University of Louisville

PURCHASING DEPARTMENT
LOUISVILLE, KENTUCKY

Invitation No: IB-60-12 **Date: March 13, 2012**
Title: Student Recreation Center, BC-4 General Contractor
Addendum No. Four (4)

The following shall clarify and/or modify the original bid document(s) as issued by the University of Louisville.

1. **Change in submission Procedure for Bidding Documents by bidders to the University:**
   - **Part 2 (Pricing for GC Services) shall be due no later than 2:00 PM March 20, 2012. This information shall include copies of Form of Proposal Pages FP-1 through FP-3 FP-6 and FP-7 (Major Sub-Contractors) ONLY and Bid Bond.**
   - **Part 1 (Bidders Qualifications for GC Services) shall be due no later than 2:00 PM March 21, 2012. This information shall include ALL Part 1 information requested (1 original, 5 Copies, 1 CD), Form of Proposal pages FP-1 through FP-16 complete, minus Page FP-3 (Lump Sum Bid Page**

2. **Add the attached Additions, Changes and Clarifications to this Invitation to Bid.**
   - **Architectural pages 1-2, 6 Drawings**
   - **Mechanical page 1-3, 15 Drawings**
   - **Site Pages 1, 2 Drawings**
   - **Structural Pages 1-2, 10 Drawings**
   - **Specification 072100 Thermal Insulation 7 pages**
   - **Specification 122413 Roller Window Shades 5 pages**
   - **General Specification Corrections 6 pages**

3. **Submitted Questions as of 3-9-12 that were not addressed in previous addenda and University response.**

Bidder must acknowledge receipt of this and any addenda either with bid or by separate letter. Acknowledgement must be received in the Office of Purchasing, Service Complex Building, University of Louisville no later than **March 20, 2012 at 2:00 PM.** If by separate letter, the following information must be placed in the lower left hand corner of the envelope:

Invitation No: IB-60-12
Title: Student Recreation Center, BC-4 General Contractor
Open Date: March 20, 2012 at 2:00 PM

BY: *Curtis Monroe*
Authorized Purchasing Officer

Receipt Acknowledged: _____
FIRM

BY: _____

highlighted text = items not inserted in architectural specs/drawings

ADDENDUM NUMBER FOUR (ARCHITECTURAL ITEMS)

Bidders shall conform to the following changes, as same shall become binding on the Contract to be issued in response to this Invitation to Bid.

PRODUCT INFORMATION

For all of the product information listed below, Bidders are reminded that the listing of a manufacturer in this document is in no way an endorsement or approval of the manufacturer's products, nor is it a waiver of any specified criteria. All bidders must comply with the criteria originally specified.

Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing (075216) – The following manufacturers may submit products for SBS modified bituminous membrane roofing (Please note this information supersedes information contained in "Addendum Two (Architectural Items), Product Information" for Styrene-Butadiene-Styrene SBS Modified Bituminous Membrane Roofing):

GAF Architectural Information Services
(800) 522-9224 Ext. 1407 www.gaf.com

Firestone Building Products
(859) 384-5050 www.firestonebpco.com

CertainTeed Corporation
(502) 905-5223 www.certainTeed.com

Resilient Athletic Flooring (096566) – The following manufacturer may offer products that meet the specified criteria for resilient athletic flooring:

Northwest Rubber Mats Ltd.
(604) 859-2009 www.northwestrubber.biz

CORRECTIONS, CLARIFICATIONS & ADDITIONS

1. **Clarification:** The assignment for Means and Methods of Construction for Bid Package, Phase #3 shall be the responsibility of the General Contractor Best Value including site logistics. The laydown area anticipated, follows the construction sequence diagram in the area north of the fitness area 117B. Refer to attached "Proposed Erection Sequencing Plan for UofL Student Recreation Center" and sketch.
2. **Clarification:** (Reference Specification Section 072100 "Thermal Insulation") Provide glass fiber blanket insulation in all wall types on sheets A-401, A-402, A-411 and in all locations where shown on drawings with batt insulation smbol indicated on sheet A-001. Refer to attached specification section 72100 "Thermal Insulation" from Omni Architects dated January 2012 for omitted specification section.
3. **Clarification:** (Reference Specification Section 122413 "Roller Window Shades") Refer to attached specification section 122413 "Roller Window Shades" from Omni Architects dated January 2012 for omitted specification section.
4. **Clarification:** (Reference Drawing A-712 and A-713, Classroom 110 and Classroom 110A) Refer to attached supplemental drawing SD-ADD4.1 from Omni Architects dated March, 13 for head detail at operable partition.
5. **Addition:** (Reference Reflected Ceiling Plan A-712 and A-1201) Acoustical Panel Ceiling (APC-2) to be provided in Equipment 115C and Corridor 198. No ceiling will be required in Laundry 115B. Refer to Addendum Four (M/E/P Items) for M/E/P changes due to added ceiling.
6. **Correction:** (Reference Addendum Number Two (Architectural Items), Item 22) Also reference specification section 074213.19 "Insulated Metal Panels". Exterior facing shall be 22 gage (0.0336") and interior facing shall be 26 gage (0.0217") minimums. THIS INFORMATION SUPERSEDES ADDENDUM TWO (ARCHITECTURAL ITEMS), ITEM 22)
7. **Clarification:** (Reference 078123 "Intumescent Fireproofing", Part 2 "Products" and Part 3 "Execution") Contractor to apply latex interior flat topcoat gloss level 1 by intumescent mastic fireproofing manufacturer,

with compatible products in accordance with UL rating. Coordinate sequence of application with other trades and touch-up at final completion of work.

8. **Correction:** (Reference Drawings A-111, A-131, Detail 3/A-906 and Addendum Number Three (Architectural Items), Item 12) The bench shown in Gymnasium 125 and 305 on North wall and detail 3/A-906 will be an Owner Furnished / Owner Installed item. THIS INFORMATION SUPERSEDS ADDENDUM NUMBER THREE (ARCHITECTURAL ITEMS), ITEM 12
9. **Correction:** (Reference Drawing A-1011, Frame Type "FT20") Referenced frame type elevation incorrectly shows a hatch. The glazing type for this frame type to be GL-6 as shown on the drawings.
10. **Correction:** (Reference) Refer to attached supplemental drawing 4/A-802r from Omni Architects dated March 13, 2012 for revised mechanical equipment roof curb.
11. **Clarification:** (Reference Specification Section 078123 "Intumescent Mastic Fireproofing", Part 2.1.C.1) Add the following: "Unrestrained steel members: Include X-bracing, wind columns, and girts"
12. **Clarification:** (Reference Specification Section 078123 "Intumescent Mastic Fireproofing", Part 3.2.C) Add the following: "Provide list of approved shop primers and application requirements to Bid Package, Phase 3 contractor. Bid Package, Phase 3 contractor is under contract to apply appropriate primers to steel."
13. **Clarification:** (Reference Specification Section 078100 "Applied Fireproofing", Part 2.3.B) Add the following: "Provide list of approved shop primers and application requirements to Bid Package, Phase 3 contractor. Bid Package, Phase 3 contractor is under contract to apply appropriate primers to steel."
14. **Correction:** (Reference Specification Section 055000"Metal Fabrications" Part 2.10, "Loose Steel Lintels") Provide loose steel lintels at all CMU and brick openings per addendum #3 schedule including openings for louvers, ductwork, mechanical, electrical, pluming, fire-protection and I.T. openings.
15. **Clarification:** (Reference Specification Section 064023 "Interior Architectural Woodwork") Cubbies (day storage bins) as shown on sheet A-606, and sound rack as shown on A-902 to be work of specification section 064023 "Interior Architectural Woodwork"
16. **Correction:** (Reference A-1201, Finish Schedule) Any reference in the Finish Schedule to "CMU" in the "Wall" category, "Field" column to receive a painted finish PT-1.
17. **Clarification:** (Reference Specification Section 105113 "Metal Lockers") Shower dressing benches, locker room benches, accessible benches and racquetball observation benches specified in 105113 "Metal Lockers" to include wood bench and steel supports with powder coated finish.
18. **Correction:** (Reference Drawings A-004) The following wall types have been added: 9A, 16 and 17. Refer to attached supplemental drawings 9/A-004r and 10/A-004r from Omni Architects dated March 13, 2012.
19. **Reference separately attached specification section corrections from Cannon Design dated March 12, 2012.**

End of Addendum No. 4 (Architectural Items)

ADDENDUM NUMBER FOUR (M/E/P ITEMS)

Bidders shall conform to the following changes, as same shall become binding on the Contract to be issued in response to this Invitation to Bid.

Fire Protection

1. Refer to the fire protection drawings; sprinkler heads in 199F, 299, 299C, 299D, and 399B shall be fully recessed type.
2. Refer to sheet FP0121 & FP031; all sprinkler piping, branch piping, and heads in the Gymnasiums and Fitness 117 areas shall be coordinated with the HVLV (BAF) fans located in the truss space. Refer to the mechanical drawings for more information.

Plumbing

1. Refer to specification section 220200. Replace plumbing fixture specifications for fixture P-6A and P-6B with the following:

   P-6A Single Compartment Sink – 15”x17”
   Elkay model LR-1517 single compartment stainless steel sink, 15" x 17" O.D., 18 gauge with 2-hole, 4” center faucet punching. Provide with grid strainer, 3/8" chrome supplies stops, tailpiece, P-trap, drain and escutcheons. Sink trim shall be as follows:
   - Gooseneck faucet with wrist blade handles shall be Zurn model Z812B4-3F with polished chrome-plated cast brass faucet body on 4" centers with quarter turn ceramic disc cartridges and 5-3/8” swing gooseneck spout. Furnish with 0.5 GPM vandal-resistant aerator and 4” color-coded metal wrist blade handles.

   P-6B Double Compartment Sink – 33”x22”
   Elkay LR-3322, compartment stainless steel sink, 33" x 22", each bowl, 18 gauge with 3-hole, 8" center faucet punching. Provide with grid strainer, chrome supply stops, tailpiece, 17 gauge P-trap, drain and escutcheons. Sink trim shall be as follows:
   - Two-handle faucet shall be Zurn model Z871G3 with polished chrome-plated cast brass faucet body on 8” centers with quarter turn ceramic disc cartridges and 4” long integral cast spout. Furish with 0.5 GPM vandal resistant-aerator and 2” color-coded metal dome lever handles
2. Contractor shall coordinate installation of all access panels with all trades to share access panels where applicable.

Mechanical

1. Refer to specification section 230200 – HVAC Equipment; add Climate Master to the list of acceptable manufacturers under Part 4.1.
2. Refer to specification section 201305 – Geothermal Loop System; all chemical treatment as required in Part 9 shall be performed by the water treatment contractor listed in section 201310.
3. Refer to sheet UM0100; all site utility piping is shown for reference only. Refer to site utility drawings (SD-8.0) and the addenda for detailed information.
4. Refer to sheet M0212; the 30x22 return air duct work shall be routed as high as possible. Coordinate routing with structural bracing. Run outs to louvers (L-3x) shall be off the bottom of the duct main as necessary.
5. Refer to sheet M0213; Flexible duct work connections to registers and grilles in Equipment 115C and Corridor 198 shall be acceptable. All ceiling air terminal devices shall be rigidly connected and supported for an exposed installation.
6. Refer to sheet M0213; Recycling/Bldg. Supplies 111 will not have a ceiling. All terminal devices shall be rigidly connected to the ductwork. All supply and outside air ductwork shall have rigid insulation and all ductwork in the space shall be painted to match the structure.

7. Refer to sheet M0214; the supply ductwork main routing below the running track shall be held as tight to structure as possible. Hold the ductwork tight to the exterior wall of the running track overhang.
8. Refer to sheet M0223; see the attached revision sketch REV M0223-1 for air distribution revisions in Aerobics 204. The bottom of the exhaust grilles (E-6) shall be mounted at 10'-0" AFF. Add note 21 to the tagged notes as follows: 21. Return grilles shall be rigidly mounted to the run out duct from the bottom of the main. Provide high efficiency take off with balance damper. Keep the duct and grille as high as possible. All exposed supply and outside air ductwork shall be double wall construction. All ductwork to be painted to match structure. Coordinate with the general trades contractor.
9. Refer to sheet M0232; see the attached revision sketch REV M0232-1 for revised louver L-2A & L-2B locations, dimensions and the corresponding return duct plenum changes.
10. Refer to sheet M0321; all exposed HCS/HCR piping routed in the truss space in Gym 125 and MAC 112 shall be held as tight to the roof deck as possible and be wrapped with 6 oz canvas jacketing.
11. Refer to sheet M0321; the 1" HCS/HCR piping routing down to the radiant floor manifold along the exterior wall shall be enclosed in a cast iron pipe to protect the pipe and insulation. The protective piping shall be a minimum of 4" diameter but shall be coordinated with the required insulation. Protective piping shall be painted to match the structure. Coordinate with the general trades contractor.
12. Refer to sheet M0321 & M0331; the 1" HCS/HCR piping for the upper level gym radiant flooring system shall be routed between the structural beam and the exterior wall. Coordinate routing with the structure. All piping shall be insulated.
13. Refer to sheet M0501; BAF attachment to structure, referenced in views 3 and 5 and noted in Tag Note 1, shall be coordinated with the structural contractor to insure adequate support and attachment point is provided and location is coordinate between trades.
14. Refer to sheet M0501; see the attached revision sketch REV M0501-1 for revised locations and dimensions of the two louvers L-2A/L-2B in Gymnasium 305.
15. Refer to sheet M1101; the escutcheon plate on the Exposed Round Duct Wall Penetration Detail shall be 20 GA prefinished aluminum with hemmed edges and shall be 6" larger than the wall opening.
16. Refer to sheet M1202; see the attached revision sketch REV M1202-1 for additional GRD schedule information.
17. Refer to sheet M1202; all louvers listed in the Louver Schedule shall have flanged frames.
18. Refer to sheet M1202; see the revision sketch REV M1202-2 for changes to the size and performance values of louvers L-2A & L-2B in the Louver schedule.
19. Refer to sheet M1202; alternative manufacturer for the BAF fans in the HVLV Fan Schedule shall coordinate equipment weights with the structural engineer & contractor to insure proper support. Any supplemental bracing/support shall be by the HVLV equipment manufacturer.
20. Contractor shall coordinate installation of all access panels with all trades to share access panels where applicable.

Electrical

1. Refer to sheet E0213; Light fixtures in Equipment 115C and Corridor 198 shall be Type "B" fixtures in lieu of type "H" to accommodate ceiling added in these areas refer to architectural addendum for exact ceiling layout.
2. CCTV head end rack located in Room 122 is to be relocated to a/v distribution room 212B.
3. For clarification BACNET over IP is provide from EM4800 meters. Network connection is provided by the electrical contractor.
4. Refer to sheet E0214; Contractor shall coordinate with engineer prior to rough-in of exterior G2 light fixtures at the running track overhang. Location shall be coordinated with ductwork in this area.
5. Refer to sheet E0223; Light fixtures in Aerobics 204 are to be changed to type "C2". Refer to attached drawing E0223-AD4.1 for revised layout.

6. Refer to attached drawings E0313-AD4.1, E0313-AD4.2, E0314-AD4.1, E0323-AD4.1, E0324-AD4.1, E0324-AD4.2, E0331-AD4.1, AND E0331-AD4.2. For additional CCTV camera locations.
7. Refer to sheet UE1201- Contractor shall provide CCTV camera at north east gate to sports field, and card reader and MAG lock at south east gate to sports field refer to attached drawing UE1201-AD4.1
8. Contractor shall coordinate installation of all access panels with all trades to share access panels where applicable.
9. Refer to sheet UE1401: refer the generator concrete pad detail. For clarification this is a natural gas generator and does require a fuel tank.
10. Contractor shall coordinate installation of receptacle along workout tiers with the casework. Receptacles shall be placed in the lower face of the casework and mounted horizontally.

Refer to specifications section 28075: CCTV system shall be capable of providing remote access over the network.

End of Addendum No. 4 (M/E/P Items)

ADDENDUM NUMBER FOUR (SITE ITEMS)

Bidders shall conform to the following changes, as same shall become binding on the Contract to be issued in response to this Invitation to Bid.

Clarifications

1. Sheets SD 9.0 and 9.1: Metal edging is not required where pavements meet bed edges. Concrete pavements may receive a thickened edge when indicated or warranted. Paver edges are to be stabilized with paver restraint as indicted by detail K/SD-12.3.
2. Metal landscape edging is required only where indicated on Sheets SD-9.0 and 9.1. Metal edging should be installed where turf meets landscape beds and/or changes in grass materials. Metal edging is not necessary at pavements, curbs or pavers or where shrubs are adjacent to grasses. (i.e., Liriope and Fothergilla)
3. Sheet SD-9.1: All trees planted within pavements are to receive paver grate system indicated by detail G/SD-12.4 and Specification Section 329443 which incorporates a metal edging component. This metal edging is not similar to landscape edging.

Plans

4. Sheet SD-8.0: Coded Note #11 shall read: 6" Class 350 Ductile Iron – See MEP Sheet UM0100
5. Sheet SD – 8.0: See Addendum Exhibit SD – F, dated 3.12.12: The Louisville Water Company will be responsible for the water line taps and extending to the meter vaults for each water line extension. The Contractor will be responsible for all costs incurred for the taps and shall coordinate and pay the Louisville Water Company. The Contractor shall be responsible for each water line extension from the meter vaults. The line labeled "FP" shall be eliminated from the scope of work and Coded Note #4 shall be deleted.
6. Sheet SD – 8.0: Add Coded Note #17 that shall read: Water lines and meter vaults/boxes installed by Louisville Water Company. All associated costs to Louisville Water Company shall be the responsibility of and paid for by the Contractor. See Addendum Exhibit SD – F.
7. Sheets SD-9.0, 9.1 and 9.2: Reference to the Planting Schedule. The Red Osier Dogwood specifications reference of 30 gal: 60" spacing shall be removed and replaced with BB 24"-36": 48" spacing.
8. Sheet SD – 12.2: Replace Detail "J" with Detail "J" as shown on Addendum Exhibit SD – G, dated 3.12.12.

Specifications

8. Section 321293 ARTIFICIAL TURF Part 3 – 3.3 INSTALLATION GENERAL – Paragraph F. Infill Materials shall be modified to read:

A. F. Infill Materials:
   1. Infill materials shall be applied in numerous thin lifts. The turf shall be brushed as the mixture is applied. The infill material shall be installed to a depth of 1.5" at the time of installation.

Infill materials shall be installed to fill the voids between the fibers and allow the fibers to remain vertical and non-directional. The Infill installation consists of a homogenous mixture of ambient processed rubber. A final application of specifically sized processed rubber completes the system. The Infill shall be installed to the depth of 1.5". Infill density shall consist of at least 3.33 pounds of rubber per square foot. The Infill shall be placed so that there is a void of ½" to the top of the fibers immediately after installation.

End of Addendum No. 4 (Site Items)

ADDENDUM NUMBER FOUR (STRUCTURAL ITEMS)

Bidders shall conform to the following changes, as same shall become binding on the Contract to be issued in response to this Invitation to Bid.

Drawings:

1. SHEETS S0106, S0107, S0108 & S0109 - SLAB ON GRADE PLAN
   a. (AREA-A,B,C & D)

   i) In SLAB ON GRADE NOTES: No 1 should be read as **"TYPICAL INTERIOR SLAB ON GRADE: 5" THICK SLAB w/W.W.F. 4x4 - W4xW4 OVER 15 MIL POLY VAPOR BARRIER OVER 4" GRAVEL BASE - PER TYPICAL DETAILS"** instead of TYPICAL INTERIOR SLAB ON GRADE: 5" THICK FIBER MESH REINFORCED SLAB OVER 15 MIL POLY VAPOR BARRIER OVER 4" GRAVEL BASE - PER TYPICAL DETAILS.

2. SHEETS S0121, S0122, S0123 & S0124 - MEZZANINE FLOOR FRAMING PLAN (AREA-A,B,C & D)

   i) In MEZZANINE FLOOR FRAMING NOTES: No **3** should be read as **"TYPICAL FLOOR SLAB (6 1/4" TOTAL DEPTH) : 3 1/4" LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W2xW2 ON 3 VLI, 18 GAGE,GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT (TYP., U.N.O.)"** instead of TYPICAL FLOOR SLAB (6 1/4" TOTAL DEPTH) : 3 1/4" LIGHT WEIGHT CONCRETE w/FIBERMESH ON 3 VLI, 18 GAGE,GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT (TYP., U.N.O.).

   ii) In MEZZANINE FLOOR FRAMING NOTES: No **4** should be read as **"FLOOR SLAB [6 1/4" TOTAL DEPTH] 3 1/4" MIN. LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W2xW2 ON 3VLI 18 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT (TYP. U.N.O.) AND 4 3/4" TOPPING SLAB w/W.W.F. 4x4 - W3.5xW3.5 CONCRETE ABOVE INSULATION. SEE DETAIL (5/S0163)"** instead of FLOOR SLAB [6 1/4" TOTAL DEPTH] 3 1/4" MIN. LIGHT WEIGHT CONCRETE W/FIBERMESH ON 3VLI 18 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT (TYP. U.N.O.) AND 4 3/4" TOPPING SLAB W/FIBERMESH CONCRETE ABOVE INSULATION. SEE DETAIL (5/S0163).

   iii) In MEZZANINE FLOOR FRAMING NOTES: No **5** should be read as **"FLOOR SLAB [6 1/4" TOTAL DEPTH] 3 1/4" MIN. LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W2xW2 ON 3VLI, 18 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT (TYP. U.N.O.) AND SLAB [4" TOTAL DEPTH] 2 1/2" MIN. LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W1.4xW1.4 ON 1.5C, 20 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT ABOVE ISO-LAT SYSTEM.SEE DETAIL (5/S0163)"** instead of FLOOR SLAB [6 1/4" TOTAL DEPTH] 3 1/4" MIN. LIGHT WEIGHT CONCRETE W/FIBERMESH ON 3VLI, 18 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT (TYP. U.N.O.) AND SLAB [4" TOTAL DEPTH] 2 1/2" MIN. LIGHT WEIGHT CONCRETE W/FIBERMESH ON 1.5C, 20 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT ABOVE ISO-LAT SYSTEM.SEE DETAIL (5/S0163).

3. SHEETS S0131, S0132, S0133 & S0134 - LEVEL 02 FLOOR FRAMING PLAN (AREA-A,B,C & D)

   i) In LEVEL 02 FLOOR FRAMING NOTES: No **2** should be read as **"FLOOR SLAB [10 1/2" TOTAL DEPTH] 3" MIN. LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W1.4xW1.4 ON EDCP750A, 16/18 GAGE GALVANIZED EPIC WIDECK BY EPIC METAL**

CORPORATION" instead of FLOOR SLAB [10 1/2" TOTAL DEPTH] 3" MIN. LIGHT WEIGHT CONCRETE w/FIBERMESH ON EDCP750A, 16/18 GAGE GALVANIZED EPIC WIDECK BY EPIC METAL CORPORATION.

ii) In LEVEL 02 FLOOR FRAMING NOTES: No **3** should be read as **"FLOOR SLAB [13" TOTAL DEPTH] 5 1/2" MIN. LIGHT WEIGHT CONCRETE w/W.W.F. 6x6 - W2.5xW2.5 ON EDCP750A, 16/18 GAGE GALVANIZED EPIC WIDECK BY EPIC METAL CORPORATION. SEE SECTION 9/S0161"** instead of FLOOR SLAB [13" TOTAL DEPTH] 5 1/2" MIN. LIGHT WEIGHT CONCRETE w/FIBERMESH ON EDCP750A, 16/18 GAGE GALVANIZED EPIC WIDECK BY EPIC METAL CORPORATION. SEE SECTION 9/S0161.

iii) Sketches **ST-45, ST-46, & ST-47** modify part of sheet S0131. Steel tubes to support the Big Ass Fans (BAF) have been added.

4. SHEET S0145 - RACQUETBALL COURT ROOF FRAMING PLAN

i) Replace Sketch **1/ST-33 (ADDENDUM #3)** with Sketch **1/ST-33 REVISED**.

5. <u>SHEET S0144 – LOW ROOF FRAMING PLAN – AREA D</u>

i) Sketches **ST-48, ST-49, & ST-50** modify part of sheet S0144. Steel tubes to support the Big Ass Fans (BAF) have been added.

6. SHEET S0164 - SECTIONS AND DETAILS

i) In **Sections 3 & 4** Note **1** should be read as **"ELEVATOR ROOF SLAB (8" TOTAL DEPTH) 5" MIN. LIGHT WEIGHT CONCRETE w/ W.W.F. 6x6 - W2.5xW2.5 ON 3C, 16 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT"** instead of ELEVATOR ROOF SLAB (8" TOTAL DEPTH) 5" MIN. LIGHT WEIGHT CONCRETE w/ FIBER MESH ON 3C, 16 GAGE GALVANIZED METAL DECK BY VULCRAFT OR APPROVED EQUIVALENT.

7. SHEET S0174 SECTIONS AND DETAILS

i) In **SECTION 9/S0174**, Add waterstop for keyed joints- **"GREENSTREAK SWELLSTOP WATERSTOP OR EQUAL, INSTALL PER MFRG. INSTRUCTIONS".**

8. SKETCH ST-39

i) Add the following as note 2 in Sketch **1/ST-39 (PHASE #4, ADDENDUM #3)**, **"ARCHITECT SHEET A-516, DETAIL #1, THE (2) STEEL TUBES SHOWN AT THE MID-LEVEL LANDING OF THE STAIRCASE SHALL BE LABELED AS HSS8x4x1/4".**

9. NEW TYPICAL DETAILS

i) Sketch **"1/ST-43 and 1/ST-44"** illustrates new typical details.

Sketch **1/ST-51** detail connection of new tubes to truss chords.

End of Addendum No. 4 (Structural Items)

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Foam-plastic board insulation.
2. Glass-fiber blanket insulation.
3. Loose-fill insulation.
4. Spray-applied cellulosic insulation.
5. Spray polyurethane foam insulation.

B. Related Sections:

1. Section 042000 "Unit Masonry" for insulation installed in cavity walls and masonry cells.
2. Section 061600 "Sheathing" for foam-plastic board sheathing over steel framing.
3. Section 071413 "Hot Fluid-Applied Rubberized Asphalt Waterproofing" for insulated drainage panels installed with waterproofing.
4. Section 075216 "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing" for insulation specified as part of roofing construction.
5. Section 078446 "Fire-Resistive Joint Systems" for insulation installed as part of a perimeter fire-resistive joint system.
6. Section 092116.23 "Gypsum Board Shaft Wall Assemblies" and Section 092000 “Gypsum Board” for installation in wood- and metal-framed assemblies of insulation specified by referencing this Section.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. LEED Submittals:

1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.

1.4 INFORMATIONAL SUBMITTALS

A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each product.

B. Research/Evaluation Reports: For foam-plastic insulation, from ICC-ES.

1.5 QUALITY ASSURANCE

A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

B. Protect foam-plastic board insulation as follows:

1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site before installation time.
3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.

PART 2 - PRODUCTS

2.1 FOAM-PLASTIC BOARD INSULATION

A. Extruded-Polystyrene Board Insulation: ASTM C 578, of type and minimum compressive strength indicated below, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. DiversiFoam Products.
b. Dow Chemical Company (The).
c. Owens Corning.
d. Pactiv Building Products.

2. Type IV, 25 psi (173 kPa).

B. Unfaced Wall Insulation Drainage Panels: Extruded-polystyrene board insulation complying with ASTM C 578, Type IV, 25-psi (173-kPa) minimum compressive strength; unfaced; fabricated with shiplap or channel edges and with one side having grooved drainage channels.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. DiversiFoam Products.
b. Dow Chemical Company (The).
c. Pactiv Building Products.

C. Geotextile-Faced Wall Insulation Drainage Panels: Extruded-polystyrene board insulation complying with ASTM C 578, Type IV, 25-psi (173-kPa) minimum compressive strength; fabricated with tongue-and-groove edges and with one side having grooved drainage channels faced with nonwoven geotextile filter fabric.

1. Manufacturers: Subject to compliance with requirements, provide products by one of available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Owens Corning.

D. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

2.2 GLASS-FIBER BLANKET INSULATION

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. CertainTeed Corporation.
2. Guardian Building Products, Inc.
3. Johns Manville.
4. Knauf Insulation.
5. Owens Corning.

B. Recycled Content: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 20 percent.

C. Kraft-Faced, Glass-Fiber Blanket Insulation: ASTM C 665, Type II (non-reflective faced), Class C (faced surface not rated for flame propagation); Category 1 (membrane is a vapor barrier).

D. Sustainability Requirements: Provide glass-fiber blanket insulation as follows:

1. Free of Formaldehyde: Insulation manufactured with 100 percent acrylic binders and no formaldehyde.
2. Low Emitting: Insulation tested according to ASTM D 5116 and shown to emit less than 0.05-ppm formaldehyde.

2.3 LOOSE-FILL INSULATION

A. Glass-Fiber Loose-Fill Insulation: ASTM C 764, Type I for pneumatic application or Type II for poured application; with maximum flame-spread and smoke-developed indexes of 5, per ASTM E 84.

1. Recycled Content: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 20 percent.

2.4 SPRAY-APPLIED CELLULOSIC INSULATION

A. Self-Supported, Spray-Applied Cellulosic Insulation: ASTM C 1149, Type II (materials containing a dry adhesive activated by water during installation; intended only for enclosed or covered applications), chemically treated for flame-resistance, processing, and handling characteristics.

1. Recycled Content: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 20 percent.

2. Application: Provide around each roof drain pan & at other locations noted for insulation.

3. Subject to compliance with requirements, available products that may be incorporated into the work include, but are not limited to:
   a. International Cellulose Corporation K-13 White (2" Thick).

2.5 INSULATION FASTENERS

A. Adhesively Attached, Spindle-Type Anchors: Plate welded to projecting spindle; capable of holding insulation of specified thickness securely in position indicated with self-locking washer in place.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

   a. AGM Industries, Inc.; Series T TACTOO Insul-Hangers.
   b. Gemco; Spindle Type.

2. Plate: Perforated, galvanized carbon-steel sheet, 0.030 inch (0.762 mm) thick by 2 inches (50 mm) square.
3. Spindle: Copper-coated, low-carbon steel; fully annealed; 0.105 inch (2.67 mm) in diameter; length to suit depth of insulation indicated.

B. Adhesively Attached, Angle-Shaped, Spindle-Type Anchors: Angle welded to projecting spindle; capable of holding insulation of specified thickness securely in position indicated with self-locking washer in place.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

   a. Gemco; 90-Degree Insulation Hangers.

2. Angle: Formed from 0.030-inch- (0.762-mm-) thick, perforated, galvanized carbon-steel sheet with each leg 2 inches (50 mm) square.
3. Spindle: Copper-coated, low-carbon steel; fully annealed; 0.105 inch (2.67 mm) in diameter; length to suit depth of insulation indicated.

C. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch- (0.41-mm-) thick galvanized-steel sheet, with beveled edge for increased stiffness, sized as required to hold insulation securely in place, but not less than 1-1/2 inches (38 mm) square or in diameter.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

   a. AGM Industries, Inc.; RC150.
   b. Gemco; Dome-Cap.

2. Protect ends with capped self-locking washers incorporating a spring steel insert to ensure permanent retention of cap in the following locations:
   a. Ceiling plenums.
   b. Soffits.
   c. Where indicated.

D. Insulation Standoff: Spacer fabricated from galvanized mild-steel sheet for fitting over spindle of insulation anchor to maintain air space of 1 inch (25 mm) between face of insulation and substrate to which anchor is attached.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

    a. Gemco; Clutch Clip.

E. Anchor Adhesive: Product with demonstrated capability to bond insulation anchors securely to substrates indicated without damaging insulation, fasteners, and substrates.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

    a. AGM Industries, Inc.; TACTOO Adhesive.
    b. Gemco; Tuff Bond Hanger Adhesive.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrates of substances that are harmful to insulation or that interfere with insulation attachment.

3.2 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.3 INSTALLATION OF BELOW-GRADE INSULATION

A. On vertical surfaces, set insulation units using manufacturer's recommended adhesive according to manufacturer's written instructions.

1. If not otherwise indicated, extend insulation a minimum of 36 inches (915 mm) below exterior grade line.

3.4 INSTALLATION OF CAVITY-WALL INSULATION

A. Foam-Plastic Board Insulation: Install pads of adhesive spaced approximately 24 inches (610 mm) o.c. both ways on inside face, and as recommended by manufacturer. Fit courses of insulation between wall ties and other obstructions, with edges butted tightly in both directions. Press units firmly against inside substrates.

1. Supplement adhesive attachment of insulation by securing boards with two-piece wall ties designed for this purpose and specified in Section 042000 "Unit Masonry." Insulation may not be “Friction-Fit”

3.5 INSTALLATION OF INSULATION FOR FRAMED CONSTRUCTION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Foam-Plastic Board Insulation: Seal joints between units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.

C. Glass-Fiber Blanket Insulation: Install in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. Maintain 3-inch (76-mm) clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
4. For metal-framed wall cavities where cavity heights exceed 96 inches (2438 mm), support unfaced blankets mechanically and support faced blankets by taping flanges of insulation to flanges of metal studs.
5. For wood-framed construction, install blankets according to ASTM C 1320 and as follows:

    a. With faced blankets having stapling flanges, secure insulation by inset, stapling flanges to sides of framing members.
    b. With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.

D. Spray-Applied Insulation: Apply spray-applied insulation according to manufacturer's written instructions. Do not apply insulation until installation of pipes, ducts, conduits, wiring, and electrical outlets in walls is completed and windows, electrical boxes, and other items not indicated to receive insulation are masked. After insulation is applied, make flush with face of studs by using method recommended by insulation manufacturer. Where exposed to view, mask-off area neatly.

3.6 INSTALLATION OF INSULATION IN CEILINGS FOR SOUND ATTENUATION

A. Where glass-fiber blankets are indicated for sound attenuation above ceilings, install blanket insulation over entire ceiling area in thicknesses indicated. Extend insulation 48 inches (1219 mm) up either side of partitions.

3.7 INSTALLATION OF GLASS FIBER BLANKET INSULATION

A. Provide Glass Fiber Blanket Insulation in all locations where shown on Drawings with Batt Insulation Symbol indicated on sheet A-001.

3.8 INSTALLATION OF INSULATION FOR CONCRETE OR CMU SUBSTRATES

A. Install board insulation on concrete substrates by adhesively attached, spindle-type insulation anchors as follows:

1. Fasten insulation anchors to concrete substrates with insulation anchor adhesive according to anchor manufacturer's written instructions. Space anchors according to insulation manufacturer's written instructions for insulation type, thickness, and application indicated.
2. Apply insulation standoffs to each spindle to create cavity width indicated between concrete substrate and insulation.
3. After adhesive has dried, install board insulation by pressing insulation into position over spindles and securing it tightly in place with insulation-retaining washers, taking care not to compress insulation below indicated thickness.
4. Where insulation will not be covered by other building materials, apply capped washers to tips of spindles.

3.9 INSTALLATION OF CURTAIN-WALL INSULATION AT HEAD, JAMB, & SILLS

A. Install board insulation in curtain-wall construction where indicated on Drawings according to curtain-wall manufacturer's written instructions.

1. Hold insulation in place by securing metal clips and straps or integral pockets within window frames, spaced at intervals recommended in writing by insulation manufacturer to hold insulation securely in place without touching spandrel glass. Maintain cavity width of dimension indicated between insulation and glass.
2. Install insulation where it contacts perimeter fire-containment system to prevent insulation from bowing under pressure from perimeter fire-containment system.

3.10 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 072100

SECTION 122413 - ROLLER WINDOW SHADES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Manually operated roller shades with single rollers.

B. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for wood blocking and grounds for mounting roller shades and accessories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions for roller shades.

B. Shop Drawings: Show fabrication and installation details for roller shades, including shadeband materials, their orientation to rollers, and their seam and batten locations.

C. Samples: For each exposed product and for each color and texture specified, 10 inches (250 mm) long.

D. Samples for Initial Selection: For each type and color of shadeband material.

1. Include Samples of accessories involving color selection.

E. Roller-Shade Schedule: Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Certificates: For each type of shadeband material, signed by product manufacturer.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roller shades to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver roller shades in factory packages, marked with manufacturer, product name, and location of installation using same designations indicated on Drawings.

1.8 FIELD CONDITIONS

A. Environmental Limitations: Do not install roller shades until construction and finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operating hardware of operable glazed units through entire operating range. Notify Architect of installation conditions that vary from Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide MechoShade Systems, Inc., or comparable product by one of the following:

1. BTX Window Automation, Inc.
2. DFB Sales.
3. Draper Inc.
4. Hunter Douglas Contract.
5. Lutron Electronics Co., Inc.
6. MechoShade Systems, Inc.
7. Nysan Solar Control Inc.; Hunter Douglas Company.
8. OEM Shades Inc.
9. Shade Techniques, LLC.
10. Silent Gliss USA, Inc.
11. SM Automatic, Inc.

B. Source Limitations: Obtain roller shades from single source from single manufacturer.

2.2 MANUALLY OPERATED SHADES WITH SINGLE ROLLERS

A. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch that stops shade movement when bead chain is released; permanently adjusted and lubricated.

1. Bead Chains: Stainless steel.

a. Loop Length: Full length of roller shade.
b. Limit Stops: Provide upper and lower ball stops.
c. Chain-Retainer Type: Clip, jamb mount.

2. Spring Lift-Assist Mechanisms: Manufacturer's standard for balancing roller-shade weight and lifting heavy roller shades.

a. Provide for shadebands that weigh more than 10 lb (4.5 kg) or for shades as recommended by manufacturer, whichever criteria are more stringent.

B. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate operating mechanisms and weights and widths of shadebands indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of shadebands for service.

1. Roller Drive-End Location: Right side of inside face of shade.
2. Direction of Shadeband Roll: Regular, from back of roller.
3. Shadeband-to-Roller Attachment: Manufacturer's standard method.

C. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.

D. Roller-Coupling Assemblies: Coordinated with operating mechanism and designed to join up to three inline rollers into a multiband shade that is operated by one roller drive-end assembly.

E. Shadebands:

1. Shadeband Material: Light-filtering fabric.
2. Shadeband Bottom (Hem) Bar: Steel or extruded aluminum.

a. Type: Exposed with endcaps.
b. Color and Finish: As selected by Architect from manufacturer's full range.

F. Installation Accessories:

1. Front Fascia: Aluminum extrusion that conceals front and underside of roller and operating mechanism and attaches to roller endcaps without exposed fasteners.

a. Shape: L-shaped.
b. Height: Manufacturer's standard height required to conceal roller and shadeband when shade is fully open, but not less than 3 inches (76 mm).

2. Exposed Headbox: Rectangular, extruded-aluminum enclosure including front fascia, top and back covers, endcaps, and removable bottom closure.

a. Height: Manufacturer's standard height required to enclose roller and shadeband when shade is fully open, but not less than 3 inches (76 mm).

3. Endcap Covers: To cover exposed endcaps.
   a. 2 inches (51 mm).

2.3 SHADEBAND MATERIALS

A. Shadeband Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

B. Light-Filtering Fabric: Woven fabric, stain and fade resistant.

1. Source: Roller-shade manufacturer.
2. Type: Woven PVC-coated fiberglass and PVC-coated polyester.
3. Weave: Mesh.
4. Roll Width: Without Seams.
5. Orientation on Shadeband: Up the bolt.
6. Openness Factor: 5 percent.
7. Color: As selected by Architect from manufacturer's full range.

2.4 ROLLER-SHADE FABRICATION

A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1, including requirements for flexible, chain-loop devices; lead content of components; and warning labels.

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F (23 deg C):
   1. Outside of Jamb Installation: Width and length as indicated, with terminations between shades of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.

C. Shadeband Fabrication: Fabricate shadebands without battens or seams to extent possible except as follows:

1. Vertical Shades: Where width-to-length ratio of shadeband is equal to or greater than 1:4 provide battens and seams at uniform spacings along shadeband length to ensure shadeband tracking and alignment through its full range of movement without distortion of the material.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ROLLER-SHADE INSTALLATION

A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer's written instructions.

1. Opaque Shadebands: Located so shadeband is not closer than 2 inches (51 mm) to interior face of glass.

3.3 ADJUSTING

A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.4 CLEANING AND PROTECTION

A. Clean roller-shade surfaces after installation, according to manufacturer's written instructions.

B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of Substantial Completion.

C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

END OF SECTION 122413

University of Louisville **ADDENDUM NO. 4**
Student Recreation Center

Date of Addendum: March 13, 2012

Owner	**Architects and Engineers**
Owner's Name	Cannon Design
Street Address	2170 Whitehaven Road
City, State Zip Code	Grand Island, New York 14072

This Addendum amends Drawings and/or Specifications and/or Addenda for the above titled project, as indicated below, and is hereby incorporated into the Contract Documents as part thereof.

Bidders are required to acknowledge receipt of this Addendum in the space provided on the Proposal/Bid Form.

Attachments:

Specifications:

SPECIFICATIONS (PROJECT MANUAL)

1. SECTION 093000 - TILING

   A. Page 093000-5

      1) In 2.6 strike A and B and insert the following:

         "A. Water Cleanable Epoxy Grout: ANSI A118.3.

            1. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 deg F and 212 deg F, respectively, and certified by manufacturer for intended use.

               a. MAPEI Corportion: Kerapoxy."

   B. Page 093000-11

      1) Strike 3.7, A entirely.

      2) In 3.7, B after "F122" insert "or F122A".

      3) In 3.7, B, strike 2 and insert the following:

         "2. Thin-set Mortar: Thin-set or medium bed, Portland Cement Mortar"

      4) In 3.7, B strike "Polymer modified sanded grout" and insert the following:

         "Epoxy grout"

      5) In 3.7, strike C entirely and insert the following:

         "C Tile Installation B 41511: floor and wall assembly, thin-set mortar on water proofing on cementious backer board or mortar bed:

            1. TileType: Ceramic Tile

            2. Thin-Set Mortar: latex Portland Cement Mortar.

3. Grout: Epoxy Grout.

2. SECTION 096566 - RESILIENT ATHLETHIC FLOORING

A. Page 096566-3

1) After 2.2, A, 1, add the following:

"4. Mat, Inc."

B. Page 096566-6

1) After 3.4, D.1, insert the following:

"2. RAF-1 only: Follow manufacturer written instructions. Weight seams with concrete utility blocks 2" x 4" x 8".

Completely cover the seams for a minimum period of 24 hours."

3. SECTION 105113 - METAL LOCKERS

A. Page 105113-2

1) After 2.1, D, insert the following:

"E. Steel Plates, Shades and Bars: ASTM A36/A36M."

B. Page 105113-4

1) In 2.3, A, Strike "of 17 ½ inches (445 mm)" and insert:

"as indicated on the drawings."

C. Page 105113-5

1) In 2.3, F, strike "3" x 3" x 1/4" " and insert "2 1/2" x 2 1/2" x 1/4" ":

4. SECTION 111413 - TURNSTILES

A. Page 111413-2

1) Strike 2.2 in its entirety and insert the following:

"A. Construction
1. Exterior: Satin finish (#4) stainless steel.
2. Lid: Livingstone acrylic resin, Starry Night Black.
3. Base: Recessed, powdercoated in RAL 9017, Solar Black.
4. Barrier Arm: 1.75 inch diameter aluminum tubing with clear anodized finish.

B. Equipment

1. General: Upon receiving a signal from an access control system, GateKeeper software, or a push button device, the barrier arms will open and allow a single user to pass through the turnstile in the direction requested. The turnstile will reset after the user has passed through the turnstile or the time frame allowed for entry to occur has expired. If an unauthorized user attempts to tailgate or enter from the opposite direction, the unit will recognize the illegal passage and a built in violation alarm will be activated. Each turnstile shall be bi-directional in operation shall operate in three Passage Modes (see below).
2. Types of Units: The installation shall consist of end and center lanes, as required by the installation location. Center lanes shall have the same dimensions as end lanes.
3. Operating Modes:
   a. Normally Closed: The barrier arms are raised, securing the turnstile. Upon receipt of an authorization signal from the access control system, the arms will drop in a controlled manner and allow a single passage in the authorized direction. The arms return to the raised position after the user has passed through the turnstile or the time frame allowed for entry expires.
   b. Normally Open: The barrier arms are down, providing a barrier free passageway. The barrier arms will not raise and secure the turnstile unless tailgating or an unauthorized passage is attempted.
   c. Barrier Disabled: The arms remain open, allowing the unit to function as a barrier free optical turnstile.
   d. Optical safety sensors shall be present to prevent the arms from closing when the passageway is blocked.
   e. The barriers arms shall stop and return to the “home” position if they encounter resistance while closing.
   f. When fully closed, the arms shall retract downward upon the application of approximately 15 lbs. of downward pressure on the arms.
   g. When the fire alarm input is triggered, the barrier arms shall lower, leaving a barrier free passageway.
   h. When power to the unit is lost, the arms shall lower through mechanical means.

4. Passage Mode: There are three operating states:
   a. Free Passage: All patrons are allowed to pass. The arms lower when the first sensor in the various arrays is activated and the arms remain lowered until the passing patron, or subsequent patrons, either pass through or back out of the turnstile. Provide locked entry with override mode push button.
   b. Lane Closed: No passage is allowed. Valid electronic credentials are ignored.
5. System Integration:
   a. General: Each unit shall integrate with outside systems through the use of dry contact inputs and outputs.
   b. Custom: Custom methods of integration (through software) shall be available if desired by the end user.
   c. Available Inputs: Available inputs shall include:
      1) Direction closed, no passage x 2
      2) Direction open, free passage x 2

3) Override passage (guard override) x 2
4) Passage allowed, access granted x 2
5) Passage denied, access denied x 2
6) Alarm reset x 1
7) Disable barrier x 1
8) Emergency override x 1

d. Available Outputs: Available outputs shall include:
1) Authorized Passage x 2
2) Unauthorized Passage x 2
3) Violation alarm x 2
4) Aborted Entry Timeout x 2
5) Blocked Sensor x 2
6) Total passage counter x 2

e. Sounds: Each unit shall have the following sounds available for the various types of alarms and notification.
1) Pleasant chime – Access granted
2) Buzzer – Access denied and violation alarms
3) Chirp – Loitering / blocked sensor

f. Diagnostics: Each unit shall have diagnostic capability through use of a standard PC.

g. Turnstile Control: It shall be possible to control the turnstiles through:
1) Provide Windows based control software

2) From the access control system via dry contact interface.

6. <u>User Interface:</u>
a. Status Icons User Instructions: The unit shall have illuminated (high bright LED arrays) status user icons. Status user icons shall be located on the lid, on each side of the unit. Status user Icons to be as follows:

1) A yellow card shall symbolize the turnstile is ready for card presentation.
2) A green arrow shall signify that passage is allowed in the direction indicated and patron to proceed through the turnstile.
3) A red stop “X” symbol shall signify that passage is prohibited in the direction indicated.
4) A flashing green arrow shall signify that free passage is allowed in the direction indicated.
5) A flashing red stop “X” symbol shall signify an alarm condition.

b. Open / Closed Light User Instructions: The unit shall have illuminated (high bright LED arrays). Open / closed lights shall be located on the end of the unit and lights shall appear on the right-hand sides of each turnstile in each direction. Open / closed lights to be as follows:
1) A green arrow consistently illuminated means the turnstile is open for use.
2) A red stop “X” symbol shall signify the turnstile is closed for use.
3) A flashing green arrow means the turnstile is open for use.

4) A flashing red stop “X” symbol shall signify an alarm condition.

7. Operator Interface for Control**:**
   a. GateKeeper Control and Monitoring Software: Windows based control software shall be provided that allows diagnostics and control of all installed units. The control software shall be Windows based and communication between the control software and the units shall be via RS485 serial communication.
   b. Diagnostics: The control software shall have diagnostic capability to diagnose unit irregularities.
   c. Diagnostics Communication: Each turnstile shall provide its current operational status to the control software.
   d. Control Portion of Software: The control portion of the software shall include:
      1) The control portion of the software shall have three different levels of access, with the level of access dependent on the level of the operator. Access levels shall be password protected.
      2) The control software shall maintain a real time status of all units installed in a facility, including barrier, activation and alarm status.
      3) The control software shall allow the mode status of turnstiles to be changed and updated in real time via a configuration menu.
      4) The control software shall allow the passage mode status of turnstiles to be changed and updated in real time via a configuration menu.
      5) The control software shall monitor turnstile alarm conditions and alert the operator to turnstile alarm conditions caused by any of the following: Unauthorized entry; tailgating; delayed entry; crawl violation; loitering or gate crashing.
      6) The control software shall allow for either a manual or a timed reset in the case of an alarm violation.
      7) The control software shall allow the turnstiles to be placed in an emergency override condition either manually or through a fire input.
      8) The control software shall allow the operator to allow a single passage through an individual turnstile in either direction.
      9) The control software shall have an advanced setting section that will allow advanced settings to be configured for each turnstile. Advanced settings include: blocked sensor time limit; alarm mode; alarm duration; aborted passage timer; crawl detection disable; physical orientation (useful during installation); tailgate sensitivity.

   e. Event Scheduler: The control portion of the software shall include an integrated event scheduler. This feature shall enable turnstile settings such as barrier mode, entry mode and exit mode to be changed automatically at scheduled times.

f. Event Scheduler: The control portion of the software shall allow specific “Events” to be created for individual units or for all units to allow the user to automatically determine the mode status and passage mode status at user definable times. The software shall allow events to be saved and associated with particular dates (weekdays; holidays, etc.).

g. Event Scheduler: The control portion of the software shall include a list of predefined templates as well as a menu to easily create new events.

h. Log Report: The control portion of the software shall maintain a detailed log of all activity for a defined period – not to exceed 7 days. The log shall track the alarms generated from each turnstile as well as the activities performed by each of the three allowed levels of operators within the software.

8. Detection Sensors:

a. Separate Transmitter and Receiver: Each sensor shall be composed of a separate transmitter and receiver.

b. Operation: Sensor operation shall not be affected by natural or indoor lighting.

c. Sensor Deployment: Sensors shall be deployed at various heights to be able to detect persons accurately and be able to detect persons crawling or rolling through the turnstile.

d. Operation: The unit shall be able to detect and avoid generating alarms for commonly carried objects.

e. Tailgate Settings – Tailgate sensitivity settings shall be adjustable via DIP switches and/or through use of GateKeeper software.”

END OF ADDENDUM NO. 4

SRC GC Questions as of 3-13-12

QUESTIONS AND RESPONSES NOT INCLUDED WITH ADDENDUM #3

Q56 Specification Section 3.3A refers to a grout flow of not less than 21 seconds, please clarify if this is using a standard ½" Flow cone. If so the more standard specification section would reference a flow of 10 to 25 seconds using a cone with a ¾" opening as recommended by the Deep foundations institute specifications.
UofL Modify this section to use a ¾" cone with a flow rate of 10 to 25 seconds.

Q59 Pile load testing section refers to the use of ASTM D1143-81 and provides for use of the quick test with a 12 hour hold at 2 times design load. The current ASTM, D1143-07 uses the quick test method as is standard loading method. Given the fact that overload of the pile is required to 2.5 times design it is not typical to have an extended hold period prior to reaching the maximum test load and can cause inconsistencies in your time vs. deflection plots. Please consider switching this reference to the current standard with the typical hold times it provides.
UofL Use ASTM D1143-07 Procedure A test for pile load testing.

Q61 At several locations in the specification there are references to "Auger withdrawals" this practice is common in the installation of drilled shafts and Caissons as a method of strata verification. Given the installation methods for APG piles and the geotechnical conditions present at this site Auger withdrawals become impractical and a waste of time and money. When a continuous flighted auger is removed from the ground prior to grouting it is almost impossible to view the walls of the shaft due to its slender nature and due to the augering process the material present on the auger stem is not indicative of the in situ material the same depth below the drill grade. We would ask the auger withdrawals be removed from the specification.
UofL Auger withdrawals are not required. Please delete all references to auger withdrawals.

Q62 Currently the Drawing S0173 Detail 4 shows a 180 degree hook at the top of each vertical bar in the APG cage. Depending on the working grade these hooks are impossible to install as shown The projection required for a #8 bar into the pile caps shown is less than 36". Can the cage detail be amended to show a consistent bar projection into the pilecap utilizing a straight bar in lieu of the hooks currently shown. Varying steel projection above the top of pile dependent on cap thickness adds unnecessary complication to the process and increases the risk of non-conformance.
UofL The 180 degree hooks can be turned inward toward the middle of the pile. The hooks are still required and the piles will be installed as detailed in the drawings.

Q94 Should the Red Osier Dogwood be a 3 gallon plant as opposed to a 30 gallon plant? In the plant key it is listed as a 30 gal.
Response: Refer to Addendum Number Four (Site Items), Item 7

Q95 SD-9.0 Metal Edging: Foundation planting: Its obvious that the edging will separate plant groupings and where turf meets the bed line. Is there to be metal edging where paved surfaces meet the bed edges (i.e; concrete curbing, sidewalks, pavers)?
Response: Refer to Addendum Number Four (Site Items), Item 1, 2 and 3

Q96 SD-9.0 Metal Edging: SW island planting: Is there to be edging between the Liriope planting and the Fothergilla? Is there to be edging at the concrete curb edge?
Response: Refer to Addendum Number Four (Site Items), Item 1, 2 and 3

Q97 SD-9.1 Metal Edging: Its obvious that the edging will separate plant groupings and where turf meets the bed line. Is there to be metal edging where paved surfaces meet the bed edges (i.e; concrete curbing, sidewalks, pavers)? Do the NE tree islands require edging?
Response: Refer to Addendum Number Four (Site Items), Item 1, 2 and 3

Q98 SD-9.2 Metal Edging: Is there to be metal edging between the Fountain Grass and the Dogwood or anywhere else on this page?
Response: Refer to Addendum Number Four (Site Items), Item 1, 2 and 3

Q99 If you take a look at your fire rating column there are several openings indicated as 'ST' – Can you please tell me what that means? We have checked the wall types for these particular openings and they do not appear to be fire rated however we would like clarification so that we don't miss something.
Response: The "ST" designation represents "Smoke Tight".

Q100 Can you please tell me what the thickness of the Taraflex Sport M Plus is (Section 096566 Resilient Athletic Flooring) as it is not called out in the spec's.
Response: (Reference Specification Section 096566 "Resilient Athletic Flooring", Paragraph 2.4 "Sheet Vinyl Flooring RAF-4 (Classrooms)) The thickness of the Taraflex Sport M Plus is 0.27" (7mm).

Q101 Should the fire sprinkler contractor follow sheet UM0100 note #28? If so what would we be connecting to? SD-8.0 indicates two lines brought to the property line both 6."Since the Louisville Water Company will only allow one line will the line brought across be the same size and will it Ductile, c900, or sch80 PVC as #11 indicates.
Response: Refer to Addendum Number Four (Site Items), Item 5 and 6

Q102 Is the previously awarded structural steel contractor responsible for all of his access roads and laydown areas. I see no mention of this in the BP #3 documents. Please clarify who is responsible for this.
Response: The assignment for Means and Methods of Construction for Bid Package, Phase #3 shall be the responsibility of the General Contractor Best Value including site logistics. The laydown area anticipated, follows the construction sequence diagram in the area north of the fitness area 117B. Refer to Addendum Four (Architectural Items), Item 1 referencing proposed Erection Sequencing Plan prepared by Geiger & Peters and Huelsman Sweeney.

Q103 There is mention of removal and replacement of unsuitable soils in the soils report and on the Structural drawing general notes. Are we to include an allowance amount of cubic yards to assume removal and replacement? If not, how will unsuitable soils be handled? I do not see a unit price for this on the bid form.
Response: All Earthwork is "UNCLASSIFIED" and costs will be the responsibility of the Bid Package, Phase #4 General Contractor Best Value, based upon the information available. There will be NO "classified" change orders based upon allowances or unit pricing.

Q104 See page FP-4 on the bidform. There is a unit price under General for Shut down days. This unit price seems vague. Please provide further explanation of what this unit price is to include..
Response: In the event the University of Louisville requests the Bid Package, Phase #4 General Contractor Best Value to shut down work due to either an academic, administrative, or housing event, the unit price will be utilized to compensate the GCBV.

Q105 Are metal angle iron bench supports and wood bench tops in the locker rooms by locker trade or "metal fabrications" and "interior architectural woodwork" per the "Related Sections" in the locker specifications? The drawing detail (A-803) says Section 105113.

Response: The listed metal supports and wood bench tops are per specification section 105113 “Metal Lockers”. See also Addendum Number Four (Architectural Items), Items 17.

Q106 What does the bench detail of 3A-906 correspond to? The benches are perforated formed metal with backs. The north gym benches on A-111 keynote says that details are 1 and 2A-906. They are standard pedestal benches. The racquetball bench detail is on 8A-606. They are specified as wood benches by Forms and Surfaces with no backs on them. Is there a specification for 3A-906? Where are they at?
Response: Benches located in Gymnasium 125 and 305 and detail 3/A-906 are to be Owner Furnished / Owner Installed. See also Addendum Number Four (Architectural Items), Item 8

Q107 Are wall to wall large mirrors (TA-21) in Rooms 116,120,206,207,301,302 by Toilet Accessories or Mirror Glazing Sections? The mirrors look like they have cut-outs for soap dispensers in some areas.
Response: Mirrors in rooms 116A, 120A, 206, 207, 301 and 302 are to be included in specification section 088300 “Mirrors”.

Q108 On the window schedule for this project there are several elevations that have glass type GL-6 listed that has the area where the glass is designated for hatched (such as F20 on A-1011). Under the 88000 glazing specification (2.12/A/6b), it says that to use laminated glass type GL-6b (which is frosted tempered laminated). Am I correct to assume that the hatched GL-6 glass is to have a frosted laminated inboard lite?
Response: (Reference Drawing A-1011, Frame Type “FT20”) Referenced frame type elevation incorrectly shows a hatch. The glazing type for this frame type to be GL-6 as shown in the drawings. The glazing in FT20 to be tempered and laminated. A frosted inboard lite is NOT required. See also Addendum Number Four (Architectural Items), Item 9.

Q109 Is it required for the painter to apply any extra coat on all the intumescent fireproofing spray texture?
Response: (Reference Specification Section 078123 “Intumescent Fireproofing”) Intumescent fireproofing application and pigmented top coat are the requirement of the intumescent fireproofing installer. Refer to Addendum Four (Architectural Items), Item 7 for additional information pertaining to intumescent fireproofing requirements.

Q110 Reference Section 312000-5 “Earthwork Moving” paragraph 3.04 item “A”: Please clarify which method will be required to address the undocumented existing fill under the proposed building foot print. Is this part of the base bid or will this be handled by unit pricing ? Please note on page 4 of the soil report the borings encountered existing fills to a depths up to 10 feet.
Response: All Earthwork is “UNCLASSIFIED” and costs will be the responsibility of the Bid Package, Phase #4 General Contractor Best Value, based upon the information available. There will be NO “classified” change orders based upon allowances or unit pricing.

Q111 Has the architect and MEP engineers done any 3D modeling using Revit or BIM showing paths of mechanical and electrical systems? Will this be available to the successful bid package four bidders?
Response: The construction documents were prepared using Revit. The digital files will be made available to the Bid Package, Phase #4 General Contractor provided requirements are met as listed in specification section 011000 “Summary”, Part 1.16 “Digital Data Files”.

Q112 Sheet A403/ detail 1 shows the MAC gym roof members / trusses getting intumescent fireproofing. The G5 drawing shows no indication of fireproofing in this area. I know the columns in this area does get intumescent, but what about the supporting steel structural?

Response: The G5 sheet is correct. There should be no intumescent fireproofing on supporting steel structure. Disregard the note on wall section 1/A-403 referencing intumescent fireproofing on supporting steel structure.

Q113 Reference drawing #A-122. Section #1/W0414 is referenced thru the Raquetball court back walls. We are not finding this detail in the drawings. What are the requirements for detail #W0414?
Response: Disregard all reference to section with the prefix "W". These stand for working drawings and are not to be included in the set.

End of Questions