Mitchell Giurgola Architects, LLP.
630 Ninth Avenue
New York, NY 10036

Volume 00
PROJECT MANUAL

University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2

STORRS, CONNECTICUT

FRONT END DOCUMENTS
Contracting Requirements & Scopes of Work

Fusco

FUSCO PROJECT #2720
February 20, 2015

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INVITATION TO BID
For
University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2

Contractors prequalified for the Bid Package listed below for the **University of Connecticut New Engineering & Science Building Project #901376, Phase 2,** located at **University of Connecticut Campus Storrs, Connecticut** are invited to submit bid proposals.

The following are targeted Schedule of Milestones dates for all work outlined in the Contract Documents.

Documents availability:	**April 6, 2015**
Bid Submission Deadline:	**May 15, 2015**
RFI Submission Deadline:	**May 1, 2015**
Proposed Start Date:	**August, 2015**
Completion Date	**December, 2016**

There will be a **Pre-Bid Meeting** on Thursday, April 16, 2015 at 10:00AM. Location – Student Union Theatre Auditorium (1st floor), 2110 Hillside Road. Recommended parking is at the North Parking Garage Storrs, Connecticut. Immediately following the pre-bid meeting, a **site walk-through** will be conducted.

Sealed Bid Proposals will be accepted for the following Bid Packages:

Bid Package #	Description	Estimated Amount
Bid Package 01.0**	Final Cleaning	$87,320
Bid Package 01.1**	Construction Progress Cleaning	$96,000
Bid Package 03.0	Cast-In-Place Concrete	$2,430,892
Bid Package 04.0	Masonry & Precast	$1,321,639
Bid Package 05.0	Structural Steel & Metal Decking	$4,376,124
Bid Package 05.1	Metal Fabrication (With Structural Steel)	
Bid Package 06.0	General Trades	$3,101,191
Bid Package 06.1	Architectural & Lab Casework	$4,412,110
Bid Package 07.0	Roofing	$807,481
Bid Package 07.2**	Fire Stopping (With General Trades)	
Bid Package 07.3*	Spray Fireproofing	$239,225
Bid Package 08.0	Glass & Glazing / Terecotta	$9,258,594
Bid Package 08.1	Doors, Frames & Hardware	$572,805
Bid Package 09.0*	Ceramic Tile & Stone Flooring	$312,953
Bid Package 09.1	Terrazzo	$345,140
Bid Package 09.3*	Resilient Floors	$349,392
Bid Package 09.4*	Epoxy Flooring	$264,655
Bid Package 09.5	Acoustical Ceilings	$410,295
Bid Package 09.6**	Painting	$394,821
Bid Package 10.0*	Signage	$38,542
Bid Package 10.1*	Toilet Compartments & Accessories	$97,670
Bid Package 12.1*	Window Treatments	$239,108
Bid Package 13.0	Environmental Rooms	$412,412
Bid Package 14.0	Elevators	$570,960
Bid Package 21.0	Fire Suppression	$598,486
Bid Package 22.0	Plumbing &Laboratory Equipment	$4,850,534
Bid Package 23.0	HVAC	$12,643,046

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Bid Package 26.0	Electrical	$5,066,564
Bid Package 26.1*	Fire Alarm	$318,562
Bid Package 27.0*	Communications	$904,537
Bid Package 27.1**	Security	$290,345
Bid Package 31.0	Sitework	$4,193,327
Bid Package 31.2**	Landscaping	$468,630

Single asterisk "*" = SBE
Double asterisk "**" = MBE

All bids must be submitted in **triplicate** without exceptions, modification and/or qualifications to the bid documents and placed in a sealed envelope marked as follows:

University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2
Bid Package No. _____

Bids will be accepted until 1:00PM Friday, May 15, 2015 at the office of **The Fusco Corporation, 555 Long Wharf Drive, New Haven, CT.** Bids received after the time indicated above will not be considered and will be returned unopened. Bids will be opened and publicly read aloud fifteen (15) minutes thereafter, at 555 Long Wharf Drive, 3rd floor, New Haven, CT. Bidders are solely responsible for ensuring timely delivery to the correct address. After the Bids have been reviewed for conformance with the bid documents, the apparent low bidder shall be notified to arrange a meeting to review the Scope of Work and Contract requirements.

If applicable any Bidder may elect to submit a Bid Proposal combining a number of Bid Packages if the amount of the Bid Proposal offers a cost reduction. This combined Bid Packages "Offer" will be valid only if the Bidder submits an individual offer for each package involved. Bidders may offer this combined package proposal by submitting it on his or her business letterhead, as an added page to each Bid Form.

Each Bidder shall provide a Bid Bond for each Bid Package executed by an acceptable Surety company or companies authorized to do business in the State of Connecticut having a Best rating of A- or higher, in an amount equal to (10%) of the total Bid.

Bids which fail to contain a Bid Bond Security as stated above will be rejected as non-responsive.

Contract Documents: have been prepared by: **Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036** and shall be on file and available at the locations listed below on or about **April 6, 2015**

Fusco Corporation
Long Wharf Maritime Center
555 Long Wharf Drive, Suite 14
New Haven, CT 06511
(203) 777-7451

McGraw Hill Construction
www.construction.com

Joseph Merritt & Company
60 Hamilton Street
New Haven, CT 06511
(203) 562-9885

CProjects.com

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The Hartford Economic Development Corporation
& The Greater Hartford Business Development Center, Inc.
(HEDCo & GHBDC) – http:// www.hedco-ghbdc.com

Connecticut DAS Web Portal

Contract documents may be obtained, **at cost**, by submitting a written request directly to **Joseph Merritt & Company 60 Hamilton Street New Haven, CT. 06511 Email: www.newhaven-jobs@merrittgraphics.com Phone: (203) 562-9885** Payments shall be made via check payable to the **Joseph Merritt & Company.** Upon receipt of your request and payment, the printer listed above shall prepare a complete set of documents. Arrangements for the pickup of documents shall be made directly through the printer. Documents shall be mailed only at the request and cost of the bidder.

Partial sets or additional sets of Contract Documents are also available for a non-refundable direct purchase from the **Joseph Merritt & Company 60 Hamilton Street New Haven, CT. 06511 Email: www.newhaven-jobs@merrittgraphics.com, Phone: (203) 562-9885.** Any/all addenda/addendums will be issued only to bidders who have requested and purchased a full set of documents and are thereby registered with the Construction Manager. Partial set purchasers are referred to McGraw Hill Construction-Dodge , CProjects.com or Connecticut DAS Web Portal for updates and/or addenda.

SECTION 00160 INSTRUCTIONS TO BIDDERS

The Fusco Corporation, Construction Manager, will be accepting Bids from contractors prequalified to submit bids for the following bid packages for the University of Connecticut New Engineering & Science Building, Project #901376, Phase 2:

Bid Package #	Description	Estimated Amount
Bid Package 01.0**	Final Cleaning	$87,320
Bid Package 01.1**	Construction Progress Cleaning	$96,000
Bid Package 03.0	Cast-In-Place Concrete	$2,430,892
Bid Package 04.0	Masonry & Precast	$1,321,639
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Bid Package 07.2**	Fire Stopping (with General Trades)	
Bid Package 07.3*	Spray Fireproofing	$239,225
Bid Package 08.0	Glass & Glazing / Terracotta	$9,258,594
Bid Package 08.1	Doors, Frames & Hardware	$572,805
Bid Package 09.0*	Ceramic Tile & Stone Flooring	$312,953
Bid Package 09.1	Terrazzo	$345,140
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Bid Package 27.0*	Communications	$904,537
Bid Package 27.1**	Security	$290,345
Bid Package 31.0	Sitework	$4,193,327
Bid Package 31.2**	Landscaping	$468,630

Single asterisk "*" = SBE
Double asterisk "**" = MBE

NOTE: Bids will only be accepted from contractors prequalified to bid on the foregoing Bid Package for this Project.

ARTICLE 1 – KEY DATES

Bids will be accepted until 1:00PM Friday, May 15, 2015 at the office of The Fusco Corporation, 555 Long Wharf Drive, New Haven, CT. Bids received after the time indicated above will not be considered and will be returned unopened. Bids will be opened and publicly read aloud fifteen (15) minutes thereafter, at 555 Long Wharf Drive, 3rd floor, New Haven, CT. Bidders are solely responsible for ensuring timely delivery to the correct address. After the Bids have been reviewed for conformance with the bid documents, the apparent low bidder shall be notified to arrange a meeting to review the Scope of Work and Contract requirements.

1.1 Bidders are solely responsible for ensuring timely delivery to the correct address.

NOTE: Bids received after the date and time noted above will not be accepted and will be returned unopened. No Verbal, Telephone or Electronic proposals will be considered. Neither the Construction Manager nor the Owner will be held responsible for any Bid Proposals that are delivered to an incorrect address.

1.2 Bids **must be** received **IN TRIPLICATE** in a **SEALED ENVELOPE** plainly marked on the outside with the following information:

University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2
Bid Package No. _____

If Bids are submitted by US Mail or Courier Service, each Bid must be in a separate Sealed Envelope within the mailing package.

There will be a **Pre-Bid Meeting** on Thursday, April, 16 2015 at 10:00AM. Location – Student Union Theatre Auditorium (1st floor), 2110 Hillside Road, Storrs, CT. Recommended parking is at the North Parking Garage Storrs, Connecticut. Immediately following the pre-bid meeting, a **site walk-through** will be conducted.

1.3 **All bids shall be good for a period of Ninety (90) calendar days from the Bid Date, unless otherwise noted.** Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement.

ARTICLE 2 – OBTAINING BID DOCUMENTS

2.1 Bidders may obtain sets of the Bid Documents from the individuals or entities designated in the Invitation to Bid.

2.2 Copies of the Plans and Specifications, Form of Proposal, and other Contract Documents may be examined by appointment during normal business hours at the locations designated in the Invitation to Bid.

2.3 Bidders shall use a complete set of Bid Documents in preparing Bids. Neither the Construction Manager, Owner nor the Architect assumes responsibility for errors or misinterpretations resulting from the use of an incomplete set of Bid Documents.

ARTICLE 3 – BID SUBMISSION

3.1 Prepare Bids using the Bid Forms provided in the Bid Documents. **The Bid Forms must be submitted in TRIPLICATE**.

3.2 The Bid must clearly indicate the amount of the Bid for each Bid Package **written in both words and numbers**. In the event of any discrepancy between the written amounts and the numbers, the written amounts shall govern.

3.3 The Bid Form must be fully completed and signed by a duly authorized agent of the Bidder and notarized. **All BLANK spaces for bid prices must be filled in.**

3.4 Any Bidder may elect to submit a proposal combining a number of Bid Packages if the amount of the combined proposal offers the University of Connecticut a cost reduction. This combined package offer will be valid only if the Bidder submits an offer for each package involved. A Bidder may offer this combined package proposal by submitting it on his or her business letterhead as an added page to each Bid Package. The Fusco Corporation and the Owner reserve the right to not accept any combined package even if the combined package offers a cost reduction.

3.5 **All Bidders must furnish the following with the Bid:**

1. Bid Forms A through F (document 000950)
2. Bid Bond (document A310)
3. Certification as to Corporate Principal (document 000312)
4. Form of Surety (document 000315)
5. Department of Administrative Services (DAS) "Contractor Prequalification Certificate and Update Statement (document 000412A) Subcontractor needs to acquire this document from DAS
6. Non-Collusion Affidavit of Prime Bidder (document 000320)
7. Notification to Bidders (document 000330)
8. Contract Compliance Data Form (document 000340)
9. Contractor's Minority Business Enterprises (document 000350-3)
10. Notification to Bidders – CHRO (document 000350-4)
11. Certification of Bidder Regarding Equal Employment Opportunity (document 000360)
12. Contractors Wage Certification Form (document 000847)
13. University of Connecticut Contractor EHS Manual – Contractor Receipt Acknowledgement Form

The information required under (1) to (13), inclusive, shall be furnished on the forms included in the Bid Documents, IN TRIPLICATE, and duly executed.

3.6 A Bid may not be modified, withdrawn, or cancelled by the Bidder for a period of ninety (90) calendar days following the Bid Opening Date and Time and each Bidder so agrees to this when submitting a Bid Proposal.

3.7 Prior to the Bid Opening Date and Time, a Bid may be modified or withdrawn by written notice to the Fusco Corporation. Any such notice shall be in writing over the signature of the Bidder and must be received by the Fusco Corporation prior to the Bid Opening Date and Time. Bidders are solely responsible for ensuring timely delivery and receipt of a written notice to modify or withdraw a Bid.

ARTICLE 4 - BIDDER REPRESENTATIONS

4.1 By submitting a Bid, the Bidder makes the following representations:

4.1.1 The Bidder has read and understands the Bid Documents and Contract Documents, including the plans and specifications, to the extent that such documentation relates to the work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.

4.1.2 The Bid is made in compliance with the Bid Documents.

4.1.3 The Bidder has visited the site, is familiar with local conditions under which the work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

4.1.4 The Bidder understands and agrees that it is required to comply with all federal, state, and local laws, regulations, ordinances, codes, and orders of authorities having jurisdiction that in any manner relate to the performance of the work.

4.1.5 The Bidder acknowledges and agrees to the terms and conditions of the Contract Documents without exception or qualification.

4.1.6 The Bid is based upon the materials, equipment and systems required by the Bid Documents without exception.

ARTICLE 5 - ALTERNATES AND/OR UNIT PRICES

5.1 No Alternates will be considered unless Alternates are specifically requested.

5.2 If Alternates and/or Unit Prices are required as part of their Scope of Work, the Bidder must provide the information on the Bid Form.

ARTICLE 6 - INTERPRETATIONS & CLARIFICATIONS OF BIDDING DOCUMENTS

6.1 All **Requests for Information (RFI)** for interpretations and/or clarifications to the Bid Documents and Contract Documents **must be** submitted in writing to The Fusco Corporation, 555 Long Wharf Drive, New Haven, CT 06511, and directed to Darren Antolini. RFIs may be submitted electronically to the following email address: dantolini@fusco.com

6.2 No oral statement shall be effective to waive, change or otherwise modify any provision of the Contract Documents, and no bidder shall rely on any alleged oral statement. Every question relating to the Bid Documents and Contract Documents shall be in the form of a written RFI.

6.2 RFIs must be submitted at least fourteen days prior to the Bid Opening Date. May 1, 2015 will be the **final day** for submitting all RFIs. Any RFI received after that date will not be answered.

ARTICLE 7 – ADDENDA

7.1 Any and all interpretations, responses and supplemental instructions will be in the form of written Addenda to the Bid Documents.

7.2 All Addenda will be automatically sent out to ONLY the prospective Plan Holders on record with Joseph Merritt & Company. In addition, the Addenda will be available for viewing at the locations designated in the "Invitation to Bid".

7.3 All Addenda will be incorporated into the scope of work covered by the Bid Packages and shall become part of the Contract Documents and part of the Subcontract Agreement with the Construction Manager.

7.4 It is the **sole responsibility of each Bidder to make sure they have received and reviewed all Addenda.** Bidders shall state on the Bid Form, the date and number of each Addendum in which they have received, reviewed and acknowledge.

NOTE: Failure to provide this information on the Bid Proposal Form may be considered non-conforming and subject to rejection.

7.5 The last addenda, if required, will be issued in writing no later than Seven days prior to the Bid Opening Date. May 8, 2015 will be the **final day** for issuing Addenda.

ARTICLE 8 – SUBSTITUTIONS

8.1 The materials, products and equipment described in the Bid Documents establish a standard of required function, dimension, appearance and quality to be met by the Subcontractor for the Project.

8.2 Each bidder shall utilize the specified manufacturers or equal in their bid.

8.3 No Substitutions shall be considered prior to receipt of bids unless written request for approval has been received by the Construction Manager and Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final. If the Architect determines that the substituted product does not meet the specified requirements used in the bid, the Subcontractor will be responsible to provide the specified product or approved equal at no additional cost to the Project.

ARTICLE 9 – BID BOND & PERFORMANCE AND PAYMENT BONDS

9.1 Each Bid must be accompanied by Bid Security in the form of a Bid Bond, or to the extent

permitted by Article 9.3, a Letter of Credit.

9.2 Bids must be accompanied by a Bid Bond in the amount of ten percent (10%) of the total amount of the Bid. The Bid Bond shall ensure the execution of the Subcontract Agreement and the furnishing of the surety bond or bonds by the successful bidder, as required by the Bid Documents and Contract Documents.

9.3 For Bid Packages set-aside for award to Department of Administrative Services ("DAS") certified Small Business Enterprise ("SBE") or Minority Business Enterprise ("MBE")[1] contractors, Bidders may provide, in lieu of a Bid Bond, a letter of credit in the amount equal to ten percent (10%) of the Bid amount for any bid that is less than One Hundred Thousand Dollars ($100,000) and in the amount equal to twenty five percent (25%) of the Bid amount that is equal to or in excess of One Hundred Thousand Dollars ($100,000).

9.4 The Fusco Corporation will have the right to retain the Bid Security of bidders to whom an award is being considered until either (a) the Subcontract Agreement has been executed and bonds, if required have been furnished, or (b) the specified time has elapsed so the Bids may be withdrawn, or (c) all Bids have been rejected.

9.3 Except as provided in Article 9.4, all successful Bidders will be required to furnish a **Performance and Labor and Material Payment Bond in the amount of 100%** of the total Contract Amount within ten (10) calendar days after the receipt of the Subcontract Agreement. Such Bonds shall name the Fusco Corporation and the University of Connecticut as obligees with rights on the Bonds jointly and severally.

9.4 For Bid Packages set-aside for award to DAS certified SBE or MBE contractors, Bidders may provide, in lieu of a Performance and Labor and Material Payment Bond, a letter of credit in the amount equal to ten percent (10%) of the Bid amount for any bid that is less than One Hundred Thousand Dollars ($100,000) and in the amount equal to twenty five percent (25%) of the Bid amount that is equal to or in excess of One Hundred Thousand Dollars ($100,000).

9.5 All Bonds (Bid, Performance, and Labor and Material) must be issued by a Surety Company satisfactory to The Fusco Corporation, licensed and qualified to underwrite bonds in the State of Connecticut, listed in the latest issue of the U.S. Treasury Circular 570 and having a AM Best Rating of A- or better. Such Bonds shall also include the following language: "In the event the surety assumes the contract or obtains bids for completion of the contract, the surety shall ensure that the contractor chosen to complete the contract is prequalified pursuant to section 4a-100 of the Connecticut General Statutes in the requisite classification and has the aggregate work capacity rating and single project limit necessary to complete the project."

9.6 The cost for all Bonds or Letters of Credit shall be included in the Bid Amount.

9.7 All bonds to be submitted in form as set forth in the Bid Documents. The current power of attorney for the person who signs for any surety company shall be attached to the bonds.

9.8 Before commencing the Work, the Subcontractor shall procure and maintain, at its own expense, at least the insurance as specified in the Bid Documents and Contract Documents. The cost of all required insurance shall be included in the subcontractor's Bid Amount.

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[1] The term small business enterprise ("SBE") means a "small contractor" as defined in Connecticut General Statutes Section 4a-60g. The term minority business enterprise ("MBE") means a "minority business enterprise" as defined in Connecticut General Statutes Section 4a-60g.

ARTICLE 10 - QUALIFICATION OF BIDDERS

10.1 All Bidders submitting a bid $500,000 or higher must include their DAS Update (Bid) Statement. Such Bidders were to have previously provided their DAS Prequalification Certificates in response to the Invitation to Prequalify.

NOTE: Any Bid submitted without a copy of the DAS Update (Bid) Statement may be deemed non-conforming and the Bid may be subject to rejection by the Construction Manager and Owner.

10.2 All Bidders submitting a bid $500,000 or higher must be prequalified by the DAS in the requisite classification and have the aggregate work capacity rating and single project limit necessary to complete the work for which the Bid is submitted.

10.3 The Construction Manager and Owner may make such investigation as they deem necessary to determine the Bidder's responsibility and ability to perform the work. The Bidder shall furnish all information and data for this purpose as the Construction Manager or Owner may require. The Construction Manager and Owner reserve the right to reject any Bid if evidence submitted by the Bidder or investigation of the Bidder fails to satisfy the Construction Manager or Owner that the Bidder is responsible and properly qualified to carry out the obligations of the Contract and to complete the work within the specified time.

10.4 The Fusco Corporation and the Owner reserve the right to reject any and all bids. A Bid not accompanied by a required Bid Security or by other data required by the Bid Documents, or Bid which is in any way incomplete or irregular is subject to rejection. A Bid which is conditional or obscure or which contains any additional information not called for in the Bid Documents is subject to rejection.

10.5 Subject to the rights of the Owner and Construction Manager as set forth in the Bid Documents, the Subcontract award for each Bid Package will be issued to the <u>lowest responsible, qualified, approved bidder</u>. Consideration will be given to the Bidder's prior experience in performing work of similar size and complexity and completing such Projects and/or lack of experience in Projects of similar size and complexity.

ARTICLE 11 – ACCEPTANCE OF BID (AWARD)

11.1 The Fusco Corporation and University of Connecticut will have the right to award the Contract to any Bidder, and not necessarily the low bidder, and to waive informalities and irregularities in any Bid received if it is determined to be in the best interest of the University of Connecticut.

11.2 The Fusco Corporation and University of Connecticut will have the right to accept or not to accept Alternates in any order or combination, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternate accepted.

ARTICLE 12 – SUBCONTRACTORS

12.1 If a Bidder intends to subcontract any portion of its scope of work, then such bidder shall include in its Bid the names of all proposed subcontractors and sub-subcontractors (See Bid Form 'E').

12.2 The Bidder will be required to establish to the satisfaction of the Owner, the Construction Manager and Architect, the reliability and responsibility of all proposed subcontractors and sub-subcontractors.

12.3 The Construction Manager will notify the Bidder in writing if the Owner, Construction Manager, or Architect, has an objection to any subcontractor or sub-subcontractor proposed by the Bidder. If the Owner, Construction Manager, or Architect, has an objection to any subcontractor or sub-subcontractor proposed by the Bidder, the Bidder may submit an acceptable substitute with no adjustment in the Bid Amount. Additionally, with respect to any subcontractor or sub-subcontractor proposed by the Bidder to whom the Owner, Construction Manager, or Architect has an objection, the Construction Manager may request that such subcontractor or sub-subcontractor furnish performance and payment bonds covering the faithful performance of their contracts. In no case shall the Bidder be entitled to an adjustment of its Bid Amount as a result of the Owner's, Construction Manager's, or Architect's objection to a proposed subcontractor or sub-subcontractor or the cost of requested performance or payment bonds.

12.4 The Construction Manager and Owner also reserve the right to reject any and all bids on the basis of a Bidder's inability to establish to the satisfaction of the Construction Manager that the Bidder and/or a proposed subcontractor or sub-subcontractor has the manpower and resources available to it to satisfy the time durations and milestones established by the Construction Manager in the Construction Schedule.

12.5 Whenever the Construction Manager or Owner informs the Subcontractor that any person in their employ on the project is incompetent, disorderly, contrary to the specifications and/or the instructions of the Construction Manager or Owner, that person shall be immediately dismissed from the job and shall not be given employment on any work connected with the Contract.

12.6 The Subcontractor shall not permit the use of intoxicating drugs or liquor on or about the Project jobsite nor shall he permit anyone suffering from the effects thereof to remain on the project. Use of intoxicating drugs or liquor on or around the Project is **grounds for immediate removal** of the individual(s) from the Project.

ARTICLE 13 – PAYROLL

13.1 Pursuant to Connecticut General Statutes Section 31-53, the following provision is hereby made part of these Contract Documents:

The wages paid on an hourly basis to any mechanic, laborer or worker employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund, as defined in Section 31-53 of the General Statutes, shall be at a rate equal to the rate (of wages) customary or prevailing for the same work in the same trade or occupation in the town in which such public works are being constructed. Any Subcontractor who is not obligated by the agreement to make payment or contribution on behalf of such employees to any such welfare fund shall pay to

each employee as part of his wages the amount of payment or contribution for his classification on each payday.

13.2 The Minimum Wage Rate Schedule issued by the State of Connecticut Department of Labor is provided in Division 000840 and Division 000845, of the Bid Documents. Said Wage Rate Schedules shall be posted at a conspicuous location on the Project site. In addition, Subcontractors will be required to pay the annual adjusted prevailing wages posted by the Department of Labor and are responsible for obtaining the annual adjusted prevailing wage rate increases directly from the Department of Labor. Such annual adjustments are accounted for in the Bid Price.

ARTICLE 15 – UTILIZATION OF SMALL AND MINORITY BUSINESS ENTERPRISES

15.1 Subcontractors shall participate and comply with all contract compliance rules, regulations, workforce requirements, and contract compliance programs of the Connecticut Commission on Human Rights and Responsibilities ("CHRO"), including, but not limited to, Sections 46a-68j-21 through 43 inclusive of the CHRO state regulations.

15.2 Subcontractors shall meet or exceed the minimum SBE/MBE goals of 32% DAS certified SBE and of that amount, 38% to SBEs who are also DAS certified MBEs, or 12% of the total Subcontract value. Whereas Connecticut statutes call for utilization goals reflecting 25% SBE and 6.25% MBE of total contract values, the Owner is requiring that 32% SBE and 12% MBE goals be applied to the respective contract values to ensure overall achievement of CHRO set-aside goals for this Project. Similarly, whereas Connecticut statutes call for SBE contractors to self-perform greater than or equal to 30% of the Work with their own forces, the Owner is requiring that all contractors self-perform greater than or equal to 40% of the work with their own forces.

15.3 Subcontractors will be required to undertake good faith efforts to employ or sub-subcontract with SBE and MBE contractors, to document those efforts, and to provide documentation of such efforts to the Fusco Corporation upon demand. In connection with such efforts, successful Bidders and their sub-subcontractors will be required to submit Monthly Employment Utilization Reports to the Construction Manager. This report is a specific employment utilization form summarizing the information from your certified payrolls.

15.4 Prior to award of this Contract and in a period not more than thirty (30) days after bid opening, the successful Bidder must furnish the following information for each SBE or MBE contractor the Bidder will use:

1. The name, address, and contact person for each small SBE or MBE contractor the successful Bidder will use.

2. The nature of the work to be undertaken by each SBE or MBE contractor.

3. The dollar amount of the work to be undertaken by the SBE or MBE contractor.

ARTICLE 16 – EQUAL EMPLOYMENT OPPORTUNITY

16.1 Attention is called to the requirements that Subcontractors and sub-subcontractors not discriminate in their hiring and employment practices against any employee or applicant for

employment because of race, color, religious creed, age, sex, gender identity or expression, marital status, national origin, ancestry, present or past history of mental disability, mental retardation, learning disability or physical or mental disability or handicap, or, sexual preference, veteran's status or any other protected class established by federal, state or local law in any manner prohibited by law or regulation.

ARTICLE 17 – TAXES

17.1 This Project is exempt from State of Connecticut Sales Tax. Connecticut Sales and Use Tax in accordance with State Statues are not to be included on labor and/or material, to be incorporated into the Project. A Tax-Exempt Certificate will be issued to all successful-bid Subcontractors.

17.2 If a Subcontractor is a non-resident contractor within the meaning of Connecticut General Statutes Section 12-430(7), the Subcontractor shall comply with the requirement set out in said Statute and cause the Commissioner of Revenue Services to provide the Construction Manager with (1) evidence that it is a "verified contractor" by providing a certificate issued by the Connecticut Department of Revenue Services ("DRS") or (2) provide a copy of a Certificate of Compliance issued by DRS. More detailed information concerning these rules is set forth in DRS Special Notice 2012(12).

ARTICLE 18 - CONSTRUCTION SCHEDULE

18.1 The Construction Schedule is provided in Division 000930 of the Bid Documents. The following criteria should be in preparation of the Bidder's proposal.

18.2 Each Subcontractor shall co-operate with the Construction Manager in adhering to the Construction Schedule.

18.3 In the event that this Construction Schedule is interrupted or delayed because the Subcontractor does not have sufficient materials, equipment, or work force on the jobsite, the Construction Manager shall direct the Subcontractor to make up the lost time through the use of additional labor and/or working beyond the normal working time at **NO ADDITIONAL COST** to the Owner or Construction Manager.

ARTICLE 19 - TIME IS OF THE ESSENCE

19.1 The provisions of the Contract relating to the time of the performance and completion of the work are of the essence of the Contract. Accordingly, each Subcontractor shall begin work on the day specified, and shall prosecute the work diligently so as to permit full occupancy not later than the first day following the construction period established on the Construction Schedule.

ARTICLE 20 - CONTRACT

20.1 All successful Bidders will be required to execute the Standard Form of Subcontract and the Subcontract Agreement provided in the Bid Documents without alteration or exception. The Subcontractor shall execute and return to The Fusco Corporation the executed Standard Form

of Subcontract, Subcontract Agreement, along with all required Bonds and insurance certificates within ten (10) days of receipt of the prescribed forms for signature.

20.2 The failure of the successful Bidder to execute the Standard Form of Subcontract or the Subcontract Agreement provided in the Bid Documents or to supply the required Bonds or insurance certificates within ten (10) days after the prescribed forms are presented for signature shall constitute a default and the Bidder's Bid Security shall be forfeited to the Fusco Corporation as liquidated damages.

END OF SECTION

FUSCO CORPORATION - CONSTRUCTION MANAGER
University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2
BIDDER REQUEST FOR INFORMATION

BIDDER RFI FORM

RFI# _____

TO: **Fusco Corporation**
555 Long Wharf Dr.
New Haven, CT 06511
Phone **203-777-7451**
Fax **203-782-0725**
Attention: **Darren Antolini**
Project Manager

From: _____

Must be requested not less than 14 days prior to bid date

Request Date: _____

Response Required By: _____

BP #: _____

Trade: _____

Reference: Drawing number : _____ Detail: _____ Spec. Section: _____

Information Requested:

Response Date: **Respondent:**

Response:

DRAFT

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)

« »« »
« »

SURETY:
(Name, legal status and principal place of business)

« »« »
« »

OWNER:
(Name, legal status and address)

«Fusco Corporation » University of Connecticut
«555 Long Wharf Drive » Capital Project & Contract Administration
«New Haven, CT 06511 » 3 North Hillside Road, Unit 6047
Storrs, CT 06269

BOND AMOUNT: $ « »

PROJECT:
(Name, location or address, and Project number, if any)

«UCONN»
«New Science and Engineering »
« »

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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User Notes: (826689616)

In the event the surety assumes the contract or obtains bids for completion of the contract, the surety shall ensure that the contractor chosen to complete the contract is prequalified pursuant to Section 4a-100 of the Connecticut General Statues in the requisite classification and has the aggregate work capacity rating and single project limit necessary to complete the project.

Signed and sealed this « » day of « » , « »

	« »
	(Contractor as Principal) *(Seal)*
	« »
(Witness)	*(Title)*
	« »
	(Surety) *(Seal)*
	« »
(Witness)	*(Title)*

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User Notes: (826689616)

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ of the Corporation named as principal in the within bond, that _____who signed the said bond on behalf of the principal was then _____of said Corporation; that I know *its* signature, and its signature thereto is genuine, and that said bond was duly signed, sealed and attested to for and in behalf of said Corporation by authority of its governing body.

_____ (Corporate Seal)
Title: _____

(The Surety Company must append statement of its financial condition and a copy of the resolution authorizing the execution of bonds by officers of the company, and the power-of-attorney of the surety company's attorney-ill-fact, authorized to act within the State of Connecticut).

FORM OF SURETY GUARANTY

(To accompany bid)

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the sum of $1.00, lawful money of the United States; the receipt whereof is hereby acknowledged, paid the undersigned corporation, and for other valuable consideration, the

_____
(Name of' Surety Company)

a corporation organized and existing under the laws of the State of_____ and licensed to do business in the State of Connecticut, certified and agrees, that if Contract _____, Project number _____ is awarded to

_____ the undersigned Corporation will execute
(Name of Bidder)

the bond or bonds as required by the Contract Documents and will become Surety in the full amount of the Contract Price for the faithful performance of the Contract and for payment of all persons supplying labor or furnishing materials in connection thence with.

_____

(Surety)

(To be accompanied by the usual proof of authority of officers of surety company to execute the same).

(To be included with bid)

SECTION 00320 NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of.....)

County of.....)

_____, being first duly sworn, deposes and says that:

(1) He is _____of _____, the Bidder that has submitted the attached Bid;

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the owner, or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed)

(Title)

Subscribed and sworn to before me this ____day of ____-', 20__.

_____ (Title)

My Commission Expires:

END OF SECTION

(To be included with bid)

SECTION 00330 NOTIFICATION TO BIDDERS

This contract to be awarded is subject to contract compliance requirements mandated by Section 4-11 a of the Connecticut General Statutes and, when the awarding agency is the state, Section 46a-71 (d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 4-11a-1 et seq. of the Regulations of the Connecticut State Agencies which establish a procedure for the awarding of all contracts covered by Section 4-11a and 46a-71 (d) of the Connecticut General Statutes.

According to Section 4-11a-3(9) of the Regulations of Connecticut State Agencies regarding Contract Compliance, every agency awarding a contract subject to the contract compliance requirements has an obligation to "aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers 0 f materials." "Minority business enterprise" is defined in Section 4-11a of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: "(1) Who are active in the daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in Section 3-9n(a)." "minority" groups are defined in Section 32-9n(a) of the Connecticut General Statutes as "(1) Black Americans (2) Hispanic Americans ... (3) Women ... (4) Asian Pacific Americans and Pacific Island or (5) American Indians ... " The above definitions apply to the contract compliance requirements by virtue of Section 4-11 a-1 (1) of the Regulations of Connecticut State Agencies regarding Contract Compliance. The awarding agency will consider the following f actors when reviewing the bidder's qualifications under the contract compliance requirements:

a) the bidder's success in implementing an affirmative action plan:
b) the bidder's success in developing an apprenticeship program complying with Section 46a-68-1 to 46a-68-17 inclusive, of the Regulations of Connecticut State Agencies:
c) the bidder's promise to develop and implement a successful affirmative action plan:
d) the bidder's submission of EEO-1 data indicating that the composition of its work force is at or near parity when compared to the racial and sexual composition of the work force in the relevant labor market area: and
e) the bidder's promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 4-11 a-3(1 0) of the Regulations of Connecticut State Agencies regarding Contract Compliance

INSTRUCTION: Bidder must <u>sign</u> acknowledgement below, detach along dotted line, and <u>return</u> acknowledgement to Awarding Agency along with bid proposal.

The undersigned acknowledges receiving and reading a copy of the "Notification to Bidders."

_____ _____
Signature Date

On behalf of: _____

END OF SECTION

(To be included with bid)

SECTION 00340
CONTRACT COMPLIANCE DATA FORM

(If your organization files a Federal EEO-1 or EEO-4 form, substitute it for this form)

1. PRIME CONTRACTOR (name) PRINCIPAL OFFICER (name) (title)

ADDRESS (contractor) (street) (town) (zip)

Use figures for pay period ending nearest 15th of previous month.

JOB CATEGORIES	OVERALL TOTALS	A. WHITE (NOT OF HISPANIC ORIGIN)		B. BLACK (NOT OF HISPANIC ORIGIN)		C. HISPANIC		D. OTHER	
	Male & Female	Male	Female	Male	Female	Male	Female	Male	Female
Officials & Managers									
Professionals									
Technicians									
Sales Workers									
Office and Clerical									
Craft Wkrs. (skilled)									
Operatives (semi-skilled)									
Laborers (unskilled)									
Service Workers									

TOTALS ABOVE									
TOTALS ONE YEAR AGO									
Apprentices									

Is this composition of your work force at or near parity when compared to the racial and sexual composition of the work force in the relevant labor market area? Yes [ ] No [ ]

Does the contractor promise to set aside a portion of the contract for legitimate minority business enterprises? Yes [ ] No [ ]

CONTRACTOR'S AUTHORIZED SIGNATURE DATE

EQUAL EMPLOYMENT OPPORTUNITY AGREEMENT

During the performance of this contract, the Contractor will implement, monitor and enforce this affirmative Equal Employment Opportunity Agreement in conjunction with all applicable federal, state, and municipal laws, regulations, executive orders and ordinances including:

A. The contractor acknowledges that this is a state funded project, subject to contract compliance requirements mandated by Connecticut General Statutes and reviewed, monitored and enforced by the Connecticut Commission on Human Rights and Opportunities (CHRO).
B. The contractor must file an Affirmative Action Plan with the State of Connecticut Commission on Human Rights & Opportunities (CHRO) prior to the commencement of construction and receive formal approval of such plan.
C. The contractor shall comply with all federal, state and local antidiscrimination and contract compliance laws, and shall not discriminate or permit a discriminatory practice to be committed;
D. The contractor will, in all solicitations or advertisements for employees and bid advertisements placed by or on behalf of the contractor state that it is an "Affirmative Action/Equal Opportunity Employer" or "AA/EOE", and that all qualified applicants and respondents will receive equal consideration.
E. The contractor will take affirmative steps to meet not less than the minimum small and minority/women business enterprise goals and requirements, established by contract and/or the State of Connecticut small contractor set-aside program.
F. The contractor will make a "best good faith effort" to actively solicit bids from contractors and/or vendors currently certified through the Department of Administrative Services Supplier Diversity Program as small businesses and small businesses owned by ethnic minorities, women, and persons with disabilities to assure compliance with the State of Connecticut small contractors set-aside program.
G. The contractor will comply with workforce goals for the metropolitan statistical area in which the project is located and will provide weekly certified payroll reports and monthly employment utilization and other compliance-related reports in the manner prescribed by CHRO and Fusco Corporation.
H. The contractor will adhere to Connecticut Prevailing Wage and other relevant wage and hour laws; pay not less than the annual prevailing wage rates to mechanics and laborers performing work on site; and report such wages on certified payroll reports on a weekly basis.
I. The contractor will make a "good faith effort" to include registered apprentices in its direct workforce during the course of the project.
J. The contractor will register all workers in the skilled trades who are below the journeyman level with the Office of Apprentice Training of the Connecticut Labor Department and provide proof of such registration.

K. The contractor will utilize the Connecticut Labor Department and manpower programs within the project area as a source of recruitment for all job vacancies that may arise for the duration of the project.
L. In the event of the contractor's non-compliance with the non-discrimination clauses of the contract or with any rule, regulation or order; the contract may be canceled, terminated or suspended, in whole or in part, and such other sanctions may be imposed and remedies invoked as are provided for by federal, state and local laws.
M. The contractor will include the provisions of Section A through L of this Agreement, in every subcontract or purchase order unless exempted by rules, regulations or orders of CHRO or by law, so that such provision will be binding upon each subcontractor or vendor.
N. The contractor agrees that a finding, as hereinafter provided, or a refusal by the contractor, or subcontractor, to comply with any portion of this program as herein stated and described, may subject the offending party to any or all of the following penalties:
    a. Withholding of all future payments under the involved public contract to the contractor in violation until it is determined that the contractor or subcontractor is in compliance with the provisions of the contract;
    b. Cancellation of the public contract
    c. Recovery of specified monetary penalties
    d. In the case of substantial or material violation, or the threat of substantial or material violation of the compliance procedure as may be provided for by contract, appropriate equitable or legal proceedings may be brought to enforce these provisions against contractors, subcontractors or other organizations, individuals or groups who directly or indirectly are not in compliance with the policy herein outlined.

Minority Business Enterprise Resources

Small and Minority Businesses (S/MBE) are encouraged to apply/bid. For additional information on certifying as and S/MBE in Connecticut, Please visit the following link: http://www.das.ct.gov/cr1.aspx?page=34

S/MBE Contractors may find the following resources helpful:

The Business Resource Center (BRC) – http://www.brcct.com

The BRC is a comprehensive, ONE-STOP Services Center that provides quick and easy access to professional consultation, resource materials, and, action-oriented training (OSHA, certified payrolls, schedules, billings, estimating, etc.), in the skills/techniques needed to grow business in the Greater Hartford area. The Business Resource Center, in addition to its focus on developing small businesses, operates a Minority Business Enterprise Assistance Program which has a specific focus on the development of minority construction firms in Connecticut, including assistance with the capacity to qualify for bonding (bid, performance and payment). For additional information please contact Kim Hawkins, Director, Business Resource Center at (860) 527-1100 or email her at khawkins@brcct.com

The Hartford Economic Development Corporation & The Greater Hartford Business Development Center, Inc. (HEDCO & GHBDC) – http://www.hedco-ghbdc.com

HEDCo is a 501 (c 3) Community Development Financial Institution (CDFI) and a Small Business Administration Certified Micro Lender. The agency has been in operation since 1975 and serves the 169 cities and towns in Connecticut, especially small business within the City of Hartford, to help them develop business plans, acquire financing and achieve sustained successful growth.

ACCION

http://www.accioneast.org or (866) 245-0783

Accion East and Online is a nonprofit organization with over twenty years of experience in offering small business loans from $500 to $50,000 and financial education to entrepreneurs in the United States.

Accion small business loan benefits include:

- Simple application process
- Tailored Loan Solution with flexible requirements
- Financial education and technical assistance
- Connection to community networks
- High-profile corporate partnerships
- Ongoing client mentorship

DAS Prequalification is required for all bids which exceed $500,000 regardless of whether the scope is identified S/MBE companies must be certified by the CT DAS to count towards the minimum participation levels.

CONTRACT COMPLIANCE CONSULTANTS

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Bloomfield, CT 06002
Phone: 860.614.5499
lillyreina@aol.com

(To be included with bid)

SECTION 00350
CONTRACTOR'S MINORITY BUSINESS ENTERPRISES
UTILIZATION FORM

NAME AND ADDRESS OF AWARDING AGENCY:	NAME AND ADDRESS OF CONTRACTOR:

CONTRACT

NOTICE TO CONTRACTOR: Under Section 4-114a-3 of the Contract Compliance Regulations, contractors are required to make GOOD FAITH EFFORTS to employ Minority Business Enterprises (MBEs) as subcontractors and suppliers of materials on all projects subject to contract compliance requirements. The contract which is referenced above is subject to contract compliance requirements.

INSTRUCTIONS: List the names and addressed of all MBEs you have selected as subcontractors and suppliers of materials for this project. If the MBEs selected as subcontractors and suppliers of materials meet the criteria for MBEs set out in Section 4-114a of the Connecticut General Statutes, Contractors MUST complete the attached affidavit. If such businesses are not currently registered with the Department of Economic Development and if the contractor wishes the Commission on Human Rights and Opportunities (CHMO) to consider favorably the selection of an unregistered MBE in the evaluation of the contractor's good faith efforts, contractors MUST complete the attached affidavit. In either case, the affidavit must be filled out in triplicate, with the original sent to the CHMO, Contract Compliance Unit, 10 Washington Street, Hartford, Connecticut 06106; one copy sent to the Awarding Agency; one copy retained by contractor. If the contractor does not wish the CHRO to consider selection of an unregistered MBE in its evaluation of the contractor's good faith efforts, no affidavit need be made.

(Attach additional pages if necessary, using same headings)

NAME AND ADDRESS OF ALL MBE SUBCONTRACTORS(S) OR SUPPLIER(S) OF MATERIALS:	Check here is MBE(S) qualify under Section 4-114a of the Conn. Gen. Stats.	Check here is MBE is unregistered but wants consideration for good faith efforts

I, _____, certify that I am the Secretary of the Corporation named in the foregoing instrument; that I have been duly authorized to affix the seal of the Corporation to such papers a require the seal; that , who signed said instrument on behalf of the Corporation was then of said corporation; that said instrument was duly signed for and in behalf of said Corporation by authority of its governing body and is within the scope of its corporation powers.

(Signature of Person Certifying)

(Corporate Seal)

END OF SECTION

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS

(Revised 09/17/07)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to "aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials." "Minority business enterprise" is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: "(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n." "Minority" groups are defined in Section 32-9n of the Connecticut General Statutes as "(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4)Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . ." An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder's qualifications under the contract compliance requirements:

(a) the bidder's success in implementing an affirmative action plan;
(b) the bidder's success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
(c) the bidder's promise to develop and implement a successful affirmative action plan;
(d) the bidder's submission of employment statistics contained in the "Employment Information Form", indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
(e) the bidder's promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder's good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) Definition of Small Contractor

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding ten million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

3) Definition of Racial and Ethnic Terms (as used in Part IV Bidder Employment Information) (Page 3)

White (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East. Black(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa. Hispanic- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.	Asian or Pacific Islander- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa. American Indian or Alaskan Native- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number_____ Or Social Security Number_____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes__ No__ -Bidder is a minority business enterprise Yes__ No__ (If yes, check ownership category) Black___ Hispanic___ Asian American___ American Indian/Alaskan Native___ Iberian Peninsula___ Individual(s) with a Physical Disability___ Female___
Bidder Parent Company (If any)	- Bidder is certified as above by State of CT Yes__ No__
Other Locations in Ct. (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes__ No__	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes__ No__
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes__ No__	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes__ No__
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes__ No__	9. Does your company have a mandatory retirement age for all employees? Yes__ No__
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes__ No__	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes__ No__ NA__
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes__ No__	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes__ No__ NA__
6. Does your company have a collective bargaining agreement with workers? Yes__ No__ 6a. If yes, do the collective bargaining agreements contain non-discrim ination clauses covering all workers? Yes__ No__ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes__ No__	12. Does your company have a written affirmative action Plan? Yes__ No__ If no, please explain. 13. Is there a person in your company who is responsible for equal employment opportunity? Yes__ No__ If yes, give name and phone number. _____

Part III - Bidder Subcontracting Practices

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above? Yes__ No__

PART IV - Bidder Employment Information

Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

PART V - Bidder Hiring and Recruitment Practices

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)

SOURCE	YES	NO	% of applicants provided by source
State Employment Service			
Private Employment Agencies			
Schools and Colleges			
Newspaper Advertisement			
Walk Ins			
Present Employees			
Labor Organizations			
Minority/Community Organizations			
Others (please identify)			

2. Check (X) any of the below listed requirements that you use as a hiring qualification

(X)	
	Work Experience
	Ability to Speak or Write English
	Written Tests
	High School Diploma
	College Degree
	Union Membership
	Personal Recommendation
	Height or Weight
	Car Ownership
	Arrest Record
	Wage Garnishments

3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)

(To be included with bid)

SECTION 00360 CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION BY BIDDER

Bidder's Name:

Address and Zip Code:

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.

   Yes [ ] No [ ] (If answer yes, identify the most recent contract.)

2. Compliance reports were required to be filed in connection with such contract or subcontract.
   Yes [ ] No [ ] (If answer yes, identify the most recent contract.)

3. Bidder has filed all compliance reports due under applicable instructions, including SF-1 00.

Yes ( ] No [ ] None Required [ ]

4. If answer to Item 3 is "No", please explain in detail on reverse side of this certification.

Certification ~ The information above is true and complete to the best of my knowledge and belief.

Name and Title of Signer (Please Type)

_____ _____

Signature Date

END OF SECTION 00360

SECTION 000840

WAGE RATES AND STATEMENT OF COMPLIANCE

1.01 APPLICABLE LAWS

A All provisions of the Contract Documents shall be subject to all applicable provisions of law including, without limitation, federal, state and local laws related to prevailing wages, record keeping, and reporting.

1. The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done, and the amount of payment or contribution paid or payable on behalf of each such employee welfare fund as defined in the Connecticut General Statutes shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the Town of Storrs.
2. Any Contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each payday.

1.02 WAGE RATES & RECORDS

A Wage Rates: The minimum rates of wages to be paid to workers employed under this Contract shall be as set forth in the schedule of rates of wages.

1. Wage Rate Schedules: The current Connecticut Department of Labor Wage and Benefit Rate schedule is attached.

B Records: In accordance with Connecticut General Statutes 31-53,31-54 and 31-55a, all Contractors and Subcontractors working under this Contract are required to complete and submit the following forms to The Fusco·Corporation

1. “Contractors Wage Certifications Form"
2. "Contracting Agency Certification Form"
3. "Payroll Certification for Public Works Projects -Weekly Payroll" (Form WWS-CP1 and WWS-CP2)

C Penalties: Any Contractor or Subcontractor not in compliance with the minimum wage requirements is subject to the penalties prescribed by law.

1.3 Contractors bidding on this project should be aware of the following "Connecticut Public and Special Acts" PA 02-69:

Public Act No. 02-69
Substitute Senate Bill No. 63
AN ACT CONCERNING ANNUAL ADJUSTMENTS TO PREVAILING WAGES.

Be it enacted by the Senate and House of Representatives in General Assembly con vened:

Section 1. (NEW) (Effective October 1, 2002) Each contractor that is awarded a contract on or after October 1, 2002, for (1) the construction of a state highway or bridge that falls under the provisions of Section 31-54 of the general statutes, or (2) the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project that falls under the provisions of Section 31-53 and 31-55a, of the general statutes shall contact the Labor Commissioner on or before July first of each year, for the duration of such contract, to ascertain the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee, effective each July first.

WAGE RATES ATTACHED

Project: UConn New Engineering And Science Building Phase II

Minimum Rates and Classifications for Building Construction

ID# : B 20392

Connecticut Department of Labor
Wage and Workplace Standards Division

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: 901376 Project Town: Mansfield

State#: FAP#:

Project: UConn New Engineering And Science Building Phase II

CLASSIFICATION	Hourly Rate	Benefits
1a) Asbestos Worker/Insulator (Includes application of insulating materials, protective coverings, coatings, & finishes to all types of mechanical systems; application of firestopping material for wall openings & penetrations in walls, floors, ceilings	35.75	28.82
1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters.**See Laborers Group 7**		
2) Boilermaker	35.24	25.01

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3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	32.50	28.74 + a
3b) Tile Setter	33.75	24.21
3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
3d) Tile, Marble & Terrazzo Finishers	26.26	20.69
3e) Plasterer	32.50	29.45

------LABORERS------

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Project: UConn New Engineering And Science Building Phase II

4) Group 1: Laborers (common or general), acetylene burners, carpenter tenders, concrete specialists, wrecking laborers, fire watchers.	27.05	17.80
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofer/mixer/nozzleman (Person running mixer and spraying fireproof only)..	27.30	17.80
4b) Group 3: Jackhammer Operators/Pavement Breaker, mason tender (brick) and mason tender (cement/concrete)	27.55	17.80
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is $26.80	27.30	17.80
4d) Group 5: Air track operators, Sand blasters	27.80	17.80
4e) Group 6: Nuclear toxic waste removers, blasters	30.05	17.80

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4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped)	28.05	17.80
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew	27.55	17.80
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew	27.05	17.80
4i) Group 10: Traffic Control Signalman	16.00	17.80
5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	31.00	22.50
5a) Millwrights	31.60	22.75

6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	38.10	22.72 + 3% of gross wage
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	47.96	28.385+a+b
-----LINE CONSTRUCTION----		
Groundman	24.37	6.5%+10.04
Linemen/Cable Splicer	44.30	6.5%+17.70
8) Glazier (Trade License required: FG-1,2)	34.58	18.55

9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	34.47	29.74 + a

----OPERATORS----

Group 1: Crane handling or erecting structural steel or stone, hoisting engineer 2 drums or over, front end loader (7 cubic yards or over); work boat 26 ft. and over. (Trade License Required)	36.80	22.30 + a
Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver ($3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required)	36.48	22.30 + a
Group 3: Excavator; Backhoe/Excavator under 2 cubic yards; Cranes (under 100 ton rated capacity), Grader/Blade; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar);Grader Operator; Bulldozer Fine Grade. (slopes, shaping, laser or GPS, etc.). (Trade License Required)	35.74	22.30 + a
Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	35.35	22.30 + a

Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	34.76	22.30 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	34.76	22.30 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	34.45	22.30 + a
Group 7: Asphalt roller, concrete saws and cutters (ride on types), vermeer concrete cutter, Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrell).	34.11	22.30 + a
Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	33.71	22.30 + a
Group 9: Front end loader (under 3 cubic yards), skid steer loader regardless of attachments, (Bobcat or Similar): forklift, power chipper; landscape equipment (including Hydroseeder).	33.28	22.30 + a

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Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	31.24	22.30 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	31.24	22.30 + a
Group 12: Wellpoint operator.	31.18	22.30 + a
Group 13: Compressor battery operator.	30.60	22.30 + a
Group 14: Elevator operator; tow motor operator (solid tire no rough terrain).	29.46	22.30 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	29.05	22.30 + a

Group 16: Maintenance Engineer/Oiler.	28.40	22.30 + a
Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	30.60	22.30 + a
Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	30.29	22.30 + a
------PAINTERS (Including Drywall Finishing)------		
10a) Brush and Roller	31.02	18.55
10b) Taping Only/Drywall Finishing	31.77	18.55

10c) Paperhanger and Red Label	31.52	18.55
10e) Blast and Spray	34.02	18.55
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	40.31	26.82
12) Well Digger, Pile Testing Machine	33.01	19.40 + a
13) Roofer (composition)	33.25	18.05
14) Roofer (slate & tile)	33.75	18.05

Project: UConn New Engineering And Science Building Phase II

15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	34.87	32.40
16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	40.31	26.82
------TRUCK DRIVERS------		
17a) 2 Axle	28.33	19.14 + a
17b) 3 Axle, 2 Axle Ready Mix	28.43	19.14 + a
17c) 3 Axle Ready Mix	28.48	19.14 + a

As of: **Friday, March 27, 2015**

17d) 4 Axle, Heavy Duty Trailer up to 40 tons	28.53	19.14 + a
17e) 4 Axle Ready Mix	28.58	19.14 + a
17f) Heavy Duty Trailer (40 Tons and Over)	28.78	19.14 + a
17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	28.58	19.14 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	39.76	19.87 + a
19) Theatrical Stage Journeyman	25.76	7.34

Project: UConn New Engineering And Science Building Phase II

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional $1.25 per hour for truck drivers.*

***Note: Hazardous waste premium $3.00 per hour over classified rate*

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra $1.00 premium in addition to the hourly wage rate and benefit contributions:

1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)

2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson

3) Cranes (under 100 ton rated capacity)

Crane with 150 ft. boom (including jib) - $1.50 extra
Crane with 200 ft. boom (including jib) - $2.50 extra
Crane with 250 ft. boom (including jib) - $5.00 extra
Crane with 300 ft. boom (including jib) - $7.00 extra
Crane with 400 ft. boom (including jib) - $10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyperson instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

***As of:* Friday, March 27, 2015**

Project: UConn New Engineering And Science Building Phase II

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: **Friday, March 27, 2015**

CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION

CONTRACTORS WAGE CERTIFICATION FORM

I,_____of _____
Officer, Owner, Authorized Rep. Company Name

do hereby certify that the _____
Company Name

_____
Street

_____
City

and all of its subcontractors will pay all workers on the

_____
Project Name and Number

_____
Street and City

the wages as listed in the schedule of prevailing rates required for such project (a copy of which is attached hereto).

_____
Signed

Subscribed and sworn to before me this _____ day of _____, 20___ .

_____
Notary Public

Return to:

Connecticut Department of Labor
Wage & Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

_____

Subcontract Agreement

«ProjectDescription»
Subcontract #: «SL»

This Subcontract Agreement ("Subcontract") dated as of 4/7/2015 between

The Fusco Corporation
555 Long Wharf Drive
New Haven, Connecticut 06511
(hereinafter called the "General Contractor")

and

«FirmName»
«FirmAddress»
«FirmCity», «FirmState», «FirmZip»

(hereinafter called the "Subcontractor")

WITNESSETH:

1. Scope of Work

(a) The General Contractor has entered into a contract ("Principal Contract") with «Owner» ("Owner") for construction of «ProjectDescription» located at «JobAddress», «JobCity», «JobState» ("Project") according to the Principal Contract Documents which include, without limitation, the Principal Contract, and all general, supplementary and special conditions thereto, the plans and specifications prepared by «ArchEngName» ("Architect") and its consultants, any addenda, notices, instruction forms or modifications thereto, and any other provisions or documents forming or by reference made a part of the Principal Contract. Subcontractor agrees to furnish, and be responsible for the provision of, all supervision, labor, materials, supplies, equipment, hoisting, scaffolding, tools, appliances, etc., necessary to complete a portion of the Project as described herein. All work is to be performed in strict compliance with the Subcontract Documents, which include the Principal Contract Documents, this Subcontract and the other documents listed on **Exhibit A**. The Principal Contract is specifically incorporated herein and made a part hereof by reference. In case of a conflict between this Subcontract and the Principal Contract as incorporated herein, the terms of this Subcontract shall control.

(b) Subcontractor's work is as set forth in **Exhibit B** and includes, without limitation, the installation of any temporary facilities in its scope of work required in the construction of the Project and the furnishing of all required information for shop drawings, as-built drawings, samples, tests, third-party inspections, installation, supervision by factory-trained experts, offsite inspections, etc., and other requirements of the Owner concerning quality control within the Subcontractor's scope of work ("Work").

(c) In the performance of this Subcontract, the Subcontractor shall be bound to the General Contractor in the same manner, to the same extent, and with the same force and effect that the General Contractor is bound to the Owner by all the terms, provisions, general conditions, and special conditions of the Principal Contract Documents, except as may be expressly modified by this Subcontract. Subcontractor has carefully examined, or has been afforded the opportunity to do so, and fully understands all the Subcontract Documents, including the Principal Contract Documents as incorporated therein and confirms that they are sufficiently complete and detailed for the Subcontractor to perform the Work intended thereby whether shown, described, or reasonably inferred as necessary for the completion of the Work.

(d) Subcontractor acknowledges that the drawings and specifications may not be fully developed and the Subcontractor agrees to perform all Work which may not be specifically mentioned in these Subcontract Documents, but which is required to make the Work complete, functional, and operational as determined by the General Contractor and Owner (e)

(e) Subcontractor represents that it has examined the Subcontract Documents and is familiar with them and has or will, immediately upon discovery, call to the attention of the General Contractor any errors or omissions contained therein and discovered by Subcontractor. Subcontractor agrees that it is responsible for coordination of the Work with the adjacent and prior work and the fitting of the Work to such work. Subcontractor agrees to furnish and install all materials per requirements of applicable Federal, State and local codes.

(f) Subcontractor represents that it is fully qualified to perform this Subcontract, and acknowledges that, prior to the execution of this Subcontract, it has (a) by its own independent investigation ascertained (i) the Work required by this Subcontract, (ii) the conditions involved in performing the Work, and (iii) the obligations of this Subcontract and the Principal Contract Documents incorporated herein; and (b) verified all information furnished by General Contractor or others satisfying itself as to the correctness and accuracy of that information. Any failure by Subcontractor to independently investigate and become fully informed will neither relieve Subcontractor from its responsibilities hereunder nor be the basis of any claim. The Subcontractor shall have no claims in connection with any concealed or unconcealed condition which does not differ materially from those conditions discovered, or which reasonably should have been discovered by Subcontractor's prior inspections, tests and reviews which Subcontractor performed or which Subcontractor had the opportunity to perform in connection with the Project.

(g) Subcontractor warrants its Work to General Contractor on the same terms, and for the same period, as General Contractor warrants the Work to Owner under the Principal Contract Documents. In addition, Subcontractor warrants that all materials, equipment and workmanship shall be sufficient for the purpose intended, merchantable, of good quality, and free from defects.

(h) Subcontractor shall obtain and pay for all permits, licenses, and certificates of inspection necessary for the prosecution and completion of the Work. Subcontractor shall be duly licensed to operate under the law of the applicable jurisdiction.

2. Payment -

(a) General Contractor agrees to pay Subcontractor, subject to additions and deductions by written change order, the total sum of **ZERO AND 00/100 DOLLARS**«TotalSubcontract» for the Work covered by this Subcontract ("Subcontract Price").

(b) Prior to the start of the Work, Subcontractor shall submit, for the General Contractor's approval, a breakdown of the Subcontract Price on General Contractor's standard schedule of values which shall include a separate value for labor and material for each part of the Work. In addition, and as a condition precedent to any payment hereunder, the Subcontractor shall, at the time it submits its first application for payment, furnish to the General Contractor, a certified list of all sub-subcontractors, suppliers and/or materialmen that the Subcontractor intends on using to perform all its obligations hereunder. As necessary, the Subcontractor shall update said list as additional sub-subcontractors, suppliers and/or materialmen are utilized.

(c) Progress payments will be made on a monthly basis following General Contractor's receipt of payment by Owner on Subcontractor's applications for payment submitted not later than the 25th of the month. Failure to comply will delay Subcontractor's payment until the following billing date. Within thirty (30) days of General Contractor's receipt of payment by the Owner in which payment allowance has been made by the Owner for Work performed and/or materials delivered by the Subcontractor, the General Contractor shall retain 10% of the value of said Work and/or materials as accepted by the General Contractor and Owner, but this payment shall in no event exceed the payment that the General Contractor actually receives from the Owner for said Subcontract Work.

(d) Commencing with the second application for payments, partial lien waivers and releases in the form as attached as **Exhibit D** as executed by Subcontractor and its sub-subcontractors and suppliers covering all labor and materials furnished through the immediately preceding pay period, shall be submitted by Subcontractor with each application for progress payment. In addition to the requirements for payment in the Principal Contract Documents, as requested by the General Contractor, the Subcontractor may be required to furnish with any payment application an affidavit stating that all obligations directly or indirectly related to any payment have been paid. The Subcontractor shall also furnish to the General Contractor, if so requested, all information concerning materials, supplies and equipment to be purchased in connection with the Work to be performed under the Subcontract, including copies of all purchase orders, bills of lading, shipping documents, receipts, sub-subcontracts of the Subcontractor or any payroll or payroll-related information of the Subcontractor with respect to the Work covered by this Subcontract.

(e) All material and Work covered by partial payments shall become property of the General Contractor or, if the Principal Contract Documents so provide, the property of Owner immediately upon payment; provided that nothing shall relieve Subcontractor from the sole responsibility and liability for all Work upon which payments have been made until final acceptance thereof by General Contractor and Owner. No partial payment made under this Subcontract shall be considered an acceptance of the Work in whole or in part.

(f) Final payment, including retainage, will be made ten (10) days after receipt of final payment by General Contractor from the Owner provided that Subcontractor has furnished General Contractor with (i) an executed Final Release and Waiver of Lien, in a form as set forth on **Exhibit C** and acceptable to General Contractor and Owner from Subcontractor, and all persons or entities furnishing labor and/or materials in the performance of the Subcontract, (ii) any warranties required by the Subcontract Documents furnished by a manufacturer and any warranties or guarantees, instruction manuals and spare parts, information for as-built drawings and technical information required by the Owner in the above referenced documents in form satisfactory to the Owner, (iii) other documents or instruments as General Contractor may reasonably require or which are required by the Subcontract Documents, and (iv) Subcontractor has otherwise completed his Work in a manner satisfactory to the General Contractor, Architect and Owner. Acceptance of final payment by the Subcontractor shall be a complete waiver of any and all claims of any nature against the General Contractor and its surety, if any, the Owner, and the Architect.

(g) Subcontractor expressly agrees that payment by the Owner to the General Contractor for any Work performed by the Subcontractor is an express condition precedent to any payment by the General Contractor to the Subcontractor and that the General Contractor is under no obligation to make any payment to Subcontractor until and unless the General Contractor has been paid by the Owner for the Work in question. Payment by Owner is also an express condition precedent to the liability of any surety on any payment bond furnished on behalf of General Contractor as principal. Subcontractor agrees to share the risk with General Contractor of non-payment by Owner for whatever reason. At its sole and absolute discretion, General Contractor may assign its payment rights against Owner to Subcontractor to prosecute at Subcontractor's sole expense.

(h) At any point up until five (5) years after final payment is made hereunder, the General Contractor, at its sole discretion, is hereby authorized to audit the Subcontractor's books and records with regard to all costs incurred by the Subcontractor in performing Work covered by this Subcontract. Subcontractor shall cooperate with General Contractor in arranging for such an audit. The Subcontractor shall maintain, at its own expense, all such books and records relating to the Project for a period of five (5) years after final payment.

(i) The General Contractor at its discretion may make payment by joint check, or otherwise, directly to any sub-subcontractor, materialmen, supplier or person or firm furnishing labor, equipment or materials to the Subcontractor with respect to the Work covered by the Subcontract and any such payments shall be applied against the aggregate sum payable to the Subcontractor hereunder, and, at the option of the General Contractor, may be deducted from the next sums payable to the Subcontractor.

(j) General Contractor may withhold from any payment to the Subcontractor, including final payment, such amount as General Contractor, in its sole discretion, deems reasonably necessary to protect itself against any action or potential liability or damage directly or indirectly relating to the Subcontract arising from, or alleged to arise from, any act or omission of Subcontractor, its sub-subcontractors, suppliers, or employees or anyone else for whom the Subcontractor is legally liable, regardless of whether or not the Owner has actually withheld payment from the General Contractor.

(k) The General Contractor shall be entitled to set off any monies due and owing to by General Contractor to Subcontractor under this Subcontract by any other sum alleged to be owed by Subcontractor to General Contractor by reason of any backcharge or payment to any third party under any other contract or agreement with General Contractor, or on account of any reason whatsoever.

(l) Subcontractor shall ensure that all sub-subcontractors, employees and suppliers, at all times, are paid all amounts due in connection with the performance of the Subcontract. The Subcontractor shall pay any amounts to its sub-subcontractors, whether for labor performed or materials furnished, within seven (7) days after the Subcontractor receives payment from the General Contractor, which encompasses labor or material furnished by such sub-subcontractor. Subcontractor shall not submit an application to General Contractor for any monies, on account of its sub-subcontractors, employees or suppliers, including retainages that Subcontractor does not immediately intend to pass on to its sub-subcontractors, employees and suppliers. Subcontractor shall not use any payment received by Subcontractor from General Contractor for any purpose other than to satisfy indebtedness incurred in the performance of this Subcontract; such payments from General Contractor being deemed to be trust funds solely for the payment of such sub-subcontractors, suppliers and vendors. General Contractor shall have the right, at any time, to contact the Subcontractor's sub-subcontractors and suppliers for the purpose of verifying that Subcontractor's payment obligations are being met. In the event General Contractor has reason to believe that Subcontractor is not fulfilling its payment obligations, General Contractor may take any steps necessary to ensure that progress payments are utilized to pay such obligations, including, but not limited to, the right to withhold out of subsequent progress payments, a reasonable amount to protect the General Contractor from any and all claims, loss or damages, including attorneys' fees, arising out of any claim or lien until Subcontractor submits evidence satisfactory to Contractor that all previous amount owed in connection with the performance of this Subcontract or any other contractual arrangements between the parties have been paid. All materials for which a requisition has been approved shall not be removed from the Project site without General Contractor's written permission.

3. Schedule; Time; Coordination; Remedial Plans -

(a) Subcontractor will proceed with the Work in a prompt and diligent manner in accordance with the Project Schedule attached hereto as **Exhibit E**, as amended from time to time by General Contractor. TIME IS OF THE ESSENCE OF THIS SUBCONTRACT. Subcontractor shall be entitled to additional compensation for compliance with schedule adjustments only to the extent, if any, that General Contractor receives reimbursement from the Owner.

(b) Subcontractor will furnish a detailed construction schedule of the Work, including Submittals, etc., for General Contractor's review and approval which will comply with all scheduling requirements of paragraph 3(a) and the Principal Contract Documents. Subcontractor is to coordinate all Work on the jobsite with General Contractor's Project Superintendent and Project Manager, follow any instructions they may give concerning scheduling of Work and report to them, upon request, the status of Subcontractor's equipment or materials to be furnished to the Project. Subcontractor is to coordinate its Work with the work of the General Contractor, other subcontractors, and others on the Project so as to expedite the Work without causing any delays to other trades or the Project. All Submittals shall be submitted to General Contractor in compliance with the Principal Contract as amended.

(c) Subcontractor is to assume and pay for liquidated damages, assessed by the Owner against the General Contractor and/or additional expenses incurred by the Owner or General Contractor because of delays caused by this Subcontractor. Such amounts are deductible from any amounts due to Subcontractor pursuant to the terms of this Subcontract.

(d) Subcontractor shall at all times supply necessary materials and equipment and a sufficient number of skilled workers to perform the Work with diligence and in strict accordance with General Contractor's scheduling requirements. In the event that General Contractor determines that the Subcontractor has fallen behind the schedule at any time, upon written notice, Subcontractor shall promptly submit a remedial plan of action in a form which is satisfactory to General Contractor. When a satisfactory remedial plan is not proposed and promptly implemented in the opinion of the General Contractor, then the General Contractor, at its sole discretion, may either (i) require the Subcontractor to expedite material and equipment deliveries and/or increase its work force, construction plant and equipment, the number of hours of work, number of shifts or any combination of the aforementioned, without any additional cost to the General Contractor or (ii) supplement the Subcontractor's forces with additional workers and/or purchase necessary materials and equipment from suppliers of its choice and deduct the cost of same from payments due Subcontractor. The exercise of either of the General Contractor's aforementioned options shall be in addition to any and all rights or remedies of the General Contractor set forth in this Agreement.

(e) Notwithstanding anything to the contrary in the Principal Contract Documents, if the Subcontractor is delayed or disrupted in the commencement, prosecution, or completion of the Work, without fault on its part or on the part of any entity for which it is responsible, as a direct result of any breach, negligence, or wrongful act of the Owner, General Contractor, or Architect, or by changes ordered in the Work, or by other causes which were unforeseeable, uncontemplated and beyond the control of the Subcontractor, then, to the extent the Subcontractor demonstrates actual impact to the critical path of its scheduled Work, and expressly conditioned upon an extension of time being given to the General Contractor by the Owner under the terms of the Principal Contract Documents, the Subcontractor shall be entitled to an equitable extension of the Project Schedule. In addition, Subcontractor's entitlement to such equitable extension is expressly contingent upon written notice given by the Subcontractor to the General Contractor within five (5) days of when the Subcontractor is aware, or should have become aware, of the occurrence or facts giving rise to such delay or disruption. Within thirty (30) days of receipt of a written request by General Contractor, Subcontractor shall fully substantiate the impact of any delay or disruption, including furnishing an impact study which details specific activities allegedly affected by such delay or disruption. In no event will any time extension be given

on account of delay or disruption which could have been anticipated by the Subcontractor or, in circumstances where the performance of the Work is, was, or would have been delayed, by any other cause for which the Subcontractor is not entitled to an extension. The Subcontractor's entitlement to an equitable extension of time as provided herein shall be the sole and exclusive remedy in the event of any delays, interferences, suspensions, reschedulings, changes in sequence, disruptions, or the like ("Delays") arising from or out of any act or omission of the Owner, General Contractor, or the Architect, or caused or claimed to be caused by any other reason whatsoever, whether foreseeable or unforeseeable or contemplated or uncontemplated. In no event will the General Contractor be obligated or liable to Subcontractor, and the Subcontractor expressly waives any claim against General Contractor, for or on account of any damages, costs, expenses of any nature which the Subcontractor or any of its sub-subcontractors or any other person may incur as a result of any Delays, it being understood and agreed that the Subcontractor's sole remedy in such an event shall be an extension of the Project Schedule in strict accordance with the provisions of the Subcontract Documents and all at no additional cost to or compensation from the General Contractor or Owner. Furthermore, the exercise by the Owner or the General Contractor of any of its rights or remedies under the Principal Contract Documents or Subcontract Documents, respectively, including, without limitation, ordering changes in the Work, directing suspensions, rescheduling, or correcting Work, regardless of the extent or frequency of the exercise of such rights or remedies, shall not be construed as active interference with the Subcontractor's performance of the Work.

(f) If the General Contractor shall desire the Work hereunder to be performed with greater speed than is herein contracted for, the Subcontractor shall, without affecting or abridging the rights of the General Contractor set forth in any Article hereof, upon receipt of a written order from the General Contractor, employ overtime work as so directed. The actual premium cost of such overtime work as shown on the time slips checked and approved each day by the General Contractor shall be paid by the General Contractor to the Subcontractor, but no overhead, supervision costs, commission, etc. or other costs shall be charged thereon. Jobsite supervision is included.

4. Labor; Insurance -

(a) To the extent that Subcontractor is a signatory to any union collective bargaining agreement(s), Subcontractor shall perform its work on this Project in strict accordance with all union rules and regulations affecting the Subcontractor's work, including, if applicable, the utilization of union labor.

(b) Should a jurisdictional dispute involve one or more of the trades, Subcontractor will avoid a work-stoppage in any form by withdrawing its workmen and resume as directed by General Contractor without delay.

(c) Subcontractor shall comply with the Immigration Reform and Control Act ("IRCA") in all respects. All workers provided under this Subcontract shall be authorized for employment in the United States. Subcontractor shall have properly completed I-9s for all of its workers assigned to the Project and shall require that each of its sub-subcontractors have properly completed I-9s for their workers assigned to the Project. Subcontractor agrees to indemnify, defend, and hold harmless the General

Contractor and the Owner from any and all claims, damages, or liability of any kind, including, but not limited to all damages, fines, penalties, punitive damages, attorneys' fees, and costs, arising out of or relating to the foregoing obligations.

(d) The Subcontractor shall comply with the insurance requirements set forth on **Exhibit G**.

5. Taxes -

(a) Subcontractor shall pay any taxes or contributions of any nature assessed or levied against Owner, General Contractor or Subcontractor by the federal government, any state or political subdivision thereof, relating to labor performed or materials or equipment furnished by Subcontractor, including any interest or penalties. Subcontractor shall defend, indemnify and hold harmless General Contractor for failure to make payment of any such taxes or contributions, which indemnity shall survive the completion or termination of this Subcontract. If this Project is subject to Connecticut Sales and Use Tax, then Subcontractor shall show any applicable Sales and/or Use Tax(es) separately on all invoices submitted for payment.

(b) If the Subcontractor is a "nonresident contractor" within the meaning of Connecticut General Statutes Section 12-430(7), the Subcontractor shall:

1. provide General Contractor with evidence that the Subcontractor is a "verified contractor" by providing a certificate issued by the Connecticut Department of Revenue Services ("DRS"); or

2. provide General Contractor with evidence that the Subcontractor has posted a bond with DRS for 5% of the Subcontract price by providing a Certificate of Compliance issued by DRS. In addition to any retainage withheld, General Contractor will withhold an additional 5% of payments otherwise required to be made to Subcontractor until Subcontractor furnishes General Contractor with a Certificate of Compliance authorizing the full or partial release of the amount held back from payments to Subcontractor.

On completion of the job you must request DRS to determine if it has been over/underpaid. Under either option, you must complete and submit to DRS a Form REG-1 (Business Taxes Registration Application) and be issued a Connecticut Tax Registration Number.

You can obtain more detailed information concerning these rules in DRS Special Notice 2012(2).

6. Changes, Claims -

(a) General Contractor may, at any time, unilaterally or by agreement with Subcontractor, and without notice to sureties, make changes including additions and deletions in the Work. Subcontractor shall immediately proceed with performance of any changed Work without delay.

(b) Subcontractor shall submit in writing to General Contractor, along with substantiating evidence deemed satisfactory by General Contractor, any claims for adjustment in the Subcontract Price, schedule or

other provisions of the Subcontract claimed by Subcontractor for changes directed by Owner, or for damages for which the Owner is liable, or as a result of deficiencies or discrepancies in the Principal Contract Documents, at least five (5) business days prior to the time specified in the Principal Contract Documents, otherwise such claims are waived. Subcontractor assumes, with respect to his Work, all of the responsibility of General Contractor to the Owner under the sections of the Principal Contract concerning such changes, claims and extensions of time. General Contractor agrees to forward to the Owner any notice from Subcontractor of any change or claim and to process any change orders, claims and requests for extensions of time according to the provisions of the Principal Contract Documents so as to protect the interests of Subcontractor and others, including the General Contractor. In no event shall the General Contractor be required to pay Subcontractor for a claimed change or for a change order more than General Contractor actually receives from Owner on account of Subcontractor's Work. It is expressly acknowledged that receipt of payment by General Contractor from Owner on account of any such Subcontractor changes or claims is an express condition precedent to any obligation of General Contractor or its surety, if any, to pay Subcontractor for any such changes or claims.

(c) For changes ordered by General Contractor independent of Owner or the Principal Contract Documents, Subcontractor shall be entitled to an equitable adjustment of the Subcontract Price or Project Schedule, or both to the extent that impact can be substantiated to the General Contractor's satisfaction.

(d) Subcontractor shall provide any certification required by the Principal Contract Documents or applicable law for change orders, claims and pricing data. Subcontractor shall indemnify, defend and hold harmless General Contractor from any cost, expense, fine or liability resulting from a claim or claim certification deemed wrongful in whole or in part.

(e) Field slips signed by General Contractor's employees acknowledge only the verification of labor and materials indicated thereon and do not constitute or imply acceptance or approval of payment by General Contractor or by Owner which is to be obtained by the separate Change Order procedure referred to above.

(f) Overhead and Profit ("OH&P") shall for Subcontractor, all sub-subcontractors and suppliers on any Subcontractor change or claim shall not exceed the amounts set forth on the following table.

Subcontractor Combined Overhead and Profit Markup Table	**Overhead and Profit**
Subcontractor markup on self-performed work	10%
Subcontractor markup on first tier sub-subcontractor work	5%
Sub-subcontractor markup on self-performed work	10%
Subcontractor markup on Sub-subcontractor subtier work Sub-subcontractor markup on subtier work	0% 0%

Subcontractor's labor rate for time and material work performed, including OH&P, shall be in accordance with Exhibit B. Under no circumstances will Subcontractor be entitled to any OH&P in excess of that set forth in the Principal Contract Documents.

7. Remedies of General Contractor -

(a) On default by the Subcontractor or on occurrence of circumstances that reasonably lead the General Contractor to anticipate the Subcontractor's inability to perform the Subcontractor's Work properly or on schedule or comply with any of the provisions of this Subcontract or meet the financial obligations that the Subcontractor will occur in the course of performance of this Subcontract in a timely manner, the General Contractor may, after seven (7) day written notice, and without prejudice to any other remedies it may have, (i) take such steps as are necessary to overcome the condition, in which case the Subcontractor shall be liable to the General Contractor for the costs thereof; (ii) terminate this Subcontract in the manner prescribed herein, and any loss resulting therefrom shall be borne by the Subcontractor; or (iii) pursue any other remedy allowed at law or equity.

(b) Without limitation to other possible grounds, the following events shall, at the option of the General Contractor, be deemed to be sufficient cause for determining the Subcontractor to be in default: filing of a petition under any of the provisions of the Federal Bankruptcy Code with respect to the Subcontractor; the commission of any act of bankruptcy as that term is used in connection with the Federal Bankruptcy Code by the Subcontractor; the appointment of a Receiver under the laws of any state with respect to the Subcontractor; the failure to discharge any lien as provided in paragraph 10 of the Subcontract; the garnishment of funds due or coming due from the General Contractor to the Subcontractor or the attachment of any property of the Subcontractor for the recovery of such property by a person holding title under a Title Retention Security Agreement used in connection with the Work to be done under this Subcontract which are not removed in seven (7) days if an attachment or in fifteen (15) days if a garnishment; imposition of a Federal or State Tax Lien; failure to provide sufficiently trained workmen or materials of the proper quality; failure to commence or carry forward Subcontractor's Work in accordance with the Project Schedule.

(c) In the event of a termination of this Subcontract for default, the General Contractor, at its option, may (i) enter on the premises and take possession of all materials and equipment of Subcontractor for the purpose of completing the Work; (ii) assume, and the Subcontractor hereby agrees to assign, any sub-subcontract or purchase orders made by the Subcontractor relating to this Project; or (iii) complete the Work by itself or through others by whatever method the General Contractor deems expedient. After a default termination, no monies shall be due and owing to Subcontractor until (i) the scope of the Work has been completed and Subcontractor has paid General Contractor for all costs that the General Contractor incurred in completing the Work (including an overhead fee of 10%) and (ii) a determination made as to the extent of damages suffered by General Contractor as a result thereof and Subcontractor has paid General Contractor any and all such damages incurred by the General Contractor.

(d) Any default termination that is subsequently deemed to be wrongful will be converted into a termination for convenience.

8. Termination for Convenience - Notwithstanding any provision herein to the contrary, this Subcontract may be terminated, in whole or in part, by the General Contractor, for its convenience and at its sole discretion, and regardless of whether the Owner has terminated the Principal Contract, upon giving at least seven (7) days written notice to the Subcontractor. In the event of such termination, the General Contractor shall pay to the Subcontractor any sums properly requisitioned and due and owing at that time (including retainage) plus the value of the Work (in accordance with the approved schedule of values) performed by the Subcontractor since the last requisition, after payment therefore by the Owner to the General Contractor, less any backcharges the General Contractor has against that Subcontractor. Such payment shall be the Subcontractor's exclusive remedy and in no event will the Subcontractor be entitled to lost profits or any other damages.

9. Subcontractor's Liability; Bonds -

(a) To the maximum extent permitted by law, the Subcontractor shall indemnify, defend and hold harmless the General Contractor, Owner, Architect, and their respective agents, consultants and employees ("Indemnitees"), from and against any and all claims, losses, costs, damages, expenses (including but not limited to defense costs and attorneys' fees, whether incurred in court, out of court, or on appeal or as part of any regulatory, administrative or bankruptcy proceeding), fines, penalties and causes of action, whether for personal or bodily injury, property damage, death, disease, damage to business, or otherwise, and any and all liabilities of any nature whatsoever, direct or consequential (collectively "Claims"), brought by or on behalf of any person or entity including, without limitation, any persons or entities affiliated with or employed by the Subcontractor relating to, arising out of, or claimed to relate to or arise out of, or occurring in connection with performance of the Subcontract or the Work; except that the Subcontractor shall not be required to indemnify or hold harmless an individual Indemnitee against Claims for bodily injury or property damage caused by or resulting from the negligence of such Indemnitee. Such indemnity shall not be in derogation or limitation of any other obligation or liability of the Subcontractor or rights of the General Contractor under other provisions of the Subcontract Documents. The Subcontractor's indemnity obligation shall not be limited in any way by the amount or types of damages, compensation or benefits payable by or for the Subcontractor under any Worker's Compensation Act, Disability Benefit Acts, or Employee Benefit Acts. This obligation shall survive the completion of the Work or termination of the Subcontract. Independent of this indemnity obligation, the Subcontractor shall maintain contractual liability insurance to secure its indemnification obligation as set forth herein.

(b) Subcontractor hereby assumes the entire responsibility and liability for all Work, supervision, labor and materials provided hereunder, whether or not erected in place, and for all plant, scaffolding, tools, equipment, supplies and other things provided by Subcontractor until final acceptance of the entirety of the Work by General Contractor or Owner. In the event of any loss, damage or destruction thereof from any cause, Subcontractor shall be liable therefor, and shall repair, rebuild and make good said loss, damage or destruction at Subcontractor's cost, subject only to the extent that any net proceeds are payable under any builder's risk property insurance that may be maintained by Owner or General Contractor, if any.

(c) Subcontractor agrees to defend, indemnify and hold harmless General Contractor from any and all claims for bodily injury (including death) or property damage arising out of or relating to in any way the use of General Contractor's hoists, cranes, elevators or other equipment by or for the benefit of Subcontractor; except this indemnity expressly excludes claims for bodily injury or property damage resulting from the negligence of the General Contractor, its agents or employees.

(d) Subcontractor shall, furnish Payment and Performance Bonds in the full amount of the Subcontract Price, with such sureties as shall be satisfactory to General Contractor. All bond must have A.M. Best ratings of A-VII or better and be qualified to conduct business in the state of Connecticut**.**

10. Liens -

In the event that liens are filed by anyone in relation to the labor or material being furnished through Subcontractor, Subcontractor agrees to have the same discharged at Subcontractor's sole expense, by posting a bond or otherwise within five (5) days of notice and to otherwise indemnify, defend and hold harmless the General Contractor and Owner from and against any costs or expenses (including attorneys' fees) arising therefrom. In the event any such lien is not so discharged, General Contractor shall have the right to discharge said lien and recover from the Subcontractor all costs associated therewith, including, but not limited to, attorneys' fees and bond costs.

11. Disputes -

(a) In case of any dispute between General Contractor and Subcontractor due to any act or omission of Owner or involving the Principal Contract Documents, and except as otherwise expressly provided herein including but not limited to paragraph 3 hereof prohibiting damages for delay and disruption, Subcontractor agrees to be bound to the General Contractor to the extent that General Contractor is bound to Owner, by the terms of the Principal Contract Documents or by law, whether or not Subcontractor is a party to such proceedings. In case of such dispute, Subcontractor, at its own expense, will comply with all provisions of the Principal Contract Documents allowing reasonable time for General Contractor to analyze and forward to Owner any required communications and thereafter (i) present to Owner, in General Contractor's name, or (ii) authorize Subcontractor to present to Owner, in General Contractor's name, all of the Subcontractor's claims and answer Owner's claims involving Subcontractor's Work, when permitted to do so by the terms of the Principal Contract Documents. If such dispute is prosecuted or defended by General Contractor, Subcontractor agrees to furnish all documents therewith.

(b) With respect to any controversy between General Contractor and Subcontractor not involving Owner or the Principal Contract Documents, the General Contractor shall issue a final decision which shall be binding unless within ten (10) days of receipt of such decision, Subcontractor delivers the General Contractor a notice of its intention to appeal such decision to a court of competent jurisdiction in the State of Connecticut, if it disagrees with General Contractor's final decision.

(c) Any other provision of the Subcontract Documents to the contrary notwithstanding, including paragraph 1, no dispute or claim of any nature arising out of or relating to the Subcontract will be subject to arbitration. Subcontractor agrees it will not commence any action in law or equity against the General

Contractor because of any matter whatsoever arising out of or relating to this Subcontract or Work thereof, except in a court of competent jurisdiction in the New Haven Judicial District of the State of Connecticut at New Haven. In no case shall Subcontractor, during the pendency of any dispute or claim including, but not limited to, the commencement of any such action, suspend or terminate the performance of its Work hereunder and Subcontractor shall proceed diligently with its Work. If the Principal Contract requires mediation and if one or more of the matters to be mediated involves in any way Subcontractor's Work, the Subcontractor agrees to participate in the mediation at its own cost and expense.

(d) Subcontractor expressly waives its right to notice and hearing under Connecticut General Statutes §§ 52-278a through 52-278q inclusive, relative to prejudgment remedies, and agrees that General Contractor may issue a writ for prejudgment remedy (attachment, foreign attachment, garnishment, or replevin) by its attorney without securing a court order.

(e) In no event will General Contractor be liable to Subcontractor on account of consequential, special or incidental damages arising out of the Subcontract whether based on breach of contract, warranty, tort, strict liability or otherwise, including, but not limited to, loss of profits, loss of bonding capacity, business interruption or the like.

12. Safety

The Subcontractor shall perform its Work in a safe and workmanlike manner. The prevention of accidents to workers engaged in the Work or others affected by the performance of the Work is the Subcontractor's sole responsibility and Subcontractor agrees to comply with all federal, state and local laws, regulations and codes concerning safety as it shall be applicable to the Work. The Subcontractor shall also follow any safety directions from General Contractor although any direction given or action taken by the General Contractor will not relieve the Subcontractor of its responsibilities hereunder. The Subcontractor shall, at its own expense, preserve and protect from injury all property and persons which may be affected by its operations in performing the Work. Subcontractor shall, at its own expense, protect the Work and the areas where the Work is performed with such lights, barricades and warning signs as are necessary for that purpose or may be required by the General Contractor.

13. Governing Law

The laws of the State of Connecticut, without regard to conflict of law principles, shall govern the interpretation of the Subcontract.

14. Equal Employment Opportunity -

(a) Subcontractor shall not discriminate in its hiring and employment practices against any employee or applicant for employment because of race, color, religious creed, age, sex, gender identity or expression, marital status, national origin, ancestry, present or past history of mental disability, mental retardation, learning disability or physical or mental disability or handicap, or, sexual preference, veteran's status or any other protected class established by federal, state or local law in any manner prohibited by law or regulation.

(b) Subcontractor shall indemnify, defend and hold Owner and General Contractor, their agents, servants and employees, harmless from any and all, claims, demands, liabilities and lawsuits, including reasonable attorneys fees incurred thereby, resulting from or pertaining to any alleged violations by Subcontractor or any of its sub-subcontractors of any and all applicable federal, state and local discriminatory employment laws, rules and regulations in effect and applicable for the Project.

15. Special Provisions

See Rider "A" attached hereto as **Exhibit F** and made a part hereof for the special conditions or provisions included in this Subcontract.

16. Miscellaneous -

(a) This Subcontract is conditioned upon General Contractor entering into a corresponding Principal Contract with the Owner and upon receiving a "notice to proceed" from the Owner. It is further conditioned upon the Owner's approval of Subcontractor herein and of this Subcontract, if that right is reserved to the Owner in the Principal Contract. This Subcontract is conditioned upon the Owner's approval of any materials and equipment which are to be furnished by the Subcontractor in accordance with the Prime Contract Documents. Subcontractor recognizes that approval of "or equal" materials and equipment is solely at the discretion of the General Contractor and/or appropriate consultant and Owner.

(b) The Work, or portions thereof, covered by this Subcontract may not be subcontracted without General Contractor's written approval. Subcontractor shall be fully responsible for the acts, errors, omissions, defaults and conduct of all its sub-subcontractors, employees and suppliers. Neither this Subcontract nor the right to receive any money payable or to become payable to Subcontractor may be assigned without General Contractor's written approval. The General Contractor reserves the right to approve the Subcontractor's sub-subcontractors and material suppliers. Any sub-subcontracts or purchase orders entered into by the Subcontractor for any portion of the Work shall incorporate the provisions of the Subcontract to the extent relevant to the scope of such subcontract or purchase order. General Contractor shall have no obligation to recognize any assignment or sub-subcontract made in violation of this Subcontract.

(c) Subcontractor agrees to indemnify, defend and hold General Contractor harmless from any loss, cost or damage arising out of any claim of patent infringement, except with respect to any material, method, process or design expressly identified in the Principal Contract Documents furnished by Owner and in the latter case, Subcontractor agrees to notify General Contractor of any potential claims falling into such category that are known to it promptly.

(d) Amendments or modifications to this Subcontract shall not be valid unless they are in writing and signed by the party to be charged.

(e) If the Principal Contract is terminated for any reason, and the Owner does not accept an assignment of the Subcontract pursuant to the Principal Contract, the Subcontract shall also be automatically terminated and rendered null and void, and General Contractor's liability to Subcontractor shall be limited to an

equitable portion of the amount actually paid to General Contractor by Owner with respect to Subcontractor's Work.

(f) Attention is called to the provisions of the Principal Contract authorizing the Owner to omit any item of work. In the event Owner elects to omit any item of Work included in this Subcontract, any such omission shall be binding upon the Subcontractor and the determination of the Architect with respect to any deductions taken by it under the General Contractor's Principal Contract shall be binding upon the Subcontractor. In no event shall the General Contractor's liability to the Subcontractor exceed the amount actually paid to the General Contractor by the Owner with respect to Subcontractor's Work, it being agreed that the receipt of payment by the Owner is a condition precedent to the General Contractor's obligation to pay Subcontractor.

(g) Attention is called to provisions of the Principal Contract relating to inspection and testing of Work and uncovering of Work for the Owner's Architect or engineer. Subcontractor hereby assumes all of General Contractor's obligations to Owner thereunder with respect to Subcontractor's Work.

(h) Subcontractor agrees to furnish to the General Contractor as-built drawings of all Work performed by Subcontractor to the extent required by the Principal Contract Documents, the General Contractor, or Owner.

(i) Subcontractor agrees that it will require its employees to park in areas designated by General Contractor if parking is provided on site.

(j) Subcontractor agrees that if shipments of materials or supplies arrive at the jobsite for the account of Subcontractor and if Subcontractor does not have adequate men or equipment available to unload such materials and supplies and place them in proper storage or deliver them to the working area, then General Contractor may do so and charge Subcontractor. In addition, the Subcontractor shall remain liable for and shall indemnify the General Contractor with respect to any bodily injury or property damage arising out of General Contractor's efforts in such respect, except to the extent of the negligence of General Contractor, its agents or employees.

(k) The partial or incomplete validity of any one or more provisions of this Subcontract shall not affect the validity or continuing force and effect of any other provision. The failure of either party to insist, in any one or more instances, upon the performance of any of the terms, covenants, or conditions of this Subcontract, or to exercise their right herein, shall not be construed as a waiver or relinquishment of such term, covenant, condition or right as respects further performance.

(l) The Subcontract contains the entire agreement between the parties hereto with respect to the matters covered herein. No other agreement, representations, warranties, or other matters, oral or written, shall be deemed to bind the parties hereto.

(m) The Subcontractor acknowledges that it is, and will remain during the performance of its Work, an independent contractor.

(n) Cleaning work shall be the responsibility of the Subcontractor for his respective trade regardless of what the Principal Contract Documents may or may not require. Cleaning work shall be promptly accomplished at the direction of General Contractor's Project Superintendent. See **Exhibit B** for further details. When such direction is not complied with, the General Contractor will perform such work and charge all costs to the Subcontractor's account.

(o) All required reports, certificates, invoices, submittals, samples, shop drawings, etc., shall be sent to General Contractor at the addresses identified above. All notices shall be addressed to the appropriate party at the address set out herein and shall be considered as delivered when postmarked, if sent by registered or certified mail, or when received in all other cases, including facsimiles.

IN WITNESS WHEREOF, we have hereunto set our hands and seals as of the day and year first above written.

With Attachments.

Exhibit A - Subcontract Documents
Exhibit B - Scope of Work
Exhibit C - Final Release & Waiver of Lien
Exhibit D - Partial Release & Waiver of Lien
Exhibit E - Project Schedule
Exhibit F - Rider A - Special Conditions
Exhibit G - Insurance Requirements

THE FUSCO CORPORATION,
GENERAL CONTRACTOR

By: _____
Michael Tyler, Director of Purchasing

Date: _____

SUBCONTRACTOR: «FirmName»

By: _____

Name: _____

Title: _____

Date: _____

EXHIBIT A
SUBCONTRACT DOCUMENTS

1) Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015
Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM
PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

EXHIBIT "B"
SCOPE OF WORK

This subcontract is issued to Subcontractor for the furnishing and installation of the following work indicated or implied on the Contract Document for the above listed Project.

The Scope of work shall include but not be limited to:

«SLNotes»

SOV #	Fusco Phase Code	SOV Description	Quantity	UM	Unit Price	Amount	Notes
«SOVItem»	«PhaseCode»	«SOVItemDescription»	«Quantity»	«UM»	«UnitPrice»	«ExtendedPrice»	«ItemNote»

SUPPLEMENTAL SCOPE OF WORK

1) **General:** Requirements set forth herein are in addition to and shall be considered as complementary to the Conditions of the Contract and the Division 1 Specifications and supplemental to each Bid Package Scope of Work. All Contractors, Subcontractors, Sub subcontractors, Vendors and the like shall be required to familiarize themselves with and shall be responsible for said provisions.

2) **State of Connecticut Education Fund Fee (PERMITS) – The Electrical Contractor, Mechanical Contractor and Sprinkler Contractor shall be responsible to pay for the State of Connecticut Education Fund Fee (.24 / 1000) when applying for applicable permits.**

3) **Schedule:** It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained. The objective of this project is to complete the construction as defined in these Contract Documents, within the project schedule. To meet this objective, the Contractor shall plan the work, obtain materials, and execute the construction in the most expeditious manner possible in accordance with the requirements listed below.

   a. The Subcontractor understands that the Work of this trade may not be continuous and that the Subcontractor may be required to work out of sequence and/or leave a portion of the Work out due to coordination at the direction of the **Construction Manager**. There shall be no charges for "comeback time" or out of sequence Work.
   b. The Subcontractor has included any and all costs necessary to meet the Project Schedule dates and allow enough time for follow up work by others to be completed with the scheduled dates for the follow up trades.
   c. Immediately upon receipt of a contract, the Contractor shall organize the work, provide all required submittals, order all materials subject to approval, and expedite long lead items. If requested by the **Construction Manager**, the Contractor shall provide proof of orders and delivery dates. Each Contractor shall provide their own schedule to the **Construction Manager** incorporating all requirements set forth in the **Construction Manager**'s Project Schedule. The Contractor's schedule shall be a detailed accounting of the dates and durations of all construction activities including approvals, permits, submittal reviews, material deliveries, and inspections for work required under their contract. See Contract Documents for further Schedule requirements.

If the Contractor fails to staff the job adequately to meet the completion date, the Owner reserves the right to assume possession of the material and complete installation with the Owner's forces or other Contractors or to require the Contractor to work second shift and/or weekends.

d. If, in the opinion of the **Construction Manager**, any construction activity, completion dates, milestone and/or substantial completion dates are in jeopardy of being met as a result of this Trade Contractor's performance, then upon two days written notice from the **Construction Manager**, this Trade Contractor agrees to work overtime, add manpower, and do whatever is necessary to meet said construction activity, milestone and/or substantial completion dates. If, in the opinion of the **Construction Manager**, this Trade Contractor, after having received two days notice, has failed to take sufficient action to meet the referenced dates, the **Construction Manager** may take whatever action it deems necessary to attempt to meet the construction activity, milestone and/or substantial completion dates. The cost of such action shall be the responsibility of this Trade Contractor and be deducted from this contract. If insufficient monies exist within this contract to fund such an action, then this Trade Contractor agrees to fund the balance of such action from other sources. The **Construction Manager**, by taking action under this paragraph, shall not assume the responsibility for meeting the referenced dates, nor responsibility for the work, and such responsibilities shall remain with this Trade Contractor and the Trade Contractor's Bonding Company. The costs referenced in this paragraph are not in substitution of or in lieu of liquidated damages which may be assessed pursuant to other provisions of this contract.

e. Each Contractor has confirmed prior to bid and carrying in their bid the proper trade classification for all work required by this bid package including composite crews of different trade classifications if needed, as required by the project and the State of Connecticut Department of Labor. No added monies will be entertained after subcontract award.

f. Each Contractor shall have figured in their bid price multiple crews to perform the work of their bid package but not limited to; work both interior and exterior simultaneously in addition to separate crews for other work necessary to meet and maintain project schedule and milestone dates. This includes working in every available area simultaneously and must be properly supervised, regardless of your individual plan and as directed by the **Construction Manager**.

4) Existing Conditions: Existing grades and other existing conditions are shown on the drawings to the best knowledge of the Architect.

g. It shall be the responsibility of each Contractor to visit the site and verify all existing conditions. The site contractor must review the site prior to submitting his or her proposal. The site contractor by submitting a proposal is also submitting and agreeing to the fact that he or she has walked the site and adjacent areas and has carried all costs in his or her proposal to deal with any and all existing conditions that includes, but not limited to: any existing encumbrances, any existing conditions, adjacent property owners, existing streets and walks.

h. The Project Site conditions are as of the day the Contractor begins work. All work to be performed will be based on the conditions found at that time. It is the obligation of the Contractor to inform the **Construction Manager** of any substantial changes in the site conditions that have occurred between the time the bid is opened and the notice to begin work. No claims or extras will be allowed for any changes in site conditions due to the Contractor's discovery after the commencement of work, unless there is an approved change order.

i. The **Construction Manager** assumes that the Contractor, during the process of developing his bid, has thoroughly examined the site or project area and has disclosed any obvious defects in the plans and specifications prior to bid and has entered into this agreement to complete all work required in the contract at the bid price(s) submitted and accepted. Conflicts found in the plans and specifications by the Contractor at a later date after the bidding period shall not be the basis of additional cost claims by the Contractor.

j. Boring and survey data made available to the Trade Contractor is for information only, and the Contractor shall use his own judgment as to the actual conditions. He is warned that reliance on the information presented is at his own risk, and neither the Owner nor the Architect and his consultants will be liable for errors relating to such data.

k. The Contractor may make borings or drive test pits he requires to verify the conditions at the site at his own expense. The location and size of such exploratory holes will be subject to approval by the Architect.

5) Rigging/Hoisting/Distribution: This Subcontractor shall include all hoisting, rigging, distribution, erection and scaffolding as may be required for the installation of his work. Subcontractor shall be responsible for unloading, rigging and hoisting all of its equipment and material required to complete the Work of this Subcontract Agreement. This includes furnishing and erecting all planking, scaffolding, and temporary hoist beams as necessary. All hoisting equipment, machinery, and operation shall comply in all respects to all applicable Federal (including OSHA), State, and local laws, rules, regulations codes and ordinances. Contractors shall be responsible for hauling, hoisting

and rigging their own materials and equipment. This Contractor shall not hoist or lift any material over any occupied areas such as buildings, roads, parking lots or any public space at any time. Subcontractor shall completely remove all temporary erection devices, miscellaneous supports, connection devices, which interfere with subsequent work, are trip hazards, or are aesthetically unacceptable. Contractor may not use the existing or newly installed elevators for loading materials onto upper floors at any time. All Contractors shall include in their Bid Proposal any and all cost required to load materials to all floors and to any roof elevations.

5) **Familiarity with Project Logistics:** This Subcontractor is solely responsible to have inspected the site and to have familiarized himself with the Site Logistics that will be in place during the period of time that he will be installing his work.

6) **Drinking Water:** This Subcontractor shall provide drinking water for his personnel at the project site, including the furnishing of paper cups and waste receptacles.

7) **Temporary Sanitary Facilities:** For the duration of Phase 1, the **Demolition and Hazardous Material Abatement** shall provide portable toilets for all personnel working at the site, including a separate, lockable portable toilet for female workers.

8) **Mobilization/De-mobilization:** Subcontractor shall provide complete mobilizations to site and complete demobilizations offsite, as required per the schedule of the Project. Each Contractor is responsible for all work necessary for the movement of personnel, equipment, storage facilities, materials, and field offices to, from, and around the project site as required by any construction operations. No additional payment shall be made for this work.

9) **Weather:** Subcontractor understands and has made provisions for continuing installation during typical Connecticut weather conditions and has included these costs in this Subcontract.

10) **General Cleaning of Work:** Subcontractor is responsible for general cleaning of all materials and systems. This will include, but not be limited to, the removal of tabs, stickers, markers, grease marks, piece markings, labels, smears, handprints, etc.

11) **Just-In-Time Deliveries:** This Subcontractor shall anticipate limited storage space for stockpiling materials and storage.

a. This Subcontractor shall sequence deliveries to the jobsite in parallel with sequence of Project Construction Schedule and progress of activities.
b. All deliveries are to be made just prior to installation.
c. Location of materials is to be agreed upon by **Construction Manager** prior to material arrival.
d. **Construction Manager** will not be responsible for the theft of any items from this site.
e. On-site storage will NOT be permitted without prior approval by the **Construction Manager**. Note at any time this Contractor shall relocate materials upon request if deemed necessary by the **Construction Manager**'s Superintendent.
f. Each Contractor must have representatives on site to accept deliveries and unload materials from delivery trucks. **Construction Manager** will not accept any deliveries of materials. If Contractor is not on site, materials must be delivered to their own home office facilities.

12) Access to Site: At all times, the Work of this Subcontractor will be coordinated to ensure unobstructed access to the Site or to locations of Work being performed by other Subcontractors on the Site.

a. Subcontractor will gain access and egress to the project site by using the already established site and building entrance procedure.
b. Workers to be identified by project badges and tools to be subject to inspection.
c. This Subcontractor shall coordinate all Work with **Construction Manager** in order to maintain site access for all trades. This includes the entrance referenced above, as well as the access roads and laydown areas identified by **Construction Manager**. Due to the limitation of available space within the project site, office and material trailers will need to be coordinated with **Construction Manager**. Each Contractor shall move or relocate storage boxes, gang boxes, trailers at the direction of the **Construction Manager** at any given time and as required. There shall be no storage of materials in the building.
d. Each Trade Contractor will be allowed to have one or two (pending approval of CM) forty foot Sea Land Container(s) on the job site and one office trailer. Location, sizes, quantities, etc., must be submitted to and approved by the **Construction Manager**.
e. The location of any trailers, equipment or stored material must be submitted to, and approved by the **Construction Manager** Superintendent prior to delivery. All trailers must be in a condition that is acceptable to **Construction Manager** and Owner. **Construction Manager**

reserves the right not to allow trailers onto the Project site if the delivered material is improperly scheduled with no cost impact to this Subcontract.

f. All material and equipment deliveries shall be coordinated through **Construction Manager**'s Superintendent a minimum of 48 hours prior to arrival.
g. This Subcontractor shall provide all necessary labor, equipment, dunnage, or material necessary for unloading and staging of deliveries.
h. Storage of material and equipment at the job site will be permitted only to the extent approved in advance by the **Construction Manager**'s Superintendent.
i. Each Contractor shall make any and all provisions to store all units offsite until they are ready to be installed or set in their final resting place.
j. If anything so stored obstructs the progress of any portion of Work, it shall be promptly removed or relocated by this Subcontractor without reimbursement.
k. Facilities for storage at the site will be limited and it shall be this Subcontractor's responsibility to make whatever arrangements may be necessary to insure proper material availability to maintain job progress.
l. Furthermore, any material temporarily stored inside the Building's footprint, shall be placed on moveable dollies/carts with lockable wheels.
m. Storage of materials is limited to the discretion of the **Construction Manager**'s Superintendent.
n. This Contractor shall not hoist or lift any material over any occupied areas such as buildings, roads, parking lots or any public space at any time.
o. By submitting a bid proposal, this Contractor agrees that he or she will never have a wide open area to work, since other trade work will be in progress concurrently with this work.

13) Winter Conditions: Each Contractor shall provide removal of snow and ice from his or her staging and work areas for his or her work. This operation shall be performed for the duration of the Phase 1.

b. The **Demolition and Hazardous Material Abatement Contractor** shall be responsible for all snow, ice, water removal from the existing roof. This includes any snow, ice removal that is related to the roof.
c. The **Demolition and Hazardous Material Abatement Contractor** is responsible to remove snow, ice, water and other weather conditions inside the existing building.
d. The **Demolition and Hazardous Material Abatement Contractor** shall provide removal of snow,

ice and mud from Construction Roads, City Sidewalks, **Construction Manager**'s Office Trailer stairs and access and Construction Parking and Material Storage Areas as may be required for accessibility, safety, protection and prosecution the work These operations shall be performed for the duration of the Phase 1. In addition to removing the snow, this Contractor shall spread ice melt as needed or at the CM's discretion. This Contractor will be responsible to sweep up all sand used in the above process.

14) Traffic/ Safety: This Subcontractor is responsible to include for all required permits, traffic plans, flaggers, signs and barricades associated with its Work. All traffic changes (lane closure, one way traffic etc…) must be approved by the University of Connecticut's project representative and or the University Of Connecticut Department Of Police Services.

a. The Contractor shall maintain access to all driveways.

a. No Steel Road Plates shall be used during winter do to interference with snow plowing.
b. The Contractor shall provide and install all new pavement markings damaged or removed during construction.
c. Alternating one way traffic operations will be allowed only with specific prior written approval of the Department of Traffic and Parking.
d. Prior to the commencement of any activity which could interfere in or impede the normal movement of traffic, the Contractor shall notify the **University Of Connecticut Department Of** Police Services and request an off duty police officer to act as a traffic-man. The Contractor shall include all costs for the Police Traffic Man in the Lump Sum Bid Price. Should the Department of Police Services fail to provide an officer, the Contractor shall provide flagmen to direct traffic in the areas of construction. The Contractor shall include all costs for the Flagmen in the Lump Sum Bid Price.
e. No Street shall be completely closed to traffic at any time, unless specifically approved by the Department of Traffic and Parking and/or by the Owner.
f. The Contract and/or Cost to provide for traffic maintenance and protection shall include all costs for labor, equipment, and services involved in the erection, maintenance, moving, adjusting, relocating, and storing of all traffic control devices such as signs, barricades, cones, drums, and markings shall be carried by any Contractor or Sub-contractor (all tiers) in his or her lump Sum Bid Proposal. Trenches must be back-filled or covered with Steel Road Plates (except as noted above) at the end of each day at no additional cost to the **Construction Manager**.

g. All public streets, sidewalks and school driveways/parking areas shall be kept open and maintained free of debris and construction dirt throughout the entire project. This includes any necessary temporary protection.

15) Theft Vandalism Prevention: Each Contractor is responsible for protecting all materials, tools or equipment from theft vandalism and/or damage at the end of each workday. Replacement costs for theft vandalism and/or damage of materials, tools or equipment shall be the responsibility of each Contractor.

16) Temporary Works: Any and all temporary Work, required to support this Subcontractor's means and methods, will be provided by this Subcontractor.

a. Subcontractor shall provide traffic control, flagmen, dust control, noise control and temporary enclosures for its Work. Sequencing and barricading of Work shall provide for the complete safety of the public and all construction personnel and shall create a minimum of interference with the normal flow of pedestrians and autos.
b. All work shall be in strict compliance with the Occupational Safety and Health Act (OSHA).
c. The **Demolition and Hazardous Material Abatement Contractor** shall provide, install, maintain and expand if required OSHA protection (and eventually remove).

17) Testing: Coordination with the Owner's on-site Third Party Independent Testing Agency, the following provisions are also this Subcontractor's responsibilities:

a. It is this Subcontractor's responsibility to initiate and coordinate all required tests and inspections, including conformance with requirements of all applicable public agencies and authorities. Inspection of the Work shall not relieve this Subcontractor from an obligation to fulfill the Work of this Subcontract.
b. Subcontractor will cooperate with Testing Agency personnel, and provide access, and support labor necessary for duties to be performed at the site by Testing Agency.
c. Furnish tools, ladders, hoist, lighting, water supply and like materials and equipment as required.
d. Subcontractor shall repair or replace any components and correct all deficiencies observed as a result of these tests and demonstrations, and retest as required by **Construction Manager**

and/or the Owner.

e. This Contractor is to coordinate all requirements for testing and inspection in accordance with the specifications. The Testing and Inspection Company shall be contracted by the Owner, but it is this Contractors responsibility to coordinate, schedule, provide access (including but not limited to aerial lifts and operator) to accommodate all testing and inspections as required for their work.

f. This Contractor shall provide a minimum 48 hrs notice to the **Construction Manager** prior to the required inspection.

18) Preliminary Conference: Subcontractor will conduct a preliminary conference and pre-installation conference at the Project Site to review methods and procedures related to the Work as required by the Contract Documents.

a. It shall be the responsibility of the Contractor to make timely requests of the **Construction Manager** for any additional information not already in its possession, which should be furnished by the Owner under the terms of this Contract, and which the Contractor will require in the planning and execution of the work. Such request may be submitted from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first shall be submitted within two weeks after Contract awarded and shall be complete as possible at the time. The Contractor, shall, if requested, furnish promptly any assistance and information the Architect and/or Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in the work or to others arising from its failure to comply fully with the provisions of this section.

Within seven working days of award, submit a detailed list of proposed Contractors, vendors and suppliers to the **Construction Manager**. The Bid Proposal Form requires this bidder to list and name their Subcontractors, address and trade.

19) Contract Documents and Drawings Provided: The Contractor shall is required to purchase all Contract Documents, including Technical Specifications and Drawings and Addenda. The Contractor shall, at all times, keep at the site of work one (1) complete set of the Contract Drawings and Specifications for its own use and that of the Engineer, Owner, or the **Construction Manager**. Each

Contractor shall be issued only one copy of any documents issued after contract start date including: bulletins, Architect's Supplemental Instructions, Proposal Requests, etc. Contractors are responsible for providing their own subcontractors with all documents, drawings, and specifications required to perform their work. Additional sets of contract drawings or specifications are available for purchase at the cost of reproduction.

20) Fall Protection: Subcontractor shall provide 100% tie off of personnel working more than six (6) feet above the level below. Furthermore, this Subcontractor shall provide any and all leading edge.

21) Parking: Subcontractor is hereby advised that there is limited **on-site parking** for storage and trailers. All staging will be done per the **Construction Manager**'s direction and coordination. Any Car, truck, vehicle parked in areas restricted or outside of any designated areas will be towed at the expense of the employer. The **Construction Manager** and/or the Owner are not responsible for any damage to vehicles parked on or off-site, or for any fines incurred through the receipt of parking violation tickets issued by the municipality. No parking of personnel or company cars within the fence line, only construction vehicles are permitted within the fence line.

22) Meetings: Subcontractor shall attend all regularly scheduled design and job meetings and shall maintain a full-time competent on-site staff at all times during the Project.

a. A representative of this Subcontractor shall be required to attend Project Managers' meetings, Safety meetings, Superintendents' meetings, Coordination meetings and all other meetings, which **Construction Manager** may require.

b. This Contractor's Superintendent/Foreman and Project Manager shall attend weekly job meetings; in addition there will be a mandatory monthly Foreman Safety Meeting, and additional scope coordination meeting as required at the **Construction Manager**'s field office on site scheduled by **Construction Manager**'s Project Manager/Superintendent. This Contractor will properly coordinate their work with other trades and will resolve coordination issues as required to ensure the completion of work in accordance with the project schedule. The work of the Contractor shall be performed in a manner that does not impede or delay another Contractor in the performance of their work. This Contractor should include the cost of rerouting their work, etc., due to coordination procedures as part of their contract price.

c. Each Contractor shall conduct weekly toolbox talk. This Contractor's safety representative

shall chair each meeting. The CM shall receive copies of all weekly toolbox meeting minutes weekly. (No later than Thursday afternoon) An agenda and its heading contents/outline shall be submitted to the CM for review and approval prior to the first toolbox safety meeting.

d. This Contractor shall submit detailed List of all Key personnel with cell, emergency and home numbers and a very detailed list of Contractors, Subcontractors, Suppliers and Vendors within seven days of award of Contract. Any and all changes must be re-submitted to the CM immediately.

e. Job meetings will be held at the jobsite weekly basis unless otherwise designated by the **Construction Manager**, Owner or by the Architect. Any Contractor missing any project job meeting shall be subject to a $250 dollar fine.

f. In addition to contractors abiding by the rules and requirements in the site specific Fusco Health and Safety Plan (HASP), a copy of which will be provided upon request, they are also required to abide by the University of Connecticut, Contractor EHS Manual, Revision 4, March 2012. In the event of inconsistencies or conflicts within or between parts of the UConn EHS Manual and the Fusco HASP or between such documents and applicable laws, codes, standards or ordinances, the most stringent requirements shall apply.

g. Each contractor and their subcontractors shall obtain a copy of University of Connecticut, Contractor EHS Manual, Revision 4, March 2012 prior to starting work and shall read and fully understand the document. Prior to commencing work, the form found in Section VIII (Contractor Receipt Acknowledgement Form) of this manual shall be signed by an authorized contractor representative and a representative of each of its subcontractors. Signed copies of this form shall be submitted to Fusco and the appropriate UCONN Project Representatives.

h. Each contractor and their sub-contractors will develop and provide a written Job Hazard Analysis (JHA) prior to performing work at the site. The JHA must be site specific and identify the work or tasks to be performed, the sequence of the work, the hazard(s) associated with each task and the means and methods to be used to abate or minimalize the hazard. The JHA will be reviewed during pre-construction meetings by Fusco, the trade contractor supervisor and their safety representative. As work progresses the JHAs may need modification to address changing conditions or additional work tasks. All JHAs and any modifications to them will be subject to review and approval prior to implementation.

i. The use and storage of explosives, such as those used in blasting, will require strict

adherence to the of University of Connecticut, Contractor EHS Manual, Revision 4, March 2012. Each contractor involved in any such operation shall read and fully understand and comply with the requirements contained in Section IV Health & Safety Requirements and the part titled "Blasting And The Use of Explosives" contained in the above reference manual.

23) **Temporary Lifting Devices:** Each Contractor shall furnish, install, operate, and maintain in safe condition all hoisting equipment and machinery required to properly carry out and complete his/her Work.

24) **Manpower Schedule:** Subcontractor and all of its lower tier Subcontractors shall provide to **Construction Manager** a manpower schedule by week for the Project, or at times as agreed to by **Construction Manager**, and shall report to **Construction Manager** actual hours worked per week. Furthermore, this Subcontractor shall complete and submit **Construction Manager**'s Material and Equipment Status Report on a weekly basis.

25) **Manpower:** Subcontractor shall provide at all times sufficient manpower to maintain the progress of the Work to the satisfaction of **Construction Manager** and/or Owner.

a. All Work shall be performed by skilled labor experienced in their respective trade, who shall comply with all Project, site safety and security requirements.
b. All employees of this Contractor are to carry themselves in a proper professional manner. There will be zero tolerance for unacceptable conduct. This is not limited to drug and/or alcohol use, foul language, attire, and gestures, etc. Any employee or associated personnel found not conducting themselves of said conduct will be immediately dismissed from site/project.
c. This Subcontractor shall remove from the Project any employee deemed by **Construction Manager** and/or Owner to be in violation of any Project safety or security requirements.
d. Subcontractor is required to submit Daily Work Reports to **Construction Manager**'s Field Superintendent on an appropriate form, which will be provided by **Construction Manager**. This Contractor shall provide Daily Construction Reports to the **Construction Manager**'s field office by 9:30 a.m. the following workday. Manpower counts shall be included for all Contractor forces including Sub-Contractors and identify trade, classification, gender, race, etc.
e. Manpower counts shall be included for all Contractor forces including Sub-Contractors and

identify trade and classification (i.e. Foreman, Journeyman, Apprentice, etc.).

f. This Subcontractor's Foremen will be required to provide the required information detailing manpower levels, Work activities and locations for same within the building, building area and building level, and major issues impacting this Subcontractor's Scope of Work.

g. These reports are to be kept current and are to be submitted to **Construction Manager**'s Field Superintendent.

h. There shall be a strict 'No Smoking Policy' and 'No Radio/Stereo/MP3/Ipod Policy' for the interior, the roof, or anywhere on the project property at all times. Workers who violate this policy shall be given one verbal warning. Subsequent offenses shall result in $250 fines back charged to the appropriate contractor. Contractors are responsible for the adherence to this policy by their subcontractors, and will be liable for all fines incurred by their subcontractors.

i. There shall be a strict 'Lunch/Coffee Break Location Policy' for all areas of the Project Site. The **Construction Manager** shall designate two areas of the site only where all workers shall take their lunch and coffee breaks. Workers who violate this policy shall be given one verbal warning. Subsequent offenses shall result in $250 fines back charged to the appropriate contractor. Contractors are responsible for the adherence to this policy by their subcontractors, and will be liable for all fines that may be incurred by their subcontractors.

j. Contractor may not engage in noisy or disruptive operations during hours restricted or prohibited by the Owner.

k. Any work after occupancy which might be disruptive to the school operations and/or during standardized testing (As determined by Owner or the **Construction Manager**) will be performed after school hours, which are 7:30 a.m. through 3:30 p.m. Permission will have to be granted for any work outside of these work hours. Scheduling of these activities must be done at least 48 hours in advance. All costs for this work, including premium time, will be funded by this Contractor, including the cost for CM's Supervision.

26) Supervisory Personnel: Subcontractor shall provide competent supervisory personnel who shall be authorized to act on behalf of this Subcontractor. The appointed supervisor shall be present on site at any time Work is being performed either by this Subcontractor or any other subcontractor working under this Subcontractor's agreement to complete the Scope of Work contained herein. The supervisory personnel assigned to the Project shall not be transferred from the Project without the prior written consent of **Construction Manager**. This Subcontractor shall remove from the Project any supervisory personnel deemed to be incompetent or unacceptable by **Construction Manager** and/or

Owner. The Superintendent's resume shall be submitted for the CM's review and approval. This Superintendent shall furthermore be equipped with a NEXTEL digital phone for 2- way/cellular phone communication with the **Construction Manager** and other trades in lieu of walkie-talkies. When a Contractor has any of their subcontractors or vendors of any tier working on site or in the street, supervision from the Primary Contractor must be present at all times.

27) Coordination: Subcontractor shall perform all Work in full cooperation with other trades and coordinate the schedule and sequence of all Work with other trades under the direction of **Construction Manager**.

a. When so directed, this Subcontractor shall temporarily omit, or perform certain portions of the Work out of normal sequence, in order to accommodate coordination requirements.
b. The Work of this Subcontractor shall not be installed if it prevents another Subcontractor from being able to perform its Work. **Construction Manager** shall be immediately notified of problem areas, and this Subcontractor shall perform Work in another area until the issue is resolved.
c. The Owner, it's authorized representatives and agents shall, at all times, have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the Owner through its authorized representatives or agents.
d. In case of conflict between Contractors, Fusco will determine the sequence and location where work shall commence. Such determination shall have no effect on the Contract costs and will not be considered as the basis for a claim for additional compensation. The work under this Contract shall be coordinated with any other work which may be under construction or contemplated in the same general area. In order that the work under this Contract may conform to the conditions under which it has been undertaken, Fusco will determine the sequence and location where the work will commence. Such determination shall have no effect on the Contract cost and will not be considered as the basis for a claim for additional compensation. No Contractor shall receive extra payment to make multiple return visits to the Project site or a specific work area for any reason. The **Construction Manager** makes no guarantee that any Contractor will be able to commence and complete

their contract work without multiple interruptions.

e. The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all subcontractors, trades, or material men engaged upon this Contract. Contractor shall be prepared to guarantee to each subcontractor the locations and measurements which they may require for the fitting of their work to all surrounding work.

f. The Contractor shall also be responsible to carry all monies in his or her lump sum proposal to carry out any work that is considered industry standard. Additionally, include all costs for any and all cutting/patching that may be required to complete or conduct your work. The Contractor shall provide all necessary attachments (clips, angle, reinforcement, etc.) as required, whether or not shown on Contract Documents, to properly erect and install his or her work.

g. All bid package Prime Contractors and lower Tier Sub Contractors are responsible to coordinate construction operations and activities with the work of the other bid packages subcontractors directly; the CM will assist the coordination and construction.

28) Property of the Owner: The owner reserves the right to take ownership of items that were provided to the project. Including any item that states shall be eventually removed.

29) Damaged Work: Subcontractor shall protect the Work and equipment of others while performing its Work. Include all costs to protect all of your materials furnished and/or installed by this Contractor from the elements, damage, rust, dust, non-use, etc. until acceptable in writing by the Owner.

a. Any Work performed by others that is damaged by this Subcontractor or its employees or agents shall be the responsibility of this Subcontractor to replace at no additional cost. This Contractor is responsible to complete his or her work in a manner so as to not cause damage to the site, existing buildings and those items noted to remain. Should damage occur as a result of this Contractor's actions any costs associated with the repair and/or replacement of the damage shall be the responsibility of this Contractor. The Contractor is responsible to protect his or her work during and after installation for the duration of the project and until turn over process is completed. This includes but not limited to: Coverings, barriers, shrink wrapping, masonite/homosote coverings, plywood covering, etc., whatever necessary means are needed to protect your work for the duration of the project. Please note a majority of the existing sidewalks along the perimeter of the site remain and must be protected and delivered back to the City as they existed at the start of construction.

30) OSHA: Subcontractor includes all safety that is part of this Work, including but not limited to personal protection, safety access ladders, Subcontractor safety, and protection of all of it employees and agents per OSHA.

a. A fall protection system in full compliance with OSHA is to be provided and maintained by this Subcontractor. Details of the fall protection program must be included in the Project Specific Safety Plan submitted for approval. Full body harnesses must be worn as part of the fall protection system. Safety belts are not acceptable. Note, this also includes six foot (6'-0") fall protection requirements. This Subcontractor is responsible for providing acceptable safety protection devices and/or precautions for all related Work, and for full compliance with all safety programs instituted by **Construction Manager** and/or OSHA. At all times this Subcontractor's employees must wear hardhats, eye protection, gloves and a Class 2 lime green traffic vest. This Subcontractor is responsible to provide employees with all safety equipment including, but not limited to, hardhats, eye protection, gloves and vests. All injuries, regardless of severity, must be reported to **Construction Manager**'s Superintendent and an accident report must be completed within 24 hours. Anyone creating an unsafe condition must erect the necessary barricades, covers and warning apparatus. Subcontractor shall submit a listing of emergency telephone numbers for key personnel involved with this project before any Work starts. . All scaffolding must be constructed in accordance with OSHA Regulations. Riding on rolling scaffolding is strictly prohibited. Guardrails must be installed at six feet (6'-0") or higher. No power tool is to be operated without the proper guards and/or safeties in place.
b. All personnel on the jobsite are required to wear hard hats and safety glasses at all times and any other specific personnel protection equipment. Failure to do so will result in a five hundred dollar fine charge to the Prime Contractor employing the offending person. Metal Hard Hats are not permitted.
c. This Contractor shall include in his or her schedule of values a specific line item with mutually agreeable value for safety and protection that are included in the contract value.
d. There shall be a strict PPE Policy' for all areas of the Project Site. Workers shall conform to the requirements OSHA for PPE. Workers who violate this policy shall be given one verbal warning. Subsequent offenses shall result in $500 fines back charged to the appropriate contractor. Contractors are responsible for the adherence to this policy by their subcontractors, and will be liable for all fines that may be incurred by their subcontractors.

e. All contractors and personnel are required to attend Fusco's Safety Orientation prior to entering and performing any work on this project.
f. All Contractors are required to supply first aid kits that are adequate to the size of their crew. The **Construction Manager** office trailer is not a first aid resource.
g. All contractors are to hold at least one weekly toolbox talk safety meetings with their entire crew and provide Fusco with a formal copy of the Agenda and attendance sheet.
h. Any flammable liquids and gasses are to be stored and secured properly.
i. All contractor's and personnel are required to wear hard hats, safety glasses and reflective vest at ALL TIMES within this project limit lines.
j. This Contractor is responsible for providing and maintaining at all times OSHA recommended safety requirements including but not limited to rebar protection such as Flat Headed Rebar Caps, (Mushroom type caps shall not be allowed).
k. This Contractor shall schedule with the **Construction Manager** a Safety pre-planning prior to the start of new work activities/operations. This meeting will be held to coordinate a specific safety plan for this Contractor's Scope of Work. Additional planning meetings will be scheduled as required, for new work activities/operations during the course of the project. Trade Contractors must submit two job specific safety programs which shall include MSDS Sheets in a bound book with the Companies name and the job name, one for the **Construction Manager**'s trailer and one for the Trade Contractor's gang box.
l. This Contractor shall be required to notify the **Construction Manager** if it is identified as a "SEVERE VIOLATOR" by OSHA in accordance with OSHA directives. This Contractor shall be required to notify the **Construction Manager** prior to executing any subcontract and prior to conducting any Work. If this Contractor is cited by OSHA after executing the subcontract and while working on the Project or on any other project as being a "SEVERE VIOLATOR", notification to the **Construction Manager** must be made immediately in writing.
m. The following form shall be filled out by all Contractors for their respective employees prior to starting work:

Safety Orientation Fusco Corporation
UCONN Old Warehouse Building Demolition
Storrs, Connecticut

Violation of the attached rules will result in disciplinary actions that are as follows:

1. **First Violation: Verbal Warning**
2. **Second Violation: Employer fined and Employee removed from site for the remainder of the day.**
3. **Third Violation: Employer fined and employee permanently prohibited from working on site.**

Fines are back charged to the appropriate contractor (fines will be deducted from their contract value). Contractors are responsible for the adherence to these site rules by their subcontractors, venders, visitors, delivery personnel, etc. and will be liable for all fines that may be incurred by their subcontractors. Refer to attached Table of Fines.

By signing below I signify that I have read the above and both pages of the attached list of rules and that I understand them and agree to comply with them.

Date; _____

Contractor You Work For; _____

Hard Hat Sticker #_____

Name, Print; _____

Signature; _____

Telephone Number, Home; _____

Cell; _____

Emergency Contact, Name; _____

Emergency Contact Phone Number; _____

Vehicle, Make; _____

Color; _____ Plate; _____

1. There shall be a strict 'Hard Hat and Eye Protection Policy' for all areas of the Project Site. Hard Hats and Safety Eye Protection shall be worn at all times while on site. This policy includes operators out of machines (or in machines without Roll Over Protection Systems), for all workers, foreman, supervisors, venders, visitors, etc.

2. High visibility clothing, such as safety vests is required for all individuals entering the work site.

3. Steel erectors, Scaffold erectors and Roofers are required to adhere to OSHA fall protection requirements for their particular operations. For all other operations fall protection means 100% tie off when six feet or more above floor or safe working platform

4. Eating will be allowed in designated area's only.

5. Radios, I Pods, Bluetooth or Equivalent or MP3 devises are not allowed to be used on the job site.

6. A safe work environment must be maintained and compliance with OSHA regulations and site safety plan(s) is required. In the event of accidents, major or minor, all are to be reported to the Construction Manager immediately. All associated paper (accident investigation, First Report of Injury, etc.) work must be submitted to Fusco with in 48 hours.

7. Harassments of any kind are to be reported to the Construction Manager immediately. This includes any offensive statements, actions, graffiti, writing, drawing or posting anywhere on site.

8. Use of alcohol or any illegal drugs prior to or during the work day is prohibited as is the possession of such on the job site. If at any time the Construction Manager or any Supervisor suspects that someone has been using alcohol or drugs, this person will be directed to immediately leave the construction site for the remainder of the day. This can result in permanent suspension from the job site.

9. An Emergency Action Plan has been developed for the site (which also includes emergency phone numbers). Each contractor is responsible for retaining a copy of this plan from Fusco, informing their employees of the requirements contained in the plan and of any changes. Each employee is responsible for following the plan.

10. Parking is allowed only in designated areas. Vehicles parking in undesignated areas will be towed at the owner's expense. No parking of personnel or company cars within the fence line, only construction vehicles are permitted within the fence line.

11. Visitors entering the facility must sign the appropriate register at the Fusco Field office

12. Possession of firearms (or any other types of weapons) on the premises is prohibited.

13. All tool boxes, lunch containers and packages are subject to inspection while in the facility and at all times when exiting.

14. Thefts or mis-appropriation of funds, property or other's personal property from the facility will be referred to the appropriate legal authorities for prosecution.

15. All contractors must maintain copies of MSDSs on site for all materials brought onto the site for which an MSDS is required (such as chemicals). Copies must also be provided to Fusco.

16. Contractors shall coordinate any excavation work with Fusco and provide at least 24 hour notice to Fusco prior to conducting any excavation.

17. Contractors shall coordinate any crane use with Fusco Corporation and provide substantial notice (based upon the planned use of the crane) of a crane coming onto the site. Any Crane to be used on site shall have all (up to date) certifying documents including insurance, annual inspection and State of Connecticut Registration. A lift plan will also be required to be submitted well in advance. If Fusco deems that either the documentation, notice, or lift plan are insufficient, work will not be allowed to proceed. In no way will Fusco be liable for any incurred costs because of work not proceeding due to the contractor not meeting the requirements of providing: substantial notice, proper documentation or a sufficient lift plan. This in no way relieves contractor of the crane from being ultimately responsible for safe operation of the crane or determining the lift plan is safe and both are in compliance with all State and Federal regulations.

18. Any individual operating a crane must have in their possession a license recognized by the State of Connecticut. Individuals using or operating equipment such as forklifts, man lifts (both scissors and aerial boom lifts) or operating equipment that meets the State of Connecticut Hoisting License requirements, must provide proof of training prior to operating such equipment to the Construction Manager for copying and filing.

Table of Fines

Violation	First Offense Fine	Subsequent Per Violation
Assured Grounding Program Violation	$200	$400
Lack of Ground Fault Protection	$200	$400
Lockout/Tag-out violation	$200	$400
Defective electrical cord	$50	$100
Electrical cords not protected	$50	$100
Confined space violation	$300	$600/Removal
Clothing not adequate	$50	$100
Foot wear not adequate	$50	$100
Eye protection missing/inadequate	$100	$200
Hard hat missing	$100	$200
Hearing protection missing	$100	$200
Fire extinguisher missing/needs charging	$100	$200
Fire watch missing	$100	$200
Hot work permit missing	$100	$200
Gas cylinders stored incorrectly/not identified	$50	$100
Failure to protect public	$50	$200
Fall Protection not present	$200	$400
Guardrail removal	$200	$400
Defective ladder	$200	$400
Standing on top of ladder	$200	$400
Ladder not secured	$100	$200
Unprotected floor penetration/hole	$50-$200	$100-$400
Scaffold violation	$50-$200	$100-$400
Lacking competent person on site	$200	$400
Trenching/excavation violation	$200	$400
Power tool defective	$50	$100
Equipment defective	$50-$100	$100-$200
Uncertified lifting device	$100	$200
Poor housekeeping	$50	$100
Improper material storage	$50	$100
Food consumption non-designated area	$50	$100
Smoking in non-designated area	$100	$200
Urinating/defecating in building	$400/removal	N/A
Orientation not attended	$50	$100
Tool box meeting not held	$100	$200
Written Haz Com missing	$100	$200
Missing MSDS	$100	$200

Example of Non-Compliance Notification Form

Notice of Non-Compliance with Site Safety Rules

Date: _____ Project Name/Number: _____

(Hard Hat Identification Number)/Individuals in Non-Compliance:
(___)_____

Subcontractor:_____

Foreman of Subcontractor: _____

Person Observing the Violation: _____

Comments/Noncompliance Description:

Example for lack of Eye Protection

This employee was observed lacking eye protection, this employee of _____ has received a verbal warning in the past for non-compliance with the eye protection requirement.
Eye protection is required 100% of the time while on this project and that fines and suspensions can result for non-compliance. All individuals are informed of this during site orientation. A verbal warnings had been given and non-compliance has remained an issue. The above referenced employee was observed not wearing eye protection and this is to inform you that a fine of $100.00 has been issued to your company. All fines will be deducted from your contract value. In addition, as stated in the orientation, the employee in violation was removed from the site for the remainder of the work day. Any further non-compliance issue by this employee will result in the above referenced employee being permanently barred from the site.

Fusco Corporation Superintendent: _____

31) **Standby Trades:** Subcontractor will be responsible for all costs of standby trades.

32) **Tolerances:** Each Contractor shall install his or her work within specified tolerances. Any corrective work necessary to obtain the acceptance of this work shall be performed in a timely manner so as not to impact the project schedule or sequence.

33) **Permits:** The basic building permit shall be provided by others. Each Contractor shall be responsible to obtain and include all costs for any Permits, Approvals, Inspections, Filings, Fees, Certificates, License as required by Federal, State and Local Authorities having jurisdiction, including but not limited to all applications, acceptance fees and any other necessary documentation.

34) **Utility Company Fees and Costs:** Each Contractor is to include all Utility Company fees and costs for disconnecting/providing any and all required equipment by that Utility Company.

35) **Non-Conformance Notices: Construction Manager** reserves the right to issue Non-Conformance Notices for defective Work, schedule delays; safety related items, etc. The Non-Conformance Notice will describe the deviation to be corrected and the monetary value, which will be withheld from progress payments until remediation, is complete. If remediation is not complete by the designated completion date, **Construction Manager**, at its sole discretion may elect to have the Work performed by others and charge this Subcontractor for the cost of the Work performed. In the event any scope items of this Subcontract are improperly located, this Subcontractor will be responsible for all cutting and patching associated with installing these items correctly. Each worker on this site is responsible for both safety and quality control. The installations on this site are to be of the highest possible quality. Inferior quality Work will be repaired or replaced at this Subcontractor's cost.

36) **Emergency Evacuations:** In the event of any emergency evacuation drills, any lost time will not be reimbursable.

37) **Fire Alarms:** Unscheduled fire alarm $500 fine and reimburse Owner for costs.

38) **Blasting and Explosives:** When the use of explosives is necessary for the prosecution of the work and is approved by the Owner, all requirements of local and State laws and regulations shall be complied with and all necessary permits and licenses obtained by the Contractor at its expense.

a. The Contractor shall keep on the job only such quantities of explosives as may be needed for the work underway and only during such time or times as they are being used. Explosives shall be stored in a secure manner in locked containers and separate from all tools. Caps and detonators shall be stored separately from explosives.
b. The Contractor shall notify each public utility company, having structures in proximity to the site of the work and all others who may be affected, of its intention to use explosives and such notice shall be given sufficiently in advance to enable the companies, the Contractor and others to take such steps as they may deem necessary to protect utilities and property from injury. Such notice shall not relieve the Contractor of responsibility for any damage resulting from its blasting operation.
c. Explosives shall be of such power, placed and used in such quantities and positions as will not make the excavation unduly large, nor shatter unnecessarily the rock mass structure, upon or against which the sewer or structure to be built.
d. The rock obstacle or mass structure must be covered sufficiently when blasts are fired to prevent damage or injury to persons or property or the scattering of broken fragments on the adjacent ground. Adequate warning shall be given all persons in the vicinity before any blast is discharged.

39) Welding: Each contractor shall control the safe handling and storage of all welding materials, acetylene and oxygen tanks, and other equipment required for welding and cutting work at the job site. All welding is to be done by certified welders. Copies of certification documents are to be supplied to the **Construction Manager**. All welding materials and equipment shall be removed promptly from the premises upon completion of the welding and cutting work. No tanks shall be stored in the school building. A fire watch shall be provided if required by local fire authorities. The cost for such fire watch shall be borne by the contractor performing welding. Prior to any hot work, the contractor must notify the **Construction Manager** and receive permission to carry out such work. The contractor will then notify the **Construction Manager** when the work is completed. The use of any propane on site requires a permit and approval from the Fire Marshall. All Trade Contractor's shall review with the Fire Marshall all conditions and requirements for storing materials on-site and must strictly comply.

40) Break Areas: Subcontractor employees will eat lunch break meals at a designated area. This area will be determined by **Construction Manager**'s Superintendent and may change from time to time. Employees are to leave the area free of debris after each meal. Subcontractors will also be responsible

for keeping the parking areas free of trash and debris.

41) **As-Built Drawings:** As-built drawings must be maintained on-site at all times. Periodic inspections of ongoing as- built documentation will be performed by **Construction Manager**, the Engineer(s) and the Owner's personnel.

    a. Failure to maintain as-built drawings is cause for withholding of progress payments until the condition is resolved.

42) **Closeout Documents:** Before the date of Substantial Completion for the Project, this Subcontractor will submit final as-built documentation, guarantees, attic stock, extra stock, additional lubricants, warranties, and all other closeout documents required by the Contract Documents.

43) **Professional Engineering:** Where structural calculations, design and/or shop drawings are required to be signed, stamped and sealed by a Professional Engineer, said Engineer shall be licensed in the State of Connecticut and the costs for same are included in this Subcontract Price.

44) **Tools and Equipment**: This Subcontractor must secure its own tools and equipment and carry appropriate insurance coverage for these occurrences.
    a. This Subcontractor will be required to mark all lifts with their company name and provide **Construction Manager** with a key.
    b. All personnel will be trained on the use of the lift.
    c. Any lifts used to perform the subject Work in areas which are not open to the exterior must be electric type, and any power required/ associated hook-up costs are the responsibility of this Subcontractor.

45) **Environmental Controls:** Environmental control and monitoring shall be the responsibility of each Subcontractor for their own Work areas.
    a. Any Work that generates fumes and/or dust will require ventilation/exhausting from the Building(s) and/or off peak/2nd shift installation requirements.
    b. If **Construction Manager** determines that additional ventilation and/or off peak/2nd shift installation periods are required, there will be no reimbursement to this Subcontractor.

c. Any items that may be affected by this Subcontractor's scope of Work [smoke detectors, etc.] must be protected prior to Work being performed.
d. This Subcontractor shall also provide "smoke eaters" to remove any smoke/dust/etc. generated by the Work of this Subcontractor.
e. This Subcontractor is aware of the materials it is working with and the potential side effects and shall include all costs associated with same.
f. No washing of tools, equipment or any materials into storm or sanitary systems.

46) Temporary Electricity: The **Demolition and Hazardous Material Abatement Contractor** shall be responsible to provide its own temporary electricity for the duration of Phase 1.

47) Temporary Water: The **Demolition and Hazardous Material Abatement Contractor** shall provide a frost/freeze free water service for use by the **Construction Manager** and other trades in a mutually agreed location for the duration of Phase 1.

48) Clean-up: In addition to the cleaning requirements stipulated in the Contract Documents, the Contractor shall furnish continuous cleanup and rubbish removal for your Scope of Work for the duration of the project. This includes sending a laborer around the site on a daily basis to cleanup all papers, litter, garbage and rubbish generated by your Scope of Work. All crates, packing materials, large scraps, paper, etc., will be cleaned out of the work area and disposed of as delivered and/or as installation of the work is completed (but not less than on a daily basis).

g. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. All trades are responsible for daily clean-up of their Work and debris. If a Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

h. Any trucks leaving site with loads must be covered by this Subcontractor

i. In addition to that which is required in the Contract Documents, the Demolition and Hazardous Material Abatement Contractor shall furnish all necessary continuous cleanup and rubbish removal associated with your scope of work for the duration of Phase 1.

j. Cleaning Requirements: The following are mandatory requirements for all trade contractors under this project:

49) ALL DUMPSTERS are to be provided by the Demolition & Abatement Contractor for its Scope of Work.

2. Each trade contractor is responsible for providing his own tools and equipment for cleaning. Tools and equipment shall include, but not necessarily be limited to, shovels, pails, brooms, sweeping compound, wheelbarrows, hand trucks, etc. Use of any sweeping compound or cleaning agent must first be approved by the **Construction Manager** to insure its compatibility with flooring materials.

3. Once a week, for the duration of the project, the **Construction Manager** will designate a day where each Trade Contractor will participate jointly in the cleaning of the entire project. Manpower provided by each Trade Contractor will be selected by the **Construction Manager** and be proportionate to the total man-hours worked by that Trade Contractor during the previous week. Each Trade Contractors' personnel will report to the **Construction Manager**'s trailer on the date and time so designated for a brief meeting to discuss general items, problem areas and identify the non-participants.

4. The **Demolition and Hazardous Material Abatement Contractor** shall be responsible for cleaning and disposal of any and all publicly generated trash and debris for the entire site include public sidewalks and up to and including the street gutter located outside of the perimeter site fencing.

5.Every trade contractor shall include in his Schedule of Values a single line item for routine and joint weekly cleaning. The minimal value of that cleaning line item should not be less than:

Contracts Valued At	Cleaning Line Item Minimum Value
Less than $100,000	3% of total contract value
$100,000.00 to $500,000.00	2% of total contract value
Greater than $500,000.00	1.5% of total contract value

Each trade contractor is reminded to increase this value if the minimal value is

insufficient to accomplish the work as herein stated.

50) Non-Performance: Failure to comply with any portion of this cleaning specification will subject the offending trade contractor to a $500.00 fine and the withholding of monies against the cleaning line item as established in Item 5 above.

Should the **Construction Manager**, at its sole discretion, find it necessary to act on behalf of the offending Trade Contractor in carrying out that Trade Contractor's cleaning obligations under this specification, it may do so after notifying the offending trade contractor, within 24-hours of the non-compliance. The cost of such action, plus a change order processing fee of $500.00, will be assessed against the offending trade contractor's contract. Notification will be deemed to be sufficient when sent, in writing, via fax, or by e-mail.

51) Temporary Lighting: General **Interior** temporary lighting shall be provided by the **Demolition and Hazardous Material Abatement Contractor** inside the building footprint. General **Exterior** temporary lighting shall be provided by the **Demolition and Hazardous Material Abatement Contractor** outside the building footprint. Any temporary lighting required to complete the Work shall be provided by the **Demolition and Hazardous Material Abatement Contractor** for the duration of Phase 1.

52) Submittals and Substitutions/Equals: Within seven working days of award, submit a detailed schedule of submittals to the **Construction Manager** for review and approval. This schedule shall include a complete listing of all shop drawings, samples, manufacturer's data, certifications, warranties/guarantees, O & M Manuals, etc., required by the specifications to be submitted for review. Each Contractor's shall also include target submission dates for each item listed including fabrication and delivery durations consistent with the Project Schedule Milestones. Failure to provide this and any other required paperwork shall result in all requisitions and or pending payments being placed in suspension until submissions are satisfactorily submitted, reviewed and approved.

a.) All submittals shall be submitted sixty days from the date of notice to award, with the exception of site work, concrete work, masonry reinforcing, structural steel anchor bolt work, structural steel shop drawings, roof drains, any roof opening shop drawing,

mechanical roof top openings, skylight shop drawings, and all other crucial materials/equipment crucial to delivery and the schedule, which shall be submitted within twenty days or earlier of the Notice of Award or Notice to Proceed.

b.) When all corrections, resubmissions and approvals are sent back to the submitting Contractor, he or she shall make distribution copies (six copies) for Engineers, Architect, CM and all trades. This Contractor shall submit five copies going in and shall make seven copies of the returned drawings for distribution. If submission was revise and resubmit the above process shall be repeated. If approved as noted, this Contractor shall correct and resubmit to the CM six record and distribution copies. All cost associated with printing and distribution shall be included in the submitting Contractor's bid proposal.

c.) Substitutions or Equals must be noted at the time of bid or they will not be accepted at or after contract award.

53) Record Drawings: This Contractor shall furnish and continuously record the progress of their work on a record set of drawings to be maintained at the jobsite. The Architect, Engineer, and the **Construction Manager** will review these documents on a monthly basis in conjunction with the monthly payment application review and shall be a condition of approval of each progress payment. NOTE: A preliminary copy of the "As-Built" drawings and O&M manuals to be submitted for review ninety days prior to substantial completion.

54) Schedule of Values: Within seven working days of award, submit a detailed schedule of values to the **Construction Manager** for review and approval in accordance with the General Conditions. This schedule of values shall be broken down with individual line items for labor and material for each component of the work, including but not limited to values for project manager, Superintendent, bonds, insurance, submittals, schedule, mobilization, demobilization, daily cleaning, final cleaning, safety, protection, Start-up, testing, commission, training, Operation and Maintenance Manuals, As-builts, punch list, attic stock, warranties and guarantees, very detailed general conditions, etc., that are included in the contract value. All Contractors must show evidence to verify bonds, insurance and any other line item in the schedule of values is a requirement.

55) **Proposed Subcontractors and Vendors (any tier):** Within seven working days of award, submit a detailed list of proposed Contractors, vendors and suppliers to the **Construction Manager**. The Bid Proposal Form requires this bidder to list and name their Subcontractors, address and trade.

56) **Small Tools:** All Trade Contractors submitting time and material change orders should note that all cost for small tools are included in the overhead and profit. Small tool allowance is not to be added as a separate percentage. Any specific equipment rented for time and material work can only be billed based on actual invoices for the rental of the equipment.

57) **Quality Control and Quality Assurance:** This Contractor understands that Quality Control and Quality Assurance is a specific commitment and attitude, which is required during the implementation of the work. The focus required to establish a quality level, by developing in place mock-ups, by providing skilled supervision and by monitoring daily production quality are all expected to be carried out during the execution of this contract. Extensive mock-ups will be utilized as required by the Architect to establish the level of quality prior to the start of finish work.

58) **Beyond Normal Working Hours:** Each Contractor shall be responsible to pay directly to any other bid package contractors and **Construction Manager**s costs that occur outside of the normal working hours.

59) **Contract Closeout:** The Following close-out procedures shall be adhered to as follows:

a) The Schedule of Values on the Contractor's application for payment shall include line items and values for all close-out documents and activities, such as Start-up, testing, commission, training, O&M manuals, As-built drawings, punch list, attic stock, etc.
b) Operation and Maintenance Manuals are due three months prior to anticipated turnover of each phase of the Project.
c) Warranties and Guarantees are due following substantial completion of the Project.
d) A schedule of all Equipment requiring commissioning and Owner Training shall be submitted two months following contract award.

e) As-built drawings, attic stock, and special tools shall be submitted one month following the substantial completion of the Project.

f) All Punch-List work must be completed per the **Construction Manager**s and/or the Architect/Engineers' punch list completion schedule (and prior to turnover to the Owner/user).

g) Each Trade Contractor shall remedy all punch list items within thirty (30) days of issuance of the list. If a Trade Contractor is unable to remedy any item due to occupancy by the Owner, then those items will be remedied during the first vacation period subsequent to the occupancy. If the punch list items are not remedied in accordance with the above provisions, the **Construction Manager** will have the items remedied at the expense of the Trade Contractor.

h) Failure to comply with the above requirements will result in a $2,000.00 deduct change order per item and will result in delays in progress and final payment(s).

60) Time and Material: All Time and Material tickets for extra work will indicate the name of each individual performing the work and his pay-rate, foreman, journeyman, apprentice. Certified payroll reports must support the time and material tickets. Extra work tickets must be signed on a daily basis for this work. For any work that a contractor disputes as being part of his contract and is directed to perform, the **Construction Manager** shall sign daily tickets for work verification of the disputed work only. No consideration will be given or change order issued for any claim of extra work that is not brought to the attention of the **Construction Manager** at the time the alleged extra work is being performed.

61) Man Lifts: Each Contractor shall allow use of man lifts by the **Construction Manager** or other for inspection purposes and or as directed by the **Construction Manager**. Provide training and any necessary safety equipment.

62) Separate Contracts: All Trade Contractors shall cooperate with the Contractors for any separate Contracts that the Owner and **Construction Manager** may award.

63) Notations to "Construction Manager" and/or "General Contractor": Any notations to the term

"General Contractor" shall be interpreted strictly, in the sole discretion of the **Construction Manager**, to be provided by the Bid Package Subcontractor for which that Contract Drawing, that Detail, that Specification, that Scope of Work, that Item of Work or that Contract Document is hereby assigned.

64) Allowances within Trade Subcontractor's Scope of Work: If a Prime Trade Contractor for a given Bid Package elects **not** to use his/her own forces to perform the scope of work that is identified within an Allowance but rather decides to sub contract that work, they must provide the **Construction Manager** with three (3) formal written quotations. The only exceptions are: utility company usage charges, pre-established utility company connection fees, and where a proprietary product or manufacturer is specified. The Prime Trade Contractor must provide the **Construction Manager** a detailed cost breakdown for work that they do intend to perform utilizing their own forces for work identified within the Allowances unless it is agreed in advance that the work will be prosecuted on a time and material basis**.**

65) Non-Compensable Overhead: Contractors will not be compensated for any home office overhead in excess of that provided in Subcontract Agreement part 6(f).

EXHIBIT C
FINAL LIEN WAIVER AND RELEASE

The undersigned,
("Releasing Party") located at
having performed or furnished, or having caused to be performed or furnished, labor, services or materials in the construction, alteration or improvement of that property of
("Owner") described as:

(the "Project" which term includes the real property on which construction is taking place) acknowledges receipt of final payment in the amount of $ for all labor, materials, equipment or services performed or furnished to the Project pursuant to a contract ("Subcontract") with Fusco Corporation ("General Contractor").

Travelers Casualty and Surety Company of America ("Surety") has furnished a payment bond ("Payment Bond") on the Project.

The Releasing Party does hereby remise, release and forever discharge, for itself and its successors, the Owner, Surety and General Contractor, and their successors, heirs, executors and administrators, of and from all, and all manner of action and actions, cause and causes of actions, suits, liens, debts, dues, sums of money, accounts, reckonings, bonds, bills, specialties, covenants, contracts, controversies, agreements, promises, variances, trespasses, damages, judgments, extents, executions, claims and demands whatsoever, in law, in admiralty, or in equity which against the said the Owner, Surety and General Contractor, the Releasing Party ever had, now has, or which it or its successors, hereinafter can, shall or may have in connection with any and all claims of any nature whatsoever arising out of or relating to the Project.

Further, the Releasing Party certifies, under oath, and in accordance with all applicable statutes, laws and regulations, that all laborers, subcontractors or materialmen, have been paid in full for all materials, equipment, fees, licenses, insurances and taxes of every description, and that there are no liens, causes for liens or claims against the Releasing Party for such items. The Releasing Party certifies that he will indemnify and save harmless the Owner and General Contractor from any and all manner of claims, liens, suits, losses, costs, expenses and damages, including, but not limited to, reasonable attorneys fees, arising out of or resulting from the Subcontract referred to above, or any work performed or material supplied thereunder, and hereby releases forever all claim, title and interest in the Project for the same.

Further, the Releasing Party, for value received, does hereby forever waive, relinquish and release the Project from any and all mechanics, materialman's or like liens, and all claims of liens it now has or may have against the project for any and all labor, equipment, services and materials furnished to the project.

Further, and in addition to the foregoing, the Releasing Party for value received, does hereby expressly release, waive and relinquish any and all right or claim it may now have or may hereafter have under the Payment Bond provided on the Project for any and all labor, services, materials or equipment furnished on the Project.

FINAL LIEN WAIVER AND RELEASE (con't)

Further, the Releasing Party warrants that no assignment of claims for payments or rights to perfect a lien or claim against the Payment Bond or against the Project have been made, and that the undersigned has the authority to execute this Final Release and Waiver of liens and has performed the labor and services supplied the materials required of the Releasing Party. The undersigned has personal knowledge that the statements made herein are true and correct.

Dated:_____ By:_____

_____
Title:

State of _____County of_____

The foregoing instrument was acknowledged before me this _____day of _____,

By_____, as_____,

Of_____, a_____corporation on behalf of the corporation

He/She is personally known to me or has produced __as identification and did (did not) take an oath.

My Commission Expires _____
(Signature)

(AFFIX OFFICIAL SEAL) Name:_____
(Legibly Printed)

Commissioner of the Superior Court/Notary Public State of _____

Sheet 2 of 2

EXHIBIT D
PARTIAL LIEN WAIVER AND RELEASE

The undersigned ("Releasing Party") located at , having performed or furnished, or having caused to be performed or furnished, labor, services or materials in the construction, alteration or improvement of that property of ("Owner") described as:

(the "Project" which term includes the real property on which construction is taking place) hereby certifies that the Releasing Party has been paid by Fusco Corporation ("General Contractor") pursuant to a contract with the General Contractor ("Subcontract") all the monies due it for all labor, materials or services performed on or furnished to the Project up to and including the date of (date payment is made through) (referred to hereinafter as the "Release Date").

Travelers Casualty and Surety Company of America ("Surety") has furnished a payment bond ("Payment Bond") for the Project.

The Releasing Party, up through and including the Release Date, does hereby remise, release and forever discharge, for itself and its successors, the Owner, Surety and General Contractor, and their successors, heirs, executors and administrators, of and from all manner of actions and actions, cause and causes of actions, suits, liens, debts, dues, sums of money, accounts, reckonings, bonds, bills, specialties, covenants, contracts, controversies, agreements, promises, variances, trespasses, damages, judgments, extents, executions, claims and demands whatsoever in law, or in equity which the Releasing Party ever had, now has, or which it or its successors, hereafter can, shall or may have from the beginning of the world to the Release Date in connection with any and all claims of any nature whatsoever arising out of or relating to the Project.

Further, the Releasing Party certifies, under oath, and in accordance with all applicable statutes, laws and regulations, that all laborers, subcontractors or materialmen, have been paid in full up through the Release Date for all materials, equipment, fees, licenses, insurances and taxes of every description and that there are no liens, causes for liens or claims against the Releasing Party for such items. The Releasing Party certifies that it will indemnify and save harmless the Owner, Surety and General Contractor from any and all manner of claims, liens, suits, losses, costs, expenses and damages, including, but not limited to, reasonable attorneys fees arising out of or resulting from the Subcontract referred to above, or any work performed or material supplied thereunder, and hereby releases forever all claim, title and interest in the Project for the same through the Release Date.

Further, the Releasing Party for value received does hereby release, waive and discharge the Project from any and all mechanic's liens and claims of liens, equitable or legal, or claims against the Payment Bond, which the undersigned has or may have against the Project and or Payment Bond for labor, services, materials or equipment through the Release Date. Lien rights or Payment Bond rights which the Releasing Party may acquire for labor, services, materials or equipment furnished subsequent to the Release Date are not released by this instrument.

PARTIAL LIEN WAIVER AND RELEASE (con't)

Further, the Releasing Party warrants that no assignment of claims for payments relating to the Project has been made, and that the undersigned has the authority to execute this Partial Release and Waiver has performed the labor and services supplied and the materials required of the Releasing Party to the state of completion of said improvements for which payment is being applied. The undersigned has personal knowledge that the statements made herein are true and correct.

Dated:_____ By:_____

_____
Title:

State of _____County of _____

The foregoing instrument was acknowledged before me this _____day of _____,

By_____, as_____,

Of_____, a_____corporation on behalf of the corporation

He/She is personally known to me or has produced __as identification and did (did not) take an oath.

My Commission Expires _____
(Signature)

(AFFIX OFFICIAL SEAL) Name:_____
(Legibly Printed)

Commissioner of the Superior Court/Notary Public State of _____

Sheet 2 of 2

EXHIBIT E

PROJECT SCHEDULE

EXHIBIT F

RIDER A - SPECIAL CONDITIONS

1. Subcontractor agrees to furnish General Contractor, promptly upon request, in an electronic version acceptable to General Contractor and Owner: (1) the subcontract; (2) the MBE/SBE status of the subcontractor and each of its second tier subcontractors; (3) the amount paid by the General Contractor to the subcontractor and the amount paid by the subcontractor to its second tier subcontractors; and, (4) a list of all contractors from whom competitive bids, proposals, or quotes were solicited or received by the subcontractor, together with the basis of the subcontractor's selection of the second-tier subcontractor. Subcontractor further agrees to require its lower tier subcontractors to provide any such information promptly upon request by General Contractor or Owner.

2. Subcontractor must perform greater than or equal to forty percent (40%) of all Work with its own forces.

3. It is understood that contracts may be awarded by General Contractor and labor may be employed on the Project without discrimination as to whether employees, agents, suppliers or subcontractors of the General Contractor or any other subcontractor, including those that may be employed by the Owner, are members or non-members of any labor or collective bargaining organization, and the Subcontractor accepts this Subcontract with this understanding. There shall be no manifestations on the Project of any dispute between any labor organization and the Subcontractor. The Subcontractor agrees to employ workers, agents, suppliers and subcontractors who will perform the Work under this Subcontract whether or not such other employees or mechanics on the Project are members or non-members of any labor or collective bargaining organization. Should any workers performing any portion of the Work engage in a strike or other work stoppage or disruption or cease to work due to picketing or a labor dispute of any kind, said circumstances shall be deemed a failure to perform the Work on the part of the Subcontractor subject to the terms and conditions set forth in Article 7 of the Subcontract Agreement.

4. All performance and payment bonds issued by the Subcontractor shall name the Owner and the General Contractor as dual obligees. Such bonds shall contain the following language: "In the event that the surety assumes the contract or obtains a bid or bids for completion of the contract, the surety shall ensure that the contractor chosen to complete the contract is prequalified pursuant to section 4a-100 of the Connecticut General Statutes in the requisite classification and has the aggregate work capacity rating and single project necessary to complete the contract."

5. **Liquidated Damages.** Subcontractor is aware that the Principal Contract provides that if Substantial Completion is not achieved within the Contract Time and, as otherwise required by the Contract Documents, the Owner shall be entitled to retain or recover as liquidated damages, and not as a penalty, the sum of **$500 per day**, commencing on the first day following the expiration of the Contract Time for Substantial Completion and continuing until the actual Date of Substantial Completion. If liquidated damages are assessed by the Owner against the General Contractor, Subcontractor shall assume and pay for the portion of such liquidated damages attributable to the fault of the Subcontractor or those under its direction or control. Such amounts are deductible from any amounts due to Subcontractor pursuant to the terms of the Subcontract. The foregoing is in addition to any and all remedies of General Contractor set forth in the Subcontract Documents, at law, or in equity.

6. **CHRO Requirements.** With respect to the value of its work on the Project as reflected by this Subcontract price and approved change orders, Subcontractor shall participate and comply with all contract compliance rules, regulations, workforce requirements, and contract compliance programs of the Connecticut Commission on Human Rights and Responsibilities ("CHRO"), including, but not limited to, Sections 46a-68j-21 through 43 inclusive of the CHRO state regulations. In addition, Subcontractor shall meet or exceed the minimum SBE/MBE goals of 32% DAS certified Small Business Enterprises ("SBE") and of that amount, 38% to SBEs who are also DAS certified Minority Business Enterprises ("MBE"), or 12% of the total Subcontract value. Whereas Connecticut statutes call for utilization goals reflecting 25% SBE and 6.25% MBE of total contract values, the Owner is requiring that 32% SBE and 12% MBE goals be applied to the respective contract values to ensure overall achievement of CHRO set-aside goals for this Project. Similarly, whereas Connecticut statutes call for SBE contractors to self-perform greater than or equal to 30% of the Work with their own forces, the Owner is requiring that all contractors self-perform greater than or equal to 40% of the work with their own forces. Among other things that may be required by CHRO or the Owner, Subcontractor must undertake good faith efforts, as deemed appropriate by the Owner, CHRO, and/or General Contractor, to employ or sub-subcontract with other SBEs and MBEs to perform portions of the work under this Subcontractor. Subcontractor shall fully and adequately document its good faith efforts in this regard, and it shall produce such documentation to General Contractor upon demand. Any failure by the Subcontractor to carry out these requirements will be considered a material breach of the Subcontract, which shall entitle General Contractor to withhold any and all progress or final payments for Subcontractor until such time that Subcontractor corrects its non-compliance to the satisfaction of the Owner, CHRO, and/or General Contractor. General Contractor shall be entitled to withhold such payments regardless of whether General Contractor has received payment from the Owner for the Subcontractor's work. The Subcontractor's failure to comply with

the requirements of this paragraph 6 may also result in the default termination of the Subcontract or such other remedy as General Contractor deems appropriate. Moreover, Subcontractor shall be responsible to General Contractor for any and all fines, penalties, assessments or liquidated damages that may be assessed against General Contractor by the Owner or CHRO due to Subcontractor's failure to satisfy its obligations under this paragraph.

Subcontractor will include an adequate representation of SBEs and MBEs in all bid solicitations. All project Subcontractors will utilize the DAS Supplier Diversity website to identify and meet their obligations to utilize DAS certified SBEs and MBEs as Subcontractors on the Project.

If this Subcontractor is a DAS-certified SBE or MBE, it shall maintain such certification for the duration of the Project.

Subcontractor shall provide monthly reports as required and as a condition precedent to monthly progress payments.

7. In addition to contractors abiding by the rules and requirements in the site specific Fusco Health and Safety Plan (HASP), a copy of which will be provided upon request, they are also required to abide by the University of Connecticut, Contractor EHS Manual, Revision 4, March 2012. In the event of inconsistencies or conflicts within or between parts of the UConn EHS Manual and the Fusco HASP or between such documents and applicable laws, codes, standards or ordinances, the most stringent requirements shall apply.

EXHIBIT G
INSURANCE REQUIREMENTS

The Subcontractor shall secure and maintain the following insurance coverages in the amounts as specified and in accordance with the terms hereof:

The Subcontractor shall secure and maintain the following insurance coverages in the amounts as specified and in accordance with the terms hereof:

1. GENERAL PROVISIONS

(a) All insurers must have A.M Best ratings of A- VII or better and be authorized to conduct business in the state in which the Project is located.

(b) Evidence of all the aforementioned insurance coverages must be provided by the Subcontractor to the General Contractor five (5) days before the commencement of Work by the furnishing of a certificate of insurance executed by a duly authorized representative of each insurer and supporting additional insured endorsement. Subcontractor shall provide General Contractor with a copy of an insurance policy when requested by General Contractor. Renewal certificates must be provided ten (10) days prior to the expiration of coverage.

(c) All policies shall be endorsed to require at least a sixty (60) day written notice by the insurer of cancellation, non-renewal, or material changes, except for a ten (10) day notice for non-payment of premium which will be sent to Michael J. Tyler at The Fusco Corporation, 555 Long Wharf Drive, Suite 14, New Haven, Connecticut 06511.

(d) All policies must include a waiver of subrogation whereby the insured and insured's insurer waives the right to subrogate against Owner, General Contractor and their respective subsidiaries, employees, volunteers, directors and officers.

(e) All policies must include a clause which states that the Subcontractor's policy is primary and the insurer shall not seek contribution from other insurance maintained by or available to the Owner, General Contractor or their respective subsidiaries, employees, volunteers, directors or officers.

(f) All deductibles or self-insured retentions are the responsibility of Subcontractor, including claim handling and legal expenses.

(g) Copies of exclusions of coverage not found in standard policies must be provided to and accepted by the General Contractor.

(h) All insurance must be effective on or before the date Work commences and remain in effect until the final completion and acceptance of the Work, unless otherwise provided by the Subcontract Documents..

(i) It is the responsibility of the Subcontractor to require that all of its subcontractors procure and maintain the same insurance required of the Subcontractor as specified herein. Subcontractor shall furnish copies of certificates of insurance and supporting additional insured endorsement evidencing coverage for each sub-subcontractor.

(j) Failure to comply with all the insurance provisions herein shall in no way relieve the Subcontractor of its indemnification obligations as provided in the Subcontract Documents.

(k) Failure of the Subcontractor to procure and maintain any insurance required by the Subcontract Documents may result in termination of this Subcontract for cause and shall also give General Contractor the right, but not the obligation, to procure and maintain such insurance in the name of the Subcontractor and Subcontractor agrees to pay the cost thereof and General Contractor may deduct such cost from monies otherwise due the Subcontractor.

(l) In addition to the insurance coverages set forth in this **Exhibit** G, Subcontractor shall also comply with any insurance requirements of the Principal Contract which are imposed upon the Subcontractor.

2. WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE

(a) For all Work performed pursuant to this Subcontract, Subcontractor shall maintain Workers' Compensation Insurance, including coverage for all sole proprietors and members of single-member LLCs, in the amounts required by all applicable statutes, laws, regulations, and acts.

(b) Employer's Liability insurance limits of at least $1,000,000 each accident for bodily injury by accident and $1,000,000 each employer for bodily injury by disease.

(c) Where applicable, U.S. Longshore and Harbor workers Compensation Act Endorsement shall be attached to the policy.

3. COMMERCIAL GENERAL LIABILITY (CGL)

(a) Limits of insurance of not less than $1,000,000 per occurrence with a $2,000,000 annual aggregate.

(b) If the CGL coverage contains a General Aggregate limit, such General Aggregate shall apply separately to each project.

(c) Coverage shall be written on an ISO occurrence form (CGL 00 01 10 01), or a substitute occurrence-based form providing equivalent coverage, and shall cover liability arising from premises, operations, independent contractors, products/completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

(d) General Contractor and Owner (their respective subsidiaries, employers, volunteers, directors and officers) shall be included as additional insureds under the CGL using ISO Additional Insured Endorsement (CG 20 10 11 85) or (CG 2010 10/93 and CG 2037 10/01) or (CG 2033 10/01 and CG 2037 10/01) or an endorsement providing equivalent coverage. Insurance for additional insureds shall be as broad as the coverage provided for the named insured. It shall apply as Primary and non-contributory Insurance before any other insurance or self-insurance, including any deductible maintained by or provided to the additional insureds.

(e) Subcontractor shall maintain CGL coverage for itself and all additional insureds for the duration of the Project and maintain products/completed operations coverage for itself and additional insureds for at least five (5) years after final payment.

(f) There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from explosion, underground property damage or collapse.

3. AUTOMOBILE LIABILITY

(a) Business Auto Liability with limits of at least $1,000,000 per accident for bodily injury and property damage.

(b) Business Auto coverage must include coverage for liability arising out of all owned, leased, hired and non-owned automobiles.

(c) General Contractor and Owner (their respective subsidiaries, employers, volunteers, directors and officers) shall be included as additional insureds under the policy.

4. COMMERCIAL UMBRELLA/EXCESS LIABILITY

(a) Subcontractors shall provide excess coverage over the Subcontractor's CGL, Business Auto and Employer's Liability insurance coverages

(b) Limits shall be at least $5,000,000. However, Structural Steel and Demolition and Abatement Subcontractors shall provide no less than $10 million in umbrella/excess liability coverage.

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(c) Umbrella coverage must include as additional insureds all entities that are additional insureds on the CGL.

(d) Umbrella coverage for such additional insureds shall apply as primary and non-contributory before any other insurance or self-insurance, including any deductible maintained by or provided to the additional insured.

(e) Coverage must be on an "occurrence" basis.

5. PROPERTY INSURANCE

Subcontractor shall be responsible for damage to, and shall provide property insurance for all their tools and equipment and materials and equipment stored off-site or in transit that are not covered by the project's builders risk insurance.

6. POLLUTION LIABILITY INSURANCE

If the Subcontractor's Work involves the handling, abatement, clean-up or removal of any pollutants or hazardous material, including but not limited to asbestos, PCBs, contaminated soils, and lead-based paint, the Subcontractor shall provide pollution, lead, mold and asbestos liability insurance.

(a) The policy must specifically include coverage for "asbestos, lead paint, and other hazardous building materials such as PCB's, abatement operations" and have the "Pollution Exclusion" eliminated or modified so as not to apply to any bodily injury, including but not limited to asbestos, lead paint, and other hazardous building materials such as PCB's abatement, handling, transport or disposal.

(b) All policies shall be written on an "occurrence" basis.

(c) Minimum Limits: $1,000,000 per occurrence and $2,000,000 policy aggregate.

(d) Coverage shall include first party, third party, clean-up, legal and claim expense including transit and disposal.

(e) Full policy forms and endorsements are subject to review by Fusco Corporation.

7. ERRORS & OMISSIONS LIABILITY

(a) Subcontractors who are performing engineering or other design services in connection with their Work shall provide errors & omissions liability insurance. If Subcontractor engages consultants to perform such engineering or design services, Subcontractor shall ensure that such consultants provide errors & omissions liability insurance as set forth herein.

(b) The policy shall name Fusco Corporation, Owner and their respective subsidiaries, employers, volunteers, directors and officers.

(b) Minimum policy limits of $1,000,000 per occurrence and $2,000,000 aggregate.

(c) If written on a claims-made basis, coverage must incept by the start of the contract and contain a five (5) year extended reporting starting at the completion of the contract.

(d) Policy forms and endorsements are subject to review by Fusco Corporation.

SUBCONTRACT

THIS AGREEMENT made this Day, day of Month, 20 YY by and between Enter Contractor Name a corporation organized and existing under the laws of Enter State of Contractor a partnership consisting of an individual doing business as Enter DBA Name if applicable hereinafter called the "Contractor" and Enter Subcontractor Name a corporation organized and existing under the laws of Enter State of Subcontractor a partnership consisting of an individual doing business as Enter DBA Name if applicable hereinafter called the "Subcontractor",

WITNESSETH that the Contractor and the Subcontractor for the considerations hereafter named, agree as follows:

1. The Subcontractor agrees to furnish all labor and materials required for the completion of all work specified in Section No. Enter Section Numbersof the specifications for Enter Name of Subtrade and Drawings referred to therein and Addenda No. Enter Addenda #. and Enter Addenda #. for *the* Enter Complete Project Name and Number all as prepared by Enter Architect's Name for the sum of Spell out Dollar Amount DOLLARS ($Spell out Dollar Amount), and the Contractor agrees to pay the Subcontractor said sum for said work. This price includes the following Alternates:

Alternate No (s) Enter Alternative (If not applicable, say N/A

(a) The Subcontractor agrees to be bound to the Contractor by the terms of the hereinbefore described Contract Documents (including all general and supplementary conditions stated therein which apply to his trade) and Addenda No. Enter Addenda #. and Enter Addenda #. and Enter Addenda #., and to assume to the Contractor all the obligations and responsibilities that the Contractor by those Documents assumes to the Enter Awarding Authority, hereinafter called the "Awarding Authority", except to the extent that provisions contained therein are by their terms or by law applicable only to the Contractor.

(b) The Contractor agrees to be bound to the Subcontract by the terms of the hereinbefore described documents and to assume to the Subcontractor all the obligations and responsibilities that the Awarding Authority by the terms of the hereinbefore described documents assumes to the Contractor, except to the extent that provisions contained therein are by their terms or by law applicable only to the Awarding Authority.

(2) The Contractor agrees to begin, prosecute and complete the entire work specified by the Awarding Authority in an orderly manner so that the Subcontractor will be able to begin, prosecute and complete the work described in this subcontract; and, in consideration thereof, upon notice from the Contractor, either oral or in writing, the Subcontractor agrees to begin, prosecute and complete the work described in this Subcontract in an orderly manner in accordance with completion schedules prescribed by the General Contractor for each subcontract work item, based on consideration to the date or time specified by the Awarding Authority for the completion of the entire work.

(3) The Subcontractor agrees to furnish to the Contractor, within a reasonable time after the execution of this Subcontract, evidence of worker's compensation insurance as required by law and evidence of public liability and property damage insurance of the type and in limits required to be furnished to the Awarding Authority by the Contractor.

(4) The Contractor agrees that no claim for services rendered or materials furnished by the Contractor to the Subcontractor shall be valid unless written notice thereof is given by the contractor to the Subcontractor during the first forty (40) days following the calendar month in which the claim originated.

(5) In the event of any conflict or inconsistency between the University of Connecticut's Subcontract form and the Contractor's standard Subcontract form, the provisions of the University of Connecticut's Subcontract form shall prevail. Any standard Subcontract form used will be attached hereto as a supplement to the University of Connecticut's Subcontract form.

(6) This agreement is contingent upon the execution of a general Contract between the Contractor and the Awarding Authority for the complete work.

IN WITNESS WHEREOF, the parties hereto have executed this agreement the day and year first above-written.

SEAL

ATTEST By:

_____Enter Subcontractor Name_____

(Name of Subcontractor)

SEAL By:

_____Enter Contractor Name_____

ATTEST (Name of Contractor)

ORIGINAL

AIA® Document A201™ – 2007

General Conditions of the Contract for Construction

The following document is the AIA Document A201-2007 as modified by the Owner for use with Contractor Construction Manager Contract.
Modification Date: November 26, 2012

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

for the following PROJECT:
901376 - Engineering Building - Engineering & Science Building
University of Connecticut
Storrs Campus
Storrs, CT

THE OWNER:
University of Connecticut
Capital Project & Contract Administration
3 North Hillside Road, Unit 6047
Storrs, Connecticut 06269

and the Construction Manager (hereinafter "Contractor or Construction Manager"):
(Name and address)
Fusco Corporation
555 Long Wharf Drive, Suite 14
New Haven, CT 06511-5964

THE ARCHITECT:
Mitchell | Giurgola Architects, LLP
630 Ninth Avenue
Suite 711
New York, NY 10036

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Invitation to Proposers, Conditions and Requirements of the Proposal, as accepted by the Owner, the contract between Owner and Contractor (hereinafter the Contract), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Contract and Modifications issued after execution of the Contract, all of which form the Contract, and are as fully a part of the Contract as if attached to this Contract or repeated herein. An enumeration of the Contract Documents, other than a Modification, appears in Article 12 of the AIA A133-2009. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, or (3) a written order for a minor change in the Work issued by the Architect.

§ 1.1.1.1 Whenever the words, "directed", "required", "ordered", "designated", prescribed", or words of like import are used, it shall be understood that the direction", "requirement", "order", "designation", or "prescription" of the Owner Representative is intended and similarly the words "approved", "acceptable", satisfactory", or words of like import shall mean, "approved by", or "acceptable to", or "satisfactory to" the Owner Representative unless otherwise expressly state. The "Owner Representative" shall be as defined in the AIA A201 Section 2.1.1.1. The term "Contractor" as used in this A201™-2007, as modified by the Owner shall mean the Construction Manager as identified in the AIA A133-2009, as modified by the Owner, for this Project and Contract.

§ 1.1.1.2 Where "as shown", "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the Contract Documents accompanying this Contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place" that is, "furnished and installed".

§ 1.1.1.3 All personal pronouns used in this Contract, whether used in the masculine, feminine, or neuter gender, shall include all other genders; and the singular shall include the plural and vise versa. Title of Articles and Sections are for convenience only, and neither limit or amplify the provisions of this Contract in itself. The use herein of the word "including", when following any general statement, term, or matter, shall not be construed to limit such statement, term, or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not non-limiting language (such words as "without limitation", or "but not limited to", or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement, term or matter.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project, whether on or off the site of the Project, and including all labor, materials, equipment and services provided or to be provided by subcontractors, sub-subcontractors, material suppliers or any other entity for whom the Contractor is responsible under or pursuant to the Contract Documents.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

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§ 1.1.4.1 THE PROJECT MANUAL
The Project Manual is a volume assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.

§ 1.1.5 THE DRAWINGS
The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS
The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 INSTRUMENTS OF SERVICE
Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 INITIAL DECISION MAKER
The Initial Decision Maker is the person identified in the Contract to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Contract under Section 14.2.2.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS
§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 In the event of any conflict between provisions of the AIA A133CMc Contract, the AIA A201-2007 General Conditions, as modified by the Owner and Division One of the Specifications, on the one hand, and provisions of the technical specifications and plans prepared by the Architect, on the other hand, the provisions of the former group of documents shall take precedence.

§ 1.2.1.2 Subject to the provisions of the foregoing Section 1.2.1.1, in the event of inconsistencies within or between parts of the Contract Documents or between the Contract documents and applicable standards, codes, and ordinances, the Contractor shall: 1) provide the better quality or greater quantity of work, or 2) comply with the more stringent requirement; either or both in accordance with the Owner Representative's interpretation. The terms and conditions of this Section 1.2.1 however, shall not relieve the Contractor of any of the obligations set forth in Sections 3.2 and 3.7.

§ 1.2.1.3 Before allowing the ordering of any materials or doing any Work, the Contractor and each Subcontractor shall verify measurements at the project site and shall be responsible for the correctness of such measurements. Any difference which may be found shall be submitted to the Architect for resolution before proceeding with the Work.

§ 1.2.1.4 If a minor change in the Work is found necessary due to actual field conditions, the Contractor shall submit detailed drawings of such departure for approval by the Architect before making the change.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 In performing its obligations under this contract, the Contractor shall comply with all applicable statutes, laws, ordinances, regulations, codes, rules or orders of, or issued by any governmental body having jurisdiction over the Work, location of the Work, or the Contract.

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§ 1.2.5 If any item, material, product or equipment is found to be specified in more than one Division Section or Article of the Specifications, the Contractor shall be responsible for determining which subcontractor or supplier shall provide the item.

§ 1.2.5.1 When applied to materials and equipment, the words "furnish", "install", and "provide" shall mean the following:

The word "provide" shall mean to furnish, pay for, deliver, install, adjust, clean and otherwise make materials and equipment fit for their intended use, as specified in Section 3.5 of the General Conditions.

The word "furnish" shall mean to secure, pay for, deliver to site, unload, uncrate and store materials.

The word "install" shall mean to place in position, incorporate in the work, adjust, clean, make fit for use, and perform all services specified in General Conditions Section 3.5 except those included under the definition of the word "furnish" above.

The phrase "furnish and install" shall be equivalent to the word "provide".

§ 1.2.5.2 The phrase "match existing" shall mean the following:

Where Contract Documents call for exact matching, match existing work exactly in quality and appearance.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 EXECUTION OF CONTRACT DOCUMENTS

§ 1.5.1 Execution of the Contract by the Contractor and its subcontractors is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

(Paragraph deleted)

§ 1.6 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.6.1 For the purpose of this Contract only, the Drawings, Specifications and other documents, including those in electronic form, prepared by the Architect and the Architect's consultants are Instruments of Service through which the Work to be executed by the Contractor is described. The Contractor may retain one record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the Architect or the Architect's consultants, and unless otherwise indicated the Architect and the Architect's consultants shall be deemed the authors. The Owner will retain all common law, statutory and other reserved rights, including copyrights unless the Contract between the Owner and Architect provides otherwise. All copies of Instruments of Service, except the Contractor's record set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents. Submittal or distribution to meet official regulatory requirements or

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for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' rights.

§ 1.6.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 1.7 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Contract or the Contract Documents.

§ 1.8 PROVISIONS REQUIRED BY LAW DEEMED INSERTED

§ 1.8.1 Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Contract and is referred to throughout the Contract Documents as if singular in number. . Except as otherwise provided in Section 4.2.1, the Architect does not have any authority to act on behalf of the Owner. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.1.1 A staff member of the Owner shall be designated as the "Owner Representative". All contact and communication with the Owner shall be through the Owner Representative or his or her designee. The Owner on certain projects, may also retain the Services of an outside Construction Administrator, who may be authorized to exercise certain contractual powers of the Owner Representative and/or the Architect. Should this occur, the Contractor will be advised in writing, as appropriate, of the scope and nature of this Construction Administrator's role pursuant to these Contract Documents.

§ 2.1.2 Not Used.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Not Used.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. See AIA A133 Section 3.1.4. The Contractor shall exercise proper precautions relating to the safe performance of the Work. The Owner does not represent that the information contained there is complete, but only that it constitutes a disclosure of information known to the Owner at this time regarding such conditions. Contractor shall review all such information and notify the Owner of any inaccuracies within twenty (20) days of its receipt.

§ 2.2.3.1 Data concerning site, size, access to site, staging and storing, present obstructions on or near the site, conditions of existing adjacent structures, locations and depths of sewers, conduits or pipes, gas lines, position of sidewalks, curbs and pavements, and other data concerning site conditions, has been obtained from sources Owner believes reliable. Accuracy of such data, however, is not guaranteed and is furnished solely for accommodation of Contractor. Use of such data is made at Contractor's sole risk and expense.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness.

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§ 2.2.5 The Contractor shall purchase such copies of Drawings and Project Manuals as are reasonably necessary for execution of the Work.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3. This right shall be in addition to and not in restriction or derogation of the Owner's rights under Article 14 hereof.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven -day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, after such seven (7) day period give the Contractor a second written notice to correct such deficiencies within a three (3) day period. If the Contractor, within such three-day period after receipt of such second notice fails to commence and continue to correct any deficiencies, the Owner may, without prejudice to other remedies, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

§ 2.5 EXTENT OF OWNER RIGHTS

§ 2.5.1 The rights stated in Article 2 and elsewhere in the Contract Documents are cumulative and not in limitation of any rights of the Owner (1) granted in the Contract Documents, (2) at law or (3) in equity.

§ 2.5.2 In no event shall the Owner have control over, charge of, or any responsibility for construction means, methods, techniques, sequences or procedures for safety precautions and programs in connection with the Work, notwithstanding any of the rights and authority granted the Owner in the Contract Documents.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Contract and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative. The Contractor shall not replace the Contractor's Representative without the prior written consent of the Owner.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.1.4 The Contractor represents and warrants the following to the Owner (in addition to the other representations and warranties contained in the Contract Documents) as an inducement to the Owner to execute the Contract Documents, which representations and warranties shall survive the execution and delivery of the Contract Documents and the final completion of the Work;

(a) That it is financially solvent, able to pay its debts as they mature and possesses sufficient working capital to complete the Work and perform its obligations under the Contract Documents;

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(b) That it, through its Subcontractors or otherwise, is able to furnish the plant, tools, materials, supplies, equipment and labor required to complete the Work and perform its obligations hereunder and has sufficient experience and competence to do so;
(c) That it is authorized to do business in the State where the Project is located and properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over it and over the Work and the site of the Project;
(d) That its execution of the Contract Documents and its performance thereof have been duly authorized by all necessary corporate action; and
(e) That its duly authorized representative has visited the site of the Work, familiarized himself with the local conditions under which the Work is to be performed and correlated his observations with the requirements of the Contract Documents.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is an agreement by the Contractor that the Contractor and all Subcontractor tiers have, or shall be deemed to have, visited the site, become familiar with all existing conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

(Paragraph deleted)

§ 3.2.2 The Contractor and all Subcontractors shall visit the Project site and become acquainted with all existing conditions and conduct all tests, examinations or inspections including, but not necessarily limited to any subsurface investigations they deem necessary or as required by law, at their sole expense, to satisfy themselves as to existing conditions on the site, including sub-surface conditions. No such tests, examinations or inspections shall be conducted without the Owner's prior written approval and the Owner shall approve of any engineer or consultant engaged to perform such test, examination or inspection.

§ 3.2.3 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect and Owner Representative any errors, inconsistencies or omissions discovered or which should have been discovered by or made known to the Contractor as a request for information in such form as the Architect and Owner Representative may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. After reporting to the Architect any error, inconsistency, or omission which the Contractor may discover in the Contract Documents, the Contractor is not to proceed with any work so affected without the Architect's written response and or clarifications and, if required, Owner approval of Contract adjustments.

§ 3.2.4 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect and Owner Representative any nonconformity discovered, or which should have been discovered, by or made known to the Contractor as a request for information in such form as the Architect may require.

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§ 3.2.5 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.3 or 3.2.4, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.3 or 3.2.4, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities unless the Contractor recognized, or should have recognized, such error, inconsistency, omission or difference and knowingly failed to report it to the Architect and Owner Representative immediately.

§ 3.2.6 No compensation will be allowed by reason of any difficulties which the Contractor could have discovered or reasonably anticipated, prior to execution of the Contract by visiting the project site and observing existing conditions and/or comparing these to the Contract Documents at the time of shop drawings and/or submittals.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. The Contractor shall schedule and perform the Work so as not to interfere with any other related work being performed by the Owner in or about the Project site. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for any damages, losses, costs and expenses resulting from the acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.3.4 The Contractor shall send its qualified representative to periodic progress meetings held at such time and at such place as Architect or the Owner shall designate in accordance with the Contract Documents.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.2.1 In connection with any requests for substitutions, the Contractor:

.1 represents that the Contractor and Subcontractor or any applicable tier have personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;

.2 represents that the Contractor and proposed manufacturer will provide the same or superior warranty coverage for the substitution that the Contractor would for that specified;

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.3 certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent;

.4 shall coordinate the installation of the accepted substitution, making such changes as may be required for the Work to be complete in all respects;

.5 shall make requests for substitutions within fifteen (15) days after subcontractor contract award; and

.6 shall reimburse and compensate the Owner for any costs incurred in connection with, and/or the value of, any services performed by the Architect and/or the Owner Representative associated with addressing the request for substitution.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.4.3.1 The Contractor shall neither permit nor suffer the use of offensive language on or about the Work embraced in this Contract.

§ 3.4.3.2 The Contractor shall neither permit nor suffer lewd conduct on or about the Work embraced in this Contract.

§ 3.4.3.3 All buildings of the Owner are smoke free buildings. Additionally, the Contractor shall not permit outdoor smoking where it creates a hazard nor the introduction or use of drugs, spirituous or intoxicating liquors, on or about the Work embraced in this Contract.

§ 3.4.3.4 The Contractor shall be fully responsible to the Owner for the acts of his Subcontractors, and of persons either directly or indirectly employed by him, as he is for the acts of persons directly employed by him.

§ 3.4.3.5 The Contractor shall familiarize himself and act in compliance with the current "President's Policy on Harassment" including its provisions prohibiting sexual harassment.

§ 3.4.3.6 The Contractor is hereby specifically cautioned that unless specifically authorized, in writing, by the Owner's Executive Vice President for Administration and Chief Financial Officer or in the case of a University of Connecticut Health Center project, the Chief Administrative Officer, on a case by case basis, the Contractor shall have no right to use and shall not use, in any manner, the name of the Owner, its officials or employees, or the Seal of the Owner: (a) in any advertising, publicity, promotion; nor (b) to express or to imply any endorsement of Contractor's work product or services.

§ 3.4.4 Directions, specifications and recommendations by manufacturers for installation, handling, storing, adjustment, and operation of their materials or equipment shall be complied with, but the Contractor shall nonetheless have the responsibility of determining whether such directions, specifications, and recommendations may safely and suitably be employed in the Work, and of notifying the Architect in advance in writing of any deviation or modification necessary for installation safety or proper operation of the item.

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

The Owner is a tax exempt institution. The Contractor shall be familiar with the current regulations of the Department of Revenue Service. The tax on materials or supplies exempted by such regulations shall not be included as part of the

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Contract Sum, or any Application for Payment, or request for Change Order or other compensation. A Sales Tax Certificate is available from the Owner's Purchasing Department upon written request.

§ 3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

(Paragraph deleted)

§ 3.7.4 If any governmental body having jurisdiction over the Work requires licenses or registrations for the performance of the Work, or any part thereof, the Contractor shall hold such valid licenses or registrations as may be required by law to prosecute the Work to completion. If any part of the Work for which such a license or registration is required to be performed by Subcontractors of any tier, the Contractor shall ensure that any such Subcontractor holds such valid licenses or registrations as may be required by law to prosecute said Work to completion.

§ 3.7.5 Concealed or Unknown Conditions. See Section 15.1.8.

§ 3.7.6 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Guaranteed Maximum Price ("GMP") all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

.1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

.2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances except when installation is specified as part of the allowance in Division 1 of the Specifications; and

.3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2, except when installation is specified as part of the allowance in the General Requirements (Division 1 of the Specifications).

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

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§ 3.9 SUPERINTENDENT AND PROJECT MANAGER

§ 3.9.1 The Contractor shall employ a competent full time superintendent(s) and necessary assistants who shall be in attendance at the Project site during performance of the Work for the duration of the entire Project. The superintendent shall be satisfactory to the Owner and the Contractor shall not replace the superintendent without the prior written consent of the Owner. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

§ 3.9.2 If not already identified as part of the Owner's pre-qualification process, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name, qualifications and references of the proposed superintendent(s).

§ 3.9.3 The superintendent(s) shall be satisfactory to the Owner and the Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. If for any reason the superintendent(s) is unsatisfactory, upon request of Owner, other qualified representatives shall be substituted. The Contractor shall not change the superintendent without the Owner's written consent, which shall not unreasonably be withheld or delayed.

§ 3.9.4 The Contractor shall employ a competent full time project manager(s) and necessary assistants who shall be in attendance at the Project site during performance of the Work for the duration of the entire Project. The project manager shall be satisfactory to the Owner and the Contractor shall not replace the project manager without the prior written consent of the Owner. The project manager shall represent the Contractor, and communications given to the project manager shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

§ 3.9.5 If not already identified as part of the Owner's pre-qualification process, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name, qualifications and references of the proposed project manager.

§ 3.9.6 The project manager shall be satisfactory to the Owner and the Contractor shall not employ a proposed project manager to whom the Owner or Architect has made reasonable and timely objection. If for any reason the project manager is unsatisfactory, upon request of Owner, other qualified representatives shall be substituted. The Contractor shall not replace the project manager without the prior written consent of the Owner.

§ 3.9.7 Additional key personnel may be required for this project. The Contractor shall provide additional personnel as required to ensure proper project coordination.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, within thirty (30) days of the approval of the GMP, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall be in such format, and contain such information as the Owner may request or outlined in Division 1 of the Specifications.. The schedule shall not exceed time limits current under the Contract Documents, shall, with the prior review and approval of the Owner and Architect, be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor, within thirty (30) days of the approval of the GMP, shall prepare and submit a submittal schedule, promptly after being awarded the GMP and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for simultaneous review and approval by the Owner and Architect. The Owner and Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

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§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Bid Clarifications and/or Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.11.1.1 In addition, the Contractor shall indicate on the drawings, as best as possible, all new and existing pipe and conduit runs which are concealed in the floor slabs, walls, ceilings, etc. The Contractor shall indicate on the drawing the electrical distribution panel and circuit number supplying each item installed or reconnected, with diagrammatic lines showing sequence of connections. All changes shall be identified and circled on the Architect's and Engineer's drawings at the time they occur for each such field change.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect or Engineer without action. Such action will not be grounds for time extension to the Contract.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect and the Owner Representative in writing of such deviation at the time of submittal and (1) the Owner Representative has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

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§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.12.11 See Specifications for additional information on Shop Drawings.

§ 3.13 USE OF SITE

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.13.2 Nothing contained in the Contract Documents shall be interpreted as giving the Contractor exclusive use of the premises where the Work is to be performed.

§ 3.13.3 The Work in this Contract should not interfere with normal, continuous and safe operation of the buildings and site. If interference appears possible because of new connections to existing work or other reasons, the Work involved must be done at a time and in a manner approved by the Owner Representative as a part of the Contract.

§ 3.13.4 The Contractor shall comply with the following procedures when working in occupied areas including classrooms, hallways, and office spaces:

§ 3.13.4.1 **Notification**: The Contractor shall notify the Owner Representative and the Building Safety Committee Representative two (2) days prior to commencing work in occupied office, classroom and other areas. This notification shall include detailed description of proposed work.

§ 3.13.4.2 **Overhead Work**: There shall be no overhead work, (e.g. demolition, HVAC ductwork, and/or electrical) performed directly over occupied spaces.

§ 3.13.5 The Contractor shall produce a site mobilization plan for the Owner Representative's review and approval before beginning operations on site. This document shall be updated and submitted monthly. No deviations will be allowed without the prior approval of the Owner.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor

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except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.14.3 Written permission shall be obtained from the Architect/Engineer before cutting beams, arches, lintels or other structural members.

§ 3.14.4 See Specifications for additional information on Cutting and Patching.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials and shall clean and/or remove all stains, spots, marks, blemishes, foreign matter and dirt from surfaces of the Work and from other surfaces not a part of the Work but where such conditions resulted from the Contractor's operations from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect. In the event of legal action arising out of such infringement for which the Contractor is responsible and which action has the effect of stopping the Work, the Owner may require the Contractor to substitute other products of like kind as will make it possible to pursue and complete the Work. Costs and expenses caused thereby shall be borne by the Contractor.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall defend, indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the willful, wanton or negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 3.18. Nothing in this Section shall be construed as obligating the Contractor to indemnify or hold harmless any of the parties indemnified hereunder against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of any such indemnified party, or such party's agents or employees.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

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§ 3.18.3 The Contractor further agrees to obtain, and maintain at its expense such general liability insurance coverage as will insure the provisions of this Section and other contractual indemnity obligations assumed by the Contractor in this Contract.

§ 3.18.4 The Contractor shall defend, indemnify and hold harmless the Owner, the Architect, and the Architect's consultants and their agents and employees from and against all claims, damages, losses, including, but not limited to, attorneys fees, arising out of or resulting from any type of pollution and/or environmental impairment into or upon the land, the atmosphere, or any course or body of water that is above or below ground, which is caused by any negligent or willful or wanton act or omission of the Contractor, subcontractors, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. The Contractor shall further indemnify and hold harmless the Owner, the Architect, and the Architect's consultants, and the agents and employees of any of them, as set out above for any acts that are outside of the contract specifications, and without the supervision or direction of the Owner, its Architects and Engineers; additionally this same indemnification shall apply to the misuse or malfunction of any equipment rented, owned, or leased by the Contractor, subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable. Nothing in this Section shall be construed as obligating the Contractor to indemnify or hold harmless any of the parties indemnified hereunder against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of any such indemnified party, or such party's agents or employees.

The Owner assumes no responsibility or liability from loss or damage to the Contractor's equipment, materials, or supplies.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Contract and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate For Payment and with the Owner's concurrence, from time to time during the one-year period for correction of Work described in Section 12.2.. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents. The Architect will advise and consult with the Owner in the performance of the Architect's performance of contract administration.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of the Contractor's operations, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.2.1 Where it is stated in the Contract Documents that the Contractor shall pay for or reimburse the Owner for services of the Architect, such payment shall be at a rate of two and one half (2.5) times the Architect's Direct Personnel Expense plus any expenses incurred in providing such services. Direct Personnel Expense is defined as the

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direct salaries of the architect's personnel engaged on the Project and the portion of the cost of their mandatory and customary contributions and benefits related thereto, such as employment taxes and other statutory employee benefits, insurance, sick leave, holidays, vacations, pensions and similar contribution and benefits.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION
Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Owner Representative has authority to reject Work that does not conform to the Contract Documents. Whenever the Owner Representative considers it necessary or advisable for implementation of the intent of the Contract Documents, , the Owner Representative will have authority to require additional inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. The Architect shall advise and assist the Owner Representative in performing any of the functions set forth in this Section.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Owner Representative or the Architect will prepare Change Orders and Construction Change Directives and may authorize minor changes in the Work as provided in Section 7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10. The undertaking of any inspections by the Architect is not to be construed as supervision of actual construction, nor to make the Architect responsible for providing a safe place for the performance of work by the Contractor or the Contractor's employees, or those of suppliers of subcontractors for access, visits, work, travel, or occupancy by any person.

§ 4.2.10 Not Used.

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§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretations until 15 days after written request is made for them.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and initial decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The decisions of the Owner Representative, with the advice and consultation of the Architect, on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1
Pre-Qualification of Subcontractors, solicitation of bids from Subcontractors, and awarding of subcontracts to Subcontractors is governed by and shall be in accordance with the provisions of Sections 2.1.6, 2.1.6.1 and 2.1.6.2 of the AIA A133 CMc Contract between Owner and Contractor. Contractor shall comply in all respects with the requirements of these provisions and the decisions and requirements of the Owner issued in accordance therewith. The Contractor shall submit the list of the Subcontractors along with their State of Connecticut registration number and FEIN or social security number if a FEIN number is not available, within fifteen (15) days of award of each individual subcontract along with a copy of their subcontract.

§ 5.2.2 The Contractor shall not be eligible to submit a bid for, or to perform with its own forces, any project element.

§ 5.2.3 The Contractor shall not contract with a person or entity who appears on the State of Connecticut Debarment List, the Federal Davis Bacon Act Debarment List, both of which are available through http://www.ctdol.state.ct.us or the Federal List of Excluded Parties Listing System available through http://epls.arnet.gov

§ 5.2.4 After a Subcontractor has been awarded a Subcontract or has been selected for award of a Subcontract after the bidding and Owner approval process required by Sections 2.1.6, 2.1.6.1 and 2.1.6.2 of the AIA A133 CMc Contract between Owner and Contractor, Contractor shall not be permitted to substitute another Subcontractor for the performance of the current Subcontractor's designated trade work or project elements, except upon approval of the Owner in writing and for good cause. The term "good cause" includes but is not limited to a Subcontractor's: 1) death or physical disability, if the selected Subcontractor is an individual; 2) dissolution, if a corporation or partnership; 3) bankruptcy; 4) inability to furnish any performance and payment bond required by this Contract; 5) inability to obtain, or loss of, a license necessary for the performance of a particular category of work; 6) failure to inability to comply

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with a requirement of law applicable to contractors, subcontractors, or construction, alteration or repair projects; and 7) failure to perform its agreement to execute a Subcontractor pursuant to the requirements of this Contract.

§ 5.3 SUBCONTRACTUAL RELATIONS

§ 5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.3.2 Any Subcontract must be in the form set forth in Section 4b-96 of the Connecticut General Statutes, as provided by the Owner. Supplements or other forms of Subcontracts are permitted as long as all the basic elements of the Connecticut General Statutes Section 4b-96 form are covered. In the event of any conflict or inconsistency between the Connecticut General Statutes Section 4b-96 Subcontract form and the Contractor's standard Subcontract form, the provisions of the Connecticut General Statutes Section 4b-96 Subcontract form shall prevail. Any standard Subcontract form used will be attached as a supplement to the Connecticut General Statutes Section 4b-96 Subcontract form, as provided by the Owner.

Within five days after the execution of an Amendment authorizing any construction work which includes masonry, electrical, mechanical other than HVAC, or HVAC work, or other subcontract work which the Owner has designated as applicable to the following requirements, or, in the case of an approval of a substitute Subcontractor by the Owner, within five days after being notified of such approval, the Construction Manager shall present to each approved Subcontractor which will be performing such work:

1. A Subcontract in the form as described above.
2. A notice of the time limit under this section for executing a Subcontract.

If such Subcontractor fails within five days, Saturdays, Sundays and legal holidays excluded after presentation of a Subcontract by the Construction Manager to execute a Subcontract in the form hereinafter set forth, the Construction Manager shall propose another Subcontractor for the Owner's consideration and approval. When seeking approval for a substitute Subcontractor, the Construction Manager shall provide the University with all documents showing (A) the Construction Manager's proper presentation of a Subcontract to the listed Subcontractor and (B) communications to or from such Subcontractor after such presentation. The Owner shall adjust the Contract Price to reflect the difference between the amount of the price of the new Subcontractor and the amount of the price of the prior Subcontractor if the new Subcontractor's price is lower and may adjust such Contract Price if the new Subcontractor's price is higher. The Construction Manager shall, with respect to each such Subcontractor or approved substitute Subcontractor, file with the Owner a copy of each executed subcontract within ten days, Saturdays, Sundays and legal holidays excluded, of presentation of a Subcontract to such Subcontractor.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

.1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

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When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract. Contractor agrees to execute any and all other documents reasonably required to effect the assignment.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

§ 5.5 The Contractor shall promptly advise the Owner in writing of any claim or demand by a Subcontractor claiming that any amount is due to such Subcontractor or claiming any default by the Contractor in any of its obligations to such Subcontractor.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Contract.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable. If any part of a Contractor's work depends on proper and timely execution or relies upon the interphasing or coordinating of the work of any other separate Contractor, or the Owner, the Contractor shall allow for this interrelationship in the planning and performance of his work, without interference to any other contractor.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be

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responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Owner Representative will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor ; a Construction Change Directive may be issued without the agreement of the Contractor. All changes to the Work shall be approved by the Owner Representative. Except as permitted in Section 7.3, a change in the GMP or the Contract Time shall be accomplished only by Change Order to the GMP. Accordingly, no course of conduct or dealings between the parties, nor express or implied acceptance of alterations or additions to the Work, , whether or not there is, in fact, any unjust enrichment , shall be the basis for any claim for an increase in any amounts due under the Contract Documents or a change in any time period provided for the Contract Documents.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Owner or Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

.1 The change in the Work;
.2 The amount of the adjustment, if any, in the GMP or subcontractors contract; and
.3 The extent of the adjustment, if any, in the Contract Time.

There shall be no extension in the Contract time unless the Contractor can effectively demonstrate that the Work delayed is on the critical path of the Project Schedule in accordance with Section 8.3.

The signature of the Architect signifies that he has reviewed the change proposed, with accompanied breakdowns and subcontractors change proposals for appropriate quantities and unit costs and recommends the change. However, if the Contractor and the Owner Representative have signed the change order, the Architect's signature is not necessary in order for the Change Order to constitute a modification to the Contract which binds the Owner and the Contractor.

§ 7.2.2 CHANGE ORDER COST COMPONENTS

The contractor's proposal for a change in the Work shall be itemized completely, submitted in a detailed format acceptable to the Owner and shall include the following itemized cost components, as appropriate:

§ 7.2.2.1 Engineered Equipment and Materials:

Engineered Equipment shall be defined as equipment specified by the contract from a single manufacturer. **Material** (bulk materials) shall be defined as permanent construction materials that become part of the completed installation Engineered Equipment and Material costs shall be considered all-inclusive of the purchase cost of the equipment including all freight costs, purchasing services, expediting, and inspections and shall be substantiated by manufacturer

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quotes subject to review and approval by the Owner's representative, with the advice of the Architect.

§ 7.2.2.2 Direct Field Labor Hours:
Direct labor work hours for change orders shall be itemized indicating the estimated direct labor to be expended in the actual installation of equipment and materials that will become a permanent part of the finished project. The quantity of hours shall be based upon the contractor's estimate to complete the work based upon actual field conditions subject to review and approval by the Owner's representative, with the advice of the Architect.

§ 7.2.2.3 Direct Field Labor Costs:
Direct field labor costs are defined as cost of the direct labor estimated in the actual installation of equipment and materials that will become a permanent part of the finished project. Direct field labor may include hourly labor classifications for foremen, journeymen, apprentices, laborers, etc. Direct field labor costs may include contractor's direct labor payroll costs including social security, unemployment (federal and state), workers' compensation insurance, fringe benefits, and any other identified costs directly related to direct labor subject to review and approval by the Owner's representative, with the advice of the Architect.

The contractor's direct labor rates as outlined above are to be substantiated by a detailed direct labor cost breakdown with associated back-up support in a form acceptable to the Owner.

If the project is subject to prevailing wage rates, no wage above the prevailing rate shall be allowed unless such rate is substantiated by documentation of actual wages paid in the proposed amount or subject to labor rates submitted and accepted by the Owner as part of the contract documents.

§ 7.2.2.4 Construction Equipment and Tool Rental:
Subcontractor owned or rented equipment and major tools costs are allowed as part of the cost of a Change Order if it is demonstrated to the Owners satisfaction that such costs are valid and related to the change in work. Major tools shall be defined as non-hand held tools. Pricing rates for equipment and major tools shall be acceptable if agreed to by the Owner. In such cases, equipment costs shall be submitted for review and approval by the Owner, with the advice of the Architect. Changes that require specialized equipment not already on site shall have costs shown separately and shall include justification.

§ 7.2.2.5 Field Overheads (Indirects):
Field overhead (indirect) labor shall include field (onsite) supervision (superintendent, general foremen, field engineers)

Field overhead (Indirects) are allowed as part of a cost of a Change Order if it is demonstrated to the Owners satisfaction that such costs are valid and related to the change in work. In such cases additional costs of supervision and directly attributable to the change based on supporting data additional shall be submitted for review and approval by the Owner, with the advice of the Architect. The hourly rate for such personnel shall be based upon rates submitted to and approved by the Owner with the advice of the Architect. Changes that require specialized personnel or additional staff shall have costs shown separately and shall include justification.

Field Facilities shall include the following classifications, as applicable:

1. Temporary offices (office furniture, copiers, computers, printers, other office equipment and supplies)
2. Temporary material storage (storage vans and containers, warehouse rental)
3. Utilities (electricity, phones, data lines, restroom facilities)

Field Facilities costs are not allowed as part of the costs of a Change Order except in the event that a change involving an adjustment in contract time is submitted and approved in accordance with Section 8.3 or for changes that do not impact the critical path, it is demonstrated to the Owners satisfaction that such incremental costs are valid and related to the change in work. In such cases, Field Facilities costs shall be submitted for review and approval by the Owner, with the advice of the Architect.

§ 7.2.2.6 As noted in Section 3.6, the Owner is a tax exempt institution. The tax on materials or supplies exempted by the current regulations of the Department of Revenue Services shall not be included as a cost component of any Change Order or Change Order request/proposal.

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§ 7.2.2.7 **Subcontractors:**
Subcontractors shall adhere to the same contract requirements and shall utilize change order pricing methodology that is consistent with the general contractor's contractual agreement with the owner. Include detailed Subcontractor cost proposals as backup to all subcontractor pricing.

§ 7.2.2.8 **General and Administrative Overhead (Home Office) Costs and Profit (Overhead and Profit):**
Overhead and Profit shall be applied as a percentage to the total cost of the change and shall include:

1. All home office expenses;
2. Safety related items, including safety equipment, safety administration, and all related costs associated with the contractor's safety program;
3. Small tools, which are defined as construction tools with a value of up to $500;
4. Consumable materials, which are normally used in the execution of the work and as may be further defined in the general conditions section of the specifications;
5. Indirect costs as related to field administrative personnel (project manager, field safety supervisor, planners, estimators, office manager, secretarial services, document control);
6. Indirect costs as related to support staff;
7. Commercial General, Automobile, Umbrella, Aircraft and Contractor's Pollution Liability Insurance as described in Section 11.1.2;
8. Parking;
9. Safety;
10. Commissioning Requirements;
11. Such other items as are commonly considered part of home office overhead;
12. Company vehicles, gas, mileage and travel time;
13. Union-related contributions, fees, expenses and costs;
14. Any training; and
15. Licenses.

§ 7.2.2.9 The determination of overhead and profit allowance for a subcontract change shall be based on the total direct cost of the work including material, labor, and equipment cost, as appropriate, utilizing the Subcontractor Combined Overhead and Profit Markup Table as follows:

§7.2.2.9.1

Construction Manager Fee/Subcontractor Combined Overhead and Profit Markup Table:	
Construction Manager fee on changes to the GMP only.	*
Subcontractor markup on self performed work.	10%
Subcontractor markup on first tier sub-subcontractor work.	5%
Sub-subcontractor markup on self performed work.	10%
Subcontractor markup on Sub-subcontractor subtier work	0%
Sub-subcontractor markup on subtier work.	0%

* Percentage fee as noted in Section 5.1.1 of the AIA A133.

§7.2.2.9.2 The percentage mark-ups in Section 7.2.2.9.1 shall apply to Allowances, Contingencies and Line Item Hold Backs within the GMP.

§ 7.2.2.10 Upon computing of the direct costs and applying the Section 7.2.2.9 mark ups to the direct costs on a compounded basis, the aggregate allowance for overhead and profit on any contract change shall not exceed fifteen percent (15%), not inclusive of Contractor's fee percent.

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§ 7.2.2.11 Overtime, when specifically authorized by the Owner and not as an Extraordinary Measure (as defined in Section 8.2.3.2), shall be paid for by the Owner on the basis of premium payment only, plus the cost of insurance and taxes based on the premium payment period.

§ 7.2.2.12 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be confirmed by the Owner Representative. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.2.2.13 If the Contractor does not expeditiously proceed with the work in dispute, the Owner may, in its sole discretion, cause the work to be performed by other forces, and may issue a Change Order deducting the actual cost of the work to the Owner from the Contract Sum.

§ 7.2.2.14 Bond Costs: Actual additional bonding costs associated with the value of the Change Order will be compensable only when supported by written documentation by the bonding company that the Change Order requires an increase to the original Performance, Payment, Labor or Material Bond. Such Bond Costs will be adjusted as a final Change Order to the subcontractor and/or Construction Manager with no additional fee or mark-up.

§ 7.2.3 The Contractor shall submit cost proposals only on "Change Order Proposal Request Form" provided in Division 1 of the Specifications or on a form and in a format acceptable to the Owner. In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials, unit prices, and Subcontracts. Subcontract proposals included in any work shall also be itemized.

§ 7.2.4 Alternates awarded by Change Order after Contract execution are not subject to Contractor , Subcontractor or Subcontractor tiers overhead and profit mark-up.

§ 7.2.5 Agreement upon and execution of any Change Order shall constitute a final settlement of all matters relating to the change in the Work which is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum and the construction schedule. In the event a Change Order increases the Contract Sum, Contractor shall include the Work covered by such Change Orders in Application for Payment as if such Work were originally part of the Contract Documents.

§ 7.2.6 Any percentage referred to hereafter for General Conditions, and/or Overhead and Profit included in the adjustment to the Contract Sum shall be applied to the costs of performing the work attributable to the change as stated in 7.3.7.1 through 7.3.7.6. No markup shall be allowed for premiums on bonds and insurance.

§ 7.2.7 The Construction Manager is responsible for performing an estimate on every change order. The Contractor shall prepare and submit for every Change Order, an estimate of value detail for the change.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Owner Representative and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly. The signature of the Architect signifies that he has reviewed and recommends the Change. However, if the Owner Representative has signed the Change Directive, the Architect's signature is not necessary in order for the Change Directive to be valid.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum and/or Contract Time, the adjustment shall be based on one of the following methods:

.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

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.2 Unit prices stated in the Contract Documents;
.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
.4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method for adjustment in the Contract Sum and/or Contract Time shall be determined at the sole discretion of the Owner Representative, on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, a reasonable allowance for overhead and profit in accordance with Section 7.2. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Owner Representative may prescribe, an itemized accounting together with appropriate supporting data. Any increase to Contract time will be limited to only changes that have been demonstrated through a critical path analysis in conformance with Section 8.3 and Division 1 of the Contract Documents to extend the Project end date. Unless otherwise provided in the Contract Documents, costs of performing the Work attributable to the changes for the purposes of this Section 7.3.7 shall be limited to the following as defined in Section 7.2:

.1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
.2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
.3 Rental costs of machinery and equipment, exclusive of hand tools and any hand-held equipment, whether rented from the Contractor or others;
.4 Costs of premiums for all bonds, permit fees, and sales, use or similar taxes related to the Work; and
.5 Additional costs of field overhead personnel directly attributable to the change based on supporting data.

§ 7.3.8 If the Contractor does not expeditiously proceed with the work in dispute, the Owner may, in its sole discretion, cause the work to be performed by other forces, and may issue a Change Order deducting the actual cost of the work to the Owner from the Contract Sum.

§ 7.3.9 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be confirmed by the Owner Representative. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Owner Representative concerning the adjustments in the GMP , or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

§ 7.4 MINOR CHANGES IN THE WORK

The Architect, subject to the approval of the Owner Representative, will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

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ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Contract.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Contract the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.2.3.1 The Contractor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner of any delays or potential delays. The accepted construction schedule shall be updated to reflect actual conditions (sometimes referred to as progress reports) as set forth in Section 3.10.1 of AIA Document A201 or as requested by the Owner. In the event any progress report indicates any delays or potential delays, the Contractor shall advise the Owner of its plan to recover the schedule providing the Owner with a recovery schedule, and shall further take all steps necessary to correct the delay, including overtime, and/or additional labor, if necessary. In no event shall any progress report or recovery schedule constitute an adjustment in the Contract Time or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to Change Order.

§ 8.2.3.2 In the event the Owner determines that the performance of the Work has not progressed or reached the level of completion required by the approved construction schedule for reasons within the responsibility of the Contractor, the Owner shall have the right to order the contractor to take any and all corrective measures necessary to expedite the progress of construction, including, without limitation; (1) working additional shifts or overtime, (2) supplying additional manpower, equipment and facilities and, (3) other similar measures (hereinafter referred to collectively as "Extraordinary Measures"). Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion required by the approved construction schedule. The Owner's right to require Extraordinary Measures is solely for the purpose of ensuring the Construction Manager's compliance with the construction schedule.

§ 8.2.3.3 The Contractor shall not be entitled to an adjustment in the GMP in connection with Extraordinary Measures required by the Owner, if the Owner determines that the conditions creating the need for such Extraordinary Measures were within the responsibility of the Construction Manager.

§ 8.2.3.4 The Owner may exercise the rights furnished the Owner under or pursuant to this Section as frequently as the Owner deems necessary to ensure that the Construction Manager's performance of the Work will comply with any approved construction schedule or completion date established in accordance with the Contract Documents.

§ 8.2.4 The Contractor and the Owner agree that the times specified for the performance of the Contract shall include not only the work of the original Contract but any additional work ordered by the Owner which, in the opinion of the Owner Representative, can be performed concurrently with the original work specified and therefore, does not warrant the granting of an extension of time.

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§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by other causes that the Owner determines may justify delay, then the Contract Time may be extended by Change Order for such reasonable time as demonstrated through a Critical Path Analysis in conformance with Division 1 of the Contract Documents and accepted by the Owner Representative.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Contract and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

§ 9.2.1 Where the Contract is based on a stipulated sum or GMP, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Owner Representative may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.2.1.1 Draft submission of the Schedule of Values shall be made and accepted prior to the execution of the Amendment finalizing the GMP.

§ 9.2.1.2 The final Schedule of Values shall be submitted (typewritten) on an AIA Document G702 form and should be broken down into a minimum of sixteen (16) divisions based on the Construction Specifications Institute (CSI) Guidelines and subdivided further by Materials and Labor.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 Each month the Contractor shall submit to the Owner Representative a Draft Application for Payment in the form of an AIA Document G702 Application and Certification for Payment, supported by AIA Document G703 Continuation Sheet. A copy of the Draft Application for Payment will be forwarded to the Architect by the Owner Representative.

The Owner Representative and the Architect will, within 10 days after receipt of the Contractor's Draft Application for Payment, notify the Contractor in writing of all necessary revisions.

The Contractor shall make all revisions to the Application for Payment as required by the Owner Representative.

The Contractor shall then submit to the Owner Representative an application for Payment in the form of a notarized AIA Document G702 Application for Payment, supported by AIA Document G703 Continuation Sheet free of any handwritten marks, notes, annotation etc. and an Affidavit of Payment and Release of Claims form (either partial release or final release as appropriate) in a form as provided by the Owner.

By this submission the Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown therein is now due.

§ 9.3.1.1 Each payment requisition submitted by the Construction Manager shall include a statement showing the status of all pending construction change orders, other pending change directives and approved changes to the original contract or subcontract. Such statement shall identify the pending construction change orders and other pending

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change directives, and shall include the date such change orders and directives were initiated, the costs associated with their performance and a description of any work completed. As used in this subsection, "pending for construction change order" or "other pending change directive", means an authorized directive for extra work that has been issued to a contractor or a subcontractor.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.3 Such Application for Payment shall include a deduction of ten (10%) percent of the estimated amount of the application to be retained by the Owner until the completion of the entire Contract in an acceptable manner. The Contractor shall be prohibited from withholding more than ten (10%) percent retainage from any payment which is otherwise due to any Subcontractor.

§ 9.3.1.3.1 In addition, if the State Commission on Human Rights and Opportunities ("CHRO") authorizes the award or execution of this contract in advance of CHRO's approval of the Affirmative Action Plan required to be submitted by the Contractor pursuant to Connecticut General Statutes Section 46a-68d, the Owner will withhold an additional two percent (2%) of the total contract price per month from any payment made to such Contractor, until such time as the Contractor has received approval from CHRO of the Affirmative Action Plan. Moreover, if CHRO determines through its complaint procedure and the hearing process provided in Connecticut General Statutes Section 46a-56(c) that a contractor or subcontractor is not complying with anti-discrimination statutes or contract provisions required under Connecticut General Statutes Section 4a-60 or 4a-60(a) or the provisions of Connecticut General Statutes Section 46a-68c to 46a-68f, inclusive, and if so ordered by the presiding officer after such hearing and upon a finding of noncompliance, the University shall retain two percent (2%) of the total contract price per month on the contract with the Contractor.

§ 9.3.1.4 Whenever the Owner has designated a separate section for a class of work the Contractor shall, when applicable, state as part of its application for partial payment that it considers the work required to be done under any such separate section to be fully completed in accordance with the terms of the Contract. The Owner shall thereupon conduct an inspection of the work in such class, and if it finds that such work has been fully completed in accordance with the terms of the Contract, it shall issue a statement certifying that such work is accepted as fully completed, and shall pay the Contractor in full for such work.

§ 9.3.2 Unless otherwise specifically approved, the Owner will pay only for material and equipment delivered and incorporated in the Work. If approved in advance by the Owner, payment may be similarly made for material and equipment suitably stored on site or off site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.2.1 Payment for stored material either on site or off site will require Owner's prior approval. Approval will be dependent upon demonstration of hardship due to extended time duration between required purchase and actual field installation or the critical nature of the commodity in relationship to the critical path of the construction schedule. Additionally, the Contractor must provide secured storage, insurance coverage for the material during storage, transfer of ownership of the material to the Owner and indemnify the Owner from any delay, cost associated with or resulting from, the loss or damage of such material during such storage. Payment for such material will be paid for at 80% of invoice verified cost. No stored payment will be considered for raw materials. Those items requiring fabrication must be complete so that identification and appropriate documentation can be obtained to insure such items are part of the work identified in this Contract.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

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§ 9.3.4 If payment for stored products is approved, Contractor shall furnish with Application for Payment a vendor invoice establishing value of material and equipment stored along with a statement of amount to be paid to vendor.

§ 9.3.4.1 Such stored items are subject to prior approval for storage and to inspection by Architect and Owner before payment is recommended.

§ 9.3.4.2 Contractor shall give Owner Certificates of Insurance in accordance with Contract Documents for the full value of the items stored. Insurance to be maintained until items are incorporated in the Work.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect following consultation with the Owner Representative may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. The Architect following consultation with the Owner Representative may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 after prior notice, defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless full bond coverage, insurance or security acceptable to the Owner is provided by or demonstrated by the Contractor, or unless the Contractor demonstrates to the Owner that the claims do not have a reasonable basis in fact;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment in accordance with the provisions of this Contract;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 injury to persons or damage to the Work or property of the Owner, other Contractors, or others caused by the act of neglect of the Contractor or any of his Subcontractors;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance of the Contract Sum would not be adequate to cover actual or liquidated damages for the anticipated delay unless the Contractor demonstrates to the satisfaction of the Owner that it or others for whom it is responsible are not responsible for such delay;
- .7 repeated failure to carry out the Work in accordance with the Contract Documents;

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.8 failure to submit Construction Schedules as outlined in Division 1 of the Specifications in the time prescribed;
.9 failure to submit all documents necessary for compliance with CHRO requirements;
.10 failure to submit all copies of all certified payrolls;
.11 failure to provide copies of subcontractors contracts per statute; or
.12 failure to submit any other documentation requested by the Owner necessary for compliance with the requirements of any regulatory agency.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld. The Owner shall not be deemed in default by reason of withholding payment while any of the above grounds remain uncured, nor shall any interest accrue or be payable with respect to any payments so withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.5.4 The Owner shall have the right to apply any such amounts so withheld in such manner, as the Owner may deem proper to satisfy such claims or to secure such protection. Such application of such amounts shall be payments to the Contractor.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has certified the Application for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, or shall so notify the Contractor of the Owner's intent to withhold payment to the extent reasonably necessary to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions of its Subcontractors due to the causes set forth in Section 9.5.1.

§ 9.6.2 For every Contract with the Owner for the construction, alteration or repair of any building or work;

.1 The Contractor within thirty (30) days after payment to the Contractor by the Owner, shall be required to pay any amounts due any Subcontractor, whether for labor performed or materials furnished, when the labor or materials have been included in a requisition submitted by the Contractor and paid by the Owner;
.2 The Contractor shall include in each of its subcontracts a provision requiring each Subcontractor to pay any amounts due any of its Subcontractors, whether for labor performed or materials furnished, within thirty (30) days after each Subcontractor receives a payment from the Contractor which encompasses labor or materials furnished by such Subcontractor.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven (7) days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Pursuant to Connecticut General Statutes Sections 10a-109a through 10a-109y:

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.1 No payments shall be made by the Owner on account of this Contract for this project until the bills or estimates presented for such payments shall have been duly certified to be correct by the Owner;

.2 The obligations of the Owner or the State of Connecticut to make payments to the Contractor for services, labor, or materials provided on this project are limited to those amounts set forth in the Contract Documents and any agreed upon changes or amendments thereto. Neither the Owner nor the State of Connecticut shall or may be liable to make payments in excess of such amount.

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven (7) days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven (7) days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven (7) additional days' written notice to the Owner and Architect be entitled to the applicable statutory interest.. Said provision does not apply where the Owner has submitted to the Contractor its intention to withhold payment in accordance with Section 9.6.1 or where the Architect has submitted to the Contractor its intention to withhold certification in accordance with Section 9.5.1.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize without impact or interruptions the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. The Certificate of Substantial Completion shall become valid upon the written approval thereof by the Owner Representative. Upon such acceptance and written consent of Contractor's surety, if any, and a written statement from CHRO releasing the Owner from any obligation to withhold amounts retained under Section 9.3.1.3.1, the Owner shall make payment of retainage applying to such Work or designated portion thereof. At the sole discretion of the University, reductions in retainage may be allowed before the Contractor reaches Substantial Completion. Such reductions shall not be allowed without written consent from the Contractor's surety. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.8.6 Certifications. The Contractor at completion of construction shall provide to the Owner a "Certificate of Substantial Compliance" bearing original signatures of an officer of the company stating: "This is to CERTIFY that in my professional opinion the complete structure/renovations described above is in substantial compliance with the approved construction documents on file with the University of Connecticut. Minor deviations and special stipulations are noted below (if any)".

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§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner, (6) all documents necessary for compliance with CHRO requirements and as required to obtain the written statement of release from CHRO referenced in Section 9.8.5, (7) copies of all certified payrolls, (8) certifies that all material installed does not contain asbestos, (9) the Certificate of Substantial Compliance referenced in Section 9.8.6, and (10) any other documentation requested by the Owner necessary for compliance with the requirements of any regulatory agency. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such claim. If such claim remains unsatisfied after payments are made to the Contractor, the Contractor shall promptly pay to the Owner all money that the Owner may be compelled to pay in discharging such claim, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor, the written approval of the Owner Representative and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the

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Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4
(Paragraphs deleted)
NOT USED.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

§ 9.11 LIQUIDATED DAMAGES

§9.11.1 Time is of the essence to the Contract Documents and all obligations thereunder. The Contractor acknowledges and recognizes that the Owner is entitled to full and beneficial occupancy and use of the completed Work immediately following expiration of the Contract Time. The Contractor further acknowledges and agrees that if the Construction Manager fails to achieve Substantial Completion, or to cause any delay to the Substantial Completion of any portion of the Work, within the Contract Time, as may be extended by the Owner, the Owner will sustain extensive damages and serious loss as a result of such failure. The exact amount of such damages will be extremely difficult to ascertain. Therefore, the Owner and Construction Manager agree as follows:

.1 if the Construction Manager fails to achieve Substantial Completion of the Work within the Contract Time and as otherwise required by the Contract Documents, the Owner shall be entitled to retain or recover from the Contractor, as liquidated damages and not as a penalty, the sum as agreed to in Section 11.6 of the AIA A133 CMc Contract between Owner and Construction Manager, commencing upon the first day following the expiration of the Contract Time for Substantial Completion and continuing until the actual Date of Substantial Completion. Such liquidated damages are hereby agreed to be a reasonable pre-estimate of damages the Owner will incur as a result of delayed completion of the Work;

.2 the Owner may deduct liquidated damages described in Section 11.6 from any unpaid amounts then or thereafter due to the Construction Manager under this Contract. Any liquidated damages not so deducted from any unpaid amounts due the Construction Manager shall be payable to the Owner at the demand of the Owner, together with interest from the date of the demand at the legal rate;

.3 the Owner shall be entitled to recover as actual damages the Owner's costs, expenses, and damages it incurs in connection with the completion of the Work in the event that the Contractor fails to complete the Work, and/or the Contractor's Surety fails to perform the Work pursuant to any Performance Bond. The Owner shall be entitled to recover as actual damages any payments it makes to any subcontractor or materials supplier that the Contractor's Surety fails to pay pursuant to any Payment Bond.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

§ 10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. Prior to and as a condition of mobilization on site, the Contractor shall submit a Safety Plan to Owner. To the extent the Owner provides safety manuals or other information, any such manuals and information shall be deemed minimum requirements for the Contractor's fulfillment of its safety obligations. Safety fines may be assessed based on Owner's safety plan and or Occupational Safety and Health Administration ("OSHA").

§10.1.1.1 In accordance with C.G.S. Section 31-53b, the Contractor is required to submit proof that each employee has completed a course of at least ten hours in duration in construction safety and health approved by the federal OSHA.

§10.1.1.2 The Contractor shall remove all snow and ice as may be required for the proper protection and/or prosecution of the Contractor's work. The Contractor shall coordinate and cooperate with the Owner for such activities.

§ 10.1.2 **Contractors Safety Program:** The Contractor hereby acknowledges that the job site safety will be of utmost importance. Contractor shall be responsible for initiating, maintaining and supervising safety and anti-substance abuse precautions and programs in connection with the Work. Contractor shall provide all protection to

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prevent injury to all persons involved in any way in the Work and all other persons, including, without limitation, the employees, agents, guests, visitors, invitees and licensees of the Owner who may visit or be affected thereby. These precautions shall include, but in no event be limited to: (1) those set forth in the most current provisions of the Owner's Contractor Environmental Health and Safety Manual, which is incorporated by reference as a Contract Document; (2) the posting of danger signs and personal notification to all affected persons of the existence of a hazard of whatever nature; (3) the furnishing and maintaining of necessary traffic control barricades and flagman services; (4) the use, or storage, removal and disposal of required explosives or other hazardous materials only under the supervision of qualified personnel and after first obtaining permission of all applicable governmental authorities; (5) and the maintenance of adequate quantities of both hose and operable fire extinguishers at the job site. The Contractor shall set forth in writing its own safety and anti-substance abuse precautions and programs in connection with the Work and if requested by the Owner submit the same to the Owner or its designee for review. The Owner may but shall not be obligated to make suggestions and recommendations to the Contractor with respect thereto.

.1 **Compliance of Work, Equipment and Procedures with all Laws:** All Work, whether performed by the Contractor and its Subcontractors of any tier, or anyone directly or indirectly employed by any of them, and all equipment, appliances, machinery, materials, tools and like items incorporated or used in the Work, shall be in compliance with and conform to: (a) all applicable laws, ordinances, rules, regulations and orders of any public, quasi-public or other governmental bodies relating to the safety of persons and their protection against injury, specifically including, but in no event limited to the Federal Occupations Safety and Health Act of 1970, as amended and all rules and regulations now or hereafter in effect pursuant to said Act and the OSHA Act of the State of Connecticut, as amended and all rules and regulations now or hereafter in effect pursuant to said Act; and (b) all rules, regulations and requirements of the Owner and its insurance carriers relating thereto, including without limitation the O. In the event of conflicting provisions the more stringent shall govern. The Owner reserves the right to assess fines and penalties to the Contractor for violations of the Owner's Contractor Environmental Health and Safety Manual as may be more specifically referred to in the Manual and may deduct such fines and penalties from any payments due the Contractor under the Contract.

.2 **Contractors Designation of Safety Program Administrator:** The Contractor shall designate a qualified member of its organization at the job site in accordance with the requirements of the Owner's Contractor Environmental Health and Safety Manual whose duties shall include enforcement of the Contractor's Safety Program to assure compliance with Article 10 and to prevent accidents. This position may be required to be a full time position dedicated to this Project. This person's name, qualifications and the estimated number of man-hours of effort per week performing this function shall be submitted to the Owner in writing. His or her identity, qualifications and level of effort must be satisfactory to the Owner who shall have the sole discretion to approve or reject same. Any reduction to this schedule must be submitted to the Owner for approval. The Contractor shall further cause each of its Subcontractors of any tier to designate a qualified safety representative to assist the Contractor's Representative in the performance of its duties as described above and the names of such representative shall be given to the Owner.

.3 **Suspension of Contractor's Work:** If in the opinion of the Owner or its designee the Contractor shall fail to provide a safe area for the performance of the Work or any portion thereof the Owner or its designee shall have the right but not the obligation to suspend Work in the unsafe area. Contractor shall be liable for all costs incurred of any nature (including without limitation overtime pay, liquidated damages or other costs resulting from delays) resulting from the suspension.

.4 **Right of Owner to have Contractor Send Worker Home:** The Contractor shall provide to each worker on the job site the proper safety equipment for the duties being performed by that worker and will not permit any worker on the job site who fails or refuses to use the same. The Owner shall have the right but not the obligation to order the Contractor to cause any worker to be sent home for the day or to otherwise temporarily or permanently remove him or her from the job site for his or her failure to comply with safe practices or anti-substance abuse policies. Contractor shall promptly comply with such orders from the Owner and shall be liable for any and all costs of whatsoever nature, including attorney's fees paid or incurred by the Owner.

§ 10.1.3 Protection of Work and Property; Responsibility for Loss: The Contractor shall, throughout its performance of the Work, maintain adequate and continuous protection of all property of the Owner and third parties and of the Work and temporary facilities against loss or damage from whatever cause arising out of the performance of the Work and shall comply with the requirements of the Owner and its insurance carriers and with all applicable laws,

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codes, rules and regulations with respect to the prevention of loss or damage to property as a result of fire or other hazards.

§ 10.1.4 Emergencies: In any emergency affecting the safety of persons or property, or in the event of a claimed violation of any federal or state safety or health law or regulation arising out of or in any way connected with the Work or its performance, the Contractor shall act immediately to prevent threatened damage injury or loss or to remedy said violation whichever is applicable, failing which the Owner or its Designee may immediately take whatever action it deems necessary including, but not limited to, suspending the Work.

The Owner may offset any and all cost or expenses of whatever nature including attorneys' fees paid or incurred by the Owner in taking such action against any sums then or thereafter due to the Contractor. The Contractor shall defend indemnify and hold the Owner, and its officers, agents, employees, harmless against any and all costs, expenses or liability in accordance with Section 3.1.8. If the Contractor shall be entitled to any additional compensation or extension of time claimed on account of emergency work not due to the fault or neglect of the Contractor or its Subcontractors or Sub-subcontractors, it shall be handled as a request for a Change Order as provided in Section 7.2 of this Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

.1 employees on the Work and other persons who may be affected thereby;

.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and

.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall provide and pay for whatever security measures the Contractor deems necessary to protect the Contractor's work until acceptance by the Owner through issuance of a Certificate of Substantial Completion.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 At a minimum, the Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities. Additionally, the Contractor shall maintain all passageways, guard fences, lights and other facilities for protection.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor, at a minimum, shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

.1 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary, the Contractor shall give the Owner advance written notice of at least five (5) days prior to bringing to the site or utilizing such explosives, materials, equipment or methods..

§ 10.2.5 The Contractor shall promptly remedy damage and loss to property referred to in Sections 10.2.1.2 and 10.2.1.3 and indemnify and save the Owner harmless for all damage or injury to referenced persons and property caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable in whole or in part to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

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.1 The Contractor shall repair or replace any such damage at no additional cost to the Owner. Such repair or replacement shall be completed within one week of the damage or as directed by the Owner Representative. If the Contractor fails or refuses to repair the damage promptly, the Owner may have the necessary Work performed and charge the cost to the Contractor.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger the safety of persons or property or cause damage or create an unsafe condition.

(Paragraphs deleted)
§ 10.2.8 All materials furnished and all work installed shall comply with the rules and recommendations of the National Board of Fire Underwriters; with all applicable State and local codes, laws, ordinances, rules and regulations; with all requirements of local utility companies and with the recommendations of the Insurance Rating Organization having jurisdiction.

§ 10.2.9 All apparatus, equipment and construction such as ladders, scaffolds, chutes, etc. shall comply with the recommendations of the manual of Accident Prevention in Construction published by the Associated General Contractors of America.

§ 10.3 HAZARDOUS MATERIALS
§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.1.1 Upon request, the Owner, through the Office of Environmental Health and Safety, will provide the Contractor with a written copy of the Hazard Communication Program and chemical inventory for work areas in which they will be working. The Owner, upon request, will make available to the Contractor an opportunity to review the Material Safety Data Sheets ("MSDS") on file for areas where hazardous chemicals are used and stored for work areas they will be working in.

§ 10.3.1.2 Per OSHA's Hazard Communication Standard, Contractors are expected to inform and provide the Owner any MSDSs of materials to be used in their work at the University of Connecticut. Contractors shall provide a chemical inventory and information on the location of chemical use and storage. The Contractor shall be responsible for the removal of all unused portions of chemicals and their waste products from the Project Site. A copy of the Hazard Communication Policy is available for review by the Contractor or prospective Proposers of the Contract at the Office of Capital Project & Contract Administration or at:

http://www.ehs.uconn.edu/Occupational/occuhazard.php

or http://ors.uchc.edu

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Upon written request, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner

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and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up which may have occurred, but must be demonstrated as impacting the critical path of the schedule.

§ 10.3.3 NOT USED.

§ 10.3.4 In no event, however, shall the Owner have any responsibility for any substance or material that is brought to the Project site by the Contractor, any Subcontractor, any materialman or supplier or any entity for whom any of them is responsible. The Contractor agrees not to use any fills or other materials to be incorporated into the Work, which are hazardous, toxic or comprised of any items that are hazardous or toxic. In the event it is determined materials that are hazardous, toxic or comprised of items that are hazardous or toxic have been used as fills or incorporated into the Work, the Contractor, at its sole expense, shall be responsible for immediate removal, proper disposal, and replacement of materials of the Work and surrounding areas so affected.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 Contractor shall verify that all material/equipment installed in any portion of the Work shall be asbestos free. The Owner may perform sampling to verify all suspect material/equipment is asbestos free. If any material/equipment is found to contain asbestos, the Contractor shall pay for the lawful and proper removal and disposal of product(s), and re-install acceptable material/equipment all at its sole expense. Contractor shall visually and in writing provide to Owner or its representative proof that products or equipment to be used are non-asbestos containing, asbestos free, do not contain asbestos, or similar via manufacture statement on product itself or accompanying information.

10.3.6.1 For purposes of this requirement, materials include, but are not limited to, the following:

.1 **Surfacing Treatments**
Fireproofing Acoustical Plaster
Finish Plasters, Skim Coats of Joint Compound, Fibrous Type Paint Applications

.2 **Thermal System Insulation**
Equipment Insulation
Boiler, Breeching, Boiler Rope, Duct or Tank Insulation, Cement or Mortar used for boilers and refractory brick
Piping and fitting insulations including but not limited to Wrapped Paper, Aircell, Millboard, Rope, Cork, Preformed Plaster, Job Molded Plaster and coverings over fibrous glass insulation

.3 **Roofing and Siding Miscellaneous Materials**
Insulation Board Vapor Barriers
Coatings Felts
Flashing Shingles
Cementitious Board (Transite) Galbestos
Non-Metallic or Non-Wood roof Decking

.4 **Other Miscellaneous Materials**
Cove Base Floor Leveling Compound
Ceiling Tile Vermiculite Insulation
Vibration Isolators Laboratory Tables and Hoods

§ 10.3.7 Most buildings at the University of Connecticut have some Asbestos Containing Materials (ACM) used as building products. Any known ACM has been identified on the Plans and Specifications of this Contract.

§ 10.3.8 Every effort has been made to identify ACM; however, there may be additional ACM present in the area of work. This suspected ACM may become apparent especially during the demolition phases of contracts.

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§ 10.3.9 The Contractor shall make every attempt to accomplish work in such a manner as to not disturb ACM or suspected ACM. If the Work cannot be accomplished without disturbing ACM or suspected ACM, or if ACM abatement is specifically incorporated as part of this contract, the Contractor must have the applicable training, licenses, or any other qualifications necessary to perform such work safely and in accordance with Federal, State and Local regulations.

§ 10.3.10 The Contractor shall bring to the immediate attention of the Owner Representative the location of suspected ACM that will be disturbed by work required under this Contract. No work shall be attempted that could result in a release of ACM to the environment.

§ 10.3.11 Asbestos surveys for most buildings of the Owner which are part of this Contract are available for Contractor's review in the Architectural and Engineering Services building or for UCHC projects at the Facilities Development & Operations office.

§10.3.12 Exposure levels for lead in the construction industry are regulated by 29 CFR 1926.62. Construction activities disturbing surfaces containing lead-based paint (LBP) which are likely to be employed, such as sanding, grinding, welding, cutting and burning, have been known to expose workers to levels of lead in excess of the Permissible Exposure Limit (PEL). Contractor shall conduct demolition and removal work specified in the Contract Documents in conformance with these regulations. In addition, construction debris/waste may be classified as hazardous waste. Disposal of hazardous waste material shall be in accordance with 40 CFR Parts 260 through 271 and Connecticut Hazardous Waste Management Regulations Section 22a-209-1; 22a-209-8(c)-11; and 22a-449(c)-100 through 110.

§ 10.3.13 Where a child under the age of six resides, the work shall also be in accordance with Connecticut Regulations Section 19a-111-1 through 11.

§ 10.3.14 If this is a renovation project, testing for lead-based paint has been conducted at selected facilities of the Owner. Results of LBP testing are for information purposes only. Under no circumstance shall this information be the sole means used by the Contractor for determining the extent of LBP. The Contractor shall be responsible for verification of all field conditions affecting performance of the Work.

§ 10.3.15 Except for UCHC projects, lead based paint testing results are available at the Architectural and Engineering Services building. Contractors proposing on this project are requested to visit this office and review lead testing documents.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

10.5 LOCKOUT/TAGOUT PROCEDURES REQUIRED BY OSHA

§ 10.5.1 OSHA regulations 29 CFR 1910.147 (The Control of Hazardous Energy) requires employers to develop procedures for the lockout or tag out of machines or equipment. The purpose is to prevent injuries by ensuring that hazardous forms of energy are isolated (locked or tagged out) before employees perform any servicing or maintenance activities, which could result in the unexpected energization, start-up or release of stored energy. This includes electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy sources.

§ 10.5.2 The Owner has a written Lockout/Tag out Policy, as required under 29 CFR 1910.147. The policy is available for review by the Contractor or prospective Proposers of this Contract upon request.

§ 10.5.3 Prior to commencing any work under this Contract that will or may involve exposure to potentially hazardous energy; the Contractor shall notify the Owner Representative of the lockout/tag out procedures to be used. Lockout/tag out procedures shall be exchanged between the Contractor and the Owner Representative at the Pre-Construction Conference.

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§ 10.5.4 All work carried out under this Contract that will or may involve exposure to potentially hazardous energy shall be carried out in accordance with all applicable Federal, State and local rules and regulations, including OSHA regulation 29 CFR 1910.147 (The Control of Hazardous Energy) and 1926.417 (Locking and Tagging of Circuits).

10.6 SOLVENT BASED PRODUCTS

§ 10.6.1 The use of solvent-based products, including paints and adhesives within occupied areas of buildings shall not be allowed as part of this project, unless specifically directed in other provisions of the Contract Documents. The use of solvent-based products in non-occupied areas shall be carried out using adequate ventilation that prevents migration of vapors into occupied areas. If solvent-based products are to be used in occupied areas, then work shall only be accomplished on nights or weekends and with prior approval with the Owner Representative; continuous ventilation should be provided as required to mitigate odors on building occupants using adequate ventilation. The Contractor's representative shall notify the Owner Representative, the Department of Environmental Health and Safety and the Building Safety Committee Representative two (2) days prior to the intended date of such work.

10.7 CONFINED SPACE ENTRY

§ 10.7.1 Certain areas at the University of Connecticut such as manholes, tanks, vessels, trenches, ducts, etc. meet the OSHA definition of a confined space (pursuant to 29 CFR 1910.146) in that they: 1) are large enough and so configured that an employee can bodily enter and perform assigned work; 2) have limited or restricted means for entry or exit; and 3) are not designated for continuous employee occupancy.

§ 10.7.2 According to this OSHA regulation, employers are required to implement a confined space entry permit program if its employees will enter confined spaces which have one or more of the following characteristics: 1) contain or have the potential to contain a hazardous atmosphere, 2) contain a material that has the potential for engulfing and entrant, 3) have an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or by a floor which slopes downward and tapers to a smaller cross-section, or 4) contain any other recognized safety or health hazard. Such a space is considered to be a permit-required confined space.

§ 10.7.3 The Owner has a written confined space entry policy, which implements a permit program. The policy is available for review by the Contractor or prospective Proposers of this Contract at the Architectural and Engineering Services building.

§ 10.7.4 Prior to commencing work that may require entry into a confined space; the Contractor shall consult with the Owner Representative and the Environmental Health and Safety Department to become apprised of the locations, the nature of the hazards, and safe entry procedures of known permit-required confined spaces.

§ 10.7.5 The contractor shall coordinate entry operations with the Owner through the Owner Representative when both Owner and Contractor personnel will be working in or near permit spaces.

§ 10.7.6 Any work carried out under this Contract that will require entry into a confined space shall be carried out in accordance with all applicable Federal, State, and Local rules and regulations, including OSHA regulations 29 CFR 1910.146 (Permit required confined spaces), 1926.21(b) (6) (Safety Training and Education – Employer responsibility (confined spaces)), 1926.352(g) (Fire prevention in enclosed spaces) and 1926.353(b) (Welding, cutting and heating in confined spaces).

10.8 EXCAVATION AND TRENCHING

§ 10.8.1 The Owner has a written Excavation and Trenching Policy, which can be found in the Owner's Contractor Environmental Health and Safety Manual.

§ 10.8.2 Any work carried out under this Contract that will require excavation or trenching shall be carried out in accordance with all applicable Federal, State and Local rules and regulations, including OSHA regulation 29 CFR 1926 Subpart P (Excavations).

§ 10.8.3 At a minimum, the Contractor shall comply with established Owner's Contractor Environmental Health and Safety Manual, which have been previously provided to bidders and/or are available for review upon request. These policies are hereby incorporated by reference herein, including but not limited to: Policies on Lockout/Tagout; Confine Space Entry; Code of Conduct; Sexual Harassment; Racism and Acts of Intolerance; Smoking.

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ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall demonstrate and provide evidence of insurance in an industry accepted certificate of insurance and maintain with a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;

.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;

.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;

.4 Claims for damages insured by usual personal injury liability coverage;

.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

.6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;

.7 Claims for bodily injury or property damage arising out of completed operations; and

.8 Claims involving contractual liability applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

.1 **Worker's Compensation Insurance:** Worker's Compensation Insurance in Statutory Limits of the Worker's Compensation Laws of the State of Connecticut, and other extensions, with Coverage B – Employer's Liability of not less than limits of $1,000,000 – Each Accident, $1,000,000 – Policy Limit and $1,000,000 – Each Employee. Coverage under the Broad Form All State extension shall also be included.

.2 **Commercial General Liability Insurance:** $1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. Coverage shall include Premises and Operations, Independent Contractors, Products and Completed Operations, Contractual Liability and Broad Form Property Damage coverage. If a general aggregate is used, the general aggregate limit shall apply separately to the project or the general aggregate limit shall be twice the occurrence limit. The coverage shall contain no special limitations on the scope of protection afforded to the State. Said policy shall also state that it is primary insurance, and that the Owner, the State of Connecticut, the Contractor, and such other persons or interests as the Owner may designate as additional insured in connection with the performance of the Work, including hazards of operations (including explosion, collapse and underground coverage), elevators, independent contractors, employees as additional insured, completed operations for a period of three (3) years after final completion of the Work.

.3 **Automobile Liability Insurance:** Automobile Liability Insurance covering all owned, non-owned and hired automobiles, trucks and trailers of the respective parties required to provide and maintain this insurance. Such insurance shall provide coverage not less than that of the Standard Comprehensive Automobile Liability policy in limits not less than, as respects Contractor and all tiers of Subcontractors, $1,000,000 Combined Single Limit each occurrence for Bodily Injury and Property Damage.

.4 **Umbrella Liability Insurance:** Umbrella liability (following form) in the amount of $10,000,000 per occurrence.

.5 **Aircraft Liability:** If aircraft of any kind is used by the Contractor, any tier of Subcontractor or by anyone else on their behalf, the Contractor or Subcontractor shall maintain or cause the operator of the aircraft to maintain aircraft public liability insurance insuring passengers and the general public against personal injury, bodily injury or property damage arising from aircraft owned, used, operated or hired

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in connection with the Work by the Contractor, Subcontractor or anyone else in limits of $50,000,000 Combined Single Limit for any one occurrence, each aircraft.

.6 **Contractor's Pollution Liability:** If the work of this project includes the abatement, removal, cleanup or handling of any asbestos, PCB's, lead based paint, or other pollutants or hazardous materials, then the Contractor shall also provide evidence that Pollution Liability Insurance, including completed operations and Contractual Liability coverage of not less than limits of $5,000,000 has been procured and is in force on the project. However, if the Contractor demonstrates that coverage for claims arising out of the abatement, removal, cleanup or other handling of asbestos, PCB's, lead based paint, or other pollutants or hazardous materials is covered by the Contractor's general liability insurance, a separate Contractor's Pollution Liability Policy will not be required.

.7 Builder's Risk: If the Project is for new construction, rather than for renovations to an existing structure or facilities, the Contractor shall purchase and maintain Builder's Risk Insurance, ISO CP 30 10 00 special form, in the amount of the initial contract amount plus values of subsequent modifications or change orders on a replacement cost basis. The Builder's Risk coverage shall be written on a Special Covered Cause of Loss form and shall include theft, vandalism, malicious mischief, collapse, temporary buildings, transit, debris removal, increased cost of construction, architect fees and expenses, soft costs, flood and earthquake.

Builder's Risk shall include portions of work located away from site but intended for use at the site. Contractor shall obtain consent of the insurance company and delete any provisions with regard to restrictions within any occupancy clause. Equipment break down coverage shall be included and shall cover insured equipment during installation and testing.

.8 It is agreed that the Owner, the State of Connecticut, their officers, officials, agents, employees, boards and commissions shall be additional named insureds under the coverages described in Clauses 11.1.2.2; 11.1.2.3; 11.1.2.4; 11.1.2.5; 11.1.2.6; 11.1.2.7 and that said coverage(s) is provided for all operations, uses, occupations, acts and activities of the insureds under the Contract Documents and under any amendments, modifications, extensions or renewals of said Contracts regardless of whether liability is attributable to the named insureds or a combination of the named insureds and the additional named insureds.

.9 If the Construction Manager is a joint venture, the joint venture and each individual partner of the joint venture must be designated in each policy as named insureds.

.10 A Certificate of Insurance shall clearly indicate the Project name, Project number or some easily identifiable reference to the relationship to the Owner.

.11 Each liability policy shall contain a Cross Liability Endorsement.

.12 Coverage, written on an occurrence basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment.

.13 All insurance secured by Contractor or Subcontractors pursuant to the Owner's requirements under the provisions of this Section 11.1.2 shall be in policies subject to the Owner's approval, as to form, content, limits of liability, cost and issuing companies. Such companies shall have and maintain an A.M. Best rating of not less than A-(VII), or otherwise acceptable to Owner.

.14 If the Contractor maintains insurance against physical loss or damage to Contractor's construction equipment and tools, such insurance shall include an insurer's waiver of rights of subrogation in favor of Owner.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled, terminated or materially changed, altered or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief and shall identify on their faces the project name and contract number to which they apply. The Certificate(s) of Insurance must also provide clear evidence that the Contractor's Insurance Policies contain at least the minimum limits of coverage and special provisions prescribed in Article 11.

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§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.2 OWNER'S LIABILITY INSURANCE
NOT USED.

§ 11.3 PROPERTY INSURANCE
§ 11.3.1 Property insurance on an all-risk basis, including coverage for the perils of earthquakes and floods, has been purchased by the Owner. Insurance required by Section 11.3 is not intended to cover machinery, tools and equipment of the Contractor which is used in the performance of the Work, but is not incorporated into the permanent improvements, nor any materials and equipment paid for by the Owner and stored off-site, for which the Contractor shall procure property insurance satisfactory to the Owner. The Contractor shall, at is own expense, provide coverage for its machinery, tools and equipment subject to these provisions.

§ 11.3.1.1 NOT USED.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then procure and maintain insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the Owner's property insurance requires deductibles, the Contractor shall pay costs not covered because of such deductibles.

§ 11.3.1.4 NOT USED.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 BOILER AND MACHINERY INSURANCE
The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 LOSS OF USE INSURANCE
NOT USED.

§ 11.3.4 NOT USED.

§ 11.3.5 NOT USED.

§ 11.3.6 NOT USED.

§ 11.3.7 WAIVERS OF SUBROGATION
The Owner and Contractor waive all rights of subrogation against (1) each other and any of their subcontractors of all tiers, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors

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described in Article 6, if any, and any of their subcontractors of all tiers, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3, the boiler and machinery insurance maintained by the Owner or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Contract between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five (5) days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Contract. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 PERFORMANCE BOND; PAYMENT BOND AND GUARANTY BOND

§ 11.4.1 The Contractor shall provide to the Owner and deliver at the time of Amendment for the GMP, Performance and Payment Bonds from a surety company, in the full amount of the Contract or in the case of bonds from a subcontractor in the full amount of the subcontract. All such bonds shall be in compliance with the forms which have been adopted by the University as its required forms of payment and performance bonds and shall be in compliance with the requirements of Connecticut General Statutes Section 49-41 et seq. and as otherwise set forth in Section 8.2 of the AIA A133 portion of the Contract.

§ 11.4.1.1 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.4.2 If the Contractor or any of its subcontractors is a non-resident contractor, the Contractor and/or subcontractor shall comply with the requirements of Connecticut General Statutes Section 12-430(7) ("the statute"), to the extent applicable. If the Contractor is a verified contractor as defined in the statute, the Contractor shall provide to the Owner written verification of that status from the State Commissioner of Revenue Services. If the Contractor is a unverified contractor as defined in the statute, the Contractor shall provide to the Owner proof that the Contractor has posted with the Commissioner of Revenue Services a surety bond in an amount equal to five percent (5%) of the contract price and which is otherwise in compliance with the requirements of the statute.

§ 11.4.3 If the Contractor proposes a Subcontractor default coverage program, the Contractor must demonstrate a cost savings of no less than 18% as compared to the actual Subcontractor traditional bond cost, including a reasonable

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percentage for changes as agreed upon by the Owner. As governed by Statute, the Owner will not agree that a subcontractor default coverage program can be used in lieu of a labor and materials payment bond.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Owner Representative with the advice of the Architect has not specifically requested to examine prior to its being covered, the Owner Representative with the advice of the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Owner Representative with the advice of the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing, inspections, uncovering and replacement, and compensation for the Architect's and Owner Representative services made necessary thereby, shall be at the Contractor's expense.

If prior to the date of Substantial Completion, the Contractor, a Subcontractor or anyone from whom either is responsible uses or damages any portion of the Work, including, without limitation, mechanical, electrical, plumbing, and other building systems, machinery, equipment, or other mechanical device, the Contractor shall cause such item to be restored to "like new" condition at no expense to the Owner.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly at Contractor's sole expense after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4 or may exercise any other commercially reasonable remedies to compensate Owner for any expenses losses or damage caused by such nonconforming work.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

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§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made at an appropriate time as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written

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authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's and Owner Representative services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST
NOT USED.

§ 13.7 TIME LIMITS ON CLAIMS
NOT USED.

§ 13.8 NON-DISCRIMINATION, AFFIRMATIVE ACTION, GOVERNOR'S EXECUTIVE ORDERS, AND OTHER MISCELLANEOUS PROVISIONS

§ 13.8.1 NONDISCRIMINATION. References in this section to "Contract" shall mean this Contract and references to "Contractor" shall mean the Construction Manager.

(a) For purposes of this Section, the following terms are defined as follows: (i) "Commission" means the Commission on Human Rights and Opportunities; (ii) "Contract" and "contract" include any extension or modification of the Contract or contract; (iii) "Contractor" and "contractor" include any successors or assigns of the Contractor or contractor; (iv) "Gender identity or expression" means a person's gender-related identity, appearance or behavior, whether or not that gender-related identity, appearance or behavior is different from that traditionally associated with the person's physiology or assigned sex at birth, which gender-related identity can be shown by providing evidence including, but not limited to, medical history, care or treatment of the gender-related identity, consistent and uniform assertion of the gender-related identity or any other evidence that the gender-related identity is sincerely held, part of a person's core identity or not being asserted for an improper purpose; (v) "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations; (vi) "good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements; (vii) "marital status" means being single, married as recognized by the State of Connecticut, widowed, separated or divorced; (viii) "mental disability" means one or more mental disorders, as defined in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders", or a record of or regarding a person as having one or more such disorders; (ix) "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in subsection (a) of Connecticut General Statutes § 32-9n; and (x) "public works contract" means any agreement between any individual, firm or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the State, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

For purposes of this Section, the terms "Contract" and "contract" do not include a contract where each contractor is (1) a political subdivision of the state, including, but not limited to, a municipality, (2) a quasi-public agency, as defined in

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Conn. Gen. Stat. Section 1-120, (3) any other state, including but not limited to any federally recognized Indian tribal governments, as defined in Conn. Gen. Stat. Section 1-267, (4) the federal government, (5) a foreign government, or (6) an agency of a subdivision, agency, state or government described in the immediately preceding enumerated items (1), (2), (3), (4) or (5).

(b) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, mental retardation, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut; and the Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, mental retardation, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by the Contractor that such disability prevents performance of the work involved; (2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission; (3) the Contractor agrees to provide each labor union or representative of workers with which the Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which the Contractor has a contract or understanding, a notice to be provided by the Commission, advising the labor union or workers' representative of the Contractor's commitments under this section and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor agrees to comply with each provision of this Section and Connecticut General Statutes §§ 46a-68e and 46a-68f and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes §§ 46a-56, 46a-68e and 46a-68f; and (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this Section and Connecticut General Statutes § 46a-56. If the contract is a public works contract, the Contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works projects.

(c) Determination of the Contractor's good faith efforts shall include, but shall not be limited to, the following factors: The Contractor's employment and subcontracting policies, patterns and practices; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.

(d) The Contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission, of its good faith efforts.

(e) The Contractor shall include the provisions of subsection (b) of this Section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes §46a-56; provided if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

(f) The Contractor agrees to comply with the regulations referred to in this Section as they exist on the date of this Contract and as they may be adopted or amended from time to time during the term of this Contract and any amendments thereto.

(g) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the laws of the United States or the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation; (2) the Contractor agrees to provide each labor union or

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representative of workers with which such Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (3) the Contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes § 46a-56; and (4) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor which relate to the provisions of this Section and Connecticut General Statutes § 46a-56.

(b) The Contractor shall include the provisions of the foregoing paragraph in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes § 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

§ 13.8.2 This Contract is subject to the provisions of **Executive Order No. 3 of Governor Thomas J. Meskill promulgated June 16, 1971**, concerning labor employment practices, **Executive Order No. Seventeen of Governor Thomas J. Meskill**, promulgated February 15, 1973, concerning the listing of openings and **Executive Order No. Sixteen of Governor John G. Rowland**, promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a party of this Contract as if they had been fully set forth herein. At the Contractor's request, the Owner shall provide a copy of these orders to the Contractor. The Contract may also be subject to **Executive Order No. 7C of Governor M. Jodi Rell**, promulgated July 13, 2006, concerning contracting reforms and **Executive Order No. 14 of Governor M. Jodi Rell**, promulgated April 17, 2006, concerning procurement of cleaning products and services, in accordance with their respective terms and conditions.

§13.8.3 ETHICS AND COMPLIANCE

In accordance with the Owner's compliance program, the Owner has in place an anonymous ethics and compliance reporting hotline service – 1-888-685-2637. Any person who is aware of unethical practices, fraud, violation of state laws or regulations or other concerns relating to Owner policies and procedures can report such matters anonymously. Such persons may also directly contact the Owner's compliance office at: Office of Audit, Compliance, and Ethics, 9 Walters Avenue, Unit 5084, Storrs, CT 06269-5084; Phone 860-486-4526; Fax 860-486-4527. As a provider of goods and/or services to the Owner, you are hereby required to notify your employees, as well as any subcontractors, who are involved in the implementation of this contract, of this reporting mechanism.

§13.8.4 CAMPAIGN CONTRIBUTION RESTRICTIONS

For all State contracts as defined in P.A. 10-1 having a value in a calendar year of $50,000 or more or a combination or series of such agreements or contracts having a value of $100,000 or more, the authorized signatory to this Contract expressly acknowledges receipt of the State Elections Enforcement Commission's notice advising state contractors of state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice (SEEC Form 11):

SEEC FORM 11
CONNECTICUT STATE ELECTIONS ENFORCEMENT COMMISSION
Rev. 1/11

NOTICE TO EXECUTIVE BRANCH STATE CONTRACTORS AND PROSPECTIVE STATE CONTRACTORS OF CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

This notice is provided under the authority of Connecticut General Statutes §9-612(g)(2), as amended by P.A. 10-1, and is for the purpose of informing state contractors and prospective state contractors of the following law (italicized words are defined on the reverse side of this page).

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CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

No *state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor*, with regard to a *state contract* or *state contract solicitation* with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee (which includes town committees).

In addition, no holder or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of State senator or State representative, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

On and after January 1, 2011, no state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a state contract or state contract solicitation with or from a state agency in the executive branch or a
quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall **knowingly** *solicit* contributions from the state contractor's or prospective state contractor's employees or from a *subcontractor* or *principals of the subcontractor* on behalf of (i)
an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor,
Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

DUTY TO INFORM

State contractors and prospective state contractors are required to inform their principals of the above prohibitions, as applicable, and the possible penalties and other consequences of any violation thereof.

PENALTIES FOR VIOLATIONS

Contributions or solicitations of contributions made in violation of the above prohibitions may result in the following civil and criminal penalties:

Civil penalties—Up to $2,000 or twice the amount of the prohibited contribution, whichever is greater, against a principal or a contractor. Any state contractor or prospective state contractor which fails to make reasonable efforts to comply with the provisions requiring notice to its principals of these prohibitions and the possible consequences of their violations may also be subject to civil penalties of up to $2,000 or twice the amount of the prohibited contributions made by their principals.

Criminal penalties—Any knowing and willful violation of the prohibition is a Class D felony, which may subject the violator to imprisonment of not more than 5 years, or not more than $5,000 in fines, or both.

CONTRACT CONSEQUENCES

In the case of a state contractor, contributions made or solicited in violation of the above prohibitions may resulting the contract being voided.

In the case of a prospective state contractor, contributions made or solicited in violation of the above prohibitions shall result in the contract described in the state contract solicitation not being awarded to the prospective state contractor, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

The State shall not award any other state contract to anyone found in violation of the above prohibitions for a period of one year after the election for which such contribution is made or solicited, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

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Additional information may be found on the website of the State Elections Enforcement Commission, www.ct.gov/seec. Click on the link to "Lobbyist/Contractor Limitations."

DEFINITIONS

"State contractor" means a person, business entity or nonprofit organization that enters into a state contract. Such person, business entity or nonprofit organization shall be deemed to be a state contractor until December thirty-first of the year in which such contract terminates. "State contractor" does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

"Prospective state contractor" means a person, business entity or nonprofit organization that (i) submits a response to a state contract solicitation by the state, a state agency or a quasi-public agency, or a proposal in response to a request for proposals by the state, a state agency or a quasi-public agency, until the contract has been entered into, or (ii) holds a valid prequalification certificate issued by the Commissioner of Administrative Services under section 4a-100. "Prospective state contractor" does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

"Principal of a state contractor or prospective state contractor" means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a state contractor or prospective state contractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a state contractor or prospective state contractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a state contractor or prospective state contractor, which is not a business entity, or if a state contractor or prospective state contractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any state contractor or prospective state contractor who has *managerial or discretionary responsibilities with respect to a state contract*, (v) the spouse or a *dependent child* who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the state contractor or prospective state contractor.

"State contract" means an agreement or contract with the state or any state agency or any quasi-public agency, let through a procurement process or otherwise, having a value of fifty thousand dollars or more, or a combination or series of such agreements or contracts having a value of one hundred thousand dollars or more in a calendar year, for (i) the rendition of services, (ii) the furnishing of any goods, material, supplies, equipment or any items of any kind, (iii) the construction, alteration or repair of any public building or public work, (iv) the acquisition, sale or lease of any land or building, (v) a licensing arrangement, or (vi) a grant, loan or loan guarantee. "State contract" does not include any agreement or contract with the state, any state agency or any quasi-public agency that is exclusively federally funded, an education loan, a loan to an individual for other than commercial purposes or any agreement or contract between the state or any state agency and the United States Department of the Navy or the United States Department of Defense.

"State contract solicitation" means a request by a state agency or quasi-public agency, in whatever form issued, including, but not limited to, an invitation to bid, request for proposals, request for information or request for quotes, inviting bids, quotes or other types of submittals, through a competitive procurement process or another process authorized by law waiving competitive procurement.

"Managerial or discretionary responsibilities with respect to a state contract" means having direct, extensive and substantive responsibilities with respect to the negotiation of the state contract and not peripheral, clerical or ministerial responsibilities.

"Dependent child" means a child residing in an individual's household who may legally be claimed as a dependent on the federal income tax of such individual.

"Solicit" means (A) requesting that a contribution be made, (B) participating in any fund-raising activities for a candidate committee, exploratory
committee, political committee or party committee, including, but not limited to, forwarding tickets to potential contributors, receiving contributions for transmission to any such committee or bundling contributions, (C) serving as chairperson, treasurer or deputy treasurer of any such committee, or (D) establishing a political committee for the sole purpose of soliciting or receiving contributions for any committee. Solicit does not include: (i) making a contribution that is otherwise permitted by Chapter 155 of the Connecticut General Statutes; (ii) informing any person of a position taken by a candidate for public office or a public official, (iii) notifying the person of any activities of, or contact information for, any candidate for public office; or (iv) serving as a member in any party committee or as an officer of such committee that is not otherwise prohibited in this section.

"Subcontractor" means any person, business entity or nonprofit organization that contracts to perform part or all of the

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obligations of a state contractor's state contract. Such person, business entity or nonprofit organization shall be deemed to be a subcontractor until December thirty first of the year in which the subcontract terminates. "Subcontractor" does not include (i) a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or (ii) an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

"Principal of a subcontractor" means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a subcontractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a subcontractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a subcontractor, which is not a business entity, or if a subcontractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any subcontractor who has managerial or discretionary responsibilities with respect to a subcontract with a state contractor, (v) the spouse or a dependent child who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the subcontractor.

§ 13.8.5 WHISTLEBLOWING:
This Contract is subject to the provisions of § 4-61dd of the Connecticut General Statutes. In accordance with this statute, if an officer, employee or appointing authority of the Contractor takes or threatens to take any personnel action against any employee of the Contractor in retaliation for such employee's disclosure of information to any employee of the Contracting state or quasi-public agency or the Auditors of Public Accounts or the Attorney General under the provisions of subsection (a) of such statute, the Contractor shall be liable for a civil penalty of not more than five thousand dollars for each offense, up to a maximum of twenty per cent of the value of this Contract. Each violation shall be a separate and distinct offense and in the case of a continuing violation, each calendar day's continuance of the violation shall be deemed to be a separate and distinct offense. The Owner may request that the Attorney General bring a civil action in the Superior Court for the Judicial District of Hartford to seek imposition and recovery of such civil penalty. In accordance with subsection (f) of such statute, each large state Contractor, as defined in the statute, shall post a notice of the provisions of the statute relating to large state Contractors in a conspicuous place which is readily available for viewing by the employees of the Contractor.

§ 13.8.6 COMPLIANCE WITH OWNER POLICIES AND GUIDELINES
At a minimum, the Contractor shall comply with established Owner policies and guidelines, which have been previously provided to bidders and/or are available for review upon request. These policies are hereby incorporated by reference herein, including but not limited to: Policies on Lockout/Tagout; Confined Space Entry as referenced in the Contractor's Environmental Health and Safety Manual; Code of Conduct; Sexual Harassment; Racism and Acts of Intolerance; Smoking.

§ 13.9 PREFERENCE IN EMPLOYMENT
§ 13.9.1 In the employment of labor to perform the work specified herein, preference shall be given to citizens of the United States, who are, and continuously for three months prior to the date hereof have been residents of the labor market areas, as established by the Labor Commissioner in which said work is to be done; and if no such qualified persons are available, then to citizens who have continuously resided in the county in which the work is to be performed for at least three months prior to the date hereof and then to citizens of the State who have continuously resided in the State at least three months prior to the date hereof. In no event shall said provisions be deemed to abrogate or supersede in any manner any provision regarding residence requirements contained in a Collective Bargaining Agreement to which the Contractor is a party.

§ 13.10 MINIMUM WAGE RATES
§ 13.10.1 If this project involves new construction of a building or other structure or improvement and the total cost of all Work to be performed by Contractors and Subcontractors is $400,000 or more or if the project involves remodeling, refurbishing, rehabilitation, alteration or repair of a building or other structure or improvement and such total cost is $100,000 or more then:

.1 The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund as defined in Subsection (i) of Section 31-53 of the Connecticut General Statutes shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such project is being constructed. Any

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Contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each payday.

§ 13.10.2 The State of Connecticut Labor Department Wage Schedule where required shall be provided with these documents typically with the Bidding Documents, or will be incorporated in the Contract Documents as an Addendum. The Contractor agrees to accept the current prevailing wage scale as well as any annual adjustment to the prevailing wage scale as provided by the Connecticut Department of Labor. Wage Rates will be posted each July 1st on the Department of Labor's website: www.ctdol.state.ct.us. Such prevailing wage adjustment will not be considered a basis for an annual contract amendment. The schedule is deemed to reflect customary or prevailing wages for this project and is hereby incorporated and made a part of the Contract Documents. Wage Rates shall be paid pursuant to Sections 31-53 and 31-54 of the Connecticut General Statutes and any regulations issued there under.

§ 13.11 HOURS OF LABOR PERMITTED

§ 13.11.1 Pursuant to Section 31-57 of the Connecticut General Statutes, no person shall be employed to work or be permitted to work more than eight hours in any day or more than forty hours in any week on any work provided for in the Contract. The operation of such limitation of hours of work may be suspended during an emergency upon the approval of the Owner Representative.

§ 13.12 EXAMINING AND COPYING CONTRACTOR'S RECORDS

§ 13.12.1 The Contractor shall permit the Owner or its duly authorized representative to examine and copy books and records of the Contractor relative to charges for extra work, alleged breaches of contract, settlement of claims, or any other matter involving the Contractor's demand for added compensation from the Owner. The Contractor shall also permit such examination and copying of his records as the Owner may deem necessary, excepting papers and records preceding the execution of the Contract that are not a matter of record with the Owner, in order to determine that the Contractor has complied with all laws and regulations pertaining to the Contract, such as but not limited to Labor Compliance, Affirmative Action Program and Equal Employment Opportunity.

§ 13.12.2 The Contractor further agrees that he shall keep all records relating to this Contract until the expiration of six (6) years after final payment under this Contract is made, or six (6) months after settlement of any disputes whichever may be later.

§ 13.12.3 The Contractor further agrees that he and his Subcontractors shall permit the Owner, at its own expense, by its duly authorized representatives, to inspect and audit all their data, records and files pertaining to this Contract.

§ 13.13 SYSTEM LAYOUT DRAWING

§ 13.13.1 System layouts indicated on the on the drawings are generally diagrammatic and locations and arrangements of items are approximate. Exact routing of conduit, wiring, location of fixtures, outlets, panels, piping, valves and all other equipment shall be governed by the structural conditions and obstructions. The entire layout shall be followed as closely as possible and the right is reserved by the Owner to reasonably change the locations to accommodate any conditions which may arise during the progress of the work without additional compensation to the Contractors.

§ 13.14 GUARANTY OF PERFORMANCE

§ 13.14.1 If the Contractor has submitted the financial statement of a parent or other affiliated entity in its Proposers Qualification Statement, or if pre-qualified, its application for pre-qualification and has also indicated in that submission that such parent or affiliate will guarantee the performance of the Contract, then the parent or affiliate shall execute, simultaneously, with the Contractor's execution of the Contract, a Guaranty in a form provided by and acceptable to the Owner.

§13.15 JOINT VENTURE

§ 13.15.1 If the Contractor is a joint venture, each joint venture partner shall be jointly, severally and individually responsible to the Owner for the performance of any and all obligations of the Contractor encompassed by this contract or as required by applicable law, and each joint venture partner shall be jointly, severally and individually liable to the Owner for any failures to perform such obligations in accordance with the contract or applicable law. In its dealings with the Owner, each joint venture partner shall have full authority to act in behalf of and bind the joint venture and any other joint venture partner. Each joint venture partner shall be considered to be the agent of the joint

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venture and of any other joint venture partner.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

.1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped; or

.2 An act of government, such as a declaration of national emergency that requires all Work to be stopped.

.3 Not Used.

.4 Not Used.

§ 14.1.2 Not Used.

§ 14.1.3 If one of the reasons described in Section 14.1.1 exists, the Contractor may, upon seven (7) days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery.

§ 14.1.4 If the Work is stopped for a period of sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven (7) additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may, without prejudice to or waiving any other right or remedy of the Owner, terminate the Contract if the Contractor

.1 refuses or fails to supply enough properly skilled workers or proper materials;

.2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;

.3 disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority;

.4 otherwise is guilty of substantial breach of a provision of the Contract Documents;

.5 Fails to furnish the Owner with assurances satisfactory to the Owner evidencing the Contractor's ability to complete the Work in compliance with all requirements of the Contract Documents;

.6 Refuses or fails to prosecute the Work or any separable part, with the diligence that will insure its completion within the time specified in this Contract including any duly authorized extension, or fails to compete the Work within said period; or

.7 Fails to comply with laws, rules, regulations, or directives regarding job site safety; or to comply with the provisions of the Owner's Contractor Environmental Health and Safety Manual , or orders or directives regarding safety issued by the Owner pursuant to the Contract.

§ 14.2.2 When any of the above reasons exist, the Owner, with advice of the Architect and upon certification by the Initial Decision Maker, determines that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven (7) days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

.1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

.2 Accept assignment of subcontracts pursuant to Section 5.4;

.3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work; and

.4 Terminate the Contractor's right to proceed with a separate part of the Work if the Owner so elects.

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§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be retained by the Owner. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect and Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause and without prejudice to or waiving any other right or remedy of the Owner, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

.1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or

.2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, without prejudice or waiving any other right or remedy of the Owner, terminate the Contract in whole or in part for the Owner's convenience and without cause. Termination by the Owner under this Section shall be by a Notice of Termination delivered to the Contractor specifying the extent of termination and the effective date.

§ 14.4.2 Upon receipt of a Notice of Termination for convenience, the Contractor shall immediately, in accordance with instructions from the Owner, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this Section:

.1 Cease operations as specified in the notice;

.2 Place no further orders and enter into no further Subcontracts for materials, labor, services or facilities except as necessary to complete continued portions of the Contract;

.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

.4 Proceed to complete the performance of Work not terminated;

.5 Take actions that may be necessary or that the Owner may direct for the protection and preservation of the terminated Work.

§ 14.4.3 Upon such termination, the Contractor shall recover as its sole remedy, payment for Work properly performed in connection with the terminated portion of the Work prior to the effective date of termination and for items properly and timely purchased or fabricated off the Project site, delivered and stored in accordance with the Owner's instructions plus demobilization costs. The Contractor hereby waives and forfeits all other claims for payment and damages, including without limitation, anticipated profits.

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§14.4.4 The Owner shall be credited for (1) payments previously made to the Contractor for the terminated portion of the Work; (2) claims which the Owner has against the Contractor under the Contract and (3) the value of the materials, supplies, equipment or other items that are to be disposed of by the Contractor that are part of the Contract Sum.

§14.4.5 The payment to the Contractor pursuant to this Section may not exceed the total Contract Price as reduced by:

.1 The amount of payments previously made
.2 The Contract price of work not terminated.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension or time, and/or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by the Contractor must be initiated by written notice to the Owner Representative as described in Section 1.1.1.1 and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by the Contractor must be initiated within twenty-one (21) days after occurrence of the event giving rise to such Claim or within fourteen (14) days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims may also be reserved by the Contractor in writing within the time limits set forth in this Section 15.1.2. If a Claim is reserved, the Resolution of Claims and Disputes procedures described in Article 15 shall not commence until a written notice from the Contractor is received by the Owner Representative. No such claim shall be valid unless so made. Any notice of Claim or reservation of Claim must clearly identify the alleged cause and the nature of the Claim and include data and information then available to the claimant that will facilitate prompt verification and evaluation of the Claim.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

§ 15.1.4.1 If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§15.1.4.2 If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be made in accordance with the provisions of this Article 15.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. No such claim shall be valid unless made in accordance with the provisions of this Article 15. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

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§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES
NOT USED.

§ 15.1.7 **Injury or Damage to Person or Property.** If the Contractor suffers injury or damage to person or property because of an act or omission of the Owner Representative, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding twenty-one (21) days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 15.1.8 **Claims for Concealed or Unknown Conditions:** If, upon or subsequent to the Contractor's and its Subcontractors' site visits and performance of the tests, examinations and inspections required by Section 3.2.2, the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor will promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 5 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different in the respects noted above and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. Any claim by the Contractor in opposition to such determination must be made within 21 days after the Architect has given notice of the recommendation. The Owner Representative will have the final authority to accept or reject the Architect's recommendations, which decision by the Owner Representative shall be subject to further proceedings pursuant to Article 15.

§ 15.2 INITIAL DECISION

§ 15.2.1 Claims by the Contractor, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the AIA 101-2007 Section 6.1 of the Contract. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, regardless of (1) whether such matters relate to execution and progress of the Work, or (2) the extent to which the Work has been completed. The decision by the Initial Decision Maker in response to a Claim shall not be a condition precedent to arbitration or litigation in the event (1) the position of Initial Decision Maker is vacant, (2) the Contractor has not provided evidence or (3) the Initial Decision Maker has failed to take action required under Section 15.2.2 within thirty (30) days after the Claim is made.

§ 15.2.2 The Initial Decision Maker will review Claims by the Contractor and within thirty (30) days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims of the Contractor, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim of the Contractor or to furnish additional supporting data, such party shall respond, within ten (10) days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

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§ 15.2.4.1 If a Claim of the Contractor has not been resolved after consideration of the foregoing, the Initial Decision Maker will render a written decision on the claim, including any change in the Contract Sum or Contract Time or both, which decision shall be final and binding but subject to meeting and mediation pursuant to Section 15.3 of this document and arbitration or litigation pursuant to Connecticut General Statutes Section 4-61 and Section 15.4 of this Contract to the extent applicable.

§ 15.2.5 NOT USED.

§ 15.2.6 NOT USED.

§ 15.2.6.1 NOT USED.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 NOT USED.

§ 15.3 MEDIATION

§ 15.3.1 Claims of the Contractor except those waived as provided for in Section 9.10.5 shall be submitted to the meeting and mediation process described in the Sections which follow, prior to and as a precondition to the Contractor pursuing any other available remedy. Claims by the Owner, at the option of the Owner, may be submitted to such meeting process and/or mediation process, and, in such event, Contractor shall be required to submit to and participate in such a meeting and/or mediation. The meeting shall be between the parties and attended by individuals with decision-making authority regarding the dispute, to attempt in good faith to negotiate a resolution of the dispute.

§ 15.3.2 The meeting referenced in Section 15.3.1 shall be held promptly, but not less than fourteen (14) calendar days after a party's request for the meeting. The Contractor shall not submit any claim to mediation in accordance with the provisions of Sections 15.3.1 through 15.3.6 until fourteen (14) calendar days after the date of the meeting.

§ 15.3.3 In connection with any such mediation, a request for mediation shall be made in writing, delivered to the other party to the Contract. The request may be made concurrently with the filing of applicable binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of sixty (60) calendar days from the date of filing, unless stayed for a different period of time by agreement of the parties or as modified by court order.

§ 15.3.4 The parties will jointly appoint a mutually acceptable mediator, seeking assistance in such regard from a mutually agreed upon dispute resolution entity if they have been unable to agree upon such appointment within twenty (20) calendar days from the submittal of the request for mediation. If the parties are unable to agree on the dispute resolution entity, the mediation shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of this Contract.

§ 15.3.5 The parties agree to participate in good faith in the mediation and negotiations related thereto for a period of sixty (60) calendar days from the date of submittal, or until the parties reach impasse as evidenced by a letter from a party to the mediator, whichever first occurs. If the parties are not successful in resolving the dispute through mediation, then the parties may pursue other legal remedies available to them.

§ 15.3.6 Should the Owner request, the Contractor agrees to participate as a party in any mediation proceeding between the Owner and the Architect or other Consultant for the Project in which construction deficiencies, contract breaches, or other alleged wrongful acts by the Contractor are alleged.

§ 15.4 ARBITRATION OR LITIGATION OF CLAIMS

§ 15.4.1 NOT USED.

§ 15.4.1.1 NOT USED.

§ 15.4.2 NOT USED.

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§ 15.4.3 NOT USED.

§ 15.4.4 Should the Owner have a claim against the Contractor, the parties agree that the Owner, whether or not it elects to proceed with the meeting process or mediation described in Section 15.3, shall have the option of either prosecuting the claim against the Contractor in an appropriate court of general jurisdiction, or by arbitrating the claim by filing a demand for arbitration pursuant to the rules of a dispute resolution entity agreed upon by the parties, except that if the parties cannot agree upon a dispute resolution entity, the rules of the American Arbitration Association shall apply.

§ 15.4.5 Should the Contractor have a claim against the Owner which has not been resolved by mediation or any other procedure set forth in this Contract, the Contractor's rights to assert its claim against the Owner shall be subject to the provisions of Connecticut General Statutes Section 4-61.

§ 15.4.6 CONSOLIDATION OR JOINDER

§ 15.4.6.1 Should either the Contractor institute an arbitration to the extent authorized by Section 4-61 of the Connecticut General Statutes or the Owner institute an arbitration as set forth herein, the Contractor agrees that any such arbitration may be consolidated, at the Owner's discretion, with any arbitration proceeding involving the Owner and the Architect or other Consultant for the Project in which construction or design deficiencies, breaches of contract, or any other alleged wrongful acts by the Contractor or Architect are alleged.

§ 15.4.6.2 NOT USED.

§ 15.4.6.3 NOT USED.

§ 16 CODE OF CONDUCT

§ 16.1 In furtherance of its longstanding commitment to fundamental human rights, to the dignity of all people, and to the environment, the Owner has developed the Code of Conduct for University of Connecticut Vendors (the "Vendor Code of Conduct"). The Contractor hereby acknowledges receipt of the Vendor Code of Conduct. A copy of the Vendor Code of Conduct is available at http://csr.uconn.edu/. The Vendor Code of Conduct is hereby incorporated herein by reference to the extent the Contractor is required to comply with the same pursuant to this section.

The Contractor agrees to comply with the "Principal Expectations" described in the Vendor Code of Conduct. The Contractor further agrees to comply with the "Preferential Standards" described in the Vendor Code of Conduct, to the extent a commitment to so comply, or a representation of compliance, was provided by the Contractor to the Owner in writing. Any such commitment or representation is hereby incorporated herein by reference. The Contractor agrees to provide the Owner with such evidence of Contractor's compliance with this section as the Owner reasonably requests and to, at the request of the Owner, provide a comprehensive, annual summary report of the Contractor's corporate social and environmental practices.

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This Agreement is entered into as of December 23, 2013 and is executed in at least three originals, of which one is to be delivered to the Contractor, one to the Architect for use in the administration of the Contract, and the remainder to the Owner.

OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
Richard D. Gray Executive VP for Administration & CFO	Dennis Reilly Chief Financial Officer Fusco Corporation
Duly Authorized: CGS §§ 10a-109d; 10a-109n *(Printed name and title)*	*(Printed name and title)*
Date: 12/23/2013	Date: 12/23/13

(Paragraphs deleted)

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NUMBER	SHEET NAME	REV #	LATEST ISSUE
ARCHITECTURAL			
A0.00-I	COVER VOLUME I		BID DOCUMENTS
A0.01	DRAWING LIST	1	BID ADDENDUM 01
A0.02	SYMBOLS AND ABBREVIATIONS		BID DOCUMENTS
A0.03	CODE SUMMARY		BID DOCUMENTS
A0.04	BASEMENT, 1 THROUGH 3 FLOORS CODE COMPLIANCE PLANS		BID DOCUMENTS
A0.05	4 THROUGH PENTHOUSE FLOORS CODE COMPLIANCE PLANS		BID DOCUMENTS
SURVEY			
SV-1	EXISTING CONDITIONS SURVEY		BID DOCUMENTS
SV-2	EXISTING CONDITIONS SURVEY		BID DOCUMENTS
CIVIL			
			BID DOCUMENTS
C101	SITE DEMOLITION PLAN		BID DOCUMENTS
C201	SITE LAYOUT PLAN		BID DOCUMENTS
C301	GRADING AND DRAINAGE PLAN		BID DOCUMENTS
C401	SITE UTILITIES		BID DOCUMENTS
C501	EROSION AND SEDIMENTATION CONTROL PLAN		BID DOCUMENTS
C601	DETAILS		BID DOCUMENTS
C602	DETAILS		BID DOCUMENTS
C603	DETAILS		BID DOCUMENTS
C604	DETAILS		BID DOCUMENTS
FOUNDATION			
FD1.0	FOUNDATION & UNDERSLAB DRAIN PLAN		BID DOCUMENTS
LANDSCAPE			
L0.00A	TREE PROTECTION AND TRANSPLANTING PLAN		BID DOCUMENTS
L1.00A	SITE GRADING PLAN		BID DOCUMENTS
L2.00A	SITE MATERIALS PLAN		BID DOCUMENTS
L2.01A	SITE MATERIALS ENLARGEMENTS		BID DOCUMENTS
L3.00A	SITE LAYOUT PLAN		BID DOCUMENTS
L3.01A	GUARDRAIL LAYOUT		BID DOCUMENTS
L3.02A	PAVER LAYOUT		BID DOCUMENTS
L4.00A	SITE PLANTING SOILS PLAN		BID DOCUMENTS
L5.00A	SITE PLANTING PLAN		BID DOCUMENTS
L5.01A	GREENROOF PLANTING PLAN		BID DOCUMENTS
L5.02A	PLANTING DETAILS		BID DOCUMENTS
L6.00A	SITE DETAILS		BID DOCUMENTS
L6.01A	WALL AND RAIL DETAILS		BID DOCUMENTS
ARCHITECTURAL			
A2.00	BASEMENT PLAN	1	BID ADDENDUM 01
A2.01	FIRST FLOOR PLAN	1	BID ADDENDUM 01
A2.02	SECOND FLOOR PLAN	1	BID ADDENDUM 01
A2.03	THIRD FLOOR PLAN	1	BID ADDENDUM 01
A2.04	FOURTH FLOOR PLAN	1	BID ADDENDUM 01
A2.05	FIFTH FLOOR PLAN	1	BID ADDENDUM 01
A2.06	PENTHOUSE PLAN	1	BID ADDENDUM 01
A2.07	ROOF PLAN		BID DOCUMENTS
A3.01	EXTERIOR ELEVATION NORTH & STAIR BULKHEAD		BID DOCUMENTS
A3.02	EXTERIOR ELEVATION SOUTH		BID DOCUMENTS
A3.03	EXTERIOR ELEVATIONS EAST WEST		BID DOCUMENTS
A3.04	EXTERIOR PARTIAL ELEVATIONS WEST		BID DOCUMENTS
A3.05	EXTERIOR PARTIAL ELEVATIONS EAST		BID DOCUMENTS
A4.01	EXTERIOR WALL SECTIONS		BID DOCUMENTS
A4.02	EXTERIOR WALL SECTIONS		BID DOCUMENTS
A4.03	VESTIBULE A & CANOPY		BID DOCUMENTS
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A5.01	ELEVATOR LAYOUT		BID DOCUMENTS
A5.03	STAIR A PLANS AND SECTIONS	1	BID ADDENDUM 01
A5.04	STAIR B PLANS AND SECTIONS	1	BID ADDENDUM 01

A5.05	STAIR A DETAILS	1	BID ADDENDUM 01
A5.06	STAIR B DETAILS	1	BID ADDENDUM 01
A5.07	STAIR C PLANS, SECTIONS AND DETAILS	1	BID ADDENDUM 01
A6.00	EXTERIOR ENVELOPE WALL & ROOF ASSEMBLY TYPES	1	BID ADDENDUM 01
A6.01	EXTERIOR DETAILS		BID DOCUMENTS
A6.02	EXTERIOR DETAILS		BID DOCUMENTS
A6.03	EXTERIOR DETAILS		BID DOCUMENTS
A6.04	EXTERIOR DETAILS		BID DOCUMENTS
A6.05	EXTERIOR DETAILS		BID DOCUMENTS
A6.06	EXTERIOR DETAILS		BID DOCUMENTS
A6.07	EXTERIOR DETAILS		BID DOCUMENTS
A6.08	EXTERIOR DETAILS		BID DOCUMENTS
A6.09	EXTERIOR DETAILS		BID DOCUMENTS
A6.10	EXTERIOR PLAN DETAILS FIRST FLOOR		BID DOCUMENTS
A6.11	EXTERIOR PLAN DETAILS FIRST FLOOR		BID DOCUMENTS
A6.12	EXTERIOR PLAN DETAILS SECOND TO FIFTH FLOOR		BID DOCUMENTS
A6.13	EXTERIOR PLAN DETAILS SECOND TO FIFTH FLOOR		BID DOCUMENTS
A6.14	EXTERIOR PLAN DETAIL PENTHOUSE & BULKHEAD		BID DOCUMENTS
A6.30	EXTERIOR SECTION DETAILS	1	BID ADDENDUM 01
A6.31	EXTERIOR SECTION DETAILS		BID DOCUMENTS
A6.32	EXTERIOR SECTION DETAILS		BID DOCUMENTS
A6.33	EXTERIOR SECTION DETAILS		BID DOCUMENTS
A6.50	EXTERIOR ROOF DETAILS	1	BID ADDENDUM 01
A6.70	SITE AND VESTIBULE DETAILS		BID DOCUMENTS
A6.71	CANOPY & MISC. DETAILS		BID DOCUMENTS
A7.00	INTERIOR COLOR SCHEDULE & TYP. TILE WALL DETAILS	1	BID ADDENDUM 01
A7.01	LOBBY, GATHERING SPACE & SMART BLDG DISPLAY		BID DOCUMENTS
A7.02	INTERIOR ELEVATIONS FIRST FLOOR		BID DOCUMENTS
A7.03	INTERIOR ELEVATIONS FIRST FLOOR		BID DOCUMENTS
A7.04	INTERIOR ELEVATIONS	1	BID ADDENDUM 01
A7.06	DECORATIVE GLASS SCREEN WALL IN LOBBY		BID DOCUMENTS
A7.07	GATHERING SPACE MOVABLE VIDEO TABLE		BID DOCUMENTS
A7.09	INTERIOR DETAILS	1	BID ADDENDUM 01
A7.10	INTERIOR DETAILS	1	BID ADDENDUM 01
A7.11	INTERIOR DETAILS	1	BID ADDENDUM 01
A7.12	INTERIOR DETAILS		BID DOCUMENTS
A7.13	INTERIOR SIGNAGE		BID DOCUMENTS
A7.25	RESTROOMS	1	BID ADDENDUM 01
A7.50	INTERIOR PARTITION TYPES		BID DOCUMENTS
A7.51	DOORS, FRAMES & THRESHOLDS		BID DOCUMENTS
A8.00	BASEMENT REFLECTED CEILING PLAN		BID DOCUMENTS
A8.01	FIRST FLOOR REFLECTED CEILING PLAN	1	BID ADDENDUM 01
A8.02	SECOND FLOOR REFLECTED CEILING PLAN	1	BID ADDENDUM 01
A8.03	THIRD FLOOR REFLECTED CEILING PLAN	1	BID ADDENDUM 01
A8.04	FOURTH FLOOR REFLECTED CEILING PLAN	1	BID ADDENDUM 01
A8.05	FIFTH FLOOR REFLECTED CEILING PLAN	1	BID ADDENDUM 01
A8.06	PENTHOUSE REFLECTED CEILING PLAN		BID DOCUMENTS
A8.07	CEILING DETAILS		BID DOCUMENTS
A8.08	GATHERING ROOM RCP AND DETAILS		BID DOCUMENTS
A8.09	CEILING DETAILS	1	BID ADDENDUM 01
A8.10	T-SLOTTED ALUMINUM FRAME CEILING DETAILS		BID DOCUMENTS
A8.11	ENLARGED CEILING PLANS	1	BID ADDENDUM 01
A8.12	ENLARGED CEILING PLANS		BID DOCUMENTS
A8.13	ENLARGED CEILING PLAN	1	BID ADDENDUM 01
A9.01	LAB CASEWORK SCHEDULE	1	BID ADDENDUM 01
A9.02	1ST FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.03	1ST FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.04	1ST FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS		BID DOCUMENTS
A9.05	1ST FLOOR WATER LAB		BID DOCUMENTS
A9.06	2ND FLOOR ENLARGED PARTIAL PLAN AND ELEVATIONS	1	BID ADDENDUM 01
A9.07	2ND FLOOR ELEVATIONS	1	BID ADDENDUM 01
A9.08	2ND FLOOR ENLARGED PARTIAL PLAN AND ELEVATIONS	1	BID ADDENDUM 01
A9.09	2ND FLOOR ENLARGED PARTIAL PLAN AND ELEVATIONS	1	BID ADDENDUM 01
A9.10	2ND FLOOR ENLARGED PARTIAL PLANS & ELEVATIONS	1	BID ADDENDUM 01
A9.11	3RD FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.12	3RD FLOOR ELEVATIONS	1	BID ADDENDUM 01
A9.13	3RD FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.14	3RD FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.15	3RD FLOOR ENLARGED PARTIAL PLANS & ELEVATIONS	1	BID ADDENDUM 01
A9.16	4TH FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.17	4TH FLOOR ELEVATIONS	1	BID ADDENDUM 01
A9.18	4TH FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.19	4TH FLOOR ELEVATIONS	1	BID ADDENDUM 01
A9.20	4TH FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.21	4TH FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.22	5TH FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01

A9.23	5TH FLOOR ELEVATIONS		BID DOCUMENTS
A9.24	5TH FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.25	5TH FLOOR ELEVATIONS		BID DOCUMENTS
A9.26	5TH FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS		BID DOCUMENTS
A9.27	5TH FLOOR ENLARGED PARTIAL PLAN & ELEVATIONS	1	BID ADDENDUM 01
A9.28	LAB BENCH PLANS & ELEVATIONS		BID DOCUMENTS
A9.29	LAB BENCH PLANS & ELEVATIONS		BID DOCUMENTS
A9.29A	LAB BENCH PLANS & ELEVATIONS	1	BID ADDENDUM 01
A9.30	LAB BENCH PLANS & ELEVATIONS		BID DOCUMENTS
A9.31	DETAILS	1	BID ADDENDUM 01
A9.32	DETAILS		BID DOCUMENTS
A9.33	DETAILS		BID DOCUMENTS
A9.34	DETAILS		BID DOCUMENTS
A9.35	UMBILICAL PLAN DETAILS		BID DOCUMENTS
A9.36	UMBILICAL PLAN DETAILS		BID DOCUMENTS
A9.37	DETAILS		BID DOCUMENTS
A9.41	FIRST FLOOR FINISH PLAN		BID DOCUMENTS
A9.42	SECOND FLOOR FINISH PLAN		BID DOCUMENTS
A9.43	THIRD FLOOR FINISH PLAN		BID DOCUMENTS
A9.44	FOURTH FLOOR FINISH PLAN		BID DOCUMENTS
A9.45	FIFTH FLOOR FINISH PLAN		BID DOCUMENTS
A9.46	FLOORING PATTERN DETAILS	1	BID ADDENDUM 01
A9.50	BID ADDENDUM 01 ALTERNATES	1	BID ADDENDUM 01

FAÇADE MAINTENANCE

FM-101	FACADE MAINTENANCE COMPOSITE ROOF PLAN EQUIPMENT LAYOUT		BID DOCUMENTS
FM-201	FACADE MAINTENANCE EQUIPMENT DETAIL		BID DOCUMENTS

STRUCTURAL

S-100	FOUNDATION PLAN	1	BID ADDENDUM 01
S-101	1ST FLOOR FRAMING PLAN	1	BID ADDENDUM 01
S-102	2ND FLOOR FRAMING PLAN	1	BID ADDENDUM 01
S-103	3RD FLOOR FRAMING PLAN	1	BID ADDENDUM 01
S-104	4TH FLOOR FRAMING PLAN	1	BID ADDENDUM 01
S-105	5TH FLOOR FRAMING PLAN	1	BID ADDENDUM 01
S-106	PENTHOUSE FRAMING PLAN	1	BID ADDENDUM 01
S-107	PENTHOUSE ROOF FRAMING PLAN		BID DOCUMENTS
S-201	FOUNDATION SECTIONS AND DETAILS I	1	BID ADDENDUM 01
S-202	FOUNDATION SECTIONS AND DETAILS II	1	BID ADDENDUM 01
S-301	SECTIONS AND DETAILS I		BID DOCUMENTS
S-302	SECTIONS AND DETAILS II	1	BID ADDENDUM 01
S-303	SECTIONS AND DETAILS III	1	BID ADDENDUM 01
S-304	SECTIONS AND DETAILS IV		BID DOCUMENTS
S-401	LATERAL BRACINGS I		BID DOCUMENTS
S-402	LATERAL BRACINGS II		BID DOCUMENTS
S-501	COLUMN SCHEDULE I		BID DOCUMENTS
S-502	COLUMN SCHEDULE II		BID DOCUMENTS
S-600	GENERAL NOTES		BID DOCUMENTS
S-601	TYPICAL DETAILS I		BID DOCUMENTS
S-602	TYPICAL DETAILS II	1	BID ADDENDUM 01
S-603	TYPICAL DETAILS III		BID DOCUMENTS
S-604	TYPICAL DETAILS IV		BID DOCUMENTS
S-605	BRACING DETAILS		BID DOCUMENTS
S-606	TYPICAL DETAILS V	1	BID ADDENDUM 01

VOLUME II

ARCHITECTURAL

A0.00-I	COVER VOLUME II		BID DOCUMENTS
A0.01	DRAWING LIST	1	BID ADDENDUM 01

HVAC

H0.00	HVAC LEGEND		BID DOCUMENTS
H0.01	HVAC SCHEDULES		BID DOCUMENTS
H0.02	HVAC SCHEDULES	1	BID ADDENDUM 01
H0.11	HVAC SITE DETAILS	1	BID ADDENDUM 01
H1.00	BASEMENT DUCTWORK PLAN		BID DOCUMENTS
H1.01	FIRST FLOOR DUCTWORK PLAN	1	BID ADDENDUM 01
H1.02	SECOND FLOOR DUCTWORK PLAN	1	BID ADDENDUM 01
H1.03	THIRD FLOOR DUCTWORK PLAN	1	BID ADDENDUM 01
H1.04	FOURTH FLOOR DUCTWORK PLAN	1	BID ADDENDUM 01

H1.05	FIFTH FLOOR DUCTWORK PLAN		BID DOCUMENTS
H1.06	PENTHOUSE DUCTWORK PLAN		BID DOCUMENTS
H1.07	ROOF DUCTWORK PLAN		BID DOCUMENTS
H2.00	BASEMENT PLAN PIPING	1	BID ADDENDUM 01
H2.01	FIRST FLOOR PIPING PLAN		BID DOCUMENTS
H2.02	SECOND FLOOR PIPING PLAN	1	BID ADDENDUM 01
H2.03	THIRD FLOOR PIPING PLAN	1	BID ADDENDUM 01
H2.04	FOURTH FLOOR PIPING PLAN	1	BID ADDENDUM 01
H2.05	FIFTH FLOOR PIPING PLAN	1	BID ADDENDUM 01
H2.06	PENTHOUSE PIPING PLAN		BID DOCUMENTS
H2.07	ROOF PIPING PLAN		BID DOCUMENTS
H3.00	HVAC AIRFLOW DIAGRAM	1	BID ADDENDUM 01
H3.01	HVAC CHILLED WATER FLOW DIAGRAM		BID DOCUMENTS
H3.02	HVAC STEAM FLOW DIAGRAM	1	BID ADDENDUM 01
H3.03	HVAC HOT WATER FLOW DIAGRAM		BID DOCUMENTS
H4.01	HVAC SECTIONS		BID DOCUMENTS
H4.02	HVAC BASEMENT ENLARGED PLAN	1	BID ADDENDUM 01
H5.00	AHU DETAILS		BID DOCUMENTS
H5.01	HVAC DETAILS		BID DOCUMENTS
H5.02	HVAC DETAILS		BID DOCUMENTS
H5.03	HVAC DETAILS		BID DOCUMENTS

PLUMBING

P0.01	PLUMBING COVER SHEET		BID DOCUMENTS
P0.02	PLUMBING SCHEDULES		BID DOCUMENTS
P0.03	PLUMBING DETAILS		BID DOCUMENTS
P0.04	PLUMBING DETAILS	1	BID ADDENDUM 01
P0.05	PLUMBING DETAILS		BID DOCUMENTS
P1.00	PLUMBING SUPPLY BASEMENT FLOOR PLAN		BID DOCUMENTS
P1.01	PLUMBING SUPPLY FIRST FLOOR PLAN		BID DOCUMENTS
P1.02	PLUMBING SUPPLY SECOND FLOOR PLAN	1	BID ADDENDUM 01
P1.03	PLUMBING SUPPLY THIRD FLOOR PLAN	1	BID ADDENDUM 01
P1.04	PLUMBING SUPPLY FOURTH FLOOR PLAN	1	BID ADDENDUM 01
P1.05	PLUMBING SUPPLY FIFTH FLOOR PLAN	1	BID ADDENDUM 01
P1.06	PLUMBING SUPPLY PENTHOUSE PLA		BID DOCUMENTS
P1.07	PLUMBING SUPPLY ROOF PLAN		BID DOCUMENTS
P2.00	PLUMBING DRAINAGE BASEMENT FLOOR PLAN	1	BID ADDENDUM 01
P2.00U	PLUMBING DRAINAGE UNDERGROUND PLAN	1	BID ADDENDUM 01
P2.01	PLUMBING DRAINAGE FIRST FLOOR PLAN	1	BID ADDENDUM 01
P2.02	PLUMBING DRAINAGE SECOND FLOOR PLAN	1	BID ADDENDUM 01
P2.03	PLUMBING DRAINAGE THIRD FLOOR PLAN	1	BID ADDENDUM 01
P2.04	PLUMBING DRAINAGE FOURTH FLOOR PLAN	1	BID ADDENDUM 01
P2.05	PLUMBING DRAINAGE FIFTH FLOOR PLAN	1	BID ADDENDUM 01
P2.06	PLUMBING DRAINAGE PENTHOUSE PLAN		BID DOCUMENTS
P2.07	PLUMBING DRAINAGE ROOF PLAN		BID DOCUMENTS
P3.00	SANITARY AND LABORATORY WASTE RISER DIAGRAMS	1	BID ADDENDUM 01
P3.01	SANITARY AND LABORATORY WASTE RISER DIAGRAMS	1	BID ADDENDUM 01
P3.02	RAINWATER RISER DIAGRAM		BID DOCUMENTS
P3.03	DOMESTIC AND NON POTABLE WATER RISER DIAGRAM		BID DOCUMENTS
P3.04	DOMESTIC AND NON POTABLE WATER RISER DIAGRAM		BID DOCUMENTS
P3.05	LABORATORY GASES RISER DIAGRAM		BID DOCUMENTS
P3.06	LABORATORY GASES RISER DIAGRAM		BID DOCUMENTS
P3.07	RODI RISER DIAGRAM		BID DOCUMENTS
P4.00	PLUMBING PART PLAN 2ND FLOOR NORTH		BID DOCUMENTS
P4.01	PLUMBING PART PLAN 2ND FLOOR SOUTH		BID DOCUMENTS
P4.02	PLUMBING PART PLAN 3RD FLOOR NORTH		BID DOCUMENTS
P4.03	PLUMBING PART PLAN 3RD FLOOR SOUTH		BID DOCUMENTS
P4.04	PLUMBING PART PLAN 4TH FLOOR NORTH		BID DOCUMENTS
P4.05	PLUMBING PART PLAN 4TH FLOOR NORTH		BID DOCUMENTS
P4.06	PLUMBING PART PLAN 5TH FLOOR NORTH		BID DOCUMENTS
P4.07	PLUMBING PART PLAN 5TH FLOOR SOUTH		BID DOCUMENTS

FIRE PROTECTION

FP0.01	FIRE PROTECTION COVER SHEET		BID DOCUMENTS
FP0.02	FIRE PROTECTION DETAILS		BID DOCUMENTS
FP1.00	FIRE PROTECTION BASEMENT PLAN		BID DOCUMENTS
FP1.01	FIRE PROTECTION FIRST FLOOR		BID DOCUMENTS
FP1.02	FIRE PROTECTION SECOND FLOOR		BID DOCUMENTS
FP1.03	FIRE PROTECTION THIRD FLOOR		BID DOCUMENTS
FP1.04	FIRE PROTECTION FOURTH FLOOR		BID DOCUMENTS
FP1.05	FIRE PROTECTION FIFTH FLOOR		BID DOCUMENTS
FP1.06	FIRE PROTECTION PENTHOUSE		BID DOCUMENTS
FP1.07	FIRE PROTECTION ROOF		BID DOCUMENTS
FP3.00	FIRE PROTECTION RISER DIAGRAM		BID DOCUMENTS

ELECTRICAL - FIRE ALARM

E-001	ELECTRICAL SYMBOL LIST. LEGEND & SCHEDULES	1	BID ADDENDUM 01
E-100	ELECTRICAL SITE PLAN		BID DOCUMENTS
E-101	ELECTRICAL BASEMENT LEVEL LIGHTING PLAN		BID DOCUMENTS
E-200	ELECTRICAL BASEMENT LIGHTING PLAN		BID DOCUMENTS
E-201	ELECTRICAL FLOOR 1 LIGHTING PLAN	1	BID ADDENDUM 01
E-202	ELECTRICAL FLOOR 2 LIGHTING PLAN	1	BID ADDENDUM 01
E-203	ELECTRICAL FLOOR 3 LIGHTING PLAN	1	BID ADDENDUM 01
E-204	ELECTRICAL FLOOR 4 LIGHTING PLAN	1	BID ADDENDUM 01
E-205	ELECTRICAL FLOOR 5 LIGHTING PLAN	1	BID ADDENDUM 01
E-206	ELECTRICAL PENTHOUSE LIGHITNG PLAN		BID DOCUMENTS
E-207	ELECTRICAL ROOFTOP LIGHTING PLAN		BID DOCUMENTS
E-300	ELECTRICAL BASEMENT POWER PLAN		BID DOCUMENTS
E-301	ELECTRICAL FLOOR 1 POWER PLAN	1	BID ADDENDUM 01
E-302	ELECTRICAL FLOOR 2 POWER PLAN	1	BID ADDENDUM 01
E-303	ELECTRICAL FLOOR 3 POWER PLAN	1	BID ADDENDUM 01
E-304	ELECTRICAL FLOOR 4 POWER PLAN	1	BID ADDENDUM 01
E-305	ELECTRICAL FLOOR 5 POWER PLAN	1	BID ADDENDUM 01
E-306	ELECTRICAL PENTHOUSE POWER PLAN		BID DOCUMENTS
E-307	ELECTRICAL ROOFTOP POWER PLAN		BID DOCUMENTS
E-501	ELECTRICAL NORMAL POWER RISER DIAGRAM	1	BID ADDENDUM 01
E-502	ELECTRICAL EMERGENCY POWER RISER DIAGRAM		BID DOCUMENTS
E-503	ELECTRICAL LIGHTING CONTROL ONE LINE DIAGRAM		BID DOCUMENTS
E-600	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-601	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-602	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-603	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-604	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-605	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-606	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-607	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-608	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-609	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-610	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-611	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-612	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-613	ELECTRICAL PANEL SCHEDULES	1	BID ADDENDUM 01
E-700	ELECTRICAL DETAILS		BID DOCUMENTS
E-701	LIGHTING CONTROL PANEL SCHEDULES		BID DOCUMENTS
FA-001	FIRE ALARM LEGEND		BID DOCUMENTS
FA-400	FIRE ALARM BASEMENT PLAN		BID DOCUMENTS
FA-401	FIRE ALARM FLOOR 1 PLAN		BID DOCUMENTS
FA-402	FIRE ALARM FLOOR 2 PLAN		BID DOCUMENTS
FA-403	FIRE ALARM FLOOR 3 PLAN		BID DOCUMENTS
FA-404	FIRE ALARM FLOOR 4 PLAN		BID DOCUMENTS
FA-405	FIRE ALARM FLOOR 5 PLAN		BID DOCUMENTS
FA-406	FIRE ALARM PENTHOUSE PLAN		BID DOCUMENTS
FA-407	FIRE ALARM ROOFTOP PLAN		BID DOCUMENTS
FA-500	FIRE ALARM RISER		BID DOCUMENTS
FA-600	DETAIL SHEET I OF II		BID DOCUMENTS
FA-601	DETAIL SHEET II OF II		BID DOCUMENTS

TELECOMMUNICATIONS

T001	COMMUNICATIONS LEGEND AND GENERAL NOTES	1	BID ADDENDUM 01
T100	COMMUNICATIONS BASEMENT PLAN	1	BID ADDENDUM 01
T101	COMMUNICATIONS FIRST FLOOR PLAN	1	BID ADDENDUM 01
T102	COMMUNICATIONS SECOND FLOOR PLAN	1	BID ADDENDUM 01
T103	COMMUNICATIONS THIRD FLOOR PLAN	1	BID ADDENDUM 01
T104	COMMUNICATIONS FOURTH FLOOR PLAN	1	BID ADDENDUM 01
T105	COMMUNICATIONS FIFTH FLOOR PLAN	1	BID ADDENDUM 01
T106	COMMUNICATIONS PENTHOUSE PLAN		BID DOCUMENTS
T107	COMMUNICATIONS ROOFTOP PLAN		BID DOCUMENTS
T301	COMMUNICATIONS GROUNDING & FIBER RISER DIAGRAMS	1	BID ADDENDUM 01
T302	COMMUNICATIONS COPPER & COAXIAL RISER DIAGRAMS	1	BID ADDENDUM 01
T601	COMMUNICATIONS PART PLANS AND ELEVATIONS		BID DOCUMENTS
T602	COMMUNICATIONS PART PLANS AND ELEVATIONS		BID DOCUMENTS
T603	COMMUNICATIONS PART PLANS AND ELEVATIONS		BID DOCUMENTS
T604	COMMUNICATIONS PART PLANS AND ELEVATIONS		BID DOCUMENTS
T605	COMMUNICATIONS PART PLANS AND ELEVATIONS		BID DOCUMENTS
T606	COMMUNICATIONS PART PLANS AND ELEVATIONS		BID DOCUMENTS
T607	COMMUNCATIONS RACK ELEVATION	1	BID ADDENDUM 01
T608	COMMUNCATIONS RACK ELEVATION	1	BID ADDENDUM 01
T609	COMMUNCATIONS RACK ELEVATION	1	BID ADDENDUM 01

T610	COMMUNCATIONS PART PLANS AND ELEVATIONS	1	BID ADDENDUM 01
T700	COMMUNICATIONS DETAILS		BID DOCUMENTS
T701	COMMUNICATIONS DETAILS	1	BID ADDENDUM 01
T702	COMMUNICATIONS DETAILS		BID DOCUMENTS
T703	COMMUNICATIONS DETAILS	1	BID ADDENDUM 01
T704	COMMUNICATIONS DETAILS		BID DOCUMENTS
T900	AV GATHERING/DISPLAY SPACE 121		BID DOCUMENTS
T901	AV SMART BUILDING DISPLAY 101		BID DOCUMENTS
T902	AV MEETING ROOM 114C		BID DOCUMENTS
T903	AV MEETING ROOM 104		BID DOCUMENTS
T904	AV MEETING ROOM 114A		BID DOCUMENTS
T905	AV MEETING ROOMS/BREAKOUT SPACE	1	BID ADDENDUM 01
T906	AV WATER LAB 108		BID DOCUMENTS
T907	AV VIRTUAL REALITY SPACE 106		BID DOCUMENTS
T908	AV CYBERPHYSICS 107		BID DOCUMENTS
T909	AV PANTRY / LUNCHROOM 204	1	BID ADDENDUM 01
T910	AV CGI COMPUTATIONAL TRAINING 304	1	BID ADDENDUM 01
T911	AV CGI LAB TRAINING 309BA	1	BID ADDENDUM 01

SECURITY

		BID DOCUMENTS
SEC-00	TITLE SHEET	BID DOCUMENTS
SEC-B	BASEMENT FLOOR SECURITY PLAN	BID DOCUMENTS
SEC-01	FIRST FLOOR SECURITY PLAN	BID DOCUMENTS
SEC-02	SECOND FLOOR SECURITY PLAN	BID DOCUMENTS
SEC-03	THIRD FLOOR SECURITY PLAN	BID DOCUMENTS
SEC-04	FOURTH FLOOR SECURITY PLAN	BID DOCUMENTS
SEC-05	FIFTH FLOOR SECURITY PLAN	BID DOCUMENTS
SEC-P	PENTHOUSE SECURITY PLAN	BID DOCUMENTS
SEC-R	ROOF SECURITY PLAN	BID DOCUMENTS
SEC-RIS	SECURITY RISER PLAN	BID DOCUMENTS
SEC-DET	SECURITY DOOR AND DEVICE DETAIL	BID DOCUMENTS
SEC-DET1	SECURITY DOOR HARDWARE SCHEDULE	BID DOCUMENTS

AUDIOVISUAL

AV000	AV DRAWING LIST & RESPONSIBILITY SCHEDULE	BID DOCUMENTS
AV001	AV GENERAL NOTES & LEGEND	BID DOCUMENTS
AV101	FLOOR 1 & 2 OVERALL PLAN AV SCOPE	BID DOCUMENTS
AV102	FLOOR 3 & 4 OVERALL PLAN AV SCOPE	BID DOCUMENTS
AV103	FLOOR 5 OVERALL PLAN AV SCOPE	BID DOCUMENTS
AV200	101 SMART BUILDING DISPLAY	BID DOCUMENTS
AV201	110B MEETING ROOM	BID DOCUMENTS
AV202	114A MEETING ROOM	BID DOCUMENTS
AV203	114C MEETING ROOM	BID DOCUMENTS
AV204	121 GATHERING/ DISPLAY PLAN & ELEVATIONS	BID DOCUMENTS
AV204.1	121 GATHERING/ DISPLAY SPACE CONDUIT RISER	BID DOCUMENTS
AV205	405 & 505 MEETING/ BREAKOUT SPACE ROOM	BID DOCUMENTS
AV206	108 WATER LAB PLAN, RCP & ELEVATIONS	BID DOCUMENTS
AV206.1	108 WATER LAB CONDUIT RISER & SECTION	BID DOCUMENTS
AV208	106 VIRTUAL REALITY LAB PLAN & RCP	BID DOCUMENTS
AV208.1	106 VIRTUAL REALITY LAB CONDUIT RISER	BID DOCUMENTS
AV209	107 CYBER PHYSICS LAB PLAN & RCP	BID DOCUMENTS
AV209.1	107 CYBER PHYSICS LAB CONDUIT RISER	BID DOCUMENTS
AV210	205 CONFERENCE ROOM	BID DOCUMENTS
AV211	MEETING/PANTRY & CGI COMPUTATIONAL TRAINING ROOM	BID DOCUMENTS
AV212	309BA - CGI LAB TRAINING ROOM	BID DOCUMENTS
AV213	DIGITAL SIGNAGE PLANS & CONDUIT RISERS	BID DOCUMENTS
AVA	AV DETAILS	BID DOCUMENTS
AVB	AV DETAILS	BID DOCUMENTS
AVC	AV DETAILS	BID DOCUMENTS

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SUBCONTRACTOR PERFORMANCE BOND **BOND NO.** Enter Bond #
CONSTRUCTION MANAGER CONTRACT

KNOW ALL MEN BY THESE PRESENTS:

That Enter Corporation Name, of Enter Address, (hereinafter called "the Principal"), as Principal, and Enter Surety Company a corporation duly established under the laws of the State of Enter Surety Company State. and duly authorized to transact business in the State of Connecticut (hereinafter called the Surety(ies)) as Surety(ies), are firmly bound and held unto The Fusco Corporation (hereinafter called "the Construction Manager") and the UNIVERSITY OF CONNECTICUT, as Obligees, jointly and severally, in the sum of Spell out Dollar Amount DOLLARS ($Enter Dollar Amount), for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the Principal has entered into or intends to enter into a written subcontract (the "subcontract") with the Construction Manager in connection with the University of Connecticut construction project known as University of Connecticut New Engineering & Science Building, Project No. 901376, which subcontract, together with all plans and specifications, now made or which may hereafter be made in extension, modification or alteration thereof, is hereby referred to, incorporated in, and made a part of this bond as though fully set forth herein.

NOW, THEREFORE, if the Principal faithfully performs and fulfills all of the undertakings, covenants, terms, conditions, and agreements of the subcontract during the original term of the subcontract and any extensions thereof that are granted by the Construction Manager or the University of Connecticut, with or without notice to the Surety(ies), and during the life of any guaranty required under the contract; and also faithfully performs and fulfills all the undertakings, covenants, terms, conditions and agreements of any and all duty authorized modifications of the contract that hereafter are made, then this obligation shall be void; otherwise it shall remain in full force and effect.

Any alterations which may be made in the terms of the subcontract, or in the work done or to be done under it, or the giving by the Construction Manager or the University of Connecticut of any extension of time for the performance of the subcontract or any other forbearance on the part of either the Construction Manager or the University of Connecticut or the Principal, one to the other, shall not in any way release the Principal, and/or the Surety(ies) or either of them, their representatives, heirs, executors, administrators, successors or assigns from liability hereunder, and notice to the surety(ies) of any such alteration, modification, extension or forbearance is hereby specifically and absolutely waived.

In the event that the surety assumes the subcontract or obtains a bid or bids for completion of the contract, the surety shall ensure that the contractor chosen to complete the contract is prequalified pursuant to section 4a-100 of the Connecticut general statutes in the requisite classification and has the aggregate work capacity rating and single project limit necessary to complete the contract.

Signed, sealed and executed at Enter Location this Day, day of Month, 20 YY.

Signed, sealed and delivered in the presence of : _____ (L.S.)
Principal

_____
Witness as to Principal

Signed, Sealed and Executed at Enter Location this this Day, day of Month, 20 YY.

Signed, sealed and delivered in the presence of : _____ (L.S.)
Attorney-in-Fact

_____
Witness as to Surety(ies)

SUBCONTRACTOR LABOR & MATERIAL PAYMENT BOND
CONSTRUCTION MANAGER CONTRACT

BOND NO. Enter Bond #.

KNOW ALL MEN BY THESE PRESENTS:

That Enter Corporation Name, of Enter Corporation Name, (hereinafter called "the Principal"), as Principal, and Enter Corporation Name a corporation duly established under the laws of the State of Enter Corporation Name and duly authorized to transact business in the State of Connecticut (hereinafter called the Surety(ies)) as Surety(ies), are firmly bound and held unto The Fusco Corporation (hereinafter "the Construction Manager") and the UNIVERSITY OF CONNECTICUT, as Obligees, jointly and severally, in the sum of Spell out Dollar Amount DOLLARS ($Spell out Dollar Amount), for the payment of the Principal and Surety(ies) bind, themselves, their successors, assigns, heirs, executors, and administrators, jointly and severally by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the Principal has entered into or intends to enter into a written subcontract (the "subcontract") with the Construction Manager in connection with the University of Connecticut construction project known as University of Connecticut New Engineering & Science Building, Project No. 901376, which subcontract, together with all plans and specifications, now made or which may hereafter be made in extension, modification or alteration thereof, is hereby referred to, incorporated in, and made a part of this bond as though fully set forth herein.

NOW, THEREFORE, if the Principal faithfully makes payment for all materials and labor used or employed in the performance of the subcontract, as required by the subcontract documents and the General Statutes of Connecticut, as amended, then this obligation shall be null and void; otherwise it shall remain in full force and effect. This bond is provided pursuant to Sections 49-41 et seq. of the General Statutes of Connecticut and shall be governed thereby. In the event of the Principal's failure to make such required payment, the unpaid subcontractor or supplier shall have all rights against the surety(ies) as set forth therein and as otherwise afforded by applicable law.

Any alterations which may be made in the terms of the subcontract, or in the work done or to be done under it, or the giving by the Construction Manager of any extension of time for the performance of the subcontract or any other forbearance on the part of either the Construction Manager or the University of Connecticut or the Principal, one to the other, shall not in any way release the Principal, and/or the Surety(ies) or either of them, their representatives, heirs, executors, administrators, successors or assigns from liability hereunder, and notice to the surety(ies) of any such alteration, modification, extension or forbearance is hereby specifically and absolutely waived.

In the event that the surety assumes the subcontract or obtains a bid or bids for completion of the subcontract, the surety shall ensure that the subcontractor chosen to complete the subcontract is prequalified pursuant to section 4a-100 of the Connecticut General Statutes in the requisite classification and has the aggregate work capacity rating and single project limit necessary to complete the subcontract.

Signed, sealed and executed at Enter Location this Day, day of Month, 20 YY.

Signed, sealed and delivered in the presence of : _____ (L.S.)
Principal

_____
Witness as to Principal

Signed, Sealed and Executed at Enter Location this this Day, day of Month, 20 YY.

Signed, sealed and delivered in the presence of : _____ (L.S.)
Attorney-in-Fact

_____
Witness as to Surety(ies)

Logistics Post Enabling

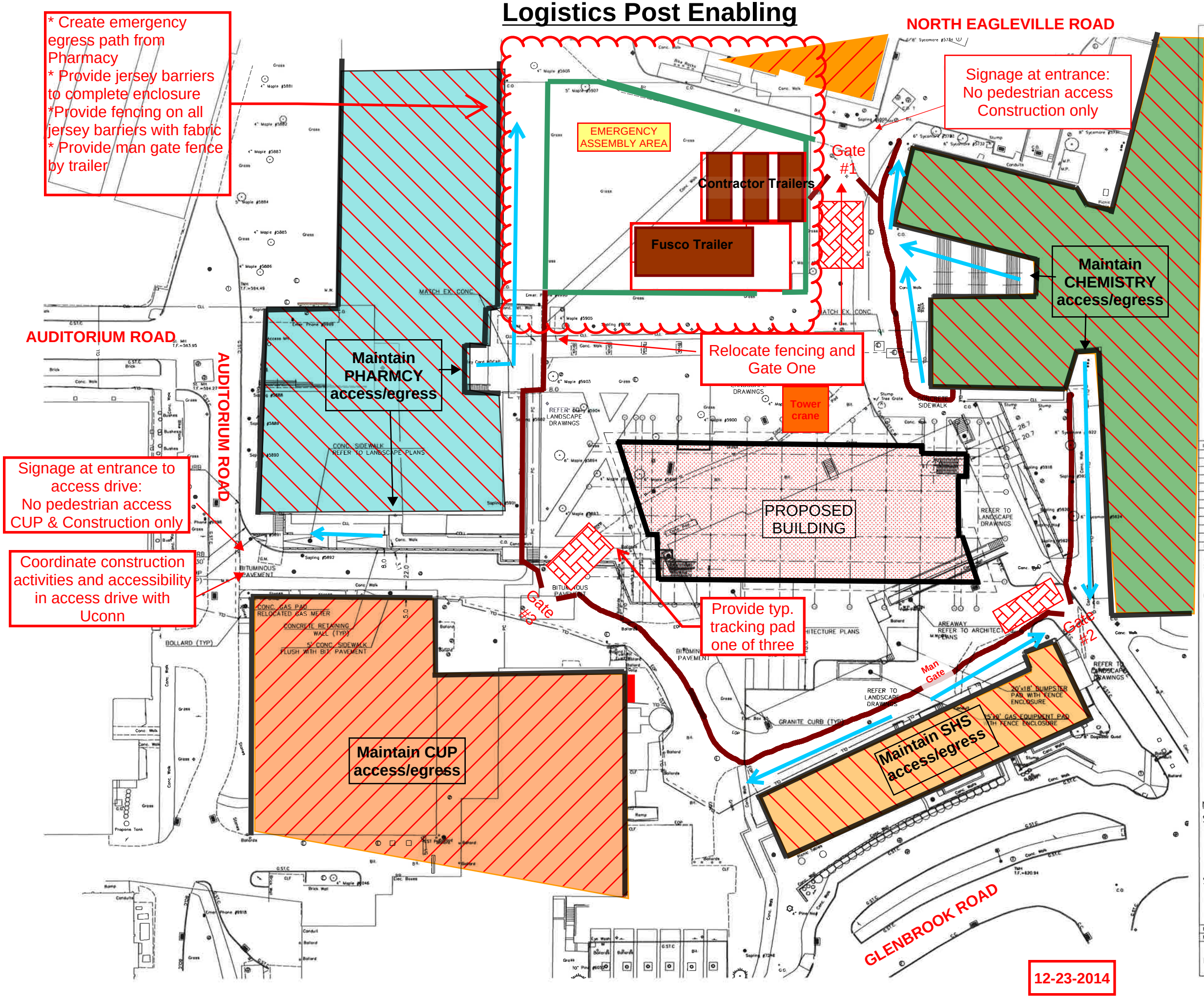

EXHIBIT "B"
Scope of Work

(New Engineering & Science Building)
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 01.0- Final Cleaning

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Final Cleaning** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Final Cleaning** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 01.0 – Final Cleaning:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Final Cleaning** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

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01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 5 – METALS

055000	Miscellaneous Metals (As Applicable)
055100	Steel Pan Stairs (As Applicable)
055200	Decorative Rail Systems (As Applicable)
057000	Ornamental Metals (As Applicable)
057100	Ornamental Stairs (As Applicable)
057700	Structural Glass Canopy (As Applicable)

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000	Carpentry (As Applicable)
064023	Architectural Woodwork (As Applicable)

DIVISION 8 – OPENINGS

081000	Door Schedule (As Applicable)
081113	Steel Doors and Frames (As Applicable)
081119	Stainless Steel Doors and Frames (As Applicable)
081433	Stile and Rail Wood Doors (As Applicable)
083113	Access Doors (As Applicable)
084413	Curtain Walls, Storefronts and Entrances (CWSE) (As Applicable)

084510	Interior Glazed Walls (As Applicable)
087100	Finish Hardware (As Applicable)
088000	Glass and Glazing (As Applicable)
088813	Fire-Rated Glass and Framing System (As Applicable)
089000	Louvers and Vents (As Applicable)

DIVISION 9 – FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
093000	Tile (As Applicable)
095113	Acoustic Panel Ceilings (As Applicable)
095133	Metal Ceilings (As Applicable)
096416	Edge Grain Wood Flooring (As Applicable)
096519	Resilient Tile Flooring (As Applicable)
096723	Architectural Epoxy Resinous Flooring (As Applicable)
096724	Resinous Flooring for Mechanical Equipment Rooms (As Applicable)
096727	Thin Set Epoxy Terrazzo (As Applicable)
096728	Elastomeric Liquid Flooring (As Applicable)
096816	Carpet (Glue Down) (As Applicable)
099000	Painting and Finishing (As Applicable)

DIVISION 10 – SPECIALTIES

101100	Visual Display Surfaces (As Applicable)
101400	Interior Signage (As Applicable)
102113	Toilet Partitions (As Applicable)
102800	Toilet Accessories (As Applicable)
104416	Fire Extinguishers and Cabinets (As Applicable)

DIVISION 11 – EQUIPMENT

112423	Façade Maintenance Systems (As Applicable)
115210	Audio-Visual Equipment (As Applicable)
115213	Electric Projection Screens (As Applicable)
116100	High Performance Laboratory Fume Hoods (As Applicable)
116200	Laboratory Equipment (As Applicable)

DIVISION 12 - FURNISHINGS

122413	Window Shades (As Applicable)
123640	Stone Counters (As Applicable)
124814	Floor Mats and Frames (As Applicable)
125100	Laboratory Darkroom Curtains (As Applicable)
129300	Site Furnishings (As Applicable)

DIVISION 13 - SPECIAL CONSTRUCTION

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132100 Laboratory Environmental Rooms
133413 Fiberglass Tank Construction

DIVISION 14 - CONVEYING EQUIPMENT

142100 Traction Elevators (As Applicable)

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210584 THROUGH-PENETRATION FIRESTOP SYSTEMS
211000 FIRE PROTECTION

DIVISION 22 – PLUMBING (As Applicable)

220500 BASIC PLUMBING MATERIALS AND METHODS
220510 UNDERGROUND PLUMBING
220529 HANGERS AND SUPPORTS
220548 PLUMBING VIBRATION CONTROLS AND SEISMIC RESTRAINTS
220553 PLUMBING IDENTIFICATION
220584 THROUGH-PENETRATION FIRESTOP SYSTEMS
221110 PLUMBING VALVES
221120 PLUMBING DISTRIBUTION PIPING
221130 DRAINAGE AND VENT PIPING
221140 PLUMBING SPECIALTIES
223000 PLUMBING EQUIPMENT
224000 PLUMBING FIXTURES
226000 LABORATORY PLUMBING SYSTEMS

DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING (As Applicable)

230500 BASIC MECHANICAL MATERIALS AND METHODS
230510 3D BUILDING INFORMATION MODELING
230513 MOTORS AND CONTROLLERS
230514 VARIABLE FREQUENCY DRIVES
230516 PIPE EXPANSION
230519.10 METERS
230519.20 HYDRONIC PIPING SPECIALTIES
230523 HVAC VALVES AND STRAINERS
230529 HANGERS AND SUPPORTS
230533 ELECTRIC HEAT TRACE
230548 MECHANICAL VIBRATION CONTROLS & SEISMIC RESTRAINTS
230553 MECHANICAL IDENIFICATION
230584 TROUGH-PENETRATION FIRESTOP SYSTEMS

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230713 DUCT INSULATION
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232000 HVAC PIPING AND JOINTS
232113.13 HVAC UNDERGROUNDPIPING
232123 HVAC HTDRONIC PUMPS AND ACCESSORIES
232223 STEAM AND CONDENSATE SPECIALTIES
232500 CHEMICAL WATER TREATMENT
233100 SHETTMETAL WORK AND ACCESSORIES
233319 SOUND ANTENUATORS
233600 AIR TERMINAL BOXES
233620 LABORATORY SYSTEM
233700 REGISTERS, GRILLES AND DIFFUSERS
233723 ROOF ACCESSORIES
233900 FANS AND ACCESSORIES
234100 FILTERS
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236500 COOLING TOWERS
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238235 TERMINAL HEAT TRANSFER UNITS
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255000 INSTRUMENTATION TERMINAL DEVICES
259000 SEQUENCE OF OPERATIONS

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260520 BASIC MATERIALS AND METHODS
260530 WIRING METHODS
260548 VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS
260570 POWER SYSTEM STUDIES
260580 ELECTRICAL ACCEPTANCE TESTS
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260920 LIGHTING CONTROL SYSTEM
261120a SECONDARY UNIT SUBSTATIONS – NORMAL POWER DOUBLE ENDED
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262010 LOW VOLTAGE DISTRIBUTION
263010 ELECTRICAL POWER GENERATION
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264310 SURGE PROTECTIVE DEVICES
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312000 Site Earthwork
312400 Building Earthwork
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321313 Concrete Paving
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APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
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REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Final Cleaning

The intent of the Scope of Work is for the **Final Cleaning** bidder to prepare the Building and Site for the Owner's Occupancy as noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 01.0 – Final Cleaning** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties

that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.

e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

5) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

6) Removal of Temporary Protection:

This Contractor shall remove and properly dispose of Temporary Flooring Protection measures when directed by the Construction Manager, at its sole discretion.

7) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9)Final Cleaning:

In addition to that as noted on the Contract Documents, the Final Cleaning Subcontractor shall also provide the following:

a.) The Subcontractor shall Employ experienced workmen, or professional cleaners, for final cleaning of work, consisting of cleaning such surface or unit of work to like new "clean" condition. Comply with manufacturer's instructions for cleaning operations.
b.) Execute final cleaning as directed by the Construction Manager.
c.) In preparation for occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces.
d.) Remove labels, which are not, required as permanent labels.
e.) Clean transparent materials, including but not limited to mirrors and windows/door glass, to a polished condition, remove substances, which are noticeable as vision-obscuring materials. Report any broken glass.
f.) Clean interior and exterior glass, window frames, and other painted metal surfaces.
g.) Clean exposed exterior and interior hard-surfaced finishes, including but not limited to metals, masonry, stone, concrete, painted surfaces, plastics, millwork cabinets, chalkboards, tile, wood, special coatings, and similar surfaces, to a dirt-free condition, free of dust, stains, films and similar noticeable distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.
h.) Clean all surfaces in mechanical and electrical room plus equipment, including but not limited to ductwork, piping, and similar equipment; remove excess lubrication and other substances.
i.) Remove debris and surface dust from all surfaces including limited access spaces, roof top units and exterior equipment room, and similar spaces.
j.) Clean all concrete floors by the way of broom, vacuum and mop clean, including in all non-occupied spaces.
k.) This Contractor shall broom, vacuum, strip and mop clean all hard flooring surfaces prior to final waxing operation.
l.) Provide Two (2) Coats of Sealer and Three (3) Coats of Wax (all environmentally friendly products as approved by the Owner).
m.) Vacuum clean carpeted surfaces and similar soft surfaces.

n.) Clean plumbing fixtures, toilet accessories, and toilet partitions to a sanitary condition, free of stains including those resulting from water exposure.

o.) Clean light fixtures, lenses, and lamps so as to function with full efficiency.

p.) Clean all new and existing exterior roofs, walls, soffits, glazing and all other exterior building surfaces.

q.) Clean project site (yard and grounds) including landscape, development areas, of litter and foreign substances. Sweep paved areas to a broom-clean condition; remove stains petrochemical spills and other foreign deposits.

r.) All cleaning shall comply with the manufacturers' recommendations for the installed products.

s.) Provide power scrubber(s) and separate mechanical water extraction equipment(s) in cleaning and ceramic, quarry and porcelain tiles floors.

CLARIFICATIONS:

In addition to that as noted on the Contract Documents, the Final Cleaning Subcontractor shall also provide the following:

a.) HEPA Vacuuming – Prior to substantial completion, vacuum all carpeted and soft surfaces with a high-efficiency particulate arrestor vacuum as required.

b.) Complete all cleaning in compliance with Connecticut High Performance Building standards.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

EXHIBIT "B"
Scope of Work

(New Engineering & Science Building)
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 01.1- Construction Progress Cleaning

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Construction Progress Cleaning** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing of all **Construction Progress Cleaning** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 01.1 – Construction Progress Cleaning:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Construction Progress Cleaning** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification

Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 – GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls

01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 5 - METALS

SECTION

055000	Miscellaneous Metals (As Applicable)
055100	Steel Pan Stairs (As Applicable)
055200	Decorative Rail Systems (As Applicable)
057000	Ornamental Metals (As Applicable)
057100	Ornamental Stairs (As Applicable)
057700	Structural Glass Canopy (As Applicable)

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000	Carpentry (As Applicable)
064023	Architectural Woodwork (As Applicable)

DIVISION 8 - OPENINGS

081000	Door Schedule (As Applicable)
081113	Steel Doors and Frames (As Applicable)
081119	Stainless Steel Doors and Frames (As Applicable)
081433	Stile and Rail Wood Doors (As Applicable)
083113	Access Doors (As Applicable)
084413	Curtain Walls, Storefronts and Entrances (CWSE) (As Applicable)
084510	Interior Glazed Walls (As Applicable)
087100	Finish Hardware (As Applicable)
088000	Glass and Glazing (As Applicable)
088813	Fire-Rated Glass and Framing System (As Applicable)
089000	Louvers and Vents (As Applicable)

DIVISION 9 - FINISHES

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092900	Gypsum Drywall (As Applicable)
093000	Tile (As Applicable)
095113	Acoustic Panel Ceilings (As Applicable)
095133	Metal Ceilings (As Applicable)
096416	Edge Grain Wood Flooring (As Applicable)
096519	Resilient Tile Flooring (As Applicable)

096723	Architectural Epoxy Resinous Flooring (As Applicable)
096724	Resinous Flooring for Mechanical Equipment Rooms (As Applicable)
096727	Thin Set Epoxy Terrazzo (As Applicable)
096728	Elastomeric Liquid Flooring (As Applicable)
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DIVISION 10 - SPECIALTIES

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101400	Interior Signage (As Applicable)
102113	Toilet Partitions (As Applicable)
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115210	Audio-Visual Equipment (As Applicable)
115213	Electric Projection Screens (As Applicable)
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116200	Laboratory Equipment (As Applicable)

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132100	Laboratory Environmental Rooms (As Applicable)
133413	Fiberglass Tank Construction (As Applicable)

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211000 FIRE PROTECTION

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220510 UNDERGROUND PLUMBING
220529 HANGERS AND SUPPORTS
220548 PLUMBING VIBRATION CONTROLS AND SEISMIC RESTRAINTS
220553 PLUMBING IDENTIFICATION
220584 THROUGH-PENETRATION FIRESTOP SYSTEMS
221110 PLUMBING VALVES
221120 PLUMBING DISTRIBUTION PIPING
221130 DRAINAGE AND VENT PIPING
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230514 VARIABLE FREQUENCY DRIVES
230516 PIPE EXPANSION
230519.10 METERS
230519.20 HYDRONIC PIPING SPECIALTIES
230523 HVAC VALVES AND STRAINERS
230529 HANGERS AND SUPPORTS
230533 ELECTRIC HEAT TRACE
230548 MECHANICAL VIBRATION CONTROLS & SEISMIC RESTRAINTS
230553 MECHANICAL IDENIFICATION
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329119 Fine Grading
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REVISED FEBRUARY 2015

2) Description of Work:

a. This Contractor shall include, but is not limited to, ALL General Cleaning work, interior and exterior, with no exceptions, within the referenced Specification Sections listed above and as indicated in the full set of Contract Documents unless noted otherwise. This Contractor shall reference all Contract Documents as they relate to their Work, including and as necessary to coordinate with other trades. This Contractor shall provide complete systems and include ALL associated work referenced in the applicable and related specifications and per the notes on the drawings with no exceptions, including but not limited to Submittals, Certifications, Qualifications, Inspections, Reports, Warranties, etc. All Work is considered as furnish and install unless noted otherwise.

b. Construction Progress Cleaning; Daily, Routine, and Ongoing Cleaning Throughout the Entire Duration of the Project to Comply With and To Exceed OSHA and Fusco Standards.

c. This Contractor shall execute the General Cleaning Work when and as directed by the CM.

   Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 01.1 – Construction Progress Cleaning** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) General Cleaning:

This Contractor shall provide general cleaning services as follows:

a. This Contractor is responsible to maintain clean and safe work areas throughout the building. Housekeeping is a daily priority. All trades are responsible for daily clean-up of their Work and debris to a designated spot on each floor, sorted by recycling type, in a location to be determined by the CM. This includes cleanup of all papers, litter, garbage and rubbish generated by their Scope of Work. All crates, packing materials, large scraps, paper, etc., shall be cleaned out of the work area and disposed of as delivered and/or as installation of the work is completed (but not less than on a daily basis). This Contractor will transfer the sorted debris from the designated spot to the respective dumpsters.

b. If a Subcontractor fails to clean up, all material and debris will be cleaned up by this Contractor and all costs associated will be charged to the responsible Subcontractor. In the event this Contractor encounters labor jurisdictional issues

over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

c. This Contractor shall insure that trucks leaving the site with loads are covered.

d. All dumpsters are to be provided by the Construction Manager (CM). This Contractor shall sort the debris as per the Waste Management Plan in Specification Section 01 74 19 Construction Demolition Waste Management.

e. This Contractor is responsible for providing his own **personal protective equipment (PPE), tools and equipment** for cleaning. Tools and equipment shall include, but not necessarily be limited to, shovels, pails, brooms, sweeping compound, wheelbarrows, hand trucks, etc. Use of any sweeping compound or cleaning agent must first be approved by the CM to insure its compatibility with finished flooring materials and adhesives. PPE shall include, but not necessarily be limited to, hard hats, safety vests, safety glasses, safety boots, gloves, fall restraint devises, conventional dust masks, respiratory filter dusk masks, etc.

f. This Contractor shall sweep floors as directed by the CM.

g. This Contractor shall perform its work in such a manner as to not create excessive dust and airborne particles that could adversely affect Tradespersons and finished work.

h. This Contractor shall provide and maintain **thirty (30) heavy duty 55 gallon capacity barrels** (Rubbermaid or equivalent with lids and wheels) marked "TRASH" to be distributed throughout the building and site as directed by the CM. Barrels are to be used for paper and plastic rubbish only and are **not** to be used as receptacles for construction waste and debris. This Contractor shall empty each barrel as necessary so that at no time the barrels become overfilled. Improper use of trash barrels will result in fines as stipulated in this specification.

i. This Contractor shall provide and maintain **thirty (30) heavy duty one cubic yard tilt trash carts** to be used for collection and transporting of construction debris, to be distributed throughout the building and site as directed by the CM.

4) Surrounding Conditions and Protection of Work:

This Contractor is responsible to complete his or her work in a manner so as to not cause damage to the site, adjacent finishes, and those items noted to remain. Should damage occur as a result of this Contractor's actions any costs associated with the repair and/or replacement of the damage shall be the responsibility of this Contractor. This Contractor is responsible to protect his or her work, and finishes until turn over process is completed and signed off by the construction manager and owner.

5) Safety

At a minimum, this Contractor shall comply with OSHA rules and regulations and the Fusco Safety Manual and Requirements while performing the Work.

6) Duration of the Work:

This work shall begin once the slabs begin to be poured within the building, however the CM may require manpower on site in advance of that date. This Contractor can expect that their duration on site will extend to the time that the Final Cleaning Subcontractor begins to mobilize to begin their work.

7) Manpower Requirements:

It is expected, but not guaranteed, that this Contractor will have at least one (1) Laborer on site for approximately twenty one (21) months from approximately September 2015 through May 2017. However, upon providing 48 hours' notice by the Construction Manager, this Contractor must be prepared to increase/decrease the manpower as requested. In addition, there is NO guarantee that the weekly work hours will be 40 hours. All payments will be based on the agreed to unit labor rates and will be verified on a ***daily*** basis by field work order tickets signed by the CM's Superintendent.

8) Base Bid Work Hours:

This Contractor shall include an **allowance of Five Thousand (5,000) laborer man-hours** (straight-time) to perform the General Cleaning Scope of Work, to be utilized on a unit price basis as described above. **This Bidder MUST provide both a unit price for each laborer hour and total allowance on the Bid Form "D" Allowances Bid Form that is appended at the end of this Scope of Work.**
The Construction Progress Cleaning Subcontractor shall include in their Base Bid number all incidental items that are necessary to support this removal construction debris from the Building and Site into trash dumpsters. These incidental items shall include, but not be limited to brooms, shovels, safety gear, (gloves, hard hats, safety vests, safety glasses, safety boots, fall restraint devises, conventional dust masks and respiratory filter dusk masks) and sweeping compound. Also, to be included shall be the appropriate means to move the waste material from the site and building into the dumpsters, i.e., wheel barrows, wheeled trash buggies, hand trucks etc.

9) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

- **a.** Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
- **b.** Subcontractor includes all mobilizations necessary to complete Work as scheduled.
- **c.** Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
- **d.** All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
- **e.** Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

10) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

11) Construction Progress Cleaning:

In addition to that as noted on the Contract Documents, the Construction Progress Cleaning Subcontractor shall also provide the following:

- **a.)** The Subcontractor shall Employ experienced workmen, or professional construction cleaners, for the Construction Progress Cleaning, consisting of cleaning all construction related waste material and depositing it in trash dumpsters provided by others.
- **b.)** Execute Construction Progress Cleaning as directed by the Construction Manager.

c.) Construction Progress Cleaning shall include the entire project site (yard and grounds) including landscape and development areas, and shall include the removal of litter and foreign substances and placement in trash dumpsters.

d.) The Construction Progress Cleaning Subcontractor shall undertake his work in such a manner as to not create excessive dust and airborne particles that could adversely affect Tradespersons and finished work.

12) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

13) Removal of Temporary Protection:

This Contractor shall remove and properly dispose of Temporary Flooring Protection measures when directed by the Construction Manager, at its sole discretion.

14) Other Subcontractors' Cleaning Responsibilities:

Each Subcontractor is responsible to maintain a clean and safe work area. Housekeeping is a daily priority. All trades are responsible for daily clean-up of their work and all debris that is generated shall be moved by them to a designated location(s) on each floor as designated by the Construction Manager. In addition, the debris shall also be sorted by recycling type in a location(s) to be determined by the Construction Manager. This includes cleanup of all papers, litter, garbage and rubbish generated by their Scope of Work. All crates, packing materials, large scraps, paper, etc., shall be cleaned out of the work area and disposed of as delivered and/or as installation of the work is completed (but not less than on a daily basis). It shall be the responsibility of the Construction Progress Cleaning Subcontractor to transfer the sorted debris from the designated location(s) in the Building or on the Site to the respective dumpsters. In addition, it shall be Construction Progress Cleaning Subcontractors responsibility to sweep the floors as directed by the Construction Manager.

15) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

16) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

CLARIFICATIONS:

In addition to that as noted on the Contract Documents, the Final Cleaning Subcontractor shall also provide the following:

1.) All sweeping compound and cleaning agents that are planned on being used by this Subcontractor must be submitted on and receive prior approval in order to be sure that it will be compatible with all flooring materials and adhesives.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

ALLOWANCE NO. 1

LABORER MANPOWER AND INCIDENTALS

The Construction Progress Cleaning Subcontractor shall include in their Base Bid the cost of **Five Thousand (5000) man hours** for laborers to perform this work. Included in that Base Bid number must be all incidental items that are necessary to support this removal construction debris from the Building and Site into trash dumpsters. These incidental items shall include, but not be limited to brooms, shovels, safety gear, (gloves, hard hats, safety vests, safety glasses, safety boots, fall restraint devises, conventional dust masks and respiratory filter dusk masks) and sweeping compound.

In addition, this Bidder shall provide an hourly rate including all incidentals items that are necessary to support this Scope of Work for the duration of the Project.

BID BREAKDOWN

This Subcontractor shall include the bid breakdown as requested on the form that is appended at the end of this Scope of Work.

Bid Package #01.1-Construction Progress Cleaning

ITEM	**VALUE**
Bonds	_____
Engineering/submittals/shop drawings	_____
Mobilization	_____
Allowance of 5000 Laborer Hours	_____
Incidentals (brooms, shovels, sweeping compound)	_____
PPE	_____
Trash Chute System	_____
(30) 55 Gallon Barrels	_____
(30) 1 CY Trash Carts	_____
Other _____	_____
Other _____	_____
Other _____	_____
BASE BID TOTAL:	

HOURLY RATE-FOR PROJECT DURATION $_____PER HOUR
Including all Incidental Support Materials

EXHIBIT "B"
SCOPE OF WORK

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package 03.0 - Concrete

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Concrete** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Concrete** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and General Contractor. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

1) **BID PACKAGE #3.0 – Concrete:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Concrete** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

SECTION

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution

017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 3 - CONCRETE SECTION

033000	Cast-In-Place Concrete

DIVISION 5 - METALS

SECTION

051200	Structural Steel (As Applicable)
053000	Metal Decking (As Applicable)
055000	Miscellaneous Metals (As Applicable)
055100	Steel Pan Stairs (As Applicable)
055200	Decorative Rail Systems (As Applicable)
057000	Ornamental Metals (As Applicable)
057100	Ornamental Stairs (As Applicable)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

SECTION

071326	Sheet Membrane Waterproofing (Elevator Pit)
079200	Joint Sealers (As Applicable)

DIVISION 14 - CONVEYING EQUIPMENT

142100	Traction Elevators (As Applicable)

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

1) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Cast-in-Place Concrete and Accessories; Concrete Forms; Shores and Re-Shores; Admixtures; Curing Materials and Compounds; Bonding Agents; Adhesives; Interior Pads for Mechanical/Electrical Equipment per the MEP drawings; Housekeeping Pads; Concrete Reinforcement; welding of reinforcement, Wire Welded Mesh, Slabs on Grade; Slabs on Metal Deck; Concrete Fill for Metal Pan Stairs; Vapor Barriers; Opening Blockouts; Water Stops; Anchor Bolt Placement and Layout; Grouting of Columns Bases; Grouting of Bearing and/or Leveling Plates; Installation of Embedded Items; Concrete Haunches; Lightweight Concrete; Drilling and Grouting of Reinforcing; Drilling and Epoxy of Reinforcing; Slab Expansion Joints; Sawcutting of Slab Control Joints; Setting of Anchor Bolts; Grouting of Base Plates; Rubbing of Exposed Concrete; Winter Protection of Concrete Placements; Masonry Shear Wall Footings; etc.

3) Vapor Barriers:

The Concrete Contractor shall provide all Under-slab Vapor Barriers and vapor retarders and accessories as noted on the Contract Documents.

4) Sumps and Pits:

This Concrete Subcontractor is responsible for all sump pits and elevator pits. Excavation and backfill will be by the Site Work Subcontractor.

5) Metal Pan Stairs & Decks:

a. The Concrete Contractor shall install Concrete Fill, Wire Mesh, Reinforcing Bar, Nosing (if applicable) to all Metal Pan Stairs and Platforms and decks in accordance with the Contract Documents. The placement of concrete for the above mentioned work must be scheduled as a separate placement from any concrete/slab placements. The Concrete Contractor is responsible for providing, installing, removing and disposing of temporary wood slip resistant stair treads in all stairs/landings and cleaning (include vacuuming to a spotless condition) of pans prior to placement of concrete. The temporary treads shall be installed immediately after steel stair erection and will remain in place until concrete fill is ready to be placed.
b. The Concrete Contractor must provide protection, barricades, etc., for the entire process of the above work. This includes protecting and cleaning stair components including any adjacent surfaces from concrete splatter. This also includes repairing any resulting damage to the satisfaction of the CM.
c. The Concrete Contractor shall provide concrete and reinforcing at all Cast in Place Concrete Stairs, Metal Pan Stairs, and Ramps, and include all Cast in Nosings (note also indicated in Structural Steel) and embeds with the exception of any Site Concrete Stairs

as shown on the Contract Documents. All Site Work Concrete not shown on structural drawings shall be provided by Sitework Contractor.

6) Structural Steel Coordination and Embeds:

a. The Concrete Contractor shall layout and install Leveling Plates, Bolts, Inserts and other Structural Elements (including grouting of same) that are to be incorporated into the concrete work. The above steel materials shall be provided by others for installation by the Concrete Contractor.
b. This Subcontractor shall coordinate the location of and include the unloading and installing of all embeds, bolts, anchor bolts, inserts and/or sleeves with the appropriate trade Subcontractor to ensure that they are installed in the proper locations.
c. This Subcontractor will coordinate and install all embedded hardware, inserts and blockouts required to connect the structural members to foundation system.
d. The Structural Steel Contractor will provide a certified survey of installed anchor bolts and bearing plates and/or leveling nuts prior to scheduled start of structural steel erection. This Contractor will correct any errors immediately upon notification of any work that must be corrected so that the Structural Steel Contractor will not be delayed.
e. The Concrete Contractor is responsible to unload, receive, inventory (verify quantities on the spot), store (as approved by CM) and then install all embeds, anchor bolts, base plates (as required) nuts and washers, angles, frames, plates, channels, or any other steel component noted to be cast into the concrete as an embedded item, provided by others to be installed in the work of this bid package.
f. The Concrete Contractor shall properly store, maintain and turn over the proper quantity of nuts and washer to the Steel Contractor/Erector.

7) Grouting and Dry-Packing:

The Concrete Contractor shall provide all grouting and/or dry-packing throughout, including but not limited to grouting of column bases, bearing and leveling plates.

8) Pipe and Tube Railings:

The Concrete Contractor shall install Inserts, Anchors, etc. as provided by others, into the concrete to allow for the installation of pipe railings, tube railings, and guard rails provided by others.

9) Winter Protection, Dewatering and Runoff Control:

a. The Site Subcontractor shall provide and maintain all winter protection up to the point where the area is taken over by the Concrete Subcontractor. The Sitework Subcontractor shall include preparation, protecting and/or pre-heating/thawing (including but not limited to blankets, ground heaters, etc.) required to complete its Work and will provide the Concrete Subcontractor with “non-frozen” conditions.
b. The Concrete Subcontractor will be responsible for Winter Protection and Dewatering its own Work once turned over to the this Contractor. This Contractor shall include Cold/Hot Weather Concrete placing procedures per current revision to ACI 306-88 including all required temporary heat, fuel, ground heaters, and blankets. This shall include time to stay late and complete the winter conditions Work. This Subcontractor includes all labor, materials, and equipment necessary to provide snow, ice and water removal that affects the performance of this Scope of Work.

10) Housekeeping Pads:

The Concrete Contractor shall include in the Contract Value all Housekeeping and Equipment Pads as noted on the Contract Documents. The Concrete Contractor shall coordinate the size and location of all pads with the respective trade contractor supplying that equipment.

House Keeping Pad design shall be the responsibility of the Subcontractor whose equipment is placed on the pad and in accordance with the Contract Documents. The Concrete Subcontractor shall form, place, install any embeds and finish the concrete housekeeping pads and curbs as shown on all Contract Documents. Any necessary seismically designed work that needs to be incorporated into the pads shall be the responsibility of the Subcontractor who requires the seismically designed housekeeping pad.

11) Sleeves:

The Concrete Contractor shall install all sleeves and/or inserts as indicated on the Contract Documents or provided by others into the Work. Sleeves and Sealing of same shall be provided by the Contractor providing the Sleeve. This includes coordinating and providing all openings in formwork for other trades as required. This includes penetrations in walls and slabs for MEP items and any related equipment as noted on the contract documents. Sleeves and/or Inserts at Metal Decks shall be furnished and installed by the contractor requiring that sleeve or insert.

12) Joint Sealant/Fillers:

The Concrete Contractor shall provide Joint Sealant, Joint Fillers and Premolded Joint Fillers at Construction Joints, and Control Joints within the Concrete Contractors Scope of Work and as shown and as required for all Concrete-to-Concrete work. This includes but not limited to the construction of Joints by saw cutting, forming of cold pours, etc.

13) Concrete Delivery:

a. This Subcontractor shall be responsible for cleaning and blowing off all surfaces prior to Concrete Delivery and Placement, including but not limited to, metal deck.
b. This Subcontractor is responsible for transporting all concrete from source to final destination. This includes, but not limited to, the use of crane buckets, concrete chutes, concrete pumps, slick lines, conveyors, buggies, etc. which shall be provided by this Subcontractor where and as required. Staging and location of concrete trucks, etc. will be coordinated with, and approved by Fusco Corporation.
c. This Concrete Subcontractor will work closely with the Site Work Subcontractor to coordinate the scheduling and excavation for concrete footing/foundations as shown.
d. This Concrete Subcontractor shall provide the specified vapor barrier before placing the slab on grade.
e. This Concrete Subcontractor shall provide all water stops as required.
f. This Concrete Subcontractor shall provide all shoring and re-shoring, as required whether shown or not shown, to complete the Work and to eliminate excessive deflection of Slab on Deck.
g. This Subcontractor is responsible for providing concrete to the jobsite that meets or exceeds the specified concrete mix, and the guarantee of test results meeting 28 day strength. This Subcontractor includes all costs of testing for defective concrete and rebar placement where and when directed by Fusco Corporation. Any extra cylinders, coring, Windsor Probe (etc.) or testing of any kind required for non-conforming items will be at this Subcontractor's cost.
h. This Concrete Subcontractor will assist the testing agency taking the necessary concrete ready-mix samples to be tested. This Subcontractor will be responsible for providing the

testing agency with an area large enough for cylinder slump testing, next to the designated/specified testing location, whether at point of discharge from the concrete truck, end of chute from pump truck or slick line, or at point of placement. Also provided and maintained by this Subcontractor shall be two (2) insulated concrete curing boxes with inside dimensions of 5' x 3' x 2'-6" high. Each curing box will be equipped with a Hi/Low thermometer and an interior outlet for heaters and lighting. Heaters, lighting and Hi/Low thermometers are to be provided by this Subcontractor. Each curing box will be insulated to maintain specified temperatures of 60-80 degrees prior to transfer of molds to testing lab. It will be this Subcontractor's responsibility to locate these boxes to the required location prior to the start of concrete placement. It is also this Subcontractor's responsibility to provide concrete pour cards designating locations, elevations, outside temperature and weather conditions, and expected quantities prior to placement.

14) Reinforcement:

a. The Concrete Contractor shall provide and install all Concrete Reinforcement for their work as noted on the Contract Documents.
b. The Concrete Contractor shall <u>drill and epoxy</u> all reinforcing bars and hooks into existing substrates abutting new concrete as noted on the Contract Documents. The Concrete Subcontractor shall drill and epoxy for all items indicated to be imbedded in new or existing concrete.
c. All reinforcing entirely in Masonry Walls and/or Partitions shall be provided and installed by the Masonry Contractor with the exception of rebar to extend from the Slab on Grade and deck into masonry walls spliced by others
d. The Concrete Contractor is responsible for supplying and installing all reinforcing steel, wire welded mesh, any necessary or required supports and required shop drawings to complete this scope of work.
e. All reinforcing steel from any concrete placement must be tied in place and inspected prior to placement of any concrete. Additionally, all reinforcing steel from any concrete structure to any unit masonry or to any other concrete structure (I.E. concrete footing to concrete wall, etc.) shall be installed by the Concrete Contractor and not drilled in by the Mason or the Concrete Contractor unless specifically noted. If for any reason the Concrete Trade Contractor misses any reinforcing steel, anchors, dowels or accessories, the Concrete Trade Contractor at his or her expense shall make any necessary corrections or changes as approved by the Engineer.
f. All reinforcing steel must be kept organized and out of any soil or mud. Additionally, all cutoffs, scraps, etc. must be disposed of on a DAILY basis.
g. All reinforcing causing a safety issue of falling upon or walking into shall be protected by the Concrete Contractor.

15) Concrete Finishing:

a. This Subcontractor includes all labor, materials, and equipment necessary to strip all forms, and break off ties. All concrete forms must be in like-new condition and free of any defects. All excess slag, concrete or slurry spills, will be removed and rubbed smooth. Walls, columns, slab on grade, slab of deck or ramps not conforming to specified and or ACI tolerances will be removed and replaced at this Subcontractor's cost.
b. It shall be the responsibility of this Subcontractor to check and accept excavations and sub grades established by the Sitework Subcontractor, to ensure they were established within the required tolerances prior to placing concrete. All site work shall be graded within ½". Any deviation or issues with the sub grade needs to be reported to Fusco Corporation prior to placing concrete.

c. All dowels and dovetail for CMU to be coordinated and placed by this Subcontractor and provided by others.
d. This Subcontractor includes all labor, material and equipment necessary to saw cut control joints.
e. This Subcontractor shall coordinate, supply and install all construction/control joint material as shown on Contract Drawings and/or as described in the Specifications, and as required for all concrete-to-concrete work and concrete-to-steel work at column diamond locations and concrete-to-masonry or any and all existing substrates, and shall coordinate and perform all saw cuts for control joints for SOG as indicated on the drawings, including all caulking and sealants.
f. This Subcontractor includes all labor, materials, and equipment necessary to furnish and install admixtures, curing materials and compounds, bonding agents, adhesives and concrete sealers as specified.
g. Exposed Concrete Walls shall be finished in accordance with Contract Documents.

16) Concrete Washouts and Debris:

The Concrete Contractor shall remove and properly dispose of all concrete debris, formed concrete demo, spoils, and concrete accumulated from truck/pump wash outs to a designated located agreed upon with the Construction Manager.

This Contractor is responsible for cleaning and /or washing down the tires of his or her construction/concrete vehicles and equipment including but not limited to visitors and vendors exiting the site at the anti-tracking aprons located at each construction entrance to avoid tracking mud, dust, and etc. from the site and onto public streets.

17) Concrete Haunches and Thickened Slabs:

The Concrete Contractor shall provide any concrete haunches and thickened slabs as noted on the contract documents or as required by code under CMU walls.

18) Floor Recesses:

The Concrete Contractor shall provide and coordinate with the General Trades Subcontractor and Flooring Subcontractor any and all recess in any concrete slab as required for floor finishes.

19) Waterstop:

The Concrete Contractor shall provide all Waterstop as noted on the Contract Documents.

20) Substrates:

a. The Concrete Contractor shall prepare substrates so that they meet or exceed the requirements of the specification for the final finishes. The Substrate shall meet or exceed flatness, levelness and/or surface texture required per the contract documents.
b. The Concrete Contractor shall review the Specification Divisions related to all Finished Flooring and verify that the substrate and substrate finish anticipated is achievable and there are no conflicts with the contract documents as it related to the Flooring Contractor floor finishes. It is the responsibility of the Concrete Contractor to coordinate all curing and sealing compounds with the Flooring Contractor to verify compatibility with all flooring adhesives and installation methods. This Contractor shall notify the Fusco Corporation of any conflicts or deficiencies prior to placing of any slabs.
c. The Concrete Contractor shall coordinate the Work, including but not limited to additives and curing methods, for compatibility with the Flooring Contractors, the Architect and specified Flooring Adhesives.

21) Duct / Equipment, Slab Edges and Openings:

a. Any closures or bulkheads required for the placement of concrete shall be constructed of wood and shall be furnished and installed by the Concrete Contractor. This shall include, but not limited to, mechanical/electrical box-outs, chase spaces, curbs, mechanical pads, box-outs for drainage, etc., that are shown on the contract documents. It shall be the responsibility of the Mechanical, Plumbing, Electrical and Fire Protection Contractors to furnish and install all required floor sleeves and appropriate fire seal ratings.

b. The Structural Steel Subcontractor shall furnish and install framing and support steel for Ducts, Equipment and other openings as indicated on the Contract Drawings. The Structural Steel Subcontractor shall coordinate framing for these openings with the appropriate Contractor.

22) Expansion Joint Assemblies:

The Concrete Contractor shall perform all box-out work as required for floor and wall expansion joint assemblies.

23) Elevator Sills:

This Contractor shall form/boxout for elevators sills and grout sill in place once installed by the Elevator Contractor.

24) Food Service Freezer / Cooler:

The Walk in Cooler Contractor shall coordinate with the Sitework Subcontractor and Concrete Subcontractor for the size and locations of all depressions.

25) Concrete Pumping and Concrete Tickets:

a. The Concrete Contractors shall be responsible for any and all concrete pumping including any approved necessary means to place concrete for their work. Additionally, original copies of concrete tickets after every concrete delivery shall be provided to the Construction Manager.

26) Additional Concrete:

The Concrete Contractor shall include any and all additional concrete required to compensate for the deflection of beams and metal deck.

27) Concrete Slab Finish / Curing:

All slabs shall be wet cured in addition to and prior to any other specified curing methods not in the Contract Documents. The Concrete Contractor shall also coordinate the slab finish as specified and depicted in the flooring specifications.

28) Keyways:

The Concrete Contractor shall provide wood keyways that are fixed into any form and shall be removed with or when the forms can be contractually removed. No dragging of Angle Irons or any other material can be used as keyways.

29) Tower Crane:

This Contractor shall provide a cast in place 5000 psi concrete foundation including rebar for a Tower Crane with inserts provided by others. The approximate dimension of the foundation will be 20’ x 20’ x 5’ deep with double mat of #8 rebar 12” on center and #6 vertical rebar 12” on center.

CLARIFICATIONS

1. The Fusco Corporation will furnish a Tower Crane and Operator for the Concrete and Steel duration of the project. During erection of Structural Steel, the Concrete Contractor shall schedule required picks with the Fusco Corporation at a minimum of 48 hours' notice.

EXCLUSIONS:

1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price Allowances as listed below. Allowances shall include all necessary material, cost for delivery, installation, machinery, insurance, and applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 4.0-Masonry & Precast

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Masonry & Precast a**s described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Masonry & Precast** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

(Scope of Work forthcoming in an Addendum)

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 5.0-Structural Steel, Metal Decking and Miscellaneous Metals

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Structural Steel, Metal Decking and Miscellaneous Metals** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Structural Steel, Metal Decking and Miscellaneous Metals** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 5.0- Structural Steel, Metal Decking and Miscellaneous Metals:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Structural Steel, Metal Decking and Miscellaneous Metals** and related work as described in the Specifications, Drawings, Existing Site Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

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SECTION

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01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
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DIVISION 3 - CONCRETE

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DIVISION 5-METALS

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051250	**Architecturally Exposed Structural Steel**
053000	**Metal Decking**
055000	**Miscellaneous Metals**
055100	**Steel Pan Stairs**
055117	**Aluminum Slotted Framing System**
055200	**Decorative Rail System**
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APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

i. All Structural Steel; Metal Deck; Steel Bar Joist; Steel Floor and Roof Framing; Steel Roof Dunnage; Steel Columns; Steel Tube Columns/Beams/Girders/Window Heads; Steel Shapes/Plates/Angles; Shear Studs/Connectors; Steel Angles and Pour Stops at all Concrete Edges; Leveling Plates; Bearing Plates; Hangers and Relieving Angles; Framing for Overhead Supported Items; All Joist Reinforcing; Steel Loose Lintels and Steel Hung Lintels at all openings; Masonry Relieving Angles; Overhead Door Frames; Elevator Sill Angles; Slab and Roof Openings; Framing Anchors and Accessories; Any Steel Support for Pipe Grid at Stage Ceiling; Rooftop Units Screening; Anchor Bolts; Inserts; Corrosion Protection; All Steel Galvanizing; Touch-up Painting at Field Welds. Installation of OSHA Compliant Perimeter Protection Cables at all Decks including the Roof; Miscellaneous Metals, Metal Fabrications; Metal Stairs. Stair Railings; Hand Rails; Ramp Rails; Guard Rails; Bollards; Removable Bollards; Site Handrails; Aluminum Slotted Overhead Support System; Decorative Rail System; Ornamental Metals; Ornamental Stair System; Façade Maintenance System; Shop Drawings and Closeout Documents.

3) Equipment Framing:

This Contractor is responsible to furnish, install and coordinate all steel equipment framing for rooftop equipment, Roof Drains and all other steel supported equipment. In addition to the Structural Drawings, the Steel Contractor shall refer to other Drawings provided for coordination of equipment locations.

4) Elevator Sill Angles:

This Subcontractor shall furnish and install elevator sill angles as indicated on the Drawings and Specifications.

5) Elevator Hoist Beams:

The Structural Steel Contractor shall provide the Elevator Hoist Beams.

6) Seismic Bracing, Clips and Angles at Top of Partitions:

This Subcontractor shall provide any and all <u>top of wall</u> miscellaneous metal bracing (except the Durawall DA2200 or equal) to the structure typical and as noted on the Contract Documents, including ALL masonry clip angles and anchors.

7) Winter Protection:

This Subcontractor will be responsible for Winter Protection for its Work.

8) Perimeter Cable Protection:

The Structural Steel Contractor shall install and maintain OSHA-compliant perimeter protection cables at all decks, where required by OSHA. Removal of perimeter cable protection at all levels (except the roof) shall be by the General Trades Contractor. Removal of perimeter cables at the roof shall be by the Roofing Contractor.

9) Temporary Pads for Crane:

The Site Work Contractor shall provide Six (6) separate compacted (90% compaction) dry pads suitable for the crane that will be used in erecting the building structural steel from outside of building foot print as located and as prescribed by the CM. These compacted pads shall be a minimum of thirty-five feet by thirty five feet.

10) Leveling and Bearing Plates, Bolts and etc.:

The Structural Steel Contractor shall furnish all interior and exterior loose materials such as but not limited to inserts, frames, anchor bolts, bolts, bearing and leveling plates to the appropriate Contractor for installation into the appropriate assembly.

These items are required to be on site at the start of concrete operations along with a complete set of approved layout drawings and templates.

11) Survey:

The Steel Trade Contractor shall provide all other layout required to perform and complete his or her Work. The cost to replace or repair lost or damage control points shall be the charged to the offending Contractor. The Sitework Trade Contractor shall provide 4 control lines and 4 benchmark grades.

The Structural Steel Trade Contractor shall submit (7 copies and 1 digital copy) a detailed As-Built Survey of all Anchor Bolts, Base Plates, embedded items, etc., by a Connecticut Licensed Land Surveyor to the Fusco Corporation/Engineer prior to any steel erection. Submission shall be in AutoCAD and shall highlight any deviations. All cost regarding these submissions is to be included in the Structural Steel Trade Contractor lump sum proposal. Each Submission must be submitted within 3 days of the foundation and bearing plates completion. This survey shall be done in a timely fashion so that any discrepancies can be corrected prior to the start of steel work. Failure to notify the Construction Manager shall be construed as acceptance of the existing condition. If any anchor bolt(s) is not located in its intended position, and the Structural Trade Contractor agrees that it can remain where it is located and with the approval of the Engineers, the anchor bolt(s) can remain, but the Concrete Trade Contractor shall bear any and all costs related to any adjustment or modifications necessary to the column bearing plate(s) or

structural steel member to rectify the situation. If the anchor bolt(s) need to be relocated, the Concrete Trade Contractor and the Mason Contractor shall immediately do so without delaying the installation of the structural steel and/or the project schedule.

Additionally the Structural Steel Contractor shall provide a certified (by a Connecticut Licensed Land Surveyor) survey of the plumpness of all columns as well as the elevations of all column splices for submission to the engineer. This survey must be submitted immediately upon the completion of structural steel leveling, plumbing, squaring, etc. (7 copies and 1 digital copy)

12) Metal Deck:

The Structural Steel Contractor shall furnish and install a complete Metal Deck system regardless of details. The Structural Steel Contractor shall also provide for all pour stops, edge forms, cover plates, closure strips, roof sump pans, ridge plates, edge angles, and cell closures, shear connectors, framing for all openings, galvanizing and shop priming accordingly.

The Structural Steel Contractor shall install metal decking over all mechanical openings (both new and abandoned). Cutting and removal of the new metal deck at new openings shall be performed by the Trade Contractor using the opening.

<u>The Structural Steel Contractor shall coordinate with the Roofing Contractor for the installation of the Acoustical Deck installation to be installed by the Roofing Contractor when the roof is installed.</u>

13) Duct/Equipment, Slab Edges and other Openings:

The Steel Trade Contractor shall furnish and install all metal closures at the edges of slabs, around columns, framed openings, and as required to prevent concrete from passing through any deck or closure. Any additional closures or bulkheads required for the placement of concrete shall be constructed of wood and shall be furnished and installed by the Concrete Contractor. This shall include but not limited to mechanical/electrical box-outs, chase spaces, curbs, mechanical pads, that are shown on the contract documents. It shall be the responsibility of the Mechanical, Plumbing and Electrical Contractors to furnish and install all required floor, wall and roof sleeves.

14) Welded Steel Masonry Anchors

The Structural Steel Contractor shall furnish and install all masonry anchors that are to be welded to any steel. (i.e., columns, beams, etc.) The Structural Steel Trade Contractor must weld anchors onto the structural steel and must make any accommodations to these anchors/ties and/or welds to make sure the anchor or tie projects pass the finished coat of the spray fireproofing. This must be done so that the male anchor or tie furnished and installed by the Masonry Trade Contractor does not disrupt the spray fireproofing finish coat. The Structural Steel Contractor shall be responsible for any cost associated with

patching of spray fireproofing if the welded anchor is supplied on site and does not protrude past the spray fireproofing finish coat.

Additionally this Contractor shall install (weld) re-enforcing steel furnished by the Masonry Contractor required to complete the Masonry Scope of Work.

15) Lintels/Embeds

The Structural Steel Contractor shall provide all interior and exterior loose hung lintels, loose lintels, angles, sill angles, steel embeds, and plates as noted on the Contract Documents for installation by others. Adhesive anchors from steel into masonry shall be installed by the Structural Steel Contractor.

The Structural Steel Contractor shall coordinate with all contractors (Window, General Trades, Mason, etc.) for elevation, line, grade typical and as noted on the contract documents prior to installations.

16) Shoring/Bracing and Temporary Connections

The Structural Steel Contractor will provide all necessary shoring, bracing, temporary connections required for this work.

17) Touch Up Paint/Shop Priming

The Structural Steel Contractor shall be responsible for touch up painting of field welds. The Steel Fabricator shall be responsible for all shop priming. Additionally, the Structural Steel Contractor shall touch-up paint any damage in the field especially to the steel receiving High Performance Coatings.

18) Temporary Power:

Temporary power may not be available at the building when the steel work begins, include any generators required to provide temporary power for the steel work operations. Regardless if the power is available or not, this Contractor is to furnish, supply and pay for **all** gas/diesel or generator driven equipment to erect the steel. If a temporary generator is the erectors choice, any and all cost associated with this option is ***to be included*** in this Contractor's proposal.

19) Roof/Slab Openings:

The Structural Steel Contractor is responsible to carry all slab and roof frame openings as shown on the Contract Documents, including but not limited to architectural, mechanical and structural drawings.

20) Hangers/Supports/Dunnage:

The Structural Steel Contractor shall furnish and install all supporting steel work shown on the contract documents for support of rooftop equipment and rooftop units. The Mechanical/HVAC/Plumbing Contractor shall be responsible for providing any loose dunnage required for proper installation of any rooftop equipment and rooftop mechanical units.

21) Framing:

The Structural Steel Contractor shall provide all steel framing as noted on the Contract Documents to support Exterior Building Skins and Soffits.

The Structural Steel Contractor shall provide all structural steel and steel framing incidental to soffits, windows, Aluminum Storefronts, Aluminum Curtain-walls, skylights, parapets and other components as indicated on the Contract Documents. –

22) Anchor Bolt Templates:

The Structural Steel Contractor shall furnish steel anchor bolt templates (1 per each anchor bolt configuration) to the Concrete Trade Contractor prior to placing of concrete foundations with anchor bolts.

23) Roof Drain Sumps:

The Structural Steel Contractor shall furnish, install and cut roof drain sumps to accommodate the roof drains.

24) Supplementary Steel and Miscellaneous Support Steel

The Structural Steel Contractor is responsible to furnish and install any and all "supplementary" bent plates, channel, angles, etc. that are indicated on the Contract documents for installation and support of surrounding construction, i.e. bent plates attached to perimeter beams, metal deck, etc., for masonry and drywall wall supports, and masonry wall bracing supports shown on the Contract Documents. All steel shown architecturally only shall be included as part of this bid. If size is not shown steel is not noted, this contractor shall figure at a minimum a 6 x 6 x 5/8 galvanized angle. This also includes any welding of deformed bars to tops of metal beams for masonry wall supports or reinforcing.

25) Steel Ladders:

a. This Subcontractor shall be responsible for furnishing and installing **ALL** steel ladders **(Interior and Exterior)** with associated clips as indicated on the Drawings and Specifications.

b. This subcontractor shall coordinate all embeds and connecting plates to concrete/masonry with the appropriate subcontractor and any other trades associated with this Work.

26) Site and Building Stair and Guard Rails:

a. This Subcontractor shall be responsible for furnishing and installing **ALL** stair rails **(Interior and Exterior)**, and associated mounting hardware, including all coring into concrete/masonry stairs, walls, footings or slabs.
b. This subcontractor shall coordinate all embeds and connecting plates to concrete/masonry with the appropriate subcontractor and any other trades associated with this Work.
c. This Subcontractor shall provide touch-up painting on all field welds satisfactory to the Architect and Construction Manager.

27) Stair Railing Erection:

This Subcontractor shall install stair railings as the Structural Steel Subcontractor erects stairs simultaneously with structural steel erection. If the Metal Fabrications Subcontractor is not able to install the stair guardrails and handrails after the steel installation of the stairs it is responsible to install temporary guardrails and handrails at the steel stair installation and remove prior to the installation of the permanent guardrails and handrails.

28) Minor Work/Provisions:

The Structural Steel, Metal Decking and Miscellaneous Metals Subcontractor shall carry in their base bid an **additional allowance of $25,000 to cover additional detailing time, additional steel material, fabrication, shop priming, delivery and erection of steel elements not depicted on the Contract Documents.** This allowance shall be for minor work not indicated and as directed by the Construction Manager in addition to all other work indicated in this scope.

29) Tower Crane:

The Fusco Corporation will furnish a Tower Crane and Operator for the Concrete and Steel duration of the project. During erection of Structural Steel, the Concrete Contractor shall schedule required picks with the Fusco Corporation at a minimum of 48 hours' notice.

CLARIFICATIONS

The Structural Steel & Metal Deck Contractor shall:

1) Include all frames for roof drains.
2) Separate waste and place in labeled dumpsters as required by State of Connecticut HPGB requirements.
3) Provide welding of rebar dowels to the steel beams typical and as indicated.
4) Include all metal shown in the "S" drawings except for the masonry and concrete rebar and as noted in this Clarifications section. Include all anchor bolts for steel.
5) Include grating shown on F8/S-201.
6) Provide 3D CAD files from Tekla or an equivalent program for all work to Construction Manager for coordination and for the use of other trades. Shop drawings for all work must be provided within 30 calendar days from Notice of Award. In addition to the requirements indicated elsewhere Subcontractor shall provide a digital copy and 5 full sized hard copies of erection drawings to the Construction Manager for coordination.
7) ERECTORS MUST BE AISC-CSE CERTIFIED ERECTORS
8) Include wide flange beams for structural glass canopy system. All stainless steel work at the glass canopy system will be by others.
9) Include loose lintels over all openings in exterior and interior masonry walls.
10) Referring to Drawing A5.01 provide typical and as noted "sill support system" at the all elevator doors.
11) Referring to Drawing A5.01 provide typical and as noted "divider beams."
12) Referring to Drawing A5.01 provide typical and as noted "Intermediate Rail Support Required Through Out the Full Height of the Shaft."
13) Construction Parking & Material Storage Location: There is no Contractor parking on site and limited material storage. This Contractor shall include in his/her price offsite parking and storage of bulk material off site should you deem necessary.
14) Furnish and install all metal ladders, alternating tread devices, and metal bar gratings at sump pit.
15) Include all guardrails, hand rail, all other site railings and vehicular gates and bollards and removable bollards. Layout and install all site items in concrete footings provided by Sitework Subcontractor and install all required bracing and embeds. Include all coordination. All site metal under this scope must be galvanized and shop primed unless specifically noted otherwise.
16) Include all welding, sleeves, inserts and other work required for attachment.
17) Include all access ladders and ladder safety doors and rails. All exterior access ladders and related items shall be galvanized as indicated.
18) Any metal that is exposed that will received painting or a finished coating must be of high architectural grade quality with true members and welds ground smooth. Burrs are not acceptable.
19) Include all welding required for the metal include in this scope.
20) Include all adhesive anchors, drilling, doweling and epoxying, for items in this scope attaching to concrete or masonry.
21) Include any calculations and shop drawings prepared and stamped by a qualified professional engineer required for this scope of work.

22) Include all metal supports and backing for toilet compartment and dressing compartment overhead braces.
23) Furnish all interior and exterior stair and step nosings.
24) Include all bollards and removable bollards.
25) Include elevator pit ladders.
26) Referring to Detail 6 on Drawing L4.00A furnish and install typical and as noted "Guard Rail Post."
27) Referring to Detail & on Drawing L4.00A furnish and install typical and noted "Guardrail."
28) Referring to Detail 8 on Drawing L4.00A furnish and install typical and as noted "handrail at Accessible Concrete Ramp." Include "Core Drill 3" dia. Mortar set with non-shrink grout and ¼" watertight epoxy."
29) Referring to Detail 8 on Drawing L4.00A comply with "Notes #1, #2 and #3."
30) Referring to Detail 9 on Drawing L4.00A furnish and install typical and as noted "Ramp @ Chemistry Building."
31) Referring to Detail 10 on Drawing L4.00A provide typical and as noted Ramp and Retaining Wall at Pharmacy Building" specifically "3" x3" square S.S. tube buried sleeves" to be provided to the Site Concrete Subcontractor along with shop drawings that clearly indicate the layout and dimensions for proper installation.
32) Referring to Detail 10 on Drawing L4.00A provide typical and as noted "3/8" mortar grout water tight epoxy, typ."
33) Referring to Detail 10 on Drawing L4.00A provide typical and as noted "Carl Stahl 2.0 MM X-Tend S.S. Mesh."
34) Referring to Drawings A2.00 through A2.06 provide typical and as noted "Stair A and B."
35) Referring to Drawing A2.06 provide typical and as noted "Galvanized Metal Steps."
36) Referring to Drawing A2.07 provide typical and as noted "Painted Metal Guardrail" however painting will be Bid Package 9.6.
37) Referring to Drawing A3.01 provide typical and as noted "Roof Guardrail." Painting Color P-3 shall be by Bid Package 9.6.
38) Referring to Drawing A3.02 provide typical and as noted "Metal Fence Enclosure W/Shed Roof."
39) Referring to Drawing A3.02 provide typical and as noted bollard as it relates to "Ptd. Stl. Door Activation Bollard."
40) Referring to Drawing A3.02 provide typical and as noted "S.S. Grating" and as further defined in Detail 6 on Drawing A4.02.
41) Referring to Drawing A3.02 provide typical and as noted "Roof Guardrail." Painting Color P-3 shall be by Bid Package 9.6.
42) Referring to Drawing A3.03 provide typical and as noted "Roof" and Metal Fence Enclosure."
43) Referring to Detail 5 on Drawing A4.02 provide typical and as noted "Support Stanchion."
44) Referring to Drawing A4.03 provide typical and as noted "St. Stl. Bar Grating."
45) Referring to Drawing A4.03 provide typical and as noted bollard as it relates to "Ptd. Stl. Door Activation Bollard."

46) Referring to Details 1 and 4 on Drawing 4.05 provide typical and as noted bollard as it relates to "Ptd. Stl. Door Activation Bollard."
47) Referring to Drawing A5.01 provide typical and as noted "pit ladder" and "Perforated Removable Galvanized Stl. Plate Cover." Also provide a frame for the cover that will be installed by Bid Package 03.0-Concrete.
48) Referring to Drawing A5.03 provide typical and as noted all stairs, integral stair railings, stair guard rails, stair wall handrails.
49) Referring to Drawing A5.03 provide typical and as noted "Wall Mounted S.S. Handrail, Rail W/Ptd. Steel Posts, Ptd. Steel Guardrail, S.S. Handrail & Metal Mesh." Painting will be by Bid Package 09.6-Painting.
50) Referring to Detail 5 on Drawing A5.04 provide typical and as noted "S.S. Handrail."
51) Referring to Detail 5 on Drawing A5.04 provide typical and as noted "steel pans."
52) Referring to Detail 5 on Drawing A5.04 provide typical and as noted "Rail W/Ptd. Steel Posts, Ptd. Steel Guardrail, S.S. Handrail & Pickets." Painting will be by Bid Package 09.6-Painting.
53) Referring to Detail 1 on Drawing A5.06 provide typical and as noted "Pre-Cast Terrazzo Treads W/grooves for Traction."
54) Referring to Detail 3 on Drawing A5.06 provide typical and as noted "Channel Support."
55) Referring to Detail 3 on Drawing A5.06 provide typical and as noted "Terrazzo Treads and Landings"
56) Referring to Detail 8 on Drawing A5.06 provide typical and as noted "1/4" x 7" Stl. Plate."
57) Referring to Detail 3 on Drawing A6.00 provide typical and as noted "Cont. St. Stl. Angle."
58) Referring to Details 1, 2, and 3 on Drawing A6.14 furnish and install typical and as noted "Cont. PTD. Alum. Structural Carrier, Typ."
59) Referring to Detail 3 on Drawing A6.14 furnish and install typical and as noted "Galvanized Metal Steps."
60) Referring to Detail 6 on Drawing A6.30 furnish and install typical and as noted "Steel Support Angle at Louver Angle Locations."
61) Referring to Detail 6 on Drawing A6.30 furnish and install typical and as noted "Alum. Clip Angle."
62) Referring to Detail 12 on Drawing A6.30 furnish and install typical and as noted "Cont. St. Stl. Angle."
63) Referring to Detail 4 on Drawing A6.31 furnish and install typical and as noted "Alum. Clip Angle" and "Steel Support Angle."
64) Referring to Detail 9 on Drawing A6.31 furnish and install typical and as noted "Ptd. Metal Guardrail, Typ."
65) Referring to Detail 11 on Drawing A6.31 furnish and install typical and as noted "Galvanized Steel Steps."
66) Referring to Details 3 and 5 on Drawing A6.50 furnish and install typical and as noted "St. Stl. Roof Anchor Welded Directly to Structure. Provide Leveling Plate So That Anchor is Plumb. See Structural For Welding and Loading Regmts."
67) Referring to Details 3 and 5 on Drawing A6.50 furnish and install typical and as noted "Anchor Sleeve."

68) Referring to Details 3 and 5 on Drawing A6.50 furnish and install typical and as noted "Fill Anchor Void with Spray-In-Place Rigid Insulation."
69) Referring to Details 3 and 5 on Drawing A6.50 furnish and install typical and as noted "St. Stl. Flashing Welded to Anchor."
70) Referring to Details 3 and 5 on Drawing A6.50 furnish and install typical "St. Stl. Roof Anchor."
71) Referring to Detail 3 and 5 on Drawing A6.50 furnish and install typical as noted "St. Stl. Cap and Flashing."
72) Referring to Details 3 and 5 on Drawing A6.50 furnish and install typical and as noted "St. Stl. U-Bolt and attachment.'
73) Referring to Detail 7 on Drawing A7.01 furnish and install typical and as noted "Custom SS Corner Guard."
74) Referring to Details 8 and 9 on Drawing A7.03 furnish and install typical and as noted "Custom SS Corner Guard."
75) Referring to Detail 1 on Drawing A7.03 furnish and install typical and as noted "Custom St. Stl. Corner Guard."
76) Referring to Detail 1 on Drawing A7.10 furnish and install typical and as noted "Custom St. Stl. Corner Guard."
77) Referring to Detail 3 on Drawing A7.10 furnish and install typical and as noted "Welded Stainless Steel Plate With Returns, #4 Finish on St. Stl."
78) Referring to Detail 11 on Drawing A7.10 furnish and install typical and as noted "Custom St. Stl. Corner Guard. #4 Finish."
79) Referring to Detail 13 on Drawing A7.25 provide typical and as noted "Custom St. Stl. Profile, 16 Gauge."
80) Include all permanent roof anchor systems and install at the time of the metal deck. Include all U-bolts, caps, insulation inside the anchors, welding, etcetera for a complete system.
81) Include all wall corner guards including all stainless steel corner guards.
82) Include all stainless steel surrounds at openings including but not limited to as shown in detail 4/A9.22, typical.
83) Referring to Detail 1 on Drawing A9.04 provide typical and as noted "Mobile Steel for Gantry Hoist."
84) Referring to Detail 1 on Drawing A9.04 provide typical and as noted "Fixed Ladder."
85) Referring to Detail 5 on Drawing A9.05 provide typical and as noted "Type 316l Stainless Steel Ladder Bolted to Wall at Area of Solid Fiberglass Marked By Manufacturer."
86) Referring to Detail 3 on Drawing A9.06 provide typical and as noted "Custom Stainless Steel Surround, Typical at Openings."
87) Referring to Drawing FM-101-provide typical and as noted "Galvanized Steel U-Bar Safety Tieback Anchor (Ground Mounted)."
88) Referring to Drawing S-606 provide typical and as noted as per the schedule "Lintels for Masonry Walls" to the Masonry Subcontractor.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

Indicated below, the following unit price's shall be used in calculating Hazardous containing materials for additions and deductions from the original contract amount. These prices shall reflect all work practices required to remove and dispose the material in accordance with the project specifications and State and Federal regulations:

Bids shall include the following Unit-cost's:

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

ALLOWANCE NO. 1:

Minor Work Provisions **$25,000**

The Structural Steel, Metal Decking and Miscellaneous Metals Subcontractor shall carry in their base bid an **additional allowance of $20,000 to cover additional detailing time, additional steel material, fabrication, shop priming, delivery and erection of steel elements not depicted on the Contract Documents.** This allowance shall be for minor work not indicated and as directed by the Construction Manager in addition to all other work indicated in this scope.

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 6.0-General Trades

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **General Trades a**s described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **General Trades** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 6.0- General Trades:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **General Trades** and related work as described in the Specifications, Drawings, Existing Site Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

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Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

All Miscellaneous Carpentry; Cold Formed Metal Framing; Framing Accessories; Gypsum Sheathing; Glass-Fiber Blanket Insulation; Gypsum Board; Glass-Matt Water-Resistant Board; Gypsum Board Accessories; Gypsum Board Shaft Walls; Gypsum Board Assemblies; Drywall Partitions; Cementitious Backer Board as Tile Substrate; Drywall Ceiling and Soffits and other Gypsum and Light Gage Framing; Non-Structural Metal Framing; Wood Framing; Wood Wall Base; Rough Carpentry; Safety (O.S.H.A. Protection); Blocking; Furring, Grounds; Backboards; Acoustical and other Sealants/Caulking; Fire-Resistive Joint System; Firestopping; Joint Sealants; Steel Doors and Frames; Flush Wood Doors; Access Doors and Frames; Door Hardware; Acoustical Ceilings; Signage; Toilet Compartments; Toilet and Bath Accessories; Fire-Protection Cabinets; Fire Extinguishers; Metal Lockers; Projection Screens; Selective Structure Demolition; DAFS Systems; Visual Display Boards; Photo Luminescent Exit Path Marking; Final Cleaning; Temporary Work; Coordination with project schedule and other trades; Submittals, Samples, Product Data;

Fire Stopping Systems; Smoke Sealing Systems; Fire Stopping and/or Smoke Sealing at top of Concrete Walls; Fire Stopping and/or Smoke Sealing at the top of Masonry Walls; Fire Stopping and/or Smoke Sealing at top of Gypsum wall assemblies; Fire Stopping and/or Smoke Sealing for **ALL** Mechanical, Plumbing, Electrical, Security System, Fire Alarm, Communications, and Fire Protection Sub-contractors and their Sub-subcontractors; Coordination with the project schedule and other Trades; Submittals and Samples; Shop Drawings; Product Data as described in the Contract Documents.

3) Construction Manager's Trailer

i. Construction Manager's Office Trailer: Provide and eventually remove a pressured treated wood deck and shed roof (watertight) for the entrances to Fusco Corporation's jobsite trailer – approx. (1) 8'x12' size deck with stairs/rails built to all applicable codes and as directed by the CM. Provide two base cabinets and two wall cabinets and countertop to fill twelve foot long space in (1) locations. Provide 50 linear feet of 5/4" x 12" clear number 1 pine shelving with the necessary brackets to hold heavy loads. Eventually remove and dispose of the above installed items.

This Subcontractor shall include transportation from the Construction Managers warehouse/office in New Haven to the Project Site and transportation at the end of the project with a rack body truck (provided by this Contractor) to bring, furniture and incidentals to and from the site. Include **two (2) laborers** to move carry and distribute these incidentals.

4) Thermal Insulation:

a. The General Trades Contractor shall furnish and install Building Insulation as required to complete its Scope of Work as noted on the Contract Documents.

5) Sheet Metal and Fabric Flashings

The Roofing Contractor shall furnish and install all Sheet Metal Flashings, Metal Copings, Trim and Roof Accessories as described in the Contract Documents and furnish all exposed Metal through Wall Flashings, including metal reglets for installation by the Mason Contactor.

a. Any concealed and exposed (partially into **NEW** masonry) flashings and any metal flashing requiring a fabricated bend shall be supplied by the Roofing Contractor and installed by the Masonry Contractor at Cavity Walls, Unit Masonry Steel Lintels, Relieving Angle and other areas in contact with Masonry as indicated on the Contract Documents.
b. The Roofing Contractor shall furnish and install all Prefinished ZINC Cap, ZINC Fascia and/or Prefinished Aluminum Flashings, Counter Flashings, Copings, Metal Gravel Stops and other Sheet Metal contiguous with the Roofing system.
c. The Roofing Contractor shall furnish to the Masonry Contractor, for installation into the Mason's **NEW** work, all other Metal Flashing and Metal Thru Wall Flashings as noted in the Contract Documents.
d. Membrane Flashings contiguous to the Mason's work shall be provided and installed by the Mason Contractor.
e. The Windows, Glazing and Storefronts Contractor shall furnish and install all Flashings and Sheet Metal that is contiguous with his or her work; such as but not limited to: Flashings required to be installed prior to window or Panel installations.

f. The Roofing Contractor shall provide all flashings and reglets and accessories into existing masonry as noted on the Contract Documents. This shall include cutting and patching of all reglets into existing masonry necessary to provide a complete system.
g. The Roofing Contractor shall supply to the Masonry Contractor all flashings and reglets and accessories into new masonry and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Masonry Contractor.
h. The Roofing Contractor shall supply to the Window Contractor all flashings and reglets and accessories into Window System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Window Contractor.
i. The Roofing Contractor shall supply to the General Trades Contractor all flashings and reglets and accessories into DAFS System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the General Contractor.
j. All metal drip flashings shall be furnished by the Roofing Contractor and installed by the Masonry Contractor.

6)Layout/Survey:

The General Trades Contractor shall provide layout/surveys for his or her own Scope of Work.

The General Trades Contractor shall provide Horizontal and Vertical Control Lines. This information shall be provided by a Connecticut Licensed Land Surveyor who shall install permanent offset points (Maximum of 30 feet) and bench marks that will allow for the reproduction of lines and grades by other Trades. This Contractor shall include per floor the following: eight control lines and benchmarks at every third exterior column and benchmarks at twenty five percent of the interior columns.

The General Trades Contractor shall provide the final survey (A2) by a surveyor licensed by the State of Connecticut.

7) Perimeter Cable Protection:

The Structural Steel Contractor shall install and maintain OSHA-compliant perimeter protection cables and supporting steel at all decks, where required by OSHA. Removal of perimeter cable protection and supporting steel at all levels (except the roof) shall be by the General Trades Contractor. Removal of perimeter cables at the roof shall be by the Roofing Contractor.

8) Seismic Framing at Top of Partitions:

This Subcontractor shall provide seismic framing and kickers at top of wall typical and as noted on the Contract Documents.

9) Light Gage Framing, Gypsum Partitions and Gypsum Ceilings

The General Trades Contractor shall furnish and install Exterior Metal Stud Framing, Gyp Board Sheathing, and/or ¾" Pressure Treated Plywood, Batt and/or Semi-Rigid Insulation, Clips, firestopping and any and all accessories required to complete the substrate for all Trades as noted on the Contract Documents.

The General Trade Contractor shall furnish and install ***all*** interior and exterior wood blocking, including but not limited to, general wood blocking, all roofing blocking and nailers required to form Fascias, Parapets, Rakes, Expansion Joints, etc., as shown on the drawings. This includes furnishing and installing any required anchors, bolts, screws, nails, anchor bolts. Etc. This Contractor is responsible via any approved method to furnish and install anchors for attaching wood to metal or concrete masonry units. Additionally, this Contractor shall furnish to the Masonry Contractor any Anchor Bolts that will be installed in Masonry units for the purpose of anchoring any wood products.

Additionally the General Trades Contractor shall furnish and install all Drywall Partitions, Insulation, Clips and/or accessories as required to complete Drywall Partitions types as noted on the Contract Documents including, Smoke, Fire, Acoustical and other Sealant and Safing as noted. Fire Safing at Metal Deck/Steel intersection shall be completed by the Drywall and General Trade Contractor. Neoprene Gasket between Drywall Partitions and Exterior Wall Systems shall be provided by the General Trades Contractor.

10) Snow, Ice and Water Removal

The General Trades Contractor shall be responsible for all snow, ice and water removal from **Interior of the Building** and staging provided by the General Trades Contractor and as directed by the Construction Manager for the duration of the Project. Snow, ice and water removal shall be required on a daily basis as directed by the Construction Manager at its sole discretion. This Contractor shall be responsible to provide whatever means necessary to remove snow, ice and water from the interior of the building including but not limited to pumping, piping and vacuuming.

11) Sound Attenuation at Mechanical Curbs:

The General Trades Contractor shall furnish and install all materials and equipment to construct Sound Attenuation Assemblies. This includes, but is not limited to, any framing, sheetrock, insulation, etc.

12) Hollow Metal Doors, Hollow Metal Door Frames:

The General Trade Contractor shall , receive, Handle, Distribute, Set, Protect, Install and Adjust *all* Steel/Hollow Metal Doors, Borrowed Lights, Vision Panels, Hardware, including access doors, including access doors furnished by others. Hollow metal frames contained within Masonry Partitions and Concrete Partitions (if required-openings/forming by Concrete Contractor) shall be set and plumbed by the General Trades Contractor who will work with the Mason/Concrete Contractor to ensure that the frames are blocked with CMU's and grouted properly.

The General Trades Contractor shall make provisions to protect Hollow Metal Frames and Hardware mounting holes, installed by the General Trade Contractor, from damage during grouting operations performed by the Masonry Contractor.

a. The General Trades Contractor shall make provisions to protect Hollow Metal Frames and Hardware mounting holes, installed by the General Trades Contractor, from damage during grouting operations.
b. The General Trades Contractor shall prepare all frames to accept all hardware and technology.

13) Sound Control Doors:

The General Trade Contractor shall, Receive, Handle, Distribute, Set, Install Adjust and Protect Sound Control Doors.

14) Finish Hardware, Weatherstripping:

<u>The General Trade Contractor shall Provide, set, install, adjust and protect all Finish Hardware for your Scope of Work</u>.

Additionally the General Trade Contractor shall also be responsible for the following:

a.) Complete coordination between all hardware, doors, and frames
b.) Install all doors, wood and hollow metal, pre-machined and pre-fit for glass lites, louvers, hardware, etc.
c.) Wood doors shall be factory pre-finished as specified
d.) Install all door louvers
e.) Install all electrified hardware for your Scope or Work including but not limited to electric locks, electric strikes, key cards, transformers and any and all necessary accessories as noted on the Contract Documents.
f.) Install lockable metal heavy duty key cabinet. This Contractor will meet with the Owner to set up the cabinet in an initial meeting and then turnover the key cabinet at a follow-up meeting.
g.) Provide and later remove at the direction of the Construction Manager all temporary construction cores to the Construction Manager.
h.) This Contractor shall install all construction cores and permanent cores in each lockset. The Owner will not be doing ANY of this work.

i.) This Contractor is responsible for coordinating the Master Key System with the owner including as many meetings as necessary to accomplish this coordination.

j.) This Contractor will return to the Project (6) months after the date of Substantial Completion to examine, re-adjust, consult, replace hardware items, and prepare a detailed written report to the Owner.

k.) This Contractor shall install the magnetic door hold open contact plate (furnished by the Electrical Contractor) on it doors as noted on the Contract Documents.

l.) This Subcontractor shall coordinate the Hollow Metal Frames and Doors to receive the Electrical Contractor's Door Contacts (contacts installed by Electrical Contractor).

m.) Subcontractor is responsible for all shims, sealants and/or backer rods required for door frame installation.

n.) Install door opening assemblies including associated exit devices, closers, and gaskets complete.

o.) Include unloading, inventorying, storing, protection, distribution, and installation of all doors, frames and finish hardware. General Trades Subcontractor is responsible for any theft, damage, or other loss to items once items are delivered to the project site.

p.) Include all adjusting and balancing of doors for proper operation. Include the adjusting and balancing of doors and closers and comply with all applicable codes. Subcontractor shall perform the adjusting and balancing when directed by the Construction Manager in writing to minimize repeat visits and shall submit a report identifying any doors or closers that are not balanced as specified and the reason why.

q.) Install thresholds, seals, smoke seals, fasteners, door stops, door hold-opens, finish hardware, kickplates, gasketing and weather stripping, sweeps, astragals and door silencers complete.

15) Wood Blocking

a. The General Trades Contractor shall coordinate the Blocking requirements for the Work of the Window, Glazing and Storefront Trades Contractor.
b. <u>Any Blocking indicated on the Contract Documents or as required by the window and storefront manufacturer and the Window, Glazing and Storefront Contractor shall be furnished and installed by the General Trades Contractor.</u>
c. The blocking coordination responsibility amongst this Contractor and General Trades Contractor shall be ongoing for the duration of the project.
d. The Window, Glazing and Storefront Contractor shall provide all Clip Angles, Steel Angles, Furring Channels, Miscellaneous Metal Framing and Shims to complete installation of the Windows and Storefronts before and after the General Trades Contractor has provided coordinated Blocking.

The General Trade Contractor shall furnish and install ALL WOOD BLOCKING required by the Contract Documents. Wood Blocking shall include, but not be limited to, plywood blocking, furring, dimensional lumber and any and all wood required by the contract documents indicated for the purpose of blocking for any and all trades. The General Trades Contractor shall prepare a blocking location plan and conduct all required meetings in the presence of the Construction Manager. The blocking location plan shall be signed off by all trades requiring blocking (including the Architect for FF&E).

16) Backboards:

The General Trade Contractor shall provide all Electrical/Mechanical/Communication Backboards and as described in the Specification and as shown on the Contract Drawings. This Contractor shall provide thirty (30) additional four foot x eight foot ¾" plywood backboards in addition to what is required by the Contract Documents.

17) Architectural Louvers, Grilles and Vents

This Contractor shall provide and install **ALL** Architectural Louvers/Grilles/Vents.

a. The General Trades Contractor shall provide "Architectural Louvers" only. This includes all louvers shown on the architectural drawings.
b. All other louvers, grills and the like shall be the responsibility of the Mechanical Contractor.
c. The Mechanical Contractor shall be responsible for all final connections to the Architectural Louvers provided by others**.**

18) Substrates:

The General Trade Contractor shall prepare drywall substrate so that they meet or exceed the requirements of the specification for the final finishes. The Substrate shall meet or exceed flatness, Levelness and/or surface texture required.

19) Inspections:

The General Trade Contractor shall be responsible for properly coordinating and scheduling all inspections including but not limited to framing, insulation and other inspection that may be required in the execution of his or her Scope of work by the Authority having Jurisdiction.

20) Expansion Joints:

The General Trade Contractor shall furnish and install all **interior and exterior** floor, wall and ceiling expansion joint assemblies as shown on the contract documents.

21) Saddles, Thresholds and Sills:

The General Trades Contractor shall provide all saddles, thresholds and sills that is a component of your assembly.

22) Proper Manpower Management:

The General Trades Contractor shall have figured in their bid price multiple crews to perform the work of this bid package but not limited to; work both interior and exterior framing simultaneously in addition to separate crews for other work such as, but not limited to; installing gypsum, interior/exterior wall panels, taping and ceiling installation to meet the project schedule.

23) Stair Erection:

The General Trades Contractor shall provide temporary wood fillers all stairs treads immediately after the Structural Steel Contractor erects the stairs simultaneously with structural steel erection.

24) Temporary Entrance Doors and Exterior Openings:

At **ALL** exterior aluminum door locations the General Trades Contractor shall include in its bid proposal the cost to provide and eventually remove and dispose of temporary 1 3/4" wood doors with heavy duty locks and keys, all other necessary hardware, partitions walls at these locations only, and LCN or equal closers. Removal shall be at the direction of the Construction Manager with close coordination of quantity and areas with the Aluminum Windows and Storefront Contractor.

The General Trade Contractor shall include in its bid proposal the cost to provide and eventually remove and dispose from **ALL** exterior openings the temporary plywood protection and wood frames. Removal shall be at the direction of the Construction Manager with close coordination of quantity and areas with the Aluminum Windows and Storefront Contractor.

The General Trades Contractor shall be responsible for security of the building and maintaining and eventually removing **ALL** temporary doors, chains, locks, etc.

The General Trades Contractor shall be responsible on a ***daily basis*** to secure all access points to the building at the direction of the Construction Manager (after the Structure Demolition and Abatement Contractor has been relieved of this responsibility).

This Contractor shall provide and maintain and eventually remove One (1) Plywood Window (at upper level) with functioning hinges and hasp lock for access of temporary works into the building by others and for general access to load the upper floors as work progresses.

25) Temporary Heating and Cooling:

The General Trades Contractor shall and provide fire-rated temporary protection (including but not limited to, cut specifically for ductwork and fit tightly in the opening as prescribed by the Unit Manufacturer) to the door and window temporary protection necessary, in the sole discretion of the Construction Manager, to accommodate the Temporary Heating and Cooling systems as described in Bid Package #23.01.

The General Trades Contractor shall provide, maintain, relocate and eventually remove sixteen (16) temporary heat barriers constructed of 2x4 fire-retardant wood framing secured to the structure lined with six (6) mil fire-retardant plastic at a height and width of a typical hallway (10' x 12').

The patching of holes in partitions is to be done by the General Trades Contractor for drywall and the Masonry Contractor for masonry.

26) Temporary Power:

The patching of holes in partitions made for Temporary Power shall be provided by the General Trades Contractor for drywall and the Masonry Contractor for masonry

27) Construction Ventilation:

The General Trades Contractor shall be responsible for providing Six (6) Five Foot (5') diameter hi-speed, heavy duty portable fans for the duration of the Project. This includes setting up, locating, moving as needed, plugging or wiring as needed and maintaining at all times during this duration.

28) Architectural Joint Systems:

The General Trade Contractor shall furnish and install all Architectural Joint Systems Assemblies and expansion joints that are to be incorporated into this Scope of Work.

29) Man Lifts:

The General Trades Contractor shall allow use of man lifts by the Construction Manager or other for inspection purposes and or as directed by the Construction Manager. Provide training and any necessary safety equipment.

30) Fire Extinguishers and Cabinets:

The General Trades Contractor shall provide all Fire Extinguisher Cabinets and Permanent Fire Extinguishers as noted on the Contract Documents.

31) Pest Management

a. This Subcontractor shall provide pest management services for the entire duration of the Work. Pest control methods should first strive to use non-chemical controls such as trapping and pest proofing, followed by chemical controls only if non-chemicals methods fail.

b. This Subcontractor will control structural pests to include:
   1. Insects and other arthropods: These include ants, cockroaches, yellow jackets and other wasps and bees, and any other arthropod pest not excluded.
   2. Mice and rats: The contractor shall adequately suppress rats and mice found inside and outside buildings. Pick-up and proper disposal of dead vertebrates is also included in this scope of work.
   3. Pests excluded from contract: Termites and other wood destroying organisms.

32) Minor Work Provisions

The General Trades Contractor shall include in their Base Bid all work that is defined, described, inferred and/or discernable within the Contract Documents as it relates to the Fire Stopping and Smoke Sealing. **However, in addition, this Subcontractor shall include a $10,000 allowance for additional Fire Stopping and Smoke Sealing that is not defined, described, inferred or discernable within the Contract Documents. This additional minor work that is not indicated on the Contract Documents shall be performed as directed by the Construction Manager and shall be in addition to all other work indicated in this scope.**

CLARIFICATIONS

a.) The General Trades Contractor shall:

1) Provide fire stopping at all slab of deck edges as called for on the contract documents.
2) Provide cold formed metal framing indicated on structural and architectural drawings.
3) Provide all spray foam building insulation.
4) Provide mineral wool insulation at exterior walls.
5) Furnish and install all architectural louvers including adjacent steel support angles, blocking, fasteners, and clip angles including but not limited to as indicated in detail 6/A6.30 and 4/A6.31 and other details.
6) Include all projector mounts. Include projector mount shown on detail 3/A8.08.
7) Install all door hardware as it relates to doors in this scope of work. Include all door openers, hardware wiring, programing, adjustments, etcetera for a complete system. Include all wiring in the door frames and doors and to the activation buttons. Coordinate with Electrical Contractor and Telecommunications Contractor.

8) Include the unloading, storage and installation of the 2 hour rated glazing system that is framed with welded hollow metal.
9) Construction Parking & Material Storage Location: There is no Contractor parking on site and limited material storage. This Contractor shall include in his/her price offsite parking and storage of bulk material off site should you deem necessary.
10) In reference to Drawings T601 through T610 furnish and install typical and as noted all "3/4" Fire Resistant Plywood."
11) The General Trades, Electrical, Communications, Fire Alarm and Security Subcontractors should carefully review Drawing AV 000 especially "Audio Visual and Related Work Responsibly Schedule" to be sure that have included all of the labor, material and equipment included in their base bid as it relates to the assignment of the work in that matrix.
12) Furnish and install all fire stopping, smoke seals and fire safing throughout the project. Include all work at top of wall and horizontal and vertical MEP penetrations.
13) This Subcontractor shall carefully review drawings A0.03, A0.04 and A0.05. This subcontractor must base his or her bid on providing Fire Stopping and Smoke Sealing that meets or exceeds the ratings that are depicted on the drawings. This subcontractor shall provide all supportive information such as UL Design Criteria as part of the shop drawing submission to justify the selection of material and the installation process of the materials.
14) Referring to Details 3 and 5 on Drawing A6.01 provide typical and as noted "Firestop at Floor Line, Typ." This Subcontractor's work will also include Firestopping at the roofs, also.
15) Referring to Detail 3 on Drawing A6.02 provide typical and as noted "Firestop at Floor Line, Typ." This Subcontractor's work will also include Firestopping at the roofs, also.
16) Referring to Detail 3 on Drawing A6.03 provide typical and as noted "Firestop at Floor Line, Typ."
17) Referring to Detail 1 on Drawing A6.13 provide typical and as noted "Fire Safing and Smoke Seal."
18) Referring to Detail 1 on Drawing A6.30 provide typical and as noted "Fire Safing and Smoke Seal."
19) Referring to Detail 5 on Drawing A6.30 provide typical and as noted "Fire Sealant at Floor Slab."
20) Referring to Detail 1 and 5 on Drawing A6.31 provide typical and as noted "Smoke Seal and Firestopping."
21) Referring to Detail 1 on Drawing A6.32 furnish and install typical and as noted "Smoke Seal and Firestopping."
22) Referring to all of the Details on Drawing A7.50 this subcontractor shall provide all smoke sealing and/or fire stopping that is required to meet or exceed the ratings that are indicated on the Contract Documents. This shall apply to both top of wall conditions, but also at all other wall penetrations.

23) Referring to Detail 1 on Drawing A8.07 provide typical and as noted "Firestopping and Sealant Around Duct Penetrations Where Required."
24) Referring to Detail 1 on Drawing A8.07 provide typical and as noted "Firestopping Around Penetrations, Typ."
25) Referring to Detail 1 on Drawing provide and comply with typical and as noted "Provide 2 Hour Rated Per Test No. WHI-39 PSH 0154/0167 USG SA-929 P.8."
26) Referring to Detail 2 on Drawing A8.07 provide typical and as noted "Firestopping."
27) Referring to Detail 2 on Drawing A8.07 provide typical and as noted "Firesafe All Open Flutes.'
28) Typically, but not always, the MEPS Subcontractors will install sleeves in the walls, floors, ceilings and roofs in advance of placing their conduit, pipe, ductwork through said sleeves. It shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the outer edge of said sleeve. In addition, it shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the inner edge of said sleeve up to and against the item(s) that are passing through the sleeve(s).
29) Provide all Fire Stopping and Smoke Sealing for the all partitions including but not limited to Masonry, Drywall Curtainwall, Glass Wall, Storefront, etc.
30) Provide all Fire Stopping and Smoke Sealing for all penetrations through walls, floors, ceilings and the roofs that created by the <u>Mechanical, Plumbing, Electrical, Security System, Fire Alarm, Communications, and Fire Protection Sub-contractors and their Sub-subcontractors.</u>
31) The General Trades Subcontractor must include in their Base Bid all work that is defined, described, inferred and/or discernable within the Contract Documents. In addition, this Subcontractor shall include a $10,000 allowance for additional Fire Stopping and Smoke Sealing that is **<u>not</u>** defined, described, inferred or discernable within the Contract Documents.
32) In reference to Drawings T601 through T610 provide all fire stopping and smoke sealing as may be required at all conduit penetrations.
33) In reference to Detail 1 on Drawing T702 comply with "Fire and Smoke Proofing General Notes."
34) In reference to Detail 1 on Drawing T702 provide typical and as noted "fire stop sealant (both sides)."
35) In reference to Detail 1 on Drawing T702 provide typical and as noted "fire stop sealant and mineral wool packing."

<u>EXCLUSIONS</u>

1) Sale and Use Taxes.

UNIT PRICES

Indicated below, the following unit price's shall be used in calculating Hazardous containing materials for additions and deductions from the original contract amount. These prices shall reflect all work practices required to remove and dispose the material in accordance with the project specifications and State and Federal regulations:

Bids shall include the following Unit-cost's:

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

ALLOWANCE NO. 1:

Minor Work Provisions: $10,000.

The General Trades Contractor shall include in their Base Bid all work that is defined, described, inferred and/or discernable within the Contract Documents as it relates to the Fire Stopping and Smoke Sealing. **However, in addition, this Subcontractor shall include a $10,000 allowance for additional Fire Stopping and Smoke Sealing that is not defined, described, inferred or discernable within the Contract Documents. This additional minor work that is not indicated on the Contract Documents shall be performed as directed by the Construction Manager and shall be in addition to all other work indicated in this scope.**

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 6.1-Architectural & Lab Casework

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Architectural & Lab Casework a**s described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Architectural & Lab Casework** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 6.1- Architectural & Lab Casework:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Architectural & Lab Casework** and related work as described in the Specifications, Drawings, Existing Site Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

   Project Manuals:

   Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

   Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

SECTION	
01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000 Carpentry (As Applicable)
064023 Architectural Woodwork

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

079200 Joint Sealers (As Applicable)

DIVISION 8 – OPENINGS

083113 Access Doors (As Applicable)

DIVISION 11 – EQUIPMENT

116100 High Performance Laboratory Fume Hoods

DIVISION 12 - FURNISHINGS

123640 Stone Counters

DIVISION 21, 22, 23, 26 & 28 – (as applicable)

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Millwork; including but not limited to: Interior Architectural Woodwork; Plastic-Laminate-Clad Architectural Cabinets; Base Cabinets; Wall Cabinets; Countertops; Window Sills; Toe Base Frames; Shelves; Miscellaneous Casework; Coat Rod and Shelf; Supply Air Grills contained within the Casework; Grommets; Wall Shelves; Support Framing (steel or otherwise); Furring and/or Bracing within your Scope of Work; Standards and Brackets; Mail Box Cabinet/slots; Laminate Casework; Laminate

Countertops; All Glass in Woodwork & Casework; Specialty Casework; Specified Accessories; Furring Blocking and Accessories necessary to install Casework; Wire Grommets; Joints Sealants; Furring and/or Bracing within your Scope of Work as described in the Specifications

3) Finish Hardware:

The Millwork Contractor shall provide all Finish Hardware for the Millwork as indicated on the Contract Documents.

4) Millwork Finishes:

The Millwork Contractor shall provide consistent Millwork Finishes that are identical to the approved Millwork Finish samples.

5) In Wall Blocking:

The Millwork Contractor shall provide coordination drawings indicating in-wall blocking and or grounds that shall be required for proper installation of Millwork/Casework. The actual in-wall blocking, grounds and etc., shall be provided by the General Trades Contractor.

6) Service Connections (Plumbing/HVAC/Electrical)

The Millwork Contractor shall coordinate with the Plumbing HVAC and Electrical Contractor all Fittings, fixtures and etc. that are to be incorporated into the Millwork.

a. The Millwork Contractor shall coordinate with the above Contractors to assure all services are complete in all respects.

b. The Millwork Contractor shall coordinate the location and size of all openings to access fittings and/or her equipment, Failure to notify the Fusco Corporation of any discrepancies shall be construed as acceptance of the condition.

c. The Millwork Contractor shall coordinate with the Plumbing/HVAC and Electrical Contractors all Fittings, Fixtures and etc. that are to be incorporated into the Millwork.

d. The Plumbing/HVAC and Electrical Contractors shall be responsible for all final connections to Service fitting.

e. The Millwork Contractor shall coordinate with the above Contractors to assure all services are complete in all respects. Cutting and, or modification of casework/millwork for MEP rough in will be by this Contractor.

f. The Millwork Contractor shall coordinate the location and size of all openings to access fittings and/or equipment.

g. Failure to notify the Fusco Corporation of any discrepancies shall be construed as acceptance of the conditions.

7) Access Doors:

The Millwork Contractor shall provide Access Doors and/or Panels where appropriate so as to allow for service connections or access to equipment for all Trades.

8) Sealants and Caulking:

The Millwork Contractor shall furnish and install all sealants and caulking as required to complete his or her scope of work. This shall include the caulking of any millwork/casework to any other surface.

9) Residential Appliances:

The Millwork Contractor shall coordinate with the General Trades Contractor the size and location of residential appliances that are to be incorporated into the Millwork

10) Cut-outs:

The Millwork Contractor are responsible for providing cutouts in all Millwork that are required by the Contract Documents and Coordination Drawings approved by the Construction Manager. Seal all exposed edges of cutouts with silicone caulking to prevent water damage.

CLARIFICATIONS

a.) The Millwork Contractor shall:

1) Include all work described in specification section 064023. This includes but is not limited to all wood laboratory and casework, countertops of molded epoxy resin and plastic laminate, casework hardware, shop applied casework finishes, molded epoxy resin bench sinks, laboratory service fixtures and fittings, drying racks, cylinder strap holders, finsh wood trim, exhaust snorkels, gas cabinets and lockers.
2) Include all lockers described in specification section 064023 and include glazing.
3) Include all glass storage cabinets.
4) Include sinks and faucets as described in specification section 064023 and provide detailed plumbing rough-in drawings within 30 calendar days of receiving a notice to proceed.
5) Include all lab bench systems and provide detailed plumbing and electrical rough-in drawings within 30 calendar days of receiving a notice to proceed.
6) Include fume hoods and all work described in specification section 116100. Provide detailed mechanical, plumbing and electrical rough-in drawings within 30 calendar days of receiving a notice to proceed. Include all piping, wiring and connections to and within fume hoods.
7) Include start-up, commissioning and training for the fume hoods.
8) Include metal enclosures above fume hoods.
9) Furnish and install all vacuum breaks required for the faucets in this scope of work as indicated and as required by the authority having jusdiction.
10) Include built in upholstered benches and wood tables.
11) Include all work shown on sheet A9.01.
12) Include all movable tables, benches, desks and casework unless specifically noted to be owner furnished.
13) Included all glazing and glass dividers and panels at benches, desk and work stations. Include all supports and fittings for glazing.

14) Include all shelving systems, hooks, drying racks and peg boards. With all shelving systems include all shelves, standards, supports, wire book ends, rods, angles, and brackets.
15) Include all countertops.
16) Include steel ceiling panels for lab benches as indicated in detail 2/A9.29.
17) Include all lab fixtures and faceplates.
18) Include all wood floor base.
19) Include stainless steel scullery sink, drain and counter system in the water lab per detail 1/A9.05.
20) Include all metal umbilical enclosures.
21) Include all tackboards and corkboards.
22) Include all display cases. Include the display case system shown on detail 1/A7.03.
23) Construction Parking & Material Storage Location: There is no Contractor parking on site and limited material storage. This Contractor shall include in his/her price offsite parking and storage of bulk material off site should you deem necessary.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

Indicated below, the following unit price's shall be used in calculating Hazardous containing materials for additions and deductions from the original contract amount. These prices shall reflect all work practices required to remove and dispose the material in accordance with the project specifications and State and Federal regulations:

Bids shall include the following Unit-cost's:

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 7.0-Roofing

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Roofing a**s described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Roofing** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 7.0- Roofing:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Roofing** and related work as described in the Specifications, Drawings, Existing Site Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

   Project Manuals:

   Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

   Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

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ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

SECTION	
01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000 Carpentry (As Applicable)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

075625 Fluid Applied Roofing System
076200 Sheet Metal Work
077100 Roof Specialties and Accessories

DIVISION 21, 22, 23, 26 & 28 – (AS APPLICABLE)

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Roofing Systems; Canopy Roofs; Roof Insulation; Snow Guards; Gutters, Leaders and Down Spouts; Primers and Adhesives; Clips and Accessories; Splash Blocks; Reglets; Tapered Roof Insulation; Roof Cants; Roof Edge System; Roof Walkways; Nail Base with Slip Sheet and Membrane Barrier Underlayment; Metal Flashing and Trim; Roof Edge Flashings; Roof Hatches; Underlayments; Roof Expansion Joints; Fasteners and Plates; Wall Flashing and Trim; Metal Copings; Membrane Flashing; Metal Soffits and Fascias, Parapet Flashing; Roof Accessories; Pipe Flashings; Skylights; Sealants; Cant Strips and Accessories; Exterior Plywood Coverboard on Roofing Insulation: Exterior Plywood Coverboard on Metal Deck; Metal Fascia; Metal Trims and Flashings; Coordination of Roof Drains; Flashing of Electrical and Mechanical Roof Penetrations. Coordination with project schedule and other trades; Submittals, Samples, Product Data and etc.

3) Sealants and Caulking:

The Roofing and Moisture Protection Contractor shall furnish and install all sealants and caulking as required to complete his or her scope of work.

4) Miscellaneous Rough Carpentry and Sheathing

The Roofing and Moisture Protection Contractor shall provide plywood sheathing where: (1) plywood sheathing is directly fastened to the Roof and or Canopy Metal Deck; and (2) plywood sheathing is directly fastened to roofing insulation.

5) Building Insulation:

a. The Roofing Contractor shall furnish and install all insulation associated with the Roofing Systems.
b. The Roofing Contractor shall provide cover board on roofing insulation as noted on the Contract Documents.

6) Roofing Coordination:

a. The Roofing Contractor shall coordinate the installation of the roofing with the Construction Manager, Window Contractor, General Trades Contractor, Steel Contractor, Masonry Contractor, Mechanical and Electrical Contractors to allow for the proper sequence of the work.
b. The Roofing and Moisture Protection Contractor shall provide unlimited return visits to the site to patch the new roofing system as required after installation of Electrical and Mechanical conduits, piping, and equipment by the MEP Contractors.
c. This roofing coordination responsibility shall be ongoing for the duration of the project.
d. This Contractor shall make for provisions to maintain the water tightness of the roof at mechanical curbs installed for packaged rooftop mechanical unit, in advance of the delivery and during the installation of the rooftop units.

7) Perimeter Cable Protection:

The Structural Steel Contractor shall install and maintain OSHA-compliant perimeter protection cables at all decks, where required by OSHA. Removal of perimeter cable and supporting steel protection at all levels **(except the roof)** shall be by the General Trades Contractor. Removal of perimeter cables and supporting steel **(at the roof)** shall be by the Roofing Contractor.

8) Temporary Roofing:

The Roofing Contractor shall provide, maintain and eventually remove any temporary roofing required to complete its scope of work and any other trades scope of work at the Roof. <u>The Roofing Contractor shall be solely responsible any and all water infiltration from the existing roof during the re-roofing (from Roof Demolition to Permanent Roofing) process.</u>

The Roofing Contractor shall provide and eventually remove temporary roofing over any and all roof penetrations as directed by the Construction Manager.

The Roofing Contractor shall provide draping of the roof in a temporary manner for a watertight condition while others complete work including but not limited to exterior walls, parapets, curbs and temporary flashings up vertical surfaces requiring coordination with other trades.

9) Roof Top Equipment Curbs:

The Roofing Contractor shall furnish and install all Roof Flashing as indicated to complete the installation for Roof Top Equipment Curbs. The Roofing Contractor shall furnish and install all required flashings as it pertains to the installation of the roof system and roof curbs. All Contractors should note that if the roof slopes all consideration must be considered in shop drawings and fabrication of any unit, curb, etc., being installed in these sloped areas.

10) Roof Drains, Vent and other Through Roof Penetrations:

The Roofing Contractor shall furnish and install all flashing and other materials required to seal all Roof Drains, Vents and other through Roof Penetrations.

11) Expansion Joints:

The Roofing Contractor shall furnish and install all Expansion Joints associated with the Roofing systems including contiguous non wood blocking, firestopping, flashings as shown on the Contract Documents.

12) Insulation:

The Roofing Contractor shall furnish and install all insulation associated with the Roofing Systems.

13) Sheet Metal and Fabric Flashings:

The Roofing Contractor shall furnish and install all Sheet Metal Flashings, Metal Copings, Trim and Roof Accessories as described in the Contract Documents and furnish all exposed Metal through Wall Flashings, including metal reglets for installation by the Mason Contactor.

a. Any concealed and exposed (partially into **NEW** masonry) flashings and any metal flashing requiring a fabricated bend shall be supplied by the Roofing Contractor and installed by the Masonry Contractor at Cavity Walls, Unit Masonry Steel Lintels, Relieving Angle and other areas in contact with Masonry as indicated on the Contract Documents.
b. The Roofing Contractor shall furnish and install all Prefinished Fascia and/or Prefinished Aluminum Flashings, Counter Flashings, Copings, Metal Gravel Stops and other Sheet Metal contiguous with the Roofing system.
c. The Roofing Contractor shall furnish to the Masonry Contractor, for installation into the Mason's **NEW** work, all other Metal Flashing and Metal Thru Wall Flashings as noted in the Contract Documents.
d. Membrane Flashings contiguous to the Mason's work shall be provided and installed by the Mason Contractor.
e. The Windows, Glazing and Storefronts Contractor shall furnish and install all Flashings and Sheet Metal that is contiguous with his or her work; such as but not limited to: Flashings required to be installed prior to window or Panel installations.
f. The Roofing Contractor shall supply to the Masonry Contractor all flashings and reglets and accessories into new masonry and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Masonry Contractor.
g. The Roofing Contractor shall supply to the Window Contractor all flashings and reglets and accessories into Window System and necessary to accept Roofing Contractor's cap

flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Window Contractor.

h. The Roofing Contractor shall supply to the General Trades Contractor all flashings and reglets and accessories into DAFS System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the General Contractor.

i. All metal drip flashings shall be furnished by the Roofing Contractor and installed by the Masonry Contractor.

14) Roof Installation:

This Contractor shall include the cost to temporarily adhere all new roof edges for water tight seal until completion of parapets, masonry, and all final roof terminations can be completed.

This Contractor will be required to make any and all mobilizations in order to meet the project schedule. No additional compensation will be issued for any and all mobilizations.

This Contractor's manufacturer's representative for the roofing system shall certify in writing, along with applicator's acceptance that the substrate to receive their system is acceptable and approved. It is understood that this manufacturer's representative will be required to visit the jobsite on a periodic basis during the installation operations to verify conformance of the application and shall issue site visit reports to the installer and directly to the Construction Manager for each trip acknowledging same.

This Contractor will install and flash all roof curbs which are provided by the MEP Contractors, with exception of the Roof Air Handling Unit curbs which will be installed by the HVAC Contractor and flashed by the Roofing Contractor.

This Contractor shall provide OSHA required fall arrest of prevention systems required to perform his or her work. At the direction of the Construction Manager this Contractor shall remove all roof perimeter safety cable systems and deliver to the Construction Manager. This Contractor shall also include patching the roof at all locations where perimeter safety cable stanchions or supports are removed.

This Contractor shall provide all roof hatches, smoke vents, as noted on the Contract Documents.

15) Protection of Masonry Work:

When a masonry wall is topped off to the roof line, it shall become the responsibility of the Roofing Contractor to keep all water, snow and ice from entering into the concrete masonry unit or the cavity until the permanent or temporary cap or cover is installed by the Roofing Contractor.

22) Snow, Ice and Water Removal

The Roofing Contractor shall be responsible for all snow, ice and water removal from the roof and roof deck and staging provided by the Roofing Contractor before, during and after the installation of the roof and as directed by the Construction Manager.

16) Down Spouts:

The Roofing Contractor shall include any roofing work related to down spout nozzles.

17) Roof Edge Protection:

The Roofing Contractor shall provide all OSHA Approved temporary roof edge protection acceptable to the Construction Manager. Provide adequate amount of sturdy stanchions and counterweights with bright colored flagging strung along all perimeter edges. The Roofing Contractor shall maintain the roof edge protection for the duration of the Project. The Roofing Contractor shall remove the roof edge protection at the direction of the Construction Manager.

18) Metal Deck Penetrations:

The Roofing Contractor shall include all cutting and removing of metal deck for Roofing Contractor's own Scope of Work installations as noted on the Contract Documents.

CLARIFICATIONS

a.) The Roofing Contractor shall:

1) Include all work described in specification section 075625, 076200 and 077100.
2) Provide **all** wood blocking required for attachment of roofing material.
3) Include all crickets shown and neccisary to provide the required slope.
4) The roofer will be required to place roofing material over all roof top equipment openings including exhaust fans. Once the equipment curbs are ready for installation the roofer will be required to return to the project and remove the roofing at these locations and then install roofing material at the curbs, place temporary roofing over the curb/equipment openings. The equipment contractor will remove the temporary roofing when setting the equipment.
5) Provide all non-shrink grout at roof including at the roof drains, overflow drains and pitch pockets.
6) Include all cold applied flashings, gravel stops and scuppers.
7) Include vegetated roof membrane, insulation and system.
8) Include all precast concrete pavers.
9) Construction Parking & Material Storage Location: There is no Contractor parking on site and limited material storage. This Contractor shall include in his/her price offsite parking and storage of bulk material off site should you deem necessary.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

Indicated below, the following unit price's shall be used in calculating Hazardous containing materials for additions and deductions from the original contract amount. These prices shall reflect all work practices required to remove and dispose the material in accordance with the project specifications and State and Federal regulations:

Bids shall include the following Unit-cost's:

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 07.3-Spray Fireproofing

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Spray Fireproofing** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Spray Fireproofing** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 07.3 – Spray Fireproofing-**This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Spray Fireproofing** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 01 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls

01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 5 – METALS

051200	Structural Steel (As Applicable)
051250	Architecturally Exposed Structural Steel (As Applicable)
053000	Metal Decking (As Applicable)
055000	Miscellaneous Metals (As Applicable)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

078100	**Sprayed Fire Resistive Materials**
078123	**Intumescent Fireproofing**

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Spray Fire Resistive Material and Intumescent Fireproofing, Shop Drawings, Submittals, Project Coordination, etc.

The intent of the Scope of Work is for the **Spray Fireproofing** bidder to furnish and install all materials and equipment noted on the Contract Documents.

Any references to “Construction Manager” or “Contractor” or “General Contractor” in the Contract Documents shall be interpreted as “this

Subcontractor" or "the **Phase 2 Bid Package No. 07.3 – Spray Fireproofing** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up& Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the General Trades Contractor.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

8) Coordination:

The Spray Fire Proofing Trade Contractor shall coordinate all of his work with all contractors including but not limited to the Structural Steel, Masonry, Roofing, Mechanical, Fire Protection, Electrical, Plumbing, Fire Alarm, Communications, Building Security, Acoustical and Drywall Contractors.

9) Spray Fireproofing:

All of the Trade Contractors' shall be responsible for installing all of his or her hangers and support steel before the Spray Fireproofing Trade Contractor mobilizes in an area. Each Contractor shall be responsible for all costs to patch and or repair Spray on Fireproofing that has been damaged as a result of the installation of his or her Scope of Work.

10) Scaffolding/Staging:

Scaffolding and/or Staging to install and/or access your work as shall be the responsibility of the Contractor performing the work.

11) Drinking Water:

This Contractor shall provide drinking water for his own personnel at the project site, including the furnishing of paper cups and waste receptacles.

12) Temporary Enclosures:

There shall be no storage space for any Contractor within the building for any stored materials. Except for roof top units, all on site stored materials shall be placed within the fenced staging area, which is identified in, section 00160-Temporary Facilities. Roof top equipment if delivered prior to the time it is to be placed on the roof, shall be stored offsite at the expense of the Mechanical Contractor.
This Contractor shall provide temporary enclosures and/or protection during the construction for your materials, equipment, etc.

13) Rigging/Hoisting/Distribution:

Included shall be all hoisting, rigging, distribution and erection as required to complete your scope of work.

14) Existing Conditions:

This Contractor shall be responsible to complete his or her work in a manner so as not to cause damage to work in place and shall be responsible for the cost of repairs should damage occur.

15) Clarifications:

a.) This subcontractor shall include **all** localized heating, tarping and protection to support his work.

b.) This subcontractor should assume that there will be rust and mill scale on the structural steel columns, beams and associated elements that will require this subcontractor to prepare in advance of beginning to apply both the spray fire resistive material and the intumescent spay materials.

c.) This subcontractor will be responsible for ascertaining any special power requirements for his work either through the electrical subcontractor or by providing their own portable electrical generators.

d.) The Construction Manager will insist that all Trade Contractors install all of their hangers, clips, tracks, etc. in advance of the Spray Fire Proofing beginning on each floor. However, the Spray Fire Proofing Trade Contractor shall include in his base bid the labor and material to make a

"second pass" after any errant Drywall, Acoustical, and MEPS hangers, clips, tracks, etc. have been installed. **For each floor**, this contractor shall include two days labor for a two man crew and $1,000 material for this work. Any wholesale removal of spray fire proofing by other trade contractors' will be considered outside of the intent of this item and will be addressed by the Construction Manager by issuing an additive change order to your account.

e.) Referring to Detail 1 on Drawing A6.14 provide typical and as noted "Applied Fireproofing."

f.) Referring to Detail 2 on Drawing A6.14 provide typical and as noted "Fireproofing per code Compliance Plans."

g.) Referring to Detail 5 on Drawing A6.31 provide typical and as noted "Spray Applied Fireproofing."

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

ALLOWANCE NO. 1:

SECOND PASS ON EACH FLOOR

Provide the labor and material to make a "second pass" after any errant Drywall, Acoustical, and MEPS hangers, clips, tracks, etc. have been installed. **For each floor**, this contractor shall include two days labor for a two man crew and $1,000 material for this work.

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 8.0-Glass & Glazing & Terra Cotta

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Roofing a**s described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Glass & Glazing & Terra Cotta** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 7.0- Glass & Glazing & Terra Cotta:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Roofing** and related work as described in the Specifications, Drawings, Existing Site Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

   Project Manuals:

   Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

SECTION	
01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
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01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings

018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 4 - MASONRY

042800	Terra Cotta Assembly

DIVISION 5 - METALS

054000	Cold Formed Metal Faming (As Applicable)
057700	Structural Glass Canopy

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

072100	Thermal Insulation (As Applicable)
072700	Air and Vapor Barrier Membrane (As Applicable)
076200	Sheet Metal Work (As Applicable)
079200	Joint Sealers (As Applicable)

DIVISION 8 – OPENINGS

081000	Door Schedule (As Applicable)
084413	Curtain Walls, Storefronts and Entrances (CWSE)
084510	Interior Glazed Walls
087100	Finish Hardware (As Applicable)
088000	Glass and Glazing
088813	Fire-Rated Glass and Framing System

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

All Aluminum Frames; All Aluminum-Framed Entrances, All Storefronts and Accessories; Glazed Aluminum Curtain Walls and Accessories; Aluminum Windows; Aluminum Trim; Aluminum In-Fills at Column Lines and at Steel Columns; Glazing; Special Function Glazing; Fire-Rated Glazing; Fasteners and Accessories; Float Mirrors; All Hardware associated with your Scope of Work; Aluminum Thresholds/Saddles/Sills; Firestopping and Safing; Flashings; Aluminum Closure Pieces; Insulation within its Scope of Work; Screens; Caulking and Sealants (in and out); Exterior Fabrications Made of Laser-Cut Formed Metal Sheet Aluminum.

3) Exterior Assemblies and Façade:

It is the intent of this scope of work to have this Contractor furnish and install the exterior vertical building envelope in its entirety from the substrate out to finish product. This shall include but not be limited to AVB, subgirts, aluminum channels, terracotta, metal/composite panels, trim, aluminum shapes, flashings and unitized glazing.

4) Shimming:

This Contractor shall coordinate the shimming to assure proper installation. All shimming, whether it is wood, plastic or any other material is to be furnished and installed by the Aluminum Windows, Storefronts, Metal Wall Panel Assemblies & Curtain Wall Contractor.

5) Window and Storefront Blocking:

a. This Contractor shall coordinate the Blocking requirements for its Work with the General Trades Contractor.
b. Any Blocking indicated on the Contract Documents or as required by the manufacturer and Window, Glazing and Storefront Contractor shall be furnished and installed by the General Trades Contractor.
c. The blocking coordination responsibility amongst this Contractor and General Trades Contractor shall be ongoing for the duration of the project.
d. This Contractor shall provide all Clip Angles, Steel Angles, Furring Channels, Miscellaneous Metal Framing and Shims to complete installation of the Work before and after the General Trades Contractor has provided coordinated Blocking.

6) Sealants and Caulking:

This Contractor shall provide all sealants and caulking as required to complete his or her scope of work.

a. This Contractor shall provide the appropriate Backer Rod, Joint Sealant/Caulking at all exterior and interior Windows, Curtain Walls, Entrances and others surfaces contiguous to your Scope of Work, as described and noted on the Contract Documents.
b. The Intent of this Joint Sealant/Caulking Scope of Work is for this Contractor is to provide a complete and weather tight system in all respects.

7) Window Flashing and Sheet Metal:

This Contractor shall furnish and install all Flashings and Sheet Metal that is contiguous with its Work; such as but not limited to: Flashings required to be installed after roofing work and prior to Window or Panel installations; Prefinished Aluminum Flashing at transitions and the like.

a. This Contractor shall provide all Flashings and Sheet Metal that is contiguous with his or her work, such as but not limited to: Flashings required to be installed prior to window or Panel installations, Prefinished Aluminum Flashing.
b. Prefinished Aluminum Flashings, Counter Flashings, Sill Closure Pieces and other Sheet Metal contiguous with the Window systems shall be provided by this Contractor.
c. This Contractor shall provide all Flashings and Sheet Metal that is contiguous with his or her work; such as but not limited to: Flashings required to be installed prior to window or Panel installations.
d. This Contractor shall provide all Flashings and Sheet Metal above the receiver (reglet) and install the receiver (reglet) provided by others.

8) Sheet Metal and Fabric Flashings:

The Roofing Contractor shall furnish and install all Sheet Metal Flashings, Metal Copings, Trim and Roof Accessories as described in the Contract Documents and furnish all exposed Metal through Wall Flashings, including metal reglets for installation by the Mason Contactor.

a. Any concealed and exposed (partially into **NEW** masonry) flashings and any metal flashing requiring a fabricated bend shall be supplied by the Roofing Contractor and installed by the Masonry Contractor at Cavity Walls, Unit Masonry Steel Lintels, Relieving Angle and other areas in contact with Masonry as indicated on the Contract Documents.
b. The Roofing Contractor shall furnish and install all Prefinished ZINC Cap, ZINC Fascia and/or Prefinished Aluminum Flashings, Counter Flashings, Copings, Metal Gravel Stops and other Sheet Metal contiguous with the Roofing system.
c. The Roofing Contractor shall furnish to the Masonry Contractor, for installation into the Mason's **NEW** work, all other Metal Flashing and Metal Thru Wall Flashings as noted in the Contract Documents.
d. Membrane Flashings contiguous to the Mason's work shall be provided and installed by the Mason Contractor.
e. The Windows, Glazing and Storefronts Contractor shall furnish and install all Flashings and Sheet Metal that is contiguous with his or her work; such as but not limited to: Flashings required to be installed prior to window or Panel installations.
f. The Roofing Contractor shall provide all flashings and reglets and accessories into existing masonry as noted on the Contract Documents. This shall include cutting and patching of all reglets into existing masonry necessary to provide a complete system.
g. The Roofing Contractor shall supply to the Masonry Contractor all flashings and reglets and accessories into new masonry and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Masonry Contractor.
h. The Roofing Contractor shall supply to the Window Contractor all flashings and reglets and accessories into Window System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Window Contractor.
i. The Roofing Contractor shall supply to the General Trades Contractor all flashings and reglets and accessories into DAFS System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the General Contractor.
j. All metal drip flashings shall be furnished by the Roofing Contractor and installed by the Masonry Contractor.

8) Saddles, Thresholds and Sills:

This Contractor shall provide all saddles, thresholds and sills that are a component of your assembly.

9) Anchorage:

This Contractor shall furnish and install all appropriate anchorage systems for his or her Scope of Work.

This Contractor shall furnish and install any additional structural members necessary for the installation of all items in this bid package that are not shown on the contract documents.

This Contractor shall provide and include all necessary attachments (clips, angle, reinforcement, hardware, shims, aluminum shapes, fasteners, or anything that is industry standard to this work, etc.) as required, whether or not shown on Contract Documents, to properly erect and install this work.

10) Glass and Glazing:

This Contractor shall furnish and install all Glass and Glazing for but not limited to Hollow Metal Doors, Sidelights, Borrowed Lights and Wood Doors and Mirrors in addition to the Metal Windows, Curtainwall and Aluminum Entrances.

This Contractor shall provide all safety laminated and fire rated glass shown on the Contract Documents.

11) Finish Hardware:

This Contractor shall provide all Finish Hardware required for your Scope of Work.

For clarification, this Contractor shall also provide factory electrified hardware for your Scope or Work including but not limited to electric locks, electric strikes, transformers and any and all necessary accessories as noted on the Contract Documents, including but not limited to all necessary prep work for security, technology, operators, etc., for this bid package and any other bid package.

The Electrical Trade Contractor shall provide to the General Trades and Window & Curtainwall Trade Contractors complete information, layout requirements and templates or actual samples of the door contacts as it relates the Security System. The General Trades and Window & Curtainwall Trade Contractors shall receive this information and have all doors and frames **factory** prepared in order to receive this material. The installation of the actual door contact shall be provided by the Electrical Contractor.

This Contractor shall install the magnetic door hold open contact plate (furnished by the Electrical Contractor) on its doors as noted on the Contract Documents.

12) Insulation:

This Contractor shall furnish and install all Insulation as noted on the Contract Drawings associated with the Aluminum Doors, Windows, Storefront, and Curtainwall.

This Contractor shall furnish and install all rigid insulation shown at header and sill conditions between Storefront / Curtainwall and Masonry as noted on the Contract Documents.

13) Aluminum Closure Pieces, Break metal and Miscellaneous Items:

This Contractor shall provide all Channels, Closure Pieces, Break metal, Anchors, Angle Clips, Sills, and Soffits associated with your Work as specified by the Contract Documents.

This Contractor shall provide all support clips that anchor your Work to Structural Steel or other contiguous substrate.

14) Weatherstripping:

This Contractor shall provide all Weather stripping for your Scope of Work.

15) Temporary Exterior Opening Enclosures Removal and Disposal:

This Contractor shall review, coordinate and approve all window plywood, protection, framing, furring, plastic wrap and/or plywood wrap temporarily installed (by others) in and adjacent to the openings prior to the time of field measuring and the installation of your Work.

16) Insulation/Expansion:

This Contractor shall furnish and install any insulation and expansion assemblies that are shown within the Contract Documents for your Scope of Work.

CLARIFICATIONS

The Glass & Glazing & Terra Cotta Subcontractor Shall:

1. Provide all Pre Finished Metal Closure pieces that are attached to or adjacent to Curtain Wall
2. Provide all expansion joints that are contained or adjacent to Curtain Walls.
3. Furnish and install all exterior sunshade systems.
4. Furnish and install all aluminum sills.
5. Furnish and install the complete structural glass canopy system. Include all stainless steel and all work attached to wide flange beams. Include work indicated in both the architectural and structural drawings.
6. Provide a complete Terra Cotta Assembly system. Include all work indicated in specification section 042800. Include aluminum clip and sub-girts system, extruded hollow clay tile panels, flashings, weather-seals, cover plates and formed metal trim, anchors, fasteners, adhesives, insulation, vapor barriers, gaskets, sealants and related accessories, aluminum closure pies at windows, curtain wall and door perimeters, etcetera for a complete system. Include all work including the air and vapor barrier system outward at locations with the Terra Cotta Assembly system. Include all engineering and calculations.
7. Include temporary enclosures and heat as necessary to install the Terra Cotta Assembly system at any time of year.
8. Furnish and install all painted aluminum panels in the curtain wall system.
9. Furnish and install all glass fin systems.
10. Include all flashings at or adjacent the Terra Cotta Assembly system. Include all flashings at louvers including but not limited to the flashing indicated in detail 6/A6.30 and 4/A6.31.
11. Furnish and install hinged glass door assemblies including but not limited to the assembly depicted on sheet A7.11 over electrical panels.
12. Include performance mock-up testing as specified in specification 084413 under item 1.05 and 4.01 for the curtain walls, storefronts and entrances.
13. Include all dichroic glass fin systems “X-G” including but not limited to as identified on A3.01, A3.02 and A3.03.
14. Construction Parking & Material Storage Location: There is no Contractor parking on site and limited material storage. This Contractor shall include in his/her price offsite parking and storage of bulk material off site should you deem necessary.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

Indicated below, the following unit price's shall be used in calculating Hazardous containing materials for additions and deductions from the original contract amount. These prices shall reflect all work practices required to remove and dispose the material in accordance with the project specifications and State and Federal regulations:

Bids shall include the following Unit-cost's:

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 08.1-Doors, Frames and Hardware (Furnish Only)

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Doors, Frames and Hardware (Furnish Only)** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing, delivering, unloading and inventorying of all **Doors, Frames and Hardware (Furnish Only)** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 08.1 – Doors, Frames and Hardware (Furnish Only):** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Doors, Frames and Hardware (Furnish Only)** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification

Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

01-1000	Summary
01-2100	Allowances
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements

01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 4 - MASONRY

042000	Unit Masonry (As Applicable)

DIVISION 5 – METALS

054000	Cold Formed Metal Framing (As Applicable)

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000	Carpentry (As Applicable)

DIVISION 8 – OPENINGS

081000	**Door Schedule**
081113	**Steel Doors and Frames**
081119	**Stainless Steel Doors and Frames**
081433	**Stile and Rail Wood Doors**
084413	Curtain Walls, Storefronts and Entrances (CWSE) (As Applicable)
087100	**Finish Hardware (As Applicable)**
088000	Glass and Glazing (As Applicable)

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

281000	Security Systems (As Applicable)
283110	Fire Alarm System (As Applicable)

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Steel and Hollow Metal Doors and Frames; Frames For Borrowed Lites; Stainless Steel Doors and Frames; Flush Wood Doors; Special Doors; Acoustically Rated Doors; Door Hardware; Fire-Rated Glass and Framing System, Coordination with the Project Schedule and other Trades; Submittals, Samples, Product Data.

The intent of the Scope of Work is for the **Doors, Frames and Hardware (Furnish Only)** bidder to coordination, furnishing, delivering, unloading and inventorying of all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 08.1 – Doors, Frames and Hardware (Furnish Only)** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up& Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Finish Hardware (FURNISH ONLY):

This Subcontractor shall furnish all Finish Hardware <u>except for the aluminum door hardware.</u>

Include the furnishing of all door hardware indicated in specification section 087100 except for the items indicated to be furnished by security contractor or electrical contractor, or for aluminum doors.

Additionally this Subcontractor shall also be responsible for the following:

a.) Complete coordination between all hardware, doors, and frames
b.) <u>Furnish</u> all doors, wood and hollow metal, pre-machined and pre-fit for glass lites, louvers, hardware, etc. Furnish all hollow metal frames for doors and borrowed lites.

c.) Furnish all electrified hardware including but not limited to electric locks, electric strikes, key cards/readers, transformers and any and all necessary accessories as noted on the Contract Documents.

d.) Furnish lockable metal heavy duty key cabinet of sufficient size to hold all key sets plus expansion for an additional 50%. This Subcontractor will meet with the Owner to set up the cabinet in an initial meeting and then turnover the key cabinet at a follow-up meeting.

e.) Furnish at the direction of the Construction Manager temporary construction cores for all locksets.

f.) This Subcontractor shall furnish all construction cores and permanent cores in each lockset. The Owner will not be doing ANY of this work. Include all cores and keying for ALL building locks including for hardware at **aluminum**, wood, FRP, steel and hollow metal doors.

g.) This Subcontractor is responsible for coordinating the Master Key System with the Owner including as many meetings as necessary to accomplish this coordination.

h.) This Subcontractor will return to the Project (6) months after the date of Substantial Completion to examine, re-adjust, consult, replace hardware items, and prepare a detailed written report to the Owner.

i.) This Subcontractor shall coordinate the magnetic door hold open contact plate (furnished by the Electrical Subcontractor) with its doors as noted on the Contract Documents.

j.) This Subcontractor shall prepare the Hollow Metal Frames and Doors to receive the Electrical Subcontractor's Door Contacts (contacts installed by Electrical Contractor).

k.) Subcontractor responsible for all shims, sealants and/or backer rods required for door frame installation.

l.) Furnish door opening assemblies including associated exit devices, closers, and gaskets complete.

m.) Furnish unloading, inventorying, distribution, and coordination of all doors, frames and finish hardware. This Subcontractor shall coordinate the deliveries of all material with both the Construction Manager and the General Trades Contractor. In addition, this Subcontractor shall receive signed vouchers from the General Trades Subcontractor that shall confirm that all material that has been delivered to the Project Site.

n.) Furnish thresholds, seals, smoke seals, fasteners, door stops, door hold-opens, finish hardware, kickplates, gasketing and weather stripping, sweeps, astragals and door silencers complete.

10) Saddles, Thresholds and Sills (FURNISH ONLY):

This Subcontractor shall furnish all saddles, thresholds and sills that are a component of its assemblies.

11) Electrified Hardware:

The Electrical Subcontractors shall furnish to the Doors, Frames and Hardware Subcontractor, General Trades Subcontractor and Glass & Glazing Subcontractor complete information, layout requirements and templates or actual samples of the door contacts as it relates the Security System.

This Subcontractor shall receive this information and have all doors and frames **factory** prepared in order to receive this material. The installation of the actual door contact shall be by the Electrical Subcontractor.

12) Factory Trained Personnel:

Doors, Frames & Hardware Subcontractor shall provide factory-training to the General Trades Subcontractor for the installation of acoustically rated doors or any other work related to this scope that requires vendor specific training.

In addition, the Doors, Frames & Hardware Subcontractor shall provide factory trained supervision during the initial frame installation, at regular periods during the door installation, and at the final inspection and the manufacturer shall issue a letter of compliance certifying the completion of a successful installation as indicated in the specifications.

CLARIFICATIONS

a.) This Subcontractor shall:

1) Assist the General Trades Contractor in providing an inventory, setup of a hardware room(s).
2) Referring to Drawing A5.01 provide door hardware on the Elevator Machine Door that complies with the following requirements; “Machine Room Access Door to Be Self-Closing and Locking with a Non-Cancellable Lock. It Shall Be Operable From Within the Room Without the Use of Key.”
3) Referring to Detail 3 on Drawing A6.14 provide typical and as noted “Insulated Galvanized HM Door and Frame.”
4) Referring to Detail 3 on Drawing A6.14 provide typical and as noted “Galvanized Steel Bulkhead Saddle.”
5) Referring to Details 10 and 11 on Drawing A6.31 provide typical and as noted “Insulated Galvanized HM Door and Frame.”
6) Referring to Detail 10 on Drawing A6.31 provide typical and as noted “Galvanized Steel Bulkhead” and “Metal Sill Pan Flashing.”
7) Referring to Detail 1 on Drawing A7.03 provide typical and as noted “Hollow Metal Door Frame.”
8) Referring to Detail 2 and 3 on Drawing A7.03 provide typical and as noted “Stile and Rail Wood Door with Glazed Panel.’

9) Referring to Detail 1 on Drawing A7.04 provide typical and as noted "Stile and Rail Wood w/ Solid Panel."
10) Referring to Detail 1 on Drawing A7.04 provide typical and as noted "Hollow Metal Door and Frame."
11) Referring to Detail 5 on Drawing A7.04 provide typical and as noted "Wood Stile and Rail Door w/Sidelight."
12) Referring to Detail 5 on Drawing A7.04 provide typical and as noted "Wood Stile and Rail Door w/HM Frame."
13) Referring to Detail 6 on Drawing A7.04 provide typical and as noted "Wood Stile and Rail Door w/HM Frames Glass Partition Walls."
14) Referring to Detail 2 on Drawing A7.09 provide typical and as noted "St. Stl. Stiffener Typ."
15) Referring to Detail 12 on Drawing A7.11 provide typical and as noted "S.S. Custom Frame."
16) Referring to Detail 13 on Drawing A7.11 provide typical and as noted "1/4" @S.S. Custom Frame….5/8" @ HM Door Frame."
17) Referring to Detail 1 on Drawing A7.51 provide typical and as noted Door Types "A, B, C, D, E, F, G, H, J and K."
18) Referring to Detail 2 on Drawing A7.51 provide typical and as noted Door Frame Types, "A, B, C, D, E, F and G."
19) The Doors, Frames and Hardware Supplier should carefully review Drawings SEC-DET and SEC-DET 1 as it relates to the Security devices that will need to be interface and be a part of the Doors, Frames and Hardware.

EXCLUSIONS

1) Sale and Use Taxes.

ALTERNATE BIDS

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 09.0 Ceramic Tile & Stone Flooring

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Ceramic Tile & Stone Flooring** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing, and installation of all **Ceramic Tile & Stone Flooring** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 09.0 – Ceramic Tile & Stone Flooring:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Ceramic Tile & Stone Flooring** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 01 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements

01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

079200	Joint Sealers (As Applicable)

DIVISION 8 - OPENINGS

081000	Door Schedule (As Applicable)
081113	Steel Doors and Frames (As Applicable)
081119	Stainless Steel Doors and Frames (As Applicable)
084413	Curtain Walls, Storefronts and Entrances (CWSE) (As Applicable)

DIVISION 9 - FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
093000	**Tile**
096416	Edge Grain Wood Flooring (As Applicable)
096519	Resilient Tile Flooring (As Applicable)
096723	Architectural Epoxy Resinous Flooring
096724	Resinous Flooring for Mechanical Equipment Rooms (As Applicable)
096727	Thin Set Epoxy Terrazzo (As Applicable)
096728	Elastomeric Liquid Flooring (As Applicable)
096816	Carpet (Glue Down) (As Applicable)
099000	Painting and Finishing (As Applicable)

DIVISION 10 - SPECIALTIES

102113	Toilet Partitions (As Applicable)
102800	Toilet Accessories (As Applicable)

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Ceramic Tile; Porcelain Tile; Quarry Tile; Stone and Marble Thresholds, Tile Base; Edge strips; Reducer Strips; Setting Materials and/or Adhesives; Grout; Bonding Agents; Mesh; Crack Isolation Membranes; Waterproof Membranes; Epoxy Grout; Flash Patching/Leveling; Expansion Joint Materials; Mixes; Transition/Reducing Strips; Expansion; Corner Guards Installed In Setting Material; Trim Pieces; All Accessories; Extra Materials; Cleaning and Protection and Final Sealing; All Guarantees and Warranties; Coordination with project schedule and other Trades; Submittals and Samples; Product Data as described in the Contract Documents.

The intent of the Scope of Work is for the **Ceramic Tile & Stone Flooring** bidder to furnish and install all materials and equipment noted on the Contract Documents, unless specifically noted to remain or be removed and/or disposed by others.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 09.0 – Ceramic Tile & Stone Flooring** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further,

this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.

e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Temporary Protection:

This Subcontractor shall provide and maintain floor protection as directed by the Construction Manager until final cleaning.

10) Preparation and Acceptance of Substrate:

This Subcontractor is responsible for all floor and wall preparation that is required to bring the substrate up to compliance with manufacturer's standards for the installation of materials under this Bid Package. This requirement shall also include, but not be limited to, any additional prep that may be required at floor boxes, plumbing drains, cleanouts, small cracks, small depressions/chips or other floor penetrations made by other subcontractors. Also, provide floating at walls as needed to ensure smooth/flat wall surfaces.

This Subcontractor shall review the Specifications, including but not limited Cast In Place Concrete, as it is related to all finished flooring and verify that the substrate and substrate finish anticipated is achievable and it will not affect the installation of any floor finish and base within This Contractor's Scope of Work. Carefully review all specified concrete admixtures and coatings as well as the admixtures and coatings submitted by the Concrete Subcontractor. It is the responsibility of the Ceramic Tile Subcontractor to coordinate all curing and sealing compounds with the Concrete Subcontractor to verify compatibility with all flooring adhesives and installation methods. This Subcontractor shall notify the Construction Manager of any conflicts or deficiencies 30 calendar days prior to placing of any slabs. Failure to notify the Fusco Corporation of any deficiencies shall be construed as acceptance of substrate conditions.

This Subcontractor shall also include in the Contract Value all necessary Flash Patching and buffing to level and to fill depressions and or imperfections in the substrate to which the floor finishes are to be applied. Additionally this Subcontractor shall provide all necessary flash patching at transitions from one floor finish to the other.

This Subcontractor shall examine and verify in writing that the concrete slab is dry according to test methods recommended by the appropriate flooring manufacturer.

This Subcontractor shall also examine and verify in writing that the concrete slab is in accordance with manufactures requirements for level and flatness when measured with a ten foot straight edge with a maximum deviation of 1/8".

This Subcontractor shall include all costs to perform testing for adhesion and moisture and pH levels at least 30 days prior to installation as detailed in the contract documents at all new and existing locations. All data and reports shall be reported to the Construction Manager. If the results are too high for the installation of flooring, then this Subcontractor and the Construction Manager shall implement and execute a plan of remedial measures to make the slab moisture content acceptable. Include additional follow up tests for adhesion and moisture and pH levels if the substrate fails as directed by the Construction Manager.

11) Cementious Underlayment/Flash Patching:

This Subcontractor shall provide all necessary Crack Isolation Membrane/Cementious Underlayment/Flash Patching and Buffing to fill depressions and or imperfections in the substrate to which the floor finishes are to be applied. Additionally, this Subcontractor shall provide all necessary flash patching at transitions from one floor finish to the other.

12) Mechanical / Plumbing / Electrical / Communications Coordination:

This Subcontractor shall coordinate devices and the like with appropriate subcontractors and shall flash patch to these floor penetrating items.

13) Finish Schedule:

All finishes shall be in accordance with the Finishes Schedule, Drawings and Specifications, and if any conflicts between the above arise the most restrictive, greatest quantity and highest quality shall prevail.

14) Saddles, Thresholds, Trim and Sills:

This Subcontractor shall provide all marble and stone thresholds and all trim at tile wall or floor transitions.

15) Installation and Protection:

This Subcontractor shall provide adequate ventilation during the performance of this work and shall include but not be limited to portable fans if necessary.

This Subcontractor shall provide and maintain barriers and protection to prevent other Subcontractors from damaging finished work during and after the installation period.

This Subcontractor shall include in the contract value <u>minimum</u> protective measures as follows:

Over All Tile Two Layers Of 40# Reinforced Kraft Paper (or equal) With Tape

This Subcontractor shall install, maintain and remove and dispose of the Flooring Protection measures when directed by the Construction Manager, at its sole discretion.

This Subcontractor shall provide transition strips at dissimilar materials.

This Subcontractor is responsible for all layout patterns for wall and flooring work to be installed under this bid package and shall be reviewed by the Architect and Construction Manager prior to installation.

16) Floor Recesses:

The Concrete Subcontractor, General Trades Subcontractor, Ceramic Tile Subcontractor, and Flooring Subcontractor shall coordinate all recesses in any concrete slab as required for floor finishes.

17) Floor Sealing:

In addition to that as noted on the Contract Documents, this Subcontractor shall also include the following:

a.) Comply with manufacturer's instructions for cleaning operations.
b.) This Subcontractor shall broom, vacuum and mop clean all flooring surfaces under this Scope of Work prior to sealing.

CLARIFICATIONS

This Subcontractor shall:

1. Furnish and install all floor and wall tile and base systems.
2. Provide extra stock at the completion of the project per project specifications.
3. Include shop drawings, samples and mock-ups for all items.
4. Provide waterproof membrane under all floor tile as indicated on the Contract Documents.
5. Referring to Details 2, 4, 5, 6 and 7 on Drawing A7.01 furnish and install typical and as noted "Concrete Tile Base."
6. Referring to Details 5 and 7 on Drawing A7.01 furnish and install typical and as noted "Concrete Tile."
7. Referring to Detail 1 and 2 on Drawing A7.03 furnish and install typical and as noted "Concrete Base" and "Concrete Tile."
8. Referring to Detail 1 on Drawing A7.10 furnish and install typical and as noted "Ptd. Metal Reveal, typ."
9. Referring to Detail 1 on Drawing A7.10 furnish and install typical and as noted "Concrete Tile Base."

10. Referring to Details 1 through 13 provide typical and as noted "Glass Tile 'T1' and 'T2'" and Concrete Tile 'T5.'"
11. Referring to Detail 13 on Drawing A7.25 provide typical and as noted "Anti-Crack Membrane."
12. Referring to Detail 14 on Drawing A7.25 provide typical and as noted "St. Stl. Tile Edge Trim."
13. Referring to Detail 3-B on drawing A7.50 provide typical and as noted "Slate Saddle."
14. Referring to Detail 3-E on Drawing A7.50 provide typical and as noted "Slate Saddle."
15. Referring to Drawing A9.46 provide typical and as noted "Extend Flooring into Closet and Cabinet Recesses."
16. Referring to Drawing A9.26 provide typical and as noted "Extend Flooring into Wall Recess. Typ."

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 9.1- Terrazzo

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Terrazzo** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Terrazzo** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 09.1 – Terrazzo:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Terrazzo** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls

01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 3 – CONCRETE

033000	Cast-In-Place Concrete (As Applicable)
035416	Cement Leveling Underlayment (As Applicable)

DIVISION 5 – METALS

055000	Miscellaneous Metals (As Applicable)
055100	Steel Pan Stairs (As Applicable)
055200	Decorative Rail Systems (As Applicable)
057000	Ornamental Metals (As Applicable)
057100	Ornamental Stairs (As Applicable)

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000	Carpentry (As Applicable)
064023	Architectural Woodwork (As Applicable)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

071326	Sheet Membrane Waterproofing (As Applicable)
079200	Joint Sealers (As Applicable)

DIVISION 9 – FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
093000	Tile (As Applicable)
096416	Edge Grain Wood Flooring (As Applicable)
096519	Resilient Tile Flooring (As Applicable)
096723	Architectural Epoxy Resinous Flooring (As Applicable)
096724	Resinous Flooring for Mechanical Equipment Rooms (As Applicable)
096727	**Thin Set Epoxy Terrazzo**
096728	**Elastomeric Liquid Flooring**
096816	Carpet (Glue Down) (As Applicable)
099000	Painting and Finishing (As Applicable)

DIVISION 12 - FURNISHINGS

124814 Floor Mats and Frames (As Applicable)

DIVISION 13 - SPECIAL CONSTRUCTION

132100 Laboratory Environmental Rooms (As Applicable)

DIVISION 21 - FIRE SUPPRESSION (AS APPLICABLE)

DIVISION 22 – PLUMBING (AS APPLICABLE)

DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING (AS APPLICABLE)

DIVISION 26 – ELECTRICAL (AS APPLICABLE)

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY (AS APPLICABLE)

DIVISION 31 – EARTHWORK

310913 Vibration and Sound Monitoring (As Applicable)

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014 REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

   Terrazzo Flooring; Precast Epoxy Terrazzo Base; Setting Materials and/or Adhesives; Grout; Bonding Agents; Mesh; Crack Isolation Membranes; Epoxy Grout; Flash Patching/Leveling; Expansion Joint Materials; Mixes; Transition/Reducing Strips; Expansion; Trim Pieces; Divider Strips; All Accessories; Extra Materials; Mock-ups; Cleaning and Protection and Final Sealing; All Guarantees and Warranties; Coordination with project schedule and other Trades; Submittals and Samples; Product Data as described in the Contract Documents.

The intent of the Scope of Work is for the **Terrazzo** bidder to furnish and install all materials and equipment noted on the Contract Documents, unless specifically noted to remain or be removed and/or disposed by others.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 09.1 – Terrazzo** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Temporary Protection:

This Contractor shall provide and maintain floor protection as directed by the Construction Manager until final cleaning.

10) Preparation and Acceptance of Substrate:

This Contractor is responsible for all floor and wall preparation that is required to bring the substrate up to compliance with manufacturer's standards for the installation of materials under this Bid Package. This requirement shall also include, but not be limited to, any additional prep that may be required at floor boxes, plumbing drains, cleanouts, small cracks, small depressions/chips or other floor penetrations made by other Contractors. Also, provide floating at walls as needed to ensure smooth/flat wall surfaces.

This Contractor shall review the Specification, including but not limited Cast In Place Concrete, as it is related to all finished flooring and verify that the substrate and substrate finish anticipated is achievable and it will not affect the installation of any floor finish and base within This Contractor's Scope of Work. It is the responsibility of This Contractor to coordinate all curing and sealing compounds with the Concrete Contractor to verify compatibility with all flooring adhesives and installation methods. This Contractor shall notify the Construction Manager of any conflicts or deficiencies 30 calendar days prior to placing of any slabs. Failure to notify the Fusco Corporation of any deficiencies shall be construed as acceptance of substrate conditions.

This Contractor shall also include in the Contract Value all necessary Flash Patching and buffing to level and to fill depressions and or imperfections in the substrate to which the floor finishes are to be applied. Additionally This Contractor shall provide all necessary Flash patching at transitions from one floor finish to the other.

This Contractor shall examine and verify in writing that the concrete slab is dry according to test methods recommended by the appropriate flooring manufacturer.

This Contractor shall also examine and verify in writing that the concrete slab is in accordance with manufactures requirements for level and flatness when measured with a ten foot straight edge with a maximum deviation of 1/8".

This Contractor shall include all costs to perform testing for adhesion and moisture and pH levels at least 30 days prior to installation as detailed in the contract documents at all new and existing locations. All data and reports shall be reported to the Construction Manager. If the results are too high for the installation of flooring, then this Contractor and the Construction Manager shall implement and execute a plan of remedial measures to make the slab moisture content acceptable.

11) Cementitious Underlayment/Flash Patching:

This Contractor shall provide all necessary Crack Isolation Membrane/Cementitious Underlayment/Flash Patching and Buffing to fill depressions and or imperfections in the substrate to which the floor finishes are to be applied. Additionally, this Contractor shall provide all necessary flash patching at transitions from one floor finish to the other.

12) Mechanical / Plumbing / Electrical / Communications Coordination:

This Contractor shall coordinate devices and the like with appropriate Contractor and shall flash patch to these floor penetrating items.

13) Finish Schedule:

All finishes shall be in accordance with the Finishes Schedule, Drawings and Specifications, any conflicts between the above, the most restrictive, greatest quantity and highest quality shall prevail.

14) Installation and Protection:

This Contractor shall provide adequate ventilation during the performance of this work and shall include but not be limited to portable fans if necessary

This Contractor shall provide and maintain barriers and protection to prevent other Contractors from damaging finished work during and after the installation period.

This Contractor shall include in the contract value minimum protective measures as follows:

Terrazzo **One Layer Of 40# Reinforced Kraft Paper (or equal) With Tape Under 1/8" Thick Masonite Hardboard**

This Contractor shall remove and dispose of the Flooring Protection measures when directed by the Construction Manager, at its sole discretion.

This Contractor shall provide transition strips at dissimilar materials.

This Contractor is responsible for all layout patterns for wall and flooring work to be installed under this bid package and shall be reviewed by the Architect and Construction Manager prior to installation.

15) Floor Recesses:

The Concrete Contractor, General Trades Contractor and Flooring Contractor shall coordinate all recess in any concrete slab as required for floor finishes.

16) Floor Cleaning:

In addition to that as noted on the Contract Documents, this Contractor shall also provide the following:

a.) Comply with manufacturer's instructions for cleaning operations.
b.) This Contractor shall broom, vacuum and mop clean all flooring surfaces under this Scope of Work prior to sealing.

CLARIFICATIONS:

1) Referring to Detail 1 on Drawing A4.04 provide typical and as noted "concrete tile" and "concrete base."
2) Referring to Detail 9 on Drawing A7.09 provide typical and as noted "Terrazzo w. Zinc strip."
3) Referring to Detail 9 on Drawing A7.09 provide typical and as noted "custom Zinc Reducer Strip."
4) Referring to Detail 3-A on Drawing A7.50 provide typical and as noted "SS. Strip."

5) Referring to Detail 3-F on Drawing A7.50 provide typical and as noted "Ptd. Alum. Saddle."
6) Referring to Detail 3-G on Drawing A7.50 provide typical and as noted "Zinc Strip, typ."
7) Referring to Detail 9 on Drawing A9.05 provide typical and as noted "Epoxy Floor and Curbs."
8) Referring to Drawing A9.46 provide typical and as noted "Extend Flooring into Closet and Cabinet Recesses."
9.) Referring to Drawing A9.26 provide typical and as noted "Extend Flooring into Wall Recess. Typ."

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 09.3-Resilient Floors

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Resilient Floors** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Resilient Floors** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 09.3-Resilient Floors:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Resilient Floors** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 01 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection

01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 3 - CONCRETE

033000	Cast-In-Place Concrete (As Applicable)
035416	Cement Leveling Underlayment (As Applicable)

DIVISION 4 – MASONRY

042000	Unit Masonry (As Applicable)

DIVISION 5 - METALS

055000	Miscellaneous Metals (As Applicable)
055100	Steel Pan Stairs (As Applicable)
055117	Aluminum Slotted Framing System
055200	Decorative Rail Systems (As Applicable)
057000	Ornamental Metals (As Applicable)
057100	Ornamental Stairs (As Applicable)

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000	Carpentry (As Applicable)
064023	Architectural Woodwork (As Applicable)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

079200	Joint Sealers (As Applicable)

DIVISION 8 - OPENINGS

081000	Door Schedule (As Applicable)
081113	Steel Doors and Frames (As Applicable)
081119	Stainless Steel Doors and Frames (As Applicable)
084413	Curtain Walls, Storefronts and Entrances (CWSE) (As Applicable)
084510	Interior Glazed Walls (As Applicable)
087100	Finish Hardware (As Applicable)
088000	Glass and Glazing
088813	Fire-Rated Glass and Framing System

Division 9 - FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
093000	Tile (As Applicable)
096416	**Edge Grain Wood Flooring**
096519	**Resilient Tile Flooring**
096723	Architectural Epoxy Resinous Flooring (As Applicable)
096724	Resinous Flooring for Mechanical Equipment Rooms (As Applicable)
096727	Thin Set Epoxy Terrazzo (As Applicable)
096728	Elastomeric Liquid Flooring (As Applicable)
096816	**Carpet (Glue Down)**
099000	Painting and Finishing (As Applicable)

DIVISION 11 - EQUIPMENT

116200	Laboratory Equipment (As Applicable)

DIVISION 12 - FURNISHINGS

124814	**Floor Mats and Frames**

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

Schedule of Drawings: Refer to Drawing List contained in the Project Manual Specification Section 00 01 15.

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Wood Flooring; Wood Filler; Felt Underlayment; Fasteners; All Wall Base At Flooring In This Scope; Vinyl Composition Tile; Rubber Flooring; Slip Resistant Floor Tiles; Resilient Wall Base and Accessories; Concrete Slab Primer; Stair Nosing/Treads/Risers; Leveling & Patching; Carpet; Tile Carpeting, Entrance

Floor Mats and Frames, Floor Mats; Edge strips; Reducer Strips; Expansion Strips; Setting Materials and/or Adhesives; Flash Patching/Leveling; Expansion Joint Materials; Mixes; Transition/Reducing Strips; Trim Pieces; All Accessories; Extra Materials; Cleaning and Protection and Applied Protective Floor Polish; All Guarantees and Warranties; Coordination with project schedule and other Trades; Submittals and Samples; Shop Drawings; Product Data as described in the Contract Documents.

The intent of the Scope of Work is for the **Resilient Floors** bidder to furnish and install all materials and equipment noted on the Contract Documents, unless specifically noted to remain or be removed and/or disposed by others.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 09.3 – Resilient Floors** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

- **a.** Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
- **b.** Subcontractor includes all mobilizations necessary to complete Work as scheduled.
- **c.** Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
- **d.** All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
- **e.** Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up& Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Temporary Protection:

The Resilient Flooring Subcontractor shall provide and maintain floor protection as directed by the Construction Manager until final cleaning.

10) Preparation and Acceptance of Substrate:

The Resilient Flooring Subcontractor is responsible for all floor preparation that is required to bring the substrate up to compliance with manufacturer's standards for the installation of materials under this Bid Package. This requirement shall also include, but not limited to, any additional prep that may be required at floor boxes, plumbing drains, cleanouts, small cracks, small depressions/chips or other floor penetrations made by other Contractors.

The Resilient Flooring Subcontractor shall review the Specifications, including but not limited Cast In Place Concrete, as it is related to all finished flooring and verify that the substrate and substrate finish anticipated is achievable and it will not affect the installation of any floor finish and base within the Carpet, Resilient & Wood Flooring Subcontractor's Scope of Work. It is the responsibility of the Carpet, Resilient & Wood Flooring Subcontractor to coordinate all admixture, curing and sealing compounds with the Concrete Subcontractor to verify compatibility with all flooring adhesives and installation methods. This Contractor shall notify the Fusco Corporation of any conflicts or deficiencies 30 calendar days prior to placing of any slabs. Failure to notify the Fusco Corporation of any deficiencies shall be construed as acceptance of substrate conditions.

The Resilient Flooring Subcontractor shall also include in the Contract Value all necessary Flash Patching and buffing to level and to fill depressions and or imperfections in the substrate to which the floor finishes are to be applied. Additionally the Resilient Flooring Subcontractor shall provide all necessary Flash patching at transitions from one floor finish to the other.

The Resilient Flooring Subcontractor shall examine and verify in writing that the concrete slab is dry according to test methods recommended by the appropriate flooring manufacturer.

The Resilient Flooring Subcontractor shall also examine and verify in writing that the concrete slab is in accordance with manufactures requirements for level and flatness when measured with a ten foot straight edge with a maximum deviation of 1/8".

Remove all dirt, fireproofing if applicable, paint, grease, curing compounds etcetera from the floors.

The Resilient Flooring Subcontractor shall include all costs to perform testing for adhesion and moisture and pH levels at least 30 days prior to installation as detailed in the contract documents at all new and existing locations. All data and reports shall be reported to the Construction Manager. If the results are too high for the installation of the

flooring, then the Flooring Contractor and the Construction Manager shall implement and execute a plan of remedial measures to make the slab moisture content acceptable. Include additional follow up testing for adhesion, moisture and pH if required after failure as directed by the Construction Manager.

11) Cementious Underlayment/Flash Patching:

The Resilient Flooring Subcontractor shall provide all necessary Cementious Underlayment/Flash Patching and Buffing to fill depressions and or imperfections in the substrate to which the floor finishes are to be applied. Additionally, the Carpet, Resilient & Wood Flooring Subcontractor shall provide all necessary flash patching at transitions from one floor finish to the other.

12) Mechanical / Plumbing / Electrical / Communications Coordination:

The Resilient Flooring Subcontractor shall coordinate devices and the like with appropriate subcontractors and shall flash patch to these floor penetrating items.

13) Finish Schedule:

All finishes shall be in accordance with the Finishes Schedule, Drawings and Specifications, and if there are any conflicts between the above, the most restrictive, greatest quantity and highest quality shall prevail.

14) Elevator Floor Finish:

Resilient Flooring Subcontractor shall provide the floor finish in the Elevator Cab as noted on the Contract Documents.

15) Installation and Protection:

The Resilient Flooring Subcontractor shall provide adequate ventilation during the performance of this work and shall include but not be limited to portable fans if necessary.

The Resilient Flooring Subcontractor shall provide and maintain barriers and protection to prevent other subcontractors from damaging finished work during and after the installation period.

Resilient Flooring Subcontractor shall include in the contract value minimum protective measures as follows:

Over Carpet (Non-Hallways) **Poly-Tak Protection (or equal) With Tape**

Over VCT (Non-Hallways) **2 Layers Of 40# Reinforced Kraft Paper(or equal)With Tape**

Other Flooring Coverguard Poly 40 Mil w/Diamond Traction (or equal) With Tape

All Hallways & Wood Floor One Layer Of 40# Reinforced Kraft Paper (or equal) With Tape Under 1/8" Thick Masonite Hardboard

Provide additional protection measures where required or indicated in the Specifications and Contract Documents.

Resilient Flooring Subcontractor shall provide transition strips at dissimilar materials.

Resilient Flooring Subcontractor is responsible for all layout patterns for wall and flooring work to be installed under this bid package and shall be reviewed by the Architect and Construction Manager prior to installation.

Resilient Flooring Subcontractor shall strip, clean and wax all VCT and Sheet Vinyl floors upon completion of its Work and at the Construction Manager's direction. This Contractor shall apply one **(1) coat of sealer (coordinate with Final Cleaning Subcontractor)** prior to installing floor protection specified above. All products must be applicable to what the owner uses for their regular maintenance.

16) Floor Recesses:

The Concrete Contractor, and General Trades Contractor, Ceramic Tile Subcontractor and Resilient Flooring Subcontractor shall coordinate all recesses in any concrete slab as required for floor finishes.

CLARIFICATIONS

This Subcontractor shall:

1) Furnish and install all flooring, stair treads, risers, nosings and base throughout the project.
2) Include shop drawings, samples, and mock-ups for all flooring indicated under this scope of work.

3) Include all vapor retarders, blocking, adhesives, leveling and patching compounds, fasteners, thresholds, saddles, reducer strips, expansion strips, subfloors, flooring channels, sleepers, fasteners, resilient pads, wood filler, sanding and finishing.
4) Include all grinding and patching.
5) For wood flooring include all wood underlayment.
6) Include a contrasting stripe at the edge of the platform stage and all other contrasting stripes at floors, landings and stairs as indicated.
7) Include all flooring and base in the elevator cabs.
8) Include all sanding and finishing of wood floors.
9) Provide extra stock for all materials as indicated in the specifications.
10) Include the specified base and transitions at all flooring under this scope.
11) Furnish and install all floor mats and frames typical and as noted on Drawing A2.01.
12) Referring to Detail 5 on Drawing A5.04 provide typical and as noted all "Rubber Tread and Riser Finish."
13) Referring to Detail 9 on Drawing A7.09 provide typical and as noted "Cork Expansion Joint As Req' d By Flooring Wood Mfr."
14) Referring to Detail 3-C on Drawing A7.50 provide typical and as noted "Vinyl Reducer Strip."
15) Referring to Detail 3-D on Drawing A7.50 provide typical and as noted "Vinyl Reducer Strip."
16) Referring to Drawing A9.46 provide typical and as noted "Extend Flooring into Closet and Cabinet Recesses."
17) Referring to Drawing A9.26 provide typical and as noted "Extend Flooring into Wall Recess. Typ."

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 09.4-Epoxy Floors

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Epoxy Floors** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Epoxy Floors** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 09.4 – Epoxy Floors:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Epoxy Floors** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 01 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements

01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 3 - CONCRETE

033000	Cast-In-Place Concrete (As Applicable)
035416	Cement Leveling Underlayment (As Applicable)

DIVISION 4 – MASONRY

042000	Unit Masonry (As Applicable)

DIVISION 9 – FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
093000	Tile (As Applicable)
096416	Edge Grain Wood Flooring (As Applicable)
096519	Resilient Tile Flooring (As Applicable)
096723	**Architectural Epoxy Resinous Flooring**
096724	**Resinous Flooring for Mechanical Equipment Rooms**
096727	Thin Set Epoxy Terrazzo (As Applicable)
096728	Elastomeric Liquid Flooring (As Applicable)
096816	Carpet (Glue Down) (As Applicable)
099000	Painting and Finishing (As Applicable)

DIVISION 31 - EARTHWORK

31 09 13	VIBRATION AND SOUND MANAGEMENT

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Architectural Epoxy Resinous Flooring and
Resinous Flooring for Mechanical Equipment Rooms

The intent of the Scope of Work is for the **Epoxy Floor** bidder to furnish and install all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 09.4 – Epoxy Floor** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up& Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be

cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

CLARIFICATIONS

1. Referring to Drawing A9.46 provide typical and as noted "Extend Flooring into Closet and Cabinet Recesses."
2. Referring to Drawing A9.26 provide typical and as noted "Extend Flooring into Wall Recess. Typ."

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 09.5-Acoustical Ceilings

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Acoustical Ceilings** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Acoustical Ceilings** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 09.5 – Acoustical Ceilings:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Acoustical Ceilings** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

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Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

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Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
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01-3233	Photographic Documentation
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018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 9 - FINISHES

095113	**Acoustic Panel Ceilings**
095133	**Metal Ceilings**

APPENDICES

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ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM
PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Acoustical Ceilings; Metal Panel Ceilings; Metal Suspension Systems; Acoustical Room Components, All Seismic Ceiling Details; Hanger Wires; Braces; Clips; Wall Angles; Metal Channels; Metal Trim; Compression Struts; Adhesives; Edge Molding and Trim; Perimeter Trim; Sealant (acoustical or otherwise); Ceiling Insulation; Coordination with project schedule and other trades; Submittals, Samples, Product Data; Shop Drawings.

The intent of the Scope of Work is for the **Acoustical Ceilings** bidder to furnish and install all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 09.5 – Acoustical Ceilings** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

- **a.** Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
- **b.** Subcontractor includes all mobilizations necessary to complete Work as scheduled.
- **c.** Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
- **d.** All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
- **e.** Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout/Survey:

This Contractor shall <u>provide</u> layout/surveys for his or her own Scope of Work.

<u>Coordinate Installation with Approved MEP Coordination Drawings</u>.

Shoot high and low points of mechanical systems prior to commencing work; installation of any acoustical ceiling components constitutes acceptance of ceiling heights. Coordinate layout and installation of grid systems with Mechanical, Fire Suppression, Electrical, General Trades and other subcontractors as required. It is the Acoustical and Wood Ceiling Subcontractor's responsibility to determine that the finished ceiling heights noted on drawings cannot be obtained with existing installations. Any conflicts need to be brought to the Construction Manager's attention prior to installation.

5) Acoustical Ceiling Coordination:

This Subcontractor shall coordinate the Acoustical Ceiling Work with the Structural Steel, Miscellaneous Metals, Mechanical, General Trades, Fire Suppression and Electric Subcontractors. Coordination meetings will be held at the Fusco Field Office as directed by Fusco Corporation. A final set of Coordination Drawings will be signed-off by all Subcontractors (Including the General Trades Subcontractor) that were required for this coordination process. Furnish and install all wires for light fixtures, registers, and all other mechanical, plumbing, fire suppression, and electrical equipment. All wires and seismic wires are to be completed in compliance with all applicable codes.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Man Lifts:

This Subcontractor shall allow use of man lifts by the Construction Manager and others for inspection purposes and as directed by the Construction Manager. Provide training and any necessary safety equipment.

8) Dumpsters, Clean-up& Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

9) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

10) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted

around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

CLARIFICATIONS

a.) This Subcontractor shall:

1) Furnish and install all acoustical and metal ceiling systems complete.
2) Include all ceiling suspension systems, hangers, braces, cross tees, runners, struts, clips, seismic supports, metal edges, gaskets, trim, moldings, ties and accessories.
3) Include shop drawings, samples and mock-ups for all ceiling systems.
4) Clean all ceiling systems and touch up minor finish damage at a time so directed by the Construction Manager.
5) Referring to Drawing A8.01 provide typical and as noted "Perforated Metal Ceiling Panels; See 13/A8.09 for Typical Suspension Detail."
6) Referring to Drawings A8.01 through A8.05 comply with "Refer to Ceiling Legend on Drawing A8.07"
7) Referring to Drawing A8.05 provide typical and as noted "Metal Panel Typ."
8) Referring to Detail 1 on Drawing A8.08 provide typical and as noted "Holes are 1.25' in Diameter. 16 Holes are Spaced Evenly Across the Width of the Panel. Holes at the Sides are Spaced ½ the BTWN Holes so that Hole Spacing Remains Equal From Panel to Panel."
9) Referring to Detail 3 on Drawing A8.08 provide typical and as noted "Reveal Trim between Gypsum Board Ceiling and Metal Panels."
10) Referring to Detail 3 on Drawing A8.08 provide typical and as noted "Perforated Metal Panels with Powder Coated Finish."
11) Referring to Detail 3 on Drawing A8.08 provide typical and as noted "Solid (unperforated) Metal Panel With Powder Coated Finish."
12) Referring to Detail 3 on Drawing A8.08 provide typical and as noted "Tight Panel Joint, typical."
13) Referring to Detail 1 on Drawing A8.09 provide typical and as noted "Edge "L" Bead Typical.
14) Referring to Detail 1 on Drawing A8.09 provide typical and as noted "Shadow Molding, Typ."
15) Referring to Detail 5 on Drawing A8.09 provide typical as noted "F Molding for 5/8" Drywall."
16) Referring to Detail 5 on Drawing A8.09 as it relates to the "F" Molding provide typical as noted "Finish to Match Ceiling Grid & Perimeter Trim."
17) Referring to Detail 9 on Drawing A8.09 provide typical and as noted "Angle Molding: Install in Rooms W/ "F" Molding at Window Soffit."
18) Referring to Detail 12 on Drawing A8.09 provide typical and as noted "W Molding and Cross T Grid to be custom Powder Coating Finish Rail 7040 as Selected By Architect."
19) Referring to Detail 12 on Drawing A8.09 provide typical and as noted "edge 'L' Bead, Typ."

20) Referring to Detail 1 on Drawing A8.10 provide typical and as noted "T-Slotted Aluminum Frame Ceiling W/ Vertical Supports at Each Intersection, typ."
21) Referring to Detail 3 on Drawing A8.10 provide typical and as noted "Threaded Rod Hanger Fastened to Metal Deck Above, typ."
22) Referring to Detail 3 on Drawing A8.11 provide typical and as noted "Metal Ceiling Panel at Snorkel, Typ."
23) Referring to Detail 3 on Drawing A8.11 provide typical and as noted "Metal Ceiling Panel at Umbilical, Typ."
24) Referring to Detail 3 on Drawing A8.11 provide typical and as noted "Perforated Metal Enclosure at Fume Hoods, Typ."
25) Referring to Detail 3 on Drawing A8.12 provide typical and as noted "Shadow Reveal Transition Molding: See Detail 4A/A8.09."
26) Referring to Detail 1 on Drawing A8.13 provide typical and as noted "Acoustic Ceiling Plank: See Finish Schedule."
27) Referring to Drawing A9.01 provide typical and as noted "Perforated Metal Closure Panel[s] Only at 5th Floor: Solid Metal Closure Panel[s] at 2nd, 3rd and 4th Floors."
28) Referring to Detail 1 on Drawing A9.32 provide typical as noted "Custom Metal Ceiling Panel with Upturned Edges at Perimeter and Snorkel Column Opening. See 5th Floor RCP for Locations."
29) Referring to Detail 1 and 2 on Drawing A9.33 provide typical and as noted "Steel Panel Ceiling."

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 09.6- Painting

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Painting** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Painting** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 09.6 – Painting:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Painting** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 01 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
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01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 4 - MASONRY

042000	Unit Masonry- (As Applicable)
042800	Terra Cotta Assembly (As Applicable)
047200	Cast Stone (As Applicable)

DIVISION 5 - METALS

051200	Structural Steel (As Applicable)
051250	Architecturally Exposed Structural Steel (As Applicable)
055000	Miscellaneous Metals (As Applicable)
055100	Steel Pan Stairs (As Applicable)
055200	Decorative Rail Systems (As Applicable)
057000	Ornamental Metals (As Applicable)
057100	Ornamental Stairs (As Applicable)
057700	Structural Glass Canopy (As Applicable)

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000	Carpentry (As Applicable)
064023	Architectural Woodwork (As Applicable)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

078100	Sprayed Fire Resistive Materials (As Applicable)
078123	Intumescent Fireproofing
078413	Firestops and Smokeseals (As Applicable)
079200	Joint Sealers (As Applicable)

DIVISION 8 - OPENINGS

081000	Door Schedule (As Applicable)
081113	Steel Doors and Frames (As Applicable)
081119	Stainless Steel Doors and Frames (As Applicable)
081433	Stile and Rail Wood Doors-(As Applicable)
083113	Access Doors (As Applicable)
084413	Curtain Walls, Storefronts and Entrances (CWSE)
088813	Fire-Rated Glass and Framing System (As Applicable)
089000	Louvers and Vents (As Applicable)

DIVISION 9 - FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
099000	**Painting and Finishing**

DIVISION 31 - EARTHWORK

31 09 13	VIBRATION AND SOUND MANAGEMENT

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Painting and Sealing; Concrete floor Sealing; Exterior Ornamental Steel Painting; Exposed Lintels and Relieving Angles Painting; Roof/Stair Guard and Hand Rails Painting; Site Rail Painting; Interior Rail Painting; Misc. Metal Items; Borrowed Lights; Metal Stairs; Doors and Frames; Structural Steel/Joist and Deck as specified; Exposed Decks and Expos Painting and Sealing; Wall Coverings, Painting and Coatings, Graffiti Resistant Coatings, High Performance Coatings Intumescent Painting, All other Surfaces other than those with Factory Finishes; Exterior Primers; Interior Primers; Exterior Finish Coats; Interior Finish Coats; Interior Wood Stains and Varnishes; Intumescent Coatings; Cutting and or Taping of other Finished products; Extra Materials as described in the Contract Documents.

Provide and install all paints, stains, sealers, sealants and coatings for a complete painting package including all interior and exterior paint. Include associated primers, fillers, putty, etc. Provide and install all fireproofing and intumescent coatings.

The intent of the Scope of Work is for the **Painting** bidder to furnish and install all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 09.**6 – Painting Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Surface Preparation and Substrates:

All surfaces to receive Painting shall be properly prepared in accordance with the Contract Documents.

Subcontractor shall include all cleaning, sanding and surface preparation necessary for an acceptable finish at all metal pan stair locations, HM doors and frames, access panels and other miscellaneous metals to receive paint. This includes removing any rust and re-priming since metal stairs, HM frames and other misc. metals will be installed early in the project schedule. Prepare all surfaces to be painted, stained, sealed or to receive other coatings and include cleaning, sanding and the repair of minor defects. In addition,

a. Substrates are to be constructed so that they meet or exceed the requirements of the specification for the final finishes.

b. Painting Subcontractor shall review the substrates required to complete his or her Scope of Work and verify that the surfaces are acceptable to receive the specified Paint and/or Coatings.
c. Painting Subcontractor shall prepare all surfaces to receive Paint and Coatings in accordance with the Contract Documents.
d. Failure to notify the Fusco Corporation of any deficiencies shall be construed as acceptance of substrate conditions.
e. The Painting Subcontractor shall caulk and fill at transitions between walls and frames, standing and running trim, millwork and other painted surfaces.
f. Painting Subcontractor shall fill all nail holes and imperfections in surfaces to be prepared and finished painting as part of the Scope of Work.
g. Painting Subcontractor shall paint and prepare all exposed metal, as specified in the contract documents, if not already provided with a finish.

10) Sequence of Work:

The Painting Subcontractor shall include within the base bid unlimited return trips to complete the Painting Scope of Work. Final coats to be completed after flooring has been completed and touch up as directed by the Construction Manager.

11) Mechanical / Electrical / Plumbing / Sprinkler Painting:

Painting Subcontractor shall be responsible for any and all painting of interior and exterior Mechanical, Electrical, Plumbing and Sprinkler piping, ductwork and any and all components as noted on the Contract Documents.

12) Electrical/Mechanical/Communication Backboards:

Painting Subcontractor shall paint all backboards at all Communication Rooms, Electrical, and Phone Closets and as indicated on the Contract Documents. <u>This Contractor shall include painting 20 additional four foot x eight foot ¾" plywood backboards that are not show in the drawings.</u>

13) Sealants, Caulking & Filling:

Painting Subcontractor shall caulk and fill at transitions between walls and frames, Standing and running trim, millwork and other painted surfaces. Also, Subcontractor shall fill and sand all nail holes, etc. in surfaces to be prepared and finished painting as part of the Scope of Work.

14) Ventilation:

Painting Subcontractor shall provide fans and any and all work necessary to exhaust fumes created by its work to the exterior of the building.

15) Concrete Floor Sealers:

Painting Subcontractor will furnish and install all concrete floor sealers, including but not limited to stair landings, slabs and treads, and rooms as called for in the finish schedule. Include cleaning the concrete floor and minor floor repair prior to sealing.

16) Exposed Piping/Ductwork:

Unless specifically noted otherwise, all mechanical piping, ductwork, sprinkler piping and electrical conduits in finish spaces that are exposed shall be painted out the same color as the adjacent surface and performed by the Subcontractor.

17) Cutting In:

Painting Subcontractor shall be responsible to cut in (or tape) areas such as, but not limited to, millwork, aluminum fascia interior trim, acoustical ceiling and wall moldings, vinyl, bases moldings, light fixtures and/or trims, hardware, escutcheons, plates and any and all equipment requiring cutting in.

18) Touch-Up:

Painting Subcontractor shall be responsible for all touch-up painting required on the Project as determined by the Construction Manager, at its sole discretion.

19) Finish Coat:

Painting Subcontractor shall request in writing approval from the Construction Manager prior to applying the finish coat. The Painting, Wall Covering and Fireproofing Subcontractor shall coordinate closely with the Construction Manager the sequence of Finish Coating, but the approval to proceed with the application of the finish coat shall be at the sole discretion of the Construction Manager.

Painting Subcontractor shall allow and coordinate with the General Trades Subcontractor and Masonry Subcontractor for access to review their workmanship and make corrections to the surfaces <u>after the first prime coat</u> and <u>prior to any subsequent coats</u>. Reasonable re-priming (spot priming) of repaired imperfections is included in this scope of work.

20) Existing Conditions and Protection of Work:

Painting Subcontractor is responsible to complete his or her work in a manner so as to not cause damage to the site, existing buildings, adjacent finishes, and those items noted to remain. Should damage occur as a result of this Subcontractor's actions any costs associated with the repair and/or replacement of the damage shall be the responsibility of this Subcontractor. Protect floors, glazing, door hardware, and other adjoining surfaces

and materials from paint droppings, spray and spillage of materials. Immediately remove all paint drips from any finish surface. This Subcontractor is responsible to protect his or her work, and finishes until turn over process is completed.

Painting Subcontractor shall be responsible to accept the condition of all surfaces to be painted. Painting on any surface constitutes acceptance of the existing surfaces/conditions. Once the Painting, Wall Covering and Fireproofing Subcontractor has accepted the surface or item, it is the responsibility of this Subcontractor to maintain its condition throughout the work of this Bid Package. This Subcontractor shall then be responsible for correcting all unsatisfactory or defective work encountered. No charges will be allowed for repainting items or surfaces that have been accepted by the Painting, Wall Covering and Fireproofing Subcontractor.

CLARIFICATIONS

a.) The Painting Subcontractor shall:

1. Include a protective stain at all interior and exterior wood unless noted otherwise.
2. Include painting all site guard rails, hand rails, other railings, bollards and vehicle access gates.
3. Include painting of plywood in all electrical and data rooms and as noted.
4. Paint all exposed fire protection piping, supports and components.
5. Referring to Drawing A2.07 provide typical and as noted painting of “Metal Guardrail.”
6. Referring to Drawing A3.01 provide typical and as noted paint color P-3 at “Roof Guardrail.”
7. Referring to Detail 1 on Drawing A3.01 provide painting typical and as noted at “HM Door P-4.”
8. Referring to Drawing A3.02 provide typical and as noted paint color P-3 at “Roof Guardrail.”
9. Referring to Drawing A3.02 provide typical and as noted painting at “Ptd. Stl. Door Activation Bollard.”
10. Referring to Drawing A3.02 provide typical and as noted painting at “Ptd, Hollow Metal Door P-5.”
11. Referring to Drawing A3.02 provide typical and as noted painting at ‘Ptd. Metal Fence Enclosure W/Shed Roof.”
12. Referring to Drawing A3.03 provide typical and as noted painting at “Hollow Metal Door P-4.”
13. Referring to Drawing A3.03 provide typical and as noted painting at “Roof, Ptd. Metal Fence Enclosure.”
14. Referring to Details 1 and 4 on Drawing 4.05 provide typical and as noted painting as it relates to “Ptd. Stl. Door Activation Bollard.”
15. Referring to Drawing A5.01 provide as noted at the Elevator Machine Room “Walls to be Painted White.”
16. Referring to Drawing A5.03 provide all painting typical and as noted “Rail W/Ptd. Steel Posts, Ptd. Steel Guardrail.”

17. Referring to Drawing A5.03 provide all panting typical and as noted "Ptd. GWP. Wall." The scope of the work in these stairs would also include the painting of all CMU or Concrete wall surfaces.
18. Referring to Drawing A5.03 provide all painting typical and as noted "Ptd. Gyp. Bd. Under Stair."
19. Referring to Detail 5 on Drawing A5.04 provide all painting typical and as noted "Rail W/Ptd. Steel Posts, Ptd. Steel Guardrail"
20. Referring to Detail 5 on Drawing A5.04 provide all panting typical and as noted "Ptd. GWP. Wall." The scope of the work in these stairs would also include the painting of all CMU or Concrete wall surfaces.
21. Referring to Detail 6 Drawing A5.04 provide all painting typical and as noted "Ptd. Gyp. Bd. Under Stair."
22. Referring to Detail 1 on Drawing A5.06 provide all painting typical as noted "Painted Steel Stringer" and "Painted Steel Riser."
23. Referring to Detail 8 on Drawing a5.06 provide all panting typical and as noted at "1/4" x 7" Ptd. Stl. Plate."
24. Referring to Detail 7 on Drawing A6.12 provide typical and as noted "PTD GWB."
25. Referring to Details 1, 4, 8, and 9 on Drawing A7.03 provide typical and as noted "Pearlescent Paint Finish System."
26. Referring to Detail 7 on Drawing A7.09 provide typical and as noted "3 Coat Paint System (PS)…."
27. Referring to Detail 11 on Drawing A7.10 provide typical and as noted "3 Coat Paint System (PS)."
28. Referring to Detail 1 on Drawing A7.12 provide typical and as noted "Ptd. GWB. Soffit at Perimeter Wall Beyond: See RCP."
29. Referring to Detail 7 on Drawing A7.12 provide typical and as noted "Ptd. GWB. Wall recess For Flat Screen Displays and Wall Mount."
30. Referring to Detail 8 on Drawing A7.12 provide typical and as noted "Ptd. GWB. Wall Recess."
31. Referring to Detail 8 on Drawing A7.12 provide typical and as noted "Ptd. Metal Reveal."
32. In reference to Drawings T601 through T610 furnish and install typical and as noted all painting of the "3/4" Fire Resistant Plywood."
33.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 10.0-Signage

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Signage** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Signage** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 10.0 – Signage:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Signage** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

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Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

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Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

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01-5719	Temporary Environmental controls
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01-7300	Execution
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01-7700	Closeout Procedures
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018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

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DIVISION 9 - FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
099000	Painting and Finishing (As Applicable)

DIVISION 10-SPECIALTIES

10 14 00 Interior Signage

DIVISION 31 - EARTHWORK

31 09 13 VIBRATION AND SOUND MANAGEMENT

DIVISION 33 - UTILITIES

33 01 00 BASIC SITE MATERIALS AND METHODS

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014 REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Interior Building Signage, glues, adhesives, mechanical attachments to building structures, shop drawings, project coordination.

The intent of the Scope of Work is for the **Signage** bidder to prepare to furnish and install all materials and equipment noted on the Contract Documents, unless specifically noted to remain or be removed and/or disposed by others.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 10.0 – Signage Subcontractor"** and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional

issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Signage:

The Signage Subcontractor shall furnish and install as required all Building Signage as indicated on the Contract Documents and verify actual dimensions by field measurements before fabrication.

a. Subcontractor shall <u>furnish and install ALL interior building signage</u>.
b. Include all brackets, anchors, adhesives, sealants, fasteners, support structures, posts and footings, etcetera as required for a complete installation.

c. Include all metal letters.
d. Include sealants if required around sign edges.
e. All signage installations to be in compliance with ADA, The State of Connecticut, the Contract Documents and safety requirements and other applicable codes.
f. Provide protection when working on finished material. Cost to repair drywall, paint, wood, etcetera due to damage by Signage Subcontractor will be back-charged to Signage Subcontractor.
g. All signage to be installed neat and clean, true and plumb.
h. Subcontractor to install one of each type of sign and review installation with the Construction Manager and Architect for approval of installation methods prior to continuing with the balance of the signage installations.
i. Provide shop drawings for approval prior to fabrication and installation.

CLARIFICATIONS

a.) The Signage Subcontractor shall:

1. Furnish and install all acrylic sheets, applied vinyl characters, panel signs, video surveillance signs, dimensional characters, concealed anchors and hardware, and signage complete.
2. Include all building signage indicated throughout the drawings.
3. Include shop drawings, samples, product data, and a sign schedule for all signage.
4. Referring to Drawing A5.01 provide “Signage on Machine Room Door” that indicates that the door hardware must comply with the following requirements; “Machine Room Access Door to Be Self-Closing and Locking with a Non-Cancellable Lock. It Shall Be Operable From Within the Room Without the Use of Key.”
5. Referring to Detail 1 on Drawing A7.06 furnish and install typical and as noted “Signage on Elevator Lobby Wall Beyond.”
6. Referring to Detail 2 on Drawing A7.10 furnish and install typical and as noted “Map Signage.”
7. Referring to Drawing A7.13-Interior Signage furnish and install all signage typical as noted.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor’s Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item

of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 10.1-Toilet Compartment & Accessories

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Toilet Compartment & Accessories a**s described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Toilet Compartment & Accessories** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 10.1-Toilet Compartment & Accessories:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Toilet Compartment & Accessories** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 01 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements

01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 3 – CONCRETE

033000	Cast-In-Place Concrete (As Applicable)

DIVISION 4 - MASONRY

042000	Unit Masonry (As Applicable)

DIVISION 5 - METALS

051200	Structural Steel (As Applicable)
054000	Cold Formed Metal Framing (As Applicable)
055000	Miscellaneous Metals (As Applicable)
055117	Aluminum Slotted Framing System (As Applicable)

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000	Carpentry (As Applicable)
064023	Architectural Woodwork (As Applicable)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

071326	Sheet Membrane Waterproofing (As Applicable)
079200	Joint Sealers (As Applicable)

DIVISION 9 - FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
093000	Tile (As Applicable)
095113	Acoustic Panel Ceilings (As Applicable)
095133	Metal Ceilings (As Applicable)
096723	Architectural Epoxy Resinous Flooring (As Applicable)
096727	Thin Set Epoxy Terrazzo
099000	Painting and Finishing (As Applicable)

DIVISION 10 – SPECIALTIES

10 21 13	**TOILET PARTITIONS**
10 28 00	**TOILET ACCESSORIES**

DIVISION 31 - EARTHWORK

31 09 13 VIBRATION AND SOUND MANAGEMENT

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Toilet Compartments; Toilet Accessories.

Furnish and install all toilet compartments including toilet enclosures, urinal screens, hardware, etc. Furnish and install all toilet and bath accessories.

The intent of the Scope of Work is for the **Toilet Compartment & Accessories** bidder to furnish and install all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 10.1 – Toilet Compartment & Accessories** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.

c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.

d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.

e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up& Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other

Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Layout/Survey:

This Subcontractor shall provide layout/surveys for his or her own Scope of Work.

The General Trade Subcontractor shall furnish and install ALL WOOD AND METAL BLOCKING AND BACKING required by the Contract Documents. Wood Blocking and backing shall include, but not be limited to, plywood blocking and backing, furring, dimensional lumber and any and all wood required by the contract documents indicated for the purpose of blocking or backing for any and all trades. The General Trades Subcontractor shall prepare a blocking and backing location plan and conduct all required meetings in the presence of the Construction Manager. The blocking and backing location plan shall be signed off by all trades requiring blocking or backing (including the Architect for FF&E). Metal backing or blocking can only be used in lieu of specified wood backing or blocking if approved in writing by the Architect and Construction Manager.

CLARIFICATIONS

a.) This Subcontractor shall:

1. Subcontractor shall furnish and install all toilet, staff lounge, dressing room, and janitor room accessories including but not limited to: soap dispensers, soap dishes, paper towel dispensers, combination receptacles and dispensers, waste receptacles, toilet tissue holders and dispensers, seat cover dispensers, grab bars, sanitary napkin disposal receptacles, mop racks/holders, janitor shelves, towel hooks and mirrors.
2. Subcontractor shall furnish and install all toilet partitions including but not limited to toilet compartments and urinal screens including all associated fasteners, trim, supports, hardware and accessories. Include
3. Provide layout for all backing. Backing plates for toilet partitions and accessories are provided and installed by others.
4. If required, any structural support for overhead braced toilet partitions and dressing compartments to be provided by others; If required, this Subcontractor shall

provide the method of attachment for toilet partitions and dressing compartments to structural support. Any required bolts, nuts and spacers are to be provided by Toilet Compartments & Accessories Subcontractor prior to ceiling installation.
5. Partitions to be installed neat and clean, plumb and true. Complete system must be rigid and suitable for a school application.
` 6. Include all toilet compartments and toilet accessories throughout the project.
7. Include shop drawings for toilet compartments as indicated.
8. Include all submittals specified including product samples for each item.
9. Include the installation of all toilet and washroom accessory items indicated in the drawings or specifications to be owner supplied and contractor installed.
10. Include all mirrors described under specification section 102800.
11. Referring to the top of Drawing A7.25 provide toilet accessory items typical and as noted "1, 2A, 2B, 2C, 2D, 3, 4, 5, 6, 7, 8A and 8B."
12. Referring to the top of Drawing A7.25 "Typical Toilet Fixture Mounting Heights" disregard the note that states the following "Supplied by Others, Installed by Contractor."
13. Referring to Drawing A7.25 provide typical and as noted all toilet partitions that depicted on this drawing.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 12.1 Window Treatment

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Window Treatment** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Window Treatment** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 12.1 – Window Treatment:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Window Treatment** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements

01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 4 - MASONRY

042000	Unit Masonry (As Applicable)

DIVISION 5 - METALS

051200	Structural Steel (As Applicable)
054000	Cold Formed Metal Framing (As Applicable)

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

062000	Carpentry (As Applicable)

DIVISION 8 - OPENINGS

081000	Door Schedule (As Applicable)
081119	Stainless Steel Doors and Frames (As Applicable)
084413	Curtain Walls, Storefronts and Entrances (CWSE) (As Applicable)
084510	Interior Glazed Walls (As Applicable)
088000	Glass and Glazing (As Applicable)
088813	Fire-Rated Glass and Framing System (As Applicable)

DIVISION 9 - FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
095113	Acoustic Panel Ceilings (As Applicable)
095133	Metal Ceilings (As Applicable)
099000	Painting and Finishing (As Applicable)

DIVISION 12 - FURNISHINGS

122413	**Window Shades**
125100	Laboratory Darkroom Curtains (As Applicable)

DIVISION 13 - SPECIAL CONSTRUCTION

132100	Laboratory Environmental Rooms (As Applicable)

DIVISION 26 – ELECTRICAL-(AS APPLICABLE)

DIVISION 31 - EARTHWORK

310913	Vibration and Sound Monitoring (As Applicable)

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM
PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Manually Operated Window Shades; Motor Operated Window Shades; Black Out Shades; Field Measurement of As-Built Conditions; All Accessories and Hardware required for a complete installation and operation; Shop Drawings including detailed information in regards to blocking, special supports and/or anchoring requirements; Detailed Information in regards to power requirements and Rough In for Electrical Services to Motor Operated Shades; Submittals; Mock Ups;

The intent of the Scope of Work is for the **Window Treatment** bidder furnishing and installation of all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 12.1 – Window Treatment** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.

d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.

e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes

compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

8) Spray Fireproofing:

The Window Treatment Contractor shall be responsible for installing all of his or her hangers and support steel before the Spray Fireproofing Trade Contractor mobilizes in an area.
The Window Treatment Contractor shall be responsible for all costs to patch and or repair Spray on Fireproofing that has been damaged as a result of the installation of his or her Scope of work.

9) Scaffolding/Staging:

Scaffolding and/or Staging to install and/or access your work as shall be the responsibility of the Contractor performing the work.

10) Rigging/Hoisting/Distribution:

Included shall be all hoisting, rigging, distribution and erection as required to complete your scope of work.

11) Existing Conditions:

This Contractor shall be responsible to complete his or her work in a manner so as not to cause damage to work in place and shall be responsible for the cost of repairs should damage occur.

<u>CLARIFICATIONS:</u>

a.) All Trade Contractors are responsible for the Section 09900-Finish Schedule as it pertains to their work.
c.) All Window Treatment Contractors are responsible for field measuring all window openings before releasing material for fabrication.
c.) The window treatment contractor is responsible for reviewing the window head conditions as depicted on the contract documents. The window treatment contractor is responsible for providing a method of securing the window treatment that will work with these conditions and not impact any other systems.

d.) Referring to Detail 3 on Drawing A6.01 provide typical and as noted "Interior Sunshade."
e.) Referring to Drawing A8.01 provide typical and as noted "Solar Shade, typ."
f.) Referring to Detail 1 on Drawing A8.09 provide typical and as noted "Extruded Alum. Shade Pocket W/ Removable Closure."
g.) Referring to Detail 12 on Drawing A8.09 provide typical and as noted "Extruded Alum. Shade Pocket W/ Removable Closure Custom Powder Coatings Finish Rail 7040 as Selected by Architect."
h.) Referring to Detail 12 on Drawing A8.09 provide typical and as noted "Motorized Solar Shade."
i.) Referring to Detail 1 on Drawing A8.11 provide typical and as noted "Solar Shade W/ Extruded Alum. Shade Pocket: Align Joint With Center Line of Mullion, typ."

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 14.0 – Elevators

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Elevators** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Elevators** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 14.0 – Elevators:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Elevators** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements

01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 2 - EXISTING CONDITIONS

029400	Structural Soil (As Applicable)

DIVISION 3 – CONCRETE

033000	Cast-In-Place Concrete (As Applicable)

DIVISION 4 – MASONRY

042000	Unit Masonry (As Applicable)

DIVISION 5 – METALS

051200	Structural Steel (As Applicable)
055000	Miscellaneous Metals (As Applicable)

DIVISION 14 - CONVEYING EQUIPMENT

142100	**Traction Elevators**

DIVISION 21 - FIRE SUPPRESSION (AS APPLICABLE)

DIVISION 22 – PLUMBING (AS APPLICABLE)
DIVISION 23 HEATING, VENTILATING AND AIR CONDITIONING (AS APPLICABLE)

DIVISION 26 – ELECTRICAL (AS APPLICABLE)

DIVISON 27-TELECOMMUNICATIONS (AS APPLICABLE)

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY (AS APPLICABLE)

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283110	Fire Alarm System (As Applicable)

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

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REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM
PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Elevators, elevators hoisting equipment, elevators signaling equipment and devices; elevators communication devices, hydraulic fluid system piping, etc. (excluding excavation, bedding, concrete and backfill). Provide all Coordination and Shop Drawings, Core Boring, Fire stopping.

The intent of the Scope of Work is for the **Elevator** bidder to furnish and install all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 14.0- Elevator** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties

that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.

e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

8) Spray Fireproofing:

The Elevator Contractor shall be responsible for installing all of his or her hangers and support steel before the Spray Fireproofing Trade Contractor mobilizes in an area.
The Elevator Contractor shall be responsible for all costs to patch and or repair Spray on Fireproofing that has been damaged as a result of the installation of his or her Scope of work.

9) Through-Penetration Firestop System:

The Elevator Contractor shall provide sleeves through wall penetration materials to the appropriate Contractor for installation in the appropriate assembly.

10) Access Doors:

The Elevator Contractor shall provide access doors to the appropriate Contractor for installation of same in the appropriate assembly to access the Elevator Contractor work.

11) Permits/Fees:

The Elevator Contractor shall procure all permits and pay all fees as required to complete his or her scope of work, i.e. application and operation permits as required by the Connecticut Department of Public Safety.

12) Scaffolding/Staging:

Scaffolding and/or Staging to install and/or access your work as shall be the responsibility of the Contractor performing the work.

13) Rigging/Hoisting/Distribution:

Included shall be all hoisting, rigging, distribution and erection as required to complete your scope of work.

14) Minor Work Provisions:

The Elevator Subcontractor shall carry in their base bid an allowance for an **Elevator Operator for ten (10) days** to operate the Elevator Cars at the direction of the Construction Manager in addition to all other work indicated in this scope.

CLARIFICATIONS:

1.) All Trade Contractors are responsible for the Section 09900-Finish Schedule as it pertains to their work.
2.) Within thirty days of the notice to proceed, the elevator contractor shall submit all and complete shop drawings for the new elevator.
3.) The elevator trade contractor shall include in his base bid the cost of the fee required to have the Department of Public Safety-Division of Elevators inspect the elevator for certification.
4.) The elevator trade contractor shall be responsible for furnishing and installing the elevator car phone; and the conduit and telephone cable from elevator to the elevator machine room. The installation shall be complete in all fashions so that when the telephone company connects to the wires they will ring out of the building.
5) Referring to Drawing A5.01 provide all Elevator work that is in compliance with the notes on this sheet.
6) Referring to Drawing A5.01 include in your Base Bid an Allowance of $25,000 for **each** Elevator Car as it relates to the Interior Cab fit out.
7) Referring to Detail 2 on Drawing A7.10 provide typical and as noted "Incise Door Frame for Flush Mounting of Plate W Number and Pins, No Visible Fasteners."
8) Referring to Detail 2 on Drawing A7.10 provide typical and as noted "Custom Stainless Steel Frames Over Rated Subframe."
9) Referring to Detail 2 on Drawing A7.10 provide typical and as noted "Rated Elevator Hoistway Subframe…."
10) Referring to Detail 2 on Drawing A7.10 provide typical and as noted "Stainless Steel Wall Plate With Semirecessed Call Lantern."
11) Referring to Detail 2 on Drawing A7.10 provide typical and as noted "Stainless Steel Wallplate with Recessed Call Lanterns."
12) Referring to Detail 2 on Drawing A7.10 provide typical and as noted "Stainless Steel Door and Frame."
13) Referring to Detail 2 on Drawing A7.10 provide typical and as noted "Stainless Steel Call Button. #4 Finish."
14) The Elevator Trade Contractor shall be responsible to return to the site, after the complete installation of his own equipment, to allow electrical, fire protection, plumbing, mechanical, and all other Trades' access to the elevator, elevator shaft, and elevator machine room for the performance of their work on the elevator or in the elevator cab, shaft, pit, machine room or entrances. This includes providing an elevator installer or operator to run the car as required. There shall be no extra costs paid for any return visit to the site, **except** for elevator re-inspection due to the failure of other Trades to complete their work.

15) The Elevator Trade Contractor shall carry all costs for operators for an **additional ten (10) days** for use of the elevator only at the Construction Managers direction.
16) The Elevator Trade Contractor shall figure an elevator operator for state inspections.
17) The Elevator Trade Contractor shall fire caulk any through wall and floor penetrations.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

ALLOWANCE NO. 1:

"FIT OUT" OF THE INTERIOR OF THE ELEVATOR CARS $100,0000

Include an allowance of $50,000 for each Elevator Car or a total of $100,000 as it relates to the "fit-out" of the Interior of the Cabs.

ALLOWANCE NO. 2

ELEVATOR OPERATOR FOR TEN (10) DAYS

Include an allowance to include all costs for providing ten (10) Days for an Elevator Operator to run the elevator cars for use of the elevators only at the Construction Managers direction.

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 21.0 – Fire Suppression

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Fire Suppression** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, and installation of the **Fire Suppression** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 21.0 – Fire Suppression:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Fire Suppression** and related work as described in the Specifications, Drawings, Site Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

   Project Manuals:

   Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

   Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
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01-2500	Substitution Procedures
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01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 3 - CONCRETE

033000 Cast-In-Place Concrete (As Applicable)

DIVISION 4 - MASONRY

042000 Unit Masonry (As Applicable)

DIVISION 5 - METALS

051200 Structural Steel (As Applicable)
051250 Architecturally Exposed Structural Steel (As Applicable)
053000 Metal Decking (As Applicable)
054000 Cold Formed Metal Framing (As Applicable)
055000 Miscellaneous Metals (As Applicable)

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095113 Acoustic Panel Ceilings (As Applicable)
095133 Metal Ceilings (As Applicable)

DIVISION 10 - SPECIALTIES

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DIVISION 13 - SPECIAL CONSTRUCTION

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220548	PLUMBING VIBRATION CONTROLS AND SEISMIC RESTRAINTS
220553	PLUMBING IDENTIFICATION
220584	THROUGH-PENETRATION FIRESTOP SYSTEMS
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221120	PLUMBING DISTRIBUTION PIPING
221130	DRAINAGE AND VENT PIPING
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230553	MECHANICAL IDENIFICATION
230584	TROUGH-PENETRATION FIRESTOP SYSTEMS
230593	TESTING, ADJUSTING AND BALANCING
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230716	EQUIPMENT INSULATION
230719	HVAC PIPING INSULATION
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232500	CHEMICAL WATER TREATMENT
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233600	AIR TERMINAL BOXES
233620	LABORATORY SYSTEM
233700	REGISTERS, GRILLES AND DIFFUSERS
233723	ROOF ACCESSORIES
233900	FANS AND ACCESSORIES
234100	FILTERS
235700	HEAT EXCHANGERS
236415	AIR COOLED WATER CHILLERS

236500	COOLING TOWERS
237323	FACTORY BUILT-UP AIR HANDLING UNITS
238216	COILS
238235	TERMINAL HEAT TRANSFER UNITS
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250500	BASIC MATERIALS AND METHODS
250630	SCHEDULES
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253523	DDC CFM TRACKING TERMINAL BOXES (VAV, VCV, CV, VVE, CVE DESIGNATIONS)
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260510	ELECTRICAL SPECIAL CONDITIONS
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260548	VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS
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Appendix 1
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ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Fire Suppression System and All Associated Components

Fire Protection Systems; Sprinkler Zone Control Assemblies; Fire Department Connections; Galvanized Sprinkler Test System; Riser Check Valve Assembly; Dry Sprinkler Systems; Fire Department Valves; Glass Door Fire Protection System; Specialty Valves; Standpipe and Hose Systems; Tamper and Pressure Switches; Supervisory Switches; Interior and Exterior Pipe and Fittings; Escutcheons; Sleeves; Alarm Devices and Equipment; Fire Department Valve Cabinets; Equipment; General Valves; Pipe Hangers; Supports and Seismic Restraint; Wet and Dry Pipe Valve Assembly; Dry Systems Alarm Devices; Sprinkler Heads; Spare Head Cabinet; Equipment Testing; Pressure Gauges; Sprinkler Control Valve Cabinets; Access Doors; Charts and Markers; Alarm Bells; Sprinkler Head Guards; Pipe/Valve/Equipment; Motors; Starters and Disconnects (unless specifically noted otherwise shall be provided by the Fire Protection Contractor); Core Boring; Furnish and Install Sleeves for Firestopping and Through-Penetration Firestop Systems for your scope of work. The Fire Protection Contractor shall include coordination of Fire Protection systems with Electrical/Mechanical systems and Architectural elements (ceilings, soffits, etc.)

Engineered & Stamped Shop Drawings and Hydraulic Calculations; Record Drawings; Identification Tags and Drawings; Operating and Maintenance Instructions; Testing and Commissioning.

Line Voltage for all equipment as noted in the Contract Documents shall be provided by the Electrical Subcontractor; unless specifically noted to be provided by others.

Excavation, Concrete Encasement, and Bedding and Backfill for Fire Protection shall be provided by Site Subcontractor.

The intent of the Scope of Work is for the **Fire Suppression** bidder to furnish and install all materials and equipment noted on the Contract Documents, unless specifically noted to remain or be removed and/or disposed by others.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 21.0 – Fire Suppression** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Fire Alarm Systems:

The Fire Alarm Subcontractor shall provide any and all coordination that may be required with the Plumbing, HVAC Subcontractor, Fire Suppression, Electrical, Communications and Security Subcontractors as it is relative to the Fire Alarm System. This shall include but not be limited to Tie-ins, Equipment, Meetings, Drawings, Sketches, Schematics Tests, etc. as indicated on the Contract Documents.

It is the intent of the Contract Documents that the Fire Suppression System be complete in all respects. Failure to notify the Construction Manager that discrepancies exist within the Contract Documents shall be construed as acceptance of the information provided.

10) Fire Protection Devices:

The Fire Suppression Subcontractor shall provide all fire alarm devices related to the sprinkler system (flow and tamper switches). The Electrical Subcontractor is responsible to wire these devices to the Fire Alarm System. The Fire Suppression Subcontractor will coordinate with the Electrical Subcontractor the exact number and locations of these devices.

11) Firestopping and Smoke Sealing:

The Firestopping and Smoke Sealing of all of your floor, walls, ceiling, and roof penetrations will be performed by the General Trades Subcontractor. The Fire Suppression Subcontractor shall install sleeves in the walls, floors, ceilings and roofs in advance of placing their conduit, pipe, ductwork through said sleeves. It shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the outer edge of said sleeve. In addition, it shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the inner edge of said sleeve up to and against the item(s) that are passing through the sleeve(s).

12) Fire Sprinkler Permit:

a. This Fire Suppression Subcontractor shall provide complete sets of Stamped and Sealed Fire Sprinkler Drawings and Calculations for the entire building prepared by a State Licensed Engineer for the Fire Sprinkler Permit Filing.
b. This Fire Suppression Subcontractor shall provide manpower, participate and coordinate all fire alarm, dry pipe, tamper switch, low pressure alarm devices, trouble indicators and alarm bell testing with the Fire Marshall and other trades, as it relates to its scope of Work.

13) Electrical Connections for Equipment:

c. The Electrical Subcontractor shall provide single source line voltage to all equipment provided within this project for all trades unless specifically noted otherwise.
d. Starters, Disconnects Low Voltage and Control Wiring shall be provided by the Fire Suppression Subcontractor unless specifically noted to be provided by the Electrical Subcontractor.
e. The Fire Suppression Subcontractor shall furnish and install any tamper switches, to be wired by the Electrical Subcontractor.

14) Equipment:

The Electrical Subcontractor shall provide line voltage to electrical equipment provided within this project for all Trades unless specifically noted otherwise. Starters and disconnects shall be provided by the Subcontractor that is providing the motorized equipment unless specifically noted to be provided by the Electrical Subcontractor.

The Fire Protection Subcontractor shall coordinate the location of connections for equipment; Failure to notify the Construction Manager of any discrepancies shall be construed as acceptance of the condition.

15) Fire Suppression Calculations and Drawings:

The Fire Suppression Subcontractor shall be responsible to expedite all drawings and calculations through the approval process, which includes proper sign off by all "Authorities Having Jurisdiction." This Subcontractor is also responsible to ensure that the Owner's Insurance Underwriter also obtains copies of these drawings and encompasses any additional requirements to satisfy the same. This shall be completed in accordance with the project schedule.

16) Work Criteria:

The Fire Suppression Subcontractor shall design, furnish and install a complete fire protection system including all sprinkler heads to the satisfaction of the specification sections referenced above and to the related specifications sections referenced within them. It is mutually agreed that this design will based on the satisfactory review and acceptance of the design submitted by this Subcontractor from all "Authorities Having Jurisdiction" Fire Protection design engineer, and Owner's Insurance Underwriter. This contract is not based on the sprinkler head count on the Contract Documents, it is based on an acceptable design conforming to the specifications and approval by the above parties. As many sprinkler heads that are required to meet this criteria will be provided by this Subcontractor.

17) Fire Protection Water Service:

The Fire Protection Subcontractor shall be responsible for the connections to the existing Fire Protection service that is provided in the existing Service Tunnel in order to complete the Subcontractor's installation. Refer to Drawing P1.00 for additional information. Inserts, sleeves, link seals and associated materials required for this work at the foundation, slabs and in the tunnels shall be provided by the Fire Protection Contractor.

18) Cleaning of Fire Suppression Line:

The Fire Suppression Subcontractor shall test and flush the fire line to the building as specified by NFPA and as required by the local Fire Marshall. When Flow testing the Fire Line, it shall be the responsibility of the Fire Suppression Subcontractor to provide whatever temporary hoses, piping, equipment necessary to dispose of the flow test water or flushing water to code and meeting all local and state requirements.

19) Fire Protection Devices:

The Fire Suppression Subcontractor shall provide all fire alarm devices related to the sprinkler system (flow and tamper switches). The Electrical Subcontractor is responsible to wire these devices to the Fire Alarm System. The Fire Suppression Subcontractor will coordinate with the Electrical Subcontractor the exact number and locations of these devices.

20) Fire Hose and Valve Cabinets:

The Fire Suppression Subcontractor shall provide all Fire Hose and Fire Valve Cabinets with appropriate signage as noted on the Contract Documents.

21) Elevator Hoistway Fire Protection:
The Fire Suppression Subcontractor shall provide all piping, sprinkler heads and control devices that are required within the Elevator Hoistways.

CLARIFICATIONS

a.) The Fire Suppression Subcontractor shall include:

1. This subcontractor shall include building information modeling (BIM) coordination, shop drawing production, and all revisions and as-builts in the base bid using 3D BIM software compatible with the architect's software. No change orders will be accepted for work related to BIM. This subcontractor will provide all BIM data and files to the Construction Manager, Design Team, and other Subcontractors for coordination.
2. Commissioning Requirements – Include all work related to commissioning for this scope of work.
3. Include the maintenance and repair of all fire suppression systems until the entire project is complete.
4. Include all fire suppression system cutting, capping, and making safe as required.
5. Furnish and install all fire suppression water flow, tamper and pressure switches/alarm systems.
6. Include all fire protection seismic and expansion joints that are required. Refer to the architectural drawings as well as the fire protection drawings for locations requiring expansion joints.

7. Include all antifreeze and dry systems for fire protection as applicable.
8. Include sprinklers in elevator shaft as indicated and required.
9. Video For Training, Maintenance & Operation - For equipment which requires training, maintenance and/or operation by operational personnel, provide a professionally developed video DVD with audio for the use of maintenance training for the facility as indicated in the specifications. Each video will be accompanied by a written index which can be utilized to find any specific item of information by time or place on the video. The recordings shall include the equipment being maintained by qualified personnel, the required maintenance tools, and a step by step technique, both verbally and visually demonstrating how to maintain each piece of equipment in a hands on application. Provide 5 copies of the video to the Construction Manager.
10. In reference to Drawing P1.00 provide typical and as noted all piping, hangers, valves, connections to "6" SPR" to the "12" Existing Fire Water Piping (VIF)."
11. In reference is Drawing FA-001-Monitor Module provide typical and as noted "'T' indicates Tamper Switch, 'F' indicates flow switch, 'P' indicates Pressure Switch." All of which is to be furnish and installed by the Fire Suppression Subcontractor.
12. In reference to Drawing FA-001 provide typical and as noted "Fire Protection Sprinkler Bell."
13. In reference to Drawing FP0.01 comply with typical and as noted "Fire Protection General Notes."
14. In reference to Detail 2 on Drawing FP0.02 provide typical and as noted "Fire Protection Riser Control Valve Assembly and Cabinets."
15. In reference to Detail 2 on Drawing FP0.02 provide typical and as noted "Sprinkler Supply and Drains."
16. In reference to Detail 3 on Drawing FP0.02 provide typical and as noted "Riser Control Valve at the Base of Every Fire Protection Riser in **Accessible Location**."
17. In reference is Detail 6 on Drawing FP0.02 provide supports for all of your work typical and as noted in compliance with these details.
18. In reference to the note in regards to "Electrical Rooms Sprinkler Protection Notes" on Drawing FP1.00 the Fire Suppression Subcontractor must assume for Bidding purposes that Fire Suppression and Fire Sprinkler Heads and Devices will be required in all Electrically related rooms.
19. In reference to Drawing FP1.00 provide typical and as noted and comply with "Refer to Architectural Drawings for Exact Locations of Risers and Cabinets."
20. In reference to Drawing FP 1.00 comply with "Sprinkler Notes."
21. In reference to Drawing FP1.00 provide typical and as noted "4" SPR Riser Up; 2" SD Riser Up; Spill SD to Nearest FD."
22. In reference to Drawing FP1.00 provide typical and as noted "Cabinet for 2-1/2" Fire Dept. Valve Recessed in Wall."
23. In reference to Drawing FP1.00 provide typical and as noted "4" FSP Riser in furring of Wall 2-1/2" Conn to FVC recessed in Wall on all Intermediate Stairway Landings.
24. In reference to Drawing FP1.00 provide typical and as noted "FSP Located Beneath Stair."
25. In reference is Drawing FP1.00 provide typical and as noted "6" F Tie Into DCDA Piping Outlet Shown on Plumbing Documents."
26. In reference to Drawing FP1.01 provide typical and as noted "Provide Dry SPR's in Vestibule (Typical)."
27. In reference to Drawing FP1.01 provide typical and as noted "Provide Corrosion Resistant Sprinklers in Water Lab."
28. In reference is Drawing FP1.01 provide typical and as noted "6" x 2-1/2" x 2-1/2" 2-way Fire Department Inlet Connection (Coordinate With Fire Official."
29. In reference to Drawing FP1.01 provide typical and as noted "Electrical Water Motor Gong."

30. In reference to Drawing FP1.01 provide typical and as noted "2" SD To Grade-Provide SS Screen Cover on Pipe Penetration at Wall Similar to Zurn Z199-DC-25 (Coordinate with Architectural DWGS."
31. In reference to drawing FP1.02 provide typical and as noted 'Provide Dry SPR's in Cold Room."
32. In reference to drawing FP1.03 provide typical and as noted 'Provide Dry SPR's in Cold Room."
33. In reference to drawing FP1.04 provide typical and as noted 'Provide Dry SPR's in Cold Room."
34. In reference to drawing FP1.05 provide typical and as noted 'Provide Dry SPR's in Cold Room."
35. In reference to Drawing FP1.05 provide typical and as noted "Provide Capped SPR Pipe For Connection to Each Gas Cylinder Cabinet For SPR With Fuse Rating of 155F and Flow Capacity of 35 GPM @ 40 PSI-Typical All Cyl. Stor. Rms."
36. In reference to Drawing FP1.06 provide typical and as noted "4" FSP Piping Routed Above Stair Window."
37. In reference to Drawing FP3.00 AMEND the notation that reads "Scope of Work Within Dashed Line is Installed by the Plumbing Contractor" to READ "Scope of Work Within Dashed Line is Installed by the Bid Package 21.0 Fire Suppression Subcontractor."
38. In reference to Drawing FP3.00 comply with the notation that reads "Existing Campus Main In Tunnel-Location Shall be Field Verified."

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

EXHIBIT "B"
SCOPE OF WORK
New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No.22.0 Plumbing

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Plumbing** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Plumbing** as required, shown, described and specified under this Bid Package, and all related scope and services, required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

1) **BID PACKAGE #22.0 – Plumbing:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Plumbing** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

(Scope of Work forthcoming in an Addendum.)

EXHIBIT "B"
SCOPE OF WORK
New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No.23.0 HVAC

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **HVAC** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **HVAC** as required, shown, described and specified under this Bid Package, and all related scope and services, required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

1) **BID PACKAGE #23.0 –HVAC:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **HVAC** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

(Scope of Work forthcoming in an Addendum)

EXHIBIT "B"
SCOPE OF WORK

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 26.0 Electrical

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Electrical, Communications, Safety and Security Systems** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Electrical, Communications, Safety and Security Systems** as required, shown, described and specified under this Bid Package, and all related scope and services, required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

1) **BID PACKAGE #26.0 - Electrical, Communications, Safety and Security Systems:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Electrical, Communications, Safety and Security Systems** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Work included but not limited to:

Electrical; Electronic Safety ; Temporary Light and Power; Core Boring; Site Electric and Site Lighting including furnishing of Anchor Bolts for installation by others; Electric Disconnects for equipment, (unless specifically noted otherwise shall be provided by Electrical Contractor); Line Voltage for all equipment as noted in the Contract Documents including but not limited to Fans, Pumps, Projection Screens, Display Cases, Operable Window Treatment, Fume Hoods; Fans, Owner Supplied Equipment, Boilers, Heating/Cooling and Air Handling Units, Commissioning; Motor Controllers/Starters shall be provided by the contractor or equipment motor supplier furnishing the equipment (unless specifically noted to be provided by the Electrical Contractor); Excavation; Concrete Encasement Bedding and Backfill for Site Electric and Site Lighting shall be by Others.

Specification Sections of the Project Manual:

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 1 - GENERAL REQUIREMENTS

SECTION	
01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 2 - EXISTING CONDITIONS

024100 Site Demolition (as Applicable)

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

SECTION

064023 Architectural Woodwork (as Applicable)

DIVISION 8 - OPENINGS

SECTION

081000 Door Schedule (As Applicable)
081113 Steel Doors and Frames (As Applicable)
081119 Stainless Steel Doors and Frames (As Applicable)
083113 Access Doors (As Applicable)
084413 Curtain Walls, Storefronts and Entrances (CWSE)
087100 Finish Hardware (As Applicable)

DIVISION 11 - EQUIPMENT

SECTION

115210 Audio-Visual Equipment (As Applicable)
115213 Electric Projection Screens (As Applicable)
116100 High Performance Laboratory Fume Hoods (As Applicable)
116200 Laboratory Equipment (As Applicable)

DIVISION 12 - FURNISHINGS

SECTION

122413 Window Shades (As Applicable)

DIVISION 13 - SPECIAL CONSTRUCTION

SECTION

131146 Tank Filtration Equipment (As Applicable)
132100 Laboratory Environmental Rooms (As Applicable)

DIVISION 14 - CONVEYING EQUIPMENT

142100 Traction Elevators (As Applicable)

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DIVISION 22 – PLUMBING (As Applicable)

DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING (As Applicable)

DIVISION25 – INTERGRATED AUTOMATION (As Applicable)

DIVISION 26 – ELECTRICAL

260510	ELECTRICAL SPECIAL CONDITIONS
260520	BASIC MATERIALS AND METHODS
260530	WIRING METHODS
260548	VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS
260570	POWER SYSTEM STUDIES
260580	ELECTRICAL ACCEPTANCE TESTS
260584	THROUGH PENETRATION FIRESTOP SYSTEMS
260920	LIGHTING CONTROL SYSTEM
261120a	SECONDARY UNIT SUBSTATIONS – NORMAL POWER DOUBLE ENDED
261120b	SECONDARY UNIT SUBSTATIONS – EMERGENCY POWER SINGLE ENDED
262010	LOW VOLTAGE DISTRIBUTION
263010	ELECTRICAL POWER GENERATION
263350	UNINTERRUPTIBLE POWER SYSTEMS
264110	LIGHTNING PROTECTION SYSTEM
264310	SURGE PROTECTIVE DEVICES
265010	LIGHTING FIXTURES
265100	Architectural Lighting

2) Temporary Construction Manager Site Office:

a. The Electrical Contractor shall install and remove all Power and Telecom/Data for the Construction Managers and Owner's Site Offices as shown on the Site Logistics Plan as directed by the Construction Manager.

3) Temporary and Permanent Heating and Cooling:

The Electrical Contractor shall provide all power wiring necessary to accommodate the Temporary and Permanent Heating and Cooling requirements as described in BP-22.

4) Light Poles/Bollards/Grounding:

This Contractor shall furnish all Anchor Bolts and Anchor Bolt templates to the Site Contractor for installation by the Site Work Contractor. This **Contractor** shall furnish and install **ALL** site light fixtures, conduit wire and cable and building grounding loop.

5) Walk in Coolers:

This Contractor shall make final electrical connections to the walk in coolers.

6) Service Connections:

The Electrical Contractor shall be responsible for all final connections, including, disconnects and etc. for all Equipment, (furnished by others) as it relates to your scope of work, including but not limited to: Millwork and Lab Casework Services, Fans, Pumps, Doors/hardware, Projection Screens Laboratory Equipment, Owner Supplied Equipment, Boilers, Heating, Ventilating and Cooling Units, Operable HVAC Controls, Fume Hoods.

This Contractor shall coordinate the location of connections for equipment; Failure to notify the Construction Manager of any discrepancies shall be construed as acceptance of the condition.

7) Equipment:

The Electrical Contractor shall provide line voltage to electrical equipment provided within this project for all trades unless specifically noted otherwise. Starters and disconnects shall be provided by the Contractor that is providing the motorized equipment unless specifically noted to be provided by the Electrical Contractor. In any case, the installation of starters and disconnects shall be by the Electrical Contractor.

The Plumbing and Mechanical Contractors will coordinate and shall furnish all starters disconnects switches for all Plumbing, HVAC, ATC equipment and as specified and noted on the Contract Documents. Installation of these devices shall be by the Electrical Contractor.

8) Temporary Light and Power:

Installation:

Provide labor, material and equipment for the installation of interior temporary light as required by these specifications, unless specifically noted otherwise in the Contract Documents.

Furnish, install, and maintain and eventually remove all distribution of interior temporary light as required.

Temporary lighting shall be installed in such a manner as not to interfere with the permanent construction. If such interference does occur, it will be the responsibility of the Electric Contractor to make such changes as may be required to overcome the interference. The cost of these changes are included as part of the Contract price.

Temporary wiring is to be laid out, balanced and wire-sized so as to produce a voltage drop of not greater than five percent (5%) at the extreme end of the line when operating a full load.

Lighting Requirements:

The exterior of the building, and the Construction Manager Office Trailer and the Construction Parking / Material Storage Trailers Location area as shown on the Site Logistics Plan, shall have extreme Security Lighting at various locations as determined by the Construction Manager. This lighting shall be controlled by sensors w/ on/off switch overrides. Staging area and Trailer area and perimeter of the existing building (30 feet out) will require a minimum of 1/2 watt/SF.

All other temporary lighting shall be controlled by appropriate on/off equipment at a mutually agreed location.

The replacement of all bulbs and temporary wiring shall be included as part of these requirements and maintained by this Subcontractor. At least on a weekly basis, the entire job shall be checked and re-lamped as required. At no time shall more than 10 percent of the temporary lighting not be operational.

System is to be of a movable nature suspended from structure and is not to damage or dislodge any spray-on-fireproofing during the life of its installation. It shall also be installed, removed and/or reinstalled as work progresses. General Area lighting will require a minimum of 1/4 watt/SF.

All mechanical rooms/areas will require a minimum of 1/2 watt/SF.

All stairwells will require a light at each landing and intermediate landing.

All entrances and exits of the building will require a single string of lights with bulbs a minimum of 10 feet on center.

Power Requirements

This Contractor shall carry all cost and all materials and equipment as needed to step down to a 600 amp 480 volt 3 phase complete temporary power service (confirm this will service will meet the requirements described below) inside the building, including but not limited to, conduit, wiring, CT and DT Cabinets, meter, panel-board, grounding, etc for complete system per the NEC and the local building code. This Subcontractor shall also provide all provisions required for weather tightness of the above system.

Provide **200 amp 120/208 volt interior temporary panels** per floor including the basement and penthouse as directed by the Construction Manager. This Subcontractor shall also provide all provisions required for weather tightness of the above system.

Provide a **400 amp 3 phase 480 volt** exterior panel along with final connects and disconnect to operate the material/peronall hoist and tower crane. The hoist and the crane will be located on the North side of the new building. Coordinate final location with the CM.

For small tools, provide 20 amp @ 120 volt power outlets located throughout the project floors so that the floor area and exterior of the building can be covered with standard 50 foot extension cords.

Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.

Provide 220 volt 40 amp receptacle for larger power equipment at each temporary panel.

This Contractor shall provide the required voltage and amps to run the elevators on a temporary basis until permeant power is made available. Power should be brought to a disconnect for the Elevator Contractor to connect to.

When the permanent power service is activated, all temporary installation shall be transferred to that source, including required OSHA Ground Fault Protection. A competent qualified Electrician is required to test all GFI certificates at the outlet panel at a minimum on a monthly basis and each panel must include a dated sign off in plain view. Any costs related to these inspections shall be included in this Contractor's bid proposal. Each Trade Contractor is to include in his or her proposal electrical cords for their work.

Maintenance
This Contractor shall maintain the temporary lighting (interior and exterior) and power systems.

All work covered under this Contract is to be maintained in good and safe operating condition and in a timely manner so not to delay the project in whole or in part. This Contractor shall be responsible for installing and maintaining a reasonably balanced system and shall take current reading on the feeders at regular intervals.

All temporary facilities are to be maintained and kept in good operating conditions. Maintenance men necessary to perform this work shall be provided so that other trades are not delayed. Local power centers shall be constantly maintained to prevent the accumulation of "rat's-nest circuitry". All temporary wiring shall be suspended and maintained at least 8 feet above finished floors and pass through permanent walls above the permanent ceiling level. The patching of holes in partitions is to be done by the General Trades Contractor for drywall and the Masonry Contractor for masonry.

Removal
This Contractor shall eventually remove (at the direction of the Construction Manager) all temporary power and lighting equipment (interior and exterior).

9) Supplement Temporary Lighting:
General temporary lighting will be provided by the Electrical Trade Contractor after the steel is erected at each level at a minimum of 1/4 watt per square foot. It will be the responsibility of each Trade Contractor to provide supplement lighting and cords as needed or when finish work is being completed especially prior to the new permanent lighting is installed and lit.

10) Electric Door Hardware:

The Electrical Contractor shall provide final connections for all electrified door hardware (locks, hold-opens, strikes, hinges, etc.) shown on the Contract Documents. Electrified door hardware shall be furnished and installed by others with the exception of electromagnetic hold opens which shall be furnished and installed by the Electrical Contractor. The Electrical Contractor shall coordinate the location of the door magnets and conduits supplying power to the magnets. All wiring to the magnets shall be concealed within the walls. Include power for all electrified hardware. Verify through submittals and in the field that all electrified hardware is rated for the supplied voltage and power and then make all connections.

11) Heat Trace:

The Mechanical Contractor will furnish and install all electric heat trace cable indicated on the Contract Documents and the Electrical Contractor will provide all of the power wiring to these heating cables.

12) Mechanical Service Lighting:

The Electrical Contractor shall furnish and install any necessary wiring for internal lighting in or on mechanical units. This Contractor is expected to check mechanical specifications and drawings to be sure any lights associated with the mechanical units are wired and operational.

13) Casework Lighting and Receptacles:

Wood and Lab Casework electrical receptacles/wiremold and task lighting shall be provided by the Electrical Contractor except if built into a finished product.

14) Pre-Manufactured Finished Raceway for Devices

The Electrical Contractor shall provide pre-manufactured finished raceway as indicated on the Contract Documents.

15) Pricing of Additional Work

All additional work for change orders that are submitted by the Electrical Trade Contractor must be calculated on the basis of the latest version of NECA Category 1 costs further reduced by 25%.

16) Wiring of ALL Plumbing/HVAC Fixtures and Equipment

The Electrical Contractor shall furnish and install all wiring and transformers for Plumbing Fixtures and HVAC Equipment that may not be shown on the Electrical Drawings but is required by the Contract Documents. This Contractor is expected to check plumbing and mechanical specifications and drawings to be sure any power associated with Plumbing Fixtures and HVAC Equipment are wired and operational.

17) Underground Ducts and Utility Structures:
The Electrical Contractor shall provide all Conduits and other materials as required to complete the Underground Conduits, Cables, Ducts, Grounding systems and Utilities installation per the Electrical Divisions.

18) BMS Panels:
This Contractor shall provide line voltage (110v) to all BMS/Temperature Control panels.

20) In Slab "Poke Thru's"
This Trade Contractor shall furnish and install all in slab poke thru's, including conduit and wiring for power.

CLARIFICATIONS

1) In reference to detail 9 on Drawing T700 "Standard 3-Port Floor Box" shall be furnished and installed by the BP 26.0 Electrical Subcontractor. All power wiring and conduit shall be furnished and installed by the BP 26.0-Elecrical. All communications wiring and conduit shall be furnished and installed by BP 27.0-Communcations.
2) In reference to detail 11 on Drawing T700 "Standard 6 Port Poke through Outlet" shall be furnished and installed by BP 26.0-Electrical. All power wiring and conduit shall be furnished and installed by the BP 26.0-Elecrical. All communications wiring and conduit shall be furnished and installed by BP 27.0-Communcations.

EXCLUSIONS

1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price Allowances as listed below. Allowances shall include all necessary material, cost for delivery, installation, machinery, insurance, and applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 026.1-Fire Alarm

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Fire Alarm** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Fire Alarm** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 026.1 – Fire Alarm:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Fire Alarm** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

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01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements

01-6100 University Product Standard
01-7300 Execution
017419 Construction Demolition Waste Management
01-7700 Closeout Procedures
01-7823 Operation and Maintenance Data
01-7839 Project Record Documents
01-7900 Demonstration and Training
018113 VOC Limits for Adhesives, Sealants, Paints and Coatings
018119 Construction Indoor Air Quality
019113 Building Commissioning Requirements

DIVISION 8 – OPENINGS

081000 Door Schedule (As Applicable)
081113 Steel Doors and Frames (As Applicable)
081119 Stainless Steel Doors and Frames (As Applicable)
081433 Stile and Rail Wood Doors (As Applicable)
083113 Access Doors (As Applicable)
087100 Finish Hardware (As Applicable)

DIVISION 9 - FINISHES

095113 Acoustic Panel Ceilings (As Applicable)
095133 Metal Ceilings (As Applicable)

DIVISION 14 - CONVEYING EQUIPMENT

142100 Traction Elevators (As Applicable)

DIVISION 21 - FIRE SUPPRESSION (AS APPLICABLE)

DIVISION 23-HEATING, VENTILATION AND AIR CONDITIONING

DIVISION 26 – ELECTRICAL (As Applicable)

DIVISION 27 – COMMUNICATIONS TABLE OF CONTENTS

270510 TELECOMMUNICATIONS (As Applicable)

Division 28 – ELECTRONIC SAFETY AND SECURITY

281000 Security Systems (As Applicable)
283110 Fire Alarm System

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014

ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

Schedule of Drawings: Refer to Drawing List contained in the Project Manual Specification Section 00 01 15.

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Fire Alarm System including all necessary Components; Core Boring; All Sleeves and Penetrations in Floors, Walls, Ceilings and Roofs for your scope of work; Line and Low Voltage for your equipment as noted in the Contract Documents including but not limited to conduits and raceways; Public Address and Mass Notification System as part of System, Emergency Dial Out Provisions; Elevator Recall Integration; Testing and Commissioning;

Basic Electrical Materials and Methods; Secondary Grounding; Transformers; Conduit and Stubs; Submittals, Product Data and Samples; Record Drawings; Identification Tags and Drawings; Operating and Maintenance Instructions; Testing and Commissioning;

Coordination with the Electrical, Communications and Security Trade Contractors.

The intent of the Scope of Work is for the **Fire Alarm** bidder to furnish and install all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 026.1 – Fire Alarm** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the General Trades Contractor.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-

emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Fire Alarm Systems:

The Fire Alarm Subcontractor shall provide any and all coordination that may be required with the Plumbing, HVAC Subcontractor, Fire Suppression, Electrical, Communications and Security Subcontractors as it is relative to the Fire Alarm System. This shall include but not be limited to Tie-ins, Equipment, Meetings, Drawings, Sketches, Schematics Tests, etc. as indicated on the Contract Documents.

It is the intent of the Contract Documents that the Fire Alarm System be complete in all respects. Failure to notify the Construction Manager that discrepancies exist within the Contract Documents shall be construed as acceptance of the information provided.

10) Elevator Recall System:

An Elevator Recall System for all Elevators shall be installed in accordance with the Contract Documents. Coordination and final connections to the Elevator Control Panel shall be provided by the General Trades (Elevator) Subcontractor.

11) Elevator Telephone:

The Communications Subcontractor shall be responsible for furnishing and installing any conduit necessary to bring the elevator phone line wire to the elevator controller. The Communications Subcontractor shall leave the phone line wire coiled in the elevator machine room adjacent to the controller for final connection to the elevator controller by the Elevator Subcontractor.

The Elevator Subcontractor shall provide a functioning telephone within the elevator cab. Dial Tone for the telephone will be brought into the elevator machine room by the

Communications Subcontractor as described above. The Elevator Subcontractor is responsible to land all wires on, to and from his or her equipment.

12) Fire Alarm Service:

The Fire Alarm Subcontractor shall provide **ALL** conduits services in accordance with that as indicated in the Contract Documents. All required Excavation, Bedding, Encasement and Backfill shall be provided by the Site Subcontractor.

13) Electric Door Hardware:

The Electronic Safety and Security Subcontractor shall provide final connections for all electrified door hardware (locks, hold-opens, strikes, hinges, etc.) indicated on the Contract Documents. Electrified door hardware shall be furnished and installed by others with the exception of electromagnetic hold opens which shall be furnished and installed by the Electrical Subcontractor. The Electrical Subcontractor shall coordinate the locations of the door magnets and conduits supplying power to the magnets. All wiring to the magnets shall be concealed within the walls. Include power for all electrified hardware. Verify through submittals and in the field that all electrified hardware is rated for the supplied voltage and power and then make all connections.

14) Fire Protection Devices:

The Fire Suppression Subcontractor shall provide all fire alarm devices related to the sprinkler system (flow and tamper switches). The Electrical Subcontractor is responsible to wire these devices to the Fire Alarm System. The Fire Suppression Subcontractor will coordinate with the Electrical Subcontractor the exact number and locations of these devices.

15) Pricing of Additional Work

All additional work for change orders that are submitted by the Electrical Subcontractor must be calculated on the basis of the latest version of NECA Category 1 costs further reduced by 25%.

17) Firestopping and Smoke Sealing:

The Firestopping and Smoke Sealing of all of your floor, walls, ceiling, and roof penetrations will be performed by the General Trades Subcontractor. The Fire Alarm Subcontractor will install sleeves in the walls, floors, ceilings and roofs in advance of placing their conduit, pipe, ductwork through said sleeves. It shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the outer edge of said sleeve. In addition, it shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the inner edge of said sleeve up to and against the item(s) that are passing through the sleeve(s).

CLARIFICATIONS

a.) The Fire Alarm Subcontractor shall include:

1) This subcontractor shall include building information modeling (BIM) coordination, shop drawing production, and all revisions and as-builts in the base bid using 3D BIM software compatible with the architect's software. No change orders will be accepted for work related to BIM. This subcontractor will provide all BIM data and files to the Construction Manager, Design Team, and other Subcontractors for coordination.
2) Commissioning Requirements – Include all work related to commissioning for this scope of work.
3) Furnish and install galvanized unistrut and fittings as required to independently support disconnects and receptacles.
4) Provide all penetrations and cores required to complete Subcontractor's Work. Include patching, acoustical caulking, and architectural caulking as required.
5) Provide all access doors and panels required for this scope of work to be installed by others.
6) Include all conduit, cable trays, raceways, sleeves, fire sealing at sleeves, back boxes, boxes, pull cords, infrastructure, and power wiring for the Communications system.
7) Video for Training, Maintenance & Operation - For equipment which requires training, maintenance and/or operation by operational personnel, provide a professionally developed video DVD with audio for the use of maintenance training for the facility as indicated in the specifications. Each video will be accompanied by a written index which can be utilized to find any specific item of information by time or place on the video. The recordings shall include the equipment being maintained by qualified personnel, the required maintenance tools, and a step by step technique, both verbally and visually demonstrating how to maintain each piece of equipment in a hands on application. Provide 5 copies of the video to the Construction Manager.
8) In reference to the Fire Alarm System notes on Drawing FA-001 in regards to the Duct Mounted Smoke Detectors they shall be "provided and wired in by the Electrical Trade Contractor and installed by the Mechanical Trade Contractor."
9) Comply with "General Notes #1 through #17" typical and as noted on Drawing FA-400.
10) Comply with "Key Notes #1 though #5" typical and as noted on Drawing FA-400.
11) In reference to Drawing FA-500 provide typical and as noted "#8 Building Ground – ¾" C. (Typical per FACP/Transponder/Terminal Cabinet-Tie Back to Building Ground."
12) In reference to Drawing FA-500, comply with "Fire Alarm Riser Diagram Notes #1 through #27."
13) In reference to Drawing FA-500, comply with "Fire Alarm Riser Diagram Key Notes #1 through #4."
14) In reference to Detail 4 on Drawing FA-600 provide typical and as noted "120 Volt circuit from the Life Safety/Emergency Panel board as indicated on the riser diagram, smoke detector located in the duct/unit, two (2) associated control/relay modules, and monitor modules."
15) In reference to Drawing FA-601, comply with the "Sequence of Operation."

16) In reference to Drawing FA-601, comply with the "Fire Alarm Operational Matrix."
17) The General Trades, Electrical, Communications, Fire Alarm and Security Subcontractors should carefully review Drawing AV 000 especially "Audio Visual and Related Work Responsibly Schedule" to be sure that have included all of the labor, material and equipment included in their base bid as it relates to the assignment of the work in that matrix.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 27.0-Communications

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Communications** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Communications** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 27.0 – Communications:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Communications** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

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Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 01 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements

01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 3 – CONCRETE

033000	Cast-In-Place Concrete (As Applicable)

DIVISION 4 – MASONRY

042000	Unit Masonry (As Applicable)

DIVISION 5 – METALS

051200	Structural Steel (As Applicable)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

078100	Sprayed Fire Resistive Materials (As Applicable)
078123	Intumescent Fireproofing (As Applicable)
078413	Firestops and Smokeseals (As Applicable)
079200	Joint Sealers (As Applicable)

DIVISION 8 - OPENINGS

081000	Door Schedule (As Applicable)
081113	Steel Doors and Frames (As Applicable)
081119	Stainless Steel Doors and Frames (As Applicable)
081433	Stile and Rail Wood Doors (As Applicable)
083113	Access Doors (As Applicable)
084413	Curtain Walls, Storefronts and Entrances (CWSE) (As Applicable)
084510	Interior Glazed Walls (As Applicable)
087100	Finish Hardware (As Applicable)

DIVISION 9 - FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
095113	Acoustic Panel Ceilings (As Applicable)
095133	Metal Ceilings (As Applicable)
098413	Acoustic Wall Panels (As Applicable)
099000	Painting and Finishing (As Applicable)

DIVISION 11 – EQUIPMENT

115210	**Audio-Visual Equipment**
115213	Electric Projection Screens (As Applicable)
116100	High Performance Laboratory Fume Hoods (As Applicable)
116200	Laboratory Equipment (As Applicable)

DIVISION 13 - SPECIAL CONSTRUCTION

132100 Laboratory Environmental Rooms (As Applicable)

DIVISION 14 - CONVEYING EQUIPMENT

142100 Traction Elevators (As Applicable)

DIVISION 21 - FIRE SUPPRESSION (AS APPLICABLE)

DIVISION 22 – PLUMBING (AS APPLICABLE)

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31 09 13 VIBRATION AND SOUND MANAGEMENT

DIVISION 33 - UTILITIES

33 01 00 BASIC SITE MATERIALS AND METHODS

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Communications; Core Boring; All Sleeves and Penetrations in Floors, Walls, Ceilings and Roofs for your scope of work that will be Firestopped, Through-Penetration Firestopped and Smoke Sealed by Bid Package BP 06.0; Site Communication; Line Voltage for your equipment as noted in the Contract Documents including but not limited to Communications hubs, racks and closets; Audio Visual Systems; Public Address and Mass Notification System, Emergency Call for Aid Systems, and Clock Systems, , Elevator Phone System; Commissioning;

All Pre-Fabricated Tele/Communications Raceway Systems and all associated Accessories; Electric Power and Communication Transmission Service from Utility to Building; Basic Electrical Materials and Methods; Secondary Grounding; Transformers; Complete Clock and PA Systems; Conduit and Stubs for Voice and Data Systems; Complete Call Systems; Complete Rescue Call for Assistance Systems; Complete Intercommunication Systems; Conduit and Stubs for Audio/Visual Systems; Core Boring; Mock-ups; Submittals, Product Data and Samples; Record Drawings; Identification Tags and Drawings; Operating and Maintenance; Instructions; Testing and Commissioning;

The intent of the Scope of Work is for the **Communications** bidder to furnish and install all materials and equipment noted on the Contract Documents, unless specifically noted to remain or be removed and/or disposed by others.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 27.0 – Communications** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.

c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.

d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.

e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent.

Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Fire Alarm Systems:

The Fire Alarm Subcontractor shall provide any and all coordination that may be required with the Plumbing, HVAC Subcontractor, Fire Suppression, Electrical, Communications and Security Subcontractors as it is relative to the Fire Alarm System. This shall include but not be limited to Tie-ins, Equipment, Meetings, Drawings, Sketches, Schematics Tests, etc. as indicated on the Contract Documents.

It is the intent of the Contract Documents that the Fire Alarm System be complete in all respects. Failure to notify the Construction Manager that discrepancies exist within the Contract Documents shall be construed as acceptance of the information provided.

10) Elevator Recall System:

An Elevator Recall System for all Elevators shall be installed in accordance with the Contract Documents. Coordination and final connections to the Elevator Control Panel shall be provided by the General Trades (Elevator) Subcontractor.

11) Elevator Telephone:

The Communications Subcontractor shall be responsible for furnishing and installing any conduit necessary to bring the elevator phone line wire to the elevator controller. The Communications Subcontractor shall leave the phone line wire coiled in the elevator machine room adjacent to the controller for final connection to the elevator controller by the Elevator Subcontractor.

The Elevator Subcontractor shall provide a functioning telephone within the elevator cab. Dial Tone for the telephone will be brought into the elevator machine room by the Communications Subcontractor as described above. The Elevator Subcontractor is responsible to land all wires on, to and from his or her equipment.

12) Conduit in Concrete Slabs:

The Communications Subcontractor shall not place conduit in any concrete slab. All routing of conduit must be concealed and take place in ceiling space, cavity space and in walls.

13) Communication Service:

The Communications Subcontractor shall provide **ALL** Communication service in accordance with that as indicated in the Contract Documents. All required Excavation, Bedding, Encasement and Backfill shall be provided by the Site Subcontractor.

14) Electric Door Hardware:

The Electronic Safety and Security Subcontractor shall provide final connections for all electrified door hardware (locks, hold-opens, strikes, hinges, etc.) indicated on the Contract Documents. Electrified door hardware shall be furnished and installed by others with the exception of electromagnetic hold opens which shall be furnished and installed by the Electrical Subcontractor. The Electrical Subcontractor shall coordinate the locations of the door magnets and conduits supplying power to the magnets. All wiring to the magnets shall be concealed within the walls. Include power for all electrified hardware. Verify through submittals and in the field that all electrified hardware is rated for the supplied voltage and power and then make all connections.

15) Fire Protection Devices:

The Fire Suppression Subcontractor shall provide all fire alarm devices related to the sprinkler system (flow and tamper switches). The Electrical Subcontractor is responsible to wire these devices to the Fire Alarm System. The Fire Suppression Subcontractor will coordinate with the Electrical Subcontractor the exact number and locations of these devices.

16) Pricing of Additional Work

All additional work for change orders that are submitted by the Electrical Subcontractor must be calculated on the basis of the latest version of NECA Category 1 costs further reduced by 25%.

17) In Wall Conduit Stubs:

This Subcontractor shall be responsible for all in wall conduit stubs for the communications system.

18) Cable Trays:

This Subcontractor shall be responsible for all Cable Trays.

19) Power and Branch Circuits for Communication Equipment:

This Subcontractor shall be responsible for all power and branch circuits for Communications Equipment.

20) Closet Grounding Conductors and Ground Bars:
This Subcontractor shall be responsible for all communications closet grounding conductors and ground bars.

21) Firestopping and Smoke Sealing:

The Firestopping and Smoke Sealing of all of your floor, walls, ceiling, and roof penetrations will be performed by the General Trades Subcontractor. The Communications Subcontractor will install sleeves in the walls, floors, ceilings and roofs in advance of placing their conduit, pipe, ductwork through said sleeves. It shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the outer edge of said sleeve. In addition, it shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the inner edge of said sleeve up to and against the item(s) that are passing through the sleeve(s).

22) Pre-Installation Coordination with Other Subcontractors:

In advance of any outlet box installation, this Subcontractor shall coordinate with the interfacing Subcontractor(s), i.e., A/V Outlets coordinate with the A/V Integrator; LAN Equipment Outlets coordinate with the LAN Equipment Installer; Security Panel Outlets coordinate with the Security Subcontractor; Millwork Outlets coordinate with the Casework and Millwork Subcontractor, etc.

23) Pre-Installation Coordination with the Project Architect:

In advance of any outlet box installation, this Subcontractor shall coordinate with and receive formal prior approval from the Project Architect. Such approval shall include but not be limited to: locations for the outlets boxes for the Digital Signage; locations for the outlet boxes for all wall mounted devices; locations for the outlet boxes for telecommunications outlets; locations, elevations and pathways of all cable trays, etc.

CLARIFICATIONS

a.) The Communications Subcontractor shall include:

1) This subcontractor shall include building information modeling (BIM) coordination, shop drawing production, and all revisions and as-builts in the base bid using 3D BIM software compatible with the architect's software. No change orders will be accepted for work related to BIM. This subcontractor will provide all BIM data and files to the Construction Manager, Design Team, and other Subcontractors for coordination.
2) Commissioning Requirements – Include all work related to commissioning for this scope of work.
3) Furnish and install galvanized unistrut and fittings as required to independently support disconnects and receptacles.
4) Provide all penetrations and cores required to complete Subcontractor's Work. Include patching, acoustical caulking, and architectural caulking as required.
5) Provide all access doors and panels required for this scope of work to be installed by others.
6) Include all conduit, cable trays, raceways, sleeves, fire sealing at sleeves, back boxes, boxes, pull cords, infrastructure, and power wiring for the Communications system.
7) Video for Training, Maintenance & Operation - For equipment which requires training, maintenance and/or operation by operational personnel, provide a professionally developed video DVD with audio for the use of maintenance training for the facility as indicated in the specifications. Each video will be accompanied by a written index which can be utilized to find any specific item of information by time or place on the video. The recordings shall include the equipment being maintained by qualified personnel, the required maintenance tools, and a step by step technique, both verbally and visually demonstrating how to maintain each piece of equipment in a hands on application. Provide 5 copies of the video to the Construction Manager.
8) In reference to Detail 9 on Drawing A9.32 provide typical and as noted all "recessed Data Outlets."
9) In reference to Drawing E-100 provide typical and as noted "4-4" RGS Conduit from JB to Building Entrance Room."
10) In reference to Drawing E-100 provide typical and as noted "36" x 36" x 12" NEMA Rated 4 Hinged Cover Junction Box."
11) In reference to Drawing E-100 provide and comply with typical and as noted "Conduit Up to Ceiling. Provide Link Seal at Foundation Wall."
12) In reference to Drawing T-100 provide typical and as noted "10' RGS Conduit shall be installed at foundation wall and extend away from Building."
13) In reference to Drawing T-100 provide typical and as noted '4-4" PVC Concrete encased Conduit to MH-79. Refer to Civil and Electrical Drawings for Exact Locations."
14) Comply with the "General Pathway Requirements" typical and as noted on Drawing T001.
15) Comply with the "General Labeling Requirements" typical and as noted Drawing T001.

16) Comply with the note on Drawing T101- "Fire Alarm Master Control Panel Location TBD. Provide 1-1/4" Dedicated Conduit to Local Telecommunications Room."
17) Comply with Note #1 at the top of Drawing T101-"Pedestal Mounted Emergency Phone Will be Installed on the North Side of the Building. Location TDB. Contractor shall carry 50" Conduit and Cable Allowance for Possible Relocation."
18) Comply with Note #2 at the top of Drawing T101-"Prior to Underground Conduit Installation Coordinate with the Civil and Landscaping Contracts."
19) In reference to Drawing T106-provide typical and as noted "(2) 4" RGS Conduits to Telecommunication Room 521 Below. All Telecommunications and Security Cameras Outlets in Penthouse Shall be Hard Piped to a 24" x 24" x 12" NEMA 1 Hinged Junction Box Attached to Sleeves." The Telecommunications Subcontractor shall provide the 2-4" RGS Conduits, the 24" x 24" x 12" NEMA 1 Hinged Junction Box Attached to Sleeves.
20) In reference to Drawing T301 provide all grounding that is depicted on this drawing
21) In reference to Drawing T301 provide all work related to the "Key Notes."
22) In reference to Drawing T301 provide the typical and as noted "Exothermic Welding."
23) In reference to Drawing Detail 2 on Drawing T601 provide "20" x 4" x ¼" Telecommunications Main Grounding Bus Bar Mounted at 7' AFF."
24) In reference to Detail 2 on Drawing T601 provide typical and as noted "(8) 4" EMT Conduits With Threaded Insulated Throat Grounding Connectors Extend 3" into Room."
25) In reference to Drawings T607 through to T610 comply with 'Notes 1 through 6" typical and as noted.
26) In reference to Details 1, 2, 3, 4, 5, 7, 8, 10 and 13 on Drawing T700 all conduit and back boxes shall be furnished and installed, typical and as noted, by the BP 27.0 - Communications Subcontractor.
27) In reference to detail 9 on Drawing T700 "Standard 3-Port Floor Box" shall be furnished and installed by the BP 26.0 Electrical Subcontractor. All power wiring and conduit shall be furnished and installed by the BP 26.0-Elecrical. All communications wiring and conduit shall be furnished and installed by BP 27.0-Communcations.
28) In reference to detail 11 on Drawing T700 "Standard 6 Port Poke through Outlet" shall be furnished and installed by BP 26.0-Electrical. All power wiring and conduit shall be furnished and installed by the BP 26.0-Elecrical. All communications wiring and conduit shall be furnished and installed by BP 27.0-Communcations.
29) In reference to Detail 2 on Drawing T701 " the 4-11/16" x 4-11/16" x 3" back box" shall furnished and installed by BP 27.0-Communcations.
30) In reference to Detail 4 on Drawing T701 the "2" Conduit to Extend to Connection to Local Cable Tray Support System" shall be furnished and installed BP 27.-Communications.
31) In reference to Detail 4 on Drawing T701- provide typical and as noted "Extend Flexible Nylon Sleeving to Furniture Raceway System. Coordinate with Architectural Drawings."
32) In reference is Detail 5 on Drawing T701-the "conduit and back box" shall furnished and installed by BP 27.0-Communcations.

33) In reference is Detail 7 on Drawing T701-the "conduit and back box" shall furnished and installed by BP 27.0-Communcations.
34) In reference is Detail 9 on Drawing T701-the "conduit and back box" shall furnished and installed by BP 27.0-Communcations.
35) In reference is Detail 10 on Drawing T701-the "back box" shall furnished and installed by BP 27.0-Communcations.
36) In reference to Detail 1 on Drawing T702 provide typical and as noted "steel sleeves" at all wall, floor, celling and roof penetrations.
37) In reference to Detail 5 on Drawing T702 the "J-Hooks shall be installed" by BP 27.1 Security for the Security Integration Contractor."
38) In reference to Detail 1 on Drawing T703 "1" conduit, the 2" conduit and the old work boxes" required as pathways to support the Communications System shall be provided by BP 27.0-Communicatrions. In addition the Communications Subcontractor shall furnish and install the Chief PAC 516 back box. BP 26.0-Elecrical shall furnish and install the old work boxes, cabling and conduits if they are required to support the Electrical System.
39) In reference to Detail 2 on Drawing T703-"Typical Security Camera-Recessed Ceiling Mounted"-BP 27.0 shall furnish and install all work above the dotted line and BP 27.1-Security shall furnish and install all work below the dotted line.
40) Reference is made to Detail 1 and 2 on Drawing T704- the "Wire Mold Evolution 6AT Series Poke-Thru Device for Electrical, Telecommunications and A/V" shall be furnish and installed by BP 26.0-Electrical. BP 26.0 shall provide their conduit and conductors in order to support their work. BP 27.0 shall provide their conduit and cabling in order to support their work.
41) Reference is made to Detail 3 on Drawing T704-the "Wire Mold Evolution 8 Gang Series Floor Box For Electrical, Telecommunications, and A/V" shall be furnish and installed by BP 26.0-Electrical. BP 26.0 shall provide their conduit and conductors in order to support their work. BP 27.0 shall provide their conduit and cabling in order to support their work.
42) The General Trades, Electrical, Communications, Fire Alarm and Security Subcontractors should carefully review Drawing AV 000 especially "Audio Visual and Related Work Responsibly Schedule" to be sure that have included all of the labor, material and equipment included in their base bid as it relates to the assignment of the work in that matrix.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 27.1-Security

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Security** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Security** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 27.1 – Security:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Security** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

   Project Manuals:

   Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 01 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality

019113	Building Commissioning Requirements

DIVISION 3 – CONCRETE

033000	Cast-In-Place Concrete (As Applicable)

DIVISION 4 – MASONRY

042000	Unit Masonry (As Applicable)

DIVISION 5 – METALS

051200	Structural Steel (As Applicable)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

078100	Sprayed Fire Resistive Materials (As Applicable)
078123	Intumescent Fireproofing (As Applicable)
078413	Firestops and Smokeseals (As Applicable)
079200	Joint Sealers (As Applicable)

DIVISION 8 - OPENINGS

081000	Door Schedule (As Applicable)
081113	Steel Doors and Frames (As Applicable)
081119	Stainless Steel Doors and Frames (As Applicable)
081433	Stile and Rail Wood Doors (As Applicable)
083113	Access Doors (As Applicable)
084413	Curtain Walls, Storefronts and Entrances (CWSE) (As Applicable)
084510	Interior Glazed Walls (As Applicable)
087100	Finish Hardware (As Applicable)
088000	Glass and Glazing (As Applicable)
088813	Fire-Rated Glass and Framing System (As Applicable)
089000	Louvers and Vents (As Applicable)

DIVISION 9 – FINISHES

092713	Glass-Reinforced Gypsum Fabrications (As Applicable)
092900	Gypsum Drywall (As Applicable)
095113	Acoustic Panel Ceilings (As Applicable)
095133	Metal Ceilings (As Applicable)
099000	Painting and Finishing (As Applicable)

DIVISION 11 – EQUIPMENT

116100	High Performance Laboratory Fume Hoods (As Applicable)
116200	Laboratory Equipment (As Applicable)

DIVISION 13 - SPECIAL CONSTRUCTION

132100 Laboratory Environmental Rooms (As Applicable)

DIVISION 14 - CONVEYING EQUIPMENT

142100 Traction Elevators (As Applicable)

DIVISION 21 - FIRE SUPPRESSION (AS APPLICABLE)

DIVISION 22 – PLUMBING (AS APPLICABLE)

DIVISION 23 HEATING, VENTILATING AND AIR CONDITIONING (AS APPLICABLE)

DIVISION 26 – ELECTRICAL (AS APPLICABLE)

DIVISION 27 – COMMUNICATIONS TABLE OF CONTENTS (AS APPLICABLE

270510 TELECOMMUNICATIONS (As Applicable)

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

281000 Security Systems
283110 Fire Alarm System (As Applicable)

DIVISION 31 - EARTHWORK

31 09 13 Vibration and Sound Management

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014 REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Electronic Safety and Security Division; Core Boring; All Sleeves and Penetrations in Floors, Walls, Ceilings and Roofs for your scope of work that will be Firestopped, Through-Penetration Firestopped and Smoke Sealed by Bid Package BP 06.0; Line Voltage for all your equipment as noted in the Contract Documents; Commissioning; Basic Electrical Materials and Methods; Transformers; Conduit and Stubs for Security Systems; Mock-ups; Submittals, Product Data and Samples; Record Drawings; Identification Tags and Drawings; Operating and Maintenance Instructions; Testing and Commissioning;

The intent of the Scope of Work is for the **Security** bidder to furnish and install all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 27.1 – Security** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work.

5) Dumpsters, Clean-up& Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

9) Grounding:

The Security Subcontractor shall also furnish and Install all required grounding cable and grounding rods.

10) Equipment:

The Security Subcontractor shall provide line voltage to their own electrical equipment provided within this project.

11) Fire Alarm Systems:

The Fire Alarm Subcontractor shall provide any and all coordination that may be required with the Plumbing, HVAC Subcontractor, Fire Suppression, Electrical, Communications and Security Subcontractors as it is relative to the Fire Alarm System. This shall include but not be limited to Tie-ins, Equipment, Meetings, Drawings, Sketches, Schematics Tests, etc. as indicated on the Contract Documents.

It is the intent of the Contract Documents that the Fire Alarm System be complete in all respects. Failure to notify the Construction Manager that discrepancies exist within the Contract Documents shall be construed as acceptance of the information provided.

12) Conduit in Concrete Slabs:

The Security Subcontractor shall not place conduit in any concrete slab. All routing of conduit must be concealed and take place in ceiling space, cavity space and in walls.

13) Communication Service:

The Communications Subcontractor shall provide **ALL** Communication conduit services inside and outside the footprint of the building in accordance with that as indicated in the Contract Documents, unless noted otherwise. All required Excavation, Bedding, Encasement and Backfill shall be provided by the Site Subcontractor.

14) Electric Door Hardware:

The Electrical Subcontractor shall provide final connections for all electrified door hardware (locks, hold-opens, strikes, hinges, etc.) indicated on the Contract Documents. Electrified door hardware shall be furnished and installed by others with the exception of electromagnetic hold opens which shall be furnished and installed by the Electrical Subcontractor. The Electrical Subcontractor shall coordinate the locations of the door magnets and conduits supplying power to the magnets. All wiring to the magnets shall be concealed within the walls. Include power for all electrified hardware. Verify through submittals and in the field that all electrified hardware is rated for the supplied voltage and power and then make all connections.

15) Fire Protection Devices:

The Fire Suppression Subcontractor shall provide all fire alarm devices related to the sprinkler system (flow and tamper switches). The Electrical Subcontractor is responsible to wire these devices to the Fire Alarm System. The Fire Suppression Subcontractor will coordinate with the Electrical Subcontractor the exact number and locations of these devices.

16) Pricing of Additional Work

All additional work for change orders that are submitted by the Electrical Subcontractor must be calculated on the basis of the latest version of NECA Category 1 costs further reduced by 25%.

17) Firestopping and Smoke Sealing:

The Firestopping and Smoke Sealing of all of your floor, walls, ceiling, and roof penetrations will be performed by the General Trades Subcontractor. The Fire Alarm Subcontractor will install sleeves in the walls, floors, ceilings and roofs in advance of placing their conduit, pipe, ductwork through said sleeves. It shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the outer edge of said sleeve. In addition, it shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the inner edge of said sleeve up to and against the item(s) that are passing through the sleeve(s).

CLARIFICATIONS

a.) The Security Subcontractor shall include:

1) This subcontractor shall include building information modeling (BIM) coordination, shop drawing production, and all revisions and as-builts in the base bid using 3D BIM software compatible with the architect's software. No change orders will be accepted for work related to BIM. This subcontractor will provide all BIM data and files to the Construction Manager, Design Team, and other Subcontractors for coordination.
2) Commissioning Requirements – Include all work related to commissioning for this scope of work.
3) Furnish and install galvanized unistrut and fittings as required to independently support disconnects and receptacles.
4) Provide all penetrations and cores required to complete Subcontractor's Work. Include patching, acoustical caulking, and architectural caulking as required.
5) Include all sleeves for Communications work.
6) Include shop drawings and calculations prepared and stamped by a qualified professional engineer as it relates to seismic restraints.
7) Provide all access doors and panels required for this scope of work to be installed by others.
8) Include all wiring, conduit, junction boxes and components.
9) Include all conduit, cable trays, raceways, sleeves, fire sealing at sleeves, back boxes, boxes, pull cords, infrastructure, and power wiring for the security system shown. All work for the security system is to be reviewed and approved by the owner's security consultant and the Construction Manager prior to starting the work.

   Video for Training, Maintenance & Operation - For equipment which requires training, maintenance and/or operation by operational personnel, provide a professionally developed video DVD with audio for the use of maintenance training for the facility as indicated in the specifications. Each video will be accompanied by a written index which can be utilized to find any specific item of information by time or place on the video. The recordings shall include the equipment being maintained by qualified personnel, the required maintenance tools, and a step by step technique, both verbally and visually demonstrating how to maintain each piece of equipment in a hands on application. Provide 5 copies of the video to the Construction.
10) Referring to Drawing A3.02 provide all layout, conduits, wiring, control devices, and termination at the typical and as noted "Ptd. Stl. Door Activation Bollard."
11) Referring to Drawing A4.03 provide all layout, conduits, wiring, control devices, and terminations typical and as noted "St. Stl. Activation Button, Typ."
12) Referring to Drawing A4.03 provide all layout, conduits, wiring, control devices, and termination at the typical and as noted "Ptd. Stl. Door Activation Bollard."
13) Referring to Details and 3 on Drawing A4.04 provide typical and as noted "St. Stl. Door Activation Button, Typ."
14) Referring to Details 1 and 4 on Drawing A4.05 provide all layout, conduits, wiring, control devices, and termination at the typical and as noted "Ptd. Stl. Door Activation Bollard."
15) In reference to Drawing T106-provide typical and as noted "(2) 4" RGS Conduits to Telecommunication Room 521 Below. All Telecommunications and Security Cameras Outlets in Penthouse Shall be Hard Piped to a 24" x 24" x 12" NEMA 1 Hinged Junction Box Attached to Sleeves." The Telecommunications Subcontractor shall provide the 2-4" RGS Conduits, the 24" x 24" x 12" NEMA 1 Hinged Junction Box Attached to Sleeves.
16) In reference to Detail 2 on Drawing T601 provide typical and as noted "(2) 4" EMT Conduits With Threaded Insulated Throat Grounding Connectors Extend 3" into Room for Security."

17) In reference to Detail 5 on Drawing T702 the "J-Hooks shall be installed" by BP 27.1 Security for the Security Integration Contractor."
18) In reference to Detail 2 on Drawing T703-"Typical Security Camera-Recessed Ceiling Mounted"-BP 27.0 shall furnish and install all work above the dotted line and BP 27.1-Security shall furnish and install all work below the dotted line.
19) In reference to Drawing SEC-00-all 120 Volt Power that is required to support the operation and functionality of your scope of work shall be furnished and installed by the Security Subcontractor.
20) In reference to Drawing SEC-DET-all conduit and conductors depicted on this drawing that is required to support the operation and functionality of your scope of work shall be furnished and installed by the Security Subcontractor.
21) The General Trades, Electrical, Communications, Fire Alarm and Security Subcontractors should carefully review Drawing AV 000 especially "Audio Visual and Related Work Responsibly Schedule" to be sure that have included all of the labor, material and equipment included in their base bid as it relates to the assignment of the work in that matrix.

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

EXHIBIT "B"
SCOPE OF WORK

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 031.0

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Site Work** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Site Work** as required, shown, described and specified under this Bid Package, and all related scope and services, required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

1) **Bid Package 31.0 Site Work:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Site Work** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

Document 000968	Soil Nail Wall Movement/ Support of Excavation/ Shotcrete Facing

DIVISION 1 - GENERAL REQUIREMENTS

SECTION

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures

01-4000 Quality Requirements
01-5000 Temporary Facilities and Controls
01-5639 Temporary Tree and Plant Protection
01-5719 Temporary Environmental controls
01-6000 Product Requirements
01-6100 University Product Standard
01-7300 Execution
017419 Construction Demolition Waste Management
01-7700 Closeout Procedures
01-7823 Operation and Maintenance Data
01-7839 Project Record Documents
01-7900 Demonstration and Training
018113 VOC Limits for Adhesives, Sealants, Paints and Coatings
018119 Construction Indoor Air Quality
019113 Building Commissioning Requirements

DIVISION 2 - EXISTING CONDITIONS

024100 Site Demolition
029400 Structural Soil

DIVISION 3 - CONCRETE SECTION

033000 Cast-In-Place Concrete (Site Only)

DIVISION 7 - THERMAL AND MOISTURPROTECTION

SECTION
71326 Sheet Membrane Waterproofing
072100 Thermal Insulation (Foundation Only)
079200 Joint Sealers (As Applicable)

DIVISION 12 - FURNISHINGS

SECTION
129300 Site Furnishings

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DIVISION 26 – ELECTRICAL

220510 – Lighting Fixtures (As Applicable)

DIVISION 31 – EARTHWORK

310913 Vibration and Sound Monitoring (By Owner)
312000 Site Earthwork
312400 Building Earthwork
312333 Trenching and Backfilling

312500 Excavated Soil and Material Management
312513 Erosion and Sedimentation Controls

DIVISION 32 - EXTERIOR IMPROVEMENTS

321216 Asphalt Paving
321313 Concrete Paving
321443 Permeable Clay Brick Paver
321640 Granite Curbing
323119 Decorative Metal Fences and Gates
329001 Transplanting
329113 Soil Preparation
329119 Fine Grading
329200 Turf and Grasses
329300 Plants
329353 Landscape Maintenance

DIVISION 33 - UTILITIES

331000 Water Utilities
333000 Sanitary Sewerage Utilities
334000 Storm Drainage Utilities
334600 Foundation Drainage Systems

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

3) Description of Work:

a. The following requirements (if applicable) are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Layout; Temporary construction and associated work; Sedimentation and Erosion Control; Cast in Place Concrete; Footings and Foundations for Site Walls; Crane Pads; Utility Pads; Removal and Replacement of Unsuitable Material; Excavation and Backfilling; Demolition and Tree Removal; Rock Removal; Soil Retentions Systems; Radon Pits; Trenching and installation both outside and inside the Buildings (including but not limited to Gas, Water, Electrical, Grounding, Telephone/Data/Cable TV, Storm, Sewer, Fire Protection; Ductwork, Heating and Cooling); Concrete Thrust Blocks for All Utilities/Systems; Sheeting and Shoring; Dewatering for all trades; Earthwork; Anti-Tracking Pads; Site Water Distribution & Drainage; Foundation Drainage; Processed Aggregate Base; Soil & Materials Management; Site Storm Sewer Systems, (including Storm Water Discharge Permit); Site Sanitary Sewer System; Gas Utility System; Water Systems; all other Site Utilities as noted; Bituminous Concrete Pavement; Portland Cement Concrete Pavement & Curbs; Wheel Stops; Pavers; Temporary Protection and weatherproofing; Concrete Encasements; Concrete Formwork (For Site Concrete Work only); Concrete Reinforcement (For Site Concrete Work only); Structural Concrete (For Site Concrete Work only); Site/Traffic Control Signage; Flagpoles; Joint Sealers and Caulking (as it applies to your scope of work) and as described in the Specifications Divisions and Sections listed below.

4) Site Preparation:

a. This Subcontractor shall relocate as necessary and remove a minimum of **six (6) construction signs and bases** at surrounding campus streets stating "Construction Equipment and Trucks Entering Road". Additional signs may be required by the **University** and is included in the Subcontract price.
b. This Subcontractor shall relocate as necessary and eventually remove a minimum of **ten (10) temporary wayfinding signs and bases** as directed by the Construction Manager.

c. This Subcontractor shall include protection of site appurtenances, lawns and plantings adjacent to work areas. This Subcontractor shall be required to provide tree protection for existing trees to remain. All protection to be removed by this Subcontractor at the completion of the Work.

d. This Subcontractor shall provide and maintain and eventually remove all erosion control measures as required including, but not limited to, inlet protection at manholes, silt fence, hay bales, anti-tracking pads at the construction entrance and exit including all associated filter fabric and large stone, as detailed and approved in the aforementioned Logistics Plan. All truck tires are to be free of dirt, dry and clean before leaving the construction site.

e. This Subcontractor shall provide dust control (watering trucks) as required by the Construction Manager and/or by any state or local agency.
f. This Subcontractor shall protect all asphalt, concrete and existing site improvements. In the event asphalt, concrete or other site improvements intended to remain, this

Subcontractor shall repair and restore the asphalt, concrete and site improvements to its original condition.

g. This Subcontractor is responsible for maintenance and eventual removal of crushed stone temporary roads to adequately support loading and withstand exposure to heavy construction traffic. Obtain approval from the Construction Manager to locate temporary roads, storage and parking areas. Extend temporary roads in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration and supervisory personnel during later phases.

h. This Contractor shall be responsible for all costs to eventually remove the water line taps and any other work related to the new water services to the Office Trailers. The water authority will provide a list of qualified Contractors who can be used for the Taps, disconnects, and any other work that needs qualifications.

i. This Subcontractor shall remove and restore the following areas depicted on the Site Logistics Plan:

   i. Construction Parking and Material Storage Location

   ii. Construction Manager's Office Trailer

j. This Subcontractor shall remove conduit and wire for all Power and Telecom and Data for Construction Manager Trailer and Owner Trailer. Include removal of two (2) overhead poles and power backboard systems. Make final disconnections to trailers for power, telecom and data.

k. This Subcontractor shall provide all Site Preparation, Sediment Erosion Control Protection, and Clearing and Grubbing to remove all Trees, Tree Roots, Stumps, Shrubs and other existing Plant materials with the exception of those specifically noted in the Contract Documents to remain.

5) Site Demolition

A. Subcontractor shall furnish all labor, equipment, materials and refuse removal for all clearing, grubbing, site preparation and site demolition in accordance with contract documents. Subcontractor to provide dumpsters for its work. Subcontractor is responsible for cartage of all debris generated.

B. This Subcontractor shall include the demolition and removal of all items scheduled to be demolished in accordance with construction documents. Items, which are to be salvaged and stockpiled, shall be coordinated with the Construction Manager and Owner.

C. Include all site demolition outside the footprint of the building as depicted on the site demolition drawings to include but not limited to removal and proper disposal of pavements, existing utilities, concrete walks and pads, fencing, flag poles.

D. Contractor is responsible for demolition permits as required by Authorities having Jurisdiction.

E. This Contractor shall remove the existing Old Warehouse foundation that has been left in place. This is not shown on the contract documents but is visible by visiting the site.

6) Temporary Roads, Paving, Access

It is understood that all final paving (top course/finish course) can take place up to several months after the binder course is installed including binder installed by others and all associated cost to install a tack coat shall be included in this Contractor's bid proposal.

The Site Contractor shall construct and maintain temporary roads and paving that will adequately support loading and withstand exposure to traffic and equipment during the construction period. Locate temporary roads, storage, staging and parking areas where the same permanent facilities will be located whenever possible. Extend temporary roads in and around the construction area as necessary to accommodate concrete trucks, concrete pumps, structural steel deliveries, and all other deliveries, storage of materials, and access for equipment and for administration and supervisory personnel. This Contractor must maintain a compacted surface that slightly slopes away from building around the entire perimeter of the building at a minimum of 10 feet wide suitable for staging of the exterior of the building. Provide and maintain suitable pumps and drains to keep the excavated areas of the building free from water and sufficiently dry at all times. This Contractor shall provide **five (5) separate compacted (90% compaction) dry pads suitable for the cranes that will be used from outside of building foot print as located and as prescribed by the CM. These five (5) separate compacted pads shall be a minimum of thirty-five feet by thirty five feet.**

This Contractor shall be responsible to professionally sweep clean the campus roads around the project site on a daily basis as result of construction traffic. Additionally, this Contractor shall professionally sweep all pavement, sidewalks, and entry steps as directed by the Construction Manager from the time this Contractor mobilizes until the issuance of the Certificate of occupancy.

6) Soil Erosion and Sediment Control

This Contractor is responsible for the furnishing, maintenance and removal of Erosion and Sedimentation Controls including anti-tracking pads as shown on the Contract Documents. This Contractor will also be responsible to maintain the anti tracking pads as shown on the Contract Documents. Please Note, anti tracking pads are shown for count only and it is possible that these pads could be located in others areas as directed by the Construction Manager.

This Contractor is responsible for cleaning and /or washing down the tires of his or her construction vehicles and equipment including but not limited to visitors and vendors exiting the site at the anti-tracking aprons located at each construction entrance to avoid tracking mud, dust, and etc. from the site and onto public streets.

Sedimentation and erosion control shall be properly installed and maintained. The silt fence specified utilizes an 8' post spacing. The posts are to be hardwood posts with the fabric prefabricated on the posts from the factory. The fabric specified does exceed the specifications of some other manufacturers in regards to strength. The control includes two rows of fabric as a means of a second defense mechanism.

A breach in the erosion control systems shall be deemed a lack of oversight from this Contractor to properly ensure the systems are installed correctly and are being inspected and maintained regularly. In the event of a breach, this Contractor shall immediately repair and replace the breach and repair and restore the neighboring property.

It is essential that the site work be performed in a staged progression to minimize the potential for soil loss through erosion as stated in the Contract Documents. The Contract Documents are not intended to show every erosion control measure necessary to coordinate with the Project Schedule (this is identified in the Erosion Control Narrative Specification). Erosion control logs shall be required by this Contractor that clearly and accurately identifies the status of the erosion control measures in place, this item shall be on the agenda of every construction meeting.

Furthermore, this Contractor will be required to submit on a weekly basis, formally sign and follow requirements of the Water Pollution Control Plan for the project.

7) Survey / Layout:

The Site Work Trade Contractor shall provide **column location control lines and 10 benchmark grades.** This information shall be provided by a Connecticut Licensed Land Surveyor who shall install permanent offset points and bench marks that will allow for the reproduction of lines and grades by other trades.

This Contractor shall provide all other layout required to perform and complete his or her Work. The cost to replace or repair lost or damage control points shall be the charged to the offending Contractor.

Contractor shall furnish at the completion of its work an A-2 as-built survey for all work performed under this bid package.

8) Temporary Works:

The Site Work Contractor shall provide:

l. The Site Work Contractor shall provide the Temporary walks, parking, and drives and their associated work.

m. This Subcontractor shall include protection of site appurtenances, lawns and plantings adjacent to work areas. The Site Contractor shall be required to provide tree protection for existing trees to remain. The Site Contractor shall be required to provide reparations of site appurtenances, lawns and plantings adjacent to work areas.

n. This Subcontractor shall include protection of utilities to remain within the work areas as indicated in the Contract Documents.

o. This Contractor shall also provide and maintain suitable pumps, drains, and etc. to keep the site and building excavations free from water and sufficiently dry at all times.

p. This Subcontractor shall remove all Temporary Works below grade, including but not limited to, temporary power conduits, temporary water piping, temporary gas piping and other temporary systems not indicated to remain.

q. This Subcontractor shall provide any and all temporary ramps over foundations for access by any trade.

9) Tower Crane Pad:

This Contractor shall excavate a hole for the Tower Crane pad that is aproximatley 25' x 25' x 5' deep. Once the Tower Crane is removed, this Contractor shall remove the concrete pad poured by others.

10) Under-slab Utilities within the Structure:

The Site Contractor shall include all trenching, bedding and backfilling within the building footprint for installation of any and all MEP under-slab work depicted on the Contract Documents and Reference Documents. Soil compaction shall be restored and tested as noted on the Contract Documents. It shall be noted that the contract documents are diagrammatic only and trenching required for unground utilities within the building footprint may be much larger then shown. This Contractor shall reference all MEP documents for this requirement.

11) Removal of Mock-Ups:

The Site Contractor shall remove and dispose in the General Trades dumpster all Mock-ups (any trade) constructed in and around the Site when directed by the Construction Manager.

12) Site Utilities:

Site Contractor shall provide all Site Utilities as shown on the Contract Documents, including but not limited to:

a. Trenching, Bedding, Pipe, Fittings, Valves, Concrete Anchors, Thrust Blocks, Concrete Encasements, Backfilling, and etc. as required to complete all systems as noted such as, Gas, Storm, Sanitary, Water, Fire Protection, Under Drains, CATV, Fiber, Electrical, Telecom, Data and Pole Mounted Security Cameras.

b. Site Water Distribution & Drainage, Site Storm Sewer Systems (including Storm Water Discharge Permit), Site Sanitary Sewer System; Gas Utility System; Fire Protection Service; Water Systems; all other Site Utilities as noted;

c. This Contractor shall provide the above services from the point of origin into the building and coordinate same with the appropriate utility.

d. This Subcontractor shall provide and install all thrust concrete blocking associated with all systems including fire protection lines and labor and material for concrete encased ductbanks.

e. This Contractor will be responsible for coordination with the appropriate utility and provide and pay for all Permit, Fees, etc. and the coordination of inspections within the Contractor's Scope of Work as required by the service provider and/or the authority having jurisdiction.

f. It is the intent of this document that the Site Contractor shall provide all utilities noted as complete in all respects, including but not limited to, providing Utility Pads as shown or required.

g. The Site Contractor shall include in the Scope of Work any costs associated with shut downs that may be required to complete the Work.

h. The Site Contractor shall be responsible for cleaning, flushing and disinfecting all water service piping prior to any Plumber or Fire Protection Trade Contractor's attaching to the new services. The Site Contractor shall employ a licensed Plumbing Contractor for any water service piping that is required to have a licensed contractor to install this above mentioned work by code. Site Subcontractor shall ensure everyone on site has appropriate licenses in regards to this subcontract.

i. The Site Work Contractor shall furnish, install and coordinate with the Construction Manager and authority having jurisdiction when performing Domestic and Fire Protection water systems. It shall be the responsibility of the Site Work Contractor to make certain that the Water Distribution Services (Fire and Domestic) is complete in all respects at no additional cost to the Project. This includes but not limited to all tapping fees.

j. The Site Contractor shall be responsible for all costs and coordination of water line taps and any other work related to the new water services. The water authority will provide a list of qualified Contractors who can be used for the Taps, disconnects, and any other work that needs qualifications.

k. The Site Contractor shall provide excavation, Bedding and backfill for the new gas service to the new gas meter.

l. The Site Contractor shall be responsible for connections to each utility service including the Gas Service, and coordinate work with other trades. Excavation, Bedding and backfill for all other trades shall be the responsibility of this Site Contractor. Inserts, sleeves and the like required to pass through the foundation and/or slabs shall be provided by the Contractor requiring the opening.

m. The Site Contractor shall include in the Scope of Work any costs associated with shut downs to complete his or her work for the entire length of the project.

n. The Site Work Contractor is responsible for all excavation, Bedding and backfill required within the new building and on the entire site for, all Trade Contractors. Each Trade Contractors shall provide line and grade for Site Contractor. It will be the responsibility of the Site Contractor to obtain the proper depth and location required for each excavation.

o. This Contractor is to furnish all labor, materials, equipment and incidentals necessary for the demolition and disconnection and lawful disposal of existing underground and above ground utilities and appurtenances servicing structures to be demolished as indicated on drawings and as necessary to perform work in the Scope of Work, as specified, and as directed by Engineer. This Contractor is to contact and coordinate with all utilities prior to the start of Work. Subcontractor to verify all existing utilities that are to remain that

are in Subcontractor's area of work. Subcontractor is required to employ, at their expense, professional underground utility locating services for their onsite work. Any utility damaged due to Subcontractor's negligence will be fixed appropriately and costs passed on to Subcontractor. Stake, flag, and protect all existing utilities to remain.

13) Site Security:

The Site Contractor shall be responsible for security of the site with temporary gates, chains, locks, etc. Any associated cost shall be included in their base bid (distribution of keys free of charge as directed by the Construction Manager. Provide locks and chains on gates in fence as indicated on the Site Logistics Plan and as directed by the Construction Manager.

The Site Contractor shall be responsible on a ***daily basis*** to secure all access points to the site at the direction of the Construction Manager.

14) Office Trailer Locations:

This Subcontractor shall remove conduit and wire for all required Power and Telecom/Data for **Fusco** Site Offices.

This Subcontractor shall remove wastewater sewer connection for **Fusco** Site Offices.

This Subcontractor shall remove water service connection for **Fusco** Site Offices.

15) Construction Parking and Material Storage Location:

There is no Contractor parking on site and limited material storage. This Contractor shall include in his/her price offsite parking and storage of bulk material off site should you deem necessary

16) Building and Site Excavation, Bedding, Backfill:

The Site Contractor shall provide Excavation, Bedding, Backfill, waterproofing, and etc. where indicated for all structures including: Site Retaining Walls, Structures, Site Concrete and Sidewalks and Utilities, The Site Contractor shall provide Bases for all Site Lighting.

This Contractor shall be responsible for the Removal and required Replacement of Unsuitable Material as described in the Appendices and Specifications. Quantities noted are estimated and for reference only. It is the responsibility of this Contractor to hire a Soil Management Company for proper disposal of all categories of soil.

This Contractor shall install the Soil Retention System as indicated in Volume 00 specification No. 00968.

This Contractor shall coordinate with the Fusco Superintendent and Concrete company on the location of a ramp exiting the foundation for removal of material and access to inside the foundation.

This Contractor shall provide the excavation and installation and furnishing of the exterior Light Pole bases. Anchor bolts will be provided by the Electrical Contractor.

17) Underground Ducts and Utility Structures:

The Site Work Contractor shall provide Excavation, Dewatering, Bedding and Backfill, and installation of all Underground Conduits, Ducts, Grounding System and all other Utilities. Additionally the Site Contractor shall furnish and install Manholes, Handholds, Power Boxes Underground Structures and Pads, Transformer Vault/Pad, Concrete Anchors & Concrete Encasements, including Reinforcing Steel and Identification for same for all Underground Conduits, Ducts and all other Utilities.

The Electrical Contractor shall provide all Conduits, Ducts, Electrical Wire Accessories, connections and other materials as required to complete the Underground Conduits, Cables, Ducts, Grounding systems and Utilities installation per the Electrical Divisions.

This Contractor shall include all dewatering including all excavations, trenches, pits, open foundations, footings, etc., for the duration of the project.

18) Rigid Foundation Insulation and Waterproofing:

All Extruded-Polystyrene Insulation and Waterproofing outside the Foundation walls and footings, blind side foundations, Slab On Grade, tunnels and where indicated on the Contract Documents, shall be furnished and installed by the Site Contractor. The elevator pit waterproofing will be furnished and installed by the Concrete Contractor.

19) Sheeting, Shoring, Underpinning and Open Hole Protection:

In addition to that required by the Contract Documents, the Site Contractor is responsible to provide all Sheeting, Shoring, Bracing, and Underpinning as required to complete his or her Scope of Work and the work of other Trades, whether shown or not on the Contract Documents.

20) Site Concrete:

The Site Contractor shall provide all Concrete Formwork (for Site Concrete Work only), Concrete Reinforcement (for Site Concrete Work only) and Structural Concrete (for Site Concrete Work only) to complete all Site Concrete as indicated on the Contract Documents.

21) Site Signage:

The Site Contractor shall provide all Site Signage, Traffic Signage, Parking Signage, and associated Posts and/or Concrete Bases as noted in the Contract Documents.

22) Transformer & Lightning Protection Grounding Loop:

The Site Contractor shall provide Trenching, Bedding and Backfilling for the installation of the Ground Loop for the Transformer and the Lighting Protection System as indicated in the drawings.

23) Winter Protection, Dewatering and Runoff Control:

a. The Site Contractor shall provide removal of snow, ice and mud from Construction Roads, Permanent Driveways & Roads, City Sidewalks, Construction Trailer Office

Locations, Office Trailer stairs and access and Construction Parking and Material Storage Areas as may be required for accessibility, safety, protection and prosecution of all trade work. These operations shall be performed for the duration of the Project. In addition to removing the snow, this Contractor shall spread ice melt as needed or at the Construction Manager's discretion. This Contractor will be responsible to sweep up all sand used in the above process. Site Subcontractor also to provide all removal of snow, ice and mud to complete its own work.

b. This Subcontractor shall include and maintain all rainwater runoff control and shall sign and agree to the Storm Water Pollution Control Plan.

c. This Subcontractor shall include ALL dewatering and surface water control for all open excavations, foundations, footings, access and haul roads, and staging areas as required for the duration of the Project. All erosion controls shall be inspected weekly and before every anticipated rain event and after every rain event.

d. This Subcontractor shall provide and maintain all winter protection up to the point where the area is taken over by the Concrete Foundation Subcontractor. This Subcontractor shall include preparation, protecting and/or pre-heating/thawing (including but not limited to blankets, ground heaters, etc.) required to complete its Work and will provide the Concrete Subcontractor's with "non-frozen" conditions. This Contractor shall remove any water, frozen soil, snow, etc. before backfilling foundations once forms are stripped. For excavations that receive concrete, the Concrete Contractor will take over the dewatering requirements once formally turned over and accepted from the Site Contractor.

24) Dust Control:

The Site Contractor shall provide all Dust Control for the duration of the Project. This Contractor will provide dust control (watering trucks) as required or as requested by the Construction Manager and/or by any state or local agency.

This Contractor is responsible for all pavement and field markings/painting, curb and wheel stops, speed bumps, undulations, and sealers. Include the complete removal of existing striping in lieu of just painting over existing with black paint.

25) Dumpsters, Clean-up, Wash-Out & Waste Removal:

a. The Site Work Contractor shall responsible to compact down ALL TRADES dumpsters w/ a machine equivalent to or greater than a John Deere 410 on an as needed basis per the Construction Manager.

b. The Site Work Contractor shall be responsible for washing out concrete trucks, pumping trucks, pipe lines, etc., off-site (take back to plant) or at a designated place on site which can be cleaned and disposed of at his or her expense. Additionally, the cost of cleaning of all concrete, mortar, and grout splatter from all surfaces immediately after placement of these materials, and repairing any resulting damage to the satisfaction of the Construction Manager shall be included in this Contractor's bid proposal. Also include a location for the Concrete Subcontractor to wash out its trucks on the project site. NO WASHING OF

TOOLS, EQUIPMENT, ETC. OR ANY MATERIALS INTO STORM OR SANITARY SYSTEMS WILL BE PERMITTED.

c. This Contractor will provide, maintain, and remove at project completion a washout area for his or hers and the Concrete/Mason Contractor's concrete trucks, pump trucks, pipe lines, etc., delivering to the site. Including periodically relocating the washout area as dictated by the Construction Manager and/or Engineer.

26) Traffic Control

This Contractor shall provide traffic control and a flagman to direct incoming and outgoing trucks and to protect pedestrian traffic when entering from North Eagleville Road.

27) Topsoil

This Subcontractor shall respread all existing topsoil as indicated on the Contract Documents. Topsoil cannot be stockpiles on site.

CLARIFICATIONS

1. The Enabling Contractor will install bituminous binder course up to the North wall of the CUP building. This contractor shall saw cut, remover binder course and install new proposed concrete sidewalk as indicated including bollards as shown.

EXCLUSIONS:

1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price Allowances as listed below. Allowances shall include all necessary material, cost for delivery, installation, machinery, insurance, and applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

EXHIBIT "B"
Scope of Work

New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No. 31.2- Landscaping

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **Landscaping** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Landscaping** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word "provide" if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

1) **BID PACKAGE No. 31.2 – Landscaping:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **Landscaping** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERINGBUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 01 - GENERAL REQUIREMENTS

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls

01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 31 – EARTHWORK

310913	Vibration and Sound Monitoring
312000	Site Earthwork (As Applicable)
312400	Building Earthwork (As Applicable)
312333	Trenching and Backfilling (As Applicable)
312500	Excavated Soil and Material Management (As Applicable)
312513	Erosion and Sedimentation Controls (As Applicable)

DIVISION 32 - EXTERIOR IMPROVEMENTS

321443	**Permeable Clay Brick Paver**
323119	Decorative Metal Fences and Gates (As Applicable)
329001	**Transplanting**
329113	**Soil Preparation**
329119	**Fine Grading**
329200	**Turf and Grasses**
329300	**Plants**
329353	**Landscape Maintenance**

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Layout; Sedimentation and Erosion Control; Landscaping; Planting Mix, Trees, Shrubs and Ground Cover; and as described in the Specifications Divisions and Sections listed below.

The intent of the Scope of Work is for the **Landscaping** bidder to furnish and install all materials and equipment noted on the Contract Documents.

Any references to "Construction Manager" or "Contractor" or "General Contractor" in the Contract Documents shall be interpreted as "this Subcontractor" or "the **Phase 2 Bid Package No. 31.2 – Landsaping** Subcontractor" and all referenced Work therefore is assigned to this Subcontractor.

3) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

a. Subcontractor includes all overtime required as a result of this Subcontractor's failure to meet the project schedule.
b. Subcontractor includes all mobilizations necessary to complete Work as scheduled.
c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.
d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
e. Subcontractor acknowledges that minor adjustments to the schedule may be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.

4) Layout and Survey: This Subcontractor shall provide all layout and surveys for its own Work. The cost to replace or repair lost or damage control points shall be the charged to the offending Subcontractor.

5) Dumpsters, Clean-up & Waste Removal:

a. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.

b. Any trucks leaving site with loads must be covered by this Subcontractor.

c. ALL DUMPSTERS are to be provided by the Construction Manager.

6) Construction Parking and Material Storage Location:

There is no Contractor Parking on site and limited space for material storage. This Contractor shall include in his/her Bid price all costs for offsite parking and the costs for storage of bulk material off site should you deem it necessary.

7) Environmental Goals – CTHPBS

Implement practices and procedures to meet the project's environmental goals, including the standards presented in the CT Building Standard Guidelines Compliance Manual for High Performance Buildings – September 2011. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of Low-emitting materials; use of FSC certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section and other Sections of the contract documents, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated standards presented in the Connecticut State Guidelines Compliance Manual for High Performance Buildings.

8) Vibration and Sound Management

It is the requirement of this Contractor to adhere to the Vibration and Sound management practices as described in Specification Section 31 09 13 and to be aware of the location and proximity of the underground Vivarium. Traffic MUST be diverted around and at no time can any traffic drive directly over its location. Cost's associated with said monitoring will be paid by the Owner.

8) Soil Erosion and Sediment Control

This Subcontractor is responsible for cleaning and /or washing down the tires of his or her construction vehicles and equipment at each construction entrance to avoid tracking mud, dust, and etc. from the site and onto public streets.

It is essential that the work be performed in a staged progression to minimize the potential for soil loss through erosion as stated in the Contract Documents. The Contract Documents are not intended to show every erosion control measure necessary to coordinate with the Project Schedule (this is identified in the Erosion Control Narrative Specification).

9) Landscaping

This Subcontractor shall provide all Planting Mix, Trees, Shrubs and Ground Cover and all other Landscaping as indicated on the Contract Documents. This Contractor shall be responsible for watering, cutting and maintaining all landscape plantings until Project is complete and as specified.

This Contractor will provide dust control (watering trucks) as required by the General Contractor and/or by any state or local agency.

CLARIFICATIONS

1. Include all landscaping maintenance for a period of 2 years from substantial completion and as indicated in the construction documents. Include all plant replacement, watering, pruning, weed control, pest and disease control, fertilizing and mulching during the maintenance period. The maintenance and guarantee period will be automatically extended if the Subcontractor does not request a final inspection and receive final acceptance as outlined in the specification.
2. Include protection of landscaping during construction and the maintenance period
3. Subcontractor shall provide and install all trees, shrubs, ground cover and other vegetation.
4. Subcontractor shall include all tree staking, vine ties, guying, root barriers and mulch as required. All mulch must be submitted for approval with a representative sample and no substitutions are permitted. All non-hardscape areas that are not defined shall receive mulch.
5. Include all watering of trees and shrubs, groundcover, and other plants. Include hand watering as required.
6. Subcontractor shall furnish and install all planting soil amendments, fertilizers, manure, peat moss, topsoil, water management polymers, tree wound dressings, pruning of new plants, herbicides, anti-desiccants and shall complete all planting soil preparation. Include rototilling.
7. All adjacent areas shall be cleaned of soil, mulch, and other items included in this scope.

8. In reference to Drawing L2.00A provide typical and as noted “Repair existing lawn to match proposed for a clean smooth transition.”
9. In reference to Drawing L2.00A provide typical and as noted “mineral mulch” and as further defined in detail 10 on Drawing L3.02A.
10. In reference to Drawing L2.00A provide typical and as noted “crushed stone path” and as further defined in detail 3 on Drawing L3.02A.
11. In reference to Drawing L2.00A comply with “Layout Notes” #1, #2, #3, #4, #9 and #11 as applicable.
12. In reference to Drawing L2.00A provide typical and as noted “Planting Bed-See Site Planting Plan.”
13. In reference to Drawing L2.00A provide typical and as noted “proposed litter receptacles.”
14. In reference to Drawing L2.00A provide typical and as noted “gravel path-see specifications.”
15. In reference to Drawing L2.00A provide typical and as noted “Type 1 Permeable Paver-See Specifications.”
16. In reference to Drawing L2.00A provide typical and as noted “Type 2 Permeable Paver-See Specifications.”
17. In reference to Drawing L2.00A provide typical and as “Tree Grate at Permeable Paver.”
18. In reference to Drawing L3.00A provide typical and as noted “Turf Grass Planting Profile” and as further defined in detail 1 on Drawing L3.02A.
19. In reference to Drawing L3.00A provide typical and as noted “Shrub Planting Profile” as further defined in detail 3 on Drawing L3.02A.
20. In reference to Drawing L3.00A provide typical and as noted “Tree Planting Profile” and as noted in detail 4 on Drawing L3.02A.
21. In reference to Drawing L3.00A provide “Perennial and Groundcover” typical and as noted and as further defined in detail 5 on Drawing L3.02A.
22. In reference to Drawing L3.00A provide “CU-Structural Soil” and as further defined in Detail 5 on Drawing L4.00A. (Installed by Site Contractor)
23. In reference to Drawing L3.01A provide typical and as noted “steel edging at mineral mulch” and as further defined in detail 9 and 10 on Drawing L3.02A.
24. In reference to Drawing L3.01A comply with all of the “Planting Notes.”
25. Comply with all “Planting Notes” on Drawing A3.01A.
26. Provide all Plant Material depicted on typical and as noted on Drawing A3.01A.
27. In reference to Drawing L3.02 typical and as noted provide “scarify soil-breakup and loosen existing soil.”
28. In reference to Drawing L3.02 typical and as noted provide “Imported Top-See Specs. Distribute in Qtys. necessary to meet finish grade after settling and light rolling.”
29. In reference to Drawing L3.02 provide typical and as noted “Amended Soil, See Specs. 1/3 imported topsoil and 2/3 existing soil.”
30. In reference to Detail 6 on Drawing L3.02 provide “Tress Staples” as required.
31. In reference to Detail 7 on Drawing L3.02 provide “Staking and Guying at Transplanted Trees.”

32. In reference to Detail 8 on Drawing L3.02 provide and maintain during the entire construction process "Tree Protection."
33. In reference to Detail 9 on Drawing L3.02 provide typical and as noted "Steel Edging."
34. In reference to Detail 10 on Drawing L3.02 provide typical and as noted "Mineral Mulch."
35. In reference to Detail 2 on Drawing L4.04A provide typical and as noted "Crushed Stone Path" including, but not limited to "compacted subgrade, 6" bank run gravel, 3/8"-1/2" crushed stone-See Specs."
36. In reference to Detail 3 on Drawing L4.00A provide typical and as noted "Permeable Paver" including, but not limited to "Compacted Backfill or undisturbed subgrade, scarified soil, ASTM No. 2 Subbase, Perforated Underdrain wrapped in filter fabric, Pitched to drain-See Civil, ASTM No. 57 Open Graded Base, Bedding Course Typical-ASTM No. 9 Stone, 4" x 8" x 2-1/4" Permeable Brick Paver-See Specs., Fill Joints with ASTM No. 9 Aggregate, Color to March Paver."
37. In reference to Detail 12 on Drawing L4.00A provide typical and as noted "72" Tree Grate With Permeable Pavers."
38. In reference to Detail 12 on Drawing L4.00A provide typical and as noted, "8" x 8" Concrete footing, Permeable Pavers-See specs, Filter Fabric-See Specs., Ironsmith Item #6220 72" square Paver Grate Installed with Manufacturers Recommendations."
39. In reference to the "Plan" detail that is above Detail 12 on Drawing L4.00A provide typical and as noted "1/2" square bar stock, trim as necessary, steel frame below, #3 grating, Removable Plate with 12" Tree Opening."
40. Comply with the "Typical Tree Planting Profile as per Detail 4 on Drawing L3.02A."

EXCLUSIONS

1) Sale and Use Taxes.

UNIT PRICES

1) Provide Unit Prices as requested on Bid Form.

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bid Form "A"
Proposal Form

University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2

Bid Package No. _____

Bid Submitted by:

_____
Company Name

_____
Street Address

_____
City, State & Zip Code

Contact

(_____) . (_____) (_____) . (_____)
Telephone No *Fax No.*

The undersigned, having familiarized themselves with the existing conditions of the, but is not limited to, the project area affecting the cost of the work, and with the Contract Documents (which includes Invitation to Bid, Bid Form, Bid Bond, Instructions to Bidders, Non-Collusion Affidavit, Addenda, General Conditions, Project Conditions, Technical Specifications, Drawings as listed in the Schedule of Drawings, and form of Surety Bond) hereby proposes to furnish all machinery, tools, appurtenances, equipment, and services, including utility and transportation services required to construct and complete the work, all in accordance with the above listed Documents, and submits herewith in conformity with the project manual and subsequent addenda, the following bid:

The total amount of the Bid as computed by the undersigned Bidder is (in words):

_____

_____

Dollars and Cents

(and figures) $_____

The Fusco Corporation reserves the right to make the award on the basis of the above Base Bid.

In submitting this Bid, the Bidder understands that the Fusco Corporation reserves the right to accept or reject all or any part of this bid, to reject any and all bids, or to waive any informalities, irregularities, or technical defect in submitted bids. The Bidder also understands that the Fusco Corporation reserves the right to accept any, all, or none of the Alternates, which may be listed above, and may accept Alternates in any order at Fusco Corporation's sole discretion. The Bidder agrees to perform the work of each accepted Alternate for the sum quoted above for each, and to include such accepted Alternates in the Contract for Construction.

If written notice of the acceptance of this Bid and any or all of the Alternates is mailed, telegraphed, or otherwise delivered to the undersigned within ninety (90) days after the opening of the Bid, or at any time thereafter before the Bid is withdrawn, the undersigned agrees to sign the Subcontract, and to furnish the required bonds within ten (10) days after the Subcontract is presented to them for signature.

Bid Bond:

The undersigned herewith submits security equal to ten percent (10%) of the Base Bid, the sum of: _____dollars and no cents

$_____

This security shall be the sole and exclusive property of the Fusco Corporation as liquidated damages to the University, if the undersigned fails to execute a Contract in conformity with the accompanying forms, after due date notification therefore in the Contract Documents.

Bidders shall furnish with their bids (in triplicate) the following:

1. Bid Forms A through F (document 000950)
2. Bid Bond (document A310)
3. Certification as to Corporate Principal (document 000312)
4. Form of Surety (document 000315)
5. Department of Administrative Services (DAS) "Contractor Prequalification Certificate and Update Statement (document 000412A) Subcontractor needs to acquire this document from DAS
6. Non-Collusion Affidavit of Prime Bidder (document 000320)
7. Notification to Bidders (document 000330)
8. Contract Compliance Data Form (document 000340)
9. Contractor's Minority Business Enterprises (document 000350-3)
10. Notification to Bidders – CHRO (document 000350-4)
11. Certification of Bidder Regarding Equal Employment Opportunity (document 000360)
12. Contractors Wage Certification Form (document 000847)
13. University of Connecticut Contractor EHS Manual – Contractor Receipt Acknowledgement Form

The information required under (1) to (13), inclusive, shall be furnished on the forms included in the Bid Documents, IN TRIPLICATE, and duly executed.

All successful Bidders will be required to execute the Standard Form of Subcontract and the Subcontract Agreement provided in the Bid Documents without alteration or exception. The Subcontractor shall execute and return to The Fusco Corporation the executed Standard Form of Subcontract, Subcontract Agreement, along with all required Bonds and insurance certificates within ten (10) days of receipt of the prescribed forms for signature.

The failure of the successful Bidder to execute the Standard Form of Subcontract or the Subcontract Agreement provided in the Bid Documents or to supply the required Bonds or insurance certificates within ten (10) days after the prescribed forms are presented for signature shall constitute a default and the Bidder's Bid Security shall be forfeited to the Fusco Corporation as liquidated damages.

Addenda:

The Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Date received	Signature

Bidder's Official Name and Address:

_____
Company Name

_____
Street Address

_____
City, State & Zip Code

Contact Name:

_____ _____
Signature Title

_____
Date

State of: County of:
Subscribed and sworn to before me this th day of 2014
Notary Public:
My Commission exprires:

Bid Form "B"

Labor Rates
University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2

Labor Rates

The following Labor Rates shall apply when Changes in your Scope Work are requested by the Owner/Construction Manager per the General Conditions of the Contract for Construction, where Unit Prices are not applicable and a Lump Sum Cost proposal cannot be agreed upon. The labor rate shall only include those categories as listed below plus the allowable percentage for Overhead and Profit. Trade-related equipment, hand tools and power tools, normally supplied with the labor, shall not be included in the Labor Rate. The Overhead and Profit is defined as all other incidental costs, Main Office Expenses, Main/Field Office Staffing, Project Management, Supervision, Insurances, Travel Expenses, etc. Under no circumstances will Subcontractor be entitled to any OH&P in excess of that set forth in the Principal Contract Documents, Article 7.

Item	Other	Laborer	Oper. Engineer	Carp.	Mason	Iron Worker	Plumb.	Elect.
Base Rate								
Benefits								
F.I.C.A.								
St. Umemp.								
Fed. Umemp.								
Gen. Liab.								
Wrkrs.Comp.								
Subtotal								

Bid Form "C"
Alternates

University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2

ALTERNATE BIDS

All Bidders shall include within his or her Bid any additional costs associated with the Alternates as listed below and in the Specifications. Should an Alternate not apply to your Scope of Work, indicate so on the Bid Form provided.

The Alternate Bid prices shall be listed on Bid Form "C" and shall include all necessary labor, materials; equipment, installation; cost for delivery; machinery; insurance; applicable taxes; supervision, overhead; and profit. Should an Alternate be accepted, the cost or credit as noted on the above form shall be added or deducted from the Contract Value via Change Order.

The Undersigned further proposes and agrees that should the following alternate or alternates be accepted and included in this Contract, the amount of base bid, as heretofore stated, shall be increased by stated alternate amount. All materials and workmanship shall be in strict accordance with original specifications and drawings.

The Contract requirements shall be an integral part of the alternates. The base bid shall include all work shown on the drawings and specifications irrespective of any items included in the alternative. The alternate is subject to acceptance or rejection by the Owner without affecting the price of the base bid. A Contract may be awarded on any base bid-alternate combination that is in the best interest of the Owner. Contractors shall perform all work required to complete execution of the accepted alternate. The amount of the alternate price shall include the cost of any and all modifications made necessary by the Owner's acceptance and all Contractor's expenses including overhead and profit. The bidding contractor shall state the amount of the alternate listed below. No response to the alternates will be interpreted as no change in cost.

Alternate No. 1:

Base Bid: Granite at base of the Building

Alternate Bid: Cast Stone at base of the Building

DEDUCT: _____

Alternate No. 2:

Base Bid: Wood base at lab "ghost corridor" wall.

Alternate Bid: Rubber base at lab "ghost corridor" wall.

DEDUCT: _____

Alternate No. 3:

Base Bid: Curtain Wall; Full performance mockup as specified in Specification 08441311

Alternate Bid: Delete performance mockup requirement.

DEDUCT: _____

Alternate No. 4:

Base Bid: Environmental Rooms: Provide 6 Laboratory Environmental Rooms (1 on second floor, 2 on third floor, 2 on fourth floor and 1 on fifth floor)

Alternate Environmental Rooms: Provide 3 Laboratory Environmental Rooms (1 on second floor, 2 on third floor). Delete the 3 Laboratory Environmental Rooms on floors four and five. Provide floor recess and cap utilities at the ceiling.

DEDUCT: _____

Alternate No. 5:

Base Bid: Thinset Epoxy Terrazzo: Provide thinset epoxy terrazzo at first floor lobby (1,200 sf) and elevator lobbies on floors two through five (6,050 sf)

Alternate Bid: "Option 1: Provide 1/8"" thick 2' x 2' Rubber/Cork flooring at elevator lobbies on floors two through five in lieu of thinset epoxy terrazzo (6,050 sf). Product to be either:

DEDUCT: _____

Alternate Bid: "Option 2: Provide seamless poured resin flooring at elevator lobbies on floors two through five in lieu of thinset epoxy terrazzo (6,050 sf). Product to be either: Smooth Extreme high gloss mono color system with no top layer by Liquid Elements. FusionFlex Pure high gloss mono color system by Fusion Floors"

DEDUCT: _____

Alternate No. 6:

Base Bid: Vertical dichroic glass blades on building envelope

Alternate Bid: Delete vertical dichroic glass blades on building envelope

DEDUCT: _____

Alternate No. 7:

Base Bid: Epoxy Resin Flooring at mechanical penthouse (11,900 SF)

Alternate Bid: Provide sealed concrete in lieu of the Epoxy Resin Flooring.

DEDUCT: _____

Bid Form "D"
Allowances

University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2

All Bidders shall include within the bid price the applicable Bid Allowances listed below. Should an Allowance not apply to your Scope of Work, indicate so on the Bid Form provided.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

SCHEDULE OF ALLOWANCES:

BP #01.1 Construction Progress Cleaning
ALLOWANCE NO. 1

The Construction Progress Cleaning Subcontractor shall include in their Base Bid the cost of **Five Thousand (5000) man hours** for laborers to perform this work. Included in that Base Bid number must be all incidental items that are necessary to support this removal construction debris from the Building and Site into trash dumpsters. These incidental items shall include, but not be limited to brooms, shovels, safety gear, (gloves, hard hats, safety vests, safety glasses, safety boots, fall restraint devises, conventional dust masks and respiratory filter dusk masks) and sweeping compound.

BP # 5.0 Structural Steel
ALLOWANCE NO. 1

The Structural Steel, Metal Decking and Miscellaneous Metals Subcontractor shall carry in their base bid an **additional allowance of $25,000 to cover additional detailing time, additional steel material, fabrication, shop priming, delivery and erection of steel elements not depicted on the Contract Documents.** This allowance shall be for minor work not

indicated and as directed by the Construction Manager in addition to all other work indicated in this scope.

BP #6.0 General Trades

ALLOWANCE NO. 1

The General Trades Contractor shall include in their Base Bid all work that is defined, described, inferred and/or discernable within the Contract Documents as it relates to the Fire Stopping and Smoke Sealing. **However, in addition, this Subcontractor shall include a $10,000 allowance for additional Fire Stopping and Smoke Sealing that is not defined, described, inferred or discernable within the Contract Documents. This additional minor work that is not indicated on the Contract Documents shall be performed as directed by the Construction Manager and shall be in addition to all other work indicated in this scope.**

BP #07.3 Spray Fireproofing

ALLOWANCE NO. 1

SECOND PASS ON EACH FLOOR

Provide the labor and material to make a "second pass" after any errant Drywall, Acoustical, and MEPS hangers, clips, tracks, etc. have been installed. **For each floor**, this contractor shall include two days labor for a two man crew and $1,000 material for this work.

BP #14.0 Elevators

ALLOWANCE NO. 1

"FIT OUT" OF THE INTERIOR OF THE ELEVATOR CARS $100,0000

Include an allowance of $50,000 for each Elevator Car or a total of $100,000 as it relates to the "fit-out" of the Interior of the Cabs.

ALLOWANCE NO. 2

ELEVATOR OPERATOR FOR TEN (10) DAYS

Include an allowance to include all costs for providing ten (10) Days for an Elevator Operator to run the elevator cars for use of the elevators only at the Construction Managers direction.

Bid Form "E"
Proposed Subcontractor Listing

University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2

This form shall be filled out by each bidder. Attach additional sheets if necessary.

Subcontractor Name And Address	Trade	Contract Amount	Certificate Type *(SBE,MBE, WBE,)*	
				SBE 32% *MBE 12%*

Construction Manager and Owner reserve the right to disapprove any proposed Subcontractor without prejudice.

Bid Form "F"
Unit Prices
University of Connecticut
New Engineering & Science Building
Project #901376
Phase 2

The Contractor shall include within his or her Bid the Unit Prices as listed in the Specifications. Should a Unit Price not apply to your Scope of Work, indicate so on the Bid Form provided.

The undersigned further proposes and agrees that should the amount of work required be increased or decreased, as directed by the Architect/CM, the following supplemental Unit Prices will be the basic price in place for computing extra cost. The stated costs are to be for "Additions" or "Deletions" of work to the Trade Contractor's Contract. All Unit Prices shall include all cost of work to the representative contractor, including all charges for materials, labor, plant, equipment, overhead, profit, additional insurance, taxes and all charges of whatever kind.

Acceptance of a unit price amount, if any, is subject to review by the Architect and Construction Manager and final approval of the Owner.

Any and all adjustments to the Contract shall be made via Change Order. No adjustments for Overhead; Profit; Supervision and the like will be allowed.

Unit Prices in accordance with the following schedule will apply to this Contract.

Unit Prices in accordance with the following schedule will apply to this Contract.

Item #	DESCRITPION	UNIT PRICES
-	-	
1	Rock excavation, removal and disposal off site	$_____CY
2	Furnish, deliver, compact in place 3/8" crushed stone	$_____CY
3	Furnish, deliver, compact in place ¾" crushed stone	$_____CY
4	Furnish, deliver, compact in place stone dust bedding	$_____CY
5	Furnish, deliver, compact in place sand bedding	$_____CY
7	Furnish and place lien concrete under footings and foundations.	$_____CY
8	Excavate, remove and legally dispose of Category 1 soil.	$_____Ton

9	Excavate, remove and legally dispose of Category 2 soil.	$_____Ton
10	Excavate, remove and legally dispose of Category 3 soil.	$_____Ton
11	Excavate, remove and legally dispose of Category 4 soil.	$_____Ton
12	Excavate, remove and legally dispose of Category 5 soil.	$_____Ton
13	Excavate, remove and legally dispose of Category 6 soil.	$_____Ton
14	Excavate, remove and legally dispose of Category 7 soil.	$_____Ton
15	Place and compact common fill for backfilling	$_____CY
16	Place and compact structural fill for backfilling	$_____CY
17	Furnish, install + remove additional silt fencing	$_____LFT
18	Test pits, as described in the scope of work	$_____EA
19	Reinforcing Steel Bars, in place	$_____LB
20	Furnish, drill & Epoxy Reinforcing Steel Bar Dowels in Concrete	$_____EA
21	F&I Concrete Pad for Mechanical Equipment	$_____SFT
22	Traffic Control (Flagger)	$_____HR
23	Steel Dunnage	$_____Ton
24	Fire Caulking	$_____LF
25	Fire Caulking (Stuff & Spray)	$_____LF
26	Caulking	$_____LF
27	Replace damaged Acoustical Ceiling Tiles with New Tiles	$_____EA
28	Furnish and Install Ceramic Wall Tile	$_____SFT
29	Furnish and Install Epoxy Terrazzo	$_____SFT
30	Flash Patching for Flooring, less than 1/4"	$_____SFT
31	Concrete Floor Moisture Mitigation - Shotblast, Epoxy & Ardex	$_____SFT
32	Add Sprinkler Head in Suspended Ceiling, incl. 10' of pipe	$_____EA
33	Furnish & Install duplex receptacle with homerun to nearest Panel source	$_____EA
34	Furnish & Install duplex floor outlet with homerun to nearest panel source	$_____EA
35	Furnish & Install data drop with homerun to nearest data source	$_____EA
36	F+I Fire Alarm Pull Station (Complete)	$_____EA
37	F+I Fire Alarm Horn/Strobe (Complete)	$_____EA
38	F+I Fire Alarm Smoke Detector (Complete)	$_____EA
39	F+I Exit Sign wall or ceiling mounted. Install, 30’ of conduit and wire (Complete)	$_____EA

LEED General Requirements

All subcontractors are required to implement practices and procedures to meet the project's sustainability goals, which include achieving LEED Certification under the LEED-New Construction Version 3.0 Rating System. The LEED-NC Version 3.0 Registered Project Checklist is included at the end of this section and provides detail as to which credits are being targeted for this project. The following materials-specific LEED credits are being pursued:

MRc2 – Construction Waste Management
MRc4 – Recycled Content
MRc5 – Regional Materials
MRc7 – Certified Wood
IEQc4.1 – Low Emitting Materials: Adhesives & Sealants
IEQc4.2 – Low Emitting Materials: Paints & Coatings
IEQc4.3 – Low Emitting Materials: Flooring Systems
IEQc4.4 – Low Emitting Materials: Composite Wood & Agrifiber Products

Working with the Contractor, subcontractors shall ensure that the requirements related to all LEED goals, as defined in the sections below, are implemented to their fullest extent. Substitutions, or other changes to the work proposed by subcontractors, shall not be allowed if such changes compromise meeting the LEED requirements.

LEED Submittal Requirements

A. The Subcontractor shall submit the following LEED certification items:
   1. A completed LEED Environmental Materials Reporting Form for CSI Divisions 3-10, 12, 31.60.00, 32.10.00, 32.30.00, 32.90.00 (sample included at the end of this section). Information to be supplied on this form shall include:
      a. Material cost(s) (excluding labor and equipment) for the building materials included in the subcontractor's work.
      b. The amount of post-consumer and post-industrial (pre-consumer) recycled content in the supplied product(s).
      c. The harvest and manufacturing locations for the supplied product(s).
      d. The Amount of FSC certified wood materials used.
   2. For Division 033000, the Concrete Tracking Form should be submitted (sample included at the end of this section).
   3. A letter from the manufacturer verifying the sustainable product information.
   4. Product Data Sheets or associated backup for all the materials included in the form.
   5. Documentation for all wood products. Provide invoices that show Chain-of-Custody numbers and also provide a copy of the FSC certification for each supplier.
   6. VOC Reporting Form (sample included at the end of this section) and Materials Safety Data Sheets for all applicable products in ALL CSI DIVISIONS (including MEP related materials). Applicable products include, but are not limited to adhesives, sealants, paints, coatings, flooring, composite woods, and furniture. MSDS shall indicate the Volatile Organic Compound (VOC) limits of the submitted product. (If the MSDS does not include a product's

VOC limits, then product data sheets, manufacturer literature, or a letter of certification from the manufacturer can be submitted in addition to the MSDS to indicate VOC limits).

7. The LEED Submittal information shall be assembled into one package per specification section and combined with other required documentation. Incomplete or inaccurate LEED submittals may be used as the basis for the Architect's rejection of products or assemblies.

LEED Credit Requirements

MRc2 – Construction Waste Management: Recycle or salvage at least 75% of non-hazardous construction and demolition debris.

a. Designate a specific area(s) on the construction site for comingled collection of waste materials and track recycling efforts throughout the construction process.
b. Cardboard, metal, brick, acoustical tile, concrete, plastic, wood, glass, gypsum, carpet, and insulation should all be recycled at a minimum.

MRc4 – Recycled Content: Building materials shall have a recycled content such that post-consumer recycled content plus one-half (1/2) of pre-consumer recycled content for Project constitutes a minimum of twenty percent (20%) of cost of materials used for Project. This credit applies to all materials within CSI Divisions 3-10, 12, 31.60.00, 32.10.00, 32.30.00, 32.90.00.

a. Cost of post-consumer recycled content plus one-half (1/2) of pre-consumer recycled content of an item shall be determined by dividing weight of post-consumer recycled content plus on one-half (1/2) of pre-consumer recycled content in the item by total weight of the item and multiplying by cost of the item.
b. "Post-consumer" material is defined as waste material generated by households or by commercial, industrial, and institutional facilities in their role as end users of the product, which can no longer be used for its intended purpose.
c. "Pre-consumer" material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it.
d. Do not include plumbing, mechanical and electrical components, and specialty items such as elevators and equipment in the calculation.

MRc5 – Regional Materials: Use 20% Regional Materials: Not less than twenty percent (20%) of building materials (by cost) shall be regional materials. This credit applies to all materials within CSI Divisions 3-10, 12, 31.60.00, 32.10.00, 32.30.00, 32.90.00.

a. "Regional Materials" are defined as those that have been extracted, harvested, or recovered, as well as manufactured, within five hundred (500) miles of Project site.
b. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.
c. Do not include plumbing, mechanical and electrical components, and specialty items such as elevators and equipment in the calculation.

MRc7 – Certified Wood: Not less than fifty percent (50%) (by cost) of wood-based materials shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship." Only include materials permanently installed on the project.

a. Wood-based materials include, but are not limited to, the following materials:
   I. Rough carpentry.
   II. Doors
   III. Miscellaneous carpentry.
   IV. Heavy timber construction.
   V. Wood decking.
   VI. Structural glue-laminated timber.
   VII. Metal-plate-connected wood trusses.
   VIII. Finish carpentry.
   IX. Architectural woodwork.
   X. Wood paneling.
   XI. Wood veneer wall covering.
   XII. Wood Flooring.
   XIII. Wood Lockers.
   XIV. Wood Cabinets.
   XV. Furniture.

b. FSC Chain-of-Custody (COC) Requirements
   I. Must submit all invoices for all permanently installed wood products, FSC certified or not, purchased by the project contractor or subcontractors.
      1. Each wood product must be identified on a line-item basis.
      2. FSC products must be identified as such on a line-item basis.
      3. The dollar value of each line item must be shown.
      4. The COC certificate number must be shown on any invoice that includes FSC products.

IEQc4.1 – Low Emitting Materials: Adhesives & Sealants: All adhesives and sealants installed in the building interior (defined as inside the weather barrier and applied on-site) must comply with South Coast Air Quality Management District (SCAQMD) Rule #1168:

Architectural Application	**VOC Limit (g/L less water)**	**Specialty Applications**	**VOC Limit (g/L less water)**
Indoor Carpet Adhesive	50	PVC Welding	510
Carpet Pad Adhesive	50	CPVC Welding	490
Wood Flooring Adhesive	100	ABS Welding	325
Rubber Floor Adhesive	60	Plastic Cement Welding	250
Subfloor Adhesive	50	Adhesive Primer for Plastic	550
Ceramic Tile Adhesive	65	Contact Adhesive	80
VCT & Asphalt Adhesive	50	Special Purpose Contact Adhesive	250
Drywall & Panel Adhesives	50	Structural Wood Member Adhesive	140
Cove Base Adhesive	50	Sheet Applied Rubber Lining Operations	850
Multipurpose Construction Adhesive	70	Top and Trim Adhesive	250
Structural Glazing Adhesives	100	**Sealants**	**VOC Limit (g/L less water)**

Substrate Specific Applications	**VOC Limit (g/L less water)**	Architectural	250
Metal to Metal	30	Roadway	250
Plastic Forms	50	Other	420
Porous Material (except Wood	50	**Sealant Primer**	**VOC Limit (g/L less water)**
Wood	30	Architectural Non-porous	250
Fiberglass	80	Architectural Porous	775
Aerosol Adhesives	**VOC Limit (g/L less water)**	Other	750
General Purpose Mist Spray	65% VOCs by weight		
General Purpose Web Spray	55% VOCs by weight		
Special Purpose Aerosol Adhesives (all types)	70% VOCs by weight		

IEQc4.2 – Low Emitting Materials: Paints & Coatings: All paints and coatings used on the interior of the building (i.e., inside of the weather barrier and applied on-site) must comply with the following criteria:

Architectural paints and coatings applied to interior walls and ceilings must not exceed the VOC content limits established in Green Seal Standard GS-11.

Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC limit of 250 g/L established in Green Seal Standard GC-03.

Clear wood finishes, floor coatings, stains, primers, and shellacs applied to interior elements must not exceed the VOC content limits established in South Coast Air Quality Management District (SCAQMD) Rule 1113.

Product Type	**VOC Limit (g/L less water)**	**Product Type**	**VOC Limit (g/L less water)**
Interior Flat Coating or Primer	50	Floor Coatings	100
Interior Non-Flat Coating or Primer	150	Sealers and Undercoaters	200
Anti-Corrosive/ Anti-Rust Paint	250	Shellac: Clear	730
Clear Wood Finish: Lacquer	550	Shellac: Pigmented	550
Clear Wood Finish: Sanding Sealer	350	Stain	250
Clear Wood Finish: Varnish	350	Concrete Curing Compounds	350
Clear Brushing Lacquer	680	Japans/ Faux Finishing Coatings	350
Waterproofing Sealers	250	Magnesite Cement Coatings	450
Waterproofing Concrete/ Masonry	400	Pigmented Lacquer	550

Sealers			
Wood Preservatives	350	Low-Solids Coatings	120

IEQc4.3 – Low Emitting Materials: Flooring Systems: All flooring elements installed in the building interior must comply with the following as applicable to the scope of the project:

Flooring System	Requirement
Carpet	Meet testing and product requirements of the Carpet and Rug Institute's Green Label Plus program
Carpet Cushion	Meet requirements of the Carpet and Rug Institute Green Label program
Carpet Adhesives	Meet VOC limit of 50 g/L
Hard Surface Flooring (See Exceptions below)	Certified as compliant with the FloorScore standard – including vinyl, linoleum, laminate flooring, wood flooring, ceramic flooring, rubber flooring, wall base
Floor Finishes – sealer, stain, and finish	Meet the Requirements of South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004
Tile Setting Adhesives and Grout	Meet the Requirements of South Coast Air Quality Management District (SCAQMD) Rule 1168
Tile, Masonry, Terrazzo, cut stone, and solid-wood flooring without coatings or sealants	Qualifies for credit without testing

IEQc4.4 – Low Emitting Materials: Composite Wood & Agrifiber Products: All composite wood and agrifiber products used on the interior of the building must contain no added urea-formaldehyde resins.

Laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifiber assemblies must not contain added urea-formaldehyde resins.

Composite wood and agrifiber products are defined as particleboard, medium density fiberboard (MDF), plywood, wheatboard, strawboard, panel substrates and door cores. Materials considered fixtures, furniture and equipment (FF&E) are not considered base building elements and are not included.

ENVIRONMENTAL MATERIALS REPORTING FORM (provide cut sheets for the data below)

PROJECT NAME: _____ **CONTRACTOR:** _____

SPEC SECTION: _____

CONTACT NAME: TEL. NO: SUBMITTAL NO:

Product Name	Vendor or Manufacturer	**REQUIRED for ALL products identified in Specs** CSI 2004 Divisions 3–10, 31.60 Foundations, 32.10 Paving, 32.30 Site Improvements, and 32.90 Planting. *MEP excluded.*	Percentage of the product salvaged, refurbished or reused[1]	Recycled Content[2] (for concrete, use separate form)		Location and distances from manufacturing point to project site AND raw material harvesting point to project site (miles)[3]	Percentage of product that is rapidly renew-able[4]	For all wood-based products[5]			
		Total Material Cost (excl. labor & equipment)		% post-consumer	% pre-consumer			% New wood	% Certified Wood	FSC Tracking: COC #	Urea formaldehyde in composites (Y/N)
1.						Harvest: Manufacture:					
2.						Harvest: Manufacture:					
3.						Harvest: Manufacture:					
4.						Harvest: Manufacture:					

CONTRACTOR CERTIFICATION:

I, _____ a duly authorized representative of _____ hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by us, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____ DATE: _____

[1] ***Salvaged***: Material or product which has been recovered from existing buildings or construction sites and reused in other buildings (e.g., structural beams, doors, brick).

[2] ***Post-Consumer Recycled Content***: Portion of material or product which derives from discarded consumer waste that has been recovered for use as a raw material (e.g., plastic bottles, newspaper).
Pre-Consumer Recycled Content: Portion of material or product which derives from recovered industrial and mfg. materials that are diverted from municipal solid waste for use in a *different* mfg. process, prior to use by a consumer (e.g., fly-ash in concrete or synthetic gypsum board, both of which are by-products of coal-burning power plants). Note that spills and scraps from the original mfg. process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product do not qualify.

[3] ***Regional Materials:*** Materials are considered regional if harvested AND manufactured within 500 miles of the project site. Materials can travel more than 500 miles, provided materials always remain within a 500 mile radius of project site. For salvaged/recycled materials such as steel, you do not need to provide the original harvesting location, but rather the location the steel was sourced from. Distances are as the crow flies, not actual miles traveled via surface transport.

[4] ***Rapidly Renewable***: Materials and products made from raw materials that are harvested within a 10-year cycle (e.g., bamboo, cork, linoleum, fast-growing poplar, wheatboard, wool carpet)

[5] ***FSC Certified***: Wood-based products which are certified by the Forest Stewardship Council and carry a Chain-of-Custody certificate number from the vendor or manufacturing.
Composite Wood & Agrifiber Products: Any wood based products must not contain added urea-formaldehyde.

LEED CONCRETE TRACKING FORM

PROJECT NAME: _____

CONTRACTOR: _____

SPEC SECTION: _____

CONTACT NAME: _____ TEL. NO:_____ SUBMITTAL NO: _____

A. Mix Number:	B. Supplier	C. Total Materials Cost of Concrete ($)	D. Mass of recycled SCMs (lbs.)	E. Mass of total cementitious materials only (lbs.)[1]	F. SCMs as a percentage of total cementitious materials only (%) [D/E]	G. Dollar value of all cementitious materials only ($) [from concrete supplier]	H. Recycled content value per yard ($) [(F/2) x G]	I. Distances from both harvesting AND manufacturing point to project site (miles)[2]
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

CONTRACTOR CERTIFICATION:

I, _____ a duly authorized representative of_____ hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by us, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____ DATE: _____

[1] This column includes Portland cement, recycled SCM's and any other cementitious ingredients that are not recycled (not total lbs. of concrete)

[2] Materials can travel more than 500 miles, provided materials always remain within 500 mile radius of project site

VOC REPORTING FORM

PROJECT NAME:

CONTRACTOR: _____ SPEC SECTION: _____

CONTACT NAME: _____ TEL. NO: _____ SUBMITTAL NO:

Product type or application	Product name	Vendor or Manufacturer	**REQUIRED for ALL field-applied adhesives, sealants, paints & coatings, carpet and carpet padding, and composite wood identified in Specs (including those related to MEP work)**		
			• Actual VOC content [1] (grams per liter) • Green Label Plus Certification (carpet) • Green Label Certification (carpet pad) • Urea Formaldehyde Free Composites	Corresponding LEED VOC limit	Backup documentation [2]
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					

1. *VOC:* Volatile organic compound which vaporizes into a gas at normal room temperatures and is emitted during the use, application, curing, or drying of an adhesive, sealant, paint, or coating product (excludes methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds).
2. Submit backup documentation from manufacturer indicating VOC content of the product, defined in either grams per liter, or lbs. per gallon (e.g., MSDS sheet, Product Data Sheet)
3. Refer to the Sustainable Design Requirements Spec. for applicable VOC limits and chemical component limitations for adhesives, sealants, paints and architectural coatings.

CONTRACTOR CERTIFICATION:

I, _____ a duly authorized representative of _____ hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by us, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____ DATE: _____

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. Special requirements for waste management of nonhazardous waste during construction operations.
        a. Protect the environment, both on-site and off-site, during construction operations.
        b. Prevent environmental pollution and damage.
        c. Maximize source reduction, reuse and recycling of solid waste.

1.3 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 QUALITY ASSURANCE

A. General: Develop waste management plan that results in end-of-Project rates for salvage/recycling of **75** percent by weight of total waste generated from construction and demolition activities.
B. Use all reasonable means to divert construction and demolition waste from landfills and incinerators.
C. Facilitate recycling and salvage of materials, including the following:
    a. Cardboard, paper, packaging
    b. Wood: clean dimensional lumber, palette wood, plywood and agrifiber sheet materials
    c. Packaging: food and beverage containers, plastic pails, polystyrene, boxes, crates, plastic, etc.
    d. Concrete

e. Bricks
f. Masonry and Concrete Masonry Units (CMU)
g. Asphalt
h. Metals: steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
i. Drywall
j. Carpet and pad
k. Paint
l. Roofing
m. Rigid Foam and Insulation
n. Glass
o. Plastics

1.5 SUBMITTALS

A. Calculations and supporting documentation to demonstrate end-of–project recycling rates meeting the requirements for Construction Waste Management in this Specification. The process for recording and assembling documentation shall be as follows:
   1. Record and document the total weight (in tons) of all demolition and construction waste materials sent to the landfill. Monthly Waste Management Reporting Forms (sample included at the end of this section) shall be used as the basis for determining the total amount of waste landfilled for the project. The monthly reporting forms shall specify:
      a. The number of dumpsters or other containers sent to the landfill for that month;
      b. The volume (in cubic yards) of each dumpster or container sent to the landfill for that month;
      c. The type of waste contained in each dumpster or container; and
      d. The weight of the waste in each dumpster or container.
      e. Identification of the landfill.

   In addition, provide the name of the receiving facilities/companies that will be purchasing or accepting the recycled or salvaged materials. Receipts or other proof of facility reception of materials is required. For materials separated for recycling off-site, establish a method for tracking the weight of the recycled material.

B. Calculate the end-of-project recycling rate percentage by dividing the recycled and salvaged waste (in tons) by the total waste generated (recycled, salvaged, and landfilled waste – also in tons), and multiplying by 100.

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
    1. Comply with operation, termination, and removal requirements
B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan.
C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
    1. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
    1. Designate and label specific areas on project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

3.2 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.
B. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.
C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at project site to the maximum extent practical according to approved construction waste management plan.
    1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from project site. Include list of acceptable and unacceptable materials at each container and bin.
        i. Inspect containers and bins for contamination and remove contaminated materials if found.
    2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
    3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
    4. Store components off the ground and protect from the weather.
    5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.
    6. For each dumpster removed from the site, a driver receipt or ticket must be left with the on-site trailer.

3.3 RECYCLING WASTE

A. Asphalt Paving: Break up and transport paving to asphalt-recycling facility.
B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
C. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
    1. Clean and stack undamaged, whole masonry units on wood pallets.
D. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
E. Metals: Separate metals by type.
F. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
G. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
H. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.
I. Carpet: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
J. Store clean, dry carpet in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.
K. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
L. Conduit: Reduce conduit to straight lengths and store by type and size.

3.4 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
    1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
    2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
B. Burning: Do not burn waste materials.
C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION

Construction Waste Management - Tracking

Project Name: **Project Location:** **Prepared By:**

4/7/14

				Demolition and Construction Materials Diverted from Landfill through Salvage/Recycling											Landfill Waste					
PHASE	DATE	Ticket	Company	Glass (tons) [2]	Asphalt (tons)	Plastic (tons)	Wood (tons)	Metals (tons)	Carpet (tons)	Cardboard (tons)	Concrete (tons)	Gypsum (tons)	Paper (tons)	Recycled Comingled (tons) [3]	Un-recycled Comingled (tons) [3]	(General Debris) Waste (tons) [5]	Recycled Total (tons)	Waste Total (tons)	Total (tons)	Comingled Total (tons) [4]
Total (tons)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	

Recycled Rate = **#DIV/0!**

Landfill Rate = **#DIV/0!**

Steven Winter Associates Inc.
61 Washington Street
Norwalk CT 06854
203 857 0200
www.swinter.com

LEED-NC Version 3.0 Registered Project Checklist

Key:
Yes - Project either currently complies or can easily comply with minimal cost.
Likely - Project can easily comply with minimal cost, but verification or minimal changes to current design are needed.
Less Likely - Compliance will have significant impact on cost, design, and/or schedule.
No - Either not applicable or cost prohibitive.
C/D - Construction or Design credits
RP - Regional Priority credit

UCONN Engineering

181 Auditorium Rd., Storrs CT 06269
118,048 GSF
FTE: xxx
3/31/14

Architect - Mitchell | Giurgola (MG)
Construction Manager - Fusco
Commissioning - BVH Integrated Services (BVH)
Landscape Architect - Dirtworks (DW)
LEED Consultant - Steven Winter Associates (SWA)
MEP - Bard, Roa + Athanas (BR+A)
Owner - University of Connecticut (UConn)
Site/Civil Engineer - Alfred Benesch & Company (AB)

C/D	Yes	Likely	Less Likely	No	Possible	Sustainable Sites	Status / Comments:	Party:	Due by:
	18	0	4	1	26				
C	Y				Prereq	Prerequisite SS 1 **Construction Activity Pollution Prevention** Implement an Erosion and Sedimentation Control (ESC) Plan that conforms to the 2003 EPA Construction General Permit.	Civil to provide photo documentation of measures during demolition and construction and confirm ESC Plan meets credit criteria.	AB	
D	1				1	Credit SS 1 **Site Selection** Do not develop on farmland; undeveloped land lower than 5' above 100-year flood plain; habitat for endangered or threatened species; within 100' of a wetlands; undeveloped land within 50' of a body of water; or public parkland.	Project is located on a previously developed site.	SWA	
D	5				5	Credit SS 2 - **Regional Priority** **Development Density & Community Connectivity** Opt 1: Previously developed site within a community with a minimum density of 60,000 sf/acre. Opt 2: Previously developed site within 1/2 mile of residential zone (10 units/acre) and 10 basic services with pedestrian access. **Exemplary Performance:** Either the project itself must have a density double the average of the calculated area OR the average density in an area twice the base credit area must be at least 120,000 sf/acre.I20	Option 2 has been documented and uploaded to LEED Online. One additional point will be awarded for Regional Priority achievement.	SWA	**COMPLETE**
D	1				1	Credit SS 3 **Brownfield Redevelopment** Develop on a contaminated site as defined by ASTM E1903-97 or by local, state or federal governmental agency.	UConn is going to demo the existing building. Fusco will mange the demo. There is asbestos abatement happening. SWA to coordinate with Cardno ATC to get documentation together.	SWA/ UConn.	
D	6				6	Credit SS 4.1 **Alternative Transportation:** Public Transportation Within 1/4 Mile of 2 bus line stops (public, campus or private) or 1/2 mile of rail stop. **Exemplary Performance:** Institute a Transportation Demand Management Plan that demonstrates automobile trip reduction OR locate the project within 1/2 mile of two rail lines or 2 bus stops (4 lines) with a minimum of 200 rides per day.	Project is located within 1/4 mile of multiple campus bus routes, however the routes must connect to a larger transportation network off campus which does not appear to exist. UConn to confirm. Historically projects on campus have achieved credit including UConn West project v2.2, Storrs Hall Addition v3, and Bousfield Psych Addition v3. UConn OEP to provide information on UConn Transit services and connections	SWA UConn	

D			1		1	Credit SS 4.2 **Alternative Transportation:** Bicycle Use Provide bicycle racks for 5% of peak building users and shower facilities for 0.5% of Full-Time Equivalent (FTE) occupants within 200 yards of the building entrance. Provide covered storage for 15% of occupants of residential buildings.	SWA to confirm if showers and racks are present to meet credit. Number of shared bicycle racks must be able to accommodate new and existing buildings expected use. No version 3 project at UConn Storrs has achieved this credit including Storrs Hall Addition v3.	SWA	
D					3	Credit SS 4.3 **Alternative Transportation:** Low-Emitting and Fuel-Efficient Vehicles Opt 1: Provide 5% preferred parking for LE/FE vehicles-Preferred parking refers to the location or cost of parking (20% reduction) Opt 2: Alternative-fuel refueling stations for 3% vehicle parking. Opt 3: Provide LE/FE vehicles for 3% of FTE with preferred parking.	Credit is feasible if UConn provides 20% parking discount for LE/FE Vehicles. UConn OEP to comment on feasibility.	UConn	
D	2				2	Credit SS 4.4 **Alternative Transportation:** Parking Capacity Provide no new parking OR **Non-Residential:** Opt 1 : Meet but not exceed local requirements and provide 5% preferred parking for carpools or vanpools. Opt 2 : For projects that provide parking for less than 5% of FTE, provide 5% preferred parking for carpools or vanpools. Opt 3: Provide no new parking. **Residential:** Do not exceed local requirements and provide infrastructure and support for shared vehicle usage. **Mixed Use:** For mixed-use buildings with less than 10% commercial area, the entire building should adhere to the residential requirements. For mixed use buildings with greater than 10% commercial area, the commercial space is to adhere to Non-Residential requirements, while the residential component is to adhere to residential requirements.	Project will not add any new parking.	MG SWA	
C			1		1	Credit SS 5.1 **Site Development:** Protect or Restore Habitat Greenfield sites: Limit site disturbance to specified distances beyond development. Previously developed sites: Restore or protect 50% of site area (excluding building footprint) or 20% of the total site area (whichever is greater) with native or adaptive vegetation. Projects earning SSc2 may include vegetated roofs, provided they are planted with native/adapted species. **Exemplary Performance:** Restore 75% or 30% of site.	Landscape 19,281 SF of native and adaptive species to comply with this credit. 100% DD drawings include 14,448 SF. The project will need to plant 4,833 SF of additional native plantings to comply with this credit. Exemplary Performance threshold is 75% without building footprint, or 28,920SF.	SWA	
D	1				1	Credit SS 5.2 **Site Development:** Maximize Open Space Opt 1: Exceed local open space requirement by 25%. Opt 2: Sites w/ no zoning requirements: Provide open space equal to building area. Opt 3: For sites with no open space requirement: Provide open space for 20% of site area. Projects earning SSc2 may include vegetated roofs, provided they are planted with native/adapted species, up to 75% of the open space may be pedestrian oriented hardscape. **Exemplary Performance:** Double open space requirements.	Option 3: SWA has performed calculations on the 100% DD drawings and 62.19% of the site area within the LEED Boundary is composed of vegetated open space. *Exemplary Performance is anticipated.	SWA	**COMPLETE**
D			1		1	Credit SS 6.1 **Stormwater Design:** Quantity Control Opt 1 (Existing <50% Impervious) Prevent post development discharge from exceeding pre development discharge for 1 and 2 year 24 hour storms or protect stream channels from excessive erosion. Opt 2 (Existing >50% Impervious) Reduce discharge volume by 25% for the 2 year 24 hour storm. Exemplary Performance: Document an exemplary comprehensive approach to capture/treatment of stormwater beyond credit requirements.	Civil to comment on feasibility. Unless more landscaping is added credit compliance is unlikely	AB	

	Yes	Likely	Less Likely	No	Possible				
D				1	1	Credit SS 6.2 - Regional Priority **Stormwater Design:** Quality Control Treat 90% of average annual rainfall using BMPs (remove 80% of TSS).	Stormwater which is not infiltrated is discharged into sewer and stream. MGA to consider green roof and pervious paving strategies to increase onsite infiltration and reduce run-off.	AB	
C	1				1	Credit 7.1 **Heat Island Effect:** Non-Roof Opt 1: Shade, pave with SRI > 29, or open grid for 50% hardscape. Opt 2: 50% of parking under cover of a material with a minimum SRI of 29. **Exemplary Performance:** Increase thresholds to 100%.	Paved surface area within the LEED Boundary is mostly concrete.	SWA	**COMPLETE**
D	1				1	Credit SS 7.2 **Heat Island Effect:** Roof Opt 1: 75% high albedo: Low Slope <2:12 SRI>78; High Slope >2:12 SRI>29. Opt 2: 50% green roof. Opt 3: Combination: Area $_{SRI}$ / 0.75 + Area $_{Green}$ / 0.50>= Area $_{Total}$ **Exemplary Performance:** Increase green roof threshold to 100%.	Project will specify light colored membrane that meets SRI requirements. MGA to consider a green roof assembly. UConn currently has two buildings on campus with green roofs. SWA will provide the design team with area requirements.	MG SWA	
D			1		1	Credit SS 8 **Light Pollution Reduction** Limit interior lighting that exits the building and do not exceed ASHRAE/IESNA 90.1 2007 lighting power density requirements.	Interior lighting will have auto-off controls at night with manual or occupancy based override. Exterior lighting requirements may not be compliant.	MG	

	Yes	Likely	Less Likely	No	Possible	Water Efficiency	Status / Comments:	Party:	Due by:
	6	4	0	0	10				
D	Y				Prereq	Prerequisite WE 1 **Water Use Reduction** Reduce water consumption by 20% compared to baseline.	See comments under WEc3	SWA	
D	4				4	Credit WE 1 **Water Efficient Landscaping:** Reduce by 50%, 100% Opt 1:Reduce potable water consumption for irrigation by 50% (2 pts) Opt 2: Reduce potable water consumption for irrigation by 100% (4 pts) Reduction can be achieved via use of appropriate plant species, irrigation efficiencies, captured stormwater or greywater.	There is currently no irrigation planned on the project. However, the design team will be evaluating the feasibility of using the campus reclaimed water for irrigation. Either approach will earn the four points available under this credit.	DW	
D		2			2	Credit WE 2 - **+1 point for Regional Priority through either option** **Innovative Wastewater Technologies** Opt 1: Reduce potable water use for sewage conveyance by 50%. Opt 2: Treat 50% of wastewater to tertiary standards and infiltrate or use on site. **Exemplary Performance:** +1 point to increase threshold to 100%.	Feasible with the campus reclaimed water system providing treated waste water for toilet/urinal flushing. Both RP and EP points can be awarded	MG BR+A	
D	2	2			4	Credit WE 3 **Water Use Reduction:** 30%, 35%, 40% Reduction Opt 1: Reduce water consumption by 30% (2 pts) Opt 2: Reduce water consumption by 35% (3 pts) Opt 3: Reduce water consumption by 40% (4 pts) **Exemplary Performance:** Increase threshold to 45%.	Daily occupancy counts for FTE and Transient must be provided. The following fixtures should be installed to meet 30% threshold and above: -1.28 GPF flush toilets -0.5 GPM (manual & automatic) faucets OR 0.25 GPM metering faucet -1.5-1.75 GPM showerhead -0-1GPF urinal	SWA	

	Yes	Likely	Less Likely	No	Possible	Energy & Atmosphere		Status / Comments:	Party:	Due by:
	6	2	4	0	35					
C	Y				Prereq	Prerequisite EA 1 **Fundamental Commissioning** Develop and implement a commissioning plan using an independent agent. Cx Plan shall be based on the Owner's Project Requirements and Basis of Design with requirements incorporated into the construction documents. Plan shall verify the installation and performance of (at a minimum) mechanical and passive heating, ventilation, air conditioning, and refrigeration systems, lighting and daylight controls, domestic hot water systems and renewable energy systems and be summarized in a Commissioning Report.		BVH will be providing the third party commissioning services for the project. SWA to invite BVH to LEED Online.	BVH	
D	Y				Prereq	Prerequisite EA 2 **Minimum Energy Performance** Design the building to exceed ASHRAE/IESNA Standard 90.1-2007 by 10% for new buildings and 5% for major renovations.		SWA to perform energy modeling services. UConn OEP to provide SWA with utility rates for the utilities provided from the CUP.	SWA	
D	Y				Prereq	Prerequisite EA 3 **Fundamental Refrigerant Management** Use no CFC-based refrigerants (or phase out current use).		UConn OEP to provide SWA with information on the CFC Phase-out program for the older chillers in the cup that still use CFC's.	BR+A	
C	3				19	Credit EA 1 **Optimize Energy Performance** Improve energy performance above ASHRAE/IESNA 90.1-2007. One credit is earned for 12% (new buildings) and 8% (existing building renovations). One addit. credit for each additional 2% improvement up to 48 or 44%. **Exemplary Performance**: Increase threshold to 50 or 46%.		SWA to perform energy modeling services. UConn OEP to provide SWA with utility rates for the utilities provided from the CUP.	SWA	
D					7	Credit EA 2 - Regional Priority for earning 1pt **On-Site Renewable Energy** Produce energy to offset 1% of bldg. energy cost. One addit. credit for each additional 2% improvement up to 7 points (13%).		UConn considering PV. If PV is included, make sure the system is included in the Cx scope.	UConn/MG/BR+A	
C	2				2	Credit EA 3 **Enhanced Commissioning** The independent CxA shall conduct at least one DD-level review of the design documents and review contractor submittals with respect to the OPR, BOD, and CD's. A systems manual for all commissioned systems must be developed and operating personal must be trained (with verification.) The CxA must also review the building operation within 10 months of substantial completion.		BVH will be providing the third party commissioning services for the project. SWA to invite BVH to LEED Online.	BVH	
D			2		2	Credit EA 4 **Enhanced Refrigerant Management** Opt 1: Use no refrigerants. Opt 2: Minimize emission and no CFC, HCFC, or Halon fire systems.		MEP to comment. Historically credit achievement has been mixed. UConn West achieved this credit under LEED v2.2 and Bousfield Psych Building v3 did achieve the credit however Storrs Hall Addition LEED version 3 did not.	BR+A	
C	1		2		3	Credit EA 5 **Measurement & Verification** Implement a M+V Plan in accordance with *IPMVP Volume III: Concepts and Options for Determining Energy Savings in New Construction* , April 2003.		The project is evaluating the feasibility of integrating a series of monitoring points for the Energy Smart Buildings program being initiated by the UConn Dept. of Electrical and Computer Engineering. If adopted, SWA can provide a proposal for the recalibration of the energy model and the development of a M&V Plan.	BR+A	
C		2			2	Credit EA 6 **Green Power** Provide 35% of the building's electricity from renewable sources for a minimum of two years. **Exemplary Performance:** Increase thresholds to 100%.		UConn purchases green power credits for the LEED projects on campus. SWA will coordinate with UConn OEP.	UConn	

	Yes	Likely	Less Likely	No	Possible		Materials & Resources	Status / Comments:	Party:	Due by:
	4	2	1	6	14					
D	Y				Prereq		Prerequisite MR 1 **Storage & Collection of Recyclables** Dedicated space for the storage and collection of recyclables (at a minimum paper, corrugated cardboard, glass, plastic and metal)	SWA will review plans for compliance with prerequisite.	SWA	
C				3	3		Credit MR 1.1 - Regional Priority for 75% reuse **Building Reuse:** 55%, 75%, 95% of Walls, Floors & Roof Applies to building structure and envelop (excluding windows).	Existing building to be demolished. Proposed building is new construction		
C				1	1		Credit MR 1.2 **Building Reuse:** 50% of Interior Non-Str. Elements Includes interior walls, doors, floor coverings and ceiling systems.	Existing building to be demolished. Proposed building is new construction		
C	2				2		Credit MR 2 **Construction Waste Management:** Divert 50%, 75% Waste can be sorted off site. Exclude soil and land-clearing debris. **Exemplary Performance:** Divert 95%.	SWA to provide CM/waste hauler with a Construction Waste Management Plan Boilerplate and track monthly waste hauls throughout construction.	SWA Fusco	
C				1	2		Credit MR 3 **Materials Reuse:** 5%, 10% Use salvaged, refurbished or reused materials for 5% of cost. **Exemplary Performance:** Increase threshold to 15%.	MG to comment on feasibility.	MG	
C	1	1			2		Credit MR 4 **Recycled Content:** 10%, 20% (post + ½ pre-consumer) Based on cost. Recycled content of materials based on weight. **Exemplary Performance:** Increase threshold to 30%.	SWA will provide specification language to help earn credit and will track materials throughout construction to determine compliance.	SWA	
C	1	1			2		Credit MR 5 **Regional Material:** 10%, 20% Extracted, Processed & Manufactured Regionally (500 mile radius) Based on material cost. Fractions of content are based on weight. **Exemplary Performance:** Increase threshold to 30%.	SWA will provide specification language to help earn credit and will track materials throughout construction to determine compliance.	SWA	
C				1	1		Credit MR 6 **Rapidly Renewable Materials:** 2.5 % Use materials with ten-year cycle (based on cost). **Exemplary Performance:** Increase threshold to 5%.	SWA will provide specification language to help earn credit and will track materials throughout construction to determine compliance.	SWA	
C			1		1		Credit MR 7 **Certified Wood** Use FSC certified wood for 50% by cost of all wood components. **Exemplary Performance:** Increase threshold to 95%.	SWA will provide specification language to help earn credit and will track materials throughout construction to determine compliance. FUSCO to ask contractors to breakout any additional costs associated with credit compliance.	SWA	

	Yes	Likely	Less Likely	No	Possible		Indoor Environmental Quality	Status / Comments:	Party:	Due by:
	7	4	3	1	15					
D	Y				Prereq		Prerequisite EQ 1 **Minimum IAQ Performance** Meet minimum requirements of ASHRAE 62.1-2007 (Sections 4 - 7) and approved Addenda (see ASHRAE 62-2001, Appendix H) using the Ventilation Rate Procedure.	BR+A has indicated the design will be compliant. They will upload documentation to LEED Online.	BR+A	
D	Y				Prereq		Prerequisite EQ 2 **Environmental Tobacco Smoke (ETS) Control** Opt 1: Non-smoking building (and 25' from openings.) Opt 2: Designated smoking areas with specific ventilation requirements.	UConn owned buildings are smoke free. SWA to review drawings for evidence of signage communicating the exterior smoking policy. Drawing(s) with signage details or photos are acceptable.	MG	

D		1			1	Credit EQ 1 **Outdoor Air Delivery Monitoring** Provide permanent monitoring of outdoor air intake (and CO2 in densely occupied spaces.)	BR+A noted that demand control ventilation will be designed for a multi-occupant spaces on the project. BR+A to document compliance via LEED Online.	BR+A	
D		1			1	Credit EQ 2 **Increased Ventilation** Increase mechanical ventilation 30% over ASHRAE 62.1-2007 or demonstrate effective ventilation for naturally ventilated buildings.	BR+A noted that most of the spaces within the building will exceed ASHRAE 62.1 ventilation rates by 30%. Only a few spaces will need increased ventilation to be compliant. BR+A to document compliance via LEED Online.	BR+A	
C	1				1	Credit EQ 3.1 **Construction IAQ Mgmt. Plan:** During Construction Implement IAQ plan per SMACNA Guidelines, protect absorptive materials from moisture and use MERV 8 filters during construction.	SWA to provide Construction IAQ Management boilerplate for GC to complete.	SWA Fusco	
C		1			1	Credit EQ 3.2 **Construction IAQ Mgmt. Plan:** Before Occupancy Opt 1: Flush out 14,000 cubic feet/ one square foot of floor area, while maintaining 60° F and 60% humidity. Opt 2: Air quality testing.	Substantial completion is expected to occur with enough time to complete a flush out prior to occupancy. Fusco and BR+A to coordinate flush out schedule when the project is closer to completion.	BR+A Owner Fusco	
C	1				1	Credit EQ 4.1 **Low-Emitting Materials:** Adhesives & Sealants All adhesives and sealants must be in accordance with SCAQMD Rule #1168.	SWA will provide LEED specifications during design phase and will review submittals and track products throughout construction phase.	SWA	
C	1				1	Credit EQ 4.2 **Low-Emitting Materials:** Paints & Coatings Limit VOCs for interior paints and coatings applied on site according to Green Seal and SCAQMD 1113. All hard surface flooring must be FloorScore compliant.	SWA will provide LEED specifications during design phase and will review submittals and track products throughout construction phase.	SWA	
C	1				1	Credit EQ 4.3 **Low-Emitting Materials:** Flooring Systems All flooring must meet standards such as Carpet and Rug Institute's Green Label Plus program for carpets; hard-surface flooring must meet FloorScore Std. & all flooring adhesives, sealers and stains must meet SCAQMD VOC limits.	SWA will provide LEED specifications during design phase and will review submittals and track products throughout construction phase.	SWA	
C		1			1	Credit EQ 4.4 **Low-Emitting Materials:** Composite Wood & Agrifiber No urea-formaldehyde resins in composite woods and laminating adhesives.	SWA will provide LEED specifications during design phase and will review submittals and track products throughout construction phase. FUSCO to ask contractors to breakout any additional costs associated with credit compliance.	SWA Fusco	
D	1				1	Credit 5 **Indoor Chemical & Pollutant Source Control** Install permanent entryway systems 10 feet long, separate exhaust for point sources of air contaminants, deck to deck partitioning, negative pressure, and use MERV 13 filtration. Provide containment for hazardous material disposal where mixing occurs.	MG and BR+A noted that compliance with credit requirements is anticipated.	MG BR+A	
D			1		1	Credit 6.1 **Controllability of Systems:** Lighting Provide control for 90% occupants and control for shared spaces.	There are very few spaces where individual lighting controls are feasible. Compliance based largely on lighting controls for multi-occupant spaces will be targeted.	MG BR+A	
D				1	1	Credit 6.2 **Controllability of Systems:** Thermal Comfort Provide control for 50% occupants and control for shared spaces.	Credit not targeted.	BR+A	
D	1				1	Credit 7.1 **Thermal Comfort:** Design Design in accordance with ASHRAE 55-2004.	BR+A noted that the project will comply with ASHRAE 55. BR+A to document compliance via LEED Online.	BR+A	
D			1		1	Credit 7.2 **Thermal Comfort:** Verification Implement verification survey within 6 to 18 months of occupancy.	SWA provided sample surveys and corrective action plans to UConn. UConn to evaluate and comment on feasibility.	UConn	

D			1		1	Credit 8.1 **Daylight & Views:** Daylight 75% of Spaces Opt 1: 2% of daylight in 75% of spaces. Opt 2: Computer simulation of 25 footcandles in 75% of spaces. Opt 3: Direct measurement of 25 footcandles in 75% of spaces. **Exemplary Performance:** Increase threshold to 95%.	SWA has performed calculations for floors 1-4 and has determined that this credit is not likely to be feasible for the project. Architect to confirm which windows will have automatic shading devices.	SWA	
D	1				1	Credit 8.2 **Daylight & Views:** Views for 90% of Spaces Provide direct line of sight to outdoors. **Exemplary Performance:** 90% of spaces meet 2 of 4 requirements in reference guide.	SWA has performed calculations and 93.48% of regularly occupied spaces have access to views.	SWA	

Yes	Likely	Less Likely	No	Possible	Innovation & Design Process	Status / Comments:	Party:	Due by:
2	3	1	0	6				
D	1			1	Credit ID 1.1 **Innovation in Design:** Green House Keeping 1. A statement of purpose describing what the policy is trying to achieve from a health and environmental standpoint, focusing on cleaning chemicals and custodial training at a minimum. 2. A contractual or procedural requirement for operations staff to comply with the guidelines, including a written program for training and implementation. 3. A clear set of acceptable performance level standards by which to measure progress or achievement, such as Green Seal standard GS-37 (see www.greenseal.org) or California Code of Regulations, Title 17 Section 94509, VOC standards for cleaning products (see details below). 4. Documentation of the program's housekeeping policies and environmental cleaning solution specifications, including a list of approved and prohibited chemicals and practices. Demonstrate that the products used in the project are non-hazardous, have a low environmental impact, and meet the criteria set forth in #3 above. Concentrated cleaning products should be utilized when available.	UConn OEP to work with cleaning contractors to ensure compliance.	SWA UConn	

D		1			1	Credit ID 1.2 **Innovation in Design:** Green Building Education To take advantage of the educational value of the green building features of a project and to earn a LEED point, two of the following three elements must be included in the educational program: 1) A comprehensive signage program built into the building's spaces to educate the occupants and visitors of the benefits of green buildings. Examples include signs to call attention to water conserving features and low VOC emitting materials. 2) The development of a manual, guideline or case study to inform the design of other buildings based on the successes of this project. This manual will be made available to the USGBC for sharing with other projects. 3) An educational outreach program or guided tour could be developed to focus on sustainable living, using the project as an example.	UConn to target compliance. UConn to decide which two of the three requirements will be targeted as the design progresses.	SWA UConn	
D	1				1	Credit ID 1.3 **Innovation in Design** Exemplary performance or use of new innovative technologies.	SSc5.2 - Maximize Open Space	SWA	**COMPLETE**
C		1			1	Credit ID 1.4 **Innovation in Design** Use of new innovative technologies.	WE Credit 3 - Water Use Reduction Innovation Credit feasible due to use of reclaimed water for flushing toilets and urinals.		
C			1		1	Credit ID 1.5 **Innovation in Design** Use of new innovative technologies.	Open		
C	1				1	Credit ID 2 **LEED® Accredited Professional** At least one LEED® AP on the project team.	Team members that hold LEED accreditation and are registered on LEED online for the project may claim Continuing Education Units (CEUs).	Team	

Yes	Likely	Less Likely	No	Possible	Regional Priority	Status / Comments:	Party:	Due by:
2	1	1	0	4				
D 1				1	Credit RP 1.1 **Regional Priority** SSc2 Development Density/Community Connectivity	Community Connectivity met. One RP point is anticipated.	SWA	**COMPLETE**
D 1				1	Credit RP 1.2 **Regional Priority**	SSC3 Brownfield Redevelopment	SWA	
C	1			1	Credit RP 1.3 **Regional Priority**	WEc2 Innovative Wastewater Treatment	SWA	
D		1		1	Credit RP 1.4 **Regional Priority**	EAc2 Renewable Energy (1pt - 1%) or SSc6.2 Stormwater Design - Treatment	SWA	

Yes	Likely	Less Likely	No	Possible			
45	16	14	8	110	**Project Totals** (pre-certification estimates)	110	Points Possible

Certified: 40-49 points, **Silver:** 50-59 points, **Gold:** 60-79 points, **Platinum:** 80+ points

	Project Information Forms		Status / Comments:	Party:
Required	Form 1 **Minimum Program Requirements** Sign off in LEED Online to confirm that all MPR are met. Choose to either report energy and water use data through the Energy Star Portfolio Manager website, or by filling out the downloadable forms from the Energy Star Portfolio Manager and sending them to the USGBC.	Need to determine if project will incorporate permanent water and energy meters. Project must also register with Energy STAR Portfolio Manager or provide utility data to USGBC in an approved way. UConn to complete template on LEED Online.		UConn
Required	Form 2 **Project Summary Details** Provide information in LEED Online, or directly to SWA regarding the project space area and gross square footage, energy and water sources and budget and historic project data.	Complete	**COMPLETE**	Owner, Architect, MEP
Required	Form 3 **Occupant and Usage Data** Provide information in LEED Online, or directly to SWA regarding the Space Usage Type, Project Space Full-Time Equivalence and Project Space Total Daily Occupancy	Must provide FTE and Transients Total Daily Occupancy. Transients should be calculated based on Peak and Daily Average.		Owner, Architect
Required	Form 4 **Schedule and Overview Documents** Provide information in LEED Online, or directly to SWA regarding the schedule of the project. Provide a general LEED Narrative and MEP Narrative for the project. Upload the following Overview Documents to LEED Online: -Representative photos of the exterior of the building, with captions. -Representative photos of the interior project space, with captions -Representative floor plans for the project space. -Project section(s)/elevation(s). -Site plan identifying the LEED project boundary -Schedules for any mechanical systems within project scope -Mechanical plans and/or drawings	MEP to provide mechanical system narratives and drawings.		Owner, Architect, MEP

University of Connecticut

Contractor EHS Manual

Environmental, Health, and Safety (EHS) Requirements for Construction, Service, and Maintenance Contractors

Revision 4
March 2012

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GLOSSARY OF TERMS

ACRONYMS

AEBS	UCONN Department of Architectural, Engineering and Building Services
ACM	Asbestos-Containing Material—any material containing more than 1 percent asbestos
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
BEC	UCONN Building and Emergency Contact
CBYD	Call Before You Dig
CFR	Code of Federal Regulations
ConnDOT	Connecticut Department of Transportation
CT DEEP	Connecticut Department of Energy and Environmental Protection
CT DPH	Connecticut Department of Public Health
DOT	United States Department of Transportation
EH&S	UCONN Department of Environmental Health & Safety
EHS	Environmental, Health, and Safety—a category of topics that relates to and encompasses all of these issues
EPA	United States Environmental Protection Agency
FDA	United States Food and Drug Administration
HASP	Health and Safety Plan
LSO	UCONN Laser Safety Officer
MUTCD	Manual on Uniform Traffic Control Devices (23 CFR 655, Subpart F)
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NEC	National Electrical Code (NFPA 70)
OFMBI	UCONN Office of Fire Marshall and Building Inspector
OEP	UCONN Office of Environmental Policy
OSHA	Occupational Safety and Health Administration
NIOSH	National Institutes of Occupational Safety and Health
NRC	United States Nuclear Regulatory Commission
PACM	Presumed Asbestos-Containing Material
PCBs	Polychlorinated biphenyls
PIV	Powered Industrial Vehicle
PPE	Personal Protective Equipment
PRCS	Permit-Required Confined Space
RSO	UCONN Radiation Safety Officer
SPCC	Spill Prevention, Control and Countermeasure
UCFD	UCONN Fire Department
UCONN	The University of Connecticut -- Storrs-based campuses and Law School
WPCF	UConn Water Pollution Control Facility

I. INTRODUCTION

PURPOSE AND SCOPE

The Contractor EHS Manual contains performance expectations applicable to all contractors and their personnel regarding environmental, health, and safety responsibilities while working at UCONN. To ensure the protection of UCONN's students, faculty, staff, visitors, and property, contractors are expected to provide a safe and secure workplace and operate in an environmentally sound manner. Strong Environmental, Health, and Safety (EHS) programs will prevent injuries, control losses, and minimize environmental impacts. We expect contractors to join us in providing a workplace free of uncontrolled hazards to people, the environment and our campuses.

This Contractor EHS Manual has been prepared for contractors, their subcontractors, visitors, delivery persons and their vehicles, and other vendors servicing the following University of Connecticut (UCONN) campuses: Storrs, Depot, Law School (Hartford), West Hartford, Avery Point, Waterbury, Stamford, Torrington, All Extension Centers, other UCONN Storrs-based campus locations.

All Construction, Service and Maintenance Contractors must comply with all federal, state and local laws, as well as UCONN's EHS policies and procedures and UCONN's Code of Ethics and Harassment Policies. The UCONN EHS requirements in this manual may be stricter than government regulations. This document is a summary of EHS performance expectations. It is not intended to replace or limit the requirements of government regulations or standard industry practice. It is the Contractor's obligation to meet applicable EHS requirements, whether or not they are addressed in this document.

UCONN Contractor Safety Program does not directly manage the safety of contractors or their personnel. UCONN will communicate known hazards. Contractors are expected to manage Environmental, Health, and Safety hazards, risks and programs for their employees and subcontractors. This manual has been published to communicate UCONN's EHS philosophy and expectations to all Construction, Service and Maintenance Contractors that do business with the University.

UCONN EHS POLICIES

Health and Safety Policy Statement

The University of Connecticut is committed to providing a healthful and safe environment for all activities under the jurisdiction of the University. Accordingly, the University has developed the following Health and Safety policy statement:

The health and safety of all students, faculty, staff, and visitors shall be a principal consideration in the planning and conduct of all University activities and programs, and in the design, construction, modification, or renovation of all University buildings and facilities.

This broad policy requires that health and safety regulations of federal and state authorities, and the consensus standards of recognized organizations, are met.

Environmental Policy Statement

In fulfilling its mission as Connecticut's land grant, public research University and its corresponding obligation to protect and preserve natural resources for an environmentally sustainable future, the University of Connecticut commits to the following principles of environmental leadership:

Performance: The University will institutionalize best practices and comply with the spirit and intent of environmental laws, regulations and standards, and continually monitor, report on and improve its environmental performance.

Responsible management and growth: The University will endeavor to design, construct and maintain its buildings, infrastructure and grounds in a manner that ensures environmental sustainability and protects public health and safety.

Outreach: The University will promote environmental stewardship in Connecticut and embrace environmental initiatives in partnership with its surrounding communities.

Academics: The University will advance understanding of the environment through its curriculum, research and other academic programs, and will employ an ethic of environmental stewardship in all intellectual pursuits.

Conservation: The University will conserve natural resources, increase its use of environmentally sustainable products, materials and services, including renewable resources, and prevent pollution and minimize wastes through reduction, reuse and recycling.

Teamwork: The University will encourage teamwork and provide groups and individuals with support, guidance and recognition for achieving shared environmental goals.

We, the community of students, faculty, staff and administration at the University of Connecticut, both individually and collectively, affirm our commitment to act in accordance with these principles.

CONTRACTOR EHS RESPONSIBILITIES

Contractors are responsible for awareness and full compliance with all applicable rules, regulations, laws, and practices applicable to their work and their Subcontractor's Work that are prescribed by UCONN and any federal, state or local government or agency that governs the safety and health of employees, students, faculty, and the general public as well as protection of the environment. These include, but are not limited to, regulations promulgated by the following federal and state agencies: OSHA, EPA, DOT, DOE, NRC, ConnOSHA, CT DPH, CT DEEP and ConnDOT.

Before starting work at UCONN, Contractors must contact the appropriate UCONN Project Representative to exchange pertinent safety information and to review applicable EHS guidelines and standard operating procedures (SOPs).

CONTRACTOR INSURANCE RESPONSIBILITIES

The Contractor agrees that while performing Services specified in this agreement s/he shall carry sufficient insurance (liability and/or other) as applicable according to the nature of the service to be performed so as to "save harmless" the State of Connecticut from insurable cause whatsoever. Prior to commencing work, Contractor shall provide the UConn Project Representative with a Certificate of Insurance (COI) covering all contracted work and support activities. The COI shall name the University of Connecticut, State of Connecticut, its officers, officials, employees, agents, boards and commissions as additional insured. The Contractor shall also provide confirmation of the insurance policy endorsement.

CONTRACTOR SAFETY ORIENTATION

Contractors may be required to attend an orientation session, which covers UCONN Contractor Safety requirements. The orientation, if applicable, is conducted during project pre-construction job meetings and

includes a review of UCONN EHS requirements. As part of this orientation, Contractors will be required to submit the following documents:

1. Mobilization Plan
2. Temporary Utility Plan
3. Schedule
4. Staffing
5. Daily Report Form
6. Health and Safety Plan

Participants will receive a copy of this document. Contractors should use the orientation session as an opportunity to become familiar with UCONN EHS expectations and for questions about applicable UCONN safety procedures.

EHS INSPECTIONS

Contractor work areas may be observed and inspected at any time to ensure compliance with this manual. UCONN, EH&S and OEP staff or their designated representatives may perform inspections. In addition, a neutral third party may be secured by UCONN to perform these inspections. Any deficiencies noted during the inspection must be corrected immediately. Repeat or serious violations could result in disciplinary action and/or expulsion from UCONN property.

CONTRACTOR RECEIPT ACKNOWLEDGEMENT FORM

Contractors shall evaluate the contents of this document as it pertains to the work to be performed on UCONN properties. Contractors shall ensure that their employees and subcontractors understand these requirements. The information in this document should be communicated and jointly enforced by UCONN personnel, Contractors and sub-contractors. In addition, Contractors shall implement a documented disciplinary process for all violations.

An authorized contractor representative and a representative of each of its subcontractors must sign and submit the receipt (Section VIII. CONTRACTOR RECEIPT ACKNOWLEDGEMENT FORM) found at the end of this document prior to commencing work, with a copy submitted to the UCONN Project Representatives (this includes UCONN project managers, project engineers and other designated UCONN representatives). Signatures indicate an acknowledgement and understanding of the requirements of this document.

II. GENERAL REQUIREMENTS

EMERGENCY MANAGEMENT

In an emergency, whether it involves fire, personal injury, or utility, all Contractor personnel must know how to protect themselves and provide immediate notification to emergency response organizations (fire, police, medical, etc.). It is critical that all Contractor personnel know where to find emergency contact information, the location of the nearest phone, fire alarm pull station, fire extinguisher, emergency eyewash station, emergency shower, and exits from the worksite and building. In the event of an emergency, the Contractor must immediately report the emergency by calling 911. Contractors are required to post emergency response information and use the Contractor Emergency Response Information Sheet (see Section VI).

Emergency situations may include, but are not limited to:

1. Accidents and injuries;
2. Observed smoke or fire;
3. Chemical or hazardous material spills;
4. Property damage;
5. Severe weather impacts, and
6. Security threats

When reporting an emergency, please provide the following:

1. Your name, phone number and location;
2. The location of the incident (building name, floor and room number);
3. Nature and extent of the incident (injury, accident, spill, smoke/fire, damage, etc.);
4. The name and amount of the material spilled (if applicable); and
5. The safest route to the spill (if applicable).

UCONN emergency response personnel (UCONN Fire Department) will be dispatched immediately. The Contractor shall wait at the nearest location deemed safe until emergency response personnel arrive.

ENTRANCES AND EXITS

Contractors may use only those entrances and exits designated for the work area. UCONN posts emergency exits with appropriate signs and often equips them with exit alarms to discourage unauthorized use. Contractors who need to disable door alarms shall obtain prior approval from the UCONN Project Representative. Exit doors shall not be blocked. The UCONN Fire Department may also have alarms on some doors that will need to be secured. In addition, doors to restricted areas may not be left unsecured or unmonitored.

INCIDENT REPORTING

In order to maintain a safe and secure work environment, Contractors shall report any incidents or observations that may affect the safety of their personnel, UCONN employees, or UCONN students.

Unsafe acts or behavior - Report unsafe behaviors and conditions immediately to the UCONN Project Representative. Stop work if an imminent danger exists. Work must cease until the Contractor corrects the issue to the satisfaction of the UCONN Project Representative.

Accidents, Injuries, Near-Miss - Within 24 hours of an accident or injury, Contractors shall report details of all such incidents to the UCONN Project Representative and EH&S. The Contractor will document an

accident investigation on all injuries other than first aid cases as defined by OSHA Record Keeping. Guidelines. The Contractor will submit a copy of the accident investigation and corrective actions to the UCONN Project Representative within 48 hours of the incident.

Emergencies - Contractors should be familiar with emergency reporting guidelines and follow the procedures noted in the *Emergency Management* section of this document. Contractors are responsible for implementing their own system for accounting for employees during an emergency. Contractors shall work with the UCONN Project Representative to ensure a system is in place for safeguarding employee safety during an emergency that requires either evacuation or shelter-in-place.

Security Issues - Notify the UCONN Police Department at 860-486-4800, or 911 in the event of an emergency, to report any issue causing a security concern. This may include theft, threats or acts of violence, malfunctioning or disabled security devices and violations of security policies or procedures.

LOADING DOCKS/RECEIPT OF MATERIAL

1. Contractors may utilize UCONN docks for loading or unloading material and equipment. Due to the high volume of UCONN shipping and receiving traffic, Contractors shall make prior arrangements through the UCONN Project Representative or Building Manager. Contractors shall make every effort to unload promptly and move to a designated parking space.
2. Deliveries directed to UCONN's docks should identify whom to contact on arrival. Generally, UCONN cannot receive material not ordered on UCONN purchase orders. In the event these materials are inadvertently received, UCONN assumes no responsibility for their disposition.
3. Workers shall follow loading dock safety procedures. This includes, but is not limited to ensuring dock locks and chocks are utilized during loading and unloading.

LOITERING AND SOLICITATION

Workers are expected to leave the site immediately upon completion of their job/project. Advertising or solicitation of any type on UCONN premises is prohibited.

NON-DISCLOSURE AGREEMENTS

Each Contractor shall sign a UCONN hold-harmless and non-disclosure agreement prior to working in a UCONN facility. Contractors shall return completed forms to the UCONN Project Representative or Purchasing for processing.

PROHIBITED ITEMS

UCONN prohibits alcoholic beverages, illegal drugs, firearms, ammunition and other weapons on its premises. UCONN may refuse entry to any person possessing such items, or suspected of being under the influence of alcohol or drugs.

Individuals (or Contractor crews) found in the possession of alcohol and/or illegal substances will be immediately removed from the site. If alcohol and/or illegal substances are found on-site in a gang box, conex box, office, or vehicle, and the individual(s) responsible cannot be identified, the entire crew will be removed from the site. People "under the influence" of alcohol, illegal substances, or prescription drugs which are incorrectly used shall be removed from the site and suspended for a period of time as determined by the UCONN Project Representative.

The presence of designated drugs in an employee's system or the manufacture, sale, distribution, purchase, possession, dispensing or use of such drugs while on UCONN premises are strictly prohibited. The taking of prescription medication in the manner prescribed by a physician is an exception to this policy provided it does not impair a person's ability to perform his/her job.

Lethal and non-lethal weapons and firearms of all types, excluding knives and other tools used for construction activities, are prohibited from the UCONN Campus at all times.

PROTECTING BUILDING OCCUPANTS AND THE PUBLIC AROUND CONSTRUCTION/RENOVATION ACTIVITIES

Contractors conducting construction/renovation activities shall ensure that the health and safety of the UCONN faculty, staff, students and visitors is not adversely affected. Whenever possible, exposure to physical and health hazards shall be minimized using engineering controls. Containment barriers, barricades, signs and localized exhaust ventilation shall be used. Building occupants and the general public must not be affected by emissions from construction/renovation activities. Contractors shall follow the contractor guidelines of ANSI A10.34 "*Protecting the Public on or Adjacent to Construction Sites.*"

Since the hazards associated with construction and renovation often change as a project progresses, the Contractor must conduct periodic hazard assessments to anticipate and plan for these changes. In addition, activities such as cutting wallboard or other dust-generating operations have the potential to activate smoke detectors/building evacuation alarm systems.

Any changes in planned construction activities shall be brought to the attention of the UCONN Project Representative so the appropriate notification can be made to all affected UCONN staff and students.

SERVICE INTERRUPTIONS

The UCONN Project Representative will coordinate service interruptions with affected UCONN customers. Contractors shall notify the UCONN Project Representative as early as possible in advance of any planned service interruptions, e.g., electricity, air conditioning, water, phone/data. Accidental or unscheduled interruptions shall be reported immediately to Work Order Control: (860) 486-3113 and the UCONN Project Representative.

SMOKING

Smoking is prohibited in all UCONN buildings by state law. Smoking is not permitted near outdoor storage areas for flammable chemicals or when using flammable or combustible liquids outdoors. In addition, Contractors shall refrain from smoking near open windows, doors, or air intakes.

TIMES WORK CAN OCCUR

All Contractor work shall be conducted at the times agreed to within the framework of the contract and discussions with UCONN Project Management. Deviations of work times must be approved by the UCONN Project Representative prior to commencement of Contractor activities outside of normal work times.

TRAFFIC SAFETY AND PARKING

Contractors shall observe speed limits, traffic signs, and other traffic rules. Contractors shall park in areas designated by the UCONN Project Representative. Vehicles parked in fire lanes, reserved areas or roadways are subject to towing. Contractors may not park or drive on sidewalks or landscaped areas unless permitted by the UCONN Project Representative. UCONN is not responsible for Contractor vehicles or their contents. Due to limited parking at UCONN, non-essential vehicular traffic must be minimized.

Service vehicles, material delivery, and construction equipment needed on site must be coordinated in advance with the UCONN Project Representative and UCONN Fire/Police. In addition, the following circumstances will require approval from the designated UCONN Project Representative and the UCONN Fire/Police Headquarters **72 hours prior to start of activity:**

1. Requests for road blockage or restriction must specify: the purpose; the exact location(s); the extent; the preferred date and time; and the required duration of the blockage or restriction.
2. Using access or egress routes that interact with pedestrian traffic flow

Contractors shall provide a traffic flagger for deliveries that require blockage, including partial roadway blockage for equipment or material deliveries. In addition, a review of the job hazard analysis is required to ensure that changes in traffic flow are carried out in the safest manner.

Contractor parking must follow the requirements outlined in the Project Manual. For the Storrs Campus, Contact UCONN Parking Services at (860) 486-4811 for instructions.

WORKING AROUND PERSONNEL IN OCCUPIED SPACES

Within the framework of the President's Policy on Harassment, Contractors are advised that sexual comments, whistling, extended staring, touching or otherwise harassing of UCONN personnel, students or visitors is prohibited. Sexual harassment will not be tolerated. Disciplinary action will be taken.

Student-Occupied Spaces

Entering a student room without prior approval and without an escort from Residential Life or designated University official is prohibited.

In occupied residence halls, the student union, student commons, dining halls, and other facilities where students gather, Contractors must be sensitive to the fact that the safety and comfort of hundreds of students and staff can be affected by the most innocent mistake. Unless approved to do so and accompanied by authorized University personnel, Contractors must not:

1. tamper with/alter/or adjust heating and ventilation equipment
2. tamper with/alter/or adjust valves and controls that could impact water pressure and/or water temperature
3. tamper with/alter/or adjust fire alarms, fire protection equipment, detection systems, emergency exits

The UCONN Project Representatives must be made aware of any authorized alterations to the above listed equipment.

III. CONTRACTOR EHS PROGRAM MANAGEMENT

CONTRACTOR HEALTH AND SAFETY PLAN

Contractors hired to perform work at UCONN, which may involve potentially hazardous activities, shall submit a Site Specific Health and Safety Plan (HASP) to the UCONN Project Representative prior to commencement of the contracted work. The HASP is a working document which incorporates applicable regulatory rules and regulations, UCONN site requirements, UCONN Environmental, Health, and Safety procedures and requirements, and any other standards (e.g., ANSI, NFPA, etc.) that may be applicable to the UCONN campuses and their facilities. The HASP shall be readily available on site and shall be job/site specific to identify potential hazards and necessary protection to protect Contractor employees, UCONN staff, students and visitors. Construction contractors shall also include safety and health considerations related to multi-employer worksites, in accordance with ANSI/ASSE A10.33-2011 *Safety and Health Program Requirements for Multi-Employer Projects.*

The HASP is to be continuously updated as the project development dictates. Revisions to the HASP shall be submitted immediately to the UCONN Project Representative or their designee.

The HASP Contents may include but not be limited to:

1. Project Description
2. Project Health and Safety Organization
3. Hazard Assessment
4. Training Requirements
5. Personal Protective Equipment
6. Medical Surveillance
7. Air Monitoring and Air Borne Particulate Control Plan
8. Site Control Measures
9. Personal Hygiene, Sanitation and Decontamination
10. Emergency Response and Contingency Plan
11. Public Control Plan
12. Work Zone Safety Plan
13. Posted Regulations
14. Logs, Reports, and Recordkeeping
15. Spill Prevention Control and Countermeasure Plan for Oil and Hazardous Materials

EHS PROGRAM ENFORCEMENT

It is the responsibility of each Contractor to comply with this manual as well as all applicable federal, state, local, and UCONN requirements. Violations will be brought to the attention of the personnel involved and the responsible supervisory personnel. Identified violations must be promptly addressed and corrected. Violations may result in work stoppage (at the Contractor's cost) and will result in progressive enforcement action that range from temporary to permanent expulsion of personnel from the site. If the violations are severe or repetitive, the Contractor may be prohibited from working for the University of Connecticut. If a Contractor fails to correct a problem, UCONN reserves the right to take corrective action and back-charge the cost of any corrective action to the Contractor. Contract language enables UCONN to dismiss any individual, crew, or Contractor who fails to comply with the UCONN safety and security rules and regulations.

Contractors may be required to take other corrective actions, such as conducting an incident review, stopping work, holding safety reviews for the entire crew or company, providing increased training of employees, etc. at the discretion of UCONN.

SAFETY INSPECTIONS

Contractors are required to conduct and document safety inspections of their work areas and practices, and those of their subcontractors. Contractors shall immediately correct hazardous conditions noted. Contractors shall maintain records of these safety inspections and provide them to the UCONN Project Representative upon request.

SAFETY REPRESENTATIVE

The Contractor may be asked to assign a representative to monitor compliance with EHS requirements. The Contractor shall provide 24-hour, emergency contact numbers or list to the UCONN Project Representative. The Contractor's Safety Representative may be an individual located off campus. However, for large projects or special hazards, UCONN may require the Contractor to provide a dedicated Safety Representative, such as an OSHA-required "competent person." The UCONN Project Representative and EH&S will determine the need for an on-site Safety Representative.

Competent Persons

Regulations require "competent persons" for situations, such as, crane operations, electrical safety, excavations, fall protection, and scaffolds. UCONN expects (where applicable) Contractors to have trained competent persons within line of sight of such activities. UCONN management will periodically audit projects requiring competent persons. If a qualified competent person is not available, work will be stopped.

TRAINING

Contractors are fully responsible for the training of their employees assigned to work at UCONN. When training is required by law or regulation (e.g., hazardous waste operations or asbestos workers), the Contractor shall ensure that only trained workers are assigned to work at UCONN. In addition to meeting the regulatory requirements, it is UCONN's expectation that all personnel shall be adequately trained in proper techniques to safely perform the job assigned to them. Contractor personnel may also be required to complete certain UCONN-specific training prior to beginning work. Contact the UCONN Project Representative for additional guidance. Contractor training certificates shall be submitted along with the Health and Safety Plan to the UCONN Project Representative prior to commencing contract work.

Contractors shall be in compliance with State of Connecticut **Public Act No. 08-83**: An Act Concerning Construction Safety. The Public Act requires that the Contractor on all state or municipal renovation or repair projects of $100,000 or more, or on new construction projects of $400,000 or more, provide that its employees have completed safety training as follows: all mechanics, laborers, or workers must complete a 10-hour construction safety course conducted in accordance with federal Occupational Safety and Health Administration (OSHA) Training Institute standards. Telecommunications workers must complete 10 hours in federal OSHA telecommunications safety training. Proof of up-to-date course or training completion must accompany the first certified payroll for the first week that each employee begins work on the project. Training must have been completed no earlier than 5 years before commencement of the Project.

IV. HEALTH & SAFETY REQUIREMENTS

BLASTING AND THE USE OF EXPLOSIVES

Prior to engaging in projects involving the use of blasting or explosives, the Contractor must submit a comprehensive Blasting Plan to the UCONN Project Representative for review and approval. The plan must include, but not be limited to, the following elements:

- Pre-Blast Surveys and Seismographic Locations
- Site Safety and Job Hazard Analysis
- UConn Notification Procedures
- Blasting Monitoring
- Sequence of Blasting
- Blasting Procedures
- Blasting Mats
- Blasting Security & Warning Whistles
- Explosives information—type, quantity, transportation, storage, etc.
- Blasting Personnel
- Blaster Qualifications
- Blast Vibration
- Blast Reports
- Typical Blast Design

It is the responsibility of the Contractor to determine if any special licenses and permits are required to perform blasting operations at the work site, and to obtain those licenses and permits as part of the project. Copies of all plans, permit applications, licenses and any approvals shall be provided to the UCONN Project Representative prior to commencing work. Blasting operations shall comply with all federal, state and local regulations, including NFPA 495 and the Connecticut General Statutes 29-349 - Storage, transportation and use of explosives and blasting agents.

The Contractor shall ensure that explosive materials are stored in a manner consistent with applicable regulations and shall never store more than a one-day supply of explosives on a UCONN work site. Any excess explosive material must be removed from campus immediately. Contractors shall account for all explosives at all times and report any missing explosives to the UCONN Public Safety Communications Center at (860) 486-4925, and to the UCONN Project Representative, as soon as the loss is discovered.

Only trained, qualified and authorized individuals may handle and use explosives. Contractors shall employ the use of signs, barricades, flags, audible and visual warning devices and any other means indicated to ensure the safety of the workers and the surrounding public.

Contractors must take precautions to prevent the accidental discharge of electric blasting caps from current induced by radio transmitters (pagers, cell phones, radios), radar, lighting, adjacent power lines, dust storms, or other sources of extraneous electricity. The Contractor shall indemnify UCONN for fines, penalties or other legal exposures caused by blasting operations.

CHEMICALS, HAZARDOUS MATERIALS and HAZARD COMMUNICATION

1. Chemicals and hazardous materials used at UCONN shall be accompanied by a Material Safety Data Sheet (MSDS). Prior to use of the material(s), Contractors shall provide an MSDS to the UCONN Project Representative for distribution to affected University personnel. MSDSs are required for various chemicals, solvents, paints, thinners etc., in the workplace.
2. Contractors and their employees shall comply with all regulatory requirements in the management of the chemicals and hazardous materials they use at UCONN. Contractor personnel should be thoroughly familiar with the information contained in the MSDS and shall use the materials safely. If the use of the material has the potential for exposure to UCONN personnel (students, faculty, employees or residents) EH&S must be consulted before starting the job via the UCONN Project Representative. The MSDS must be forwarded to EH&S and the neutral third party health & safety inspector for review, as appropriate. EH&S is available to make recommendations to minimize occupant exposures to chemicals or hazardous materials. Contractors shall be aware that vapors and/or odors from chemicals can travel long distances. Every attempt shall be made to minimize or eliminate the potential for exposure.
3. The UCONN Project Representative, upon request, will provide Contractors with a written copy of the Hazard Communication Program and chemical inventory for the areas in which the Contractor will be working. The UCONN Project Representative, upon request, will make available to the Contractor an opportunity to review the MSDSs on file for areas where hazardous chemicals are used and stored for work areas where they will be working. A copy of the UCONN Hazard Communication Policy is available for review by the Contractor at: www.ehs.uconn.edu/occ/hazcom.pdf
4. Contractors shall provide secure and compliant storage, containers, and spill control for chemicals (including fuels and oils) stored on open ground or other areas lacking spill containment. See the Environmental Protection section of this document.
5. Contractors shall immediately report any oil or chemical spill or release to the UCONN Fire Department by dialing 911 while on the Storrs or Depot Campuses, and also by notifying the UCONN Project Representative. UCONN may ask the Contractor to notify government agencies, if required by federal and state environmental laws governing spills and releases. See the Environmental Protection section of this document.
6. Contractors are fully responsible for responding to oil and/or hazardous material spills resulting from their actions or from their failure to provide adequate safeguards, including without limitation the full cost of the response and any associated clean-up. The UCONN Project Representative will notify OEP of any spills or releases that the contractor reported to the UConn Fire Department and will consult with EH&S to ensure that any waste generated is properly removed and disposed. If the Contractor fails to perform any action required, UCONN, at its option, may complete the action at the Contractor's expense. The Contractor shall indemnify UCONN for fines, penalties or other legal exposures caused by the spill.
7. Contractors are responsible for managing their chemical containers according to federal, state, and local regulations. Contractors shall remove any remaining chemicals or hazardous material products within 24 hours of their completed use on a project, unless approval is received from the UCONN Project Representative to leave the material on site.
8. UCONN Contractors that generate waste materials will comply with all regulatory and UCONN requirements. Contractors may not discharge chemicals or wastewater to drains without the written approval of the UCONN Project Representative. See the Environmental Protection section of this document.
9. Contractors shall use the minimum quantity of chemicals necessary to perform the day's work. Portable containers shall not exceed five-gallon capacity without a UCONN Project Representative's and EH&S' approval.

10. Special precautions shall be observed prior to using any chemicals or hazardous materials in mechanical, electrical or air distribution rooms. The UCONN Project Representative and EH&S must be notified prior to use of chemicals in these areas.

COMBUSTION ENGINES – INDOOR

1. Contractors shall not operate combustion engines, such as those in vehicles, compressors, generators, welding machines and power tools, inside buildings unless they connect the exhaust to an approved venting system.
2. Do NOT refuel with the engine running. Contractors shall store fuel (gasoline, diesel and/or LPG) outside UCONN buildings in approved and appropriately marked containers and compliant storage areas.
3. In most instances, UCONN prohibits the use of propane-fueled vehicles inside buildings. The lifting tasks of some projects, however, may require propane-fueled lift equipment. In such cases, the Contractor shall consult with the UCONN Project Representative and EH&S.

COMPRESSED AIR

Workers using compressed air to clean chips and dirt from surfaces shall direct the air stream away from other workers or the public. A nozzle shall be used that restricts air pressure to a maximum of 30 psi.

COMPRESSED GAS CYLINDERS

1. Cylinders shall be properly secured and labeled to identify contents in accordance with OSHA's Hazard Communication Standard (1926.350, 1910.1200).
2. Workers shall close valves when cylinders are idle, empty or moved. Valve protection caps shall be in place when cylinders are moved or stored.
3. Contractors shall keep cylinders a safe distance or shielded from Hot Work.
4. Contractors shall comply with OSHA requirements and consensus standards from the Compressed Gas Association on the separation of cylinders containing incompatible chemicals. Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 feet or by a noncombustible barrier at least 5 feet high having a fire-resistance rating of at least one-half hour. A cart with oxygen and fuel-gas cylinders is in storage when it is reasonably anticipated that gas will not be drawn from the cylinder within 24 hours (overnight hours included). At that point the storage requirements must be met.
5. Regulators, hoses and torch assemblies shall be in working order and checked for leaks prior to initial use or installation. If a leak develops, remove the cylinder to a safe location outside the building.
6. Compressed gas cylinders shall never be brought into confined spaces.

CONFINED SPACE ENTRY

Contractors who may need to enter a confined space at UCONN as part of service delivery shall conduct entry under a Permit-Required Confined Space (PRCS) program in compliance with OSHA 29 CFR 1910.146. Permit-required confined spaces may include, but are not limited to, storage tanks, in-ground vaults, boilers, trenches, manholes, lift stations, and valve pits. A listing of known permit-required confined spaces at UCONN can be found in the UCONN Confined Space Entry Policy at: http://www.ehs.uconn.edu/occ/CSPOL.pdf

If during the course of work, the Contractor encounters a confined space that has not been previously identified by UCONN, the Contractor must notify the UCONN Project Representative so that the space can be assessed by the UCONN Project Representative in consultation with EH&S.

Prior to conducting work in or around a Permit-required Confined Space, Contractors shall notify the UCONN Project Representative. Upon this notification, UCONN shall provide the Contractor with information relative to the known or anticipated hazards of the space. Upon completion of the confined space entry, the Contractor will notify the UCONN Project Representative and provide information on any unexpected hazards that were encountered. **This sharing of information shall be made using the Permit-required Confined Space Pre- and Post- Entry Review Form** (see Appendix C of the UCONN Confined Space Entry Policy): http://www.ehs.uconn.edu/occ/doc/CSAPPC.pdf. **This form can also be found in Section VI of this manual.**

Contractors are expected to comply with the OSHA Permit-required Confined Space Standard. Therefore, they are expected to:

1. Have a permit space entry program in place that meets the OSHA standard.
2. Ensure their employees are properly trained.
3. Have and use the equipment and resources available to ensure a safe entry, including atmospheric testing equipment, protective clothing, hard hats, respirators, life-lines, ventilation equipment and safety harnesses etc.
4. Notify the UCONN Fire Department at 860-486-4925 prior to conducting any permit entry on the Storrs Campus.
5. **Provide for emergency rescue. The Contractor must arrange for the appropriate level of rescue services required based on the potential for the types and severity of the rescue that may be required. Documentation on the rescue procedure, authorized rescuers, training and equipment must be available on site prior to conducting confined space entries requiring rescue services.**

The use of UCONN services or equipment by Contractors to perform an entry is strongly discouraged. If UCONN and Contractor personnel will be working together during an entry, or an unforeseen circumstance requires the use of UCONN services or equipment, the UCONN Project Representative must use the **Permit-Required Confined Space Waiver and Release Waiver Form** in Appendix C of the UCONN Confined Space Entry Policy. **This form can also be found in Section VI of this manual.**

CRANES AND HOISTS

1. The Contractor shall not use UCONN-owned or leased crane or hoist equipment, unless contractually indemnified to do so or unless they have signed a separate indemnification authorizing them to do so.

2. Before lifting the first load of the day, the Contractor shall verify the hoist system will operate properly by conducting documented inspections. These inspection documents should be made available upon request of the UCONN Project Representative.
3. Contractors shall not leave suspended loads unattended. When moving a suspended load, the operator shall assure personnel are clear of the path of transport. Workers will not stand or walk under suspended loads.

4. Crane operators and riggers shall be thoroughly trained and competent in the use of such equipment. The Contractor shall provide a "competent person" (as required by OSHA) to oversee and/or perform lifting operations.
5. Contractors shall establish a restricted work area using barricades and other appropriate controls to minimize the hazards to personnel from swinging or falling objects. See the "SIGNS, SIGNALS AND BARRICADES" section of this document for details. The work area boundary must be created in response to the level of potential pedestrian traffic that could be expected to pass through. At a minimum, in light traffic areas, a boundary shall be set up with snow fencing on stanchions, posted with red "DANGER- Do Not Enter" tape and enough ground crew personnel to challenge any pedestrians who wish to pass through. If an unauthorized person enters the work zone, all work must stop. If the lifting work zone will be set up in high pedestrian traffic areas, then portable chain link fencing may be necessary to channel traffic around the work zone. As an option, performing the picks during early morning hours or weekends can preclude the use of fencing in these areas, but snow fencing, danger tape and ground crew requirements remain.
6. Contractors shall ensure that all building exits that open into the work zone are monitored by ground crew personnel to prevent pedestrians from exiting into the work area. If building exits need to be blocked, permission to do so must first be obtained from the UCONN Fire Department, as these exits may be necessary for fire egress.

ELECTRICAL SAFETY

Energized electrical equipment and services represent a significant hazard on every job site. OSHA's electrical standards (29 CFR 1926.400) address the long-held recognition that electricity poses a serious workplace hazard, exposing employees to such dangers as electric shock, electrocution, fires and explosions. OSHA's regulations related to electrical safety recognize two key hazard management tactics: elimination of the hazard through shut down and isolation (Lock Out / Tag Out 29 CFR 1910.147); or when live circuits must be maintained, the use of Energized Work Permits and protection from contact through the use of guarding, insulation, and protective equipment.

There are other considerations related to electrical systems that must not be overlooked. The National Electric Code (NEC) and NFPA 70E define design, proper installation and worker safety parameters associated with electrical systems maintenance and installation, as well as PPE that must be worn in potential arc-flash areas.

Not only must employee contact with electrical systems be avoided, fires and explosions due to overheating and arcing of electrical systems must be prevented as well. Some UCONN facilities contain "rated" areas where "explosion-proof" or intrinsically safe lights, conduits, motors, controllers, and switches are used to prevent the ignition of flammable or explosive liquids and gases. Accidental use of non-rated equipment (such as cell phones, power tools, radios) in these areas could have catastrophic consequences.

The following is a partial list of items to consider when working with or near energized systems:

1. Contractors will comply with OSHA Subpart K Electrical regulations and the current editions of the National Electric Code and NFPA 70E.
2. Contractors will comply with section 4.3 of UCONN's Electrical Safety Program.
3. Contractors must identify and document competent and qualified persons properly trained, licensed and protected.
4. Contractors shall comply with the OSHA "Lock-Out/Tagout" Standard (29 CFR 1910.147) when working with de-energized equipment or circuits. Contractors shall identify the switches that energize the

affected circuits or equipment. Due to their ability to store residual electrical energy, medium and high voltage circuits shall be grounded on both sides of affected workers. Contact the UCONN Project Representative for assistance in identifying the locations of energy isolating devices.

5. All permanent and temporary electrical work shall be done in accordance with National Electric Code, OSHA and other applicable standards.
6. Contractors installing electrical service will label circuit breakers and disconnect panels as to their purpose.
7. The responsible Contractor shall properly tag temporary feeder wiring at the source for identification purposes.
8. Exposed voltage in occupied areas shall be attended by a Contractor employee or be posted and barricaded by the Contractor within an enclosed radius safe area as recommended per NFPA 70E.
9. Electrical equipment inspection is to be done in accordance with the manufacturer's specifications, or on a quarterly basis at a minimum. Records of these inspections shall be made available upon request.
10. Frayed or cut electrical cords, or cords with damaged plugs or missing ground plugs shall be immediately removed from service, rendered unusable, and removed from the site.
11. The UCONN Project Representative reserves the right to confiscate and destroy any defective tool or cord immediately upon discovery if the defective tool or cord has not been rendered unusable.
12. Electrical connections shall be coordinated with a UCONN electrician.
13. Electrical tie-ins shall be conducted only on de-energized (locked out and tagged out) systems.
14. Unauthorized, live tie-ins to electrical services are prohibited and will result in the immediate and permanent exclusion of the worker from all UCONN facilities.
15. After a Contractor performs repairs, maintenance or installations, and before UCONN qualified employees attempt to re-energize the electrical equipment, verification shall be performed to ensure that the electrical equipment components are operationally intact and that no electrical hazard exists upon re-energization. This verification can be performed by qualified persons from the UCONN Facilities Electric Shop or a qualified third party, at the discretion of the UCONN Facilities Electric Shop supervisor.

EMERGENCY EQUIPMENT

Contractors may not block or obstruct access to emergency equipment, such as self-contained breathing apparatus, first aid kits, eyewash stations, safety showers, fire extinguishing equipment, fire hydrants, transformers and emergency generators. Contractors may not relocate, obstruct or disable emergency equipment without prior permission of the UCONN Project Representative.

EXCAVATION AND TRENCHING

1. Prior to excavating or trenching, Contractor shall be responsible for utility marking, signage and barricades, shoring, and following applicable confined space entry procedures.
2. The Contractor shall mark "limits of proposed excavation" locations of underground utilities before digging and contact "Call Before You Dig (CBYD 800-922-4455 or http://www.cbyd.com) as required by law. This is necessary to prevent service interruption or hazards from damaged utility lines. Hand digging is required near underground facilities such as electrical, gas, water or steam lines.

3. The Contractor shall comply with the OSHA Excavation Standards (29 CFR 1926.650) and other regulatory requirements associated with the work. If the Contractor encounters any suspect material (i.e., discolored soil, pipe not on UCONN's excavation package drawings, asbestos, etc.), the Contractor shall stop immediately and contact his UCONN Project Representative. If the soil is contaminated, UCONN OEP and EH&S will arrange for its proper removal and disposal.
4. The Contractor shall place conspicuous warning signage and barricades or fencing on all sides of a trench or excavation to prevent pedestrians from crossing the opening.
5. The Contractor shall provide a "competent person" as required by OSHA Excavation Standards (29 CFR 1926.650) to inspect the excavation area and protective systems. Excavations greater that 20 feet deep require excavation protection plans that are designed and executed under the supervision of a professional engineer licensed in the State of Connecticut. This would apply to sloping, use of trench shields (trench boxes) and shoring systems.
6. Contractor shall utilize the appropriate protective system (sloping, trench shields (trench boxes) or shoring per 29 CFR 1926.650 for all excavations five feet or greater in depth and/ or as site conditions require. Excavation and trench work at shallower depths may require protection when the workers' chest height is less than the depth of the excavation or trench.
7. Ramps shall be constructed in accordance with 29 CFR 1926.651 by a competent person, as defined by the OSHA Excavation Standard.
8. Contractors shall backfill as soon as possible once the work has been completed. To the extent possible, Contractors shall backfill by the end of each workday to avoid the hazards of open excavations, particularly at night. For projects that cannot be back-filled by the end of the day, the Contractor shall adequately barricade or fence the excavation and/or provide steel plate covers.

EYEWASHES AND SAFETY SHOWERS

1. Contractors are responsible for supplying eyewash and safety showers for their employees while performing work on the UCONN campuses. They will ensure these units are in full operational compliance for use during an emergency.
2. If no permanent unit is available, then a temporary unit shall be provided and utilized by the Contractor. The Contractor is responsible for assessing the adequacy of all units to be used, whether permanent or temporary, and to ensure that they are in full operations compliance.

FALL PROTECTION

Contractors shall provide fall protection for its employees, as required by 29 CFR 1926.500. Fall protection is required in areas where the fall hazard is 6 feet or greater from the worker's foot-level, or where the individual is working over dangerous equipment.

Contractors shall provide adequate protection where there is a potential for endangering persons below. Contractors shall isolate such work areas to protect persons from falling objects. In addition, the Contractor shall barricade and monitor an area of twenty-five (25) feet minimum radius from such work to prevent unauthorized personnel from entering the hazard area. If the Contractor cannot establish this secure area due to operational constraints, then the work must be scheduled during off-shift hours.

Users of fall protection equipment shall perform a documented inspection of their equipment before each use. Workers shall raise and lower tools and equipment to overhead work areas through the use of aerial work platforms or ropes and tethers. Throwing or dropping tools and equipment is prohibited.

Floor Openings

Working within six feet of a floor opening (skylight, hole, open hatch, etc.) requires appropriate fall protection. Floor openings (holes) shall be protected with a fixed cover, using materials of sufficient strength to support any imposed load or to equal the design floor loading capacity, or shall be guarded by a standard OSHA-compliant fixed railing system with toe boards on all exposed sides except at entrances to stairways.

When floor openings are protected with covers, the cover shall be clearly marked: **"Danger- Hole – Do Not Remove."** To minimize the exposure time, openings in floors shall not be cut until the last practical moment, and then only by the Contractor who will utilize or fill this floor penetration. For example, the concrete for a floor penetration in an elevated slab may be boxed out, but the decking must be left in place to be cut by the mechanical Contractor who will utilize the penetration. Precut holes in slabs and metal decking are discouraged. The Contractor that cuts the floor opening shall be responsible to maintain it, unless "ownership" is transferred to others in the contract documents.

Ladders

The following guidelines apply to all UCONN facilities per OSHA 29 CFR 1926.1053:

1. All ladders must be in good condition and free of any broken or defective parts.
2. Metal or conductive ladders are prohibited from use for electrical work or within 10 feet of overhead power lines at UCONN worksites.
3. Any ladders with broken or split rails, rungs, steps, or any defective parts must be removed from the UCONN property.
4. Workers shall not place ladders in door swing areas unless the door is locked or otherwise blocked from striking the ladder. Blocking exit doors may require permission from the OFMBI.
5. Ladders must extend a minimum of (3) three feet beyond the landing surface and be securely tied at this point to prevent any movement. When used against beams, pipes, or similar supports, workers shall secure ladders to prevent shifting, slipping, or being knocked over.

Roof Work

Working on a roof within six feet of the edge requires appropriate fall protection (railings or warning lines with safety monitors or personal fall protection).

Contractors shall not work on roofs without prior approval from the UCONN Project Representative. Access to the roof will be controlled. Only authorized persons designated by the Contractor shall be granted access. Contractor must obtain other appropriate permits as needed e.g., Hot Work, Confined Space Entry, etc. before working on roofs.

Rooftop Exhaust Fan Policy

UCONN has developed a Rooftop Exhaust Fan Policy to protect its employees from potential hazards related to rooftop exhaust fan maintenance and operation and is available for review at: www.ehs.uconn.edu/occ/ExhaustFan99.pdf.

FIRE PROTECTION IMPAIRMENTS

1. Contractors shall take precautions to prevent damage to fire protection systems. Report damage immediately to the UCONN Project Representative.
2. Except in emergency conditions, Contractors may not operate any fire protection valve/fire hydrant without prior approval of the UCONN Project Representative and Fire Department.

3. Contractors who need to disable a fire protection system shall contact the UCONN Project Representative and the UCONN Fire department. Notify the UCONN Project Representative of any planned fire protection impairment at least twenty-four (24) hours in advance to obtain for an approval to shutdown. This applies to sprinklers, fire mains, fire pumps, and fire alarm system components.
4. During fire protection equipment impairments, all operations that present a fire hazard will be suspended. These would include all types of hot work. Fire protection systems should be restored as soon as possible by the end of the workday. Fire watch personnel may be required during fire system impairments.
5. Contractors shall not suspend materials or equipment on sprinkler pipes, valves or supports.

FIRE SAFETY

1. Contractors should be familiar with the location of fire alarm activation devices (pull stations), portable fire extinguishers and at least two exit routes from the work area. Contractors shall not obstruct access to exits, exit routes or fire equipment or prop open stairwell doors.
2. All fires shall be reported by activating the nearest fire alarm station, followed by dialing the appropriate UCONN EMERGENCY NUMBER or 911.
3. Contractors shall be trained in the proper use of portable fire extinguishers if conducting fire watch duties. Contractor-supplied fire extinguishers shall be clearly marked and have current inspection. Contractors shall provide their own portable fire extinguishers for any hot work unless other arrangements have been made with the UCONN Project Representative.
4. Flammable and combustible liquids are easily ignited and thus shall meet all the labeling, use, storage and disposal requirements outlined in the Chemicals and Hazardous Materials section in this document.
5. Only the UCONN Fire Department shall open a fire hydrant or standpipe. Contractors may not use UCONN fire hoses unless prior approval has been obtained from the UCONN Project Representative and Fire Department. Water supply flow tests shall be arranged with EH&S, UCONN Fire Department, Facilities and FM Global.
6. Contractors performing welding, torch cutting, soldering, grinding, using high temperature heat gun and other forms of "Hot Work" shall adhere to the special requirements listed in the Hot Work section of this document. Hot Work shall not be conducted during times when sprinkler systems have been impaired.
7. Provide a fire extinguisher as prescribed by UCONN Fire Marshall in the construction areas, along with evacuation plans and Air Horns for emergency signals. The use of an air horn and evacuation plans should be described within the Contractor's Site Specific Health and Safety Plan.

FIRST AID AND MEDICAL SERVICES

Contractors are responsible for ensuring that first aid and medical services are available for their employees. UCONN is available to assist with emergency first aid, as necessary. Dial 911 to summon emergency assistance. The Contractor is responsible for recording and reporting injuries and illnesses as required by OSHA.

HOT WORK

UCONN utilizes and enforces the use of a Hot Work permit system to help minimize the risk associated with Hot Work. We encourage Contractors to provide suggestions/alternative methods on ways to avoid Hot Work. For instance, can bolted flanges be used? Can the welding be conducted outside? If Hot Work will be performed, it is UCONN's expectation that Contractors document a job-specific hazard assessment. All

flammable and combustible materials shall be removed from the area. The assessment also includes evaluating other work in the vicinity that has the potential to create a hazard. The Contractor shall meet or exceed all regulations and industry standards when conducting Hot Work.

1. Contractors shall contact the UCONN Fire Department to obtain a Hot Work Permit for any temporary operation involving open flame or which produces sparks. This includes, but is not limited to welding, cutting, grinding, brazing, and torch-applied roofing. In order to obtain the permit, contractors shall present a copy of the UCONN Hot Work Permit to the UCONN Fire Department (Storrs Campus only). Hot Work Permits are issued by the UCONN Facilities Manager at regional campuses.
2. The UCONN Project Representative or designee will serve as the Hot Work Authorizer. The Hot Work Permit should be valid for only one job on one shift, unless other arrangements have been agreed upon.
3. Fire protection equipment and protective materials (fire blankets, portable exhaust ventilation etc.) shall be at the Hot Work site before the work begins.
4. A designated fire watch may be required during Hot Work. The Contractor must provide trained personnel for this duty or may be required to hire a fire fighter detail for this purpose. If the fire watch observes unsafe conditions during the Hot Work operation, he/she shall stop the work until the hazard is eliminated.
5. The Contractor will verify Hot Work equipment is in proper working order and in a fire safe condition. As the Hot Work Authorizer, the UCONN Project Representative or designee may choose to inspect the Contractor's equipment before issuing the permit and may request the removal of unsafe equipment from the site.
6. Contractors shall use non-combustible or flameproof shields to protect nearby personnel from direct rays of welding arcs (asbestos blankets are prohibited).

HOUSEKEEPING/MAINTENANCE OF SITE

Each Contractor and all his employees are responsible for maintaining high standards of cleanliness and orderliness; anything less is unacceptable.

Housekeeping must be addressed on a continuous basis. Sloppy work practices will not be tolerated. In occupied buildings the work area shall also be mopped daily. Hazardous, flammable, trash, and/or excess waste material is to be removed from the work area daily.

The second aspect of housekeeping is maintaining construction materials in a neat, consolidated, and organized manner. Deliveries shall be sequenced so that only 1 week's worth of materials at most are on site at any given time, unless the Contractor has been given a specific lay down area in the contract documents for his use. Unused or excess/scrap materials shall be promptly removed from the site.

1. Temporary cords or hoses shall be supported at least six feet above the floor when routed across aisles. If this is not possible, cords and hoses shall be secured to the floor and protected from damage to eliminate trip hazards. The area shall be properly marked with appropriate warning signs or traffic cones to alert pedestrian traffic.
2. Workers shall place waste materials in proper containers. The Contractor will keep work areas clear of form and scrap lumber and other debris. Contractors will remove all waste materials and debris daily.
3. Contractors will place equipment and materials so as not to block exits, aisles, doors, stairs, ladder ways, emergency equipment or electrical panels.
4. Workers will remove nails and other sharp objects protruding from surfaces and will sweep up loose nails and screws.

5. Contractors may not store tools and equipment above work areas. Workers shall not leave materials in plenum spaces such as air handling rooms.
6. UCONN supports recycling. Contractors are encouraged to recycle discarded materials such as wood, cardboard, steel, copper, wire, etc. Contact the UCONN Project Representative for proper disposition of these recyclable materials. See the Environmental Protection section of this document.
7. Upon completion of certain projects, Contractors may be required to provide the UCONN Project Representative with documentation which indicates the amount of material recycled or disposed of.

LASER DEVICES

Contractors shall inform the UCONN Laser Safety Officer (LSO) (860-486-3613) directly or via the UCONN Project Representative of any intent of bringing a Class IIIb or IV laser onto UCONN property. The laser system and its usage must fulfill the latest specification of ANSI Z136.1 and OSHA 29 CFR 1926.54.

LOCKOUT/TAGOUT – Control of Hazardous Energy

The Contractor will assure proper isolation and control of hazardous energy on affected equipment and machinery. Contractors will comply with the OSHA "Lock-Out/Tagout" Standard (1910.147) including training and equipping workers. Contractors are expected to maintain a written program and work cooperatively with UCONN personnel for multiple lockouts. The University's Lockout/Tagout policy is for review to Contractors at: www.ehs.uconn.edu/occ/LOTO.pdf

Lockout/Tagout procedures must be exchanged and coordination of procedures must be discussed between the Contractor and UCONN during a pre-job meeting. All concerned University employees must be effectively informed of the restrictions and prohibitions associated with the Contractor's Lockout/Tagout procedures. See also the Electrical Safety section of this document.

MANUAL LIFTING/MATERIAL HANDLING

Workers who are required to lift as a routine part of their job shall have been trained in effective and proper lifting techniques. Wherever possible, workers shall use lifting aids such as carts, pallet jacks, lift gates, and hoists. Workers shall not overload carts to the point where the load is unstable or unsafe during movement. See the Cranes and Hoists and Industrial Powered Vehicles section of this document.

MOBILE EQUIPMENT/WORK PLATFORMS

1. Unless permitted by the UCONN Project Representative, and supported by appropriate indemnification in the contract language, Contractors shall not use UCONN-owned or leased aerial work platforms.
2. Contractors shall ensure that only trained and authorized personnel operate mobile equipment, such as extendable boom lifts, scissors-type lifts, and cranes. The Contractor shall provide trained personnel to assist the operator in clearing building fixtures or other obstructions when raising, lowering or advancing the equipment.
3. Contractors shall conduct a documented inspection of equipment prior to each day's use to assure it is in safe operating condition. Workers shall replace or repair defective equipment before bringing it on site.

4. For outdoor projects, workers may not operate cranes, aerial platforms, power shovels, or similar equipment within fifty (50) feet of overhead utilities without prior approval from the UCONN Project Representative.

Aerial Lifts

Only documented, trained and authorized personnel shall be allowed to operate Aerial Lifts per 29 CFR 1926.453. Aerial lifts (boom lifts) shall only be used for lifting personnel and their tools and must not be used as material hoists. The manufacturer's load limitations and operating requirements must be complied with. Personnel working in aerial lifts must be tied off to anchorages specifically designed for that purpose (railings do not meet fall protection anchorage requirements). Aerial lifts that are not equipped with such anchorages shall not be used. Work shall only be accomplished from the floors of the baskets and must not involve climbing on basket railings, ladders, or other elevating platforms. OSHA defined Frequent and Periodic inspections will be performed in accordance with manufacturer's recommendations. Copies of these inspection reports shall be kept on site. Belting off to an adjacent pole, structure or equipment while working from an aerial lift shall not be permitted.

If the work area is not included in a chain-link fenced area, contractors shall establish a restricted work area using barricades and other appropriate controls to minimize the hazards to personnel from falling objects or lift movements. See the "SIGNS, SIGNALS AND BARRICADES" section of this document for details. The work area boundary must be created in response to the level of potential pedestrian traffic that could be expected to pass through. At a minimum, in light traffic areas, a boundary shall be set up with snow fencing on stanchions, posted with red "DANGER- Do Not Enter" tape and enough ground crew personnel to challenge any pedestrians who wish to pass through. If an unauthorized person enters the work zone, all work must stop. If the lifting work zone will be set up in high pedestrian traffic areas, then portable chain link fencing may be necessary to channel traffic around the work zone. As an option, performing aerial work during early morning hours or weekends can preclude the use of chain link fencing in these areas, but snow fencing with danger tape and ground crew requirements remain.

Contractors shall ensure that all building exits that open into the work zone are monitored by ground crew personnel to prevent pedestrians from exiting into the work area. If building exits need to be blocked, permission to do so must first be obtained from the UCONN Fire Department, as these exits may be necessary for fire egress.

NOISE

Contractors are required to comply with OSHA's Noise Standard, 29 CFR 1910.95 and CT DEEP's regulations on the Control of Noise, 22a-69-1 through 7. Contractors will be asked to cease work activities when noise levels to UCONN employees or students can be expected to meet or exceed OSHA's Action Level of 85 dBA (8-hour TWA). Activities can resume when engineering or work practice controls reduce the level of noise below OSHA requirements. Should this not be feasible, work must be scheduled for a time when UCONN employees, students and town residents are not impacted.

Additional project-specific noise reduction measures or restrictions may also be required to minimize disruption to teaching and learning activities.

PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

The Contractor shall provide workers with personal protective equipment (PPE) such as safety glasses, respirators, hard hats, gloves, and safety shoes when performing certain activities or when working in designated areas. Contractors shall perform workplace hazard assessments, as required by OSHA 29 CFR

1926.95, and provide required PPE accordingly. The UCONN Project Representative will notify the Contractor when specific PPE is required for entering or working in a designated area at UCONN. The Contractor shall ensure PPE is available, maintained, and used appropriately. The UCONN Project Representative reserves the right to stop work if PPE deficiencies are noted.

1. Contractors must control their work zones and effectively communicate the hazards of the work zone and required personal protective equipment to all personnel requiring access to those work zones.
2. Contractors shall wear proper footwear and appropriate apparel and PPE when working at UCONN. Sandals, open-toed shoes, shorts, and sleeveless shirts are prohibited at UCONN construction work sites. Professional appearance is required. Muscle shirts, tank tops, or tee shirts with inappropriate graphics or slogans are prohibited.
3. Contractors working near roadways shall insure work zone safety in accordance with Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) including the use of vehicular traffic controls and workers' use of high visibility safety apparel.

POWDER-ACTUATED TOOLS

Prior to using powder-actuated tools, authorization and approval are required by the UCONN Project Representative. Contractors shall ensure powder-actuated tools are used only by trained and, if required, licensed personnel. Powder-actuated tools shall not be left unattended or available to unauthorized persons. These tools may not be used in explosive or flammable atmospheres.

Explosive-actuated tools shall meet ANSI/ASSE A10.3-2006 "Safety Requirements for Powder-Actuated Fastening Systems" and all other regulatory and applicable agency standards. Workers may not use any tool that does not meet appropriate design standards.

POWERED INDUSTRIAL VEHICLES

1. Powered Industrial Vehicles (PIVs) include forklifts, powered pallet jacks, manned rail or wire-guided equipment or other vehicles that allow operators to move large or heavy loads. The Contractor shall ensure its employees or subcontractors have a valid driver's license, authorization, and have had appropriate and effective training for the operation of PIVs in compliance with OSHA standards (29 CFR 1910.178). Contractors should implement a method, such as identification badges or vests, that clearly identifies trained operators. Workers may not use UCONN owned or leased PIVs unless they are contractually indemnified to do so or have signed a separate indemnification authorizing them to do so.
2. Workers operating PIVs shall conduct and document daily pre-use equipment inspections to assure that it is in safe operating condition. The documentation shall include the vehicle inspected, day of inspection and specific safety items inspected. Vehicles with malfunctioning safety features shall be tagged out and labeled "DO NOT OPERATE" and removed from service until repairs are completed. Documentation shall be made available upon request.
3. Diesel, gasoline or propane powered PIVs may only be used in UCONN facilities when the Contractor implements approved controls such as barriers, ventilation, and/or off-hour scheduling that can ensure the safety and comfort of the UCONN personnel. Additionally, prior notification shall be provided to local managers of areas that will be affected prior to operating fuel powered PIVs indoors.
4. Battery charging shall be performed in areas designated by UCONN. Appropriate PPE will be used during all battery charging operations. Refueling shall be performed in areas with adequate ventilation. Workers shall not refuel vehicles while the engine is running.

RADIOACTIVE MATERIALS/X-RAY EQUIPMENT

Contractors shall inform the UCONN Radiation Safety Officer (RSO) (860-486-3613) and the UCONN Project Representative of intent to bring radioactive materials such as sealed radiography sources, nuclear density gauges, or other sealed sources or radiation-producing equipment, including generally-licensed devices or equipment used for non-destructive testing onto UConn property.
Notification to the UCONN RSO must be made at least seven days in advance of the scheduled usage of said materials/equipment on university property. The materials or devices must comply with all relevant NRC, CT DEEP, and OSHA rules, including licensure or registration, exposure control monitoring, security, and training. The Contractor shall supply any documents requested by the UCONN RSO demonstrating regulatory compliance, usage plans, and control measures. Failure to do so may result in project delays.

Contractors Working in Radioactive Materials Laboratories or Areas

Contract workers who do not use radioactive materials but who have access to and work in radioactive materials laboratories or areas posted with "Caution Radioactive Materials" signage as part of their routine duties must receive training by the UCONN EH&S Radiation Safety Office prior to working in these areas. One-time or short-term contractors may be allowed to be considered a visitor and shall be escorted at all times by trained personnel. Contractors shall inform the UCONN Radiation Safety Officer (RSO) (860-486-3613) directly or via the UCONN Project Representative prior to work in radioactive materials laboratories or areas to verify training requirements and to receive training, as required. Contractors working in radiation areas or working with radioactive materials or equipment must comply with all applicable NRC regulations and UConn radiation safety procedures. Contractors are required to control areas where they are using radiological materials/devices to ensure exposures are As Low As Reasonably Achievable (ALARA).

RESPIRATORY PROTECTION

UCONN expects each Contractor and its subcontractors to manage their own Respiratory Protection Program. The Contractor and its subcontractors shall comply with the respiratory protection requirements of OSHA 29 CFR 1926.103.

Respiratory protection requirements for specific jobs shall be documented in the Contractor's Standard Operating Procedures, Site HASP, and the Contractor's Written Respirator Program.

SCAFFOLDS

All scaffolding, staging, and work platforms must satisfy the applicable OSHA regulations (29 CFR 1926.450) and manufacturer's erection requirements. The use of site built staging or scaffolding is not allowed unless prior approval is obtained from the UCONN Project Representative and the Contractor Safety Coordinator. The proper use of scaffolding requires that:

1. The scaffold be erected and inspected by a trained, competent person. UCONN expects scaffold erectors and users to comply with regulations and standard industry practices per 29 CFR 1926.450 - 452. Contractors shall train scaffold erectors and users in safe work practices and procedures.
2. Scaffold erectors hired by the Contractor shall work under the supervision of a "competent person" as defined by OSHA Scaffolding Standards. The "competent person" shall be within sight of the scaffold erecting activity.

3. Compliant scaffolding will bear a green inspection tag, signed and dated by the Contractor's competent person each shift prior to use. If the green tag is not present, or it is not signed and dated, or a red tad is affixed, the elevated work platform shall be considered unsafe for use.

SIGNS, SIGNALS AND BARRICADES

1. At the entrance to the construction site or locations the following signage must be posted: "Construction Area," "Restricted Area," "Hard Hats, Safety Glasses, and Work Boots Required."
2. When Lasers are being used "Laser in Use" Signs shall be posted.
3. Parking areas shall be conspicuously marked "Parking for Construction Only" or "No Parking."
4. In locations where construction is occurring within an active building, work areas shall be barricaded to restrict and eliminate potential access and exposures to the public.
5. Cones, Tape, Guardrails, etc. may be used to delineate and secure work zones based on the potential exposure and traffic at the locations. Delineation of work zones, either by tape, snow fence, chain link fencing, etc., must warn against any potential danger or immediate danger within, and inform persons as to the proper action required (e.g., **CAUTION – Do Not Enter** or **DANGER – Do Not Enter**).

SPECIFIC REGULATED MATERIALS OF CONCERN

Asbestos

1. Asbestos-Containing Materials (ACM) and Presumed Asbestos-Containing Materials (PACM) exist in most University buildings. Prior to **any** renovation or demolition activities, including installations or repair work, an asbestos inspection by a licensed and certified asbestos inspector must be conducted. All asbestos materials that could be disturbed during work activities must be properly removed, in accordance with federal and state regulations, prior to work commencing. Contact the UCONN Project Representative for information about the location of ACM/PACM, inspection data, or procedure for sampling. Written documentation of asbestos sampling results must be maintained at the worksite for use by affected employees.
2. Contractors shall not disturb asbestos-containing materials in UCONN facilities, unless authorized and hired to do so. In order to disturb or handle asbestos, Contractors and their employees must have the applicable training, licenses, or any other qualifications necessary to perform such work safely and in accordance with Federal, State and Local regulations.
3. Contractors are always responsible for ensuring that any work that requires a specific license (e.g. refrigeration systems repair, asbestos/PCB abatement and removal, pesticide application, etc.) is only performed by individuals who are appropriately registered and/or licensed.
4. All Contractors must comply with OSHA 29 CFR 1926.1101 training requirements for their employees who may contact, but not disturb, ACM and PACM. This is considered Class IV work and requires, at a minimum, 2 hours of asbestos awareness training annually.
5. All Contractors must comply with OSHA 29 CFR 1926.1101 employee exposure requirements and engineering and work practice controls for materials that contain <1% detectable levels of asbestos, and are thus not identified as an ACM, nor regulated by EPA or CT DPH.
6. Should suspect ACM or PACM be found during work activities, the Contractor will stop all work immediately and contact the UCONN Project Representative. No work shall be attempted that could result in a release of asbestos to the environment.

7. In the event of an asbestos emergency (release to the environment), isolate and secure the area. Immediately contact the UCONN Project Representative and EH&S (860-486-3613) during normal business hours. After hours or on weekends, contact the UCONN Fire Department (860-486-4925) and identify the nature and extent of the asbestos emergency.
8. No products containing asbestos shall be used, applied or installed during renovations, repairs, or new construction activities. Contractors are required to check new products to ensure they do not contain one of the identified asbestos minerals. Contractors shall verify and provide written certification, using the form in Section VI, that all material/equipment installed in any portion of the project work is asbestos free.

Lead Based Paint and Lead Containing Paint

1. Lead-based paint is identified by EPA, HUD, and the CT DPH, as paint containing more than 1.0 mg/cm^2 by XRF testing or 0.5% by weight by laboratory analysis
2. Contractors conducting work in pre-1978 residences and child-occupied locations must be in compliance with EPA's Renovation, Repair, and Painting Rule that became effective April 22, 2010. Evidence of certification must be provided to the UCONN Project Representative. In addition, proper notification to tenants and occupants in these locations is necessary. Coordinate this notification with the UCONN Project Representative.
3. In University buildings where children under the age of six reside, as well as in child day care centers, group day care homes, and family day care homes, Contractors must also comply with CT DPH Lead Poisoning Prevention and Control Regulations (19a-111-1 through 11).
4. OSHA considers all paint, even post-1978 residential paint as *lead-containing* when any amount of lead is present in the paint, even if found below the aforementioned levels as identified by XRF and laboratory analysis. If any identifiable amount of lead is present in the paint, the concern is the activity to the painted surface that could cause lead to become airborne in the employee's breathing zone. Exposure levels for lead in the construction industry are regulated by 29 CFR 1926.62. Many construction activities, such as hand scraping and sanding, light demolition, grinding, welding, cutting and burning have been shown to expose workers to airborne levels of lead that exceed OSHA's Permissible Exposure Limit (PEL). Contractors must follow OSHA regulations when **any** painted surfaces can be impacted.
5. In commercial and industrial buildings, only compliance in accordance with the OSHA Lead in Construction standard is necessary. Lead abatement professionals and Certified Renovators are only necessary when abatement or renovation and painting activities are conducted in pre-1978 residential and child-occupied locations.
6. While lead test data may exist for some UCONN buildings, **Contractors must use documented lead-safe work practices in all University buildings**, in accordance with OSHA 29 CFR 1926.62. Depending on the construction activities (grinding, sanding, etc.), a paint identified as not lead-based (<1.0 mg/cm^2) has the potential for creating an airborne exposure to workers which may exceed the OSHA PEL. Contact the UCONN Project Representative to review test data as necessary.
7. All paint chip debris/waste must be collected and a hazard determination must be performed prior to disposal. All waste must be disposed of in accordance with Federal EPA and Connecticut Hazardous Waste Management Regulations. Contact UCONN EH&S or OEP for more details.
8. Contractors are always responsible for ensuring that any work that requires a specific license or certification (e.g. refrigeration systems repair, asbestos/PCB abatement and removal, pesticide application, etc.) is only performed by individuals who are appropriately certified, registered and/or licensed.

9. Contractors are prohibited from conducting the following activities: dry scraping or dry sanding of paint (regardless of the year applied); torch burning/welding on painted surfaces; using heat guns set above 700°F; using non-shrouded and non-HEPA filtered powered sanders, or grinders.

PCBs in Caulk & Paint

EPA has learned that caulk & paint containing PCBs was used in buildings, including schools, in the 1950s through the 1970s (http://www.epa.gov/pcbsincaulk/). Buildings built after 1980 are less likely to contain caulk that contains PCBs. Caulk is a flexible material used to seal gaps to make windows, masonry and joints in buildings and other structures watertight or airtight. Some paints were formulated with PCB for greater durability. In light of this development, the following steps (taken from EPA's website) should be incorporated prior to any renovation or demolition project.

1. If it is believed that the caulk or paint in the building was manufactured before 1978, when PCBs were banned materials should be tested by a chemical analysis laboratory. PCBs are persistent and should ultimately be removed.
2. If PCBs are found in the caulk or paint, Contractors should avoid disturbing the material. Contact the UCONN Project Representative with information on the location of the suspected PCB-contaminated materials, and all analytical results. All PCB-containing material that could be disturbed during renovation or demolition must be removed prior to work commencing.
3. Contractors must not disturb any PCB-containing materials unless specifically authorized or hired to do so. In order to proceed with work involving handling PCBs Contractors must be adequately trained and qualified in accordance with all applicable Federal, State, and local requirements.
4. Contractors are responsible for ensuring that all work requiring specific licensure is only performed by individuals who can produce verification of such registration or licensure.
5. EPA has developed Fact Sheets for Contractors for the safe handling of PCBs in caulk during renovations (http://www.epa.gov/pcbsincaulk/caulkcontractors.htm).
6. When PCB-containing caulk is removed and disposed of, it should be done with care to avoid contamination of surrounding materials such as floors, wood, bricks, mortar or soil.
7. The Contractor must promptly removed and dispose any PCB containing materials per Federal and State regulations. EH&S must be contacted to sign off on all waste manifests to ensure proper disposal. Permission to use the University's EPA Generator ID number must be obtained from EH&S. The Contractor may choose to request a temporary EPA ID number from the CT DEEP for a specific project.

STORAGE AT JOB SITE

Generally, it is the responsibility of the Contractor to secure any materials or equipment at the job site. Industrial and construction materials to be stored outside shall be approved by the UCONN Project Representative after evaluation of security and environmental issues, including secondary containment requirements, storm water runoff concerns, potential for water damage or mold growth on construction materials, etc. The UCONN Project Representative may designate a storage area for industrial and construction materials or project-specific storage limitations. Mechanical and electrical equipment rooms may not be used for storage. The UCONN Project Representative shall approve storage areas in advance of materials being stored.

TOOLS AND EQUIPMENT

1. In general, Contractors shall provide their own tools, equipment and secure storage for valuable tools. Contractors may not use tools owned by UCONN unless authorized by the UCONN Project Representative
2. Contractors shall inspect and maintain tools in safe condition using them only for jobs in which they are intended per 29 CFR 1926.300.
3. Contractors shall use non-sparking tools in areas where flammable liquids or gases are stored or dispensed.
4. As indicated previously, portable electrical power tools, hand tools, machinery and equipment shall be approved by the appropriate agency, double insulated or have an approved grounding system. Ground Fault Circuit Interrupters (GFCI) shall be used in wet areas.
5. When using pneumatic tools, the Contractor shall disconnect hoses from air supply when not in use.

VAPOR and PARTICULATE EMISSIONS, AND OCCUPIED SPACES

Contractors conducting painting operations or other activities that create vapor or particulate-producing activities (sealing, grinding, welding, spraying, stripping, chemical etching, adhesive application, roofing, sweeping, etc.) must take into account the location of their activities, and the impact to UCONN Staff, Faculty and Students, other contractors, active research or academic efforts. Emissions from the above-described activities have the potential to adversely affect indoor air quality and interfere with active learning.

Contractors using vapor emitting products or conducting particulate producing activities must prepare an air quality control plan that will prevent any negative impact to building occupant air quality. Contractors should be prepared to provide air monitoring equipment, ventilation equipment, and engineering controls to document and maintain acceptable indoor air quality. Materials of particular concern include products that emit high volatile organic compounds (for example, solvents), certain glycol ethers that are considered reproductive hazards, epoxy based products, byproducts of combustion, and isocyanates. Also to be considered is the location of air intakes when operating power equipment outside of occupied buildings.

In the event that suitable indoor air quality cannot be achieved, Contractors should be prepared to schedule activities outside of normal working hours, and protect their employees with an OSHA compliant respiratory protection program.

WELDING EMISSIONS

Contractor shall erect appropriate shields to prevent accidental exposure to welding emissions to students, faculty, staff and other contractors. If welding is occurring in an occupied building, the Contractor must supply a "smog hog" type filtering unit to remove welding smoke, fumes and /or vapors. An air quality control plan shall be submitted to the UCONN Project Representative to address steps taken to monitor and control welding emissions.

V. ENVIRONMENTAL REQUIREMENTS

AIR POLLUTION CONTROL

Contractors must abide by good management practices to ensure that their daily activities do not adversely impact the air quality. These shall include, but not be limited to:

1. Contractors shall retain fuel slips for construction vehicles/equipment that are refueled on site. UConn requires that liquid fuels including "biofuels" consumed on-site shall not exceed the sulfur content of motor vehicle diesel fuel as defined in RCSA §22a-174-42" This includes all #2 oil and diesel burning equipment such as temporary boilers and heaters
2. No open burning is allowed on the UCONN Campus.
3. Vehicles shall NOT be operated near building fresh air intakes, and shall be equipped with exhaust scrubbers to minimize impact to indoor air quality.

Equipment shall not be allowed to idle for excessive periods of time when not in use. Connecticut law prohibits vehicles of all kinds from unnecessary idling for more than 3 minutes. Provisions are made for weather extremes, certain service vehicles and health-related conditions. R.C.S.A. 22a-174-18. This regulation applies to ALL vehicles in Connecticut. Solvent or other noxious emissions shall be evaluated as part of the work planning process to determine engineering control requirements prior to field implementation of the scope of work. *Regulations of Connecticut State Agencies* restrict and/or defines the use of certain materials such as adhesives, sealants, and other VOC containing substances used in the State of Connecticut. Contractor should refer to Regulations of Connecticut State Agencies Section 22a-174 including Section 22a-174-44 Adhesives and Sealants.

EROSION AND SEDIMENTATION CONTROL

When site work is conducted on the UCONN campus, the Contractor shall be responsible for compliance with all applicable state and federal regulations related to Erosion and Sedimentation Control, including storm water management and construction dewatering discharges. All engineering controls shall comply with Connecticut Guidelines for Erosion and Sedimentation Control, as amended *(2002 Guidelines for Erosion and Sedimentation Control)*. Erosion and sedimentation control measures, including protection of susceptible storm drains, shall be in place prior to project start.

All UConn projects with a total disturbed area of between one and five acres (regardless of phasing) shall be registered under and managed in accordance with the CT DEEP ***General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities (Construction Stormwater General Permit)***. Contractors and other service providers may be asked to work with or on behalf of UConn Project Representatives to secure the *General Permit* registration. In some cases, the Contractor may submit the permit application. The contractor shall be responsible of adhering to all erosion and sedimentation control measures, including monitoring and record keeping, that are specified in the *General Permit* and supporting materials to the respective permit application.

UTILITY STRUCTURE DEWATERING ACTIVITIES

The contractor shall direct any wastewater derived from dewatering underground utility structures (manholes, catch basins, trenches) to the UConn sanitary sewer system in accordance with the ***CT DEEP General Permit for Miscellaneous Sewer Compatible Wastewaters (Miscellaneous General Permit)***. The contractor shall notify the UCONN's Office of Environmental Policy (OEP) prior to discharging. The

contractor shall limit the total discharge to 500 gallons per day or else shall register the discharge with CT DEEP. The contractor shall record the date and approximate amount of wastewater discharge and will provide the record to OEP. Only clean water, with neutral pH, can be discharged. If necessary, a settling pond for removal of silt before final discharge must be used. The contractor shall monitor the discharge for any suspected contaminants in accordance with the Miscellaneous General Permit.

If the Contractor identifies an alternative means of discharging or disposing the dewatering wastewater other than to sanitary sewer, the Contractor must obtain approval from UConn OEP for the alternative means. Utility structure dewatering water and manhole decant wastewater shall not be discharged back into the manhole, stormwater catch basin or trench.

Soil or sediment that has been removed from underground utility structures shall be staged at a designated staging area approved by the UConn Project Representative. Final disposal determined by the Facilities Operations Landscape Department, in conjunction with the OEP. The State of Connecticut "Guideline for Municipal Management Practices for Street Sweepings & Catch Basins" is attached as an addendum for clarification.

ENVIRONMENTAL PERMITS AND LICENSES

Contractors and other service providers may be asked to work with or on behalf of UConn Project Representatives to secure environmental permits. In some cases, the Contractor may submit the permit application. Contractors are responsible for following the requirements in the environmental permits. Project permits shall be on file with the project documents and shall be made available upon request.

Under no circumstances shall a contractor use a material in an application that is banned under the Toxic Substances Control Act (40 CFR 700-799).

SPILL PREVENTION AND RESPONSE

The Spill Prevention, Control and Countermeasure (SPCC) procedure provides the guidelines to prevent and contain solid and liquid spills. The Spill Prevention/Containment Plan includes the diking/berming of all storage of contaminated liquids and/or fuel, the development of operating procedures to include spill prevention and control techniques. UCONN maintains an SPCC plan for its main Campus and certain regional campuses that exceed the SPCC regulation threshold of 1320 gallons of bulk oil storage.

To maintain SPCC compliance at all campuses the storage of fuel and other types of oil and grease products in above ground bulk storage tanks and containers (55 gallons or greater) should be avoided. Contact OEP should your project require the storage of oil or grease products in bulk storage tanks and containers. Spill clean-up materials shall be made available during fuel transfer operations from fuel delivery vehicle to site equipment. Personnel involved in fuel transfer operations shall be familiar with transfer operations and the use of the spill clean-up materials.

In the event of a spill, the Contractor is responsible for immediately reporting any and all spills to the UCONN Fire Department by dialing 911 while this includes the Storrs or Depot Campuses, and UCONN's Project Representative upon discovery. Spills or unplanned releases include spilling, spraying, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment of any chemicals or hazardous substances, hazardous materials, oils or petroleum products.

Contractors shall be solely responsible for all environmental remediation, including all costs required to address any release of oil, fuel or hazardous material as a result of their operations at any UCONN project. In the event of a release, remediation shall be completed in accordance with all applicable federal, state and local regulations, ordinances, orders and directives, EH&S, OEP and the UCONN Fire Department. Contractors not trained or licensed to conduct environmental or hazardous material remediation shall identify

an on-call vendor designated to respond to any release related to their activities. Clean-up of Contractor releases by UCONN will be charged back to the Contractor(s) responsible for the release.

Contractors who import chemical-based products to UCONN properties shall provide a spill control kit, compatible with the material to be used, and sized to accommodate a failure of the largest single container they plan to import. Spill kits shall be immediately available in the work areas where chemicals will be stored or used.

Operators of hydraulically operated equipment shall also maintain a minimum of one spill control kit sized to accommodate the largest reservoir in their inventory.

The UCONN Fire Department Hazardous Response team and Vehicle are staffed and stocked to deal with most spills that occur on the UCONN Campus. For a copy of the SPCC Plan, please ask your UCONN Project Representative.

WASTE MANAGEMENT

Contractors are fully responsible for all hazardous wastes that they generate while at UCONN. Hazardous waste may be generated from construction and renovation activities and a variety of other contractor's activities at UCONN.

Common hazardous wastes generated at UCONN include:

1. Waste solvents and solvent soaked rags;
2. Waste oils and lubricants generated by a variety of operations including motor vehicles, elevators, plant maintenance, etc. UCONN has an SPCC Plan (Spill Prevention, Control and Countermeasure Plan) in place due to the amount of fuels, gas and oil storage on campus. The Contractor should be aware of what this document contains and how it pertains to any activities you may be undertaking on the UCONN Storrs Campus.
3. Unused chemicals and other hazardous substances, such as strong acids and bases, paints, aerosol cans, etc. that are no longer needed, do not meet specifications, are contaminated, have exceeded their storage life, or are otherwise unusable;
4. Waste ethylene glycol and other coolants;
5. PCBs, batteries, lead paint and other miscellaneous materials including, contaminated rags and wipes, broken mercury-containing lamps (i.e. fluorescent lamps) and thermometers.

UCONN EH&S and OEP are available to assist Contractors with hazardous waste management procedures including disposal, although these activities remain the responsibility of the Contractor. The Contractor must promptly remove and dispose any regulated or hazardous waste generated by the Contractor (oil, paint, solvents, gasoline, etc.) from the site. **EH&S must be contacted to sign off on all hazardous waste disposal paperwork to ensure proper disposal.** Permission to use the University's EPA Generator ID number must be obtained from EH&S. The Contractor may choose to request a temporary EPA ID number from the CT DEEP for a specific project.

RECYCLING

UCONN encourages Contractors to recycle as much as possible, consistent with good practices and economic realities. UCONN requires that Contractors shall recycle, at a minimum, the following materials:

1. Corrugated Cardboard.
2. Clean dimensional wood.

3. Glass containers
4. Uncoated asphalt, bricks, and concrete (ABC).
5. Metals including, but not limited to: stud trim ductwork, piping, reinforcing steel (rebar), roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
6. Electronic components, computers, CRTs, printers, televisions, stereos, etc.
7. Used motor oil and other recyclable petroleum products.
8. Any other materials for which reuse, salvaging, or recycling results in a net cost that is equivalent to or less costly than landfill disposal or incineration.

Recyclable solid waste generated at UCONN by Contractors and their subs will be placed in properly designated receptacles supplied by the Contractor. The receptacle must be in good condition, labeled with its contents (e.g., glass, cardboard, scrap metal, used oil) and, if exposed to precipitation, covered. Receptacles must be emptied on a regular basis. Contractors cannot use UCONN receptacles unless otherwise approved by their UCONN Project Representative.
Contractors shall not place unlike wastes in containers made available for recyclable materials and should also be aware that the State of Connecticut has banned the following waste streams from in-state incineration or landfill disposal. These items may not be included in waste destined for incineration or landfills in any quantity:

1. Lead-acid batteries
2. Leaves and Yard Waste
3. Whole Tires
4. White Goods (Appliances)
5. Cathode Ray Tubes (CRTs) including computer monitors
6. Metal, Plastic and Glass Containers
7. Recyclable Paper

Through daily activity, Contractors generate various types of solid waste. A solid waste is a solid, liquid, semi-solid or contained gaseous material, which is to be discarded, or has served its intended purposes. All solid waste generated on a UCONN work site (construction debris, boxes, pallets, etc.) must be removed and properly disposed in compliance with local, state, and federal regulations.

1. Contractors must supply their own waste collection containers, unless other means of disposal is agreed upon with the UCONN Project Representative prior to the start of work.
2. The receptacle must be in good condition and labeled with the Contractor's name and the containers contents.
3. Waste collection containers must be located under a roofed structure or covered with a waterproof top when not in use (i.e. material not being placed into container, etc).

Contractors shall provide documentation to their UCONN Project Representative verifying proper treatment or disposal of hazardous and regulated waste. This documentation shall be provided no later than thirty (30) days from the date the regulated or hazardous waste is transported for treatment or disposal. UCONN will withhold payment for any invoiced disposal services that are not fully supported with all required regulatory documentation.

Resale or recycling of UCONN materials requires UCONN/State of Connecticut approval. The Contractor must provide written evidence that resold or recycled material was disposed in the manner and location approved by UCONN.

VI. APPENDICES – Forms, Permits, Maps and Documentation Requirements

Asbestos Certification Form

UConn Standards

A. Asbestos Certification
Contractor shall certify that all material/equipment installed in any portion of the Work shall be asbestos free. The owner may perform sampling to verify all suspect material/equipment is asbestos free. If any material/equipment is found to contain asbestos, the Contractor shall pay for the lawful and proper removal and disposal of product(s), and re-install acceptable material/equipment all at its sole expense.

B. For purposes of this requirement, materials include, **but are not limited to** the following:

2.1 Surfacing Treatments
Fireproofing Acoustical Plaster
Finish Plasters, Skim Coats of Joint Compound, Fibrous Type Paint Applications, Sprayed-on applications

2.2 Thermal System Insulation
Equipment Insulation, Gaskets, Valve Packings,
Boiler, Breeching, Boiler Rope, Duct or Tank Insulation,
Cement or Mortar used for boilers and refractory brick.
Piping and Fitting Insulations including but not limited to Wrapped Paper, Millboard, Rope, Cork, Preformed Plaster, Job Molded Plaster and Coverings over Fibrous Glass Insulation.

2.3 Roofing and Siding Materials
Insulation Board, Vapor Barriers,
Felts, Coatings & Adhesives,
Flashing, Shingles, Cementitious Board (Transite),
Galbestos, Non-Metallic or Non-Wood Roof Decking

2.4 Other Miscellaneous Materials
Cove Base, Floor Leveling Compound,
Ceiling & Floor Tiles, Vibration Isolators, Laboratory Tables and Hoods,
Mastics, Adhesives, Coatings & Caulks,
Wallboard & Joint Compounds,
Friction Products, Gaskets,
Fire Door Materials,
Cementitious Products (Transite)

The Contractor certifies that all material/equipment installed in any portion of the Work shall be asbestos free:

Contractor Signature: _____ Date: _____

Print Name: _____

Company: _____

Permit-Required Confined Space Pre- and Post-entry Review with Outside Contractors

Pre-entry

- ☐ 1. Inform the contractor that the spaces to be entered are permit-required confined spaces and that entry is allowed only through compliance with a permit-required confined space program meeting the requirements of the OSHA Standard (29 CFR 1910.146) or other applicable industry-specific standards (e.g., 1910.268).
- ☐ 2. Apprise the contractor of the potential hazards associated with the spaces that make them permit-required confined spaces.
- ☐ 3. Apprise the contractor of any precautions or procedures that are normally used to protect employees in or near the permit-required confined spaces where contractor personnel will be working.
- ☐ 4. Coordinate entry operations with the contractor, when both University personnel and contractor personnel will be working in or near the permit-required confined spaces.

Space(s) to be entered: _____

Reviewed by:

UCONN Representative: _____ _____ _____
Name Department Date

Outside Contractor Representative: _____ _____ _____
Name Company Date

Post-entry

- ☐ 5. Debrief the contractor, at the conclusion of entry operations, on the procedures followed and any hazards confronted or created during entry.

Location of Space(s): _____ **Date(s) of entry:** _____

Reviewed by:

UCONN Representative: _____ _____ _____
Name Department Date

Outside Contractor Representative: _____ _____ _____
Name Company Date

*****If University services or equipment will be used by the outside contractor** complete the "Waiver and Release Form."***

Permit-Required Confined Space
Waiver and Release

In consideration of the University of Connecticut furnishing services and/or equipment to enable me to enter into a permit-required confined space, as defined by the Occupational Health and Safety Administration Standard 29 CFR 1910.146 and the University of Connecticut Confined Space Entry Policy, I agree as follows:

I recognize and acknowledge that there are certain risks of physical injury to individuals entering into permit-required confined spaces, and I voluntarily agree to assume the full risk of any and all injuries, damages or loss, regardless of severity, that I may sustain as a result of said participation.

I, on behalf of myself, my personal representatives and my heirs, hereby voluntarily agree to forever release, waive, discharge, hold harmless, defend and indemnify the University of Connecticut. the State of Connecticut and their agents, officers, employees, and successors from any and all claims, actions or losses for bodily injury, property damage, wrongful death, loss of services, or otherwise, which may arise out of my use of equipment belonging to or services rendered by the University of Connecticut, the State of Connecticut and their agents, officers, employees and successors. I specifically understand that I am releasing, discharging and waiving any claims or actions that I may have presently or in the future for the negligent acts or other conduct by the owners, agents, officers or employees of The University of Connecticut.

I HAVE READ THE ABOVE WAIVER AND RELEASE AND BY SIGNING IT AGREE IT IS MY INTENTION TO EXEMPT AND RELIEVE THE UNIVERSITY OF CONNECTICUT AND ITS AGENTS, OFFICERS AND EMPLOYEES FROM LIABILITY FOR PERSONAL INJURY, PROPERTY DAMAGE OR WRONGFUL DEATH CAUSED BY NEGLIGENCE OR ANY OTHER CAUSE.

_____	_____	_____
Print Name	Signature	Date
_____	_____	_____
Company	Address	City

Contractor Emergency Contact Information Sheet

Contractor name:

Contractor Emergency Contact:

Office # Cell #

UCONN Project Name:

UCONN Project Representative:

Office # Cell #

UCONN Project Representative:

Office # Cell #

UCONN Facility Work Order Control # (860) 486-3113

UCONN Building & Emergency Contact:

Office # Cell #

UCONN Project Locator Designation:

Emergency Services
Police 911
Fire 911
Medical assistance 911

When reporting an emergency, please provide the following:

- Your name, phone number and location;
- The location of the incident (building name, floor and room number);
- Nature and extent of the incident (injury, accident, spill, smoke/fire, damage, etc.);
- The name and amount of the material spilled (if applicable); and
- The safest route to the spill (if applicable).

UCONN emergency response personnel (UCONN Fire Department) will be dispatched immediately. The Contractor shall wait at the nearest location deemed safe until emergency response personnel arrive.

VII. UCONN WEB SITE REFERENCE PAGE

Web addresses

UConn Alert Notification System/Emergency Information
http://alert.uconn.edu/index.php

Architectural, Engineering and Building Services
http://aes.uconn.edu/

Department of Environmental Health and Safety (EH&S)
www.ehs.uconn.edu

Office of Environmental Policy (OEP)
www.ecohusky.uconn.edu

Office of the Fire Marshal and Building Inspector
www.ofmbi.uconn.edu

Fire Department
web2.uconn.edu/fire/

Locksmith Services
www.locksmith.uconn.edu/ipub/index.html

Office of Capital Projects and Contract Administration
www.cpca.uconn.edu/

Parking Services
http://park.uconn.edu/

NOTES

VIII. CONTRACTOR RECEIPT ACKNOWLEDGEMENT FORM

(one form to be completed by the contractor and each of its subcontractors prior to commencing work)

ACKNOWLEDGEMENT OF RECEIPT OF THIS MANUAL "CONTRACTOR EHS MANUAL --UCONN EHS REQUIREMENTS FOR CONSTRUCTION, SERVICE AND MAINTENANCE CONTRACTORS"

NAME, ADDRESS AND TELEPHONE OF CONTRACTOR TO UCONN:

_____

_____

_____

_____

BRIEF DESCRIPTION OF WORK:

_____

_____

_____

_____

CONTRACT/WORK ORDER No: _____

We _____ (Company Name) acknowledge receipt of the UCONN document **"Contractor EHS Manual"**. We have read this manual and will ensure all persons engaged by us abide by the conditions prescribed throughout the document and implement a documented disciplinary process for all violations. In addition, by signing this acknowledgement form, we forever exempt and relieve the University of Connecticut, the State of Connecticut, and their agents, officers, employees, and successors from liability for personal injury, property damage or wrongful death caused by negligence or any other cause.

Signed: _____

Date: _____

Name (Printed): _____

Title: _____

Please supply _____ copies of this manual for our employees and sub-contractors.

PLEASE COMPLETE AND RETURN/FAX TO:

UCONN Location: _____

_____

_____

_____

TECHNICAL SPECIFICATION
FOR
SOIL NAIL WALL MOVEMENT MONITORING

1.0 DESCRIPTION: This work shall consist of furnishing all instruments, tools, materials, and labor and performing all work necessary to monitor the movement of the soil nail wall during and immediately following its construction.

Instrumentation provided under this section shall be designed, fabricated, and assembled in proper operating condition and in full conformity with these Plans and Specifications. Each component shall be furnished complete with all components indicated on the Plans or specified herein, all accessories required for proper operation, and all additional materials of construction required by the design of the system.

Any monitoring device components that are damaged or fail, for whatever reason, to perform the intended function shall be immediately repaired or replaced by the Contractor to the satisfaction of GeoDesign and at no additional cost.

All instrumentation shall be protected by the Contractor during the term of the contract and shall be replaced or restored at the Contractor's expense and to the satisfaction of GeoDesign if delivered defective or damaged during construction. The Surveyor installing and reading the instrumentation shall coordinate and cooperate as necessary with GeoDesign and the Specialty Contractor installing the soil nails.

Visual observations, survey point, and instrumentation readings will be made by the Surveyor during the course of soil nail wall construction. The Contractor shall cooperate as necessary with the Surveyor in facilitating these readings. Any monitoring data that indicates excessive structure and/or Soil Nail Wall settlements and/or deflections, the potential for unstable conditions or damage to adjacent structures or facilities, as determined by GeoDesign, shall be cause for suspension of soil nailing operations in the affected area until the causes are identified and resolved to the satisfaction of GeoDesign. Upon completion of the wall to final lowest grade, post-construction readings will be taken by the Surveyor for up to two months or as determined by GeoDesign.

2.0 MATERIALS

2.1 General: All instruments shall be approved by GeoDesign.

2.2 Optical Targets: Optical survey targets and the associated surveying equipment shall be able to provide repeatable measurements of horizontal and vertical locations to a minimum precision of 2 mm.

3.0 CONSTRUCTION REQUIREMENTS

3.1 General: GeoDesign shall be notified prior to any work on instrument installation and monitoring. All instrumentation field installations shall be performed in the presence of GeoDesign.

3.2 Installation of Optical Targets: The optical survey targets shall be installed at locations selected by GeoDesign after the designated nails in the upper row of soil nail have been tested and locked off. A minimum of three sets of initial readings shall be taken on each target prior to proceeding with excavation for subsequent (lower) nail levels within 50 feet horizontally of the survey targets and prior to continued soil nail wall construction. The Contractor shall adjust soil nail installation method at these locations as necessary to avoid damaging the optical survey targets.

3.3 Number and Location of Optical targets: The actual number and location of the optical targets will be determined by GeoDesign. Approximately ten (10) targets are anticipated; however this may be changed by GeoDesign based on wall performance as determined by review of monitoring results.

3.4 Ongoing Readings of Optical Targets: Following installation of the optical survey targets and completion of their baseline readings, each target shall be monitored by the project Surveyor a minimum of twice each week during wall excavation or as directed by GeoDesign. Readings shall be provided to GeoDesign the same day that they are obtained.

4.0 METHOD OF MEASUREMENT: No separate measurement will be made for the materials and work specified in this Section.

5.0 BASIS OF PAYMENT: Costs associated with soil nailing instrumentation and monitoring shall be included in the Soil Nail Wall Item and will not be paid separately.

END OF SECTION

TECHNICAL SPECIFICATION
FOR
SOIL NAIL WALL SUPPORT OF EXCAVATION

1.0 DESCRIPTION: The Work shall consist of constructing a temporary soil nail retaining wall as specified herein and as shown on the Plans. The Contractor shall furnish all labor, materials and equipment required for completing the Work. The Contractor shall select the method of excavation, drilling method and equipment, final drillhole diameter(s), and grouting procedures to meet the performance requirements specified herein.

Soil nailing work shall include excavating in accordance with the staged lifts shown in the Plans; drilling soil nail drillholes to the specified minimum length and orientation indicated on the Plans; providing, placing and grouting the encapsulated nail bar tendons into the drillholes; placing drainage elements; placing shotcrete reinforcement; applying temporary shotcrete facing over the reinforcement; attaching bearing plates and nuts; and performing nail testing. Shotcrete facing construction is covered by the Temporary Shotcrete Facing Specification.

The wall excavation Contractor should consult the Soil Nail and Shotcrete Facing Specifications for details. A pre-construction meeting shall be held prior to the start of wall construction. GeoDesign, prime Contractor, excavation Contractor, and soil nail specialty Contractor shall attend the meeting. The pre-construction meeting will be conducted to clarify the construction requirements for the work, to coordinate the construction schedule and activities, and to identify contractual relationships and delineation of responsibilities - particularly those pertaining to wall excavation, nail installation and testing, excavation and wall alignment survey control, and shotcrete facing construction. Because soil nail wall construction requires excavation in staged lifts, excavation in the vicinity of the wall face requires special care and effort compared to general earthwork excavation. The excavation Contractor should take this into account during planning and should consult the Wall Excavation and Measurement/Payment Sections of the Soil Nail and Shotcrete Facing Specification.

The term "Soil Nail" as used in these specifications is intended as a generic term and refers to a reinforcing bar grouted into a drilled hole installed in any type of ground. Soil nail walls are built from the top down in existing ground.

Soil properties, strength parameters, partial safety factors or load and resistance factors, design requirements and other criteria are shown on the Plans and Supporting Design Calculations. In addition to the subsurface information presented in the Plans and the Supporting Design Calculations, additional subsurface information is provided in the project's Geotechnical Report.

Where the imperative mood is used within this Specification for conciseness "the Contractor shall" is implied.

1.1 Soil Nail Contractor's Experience Requirements and Submittal: The soil nailing Contractor shall submit a project reference list verifying the successful construction completion of at least three

soil nail retaining wall projects during the past three years totaling at least 10,000 square feet of wall face area and at least 500 soil nails. A brief description of each project with the Owner's name and current phone number shall be included.

A Registered Professional Engineer employed by the soil nailing Contractor and having experience in the construction of soil nail retaining walls on at least 3 completed projects over the past 3 years shall supervise the Work. The on-site supervisor and drill rig operators shall have experience installing soil nails on at least 3 projects over the past 3 years. The Contractor shall not use consultants or manufacturer's representatives to satisfy the requirements of this section.

At least 10 calendar days before starting the wall, the soil nail Contractor shall submit 5 copies of the completed project reference list and a list identifying the supervising Engineer, drill rig operators, and on site supervisors assigned to the project. The personnel list shall contain a summary of each individual's experience and be complete enough for GeoDesign to determine whether each individual satisfies the required qualifications. GeoDesign will approve or reject the Contractor's qualifications within 5 calendar days after receipt of a complete submission. Work shall not be started nor materials ordered until GeoDesign's written approval of the Contractor's qualifications is given.

GeoDesign may suspend the Work if the Contractor uses non-approved personnel. If work is suspended, the Contractor shall be fully liable for all resulting costs and no adjustment in contract time will result from the suspension.

1.2 Construction Site Survey: Before proceeding with the Work, the Contractor shall review the available subsurface information and visit the site to assess the site geometry, equipment access conditions, and location of existing structures and above ground facilities.

The Contractor is responsible for field locating and verifying the location of all utilities shown on the Plans prior to starting the Work. Maintain uninterrupted service for those utilities designated to remain in service throughout the Work. Notify GeoDesign of any utility locations different from shown on the Plans that may require nail relocations or wall design modification. Subject to GeoDesign's approval, additional cost to the Contractor due to nail relocations and/or wall design modification resulting from utility locations different from shown on the Plans, will be paid as Extra Work.

Prior to start of any wall construction activity, the Contractor and Engineer shall jointly inspect the site to observe and document the pre-construction condition of the site, existing structures and facilities. During construction, the Contractor shall observe the conditions above the soil nail wall on a daily basis for signs of ground movement in the vicinity of the wall. Immediately notify GeoDesign if signs of movements such as new cracks in structures, increased size of old cracks or separation of joints in structures, foundations, streets or paved and unpaved surfaces are observed. If GeoDesign determines that the movements exceed those anticipated for typical soil nail wall construction and require corrective action, the Contractor shall take corrective actions necessary to stop the movement or perform repairs. When due to the Contractor's methods or operations or

failure to follow the specified/approved construction sequence, as determined by GeoDesign, the costs of providing corrective actions will be borne by the Contractor. When due to differing site conditions, as determined by GeoDesign, the costs of providing corrective actions will be paid as Extra Work.

1.3 Construction Submittals:

Upon approval of the soil nailing Contractor's qualifications submittal set forth in Section 1.1, submit 5 copies of the following information, in writing, to GeoDesign for review and approval. Provide submittal Item Numbers 1 through 1D at least 15 calendar days prior to initiating the nail wall construction and submit Item Numbers 2 through 6 at least 15 calendar days prior to start of nail installation or incorporation of the respective materials into the Work:

1. The proposed start date and proposed detailed wall construction sequence including:

1A. Plan describing how surface water will be diverted, controlled and disposed of.

1B. Proposed methods and equipment for excavating the soil and/or rock to the staged excavation lifts indicated in the Plans, including the proposed grade elevations for each excavation lift shown on a wall elevation view.

1C. Measures to ensure wall and slope stability during various stages of wall construction and excavation where discontinuous rows of nails will be installed (if applicable); information on space requirements for installation equipment; temporary shoring plans (if applicable); information on provisions for working in the proximity of underground facilities or utilities (if applicable).

1D. Proposed nail drilling methods and equipment including drillhole diameter proposed to achieve the specified pullout resistance values and any variation of these along the wall alignment.

2. Nail grout mix design including:

   Type of Portland cement.
   Aggregate source and gradation.
   Proportions of mix by weight and water-cement ratio.
   Manufacturer, brand name and technical literature for proposed admixtures.
   Compressive strength test results (per AASHTO T106/ASTM C109) supplied by a qualified independent testing lab verifying the specified minimum 3 and 28-day grout compressive strengths. Previous test results for the proposed grout mix completed within one year of the start of grouting may be submitted for initial verification and acceptance of the required compressive strengths and start of production work.

3. Proposed nail grout placement procedures and equipment.

4. Proposed nail testing methods and equipment setup including:
   Details of the jacking frame and appurtenant bracing.
   Details showing methods of isolating test nails during shotcrete application (i.e., methods to prevent bonding of the soil nail bar and the shotcrete facing during testing).
   Details showing methods of providing the temporary unbonded length and of grouting the temporary unbonded length of test nails after completion of testing.
   Equipment list.

5. Identification number and certified calibration records for each test jack and pressure gauge and load cell to be used. Jack and pressure gauge shall be calibrated as a unit. Calibration records shall include the date tested, device identification number, and the calibration test results and shall be certified for an accuracy of at least 2 percent of the applied certification loads by a qualified independent testing laboratory within 90 days prior to submittal.

6. Manufacturer Certificates of Compliance for the soil nail centralizers, and nail encapsulation.

GeoDesign will approve or reject the Contractor's submittals within 10 calendar days after receipt of a complete submission. The Contractor will not be allowed to begin wall construction or incorporate materials into the work until the submittal requirements are satisfied and found acceptable to GeoDesign. Changes or deviations from the approved submittals must be re-submitted for approval. No adjustments in contract time will be allowed due to incomplete submittals.

Upon delivery of nail bars and soil nail bar couplers (if allowed) to the project site, provide Certified mill test results for nail bars and couplers from each heat specifying the ultimate strength, yield strength, elongation and composition.

1.4 Pre-Construction Meeting: A pre-construction meeting will be scheduled by GeoDesign and held prior to the start of wall construction. GeoDesign, prime Contractor, soil nail specialty Contractor and geotechnical instrumentation Surveyor shall attend the meeting. The excavation Contractor, shotcreting Contractor and survey Contractor, if different than the prime or soil nail specialty contractor, shall also attend. Attendance is mandatory. The pre-construction meeting will be conducted to clarify the construction requirements for the work, to coordinate the construction schedule and activities, and to identify contractual relationships and delineation of responsibilities amongst the prime Contractor and the various Subcontractors - particularly those pertaining to wall excavation, nail installation and testing, excavation and wall alignment survey control, and shotcrete

facing construction. Soil nail wall construction requires excavation in staged lifts and excavation in the vicinity of the wall face requires special care and effort compared to general earthwork excavation. The Contractor should take this into account during planning and should consult the Wall Excavation and Measurement/Payment Sections of this Specification for details.

2.0 MATERIALS: Furnish materials new and without defects. Remove defective materials from the job site at no additional cost. Materials for soil nail structures shall consist of the following:

Solid Bar Nail Tendons: AASHTO M31/ASTM A615, Grade 600. Deformed bar, continuous without splices or welds, new, straight, undamaged, encapsulated as shown on the Plans. Threaded a minimum of 6 inches on the wall anchorage end to allow proper attachment of bearing plate and nut. Threading may be continuous spiral deformed ribbing provided by the bar deformations (e.g. continuous threadbars) or may be cut into a reinforcing bar. If threads are cut into a reinforcing bar, provide the next larger bar number designation from that shown on the Plans, at no additional cost.

Centralizers: Manufactured from Schedule 40 PVC pipe or tube, steel or other material not detrimental to the nail steel (wood shall not be used); securely attached to the nail bar; sized to position the nail bar within 1 inch of the center of the drillhole; sized to allow tremie pipe insertion to the bottom of the drillhole; and sized to allow grout to freely flow up the drillhole.

Nail Grout: Neat cement or sand/cement mixture with a minimum 3-day compressive strength of 1,800 psi and a minimum 28-day compressive strength of 3,000 per AASHTO T106/ASTM C109.

Admixtures: AASHTO M194/ASTM C494. Admixtures which control bleed, improve flowability, reduce water content and retard set may be used in the grout subject to review and acceptance by GeoDesign. Accelerators are not permitted. Expansive admixtures may only be used in grout used for filling sealed encapsulations. Admixtures shall be compatible with the grout and mixed in accordance with the manufacturer's recommendations.

Cement: AASHTO M85/ASTM C150, Type I, II, III or V.

Fine Aggregate: AASHTO M6/ASTM C33.

Film Protection: Polyethylene film per AASHTO M171.
Bar Couplers: Bar couplers shall develop the full ultimate tensile strength of the bar as certified by the manufacturer.

2.1 Materials Handling and Storage: Store cement to prevent moisture degradation and partial hydration. Do not use cement that has become caked or lumpy. Store aggregates so that segregation and inclusion of foreign materials are prevented. Do not use the bottom 6-inches of aggregate piles in contact with the ground.

Store steel reinforcement on supports to keep the steel from contacting the ground. Damage to the nail steel as a result of abrasion, cuts, nicks, welds, and weld splatter shall be cause for rejection. Do not ground welding leads to nail bars. Protect nail steel from dirt, rust, and other deleterious substances prior to installation. Heavy corrosion or pitting of nails shall be cause for rejection. Light rust that has not resulted in pitting is acceptable. Place protective wrap over anchorage end of nail bar to which bearing plate and nut will be attached to protect during handling, installation, grouting and shotcreting.

Do not move or transport encapsulated nails until the encapsulation grout has reached sufficient strength to resist damage during handling. Handle encapsulated nails in a manner that will prevent large deflections, distortions or damage. Repair encapsulated nails that are damaged or defective in accordance with the manufacturer's recommendations or remove them from the site.

3.0 CONSTRUCTION REQUIREMENTS:

3.1 Site Drainage Control: Provide positive control and discharge of all surface water that will affect construction of the soil nail retaining wall. Maintain all pipes or conduits used to control surface water during construction. Repair damage caused by surface water at no additional cost. Upon substantial completion of the wall, remove surface water control pipes or conduits from the site. Alternatively, with the approval of GeoDesign, pipes or conduits that are left in place, may be fully grouted and abandoned or left in a way that protects the structure and all adjacent facilities from migration of fines through the pipe or conduit and potential ground loss.

Based on the results of the geotechnical site investigation, the local (site) groundwater table is anticipated to be as high as about 2/3 of the height of the wall above its base (lowest excavation level). Localized areas of perched water or seepage may be also encountered during excavation at the interface of geologic units or from localized groundwater seepage areas.

Immediately contact GeoDesign if unanticipated existing subsurface drainage structures are discovered during excavation. Suspend work in these areas until remedial measures meeting GeoDesign’s approval are implemented. Capture surface water runoff flows and flows from existing subsurface drainage structures independently of the wall drainage network and convey them to an outfall structure or storm sewer, as approved by GeoDesign.

3.2 Excavation: Coordinate the work and the excavation so the soil nail wall is safely constructed. Perform the wall construction and excavation sequence in accordance with the Plans and approved submittals. No excavations steeper than those specified herein or shown on the Plans will be made above or below the soil nail wall without written approval of GeoDesign.

3.2.1 Excavation and Wall Alignment Survey Control:

The Contractor will be responsible for providing the necessary survey and alignment control during excavation of each lift, locating and drilling each drillhole within the allowable tolerances and for

performing the wall excavation and nail installation in a manner which will allow for constructing the shotcrete construction facing to the specified minimum thickness and such that the shotcrete facing can be constructed to the specified minimum thickness and to the line and grade indicated in the Plans.

3.2.2 General Excavation: Complete clearing, grubbing, grading and excavation above and behind the wall including placement or riprap revetment before commencing wall excavation. Do not overexcavate the original ground behind the wall or at the ends of the wall, beyond the limits shown on the Plans. Do not perform general excavation that will affect the soil nail wall until wall construction starts. General excavation shall be coordinated with the soil nailing work and the excavation shall proceed from the top down in a horizontal staged excavation lift sequence with the ground level for each lift excavated no more than mid-height between adjacent nail rows, as illustrated on the Plans. Do not excavate the full wall height to the final wall alignment as shown on the Plans but maintain a working bench of native material to serve as a platform for the drilling equipment. The bench shall be wide enough to provide a safe working area for the drill equipment and workers, typical minimum bench width should be about 15 feet.

3.2.3 Soil Nail Wall Structure Excavation: Structure excavation in the vicinity of the wall face will require special care and effort compared to general earthwork excavation. The excavation Contractor should take this into account during planning. Due to the close coordination required between the soil nail Contractor and the excavation Contractor, the excavation Contractor shall perform the structure excavation for the soil nail wall under the direction of the soil nail specialty Contractor. The structure excavation pay limits are shown on the Plans.

Excavate to the final wall face using procedures that: (1) prevent over excavation; (2) prevent ground loss, swelling, air slaking, or loosening; (3) prevent loss of support for completed portions of the wall; (4) prevent loss of soil moisture at the face; and (5) and prevent ground freezing. Costs associated with additional thickness of shotcrete or concrete or other remedial measures required due to irregularities in the cut face, or inadvertent over excavation, shall be borne by the Contractor.

The exposed unsupported final excavation face cut height shall not exceed the vertical nail spacing plus the required reinforcing lap or the short-term stand-up height of the ground, whichever is less. Complete excavation to the final wall excavation line and application of the shotcrete in the same work shift unless otherwise approved by GeoDesign. Application of the shotcrete may be delayed up to 24 hours if the Contractor can show that the delay will not adversely affect the excavation face stability. A polyethylene film over the face of the excavation may reduce degradation of the cut face caused by changes in moisture. Damage to existing structures or structures included in the Work shall be repaired and paid by the Contractor where approval is granted for the extended face exposure period.

At the Contractor′s option, during each excavation lift, nails may be drilled and installed through a temporary stabilizing berm, as illustrated on the Plans. Purpose of the stabilizing berm is to prevent or minimize instability or sloughing of the final excavation face due to ground conditions

and/or drilling action. The stabilizing berm geometry illustrated on the plans shows the top of berm extending horizontally out from the bottom front face of the overlying shotcrete a distance of 1 foot and cut down from that point to the base grade for that excavation lift at a slope not steeper than 1H:1V. The Contractor may use different berm geometry than illustrated on the Plans, upon satisfactory demonstration that the different geometry provides satisfactory performance. Following the installation of nails in that lift, excavate the temporary stabilizing berm to the final wall face excavation line and clean the final excavation face of all loose materials, mud, rebound and other foreign matter which could prevent or reduce shotcrete bond. Ensure that installed nails are not damaged during excavation of the stabilizing berm. Repair or replace nails damaged or disturbed during excavation of the stabilizing berm, to GeoDesign's satisfaction, at no additional cost. Do not excavate the stabilizing berm until the nail grout has aged for at least 24 hours. Remove hardened nail grout protruding from the final wall excavation line more than 50 mm in a manner that prevents fracturing the grout at the nail head. Sledge hammer removal of the grout is not allowed. The use of hand held rock chippers is acceptable provided their use does not damage or disturb the remaining grout at the nail head, or the nail bar. Alternative excavation and soil nail installation methods that meet these objectives may be submitted to GeoDesign for review in accordance with the Submittals section.

Excavation to the next lift shall not proceed until nail installation, reinforced shotcrete placement, attachment of bearing plates and nuts and nail testing has been completed and accepted in the current lift. Nail grout and shotcrete shall have cured for at least 72 hours or attained at least their specified 3-day compressive strength before excavating the next underlying lift. Excavating the next lift in less than 72 hours will only be allowed if the Contractor submits compressive strength test results, for tests performed by a qualified independent testing lab, verifying that the nail grout and shotcrete mixes being used will provide the specified 3-day compressive strengths in the lesser time.

Notify GeoDesign immediately if raveling or local instability of the final wall face excavation occurs. Unstable areas shall be temporarily stabilized by means of buttressing the exposed face with an earth berm or other methods. Suspend work in unstable areas until remedial measures are developed.

3.2.4 Wall Discontinuities: Where the Contractor's excavation and installation methods result in a discontinuous wall along any nail row, the ends of the constructed wall section shall extend beyond the ends of the next lower excavation lift by at least 10 feet. Slopes at these discontinuities shall be constructed to prevent sloughing or failure of the temporary slopes. If sections of the wall are to be constructed at different times, prevent sloughing or failure of the temporary slopes at the end of each wall section.

3.2.5 Excavation Face Protrusions, Voids or Obstructions: Remove all or portions of cobbles, boulders, rubble or other subsurface obstructions encountered at the wall final excavation face which will protrude into the design shotcrete facing. Determine method of removal of face protrusions, including method to safely secure remnant pieces left behind the excavation face and for promptly backfilling voids resulting from removal of protrusions extending behind the excavation face. Notify

GeoDesign of the proposed method(s) for removal of face protrusions at least 24 hours prior to beginning removal. Voids or over-excavation beyond the plan wall excavation line resulting from the removal of face protrusions or excavation operations shall be backfilled with shotcrete or concrete, as approved by GeoDesign. Removal of face protrusions and backfilling of voids or over-excavation is considered incidental to the work. Cost due to removal of unanticipated man-made obstructions will be paid as Extra Work.

3.3 Nail Installation: Determine the required drillhole diameter(s), drilling method, grout composition and installation method necessary to achieve the nail pullout resistance(s) specified herein or on the Plans, in accordance with the nail testing acceptance criteria in the Nail Testing section.

No drilling or installation of production nails will be permitted in any soil/rock unit until successful pre-production verification testing of nails is completed in that unit and approved by GeoDesign. Install verification test nails using the same equipment, methods, nail inclination and drillhole diameter as planned for the production nails. Perform pre-production verification tests in accordance with the Verification Testing Section prior to starting wall excavation and prior to installation of production nails in the specific lift in which the designated verification test nails are located. The number and location of the verification tests will be as indicated on the Plans or specified herein. Verification test nails may be installed through either the existing slope face prior to start of wall excavation, drill platform work bench, stabilization berm or into slot cuts made for the particular lift in which the verification test nails are located. Slot cuts will only be large enough to safely accommodate the drill and test nail reaction setup. Subject to GeoDesign's approval, verification test nails may also be installed at angle orientations other than perpendicular to the wall face or at different locations than specified, as long as the Contractor can demonstrate that the test nails will be bonded into ground which is representative of the ground at the verification test nail locations designated on the Plans or herein. Install the production soil nails before the application of the reinforced shotcrete facing. At the Contractor's request and subject to GeoDesign's written approval, the shotcrete facing may be placed before drilling and installing the nails. Provide a blockout through the shotcrete facing at drillhole locations using PVC pipe or other suitable material, to prevent damage to the facing during drilling. As part of the required construction submittals, provide GeoDesign with acceptable structural design calculations demonstrating that the facing structural capacity will not be reduced and that the bearing plates are adequate to span the nail drillhole blockout through the construction facing. If this requires larger size bearing plates and/or additional reinforcement beyond that detailed on the Plans, the extra cost will be incidental.

Where necessary for stability of the excavation face, the Contractor shall have the option of placing a sealing layer (flashcoat) of unreinforced shotcrete or steel fiber reinforced shotcrete or of drilling and grouting of nails through a temporary stabilizing berm of native soil to protect and stabilize the face of the excavation per Section 3.2.3 Wall Structure Excavation. Cost shall be incidental to the Work.

GeoDesign may add, eliminate, or relocate nails to accommodate actual field conditions. Cost

adjustments associated with these modifications shall be made in accordance with the General Provisions of the Contract. The cost of any redesign, additional material, or installation modifications resulting from actions of the Contractor shall be borne by the Contractor.

3.3.1 Drilling: The drill holes for the soil nails shall be made at the locations, orientations, and lengths shown on the Plans or as directed by GeoDesign. Select drilling equipment and methods suitable for the ground conditions described in the geotechnical report and shown in the boring logs. Select drillhole diameter(s) required to develop the specified pullout resistance and to also provide a minimum 1/2 inch grout cover. A minimum required drillhole diameter is shown on the plans. It is the Contractor′s responsibility to determine the final drillhole diameter(s) required to provide the specified pullout resistance. Use of drilling muds such as bentonite slurry to assist in drill cutting removal is not allowed but air may be used. With GeoDesign's approval, the Contractor may be allowed to use water or foam flushing upon successful demonstration, at the Contractor's cost, that the installation method still provides adequate nail pullout resistance. If caving ground is encountered, use cased drilling methods to support the sides of the drillholes. Where hard drilling conditions such as rock, cobbles, boulders, or obstructions are described elsewhere in the contract documents or project Geotechnical Report, percussion or other suitable drilling equipment capable of drilling and maintaining stable drillholes through such materials, will be used.

Immediately suspend or modify drilling operations if ground subsidence is observed, if the soil nail wall is adversely affected, or if adjacent structures are damaged from the drilling operation. Immediately stabilize the adverse conditions at no additional cost.

3.3.2 Nail Bar Installation: Provide nail bars in accordance with the schedules included in the Plans. Provide centralizers sized to position the bar within 0.5 inch of the center of the drillhole. Position centralizers as shown on the Plans so their maximum center-to-center spacing does not exceed 10 feet. Also locate centralizers within 2 feet from the top and bottom of the drillhole. Securely attach centralizers to the bar so they will not shift during handling or insertion into the drill hole yet will still allow grout tremie pipe insertion to the bottom of drillhole and allow grout to flow freely up the hole.

Inspect each nail bar before installation and repair or replace damaged bars. Check uncased drillholes for cleanliness prior to insertion of the soil nail bar. Insert nail bars with centralizers into the drill hole to the required length without difficulty and in a way that prevents damage to the drillhole or bar. Do not drive or force partially inserted soil nails into the hole. Remove nails which cannot be fully inserted to the design depth and clean the drill hole to allow unobstructed installation.

3.3.3 Nail Installation Tolerances: Nails shall not extend beyond the right-of-way or easement limits shown on the Plans. Nail location and orientation tolerances are:

Nail head location, deviation from plan design location: 6 inches in any direction.

Nail inclination, deviation from plan: + or - 3 degrees

Location tolerances are applicable to only one nail and not accumulative over large wall areas. Center nail bars within 1 inch of the center of the drillhole.

Soil nails which do not satisfy the specified tolerances, due to the Contractor's installation methods, will be replaced at no additional cost. Backfill abandoned nail drill holes with tremied grout. Nails which encounter unanticipated obstructions during drilling shall be relocated, as approved by GeoDesign. Cost of drilling and backfilling drillholes abandoned due to unanticipated obstructions will be paid as Extra Work.

3.4 Grouting

3.4.1 Grout Mix Design. Use a neat cement grout or a sand-cement grout. Submit the proposed nail grout mix design to GeoDesign for review and approval in accordance with the submittal section. The design mix submittal shall include compressive strength test results verifying that the proposed mix will have a minimum 3-day compressive strength of 1,800 psi and minimum 28-day compressive strength of 3,000 psi.

3.4.2 Grout Testing. Previous test results for the proposed grout mix completed within one year of the start of work may be submitted for initial verification of the required compressive strengths for installation of pre-production verification test nails and initial production nails. During production, nail grout shall be tested by the Contractor in accordance with AASHTO T106/ASTM C109 at a frequency of no less than one test for every 40 cubic yards of grout placed or a minimum of 7 tests per grout batch. Provide grout cube test results to GeoDesign within 24 hours of testing.

3.4.3 Grouting Equipment. Grout equipment shall produce a uniformly mixed grout free of lumps and undispersed cement, and be capable of continuously agitating the mix. Use a positive displacement grout pump equipped with a pressure gauge which can measure at least twice but no more than three times the intended grout pressure. Size the grouting equipment to enable the entire nail to be grouted in one continuous operation. Place the grout within 60 minutes after mixing or within the time recommended by the admixture manufacturer, if admixtures are used. Grout not placed in the allowed time limit will be rejected.

3.4.4 Grouting Methods: Grout the drillhole after installation of the nail bar. Each drillhole will be grouted within 2 hours of completion of drilling, unless otherwise approved by GeoDesign. Inject the grout at the lowest point of each drill hole through a grout tube, casing, hollow-stem auger, or drill rods. Keeps the outlet end of the conduit delivering the grout below the surface of the grout as the conduit is withdrawn to prevent the creation of voids. Completely fill the drillhole in one continuous operation. Cold joints in the grout column are not allowed except at the top of the test bond length of proof tested production nails. At the Contractor’s option, the grout tube may remain in the hole provided it is filled with grout. Grouting before insertion of the nail is allowed provided the nail bar is immediately inserted through the grout to the specified length without difficulty.

During casing removal for drillholes advanced by either cased or hollow-stem auger methods, maintain sufficient grout level within the casing to offset the external groundwater/soil pressure and prevent hole caving. Maintain grout head or grout pressures sufficient to ensure that the drillhole will be completely filled with grout and to prevent unstable soil or groundwater from contaminating or diluting the grout. Record the grout pressures for soil nails installed using pressure grouting techniques. Control grout pressures to prevent excessive ground heave or fracturing.

Remove the grout and nail if grouting is suspended for more than 30 minutes or does not satisfy the requirements of this specification or the Plans, and replace with fresh grout and undamaged nail bar at no additional cost.

3.5 Nail Testing: Perform both verification and proof testing of designated test nails. Perform pre-production verification tests on sacrificial test nails at locations shown on the Plans or listed herein. Perform proof tests on production nails at locations selected by GeoDesign. Required nail test data shall be recorded by GeoDesign. Do not perform nail testing until the nail grout and shotcrete facing have cured for at least 72 hours and attained at least their specified 3-day compressive strength. Testing in less than 72 hours will only be allowed if the Contractor submits compressive strength test results, for tests performed by a qualified independent testing lab, verifying that the nail grout and shotcrete mixes being used will provide the specified 3-day compressive strengths in the lesser time.

3.5.1 Proof Test Nail Unbonded Length: Provide temporary unbonded lengths for each test nail. Isolate the test nail bar from the shotcrete facing and/or the reaction frame used during testing. Isolation of a test nail through the shotcrete facing shall not affect the location of the reinforcing steel under the bearing plate. Accepted proof test nails may be incorporated as production nails provided the temporary test unbonded length is fully grouted subsequent to testing. Submit the proposed test nail isolation methods, methods for providing an unbonded test length and methods for grouting the unbonded length subsequent to testing to GeoDesign for review and approval in accordance with the Submittals section. Where temporary casing of the unbonded length of test nails is provided, install the casing in a way that prevents any reaction between the casing and the grouted bond length of the nail and/or the stressing apparatus.

3.5.2 Testing Equipment: Testing equipment shall include dial gauges, dial gauge support, jack and pressure gauge, electronic load cell, and a reaction frame. The load cell is required only for the creep test portion of the verification test. Provide description of test setup and jack, pressure gauge and load cell calibration curves in accordance with Submittals section.

Design the testing reaction frame to be sufficiently rigid and of adequate dimensions such that excessive deformation of the testing equipment does not occur. If the reaction frame will bear directly on the shotcrete facing, design it to prevent cracking of the shotcrete. Independently support and center the jack over the nail bar so that the bar does not carry the weight of the testing equipment. Align the jack, bearing plates, and stressing anchorage with the bar such that unloading

and repositioning of the equipment will not be required during the test.

Apply and measure the test load with a hydraulic jack and pressure gauge. The pressure gauge shall be graduated in 50 psi increments or less. The jack and pressure gauge shall have a pressure range not exceeding twice the anticipated maximum test pressure. Jack ram travel shall be sufficient to allow the test to be done without resetting the equipment. Monitor the nail load during verification tests with both the pressure gauge and the load cell. Use the load cell to maintain constant load hold during the creep test load hold increment of the verification test.

Measure the nail head movement with a dial gauge capable of measuring to 0.001 in. The dial gauge shall have a travel sufficient to allow the test to be done without having to reset the gauge. Visually align the gauge to be parallel with the axis of the nail and support the gauge independently from the jack, wall or reaction frame. Use two dial gauges when the test setup requires reaction against a soil cut face.

3.5.3 Pre-production Verification Testing of Sacrificial Test Nails: Pre-production verification testing shall be performed prior to installation of production nails to verify the Contractor's installation methods and nail pullout resistance. Perform pre-production verification tests at the locations and elevations shown on the Plans or herein and per Nail Installation Section 3.3, unless otherwise approved by GeoDesign. Perform a minimum of three (3) verification tests as shown on the drawings and for each different drilling/grouting method proposed to be used. Verification test nails will be sacrificial and not incorporated as production nails. Oversized bars can be used for the sacrificial verification test nails.

Develop and submit the details of the verification testing arrangement including the method of distributing test load pressures to the excavation surface (reaction frame), test nail bar size, grouted drillhole diameter and reaction frame dimensioning to GeoDesign for approval in accordance with Submittals section. Construct verification test nails using the same equipment, installation methods, nail inclination, and drillhole diameter as planned for the production nails. Changes in the drilling or installation method may require additional verification testing as determined by GeoDesign and shall be provided at no additional cost. Payment for additional verification tests required due to differing site conditions, if determined by GeoDesign, shall be per the contract unit price.

Test nails shall have both bonded and temporary unbonded lengths. Prior to testing only the bonded length of the test nail shall be grouted. The temporary unbonded length of the test nail shall be at least 3 feet. The bonded length of the test nail shall be determined based on the production nail bar grade and size such that the allowable bar structural load is not exceeded during testing, but shall not be less than 10 feet. The allowable bar structural load during testing shall not be greater than 90 percent of the yield strength for Grade 60. The Contractor shall provide larger verification test bar sizes, as required to safely accommodate the 10-foot minimum test bond length and testing to 3 times the allowable pullout resistance requirements, at no additional cost.

The verification test bonded length L_{BV} shall not exceed the test allowable bar structural load

divided by 3 times the allowable pullout resistance value. The following equation shall be used for determining the verification test nail maximum bonded length to be used to avoid structurally overstressing the verification test nail bar size:

L_{BV} = C f_Y A_S / 3 Q_d , or 10 feet, whichever is greater.
L_{BV} = Maximum Verification Test Nail Bonded Length (ft.)
C = 0.9 for Grade 60 bars
Fy = Bar Yield or Ultimate Stress (ksi)
A_S = Bar Steel Area (in^2)
3 = Pullout resistance safety factor (for Verification Test only)
Q_d = Allowable pullout resistance (kips/ft of grouted nail length, specified herein or on the Plans)

The Design Test Load (DTL) during verification testing shall be determined by the following equation:

DTL = Design Test Load (kips) = L_{BV} x Q_d
L_{BV} = As-built bonded test length (ft.)
Q_d = Allowable pullout resistance (kips/ft of grouted nail length, specified herein or on the Plans)

MTL = 3.0 x DTL = Maximum Test Load (kips)

Verification test nails shall be incrementally loaded to a maximum test load of 300 percent of the Design Test Load (DTL) or to Failure in accordance with the following loading schedule. The soil nail movements shall be recorded at each load increment.

VERIFICATION TEST LOADING SCHEDULE

LOAD	HOLD TIME
AL (.05 DTL max.)	1 minute
0.25 DTL	10 minutes
0.50 DTL	10 minutes
0.75 DTL	10 minutes
1.00 DTL	10 minutes
1.25 DTL	10 minutes
1.50 DTL (Creep Test)	60 minutes
1.75 DTL	10 minutes
2.00 DTL	10 minutes
2.50 DTL	10 minutes max.
3.00 DTL or Failure (Max. Test Load)	10 minutes max.

The alignment load (AL) should be the minimum load required to align the testing apparatus and should not exceed 5 percent of the Design Test Load (DTL). Dial gauges should be set to "zero"

after the alignment load has been applied.

Each load increment shall be held for at least 10 minutes. The verification test nail shall be monitored for creep at the 1.50 DTL load increment. Nail movements during the creep portion of the test shall be measured and recorded at 1 minute, 2, 3, 5, 6, 10, 20, 30, 50, and 60 minutes. The load during the creep test shall be maintained within 2 percent of the intended load by use of the load cell.

3.5.4 Proof Testing of Production Nails: Perform proof testing on 5 percent (1 in 20) of the production nails in each nail row or minimum of 1 per row. The locations shall be designated by GeoDesign. A verification test nail successfully completed during production work shall be considered equivalent to a proof test nail and shall be accounted for in determining the number of proof tests required in that particular row.

Production proof test nails shall have both bonded and temporary unbonded lengths. Prior to testing only the bonded length of the test nail shall be grouted. The temporary unbonded length of the test nail shall be at least 3 feet. The bonded length of the test nail shall be determined based on the production nail bar grade and size such that the allowable bar structural load is not exceeded during testing, but shall not be less than 1 foot. Production proof test nails shorter than 15 feet in length may be constructed with less than the minimum 10-foot length with the unbonded length limited to 3 feet. The allowable bar structural load during testing shall not be greater than 90 percent of the yield strength for Grade 60 bars.

The proof test bonded length L_{BP} shall not exceed the test allowable bar load divided by 1.5 times the allowable pullout resistance value, or above minimum lengths, whichever is greater. The following equation shall be used for sizing the proof test nail bonded length to avoid overstressing the production nail bar size:

L_{BP} = C Fy A_S / 1.5 Q_d , or above minimum lengths, whichever is greater.
L_{BP} = Maximum Proof Test Nail Bonded Length (ft.)
C = 0.9 for Grade 60 bars
Fy = Bar Yield or Ultimate Stress (ksi)
A_S = Bar Steel Area (in^2)
1.5 = Pullout resistance safety factor
Q_d = Allowable pullout resistance (kips/ft of grouted nail length, specified herein or on the Plans)

Design Test Load (DTL) during proof testing shall be determined by the following equation:

DTL = Design Test Load (Kips) = L_{BP} x Q_d = **13.5 kips**
L_{BP} = As-built bonded test length (ft.)
Q_d = Allowable pullout resistance (kips/ft of grouted nail length, specified herein or on the Plans)
MTL = 1.5 x DTL = Maximum Test Load (Kips)

Proof tests shall be performed by incrementally loading the proof test nail to a maximum test load of 150 percent of the Design Test Load (DTL). The nail movement at each load shall be measured and recorded by GeoDesign in the same manner as for verification tests. The test load shall be monitored by a jack pressure gauge with a sensitivity and range meeting the requirements of pressure gauges used for verification test nails. At load increments other than maximum test load, the load shall be held long enough to obtain a stable reading. Incremental loading for proof tests shall be in accordance with the following loading schedule. The soil nail movements shall be recorded at each load increment.

PROOF TEST LOADING SCHEDULE

LOAD	HOLD TIME
AL (.05 DTL max.)	Until Stable
0.25 DTL	Until Stable
0.50 DTL	Until Stable
0.75 DTL	Until Stable
1.00 DTL	Until Stable
1.25 DTL	Until Stable
1.50 DTL (Max. Test Load)	See Below

The alignment load (AL) should be the minimum load required to align the testing apparatus and should not exceed 5 percent of the Design Test Load (DTL). Dial gauges should be set to "zero" after the alignment load has been applied.

All load increments shall be maintained within 5 percent of the intended load. Depending on performance, either 10 minute or 60 minute creep tests shall be performed at the maximum test load (1.50 DTL). The creep period shall start as soon as the maximum test load is applied and the nail movement shall be measured and recorded at 1 minutes, 2, 3, 5, 6, and 10 minutes. Where the nail movement between 1 minute and 10 minutes exceeds 1 mm, the maximum test load shall be maintained an additional 50 minutes and movements shall be recorded at 20 minutes, 30, 50, and 60 minutes.

3.5.5 Test Nail Acceptance Criteria: A test nail shall be considered acceptable when:

1. For verification tests, a total creep movement of less than 2 mm per log cycle of time between the 6 and 60 minute readings is measured during creep testing and the creep rate is linear or decreasing throughout the creep test load hold period.

2. For proof tests, a total creep movement of less than 1 mm is measured between the 1 and 10 minute readings or a total creep movement of less than 2 mm is measured between the 6 and 60 minute readings and the creep rate is linear or decreasing throughout the creep test load hold period.

3. The total measured movement at the maximum test load exceeds 80 percent of the theoretical

elastic elongation of the test nail unbonded length.

The minimum acceptable elastic movement shall be computed as follows:

measured movement, DL, acceptable if > $0.8(P)(UL)(10^6)/(A_S)(E)$

where measured movement DL is in mm and:

P = Maximum applied test load (Kips)
UL = Length from the back of the nail to jack connection to the top of the bond length, i.e., the unbonded free length (feet)
A_S = Cross-sectional area of the soil nail bar steel (in^2)
E = Young's modulus of steel (29,000 ksi)

4. A pullout failure does not occur at the maximum test load. Pullout failure is defined as the load at which attempts to further increase the test load simply result in continued pullout movement of the test nail. The pullout failure load shall be recorded as part of the test data.

Successful proof tested nails meeting the above test acceptance criteria may be incorporated as production nails, provided that (1) the unbonded length of the test nail drillhole has not collapsed during testing, (2) the minimum required drillhole diameter has been maintained, (3) the specified corrosion protection is provided, and (4) the test nail length is equal to or greater than the scheduled production nail length. Test nails meeting these requirements shall be completed by satisfactorily grouting up the unbonded test length. Maintaining the temporary unbonded test length for subsequent grouting is the Contractor's responsibility. If the unbonded test length of production proof test nails cannot be satisfactorily grouted subsequent to testing, the proof test nail shall become sacrificial and shall be replaced with an additional production nail installed at no additional cost.

3.6 Test Nail Rejection: If a test nail does not satisfy the acceptance criterion, the Contractor shall determine the cause.

3.6.1 Verification Test Nails: GeoDesign will evaluate the results of each verification test. Installation methods which do not satisfy the nail testing requirements shall be rejected. The Contractor shall propose alternative methods and install replacement verification test nails. Replacement test nails shall be installed and tested at no additional cost.

3.6.2 Proof Test Nails: GeoDesign may require the Contractor to replace some or all of the installed production nails between a failed proof test nail and the adjacent passing proof test nail. Alternatively, GeoDesign may require the installation and testing of additional proof test nails to verify that adjacent previously installed production nails have sufficient load carrying capacity. Contractor modifications may include, but are not limited to; the installation of additional proof test nails; increasing the drillhole diameter to provide increased capacity; modifying the installation or grouting methods; reducing the production nail spacing from that shown on the Plans and installing

more production nails at a reduced capacity; or installing longer production nails if sufficient right-of way is available and the pullout capacity behind the failure surface controls the allowable nail design capacity. The nails may not be lengthened beyond the temporary construction easements or the permanent right-of-way shown on the Plans. Installation and testing of additional proof test nails or installation of additional or modified nails as a result of proof test nail failure(s) will be at no additional cost.

3.7 Nail Installation Records: Records documenting the soil nail wall construction will be maintained by GeoDesign, unless specified otherwise.

Typical records maintained by GeoDesign will include the following:

a. Contractor's name
b. Drill rig operator's name
c. Date and time of start and finish of drilling
d. Drilling difficulties
e. Caving or sloughing of excavation or drillhole
f. Groundwater conditions
g. Drill casing requirements
h. Installed nail drillhole and bar diameter
i. Design nail length
j. Installed nail length
k. As-built nail location and deviation from specified tolerances
l. Date, time and method grout was placed including grout pressure (if applicable)
m. Design changes

The Contractor shall provide GeoDesign with as-built drawings showing as-built nail locations and as-built shotcrete facing line and grade within 5 days after completion of the shotcrete facing.

4.0 SELF-GROUTING HOLLOW CORE SOIL NAIL ALTERNATE: The owner may entertain an alternate soil nail type consisting of self-grouting, hollow core soils nails such as those manufactured by TITAN, DYWIGAG Drill Hollow Bar or equivalent. If such nails are proposed, they shall be designed by the Soil Nail Contractor and installed per the following reports: FHWA's April 2006 "Hollow-Core Soil Nails State of the Practice" and FHWA's August 2010 "Hollow Bar Soil Nails - Review of Corrosion Factors and Mitigation Practice" Report No. FHWA-CFL/TD-1-002. The design shall be submitted to GeoDesign for review and approval prior to the installation or ordering of any materials, and such a change shall be approved by the Owner's Construction Manager and shall not adversely affect the project schedule.

5.0 METHOD OF MEASUREMENT: The unit of measurement for production soil nails will be per lineal feet. The length to be paid will be the length measured along the bar centerline from the back face of shotcrete to the bottom tip end of nail bar as shown on the Plans. No separate measurement will be made for proof test nails, which shall be considered incidental to production

nail installation. Specified verification test nails will be measured on a unit basis for each verification test successfully completed. Failed verification test nails or additional verification test nails installed to verify alternative nail installation methods proposed by the Contractor will not be measured.

Structure Excavation for Soil Nail Wall will be measured as the theoretical plan volume in cubic yards within the structure excavation pay limits shown on the Plans. This will be the excavation volume within the zone measured from top to bottom of shotcrete wall facing and extending out 6 feet horizontally in front of the plan wall final excavation line. Additional excavation beyond the plan wall final excavation line resulting from irregularities in the cut face or inadvertent excavation, will not be measured. The final pay quantities will be the design quantity increased or decreased by any changes authorized by GeoDesign.

6.0 BASIS OF PAYMENT: The accepted quantities of soil nails and soil nail wall structure excavation will be paid for at the contract unit prices. Payment will be full compensation for all labor, equipment, materials, material tests, field tests and incidentals necessary to acceptably fabricate and construct the soil nails and perform the structure excavation, including the excavation and wall alignment survey control, for the soil nail wall(s) in accordance with all requirements of the contract. Payment will be made for each of the following items:

Pay Item	Measurement Unit
Soil Nails. No. 6 Bar (Grade 60)	Lineal Feet
Verification Test Nails	Each
Structure Excavation-Soil Nail Wall	Cubic Yards
Alternate for self-grouting, hollow core soils nails	Lineal Feet

END OF SECTION

TECHNICAL SPECIFICATION
FOR
TEMPORARY SHOTCRETE FACING

1.0 DESCRIPTION: Shotcrete facing and wall drainage work consists of furnishing all materials and labor required for placing and securing geocomposite drainage material, reinforcing steel and shotcrete for the temporary shotcrete facing and nail head bearing plates and nuts for the soil nail wall shown on the Plans. The Work shall include any preparatory trimming and cleaning of soil surfaces and shotcrete cold joints to receive new shotcrete.

Shotcrete shall comply with the requirements of ACI 506.2, "Specifications for Materials, Proportioning and Application of Shotcrete", except as otherwise specified. Shotcrete shall consist of an application of one or more layers of concrete conveyed through a hose and pneumatically projected at a high velocity against a prepared surface.

Shotcrete may be produced by either a wet-mix or dry-mix process. The wet-mix process consists of thoroughly mixing all the ingredients except accelerating admixtures, but including the mixing water, introducing the mixture into the delivery equipment and delivering it, by positive displacement, to the nozzle. The wet-mix shotcrete shall then be air jetted from the nozzle at high velocity onto the surface. The dry-mix process consists of shotcrete without mixing water which is conveyed through the hose pneumatically with the mixing water introduced at the nozzle. For additional descriptive information, the Contractor's attention is directed to the American Concrete Institute ACI 506R "Guide to Shotcrete."

Soil nails and wall excavation are covered by the Soil Nail Wall Support of Excavation Specification.

Where the imperative mood is used within this Specification for conciseness, “the Contractor shall” is implied.

1.1 Contractor’s Experience Requirements. Workers, including foremen, nozzlemen, finishers and delivery equipment operators, shall be fully experienced to perform the work. All shotcrete nozzlemen on this project shall have experience on at least three projects in the past three years in similar shotcrete application work totaling at least 10,000 square feet of wall face area and shall demonstrate ability to satisfactorily place the shotcrete.

Initial qualification of nozzlemen will be based either on previous ACI certification or satisfactory completion of preconstruction test panels. The requirement for nozzlemen to shoot preconstruction qualification test panels will be waived for nozzlemen who can submit documented proof they have been certified in accordance with the ACI 506.3R Guide to Certification of Shotcrete Nozzlemen. The Certification shall have been done by a recognized shotcrete testing lab and/or recognized

shotcreting consultant and have covered the type of shotcrete to be used (plain wet-mix, plain dry-mix or steel fiber reinforced.

1.2 Construction Submittals: At least 15 calendar days before the planned start of shotcrete placement, submit five copies of the following information, in writing, to GeoDesign for review:

a. Written documentation listing at least five structural shotcrete walls successfully completed within the past three years, including photographs of the project as well as names, addresses, and phone numbers of the owner's representative.

b. Written documentation of the nozzlemen's qualifications including proof of ACI certification (if applicable).

c. Proposed methods of shotcrete placement and of controlling and maintaining facing alignment and location and shotcrete thickness.

d. Shotcrete mix design including:
Type of Portland cement.
Aggregate source and gradation.
Proportions of mix by weight and water-cement ratio.
Proposed admixtures, manufacturer, dosage, technical literature.
Previous strength test results for the proposed shotcrete mix completed within one year of the start of shotcreting may be submitted for initial verification of the required compressive strengths at start of production work.

e. Certificates of Compliance, manufacturers' engineering data and installation instructions for the drainage geotextile, and geocomposite drain strip.

f. Certificates of Compliance for bearing plates, nuts, drainage aggregate and PVC drain piping.

GeoDesign will approve or reject the Contractor's Submittals within 10 calendar days after receipt of a complete submission. The Contractor will not be allowed to begin wall construction or incorporate materials into the work until the submittal requirements are satisfied and found acceptable to GeoDesign. Changes or deviations from the approved submittals must be re-submitted for approval. No adjustments in contract time will be allowed due to incomplete submittals.

Upon delivery to the project site, provide certified mill test results for all reinforcing steel specifying the minimum ultimate strength, yield strength, elongation and chemical composition.

1.3 Pre-Construction Meeting: A pre-construction meeting scheduled by GeoDesign will be held prior to the start of wall construction. Attendance is mandatory. The shotcrete Contractor, if different

than the soil nail specialty Contractor, shall attend. See Section 1.4 of the Soil Nail Wall Support of Excavation Specification.

2.0 MATERIALS: All materials for shotcrete shall conform to the following requirements:

Cement	AASHTO M85/ ASTM C150, Type I, II, III or V.
Fine Aggregate	AASHTO M6/ASTM C33 clean, natural.
Coarse Aggregate	AASHTO M80, Class B for quality
Water	Clean and Potable. AASHTO M157/ASTM C94
Chemical Admixtures	
Accelerator	Fluid type, applied at nozzle, meeting requirements of AASHTO M194/ASTM C494/ASTM C1141
Air-Entraining Agent	AASHTO M154/ASTM C260
Water-reducer and Superplastisizer	AASHTO M194/ASTM C494 Type A,C,D,E,F, or G
Retarders	AASHTO M194/ ASTM C494 Type B or D.
	Mineral Admixtures
	Fly Ash AASHTO M295/ASTM C618 Type F or C, cement
	Silica Fume ASTM C1240, 90 percent minimum silicon dioxide solids content, not to exceed 12 percent by weight of cement.
	Welded Wire Fabric AASHTO M55/ASTM A185 or A497.
	Reinforcing Bars for AASHTO M31/ASTM A615, Grade 420, deformed.
	Shotcrete Facing

Bearing Plates	AASHTO M183/ASTM A36.
Nuts	AASHTO M291, grade B, hexagonal, fitted with beveled washer or spherical seat to provide uniform bearing.
Curing Compounds	AASHTO M148, Type 1D or Type 2
Prepackaged Shotcrete	ASTM C928.
Drainage Geotextile	
For Drain Strip	AASHTO M288-06 Class 3, Water Flow Rate 150 gpm/ft^2
Geocomposite Drain Strip	AWD SiteDrain Strip 6400, or approved equal.
Drainage Aggregate	½ inch Crushed Stone per Project Specification 31 23 23
Film Protection	Polyethylene films per AASHTO M-171.

Materials shall be delivered, stored and handled to prevent contamination, segregation, corrosion or damage. Store liquid admixtures to prevent evaporation and freezing.

Drainage geotextile and geocomposite drain strips shall be provided in rolls wrapped with a protective covering and stored in a manner which protects the fabric from mud, dirt, dust, debris, and shotcrete rebound. Protective wrapping shall not be removed until immediately before the geotextile or drain strip is installed. Extended exposure to ultra-violet light shall be avoided. Each roll of geotextile or drain strip in the shipment shall be labeled to identify the production run.

2.1 Shotcrete Mix Design: The Contractor must receive notification from GeoDesign that the proposed mix design and method of placement are acceptable before shotcrete placement can begin.

2.1.1 Aggregate: Aggregate for shotcrete shall meet the strength and durability requirements of AASHTO M6/M80 and the following gradation requirements:

Sieve Size	Percent Passing by Weight
½ in.	100
3/8 in.	90-100
#4	70-85
#8	50-70
#18	35-55
#30	20-35
#50	8-20
#100	2-10

2.1.2 Proportioning and Use of Admixtures: Proportion the shotcrete to be pumpable with the concrete pump furnished for the work, with a cementing materials content of at least 625 lbs. per cubic yard and water/cement ratio not greater than 0.45. Do not use admixtures unless approved by GeoDesign. Thoroughly mix admixtures into the shotcrete at the rate specified by the manufacturer. Accelerators (if used) shall be compatible with the cement used, be non-corrosive to steel and not promote other detrimental effects such as cracking or excessive shrinkage. The maximum allowable chloride ion content of all ingredients shall not exceed 0.10% when tested to AASHTO T260.

2.1.3 Air Entrainment: Air entrainment is not required.

2.1.4 Strength and Durability Requirements: Shotcrete Facing: Provide a shotcrete mix capable of attaining 2,000 psi compressive strength in 3 days and 3,000 psi in 28 days. The average compressive strength of each set of three test cores extracted from wall face must equal or exceed 85 percent of the specified compressive strength, with no individual core less than 75 percent of the specified compressive strength, in accordance with ACI 506.2.

2.1.5 Mixing and Batching: Aggregate and cement may be batched by weight or by volume in accordance with the requirements of ASTM C94 or AASHTO M241/ASTM C685. Mixing equipment shall thoroughly blend the materials in sufficient quantity to maintain placing continuity. Ready mix shotcrete shall comply with AASHTO M157. Shotcrete shall be batched, delivered, and placed within 90 minutes of mixing. The use of retarding admixtures may extend application time beyond 90 minutes if approved by GeoDesign.

Premixed and packaged shotcrete mix may be provided for on-site mixing. The packages shall contain materials conforming to the Materials section of this specification. Placing time limit after mixing shall be per the manufacturer's recommendations.

2.2 Field Quality Control: The Contractor shall provide equipment, materials, and personnel as necessary to obtain shotcrete cores for testing including construction of test panel boxes, field curing requirements and coring. Compressive strength testing will be performed by the Owner's testing laboratory. Shotcrete final acceptance will be based on the 28-day strength.

Shotcrete production work may commence upon initial approval of the design mix and nozzlemen and continue if the specified strengths are obtained. The shotcrete work by a crew will be suspended if the test results for its work do not satisfy the strength requirements. The Contractor shall change all or some of the following: the mix, the crew, the equipment, or the procedures. Before resuming work, the crew must shoot additional test panels and demonstrate that the shotcrete in the panels satisfies the specified strength requirements. The cost of all work required to obtain satisfactory strength tests will be borne by the Contractor.

2.2.1 Preconstruction Test Panels: Not required.

Make preconstruction test panels with minimum dimensions of 3-ft x 3-ft square and at least 4 inches thick. Slope the sides of preconstruction and production test panels at 45 degrees over the full panel thickness to minimize entrapment of rebound and for ease of stripping the form. Two preconstruction test panels shall include the maximum anticipated reinforcing congestion shown on the Plans. Cores extracted from the test panel shall demonstrate encapsulation of the reinforcement in accordance with ACI 506.2 equal to core grade 2 or better. Two preconstruction test panels shall be constructed without reinforcement and have cores extracted for absorption and compressive strength testing.

2.2.2 Production Test Panels: Not required.

2.2.3 Test Specimen Extraction and Testing:

Provide at least six 3-inch diameter core samples cut from the wall facing without reinforcement, for core grading. Core locations will be designated by GeoDesign. Clearly mark the cores and container to identify the core locations. Immediately wrap cores in wet burlap or material meeting the requirements of ASTM C171 and seal in a plastic bag. Deliver cores to the testing lab, as directed by GeoDesign, within 48 hours of shooting the panels. The remainder of the panels will become the property of the Contractor. Compressive strength testing will be performed by the testing lab. Upon delivery to the testing lab, samples will be placed in the moist room until the time of test. When the test length of a core is less than twice the diameter, the correction factors given in AASHTO T24/ASTM C42 will be applied to obtain the compressive strength of individual cores. Three cores will be tested at 1 day, three cores will be tested at 3 days, and three cores will be tested at 28 days for compressive strength per AASHTO T24/ASTM C42.

Fill core holes in the wall by either dry-packing with non-shrink patching mortar after the holes are cleaned and dampened, or with shotcrete.

3.0 CONSTRUCTION REQUIREMENTS:

3.1 Wall Drainage Network: Install and secure all elements of the wall drainage network as shown on the Plans, specified herein, or as required by GeoDesign to suit the site conditions. The

drainage network shall consist of installing geocomposite drain strips as shown on the Plans or as directed by GeoDesign. All elements of the drainage network shall be installed prior to shotcreting.

Unanticipated subsurface drainage features exposed in the excavation cut face shall be captured independently of the wall drainage network and shall be mitigated prior to shotcrete application in accordance with Section 3.1 of the Soil Nail Wall Support of Excavation Specification. Costs due to the required mitigation will be paid for as Extra Work.

3.1.1 Geocomposite Drain Strips: Install geocomposite drain strips centered between the columns of nails as shown on the Plans. The drain strips shall be at least 12-inches wide and placed with the geotextile side against the ground. Secure the strips to the excavation face and prevent shotcrete from contaminating the ground side of the geotextile. Drain strips will be continuous. Splices shall be made with a 12 inch minimum overlap such that the flow of water is not impeded. Repair damage to the geocomposite drain strip, which may interrupt the flow of water.

3.1.2 Footing Drains: Not required (for Soil Nail Wall)

3.1.3 Connection Pipes and Weepholes: Not Required

3.2 Shotcrete Facing:

3.2.1 Shotcrete Alignment and Thickness Control: Ensure that the thickness of shotcrete satisfies the minimum requirements shown on the Plans using thickness control pins, or other devices acceptable to GeoDesign. Install thickness control devices normal to the surface such that they protrude the required shotcrete thickness outside the surface and maintain a plane surface.

3.2.2 Surface Preparation: Clean the face of the excavation and other surfaces to be shotcreted of loose materials, mud, rebound, overspray or other foreign matter that could prevent or reduce shotcrete bond. Protect adjacent surfaces from overspray during shooting. Avoid loosening, cracking, or shattering the ground during excavation and cleaning. Remove any surface material which is so loosened or damaged, to a sufficient depth to provide a base that is suitable to receive the shotcrete. Remove material that loosens as the shotcrete is applied. Cost of additional shotcrete is incidental to the work. Divert water flow and remove standing water so that shotcrete placement will not be detrimentally affected by standing water. Do not place shotcrete on frozen surfaces.

3.2.3 Delivery and Application: Maintain at all times a clean, dry, oil-free supply of compressed air sufficient for maintaining adequate nozzle velocity and for simultaneous operation of a blow pipe for cleaning away rebound. The equipment shall be capable of delivering the premixed material accurately, uniformly, and continuously through the delivery hose. Control shotcrete application thickness, nozzle technique, air pressure, and rate of shotcrete placement to prevent sagging or sloughing of freshly-applied shotcrete.

A clearly defined pattern of continuous horizontal or vertical ridges or depressions at the reinforcing

elements after they are covered with shotcrete will be considered an indication of insufficient reinforcement cover or poor nozzle techniques. In this case the application of shotcrete shall be immediately suspended and the Contractor shall implement corrective measures before resuming the shotcrete operations. The shotcreting procedure may be corrected by adjusting the nozzle distance and orientation, by insuring adequate cover over the reinforcement, by adjusting the water content of the shotcrete mix or other means. Adjustment in water content of wet-mix will require requalifying the shotcrete mix. Multiple layer shotcrete construction shall not be allowed.

3.2.4 Defective Shotcrete: GeoDesign shall have authority to accept or reject the shotcrete work. Shotcrete which does not conform to the project specifications may be rejected during the shotcrete application process, or on completed work. Repair shotcrete surface defects as soon as possible after placement. Remove and replace shotcrete which exhibits segregation, honeycombing, lamination, voids, or sand pockets. In-place shotcrete determined not to meet the specified strength requirement will be subject to remediation as determined by GeoDesign. Possible remediation options include placement of additional shotcrete thickness or removal and replacement, at the Contractor's cost.

3.2.5 Construction Joints and Shotcrete Placement Sequence:

Taper construction joints uniformly toward the excavation face over a minimum distance equal to the thickness of the shotcrete layer. Square joints are not permitted. The surface of the joints shall be rough, clean, and sound. Provide a minimum reinforcement overlap at reinforcement splice joints as shown on the Plans. Clean and wet the surface of a joint before adjacent shotcrete is applied.

3.2.6 Final Face Finish: Shotcrete finish shall be an undisturbed gun finish as applied from the nozzle.

3.2.7 Attachment of Nail Head Bearing Plate and Nut: Attach a bearing plate and nut to each nail head as shown on the Plans. While the shotcrete is still plastic and before its initial set, uniformly seat the plate on the shotcrete by hand wrench tightening the nut. Where uniform contact between the plate and the shotcrete cannot be provided, set the plate in a bed of grout. After grout has set for 24 hours, hand wrench tighten the nut. Embed the bearing plate and nut in the wall as shown on the Plans. Ensure shotcrete placement such that the bearing plate and nut are free of any voids or pockets behind the plate.

3.2.8 Weather Limitations: Protect the shotcrete if it must be placed when the ambient temperature is below 40 ° F and falling or when it is likely to be subjected to freezing temperatures before gaining sufficient strength. Maintain cold weather protection until the in-place compressive strength of the shotcrete is greater than 800 psi. Cold weather protection includes blankets, heating under tents, or other means acceptable to GeoDesign. The temperature of the shotcrete mix, when deposited, shall be not less than 50° F or more than 95° F. Maintain the air in contact with shotcrete surfaces at temperatures above 32° F for a minimum of 7 days.

If the prevailing ambient conditions (relative humidity, wind speed, air temperature and direct

exposure to sunlight) are such that the shotcrete develops plastic shrinkage and/or early drying shrinkage cracking, shotcrete application shall be suspended. The Contractor shall: (a) Reschedule the work to a time when more favorable ambient conditions prevail; and/or (b) Adopt corrective measures, such as installation of sun-screens, wind breaks or fogging devices, to protect the work. Remove and replace newly placed shotcrete exposed to rain that washes out cement or otherwise makes the shotcrete unacceptable.

3.2.9 Curing: Not Applicable

3.2.10 Shotcrete Facing Tolerances: Construction tolerances for the shotcrete facing are as follows:

Horizontal Location of Bearing Plates: from Plan location: + or – 1 inch
Complete thickness of shotcrete, from plan dimension:
If left as shot: minus 1/2 inch

Complete wall face alignment: + or – 8 inches from plan location

Nail head bearing plate, deviation from parallel to wall face: 10 degrees

3.3 Backfilling Behind Wall Facing Upper Cantilever: Compact backfill within three feet behind the wall facing upper cantilever using light mechanical tampers.

3.4 Safety Requirements: Nozzlemen and helpers shall be equipped with gloves, eye protection, and adequate protective clothing during the application of shotcrete. The Contractor is responsible for meeting all federal, state and local safety code requirements.

END OF SECTION