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**ADDENDUM NO. 4  
PROJECT BI-CTC-455**

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Date: May 8, 2015  
Renovations and Addition to Lafayette Hall  
Housatonic Community College  
Bridgeport, CT

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**CLARIFICATIONS**

1. See latest pre-bid requests for information and responses to date. See Addendums 1, 2 and 3 for earlier pre-bid requests for information and responses.
2. Amenta/Emma Architects Addendum 4 Dated May 8, 2015 Clarifications and Sketches are attached.
3. Section 00 90 02B Bid Package 02B General Trades; Page 1 of 7 revise Title "DOCUMENT 00 90 20B" to read "DOCUMENT 00 90 20B"
4. The **State of Connecticut CHRO** is requiring all bid packages including Set-Aside bid packages be to revised as follows: Revise **25% SBE of which 6.25% is required MBE** to read **20% SBE AND 10% MBE**. Please make appropriate accommodations to this request. All Affirmative Action Plans to be submitted providing detailed document of the required SBE/MBE solicitations.
5. Scopes from the original set of Bid Packages have been reduced to create "Set - Aside" Bid Packages as requested by The State of Connecticut's Commission on Human Rights and Opportunities (CHRO). The "Set-Aside" Bid Packages can only be bid by State of CT, DAS Certified SBE/MBE Contractors. The following Division 00 Set-Aside Bid Packages Sections have been added and or repackaged for Set-Aside Bids only:

Section 00 90 02D	Final Cleaning	"Set-Aside Package"
Section 00 90 27	Communication	"Set-Aside Package"
Section 00 90 28	Site Concrete	"Set-Aside Package"
Section 00 90 29	Landscaping	"Set-Aside Package"
Section 00 90 30	Firestopping	"Set-Aside Package"
Section 00 90 31	Signage	"Set-Aside Package"
Section 00 90 09C	Acoustical	"Set-Aside Package"
Section 00 90 09D	Painting, Coatings, W/C	"Set-Aside Package"
Section 00 90 09E	Carpeting	"Set-Aside Package"
Section 00 90 09F	Resilient Flooring/Base, CT	"Set-Aside Package"
Section 00 90 32	Security	"Set-Aside Package"
Section 00 90 33	Fire Alarm	"Set-Aside Package"

For the above referenced Bid Packages see the attached scopes of work.

6. The following scopes from the original bid packages have been deleted:

- a) BP 02B General Trades, Delete Final Cleaning requirements and weekly cleaning of the CM and DCS trailers. Trailer dumpsters and Temporary toilets to remain in BP 02B.
- b) BP 02B General Trades, Delete Section 10 14 19 Dimensional Letter Signage.
- c) BP 02B General Trades
  - BP 04 Masonry
  - BP 09A Drywall
  - BP 09C Acoustical
  - BP 21 Fire protection
  - BP 22 Plumbing
  - BP 23 Mechanical
  - BP 26 Electrical
  - BP 27 Communications

For the above packages, Delete Sections 07 84 13 Penetration Firestopping and 07 84 43 Joint Firestopping from bid package.

- d) BP 02C Site Construction, Delete notes 01.31, 01.32 and 01.32 from bid package. Item 01.30 remains part of BP 02C scope.
  - e) BP 02C Site Construction, Delete Section 32 90 00 Trees, Shrubs Perennials from bid package.
  - f) BP 02C Site Construction, Delete Section 32 92 19 Lawns and Grass from bid package.
  - g) BP 02C Site Construction, Delete Section 32 17 26 Tactile Warning Tiles
  - h) BP 26 Electrical, Delete Division 28 Sections 28 16 00 Intrusion Detection, 28 23 00 Video Surveillance and 28 31 11 Digital, Addressable Fire-Alarm System including all related conduit, raceways and low voltage wiring from bid package. Line voltage work and requirements for these sections remain part of BP 26.
7. BP 09B Finish Flooring, Delete entire bid package the work has been broken up into separate "set-aside" bid packages.
  8. BP 09C Acoustical has been reassigned and is now designated a "Set Aside" Bid Package.
  9. BP 09D Painting has been reassigned and is now designated a "Set Aside" Bid Package.
  10. BP 27 Communications has been reassigned and is now designated a "Set Aside" Bid Package.
  11. BP 27 Communications; revise bid package item 01.35 to read:

"Furnish and install all required low voltage wiring, devices, power supplies, connections required to complete communication contractor's scope of work."

12. General Trades BP 02B please keep in mind the Terrazzo subcontractor must adhere to Specification Section 09 66 23 1.8 Quality Assurance, A. Installer Qualifications. 1., 2.
13. A pre bid conference will be held May 18, 2015 at Housatonic CC Beacon Hall Room 287 at 10:00 AM for the "Set Aside" Bid Package Contractors, see the attached "Set Aside" Invitation to Bid.
14. The deadline for the submission of bid packages 02A, 02B, 02C, 03, 04, 05, 07A, 08, 09A, 21, 22, 23, 26 for this solicitation remain May 14, 2015 by 2:00 PM at the State Office Building 165 Capitol Ave. Hartford CT Room G-36.
15. The deadline for the submission of the "Set Aside" bid packages 02D, 09C, 09D, 09E, 09F, 27, 28, 29, 30, 31, 32, and 33 for this solicitation is May 27, 2015 by 2:00 PM at the State Office Building 165 Capitol Ave. Hartford CT Room G-36.

#### ATTACHMENTS

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|--|----------|
| 1. Pre-Bid Request for Information Question and Responses, | 3 pages  |
| 2. Amenta/Emma Architects Addendum 4                       | 32 pages |
| 3. "Set Aside" Invitation to Bid                           | 2 pages  |
| 4. "Set Aside" Bid Packages                                | 44 pages |

**ADDENDUM NO. 4**  
**Prebid Requests for Information**  
**Questions and Responses**  
**May 8, 2015**

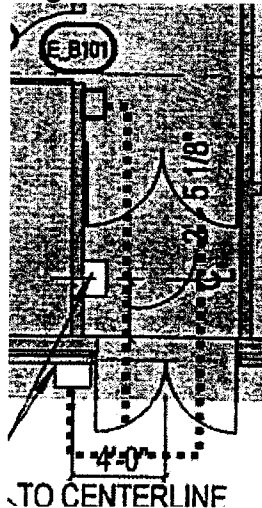
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**Renovations and Addition to Lafayette Hall**  
**Housatonic Community College**  
**Bridgeport CT**  
**Project No. BI-CTC-455**

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**Questions (*Responses in Italics*):**

1. Glass manufacturers have issues with providing product for the designated FM Global wind load design requirements called for in the bidding documents, please clarify. ***See attached Addendum 4 clarifications provided by Amenta/Emma Architects***
2. Q&A RFI 18. In Addendum 3 please clarify answer that was provided. "Provide shop weld details for column at the base place in Section 3/S4.07." ***Refrigerant recovery, storage and make up, glycol recovery and make up as well as calcium chloride brine solution recovery, storage and make up is. See Amenta/Emma Addendum 3 Clarifications.***
3. Please verify quantity the door operators called for on 25/A1.12 west entry vestibule along column X30? ***The image below should be the intent.***



***Intent is for 1 operator to open plan right leaf of both interior and exterior doors of vestibule. Second operator to open the plan left leaf of both interior and exterior doors of vestibule. Relocate operator indicated within vestibule to interior between vestibule and door E\_B1.01.***

4. Details 2, 3 & 5/S4.03 show a continuous L6x6x5/16 angle for CMU support. Those sections reference 10/S7.00. Do the length and size of these angles normal practice to assist in erection would be to shop bolt the angles to the beam for final adjustment and welding in the field. Please confirm this is acceptable. Also please confirm the

only weld required? *In detail 2, 3 and 5/s4.03 revise CONT L6x6x5/16 to L6x6x5/16 x 0'-6"*. Weld information as indicated within detail 10/S7.00.

5. Addendum 3 RFI Question 38 please verify response. "Who owns the blocking and exterior plywood above the masonry and behind the metal panels on detail 15/A3.31?" ***Roofing BP 07A. This work is to be furnished and installed by BP 09A Drywall, see BP 09A item 01.22.***
6. Addendum 3 RFI Question 39 please verify response. "Who owns the blocking and exterior plywood above and behind the GFRC panels on detail 6/A3.31?" ***Roofing BP 07A. Since this work needs to be completed and coordinated with the GFRC panels the blocking and plywood cant it to be furnished and installed by BP 02B General Trades.***
7. On page 3 of 6 section 084233 2.2, 7., the canopy of the revolving door is calling for Custom half glass, half extruded aluminum ceiling, fascia, and framing with size, layout, materials and exposed finishes matching enclosure. We have searched through the Architectural plans and do not see any detail of this canopy, please provide information? ***Refer to detail 27/A3.30.***
8. Please verify location of top coat for spray applied fireproofing? ***Topcoat indicated shall be provided at spray applied fireproofing exposed to touch (ex: column at K/2).***
9. On drawing M3.01 Schedules, Cleaver Brooks is listed as "basis of design". Spec section 235223 refers to cast iron boilers. Cleaver Brooks is a steel water tube boiler. Please advise. ***See attached Addendum 4 clarifications provided by Amenta/Emma Architects.***
10. Please verify steel bid package is not responsible for any demo or abatement that may be required for connection to existing structure. ***Demolition of steel connections pockets is to be furnished and installed by BP 02A. Weather protection and maintenance of these pockets is the responsibility of BP 05 Metals. The existing steel has not been tested for lead paint, refer to BP 05 note 1.04. Abatement of other hazardous materials if discovered is not the responsibility of BP 05 Metals.***
11. In BP Metals scope item 01.24 please verify this means the masons is to install epoxy anchors and field weld for details 5, 10 and 11/S7.00. ***Correct***
12. Please clarify final cleaning responsibility. ***See Addendum 4 cover sheet for clarification.***
13. There appears to be a concern of the crane pad location shown on the site logistic plan shown in Division 00 and the size of the crane required to complete the erection from this one point, please revisit additional access into building pad. ***The intent of the site logistics plan to reinforce the site constraints on the entire project and access limitation that all the trade contractors need to consider during the construction of this project. The final determination of the derrick sequence, location of cranes and potential alternate access will be addressed during steel preconstruction.***

14. Addendum #2, question 13 stated that the GFRC Panels 034900 were in both bid packages 02B and 08 Glass and glazing. The GFRC panels were never listed in 02B, they were in bid packages 08 and 09. These panels should be provided and installed by the trades that is responsible for the rest of the building exterior system, the 08 Glass and Glazing package. That way you have one point of responsibility. Please advise. **GFRC Panels 034900 will remain in the BP 02B General Trades per Addendum 2.**
15. Add 1 adds roof anchor's to spec section 077200 and also includes a detail on the above installation which seems to be secured to the steel beam below. This item is generally furnished and installed by the steel contractor. Can you please verify this is by the steel contractor? Also can you confirm there is only one roof anchor as shown on the connector roof 19/A5.07? **There is only one roof anchor on the project on the connector roof. The roof anchors is to be furnished and installed by BP 05 Metals, blocked and flashed by BP 07A Roofing.**
16. Please clarify who is responsible for these wood blocking as listed below.
- a. Detail 12 /A1.62 wood blocking **BP 09A**
  - b. Detail 7 /A1.63 plywood **BP 02B**
  - c. Detail 2 & 3 /A3.10 wood blocking filler **BP 09A**
  - d. Detail 15 /A3.20 wood blocking/plywood below the composite panel **BP 09A**
  - e. Detail 18 & 28 & 6 /A3.21 wood blocking filler **BP 09A**
  - f. Detail 15 & 25 & 6 /A3.21 wd. blocking/plywd below composite panel **BP 09A**
  - g. Detail 6 /A3.22 wood blocking filler **BP 09A**
  - h. Detail 27 /A3.22 wood blocking top of wall **BP 09A**
  - i. Detail 15 & 25 /A3.30 wood blocking **BP 09A**
  - j. Detail 27 /A3.31 wood blocking, is the upper wood by roofer? **BP 07A**
  - k. Detail 15 & 6 /A3.31 wood blocking and plywood below metal panel **15/A3.1 BP 09A, 6/A3.31 BP 02B**
  - l. Detail 6 /A3.31 wood blocking top of cmu wall **CMU does not exist in detail**
  - m. Detail 15 /A3.32 wood blocking and plywood. **BP 07A**
  - n. Detail 6 /A3.3 wood blocking top of cmu wall. **No detail exists.**
  - o. Detail 15 /A3.33 wood blocking filler attached to bent plate. **BP 09A**
  - p. Detail 5 /A3.40 wood blocking and plywood
  - q. Detail 27 /A3.42 wood blocking below the plywood (plywood by roofer?) **All BP 07A**
  - r. Detail 18 /A3.42 wood blocking plywood and insulation behind the metal counterflashing. **Exterior BP 07A, Interior BP 02B**
  - s. Detail 6 /A3.51 wood blocking **BP 09A**
  - t. Detail 23 /A4.03 wood blocking and plywood at corner of cmu **BP 09A**
  - u. Detail 12 /A5.05 wood blocking at guardrails **BP 02B**
  - v. Detail 7 /A5.05 wood blocking at guardrails **BP 02B**
17. Please clarify who is responsible for the plywood shown on wall assemblies in A1.51 and A1.52. **See Addendum 3 for clarification.**
18. Please clarify BP General Trade item 01.27. **See other trade package notes relative to fireproofing patching. These supplemental notes describe responsibilities.**

**FURTHER ANSWERS TO PRE-BID QUESTIONS APPEAR IN ADDENDUM 4  
CLARIFICATIONS PROVIDED BY AMENTA/EMMA ARCHITECTS**

INVITATION TO BID  
**SET ASIDE BID PACKAGES**

May 8, 2015

BI-CTC-455-CMR

Renovations & Addition to Lafayette Hall  
Housatonic Community College, Bridgeport, CT

Sealed proposals for Set Aside Bid Packages listed below will be received until **2:00 P.M. on Wednesday May 27, 2015**. All bids will be received at the **State Office Building, 165 Capitol Avenue, Hartford, CT in Room No. G-36** until date and time stated above and thereafter publicly opened and read aloud in **Room No. G-32**. All proposals should be clearly marked with bid package number and title, project number BI-CTC-455-CMR and addressed to Newfield Construction, Construction Manager, c/o Department of Construction Services. The work consists of the addition and renovations at Housatonic Community College Bridgeport, Connecticut.

02D	Final Cleaning	"Set-Aside Package"
09C	Acoustical	"Set-Aside Package"
09D	Painting and Coatings	"Set-Aside Package"
09E	Carpeting	"Set-Aside Package"
09F	VCT/Rubber/Base/CT	"Set-Aside Package"
27	Communications	"Set-Aside Package"
28	Site Concrete	"Set-Aside Package"
29	Landscaping	"Set-Aside Package"
30	Firestopping	"Set-Aside Package"
31	Signage	"Set-Aside Package"
32	Security	"Set-Aside Package"
33	Fire Alarm	"Set-Aside Package"

A pre-bid meeting will be held for all bidders at **Housatonic Community College, Beacon Hall, Room 287, Bridgeport, Connecticut at 10:00 AM on May 18, 2015**, a site walk thru will commence at the conclusion of the pre-bid meeting. Attendance is **strongly recommended** for all bidders.

The bidder must have prior experience consisting of no less than three similar projects with an equal or greater value within the last five years. Bidders must provide verification of experience with proposal. The Contractor shall hold a current "DAS Contractor Prequalification Certificate" from the Department of Administrative Services of the State of Connecticut according to Connecticut General Statute 4a-100, 4b-101 and 4b-91. DAS Certified Set Aside Contractors Certificate, as well as additional items list in Instructions to Bidders. Failure to submit these items with the bid will result in disqualification of the bidder per the public act.

Sets of plans and specifications may be purchased on or after **Tuesday, April 2, 2015**. Partial sets will not be issued. Documents can be purchased from **ARC, arcct@e-arc.com, (860) 677-8817, 17 Talcott Notch Road, Farmington CT 06032**. Bidding Documents can be downloaded free of charge from Newfield Construction, Inc.'s FTP site. Visit [www.newfieldconstruction.com](http://www.newfieldconstruction.com) (Projects Bidding) for downloading instructions.

All inquiries must be submitted to the **Construction Manager by 5:00 PM on May 21, 2015**.

Construction Manager:  
Newfield Construction, Inc.  
225 Newfield Avenue  
Hartford, CT 06106  
Phone (860) 509-3023, Fax (860) 953-1712  
Attn: Stephen Buccheri

Architect:  
Amenta/Emma Architects, P.C.  
242 Trumbull Street  
Hartford, CT 06103  
Phone (860) 549-4725, Fax (860) 5-5107  
Attn: Jenna McClure

Plans and specifications may be reviewed, by invitation only, at the following locations:

Newfield Construction  
225 Newfield Ave.  
Hartford, CT 06106

Department of Administrative Services  
165 Capitol Ave. 5<sup>th</sup> Floor East  
Hartford, CT 06106

Online:

[jobs2bid.com](http://jobs2bid.com)

[cdcnews.com](http://cdcnews.com)

[cmdgroup.com](http://cmdgroup.com)

No oral, telephone, or telegraphic proposals will be considered. All bids shall stand available for acceptance for a period of ninety (90) days from the date bids are opened. Alternate bids shall stand available for acceptance for a period of one hundred eighty (180) days from the date the bids are open.

The project shall be awarded to the lowest responsible bidder in accordance with Connecticut General Statute 10-287(b), however, The State of Connecticut and the Construction Manager reserves the right to waive any informality in any Bids or to reject any and all bids, or any part of any bid, when it is determined to be in the best interest of the State or the Construction Manager to do so.

A 10% Bid Security is required from each Bidder at the time of bid submission. The selected bidder will be required to post Performance and Payment Bonds for the full amount of the Contract Sum, (if in excess of \$100,000.00 dollars). The cost of such bonds shall be included in the bid price.

All bidders must comply with all the provisions of Connecticut General Statutes 31-53 (Prevailing Wages) and Executive Order #3.

Connecticut Set-Aside Program Requirements:

Each Trade Contractor award not less the **twenty-five percent (25%)** of their total contract price to contractors who are certified and eligible to participate in the State of Connecticut's "Small Contractor's" set aside program, including **(25%)** of this amount (or **6.25%**) of the total contract price to be awarded to certified and eligible "Minority Business Enterprises" (MBE).

The Commission on Human Rights and Opportunities (CHRO) require all bidders are to comply with the contract compliance law, enacted as Conn. Gen. Stat. Section 4a-60, and the administrative regulations issued pursuant there to prohibit all those who contract with the state, including subcontractors, from engaging in or permitting discrimination in recruiting, hiring or other employment practices. The law further requires state agencies to aggressively solicit the participation of minority and women owned businesses in state contracts. There is a subset of the contract compliance law that pertains to construction related contracts. It places specific contract compliance responsibilities on public works contracts. These are agreements for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property. Link to these statutes (beginning with section 46a-68b through 46a-68k). The bidding trade contractors are to provide all required paperwork post bid/pre award.

This project is exempt from Federal Excise Taxes as well as State of Connecticut Sales Tax to the extent allowed by law.

**AA/EEO Employer**



HARTFORD  
242 Trumbull Street  
Hartford, CT 06103  
860.549.4725

STAMFORD  
One Landmark Square  
Stamford, CT 06901  
203.348.0767

CAMBRIDGE  
32 Warren Street  
Cambridge, MA 02141  
617.492.3662

# AMENTA|EMMA

ARCHITECTS

Design. Precisely.

## ADDENDUM #4

Renovations and New Addition to Lafayette Hall  
Housatonic Community College  
Bridgeport, Connecticut

DCS Project Number: BI-CTC-455-CMR

May 8, 2015

Prepared by Amenta|Emma Architects, PC

This addendum is issued to show corrections, revisions and clarifications to the BID Documents Submission for the *Renovations and New Addition to Lafayette Hall at Housatonic Community College*, dated March 6, 2015.

### Clarifications:

- N/A

### Modifications to the Drawings:

Sheet G2.14:

- West Building Second Floor – Occupancy Plan: **REVISE** rating at South and East sides of Elevator Machine Room (L224) to 2 hour.
- Code Information: **ADD** 2011 and 2013 CT Amendment to State Building Code.
- Code Information: **REVISE** International Energy Conservation Code to 2009.
- Code Information: **REVISE** National Electrical Code to 2011.

Sheet G2.15:

- IECC Construction Assemblies Compliance Chart: **REVISE** requirement for mass walls above grade to 11.4ci.
- IECC Construction Assemblies Compliance Chart: **REVISE** requirement for mass walls below grade to 7.5ci.

Sheet G2.20:

- Fireproofing Diagram – 2<sup>nd</sup> Floor Framing: **ADD** designation 1i to beam located directly East of column line 15, columns located at gridlines G/15 and H/15 and any components of connection between beam and column.
- Fireproofing Legend: **ADD** note to clarify connection requirements where non-fire-resistance-rated members attach to fire-resistance rated members as indicated in sketch AD4-A1.

AMENTA|EMMA

Sheet D1.22:

- Second Floor C Wing Demolition Plan: **ADD** the following to the note indicating removal of existing fume hood; "Fume hood shall be reconditioned, tested and approved (by authority acceptable to OSBI/OSFM) prior to reinstallation in new location.

Sheet A1.22a/A5.04:

- Elevator Machine Room Partitions: **REVISE** partitions at South and East sides of room to 2 hour rated, type 20R. Provide continuous fire treated plywood blocking within the stud cavity.

Sheet A1.51:

- Partition Type 2R: **ADD** fire stopping joint system HW-D-1011, 07 84 43 to partition type.

Sheet A1.52:

- Partition Types 27D & 28D: **ADD** STC rating of 52 to partition types.

Sheet A3.06:

- Wall Section @ Main Lobby Curtain Wall: **ADD** wind load clip and fastener back to added steel tube as indicated in sketch AD4-A2.

Sheet A3.33:

- Detail 27: **ADD** 1-hour rated intumescent fireproofing to beam located directly below 1 hour rated exterior wall, Metal Composite Wall Panel Construction 1HR (UL #U419).

Sheet A4.02:

- Door Schedule: **REVISE** rating indicated for Door L224 to 90 minutes, revise Throat Size to 6-1/8" and revise head and jamb detail reference to 19/A4.03.

Sheet A7.01:

- Enlarged Construction Plan Toilet Room L102A and L102B: **REVISE** toilet stall compartment adjacent to urinal to be 3'-0" wide ambulatory stall, complete with grab bars and accessories as indicated within Women's Room L102A. **ADD** call for aid to ambulatory stall, coordinate mounting location in field.
- Toilet Accessory Mounting Height Diagram: **ADD** low toilet partition door handle at accessible toilet compartments. Mount handle 6" from the hinge side of the compartment side of the door and vertically between 26" and 36" from the finished floor.

Sheet S0.01:

- Components and Cladding Wind Loads: **REVISE** PRESSURE values indicated for parapets within Zone 4 and Zone 5 to 94.2.
- Components and Cladding Wind Loads: **REVISE** SUCTION values indicated for parapets within Zone 4 to -65.9 and Zone 5 to -75.4.

Sheet S2.02:

- Second Floor Framing Plan: **ADD** two HSS beams along column line "H" as indicated in sketch AD4-S1.

Sheet S4.08:

- Detail 5/S4.08: **ADD** detail at HSS beam connection as indicated in sketch AD4-S3.

Sheet S5.00:

- Column Base Schedule: **REVISE** column sizes as indicated in sketch AD4-S2.

Sheet MD1.23:

- Second Floor C Wing Demolition Plan - Mechanical: **ADD** the following to the note indicating removal of existing fume hood; "Fume hood shall be reconditioned, tested and approved (by authority acceptable to OSBI/OSFM) prior to reinstallation in new location.

Sheet E0.01:

- General Notes: **REVISE** note number 6 under Wiring Installation to add the "light" before the word switch. Complete note to read "Under no circumstances shall any light switch or circuit breaker break a neutral conductor".

Sheet E4.01:

- Single Line Diagram: **REVISE** single line diagram as indicated on attached Sheet E4.01.

Sheet E6.00:

- Branch Panel ELP-1 Schedule: **REVISE** branch panel circuits as indicated on attached Sheet E6.00.

### **Modifications to the Specifications:**

Division 8, Section 08 44 13 Glazed Aluminum Curtain Walls:

- **REVISE** the Inward and Outward wall area lateral design pressures and safety factor indicated in paragraph 2.1, C, 3 as follows:
  - a. Field (Zone 4): Inward 50.0 psf, outward 53.0 psf.
  - b. Corners (Zone 5): Inward 50.0 psf, outward 62.1 psf.
  - c. Safety Factor: 1.5.

Division 8, Section 08 41 13 Aluminum-Framed Entrances and Storefronts:

- **REVISE** the Inward and Outward wall area lateral design pressures and safety factor indicated in paragraph 2.1, B, 3 as follows:
  - d. Field (Zone 4): Inward 50.0 psf, outward 53.0 psf.
  - e. Corners (Zone 5): Inward 50.0 psf, outward 62.1 psf.
  - f. Safety Factor: 1.5.

Division 9, Section 09 66 23 Resinous Matrix Terrazzo Flooring:

- **ADD** the following paragraph 2.2, A, 1, d:
  - d. Key Resin Company; Key Epoxy Terrazzo.
- **ADD** the following paragraph 2.3, 1, d:
  - d. Key Resin Company; Key Epoxy Terrazzo.

Division 23, Section 23 52 23 Cast-Iron Boilers:

- **DELETE** the above indicated specification in its entirety.

Division 23, Section 23 52 33 Water Tube Boilers:

- **ADD** the above indicated specification in its entirety to replace deleted specification section 23 52 23.

Division 27, Section 27 15 00 Communications Horizontal Cabling:

- **REVISE** the indicated manufacturer and associated part numbers for the UTP & STP cable hardware to Panduit as indicated in paragraphs 2.4 and 2.5.
- **REVISE** TIA standards as indicated in parts 2 and 3 of the specification.

**Attachments:**

**DRAWINGS:**

- AD4-A1
- AD4-A2
- AD4-S1
- SD4-S2
- AD4-S3
- E4.01
- E6.00





**SPECIFICATIONS:**

- Section 23 52 33 – Water Tube Boilers
- Section 27 15 00 – Communications Horizontal Cabling

End of Addendum

**NOTE:** WHERE NON-FIRE-RESISTANCE-RATED MEMBERS ATTACH TO FIRE-RESISTANCE-RATED MEMBERS, THE NON-RATED MEMBER SHALL BE PROTECTED IN THE SAME MANNER AS THE RATED MEMBER (TYPE AND RATING OF FIREPROOFING), TYPICAL THROUGHOUT THE ENTIRE SCOPE OF THE PROJECT. PROTECTION SHALL BE PROVIDED FOR A MINIMUM OF 12 INCHES ON EITHER SIDE FROM THE POINT OF CONNECTION OF NON-CONTINUOUS MEMBERS. PROTECTION SHALL BE PROVIDED FOR THE FULL LENGTH OF CONTINUOUS MEMBERS.

**NOTE:** AT LOCATIONS IN PLAN WHERE A STEEL BEAM IS ABOVE A STEEL BRACE, BOTH THE BRACE AND FRAME SHALL RECEIVE THE INDICATED FIREPROOFING

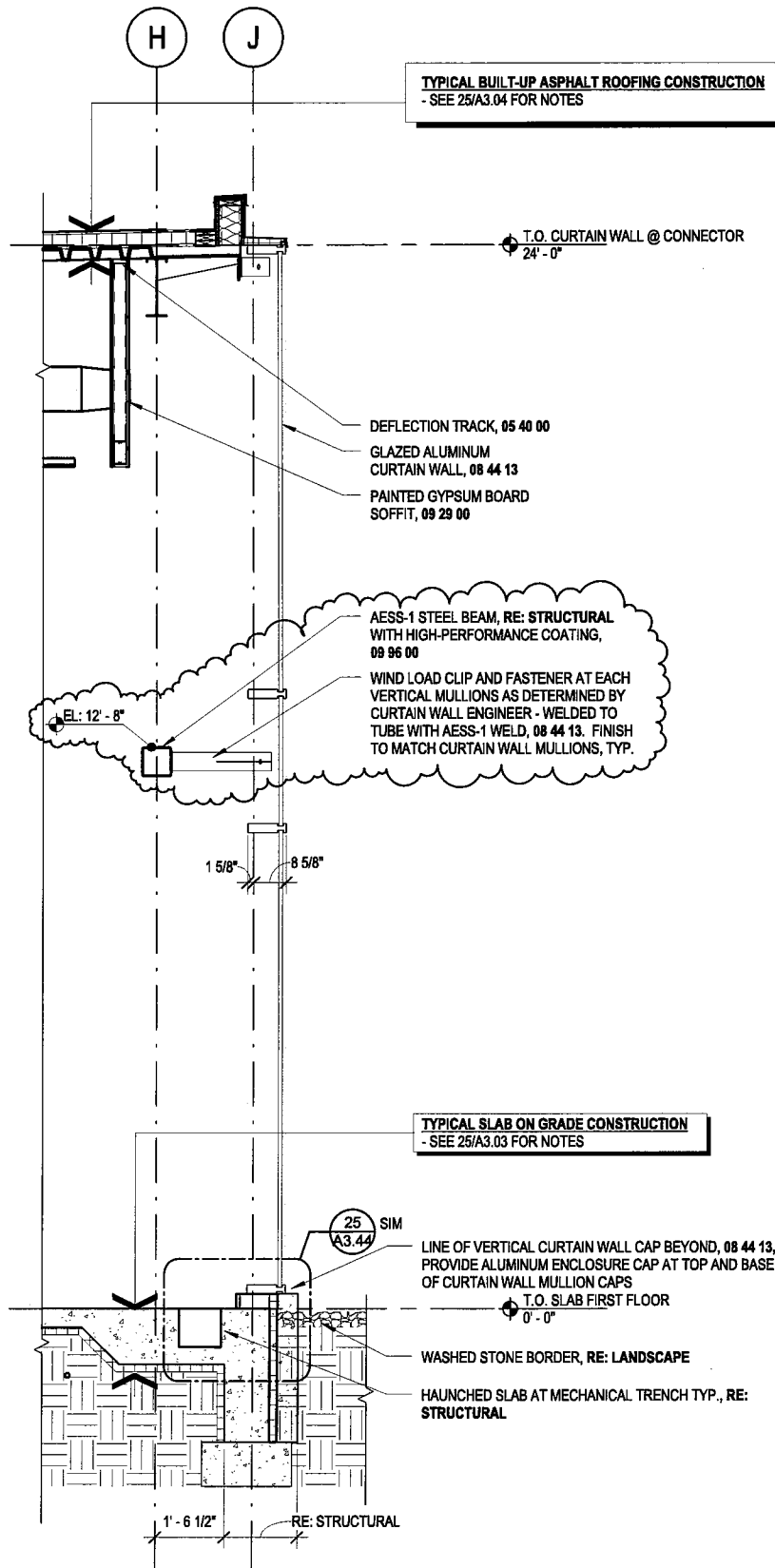
-  1 HOUR APPLIED FIREPROOFING, 07 81 00
-  2 HOUR APPLIED FIREPROOFING, 07 81 00
-  2 HOUR INTUMESCENT FIREPROOFING, 07 81 23
-  2 HOUR APPLIED FIREPROOFING AT UNDERSIDE OF DECK FOR USE SEPARATION

STATE OF CONNECTICUT  
DEPARTMENT OF ADMINISTRATIVE SERVICES  
DIVISION OF CONSTRUCTION SERVICES

HOUSATONIC COMMUNITY COLLEGE:  
RENOVATIONS & ADDITION TO LAFAYETTE HALL

FIREPROOFING LEGEND

**AD4-A1**

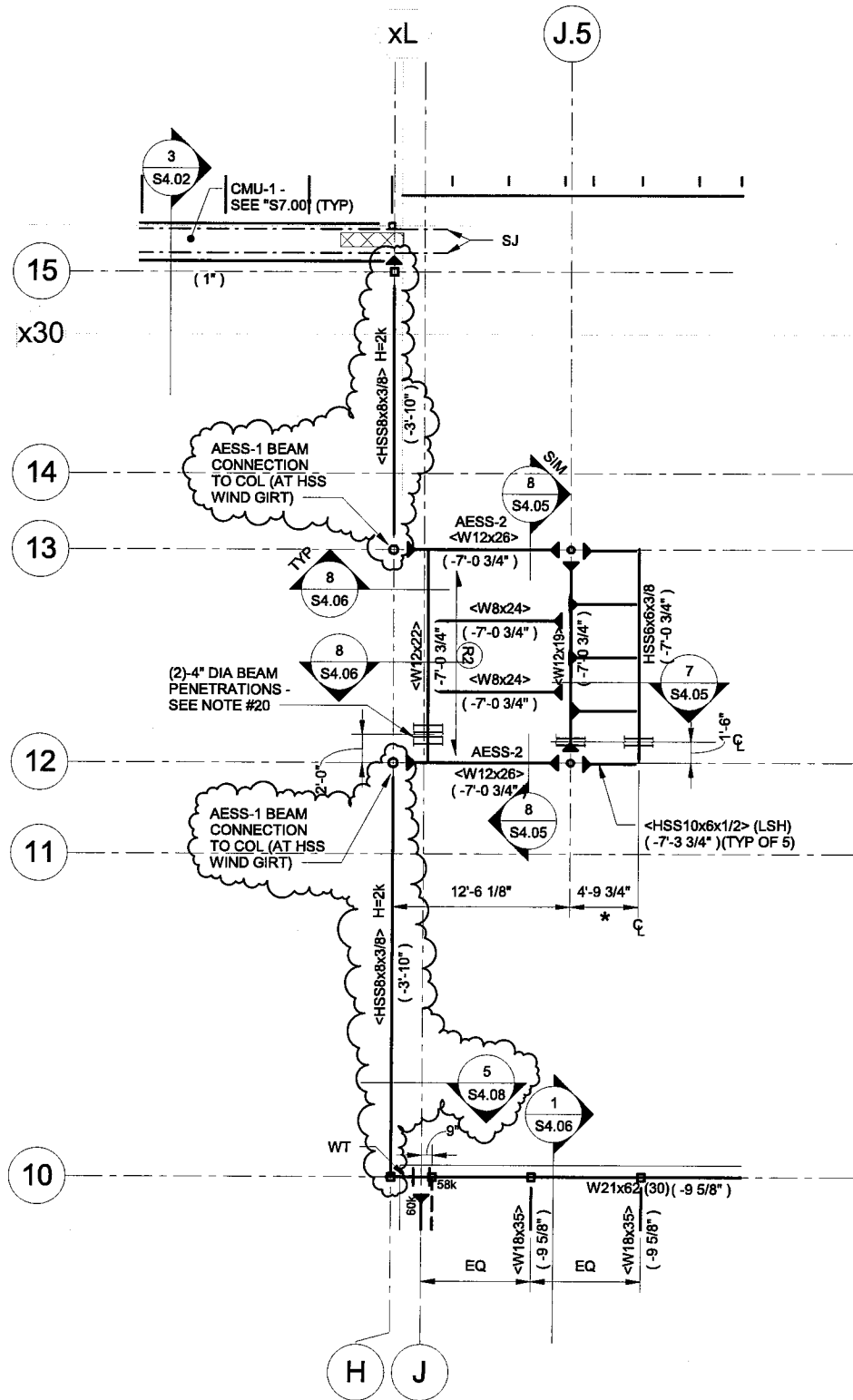


STATE OF CONNECTICUT  
DEPARTMENT OF ADMINISTRATIVE SERVICES  
DIVISION OF CONSTRUCTION SERVICES

HOUSATONIC COMMUNITY COLLEGE:  
RENOVATIONS & ADDITION TO LAFAYETTE HALL

WALL SECTION @ MAIN LOBBY CURTAIN WALL

AD4-A2



**PARTIAL SECOND FLOOR FRAMING PLAN**


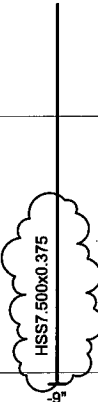
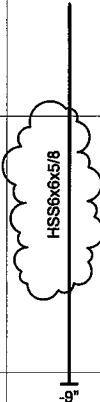
1/8" = 1'-0"

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MASTER PLAN PHASE II - RENOVATIONS & NEW  
 ADDITIONS TO LAFAYETTE HALL

SECOND FLOOR FRAMING PLAN

AD4-S1

COLUMN SCHEDULE				
Roof T/SII				Roof T/SII
61'-6"				61'-6"
Level 4 T/SII				Level 4 T/SII
46'-6"				46'-6"
Level 3 T/SII				Level 3 T/SII
31'-6"				31'-6"
Level 2 T/SII				Level 2 T/SII
16'-6"				16'-6"
FOUNDATION PLAN				FOUNDATION PLAN
0"	-9"	-9"	-9"	0"
Column Locations	H-12	H-13	H-15	
LOAD (k)	30	30	20	
UPLIFT LOAD (k)	-	-	-	
SHEAR (k)	-	-	-	
BASE PLATE DET.	BP-13	BP-13	BP-12	
ANCHOR ROD DET.	AR-2	AR-2	AR-2	
LATERAL COLUMN	LAT	LAT	LAT	

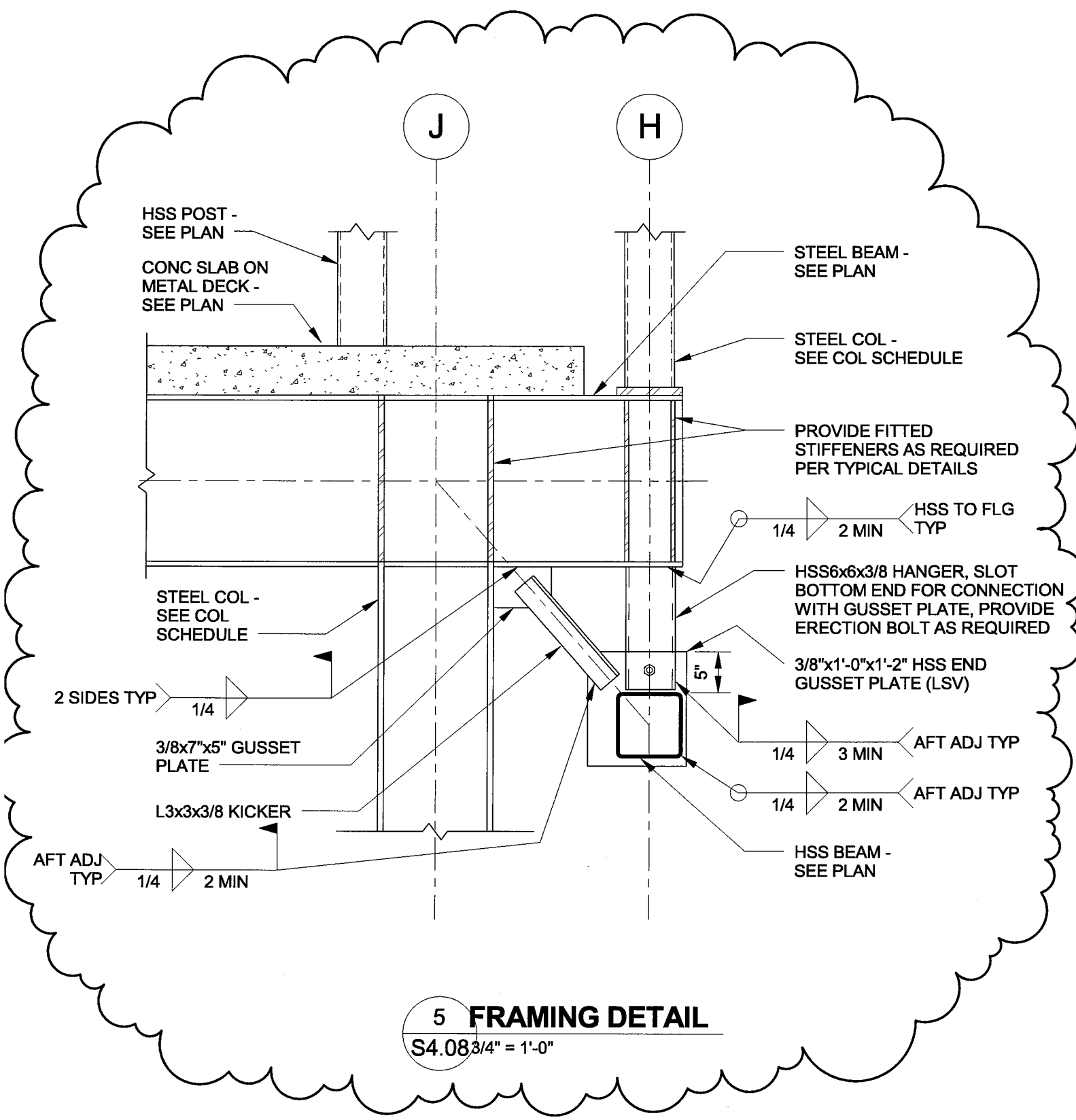
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DIVISION OF CONSTRUCTION SERVICES

MASTER PLAN PHASE II - RENOVATIONS & NEW  
ADDITIONS TO LAFAYETTE HALL

COLUMN SCHEDULE

AD4-S2





**5 FRAMING DETAIL**  
 S4.08 3/4" = 1'-0"

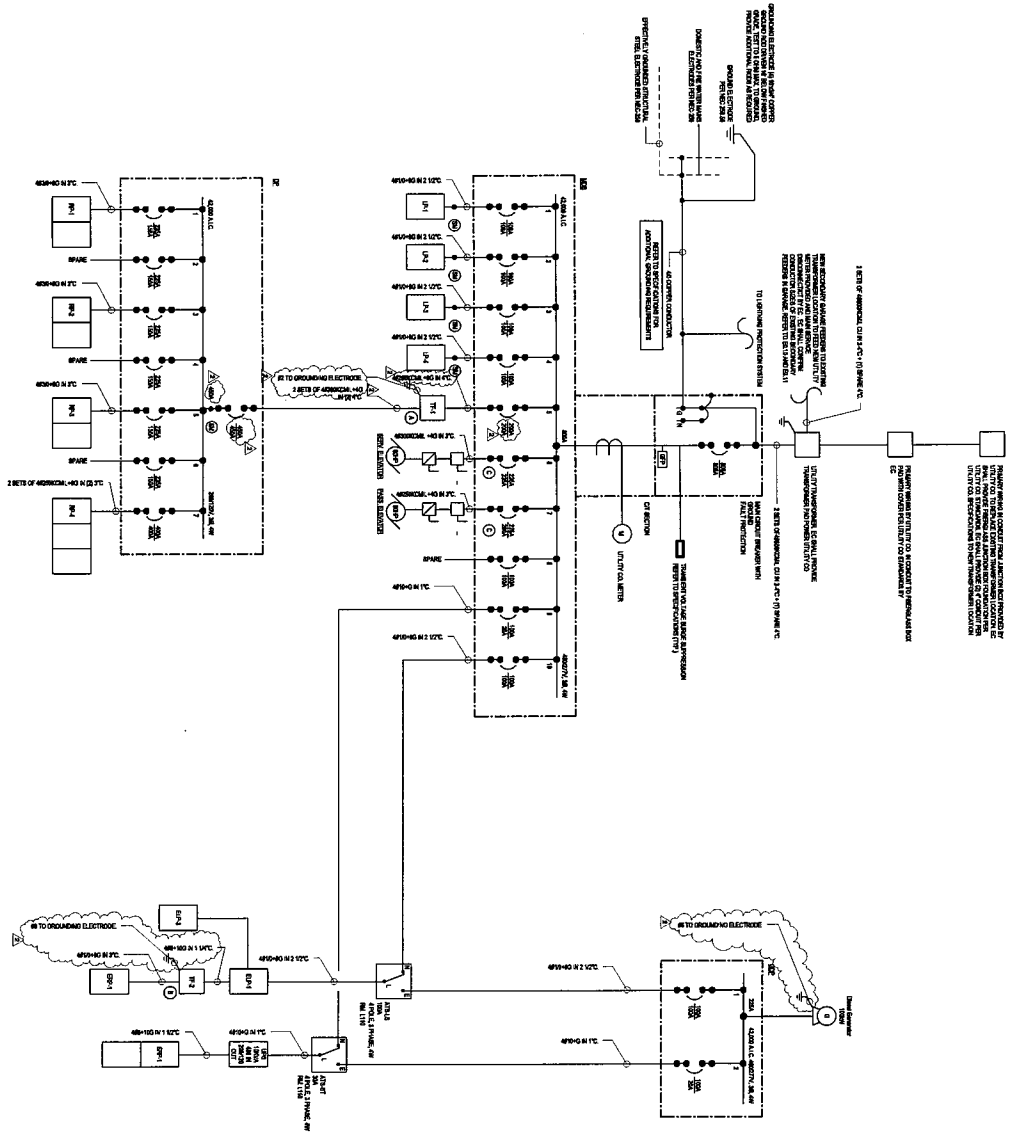
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FRAMING DETAIL

MASTER PLAN PHASE II - RENOVATIONS & NEW  
 ADDITIONS TO LAFAYETTE HALL

**AD4-S3**

1 SINGLE LINE DIAGRAM



1. 120V OF 400V CIRCUIT (1) 120V ETC.  
 2. 200V OF 400V CIRCUIT (1) 200V ETC.  
 3. 400V OF 400V CIRCUIT (1) 400V ETC.

NOTES

1. CONDUCTIVE SURFACE SHALL BE MAINTAINED AT ALL TIMES.
2. SHALL BE MAINTAINED AT ALL TIMES.
3. SHALL BE MAINTAINED AT ALL TIMES.
4. SHALL BE MAINTAINED AT ALL TIMES.
5. SHALL BE MAINTAINED AT ALL TIMES.

GENERAL NOTES

1. ALL MATERIALS SHALL BE AS SPECIFIED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SAFETY OF ALL PERSONNEL AND THE PUBLIC.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES.

STATE OF CONNECTICUT  
 DEPARTMENT OF CONSTRUCTION SERVICES  
 DIVISION OF CONSTRUCTION SERVICES

PROJECT: HOUSATONIC COMMUNITY COLLEGE  
 ADDITIONAL NEW ADDITION TO  
 BROADPORT, CONNECTICUT

DATE: 01/08/2011  
 TIME: 10:00 AM

PROJECT NO: E4101



**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.
- B. Section 01 91 00 – General Commissioning Requirements.

**1.2 SUMMARY**

- A. This Section includes packaged, water-tube boilers, trim, and accessories for generating hot water with the following configurations, burners, and outputs:
  - 1. Boilers shall be factory shipped for field assembly.
  - 2. Combination gas and oil burner.

**1.3 ACTION SUBMITTALS**

- A. Product Data: Include performance data, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings: For boilers, boiler trim, and accessories. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Design calculations and vibration isolation base details, signed and sealed by a qualified professional engineer.
    - a. Design Calculations: Calculate requirements for selecting vibration isolators and seismic restraints and for designing vibration isolation bases.
    - b. Vibration Isolation Base Details: Detail fabrication including anchorages and attachments to structure and to supported equipment. Include auxiliary motor slides and rails and equipment mounting frames.
  - 2. Wiring Diagrams: Power, signal, and control wiring.

**1.4 INFORMATIONAL SUBMITTALS**

- A. Manufacturer Seismic Qualification Certification: Submit certification that boiler, accessories, and components will withstand seismic forces defined in Section 23 05 48 "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."

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.

- B. Source quality-control test reports.
- C. Field quality-control test reports.
- D. Warranty: Special warranty specified in this Section.
- E. Other Informational Submittals:
  1. Startup service reports.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For boilers, components, and accessories to include in emergency, operation, and maintenance manuals.

#### 1.6 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. ASME Compliance: Fabricate and label boilers to comply with ASME Boiler and Pressure Vessel Code.
- C. ASHRAE/IESNA 90.1 Compliance: Boilers shall have minimum efficiency according to "Gas and Oil Fired Boilers - Minimum Efficiency Requirements."
- D. DOE Compliance: Minimum efficiency shall comply with 10 CFR 430, Subpart B, Appendix N, "Uniform Test Method for Measuring the Energy Consumption of Furnaces and Boilers."
- E. I=B=R Compliance: Boilers shall be tested and rated according to HI's "Rating Procedure for Heating Boilers" and "Testing Standard for Commercial Boilers," with I=B=R emblem on a nameplate affixed to boiler.
- F. UL Compliance: Test boilers for compliance with UL 726, "Oil-Fired Boiler Assemblies UL 726, "Oil-Fired Boiler Assemblies," and UL 795, "Commercial-Industrial Gas Heating Equipment UL 795, "Commercial-Industrial Gas Heating Equipment." Boilers shall be listed and labeled by a testing agency acceptable to authorities having jurisdiction.

#### 1.7 COORDINATION

- A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

## 1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace controls and heat exchangers of boilers that fail in materials or workmanship within specified warranty period.
1. Warranty Period for Controls: Two years from date of Substantial Completion.
  2. Warranty Period for Heat Exchangers: 10 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 FLEXIBLE WATER-TUBE BOILERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Precision Boilers
  2. Bryan Steam, LLC.
  3. Cleaver-Brooks; div. of Aqua-Chem, Inc.
- B. Description: Factory-fabricated and field-assembled, water-tube boiler with heat exchanger sealed pressure tight, built on a steel base; including insulated jacket, flue-gas vent, supply and return connections, and controls.
- C. Heat-Exchanger Design: Bent steel tubes swaged into steel headers.
1. Limit tube configurations to four.
  2. Accessible drain and blowdown tappings, both high and low, for surface and mud removal.
  3. Accessible inspection ports in drum, mud legs, and tube manifolds.
  4. Lifting lugs on top of boiler.
  5. Built-in air separator.
- D. Combustion Chamber: Equipped with minimum 2-1/2-inch, 2700 deg F poured refractory on floor and minimum 2-inch lap-jointed cast refractory with fiber-blanket joint seals on side walls. Combustion chamber shall have flame observation ports in front and back.
- E. Casing:
1. Insulation: Minimum 2-inch thick, lightweight refractory; 1-inch thick insulating board; galvanized-steel membrane, and 2-inch thick, mineral-fiber insulation surrounding the heat exchanger and combustion chamber.
  2. Top Flue Connection: Constructed of stainless steel.
  3. Jacket: Galvanized sheet metal, with screw-fastened closures and baked-enamel protective finish.
  4. Mounting base to secure boiler to concrete base.
    - a. Seismic Fabrication Requirements: Fabricate mounting base and attachment to boiler, accessories, and components with reinforcement strong enough to withstand seismic forces defined in Section 23 05 48 "Vibration and Seismic Controls for HVAC Piping and Equipment" when mounting base is anchored to building structure.

5. Control Compartment Enclosure: NEMA 250, Type 1A.

F. Draft Diverter: Galvanized-steel assembly with flue-gas thermometer.

## 2.2 BURNER

A. Burner: Welded construction with multivane, stainless-steel, flame-retention diffuser for fuel oil and natural gas.

B. Blower: Forward-curved centrifugal fan integral to burner, directly driven by motor; with adjustable, dual-blade damper assembly and locking quadrant to set air-fuel ratio.

1. Motors: Comply with requirements specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."

a. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.

C. Oil Supply: Control devices and modulating control sequence shall comply with requirements in ASME CSD-1 FMG IRI UL.

1. Oil Pump: Two-stage, gear-type oil pump integral to and directly driven by blower shall be capable of producing 300-psig discharge pressure and 15-inch Hg vacuum.

2. Oil Piping Specialties:

- a. Suction-line, manual, gate valve.
- b. Removable-mesh oil strainer.
- c. 0- to 30-inch Hg vacuum; 0- to 30-psig vacuum-pressure gage.
- d. 0- to 300-psig oil-nozzle pressure gage.
- e. Nozzle-line, solenoid-safety-shutoff oil valve.

D. Gas Train: Control devices and modulating control sequence shall comply with requirements in ASME CSD-1 FMG IRI UL.

E. Gas electronic Ignition: Intermittent-electric-spark (electronic) ignition with 100 percent main-valve and pilot-safety shutoff with electronic supervision of burner flame.

F. Oil Electronic Ignition: Intermittent-electric-spark (electronic) ignition with 100 percent main-valve and pilot-safety shutoff solenoid with cadmium sulfide flame-safety control.

G. Flue-Gas Recirculation: Burner connections shall be equipped for recirculating flue gas.

1. Maximum Oxides of Nitrogen Emissions: 20 ppm.

H. Trim:

- 1. Include devices sized to comply with ANSI B31.9, "Building Services Piping."
- 2. Aquastat Controllers: Operating, firing rate, and high limit.
- 3. Safety Relief Valve: ASME rated.
- 4. Pressure and Temperature Gage: Minimum 3-1/2-inch-diameter, combination water-pressure and -temperature gage. Gages shall have operating-pressure and -temperature ranges so normal operating range is about 50 percent of full range.
- 5. Boiler Air Vent: Automatic.

6. Drain Valve: Minimum NPS 3/4 hose-end gate valve.

## 2.3 CONTROLS

- A. Refer to Division 23 Section "Instrumentation and Control for HVAC."
- B. Boiler operating controls shall include the following devices and features:
  1. Control transformer.
  2. Set-Point Adjust: Set points shall be adjustable.
  3. Operating Pressure Control: Factory wired and mounted to cycle burner.
    - a. Include automatic, alternating-firing sequence for multiple boilers.
- C. Burner Operating Controls: To maintain safe operating conditions, burner safety controls limit burner operation.
  1. High Cutoff: Manual reset stops burner if operating conditions rise above maximum boiler design temperature.
  2. Low-Water Cutoff Switch: Electronic probe shall prevent burner operation on low water. Cutoff switch shall be manual-reset type.
  3. Blocked Vent Safety Switch: Manual-reset switch factory mounted on draft diverter.
  4. Rollout Safety Switch: Factory mounted on boiler combustion chamber.
  5. Audible Alarm: Factory mounted on control panel with silence switch; shall sound alarm for above conditions.
- D. Building Management System Interface: Factory install hardware and software to enable building management system to monitor, control, and display boiler status and alarms.
  1. Hardwired Points:
    - a. Monitoring: On/off status, common trouble alarm low water level alarm.
    - b. Control: On/off operation, hot water supply temperature set-point adjustment.
  2. A communication interface with building management system shall enable building management system operator to remotely control and monitor the boiler from an operator workstation. Control features available, and monitoring points displayed, locally at boiler control panel shall be available through building management system.

## 2.4 ELECTRICAL POWER

- A. Controllers, Electrical Devices, and Wiring: Electrical devices and connections are specified in Division 26 Sections.
- B. Single-Point Field Power Connection: Factory-installed and -wired switches, motor controllers, transformers, and other electrical devices necessary shall provide a single-point field power connection to boiler.
  1. House in NEMA 250, Type 1 enclosure.
  2. Wiring shall be numbered and color-coded to match wiring diagram.
  3. Install factory wiring outside of an enclosure in a metal raceway.
  4. Field power interface shall be to fused disconnect switch.



5. Provide branch power circuit to each motor and to controls.
6. Provide each motor with overcurrent protection.

## 2.5 CAPACITIES AND CHARACTERISTICS

- A. Heating Medium: Hot water.
- B. Refer to Drawings for boiler capacity requirements.

## 2.6 SOURCE QUALITY CONTROL

- A. Test and inspect factory-assembled boilers, before shipping, according to ASME Boiler and Pressure Vessel Code.
- B. Burner and Hydrostatic Test: Factory adjust burner to eliminate excess oxygen, carbon dioxide, oxides of nitrogen emissions, and carbon monoxide in flue gas and to achieve combustion efficiency; perform hydrostatic test.
- C. Allow Owner access to source quality-control testing of boilers. Notify Architect 14 days in advance of testing.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Before boiler installation, examine roughing-in for concrete equipment bases, anchor-bolt sizes and locations, and piping and electrical connections to verify actual locations, sizes, and other conditions affecting boiler performance, maintenance, and operations.
  1. Final boiler locations indicated on Drawings are approximate. Determine exact locations before roughing-in for piping and electrical connections.
- B. Examine mechanical spaces for suitable conditions where boilers will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 BOILER INSTALLATION

- A. Equipment Mounting: Install boilers on cast-in-place concrete equipment base(s) using elastomeric pads. Comply with requirements for equipment bases specified in Division 03 Section "Miscellaneous Cast-in-Place Concrete." Comply with requirements for vibration isolation devices specified in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment."
  1. Minimum Deflection: 1/4 inch.
  2. Coordinate sizes and locations of concrete bases with actual equipment provided. Cast anchor-bolt inserts into bases.

3. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of concrete base.
  4. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base, and anchor into structural concrete floor.
  5. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
  6. Install anchor bolts to elevations required for proper attachment to supported equipment.
  7. Install on 4-inch-high concrete base designed to withstand, without damage to equipment, seismic force required by code.
- B. Install gas-fired boilers according to NFPA 54.
- C. Install oil-fired boilers according to NFPA 31.
- D. Assemble boiler sections in sequence and seal between each section.
- E. Assemble and install boiler trim.
- F. Install electrical devices furnished with boiler but not specified to be factory mounted.
- G. Install control wiring to field-mounted electrical devices.

### 3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to boiler to allow service and maintenance.
- C. Connect gas piping to boiler gas-train inlet with union. Piping shall be at least full size of gas train connection. Provide a reducer if required.
- D. Connect oil piping full size to burner inlet with shutoff valve and union.
- E. Connect hot-water piping to supply- and return-boiler tappings with shutoff valve and union or flange at each connection.
- F. Install piping from safety relief valves to nearest floor drain.
- G. Install piping from equipment drain connection to nearest floor drain. Piping shall be at least full size of connection. Provide an isolation valve if required.
- H. Connect breeching full size to boiler outlet. Comply with requirements in Division 23 Section "Breechings, Chimneys, and Stacks" for venting materials.
- I. Install flue-gas recirculation duct from vent to burner. Comply with requirements in Division 23 Section "Breechings, Chimneys, and Stacks" for recirculation duct materials.
- J. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."

- K. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

### 3.4 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
  - 1. **Manufacturer's Field Service:** Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
  - 2. The contractor shall submit the FM Global Boiler Inspection Form as part of the submittal process and upon completion of testing and inspection.
- B. Tests and Inspections:
  - 1. Perform installation and startup checks according to manufacturer's written instructions.
  - 2. **Leak Test:** Hydrostatic test. Repair leaks and retest until no leaks exist.
  - 3. **Operational Test:** Start units to confirm proper motor rotation and unit operation. Adjust air-fuel ratio and combustion.
  - 4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
    - a. **Burner Test:** Adjust burner to eliminate excess oxygen, carbon dioxide, oxides of nitrogen emissions, and carbon monoxide in flue gas and to achieve combustion efficiency.
    - b. Check and adjust initial operating set points and high- and low-limit safety set points of fuel supply, water level, and water temperature.
    - c. Set field-adjustable switches and circuit-breaker trip ranges as indicated.
- C. Remove and replace malfunctioning units and retest as specified above.
- D. **Occupancy Adjustments:** When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to Project during other than normal occupancy hours for this purpose.
- E. Performance Tests:
  - 1. Engage a factory-authorized service representative to inspect component assemblies and equipment installations, including connections, and to conduct performance testing.
  - 2. Boilers shall comply with performance requirements indicated, as determined by field performance tests. Adjust, modify, or replace equipment in order to comply.
  - 3. Perform field performance tests to determine the capacity and efficiency of the boilers.
    - a. For dual-fuel boilers, perform tests for each fuel.
    - b. Test for full capacity.
    - c. Test for boiler efficiency at low fire 20, 40, 60, 80, 100, 80, 60, 40 and 20 percent of full capacity. Determine efficiency at each test point.
  - 4. Repeat tests until results comply with requirements indicated.
  - 5. Provide analysis equipment required to determine performance.
  - 6. Provide temporary equipment and system modifications necessary to dissipate the heat produced during tests if building systems are not adequate.
  - 7. Notify Architect in advance of test dates.
  - 8. Document test results in a report and submit to Architect.

**3.5 DEMONSTRATION**

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain boilers. Refer to Section 01 79 00 "Demonstration and Training."

**3.6 COMMISSIONING**

- A. Where indicated in the equipment or commissioning specifications, engage a factory-authorized service representative, to perform startup service as per functional test sheets and requirements of Section 01 91 00 – General Commissioning Requirements.
- B. Complete installation and startup checks and functional tests according to Section 01 91 00 – General Commissioning Requirements and manufacturers written instructions.
- C. Operational Test: After electrical system has been energized, start units to confirm proper unit operation. Rectify malfunctions, replace defective parts with new one and repeat the start up procedure.
- D. Verify that equipment is installed and commissioned as per requirements of section 01 91 00 and manufacturers written instructions/requirements.

END OF SECTION 23 52 33

**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. Pathways.
- 2. UTP cabling.
- 3. Cable connecting hardware, patch panels, and cross-connects.
- 4. Telecommunications outlet/connectors.
- 5. Cabling system identification products.
- 6. Cable management system.

**B. Related Sections:**

- 1. Division 27 Section "Communications Backbone Cabling" for voice and data cabling associated with system panels and devices.

**1.3 DEFINITIONS**

- A. Basket Cable Tray: A fabricated structure consisting of wire mesh bottom and side rails.
- B. BICSI: Building Industry Consulting Service International.
- C. Channel Cable Tray: A fabricated structure consisting of a one-piece, ventilated-bottom or solid-bottom channel.
- D. Consolidation Point: A location for interconnection between horizontal cables extending from building pathways and horizontal cables extending into furniture pathways.
- E. Cross-Connect: A facility enabling the termination of cable elements and their interconnection or cross-connection.
- F. EMI: Electromagnetic interference.
- G. IDC: Insulation displacement connector.
- H. Ladder Cable Tray: A fabricated structure consisting of two longitudinal side rails connected by individual transverse members (rungs).
- I. LAN: Local area network.
- J. MUTOA: Multiuser telecommunications outlet assembly, a grouping in one location of several telecommunications outlet/connectors.

- K. **Outlet/Connectors:** A connecting device in the work area on which horizontal cable or outlet cable terminates.
- L. **RCDD:** Registered Communications Distribution Designer.
- M. **Solid-Bottom or Nonventilated Cable Tray:** A fabricated structure consisting of longitudinal side rails and a bottom without ventilation openings.
- N. **Trough or Ventilated Cable Tray:** A fabricated structure consisting of longitudinal side rails and a bottom having openings for the passage of air.
- O. **UTP:** Unshielded twisted pair.

#### 1.4 HORIZONTAL CABLING DESCRIPTION

- A. Horizontal cable and its connecting hardware provide the means of transporting signals between the telecommunications outlet/connector and the horizontal cross-connect located in the communications equipment room. This cabling and its connecting hardware are called "permanent link," a term that is used in the testing protocols.
  - 1. TIA/EIA-568-C.0 requires that a minimum of two telecommunications outlet/connectors be installed for each work area.
  - 2. Horizontal cabling shall contain no more than one transition point or consolidation point between the horizontal cross-connect and the telecommunications outlet/connector.
  - 3. Bridged taps and splices shall not be installed in the horizontal cabling.
  - 4. Splitters shall not be installed as part of the optical fiber cabling.
- B. A work area is approximately 100 sq. ft., and includes the components that extend from the telecommunications outlet/connectors to the station equipment.
- C. The maximum allowable horizontal cable length is 295 feet. This maximum allowable length does not include an allowance for the length of 16 feet to the workstation equipment. The maximum allowable length does not include an allowance for the length of 16 feet in the horizontal cross-connect.

#### 1.5 PERFORMANCE REQUIREMENTS

- A. **General Performance:** Horizontal cabling system shall comply with transmission standards in TIA/EIA-568-C.0, when tested according to test procedures of this standard.

#### 1.6 ACTION SUBMITTALS

- A. **Product Data:** For each type of product indicated.
- B. **Shop Drawings:**
  - 1. **System Labeling Schedules:** Electronic copy of labeling schedules, in software and format selected by Owner.
  - 2. **System Labeling Schedules:** Electronic copy of labeling schedules that are part of the cabling and asset identification system of the software.
  - 3. **Cabling administration drawings and printouts.**

4. Wiring diagrams to show typical wiring schematics, including the following:
    - a. Cross-connects.
    - b. Patch panels.
    - c. Patch cords.
  5. Cross-connects and patch panels. Detail mounting assemblies, and show elevations and physical relationship between the installed components.
  6. Cable tray layout, showing cable tray route to scale, with relationship between the tray and adjacent structural, electrical, and mechanical elements. Include the following:
    - a. Vertical and horizontal offsets and transitions.
    - b. Clearances for access above and to side of cable trays.
    - c. Vertical elevation of cable trays above the floor or bottom of ceiling structure.
    - d. Load calculations to show dead and live loads as not exceeding manufacturer's rating for tray and its support elements.
- C. Samples: For workstation outlets, jacks, jack assemblies, in specified finish, one for each size and outlet configuration and faceplates for color selection and evaluation of technical features.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer, qualified layout technician, installation supervisor, and field inspector.
- B. Source quality-control reports.
- C. Field quality-control reports.

#### 1.8 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For splices and connectors to include in maintenance manuals.
- B. Software and Firmware Operational Documentation:
  1. Software operating and upgrade manuals.
  2. Program Software Backup: On magnetic media or compact disk, complete with data files.
  3. Device address list.
  4. Printout of software application and graphic screens.

#### 1.9 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  1. Patch-Panel Units: One of each type.
  2. Connecting Blocks: One of each type.
  3. Device Plates: One of each type.

1.10 QUALITY ASSURANCE

- A. Installer Qualifications: Cabling Installer must have personnel certified by BICSI on staff.
  - 1. Layout Responsibility: Preparation of Shop Drawings and Cabling Administration Drawings, and field testing program development by an RCDD.
  - 2. Installation Supervision: Installation shall be under the direct supervision of Level 2 Installer, who shall be present at all times when Work of this Section is performed at Project site.
  - 3. Testing Supervisor: Currently certified by BICSI as an RCDD to supervise on-site testing.
- B. Testing Agency Qualifications: An NRTL.
  - 1. Testing Agency's Field Supervisor: Currently certified by BICSI as an RCDD to supervise on-site testing.
- C. 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.
- D. Telecommunications Pathways and Spaces: Comply with TIA/EIA-569-A.
- E. Grounding: Comply with ANSI-J-STD-607-B.

1.11 DELIVERY, STORAGE, AND HANDLING

- A. Test cables upon receipt at Project site.
  - 1. Test each pair of UTP cable for open and short circuits.

1.12 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install cables and connecting materials until 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.

1.13 COORDINATION

- A. Coordinate layout and installation of telecommunications pathways and cabling with Owner's telecommunications and LAN equipment and service suppliers.
- B. Coordinate telecommunications outlet/connector locations with location of power receptacles at each work area.

PART 2 - PRODUCTS

2.1 PATHWAYS

- A. General Requirements: Comply with TIA/EIA-569-A.



- B. Cable Support: NRTL labeled for support of Category 5E cabling, designed to prevent degradation of cable performance and pinch points that could damage cable.
  - 1. Support brackets with cable tie slots for fastening cable ties to brackets.
  - 2. Lacing bars, spools, J-hooks, and D-rings.
  - 3. Straps and other devices.

## 2.2 UTP CABLE

- A. Manufacturers: Subject to compliance with requirements:
  - 1. Berk-Tek: LANMark-1000
  - 2. Mohawk: 6 LAN Plus
  - 3. Hitachi: PLUS Enhanced Cat6
  - 4. General Cable: GenSpeed 6000
  - 5. Approved Equal
- B. Description: 100-ohm, 4-pair UTP, covered with a colored thermoplastic jacket as indicated.
  - 1. Comply with ICEA S-90-661 for mechanical properties.
  - 2. Comply with TIA/EIA-568-C.2 for performance specifications.
  - 3. Comply with TIA/EIA-568-C.2, Category 6.
  - 4. Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444 and NFPA 70 for the following types:
    - a. Communications, Plenum Rated: Type CMP, complying with NFPA 262.
  - 5. "Minimum Compliant" cables will not be accepted.
  - 6. Copper-Clad Aluminum cables will not be accepted.
  - 7. Cable Jacket Colors:
    - a. Data Cables: Blue and Green

## 2.3 STP CABLE

- A. Manufacturers: Subject to compliance with requirements:
  - 1. Berk-Tek: LANMark-10G FTP Cat6A
  - 2. Mohawk: XGO F/UTP Cat6A
  - 3. Hitachi: Supra 10G Enhanced Shielded Cat6A
  - 4. General Cable: GenSpeed 10,000 Shielded Cat6A
  - 5. Approved Equal
- B. Description: 100-ohm, 4-pair UTP, covered with a colored thermoplastic jacket as indicated.
  - 1. Comply with ICEA S-90-661 for mechanical properties.
  - 2. Comply with TIA-568-C.2-10 for performance specifications.
  - 3. Comply with TIA-568-C.2-10, Category 6A.
  - 4. Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444 and NFPA 70 for the following types:
    - a. Communications, Plenum Rated: Type CMP, complying with NFPA 262.

5. "Minimum Compliant" cables will not be accepted.
6. Copper-Clad Aluminum cables will not be accepted.
7. Used for Wireless Access Point cabling.
8. Cable Jacket Colors:

- a. Data Cables: White

## 2.4 UTP CABLE HARDWARE

- A. Manufacturers: Subject to compliance with requirements:

1. **Panduit**

- B. General Requirements for Cable Connecting Hardware: Comply with **TIA-568-C.2**, IDC type, with modules designed for punch-down caps or tools. Cables shall be terminated with connecting hardware of same category or higher.

- C. Patch Panel: Modular panels housing multiple-numbered jack units with IDC-type connectors at each jack for permanent termination of pair groups of installed cables.

1. **Category 6 rated, 48-Port, 2U, Flat – Panduit Part #DP48688TGY**
2. **Strain relief bar – Panduit Part #SRB19BLY**

- D. Horizontal Wire Manager:

1. 1U Wire Manager – **Panduit Part #NMF1**
2. 2U Wire Manager – **Panduit Part #NMF2**

- E. Jacks and Jack Assemblies:

1. Modular, color-coded, eight-position modular receptacle units with integral IDC-type terminals.
2. Angled or Flush mounting jacks, positioning the cord at a 45-degree angle.
3. Category-6 Information Outlet
  - a. Green Jacks for Data Terminations – **Panduit Part #CJ688TGGR**
  - b. Blue Jacks for Data Terminations – **Panduit Part #CJ688TGBU**
  - c. Provide Blank Inserts for all blank spaces in faceplates
  - d. Keystone Style jacks as needed in A/V Faceplates or other locations as required.

- F. Faceplates:

1. 2-Gang and single-gang A/V Faceplates with modules for Keystone jacks.
2. **2-Port single-gang Faceplate – Panduit Part #UICFP2WH (Color is "White". Coordinate final color w/ Architect)**
3. **4-Port single-gang Faceplate – Panduit Part #UICFP4WH (Color is "White". Coordinate final color w/ Architect)**
4. Wallphone Faceplate – **Panduit Part #KWP6PY.**
5. Modular Furniture Adapter Plates: **Panduit Part #CFFPL4BL**
6. Faceplate color to be coordinated with finish, and approved by Architect.

- G. Patch Cords: Factory-made, four-pair Category-6 cables in lengths and colors indicated below; terminated with eight-position modular plug at each end. Confirm patch cords quantities and lengths with Owner prior to procurement.

1. 5 Ft Blue CAT.6 UTP for IDF Room – **Panduit Part #UTPSP5BUY** – QTY 150
2. 7 Ft Blue CAT.6 UTP for IDF Room – **Panduit Part #UTPSP7BUY** – QTY 300
3. 10 Ft Blue CAT.6 UTP for IDF Room – **Panduit Part #UTPSP10BUY** – QTY 300
4. 15 Ft Blue CAT.6 UTP for IDF Room – **Panduit Part #UTPSP15BUY** – QTY 250
5. 10 Ft **White** CAT.6 UTP for Workstations – **Panduit Part #UTPSP10Y** – QTY 1,000

## 2.5 STP CABLE HARDWARE

- A. Manufacturers: Subject to compliance with requirements:

1. **Panduit**

- B. General Requirements for Cable Connecting Hardware: Comply with **TIA-568-C.2**, IDC type, with modules designed for punch-down caps or tools. Cables shall be terminated with connecting hardware of same category or higher.

- C. Patch Panel: Unloaded shielded patch panels with spaces for modular shielded jacks for permanent termination of pair groups of installed cables.

1. 24-Port, 1U, Flat – **Panduit shielded modular patch panels, Part #CP24WSBLY**

- D. Horizontal Wire Manager:

1. 1U Wire Manager – **Panduit Part #NMF1**
2. 2U Wire Manager – **Panduit Part #NMF2**

- E. Jacks and Jack Assemblies:

1. Modular, color-coded, eight-position modular receptacle units with integral IDC-type terminals.
2. Angled or Flush mounting jacks, positioning the cord at a 45-degree angle.
3. T568B wiring.
4. Category-6A shielded Information Outlet

a. **Panduit Part #CJS6X88TGY**

- F. Faceplates:

1. **2-Port single-gang Faceplate – Panduit Part #UICFP2WH (Color is “White”. Coordinate final color w/ Architect)**
2. Surface mount boxes as required
3. Faceplate color to be coordinated with finish, and approved by Architect.

- G. Patch Cords: Factory-made, four-pair Category-6 cables in lengths and colors indicated below; terminated with eight-position modular plug at each end. Confirm patch cords quantities and lengths with Owner prior to procurement.

1. 15 Ft **International Gray** CAT.6A STP for IDF Room – **Panduit Part #STP6X15IG** – QTY 100

2. 15 Ft **International Gray** CAT.6A STP WAP devices – **Panduit Part #STP6X15IG** – QTY 100

## 2.6 GROUNDING

- A. Comply with requirements in Division 27 Section "Grounding and Bonding" for grounding conductors and connectors.
- B. Comply with **TIA-607-B**.

## 2.7 IDENTIFICATION PRODUCTS

- A. Comply with **TIA-606-B** and UL 969 for labeling materials, including label stocks, laminating adhesives, and inks used by label printers.
- B. Comply with requirements in Division 27 Section "Identification for Communications Systems."

## 2.8 SOURCE QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to evaluate cables.
- B. Factory test UTP and optical fiber cables on reels according to **TIA-568-C.1**.
- C. Factory test UTP cables according to **TIA-568-C.2**.
- D. Factory-sweep test coaxial cables at frequencies from 5 MHz to 1 GHz. Sweep test shall test the frequency response, or attenuation over frequency, of a cable by generating a voltage whose frequency is varied through the specified frequency range and graphing the results.
- E. Cable will be considered defective if it does not pass tests and inspections.
- F. Prepare test and inspection reports.

## PART 3 - EXECUTION

### 3.1 WIRING METHODS

- A. Wiring Method: Install cables in raceways and cable trays except within consoles, cabinets, desks, and counters. Conceal raceway and cables except in unfinished spaces.
  1. Install plenum cable in environmental air spaces, including plenum ceilings.
  2. Comply with requirements for raceways and boxes specified in Division 26 Section "Raceway and Boxes for Electrical Systems."
- B. Wiring Method: Conceal conductors and cables in accessible ceilings, walls, and floors where possible.

- C. Wiring within Enclosures: Bundle, lace, and train cables to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.

### 3.2 INSTALLATION OF CABLES

- A. Comply with NECA 1.

- B. General Requirements for Cabling:

1. Comply with **TIA-568-C.1**.
2. Comply with BICSI ITSIM, Ch. 6, "Cable Termination Practices."
3. Install 110-style IDC termination hardware unless otherwise indicated.
4. MUTOA shall not be used as a cross-connect point.
5. Terminate conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, cross-connects, and patch panels.
6. Cables may not be spliced. Secure and support cables at intervals not exceeding 30 inches and not more than 6 inches from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
7. Install lacing bars to restrain cables, to prevent straining connections, and to prevent bending cables to smaller radii than minimums recommended by manufacturer.
8. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter. Install lacing bars and distribution spools.
9. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
10. Cold-Weather Installation: Bring cable to room temperature before dereeling. Heat lamps shall not be used for heating.
11. Pulling Cable: Comply with BICSI ITSIM, Ch. 4, "Pulling Cable." Monitor cable pull tensions.

- C. UTP Cable Installation:

1. Comply with **TIA-568-C.2**.
2. Do not untwist UTP cables more than 1/2 inch from the point of termination to maintain cable geometry.

- D. Open-Cable Installation:

1. Install cabling with horizontal and vertical cable guides in telecommunications spaces with terminating hardware and interconnection equipment.
2. Suspend UTP cable not in a wireway or pathway a minimum of 8 inches above ceilings by cable supports not more than 60 inches apart.
3. Cable shall not be run through structural members or in contact with pipes, ducts, or other potentially damaging items.

- E. Separation from EMI Sources:

1. Comply with BICSI TDMM and **TIA-569-A** for separating unshielded copper voice and data communication cable from potential EMI sources, including electrical power lines and equipment.
2. Separation between open communications cables or cables in nonmetallic raceways and unshielded power conductors and electrical equipment shall be as follows:

- a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 5 inches.
  - b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 12 inches.
  - c. Electrical Equipment Rating More Than 5 kVA: A minimum of 24 inches.
3. Separation between communications cables in grounded metallic raceways and unshielded power lines or electrical equipment shall be as follows:
- a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 2-1/2 inches.
  - b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 6 inches.
  - c. Electrical Equipment Rating More Than 5 kVA: A minimum of 12 inches.
4. Separation between communications cables in grounded metallic raceways and power lines and electrical equipment located in grounded metallic conduits or enclosures shall be as follows:
- a. Electrical Equipment Rating Less Than 2 kVA: No requirement.
  - b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 3 inches.
  - c. Electrical Equipment Rating More Than 5 kVA: A minimum of 6 inches.
5. Separation between Communications Cables and Electrical Motors and Transformers, 5 kVA or HP and Larger: A minimum of 48 inches.
6. Separation between Communications Cables and Fluorescent Fixtures: A minimum of 5 inches.

### 3.3 GROUNDING

- A. Install grounding according to BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.
- B. Comply with **TIA-607-B**.
- C. Locate grounding bus bar to minimize the length of bonding conductors. Fasten to wall allowing at least 2-inch clearance behind the grounding bus bar. Connect grounding bus bar with a minimum No. 4 AWG grounding electrode conductor from grounding bus bar to suitable electrical building ground.
- D. Bond metallic equipment to the grounding bus bar, using not smaller than No. 6 AWG equipment grounding conductor.

### 3.4 IDENTIFICATION

- A. Identify system components, wiring, and cabling complying with **TIA-606-A**. Comply with requirements for identification specified in Division 27 Section "Identification for Communications Systems."
  1. Color-code cross-connect fields. Apply colors to voice and data service backboards, connections, covers, and labels.
- B. Comply with requirements in Division 09 Section "Interior Painting" for painting backboards. For fire-resistant plywood, do not paint over manufacturer's label.

- C. Cable Schedule: Post in prominent location in each equipment room and wiring closet. List incoming and outgoing cables and their designations, origins, and destinations. Protect with rigid frame and clear plastic cover. Furnish an electronic copy of final comprehensive schedules for Project.
- D. Cabling Administration Drawings: Show building floor plans with cabling administration-point labeling. Identify labeling convention and show labels for telecommunications closets, backbone pathways and cables, entrance pathways and cables, terminal hardware and positions, horizontal cables, work areas and workstation terminal positions, grounding buses and pathways, and equipment grounding conductors. Follow convention of **TIA-606-B**. Furnish electronic record of all drawings, in software and format selected by Owner.
- E. Cable and Wire Identification:
1. Label each cable within 4 inches of each termination and tap, where it is accessible in a cabinet or junction or outlet box, and elsewhere as indicated.
  2. Each wire connected to building-mounted devices is not required to be numbered at device if color of wire is consistent with associated wire connected and numbered within panel or cabinet.
  3. Label each terminal strip and screw terminal in each cabinet, rack, or panel.
    - a. Individually number wiring conductors connected to terminal strips, and identify each cable or wiring group being extended from a panel or cabinet to a building-mounted device shall be identified with name and number of particular device as shown.
    - b. Label each unit and field within distribution racks and frames.
  4. Identification within Connector Fields in Equipment Rooms and Wiring Closets: Label each connector and each discrete unit of cable-terminating and connecting hardware. Where similar jacks and plugs are used for both voice and data communication cabling, use a different color for jacks and plugs of each service.
- F. Labels shall be preprinted or computer-printed type with printing area and font color that contrasts with cable jacket color but still complies with requirements in **TIA-606-B**.
1. Cables use flexible vinyl or polyester that flex as cables are bent.

### 3.5 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Tests and Inspections:
1. Visually inspect UTP and optical fiber cable jacket materials for NRTL certification markings. Inspect cabling terminations in communications equipment rooms for compliance with color-coding for pin assignments, and inspect cabling connections for compliance with **TIA-568-C.0** and **C.1**.
  2. Visually confirm Category 6 marking of outlets, cover plates, outlet/connectors, and patch panels.
  3. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of all components.
  4. UTP Performance Tests:

- a. Test for each outlet. Perform the following tests according to TIA-568-C.1 and TIA-568-C.2:
    - 1) Wire map.
    - 2) Length (physical vs. electrical, and length requirements).
    - 3) Insertion loss.
    - 4) Near-end crosstalk (NEXT) loss.
    - 5) Power sum near-end crosstalk (PSNEXT) loss.
    - 6) Equal-level far-end crosstalk (ELFEXT).
    - 7) Power sum equal-level far-end crosstalk (PSELFEXT).
    - 8) Return loss.
    - 9) Propagation delay.
    - 10) Delay skew.
  5. Final Verification Tests: Perform verification tests for UTP systems after the complete communications cabling and workstation outlet/connectors are installed.
    - a. Voice Tests: These tests assume that dial tone service has been installed. Connect to the network interface device at the demarcation point. Go off-hook and listen and receive a dial tone. If a test number is available, make and receive a local, long distance, and digital subscription line telephone call.
    - b. Data Tests: These tests assume the Information Technology Staff has a network installed and is available to assist with testing. Connect to the network interface device at the demarcation point. Log onto the network to ensure proper connection to the network.
  - C. Document data for each measurement. Data for submittals shall be printed in a summary report that is formatted similar to Table 10.1 in BICSI TDMM, or transferred from the instrument to the computer, saved as text files, and printed and submitted.
  - D. End-to-end cabling will be considered defective if it does not pass tests and inspections.
  - E. Prepare test and inspection reports.
- 3.6 DEMONSTRATION
- A. Train Owner's maintenance personnel in cable-plant management operations, including changing signal pathways for different workstations, rerouting signals in failed cables, and keeping records of cabling assignments and revisions when extending wiring to establish new workstation outlets.

END OF SECTION 27 15 00



INVITATION TO BID  
**SET ASIDE BID PACKAGES**

May 8, 2015

BI-CTC-455-CMR

Renovations & Addition to Lafayette Hall  
Housatonic Community College, Bridgeport, CT

Sealed proposals for Set Aside Bid Packages listed below will be received until **2:00 P.M. on Wednesday May 27, 2015**. All bids will be received at the **State Office Building, 165 Capitol Avenue, Hartford, CT in Room No. G-36** until date and time stated above and thereafter publicly opened and read aloud in **Room No. G-32**. All proposals should be clearly marked with bid package number and title, project number BI-CTC-455-CMR and addressed to Newfield Construction, Construction Manager, c/o Department of Construction Services. The work consists of the addition and renovations at Housatonic Community College Bridgeport, Connecticut.

02D	Final Cleaning	"Set-Aside Package"
09C	Acoustical	"Set-Aside Package"
09D	Painting and Coatings	"Set-Aside Package"
09E	Carpeting	"Set-Aside Package"
09F	VCT/Rubber/Base/CT	"Set-Aside Package"
27	Communications	"Set-Aside Package"
28	Site Concrete	"Set-Aside Package"
29	Landscaping	"Set-Aside Package"
30	Firestopping	"Set-Aside Package"
31	Signage	"Set-Aside Package"
32	Security	"Set-Aside Package"
33	Fire Alarm	"Set-Aside Package"

A pre-bid meeting will be held for all bidders at **Housatonic Community College, Beacon Hall, Room 287, Bridgeport, Connecticut at 10:00 AM on May 18, 2015**, a site walk thru will commence at the conclusion of the pre-bid meeting. Attendance is **strongly recommended** for all bidders.

The bidder must have prior experience consisting of no less than three similar projects with an equal or greater value within the last five years. Bidders must provide verification of experience with proposal. The Contractor shall hold a current "DAS Contractor Prequalification Certificate" from the Department of Administrative Services of the State of Connecticut according to Connecticut General Statute 4a-100, 4b-101 and 4b-91. DAS Certified Set Aside Contractors Certificate, as well as additional items list in Instructions to Bidders. Failure to submit these items with the bid will result in disqualification of the bidder per the public act.

Sets of plans and specifications may be purchased on or after **Tuesday, April 2, 2015**. Partial sets will not be issued. Documents can be purchased from **ARC, arcct@e-arc.com, (860) 677-8817, 17 Talcott Notch Road, Farmington CT 06032**. Bidding Documents can be downloaded free of charge from Newfield Construction, Inc.'s FTP site. Visit [www.newfieldconstruction.com](http://www.newfieldconstruction.com) (Projects Bidding) for downloading instructions.

All inquiries must be submitted to the **Construction Manager by 5:00 PM on May 21, 2015**.

Construction Manager:  
Newfield Construction, Inc.  
225 Newfield Avenue  
Hartford, CT 06106  
Phone (860) 509-3023, Fax (860) 953-1712  
Attn: Stephen Buccheri

Architect:  
Amenta/Emma Architects, P.C.  
242 Trumbull Street  
Hartford, CT 06103  
Phone (860) 549-4725, Fax (860) 5-5107  
Attn. Jenna McClure

Plans and specifications may be reviewed, by invitation only, at the following locations:

Newfield Construction  
225 Newfield Ave.  
Hartford, CT 06106

Department of Administrative Services  
165 Capitol Ave. 5<sup>th</sup> Floor East  
Hartford, CT 06106

Online:

[jobs2bid.com](http://jobs2bid.com)

[cdcnews.com](http://cdcnews.com)

[cmdgroup.com](http://cmdgroup.com)

No oral, telephone, or telegraphic proposals will be considered. All bids shall stand available for acceptance for a period of ninety (90) days from the date bids are opened. Alternate bids shall stand available for acceptance for a period of one hundred eighty (180) days from the date the bids are open.

The project shall be awarded to the lowest responsible bidder in accordance with Connecticut General Statute 10-287(b), however, The State of Connecticut and the Construction Manager reserves the right to waive any informality in any Bids or to reject any and all bids, or any part of any bid, when it is determined to be in the best interest of the State or the Construction Manager to do so.

A 10% Bid Security is required from each Bidder at the time of bid submission. The selected bidder will be required to post Performance and Payment Bonds for the full amount of the Contract Sum, (if in excess of \$100,000.00 dollars). The cost of such bonds shall be included in the bid price.

All bidders must comply with all the provisions of Connecticut General Statutes 31-53 (Prevailing Wages) and Executive Order #3.

Connecticut Set-Aside Program Requirements:

Each Trade Contractor award not less the **twenty (20%)** of their total contract price to contractors who are certified and eligible to participate in the State of Connecticut's "Small Contractor's" set aside program and **ten (10%)** of the total contract price to be awarded to certified and eligible "Minority Business Enterprises" (MBE).

The Commission on Human Rights and Opportunities (CHRO) require all bidders are to comply with the contract compliance law, enacted as Conn. Gen. Stat. Section 4a-60, and the administrative regulations issued pursuant there to prohibit all those who contract with the state, including subcontractors, from engaging in or permitting discrimination in recruiting, hiring or other employment practices. The law further requires state agencies to aggressively solicit the participation of minority and women owned businesses in state contracts. There is a subset of the contract compliance law that pertains to construction related contracts. It places specific contract compliance responsibilities on public works contracts. These are agreements for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property. Link to these statutes (beginning with section 46a-68b through 46a-68k). The bidding trade contractors are to provide all required paperwork post bid/pre award.

This project is exempt from Federal Excise Taxes as well as State of Connecticut Sales Tax to the extent allowed by law.

***AA/EEO Employer***

**DOCUMENT 00 90 20D—SET ASIDE BID PACKAGE 02D FINAL CLEANING**

**Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

**This Bid Package includes all Division 00 Sections and Documents.**

**Refer to Volume 1 of the Project Manual.**

**DIVISION 01 – GENERAL REQUIREMENTS**

**This Bid Package includes all Division 1 Sections as they apply to this scope of work.**

**Refer to the Volume 1 of the Project Manual.**

<b>DIVISION 01</b>		<b>GENERAL REQUIREMENTS</b>	
<b>Section No.</b>		<b>Title</b>	
<b>01 77 00</b>		<b>Closeout Procedures (AS APPLIES TO FINAL CLEANING)</b>	

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless

otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training.

- 01.05 The Final Cleaning Trade Contractor shall clean the Construction Manager's and the Department of Construction Service's trailer(s) and related areas. This cleaning shall take place once per week for the duration of the Project. Include dusting, emptying all trash containers, wipe down of surfaces, a vacuum and wet mop of the floors.
- 01.06 Include an allowance of five thousand dollars (\$5,000.00) dollars be used at the discretion of the Construction Manager. All allowances shall be included in the base bid. Overhead and Profit on the allowance shall be included in the contract sum and not within the allowance.
- 01.07 The Final Cleaning Trade Contractor scope of work and is to be performed upon substantial completion of each phase of construction. The professional cleaning shall include, but not limited to, exposed steel, exposed ductwork, lighting fixtures, interior and exterior glass and framing systems, mirrors, doors, door frames and door hardware, millwork interiors and exteriors, counter surfaces, finished flooring including stripping, washing and waxing, exterior concrete sidewalks. All stickers, cork, felt separators, shall be removed and cleaned from glass surfaces as part of the final cleaning.
- 01.08 The Final Cleaning trade contractor is to provide final cleaning of adjacent existing spaces and surfaces such as corridors, stairwells and other existing areas used during construction.
- 01.09 Use of the new and or existing elevator(s) during the phased renovations in the existing facility will not be available for the movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.

**DOCUMENT 00 90 09C- SET ASIDE BID PACKAGE 09C ACOUSTICAL**

**A. Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

**This Bid Package includes all Division 00 Sections and Documents.  
Refer to Volume 1 of the Project Manual.**

**DIVISION 01 – GENERAL REQUIREMENTS**

**This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
Refer to the Volume 1 of the Project Manual.**

<b>DIVISION 02</b>		<b>EXISTING CONDITIONS</b>	
<b>Section No.</b>		<b>Title</b>	
<b>02 41 19</b>		<b>Selective Demolition (AS APPLIES TO ACOUSTICAL WORK)</b>	

<b>DIVISION 07</b>		<b>THERMAL AND MOISTURE PROTECTION</b>	
<b>Section No.</b>		<b>Title</b>	
<b>07 21 00</b>		<b>Thermal Insulation (AS APPLIES TO ACOUSTICAL WORK)</b>	
<b>07 81 00</b>		<b>Applied Fireproofing (AS APPLIES TO ACOUSTICAL WORK)</b>	
<b>07 81 23</b>		<b>Intumescent Fireproofing (AS APPLIES TO ACOUSTICAL WORK)</b>	
<b>07 92 00</b>		<b>Joint Sealants (AS APPLIES TO ACOUSTICAL WORK)</b>	
<b>07 95 00</b>		<b>Expansion Control (AS APPLIES TO ACOUSTICAL WORK)</b>	

<b>DIVISION 09</b>		<b>FINISHES</b>	
<b>Section No.</b>		<b>Title</b>	
<b>09 51 13</b>		<b>Acoustical Panel Ceilings</b>	
<b>09 54 23</b>		<b>Linear Metal Ceilings</b>	

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular

- and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training. .
- 01.05 The Steel Trade Contractor shall include furnishing, installing (in accordance with OSHA Standards) a double row of temporary safety cables and cable supports at all levels above the grade level of the building, the building perimeter and at all floor openings. Height of installation is to accommodate all finished concrete floor elevations. The General Trades contractor shall maintain the safety cables. These temporary safety cables and supports shall be installed for the protection of all Project workers. Upon completion of the concrete slab the General Trades Contractor shall furnish and install toe boards, in accordance with OSHA standards, at the building perimeter and all floor openings, as required. The General Trades Contractor shall furnish, install and remove when no longer necessary two (on each level) removable wood barriers (locations to be determined) a minimum of twelve feet wide at the main and upper levels to accommodate loading materials. Any trade contractor requiring removal of any portion of the safety cables shall reinstall the cables to maintain fall protection. All work performed where fall protection has been removed shall be performed in compliance with OSHA standards. All cores and small openings (less than 576 sq. in.) shall be protected by the trade creating the core or small opening. The General Trades Contractor is responsible to provide fall protection for all openings and hazards at metal framed walls. The General Trades Contractor is responsible for fall protection required for all other openings. The General Trades Contractor is responsible to inspect and correct as required all perimeter safety cabling and toe boards weekly provide a written report to construction manager. The Roofing Contractor is responsible for the required fall protection to perform the Roofing scope of work. All Contractors performing work on the roof shall provide their own fall protection in accordance with OSHA standards. The General Trades Contractor shall remove the safety cables, supports and toe boards when no longer required. Upon removal of the safety cables, the applicable Trade Contractor working in the area of removed cables shall be responsible to maintain fall protection until their work is complete in the area where the cables were removed. When the masonry or wall framing work is complete in an area, the General Trades Contractor shall furnish, install and maintain fall protection at all shafts, window and door openings, as required. The general trade contractor shall furnish and install temporary rails (in strict accordance with OSHA standards) at all stair towers balconies and mezzanines as required, coordinate and remove the temporary rails with the installation of the permanent finished construction.
- 01.06 All required holes for sizes of 12" or less must be drilled or core bored and shall be the responsibility of the Trade Contractor requiring the hole. The Trade Contractors shall include sealing of the penetrations. For larger holes and openings cutting and patching will be as follows: The Masonry Contractor shall include all necessary cutting and patching in masonry walls for all trades. The Drywall Contractor shall include cutting and patching in plaster or drywall walls for all trades. The General Trades Contractor shall include cutting and patching in all concrete slabs for all trades. The trade requiring openings shall provide layout and any required sleeves.

- 01.07 General debris dumpsters will be provided by others. Deposit general debris in a dumpster on a daily basis.
- 01.08 Layout, horizontal and vertical control for item work included in this bid package.
- 01.09 With the exception of mechanical and electrical shafts shown on the drawings, each trade contractor requiring openings, sleeves, penetrations through walls, roofs, foundations and floors shall be the responsible to coordinate with the trade performing the wall, roof, foundation and floor construction. Failure to coordinate any required penetration and or opening causing corrective to the compromised substrate shall be the responsibility of the trade that required the opening and or penetration.
- 01.10 Acoustical Contractor shall include protection of adjacent existing or adjacent finish items to remain.
- 01.11 The acoustical contractor to provide thermal and or sound attenuation insulation directly above or laid on all the suspended acoustical and or metal ceiling assemblies.
- 01.12 The acoustical contractor will include suspension systems required for their scope of work.
- 01.13 Coordinate openings required for expansion joint installation within the acoustical grid/framing assemblies to adjacent construction. Expansion Joint and installation is provided by others.
- 01.14 The acoustical trade contractor is responsible for the control of construction dust in and outside the construction areas specific to their scope of work. The trade contractor shall employ whatever means and methods deemed necessary to control its trade specific dust with the building.
- 01.15 The acoustical contractor to provide all break metal or formed metal transitions, closures between acoustical or metal ceilings and any adjacent work.
- 01.16 Access and storage space on site does not exist, material trailers will not be allowed on site, the finish flooring contractor is to coordinate and schedule material deliveries on a daily basis with the material loaded to the area of installation for daily installation. All road closures, road permits, off site staging areas, flagmen, and police protection is the responsibility of the roofing contractor for their scope of work.
- 01.17 The acoustical contractor to include caulking between perimeter wall angles and walls.
- 01.18 The acoustical contractor to provide and smooth transition between existing and new acoustical construction specifically with the phased renovation areas.
- 01.19 Include an allowance of ten thousand dollars (\$10,000.00) to be used at the discretion of the construction manager. All allowance shall be included in the base bid and shall not include overhead and profit. Overhead and profit shall be included in the contract bid sum.
- 01.20 Acoustical sealants, fire caulking, smoke sealants integral with the drywall and framing scope of work in included.
- 01.21 Use of the existing elevator(s) during the phased renovations in the existing facility will not be available movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.

- 01.22 The acoustical contractor to coordinate the installation of all their assembly components with the spray applied and intumescent fireproofing assemblies. Any patching of removed fireproofing required to complete this contractor's work will be the responsibility of the contractor removing the material.
- 01.23 The acoustical contractor to install all required access panels located within the acoustical and or metal ceiling systems. Access panels will be furnished by the associated trade needing the access.
- 01.24 The acoustical contractor is to remove store and reinstall existing acoustical ceilings as called for on the acoustical ceiling drawings.



**DOCUMENT 00 90 09D-SET ASIDE BID PACKAGE 09D PAINTING, COATINGS, W/C**

**A. Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

**This Bid Package includes all Division 00 Sections and Documents.  
Refer to Volume 1 of the Project Manual.**

**DIVISION 01 – GENERAL REQUIREMENTS**

**This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
Refer to the Volume 1 of the Project Manual.**

<b>DIVISION 09</b>		<b>FINISHES</b>
<b>Section No.</b>	<b>Title</b>	
<b>09 72 20</b>	<b>Wall Covering</b>	
<b>09 91 13</b>	<b>Exterior Painting</b>	
<b>09 91 23</b>	<b>Interior Painting</b>	
<b>09 93 00</b>	<b>Staining and Transparent Finishing</b>	
<b>09 96 00</b>	<b>High-Performance Coatings</b>	

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training.
- 01.05 The Steel Trade Contractor shall include furnishing, installing (in accordance with OSHA Standards) a double row of temporary safety cables and cable supports at all levels above the grade level of the building, the building perimeter and at all floor openings. Height of installation is to accommodate all finished concrete floor elevations. The General Trades con-

tractor shall maintain the safety cables. These temporary safety cables and supports shall be installed for the protection of all Project workers. Upon completion of the concrete slab the General Trades Contractor shall furnish and install toe boards, in accordance with OSHA standards, at the building perimeter and all floor openings, as required. The General Trades Contractor shall furnish, install and remove when no longer necessary two (on each level) removable wood barriers (locations to be determined) a minimum of twelve feet wide at the main and upper levels to accommodate loading materials. Any trade contractor requiring removal of any portion of the safety cables shall reinstall the cables to maintain fall protection. All work performed where fall protection has been removed shall be performed in compliance with OSHA standards. All cores and small openings (less than 576 sq. in.) shall be protected by the trade creating the core or small opening. The General Trades Contractor is responsible to provide fall protection for all openings and hazards at metal framed walls. The General Trades Contractor is responsible for fall protection required for all other openings. The General Trades Contractor is responsible to inspect and correct as required all perimeter safety cabling and toe boards weekly provide a written report to construction manager. The Roofing Contractor is responsible for the required fall protection to perform the Roofing scope of work. All Contractors performing work on the roof shall provide their own fall protection in accordance with OSHA standards. The General Trades Contractor shall remove the safety cables, supports and toe boards when no longer required. Upon removal of the safety cables, the applicable Trade Contractor working in the area of removed cables shall be responsible to maintain fall protection until their work is complete in the area where the cables were removed. When the masonry or wall framing work is complete in an area, the General Trades Contractor shall furnish, install and maintain fall protection at all shafts, window and door openings, as required. The general trade contractor shall furnish and install temporary rails (in strict accordance with OSHA standards) at all stair towers balconies and mezzanines as required, coordinate and remove the temporary rails with the installation of the permanent finished construction.

- 01.06 All required holes for sizes of 12" or less must be drilled or core bored and shall be the responsibility of the Trade Contractor requiring the hole. The Trade Contractors shall include sealing of the penetrations. For larger holes and openings cutting and patching will be as follows: The Masonry Contractor shall include all necessary cutting and patching in masonry walls for all trades. The Drywall Contractor shall include cutting and patching in plaster or drywall walls for all trades. The General Trades Contractor shall include cutting and patching in all concrete slabs for all trades. The trade requiring openings shall provide layout and any required sleeves.
- 01.07 General debris dumpsters will be provided by others. Deposit general debris in a dumpster on a daily basis.
- 01.08 Layout, horizontal and vertical control for item work included in this bid package.
- 01.09 With the exception of mechanical and electrical shafts shown on the drawings, each trade contractor requiring openings, sleeves, penetrations through walls, roofs, foundations and floors shall be the responsible to coordinate with the trade performing the wall, roof, foundation and floor construction. Failure to coordinate any required penetration and or opening causing corrective to the compromised substrate shall be the responsibility of the trade that required the opening and or penetration.
- 01.10 Painting Contractor shall include protection of adjacent existing or adjacent finish items to remain.

- 01.11 All exterior ferrous metals including but not limited to, rails, lintels and bollards shall be painted by the painting contractor.
- 01.12 The metals trade contractor shall be responsible for all cleaning and touch up primer painting of all field welds, bolted connections, piece markings, abraded areas of shop paint and all touch up specified in division 5 with no exceptions.
- 01.13 Include minor wall preparation.
- 01.14 The painting trade contractor is responsible for the control of construction dust in and outside the construction areas specific to their scope of work. The trade contractor shall employ whatever means and methods deemed necessary to control its trade specific dust with the building.
- 01.15 Include painting of all exposed to view mechanical piping, plumbing piping, sprinkler piping, electrical conduit and boxes, communication conduit and boxes, security conduit and boxes and all items not factory finished.
- 01.16 Access and storage space on site does not exist, material trailers will not be allowed on site, the finish flooring contractor is to coordinate and schedule material deliveries on a daily basis with the material loaded to the area of installation for daily installation. All road closures, road permits, off site staging areas, flagmen, and police protection is the responsibility of the roofing contractor for their scope of work.
- 01.17 The painting contractor to include minor caulking between differing material to complete the painting and finishing.
- 01.18 The painting contractor to provide and smooth transition between existing and newly finished construction, specifically with the phased renovation areas.
- 01.19 Include an allowance of five thousand dollars (\$5,000.00) to be used at the discretion of the construction manager. All allowance shall be included in the base bid and shall not include overhead and profit. Overhead and profit shall be included in the contract bid sum.
- 01.20 Use of the existing elevator(s) during the phased renovations in the existing facility will not be available movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.
- 01.22 Sealed interior concrete floors and pads and exterior garage floors and pads is part of the painting contract scope of work
- 01.23 Include the necessary mobilizations for the following wall painting sequence: 1. Wall surfaces accepted by the Painting Contractor. 2. Walls primed. 3. Touch ups by Masonry and Drywall trades performed. 4. Spot prime touch ups and apply first finish coat. 5. Apply second finish coat just prior to substantial completion. 6. Perform reasonable touch ups including ding repair after punch list is complete, prior to Owner turnover.
- 01.24 Include the painting temporary walls doors and frames exposed to the public see the phasing drawings and the temporary egress drawings.
- 01.25 The painting contractor to include touch up of disturbed existing finishes at the bridge connection from the new addition to the existing garage, including but not limited to existing precast painting and or sealing, existing metal surfaces, existing concrete surfaces.



**DOCUMENT 00 90 09E—BID PACKAGE 09E SET ASIDE CARPETING**

**A. Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

**This Bid Package includes all Division 00 Sections and Documents.  
Refer to Volume 1 of the Project Manual.**

**DIVISION 01 – GENERAL REQUIREMENTS**

**This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
Refer to the Volume 1 of the Project Manual.**

<b>DIVISION 02</b>		<b>EXISTING CONDITIONS</b>	
<b>Section No.</b>		<b>Title</b>	
<b>02 41 19</b>		<b>Selective Demolition (AS APPLIES TO CARPETING)</b>	

<b>DIVISION 09</b>		<b>FINISHES</b>	
<b>Section No.</b>		<b>Title</b>	
<b>09 68 13</b>		<b>Tile Carpeting</b>	
<b>09 68 16</b>		<b>Sheet Carpeting</b>	

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training.

- 01.05 The Steel Trade Contractor shall include furnishing, installing (in accordance with OSHA Standards) a double row of temporary safety cables and cable supports at all levels above the grade level of the building, the building perimeter and at all floor openings. Height of installation is to accommodate all finished concrete floor elevations. The General Trades contractor shall maintain the safety cables. These temporary safety cables and supports shall be installed for the protection of all Project workers. Upon completion of the concrete slab the General Trades Contractor shall furnish and install toe boards, in accordance with OSHA standards, at the building perimeter and all floor openings, as required. The General Trades Contractor shall furnish, install and remove when no longer necessary two (on each level) removable wood barriers (locations to be determined) a minimum of twelve feet wide at the main and upper levels to accommodate loading materials. Any trade contractor requiring removal of any portion of the safety cables shall reinstall the cables to maintain fall protection. All work performed where fall protection has been removed shall be performed in compliance with OSHA standards. All cores and small openings (less than 576 sq. in.) shall be protected by the trade creating the core or small opening. The General Trades Contractor is responsible to provide fall protection for all openings and hazards at metal framed walls. The General Trades Contractor is responsible for fall protection required for all other openings. The General Trades Contractor is responsible to inspect and correct as required all perimeter safety cabling and toe boards weekly provide a written report to construction manager. The Roofing Contractor is responsible for the required fall protection to perform the Roofing scope of work. All Contractors performing work on the roof shall provide their own fall protection in accordance with OSHA standards. The General Trades Contractor shall remove the safety cables, supports and toe boards when no longer required. Upon removal of the safety cables, the applicable Trade Contractor working in the area of removed cables shall be responsible to maintain fall protection until their work is complete in the area where the cables were removed. When the masonry or wall framing work is complete in an area, the General Trades Contractor shall furnish, install and maintain fall protection at all shafts, window and door openings, as required. The general trade contractor shall furnish and install temporary rails (in strict accordance with OSHA standards) at all stair towers balconies and mezzanines as required, coordinate and remove the temporary rails with the installation of the permanent finished construction.
- 01.06 All required holes for sizes of 12" or less must be drilled or core bored and shall be the responsibility of the Trade Contractor requiring the hole. The Trade Contractors shall include sealing of the penetrations. For larger holes and openings cutting and patching will be as follows: The Masonry Contractor shall include all necessary cutting and patching in masonry walls for all trades. The Drywall Contractor shall include cutting and patching in plaster or drywall walls for all trades. The General Trades Contractor shall include cutting and patching in all concrete slabs for all trades. The trade requiring openings shall provide layout and any required sleeves.
- 01.07 General debris dumpsters will be provided by others. Deposit general debris in a dumpster on a daily basis.
- 01.08 Layout, horizontal and vertical control for item work included in this bid package.
- 01.09 With the exception of mechanical and electrical shafts shown on the drawings, each trade contractor requiring openings, sleeves, penetrations through walls, roofs, foundations and floors shall be the responsible to coordinate with the trade performing the wall, roof, foundation and floor construction. Failure to coordinate any required penetration and or opening causing corrective to the compromised substrate shall be the responsibility of the trade that required the opening and or penetration.

- 01.10 Carpeting Trade Contractor flooring shall include protection of existing items to remain.
- 01.11 The carpeting trade contractor to provide moisture and relative humidity content testing as required per manufacturers instructions and as specified.
- 01.12 The finish flooring contractor will include the installation and removal of temporary floor protection as required and as directed by the construction manager.
- 01.13 Coordinate openings required for expansion joint installation within the framing assemblies to adjacent construction. Expansion Joint and installation is provided by others.
- 01.14 The carpeting trade contractor is responsible for the control of construction dust in and outside the construction areas specific to their scope of work. The trade contractor shall employ whatever means and methods deemed necessary to control its trade specific dust with the building.
- 01.15 The carpeting flooring contractor to provide finished flooring as specified in the elevator cabs.
- 01.16 The carpeting trade contractor to provide all carpet to floor door sills, thresholds, floor transitions between carpeting and differing flooring material.
- 01.17 Access and storage space on site does not exist, material trailers will not be allowed on site, the finish flooring contractor is to coordinate and schedule material deliveries on a daily basis with the material loaded to the area of installation for daily installation. All road closures, road permits, off site staging areas, flagmen, and police protection is the responsibility of the roofing contractor for their scope of work.
- 01.18 The carpeting trade contractor to provide and smooth transition between existing and new flooring construction specifically with the phased renovation areas and where existing work meets new. The work to including but not limited to skim coatings and flash patching as required.
- 01.19 The carpeting trade contractor is to include all floor preparation, fine sweeping, power sanding and vacuuming of all floors prior to the installation of finish flooring and applied water-proofing products. This will include but not limited to grinding, patching and skim coating up to ¼" thick or as required to achieve the desired installation.
- 01.20 The carpeting trade contractor is to include patching of substrates and finished floors where existing or temporary partitions are removed.
- 01.21 Use of the existing elevator(s) during the phased renovations in the existing facility will not be available movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.

DOCUMENT 00 90 09F—SET ASIDE BID PACKAGE 09F RESILIENT FLOORING/BASE, CT

A. Specification Sections:

DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS

This Bid Package includes all Division 00 Sections and Documents.  
Refer to Volume 1 of the Project Manual.

DIVISION 01 – GENERAL REQUIREMENTS

This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
Refer to the Volume 1 of the Project Manual.

DIVISION 02		EXISTING CONDITIONS	
Section No.		Title	
02 41 19		Selective Demolition (AS APPLIES TO BP 09F)	

DIVISION 07		THERMAL AND MOISTURE PROTECTION	
Section No.		Title	
07 14 16		Cold Fluid-Applied Waterproofing (AS APPLIES TO BP 09F)	

DIVISION 09		FINISHES	
Section No.		Title	
09 30 13		Ceramic Tiling	
09 65 13		Resilient Base and Accessories	
09 65 19		Resilient Tile Flooring	

B. Bid Package Notes:

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.



- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training. .
- 01.05 The Steel Trade Contractor shall include furnishing, installing (in accordance with OSHA Standards) a double row of temporary safety cables and cable supports at all levels above the grade level of the building, the building perimeter and at all floor openings. Height of installation is to accommodate all finished concrete floor elevations. The General Trades contractor shall maintain the safety cables. These temporary safety cables and supports shall be installed for the protection of all Project workers. Upon completion of the concrete slab the General Trades Contractor shall furnish and install toe boards, in accordance with OSHA standards, at the building perimeter and all floor openings, as required. The General Trades Contractor shall furnish, install and remove when no longer necessary two (on each level) removable wood barriers (locations to be determined) a minimum of twelve feet wide at the main and upper levels to accommodate loading materials. Any trade contractor requiring removal of any portion of the safety cables shall reinstall the cables to maintain fall protection. All work performed where fall protection has been removed shall be performed in compliance with OSHA standards. All cores and small openings (less than 576 sq. in.) shall be protected by the trade creating the core or small opening. The General Trades Contractor is responsible to provide fall protection for all openings and hazards at metal framed walls. The General Trades Contractor is responsible for fall protection required for all other openings. The General Trades Contractor is responsible to inspect and correct as required all perimeter safety cabling and toe boards weekly provide a written report to construction manager. The Roofing Contractor is responsible for the required fall protection to perform the Roofing scope of work. All Contractors performing work on the roof shall provide their own fall protection in accordance with OSHA standards. The General Trades Contractor shall remove the safety cables, supports and toe boards when no longer required. Upon removal of the safety cables, the applicable Trade Contractor working in the area of removed cables shall be responsible to maintain fall protection until their work is complete in the area where the cables were removed. When the masonry or wall framing work is complete in an area, the General Trades Contractor shall furnish, install and maintain fall protection at all shafts, window and door openings, as required. The general trade contractor shall furnish and install temporary rails (in strict accordance with OSHA standards) at all stair towers balconies and mezzanines as required, coordinate and remove the temporary rails with the installation of the permanent finished construction.
- 01.06 All required holes for sizes of 12" or less must be drilled or core bored and shall be the responsibility of the Trade Contractor requiring the hole. The Trade Contractors shall include sealing of the penetrations. For larger holes and openings cutting and patching will be as follows: The Masonry Contractor shall include all necessary cutting and patching in masonry walls for all trades. The Drywall Contractor shall include cutting and patching in plaster or drywall walls for all trades. The General Trades Contractor shall include cutting and patching in all concrete slabs for all trades. The trade requiring openings shall provide layout and any required sleeves.
- 01.07 General debris dumpsters will be provided by others. Deposit general debris in a dumpster on a daily basis.

- 01.08 Layout, horizontal and vertical control for item work included in this bid package.
- 01.09 With the exception of mechanical and electrical shafts shown on the drawings, each trade contractor requiring openings, sleeves, penetrations through walls, roofs, foundations and floors shall be the responsible to coordinate with the trade performing the wall, roof, foundation and floor construction. Failure to coordinate any required penetration and or opening causing corrective to the compromised substrate shall be the responsibility of the trade that required the opening and or penetration.
- 01.10 The Resilient Flooring/Base, CT Trade Contractor shall include protection of existing items to remain.
- 01.11 The Resilient Flooring/Base, CT Trade Contractor to provide moisture and relative humidity content testing as required per manufacturers instructions and as specified.
- 01.12 The Resilient Flooring/Base, CT Trade Contractor will include the installation and removal of temporary floor protection as required and as directed by the construction manager.
- 01.13 Coordinate openings required for expansion joint installation within the framing assemblies to adjacent construction. Expansion Joint and installation is provided by others.
- 01.14 The trade contractor is responsible for the control of construction dust in and outside the construction areas specific to their scope of work. The trade contractor shall employ whatever means and methods deemed necessary to control its trade specific dust with the building.
- 01.15 The Resilient Flooring/Base, CT Trade Contractor to provide flooring as specified in the elevator cabs.
- 01.16 The Resilient Flooring/Base, CT Trade Contractor to provide all floor to floor door sills, thresholds, floor transitions between differing flooring material.
- 01.17 Access and storage space on site does not exist, material trailers will not be allowed on site, the finish flooring contractor is to coordinate and schedule material deliveries on a daily basis with the material loaded to the area of installation for daily installation. All road closures, road permits, off site staging areas, flagmen, and police protection is the responsibility of the roofing contractor for their scope of work.
- 01.18 The Resilient Flooring/Base, CT Trade Contractor is to include furnish and install cold fluid-applied waterproofing systems under all finished their specified floors. Work to include any preparatory work as required.
- 01.19 The Resilient Flooring/Base, CT Trade Contractor to provide and smooth transition between existing and new flooring construction specifically with the phased renovation areas and where new work meeting existing. The work to including but not limited to skim coatings and flash patching as required.
- 01.20 The Resilient Flooring/Base, CT Trade Contractor is to include all floor preparation, fine sweeping, power sanding and vacuuming of all floors prior to the installation of finish flooring and applied waterproofing products. This will include but not limited to grinding, patching and skim coating up to ¼" thick or as required to achieve the desired installation.
- 01.21 The Resilient Flooring/Base, CT Trade Contractor is to include patching of substrates and finished floors related to their work where existing or temporary partitions are removed.

01.22 Use of new and or existing elevator(s) during the phased renovations in the existing facility will not be available movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.

**DOCUMENT 00 90 027- SET ASIDE BID PACKAGE 27 COMMUNICATIONS**

**A. Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

This Bid Package includes all Division 00 Sections and Documents.  
 Refer to Volume 1 of the Project Manual.

**DIVISION 01 – GENERAL REQUIREMENTS**

This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
 Refer to the Volume 1 of the Project Manual.

<b>DIVISION 02</b>	<b>EXISTING CONDITIONS</b>
Section No.	Title
02 41 19	Selective Demolition (AS APPLIES TO COMMUNICATIONS WORK)

<b>DIVISION 08</b>	<b>OPENINGS</b>
Section No.	Title
08 31 13	Access Doors and Frames (AS APPLIES TO COMMUNICATIONS WORK)

<b>DIVISION 27</b>	<b>COMMUNICATIONS</b>
Section No.	Title
27 01 00	Communications Equipment Room Fittings
27 05 00	Common Methods for Communications Work
27 05 26	Grounding and Bonding for Communication Systems
27 05 28	Pathways for Communicating Systems
27 05 44	Sleeves and Sleeve Seals for Communications Pathways and Cabling
27 05 53	Identification for Communications Systems
27 08 00	Communications Systems Commissioning
27 11 00	Communication Equipment Room Fitting
27 13 00	Communications Backbone Cabling
27 15 00	Communications Horizontal Cabling
27 51 23	Intercommunications and Program Systems
27 53 13	Clock Systems

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.

- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training. .
- 01.05 The Steel Trade Contractor shall include furnishing, installing (in accordance with OSHA Standards) a double row of temporary safety cables and cable supports at all levels above the grade level of the building, the building perimeter and at all floor openings. Height of installation is to accommodate all finished concrete floor elevations. The General Trades contractor shall maintain the safety cables. These temporary safety cables and supports shall be installed for the protection of all Project workers. Upon completion of the concrete slab the General Trades Contractor shall furnish and install toe boards, in accordance with OSHA standards, at the building perimeter and all floor openings, as required. The General Trades Contractor shall furnish, install and remove when no longer necessary two (on each level) removable wood barriers (locations to be determined) a minimum of twelve feet wide at the main and upper levels to accommodate loading materials. Any trade contractor requiring removal of any portion of the safety cables shall reinstall the cables to maintain fall protection. All work performed where fall protection has been removed shall be performed in compliance with OSHA standards. All cores and small openings (less than 576 sq. in.) shall be protected by the trade creating the core or small opening. The General Trades Contractor is responsible to provide fall protection for all openings and hazards at metal framed walls. The General Trades Contractor is responsible for fall protection required for all other openings. The General Trades Contractor is responsible to inspect and correct as required all perimeter safety cabling and toe boards weekly provide a written report to construction manager. The Roofing Contractor is responsible for the required fall protection to perform the Roofing scope of work. All Contractors performing work on the roof shall provide their own fall protection in accordance with OSHA standards. The General Trades Contractor shall remove the safety cables, supports and toe boards when no longer required. Upon removal of the safety cables, the applicable Trade Contractor working in the area of removed cables shall be responsible to maintain fall protection until their work is complete in the area where the cables were removed. When the masonry or wall framing work is complete in an area, the General Trades Contractor shall furnish, install and maintain fall protection at all shafts, window and door openings, as required. The general trade contractor shall furnish and install temporary rails (in strict accordance with OSHA standards) at all stair towers balconies and mezzanines as required, coordinate and remove the temporary rails with the installation of the permanent finished construction.
- 01.06 All required holes for sizes of 12" or less must be drilled or core bored and shall be the responsibility of the Trade Contractor requiring the hole. The Trade Contractors shall include sealing of the penetrations. For larger holes and openings cutting and patching will be as

follows: The Masonry Contractor shall include all necessary cutting and patching in masonry walls for all trades. The Drywall Contractor shall include cutting and patching in plaster or drywall walls for all trades. The General Trades Contractor shall include cutting and patching in all concrete slabs for all trades. The trade requiring openings shall provide layout and any required sleeves.

- 01.07 General debris dumpsters will be provided by others. (Deposit general debris in a dumpster on a daily basis.
- 01.08 Temporary bracing and shoring required for this scope of work is included.
- 01.09 Include an allowance of ten thousand dollars (\$10,000.00) to be used at the discretion of the construction manager. All allowance shall be included in the base bid and shall not include overhead and profit. Overhead and profit shall be included in the contract bid sum.
- 01.10 Not used.
- 01.11 All small roof penetrations, furnishing and setting of curbs shall be the responsibility of the trade contractor requiring such items. The Roofing Contractor will be responsible to flash in all such items. All pitch boxes shall be provided by the Roofing Contractor. Roof deck cutting is the responsibility of the Metals Contractor except for holes less than 250 square inches, which are the responsibility of the trade requiring the hole. Layout of openings cut by others is the responsibility of the trade requiring the opening.
- 01.12 With the exception of mechanical and electrical shafts shown on the drawings, each trade contractor requiring openings, sleeves, penetrations through walls, roofs, foundations and floors shall be the responsible to coordinate with the trade performing the wall, roof, foundation and floor construction. Failure to coordinate any required penetration and or opening causing corrective to the compromised substrate shall be the responsibility of the trade that required the opening and or penetration.
- 01.13 Provide snow removal required to complete this scope of work in accordance with the schedule. Include cleaning and removal of snow and ice from building component substrates required to be framed or sheathed, as required. Snow and ice shall be removed to a site location as designated by the construction manager. The site contractor is responsible to remove snow from site.
- 01.14 Layout, horizontal and vertical control for this bid package work included in this bid package.
- 01.15 Acoustical sealants, fire caulking, smoke sealants integral and associated with the communications scope of work is included in this package.
- 01.16 The communications contractor to coordinate the installation of all their assembly components with the spray applied and intumescent fireproofing assemblies. Any patching of removed fireproofing required to complete this contractor's work will be the responsibility of the contractor removing the material.
- 01.17 The trade contractor is responsible for the control of construction dust in and outside the construction areas specific to their scope of work. The trade contractor shall employ whatever means and methods deemed necessary to control its trade specific dust with the building.

- 01.18 All access doors on this project shall be by a common manufacturer. Furnish access doors required for this scope of work; lay out and coordination is the responsibility of the trade requiring the access. Installation of the access doors into drywall framed partitions will be by the drywall trade contractor. Installation of the access doors into masonry partitions will be by the masonry trade contractor.
- 01.19 All fire rated assemblies integral to communication penetrations and assemblies for this scope of work.
- 01.20 Access and storage space on site does not exist, material trailers will not be allowed on site, the mechanical contractor is to coordinate and schedule material deliveries on a daily basis with the material loaded to the area of installation for daily installation. All road closures, road permits, off site staging areas, flagmen, and police protection is the responsibility of the roofing contractor for their scope of work.
- 01.21 Use of the existing elevator(s) during the phased renovations in the existing facility will not be available movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.
- 01.22 The communications contractor to coordinate locations of all piping and equipment with others trades, structural components, architectural finishes. 3D modeling is required for coordination drawings.

It is expected that all M/E/P, FS, Communications trades utilize BIM to coordinate their work. The design model produced by the design team will be released to the MEP, FS trades after a waiver is executed by each trade contractor.

The trade contractors will then utilize the design model to begin layout of their respective systems.

The coordination of systems may be divided into areas (floors, phases, areas, etc.) as determined by the Construction Manager.

The HVAC contractor will act as gatekeeper of the coordination model during the entire coordination effort.

Each contractor shall model their systems and provide sufficient detail to enable accurate and complete clash detection prior to the start of subcontractor's work on site.

At a minimum, coordination meetings shall occur weekly until final coordination is achieved and in no way shall delay the progress of the job.

HVAC contractor will make available their server (or other means acceptable to all parties) that will enable all project parties to upload and download their respective shop drawing models during the coordination effort. When coordination models from each trade are uploaded, the HVAC contractor will download and integrate all trade models into a consolidated model. After this, a clash report will be created to identify clashes and conflicts between trade systems, building structure, architectural elements, etc. A report will be issued to all trades and the CM for review, response, and correction.

Once all coordination efforts (by area) are completed and clashes resolved, HVAC contractor shall produce a final set of coordination drawings as well as an integrated model for use and reference during construction.

Typical sequence of coordination, unless otherwise determined, shall be:

- 1) Duct layout
- 2) Pitched Pipe Layout
- 3) Plumbing
- 4) Fire Protection
- 5) Electrical
- 6) Communication
- 7) Miscellaneous

Each system shall use a specific color for ease of identification. All files to shall have specific names assigned to track version and date of file per trade. The HVAC contractor is to determine color assignments and file naming requirements.

All files to be Autodesk.dwg file format and be readable by other trades' CAD systems and Navisworks.

- 01.23 All in wall conduit or above ceiling required rough in including but not limited to back boxes, plaster rings and pull strings related to the specified communication systems and assemblies is to be provided by the communications contractor.
- 01.24 Power Company, CATV and Telephone Company construction fees for permanent services will be paid for by others.
- 01.25 Provide all required shut downs of the communication systems during the phased renovations of the existing facility. Include temporary tie-ins as required.
- 01.26 All equipment pads shall be furnished and installed by the concrete trade contractor.
- 01.27 The Mechanical/Electrical/Plumbing/Sprinkler/Communications Trade Contractors to cut, cap and drop all trade related and specific items within their scope of work. The demolition contractor is to remove dropped material from site.
- 01.28 The Mechanical/Electrical/Plumbing/Sprinkler/Communications Trade Contractors shall and salvage to owner items call to be salvaged for owner.
- 01.29 The Mechanical/Electrical/Plumbing/Sprinkler/Communications Trade Contractors shall remove, store (off-site if required) items called to be salvaged for reuse. Cost of off site storage is the related contractor's responsibility.
- 01.30 Provide all required steel and miscellaneous steel donnage and rails required to support communications equipment.
- 01.30 Provide on-site staff or vendor support for commissioning as required including but not limited to specified testing, data technicians and communications foremen.
- 01.31 Protect all new and existing communications equipment from dust, debris and contamination, at a minimum cover with self adhering plastic coverings. Remove all plastic as the equipment is connected and or put into operation.



- 01.32 The site contractor is to provide exaction and backfill, sand bedding and markings for electrical, telephone, CATV conduit and electrical duct banks. The electrical contractor is to furnish and install all exterior electrical and or communications piping, conduit, junction boxes, pull boxes, pull strings and wiring.
- 01.33 The electrical contractor shall furnish and install power, telephone and DSL service to the construction manager's field office and the construction administrator's field office the field offices will be rigged to the roof of the existing parking garage north side. Power for both trailers will come from an existing panel located on level 6 south side of garage. The telephone and DSL service will be connected to the campus system from within the existing Lafayette Hall level one MDF room to an existing junction box located in the north east corner on the first floor of the parking garage, an existing underground conduit can be used to get to the garage junction box, from the junction box the feeds need to be brought of the roof of the garage to tie into the two trailers, use fiber cable and terminate to a punch down block as required. The communications contractor is to contact to the fiber punch down block and provide three CAT 6A drops per trailer; final locations will be as directed by the construction manager and construction administrator.
- 01.34 Provide all required temporary provisions and temporary supports for existing communication systems as it relates the new hydronic piping installation installed through the existing first floor corridor ceilings from the existing mechanical room to the new additional see drawings A6.11 and A6.12 for extent of work.
- 01.35 Furnish and install all required low voltage wiring, devices, power supplies, connections required to complete communication contractor's scope of work.
- 01.36 Include the necessary provisions to maintain the existing communications systems in the existing building during construction.
- 01.37 The General Trade Contractor shall furnish, install and paint all necessary wood backboards for electrical, telephone and data equipment.
- 01.38 The communications contractor is to carry an allowance to furnish and install into existing walls and above existing acoustical ceilings six (6) Cat 6A drops and terminated with an RJ6 face plate with 225 lineal feet per drop terminated at an existing communications rack.

**DOCUMENT 00 90 28—SET-ASIDE BID PACKAGE 28 SITE CONCRETE**

**Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

This Bid Package includes all Division 00 Sections and Documents.  
Refer to Volume 1 of the Project Manual.

**DIVISION 01 – GENERAL REQUIREMENTS**

This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
Refer to the Volume 1 of the Project Manual.

<b>DIVISION 02</b>		<b>EXISTING CONDITIONS</b>	
<b>Section No.</b>		<b>Title</b>	
<b>02 41 19</b>		<b>Selective Demolition (AS APPLIES TO SITE CONCRETE)</b>	

<b>DIVISION 03</b>		<b>CONCRETE</b>	
<b>Section No.</b>		<b>Title</b>	
<b>03 30 00</b>		<b>Cast-In-Place Concrete (AS APPLIES TO SITE CONCRETE)</b>	

<b>DIVISION 07</b>		<b>THERMAL AND MOISTURE PROTECTION</b>	
<b>Section No.</b>		<b>Title</b>	
<b>07 92 00</b>		<b>Joint Sealants (AS APPLIES TO SITE CONCRETE)</b>	

<b>DIVISION 32</b>		<b>EXTERIOR IMPROVEMENTS</b>	
<b>Section No.</b>		<b>Title</b>	
<b>32 13 13</b>		<b>Portland Cement Concrete Paving</b>	
<b>32 17 26</b>		<b>Tactile Warning Tiles</b>	

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.

- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training. Refer to the Lead Inspection Report by Fuss and O'Neill in these documents for additional information.
- 01.05 Staging and Storage areas shall have clear access for all trade contractors to access their materials and building access.
- 01.06 The Site Concrete Trade Contractor shall provide vertical and horizontal control and layout for the site concrete work from an established base line and a grade benchmark on site.
- 01.07 Include sealers on all exposed concrete installed under this bid package.
- 01.08 Include caulking of all site concrete installed under this bid package.
- 01.09 Include all exterior concrete work including site walls, planter walls, equipment pads, sidewalks, pavement, curbing. Work to include rubbing and sacking of exposed vertical surfaces, and reinforcing material. Wood Benches on concrete site walls are by the General Trade Contractor. The concrete work Generator and Fuel Tank Pad located in the parking garage is by the concrete trade contractor.
- 01.10 Maintain student access and protect areas under construction during the site concrete work.
- 01.11 The site trade contractor to furnish and install all sub-base and base material and fine grade the specified elevations. The site concrete trade contractor to include sub-base and base fine grading touch up as required.
- 01.12 The site concrete trade contractor to furnish and install tactile warning tiles called for to be imbedding in site concrete.
- 01.13 Include all site concrete material, conveying of site concrete material, site concrete accessories, site concrete reinforcing steel, saw cutting required for a complete installation.

**DOCUMENT 00 90 29—SET-ASIDE BID PACKAGE 29 LANDSCAPING**

**Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

**This Bid Package includes all Division 00 Sections and Documents.  
Refer to Volume 1 of the Project Manual.**

**DIVISION 01 – GENERAL REQUIREMENTS**

**This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
Refer to the Volume 1 of the Project Manual.**

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<b>DIVISION 32</b>		<b>EXTERIOR IMPROVEMENTS</b>
<b>Section No.</b>	<b>Title</b>	
<b>32 90 00</b>	<b>Trees, Shrubs Perennials</b>	
<b>32 92 19</b>	<b>Lawns and Grass</b>	

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 Provide traffic control and signage as necessary to perform your work and maintain safe access to the site.
- 01.05 Staging and Storage areas shall have clear access for all trade contractors to access their materials and building access.

- 01.06 The Site Contractor shall provide a base line (x and y column lines at a minimum) and a grade benchmark on site from which the Trade Contractors will complete the layout of the work to be performed under their contract.
- 01.07 It is the responsibility of the Site Contractor to test, supplement and screen on site topsoil (if re-used) prior to placement. The Site Contractor to spread topsoil and fine grade to within 1/2 inch of the proposed elevations, inclusive of planters. The Landscape Contractor to fine rake, mulch/landscape and or seed as called for in the documents.
- 01.08 The Landscape Contractor to fine rake seed and restore all disturbed areas related to the construction including but not limited to utility work, site drainage, site lighting, temporary egress paths, fence and gate areas, etc.

**DOCUMENT 00 90 29—SET-ASIDE BID PACKAGE 29 LANDSCAPING**

**Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

**This Bid Package includes all Division 00 Sections and Documents.  
Refer to Volume 1 of the Project Manual.**

**DIVISION 01 – GENERAL REQUIREMENTS**

**This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
Refer to the Volume 1 of the Project Manual.**

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<b>DIVISION 32</b>		<b>EXTERIOR IMPROVEMENTS</b>
<b>Section No.</b>	<b>Title</b>	
<b>32 90 00</b>	<b>Trees, Shrubs Perennials</b>	
<b>32 92 19</b>	<b>Lawns and Grass</b>	

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 Provide traffic control and signage as necessary to perform your work and maintain safe access to the site.
- 01.05 Staging and Storage areas shall have clear access for all trade contractors to access their materials and building access.

- 01.06 The Site Contractor shall provide a base line (x and y column lines at a minimum) and a grade benchmark on site from which the Trade Contractors will complete the layout of the work to be performed under their contract.
- 01.07 It is the responsibility of the Site Contractor to test, supplement and screen on site topsoil (if re-used) prior to placement. The Site Contractor to spread topsoil and fine grade to within 1/2 inch of the proposed elevations, inclusive of planters. The Landscape Contractor to fine rake, mulch/landscape and or seed as called for in the documents.
- 01.08 The Landscape Contractor to fine rake seed and restore all disturbed areas related to the construction including but not limited to utility work, site drainage, site lighting, temporary egress paths, fence and gate areas, etc.

**DOCUMENT 00 90 30- SET ASIDE BID PACKAGE 30 FIRESTOPPING**

**Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

**This Bid Package includes all Division 00 Sections and Documents.**

**Refer to Volume 1 of the Project Manual.**

**DIVISION 01 – GENERAL REQUIREMENTS**

**This Bid Package includes all Division 1 Sections as they apply to this scope of work.**

**Refer to the Volume 1 of the Project Manual.**

<b>DIVISION 07</b>		<b>THERMAL AND MOISTURE PROTECTION</b>	
<b>Section No.</b>		<b>Title</b>	
<b>07 84 13</b>		<b>Penetration Firestopping</b>	
<b>07 84 43</b>		<b>Joint Firestopping</b>	

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training.



- 01.05 The Steel Trade Contractor shall include furnishing, installing (in accordance with OSHA Standards) a double row of temporary safety cables and cable supports at all levels above the grade level of the building, the building perimeter and at all floor openings. Height of installation is to accommodate all finished concrete floor elevations. The General Trades contractor shall maintain the safety cables. These temporary safety cables and supports shall be installed for the protection of all Project workers. Upon completion of the concrete slab the General Trades Contractor shall furnish and install toe boards, in accordance with OSHA standards, at the building perimeter and all floor openings, as required. The General Trades Contractor shall furnish, install and remove when no longer necessary two (on each level) removable wood barriers (locations to be determined) a minimum of twelve feet wide at the main and upper levels to accommodate loading materials. Any trade contractor requiring removal of any portion of the safety cables shall reinstall the cables to maintain fall protection. All work performed where fall protection has been removed shall be performed in compliance with OSHA standards. All cores and small openings (less than 576 sq. in.) shall be protected by the trade creating the core or small opening. The General Trades Contractor is responsible to provide fall protection for all openings and hazards at metal framed walls. The General Trades Contractor is responsible for fall protection required for all other openings. The General Trades Contractor is responsible to inspect and correct as required all perimeter safety cabling and toe boards weekly provide a written report to construction manager. The Roofing Contractor is responsible for the required fall protection to perform the Roofing scope of work. All Contractors performing work on the roof shall provide their own fall protection in accordance with OSHA standards. The General Trades Contractor shall remove the safety cables, supports and toe boards when no longer required. Upon removal of the safety cables, the applicable Trade Contractor working in the area of removed cables shall be responsible to maintain fall protection until their work is complete in the area where the cables were removed. When the masonry or wall framing work is complete in an area, the General Trades Contractor shall furnish, install and maintain fall protection at all shafts, window and door openings, as required. The general trade contractor shall furnish and install temporary rails (in strict accordance with OSHA standards) at all stair towers balconies and mezzanines as required, coordinate and remove the temporary rails with the installation of the permanent finished construction.
- 01.06 The Firestopping Trade Contractor shall include a broom sweep of all work areas once per week, on a day designated by the Construction Manager. This sweeping is in addition to the weekly cleaning called for in Special Project Conditions.
- 01.07 Include an allowance of five thousand dollars (\$5,000.00) dollars be used at the discretion of the Construction Manager. All allowances shall be included in the base bid. Overhead and Profit on the allowance shall be included in the contract sum and not within the allowance.
- 01.08 With the exception of the mineral wool material located within the Glass and Glazing systems, the Firestopping Trade Contractor to furnish and install all penetration firestop, smoke seals, joint firestopping for all trades for all penetrations of new work through new construction and new work through existing construction, as well as perimeter floor to floor separation assemblies, tops of wall assemblies and new elevator shaft assemblies.
- 01.09 The firestopping trade contractor to pay particular attention to the M/E/P work required within the existing facility and the existing conditions.
- 01.10 Use of the existing elevator(s) during the phased renovations in the existing facility will not be available movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.

**DOCUMENT 00 90 31- SET ASIDE BID PACKAGE 31 SIGNAGE**

**Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

**This Bid Package includes all Division 00 Sections and Documents.**

**Refer to Volume 1 of the Project Manual.**

**DIVISION 01 – GENERAL REQUIREMENTS**

**This Bid Package includes all Division 1 Sections as they apply to this scope of work.**

**Refer to the Volume 1 of the Project Manual.**

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<b>DIVISION 10</b>		<b>SPECIALTIES</b>
<b>Section No.</b>	<b>Title</b>	
<b>10 14 19</b>	<b>Dimensional Letter Signage</b>	

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**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training.
- 01.05 The Signage Trade Contractor shall include a broom sweep of all work areas once per week, on a day designated by the Construction Manager. This sweeping is in addition to the weekly cleaning called for in Special Project Conditions.
- 01.06 Use of the new and existing elevator(s) during the new addition and phased renovations in the existing facility will not be available movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.

**DOCUMENT 00 90 033 - "SET-ASIDE" BID PACKAGE 33 FIRE ALARM**

**A. Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

**This Bid Package includes all Division 00 Sections and Documents.  
 Refer to Volume 1 of the Project Manual.**

**DIVISION 01 – GENERAL REQUIREMENTS**

**This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
 Refer to the Volume 1 of the Project Manual.**

<b>DIVISION 02</b>		<b>EXISTING CONDITIONS</b>	
Section No.	Title		
02 41 19	Selective Demolition (AS APPLIES TO Fire Alarm WORK)		

<b>DIVISION 08</b>		<b>OPENINGS</b>	
Section No.	Title		
08 31 13	Access Doors and Frames (AS APPLIES TO Fire Alarm WORK)		

<b>DIVISION 26</b>		<b>ELECTRICAL</b>	
Section No.	Title		
26 01 00	General Electrical Requirements (AS APPLIES TO Fire Alarm WORK)		
26 05 00	Common Work Results for Electrical (AS APPLIES TO Fire Alarm WORK)		
26 05 19	Low-Voltage Electrical Power Conductors and Cables (AS APPLIES TO Fire Alarm WORK)		
26 05 29	Hangers and Supports for Electrical Systems (AS APPLIES TO Fire Alarm WORK)		
26 05 33	Raceways and Boxes for Electrical Systems (AS APPLIES TO Fire Alarm WORK)		
26 05 53	Identification for Electrical Systems (AS APPLIES TO Fire Alarm WORK)		
26 22 00	Low-Voltage Transformers (AS APPLIES TO Fire Alarm WORK)		

<b>DIVISION 28</b>		<b>ELECTRONIC SAFETY AND SECURITY</b>	
Section No.	Title		
28 31 11	Digital, Addressable Fire-Alarm System		

**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training. .
- 01.05 The Steel Trade Contractor shall include furnishing, installing (in accordance with OSHA Standards) a double row of temporary safety cables and cable supports at all levels above the grade level of the building, the building perimeter and at all floor openings. Height of installation is to accommodate all finished concrete floor elevations. The General Trades contractor shall maintain the safety cables. These temporary safety cables and supports shall be installed for the protection of all Project workers. Upon completion of the concrete slab the General Trades Contractor shall furnish and install toe boards, in accordance with OSHA standards, at the building perimeter and all floor openings, as required. The General Trades Contractor shall furnish, install and remove when no longer necessary two (on each level) removable wood barriers (locations to be determined) a minimum of twelve feet wide at the main and upper levels to accommodate loading materials. Any trade contractor requiring removal of any portion of the safety cables shall reinstall the cables to maintain fall protection. All work performed where fall protection has been removed shall be performed in compliance with OSHA standards. All cores and small openings (less than 576 sq. in.) shall be protected by the trade creating the core or small opening. The General Trades Contractor is responsible to provide fall protection for all openings and hazards at metal framed walls. The General Trades Contractor is responsible for fall protection required for all other openings. The General Trades Contractor is responsible to inspect and correct as required all perimeter safety cabling and toe boards weekly provide a written report to construction manager. The Roofing Contractor is responsible for the required fall protection to perform the Roofing scope of work. All Contractors performing work on the roof shall provide their own fall protection in accordance with OSHA standards. The General Trades Contractor shall remove the safety cables, supports and toe boards when no longer required. Upon removal of the safety cables, the applicable Trade Contractor working in the area of removed cables shall be responsible to maintain fall protection until their work is complete in the area where the cables were removed. When the masonry or wall framing work is complete in an area, the General Trades Contractor shall furnish, install and maintain fall protection at all shafts, window and door openings, as required. The general trade contractor shall furnish and install temporary rails (in strict accordance with OSHA standards) at all stair

- towers balconies and mezzanines as required, coordinate and remove the temporary rails with the installation of the permanent finished construction.
- 01.06 All required holes for sizes of 12" or less must be drilled or core bored and shall be the responsibility of the Trade Contractor requiring the hole. The Trade Contractors shall include sealing of the penetrations. For larger holes and openings cutting and patching will be as follows: The Masonry Contractor shall include all necessary cutting and patching in masonry walls for all trades. The Drywall Contractor shall include cutting and patching in plaster or drywall walls for all trades. The General Trades Contractor shall include cutting and patching in all concrete slabs for all trades. The trade requiring openings shall provide layout and any required sleeves.
- 01.07 General debris dumpsters will be provided by others. (Deposit general debris in a dumpster on a daily basis.
- 01.08 Temporary bracing and shoring required for this scope of work is included.
- 01.09 Include an allowance of five thousand dollars (\$5,000.00) to be used at the discretion of the construction manager. All allowance shall be included in the base bid and shall not include overhead and profit. Overhead and profit shall be included in the contract bid sum.
- 01.10 The mechanical contractor to install smoke duct detectors including all required duct access and through wall access. The smoke duct detectors will be furnished by the electrical contractor.
- 01.11 All small roof penetrations, furnishing and setting of curbs shall be the responsibility of the trade contractor requiring such items. The Roofing Contractor will be responsible to flash in all such items. All pitch boxes shall be provided by the Roofing Contractor. Roof deck cutting is the responsibility of the Metals Contractor except for holes less than 250 square inches, which are the responsibility of the trade requiring the hole. Layout of openings cut by others is the responsibility of the trade requiring the opening.
- 01.12 With the exception of mechanical and electrical shafts shown on the drawings, each trade contractor requiring openings, sleeves, penetrations through walls, roofs, foundations and floors shall be the responsible to coordinate with the trade performing the wall, roof, foundation and floor construction. Failure to coordinate any required penetration and or opening causing corrective to the compromised substrate shall be the responsibility of the trade that required the opening and or penetration.
- 01.13 Provide snow removal required to complete this scope of work in accordance with the schedule. Include cleaning and removal of snow and ice from building component substrates required to be framed or sheathed, as required. Snow and ice shall be removed to a site location as designated by the construction manager. The site contractor is responsible to remove snow from site.
- 01.14 Layout, horizontal and vertical control for this bid package work included in this bid package.
- 01.15 The fire alarm contractor to coordinate the installation of all their assembly components with the spray applied and intumescent fireproofing assemblies. Any patching of removed fireproofing required to complete this contractor's work will be the responsibility of the contractor removing the material.
- 01.16 The trade contractor is responsible for the control of construction dust in and outside the construction areas specific to their scope of work. The trade contractor shall employ what-

ever means and methods deemed necessary to control its trade specific dust with the building.

- 01.17 All access doors on this project shall be by a common manufacturer. Furnish access doors required for this scope of work; lay out and coordination is the responsibility of the trade requiring the access. Installation of the access doors into drywall framed partitions will be by the drywall trade contractor. Installation of the access doors into masonry partitions will be by the masonry trade contractor.
- 01.18 Access and storage space on site does not exist, material trailers will not be allowed on site, the mechanical contractor is to coordinate and schedule material deliveries on a daily basis with the material loaded to the area of installation for daily installation. All road closures, road permits, off site staging areas, flagmen, and police protection is the responsibility of the roofing contractor for their scope of work.
- 01.19 Use of the existing elevator(s) during the phased renovations in the existing facility will not be available movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.
- 01.20 The fire alarm contractor to coordinate locations of all piping, lighting and electrical equipment with others trades, structural components, architectural finishes. 3D modeling is required for coordination drawings.

It is expected that all M/E/P/Sec/FA, FS, Communications trades utilize BIM to coordinate their work.

The design model produced by the design team will be released to the M/E/P/Sec/FA, FS trades after a waiver is executed by each trade contractor.

The trade contractors will then utilize the design model to begin layout of their respective systems.

The coordination of systems may be divided into areas (floors, phases, areas, etc.) as determined by the Construction Manager.

The HVAC contractor will act as gatekeeper of the coordination model during the entire coordination effort.

Each contractor shall model their systems and provide sufficient detail to enable accurate and complete clash detection prior to the start of subcontractor's work on site.

At a minimum, coordination meetings shall occur weekly until final coordination is achieved and in no way shall delay the progress of the job.

HVAC contractor will make available their server (or other means acceptable to all parties) that will enable all project parties to upload and download their respective shop drawing models during the coordination effort. When coordination models from each trade are uploaded, the HVAC contractor will download and integrate all trade models into a consolidated model. After this, a clash report will be created to identify clashes and conflicts between trade systems, building structure, architectural elements, etc. A report will be issued to all trades and the CM for review, response, and correction.

Once all coordination efforts (by area) are completed and clashes resolved, HVAC contractor shall produce a final set of coordination drawings as well as an integrated model for use and reference during construction.

Typical sequence of coordination, unless otherwise determined, shall be:

- 1) Duct layout
- 2) Pitched Pipe Layout
- 3) Plumbing
- 4) Fire Protection
- 5) Electrical
- 6) Communication
- 7) Miscellaneous

Each system shall use a specific color for ease of identification. All files to shall have specific names assigned to track version and date of file per trade. The HVAC contractor is to determine color assignments and file naming requirements.

All files to be Autodesk.dwg file format and be readable by other trades' CAD systems and Navisworks.

- 01.21 Provide all required shut downs of the fire alarm systems during the phased renovations of the existing facility. Include temporary tie-ins as required.
- 01.22 All in wall conduit or above ceiling required rough in including but not limited to back boxes, plaster rings and pull strings related to the specified fire alarm systems and assemblies is to be furnished and installed by the fire alarm trade contractor.
- 01.23 All equipment pads shall be furnished and installed by the concrete trade contractor.
- 01.24 The Mechanical/Electrical/Plumbing/Sprinkler/Communications/Security/FA Trade Contractors to cut, cap and drop all trade related and specific items within their scope of work. The demolition contractor is to remove dropped material from site.
- 01.25 The Mechanical/Electrical/Plumbing/Sprinkler/Communications/Security/FA Trade Contractors shall and salvage to owner items call to be salvaged for owner.
- 01.26 The Mechanical/Electrical/Plumbing/Sprinkler/Communications/Security/FA Trade Contractors shall remove, store (off-site if required) items called to be salvaged for reuse. Cost of off site storage is the related contractor's responsibility.
- 01.27 Provide all required steel and miscellaneous steel donnage and rails required to support fire alarm equipment.
- 01.28 Provide on-site staff or vendor support for commissioning as required including but not limited to specified testing, fire alarm technicians.
- 01.29 Protect all new and existing fire alarm equipment from dust, debris and contamination, at a minimum cover fire alarm equipment with self-adhering plastic coverings. Remove all plastic as the equipment and lighting are connected and or put into operation.
- 01.30 The site contractor is to provide exaction and backfill, sand bedding and markings for electrical, telephone, CATV conduit and electrical duct banks. The electrical contractor is to furnish and install all exterior electrical and or communications piping and or conduit, junction boxes, pull boxes, pull strings and wiring.

- 01.31 Provide all required temporary provisions and temporary supports for existing fire alarm systems as it relates the new hydronic piping installation installed through the existing first floor corridor ceilings from the existing mechanical room to the new additional see drawings A6.11 and A6.12 for extent of work.
- 01.32 Furnish and install all required low voltage wiring, devices, power supplies, connections required to complete electrical contractor's scope of work including but not limited to Division 28 fire alarm work.
- 01.33 Include the necessary provisions to maintain the existing fire alarm systems in the existing building during construction.
- 01.34 The General Trades Contractor shall furnish and install and paint all necessary wood backboards for electrical, security, FA, telephone and data equipment.
- 01.35 USI Integrated is the Service vendor for the existing HCC fire alarm system, contact information is: William Palko  
USI Integrated Solutions  
1525 Kings Highway  
Fairfield, CT 06824  
Office 203-612-8000  
Fax 203-612-6900  
Cell 203-258-0420



**DOCUMENT 00 90 032- "SET-ASIDE" BID PACKAGE 32 SECURITY**

**A. Specification Sections:**

**DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS**

This Bid Package includes all Division 00 Sections and Documents.  
 Refer to Volume 1 of the Project Manual.

**DIVISION 01 – GENERAL REQUIREMENTS**

This Bid Package includes all Division 1 Sections as they apply to this scope of work.  
 Refer to the Volume 1 of the Project Manual.

<b>DIVISION 02</b>		<b>EXISTING CONDITIONS</b>	
Section No.	Title		
02 41 19	Selective Demolition (AS APPLIES TO SECURITY WORK)		

<b>DIVISION 08</b>		<b>OPENINGS</b>	
Section No.	Title		
08 31 13	Access Doors and Frames (AS APPLIES TO SECURITY WORK)		

<b>DIVISION 26</b>		<b>ELECTRICAL</b>	
Section No.	Title		
26 01 00	General Electrical Requirements (AS APPLIES TO SECURITY WORK)		
26 05 00	Common Work Results for Electrical (AS APPLIES TO SECURITY WORK)		
26 05 19	Low-Voltage Electrical Power Conductors and Cables (AS APPLIES TO SECURITY WORK)		
26 05 26	Grounding and Bonding for Electrical Systems		
26 05 29	Hangers and Supports for Electrical Systems (AS APPLIES TO SECURITY WORK)		
26 05 33	Raceways and Boxes for Electrical Systems (AS APPLIES TO SECURITY WORK)		
26 05 53	Identification for Electrical Systems (AS APPLIES TO SECURITY WORK)		
26 22 00	Low-Voltage Transformers (AS APPLIES TO SECURITY WORK)		

<b>DIVISION 28</b>		<b>ELECTRONIC SAFETY AND SECURITY</b>	
Section No.	Title		
28 16 00	Intrusion Detection		

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28 23 00 Video Surveillance

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**B. Bid Package Notes:**

- 01.01 The Trade Contractor shall be aware that the completion of this project in accordance with the Construction Schedule. The Construction Schedule shall be strictly adhered to. The Contractor shall supply the necessary resources to attain the dates put forth in the Construction Schedule.
- 01.02 A full time, English speaking, superintendent must be on site when work is being performed.
- 01.03 Work must be performed such that safe access and required egress to the building and work areas are maintained. The Owner will occupy or use the existing building and parking garage for the entire construction period. The Trade Contractor(s) shall maintain vehicular and pedestrian access to all areas of the existing building and parking garage or as designated by the construction manager.
- 01.04 All Trade Contractors shall be aware that the Owner will not remove any lead paint in this building. In the course of performing their scope of work, all Trade Contractors shall include the necessary provisions to protect workers and others from the hazards of lead paint in accordance with OSHA regulations and legally dispose of any lead waste generated unless otherwise noted in these documents. All contractors shall submit proof of the necessary OSHA training. .
- 01.05 The Steel Trade Contractor shall include furnishing, installing (in accordance with OSHA Standards) a double row of temporary safety cables and cable supports at all levels above the grade level of the building, the building perimeter and at all floor openings. Height of installation is to accommodate all finished concrete floor elevations. The General Trades contractor shall maintain the safety cables. These temporary safety cables and supports shall be installed for the protection of all Project workers. Upon completion of the concrete slab the General Trades Contractor shall furnish and install toe boards, in accordance with OSHA standards, at the building perimeter and all floor openings, as required. The General Trades Contractor shall furnish, install and remove when no longer necessary two (on each level) removable wood barriers (locations to be determined) a minimum of twelve feet wide at the main and upper levels to accommodate loading materials. Any trade contractor requiring removal of any portion of the safety cables shall reinstall the cables to maintain fall protection. All work performed where fall protection has been removed shall be performed in compliance with OSHA standards. All cores and small openings (less than 576 sq. in.) shall be protected by the trade creating the core or small opening. The General Trades Contractor is responsible to provide fall protection for all openings and hazards at metal framed walls. The General Trades Contractor is responsible for fall protection required for all other openings. The General Trades Contractor is responsible to inspect and correct as required all perimeter safety cabling and toe boards weekly provide a written report to construction manager. The Roofing Contractor is responsible for the required fall protection to perform the Roofing scope of work. All Contractors performing work on the roof shall provide their own fall protection in accordance with OSHA standards. The General Trades Contractor shall remove the safety cables, supports and toe boards when no longer required. Upon removal of the safety cables, the applicable Trade Contractor working in the area of removed cables shall be responsible to maintain fall protection until their work is complete in the area where the cables were removed. When the masonry or wall framing work is complete in an area, the General Trades Contractor shall furnish, install and maintain fall protec-

- tion at all shafts, window and door openings, as required. The general trade contractor shall furnish and install temporary rails (in strict accordance with OSHA standards) at all stair towers balconies and mezzanines as required, coordinate and remove the temporary rails with the installation of the permanent finished construction.
- 01.06 All required holes for sizes of 12" or less must be drilled or core bored and shall be the responsibility of the Trade Contractor requiring the hole. The Trade Contractors shall include sealing of the penetrations. For larger holes and openings cutting and patching will be as follows: The Masonry Contractor shall include all necessary cutting and patching in masonry walls for all trades. The Drywall Contractor shall include cutting and patching in plaster or drywall walls for all trades. The General Trades Contractor shall include cutting and patching in all concrete slabs for all trades. The trade requiring openings shall provide layout and any required sleeves.
- 01.07 General debris dumpsters will be provided by others. (Deposit general debris in a dumpster on a daily basis.
- 01.08 Temporary bracing and shoring required for this scope of work is included.
- 01.09 Include an allowance of five thousand dollars (\$5,000.00) to be used at the discretion of the construction manager. All allowance shall be included in the base bid and shall not include overhead and profit. Overhead and profit shall be included in the contract bid sum.
- 01.10 All small roof penetrations, furnishing and setting of curbs shall be the responsibility of the trade contractor requiring such items. The Roofing Contractor will be responsible to flash in all such items. All pitch boxes shall be provided by the Roofing Contractor. Roof deck cutting is the responsibility of the Metals Contractor except for holes less than 250 square inches, which are the responsibility of the trade requiring the hole. Layout of openings cut by others is the responsibility of the trade requiring the opening.
- 01.11 With the exception of mechanical and electrical shafts shown on the drawings, each trade contractor requiring openings, sleeves, penetrations through walls, roofs, foundations and floors shall be the responsible to coordinate with the trade performing the wall, roof, foundation and floor construction. Failure to coordinate any required penetration and or opening causing corrective to the compromised substrate shall be the responsibility of the trade that required the opening and or penetration.
- 01.12 Provide snow removal required to complete this scope of work in accordance with the schedule. Include cleaning and removal of snow and ice from building component substrates required to be framed or sheathed, as required. Snow and ice shall be removed to a site location as designated by the construction manager. The site contractor is responsible to remove snow from site.
- 01.13 Layout, horizontal and vertical control for this bid package work included in this bid package.
- 01.14 The security contractor to coordinate the installation of all their assembly components with the spray applied and intumescent fireproofing assemblies. Any patching of removed fireproofing required to complete this contractor's work will be the responsibility of the contractor removing the material.
- 01.15 The trade contractor is responsible for the control of construction dust in and outside the construction areas specific to their scope of work. The trade contractor shall employ whatever means and methods deemed necessary to control its trade specific dust with the building.

- 01.16 All access doors on this project shall be by a common manufacturer. Furnish access doors required for this scope of work; lay out and coordination is the responsibility of the trade requiring the access. Installation of the access doors into drywall framed partitions will be by the drywall trade contractor. Installation of the access doors into masonry partitions will be by the masonry trade contractor.
- 01.17 Access and storage space on site does not exist, material trailers will not be allowed on site, the mechanical contractor is to coordinate and schedule material deliveries on a daily basis with the material loaded to the area of installation for daily installation. All road closures, road permits, off site staging areas, flagmen, and police protection is the responsibility of the roofing contractor for their scope of work.
- 01.18 Use of the existing elevator(s) during the phased renovations in the existing facility will not be available movement of men, material, debris and refuse is to be handled through existing stair towers to areas designated by the construction manager.
- 01.19 The security contractor to coordinate locations of all piping, lighting and electrical equipment with others trades, structural components, architectural finishes. 3D modeling is required for coordination drawings.

It is expected that all M/E/P/Sec/FA, FS, Communications trades utilize BIM to coordinate their work.

The design model produced by the design team will be released to the M/E/P/Sec/FA, FS trades after a waiver is executed by each trade contractor.

The trade contractors will then utilize the design model to begin layout of their respective systems.

The coordination of systems may be divided into areas (floors, phases, areas, etc.) as determined by the Construction Manager.

The HVAC contractor will act as gatekeeper of the coordination model during the entire coordination effort.

Each contractor shall model their systems and provide sufficient detail to enable accurate and complete clash detection prior to the start of subcontractor's work on site.

At a minimum, coordination meetings shall occur weekly until final coordination is achieved and in no way shall delay the progress of the job.

HVAC contractor will make available their server (or other means acceptable to all parties) that will enable all project parties to upload and download their respective shop drawing models during the coordination effort. When coordination models from each trade are uploaded, the HVAC contractor will download and integrate all trade models into a consolidated model. After this, a clash report will be created to identify clashes and conflicts between trade systems, building structure, architectural elements, etc. A report will be issued to all trades and the CM for review, response, and correction.

Once all coordination efforts (by area) are completed and clashes resolved, HVAC contractor shall produce a final set of coordination drawings as well as an integrated model for use and reference during construction.

Typical sequence of coordination, unless otherwise determined, shall be:

- 1) Duct layout
- 2) Pitched Pipe Layout
- 3) Plumbing
- 4) Fire Protection
- 5) Electrical
- 6) Communication
- 7) Miscellaneous

Each system shall use a specific color for ease of identification. All files to shall have specific names assigned to track version and date of file per trade. The HVAC contractor is to determine color assignments and file naming requirements.

All files to be Autodesk.dwg file format and be readable by other trades' CAD systems and Navisworks.

- 01.20 Provide all required shut downs of the security systems during the phased renovations of the existing facility. Include temporary tie-ins as required.
- 01.21 All in wall conduit or above ceiling required rough in including but not limited to back boxes, plaster rings and pull strings related to the specified security systems and assemblies is to be furnished and installed by the security trade contractor.
- 01.22 All equipment pads shall be furnished and installed by the concrete trade contractor.
- 01.23 The Mechanical/Electrical/Plumbing/Sprinkler/Communications/Security/FA Trade Contractors to cut, cap and drop all trade related and specific items within their scope of work. The demolition contractor is to remove dropped material from site.
- 01.24 The Mechanical/Electrical/Plumbing/Sprinkler/Communications/Security/FA Trade Contractors shall and salvage to owner items call to be salvaged for owner.
- 01.25 The Mechanical/Electrical/Plumbing/Sprinkler/Communications/Security/FA Trade Contractors shall remove, store (off-site if required) items called to be salvaged for reuse. Cost of off site storage is the related contractor's responsibility.
- 01.26 Provide all required steel and miscellaneous steel donnage and rails required to support electrical equipment.
- 01.27 Provide on-site staff or vendor support for commissioning as required including but not limited to specified testing, security technician and foremen.
- 01.28 Protect all new and existing security equipment and lighting from dust, debris and contamination, at a minimum cover security equipment with self-adhering plastic coverings. Remove all plastic as the equipment and lighting are connected and or put into operation.
- 01.29 The site contractor is to provide exaction and backfill, sand bedding and markings for electrical, telephone, CATV conduit and electrical duct banks. The electrical contractor is to furnish and install all exterior electrical and or communications piping and or conduit, junction boxes, pull boxes, pull strings and wiring.
- 01.30 Provide all required temporary provisions and temporary supports for existing security systems as it relates the new hydronic piping installation installed through the existing first floor

corridor ceilings from the existing mechanical room to the new additional see drawings A6.11 and A6.12 for extent of work.

- 01.31 Furnish and install all required low voltage wiring, devices, power supplies, connections required to complete electrical contractor's scope of work including but not limited to Division 28 security work.
- 01.32 Include the necessary provisions to maintain the existing systems in the existing building during construction.
- 01.33 The General Trades Contractor shall furnish and install and paint all necessary wood backboards for electrical, security, FA, telephone and data equipment.
- 01.34 USI Integrated is the Service vendor for the existing HCC security system, contact information is: William Palko  
USI Integrated Solutions  
1525 Kings Highway  
Fairfield, CT 06824  
Office 203-612-8000  
Fax 203-612-6900  
Cell 203-258-0420