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CITY AUDITOR

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Members of the Bremerton City Council
Mayor Patty Lent

The City Auditor has prepared the attached report reviewing the Pacific Avenue 6th Street to 11th Street Project. This review was performed due to the length of time from the award of the grant to the completion of the project. The review was scheduled on the 2014 work plan and is presented for informational purposes.

The report discusses the several causes of delay including staff changes. The report also discusses issues raised by citizens.

The assistance of city engineers Thomas Knuckey, Gunnar Fridriksson, and Ned Lever is greatly appreciated.

Sincerely,

Gary W. Nystul

cc: Director of Public Works
City Attorney
Director of Financial Services

PACIFIC AVENUE 6th STREET to 11th STREET

PURPOSE

This is a special report reviewing the public works project to reconstruct Pacific Avenue from 6th Street to 11th Street that took an extended amount of time to complete.

SCOPE

Administrative actions, contracts for the performance of this project including design and construction, are included.

OBJECTIVE

Present an analysis of the process and the time required to reconstruct Pacific Avenue from 6th Street to 11th Street.

BACKGROUND

This project was selected for a detailed review due to the extended amount of time to complete. In October 2009 the Puget Sound Regional Council announced that Bremerton had been awarded federal funding of $3 million to construct the project. The federal funding became available on July 1, 2010. The project was substantially complete in April 2014 (46 months after funding authorization).

The Pacific Avenue Improvements were described in the grant agreement as follows: "Streetscape improvements including new curb, gutter and sidewalk, low impact development provisions, and pavement restoration to create a "complete street" in Bremerton's redevelopment of its downtown urban center."

The funding was provided by the federal grant, moneys from the city's General Fund, Water Capital and Wastewater Capital Funds. The water department and wastewater department paid their respective shares to upgrade their facilities in the project area.

THE PROJECT PROCESS

Through the Puget Sound Regional Council the city applied for federal funding to rebuild Pacific Avenue. Notification of funding in the amount of $3 million was received in September 2009 for the 2011 to 2012 funding years through the Federal Highway Administration Surface Transportation Program. The Local Agency Agreement (contract) with the Washington State Department of Transportation was approved for preliminary engineering with the federal share of $391,326 effective July 1, 2010.

The city then began the process of engaging engineering firms to design the project as required by federal and state regulations. A Statement of Qualifications was advertised in October 2010. Interviews were conducted in November 2010. In February 2011 the city council approved the selection of Parametrix to do the work activities associated with obtaining final permits and approvals, and preparation of plans, specifications and cost estimates necessary to bid and construct the proposed improvements. SvR Design Company was selected to do the work activities associated with low impact and green stormwater infrastructure techniques including landscaping and irrigation to manage, treat and infiltrate stormwater, preparation of plans, specifications and cost estimates necessary to bid and construct the proposed improvements.

In April 2011 the city council approved a project agreement for design services with Puget Sound Energy for underground conversion of their overhead lines.

In June 2011 final plans for construction were received from the engineers. A supplement to the Local Agency Agreement with the Washington State Department of Transportation was received authorizing the balance of the federal funds for construction ($2,563,175).

By July 2011, the city engineer, two project engineers and a project manager had been dismissed from city employment. On July 11, 2011 the Director of Public Works was dismissed. These personnel actions substantially reduced the ability of the Department of Public Works to manage major construction projects. In addition, the estimated costs of the project exceeded funding, including the amount for pervious surfaces. There were also significant challenges with the design, cost allocation and residential costs for undergrounding of the electrical system. As a result, the project was placed on hold.

In January 2013 the project was revived. A contract was awarded to Parametrix in February to modify the final plans and specifications that were previously submitted to meet available funding. In June 2013 a contract was awarded to RV Associates, Inc. for construction. An agreement was also approved with Puget Sound Energy for undergrounding of their electrical facilities.

CAUSE OF DELAYS

The length of time to complete this project was a result of the following:

- **Changes in Director of Public Works**. There have been four Directors of Public Works and one interim director since the project was awarded funding by the Puget Sound Regional Council through its completion.

- **Changes in managing engineers/project managers**. Managing engineers and project engineers coordinate with the consultants as well as assisting in the design. The project manager responsible for this project was dismissed in 2011, prior to design completion. This coupled with the departure of several other engineering staff left fewer project managers to manage a number of projects. Therefore, it was necessary to delay some projects until there was sufficient staff to manage them.

- **Procurement of consulting engineers**. There is a procedure established by law for the procurement of engineers for large projects and those funded by federal grants. In general this involves drafting a request for qualifications, publication, selection of a group of firms to interview, the actual interview, selection of the firm, acceptance by the State Department of Transportation, followed by city council committee approval and finally city council approval. All of which takes time.

- **Schedule 74 undergrounding by PSE**. The process to underground the electrical distribution system started with the signing of a design agreement with the electric utility company, where they provided a ballpark cost estimate of $250,000. With completion of the detailed plans, the cost for completion was projected to be $425,000, substantially more than initially estimated. This estimate resulted in a revision to meet budget causing further delays as the scope of work and the design were updated.

- **Re-design required to reduce construction cost.** The project design completed under the first project manager included a significant amount of low impact development features beyond the work scope identified in the grant documents, which were high cost with questionable reliability. The construction cost estimate completed for this design exceeded the available funding by 30%. When the project was re-initiated in 2013, staff worked with the consultant to implement several design revisions to reduce cost.

CONSTRUCTION CONTRACT

A contract with RV Associates, Inc. was signed June 14, 2013, for $3,131,378 with 138 days to complete the project. The contract was divided into four work schedules: Roadway, water, sanitary sewer, and vehicle charging station. Each schedule contained numerous items or quantities of work and the estimated cost.

Public work contracts have a long list of individual tasks and pay items with estimated quantities. The standard specifications clause regarding estimated quantities in the contract can be summarized as follows:

> The quantities shown on the proposal form and contract are estimates and are stated only for bid comparison purposes. The city does not warrant expressly or by implication that the actual quantities of work will correspond with those estimates. Payment will be made on the basis of actual quantities of each item of work completed in accordance with the contract requirements.

As is normal, quantities and conditions varied and were addressed in change orders. Four Change Orders were approved by the city council. These increased the total cost by $ 349,851.96 or 11.2% of the original contract. Five days were also added to the completion time. The following is a summary schedule of the change orders.

Change Orders

1.	Install crosswalks and temporary signs		
	Additional demolition work		
	Total		19,878.04
2.	Removal and replacement of unsuitable material		
	Additional backfill		
	Removal, splicing, restoration of utility conduits		
	Delete electric car charging stations		
	Total		42,488.80
3.	Adjust for actual vs. estimated quantities		
	Water	35,612.68	
	Sewer	76,854.92	
	Total		112,467.59
4.	Incentive for early substantial completion	18,000.00	
	Paving on Saturday	5,420.00	
	Quantity Variation	151,597.53	
	Total		175,017.53
	Total Increase		349,851.96

CONSTRUCTION OBSERVATIONS/CITIZEN ISSUES

A punch list was prepared by the Department of Public Works staff when the construction was completed. This standard procedure, at the completion of a construction project, prepares a listing of all things that need to be completed, repaired, or replaced for final acceptance by the owner. The Public Works staff reviewed the items and worked with the contractor to address them.

In addition, some design issues have been noted and reported by citizens. The following items were observed and a discussion of the item and its disposition follows the summary remarks.

1. A handicapped compliant ramp was not installed at the front door entrance of a commercial building at the corner of Pacific and 7th Street.

Prior to the project, there was a non-compliant ramp that sloped up to the door which included some of the sloping ramp in the city sidewalk. The Building Official reviewed the situation and outlined the requirements for a handicapped compliant ramp. There was not enough space to comply with the design requirements. The building official advised staff on the best solution, which was a step, which has been installed.

2. A new fire hydrant was installed in the sidewalk near the Red Cross building.

The hydrant is in the sidewalk and located towards the outside edge. The remaining clear width of the sidewalk meets ADA requirements. Other new fire hydrants installed on Pacific Avenue and elsewhere in the downtown from recent projects are not in the far side of the sidewalks and are closer to the curb. While this may meet ADA standards, it is not a logical placement.

3. The front steps of several residences encroach upon the city street right of way.

The steps from the sidewalk to the front door or porch of several residences are in the city street right-of-way. These steps most likely do not have a right-of-way permit but have been there since they were constructed many years ago. The width of the new city sidewalk meets ADA requirements. Elimination of the steps in the right-of-way would have required reconstruction on private property. There were not sufficient funds in the budget to assist with any change. It would be the responsibility of the homeowner to remove and replace the steps.

4. The undergrounding of the electrical distribution system was done for the commercial area, but not for the residential area.

Puget Sound Energy has a tariff outlining cost sharing when placing their electrical distribution system underground. The cost is shared between the city, the customer and the electric utility. The cost in the street right of way is shared between PSE and the city. The cost from the edge of the city right of way to the electrical customer's connection point must be paid for by the customer. Placing the electric services underground for the residences would place a financial burden on them. In some cases the houses do not have electrical panels or services that meet current codes. The residences would have an additional burden if they had to upgrade their residential wiring. For these reasons the undergrounding was done only in the commercial area.

5. Sidewalks near some retaining walls did not extend all the way to the wall.

New sidewalks were installed for the length of the project. In some areas where there was a retaining wall or a concrete stairway, the new sidewalk extended only to the edge of the retaining wall footing. The footing or bottom step was not removed therefore does not "appear" complete. It was neither practical nor economical to remove these footings or bottom step solely for the appearance of a new sidewalk. There was also risk to the integrity of the wall if the footing were changed. This base of the footings adjacent to the sidewalk is only a few inches wide. The new sidewalks meet ADA requirements.

6. Pervious pavement was installed on the "uphill" side of the street.

Pervious pavement is intended to direct rain water runoff into the ground under the street rather than going into the storm sewer. However, the soils under the street must be appropriate to allow the water to infiltrate. The soils analysis identified only a limited area that was conducive to absorbing runoff. In addition, there was concern in some areas of where water could collect. Some older buildings with basements have benefited from rain water running into the curb and gutter system and the storm drains. Adding water to the soils near these buildings may result in water in existing basements. The amount of pervious surface met the grant requirements and was placed where it would allow infiltration without jeopardizing adjacent buildings.

7. The bioretention swales appear to be uphill of the street runoff.

Two bioretention swales were installed at the edge of the street. Their surface is at the curb and sidewalk elevation. The swales are intended for run off from the sidewalk and nearby concrete surfaces and not from the street. They are at the proper grade.

8. Electrical boxes in the sidewalk on the side of the street in front of the bank are not in a straight line.

There are several electrical boxes in the sidewalk that are for servicing street lights, and other uses. They are not in a single straight line because the conduit connecting them is not able to be bent around them. It is an aesthetics issue and not a safety or quality issue.

9. The location of the electrical meter cabinet by the post office at 6th street.

The electrical services for lights and other uses require a cabinet to house the electrical meter. The housing serving the post office area of the project was installed at the edge of the sidewalk near 6th Street. Visually, it appears out of place. The sidewalk in the area meets ADA requirements. Access to the panel is required from the back so it could not be located at the edge of the right of way. Other panels installed for this project are in less obstructive locations.

WARRANTY

There is not a written warranty clause in the standard contract for the work performed. The state contract regulations prohibit the city including a clause in the contract stating, for example, that the contractor shall return to the project to repair or replace all defects in workmanship and material discovered within one year after Final Acceptance of the Work. The city has relied on a more general clause referencing guarantees or warranties for purchased materials.

CONTRACT DOCUMENT ERROR

The contract documents used for these public works projects are forms required by the Washington State Department of Transportation. The state provides two versions in their forms library. One form is for constructing buildings and one is for road construction. The contract executed for this project was actually the form for buildings. In addition, three places in the contract in which wording should have been inserted were left blank. The city staff needs to take better care in properly completing the standard contract forms. The state is working on addressing IT needs in the use of these forms.

CONCLUDING OBSERVATIONS

The time required to complete this project is not normal for public works. The start with the grant award, selection of the engineer and completion of plans and specifications was typical. Problems contributing to the delay were the estimated costs compared to the available grant and other funds. The problems with undergrounding the electrical utilities added design time and required cost revisions. In addition, changes in the director of public works and elimination of some engineering staff caused the project to be put on the shelf.

SUMMARY OF OBSERVATIONS

1. Changing the Director of Public Works can have an effect on management of public works projects.

2. Reduction of engineering staff can have a direct effect on the ability of the department to design, manage, and maintain required schedules of major projects.

3. A poorly placed fire hydrant or an electrical panel, detract from public confidence in the finished project although they comply with all construction standards and are only a small portion of the total cost.

4. It is difficult to understand why the Washington Department of Transportation prohibits modifications to its bid forms. This inability to modify bid forms precludes municipalities from including a provision in the construction contracts for the contractor to warranty their work for one year.

5. There are times that complying with federal regulations result in a solution that does not appear logical. (Such as a step rather than a ramp.) In cases where compliance with building standards cannot be achieved, staff appropriately relied on the building official's direction to minimize the City's risk.