

ADDENDUM NUMBER THREE



To the Drawings and Project Manual

Dated: 21 July 2009

Entitled:

PURDUE UNIVERSTIY  
Civil Engineering Building  
550 Stadium Mall Drive  
West Lafayette, IN  
Civil Engineering Building Hydraulics-  
Hydrology Lab Renovations - 2009  
PID: 9934

Prepared By:

BSA LifeStructures  
9365 Counselors Row  
Indianapolis, IN 46240



A handwritten signature in black ink that reads "D. R. Hill".

David R Hill, AIA  
Indiana State Registration No. 0600080

Addendum Dated: 1 September 2009

Project #359056

**CHANGES TO THE PROJECT MANUAL**

1. **SECTION 11 52 13 – PROJECTION SCREENS:**

- a. Add this section in its entirety.

2. **SECTION 23 57 00 – HEAT EXCHANGERS:**

- a. Add this section in its entirety.

**CHANGES TO THE DRAWINGS**

1. **DRAWING A103:**

- a. Plan Note #16: Existing crane rails will not be removed between column lines “L” & “M”. Existing crane rails will be removed between column lines “M” & “O”.

2. **DRAWING A120:**

- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”

3. **DRAWING A121:**

- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”

4. **DRAWING A122:**

- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”

5. **DRAWING A123:**

- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”

6. **DRAWING A130:**

- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”

7. **DRAWING A131:**

- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”

8. **DRAWING A132:**

- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”

9. **DRAWING A133:**

- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”
10. DRAWING A500:
- a. Main Floor Opening Schedule, Opening #1101: Change Frame “MATL/ELEV” note to read, “AL/3”.
11. DRAWING A600:
- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”
12. DRAWING A601:
- a. Equipment Schedule: Change Equipment Note #9 to read, “O.F.O.I.”
13. DRAWING E110:
- a. Plan Note Number 1: The current location of overhead crane power feed should be shown between column lines M & N in lieu of in Lab 1122.
14. DRAWING E210:
- a. Plan Note Number 2: The relocation of the overhead crane power feed should be shown between column lines O & P in lieu of shown. Extend the existing feeder from current location to new location as required.

END OF ADDENDUM NUMBER THREE

Attachments:

Specification Sections:

11 52 13 – Projection Screens

23 57 00 – Heat Exchangers

Meeting Minutes:

27 August 2009 / 28 August 2009 Pre-Bid Meeting Memorandum

## SECTION 11 52 13 — PROJECTION SCREENS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Manually operated projection screens.

B. Related Sections:

1. Division 05 Section "Metal Fabrications" for metal support framing for projection screens.
2. Division 06 Section "Rough Carpentry " for wood backing for screen installation.
3. Division 26 Sections for electrical service and connections including device boxes for switches and conduit, where required, for low-voltage control wiring.

#### 1.2 SUBMITTALS

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

B. Shop Drawings: For projection screens. Show layouts and types of projection screens. Include the following:

1. For manually operated projection screens:
  - a. Drop lengths.
  - b. Anchorage details.
  - c. Accessories.

C. Samples for Initial Selection: For finishes of surface-mounted screen cases.

D. Maintenance Data: For projection screens to include in maintenance manuals.

#### 1.3 QUALITY ASSURANCE

A. Source Limitations for Projection Screens: Obtain projection screens from single manufacturer. Obtain accessories, including necessary mounting hardware, from screen manufacturer.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Environmental Limitations: Do not deliver or install projection screens until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
- B. Store rear-projection screens in manufacturer's protective packaging and according to manufacturer's written instructions.

#### 1.5 COORDINATION

- A. Coordinate layout and installation of projection screens with adjacent construction, including ceiling suspension systems, light fixtures, HVAC equipment, fire-suppression system, and partitions

### PART 2 - PRODUCTS

#### 2.1 MANUALLY OPERATED PROJECTION SCREENS

- A. General: Manufacturer's standard spring-roller-operated units, consisting of case, screen, mounting accessories, and other components necessary for a complete installation.
  - 1. Screen Mounting: Top edge securely anchored to a 3-inch- (75-mm-) diameter, rigid steel roller; bottom edge formed into a pocket holding a tubular metal slat, with ends of slat protected by plastic caps, and with a saddle and pull attached to slat by screws.
- B. Surface-Mounted or Suspended, Metal-Encased, Manually Operated Screens: Units designed and fabricated for surface mounting on wall or ceiling, or suspended mounting from ceiling, fabricated from formed-steel sheet not less than 0.027 inch (0.7 mm) thick or from aluminum extrusions; and vinyl covering or baked-enamel finish. Provide units with matching end caps and concealed mounting.
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Da-Lite Screen Company; Model C.
    - b. Draper Inc.; Silhouette/Series M.
    - c. Draper Inc.; Premier/Series C.
    - d. Stewart Filmscreen Corporation; Luxus Communicator.
  - 2. Color: As selected by the Architect from the manufacturer's full range of standard colors.
- C. Recessed Metal-Encased, Manually Operated Screens: Units designed and fabricated for recessed mounting in suspended ceiling systems; with bottom of case composed of one or two

panels, fully enclosing screen, and designed to open and close automatically when screen is lowered and fully raised.

1. Products: Subject to compliance with requirements, provide one of the following:
  - a. Da-Lite Screen Company; Advantage w/ CSR.
  - b. Draper Inc.; Access/Series M.Color:
2. As selected by the Architect from the manufacturer's full range of standard colors.

## 2.2 FRONT-PROJECTION SCREEN MATERIAL

- A. Matte-White Viewing Surface: Peak gain not less than 0.9, and gain not less than 0.8 at an angle of 50 degrees from the axis of the screen surface.
  1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Bretford, Inc.; Matte White.
    - b. Da-Lite Screen Company; Matte White.
    - c. Draper Inc.; M1300.
- B. Material: Vinyl-coated, glass-fiber fabric.
- C. Mildew-Resistance Rating: 0 or 1 when tested according to ASTM G 21.
- D. Flame Resistance: Passes NFPA 701.
- E. Flame-Spread Index: Not greater than 75 when tested according to ASTM E 84.
- F. Seamless Construction: Provide screens, in sizes indicated, without seams.
- G. Edge Treatment: Without black masking borders.
- H. Size of Viewing Surface: As indicated on Drawings.
- I. Provide extra drop length of dimensions and at locations indicated.
  1. Color: Black.
  2. Length to allow bottom of screen positioning to 4'-0" a.f.f from ceiling/mounting location.

## PART 3 - EXECUTION

### 3.1 FRONT-PROJECTION SCREEN INSTALLATION

- A. Install front-projection screens at locations indicated to comply with screen manufacturer's written instructions.
- B. Install front-projection screens with screen cases in position and in relation to adjoining construction indicated. Securely anchor to supporting substrate in a manner that produces a smoothly operating screen with vertical edges plumb and viewing surface flat when screen is lowered.
  - 1. Test manually operated units to verify that screen-operating components are in optimum functioning condition.
  - 2. Verify final location w/ Owner prior to installation.

END OF SECTION 11 52 13

## SECTION 23 57 00 - HEAT EXCHANGERS FOR HVAC

### 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. This Section includes shell-and-tube heat exchangers.

#### 1.3 SUBMITTALS

- A. Product Data: Include rated capacities, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
  - 1. Design Calculations: Calculate requirements for selecting seismic restraints and for designing bases.
  - 2. Base Details: Detail fabrication including anchorages and attachments to structure and to supported equipment.
- C. Coordination Drawings: Equipment room, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:
  - 1. Tube-removal space.
  - 2. Structural members to which heat exchangers will be attached.
- D. Manufacturer Seismic Qualification Certification: Submit certification that heat exchanger, accessories, and components will withstand seismic forces defined in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment." Include the following:
  - 1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
    - a. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
  3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
- E. Operation and Maintenance Data: For heat exchangers to include in emergency, operation, and maintenance manuals.

#### 1.4 QUALITY ASSURANCE

- A. ASME Compliance: Fabricate and label heat exchangers to comply with ASME Boiler and Pressure Vessel Code: Section VIII, "Pressure Vessels," Division 1.
- B. Registration: Fabricate and label shell-and-tube heat exchangers to comply with the Tubular Exchanger Manufacturers Association's standards.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

#### 2.2 SHELL-AND-TUBE HEAT EXCHANGERS

- A. Manufacturers:
  1. API Heat Transfer Inc.
  2. Armstrong Pumps, Inc.
  3. ITT Industries; Bell & Gossett.
  4. Taco, Inc.
  5. Thrush Company, Inc.
- B. Configuration: U-tube with removable bundle. Design pressure of 150 psig for both shell and tube side of heat exchangers.
- C. Shell Materials: Steel.
- D. Head:
  1. Materials: Cast iron.

2. Flanged and bolted to shell.
- E. Tube:
1. Cupronickel tubes.
  2. Tube diameter is determined by manufacturer based on service.
  3. 18.0 B.W.G. minimum tube thickness.
- F. Tubesheet Materials: Steel tubesheets.
- G. Baffles: Steel.
- H. Piping Connections:
1. Shell: Inlet and outlet fluid connections, threaded drain, and vent connections.
  2. Head: Inlet and outlet fluid connections.
  3. Size 2" NPS and larger shall be flanged.
  4. Same end connections unless denoted otherwise on the Drawings.
- I. Support Saddles:
1. Fabricated of material similar to shell.
  2. Foot mounted with provision for anchoring to support.
  3. Fabricate attachment of saddle supports to pressure vessel with reinforcement strong enough to resist heat-exchanger movement during a seismic event when heat-exchanger saddles are anchored to building structure.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine areas for compliance with requirements for installation tolerances and for structural rigidity, strength, anchors, and other conditions affecting performance of heat exchangers.
1. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 HEAT-EXCHANGER INSTALLATION

- A. Install shell-and-tube heat exchangers on saddle supports.
- B. Install shell-and-tube heat exchangers on concrete base. Concrete base is specified in Division 23 Section "Common Work Results for HVAC," and concrete materials and installation requirements are specified in Division 03.
- C. Concrete Bases: Anchor heat exchanger to concrete base.

1. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around full perimeter of base.
2. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete floor.
3. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
4. Install anchor bolts to elevations required for proper attachment to supported equipment.
5. Cast-in-place concrete materials and placement requirements are specified in Division 03.

### 3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Maintain manufacturer's recommended clearances for service and maintenance. Install piping connections to allow service and maintenance of heat exchangers.
- C. Install shutoff valves at heat-exchanger inlet and outlet connections.
- D. Install relief valves on heat-exchanger heated-fluid connection and install pipe relief valves, full size of valve connection, to floor drain.
- E. Install vacuum breaker at heat-exchanger steam inlet connection.
- F. Install hose end valve to drain shell.

### 3.4 FIELD QUALITY CONTROL

- A. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

### 3.5 CLEANING

- A. After completing system installation, including outlet fitting and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finishes.

### 3.6 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain heat exchangers. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 23 57 00



**PROJECT NO:** 359056 / PID 9934

**DATE OF MEETING:** 27 AUG 2009 / 28 AUG 2009

**PROJECT:** Purdue University  
Civil Engineering Building, Hydraulics - Hydrology Lab Renovations - 20009

**LOCATION:** Civil Engineering Building

<b>PRESENT:</b>	Jen Miley	Purdue University
	Tom Cooper	Purdue University
	David Hill	Purdue University
	Miranda Beystehner	Purdue University
	Shane Hegg	A to Z Sheet Metal
	Greg Gormeng	Quantum GC
	Bob Young	Dallman Cont
	Richard Smith	Mid-States GMCC
	Steve Weatherwax	Shambaugh
	Jeff Mutzl	JR Kelly Company
	Rusty Huse	Long Electric
	Graham Benson	Twin City Electric
	Doug Sheridan	Dalmatian
	David Harrington	B&K Mechanical
	Brad Morland	B&K Mechanical
	Terrence Garrett	Terstep Co. Inc.
	Tim Whicker	Electric Plus
	Glenn Gmitter	Hagerman Inc
	Randy Austin	Freitag-Weinhart
	Adam Brown	Craft

**PURPOSE OF THE MEETING:** Pre-Bid Meeting

**ITEMS DISCUSSED:**

1. Introductions:
2. Project Over View:
  - A. Orientation:
    - 1) Project is the general renovation of several areas on multiple floor levels of the south-east wing of the Civil Engineering building.
    - 2) Limited infrastructure work may occur on other floors or other areas of the building.

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**MEETING MEMORANDUM**

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- 3) Review Division 00 and Division 01 specifications for work restrictions, temporary facilities and protection, submittal procedures, etc.
- B. Project Phasing:
- 1) Phasing is a critical aspect of this project.
  - 2) Review of Phases.
    - a) Phase 1:
      - (1) Phase 1 consists of demolition and construction in the south-east half of the project areas on the Hydro lab Floor level and Ground Floor level, to include:
        - (a) Demolition:
          1. Hydro Lab Floor:
            - a. Demolition of existing bus duct in the Hydro Lab, to include re-feeding of the existing panels in the Burke Lab.
            - b. Base bid horizontal constant head piping demolition in Hydro Lab.
            - c. Selected mechanical piping, ductwork and controls demolition in phase area.
            - d. Selected plumbing & electrical demolition in phase area.
          2. Ground Floor:
            - a. Demolition of Offices B115B and G103.
            - b. Demolition of railing and partial curb at Corridor GH01.
            - c. Demolition of existing exhaust fan and window at south-east corner of building.
            - d. Selected mechanical piping, ductwork and controls demolition in phase area.
            - e. Selected electrical demolition in phase area.
        - (b) New Construction:
          1. Hydro Lab Floor:
            - a. Installation of new Ground Floor deck in phase area to include new columns in Hydro Lab Floor level.
            - b. Construction of new Machine Shop and Instrument Storage areas on the Hydro Lab Floor level, to include all required MEP work.
            - c. Installation of new wall furring over existing ceramic tile wall finishes in Hydro Lab.
            - d. Installation of new door hardware on stairwell doors at Stairs A&B on the Hydro Lab Floor level.
            - e. Installation of new louver and exhaust fan at south-east corner of building.
            - f. Painting of south-east half of Hydro Lab Floor and Ground Floor interior spaces within the phase area.
            - g. Installation of new main power feed to replace existing bust duct and installation of new power, data and lighting in the south-east half of the Hydro lab within the phase area.
            - h. Installation of new plumbing fixtures and fittings within the phase area.
          2. Ground Floor:
            - a. Construction of new Mechanical Room, Lab Director's Office, Graduate Student Offices and Post Doctoral offices on the Ground Floor, to include all required MEP work.

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## MEETING MEMORANDUM

- b. Installation of new rated shaft enclosure in loading dock area of the Ground Floor.
  - c. Installation of new ornamental railing on Ground Floor and new ramp from Corridor GH01 down to office area.
  - d. Reconditioning of existing crane and loading dock overhead door in Alternate #2.
  - e. Installation of a new AHU, along with required ductwork and controls, in the new Ground Floor Mechanical Room to serve the new shop and office areas.
  - f. Installation of new power, data and lighting within the phase area.
- (2) Routine user access is to be maintained to the Laser Lab, Burke Lab, loading dock area and Stair A during Phase 1.
  - (3) All work in the Burke Lab to be conducted on weekends or days when classes are not in session.
    - (a) New power must be provided before removing the existing busduct.
  - (4) New Shop must be completed and occupied by the users prior to start of Phase 2.
- b) Phase 2:
- (1) Phase 2 consists of demolition and construction in the north-west half of the project areas on the Tow Tank level, Hydro lab Floor level, Ground Floor level, and Main Floor level, to include:
    - (a) Demolition:
      - 1. Tow Tank Level:
        - a. Demolition of tow tank window units in Alternate #3.
        - b. Demolition of horizontal constant head piping in Alternate #4.
        - c. Selected other MEP demolition in phase area in Alternates #3&4.
      - 2. Hydro lab Floor Level:
        - a. Demolition of existing shop area in Alternate #1.
        - b. Removal of existing constant head system control panel.
        - c. Removal of steel hatch covers and frames in Alternate #2.
        - d. Demolition of portions of existing walls and doors in the Burke Lab.
      - 3. Ground Floor Level:
        - a. Demolition of existing window at north-west corner of Hydro lab.
      - 4. Main Floor Level:
        - a. Demolition of existing stairwell door and portion of existing balcony at Stair A.
        - b. Demolition of portion of Hydrology Departmental Offices as indicated.
        - c. Demolition of existing railings and partial curb at Corridor 1H03.
        - d. Demolition of stairwell doors and portion of balcony at Stair A.
    - (b) New Construction:
      - 1. Tow Tank Level:
        - a. Reseal / paint existing sumps and paint walls in alternate #4.
        - b. Install new lighting and power distribution in Alternate #4.
        - c. Install new tow tank windows and re-seal tow tank in Alternate #3.
        - d. Replace deep well valves in Alternate #3.
        - e. Install new tow tank lighting in Alternate #3.
      - 2. Hydro lab Floor Level:

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## MEETING MEMORANDUM

- a. Construct new Sensor based Classroom (SBC) in Alternate #1, to include all required MEP work.
  - b. Painting of north-west half of Hydro Lab Floor and interior spaces within the phase area.
  - c. Installation of new windows and doors in Burke Lab.
  - d. Installation of concrete floor slab infills in Alternate #2.
  - e. Install new GFCI breakers in Burke Lab power panel.
  - f. Installation of new power, data and lighting in the north-west half of the Hydro lab within the phase area.
  - g. Installation of new plumbing fixtures and fittings within the phase area.
3. Ground Floor Level:
- a. Installation of new mezzanine floor deck in phase area to include new DVR balcony at Main Floor level.
  - b. Construction of new Data Visualization Room (DVR), to include all required MEP work.
  - c. Installation of a new AHU, along with required ductwork and controls, in the new Mezzanine Mechanical Room to serve the new DVR & SBC spaces.
  - d. Installation of new metal pan stair and railing from Mezzanine down to Hydro Lab Level.
  - e. Installation of new louver at existing window opening in mezzanine mechanical room.
  - f. Base bid modifications to the existing crane rails, to include re-feeding of the crane power track.
4. Main Floor Level:
- a. Installation of new ornamental metal railings along balcony in Corridor 1H03.
    - i. This corridor is heavily used by students. A railing must be in place at all times. May want to consider scheduling this over a break, at night, or on the weekends. Coordinate with owner.
  - b. Construction of new Hydrology Departmental Offices entry area and new stairwells door to Stair A.
  - c. Installation of selected new finishes in Hydrology Departmental office and Stair A.
  - d. Painting of Corridor 1H03 and interior spaces within the phase area.
  - e. Installation of new flooring in Corridor 1H03.
  - f. Installation of new power, data and lighting within the phase area.
- (2) Routine user access is to be maintained to the Laser Lab, Burke Lab, First Floor Hydrology departmental offices and all labs and classroom served by Corridor 1H03 during Phase 2.
- (3) All work related to base bid crane modifications in Lab 1122 and all work in the Burke Lab to be conducted on weekends or days when classes are not in session.
- (4) New door #1S01 must be installed an accessible prior to demolition of existing stairwell door and portion of existing balcony on the Main Floor at Stair A.
- (5) Access to Stair A is to be maintained at all times during Phase 2.

3) Phases cannot be run concurrently.

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- 4) There is some flexibility in the phasing. The main goal of the phasing is to keep the shop in use during construction. Other items may be able to be completed in other phases with the owner and architect's approval.

C. Project Alternates:

- 1) Alternate #1, Sensor Based Classroom (SBC):
  - a) This alternate includes all finishes, new gypsum wallboard assemblies, storefront glazing system and door, casework, utilities, equipment, and accessories as indicated on the drawings.
- 2) Alternate #2, H2O Lab Level renovations:
  - a) This alternate includes infilling unused floor hatches, reconditioning the existing loading dock overhead door, and reconditioning the existing crane as indicted on the drawings.
- 3) Alternate #3, Tow Tank Renovations:
  - a) This alternate includes repairing and resealing the tow tank, replacing the existing tow tank windows with new windows, providing new LED lighting in the tank, and repairing the deep well tank valves as indicted on the drawings.
- 4) Alternate #4, Tow Tank level Renovations:
  - a) This alternate includes new finishes, resealing and painting existing sumps, new GFCI receptacles, new power to laser and panels, new lighting controls, and removing unused piping and pumps as indicated on the drawings.

D. Addenda:

- 1) Addendum #1, to add changes and revisions to multiple specification section and drawings.
- 2) Addendum #2, to add pre-bid meeting to the Project Manual.

3. Questions:

- A. What type of dust control will be required?
  - 1) Protect laser lab as much as possible, protect upper balcony, can use the existing fans
- B. Will the owner remove all equipment?
  - 1) The two flumes will be in place during construction. These must be protected. The remainder of the equipment / furnishings will be moved by the owner.
- C. How are the sumps accessed?
  - 1) They are accessed through hatches on the main lab floor level. They are approximately 4' deep and are concrete.
- D. Are the angles to be removed when the hatches are filled in?
  - 1) Yes.
- E. Should the Allowance to recondition the existing crane which is specified in Section 01 21 00 be included only as a part of Alternate #2?
  - 1) Yes.

## MEETING MEMORANDUM

- F. Detail 2-A131 shows Equipment Note #9, Manual Projection Screens. Please clarify the desired sizes and specification information.
  - 1) See specification Section 11 52 13 – Projection Screens for product information. Provide screens with an 87” x 116” viewing area similar to Da Lite Model C for bidding purposes, however, coordinate exact screen size with Owner’s projector vendor’s requirements.
- G. Elevation 3-A600 shows 3’-6” wall standards whereas the Sections on Sheet A650 show 3’.
  - 1) Provide 3’-6” tall wall standards per Sheet A600.
- H. Elevation 5-A600 shows six ‘flat screens’ designated by Equipment Plan Note #11. These are to be CFCI. Are there specifications, sizes, or model numbers provided that I have missed?
  - 1) Flat screen monitors are to be OFOI.
- I. Referring to Sheet A113, it appears that per Plan Note #20, we are to patch the base with concrete material to match the profile of the adjacent terrazzo and then this will be painted along with the existing terrazzo base to avoid the cost of patching terrazzo. However, where new door 1S01 is to be installed we will also need to deal with the terrazzo floor. Even if the cove base is scored and neatly cut, it will extend a little into the floor of Stair 1S01. I would assume that we will need to patch this terrazzo as specified in Section 01 73 29-1.2.B, “Cutting and Patching” even though no Terrazzo Specification has been provided. If we may patch this surface with concrete and paint or install a threshold then please clarify this in an Addendum so we will be quoting your desired scope of work.
  - 1) Score and cut existing terrazzo cove at new door location as neatly as possible. Area where terrazzo cove is removed may be patched with concrete and painted to match rest of new and existing coves.
- J. Per the IF Drawings, General Plan Note K refers to the Cast In Place Concrete Specifications for floors that are designated SC or sealed concrete. In addition, Finish Abbreviation SC refers to Specification Section 03300. The IF Drawings show that some existing floors as well as some new concrete floors are to be SC. Please clarify whether Specification Section 03 36 00 – Concrete Polishing is relevant to this project and if so, which areas are to receive this finish. Also, the Hydraulics Research Lab B115 is to receive SC. Will the Owner remove all of the stored materials and furnishings from this area for us to apply the floor finish?
  - 1) IF Drawing Plan Note “SC” refers to a polished concrete finish as specified in Section 03 36 00. In the Hydraulics Research Lab B115, the two flumes will be in place during construction. These must be protected. The remainder of the equipment / furnishings will be moved by the owner.
- K. The Door Schedule on Sheet A500R shows an Aluminum Door in a Hollow Metal Frame for Opening 1101. Please clarify if this is not intended.
  - 1) Provide aluminum door and frame system similar to other storefront systems. Change Frame “MATL/ELEV note to read, “AL/3”.
- L. Per Demolition Plan Note #15 on Sheet A101 we are to remove the existing hatch covers and infill the openings under Alternate #2. Per our conversation at the Prebid Meeting today you would also like for the embedded angle to be removed. Can this be clarified in the Addendum since it is not specifically requested by the Drawings?
  - 1) Per demolition Note 315 on Sheet A101, remove existing hatch covers in their entirety. This includes the embedded angles.

## MEETING MEMORANDUM

- M. Per Addendum 1, Changes to Project Manual, Item 3 says to include an allowance for the F11 underwater lighting fixtures. Changes to the Drawings, Item 26, says to provide and install 28 underwater lighting fixtures. Are we to provide the allowance, or install the fixtures, or both?
- 1) Provide the allowance indicated for the materials and installation of the F11 underwater light fixtures as part of Alternate #3.
- N. Details 1A & 1B on Sheet A500R show the new windows for the tow tank. Per the window schedule this material is to be stainless steel. I have been informed by my Supplier that the sizes shown as C10x15.3 are not available in stainless steel. Can tubing or other shapes be utilized to get similar dimensions? Per Section 05 50 00-2.1.B.2 I assume this should be 304 stainless? Please clarify if 316 stainless is desired.
- 1) Steel member sizes shown on Sheet A500 are intended to match existing member sizes of existing window framing. Alternate section types and sizes may be used pending field verification of existing conditions and will be reviewed and approved during shop drawing submittals. Alternate section types and profiles must be sufficient to resist lateral loads and support weight of carriage and carriage rails. Provide stainless steel members composed of Type 316 or Type 316L stainless steel.
- O. Elevation 2-A600 shows an aluminum marker tray however, I cannot find any specification information for this.
- 1) Provide aluminum chalk/marker tray, Claridge Products, Model #264, or equal.
- P. Specification Section 09 93 50-Concrete Floor Stain was included however this was not included in the Finish Specifications on Sheet IF100, nor in any of the Rooms. Is this Specification applicable?
- 1) Specification Section 09 93 50-Concrete Floor Stain was included in the Project Manual in the event that the owner opts to change some of the concrete finishes from polished to stained finishes at some future point.
- Q. Per Sheet IF100, the Tow Tank, Channel Sump Room, and Pump Room are all to receive new paint on the walls. It would appear that this work should be included in the Base Bid. However, per Specification Section 01 23 00, Alternate #4-Tow Tank Renovations (room), "This Alternate includes new finishes, ...". Should the new wall finishes should be included in Alternate #4 rather than the Base Bid?
- 1) Channel Sump Room and Pump Room finishes are to be included in Alternate #4. Tow Tank finishes are to be included in Alternate #3.
- R. The drawings have a schedule for heat exchanger HE-6, but there is not a specification section for the heat exchanger. Will one be issued?
- 1) See Specification Section 23 57 00 – Heat Exchangers.

cc: All attendees  
All Bidders  
Project No.: 359056 / PID 9934                      359056

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**MEETING MEMORANDUM**