

**PUBLIC BUILDING COMMISSION OF CHICAGO**

**ADDENDUM NO. 5 TO CONTRACT NO. 1514  
FOR**

**12<sup>th</sup> District Police Station  
1412 S. Blue Island Ave.**

**FOR**

**12<sup>th</sup> District Police Station and associated Site Work**

**BY:** VOA Associates Incorporated

**DATE:** July 20, 2010

**NOTICE OF CHANGES IN CONTRACT DOCUMENTS**

The following changes are hereby made in the Contract Documents. Insofar as the prior Contract Documents are inconsistent herewith, the changes mentioned hereinafter shall govern unless the original language takes precedence according to the Order of Precedence of Components of the Contract Documents.

**In Book 3A, Technical Specification, SECTION 02110, "Site Clearing",**

1. Revise paragraph 3.1.D.10. with the following:
  10. The Contractor shall sawcut full depth a perpendicular clean joint between that portion of the curb, curb and gutter to be removed and that portion of the curb, and curb and gutter which is to remain in place.

**In Book 3A, Technical Specification, SECTION 02300, "Earthwork",**

1. Revise paragraph 3.5.B. with the following:
  - B. Classified Excavation: Excavation to subgrade elevations classified as earth and rock.
2. Delete paragraph 3.5.B.2.a.

**In Book 3A, Technical Specification, SECTION 14200, "Electric Traction Elevators",**

1. Revise paragraph 2.9.A.5. with the following:
  - A. Rated Speed: 150 fpm (0.75 m/s).
2. Add paragraph 2.1 A.2. as follows:
  2. Otis Elevator Co.; Gen2 L-Series.

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### DRAWINGS:

1. SHEET C4.0 and C4.1 (inclusive) "Site Utility Plan" and "Cistern Layout and Details"
  1. Revise 3" DIP shown from MH-14 per CSK-02, copy attached. Clarifications made per response to Question I.1.
2. SHEET L1.1 "Landscape Plan"
  1. Add English Ivy around ComEd equipment masonry enclosure wall as indicated on LSK.01, copy attached.
3. SHEET A16.2 "2<sup>nd</sup> Floor Furniture Schedule, Plans & Details"
  1. Add details for custom mattress cart as indicated on ASK.61, copy attached.
4. SHEET M7.1
  1. Revise P-3 and P-4 pump head and motor hp. Clarifications made per response to Question A and Question F.
5. SHEET ES1.1
  1. Revised ComEd primary feeder conduits and routing.
6. SHEET ES2.1
  1. Revised detail U3.
  2. Added new detail U6.

### QUESTIONS & ANSWERS:

#### A. QUESTION:

- a. Drawing number MS1.1 under "Ground Loop Notes", note #2, states "vertical heat exchanger (VHE) piping will be equipped with factory installed U-Bend Assembly." They are indicating the heat exchange pipe to be 1-1/2" dia., the factory maximum U-Bend Assembly pipe is 1-1/4" dia. which is an industry standard. We are assuming 1-1/4" is okay, especially since it was used on all other projects. Please confirm if this is not correct.
- b. Spec section 15747, page 6, 3.1E. all drill casing is to be permanently installed and sealed into bedrock. Industry standard practice is if necessary a temporary steel casing per Illinois water well code would be used while drilling and the casing would be removed as the well is grouted. Can the permanent casing be deleted they have never been specified in the past?
- c. Based on the above, we are assuming that the total bore length of 35,640 linier feet is the design criteria for the heat enchargers regardless of number of boreholes. Please respond if this is incorrect.

#### 1. RESPONSE:

- a. 1 ¼" dia piping may be used in lieu of 1.5" dia piping in the field provided that the maximum pressure drop from the field does not exceed 40 FT WG as noted in the mechanical specification 15747 section 3.8.C. For any field pressure drop exceeding 40 ft WG, it will be the geothermal field installer's responsibility to modify the pump HP and electrical requirements and accept any cost associated with such changes.
- b. Yes, the borehole drilling casing can be removed provided that the integrity of the borehole is maintained throughout the drilling and grouting process.

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c. Yes, it is acceptable to alter the number of boreholes as long as the total linear feet of bore length is maintained. It will be the geothermal field installer's responsibility to submit stamped calculations for the revised layout. Submitted calculations must include all inputs and outputs. The geothermal field installer is still responsible for any cost associated with deviations from the contract documents including increased pump HP and electrical requirements.

The maximum number of wells per vault and the vault type shall remain as shown in contract documents.

Refer to Mechanical Pump Schedule (MSK-01) for ground loop pump design criteria.

- B. **QUESTION:** In addition to the questions below, the response to Question B in Addenda 4 does not make any sense. Even if the 10,000 gallon tank it is an infiltration basin, it has to have an outlet. Otherwise, it will just fill up. End of story. As drawn on C4.1 the direction of flow is from roof, to manhole Wh-Mh-15, to the 20,000 gallon, to the pump manhole, (WH-MH 14) with overflow going to the 10,000 gallon tank and the 3" pump line going to the building. As drawn, the 10000 gallon tank is the last stop for the rainwater that; a) exceeds the capacity of the 20000 gal, tank, and B) is not recycled through the building plumbing system. Potentially, a portion of the water could drain back into WH-MH 14, but head would have to be developed in the access tube.

Additionally, the writer is not certain what an infiltration basin is; is it anything like a filtration basin? Or is the 10000 gallon tank a semi permeable vessel designed allow ground water to infiltrate from the paver parking lot?

1. **RESPONSE:** Yes, you are correct the 10,000 gal tank is the last stop for the runoff from the roof. This 10,000 gallon tank is designed to hold the runoff until it has time to infiltrate into the sandy soils below and eventually into the groundwater table. In rare cases this tank will fill completely and the over flow will bubble out of WH MH-14 and flow over land to STM CB-9. This is in rare cases, otherwise the tank is sized based on the infiltration of the soils, therefore the water will dissipate over time. Code does not allow a direct connection between the rainwater system and site storm/sanitary system.

- C. **QUESTION:** In add. # 2, pg 23, item 80, makes reference to sketch PSK-016. Same page, item 81 makes reference to sketch PSK-17. These sketches are not part of the documents. Please issue. Also, with regard to item 81, are the wall signs still required at the s.s. fixtures, in addition to the etching?

1. **RESPONSE:** See attached PSK-16 and PSK-17 referenced in Addendum No. 2 page 23 of 30 Item No. 80 and 81.

- D. **QUESTION:** Please confirm that hub and spigot, cast iron soil pipe, Service class - including fittings and gasketed joints - is acceptable for under ground drainage piping in place of ductile iron piping.

1. **RESPONSE:** The under slab drainage piping shall be ductile iron pipe and fittings, as indicated in the design documents. Pipe shall be supported from the structural slab as indicated in the Contract Documents.

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### E. QUESTION:

a. Otis requests to be added as an "approved elevator manufacturer" for the gearless traction elevator. Note we are currently installing our Gen2 L-Series gearless traction elevator at the 23<sup>rd</sup> District Police Station for PBC. 23<sup>rd</sup> District Police Station is a nearly identical elevator installation to the 12<sup>th</sup> District Police Station.

According to Addendum 1, Page 11, Item G, KONE Elevator is the only acceptable elevator manufacturer for this project which creates a non-competitive bidding environment for the elevator package. In addition to this fact we believe KONE is unable to meet many items required by the specification. Examples:

b. Car Speed – 14200-6, 2.9, A, 5 requires the car speed to be 200 FPM while KONE's Ecospace product has a maximum car speed of 150 FPM.

c. Swing-Return Car Control Stations – 14200-6, 2.8, C requires a swing-return car control station while KONE only offers an applied car operating panel. (Swing-returns are an upgraded feature)

d. Wall Panels – 14200-5, 2.6, B, 3 requires stainless steel wall panels. Please verify KONE's wall panel finish is actual metal stainless steel and not a plastic laminate finish that mimics a stainless steel. At one time KONE only offered plastic laminate. (Stainless steel is an upgraded finish from P-lam)

In summary, Otis can meet all requirements of the specification and requests to be added as an acceptable elevator manufacturer for this project.

### 1. RESPONSE:

- a. Otis Gen2 L-Series is an acceptable elevator for this project. The width of the elevator pit and shaft will need to be increased from 8'-4" wide to 8'-8" wide, this revision can be made with the Issue for Construction drawings. Any cost or coordination time on the part of the Contractor to make these dimensional changes shall be considered inclusive in the bid.
- b. Required rated speed shall be revised to 150 fpm (0.75 m/s).
- c. Swing-return car control station shall be provided as specified.
- d. Wall panels shall be provided as specified.

### F. QUESTION: There seems to be concerns over the design of the geothermal system. Just for your information, there is a subcontractor bidding the 6" boring holes with 1 1/4' dia heat exchangers vs. the 1-1/2" dia as shown, at 650' deep instead of the designated 420' depth. The price is significantly less than what is designed but could cause problems with the interior pumps & systems being under sized. Please see below the correspondence from the Jackson Geothermal's Engineer, Greg Wells, CGD;

"The pipe size shown on the drawings is an issue based on availability as discussed. The bore depth is an issue due to the fact that the PE designing the inside system, piping, pumping etc. has based the internal pipe and pump design on a certain total system pressure drop. If you change from an example 405' bore to a 650' bore utilizing the same pipe size, the system pressure drop will increase. The engineer would then have to evaluate whether his pumps as designed can handle the additional feet of head in pressure drop. This as stated can impact the pump and main pipe sizing in a negative manner. Only the engineer designing the pumping system could answer this question. If the pumps were oversized to begin with this may not be an issue but I would not assume that there would be no impact on the design without first seeing a recommendation from the engineer of record, saying that the pumps as designed, can handle this increase in pressure drop. This is a design coordination issue, I would assume nothing other

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than what is on the drawings without a formal response from the engineer designing the inside system.

In reference to the Spec section 15747, page 6, 3.1E. all drill casing is to be permanently installed and sealed into bedrock. Industry standard practice is if necessary a temporary steel casing per Illinois water well code would be used while drilling and the casing would be removed as the well is grouted. Can the permanent casing be deleted?

**1. RESPONSE:** See response to Question A, this addendum.

G. QUESTION: Sheet E2.1, Sallyport, there are (4) junction boxes shown with a note indicating "Vehicle Loop Controller" I cannot find loop detectors on the plans. Correct to assume we provide conduit only under this contract? Please clarify scope of work as it pertains to the Loop Controllers

**1. RESPONSE:** Vehicle Loop Controllers are shown on Sheet SS1.1. Refer to general notes – E2.1 and E2.2 on Sheet E2.2. Note 5: Refer to Security Sheet Series to Coordinate Rough-Ins. Provide: A) Conduit, Fittings and Junction Boxes, B) Power as noted on Sheets E2.1 and E2.2, C) Nylon pull string in conduit. And Note 6: Refer to Security Sheet Series for security conduit sizing. Maximum conduit homerun size shall be 2". Minimum conduit size shall be ¾" except ½" conduit shall be permitted for low voltage cabling in door frames.

H. QUESTION: Is there going to be a requirement for an antenna system (DAS /repeater) in the building to supply cell phone coverage? Considering the building will be LEED certified the window glass will limit the signals from penetrating into the building from the outside.

**1. RESPONSE:** Yes, refer to contract documents.

I. QUESTION: 1. Reference Spec/Drawing Ref: C4.0 & C4.1 (both revised Addendum #2), PSK-18 (revised Addendum #3) We would like to clarify the overall intent of the design for the rainwater harvesting system. Based on detail 4 sheet C4.1 and PSK-18, it is our understanding that the day tank pump and level sensor are to be located in MH-14. However, detail 1 sheet C4.1 and sheet C4.0 do not show the 3" DIP running through MH-14. Please clarify the intended routing.

Additionally, subcontractor questions have arisen from the asterisk note on PSK-18 noting "provided by division 02805" for the 20,000 gallon cistern. We would like to clarify that the intent of the design is that "Division 02805" is in reference to spec section 02815 issued with Addendum #2 that provides the general specification to the system. Paragraph 3.3 (Spec Section 02815) indicates that the system needs to be installed by a licensed plumber, so we assume that the installation of the piping, pumps, tanks, etc. within the building perimeter will also be subject to the specification requirements established in Division 15 (and Division 16 for the associated electrical connections). Would it be acceptable to assume that the customary delineation point of 5ft outside of the building for plumbing/site utilities contractor is applicable to this scope of work?

2. Reference Spec/Drawing Ref: Note 12 Sheet P1.0

Note 12 sheet P1.0 indicates that all "underground drainage pipe shall be ductile iron pipe and fittings with mechanical fittings." Is cast iron pipe with hub connections and acceptable alternative to the specified ductile iron pipe? Please advise.

3. Reference Spec/Drawing Ref: Detail 11 Sheet S2.4; Addendum #3 Q&A Question B.

The referenced details outline the requirements for support of underslab pipes and conduits.

Does this requirement pertain to pipes/conduits that are beyond a certain depth below the slab?

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Conduits for the electrical service entrance, phone, and CATV may be installed in excess of 12" below slab. Additionally, the Power "Bang-it / Wood Knocker" insert is typically cast into a slab-on-metaldeck with a threaded rod/pipe installed after the slab cures. In this case, we have an under slab-on-grade situation that will necessitate all hangers be completely installed on the pipes/conduits prior to slab placement. This product could be used, but it doesn't seem like it is the appropriate application. Please suggest an alternate product or installation method. Would it be acceptable to utilize a hanger system that connects to the reinforcement similar to detail 6 sheet M5.2 (radiant heating tub connected directly to the slab reinforcement mesh)?

4. Reference Spec Section/ Drawing: 14200  
Specification section 14200 paragraph 2.9.A.5 specifies a speed of 200 fpm, however the specified Kone EcoSpace Elevator is only available with a travel speed of 150 fpm. Please clarify if this is acceptable?

**1. RESPONSE:**

1. The 3" DIP is to come from MH-14. The 3" DIP will come from the pump housed in MH-14. See attached CSK-02 to clarify routing in plan view. With regards to the scope delineation between the Plumbing/Site Utilities, it was our intention that the asterisk portions of the PSK-18 would be provided by the site utilities contractor and the remaining is to be provided by the plumbing contractor. The plumbing contractor shall take responsibility for the mechanical components of the system to make sure that each piece works together. The site utilities contractor will be installing all the tanks, piping, and housing components of the system including the CDS system. They will be responsible for these components beginning from 5.0' from the face of the building.
  2. The under slab drainage piping shall be ductile iron pipe and fittings, as indicated in the design documents. Pipe shall be supported from the structural slab as indicated in the Contract Documents.
  3. The detail is applicable to all under slab pipes and conduits irrespective of their installation depth below the structural slab. The design team is aware of the fact that the Power "Bang-it / Wood Knocker" insert specified is an 'atypical' usage of the insert. The insert has been specified only after a detailed consultation with technical representative(s) of Power fasteners. For bid purposes assume that the conduit support detail will be as detailed.
  4. Required rated speed shall be revised to 150 fpm (0.75 m/s).
- J. QUESTION: Can steel columns be set directly on top of the caisson caps in lieu of structural slab?
- 1. RESPONSE:** The steel columns cannot be set directly on top of the caisson caps.
- K. QUESTION: Is it acceptable to provide a geothermal system that deviates from current design documents?
- 1. RESPONSE:** See response to Question A, this addendum.
- L. QUESTION: Regarding the 3hr. fire shutter system for the opening 176-A shown on A1.1C, there is the confusion regarding the size of the shutter in subcontractor market. Is it suppose to be jamb mounted and stops at the bottom of the opening (9'wide x 5'4" high) or jamb mounted and extended to the floor (6' wide x 8' 8" high)?
- 1. RESPONSE:** Shutter is to be jamb mounted and extended to floor.

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M. QUESTION: Powder coat finish is required for the coiling service doors (08331) and the overhead sectional door (08360) per specification. Please confirm that the powder coat finish will be required on both sides of coiling service as well as overhead sectional doors.

1. **RESPONSE:** Yes, specified finish shall be both sides of door. Color as selected by Architect for each face.

N. QUESTION: Regarding the caissons (02464), there is the confusion regarding the permanent corrugated metal liners in the subcontractor market. Boring reports says the north side of the site requires both temporary casing and permanent corrugated liner but we don't know which specific caissons at north side should fall into this requirement. For the bidding purposes, can PBC requires all caisson to have permanent corrugated metal liners.

1. **RESPONSE:** Yes, for bid purposes, all caissons shall require permanent corrugate metal liners.

O. QUESTION: RFI # 5: Please advise us whether Note #17 under Excavation and Foundation on S0.1 is still valid even though the building pad has been prepared through JOC Contract already.

1. **RESPONSE:** Yes, Note #17 under Excavation and Foundation on sheet S0.1 is valid at the shallow (spread) footings on the project.

### **Attachments:**

ASK.61 dated 07/19/10

LSK.01 dated 07/19/10

CSK-02 dated 07/19/10

PSK-16 dated 07/07/10

PSK-17 dated 07/08/10

MSK-01 dated 07/19/10

ESK-01 dated 07/19/10

ESK-02 dated 07/19/10

END OF ADDENDUM NO. 05

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