enforcement strategies.”

DISCUSSION

An inductive-loop detector consists of wire “coiled” to form a loop that is installed slightly under the surface of the roadway. As vehicles drive over a loop detector, the loop field changes, detecting the presence of a vehicle and alerting the overhead signals. The current industry standard for traffic signal control has shifted from these loop detectors to video detection cameras (VDC). VDCs are mounted on the traffic signal pole and utilize the video image and predefined detection zones to detect vehicles as well as other roadway users including bicyclists and pedestrians for the sole purpose of vehicle and bicycle detection to actuate the traffic signal.
When an object enters a detection zone, the pixel value within the zone changes alerting the overhead signals.

This shift to VDCs from loop detectors is advantageous for the following reasons. First, during construction loop detectors are usually removed or damaged during the work that is conducted prior to paving. All functionality of the signals is lost and usually not restored until the end of the project. VDCs allow for detection zones to be adjusted as the travel lanes continually shift during construction. Traffic signal operation will remain in effect during construction and the overall disruption to traffic will be minimized.

Second, the re-installation of loop detectors would require cutting into the roadway to place the wires. Doing so creates the potential for water intrusion and eventually the potential failure of the pavement.

The final construction contract is $195,950 which includes one change order for $46,200 for additional video detection cameras and renegotiation of existing unit price cost. There are no disputed claims and the project was completed satisfactorily without any significant incidents.

**PUBLIC OUTREACH**

On May 20, 2019 Petaluma Police Department issued a news release to address community concerns about the use of video detection cameras. In this release they emphasized that the technology was to be solely use for vehicle and bicycle detection to actuate the traffic signal. The action to award this contract was brought before Council on January 28, 2019, a publicly-noticed meeting

**FINANCIAL IMPACTS**

With the award of the Traffic Signal Video Detection Replacement contract on January 28, 2019, Council approved a project budget of $171,750, which was funded by Street Maintenance and Senate Bill 1 (SB-1), also known as the Road Maintenance and Repair Account (RMRA). With the addition of one change order in the amount of $46,200, the revised project budget was $217,250.

The following is a breakdown of the approved budget for the project:

<table>
<thead>
<tr>
<th>CIP 16101823 Pavement Restoration</th>
<th>FY 18/19 Adopted Project Budget</th>
<th>Approved Revised Project Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 18/19 Video Detection Replacement Contract</td>
<td>$ 149,750</td>
<td>$ 195,950</td>
</tr>
<tr>
<td>Contingency</td>
<td>$ 22,000</td>
<td>$ 22,000</td>
</tr>
<tr>
<td>Total</td>
<td>$ 171,750</td>
<td>$ 217,950</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>FY 18/19 Adopted Project Budget</th>
<th>Approved Revised Project Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Maintenance (RMRA-SB1)</td>
<td>$ 171,750</td>
<td>$ 217,950</td>
</tr>
<tr>
<td>Total</td>
<td>$ 171,750</td>
<td>$ 217,950</td>
</tr>
</tbody>
</table>
ATTACHMENTS

1. Resolution
2. Location Map
3. Press Release
RESOLUTION ACCEPTING THE COMPLETION OF THE TRAFFIC SIGNAL VIDEO DETECTION REPLACEMENT PORTION OF PROJECT CI6101823, PAVEMENT RESTORATION 18/19, TO DC ELECTRIC GROUP INC.

WHEREAS, City Council approved the Pavement Restoration 18/19 Project on January 28, 2019, of which the subject project was the first phase; and

WHEREAS, City staff prepared construction bid documents and advertised for the Traffic Signal Video Detection Replacement project to upgrade existing video detection equipment (“the project”); and

WHEREAS, the project was bid on December 6, 2018, and one (1) bid was received and opened on December 13, 2018 in accordance with applicable law; and

WHEREAS, the lowest responsible bid for the Project was submitted by DC Electric Group, Inc. from Petaluma, CA for $149,750; and

WHEREAS, it was determined that DC Electric Group, Inc’s bid satisfied the bidding requirements for the Project; and

WHEREAS, DC Electric Group Inc., possessed a valid California Contractor’s License, Class C-10, #949934, that allowed DC Electric Group, Inc. to perform the work for the Project; and

WHEREAS, the Project is categorically exempt pursuant to California Environmental Quality Act (“CEQA”) and Title 14, the California Code of Regulations (“CEQA Guidelines”), Section 15301, because the project consists of repair and maintenance to an existing public street; and

WHEREAS, the following contract change orders (COO) affecting the project amount were approved:

<table>
<thead>
<tr>
<th>Change Order Number</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCO#1</td>
<td>Renegotiation of Unit Price</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Additional Camera Installation</td>
<td>$46,200.00; and</td>
</tr>
</tbody>
</table>

WHEREAS, the final contract amount, as amended, including all adjustments is $195,750.00; and

WHEREAS, the Project was inspected and determined to be complete with the contract requirements, and the Contractor’s continuing warranty and other obligations pursuant to the contract; and
WHEREAS, based on the foregoing, staff recommends acceptance of the Project on behalf of the City.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Petaluma hereby:

1. The contract titled Traffic Signal Video Detection Replacement Project, with the final contract amount of $195,950, is accepted as complete, subject to the Contractor’s continuing warranty and other obligations pursuant to the contract.

2. The City Clerk is hereby authorized and directed to file a Notice of Completion concerning the Project with the Sonoma County Clerk’s Office within 10 days of the date of this Resolution.

3. The Public Works and Utilities Director is hereby authorized and directed to release all undisputed retention not subject to pending change orders within 60 days of the date of this Resolution and in accordance with the terms of the Project contract, California Public Contract Code Section 7107, and applicable law.
SONOMA MOUNTAIN PARKWAY
CORONA RD TO EAST WASHINGTON ST

INTERSECTION LOCATIONS
Incident Summary:

Community Concerns Regarding Recently Installed Traffic Cameras

Over the past few weeks, the Petaluma Police Department has become aware of discussion on social media regarding the recent installation of vehicle detection cameras (VDC) in intersections along Sonoma Mountain Parkway from Maria Drive to E. Washington St. Much of the discussion stemmed from concerns over the funding for the cameras, their scope of use, data-sharing, privacy, and oversight.

In attempt to answer a number of these questions we have consulted with our partners at the City of Petaluma’s Public Works Department. The following is information we have learned from our traffic engineers regarding the VDCs.

These new vehicle detection cameras (VDC) were installed as part of the reconstruction of Sonoma Mountain Parkway. In order to reconstruct the roadway the traffic sensor equipment embedded in the roadway was going to have to be removed. The VDC were installed to replace the existing traffic sensors prior to the larger roadway reconstruction project so we could maintain functionality of the traffic signal before and after construction. The new VDC are mounted on the traffic poles and utilize the real time video images and a predefined detection zone to detect motion when vehicles and/or bicyclists. The detection of motion is what prompts a notification for the traffic signals to cycle. The video images are not recorded or monitored.

The installation of VDCs was approved as part of the reconstruction of Sonoma Mountain Parkway by City Council on January 28, 2019 and additional information is available on line at http://petaluma.granicus.com/MinutesViewer.php?view_id=31&clip_id=2646&doc_id=48118dd6-2f23-11e9-b021-0050569183fa or by contacting the Petaluma Public Works Department at 778-4303.

Many of the concerns expressed regarding the VDCs made assumptions that the Petaluma Police Department was using and monitoring the images captured by the cameras. While that is not currently the case, the Petaluma Police Department prides itself in being a proactive and progress police department. We are constantly evaluating opportunities to augment our limited staffing with technological solutions that help us be more efficient through intelligence led policing, reduce crime, and improve the safety of our community and officers. As we consider and evaluate such technology we welcome feedback and comment from the community.