# **ADDENDUM 1**

## 7. CHANGE MANAGEMENT

Written by Kyle Nelson

As expected, the design team has issued design Bulletin #1 to address the changes required to SS line. The bulletin adds a sewer lift station that pumps sanitary waste out of a new 20' deep collection well.

You have given the Owner the expected notice of cost and schedule impacts associated with this change, but it is up to you and your team to analyze, assemble and submit those impacts in a timely manner for Owner review and approval.

#### PART B: Finalize a Change Order Request (COR) to the Owner

Booker T. (Can-U-Dig-It's project manager) has provided you the attached change order request outlining their cost and schedule impacts to perform this additional work (Section X.7.1) Given the magnitude of the change, Booker has priced the change as an entirely new scope of work/bid. In addition, Booker has included pricing from a 3<sup>rd</sup> tier electrical subcontractor, Zapp Electric, for the electrical components associated with the new lift station. You need to review Booker's change order as well as the change order from his electrician (Zapp) and fill in the required dollar values on the "Subcontractor" cost tab and "Summary" tab on the attached COR template (Section X.7.2).

We owe the Owner fair pricing for this change, so be sure to review Booker's pricing and ensure that is accurate, fair and captures only the added scope. You know that CUDI's cost of work for the original scope prior to this change was \$95,000. Booker is scheduled to be in your office at 2:00PM this afternoon so if you have any questions related to his COR you can ask him at that time.

Your superintendent has provided a summary of the Hensel Phelps labor, materials and equipment that will be needed to facilitate this added scope (reference Section X.7.3) The costs for those items need to be included in the Owner change order request.

Create an Owner Change Order Request using the template provided (Section X.7.2). Please consider the following and note you may change the cells to conform to the requirements listed below, but be cautious when doing so:

- Review the Can You Dig It (CUDI) change order request Booker T provided (Section X.7.1) After reviewing the proposal, and confirming its accuracy, validity and entitlement, input the subcontractor's final costs into the "Subcontractor" tab and "Summary" tab on the Owner change order request form (Section X.7.2).
  - You will have an opportunity to ask Booker any questions related to CUDI's COR at your 2PM meeting.
  - Allowable Subcontractor Mark Up's on Subcontractors Change Orders:
    - Overhead and Profit: 15%
    - Bonds and Insurance: 2%
- Use the Wage Rate Sheet provided (Section X.7.4) to verify that fair rates are applied in the change order.

- Hensel Phelps will have additional labor, material and equipment costs to facilitate this change. Reference the LME summary email provided by your superintendent (Section X.7.3) and add those items to the "LME" cost tab on the Change Order Request form.
  - Allowable Hensel Phelps Mark Up's on Self Performed Change Orders:
    - Overhead and Profit : 15%
- For Owner Change Orders, contractor's fee is applied to Direct Costs, Bonds & Insurance.
- Cost of Work Contractor Bonds and Insurance is 1.1%
- Hensel Phelps allowable Contractor's Fee on subcontractor change orders is 6%.

Enter the Hensel Phelps and subcontractor costs on their corresponding tabs and ensure everything totals correctly on the summary sheet. Provide a brief narrative of the change where indicated on the summary sheet and present the final COR to your project manager for review.

#### Change Management PART B Deliverable:

- 1. Submit one (1) hard copy and two (2) electronic copies of the native format (Excel) of the Owner Change Order Request.
- 2. Submit one (1) hard copy and two (2) electronic copies (PDF) of the markups (if any) on the original CUDI/Zapp change order requests outlining any revisions made.

### 10. SITE UTILIZATION

Written by Dave Canada

#### PART B: Analyze Site Impacts of Design Change

In response to your RFI regarding the sewer slope issue, the design team has issued a design bulletin illustrating a new plan for sanitary sewer routing (Reference Addendum1 Change Management section 7 above). The new design adds a sewer lift station that pumps sewage out of a new 20' deep collection well. The installation of the new lift station increases the Can You Dig It (CUDI) schedule onsite by 2 months.

As stated in the original Site Utilization section, the planned sequence of work install was to complete deep underground utilities, fill the site with 2 feet of engineered fill, proceed with slab on grade activities and lastly start structural steel erection.

This sudden turn of events has a drastic impact on the project schedule and the sequence in which your team decides to install the building steel and deep underground utilities. You must choose one of the three options below in response to this news.

#### Option 1: Prioritize Below Grade Utilities and SOG Placement for Steel Erection

In this scenario, your project team has decided to finish the utilities under the building footprint then roll into spot footings with anchor bolts in preparation for slab on grade (SOG) concrete at each building. Once SOG concrete is placed, your team will commence erection of the structural steel.

This will result in a short-term delay of 2 weeks as your team brings in the 2 feet of structural fill for just the building pads to start below grade utilities and excavation for footings. While the overall impact to the critical path is relatively small with this option, it will be extremely difficult for your team to recover time and cost for the days lost when transitioning from deep underground utilities around the site to below grade utilities under the SOG.

#### **Option 2: Prioritize Deep Underground Utilities**

In this scenario, your team has decided to focus all efforts on the installation of the deep underground utilities. No other work will commence until this work has been completed, however once completed, work onsite will continue as originally sequenced.

This will result in an immediate delay to the project schedule as your team works with the Owner, Design Team, and IOR to redesign the sewage system so that it is code compliant. It will be difficult for your team to recover the time and money associated this two-month delay. However, if you can successfully argue your case with the Owner and the schedule flow remains unchanged, your team will not have to frantically scramble to try to coordinate the install of the steel or the mobilization of other trades.

#### **Option 3: Proceed with Both at the Same Time**

In this scenario, your team has decided to install the deep underground site utilities concurrently with the utilities under the building footprint, spot footings, and SOG. In this option, the timing of

the 2 feet of structural fill needs to be analyzed. Do you bring in all the fill for the project site and sort material for deep underground trenching activities or do you just bring in fill for the building pads? The time impact of going with this option will be less than option 2, but there will be increased subcontractor inefficiencies due to open trenches and trades working on top of one another. Because there will be lots of big equipment, deep excavations, and open trenches around the site, this option is the least safe for all parties.

Review each of the options above and email your project manager outlining which option you feel would be best for the overall project considering safety, schedule and budget. Include in your email a markup of your site utilization plan and how the option you choose will affect access, deliveries, barricading, etc. around the site.

Prior to making your decision, please note the important milestones regarding structural steel installation (the critical path of the project):

- 1. Structural steel is currently under fabrication and will be delivered to the Project site mid-October.
- 2. There is not enough room onsite to store the steel, so delaying steel installation past this date will result in cost implications and/or double handling of material if the steel is to be temporarily stored at an offsite location prior to coming onsite.
- 3. The steel subcontractor has budgeted to use a large 24k gradall to set the steel for each building. In lieu of the forklift, you can decide to pay the steel contractor to setup a crane onsite., Location of the crane set-up is critical. If you decide to set it up on site, you will be impacting the sanitary sewer install. If you try to negotiate a set-up on the adjacent Stanton facilities parking lot, you will need to consider your impact to the operations of an active detention facility. You will receive quicker production from the crane, however cannot use the crane if you also decide to choose option 3 above.

#### Site Utilization PART B Deliverable:

1. Submit one (1) hard copy and two (2) electronic copies of your email and illustration outlining what option listed above you choose and why.