



**WORK SESSION MEETING
AGENDA
CITY OF CREVE COEUR
CITY COUNCIL
300 NORTH NEW BALLAS RD
OCTOBER 8, 2018
6:00 PM**

CALL TO ORDER

ROLL CALL

DISCUSSION ITEMS

1. Police Building Update

Summary: The Project Manager, design team and staff will provide an update on the police station, including a discussion of current and future change orders and follow up on requests for information about solar power and commissioning.

Pursuant to Section 610.022 RSMo., the City Council could, at any time during the meeting, vote to close the public meeting and move to closed session to discuss matters relating to litigation, legal actions and/or communications from the City Attorney as provided under Section 610.021(1) RSMo. and/or personnel matters under Section 610.021(13) RSMo. And/or employee matters under Section 610.021(3) RSMo. and/or real estate matters under Section 610.021(2) or other matters as permitted by Chapter 610.

Posted: _____ posted 10/5/2018

Deborah Ryan, MPCC
City Clerk



City Council
300 North New Ballas Rd
Creve-Coeur, MO 63141

SCHEDULED

Meeting: 10/08/18 06:00 PM
Department: Public Works Department
Category: Presentation
Prepared By: Jim Heines
Department Head: Jim Heines

STAFF REPORT

Police Building Update

The Project Manager, design team and staff will provide an update on the police station, including a discussion of current and future change orders and follow up on requests for information about solar power and commissioning.



10/04/2018
City of Creve Coeur
Creve Coeur Police Department

MONTHLY PROJECT DASHBOARD – September 2018

Project Schedule Update

- Concrete slab on grade was poured on 9/19/18.
- Foundation wall is waterproofed and backfill is nearly complete.
- Exterior metal stud wall framing has begun.
- Construction of interior masonry walls on the lower level is underway.
- Ductwork and sprinkler piping installation has started.

4 Week Look-Ahead

- Complete exterior stud wall framing
- Begin roofing installation
- Continue building enclosure with sheathing on metal studs followed by vapor barrier
- Begin framing interior metal stud walls
- Continue mechanical, electrical, plumbing and sprinkler rough-in

Total Project Financial Summary

Post Bid Budget: \$10,332,347
Changes to Budget: None
Current Budget: \$10,332,347

United Construction Contract
Original Contract: \$7,351,000
Changes to Date: \$89,558
Current Contract: \$7,440,558

Cash Flow/Projections

Proposed Change Orders:

- Create dedicated circuits for lockers
- Install two conduits for future solar power
- Modified office layout
- Additional casework, drug drop niche, and door security
- Enhanced landscaping with associated irrigation

Contingency / Allowances

Original Contingency: \$942,620
Contingency Spent: \$358,128
 • CO 1 thru CO 12
 • Lockers + Storage Systems
Proposed Changes: \$56,806
Projected Contingency Remaining: \$527,686

Other Approved Changes

Additional Design Services \$19,550

Owner Hot List / Risks

- Schedule Risks
 -Weather: Rain
- Budget Risks
 - All budget risks are being tracked on the Contingency Log.
- Miscellaneous Items:
 -None at this time.

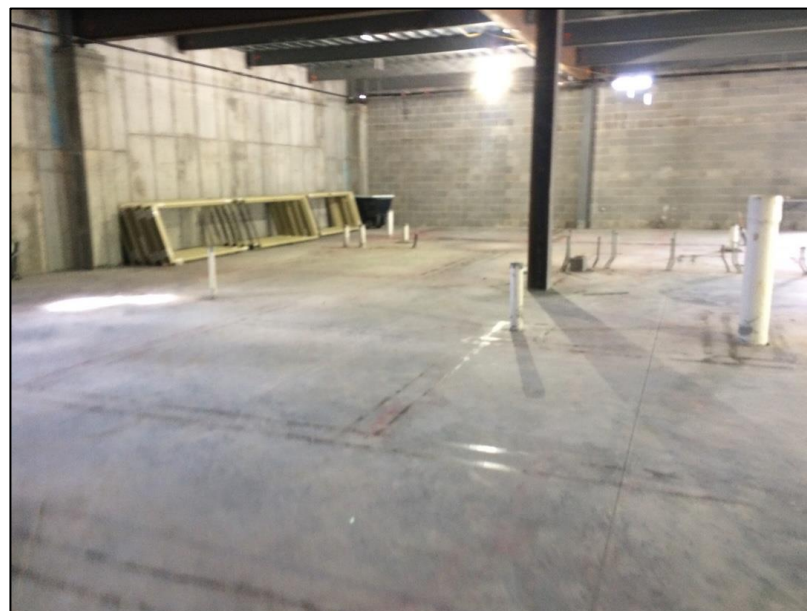
Outstanding Submittals & Requests for Information (RFI)

- 73 RFI's have been generated to date
- 4 RFI's are in review for response by the design team.
- Critical submittals are:
 - Exterior Wall Mock Up
 - Fireproofing

Schedule / Completion Date

Contractual Substantial Completion Date: *March 2019**
Targeted Owner Move-In Date: *May 2019**

**Completion Dates have been affected by Project Delays and will likely be revised by 6 to 8 weeks.*





DEPARTMENT OF PUBLIC WORKS OFFICE MEMO

DATE: September 28, 2018

TO: Mark Perkins, City Administrator

FROM: Jim Heines, Director of Public Works

SUBJECT: Research Results for Solar Panels for Police Building

City staff was request to research the feasibility of installing solar panels on the roof of the new Police building at Council Work Session on August 13, 2018. Although our design team had performed this analysis last year during the design of the building and found that with our tight budget financially it did not make sense. Now that the project is under way and the construction costs are lower than originally anticipated staff was requested to meet with a Solar Panel installation vendor to evaluate costs, incentives, rebates, and time of payback. Staff met with Steve O'Rourke from Microgrid on Wednesday, August 22, 2018 as a follow up to Council's request. Results from our meeting is discussed further below:

Available Space, Grid Size and Structural Capacity of the Building

Due to the HVAC and ventilation equipment being located in the center of the rooftop on the new Police building we would have to break the solar array into two groups, one north of the HVAC equipment and one to the south.

After maximizing the available space, per Mr. O'Rourke's calculations, we would be able to install a 29-kW array on the north roof space and a 16-kW array on the south roof for a total of 45.2 kW when using 325W modules. The array should produce approximately 62MWh annually unless there are shading issues from the equipment or parapet walls, whereby the power generation will be reduced.

The weight load of the solar panels increases the load on the roof by 5-7 pounds per square foot (PSF). And Mr. O'Rourke did not think that this would cause an issue or overload the roof structure. Staff checked with our design team and they felt that if the load remained in that range it should not have an effect, but they recommended running the loading calculations prior to the panels being purchased and installed to verify.

Cost and Available Incentives

The cost to supply and install arrays of this size would cost the city approximately \$113,000 at this time. However, with the looming tariffs on imports there is a potential that this cost could go up significantly in the next couple of months.

There are rebates available through Ameren for projects complete by June 30, 2019 and would have a value of \$22,600. The adjusted cost to the city to add solar panels would be approximately \$90,400.

Additional incentives are available from the federal government in form of tax credits. Unfortunately, municipalities cannot take advantage of tax credits. Therefore, the only way this

incentive could become an option is to find a corporate sponsor to purchase and install the panels and depreciate them over time as an investment.

Summary

During our discussions with Mr. O'Rourke he said that taking into account the available rebates and incentives the purchase and installation of solar panels on the Police building would not be a good project for the city because the return on investment would not pay for itself. He added that there could be a time in the future where the federal government brings back solar incentives for government facilities as they did a few years ago. This coupled with an Ameren rebate would make the project much more attractive to the city.

We further discussed what could be done to the building during the current construction that would prepare for future solar panel installation. As previously mentioned he felt that the structure of the building as designed would support the added weight of the panels. However, if we were to install the conduits from the electrical closet in the basement to the rooftop during while the building is open, it would be cost effective to complete that work now while the walls and ceilings are open.

The design team has designed the routing of the additional conduits and is working with our contractor to get a proposal to install the addition of the conduits.



Jim Heines <jheines@crevecoeurmo.gov>

RE: Work Session Submission

1 message

Brian D. Heideman <bdheideman@hornershifrin.com>

Thu, Oct 4, 2018 at 12:51 PM

To: "Mangan, Roy" <rmangan@archimages-stl.com>, Jim Heines <jheines@crevecoeurmo.gov>

Cc: "Joseph A. Buehler" <jabuehler@hornershifrin.com>, "Casey E. Wilson" <cewilson@hornershifrin.com>

Here you go

Since this project is not going for LEED or other energy certification the use of a third party agent is not required and purely the owner wanting a third party review. At this point in time a third party review for energy usage is past where a third party would be of any value to the owner. The systems are selected and most likely purchased. Based upon where we are at in the construction process there are really only two options for commissioning. They are;

The first option is to hire a third party commissioning agent to provide commissioning services in the construction phase. This would include review the design documents, review the construction where it is to date, review all the shop drawings and perform site visits to verify the MEP systems and equipment are being installed per the contract documents and shop drawings. They would note specifically on the HVAC system where test plugs are needed for air flow. They would be involved in the startup of all equipment and testing of all equipment. This would include all HVAC equipment, electrical equipment and plumbing equipment. They would provide to you reports on their findings and any issues that are present that the systems are not in compliance with the design intent or documents. The design team would then work with the contractors to resolve any issues.

The second option is to have the design team make more frequent site visits (we currently have a site visit once a month) specific to the installation of the HVAC, Electrical and Plumbing equipment. This is to make sure the equipment is being installed per manufactures instructions and attend system start up and testing. We already have in our contract review of the generator test report, HVAC air balance report. Our normal procedure is to review the test reports and comment on any items not in compliance with the contract documents. We would then work with the contractor and testing agency to correct any deficiencies. H&S basically does what a third party commissioning agent would do but not to the extent of reporting.

If the owner feels that a third party would give them a feeling of an unbiased review then the third party is the way to go. If the owner trusts H&S to do their job as we should be doing, then a third party is not really required. H&S will be reviewing specifically the air test and balance reports for efficiency of the HVAC equipment meeting the criteria of the design intent.

Brian D. Heideman, P.E.

Senior Project Manager

Horner & Shifrin, Inc.
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St. Louis, MO 63103

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Visit us at www.hornershifrin.com

From: Mangan, Roy <rmangan@archimages-stl.com>
Sent: Thursday, October 4, 2018 5:24 AM
To: Brian D. Heideman <bdheideman@hornershifrin.com>
Cc: Joseph A. Buehler <jabuehler@hornershifrin.com>; Casey E. Wilson <cewilson@hornershifrin.com>
Subject: Fwd: Work Session Submission

Brian

Can you send me a paragraph as requested below...

Roy Mangan

Archimages, Inc.

Architecture + Interiors

143 West Clinton Place

St. Louis, MO 63122

[314-965-7445](tel:314-965-7445) office

[314-807-9584](tel:314-807-9584) cell

rmangan@archimages-stl.com

Begin forwarded message:

From: Jim Heines <jheines@crevecoeurmo.gov>
Date: October 3, 2018 at 3:35:17 PM CDT
To: "Mangan, Roy" <rmangan@archimages-stl.com>
Cc: Collette Hermann <collette@navigatebuildingsolutions.com>
Subject: Work Session Submission

Roy, We are assembling the Work Session Packet for Monday night. Do you have a short commissioning memo we can attach to the submittal. I have a report on Solar and we will include a project dashboard report too. We thought maybe Brian could give us a paragraph long memo and speak in more detail about our options, cost and benefits at the Work Session. We will generate the packet tomorrow at 5 PM and post the agenda so if we could get it earlier in the afternoon that would be great.

Thanks,

Jim Heines

Director of Public Works

300 N. New Ballas Rd.

Creve Coeur, MO 63141
(314) 872-2538

www.crevecoeurmo.gov

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