



CITY OF FORT BRAGG

416 N. FRANKLIN, FORT BRAGG, CA 95437
PHONE 707/961-2823 FAX 707/961-2802

COUNCIL COMMITTEE ITEM SUMMARY REPORT

MEETING DATE: December 13, 2017
TO: Public Works & Facilities Committee
FROM: Tom Z. Varga, Public Works Director
AGENDA ITEM TITLE: **Receive Report and Discuss Management of Capital Projects**

ISSUE:

The recently completed 2017 Streets & Alleys Rehabilitation Project experienced some unexpected changes to the scope and costs. During a City Council review of Contract Change Order 4 for this project, the topic of how substantial changes in scope and cost are managed during the construction process was discussed. The matter was directed to the Council's Public Works & Facilities Committee for further discussion.

SUMMARY:

At its meeting of November 13, 2017, the City Council reviewed the 2017 Streets & Alleys Rehabilitation Project and reviewed a Contract Change Order 4 (CCO 4) and a budget amendment. CCO 4 covered a variety of matters with the major ones being a large increase in paving costs and the addition of corrective actions to augment previous drainage work in an alley not part of the original contract.

During its deliberation, the Council noted the following concerns and issues: (1) thoroughness of preliminary engineering, (2) completeness of design, (3) tracking of on-going, actual costs against the contract costs and bid quantities, (4) scope of contract change orders, and (5) construction management. These are discussed in greater detail below.

Preliminary engineering

In preparing for project design, it is important to provide the designer(s) all the relevant available information. These should include: record drawings, a review of the project with field staff, field surveys, and pot-holing existing facilities. Pot-holing involves digging small excavations or trenches to confirm the precise location, depth, and nature of existing underground facilities. This is normally done where the approximate location of existing facilities is already known. In contrast, exploratory underground investigation, excavating to see what might be in a particular area is normally very disruptive and damaging without providing much useful information.

Some water and sewer services were missed because they are not mapped or otherwise locatable. Currently, staff is developing Geographic Information System (GIS) capability to track this information whenever field crews work on a leak or other problem as well as transferring post-construction information to a single data-base. In general, work to be done in alleys or

minor City streets, (which have not occurred in the last few years), will usually involve utility relocation. Water pipes will essentially always be involved as the mains and services are shallow. In addition, the connection from the main to the service lateral (pipe) comes up about six inches vertically from the water main before heading to a building. Cover over this point can be as little six inches. A reasonable buffer needs to be at least another six to twelve inches below the depth of construction to avoid damage to any service lateral connections. The laterals are also very shallow where they reach the meter box at the edge of the alley. Sewer mains are often, but not always deep enough. However, sewer service laterals often can be shallow when they reach the edge of the alley and cross over into private property. Sewer laterals are not marked like water laterals (e.g. by a water meter box). Use of sewer clean-outs at the edge of the alley is infrequent.

Groundwater depth is variable throughout town especially during different seasons of the year. Occasional, unexpected groundwater problems affecting soil (subgrade) below a pavement section is a frequent underground condition that cannot always be found ahead of time. Because of the hit-or-miss nature of “wet spots” and their relatively small size, they are dealt with as they are found. This is much cheaper than over excavating an entire block of alley or street ahead of time.

Design issues

Curb ramps and some adjoining sidewalk were replaced at several intersections along Franklin Street, but most noticeably at Oak Street intersection. Surface slopes meeting the requirements of the Americans with Disabilities Act (ADA) are more carefully checked now than in years past. The risk of non-compliance is much higher for even small discrepancies. What used to be “close enough” no longer is.

Width of grinding for pavement removal was mentioned as a concern. Assumptions will in general be made more conservatively, (e.g. wider). However, this still depends on the specific project contractor and the equipment they have. It should be noted that as grinding width increases so do project costs. Care will be taken to strike the right balance.

Plan checking of work during the design phase will be increased. This will slow design process somewhat, but is cheaper than making field changes during construction.

Track contract costs, comparing actual quantities and costs against contract costs and bid quantities

Projects costs will be monitored more closely during construction. They will be examined at each partial payment, Contract Change Order (CCO), and informally at each project status meeting, (normally held weekly or bi-weekly). Up-to-date costs will be compared against the contract cost as well as the project budget. Actual quantities placed will be compared to those in the Bid Schedule. When change orders exceed the City Manager’s authority for approval and/or require a budget amendment, they will be brought forward for Council approval (as was the case with the CCO 4). Staff will also provide updates to the Public Works & Facilities Committee under the “Update on Departmental Activities” agenda item regarding change orders and progress on capital projects.

Contract Change Order, Allowed Scope

In reviewing CCO 4 with the City Attorney, he confirmed that extra material amounts for pavement rehabilitation, the work in the Colombi alley, and other changes were consistent with the original project scope. Nevertheless, Council expressed concerns over the impacts of such changes. It is important for staff to have the latitude to process change orders for such items

and the City's practice of contracting out permanent trench repair as an add-on to a capital project helps us get a good paving price. It is cheaper than a separate trench repair contract or redeploying City field crews from other higher priority tasks. Likewise, it is not unusual for a small side project to come up on short notice that can be conveniently piggy-backed onto an active, larger construction project for a quick response at an economical price. Nevertheless, it is clear from comments received at the City Council meeting that, in the future, adding a project like the storm drainage related work in the Colombi alley should be reported to the Council prior to implementation. It is important to note, however, that the Colombi alley work was not a new project. Rather it was a response to an original green alley design that did not function entirely as expected. The return to this alley was to implement corrective measures to ensure adequate drainage in the alley during normal winter conditions.

Construction Management

Finally, Council brought up oversight of construction inspector(s) and project manager(s). While these personnel are contract workers, they are nevertheless an extension of City staff. It is recommended that their performance be monitored and adjusted as appropriate with that standard in mind. A certain amount of delegation of duties is necessary to make the expense of hiring these contract workers economically viable. Still, City staff will make sure to work closely and attentively with these people to identify and resolve any issue early and quickly to avoid greater problems later on.

RECOMMENDATION:

The Committee should review and consider the information and recommendations in the staff report and provide staff with additional guidance as to what can be considered an effective response to concerns of project construction management and what should be modified.

ATTACHMENTS:

None.