



# **Volume 1 of 1 Project Manual**

**Winsted Roof and Boiler  
Department of Motor Vehicles  
151 Torrington Road  
Winsted, CT  
Project No.: BI-MM-55**

**Prepared By:  
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Two Broadway  
Hamden, CT  
06518**

**Josh Geballe – Commissioner**

**State of Connecticut  
Department of Administrative Services  
Construction Services  
450 Columbus Boulevard  
Hartford, CT 06103**

**Project Manual Date: February 21, 2019**



**FOR YOUR INFORMATION**

**IMPORTANT NOTICE**

**From The State of Connecticut  
Department of Administrative Services - Construction Services  
Office of Legal Affairs, Policy, and Procurement**

**THIS PROJECT MANUAL CONTAINS NEW REPORTING AND CONTRACTING REQUIREMENTS:**

**NEW REPORTING REQUIREMENTS FOR CONTRACTOR AND SUBCONTRACTOR PAYMENTS:**

- For compliance with the Connecticut General Statutes Sections 4b-95 and 49-41, the Department of Administrative Services-Construction Services (DAS/CS) requires every Contractor (and its Subcontractors) who has been awarded a DAS/CS construction contract to log on to the State of Connecticut web-based platform, BizNet, each month and enter payments they have received from the state, from the Contractor, or from a higher tier Subcontractor (as applicable).
- The process is described as follows: The state will pay the Contractor on a monthly basis for work performed (and purchases made) by it and its Subcontractors. The Contractor will input the payment date and amount they receive from the state on a monthly basis. The Contractor's first-level Subcontractor (Tier 1 Subcontractor) will input the payment they receive from the Contractor. The second-level Subcontractor (Tier 2 Subcontractor) will input the payment they receive from the Tier 1 Subcontractor. And so on.
- Detailed instructions can be found in the DAS/CS publication, "**6002 Instructions to Contractors/Subcontractors for Entering Payments in BizNet**", available for download by going to the DAS Homepage ([www.ct.gov/DAS](http://www.ct.gov/DAS)) and selecting Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 6000 Series.

**NEW CONTRACTING REQUIREMENTS FOR CONTRACTOR AND SUBCONTRACTOR PAYMENTS:**

- Contractors awarded a DAS/CS construction contract shall contain a provision in their subcontract agreements requiring their Subcontractors to enter payment receipt from the Contractor in the State of Connecticut web-based platform, BizNet, for work performed or purchases made in relation to state projects.

**THE FOLLOWING DOCUMENTS HAVE BEEN REVISED TO REFLECT THE NEW REQUIREMENTS:**

- Section 00 11 16 Invitation to Bid;
- Section 00 21 13 Instructions to Bidders (Subsection 3.13);
- Section 00 41 10 Bid Package Submittal Requirements; and
- Section 01 11 00 Summary of Work.

**END**



<b>Project Title:</b>	Winsted Roof and Boiler, Department of Motor Vehicles
<b>Project Location:</b>	151 Torrington Road, Winsted, CT 06098
<b>Project Number:</b>	BI-MM-55
<b>Architect/Engineer:</b>	Martin A. Benassi, AIA – Architect LLC, Two Broadway, Hamden, CT 06518

**SEALS, SIGNATURES, AND DATES OF DESIGN PROFESSIONALS OF RECORD**

<p><i>(Seal and Signature)</i></p>	<p><b>Architect Professional Certification:</b>                  I hereby certify that these documents were prepared or approved by me and that I am a duly registered Architect.</p> <p style="text-align: center;">                     _____                      Martin A. Benassi                      (Print Consultant Name)                      3312                      _____                      License No.                      7/31/2019                      _____                      Expiration Date                 </p>	<p><i>(Seal and Signature)</i></p>	<p><b>Civil Engineer Professional Certification:</b>                  I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p style="text-align: center;">                     _____                      (Print Consultant Name)                      _____                      License No.                      _____                      Expiration Date                 </p>
<p><i>(Seal and Signature)</i></p>	<p><b>Structural Engineer Professional Certification:</b>                  I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p style="text-align: center;">                     _____                      (Print Consultant Name)                      _____                      License No.                      _____                      Expiration Date                 </p>	<p><i>(Seal and Signature)</i></p>	<p><b>Electrical Engineer Professional Certification:</b>                  I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p style="text-align: center;">                     _____                      (Print Consultant Name)                      _____                      License No.                      _____                      Expiration Date                 </p>
<p><i>(Seal and Signature)</i></p>	<p><b>Mechanical Engineer Professional Certification:</b>                  I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p style="text-align: center;">                     _____                      Michael M. Vena Jr.                      (Print Consultant Name)                      0024460                      _____                      License No.                      1/31/2019                      _____                      Expiration Date                 </p>	<p><i>(Seal and Signature)</i></p>	<p><b>Fire-Protection Engineer Professional Certification:</b>                  I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p style="text-align: center;">                     _____                      (Print Consultant Name)                      _____                      License No.                      _____                      Expiration Date                 </p>

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00 01 07 Seals Page**

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Advertisement No.:	19-03-I	Advertisement Date:	March 8, 2019
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<p><b>INVITATION TO BID</b></p> <p>Connecticut Department of Administrative Services (DAS) Construction Services (CS) Office of Legal Affairs, Policy and Procurement 450 Columbus Blvd, Suite 1302, Hartford, CT 06103-1835</p>
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<b>Find Invitations to Bid on the State Contracting Portal:</b>	Go to the <b>DAS website</b> <a href="http://www.ct.gov/das">www.ct.gov/das</a> Click on “ <b>State Contracting Portal</b> ”; Select “ <b>Administrative Services, Construction Services</b> ”; Select the appropriate <b>Invitation to Bid</b> .
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<b>Instructions for On-Line Bidding:</b>	Follow the instructions in <a href="http://portal.ct.gov/-/media/DAS/Construction-Services/DAS-CS-Library/6000-Series/6001-Construction-On-Line-Bidding-Instructions.pdf">6001 Construction On-line Bidding Instructions</a> . ( <a href="http://portal.ct.gov/-/media/DAS/Construction-Services/DAS-CS-Library/6000-Series/6001-Construction-On-Line-Bidding-Instructions.pdf">http://portal.ct.gov/-/media/DAS/Construction-Services/DAS-CS-Library/6000-Series/6001-Construction-On-Line-Bidding-Instructions.pdf</a> ) For questions, call 860-713-5794.
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<b>Date and Time of Bid Opening:</b>	<table border="1"> <tr> <td style="padding: 5px;"><b>APRIL</b> <i>(Month)</i></td> <td style="padding: 5px;"><b>17</b> <i>(Day)</i></td> <td style="padding: 5px;"><b>2019</b> <i>(Year)</i></td> </tr> </table>	<b>APRIL</b> <i>(Month)</i>	<b>17</b> <i>(Day)</i>	<b>2019</b> <i>(Year)</i>	<b>Time:</b>	<table border="1"> <tr> <td style="padding: 5px;"><b>1:00</b> <i>(ET)</i></td> <td style="padding: 5px;"><b>PM</b></td> </tr> </table>	<b>1:00</b> <i>(ET)</i>	<b>PM</b>
<b>APRIL</b> <i>(Month)</i>	<b>17</b> <i>(Day)</i>	<b>2019</b> <i>(Year)</i>						
<b>1:00</b> <i>(ET)</i>	<b>PM</b>							

<b>This Invitation to Bid is for the following Project:</b>
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<b>Construction Costs:</b>	Less Than or Equal To \$500,000		
<b>Bidding Limited To:</b>	Current DAS Certified Set-Aside Contractors Only		
<b>Threshold Limits:</b> (C.G.S. §29-276b)	This Project DOES NOT exceed Threshold Limits.		
<b>Project Title:</b>	Winsted Roof and Boiler Department of Motor Vehicles		
<b>Project Location:</b>	151 Torrington Road Winsted, CT		
<b>Project Number:</b>	BI-MM-55		
<b>Project Description:</b>	Removal of built-up-roofing system to metal deck. Complete roof replacement with fully adhered EPDM roof membrane system, new insulation board, new roof curbs, flashing and fascia edge. Complete removal and replacement of existing oil fire boiler system and flue.		
<b>Work Includes But Is Not Limited To The Following:</b>	Selective demolition, roof removal, metal decking repair, misc. rough carpentry, roofing insulation, EPDM roofing, sheet metal flashing and trim, roof accessories, joint sealant, roof drains, mechanical units, mechanical-new boiler and flue.		
<b>Date DAS Began Planning Project:</b>	8/11/2017		
<b>Special Requirements:</b>	N/A		
<b>Cost Estimate Range:</b>	\$ 278,256.	<b>To</b>	\$ 307,546.
<b>Date Plans &amp; Specs Ready:</b>	March 13, 2019		
<b>Plans and Specs Download:</b>	Plans and Specs are available for electronic download on the DAS State Contracting Portal.		



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<b>Invitation to Bid (continued)</b>
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<b>Contract Time Allowed:</b>	<b>Calendar Days:</b>	90
<b>Liquidated Damages:</b>	\$ 1,352.00	Per Calendar Day Beyond Substantial Completion.
	\$ 1,052.00	Per Calendar Day Beyond 90 days After Substantial Completion
<b>Pre-Bid Meeting Date:</b>	March 25, 2019	
	<input checked="" type="checkbox"/>	Bidders are <b>strongly encouraged</b> to attend the Pre-Bid Meeting.
	<input type="checkbox"/>	Bidders are <b>required</b> to attend a <b>MANDATORY</b> Pre-Bid Meeting.
<b>Pre-Bid Meeting Time:</b>	10:00	<input checked="" type="checkbox"/> <b>AM</b> <input type="checkbox"/> <b>PM</b>
<b>Pre-Bid Meeting Location:</b>	Department of Motor Vehicles – Winsted Branch, 151 Torrington Road, Winsted, CT – Meet at the Main Public Customer/Visitor Room	
<b>Pre-Bid Meeting Contact:</b>	<b>DAS/CS Project Manager:</b>	Lisa Humble
	<b>Phone No.:</b>	860.713.5823
<b>Subcontractor and/or Supplier Small Business Enterprise (SBE) &amp; Minority Business Enterprise (MBE) Set-Aside Requirements:</b>	See 00 41 00 Bid Proposal Form	
<b>Bid Proposal Submission and Other Bid Submittal Requirements:</b>	See <b>Sections 00 21 13 Instructions to Bidders, 00 41 00 Bid Proposal Form, and 00 41 10 Bid Package Submittal Requirements</b> for Bid Proposal submission requirements, including requirements for Affidavits, Certifications, Addenda, Pre-Bid Equals and Substitution Requests, and other bidding documents.	
<b>Bid Upload and Bid Opening:</b>	Bids can be uploaded and edited electronically in BizNet <b>UNTIL 1:00 p.m.</b> on the <b>Bid Opening Date</b> and thereafter shall be locked down and publicly opened in the State Contracting Portal.	
<b>Bid Results:</b>	Within approximately two (2) days after the Bid Opening Date, the Bid Results will be posted on the State Contracting Portal.	
<b>Guide to the Code of Ethics For Current or Potential State Contractors (for contracts greater than \$500,000):</b>	Anyone seeking a contract with a value of more than \$500,000 shall electronically download the “ <b>Guide to the Code of Ethics For Current or Potential State Contractors</b> ” from the of Office of State Ethics (OSE) website <a href="http://www.ct.gov/ethics">www.ct.gov/ethics</a> , then click on the “ <b>Publications</b> ” link:	
<b>Prevailing Wage Rates:</b>	<p>Prevailing wages are required on this project, in accordance with the schedule provided in the bid documents, pursuant to Connecticut General Statutes (C.G.S.) Section 31-53 (a) through (h), as amended.</p> <p>Each contractor who is awarded a contract on or after October 1, 2002 shall be subject to provisions of C.G.S. § 31-55a concerning annual adjustments to prevailing wages.</p> <p>Wage Rates will be posted each July 1st on the Department of Labor website <a href="http://www.ctdol.state.ct.us">www.ctdol.state.ct.us</a>. Such prevailing wage adjustment shall not be considered a matter for any contract amendment.</p>	
<b>To access Executive Orders:</b>	Go to <a href="http://www.ct.gov">www.ct.gov</a> > Governor Ned Lamont > Executive Orders.	



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**Invitation to Bid (continued)**

**Important Notices:**

**UPDATED DOCUMENTS:**

Many **Division 00** and **Division 01** documents have been updated. Read all of the contents of the Project Manual *carefully!*

All Contractors are cautioned that any modifications or alterations made to either the Project Manual or any of the forms and documents contained herein may be just cause to **reject the bid!**

**NEW PROCESS FOR CONSTRUCTION STORMWATER GENERAL PERMIT:**

See Section 01 50 00 Temporary Facilities and Controls.

For all DAS/CS construction projects disturbing **one or more total acres of land area** on a site regardless of project phasing, the **Architect/Engineer** shall be responsible for filing a Department of Energy and Environmental Protection (DEEP) *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (DEEP-WPED-GP-015)* registration and Stormwater Pollution Control Plan (SPCP) through the online DEEP ezFile Portal **prior** to bidding.

Once the **Contractor** is under contract with DAS/CS, and **prior** to the commencement of any construction activities, the Contractor (and all other contractors and subcontractors listed on the SPCP) shall assume responsibility for storm water pollution control and conform to the general permit obligations and requirements by **signing** the SPCP "Contractor Certification Statement" and License Transfer Form as directed by the Architect/Engineer.

At completion of the project, the Contractor shall file a Notice of Termination (DEP-PED-NOT-015) with the DEEP in order to terminate the Construction Stormwater General Permit. A project shall **only** be considered complete after all **post-construction** measures are installed, cleaned, and functioning and the site has been stabilized for at least **three (3) months** following the cessation of construction activities.

**NEW PROCESS FOR CONTRACTOR AND SUBCONTRACTOR PAYMENTS REPORTING:**

See Section 00 21 13 Instructions to Bidders (Subsection 3.13) and Section 01 11 00 Summary of Work (Subsection 1.11).

For compliance with **C.G.S. § 4b-95 and 49-41**, DAS/CS requires every Contractor (and its Subcontractors) who has been awarded a DAS/CS construction contract to log on to the State of Connecticut web-based platform, BizNet, **each month** and **enter payments** they have received from the state, from the Contractor, or from a higher tier Subcontractor (as applicable).

The process is described as follows: The state will pay the Contractor on a monthly basis for work performed (and purchases made) by it and its Subcontractors. The Contractor will input the payment date and amount they receive from the state on a monthly basis. The Contractor's first-level Subcontractor (Tier 1 Subcontractor) will input the payment they receive from the Contractor. The second-level Subcontractor (Tier 2 Subcontractor) will input the payment they receive from the Tier 1 Subcontractor. And so on.

Contractors awarded a DAS/CS construction contract shall contain a **provision in their subcontract agreements** requiring their Subcontractors to enter payment receipt from the Contractor in the State of Connecticut web-based platform, BizNet, for work performed or purchases made in relation to state projects.

Detailed instructions can be found in the DAS/CS publication, "**6002 Instructions to Contractors/Subcontractors for Entering Payments in BizNet**", available for download by going to the DAS Homepage ([www.ct.gov/DAS](http://www.ct.gov/DAS)) and selecting Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 6000 Series.

**IMPORTANT NOTE:** *The Commissioner of the CT Department of Administrative Services reserves the right to do any of the following without liability, including but not limited to: (a) waive technical defects in the bid proposal as he or she deems best for the interest of the State; (b) negotiate with a contractor in accordance with Connecticut General Statutes Section 4b-91; (c) reject any or all bids; (d) cancel the award or execution of any contract prior to the issuance of the "Notice To Proceed"; and (e) advertise for new bids.*



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**Invitation to Bid (continued)**

**All Project Questions, Bid Questions, and Pre-Bid Equals and Substitution Requests must be submitted fourteen (14) Calendar Days prior to the Bid Due Date.**

All **Project Questions** and **Pre-Bid Equals and Substitution Requests** must be emailed (not phoned) to the **Architect/Engineer** with a **copy** to the **Construction Administrator** and the **DAS/CS Project Manager** listed below.

<b>Architect/Engineer:</b>	Martin A. Benassi, AIA-Architects LLC.	<b>Email:</b>	<a href="mailto:mhenassi@mabarchitect.com">mhenassi@mabarchitect.com</a> or <a href="mailto:mhelou@mabarchitect.com">mhelou@mabarchitect.com</a>
<b>Construction Administrator:</b>	Martin A. Benassi, AIA-Architects LLC.	<b>Email:</b>	<a href="mailto:mhenassi@mabarchitect.com">mhenassi@mabarchitect.com</a> or <a href="mailto:mhelou@mabarchitect.com">mhelou@mabarchitect.com</a>
<b>DAS/CS Project Manager:</b>	Lisa Humble	<b>Email:</b>	Lisa.Humble@ct.gov

All **Bid Questions** must be emailed to the **DAS/CS Associate Fiscal Administrative Officer** listed below.

<b>DAS/CS Associate Fiscal Administrative Officer:</b>	Mellanee Walton	<b>Email:</b>	Mellanee.Walton@ct.gov
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## Instructions to Bidders

DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement

### 1.0 General Bid Proposal Information

#### 1.1 On-Line Bidding:

1.1.1 The Department of Administrative Services (DAS) Construction Services (CS) has streamlined the Bid process by allowing contractors to submit their **Bid Package Documents on line** through the **State Contracting Portal** and **BizNet**. Rather than submitting paper Bid Package Documents, contractors simply respond to an **Invitation to Bid** on the **State Contracting Portal** by retrieving and uploading their documents electronically through their **BizNet** account. Once completed, the Bid Proposal must be **electronically signed prior** to the date and time of the **Bid Opening**. See **Page 1** of the **Invitation to Bid** for the **Date and Time of the Bid Opening**.

1.1.2 All Bidders shall **electronically** upload their **Bid Package Documents** to BizNet following the **instructions** in the DAS/CS publication, [6001 Construction On-line Bidding Instructions](#), available for download here: Go to the DAS Homepage ([www.ct.gov/DAS](http://www.ct.gov/DAS)), Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 6000 Series > **6001 Construction On Line Bidding Instructions**. For questions, call 860-713-5794.

#### 1.2 Bid Opening:

All Bids shall be publicly opened in BizNet by the awarding authority as stated in **Section 00 11 16 Invitation to Bid**.

#### 1.3 Withdrawal of Bid:

Any **Bid** once uploaded into BizNet cannot be deleted. A Bid may only be **withdrawn** by uploading a written **Letter of Withdrawal** to BizNet using the "**Other Solicitation Document**" link **prior** to the date and time of the Bid Opening.

#### 1.4 Disqualification from Bidding:

Any contractor who violates any provision of **Connecticut General Statutes (C.G.S.) § 4b-95**, as revised, shall be **disqualified** from bidding on other contracts for a period not to exceed **twenty-four (24) months**, commencing from the date on which the violation is discovered, for each violation.

#### 1.5 Waive Minor Irregularities:

1.5.1 The awarding authority **shall** be authorized to **waive minor irregularities** which he or she considers in the best interest of the State, provided the reasons for any such waiver are stated in writing by the awarding authority and made a part of the contract file.

1.5.2 **No** such bid shall be rejected because of the failure to submit prices for, or information relating to, any item or items for which no specific space is provided in the bid form furnished by the awarding authority, but this sentence shall not be applicable to any failure to furnish prices or information required by **C.G.S. § 4b-95**, as revised, to be furnished in the bid form provided by the awarding authority.

#### 1.6 Minimum Percentage of Work:

The awarding authority **may** require in the **Bid Proposal Form** that the contractor agree to perform a stated, minimum percentage of work with its **own forces**, in accordance with **C.G.S. § 4b-95(b)**.

#### 1.7 Set-Aside Contracts:

The awarding authority **may also** require the contractor to set aside a portion of the contract for subcontractors who are eligible for **set-aside contracts**.

#### 1.8 Connecticut Sales And Use Taxes:

1.8.1 **All Bidders shall** familiarize themselves with the current statutes and regulations of the **Connecticut Department of Revenue Services (DRS)**, including the Regulations of Connecticut State Agencies (R.C.S.A.) §12-426-18 and all relevant state statutes. The tax on materials or supplies exempted by such statutes and regulations shall not be included as part of a bid. See the **Sales and Use Tax Exemption for Purchases by Qualifying Governmental Agencies (CERT-134)**, available for download from the DRS website ([www.ct.gov/drs](http://www.ct.gov/drs)) under "Exemption Certificates".

1.8.2 The State of Connecticut construction contract has the following tax exemptions: (1) Purchasing of materials which will be physically incorporated and become a permanent part of the project; and (2) Services that are resold by the contractor. For example, if a Contractor hires a plumber, carpenter or electrician, a resale certificate may be issued to the subcontractor because these services are considered to be integral and inseparable component parts of the building contract.

1.8.3 The following items are **not** exempt from taxes when used to fulfill a State of Connecticut construction contract: Tools, supplies and equipment used in fulfilling the construction contract.

<b>1.9 Union Labor:</b>	
Attention is called to the fact that there may or could be construction work carried on at the site by union labor. This fact must be kept in mind by all Bidders.	
<b>1.10 Rejection of Bids:</b>	
The awarding authority <i>shall reject</i> every such <b>Bid Proposal</b> , including but not limited to, the following reasons:	
<b>1.10.1</b>	A <b>Bid Proposal Form</b> that does <i>not</i> contain the signature of the bidder or its authorized representative.
<b>1.10.2</b>	A <b>Bid Proposal Form</b> that is <i>not</i> accompanied by the following documents in BizNet: <ul style="list-style-type: none"> <li><b>.1</b> <b>Section 00 43 16 Standard Bid Bond</b>, completed for <i>either</i> the <b>Bid Bond</b> option <i>or</i> <b>Certified Check</b> option;</li> <li><b>.2</b> A <b>Certified Check</b> (if applicable) delivered to the DAS/CS Office of Legal Affairs, Policy, and Procurement <i>prior</i> to the date and time of the Bid Opening;</li> <li><b>.3</b> <b>Section 00 45 14 General Contractor Bidder's Qualification Statement</b></li> <li><b>.4</b> A <b>DAS Contractor Prequalification Certificate</b> for the Bidder for Projects <i>greater</i> than <b>\$500,000</b>;</li> <li><b>.5</b> A <b>DAS Update (Bid) Statement</b> for the Bidder for Projects <i>greater</i> than <b>\$500,000</b>;</li> <li><b>.6</b> A <b>Gift and Campaign Contribution Certification – Office of Policy and Management (OPM) Ethics Form 1</b>;</li> <li><b>.7</b> A <b>Consulting Agreement Affidavit – OPM Ethics Form 5</b>. <b>NOTE: If the Bidder fails to submit or upload the Consulting Agreement Affidavit</b> required under C.G.S. § 4a-81, such bidder shall be <i>disqualified</i> and the award shall be made to the next lowest responsible qualified bidder or new bids or proposals shall be sought;</li> <li><b>.8</b> An <b>Ethics Affidavit (Regarding State Ethics) – OPM Ethics Form 6</b>;</li> <li><b>.9</b> An <b>Iran Certification – OPM Ethics Form 7</b>.</li> </ul>
<b>1.10.3</b>	A <b>Bid Proposal Form</b> that: <ul style="list-style-type: none"> <li><b>.1</b> Fails to <b>acknowledge</b> all <b>Addenda</b> in the space provided in the <b>Bid Proposal Form</b>;</li> <li><b>.2</b> Fails to <b>correctly list</b> the <b>Named Subcontractors</b> on the <b>Bid Proposal Form</b>;</li> <li><b>.3</b> Fails to <b>correctly state</b> a <b>Named Subcontractor's price</b> on the <b>Bid Proposal Form</b>; and</li> <li><b>.4</b> Fails to list <b>Named Subcontractors</b> who are <b>DAS Prequalified at the time of the bid</b>.</li> </ul>
<b>1.10.4</b>	A <b>Bid Proposal Form</b> that is <i>not</i> submitted on the <b>forms furnished</b> for the specific project. <b>NOTE: In no</b> event will bids or changes in bids be made by telephone, telegraph, facsimile or other communication technology except through BizNet. <b>All</b> pages of the <b>Bid Proposal Form</b> <i>must</i> be uploaded to BizNet prior to the date and time of the Bid Opening.
<b>1.10.5</b>	A <b>Bid Proposal Form</b> that has omitted items, omitted pages, added items not called for, altered the form, contains conditional bids, contains alternative bids, or contains obscure bids.
<b>1.10.6</b>	A <b>paper Bid Package</b> sent to the DAS/CS Office of Legal Affairs, Policy, and Procurement. Such bids will be returned to the bidder unopened.
<b>1.10.7</b>	<b>Any Bidder</b> that does <i>not</i> make all required <b>pre-award submittals</b> <i>within</i> the designated time period. DAS/CS <i>may</i> reject such bids as <b>non-responsive</b> .
<b>1.11 Pre-Bid Meeting:</b>	
<b>1.11.1</b>	See <b>Section 00 11 16 Invitation to Bid</b> and <b>Section 00 25 13 Pre-Bid Meeting Agenda</b> for details.
<b>1.11.2</b>	When a <b>Pre-Bid Meeting</b> is " <b>strongly encouraged</b> ", all attendees shall sign his or her name to the official roster and list the name and address of the company he or she represents.
<b>1.11.3</b>	When a <b>Pre-Bid Meeting</b> is <b>MANDATORY</b> , all attendees will be required to register. <b>Proper registration</b> means that the attendee has signed his or her name to the official roster and listed the name and address of the company he or she represents on the official roster no later than the designated start time of the <b>MANDATORY Pre-Bid Meeting</b> . Bidders are advised to register early as <b>no</b> attendee will be allowed to register <i>after</i> the advertised start time of the <b>MANDATORY Pre-Bid Meeting</b> .  <b>All</b> bids submitted by all contractors who have <i>not</i> properly registered and attended the <b>MANDATORY Pre-Bid Meeting</b> shall be rejected as <b>non-responsive</b> .
<b>1.11.4</b>	<b>All Bidders Attending a Pre-Bid Meeting at a Connecticut Department of Corrections (DOC) Facility: Prior to the Pre-Bid Meeting</b> , download the " <b>Security Background Questionnaire</b> " from the <b>CT DOC website</b> ( <a href="http://www.ct.gov/doc">www.ct.gov/doc</a> under " <b>Forms</b> "), complete and submit the form as directed, and obtain approval, otherwise admission to the Pre-Bid Meeting <b>will be denied</b> . It is recommended that the approved form be brought as evidence of approval to attend the Pre-Bid Meeting.

<b>1.12 Pre-Bid Equals and Substitution Requests Procedures:</b>	
<b>1.12.1</b>	All submissions requesting "Equals and/or Substitutions" shall be made by the <b>Bidder</b> in accordance with <b>Section 01 25 00 Substitution Procedures</b> of the <b>Division 01 General Requirements and Article 15, Materials: Standards of Section 00 72 13 General Conditions</b> . Every submission shall contain all the information necessary for DAS/CS to evaluate the submission and the request. Failure to submit sufficient information to make a proper evaluation, including submittal of data for the first manufacturer listed as well as the data for the " <b>Equals and/or Substitutions</b> " proposed, shall result in a <b>rejection</b> of the submission and request. Upon receipt of the submission and request, DAS/CS shall notify the <b>Bidder</b> that the request has been received and as soon as possible shall render a decision on such submission and request.
<b>1.12.2</b>	<b>Pre-Bid-Opening Substitution of Materials and Equipment:</b> The Owner will consider requests for equals or substitutions <i>if received fourteen (14) Calendar Days prior</i> to the <b>Bid Opening Due Date</b> , as stated in the <b>Invitation To Bid</b> . The <b>Equal or Substitute Product Request (Form 7001)</b> must be used to submit requests. Download <b>Form 7001</b> from the DAS Homepage ( <a href="http://www.ct.gov/DAS">www.ct.gov/DAS</a> ) > Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 7000 Series.
<b>1.12.3</b>	<b>Equals and/or Substitutions Requests Submittal:</b> Requests for Equals or Substitutions shall be submitted to the <b>DAS/CS Project Manager, Architect / Engineer, and Construction Administrator</b> .
<b>1.12.4</b>	<b>Substitution Request Deadline:</b> Any substitution request not complying with requirements will be denied. Substitution requests sent <b>after</b> the <b>Deadline</b> will be denied.
<b>1.12.5</b>	<b>Addendum:</b> An Addendum shall be issued to inform all prospective bidder of any accepted substitution in accordance with our addenda procedures.
<b>1.12.6</b>	<b>Time Extensions:</b> No extensions of time will be allowed for the time period required for consideration of any Substitution or Equal.
<b>1.12.7</b>	<b>Post Contract Award Substitution of Materials and Equipment:</b> All requests for "Equals and Substitutions" <b>after</b> the Award of the Contract shall be made <b>only</b> by the <b>Prime Contractor</b> for materials or systems specified that are no longer available. The requests will not be considered if the product was not purchased in a reasonable time after award, in accordance with <b>Article 15, Materials: Standards of Section 00 72 13 General Conditions</b> .
<b>1.13 Joint Ventures:</b>	
<b>1.13.1</b>	<b>Each entity</b> in a Joint Venture shall submit with the Venture's bid a <b>letter</b> on their respective company letterheads stating: <ul style="list-style-type: none"> <li>· Their <b>agreement to bid</b> as a Joint Venture with the other named Joint Venture, and set forth the <b>name and address</b> of the other Joint Venture(s).</li> <li>· The <b>respective percentage of the project work</b> that would be the responsibility of each of the Joint Ventures.</li> </ul>
<b>1.13.2</b>	<b>Prequalification: Each entity</b> in a Joint Venture shall submit its <b>Prequalification Certificate and Update (Bid Statement)</b> . <b>Each entity</b> in a Joint Venture shall be <b>prequalified</b> at the time of the bid and during the entire project construction. <b>Each entity</b> in a Joint Venture shall have the <b>prequalification single project limit</b> , and <b>remaining aggregate capacity balance</b> to meet the value of its respective percentage of the joint proposed bid.
<b>1.13.3</b>	<b>Each entity</b> in a Joint Venture shall submit <b>Section 00 45 14 General Contractor Bidder's Qualification Statement</b> .
<b>1.13.4</b>	<b>Bonding:</b> The Joint Venture shall obtain the required <b>bonding</b> from a surety for the <b>total amount</b> of the contract price.
<b>1.13.5</b>	<b>Insurance: Each entity</b> in a Joint Venture shall have the <b>required insurance coverages and limits</b> to meet the insurance requirements of the contract. The Joint Venture shall provide <b>Builder's Risk insurance</b> .
<b>1.13.6</b>	<b>Bid Submission and Contract Signing:</b> If a Joint Venture submits a bid proposal, it shall be considered to be a proposal by <b>each</b> of the Joint Ventures, jointly and severally, for the performance of the entire contract as a Joint Venture in accordance with the terms and conditions of the contract. <b>Each entity</b> in a Joint Venture is required to <b>sign the contract</b> acknowledging that each Joint Venture shall be jointly and severally liable for the performance of the entire contract.
<b>1.13.7</b>	<b>Certificate of Legal Existence: Each entity</b> in a Joint Venture shall obtain a <b>Certificate of Legal Existence</b> and submit it with the contract documents.
<b>1.14 Procedure for Alleged Violation(s) of Part II Chapter 60 of C.G.S. Bidding and Contracts:</b>	
<b>1.14.1</b>	The Regulations of Connecticut State Agencies establishes a procedure for promptly hearing and ruling on claims alleging a violation or violations of the contract bidding provisions of Part II of Chapter 60 of the Connecticut General Statutes (hereinafter "Chapter 60"). In view of the fact that time is normally of the essence in awarding construction contracts under Chapter 60, the grievance procedures are intended to be quick, informal and conclusive so as to avoid delays which can increase costs and jeopardize the very ability of the State to proceed with needed public works projects.
<b>1.14.2</b>	Download " <b>6510 Procedure for Alleged Violation(s)</b> " and " <b>6505 Petition for Alleged Violation(s)</b> " from the DAS Homepage ( <a href="http://www.ct.gov/DAS">www.ct.gov/DAS</a> ) > Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 6000 Series > Scroll down to locate documents.

<b>1.15 Labor Market Area:</b>	
<b>1.15.1</b>	All Bidders <i>shall</i> have read <b>C.G.S. §§ 31-52 and 31-52a</b> , as revised. These sections relate to the <b>preference of State citizens</b> and the <b>preference of residents of the labor market area</b> in which the work under the contract is to be done and the <b>penalties for violations</b> thereof.
<b>1.15.2</b>	In order to avoid violations by the contractor and to cooperate with and assist the State in the implementation of the statutory mandates, any bidder awarded a contract with the State <b>shall</b> be required to provide the State with the following information: <ul style="list-style-type: none"> <li>.1 The names and addresses of employees utilized by the contractor and by its subcontractors and how long each such employee has resided in Connecticut.</li> <li>.2 How long each employee has resided in the labor market area, as established by the State Labor Commissioner, in which the work under the contract is to be done. Labor market areas are indicated on the end of this section.</li> <li>.3 Within thirty (30) days after the start of work, the contractor <b>shall</b> submit a signed statement setting forth the procedures the contractor and its subcontractors have taken to assure that they have sought out qualified residents of the labor market area. Also, the statement <b>shall</b> include information as to how many persons were considered for employment and how many were actually hired. Such procedures will include, but not be limited to, obtaining names of available persons from area Employment Security Offices.</li> <li>.4 In the same manner as <b>Subsection 1.15.2.3</b> above, the statement <b>shall</b> indicate the steps taken to assure that the contractor and its subcontractors have sought out qualified residents of this State.</li> </ul>
<b>1.15.3</b>	The contractor <b>shall</b> cooperate with and provide information to the DAS/CS Project Manager or their designee assigned to collect and verify the information required. The State may request that all such information be updated during the term of the contract at reasonable times.
<b>1.15.4</b>	All such information gathered and compiled by the State <b>shall</b> be forwarded to the Labor Commissioner.
<b>1.15.5</b>	<b>Pursuant to C.G.S. § 31-52b, as revised:</b> <p style="padding-left: 40px;">“The provisions of C.G.S. § 31-52 and 31-52a <b>shall not</b> apply where the State or any subdivision thereof may suffer the loss of revenue granted or to be granted from any agency or department of the federal government as a result of said sections or regulative procedures pursuant thereto.”</p> <p>However, no exception shall be determined to be applicable unless stated in writing by the Commissioner of the Department of Administrative Services.</p>
<b>1.15.6</b>	<b>Website Link:</b> For guidance on the CT DOL Labor Market Areas (LMA) go to the CT DOL website <a href="http://www.ctdol.state.ct.us/">http://www.ctdol.state.ct.us/</a> , under “Program Services”, click on “Labor Market information”.
<b>1.16 Executive Orders:</b>	
<b>1.16.1</b>	All Executive Orders of which are incorporated into and are made a part of the Contract as if they had been fully set forth in it. The Contract is subject to the provisions of the following: <ul style="list-style-type: none"> <li>.1 <b>Executive Order No. 3:</b> Governor Thomas J. Meskill, promulgated 06/16/71, concerning labor employment practices;</li> <li>.2 <b>Executive Order No. 17:</b> Governor Thomas J. Meskill promulgated 02/15/73, concerning the listing of employment openings;</li> <li>.3 <b>Executive Order No. 16:</b> Governor John G. Rowland promulgated 08/04/99, concerning violence in the workplace;</li> <li>.4 <b>Executive Order No. 14:</b> Governor M. Jodi Rell, promulgated 04/17/06, concerning procurement of cleaning products and services; and</li> <li>.5 <b>Executive Order No. 49:</b> Governor Dannel P. Malloy, promulgated 05/22/15, concerning the requirement for certain state contractors to disclosure campaign contributions to candidates for statewide public office or The General Assembly and to ensure convenient public access to information related to gifts and campaign contribution disclosure affidavits by state contractors.</li> </ul>
<b>1.16.2</b>	All Executive Orders are available for download from the State of Connecticut website. Go to <a href="http://www.ct.gov">www.ct.gov</a> , click on “Governor Ned Lamont” and scroll down to “Executive Orders”.
<b>1.17 Retaliation For Disclosure of Information:</b>	
<b>1.17.1</b>	Each contract between a state or quasi-public agency and a large state contractor shall provide that, if an officer, employee, or appointing authority of a large state contractor takes or threatens to take any personnel action against any employee of the contractor in <b>retaliation</b> for such employee's <b>disclosure</b> of information to the Auditors of Public Accounts or the Attorney General under the provisions of <b>C.G.S. § 4-61dd (a)</b> , 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 the 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 executive head of the state or quasi-public agency may request the Attorney General to bring a civil action in the Superior Court for the judicial district of Hartford to seek imposition and recovery of such civil penalty.
<b>1.17.2</b>	Each large state contractor shall post a <b>notice</b> of the provisions of <b>C.G.S. § 4-61dd</b> relating to large state contractors in a conspicuous place that is readily available for viewing by the employees of the contractor.



**1.18 Laws of the State of Connecticut:**

Forum and Choice of Law. The Bidder agrees that in the event it is awarded a Contract, the Bidder and the State deem the Contract to have been made in the City of Hartford, State of Connecticut. Both parties agree that it is fair and reasonable for the validity and construction of the Contract to be, and it shall be, governed by the laws and court decisions of the State of Connecticut, without giving effect to its principles of conflicts of laws. To the extent that any immunities provided by Federal law or the laws of the State of Connecticut do not bar an action against the State, and to the extent that these courts are courts of competent jurisdiction, for the purpose of venue, the complaint shall be made returnable to the Judicial District of Hartford only or shall be brought in the United States District Court for the District of Connecticut only, and shall not be transferred to any other court, provided, however, that nothing here constitutes a waiver or compromise of the sovereign immunity of the State of Connecticut. The Bidder waives any objection which it may now have or will have to the laying of venue of any claims in any forum and further irrevocably submits to such jurisdiction in any suit, action or proceeding.

**1.19 State's Sovereign Immunity:**

Nothing in this Agreement shall be construed as a waiver or limitation upon the **State's sovereign immunity**. To the extent this Section is found to be inconsistent with any other part of this Agreement, this Section shall control. This Section of the Agreement shall survive the completion and/or termination of this Agreement.

**2.0 Bid Proposal Form Instructions:**

**2.1 Bid Proposal Form:**

**2.1.1 All Bidders** shall upload **ALL** pages of **Section 00 41 00 Bid Proposal Form** to BizNet, prior to the date and time of the Bid Opening.

**2.2 Threshold Projects:**

**2.2.1** See **page 1** of the **Bid Proposal Form** to determine if this Project exceeds the **Threshold Limits**.

**2.2.2** If this Project exceeds Threshold Limits, **all Bidders** shall list their Firm's **Major Contractor Registration License Number** in the **Bid Proposal Form**.

**2.2.3** The **Apparent Low Bidder** shall also provide the Subcontractor(s) **Major Contractor Registration License** number(s) to the DAS/CS Office of Legal Affairs, Policy, and Procurement within **ten (10) business days after** receipt of the Letter of Intent from DAS/CS.

**2.2.4 Summary of Registration Requirements for Major Contractors:** Any person engaged in the business of construction, structural repair, structural alteration, dismantling or demolition of a structure or addition that exceeds the threshold limits provided in **C.G.S §29-276b**, or any person who, under the direction of a general contractor, performs or offers to perform any work that impacts upon the structural integrity of a structure or addition, including repair, alteration, dismantling or demolition of a structure or addition that exceeds the threshold limits shall engage in or offer to perform the work of a Major Contractor unless such person has first obtained a license or certificate of registration from the Connecticut Department of Consumer Protection (DCP). Individuals must be licensed under the requirements of **C.G.S §20-341gg "Registration of Major Contractors"**. DCP shall issue a certificate of registration to any person who is prequalified pursuant to section 4a-100 who applies for registration in accordance with this section.

**2.2.5** The Bidder and all Subcontractors that engage in work that impacts upon the structural integrity of a structure or addition must register as a **Major Contractor** with DCP and obtain a **Major Contractor License** issued by DCP **PRIOR** to the date and time of the Bid Opening for this Project.

**2.2.6** For further information go to the DCP Website: [www.ct.gov/dcp](http://www.ct.gov/dcp).

**2.3 Proposed Lump Sum Base Bid, Allowances, and Contingent Work:**

**2.3.1** The proposed **Lump Sum Base Bid** shall be set forth in the space **provided on Section 00 41 00 Bid Proposal Form**.

**2.3.2** The **Proposed Lump Sum Base Bid** shall *include* all **Allowances**, all work indicated on the drawings and/or described in the specifications *except* for **Contingent Work**. See the **Bid Proposal Form, Section 01 20 00 Contract Considerations, and Section 01 23 13 Supplemental Bids** of Division 01 General Requirements for details regarding **Contingent Work**.

**2.3.3** "**Contingent Work**" includes **Unit Prices** (for Earth and Rock Excavation, Environmental Remediation, and/or Hazardous Building Materials Abatement) and **Supplemental Bids**. See **Section 01 20 00 Contract Considerations and Section 01 23 13 Supplemental Bids**, respectively, for applicability.

**2.3.4** The **Proposed Lump Sum Base Bid** shall be shown in *both numerical figures* and "**printed**" **words dollar amount**. In the event of any discrepancy the "**printed**" **words dollar amount** shall govern.

<b>2.4 Addenda and Interpretations:</b>	
2.4.1	The <b>Number of Addenda</b> issued by the State of Connecticut shall be set forth in the space provided on the <b>Bid Proposal Form</b> . It shall be the Bidder's responsibility to make inquiry as to, and to obtain, the Addenda issued, if any.
2.4.2	<b>Addenda</b> , if issued, will be posted on the State Contracting Portal.
2.4.3	<b>Failure to acknowledge</b> all <b>Addenda</b> in the space provided in the Bid Proposal Form <b>shall</b> be cause for <b>rejection</b> of the bid.
2.4.4	Attaching <b>Addenda</b> to the <b>Bid Proposal Form</b> does <b>not</b> constitute an acknowledgement of all Addenda and does not relieve the Bidder from the requirement for the Bidder to acknowledge all Addenda in the space provided on the Bid Proposal Form.
2.4.5	<b>No interpretations</b> of the meaning of the plans, specifications or other contract documents will be made <b>orally</b> at any time. Every <b>request</b> for such interpretation <b>shall</b> be in <b>writing</b> to the awarding authority and to be given consideration <b>shall</b> be received at least <b>fourteen (14)</b> Calendar Days <i>prior</i> to the date fixed for the opening of bids. Any and all such <b>interpretations</b> and any <b>supplemental instructions</b> will be in the form of written <b>Addenda</b> to the specifications which, if issued, will be posted on the State Contracting Portal.
2.4.6	Contractors who have subscribed through BizNet to receive daily e-mail alert notices when new Bids/RFPs are issued will be notified via a daily CT DAS " <b>Connecticut Procurement Portal Daily Notice</b> ".
<b>2.5 Bidder's Qualification Statement and Objective Criteria for Evaluating Bidders:</b>	
2.5.1	<b>All Bidders</b> shall download, complete, and upload <b>Section 00 45 14 General Contractor Bidder's Qualification Statement</b> to BizNet prior to the date and time of the Bid Opening. See BizNet for a template. This information shall be considered as part of the <b>Bid Proposal Form</b> . Failure of a Bidder to answer any question or provide required information <b>may</b> be grounds for the awarding authority to <b>disqualify</b> and <b>reject</b> the bid.
2.5.2	<b>All Bidders</b> shall comply with <b>Section 00 45 15 Objective Criteria Established for Evaluating Qualifications of Bidders</b> . The <b>Objective Criteria Established for Evaluating Qualifications of Bidders</b> are to assure that the State of Connecticut will secure the "lowest responsible and qualified bidder" who has the ability and capacity to successfully complete the Bid Proposal Form and the Work. Failure to comply with any portion of this requirement <b>may</b> cause <b>rejection</b> of the bid. <b>Note:</b> Individual Specification Sections <b>may</b> contain General Contractor and/or Subcontractor Qualification requirements that <i>exceed</i> those in <b>Section 00 45 15 Objective Criteria Established for Evaluating Qualifications of Bidders</b> .
<b>2.6 Bidder's Prequalification Requirements for Projects exceeding \$500,000:</b>	
2.6.1	<b>All Bidders</b> for Projects with estimated Construction Costs <b>greater than \$500,000</b> shall upload a current copy of their " <b>DAS Prequalification Certificate</b> " and " <b>DAS Update (Bid) Statement</b> " for the applicable <b>Class of Work</b> on <b>page 1 of Section 00 11 16 Invitation to Bid</b> to Biznet <i>prior</i> to the date and time of the Bid Opening.
2.6.2	Pursuant to <b>C.G.S. § 4b-91(a)(2)</b> and <b>C.G.S. §4a-100</b> , as revised, every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or any other public work by the state that is <b>estimated</b> to exceed <b>five hundred thousand dollars (\$500,000)</b> shall be awarded <b>only</b> to the lowest responsible and qualified Bidder who is " <b>prequalified</b> " by DAS in the <b>Class of Work for this Project</b> , as specified in <b>Section 00 11 16 Invitation to Bid</b> . No person who's <b>Contract or Subcontract</b> exceeds <b>\$500,000</b> in value may perform work as a Contractor or Subcontractor, unless the person is <b>prequalified</b> , <i>at the time of bid submission</i> , in accordance with <b>C.G.S. § 4a-100</b> , as amended, <b>C.G.S. § 4b-91(a)(2)</b> , and <b>C.G.S. §4b-91 (j)</b> . "Prequalified" includes the contractor's or substantial subcontractor's prequalification classifications, aggregate work capacity ratings and single project limits.
2.6.3	The State may waive minor irregularities that otherwise may cause rejection of a Bid only when waiving such minor irregularities is in the best interests of the State and the minor irregularities have been corrected by the Bidder within seven (7) Calendar Days after the Bid Due Date. Failure to properly <u>complete</u> , <u>sign</u> and <u>upload</u> either the " <b>DAS Prequalification Certificate</b> " or " <b>DAS Update (Bid) Statement</b> " to Biznet prior to the date and time of the Bid Opening <b>shall</b> cause <b>rejection</b> of the bid and shall <b>not</b> be considered a minor irregularity under <b>C.G.S. § 4b-95</b> .
2.6.4	See <b>Section 00 40 15 CT DAS Prequalification Forms</b> for instructions on preparing and/or downloading your Firm's " <b>DAS Contractor Prequalification Certificate</b> " and " <b>DAS Update (Bid) Statement</b> ".
2.6.5	<b>Bidder's Certification:</b> Within <b>ten (10) business days after</b> receipt of the Letter of Intent from DAS/CS, the <b>Apparent Low Bidder shall</b> submit a <b>Bidder's Certification</b> certifying that the information in the bid is true, that there has been no substantial change in the Bidder's financial position or corporate structure since its most recent <b>DAS Prequalification Certificate</b> and <b>DAS Update (Bid) Statement</b> and that the bid was made without fraud or collusion with any person. See <b>Section 00 92 10 Additional Forms</b> of this Project Manual for a sample form.

<b>2.7 Named Subcontractor Requirements:</b>	
2.7.1	All Bid Proposals <b>shall</b> be for the complete work as specified and <b>shall</b> include the names of any Subcontractors for the <b>four (4) Classes of Work</b> specified in <b>C.G.S. § 4b-93(a)</b> , as revised, and for each other class of work for which the awarding authority has required a separate section pursuant to said subsection, together with the dollar amounts of their subcontracts. The contractor shall be selected on the basis of such bids.
2.7.2	The <b>Named Subcontractor Bid Price</b> shall be the price set forth in the space provided on the <b>Bid Proposal Form</b> .
2.7.3	No bid shall be rejected because of an error in setting forth the Name of a Subcontractor as long as the Subcontractor or Subcontractors designated are clearly identifiable.
2.7.4	No bid shall be rejected because the <b>Named Subcontractor's</b> plans and specifications do not accompany the bid or are not submitted with the bid.
2.7.5	Failure to correctly state a <b>Named Subcontractor's price</b> on the Bid Proposal Form <b>shall</b> be cause for <b>rejection</b> of the Bid.
2.7.6	<b>Named Subcontractor Replacement:</b> The awarding authority may require the <b>Bidder</b> to replace a <b>Named Subcontractor</b> whenever the awarding authority determines in their sole discretion that such <b>replacement</b> is in the <b>best interest of the State</b> .
2.7.7	<b>Named Subcontractor Substitution:</b>
.1	The awarding authority <b>shall not</b> permit <b>substitution</b> of a subcontractor for one <b>Named</b> in accordance with the provisions of <b>C.G.S. § 4b-95</b> , as revised, <b>except</b> for " <b>Good Cause</b> ".
.2	The awarding authority <b>shall not</b> permit <b>substitution</b> of a subcontractor for any designated sub-trade work bid to be performed by the Bidder's own forces in accordance with the provisions of <b>C.G.S. § 4b-95</b> <b>except</b> for " <b>Good Cause</b> ".
.3	<b>"Good Cause":</b> The term "good cause" includes but is not limited to, a subcontractor's or, <b>where appropriate, a Bidder's:</b> (1) death or physical disability, if the listed subcontractor is an individual; (2) dissolution, if a corporation or partnership; (3) bankruptcy; (4) inability to furnish any performance and payment bond shown on the bid form; (5) inability to obtain, or loss of, a license necessary for the performance of the particular category of work; (6) failure or inability to comply 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 subcontract under C.G.S. § 4b-96, as revised.
2.7.8	<b>Named Subcontractor DAS Prequalification Requirement for Subcontracts exceeding \$500,000:</b>
.1	The <b>Three (3) Apparent Lowest Bidders</b> shall receive <i>VIA EMAIL</i> a "Set-Aside Contractor Schedule Request" ("Request") from the DAS/CS Office of Legal Affairs, Policy, and Procurement. For <b>Subcontracts greater than \$500,000</b> , the <b>Three (3) Apparent Lowest Bidders</b> shall submit within <b>ten (10) Calendar Days</b> after receipt of the Request current <b>DAS Prequalification Certificate(s) and Update (Bid) Statement(s)</b> for <b>each Named Subcontractor</b> in <b>Table 2.7</b> of the <b>Bid Proposal Form</b> , to the extent the <b>Class of Work for the Named Subcontractor is a Prequalification Classification</b> . This information shall be considered as part of the <b>Bid Proposal Form</b> and failure to comply with any portion of this requirement <b>may cause rejection</b> of the bid.
.2	Instructions for downloading " <b>DAS Contractor Prequalification Certificates</b> " and " <b>DAS Update (Bid) Statement</b> " can be found in <b>Section 00 40 15 CT DAS Prequalification Forms</b> .
.3	<b>In accordance C.G.S. §4b-91 (j)</b> , no person whose subcontract <i>exceeds</i> five hundred thousand dollars in value may perform work as a subcontractor on a project, which project is estimated to cost more than five hundred thousand dollars and is paid for, in whole or in part, with state funds, <i>unless, at the time of bid submission</i> , the person is prequalified in accordance with <b>C.G.S. §4a-100</b> , as amended. "Prequalified" includes the contractor's or substantial subcontractor's prequalification classifications, aggregate work capacity ratings and single project limits. For <b>Subcontracts</b> estimated to <b>exceed \$500,000</b> , the <b>Named Subcontractor must</b> be " <b>prequalified</b> " by DAS in the <b>Class of Work</b> specified in <b>Table 2.7</b> of <b>Section 00 41 00 Bid Proposal Form</b> <i>at the time of bid submission</i> , pursuant to <b>C.G.S. §4b-91(j)</b> and <b>C.G.S. § 4a-100</b> , as amended. This requirement also applies to the Bidder, if the Bidder is a Named Subcontractor.
2.7.9	<b>Named Subcontractor Bidder's Qualification Statements (Section 00 45 17)</b>
.1	The <b>Three (3) Apparent Lowest Bidders</b> shall receive <i>VIA EMAIL</i> a "Set-Aside Contractor Schedule Request" ("Request") from the DAS/CS Office of Legal Affairs, Policy, and Procurement. For Projects with <b>estimated Construction Costs greater than \$500,000</b> , the <b>Three (3) Apparent Lowest Bidders</b> shall submit within <b>ten (10) Calendar Days</b> after receipt of the Request completed <b>Section 00 45 17 Named Subcontractor Bidder's Qualification Statement(s)</b> of this Project Manual for <b>each Named Subcontractor</b> in <b>Table 2.7</b> of the <b>Bid Proposal Form</b> . This information shall be considered as part of the <b>Bid Proposal Form</b> and failure to comply with any portion of this requirement <b>may cause rejection</b> of the bid.
.2	<b>Important Note:</b> Individual Technical Specification Sections <b>may</b> contain qualification requirements that <b>exceed</b> those from <b>Section 00 45 17 Named Subcontractor Bidder's Qualification Statement</b> .

<b>2.7 Named Subcontractor Requirements (continued):</b>	
<b>2.7.10 Bidder Performing Work as Named Subcontractor:</b>	
.1	In accordance with <b>C.G.S. § 4b-95(c)</b> , it shall be presumed that the <b>Bidder</b> intends to perform, with its own employees, all work in such <b>four (4) Classes of Work</b> and such other classes, for which <b>no</b> Subcontractor is named in <b>Table 2.7 of the Bid Proposal Form</b> . In accordance with <b>C.G.S. § 4b-92</b> , as revised, the <b>Bidder's</b> qualifications for performing such work shall be subject to review.
.2	If the Bidder has listed itself as a <b>Named Subcontractor(s)</b> for a <b>Class(es) of Work</b> in <b>Table 2.7 of the Bid Proposal Form</b> and the proposed dollar value of the Subcontract(s) is greater than \$500,000, then <b>to the extent the Class(es) of Work is a Prequalification Classification</b> , the Bidder shall provide a current <b>DAS Prequalification Certificate</b> and <b>Update (Bid) Statement</b> for <b>each</b> of the applicable <b>Class(es) of Work</b> within ten (10) Calendar Days after receipt of the "Set-Aside Contractor Schedule Request" from DAS/CS.
<b>2.8 Set-Aside Requirements:</b>	
<b>2.8.1 Bidder's DAS Set-Aside Certificate For Projects With Construction Costs Estimated To Be Less Than \$500,000: All Small Business Enterprise (SBE) / Minority Business Enterprise (MBE) Bidders</b>	shall upload a copy of their Firm's current "DAS Set-Aside Certificate" to BizNet prior to the date and time of the Bid Opening.
<b>2.8.2 Bidder Contract Compliance Monitoring Report For Projects With Construction Costs Estimated To Be Less Than \$500,000:</b>	All Firm's shall upload a completed copy of the CHRO Employment Information Form, " <b>Bidder Contract Compliance Monitoring Report</b> " <i>with</i> their <b>Bid Proposal Form</b> prior to the date and time of the Bid Opening. The report is posted on the <b>CHRO Webpage</b> : <a href="http://www.ct.gov/chro/cwp/view.asp?a=2525&amp;Q=315900&amp;chroPNavCtr= #45679">http://www.ct.gov/chro/cwp/view.asp?a=2525&amp;Q=315900&amp;chroPNavCtr= #45679</a> .
<b>2.8.3 All Bidders shall be required</b>	to award not less than the percentage(s) stated on <b>page 1 of Section 00 41 00 Bid Proposal Form</b> to Subcontractors who are currently certified and eligible to participate under the State of Connecticut Set-Aside Program for <b>SBE and/or MBE</b> contractors, in accordance with C.G.S. § 4a-60g. <b>Failure</b> to meet these requirements <b>shall</b> cause <b>rejection</b> of the bid. The MBE participation <b>does</b> count as part of the SBE participation.
<b>2.8.4 Set-Aside Contractor Schedule Request:</b>	The SBE/MBE participation requirement <i>must be met</i> even if the Bidder is <i>certified</i> and <i>eligible</i> to participate in the <b>Small Business Set-Aside Program</b> . To facilitate compliance with this requirement for set-aside subcontractors, the <b>Three (3) Apparent Lowest Bidders</b> shall receive <b>VIA EMAIL</b> a "Set-Aside Contractor Schedule Request" ("Request") from the DAS/CS Office of Legal Affairs, Policy, and Procurement. As directed in the Request, the <b>Three (3) Apparent Lowest Bidders</b> shall submit within <b>ten (10) Calendar Days</b> after receipt of the Request, a <b>list of certified set-aside contractors</b> to be used on this project along with the <b>dollar amounts</b> to be paid to each. (See Section 00 73 27 Set-Aside Contractor Schedule for a sample Request.) A copy of the <b>current DAS Set-Aside Certificate</b> for <b>each Subcontracted SBE and/or MBE firm(s)</b> listed in the " <b>Set-Aside Contractor Schedule</b> " must be attached to the Request. This information will be considered as part of your Bid Proposal Form and <b>failure</b> to comply with any portion of this requirement within the ten (10) days, including but not limited to <b>failure</b> to list or meet the necessary dollar amount or percentage of the bid price, will be cause to <b>reject</b> your bid.
<b>2.8.5 Percentage of Work Performed by SBE/MBE Contractors and Subcontractors:</b>	The percentage of the work performed by the SBE/MBE Contractors and Subcontractors on this project shall not be less than the percentage noted in <b>Subsection 5.1 Amount of Work Required to Be Done by "Set-Aside" Contractors of Section 00 73 38 Commission on Human Rights (CHRO) Contract Compliance Regulations</b> .
<b>2.8.6 To view and/or download a Set-Aside Certificate:</b>	Go to the DAS Homepage ( <a href="http://www.ct.gov/DAS">www.ct.gov/DAS</a> ) > Small and Minority Businesses > Apply for Small Business Enterprise or Minority Business Enterprise Certification (SBE or MBE) > View/Search SBE/MBE Directory.
<b>2.9 Insurance Coverages:</b>	
<b>2.9.1</b>	The Insurance coverages required for this project shall be those listed in <b>Article 35 Contractors Insurance of Section 00 73 13 General Conditions</b> of this Project Manual. See <b>Section 00 41 00 Bid Proposal Form</b> and <b>Section 00 62 16 Certificate of Insurance</b> of this Project Manual for additional details.
<b>2.9.2</b>	The <b>Apparent Low Bidder shall</b> submit the Firm's <b>Certificate of Liability Insurance Acord® form</b> within <b>ten (10) business days after</b> receipt of the Letter of Intent from DAS/CS.

**3.0 All Other Required Bid Documents, Affidavits, and Certifications:**

**3.1 Affidavits and Certifications:**

**Important Note:** *The State may waive minor irregularities that otherwise may cause rejection of a Bid only when waiving such minor irregularities is in the best interests of the State and the minor irregularities have been corrected by the Bidder within seven (7) Calendar Days after the Bid Due Date. Failure to properly complete, sign and upload **all** of the following Affidavits and Certifications to Biznet prior to the date and time of the Bid Opening **shall** cause **rejection** of the bid and shall **not** be considered a minor irregularity under C.G.S. § 4b-95.*

**3.1.1 Gift and Campaign Contribution Certification – OPM Ethics Form 1: All Bidders**

- .1 All Bidders:** In accordance with Executive Order No. 49, and pursuant to C.G.S. §§ 4-250, 4-252(c) and 9-612(f)(2), as revised, any principal or key personnel of the person, firm or corporation submitting a bid or proposal for a contract that has a value of **\$50,000** or more, shall be required to upload to BizNet a **Gift and Campaign Contribution Certification** prior to the date and time of the Bid Opening.
- .2** Any bidder or proposer that **does not** upload the **Gift and Campaign Contribution Certification** to BizNet prior to the date and time of the Bid Opening as required under this section shall be **disqualified** and DAS shall award the contract to the next highest ranked proposer or the next lowest responsible qualified bidder or seek new bids or proposals. Failure to upload this form to BizNet **prior** to the date and time of the Bid Opening shall not be considered a minor irregularity under CGS 4b-95.
- .3** Once uploaded, an updated **Gift and Campaign Contribution Certification** shall be uploaded within **30 days** of any changes to the submitted information.
- .4** **Annually**, on or within **two (2)** weeks of the **anniversary** date of the execution of this contract, the Contractor shall upload a completed **Annual Certification** with authorizing resolution. For the purposes of this paragraph, the execution date of the contract will be the date the DAS Commissioner signs the contract.

**3.1.2 Consulting Agreement Affidavit – OPM Ethics Form 5: All Bidders**

- .1 All Bidders:** Pursuant to C.G.S. §§ 4a -81a and 4a -81b, as revised, a **Consulting Agreement Affidavit** must be completed and uploaded to BizNet prior to the date and time of the Bid Opening for contracts with a value of **\$50,000** or more.
- .2** In the event that a Bidder or vendor fails or refuses to upload the **Consulting Agreement Affidavit** to BizNet prior to the date and time of the Bid Opening, as required under C.G.S. § 4a-81, such bidder shall be **disqualified** and the award shall be made to the next lowest responsible qualified bidder or new bids or proposals shall be sought. Failure to upload this form to BizNet **prior** to the date and time of the Bid Opening shall not be considered a minor irregularity under CGS 4b-95.
- .3** Once uploaded, an updated **Consulting Agreement Affidavit** **shall** be amended and uploaded not later than (1) **thirty (30) days** after the effective date of any such change or (2) upon the submittal of any new bid or proposal, whichever is earlier. For the purposes of this paragraph, the **execution date** of the contract will be the date the DAS Commissioner signs the contract.
- .4** Other Contributions by Individuals. Principals of Investment Services Firms, State Contractors, Principals Of State Contractors, Prospective State Contractors Or Principals Of Prospective State Contractors. Lists. Subcontracts Study. State Officials or Employees: All acquisitions, agreements and contracts are subject to the provisions of the C.G.S. § 9-612 regarding **Campaign Contribution or Contributions**.

**3.1 Affidavits and Certifications Forms (continued):**

**3.1.3 Ethics Affidavit – OPM Ethics Form 6: All Bidders and Apparent Low Bidder**

- .1 **All Bidders:** Pursuant to C.G.S. §§ 1-101mm and 1-101qq, as revised, when DAS/CS is seeking a contract for a large state construction or procurement contract having a cost of more than **\$500,000**, DAS shall inform all potential consultant and contractor firms of the summary of state ethics laws developed by the Office of State Ethics (OSE) pursuant to C.G.S. § 1-81b. “Large State Contract” means an agreement or a combination or series of agreements between a state agency and a person, firm or corporation, having a total value of more than **\$500,000** in a calendar or fiscal year a project for the construction, alteration or repair of any public building or public work. For a **Guide to the Code of Ethics For Current or Potential State Contractors** go to the Office of State Ethics (OSE) website ([www.ct.gov/ethics](http://www.ct.gov/ethics)), then click on the “**Publications**” link.
- .2 **All Bidders:** Pursuant to C.G.S. § 1-101qq, as revised, DAS is also required to notify all potential consultant and contractor firms or a large state construction or procurement contract that they must upload an **Affirmation of Receipt of State Ethics Laws Summary** to BizNet prior to the date and time of the Bid Opening affirming that their key employees have read and understand the summary and agree to comply with the provisions of state ethics law.
- .3 Failure to upload this affidavit to BizNet prior to the date and time of the Bid Opening **shall** result in **rejection** of the bid and shall not be considered a minor irregularity under CGS 4b-95.
- .4 **Apparent Low Bidder:** Furthermore, the **Apparent Low Bidder** shall provide the **Summary of the State Ethics Laws** to each **Named Subcontractor** and any other **Subcontractor** or **Subconsultant** with a contract valued over **\$500,000** and obtain a **Subcontractor and Subconsultant State Ethics Affidavit** stating that the key personnel of the subcontractor have read, understand, and agree to comply with provisions of the state ethics laws. The **Apparent Low Bidder** shall submit such subcontractor(s) affidavits to the DAS/CS Office of Legal Affairs, Policy, and Procurement within **ten (10) business days** after receipt of the Letter of Intent from DAS/CS.

**3.1.4 Iran Certification – OPM Ethics Form 7: All Bidders**

- .1 **All Bidders:** Pursuant to C.G.S. § 4-252a, when DAS/CS is seeking a contract for a large state construction or procurement contract having a cost of more than **\$500,000**, an **Iran Certification** must be completed and uploaded to BizNet **prior to the date and time of the Bid Opening**.
- .2 Pursuant to C.G.S. § 4-252a, *“This form must always be submitted with the bid or proposal, or if there was no bid process, with the resulting contract, regardless of where the principal place of business is located. Entities whose principal place of business is located outside of the United States are required to complete the entire form, including the certification portion of the form. United States subsidiaries of foreign corporations are exempt from having to complete the certification portion of the form. Those entities whose principal place of business is located inside of the United States must also fill out the form, but do not have to complete the certification portion of the form.”*

**3.1.5 Nondiscrimination Certification – Form A, B, C, D, or E: All Bidders**

- .1 **All Bidders:** Pursuant to C.G.S. §§ 4a-60 and 4a-60a, as amended, a contractor must provide an awarding State agency with written representation or documentation that certifies the contractor complies with the State's nondiscrimination agreements and warranties prior to the award of any contract with the State. A **Nondiscrimination Certification** is required for all State contracts, regardless of type, term, cost or value. The **appropriate form** must be uploaded to BizNet prior to the date and time of the Bid Opening.
- .2 Once uploaded, an updated **Nondiscrimination Certification** shall be uploaded within **30 days** of any changes to the submitted information.
- .3 **Annually**, on or within **two (2) weeks** of the **anniversary** date of the execution of this contract, the Contractor shall upload a completed **Annual Certification** with authorizing resolution. For the purposes of this paragraph, the execution date of the contract will be the date the DAS Commissioner signs the contract.

**3.1.6** For instructions on how to electronically download and upload **Affidavits and Non-Discrimination Forms**, go to the DAS Homepage ([www.ct.gov/DAS](http://www.ct.gov/DAS)) > Doing Business with the State > Create a BizNet Account for Doing Business with the State > Documents/Forms > Vendor Guide to Uploading Affidavits and Nondiscrimination Forms Online.

<b>3.2 Security For Faithful Performance:</b>	
<b>3.2.1 Certified Check or Bid Bond: All Bidders</b>	
.1	<b>All Bidders for bids in excess of \$50,000 shall submit either a Certified Check or a Bid Bond</b> , in the form required by the awarding authority. See <b>Section 00 43 16 Standard Bid Bond</b> in BizNet for a template and important instructions regarding submitting the Bid Bond or Certified Check. Complete and upload <b>Section 00 43 16 Standard Bid Bond</b> to Biznet <b>prior</b> to the date and time of the Bid Opening for <b>either</b> the Bid Bond option <b>or</b> the Certified Check option.
.2	<b>Certified Check Option:</b> The <b>Certified Check</b> shall be drawn to the order of “ <b>Treasurer, State of Connecticut</b> ”, in which it is understood shall be cashed and the proceeds thereof used so far as may be necessary to reimburse the State of Connecticut for losses and damages arising by virtue of the Bidder’s failure to file the required Bonds and execute the required contract if this proposal is accepted by the Awarding Authority.
.3	<b>Bid Bond Option:</b> The <b>Bid Bond</b> shall be in the form required by the awarding authority, having as <b>surety</b> thereto such surety company or companies acceptable to the DAS Commissioner and as are authorized to do business in this State, for an amount not less than 10 percent of the bid.
.4	<b>Return of Certified Check:</b> All <b>checks</b> submitted by <b>unsuccessful</b> Bidders shall be returned to them <i>after</i> the contract has been awarded.
.5	Failure to submit the Bid Bond <b>or</b> Certified Check <b>prior</b> to the date and time of the Bid Opening <b>shall</b> cause <b>rejection</b> of the bid and shall not be considered a minor irregularity under CGS 4b-95.
.6	<b>Forfeiture of Certified Check or Bid Bond:</b> <b>Failure</b> of the successful bidder to execute a contract awarded as specified and bid shall result in the <b>forfeiture</b> of the certified check or bid bond.
<b>3.2.2 Performance Bond: Apparent Low Bidder:</b>	Within <b>ten (10) business days after</b> receipt of the Letter of Intent from DAS/CS, the <b>Apparent Low Bidder shall</b> substitute for the <b>certified check or bid bond</b> accompanying its bid an executed <b>performance bond</b> , in the amount not less than 100 percent of the contract price, conditioned upon the faithful performance of the contract, and having as surety thereto such surety company or companies satisfactory to the Commissioner and as are authorized to transact business in this State. This bond is to be furnished pursuant to <b>C.G.S. § 49-41</b> , as revised. See <b>Section 00 92 10 Additional Forms</b> of this Project Manual for a template.
<b>3.2.3 Labor and Material Bond: Apparent Low Bidder:</b>	Within <b>ten (10) business days after</b> receipt of the Letter of Intent from DAS/CS, the <b>Apparent Low Bidder shall</b> submit a labor and material bond in the amount not less than 100 percent of the contract price which <b>shall</b> be binding upon the award of the contract to such bidder, with surety or sureties satisfactory to the Commissioner and as are authorized to transact business in this State, for the protection of persons supplying labor or materials in the prosecution of the work provided for in the contract for the use of each such person. Any such bond furnished <b>shall</b> have as principal the name of the successful Bidder. This bond is to be furnished pursuant to <b>C.G.S. § 49-41</b> , as revised. See <b>Section 00 92 10 Additional Forms</b> of this Project Manual for a template.
<b>3.2.4</b>	<b>The following section of the General Statutes of Connecticut, as revised, is inserted as information concerning this bond and will be incorporated into the Contract for the Work:</b> <b>C.G.S. § 49-41a. Enforcement of payment by general contractor to subcontractor and by subcontractor to his subcontractors. (a)</b> When any public work is awarded by a contract for which a payment bond is required by section 49-41, the contract for the public work shall contain the following provisions: (1) A requirement that the general contractor, within thirty days after payment to the contractor by the State or a municipality, 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 State or a municipality; (2) a requirement that the general contractor shall include in each of its <b>subcontracts</b> a <b>provision</b> requiring each <b>subcontractor</b> to pay any amounts due any of its subcontractors, whether for labor performed or materials furnished, within thirty days after such subcontractor receives a payment from the general contractor which encompasses labor or materials furnished by such subcontractor. <b>(b)</b> If payment is not made by the general contractor or any of its subcontractors in accordance with such requirements, the subcontractor shall set forth his claim against the general contractor and the subcontractor of a subcontractor shall set forth its claim against the subcontractor through notice by registered or certified mail. Ten days after the receipt of that notice, the general contractor shall be liable to its subcontractor, and the subcontractor shall be liable to its subcontractor, for interest on the amount due and owing at the rate of one percent per month. In addition, the general contractor, upon written demand of its subcontractor, or the subcontractor, upon written demand of its subcontractor, shall be required to place funds in the amount of the claim, plus interest of one per cent, in an interest-bearing escrow account in a bank in this State, provided the general contractor or subcontractor may refuse to place the funds in escrow on the grounds that the subcontractor has not substantially performed the work according to the terms of his or its employment. In the event that such general contractor or subcontractor refuses to place such funds in escrow, and the party making a claim against it under this section is found to have substantially performed its work in accordance with the terms of its employment in any arbitration or litigation to determine the validity of such claim, then such general contractor or subcontractor shall pay the attorney’s fees of such party. <b>(c)</b> No payment may be withheld from a subcontractor for work performed because of a dispute between the general contractor and another contractor or subcontractor. <b>(d)</b> This section shall not be construed to prohibit progress payments prior to final payment of the contract and is applicable to all subcontractors for material or labor whether they have contracted directly with the general contractor or with some other subcontractor on the work.
<b>3.2.5</b>	<b>Surety Sheet: Apparent Low Bidder:</b> Within <b>ten (10) business days after</b> receipt of the Letter of Intent from DAS/CS, the <b>Apparent Low Bidder shall</b> submit a Surety Sheet that provides information regarding the Surety Company and Agent. See <b>Section 00 92 10 Additional Forms</b> of this Project Manual for a template.

<b>3.3 Certificate (of Authority):</b>	
3.3.1	All Bidders for bids in excess of \$50,000 shall upload a signed and scanned <b>Section 00 40 14 Certificate (of Authority)</b> to BizNet prior to the date and time of the Bid Opening. See BizNet for a template.
3.3.2	The <b>Apparent Low Bidder</b> shall submit a <b>second Certificate (of Authority)</b> within <b>ten (10) business days after</b> receipt of the Letter of Intent from DAS/CS.
<b>3.4 Security Requirements for CT Department of Correction (CT DOC) Facilities:</b>	
3.4.1	All Bidders for Projects at a CT DOC Facility shall read and comply with <b>Section 00 73 63 CT DOC Security Requirements</b> for Contract Forces on CT DOC Facilities.
3.4.2	<b>NEW:</b> All Bidders for Projects at a CT DOC Facility: Prior to the Pre-Bid Meeting, all Bidders shall download the “ <b>Security Background Questionnaire</b> ” from the CT DOC website ( <a href="http://www.ct.gov/doc">www.ct.gov/doc</a> , under “Forms”), complete and submit the form as directed, and obtain approval, otherwise admission to the Pre-Bid Meeting <b>will be denied</b> . It is recommended that the approved form be brought as evidence of approval to attend the Pre-Bid Meeting.
<b>3.5 Affirmative Action Plan &amp; Employment Information Form (DAS-45): Apparent Low Bidder</b>	
3.5.1	For Projects greater than \$500,000 and/or Firms with 50 or more employees, the <b>Apparent Low Bidder shall</b> submit the Firm’s <b>Affirmative Action Plan</b> and <b>Employment Information Form (DAS-45)</b> to CHRO within <b>fifteen (15) calendar days after</b> receipt of the “Request for the <i>Affirmative Action Plan</i> and <i>Employment Information Form</i> Letter” from DAS/CS. See <b>Section 00 73 38 Commission on Human Rights and Opportunities/ Contract Compliance Regulations</b> .
3.5.2	The Apparent Low Bidder <b>shall</b> submit a copy of the Transmittal Letter to the DAS/CS Office of Legal Affairs, Policy, and Procurement within <b>fifteen (15) calendar days after</b> receipt of the “Request for the <i>Affirmative Action Plan</i> and <i>Employment Information Form</i> Letter” from DAS/CS.
<b>3.6 Prevailing Wage: Apparent Low Bidder</b>	
3.6.1	The <b>Apparent Low Bidder shall</b> submit the “ <b>Contractor’s Wage Certification Form</b> ” to CT Department of Labor (CT DOL) within <b>fifteen (15) calendar days after</b> receipt of the “Request for the <i>Affirmative Action Plan</i> and <i>Employment Information Form</i> Letter” from DAS/CS. See <b>Section 00 73 44 Prevailing Wage Rates/Contractor’s Wage Certification/Payroll Certification</b> of this Project Manual.
3.6.2	Each contractor who is awarded a contract on or after October 1, 2002 shall be subject to provisions of <b>C.G.S. § 31-53, as revised</b> . See <b>Section 00 73 44 Prevailing Wage Rates/Contractor’s Wage Certification/Payroll Certification</b> of this Project Manual.
3.6.3	<b>Annual Adjustment Of Prevailing Wage Rates:</b> In determining bid price, consideration should be given to <b>C.G.S. § 31-53 and 31-55a, as revised</b> , regarding <b>annual adjustment of prevailing wage rates</b> . Annual adjustments of prevailing wage rates will <b>not</b> be considered a matter for a contract amendment.
<b>3.7 NEW PROCESS: General Permit for the Discharge of Stormwater &amp; Dewatering Wastewaters from Construction Activities: Apparent Low Bidder</b>	
3.7.1	All DAS/CS construction projects disturbing <b>one or more total acres of land area</b> on a site <b>regardless of project phasing</b> must file a Department of Energy and Environmental Protection (DEEP) <a href="#">General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (DEEP-WPED-GP-015)</a> (“Construction Stormwater General Permit”) registration and Stormwater Pollution Control Plan (SPCP) with the DEEP. <b>The DAS/CS Architect/Engineer (A/E) shall be responsible for registering the Construction Stormwater General Permit and SPCP through the online DEEP ezFile Portal prior to bidding.</b>
3.7.2	Once the Apparent Low Bidder is under contract with DAS/CS, and prior to the commencement of any construction activities, the Apparent Low Bidder (“Contractor”) shall be required to provide the necessary information from all applicable contractors and/or subcontractors working on the Project to the DAS/CS A/E in order to finalize the SPCP and transfer the Construction Stormwater General Permit obligations to the Contractor.
3.7.3	All Contractors and Subcontractors listed on the SPCP shall be required to sign the SPCP “Contractor Certification Statement” and License Transfer Form <b>prior</b> to commencement of any construction activity.



**3.8 Section 00 52 73 Subcontract Agreement Forms: Apparent Low Bidder**

**3.8.1** The **Apparent Low Bidder** shall submit a completed **Section 00 52 73 Subcontract Agreement Form** of this Project Manual for *each* Named Subcontractor within **ten (10) Business Days** after receipt of the "Letter of Intent" from DAS/CS. This information *shall* be considered as part of the **Bid Proposal Form** and failure to comply with any portion of this requirement *may* cause **rejection** of the bid.

**3.8.2** Each **Named Subcontractor** shall be the matter of a **Subcontract** as required by **C.G.S. § 4b-96**.

**3.9 Non-Resident Contractors and Taxation: Apparent Low Bidder**

**3.9.1** **Nonresident contractors** must comply with the **provisions C.G.S. § 12-430 (7), Procedures for Nonresident Contractors**, and the regulations established pursuant to that section. See **Section 00 92 30 Procedures Regarding Taxation for Nonresident General/Prime Contractor and Subcontractors** of this Project Manual for additional details.

**3.9.2** **Apparent Low Bidder who is a Nonresident Contractor:** Within **ten (10) business days after** receipt of the "**Letter of Intent**" from DAS/CS, a certificate(s) from DRS must be provided which evidences that C.G.S. §12-430 for non-resident contractors has been met. As described in Section 00 92 30 "Procedures Regarding Taxation for Nonresident General/Prime Contractor and Subcontractors", **Verified Nonresident** General/Prime Contractors must submit a copy of their "**Notice of Verified Status**" (Verification Letter) from DRS. **Unverified Nonresident** General/Prime Contractors must submit a copy of **Form AU-965 "Acceptance of Surety Bond"** from DRS.

**3.10 Certificate of Legal Existence: Apparent Low Bidder**

**3.10.1** A **corporation** that is awarded the contract must comply with the laws of this State regarding the procurement of a certificate of authority to transact business in this State from the **Secretary of the State**. A "**Certificate of Legal Existence**" which is not older than **ninety (90) calendar days** from the date of the contract signing must be filed with the DAS/CS Office of Legal Affairs, Policy, and Procurement within **ten (10) business days after** receipt of the "Letter of Intent" from DAS/CS.

**3.11 State Election Enforcement Commission (SEEC) Form 10: Apparent Low Bidder**

**3.11.1** The **Apparent Low Bidder** shall submit a **State Election Enforcement Commission's (SEEC) Form 10** "Notice to Executive Branch State Contractors and Prospective State Contractors of Campaign Contribution and Solicitation Limitations" within **ten (10) business days after** receipt of the "Letter of Intent" from DAS/CS for contracts with a value of \$50,000 or more.

**3.11.2** Pursuant to C.G.S. § 9-612, as revised, a State Contract means an agreement or contract with the state or any state agency or any quasi-public agency 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 **submission** in response to the State's solicitation expressly **acknowledges receipt** of, and must submit **in writing**, the **SEEC Form 10 notice** advising prospective state contractors of the state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the **notice**.

**3.11.3** For instructions on how to download "**SEEC Form 10**", go to the SEEC Homepage ([www.ct.gov/seec](http://www.ct.gov/seec)); click on "Forms" at the top of the page; click on "Contractor Reporting Forms"; click on "SEEC Form 10" and follow the directions.

**3.12 OSHA Training Course: Successful Bidder**

**3.12.1** Pursuant to **C.G.S. §. 31-53b (a)**, as revised, each contract entered into for the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public building project by the state or any of its agents, or by any political subdivision of the state or any of its agents, where the total cost of all work to be performed by all contractors and subcontractors in connection with the contract is at least **one hundred thousand dollars (\$100,000)**, shall contain a provision requiring that, not later than **thirty (30) days** after the date such contract is awarded, **each contractor furnish proof to the Labor Commissioner** that all employees performing manual labor on or in such public building, pursuant to such contract, have completed a **course** of at least **ten (10) hours** in duration in **construction safety and health** approved by the federal Occupational Safety and Health Administration or, in the case of telecommunications employees, have completed at least **ten (10) hours** of training in accordance with 29 CFR 1910.268.

**3.13 NEW PROCESS: Contractor and Subcontractor Payments Reporting: Successful Bidder**

**3.13.1** For compliance with **C.G.S. §. 4b-95 and 49-41**, DAS/CS requires every Contractor (and its Subcontractors) who has been awarded a DAS/CS construction contract to log on to the State of Connecticut web-based platform, BizNet, **each month and enter payments** they have received from the state, from the Contractor, or from a higher tier Subcontractor (as applicable).

The process is described as follows: The state will pay the Contractor on a monthly basis for work performed (and purchases made) by it and its Subcontractors. The Contractor will input the payment date and amount they receive from the state on a monthly basis. The Contractor's first-level Subcontractor (Tier 1 Subcontractor) will input the payment they receive from the Contractor. The second-level Subcontractor (Tier 2 Subcontractor) will input the payment they receive from the Tier 1 Subcontractor. And so on.

Contractors awarded a DAS/CS construction contract shall contain a **provision in their subcontract agreements** requiring their Subcontractors to enter payment receipt from the Contractor in the State of Connecticut web-based platform, BizNet, for work performed or purchases made in relation to state projects.

Detailed instructions can be found in the DAS/CS publication, "**6002 Instructions to Contractors/Subcontractors for Entering Payments in BizNet**", available for download by going to the DAS Homepage ([www.ct.gov/DAS](http://www.ct.gov/DAS)) and selecting Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 6000 Series.

**4.0 Nondiscrimination and Affirmative Action**

This contract is subject to Federal and state laws, including Title VII of the 1964 Civil Rights Act, 42 U.S.C. § 2000e-2(a)(1), and the Connecticut Fair Employment Practices Act, C.G.S. §46a-60 et seq., prohibit various forms of discrimination and illegal harassment in employment.

**4.1 Nondiscrimination and Affirmative Action Provisions:**

**4.1.1 This section is inserted in connection with C.G.S. § 4a-60, as revised.**

**4.1.2** References in this section to "contract" **shall** mean this Contract and references to "contractor" **shall** mean the Contractor/Bidder.

**4.1.3 C.G.S. § 4a-60, as revised:**

(a) Every contract to which the state or any political subdivision of the state other than a municipality is a party shall contain the following provisions:

- (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, intellectual disability, 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, intellectual disability, 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;
- (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 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 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 sections 46a-68e and 46a-68f and with each regulation or relevant order issued by said commission pursuant to sections 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 section 46a-56.

(b) 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 project.

- (c) (1) Any contractor who has one or more contracts with the state or a political subdivision of the state that is valued at less than fifty thousand dollars for each year of the contract shall provide the state or such political subdivision of the state with a written or electronic representation that complies with the nondiscrimination agreement and warranty under subdivision (1) of subsection (a) of this section, provided if there is any change in such representation, the contractor shall provide the updated representation to the state or such political subdivision not later than thirty days after such change.
- (2) Any contractor who has one or more contracts with the state or a political subdivision of the state that is valued at fifty thousand dollars or more for any year of the contract shall provide the state or such political subdivision of the state with any one of the following:
- (A) Documentation in the form of a company or corporate policy adopted by resolution of the board of directors, shareholders, managers, members or other governing body of such contractor that complies with the nondiscrimination agreement and warranty under subdivision (1) of subsection (a) of this section;
- (B) Documentation in the form of a company or corporate policy adopted by a prior resolution of the board of directors, shareholders, managers, members or other governing body of such contractor if (i) the prior resolution is certified by a duly authorized corporate officer of such contractor to be in effect on the date the documentation is submitted, and (ii) the head of the agency of the state or such political subdivision, or a designee, certifies that the prior resolution complies with the nondiscrimination agreement and warranty under subdivision (1) of subsection (a) of this section; or
- (C) Documentation in the form of an affidavit signed under penalty of false statement by a chief executive officer, president, chairperson or other corporate officer duly authorized to adopt company or corporate policy that certifies that the company or corporate policy of the contractor complies with the nondiscrimination agreement and warranty under subdivision (1) of subsection (a) of this section and is in effect on the date the affidavit is signed.
- (3) Neither the state nor any political subdivision shall award a contract to a contractor who has not provided the representation or documentation required under subdivisions (1) and (2) of this subsection, as applicable. After the initial submission of such representation or documentation, the contractor shall not be required to resubmit such representation or documentation unless there is a change in the information contained in such representation or documentation. If there is any change in the information contained in the most recently filed representation or updated documentation, the contractor shall submit an updated representation or documentation, as applicable, either (A) not later than thirty days after the effective date of such change, or (B) upon the execution of a new contract with the state or a political subdivision of the state, whichever is earlier. Such contractor shall also certify, in accordance with subparagraph (B) or (C) of subdivision (2) of this subsection, to the state or political subdivision, not later than fourteen days after the twelve-month anniversary of the most recently filed representation, documentation or updated representation or documentation, that the representation on file with the state or political subdivision is current and accurate.
- (d) For the purposes of this section, "contract" includes any extension or modification of the contract, "contractor" includes any successors or assigns of the contractor, "marital status" means being single, married as recognized by the state of Connecticut, widowed, separated or divorced, and "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. For the purposes of this section, "contract" does 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 section 1-120, (3) any other state, as defined in section 1-267, (4) the federal government, (5) a foreign government, or (6) an agency of a subdivision, agency, state or government described in subparagraph (1), (2), (3), (4) or (5) of this subsection.
- (e) For the purposes of this section, "minority business enterprise" means any small contractor or supplier of materials fifty-one per cent 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 section 32-9n; and "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations. "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.
- (f) 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.
- (g) The contractor shall develop and maintain adequate documentation, in a manner prescribed by the commission, of its good faith efforts.
- (h) The contractor shall include the provisions of subsections (a) and (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 section 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.

**4.2 Nondiscrimination Provisions Regarding Sexual Orientation:**

**4.2.1 This section is inserted in connection with C.G.S. § 4a-60a, as revised.**

**4.2.2** References in this section to "contract" shall mean this Contract and references to "contractor" shall mean the Contractor/Bidder.

**4.2.3 C.G.S. § 4a-60a, as revised:**

- (a) Every contract to which the state or any political subdivision of the state other than a municipality is a party shall contain the following provisions:
- (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 of 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 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 section 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 section 46a-56.
- (b) (1) Any contractor who has one or more contracts with the state or a political subdivision of the state that is valued at less than fifty thousand dollars for each year of the contract shall provide the state or such political subdivision of the state with a written representation that complies with the nondiscrimination agreement and warranty under subdivision (1) of subsection (a) of this section.
- (2) Any contractor who has one or more contracts with the state or a political subdivision of the state that is valued at fifty thousand dollars or more for any year of the contract shall provide the state or such political subdivision of the state with any of the following:
- (A) Documentation in the form of a company or corporate policy adopted by resolution of the board of directors, shareholders, managers, members or other governing body of such contractor that complies with the nondiscrimination agreement and warranty under subdivision (1) of subsection (a) of this section;
  - (B) Documentation in the form of a company or corporate policy adopted by a prior resolution of the board of directors, shareholders, managers, members or other governing body of such contractor if (i) the prior resolution is certified by a duly authorized corporate officer of such contractor to be in effect on the date the documentation is submitted, and (ii) the head of the agency of the state or such political subdivision, or a designee, certifies that the prior resolution complies with the nondiscrimination agreement and warranty under subdivision (1) of subsection (a) of this section; or
  - (C) Documentation in the form of an affidavit signed under penalty of false statement by a chief executive officer, president, chairperson or other corporate officer duly authorized to adopt company or corporate policy that certifies that the company or corporate policy of the contractor complies with the nondiscrimination agreement and warranty under subdivision (1) of subsection (a) of this section and is in effect on the date the affidavit is signed.
- (3) Neither the state nor any political subdivision shall award a contract to a contractor who has not provided the representation or documentation required under subdivisions (1) and (2) of this subsection, as applicable. After the initial submission of such representation or documentation, the contractor shall not be required to resubmit such representation or documentation unless there is a change in the information contained in such representation or documentation. If there is any change in the information contained in the most recently filed representation or updated documentation, the contractor shall submit an updated representation or documentation, as applicable, either (A) not later than thirty days after the effective date of such change, or (B) upon the execution of a new contract with the state or a political subdivision of the state, whichever is earlier. Such contractor shall also certify, in accordance with subparagraph (B) or (C) of subdivision (2) of this subsection, to the state or political subdivision, not later than fourteen days after the twelve-month anniversary of the most recently filed representation, documentation or updated representation or documentation, that the representation on file with the state or political subdivision is current and accurate.
- 4) For the purposes of this section, "contract" includes any extension or modification of the contract, and "contractor" includes any successors or assigns of the contractor. For the purposes of this section, "contract" does not include a contract where each contractor is (A) a political subdivision of the state, including, but not limited to, a municipality, (B) a quasi-public agency, as defined in section 1-120, (C) any other state, as defined in section 1-267, (D) the federal government, (E) a foreign government, or (F) an agency of a subdivision, agency, state or government described in subparagraph (A), (B), (C), (D) or (E) of this subdivision.

(c) The contractor shall include the provisions of subsection (a) 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 section 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.

**End of Section**  
**00 21 13 Instructions to Bidders**



<b>Certificate (of Authority)</b>	
<b>DAS Construction Services Project No.:</b>	
I <input style="width: 300px; height: 20px;" type="text"/>	<input style="width: 400px; height: 20px;" type="text"/>
<i>(Signer's Name)<sup>1</sup></i>	<i>(Signer's Title)</i>
of <input style="width: 300px; height: 20px;" type="text"/>	, an entity lawfully organized and existing under the laws
<i>(Name of Entity)</i>	
of <input style="width: 300px; height: 20px;" type="text"/>	, do hereby certify that the following is a true and correct
<i>(Name of State or Commonwealth)</i>	
copy of a resolution adopted on the <input style="width: 50px; height: 20px;" type="text"/> day of <input style="width: 50px; height: 20px;" type="text"/>	, 20 <input style="width: 50px; height: 20px;" type="text"/> by the governing body of
<i>(Day)<sup>2</sup></i>	<i>(Month)<sup>2</sup></i> <i>(Year)<sup>2</sup></i>
<input style="width: 350px; height: 20px;" type="text"/>	, in accordance with all of its documents of governance and
<i>(Name Of Entity)</i>	
management and the laws of <input style="width: 250px; height: 20px;" type="text"/>	and further certify that such resolution has not
<i>(Name of State or Commonwealth)</i>	
<b>been modified, rescinded or revoked, and is at present in full force and effect.</b>	
<b>RESOLVED:</b> that <input style="width: 250px; height: 20px;" type="text"/>	<input style="width: 250px; height: 20px;" type="text"/>
<i>(Name of Signer of Contract Documents)<sup>3</sup></i>	<i>(Title of Signer of Contract Documents)<sup>3</sup></i>
of <input style="width: 350px; height: 20px;" type="text"/>	is empowered and authorized, on behalf of the entity,
<i>(Name of Entity)</i>	
<b>to execute and deliver contracts and amendments thereto, and all documents required by the Governor, the Connecticut Department of Administrative Services, the Connecticut State Properties Review Board and the Office of the Attorney General associated with such contracts and amendments.</b>	
<b>IN WITNESS WHEREOF, the undersigned has executed this certificate this <input style="width: 50px; height: 20px;" type="text"/> day of <input style="width: 50px; height: 20px;" type="text"/></b>	
	<b>, 20 <input style="width: 50px; height: 20px;" type="text"/></b>
	<i>(Day)<sup>4</sup></i> <i>(Month)<sup>4</sup></i> <i>(Year)<sup>4</sup></i>
<input style="width: 400px; height: 20px;" type="text"/>	
<i>(Signature)</i>	
<input style="width: 400px; height: 20px;" type="text"/>	<input style="width: 400px; height: 20px;" type="text"/>
<i>(Print Name)</i>	<i>(Title)</i>

**Reference Notes:**

- 1 The signer of this certificate must be someone *other than* the signer of the contract documents *except for* a sole managing member of an LLC or the sole officer or sole principal of a corporation. *If* the signer is a sole managing member of an LLC, *then* along with this certificate the signer must provide a letter on company letterhead that indicates the signer is a sole member and managing member. If the signer is the sole officer or sole principal of a corporation, then the signer must provide with the certificate a letter on company letterhead setting forth this fact.
- 2 This date must be on or before the **date of signing** of the Bid Proposal (or Contract).
- 3 This person shall sign the Contract and other required documents.
- 4 This date must be on or after the **date of signing** of the Bid Proposal (or Contract).

**For Your Information:**

**Certificate (of Authority)**

**All Bidders:**

**Complete page 1, print, sign, and scan to PDF. Upload the PDF form to BizNet.**

What the **Certificate** is saying is that the organization authorized the signatory to sign the pertinent **documents other than** the Certificate (of Authority) and that, as of the date of **execution** of the CERTIFICATE (i.e., the date set forth in the "In Witness Whereof" blanks) there has been no change in that authorization.

**Instructions For Completing The Certificate (of Authority)**

**The Certificate (of Authority) to Accompany the Bid Proposal Form:**

**1. 1<sup>st</sup> Paragraph:**

- 1.1 First, enter the name and title of the individual signing the Certificate (of Authority).
- 1.2 Second, enter the legal name of the entity (exactly as it is shown on the Secretary of State registry).
- 1.3 Third, enter the name of the state or commonwealth the entity is registered in.
- 1.4 Fourth, enter the date the resolution was adopted by the governing body. This **date** is **on** or **before** the date the **Bid Proposal** is signed.
- 1.5 Fifth, enter the name of the state or commonwealth the entity is registered in.

**2. 2<sup>nd</sup> Paragraph:**

- 2.1 First, enter the name and title of the individual signing bid documents for the entity.
- 2.2 Second, enter the legal name of the entity (exactly as it is shown on the Secretary of State registry).

**3. Last Paragraph:**

- 3.1 Enter the **Witness Date**<sup>1</sup>. This date will likely be the date of execution of the **Bid Proposal form**.

**<sup>1</sup> This Witness Date Should Not Be Before The Date Of Execution Of The Bid Proposal.**

**The Certificate (of Authority) to Accompany the Contract:**

**1. 1<sup>st</sup> Paragraph:**

- 1.1 First, enter the name and title of the individual signing the Certificate (of Authority).
- 1.2 Second, enter the legal name of the entity (exactly as it is shown on the Secretary of State registry).
- 1.3 Third, enter the name of the state or commonwealth the entity is registered in.
- 1.4 Fourth, enter the date the resolution was adopted by the governing body. This **date** is **on** or **before** the date the **Contract** is signed.
- 1.5 Fifth, enter the name of the state or commonwealth the entity is registered in.

**2. 2<sup>nd</sup> Paragraph:**

- 2.1 First, enter the name and title of the individual signing contract documents for the entity.
- 2.2 Second, enter the legal name of the entity (exactly as it is shown on the Secretary of State registry).

**3. Last Paragraph:**

- 3.1 Enter the **Witness Date**<sup>1</sup>. This date will likely be the date of execution of the **Contract**.

**<sup>1</sup> This Witness Date Should Not Be Before The Date Of Execution Of The Contract.**

**End of Section 00 40 14 Certificate (of Authority)**



## Bid Proposal Form

DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement  
 450 Columbus Boulevard, Suite 1302 | Hartford, CT 06103

<b>Date and Time of Bid Opening:</b>	See page 1 of Section 00 11 16 Invitation To Bid.
<b>Instructions for On-Line Bidding:</b>	Follow the instructions in <a href="#">6001 Construction On-line Bidding Instructions</a> , available for download from the DAS/CS Library ( <a href="http://portal.ct.gov/DASCSLibrary">http://portal.ct.gov/DASCSLibrary</a> ) > 6000 Series – Bid Phase Forms. For questions, call 860-713-5794 or 860-713-5783.

- Instructions for Completing This Bid Proposal Form:**
- **Download** and **save** the Bid Proposal Form to your computer. Close the form. Open your *saved* Bid Proposal Form and type required information in blue boxes. (Remember to keep saving to your computer.)
  - On your Word Toolbar, **click “View” then “Edit Document” or “Print Layout”** in order to edit the form.
  - When your Bid Proposal Form is complete, perform a final “save” to your computer! **Print ALL pages and sign** your Bid Proposal Form. **Scan ALL** pages of your Bid Proposal Form to **PDF**. Upload the **PDF** Bid Proposal Form to BizNet.
  - **Duly Authorized Signature:** A duly authorized representative of the Bidder or Bidder’s partnership, firm, corporation or business organization must sign the Bid Proposal Form.
  - **No Facsimile Signature** is permitted. **All information below** is to be filled in by the **Bidder**.
  - *If an Addendum is issued that **changes** the **Bid Proposal Form** then the **Revised Bid Proposal Form** (issued with the Addendum) **must** be uploaded instead.*
  - Upload to BizNet **only** the additional **Bid Package Documents** as described in **Table 1** of **Section 00 41 10 Bid Package Submittal Requirements**.
  - A signed and scanned **Certificate (of Authority), Section 00 40 14, must** be uploaded to Biznet **prior** to the date and time of the Bid Opening.
  - *Any **Bid Proposal Form** that has omitted or added items, altered the form, contains conditional, alternative, or obscure bids, or is submitted *without* the signature of the bidder or its authorized representative, **will be rejected**.*
  - See **Section 00 21 13 Instructions to Bidders** for additional information.

<b>1.0 General Bid Proposal Information:</b>	
<b>Construction Costs:</b>	Less Than or Equal To \$500,000
<b>Bidding Limited To :</b>	Current DAS Certified Set-Aside Contractors Only
<b>Threshold Limits: (C.G.S. §29-276b)</b>	This Project DOES NOT exceed Threshold Limits.
<b>Set Aside Requirements:</b>	SBE Subcontractors and/or Suppliers: None Required; MBE Subcontractors and/or Suppliers: Good Faith Effort
<b>Project Title:</b>	Winsted Roof and Boiler Department of Motor Vehicles
<b>Project Location:</b>	151 Torrington Road Winsted, CT
<b>Project Number:</b>	<b>BI-MM-55</b>
<b>Pre-Bid Meeting:</b>	See <b>Section 00 11 16 Invitation to Bid</b> and <b>Section 00 25 13 Pre-Bid Meeting</b> .
<b>Plans and Specifications prepared by A/E:</b>	Martin A. Benassi, AIA – Architect LLC., Two Broadway, Hamden, CT

**1.1 Commencement and Acceptance:** (See Section 00 73 13 General Conditions, Article 4 - Commencement and Progress of Work and Article 1 - Definitions)

The Selected Bidder shall commence Work within **fourteen (14) Calendar Days after** receiving a **“Construction Start Date and Notice to Proceed”** by the Commissioner or authorized representative and continue for 

90
90

**Calendar Days** for **“Substantial Completion”** of the project; **and** then continue 

90
----

**Calendar Days** for **“Acceptance”** of the Work.

**1.2 Liquidated Damages:** (See Section 00 73 13 General Conditions, Article 8 – Damages & Article 1 - Definitions)

**1.2.1 Liquidated Damages – Substantial Completion:**

The Selected Bidder shall be assessed \$ 

1,352.00
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 per **Calendar Day beyond** the date established for Substantial Completion of the Contract according to the **Contract Time** as defined in **Article 1.28 of Section 00 73 13 General Conditions**, and not otherwise excused or waived pursuant to the Contract Documents, as defined in **Article 1.23 of Section 00 73 13 General Conditions**.

**1.2.2 Liquidated Damages – Acceptance:**

The Selected Bidder shall be assessed \$ 

1,052.00
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 per **Calendar Day beyond ninety (90) days after** the date of said Substantial Completion that the Selected Bidder fails to achieve **Acceptance**, as defined in **Article 1.1 of Section 00 73 13 General Conditions** and not otherwise excused or waived as described above.

**1.3 Bid Proposal Statements and Conditions:** This **Bid Proposal Form** shall be submitted according to, and in compliance with, the foregoing and following statements, conditions, and/or information:

**1.3.1** This Bid Proposal Form is submitted in accordance with Chapter 60 Construction And Alterations Of State Buildings, Part II Bidding And Contracts of the Connecticut General Statutes (C.G.S.), as amended, particularly C.G.S. § 4b-91(a)(5)(A) – (C), and pursuant to, and in compliance with, the **Invitation to Bid** (Section 00 11 16), the **Instructions to Bidders** (Section 00 21 13), the **Bid Package Submittal Requirements** (Section 00 41 10), and the **Contract** (Section 00 52 03).

**1.3.2** The Bidder proposes to furnish the labor and/or materials, installed as required for the Project named and numbered on this **Bid Proposal Form**, submitted herein, furnishing all necessary equipment, machinery, tools, labor and other means of construction, and all materials specified in the manner and at the time prescribed strictly in accordance with the provisions of the **Contract** including, but not limited to, the specifications and/or drawings together with all **Addenda** issued by the Awarding Authority and received by the Bidder, prior to the scheduled **Date and Time of the Bid Opening** as stated on **page 1** of the **Invitation To Bid**, and in conformity with requirements of the Awarding Authority and any laws or Departmental regulations of the State of Connecticut or of the United States which may affect the same, for and in consideration of the price(s) stated on this **Bid Proposal Form**, hereof.

**1.3.3** The Bidder acknowledges that the **Proposed Lump Sum Base Bid** submitted on this **Bid Proposal Form** includes all work indicated on the drawings and/or described in the specifications, **except** for the **Contingent Work** described in **Subsection 2.4**.

**1.3.4** The Bidder acknowledges and agrees to furnish all labor and materials required for this **Project**, in accordance with the accompanying **Plans and Specifications** prepared by the **Architect/Engineer** listed on **page 1** of this Bid Proposal Form, for the **Contract Sum** specified in the **Proposed Lump Sum Base Bid** in **Subsection 2.1** of this Bid Proposal Form, subject to **additions** and **deductions** according to the terms of the specifications, and including the number of **Addenda** stated in **Subsection 2.2** of this Bid Proposal Form.

**1.4 Award:**

**1.4.1** All Bid Proposals shall be subject to the provisions of **Section 00 21 13 Instructions to Bidders** and for purpose of award, consideration shall be given only to Bid Proposals submitted by qualified and responsible Bidders.

**1.4.2** The award shall be made on the **lowest Lump Sum Bid** and any or all **Supplemental Bid(s)** as stated in **Subsection 2.4.2** of this **Bid Proposal Form**, taken sequentially, as applicable, provided funds are available.

**1.4.4** In the event of any **discrepancy** between the amount written in words and the amount written in numerical figures, the amount written in words shall be controlling.

**2.0 Bid Proposal Requirements:**

**Bidder Information:**

**Bid Uploaded On:**     
 (Month) (Day) (Year)

**Proposal Of:**   
 (Complete Bidder's Legal Company Name As Registered With the CT Secretary of State)

**Firm Address:**  ,  ,    
 (Avenue / Street) (Town / City) (State) (Zip Code)

**Contact Person:**    
 (Name) (Title)

**Contact Information:**     
 (Phone Number) (Fax Number) (Email Address)

**Threshold Project: Major Contractor Registration License No.:**

All Bidders for Projects that exceed Threshold Limits (see page 1 of this Bid Proposal Form): Insert your Firm's Major Contractor Registration License Number in the space provided above. **NOTE:** If this Project does **NOT** exceed Threshold Limits, insert **"Not Applicable"** in the blue box above. Delete this note by pressing the spacebar.

**2.1 Proposed Lump Sum Base Bid:**

**2.1.1 All Bidders:** Insert the **Proposed Lump Sum Base Bid** in the spaces provided below, including **both** numerical figures and **"printed words"** dollar amount. The **Proposed Lump Sum Base Bid** shall include all Allowances, all work indicated on the drawings and/or described in the specifications except for **Contingent Work**.

**2.1.2** The **Proposed Lump Sum Base Bid** shall be shown in **both** numerical figures and **"printed words"** dollar amount. In the event of any discrepancy the **"printed"** words dollar amount shall govern.

**2.1.3** The **Proposed Lump Sum Base Bid** is:

\$   
 (Place Numerical Figures in the Box Above)

**Dollars**  
 (Insert "Printed Words" Dollar Amount in the Box Above)

**2.2 Number of Addenda:**

**2.2.1 All Bidders:** Insert the **Number of Addenda** issued by the State of Connecticut in the space provided below.

**2.2.2** Failure to acknowledge the **correct number** of all **Addenda** in **the box below** in this **Bid Proposal Form** shall cause **rejection** of the bid.

**2.2.3** The Bidder acknowledges that their **Proposed Lump Sum Base Bid Proposal** includes:

**Number of Addenda. If none, enter "0"**.

**2.3 Allowances:**

See Section 01 20 00 Contract Considerations in Division 01 General Requirements for Allowances for applicability.

**2.4 Contingent Work:**

**2.4.1 Base Bid Quantities and Defined Unit Prices:** See **Section 01 20 00 Contract Considerations** in Division 01 General Requirements for **applicability** regarding Base Bid Quantities and Defined Unit Prices for Earth and Rock Excavation, Miscellaneous Items, Alterations Items, Environmental Remediation, and/or Hazardous Building Materials Abatement.

**2.4.2 Supplemental Bids:**

.1 See **Section 01 23 13 Supplemental Bids** in Division 01 General Requirements for **applicability**.

.2 **All Bidders: If Supplemental Bids are applicable** to this Project, insert the **Supplemental Bids** in the spaces provided below. Any **Supplemental Bids** listed below, *if* accepted by the Owner, will be taken cumulatively and in numerical order as scheduled. No Supplemental Bid will be skipped or taken out of numerical order as scheduled.

<b>Supplemental Bid No. 1: NOT APPLICABLE</b>		
ADD: \$	<input style="width: 90%;" type="text"/> <i>(Insert Numerical Figures)</i>	<input style="width: 90%;" type="text"/> <i>(Insert "Printed Words" Dollar Amount)</i>
<b>Dollars</b>		
<b>Supplemental Bid No. 2: NOT APPLICABLE</b>		
ADD: \$	<input style="width: 90%;" type="text"/> <i>(Insert Numerical Figures)</i>	<input style="width: 90%;" type="text"/> <i>(Insert "Printed Words" Dollar Amount)</i>
<b>Dollars</b>		
<b>Supplemental Bid No. 3: NOT APPLICABLE</b>		
ADD: \$	<input style="width: 90%;" type="text"/> <i>(Insert Numerical Figures)</i>	<input style="width: 90%;" type="text"/> <i>(Insert "Printed Words" Dollar Amount)</i>
<b>Dollars</b>		
<b>Supplemental Bid No. 4: NOT APPLICABLE</b>		
ADD: \$	<input style="width: 90%;" type="text"/> <i>(Insert Numerical Figures)</i>	<input style="width: 90%;" type="text"/> <i>(Insert "Printed Words" Dollar Amount)</i>
<b>Dollars</b>		

**2.5 Bidder's Qualification Statement and Objective Criteria for Evaluating Bidders:**

**2.5.1 All Bidders:** Download **Section 00 45 14 General Contractor Bidder's Qualification Statement** from BizNet for a template and instructions. Complete and upload **Section 00 45 14 General Contractor Bidder's Qualification Statement** to Biznet **prior** to the date and time of the Bid Opening. Information with regards to the **General Contractor's Bidder's Qualification Statement** is submitted and is made part of this **Bid Proposal Form**. Failure of a Bidder to answer any question or provide required information **shall** be grounds for the awarding authority to **disqualify** and **reject** the bid, pursuant to Connecticut General Statutes §4b-92.

**2.5.2 All Bidders** shall comply with **Section 00 45 15 Objective Criteria Established for Evaluating Qualifications of Bidders**. **Note:** Individual Specification Sections may contain General Contractor and/or Subcontractor Qualification requirements that exceed those in **Section 00 45 15 Objective Criteria Established for Evaluating Qualifications of Bidders**.

**2.6 Bidder's Prequalification Requirements for Projects Exceeding \$500,000:**

**All Bidders for Projects with estimated Construction Costs greater than \$500,000:** Upload to BizNet a current copy of your Firm's "**DAS Contractor Prequalification Certificate**" and "**Update (Bid) Statement**" for the applicable **Class of Work** on **page 1** of this **Bid Proposal Form** **prior** to the date and time of the Bid Opening. Failure to comply with this requirement **shall** cause rejection of the bid and shall not be considered a minor irregularity under **C.G.S. § 4b-95**. See **Section 00 40 15 CT DAS Prequalification Forms** for instructions on preparing and/or downloading your Firm's "**DAS Contractor Prequalification Certificate**" and "**DAS Update (Bid) Statement**".

**2.7 Named Subcontractors and Classes of Work:**  
 2.7.1 All Bidders for Projects with one or more Classes of Work checked in Table 2.7 below: Complete Table 2.7 according to the instructions below. Failure to properly provide all of the **required information** in Table 2.7 may cause rejection of the bid.

Table 2.7: Named Subcontractors and Classes of Work:	
<input type="checkbox"/> <b>Electrical Work: NOT APPLICABLE</b>	Complete Subcontractor Name: _____ Proposed Dollar Value of Subcontract: \$ _____
<input type="checkbox"/> <b>HVAC Work: NOT APPLICABLE</b>	Complete Subcontractor Name: _____ Proposed Dollar Value of Subcontract: \$ _____
<input type="checkbox"/> <b>Masonry Work: NOT APPLICABLE</b>	Complete Subcontractor Name: _____ Proposed Dollar Value of Subcontract: \$ _____
<input type="checkbox"/> <b>Plumbing Work: NOT APPLICABLE</b>	Complete Subcontractor Name: _____ Proposed Dollar Value of Subcontract: \$ _____
<input type="checkbox"/> <b>Environmental Remediation: NOT APPLICABLE</b>	Complete Subcontractor Name: _____ Proposed Dollar Value of Subcontract: \$ _____
<input type="checkbox"/> <b>Hazardous Materials Abatement: NOT APPLICABLE</b>	Complete Subcontractor Name: _____ Proposed Dollar Value of Subcontract: \$ _____

- 2.7.2 Instructions For Table 2.7:**
- .1 Each **Class of Work** set forth in a separate section of the specifications pursuant to this Section shall be a **subtrade** designated in **Table 2.7** of this **Bid Proposal Form** and shall be the matter of a **subcontract**.
  - .2 When a box is checked in **Table 2.7**, the Bidder shall insert the name of the Subcontractor with the **largest** proposed Subcontract Value; this is known as the **“Named Subcontractor”**. The Bidder shall provide all of the information for each **checked Class of Work**.
  - .3 If a **Bidder** intends to use a **Subcontractor** to perform **any portion** of the Named **Classes of Work**, including circumstances where the Subcontractor is a Small Business Enterprise (SBE) or a Minority Business Enterprise (MBE), *then* it must list the Subcontractor or SBE/MBE Subcontractor as the case may be, for such Class of Work. A **Bidder** may **not** substitute itself for any of the Named Classes of Work. The Bidder **should not list itself** as the **Named Subcontractor** if it intends to use a **Subcontractor** to perform any portion of the Classes of Work listed in **Table 2.7**. The Bidder should name the Subcontractor.
  - .4 For each **Class of Work** specified in **Table 2.7**, the Bidder shall list the **Subcontractor** with the **largest Proposed Dollar Value of Subcontract** for each Class of Work as the **Named Subcontractor** and the **Proposed Dollar Value** of its Subcontract. If the Bidder intends to use **more than one** Subcontractor to perform a Class of Work, then it shall indicate the Subcontractor Name and Subcontract Value for the **largest** single Named Subcontractor.
  - .5 If a Bidder customarily performs any of the specified Classes of Work and is Prequalified by DAS for the Class of Work at the time of the Bid Opening Date if the work is greater than \$500,000, the Bidder may list **itself** as a Subcontractor together with its **price** in the space provided in **Table 2.7**. Failure to properly provide all of the **required information** in **Table 2.7** **shall** cause **rejection** of the bid.
  - .6 If the Bidder does **not** name **itself** or a **Subcontractor** for a specified Class of Work, it shall be presumed that the Bidder intends to perform with its own employees **all work** in such specified classes. The Bidder shall be required to perform with its own employees **all** of the work of the specified class. Subcontracting any portion of such specified class of work subsequently, will be considered a violation of **C.G.S. § 4b-95** and subject the Bidder to disqualification under **C.G.S. § 4b-95(e)**.
  - .7 In the event the Bidder either lists itself or is presumed to perform with its own employees all work in a specified class, no such sub-bid by a Bidder shall be considered unless the Bidder can show to the satisfaction of the awarding authority, based on objective criteria established for such purpose, that it customarily performs such subtrade work and is qualified to do the character of work required by the applicable section of the specifications.

**2.8 Set Aside Requirements:** (see Section 00 73 38 "CHRO Contract Compliance Regulations")

**2.8.1 For Projects Less Than \$500,000:** Submit a current copy of your Firm's "DAS Set-Aside Certificate" *with* your Bid Proposal Form *prior* to the date and time of the Bid Opening.

**2.8.2 For Projects Less Than \$500,000:** Upload a completed copy of the CHRO Employment Information Form, "Bidder Contract Compliance Monitoring Report" *with* your Bid Proposal Form *prior* to the date and time of the Bid Opening. The report is on the CHRO Webpage (<http://www.ct.gov/chro/cwp/view.asp?a=2525&Q=315900&chroPNavCtr=#45679>).

**2.8.3 All Bidders shall be required** to award not less than the percentage(s) stated on **page 1 of this Bid Proposal Form** to Subcontractors who are currently certified and eligible to participate under the State of Connecticut Set-Aside Program for **SBE and/or MBE** contractors, in accordance with C.G.S. § 4a-60g. **Failure** to meet these requirements **shall** cause rejection of the bid.

**2.9 Insurance Coverages:** The **limits of liability** for the Insurance required for this project shall be those listed in **Article 35 Contractors Insurance of Section 00 73 13 General Conditions**. Also see Section 00 62 16 Certificate of Insurance.

**2.9.1 Special Hazards Insurance:**

None is Required.

"X-C-U" Coverage (explosion, collapse, and underground damage) **shall be required** in accordance with **Article 35 Contractors Insurance of Section 00 73 13 General Conditions**.

**Asbestos Abatement Insurance** is required.

**2.9.2 Builders Risk Insurance:**

None is Required.

The Bidder **shall be required to maintain Builder's Risk Insurance** providing coverage for the entire Work at the project site, portions of the Work located away from the site but intended for use at the site, and portions of the Work in transit. Coverage shall be written on an All-Risk, Replacement Cost, and completed Value Form basis in an amount at least equal to the projected completed value of the Work and the policy shall state that the State of Connecticut shall be named as a loss payee not as an additional insured for these coverages.

**2.9.3 Commercial General Liability Insurance:**

**NOTE:** There is a new requirement regarding **commercial general liability (CGL) insurance:** All selected firms are required to provide an endorsement to the CGL insurance stating that the State of Connecticut is an additional insured. Please be advised that a blanket endorsement **may not** be acceptable.

**2.9.4 Owners and Contractors Protective Liability Insurance:**

The Bidder shall maintain **Owner's and Contractor's Protective Liability** insurance providing a total limit of **\$1,000,000** for all damages arising out of bodily injury or death of persons in any one accident or occurrence and for all damages arising out of injury or destruction of property in any one accident or occurrence and subject to a total (aggregate) limit of **\$2,000,000** for all damages arising out of bodily injury to or death of persons in all accidents or occurrences and out of injury to or destruction of property during the policy period. This coverage shall be for and in the name of the State of Connecticut.

**2.9.5 Umbrella Liability Insurance:**

This project requires **Umbrella Liability Insurance**. The Bidder shall provide an endorsement to the Umbrella Liability Insurance stating that the State of Connecticut is an additional insured. Select the correct **Umbrella Limit** for this **Project's Contract Value** using the "Umbrella Liability Insurance Table" below.

Umbrella Liability Insurance Table:			
Contract Value			Umbrella Limit
\$1.00	to	\$500,000.00	\$1,000,000.00
\$500,000.01	to	\$1,000,000.00	\$2,000,000.00
\$1,000,000.01	to	\$10,000,000	\$5,000,000.00
\$10,000,000.01	to	\$30,000,000	\$10,000,000.00
\$30,000,000.01	to	\$80,000,000	\$15,000,000.00
\$80,000,000.01	to	\$150,000,000	\$20,000,000.00
\$150,000,000.01	to	\$300,000,000	\$25,000,000.00

### 3.0 Bid Proposal Acknowledgements:

The Bidder *acknowledges and agrees* to the following:

#### 3.1 To Upload to BizNet Submit the Bid Proposal Form (all pages), All Other Bid Documents, Affidavits, and Certifications:

3.1.1 The Bidder acknowledges and agrees to electronically upload to DAS BizNet all pages of the **Bid Proposal Form**, and all other **Bid Documents, Affidavits, and Certifications** as directed in **Section 00 11 16 Invitation to Bid, Section 00 21 13 Instructions to Bidders**, and **Section 00 41 10 Bid Package Submittal Requirements**.

3.1.2 The State may waive minor irregularities which it considers in the best interest of the State and, when applicable, are corrected by the Bidder within seven (7) Calendar Days after the Bid Due Date. Failure to properly complete, sign and upload any of the items marked with an asterisk (\*) in **Table 1 of Section 00 41 10 Bid Package Submittal Requirements** *shall* cause rejection of the bid and *shall not* be considered a minor irregularity under **C.G.S. § 4b-95**.

3.1.3 If there are any delays in the receipt of other documents then the Bid shall remain valid for the same additional number of days. For example, if the documents are submitted four (4) Calendar Days later; then the bid shall remain valid for ninety-four (94) Calendar Days.

3.1.4 Failure to submit the documents before the stated deadline **may** result in rejection of the bid at the sole discretion of the Commissioner of Administrative Services.

#### 3.2 To Hold Bid Price:

The Bidder acknowledges and agrees to hold the **Proposed Lump Sum Base Bid** in **Subsection 2.1** of this Bid Proposal Form for **ninety (90) Calendar Days** and any extensions caused by the Bidder's delays in required submissions. The Bidder and the State may mutually agree to extend this period. The agreement to extend the **ninety (90) Calendar Day** period may occur after the expiration of the original **ninety (90) Calendar Day** period.

#### 3.3 To Use and Accept Allowances:

When applicable to this Project, the Bidder **acknowledges and agrees** to accept and use the **Allowances** as shown in **Section 01 20 00 Contract Considerations** of Division 01 General Requirements as part of the **Proposed Lump Sum Base Bid** listed in **Subsection 2.1** of this Bid Proposal Form.

#### 3.4 To Use and Accept the Following Contingent Work:

3.4.1 **Unit Prices:** When applicable to this Project, the Bidder **acknowledges and agrees** to accept and use the **Units, Add Unit Prices, and Deduct Unit Prices** as shown in **Section 01 20 00 Contract Considerations** of Division 01 General Requirements in evaluating either additions to or deductions from the Work.

3.4.2 **Supplemental Bid:** When applicable to this Project and if accepted by the Owner, the Bidder **acknowledges and agrees** to provide all labor, material and equipment to complete the Work in accordance with the **Supplemental Bid** described in **Section 01 23 13 Supplemental Bids** of Division 01 General Requirements and provided by the Bidder in **Subsection 2.4.2** of this Bid Proposal Form.

#### 3.5 To Use the Named Subcontractors Listed in Table 2.7:

The Bidder **agrees** that each of the **Named Subcontractors** stated in **Table 2.7** of this Bid Proposal Form will be used for the **Class of Work** indicated, for the **Proposed Total Subcontract Value dollar amount stated**, unless a **substitution** is permitted by the awarding authority as provided for in and in accordance with C.G.S. § 4b-96, as amended.

#### 3.6 To Make Good Faith Efforts to Employ MBEs:

The Bidder acknowledges and agrees to make **good faith efforts** to employ **Minority Business Enterprises (MBEs)** as **Subcontractors** and **Suppliers** of materials under such Contract.

#### 3.7 To Submit a Certified Check or Bid Bond (if required):

The Bidder acknowledges and agrees to submit a **Certified Check** or **Standard Bid Bond** *prior* to the due date and time of the Bid Opening (if required). Download **Section 00 43 16 Standard Bid Bond** from BizNet for a template and instructions.

**3.0 Bid Proposal Acknowledgements (continued):****3.8 To Accept the Current Prevailing Wage Rate Schedule:**

The U. S. Secretary of Labor's latest decision and the State of Connecticut Department of Labor (DOL) Prevailing Wage Rate Schedule are all incorporated in the documents. The higher rate (Federal or State) for any given occupation shall prevail. At the time of bidding, the Bidder agrees to accept the current Prevailing Wage Rate Schedule, as well as the annual adjustment to the prevailing wage rate that is in effect each July 1st, as provided by DOL. See **Section 00 73 44 Prevailing Wage Rates/Contractor's Wage Certification/Payroll Certification**. Annual adjustments of prevailing wage rates will *not* be considered a matter for a contract amendment with DAS/CS.

**3.9 To Comply With CHRO Requirements:**

If applicable, the Apparent Low Bidder acknowledges and agrees to provide the Commission on Human Rights and Opportunities with such information as is requested by the Commission concerning their **employment practices and procedures** as they relate to the current provisions of the Connecticut General Statutes governing Contract requirements within **fifteen (15) calendar days after** receipt of the "Request for the *Affirmative Action Plan and Employment Information Form Letter*" from the DAS/CS Office of Legal Affairs, Policy, and Procurement.

**3.10 To Ensure Executive Order No. 11246 for Equal Employment Opportunity & Non-Segregated Facilities Has Been Met:**

The Apparent Low Bidder acknowledges and agrees to ensure that Executive Order No. 11246 for Equal Employment Opportunity & Non-Segregated Facilities has been met for their firm and their Subcontractors. The Apparent Low Bidder also agrees to certify (if required) to the compliance of non-segregated facilities.

**3.11 To Obtain and Maintain Required Insurance Coverages:**

The Bidder acknowledges and agrees to obtain and maintain the required Insurance Coverages and submit the Firm's "**Certificate of Liability Insurance Acord® form**" within **ten (10) business days after** receipt of the "Letter of Intent" from the DAS/CS Office of Legal Affairs, Policy, and Procurement, as discussed in **Section 00 62 16 Certificate of Insurance** and **Article 35, "Contractors Insurance"** in **Section 00 73 13 General Conditions**.

**3.12 To Comply With Security Requirements for CT Department of Correction Facilities:**

When applicable to this Project, the Bidder acknowledges and agrees to comply with **Section 00 73 63 CT Department of Correction (CT DOC) Security Requirements** for Contract Forces on CT DOC Facilities.

**3.13 To Ensure C.G.S. § 12-430 for Non-Resident Contractors Has Been Met:**

If applicable, the Apparent Low Bidder acknowledges and agrees to provide either a copy of the "**Notice of Verified Status**" (Verification Letter) from the Connecticut Department of Revenue Services (DRS) (for **Verified Nonresident** General/Prime Contractors) or a copy of **Form AU-965 "Acceptance of Surety Bond"** from DRS (for **Unverified Nonresident** General/Prime Contractors) within **ten (10) business days after** receipt of the "Letter of Intent" from the DAS/CS Office of Legal Affairs, Policy, and Procurement which evidences that **C.G.S. § 12-430** for non-resident contractors has been met, as described in **Section 00 92 30 Procedures Regarding Taxation for Nonresident General/Prime Contractor and Subcontractors**.

**3.14 To Execute Contract:**

If selected as the Prime Contractor, the Bidder acknowledges and agrees to **execute a Contract** in accordance with the terms of this **Bid Proposal Form** and the **Contract** within **ten (10) Calendar Days** (legal State holidays excluded) **after** notification thereof by the awarding authority. See **Section 00 52 03 Contract** for a sample.



**4.0 Confidentiality of Documents:**

- 4.1** The **undersigned** agrees that if not selected as the Prime Contractor for this project, all plans and specifications in their possession for the project shall be destroyed.
- 4.2** The **undersigned** agrees that if selected as the Prime Contractor for this project:
- 4.2.1** The **plans and specifications** shall not be disseminated to anyone except for construction of this project.
- 4.2.2** The **following provision** shall be included in all of its contracts with subcontractors and sub-consultants:
- “Any and all drawings, specifications, maps, reports, records or other documents associated with the contract shall only be utilized to the extent necessary for the performance of the work and duties under this contract. Said drawings, specifications, maps, reports, records and other documents may not be released to any other entity or person except for the sole purpose of the work described in this contract. No other disclosure shall be permitted without the prior written consent of DAS Construction Services. When any such drawings, specifications, maps, reports, records or other documents are no longer needed, they shall be destroyed.”*
- 4.2.3** Upon completion of the construction and the issuance of a certificate of occupancy, the plans and specifications shall be returned to DAS Construction Services, or destroyed, or retained in a secure location and not released to anyone without first obtaining the permission of DAS Construction Services.

**5.0 Bid Proposal Declarations:**

I (we), the undersigned, hereby declare that I am (we are) the only person(s) interested in the Bid Proposal and that it is made without any connection with any other person making any Bid Proposal for the same work. No person acting for, or employed by, the State of Connecticut is directly or indirectly interested in this Bid Proposal, or in any Contract which may be made under it, or in expected profits to arise therefrom. This Bid Proposal is made without directly or indirectly influencing or attempting to influence any other person or corporation to bid or refrain from bidding or to influence the amount of the Bid Proposal of any other person or corporation. This Bid Proposal is made in good faith without collusion or connection with any other person bidding for the same work and this proposal is made with distinct reference and relation to the plans and specifications prepared for this Contract. I (we) further declare that in regard to the conditions affecting the Work to be done and the labor and materials needed, this Bid Proposal is based solely on my (our) own investigation and research and not in reliance upon any representations of any employee, officer or agent of the State.

**6.0 Duly Authorized Signature:**

**Type of Business:** *(Check Applicable Box)*

<input type="checkbox"/> <b>Limited Liability Corporation (LLC)</b>  <input type="checkbox"/> <b>Partnership</b>  <input type="checkbox"/> <b>Sole Proprietor</b>  <input type="checkbox"/> <b>Doing Business As (d/b/a)</b> <i>(If d/b/a box is checked provide complete name below)</i> <input style="width: 100%;" type="text"/> <i>(Doing Business As Name)</i>	<input type="checkbox"/> <b>Corporation</b> <i>(If Checked, Provide Corporate Seal Below)</i>  <div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto;"></div> <i>(Provide <u>exact</u> corporate name from corporate seal below)</i> <input style="width: 100%;" type="text"/> <i>(Name On Corporate Seal)</i>
--	---

<b>Signed:</b>	<input style="width: 100%;" type="text"/> <i>(Month)</i>	<input style="width: 100%;" type="text"/> <i>(Day)</i>	<input style="width: 100%;" type="text"/> <i>(Year)</i>
<b>Bidder's Signature:</b>	<input style="width: 100%;" type="text"/> <i>(Duly Authorized)</i>		<input style="width: 100%;" type="text"/> <i>(Title)</i>
	<input style="width: 100%;" type="text"/> <i>(Print Named)</i>		<input style="width: 100%;" type="text"/> <i>(Date)</i>



## Bid Package Submittal Requirements:

**DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement**  
**450 Columbus Boulevard, Suite 1302 | Hartford, CT 06103**

<b>1.1</b>	<b>On-Line Bidding:</b>
1.1.1	All Bidders shall <b>electronically</b> upload their <b>Bid Package Documents</b> to BizNet following the <b>instructions</b> in the DAS/CS publication, <a href="#">6001 Construction On-line Bidding Instructions</a> , available for download here: Go to the DAS Homepage ( <a href="http://www.ct.gov/DAS">www.ct.gov/DAS</a> ) > Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 6000 Series > <b>6001 Construction On Line Bidding Instructions</b> .
1.1.2	For questions, call 860-713-5794.

<b>1.2</b>	<b>Bid Package Submittal Requirements:</b>
	All Bidders are required to <b>electronically upload Bid Package Documents</b> to BizNet <b>prior</b> to the date and time of the Bid Opening. Additional documents must be either <b>electronically uploaded</b> to BizNet <b>or</b> submitted as <b>paper copies</b> to the <b>appropriate Agency</b> . See Tables 1, 2, and 3 for specific submittal requirements.
1.2.1	<b>All Bidders:</b> See Table 1. <b>All Documents in Table 1 <u>must be electronically uploaded to BizNet.</u></b>
1.2.2	<b>Three (3) Apparent Lowest Bidders:</b> See Table 2.
1.2.3	<b>Apparent Low Bidder:</b> See Table 3.

<b>1.3</b>	<b>Deadlines for Receipt of Bid Package Documents:</b>
1.3.1	<b>Table 1:</b> Bid Package Documents must be uploaded to BizNet <b>prior</b> to the date and time of the Bid Opening. The State may waive minor irregularities that otherwise may cause rejection of a Bid only when waiving such minor irregularities is in the best interests of the State and the minor irregularities have been corrected by the Bidder within seven (7) Calendar Days after the Bid Due Date. Failure to properly <u>complete, sign and upload</u> to BizNet any of the items <b>marked with an asterisk (*)</b> in <b>Table 1 prior</b> to the date and time of the Bid Opening <b>shall cause rejection</b> of the bid and shall <b>not</b> be considered a minor irregularity under <b>Connecticut General Statutes (C.G.S.) § 4b-95</b> .
1.3.2	<b>Tables 2 and 3:</b> See the tables for additional deadlines. Failure to submit the documents before the stated deadlines <b>may</b> result in rejection of the bid at the sole discretion of the Commissioner of Administrative Services.

<b>1.4</b>	<b>Delays in Receipt of Supportive Documents from the Three Apparent Lowest Bidders:</b>		
1.4.1	If there are any delays in the receipt of the supportive documents specified in Tables 2 and 3, then the Bids shall remain valid for the same additional number of days. <table style="margin-left: 20px; border: none;"> <tr> <td style="width: 20px;">.1</td> <td>For example, since the <b>Three (3) Apparent Lowest Bidders</b> are required to <b>Hold The Bid Price</b> for <b>ninety (90) calendar days</b>, if supportive documents are submitted <b>four (4) calendar days later</b>, then the bid shall remain valid for <b>ninety-four (94) calendar days</b>.</td> </tr> </table>	.1	For example, since the <b>Three (3) Apparent Lowest Bidders</b> are required to <b>Hold The Bid Price</b> for <b>ninety (90) calendar days</b> , if supportive documents are submitted <b>four (4) calendar days later</b> , then the bid shall remain valid for <b>ninety-four (94) calendar days</b> .
.1	For example, since the <b>Three (3) Apparent Lowest Bidders</b> are required to <b>Hold The Bid Price</b> for <b>ninety (90) calendar days</b> , if supportive documents are submitted <b>four (4) calendar days later</b> , then the bid shall remain valid for <b>ninety-four (94) calendar days</b> .		
1.4.2	Failure to submit the documents before the stated deadline <b>may</b> result in rejection of the bid at the sole discretion of the Commissioner of Administrative Services.		

TABLE 1 ALL BIDDERS			
Construction Costs:		The Bid Proposal Form, Other Bid Package Documents, Affidavits, and Certifications <u>shall</u> be electronically uploaded to BizNet by <u>all</u> Bidders prior to the Date and Time of the Bid Opening.	Form Location
Less Than \$500,000	Greater Than \$500,000		
<b>Bid Proposal Form and Other Bid Package Documents</b>			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	* Section 00 41 00 Bid Proposal Form	BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	* Section 00 43 16 Standard Bid Bond or Certified Check	BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	* Section 00 45 14 General Contractor Bidder's Qualification Statement	BizNet
	<input checked="" type="checkbox"/>	* DAS Prequalification Certificate	BizNet
	<input checked="" type="checkbox"/>	* DAS Update (Bid) Statement	BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Section 00 40 14 Certificate (of authority)	BizNet
<input checked="" type="checkbox"/>		DAS Set-Aside Certificate	BizNet
<input checked="" type="checkbox"/>		Bidder Contract Compliance Monitoring Report	CHRO Website
<b>Affidavits and Certifications</b>			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	* Gift and Campaign Contribution Certification – OPM Ethics Form 1	BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	* Consulting Agreement Affidavit – OPM Ethics Form 5	BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> *	Ethics Affidavit (Regarding State Ethics) – OPM Ethics Form 6	BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> *	Iran Certification – OPM Ethics Form 7	BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Nondiscrimination Certification – Form A, B, C, D, or E	BizNet

**\* NOTE:** The State may waive minor irregularities that otherwise may cause rejection of a Bid only when waiving such minor irregularities is in the best interests of the State and the minor irregularities have been corrected by the Bidder within seven (7) Calendar Days after the Bid Due Date. Failure to properly complete, sign and upload to BizNet any of the items marked with an **asterisk (\*)** in **Table 1** prior to the date and time of the Bid Opening **shall** cause rejection of the bid and shall **not** be considered a minor irregularity under C.G.S. § 4b-95.

TABLE 2 THREE (3) APPARENT LOWEST BIDDERS			
Construction Costs:		WHEN APPLICABLE:	Form Location
Less Than \$500,000	Greater Than \$500,000	Submit within <b>ten (10) Calendar Days</b> <i>after</i> receipt of the “ <b>Set-Aside Contractor Schedule Request</b> ” from the DAS/CS Procurement Unit:	
	<input checked="" type="checkbox"/>	<b>Set-Aside Contractor Schedule</b> for each subcontracted SBE and/or MBE firm(s) (See Section 00 73 27 Set-Aside Contractor Schedule for a sample Request.)	<b>Email From DAS/CS Procurement Unit</b>
	<input checked="" type="checkbox"/>	<b>DAS Set-Aside Certificate(s)</b> for each subcontracted SBE and/or MBE firm(s) listed in the Set-Aside Contractor Schedule.	<b>Download from BizNet</b>
	<input checked="" type="checkbox"/>	<b>Section 00 45 17 Named Subcontractor Bidder’s Qualification Statements</b> for each Named Subcontractor listed in the Bid Proposal Form.	<b>Copy from Project Manual</b>
	<input checked="" type="checkbox"/>	<b>DAS Prequalification Certificate(s) and Update (Bid) Statement(s)</b> for each Named Subcontractor listed in the Bid Proposal Form <b>with Subcontracts greater than \$500,000.</b>	<b>Download from BizNet</b>

TABLE 3 APPARENT LOW BIDDER			
Construction Costs:		When Applicable, submit the following documents as noted:	Form Location
Less Than \$500,000	Greater Than \$500,000		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>If Contractor has 50 or more employees and/or the Project is equal to or greater than \$500,000, submit to CHRO:</b> Affirmative Action Plan and Employment Information Form (DAS-45).	<b>CHRO Website &amp; BizNet</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Submit to DAS/CS Procurement Unit:</b> Copy of Transmittal Letter to confirm the Affirmative Action Plan was filed with CHRO.	<b>(copy of transmittal letter)</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Submit to CT Department of Labor:</b> Contractors Wage Certification Form. See Section 00 73 44 Prevailing Wage Rates/Contractor’s Wage Certification/Payroll Certification.	<b>Copy from Project Manual</b>

Submit within <b>fifteen (15) calendar days</b> <i>after</i> receipt of the “ <b>Request for the Affirmative Action Plan and Employment Information Form Letter</b> ” from the DAS/CS Procurement Unit:			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>If Contractor has 50 or more employees and/or the Project is equal to or greater than \$500,000, submit to CHRO:</b> Affirmative Action Plan and Employment Information Form (DAS-45).	<b>CHRO Website &amp; BizNet</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Submit to DAS/CS Procurement Unit:</b> Copy of Transmittal Letter to confirm the Affirmative Action Plan was filed with CHRO.	<b>(copy of transmittal letter)</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Submit to CT Department of Labor:</b> Contractors Wage Certification Form. See Section 00 73 44 Prevailing Wage Rates/Contractor’s Wage Certification/Payroll Certification.	<b>Copy from Project Manual</b>

<b>TABLE 3                  APPARENT LOW BIDDER (continued)</b>			
<b>Construction Costs:</b>		Submit within <b>ten (10) business days</b> <i>after</i> receipt of the “Letter of Intent” from the DAS/CS Procurement Unit:	<b>Form Location</b>
<b>Less Than \$500,000</b>	<b>Greater Than \$500,000</b>		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Section 00 40 14 Certificate (of authority)</b>	Email From DAS/CS Procurement Unit
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Section 00 52 03 Contract</b>	Email From DAS/CS Procurement Unit
	<input checked="" type="checkbox"/>	<b>Section 00 52 73 Subcontract Agreement Form (Named &amp; Listed)</b>	Email From DAS/CS Procurement Unit
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Certificate of Liability Insurance Acord® form</b> (See Section 00 62 16 Insurance Certificate Form for details)	Email From DAS/CS Procurement Unit
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Certificate of Asbestos Abatement Liability Insurance</b> (for asbestos abatement only; see Section 00 62 16.1 Asbestos Abatement Liability Insurance for details)	Email From DAS/CS Procurement Unit
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Section 00 92 10:                      Additional Forms</b>	<b>Performance Bond</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Labor &amp; Material Bond</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Surety Sheet</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Bidder’s Certification: Financial Position &amp; Corporate Structure</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Power of Attorney from the Surety Company</b>	<b>Surety Company</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Nonresident (Out of State) Contractors:</b> <u>Verified Nonresident</u> General/Prime Contractors must submit a copy of their “ <b>Notice of Verified Status</b> ” (Verification Letter) from the CT Department of Revenue Services (DRS). <u>Unverified Nonresident</u> General/Prime Contractors must submit a copy of <b>Form AU-965 “Acceptance of Surety Bond”</b> from the DRS. (See Section 00 92 30 Procedures Regarding Taxation for Nonresident General/Prime Contractor and Subcontractors for additional details.)	<b>CT Department of Revenue Services</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>NEW: General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities:</b> For projects disturbing <b>one or more total acres of land area</b> , submit a copy of the signed <b>Stormwater Pollution Control Plan “Contractor Certification Statement”</b> and <b>License Transfer Form</b> , as directed by the DAS/CS Architect/Engineer, prior to commencement of any construction activities.	<b>DAS/CS Architect/Engineer</b>
	<input checked="" type="checkbox"/>	<b>Ethics Affidavit (Regarding State Ethics) OPM Ethics Form 6</b> for each Named Subcontractor	<b>BizNet</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Threshold Projects Only: Submit Major Contractor Registration License Number(s)</b> for Subcontractors	<b>CT Department of Consumer Protection</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>SEEC Form 10</b>	<b>SEEC Website</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Certificate of Legal Existence from Corporations</b>	<b>Secretary of the State</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>NEW: Contractor and Subcontractor Payments Reporting:</b> Every Contractor (and its Subcontractors) shall log on to BizNet <b>each month</b> and <b>enter payments</b> they have received from the state, from the Contractor, or from a higher tier Subcontractor (as applicable).	<b>BizNet</b>

End of Section  
 00 41 10 Bid Package Submittal Requirements

**INSTRUCTIONS FOR CERTIFIED CHECK OR BID BOND (select one):**  
**All Bidders:**  
**Edit this page, print, sign, and scan to PDF. Upload the PDF form to BizNet.**

- CERTIFIED CHECK OPTION:** *Prior* to the Date and Time of the Bid Opening:
  - (1) Check the box for "Certified Check Option";
  - (2) Print, scan to PDF, and upload the PDF form to Biznet; and
  - (3) Deliver the Certified Check, made payable to "Treasurer, State of Connecticut", to the following address:
    - State of Connecticut
    - Department of Administrative Services, Construction Services
    - Office of Legal Affairs, Policy, and Procurement
    - 450 Columbus Boulevard, North Tower, Suite 1302
    - Hartford, CT 06103-1835
  
- BID BOND OPTION** (see template below): *Prior* to the Date and Time of the Bid Opening:
  - (1) Check the box for "Bid Bond Option";
  - (2) Complete the **Standard Bid Bond** (below), print, sign, scan to PDF, and upload the PDF Bid Bond to Biznet.

**Standard Bid Bond**

**DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement**

KNOW ALL MEN BY THESE PRESENTS, That we, \_\_\_\_\_

\_\_\_\_\_, hereinafter called the Principal,

of \_\_\_\_\_, as Principal,

and \_\_\_\_\_, hereinafter

called the Surety, a corporation organized and existing under the laws of the

State of \_\_\_\_\_, and duly authorized to transact a

surety business in the State of Connecticut, as Surety, are held and firmly bound unto the State of

Connecticut, as Obligee, in the penal sum of ten (10) percent of the amount of the bid set forth in a

proposal hereinafter mentioned, \_\_\_\_\_

\_\_\_\_\_,

lawful money of the United States of America, for the payment of which, well and truly to be made to the Obligee,

the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns,

jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, That, whereas the Principal has submitted

or is about to submit a proposal to the Obligee related to a contract for Project No.: \_\_\_\_\_

NOW, THEREFORE, if the said contract be awarded to the Principal and the Principal shall, within such time as

may be specified, enter into the said contract in writing with the State of Connecticut and give the required

bonds, with surety acceptable to the Obligee, or if the Principal shall fail to do so, pay to the Obligee the

damages which the Obligee may suffer by reason of such failure not exceeding the penalty of this bond, then

this obligation shall be void, otherwise to remain in full force and effect.

SIGNED, SEALED AND DELIVERED this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

\_\_\_\_\_  
(Principal's Signature)

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Surety

by \_\_\_\_\_  
Its attorney in fact Signature

\_\_\_\_\_  
(Print Name)





## General Contractor Bidder's Qualification Statement

DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement

**Instructions:**

- All Bidders are **required** to **upload this form to BizNet**, properly completed, **prior to the date and time of the Bid Opening**.
- Failure of a Bidder to answer any question or provide required information **shall** be grounds for the awarding authority to disqualify and reject the bid, pursuant to Connecticut General Statutes §4b-92.
- If a question or request for information does not pertain to your organization in any way, use the symbol "NA" (Not Applicable).
- Attach additional information on 8 ½" x 11" sheets with your letterhead as necessary and reference specific section and subsection numbers.
- **NOTE:** The Department reserves the right to request any additional or supplemental information necessary to complete its evaluation of a Bidder's qualification.

**1.0 Project Information:**

1.1 DAS/CS Project Number:

1.2 Project Name:

1.3 Project Location:

**2.0 Projects with Construction Costs Estimated To Be Greater than \$500,000:**

- Select the applicable **Class of Work** as stated in the **00 11 16 Invitation to Bid**.
- Select **YES** if your Firm has the applicable the **DAS Prequalification Certificate and Update (Bid) Statement** or **NO** if it does not.
- If **YES**, upload the applicable **DAS Prequalification Certificate and Update (Bid) Statement** to BizNet **prior** to the date and time of the Bid Opening.

**Not Applicable - Construction Costs Less than \$500,000**

	Class of Work:	Does your Firm have the applicable DAS Prequalification Certificate and Update (Bid) Statement?
2.1	<input type="checkbox"/> General Building Construction (Group A):	YES <input type="checkbox"/> NO <input type="checkbox"/>
2.2	<input type="checkbox"/> General Building Construction (Group B):	YES <input type="checkbox"/> NO <input type="checkbox"/>
2.3	<input type="checkbox"/> General Building Construction (Group C):	YES <input type="checkbox"/> NO <input type="checkbox"/>
2.4	<input type="checkbox"/> General Trades (Interior Work Only):	YES <input type="checkbox"/> NO <input type="checkbox"/>
2.5	<input type="checkbox"/> CPS Projects ONLY: Insert Class of Work	YES <input type="checkbox"/> NO <input type="checkbox"/>

**3.0 Firm's Present Legal Name:** (the *complete legal name exactly* as it appears with the **Secretary of State registry**. The appropriate **title** must be used throughout the documents, for example: General Partner, Member, Manager, Sole Member, etc.)

**Name:**

**4.0** How many years has your Firm been in business under its **Present Legal Name**?

**Years:**

**5.0** How many years has your Firm been in business as a General Contractor?

**Years:**

**6.0** Indicate **all** other **names** by which your Firm has been known and the **length of time** known by each name:

**6.1**

<i>Years</i>	<i>Months</i>

**6.2**

<i>Years</i>	<i>Months</i>

**6.3**

<i>Years</i>	<i>Months</i>

**7.0** This Firm's **Certification** with the CT Secretary of State:

**Check Box**

**Type of Business Entity:**

**Certification Year**

**Corporation**



**Partnership**



**Sole Proprietorship**



**Limited Liability Company (LLC)**



**Other:**



**8.0** Attach resumes of all **supervisory personnel**, such as **Principals, Project Managers, and Superintendents**, who will be directly involved with the project on which you are now a bidder. Indicate their construction related training, certifications and licenses and the number of years of actual construction experience. Indicate the number of years of this actual construction experience which were in a Supervisory capacity.

**9.0 Named Subcontractor – Bidder Intends to Self-Perform:**

Check **YES** or **NO** for each “Named Subcontractor” **Class of Work** which your firm intends to perform with its own employees for this Contract; see **Section 2.7** of **Section 00 41 00 Bid Proposal Form**.

**NOTE:** For Projects with Construction Costs estimated to be greater than \$500,000, complete **Section 00 45 17 Named Subcontractor Bidder's Qualification Statement** for each **Named Subcontractor Class of Work** checked **YES** and submit within ten (10) calendar days *after* receipt of the “Set-Aside Contractor Schedule Request” from DAS/CS Office of Legal Affairs, Policy, and Procurement.

<input type="checkbox"/>	<b>Not Applicable – No Named Subcontractors &amp;/or Not Self-Performing</b>	
	<b>Named Subcontractor Class of Work</b>	<b>Does your Firm intend to self-perform this Named Subcontractor Class of Work?</b>
9.1	Electrical:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.2	HVAC:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.3	Masonry:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.4	Plumbing:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.5	Environmental Remediation:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.6	Hazardous Materials Abatement:	YES <input type="checkbox"/> NO <input type="checkbox"/>

**10.0 Named Subcontractor - Class of Work Greater than \$500,000 and Self-Performing:**

- Select the applicable **Named Subcontractor Class of Work** which your firm intends to perform with its own employees for this Contract.
- Select **YES** if your Firm has the applicable the **DAS Prequalification Certificate and Update (Bid) Statement** or **NO** if it does not.
- If **YES**, submit the applicable **DAS Prequalification Certificate and Update (Bid) Statement** within ten (10) calendar days *after* receipt of the “Set-Aside Contractor Schedule Request” from DAS/CS Office of Legal Affairs, Policy, and Procurement.

<input type="checkbox"/>	<b>Not Applicable – No Class of Work Greater \$500,000 &amp;/or Not Self-Performing</b>	
	<b>Named Subcontractor Class of Work Greater Than \$500,000</b>	<b>Does your Firm have the applicable DAS Prequalification Certificate and Update (Bid) Statement?</b>
10.1	<input type="checkbox"/> Electrical:	YES <input type="checkbox"/> NO <input type="checkbox"/>
10.2	<input type="checkbox"/> HVAC:	YES <input type="checkbox"/> NO <input type="checkbox"/>
10.3	<input type="checkbox"/> Masonry:	YES <input type="checkbox"/> NO <input type="checkbox"/>
10.4	<input type="checkbox"/> Plumbing:	YES <input type="checkbox"/> NO <input type="checkbox"/>

**11.0 List all** construction projects your Firm has completed in the **past five (5) years**. Provide **all** of the information listed below. DAS/CS *may* reject a bid as **non-responsive** if the bidder does not make **all** required pre-award submittals within the designated time period. Attach additional sheets as necessary **using the following format**:

**IMPORTANT NOTE:** **Two (2)** of the construction projects completed in the past five (5) years shall be (1) single project contracts that have reached substantial completion, not aggregate projects; (2) of commercial and/or institutional construction work (this includes compliance with general requirements); (3) within the Cost Estimate Range stated in Section 00 11 16 Invitation to Bid for this project; and (4) of the size and complexity of this Project. Failure to identify to **two** such projects **shall** result in rejection of the bid.

<b>11.1 Project Title:</b>		
<b>11.2 Project Location:</b>		
<b>11.3 Construction Start Date:</b>		
<b>11.4 Construction Finish Date:</b>		
<b>11.5 Describe the Scope of Work your Firm performed:</b>		
<b>11.6 Original Contract Amount:</b>		
<b>11.7 Final Contract Amount:</b>		
<b>11.8 Original Contract Duration (Calendar Days):</b>		
<b>11.9 Final Contract Duration (Calendar Days):</b>		
<b>11.10 Owner:</b>		
<b>11.11 Owner's Representative:</b>		
	<i>(Name)</i>	<i>(Phone Number)</i>
<b>11.12 Design Firm:</b>		
<b>11.13 Design Firm's Representative:</b>		
	<i>(Name)</i>	<i>(Phone Number)</i>

**12.0 References:**

Furnish references from **architects, engineers or owners** indicating that your Firm has satisfactorily completed in a timely manner contract work for projects within the cost estimate range, size and complexity of this project. Provide explanations where delays have occurred. This information should cover work done over the past five years.

**13.0 Construction Scheduler:**

**For Projects greater than \$5 Million:** Submit the **name, resume and references** of the **Construction Scheduler** in accordance with the requirements called for in Section **01 32 16.13 Critical Path Method Schedules** of the General Requirements.

Not Applicable – Project Less Than \$5 Million

**14.0** List and explain if your Firm has ever failed to complete a contract or if any officer or partner of your Firm has ever been an officer or partner of another organization that failed to complete a contract. Indicate below the circumstances leading to the project failure and the name of the company which provided the bonding for the failed contract(s):

Not Applicable

**15.0** List and explain if your Firm has ever had a contract terminated, indicating the circumstances leading to the project termination of contract(s):

Not Applicable

**16.0** List and explain all legal or administrative proceedings against your Firm or any officers, principals, partners, members, or employees of the organization currently pending or concluded adversely within the last five years, and any judicial or administrative sanctions that are still in effect against such organization, and any of its officers, principals, partners, members, or employees. (Exclude Occupational Safety and Health Act [OSHA] violations which are called for elsewhere in this statement). Add attachments as necessary.

Not Applicable

**17.0** List and explain any disbarments or suspensions that have been imposed on your Firm in the past five years or that were still in effect during the five year period or that are still in effect. Such list must include disbarments and suspensions of officers, principals, partners, members, and employees of your Firm:

Not Applicable

**18.0** List and explain any other reason(s) that precludes your Firm or any officer, principal, partner, member, or employees thereof from bidding on a contract in Connecticut or any other jurisdiction:

Not Applicable

**19.0** List and explain all willful or serious violations your Firm has had of any OSHA or of any standard, order or regulation promulgated pursuant to such act, during the three year period preceding the bid, provided such violations were cited in accordance with the provisions of any State Occupational Safety and Health Act or Occupational Safety and Health Act of 1970. Indicate whether these were abated within the time fixed by the citation or whether the citation was appealed. If appealed what is the status or disposition. Add attachments as necessary.

Not Applicable

**20.0** List and explain any criminal convictions your Firm has had related to the injury or death of any employee in the three-year period preceding the bid: Add attachments as necessary.

Not Applicable

**21.0** List and explain any changes in your Firm's financial condition or business organization, which might affect your Firm's ability to successfully complete this contract:

Not Applicable

**22.0** **NEW:** List and explain if your Firm has ever failed to submit an Affirmative Action Plan to the Commission on Human Rights and Opportunities (CHRO). Indicate below the circumstances leading to the failure to submit the Affirmative Action Plan to CHRO:

Not Applicable

**23.0** **NEW:** List and explain if your Firm's Affirmative Action Plan has ever been disapproved by CHRO or determined to be noncompliant. Indicate below the circumstances leading to the disapproval or finding of noncompliance of your Affirmative Action Plan by CHRO:

Not Applicable

### 24. Signature

Dated at

Signed this

 day of , 20 

Name of Firm:

Firm Address:

Signature:

Print or Type Name:

Title:

### 25. Notary Statement

Mr./Mrs./Ms.  being duly sworn

deposes and says that he/she is the  of  
*(Position or Title)*

, and that the answers to the foregoing  
*(Firm Name)*

questions and all statements therein contained are true and correct.

Subscribed and sworn before me this  day of , 20

Notary Public

My Commission Expires , 20

End of Section

00 45 14 General Contractor Bidder's Qualification Statement





## Objective Criteria Established for Evaluating Qualifications of Bidders:

CT DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement

The following items are established pursuant to Sections 4b-92, 4b-94 and 4b-95a of the Connecticut General Statutes (C.G.S.) as amended.

The **Objective Criteria Established for Evaluating Qualifications of Bidders** (Section 00 45 15) are to assure that the State of Connecticut will secure the "lowest responsible and qualified bidder" who has the ability and capacity to successfully complete the Bid Proposal Form and the Work. Failure to comply with any portion of this requirement **may** cause **rejection** of the bid. **Note:** Individual Specification Sections **may** contain General Contractor and/or Subcontractor Qualification requirements that **exceed** those in **Section 00 45 15 Objective Criteria Established for Evaluating Qualifications of Bidders**.

**THE BIDDER MUST HAVE OR HAVE COMPLETED THE FOLLOWING:**

### 1.1 DAS Prequalification Requirements:

For Projects with Construction Costs greater than \$500,000, **all Bidders** shall upload to BizNet a valid Department of Administrative Services (DAS) **Prequalification Certificate** and **Update (Bid) Statement** *prior* to the date and time of the Bid Opening.

### 1.2 Evaluation:

**1.2.1 All Bidders** shall upload to BizNet **Section 00 45 14 General Contractor's Bidder Qualifications Statement** *prior* to the date and time of the Bid Opening.

**1.2.2** If applicable, the **Three (3) Lowest Bidders** shall submit **Section 00 45 17 Named Subcontractor's Bidder Qualification Statement(s)** to DAS Construction Services (DAS/CS) Office of Legal Affairs, Policy, and Procurement within **ten (10)** calendar days **after** receipt of the "Set-Aside Contractor Schedule Request" *from* DAS/CS.

**1.2.3** The Bidder must demonstrate that the Bidder and, if applicable, its Named Subcontractors, meet the **objective criteria** for this specific project.

**1.2.4** The **responses** to the Statement(s) must identify two (2) **projects completed** – single project contracts that have reached substantial completion, not aggregate projects – of commercial and/or institutional construction work (this includes compliance with general requirements) during the past five (5) years within the Cost Estimate Range stated in Section 00 11 16 **Invitation to Bid** for this project, and of the size and complexity of this project. The failure to identify to such projects shall result in rejection of the bid.

**1.2.5** If the Bidder identifies two projects that meet the above criteria, the **State's evaluation** shall be based on the **performance record** of the prospective Bidder as a general, prime contractor and its named subcontractors during the course of the two (2) comparable projects, and not just the end result. The state will conduct the evaluation based on its interpretation of its objective criteria. **Evaluation criteria** shall include: Faithful and efficient performance; fulfilment of contract obligations; financial, managerial and technical abilities; and integrity and the absence of any conflicts of interest. Any one or all of the factors noted in this paragraph as well as in the other criteria set forth in this **Section 00 45 15** may be grounds for the determination by the State, in its sole discretion, of the Bidder's responsibility and qualifications necessary for the faithful performance of the work required of this project.

### 1.3 References:

Furnished **references from architects, engineers or owners** indicating that it has satisfactorily completed in a timely manner contract work for projects and provide explanations where delays have occurred. This information should cover work done over the **past five years**. Review of DAS/CS projects shall be included in the evaluation of the bidder's qualifications and anticipated future performance.

<b>1.4</b>	<b>Qualified Personnel:</b>
1.4.1	Shown that it customarily employs or has on its payroll <b>supervisory personnel, qualified</b> to perform the work required for this project and to coordinate the work called for in the Bid Specifications.
1.4.2	If the project is for \$5 Million or more, submit the <b>name, resume and references</b> of the <b>Construction Scheduler</b> in accordance with the requirements called for in <b>Section 01 32 16.13 Critical Path Method Schedules</b> of the General Requirements.
<b>1.5</b>	<b>Past Performance:</b>
	Demonstrated a good track record of <b>past performance</b> on State or other projects relative to quantity, quality, timeliness, cost, cooperation and harmonious working relationships with subcontractors, suppliers and client agencies. DAS/CS will review the Bidders past performance ratings prepared by DAS/CS or prepared as part of the DAS Contractor Prequalification Program. This review may focus on the comments relative to: Quality of Supervision, Adherence to Contract Documents, On Time Project Completion, Subcontractor performance, and the handling of Change Orders. Unacceptable ratings for several criteria shall be sufficient cause to deem a bidder not responsible.
<b>1.6</b>	<b>Financial Responsibility:</b>
	Shown that it is <b>financially responsible</b> to perform the work as bid. If requested, additional financial information shall be provided. Prompt and proper payments to its subcontractors and material suppliers is a critical factor to be considered by DAS/CS.
<b>1.7</b>	[Left Blank]
<b>1.8</b>	<b>Equipment Requirements:</b>
	Shown that it owns or possesses, rented, or leased <b>equipment</b> of the type customarily required by contractors in the performance of contract work and that such equipment, if needed, is available for this project.
<b>1.9</b>	<b>Materials and Suppliers:</b>
	Purchased <b>materials</b> over the past three years from suppliers who customarily sell such materials in quantity to contractors.
<b>1.10</b>	<b>Physical Facilities:</b>
	Control of adequate <b>physical facilities</b> from which the work can be performed.
<b>1.11</b>	<b>Compliance with Subcontractor Requirements:</b>
	Demonstrated that on <b>previous state projects</b> the bidder complied in good faith with the requirements of listing subcontractors as outlined in C.G.S. Sections 4b-93 and 4b-95.
<b>1.12</b>	<b>Threshold Building and Major Contractor Requirements:</b>
	Demonstrated that <b>all major subcontractors</b> are in compliance with the provisions of C.G.S. Section 20-341gg, as revised, concerning licensure requirements to perform work on any structure that exceeds the threshold limits contained in C.G.S. Section 29-276b, as revised.
<b>1.13</b>	<b>OSHA Requirements:</b>
	Proven that the Bidder has not been found to be in violation of three or more willful or serious violations of Occupational Safety and Health Administration (OSHA) regulations in the past three years.

**1.14 Criminal Convictions and Injuries or Death of Employees:**

Not received a **criminal conviction** related to the injury or death of any employee in the three-year period preceding the bid.

**1.15 Legal or Administrative Proceedings:**

Listed all **legal** (court and/or arbitration) or **administrative proceedings** currently pending as well as any legal (court and/or arbitration) or administrative proceeding related to procurement or performance of any public or private construction contracts which has concluded adversely within the last three years.

**1.16 Contract Performance and Surety:**

Identified any situations where: (1) the bidder failed to complete a construction contract; or (2) bonds were called during the past three years. If applicable, attach a sheet providing explanation including date(s) and location(s).

**1.17 State Tax Requirements:**

Not been found to be in violation of any **state tax** requirements of the Connecticut Department of Revenue Services in the five (5)-year period preceding the bid.

**1.18 State and Federal Labor Requirements:**

Not been found to be in violation of any State or Federal **labor laws** as required through the Department of Labor including violations of prevailing wage laws in the five (5)-year period preceding the bid.

**1.19 Change Order Pricing and State Ethics:**

Been found to be in compliance with all statutory and regulatory requirements. This Item shall include, but not be limited to, any DAS/CS determinations related to improper Change Order pricing relative to C.G.S. Section 1-101nn of The State Ethics Statutes.

**1.20 Internal Revenue Services (IRS) Requirements:**

Not been found in violation of any of the **Internal Revenue Service Tax Requirements** regarding classification of employees and independent contractors in the five (5)-year period preceding the bid.

**1.21 Workers Compensation and Insurance Requirements:**

Not been found to be in any violation of C.G.S. Section 31-288 relating to employee classification for purposes of Workers' Compensation insurance premiums in the five (5)-year period preceding the bid.

**NOTE:** The foregoing Item Numbers **1.13** and **1.14** are meant to comport with C.G.S. Section 31-57b.

**End of Section**  
**00 45 15 Objective Criteria Established for Evaluating Qualifications of Bidders**





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A.C. No. EXT):	FAX (A.C. No.):
INSURED Contractor's Legal Name and Address	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A:	NAIC#
	INSURER B:	
	INSURER C:	
	INSURER E:	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADD. SUIN INSR. WORD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-WIDE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC		Policy Number must be provided	Policy Effective Date must be provided	Policy Expiration Date must be provided	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADY INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - CCMPOV AGG \$ 2,000,000
	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS		Policy Number must be provided	Policy Effective Date must be provided	Policy Expiration Date must be provided	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED: RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N <input type="checkbox"/> N/A If yes, describe under DESCRIPTION OF OPERATIONS below		Policy Number must be provided	Policy Effective Date must be provided	Policy Expiration Date must be provided	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 100,000 E.L. DISEASE - EA EMPLOYEE \$ 100,000 E.L. DISEASE - POLICY LIMIT \$ 500,000
	Owner's and Contractor's Protective Liability Builder's Risk (include here when applicable)					Bodily Injury or Death (per occ.) Total \$ 1,000,000 Property Damages Total (aggregate) \$ 2,000,000 Completed Value

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Indicate Project Number and Title here

The State of Connecticut is an Additional Insured with respect to General Liability and Umbrella/Excess Liability Insurance coverage.

If Builder's Risk and or Inland Marine/Transit Insurance is required then the State is endorsed as a Loss Payee.

<b>CERTIFICATE HOLDER</b> State of Connecticut Department of Administrative Services, Construction Services Office of Legal Affairs, Policy and Procurement 450 Columbus Boulevard, Suite 1302 Hartford, CT 06103-1838	<b>CANCELLATION</b> SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Agent of Producer
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ACORD 25 (2010/05)

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End of Section  
 00 62 16 Certificate of Insurance



## Asbestos Abatement Liability Insurance

### DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement

Contractor shall provide Asbestos Abatement Liability insurance **with limits of no less than \$1,000,000.00 per occurrence**. Such insurance shall include all operations associated with hazardous materials removal and shall be written on an **occurrence basis form**. The State of Connecticut shall be named as an Additional Insured.

Asbestos abatement coverage may alternatively be provided under a Commercial General Liability policy provided the policy is specifically endorsed to provide asbestos abatement coverage.

End of Section  
00 62 16.1 Asbestos Attachment To Accord Form





**General Conditions of the Contract for Construction  
 For Design-Bid-Build  
 Department of Construction Services  
 State of Connecticut  
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**ARTICLE 1**  
**DEFINITIONS**

WHENEVER THE FOLLOWING TERMS, OR PRONOUNS IN PLACE OF THEM, ARE USED THE INTENT AND MEANING SHALL BE AS FOLLOWS:

**1.1 ACCEPTANCE:** The Owner's acknowledgement of the Work from the Contractor upon certification by the Construction Administrator and Architect or Engineer that all Work has been completed.

**1.2 ADDITIONAL OR DELETED WORK:** Work required by the Department that, in the judgment of the Commissioner, involves any addition to, deduction from, or modification of the Work required by the Contract Documents.

**1.3 AGENCY:** The (User) Agency of the State of Connecticut having administrative authority of the facility in which the Work is being performed.

**1.4 APPLICATION FOR PAYMENT, PARTIAL PAYMENT OR REQUISITION:** Contractor's certified request for payment for completed portions of the Work and, if the Contract so provides, for materials or equipment suitably stored pending their incorporation into the Work.

**1.5 ARCHITECT OR ENGINEER:** A sole proprietor, partnership, firm, corporation or other business organization under Contract with the Owner, commissioned to prepare Contract Drawings and Specifications, to advise the Owner and in certain cases, to perform regular inspections during construction and when authorized to perform the duties of the Construction Administrator.

**1.6 AS-BUILT DRAWINGS:** Construction Drawings revised by the Contractor to show all significant Modifications made during the construction process.

**1.7 BASE BID:** Monetary value stated in the Bid Proposal Form as the sum for which the Bidder offers to perform the Work described in the Bidding Documents, exclusive of adjustments for Supplemental Bids.

**1.8 BID BOND:** Form of Bid Security executed by the Bidder as Principal and by a Surety to guarantee that the Bidder will enter into a Contract within a specified time and furnish any required bond as mandated by Connecticut General Statute Section 4b-92.

**1.9 BIDDER:** A sole proprietor, partnership, firm, corporation or other business organization submitting a Bid on the Bid Proposal Form for the Work contemplated.

**1.10 BIDDING DOCUMENTS:** Collectively, the Bidding Requirements and the proposed Contract Documents, including any addenda issued prior to receipt of Bids.

**1.11 BID OR BID PROPOSAL FORM:** A complete and duly signed proposal to perform Work (or a designated portion thereof) for a stipulated sum submitted in accordance with the Bidding Documents.

**1.12 BID SECURITY:** Certified check or Bid Bond submitted with Bid Proposal Form, which provides that the Bidder, if awarded the Contract, will execute such Contract in accordance with the requirements of the Bidding Documents.

**1.13 BUILDER'S RISK INSURANCE:** A specialized form of property insurance which provides coverage for loss or damage to the Work pursuant to the Contract Documents.

**1.14 CASH ALLOWANCE:** An amount established in the Contract Documents for inclusion in the Contract Sum to cover the cost of prescribed items not specified in detail, and as shown in the Allowance Schedule.

**1.15 CERTIFICATE OF ACCEPTANCE:** A document issued by the Owner to the Contractor stating that all Work specified in the Certificate of Acceptance has been completed and accepted by the Owner.

**1.16 CERTIFICATE OF COMPLIANCE:** A document stating that for the portion of the Project completed, either the design portion or the construction portion, has been performed in substantial compliance with all applicable building codes.

**1.17 CERTIFICATE OF OCCUPANCY:** Document issued by the authority having jurisdiction certifying that all or a designated portion of a building is approved for its designated use.

**1.18 CERTIFICATE OF SUBSTANTIAL COMPLETION:** A document prepared by the Architect or Engineer and approved by the Owner on the basis of an inspection stating:

**1.18.1** that the Work, or a designated portion thereof, is determined to be Substantially Complete;

**1.18.2** the date of Substantial Completion;

**1.18.3** the responsibilities of the Owner and the Contractor for security maintenance, heat, utilities, damage to the Work and insurance; and

**1.18.4** the time within which the Contractor shall complete the remaining Work.

**1.19 CHANGE ORDER:** Written authorization signed by the Owner, authorizing a modification in the Work, an adjustment in the Contract Sum, or an adjustment in the Contract Time.

**1.20 COMMISSIONER:** The State of Connecticut, Department of Construction Services (CT DCS) Commissioner acting directly or through specifically authorized CT DCS personnel or agent(s) having authority to perform duties defined in Article 25.

**1.21 COMMISSIONING AGENT (CxA):** An independent entity under contract directly with the Owner or Owner's Representative responsible for performing the specified commissioning procedures.

**1.22 CONSTRUCTION ADMINISTRATOR:** A sole proprietor, partnership, firm, corporation or other business organization, under Contract or employed by the Owner commissioned and/or authorized to oversee the fulfillment of all requirements

of the Contract Documents. The authorized Construction Administrator may be a Department of Construction Services Assistant Project Manager, Department of Construction Services Project Manager, a Clerk of the Works, an Architect, a Consulting Architect, a Consulting Construction Administrator, a Consulting Engineer etc. or any other designee as authorized and identified by the Owner.

**1.23 CONSTRUCTION CHANGE DIRECTIVE:** A written authorization signed by the Owner, directing a modification in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum, Contract Time or both. Any Construction Change Directive effecting an adjustment to the Contract Sum or Contract Time shall result in a Change Order.

**1.24 CONTRACT DOCUMENTS OR CONTRACT:** The Agreement between Owner and Contractor, Conditions of the Contract (General Conditions, Supplementary Conditions, General Requirements and other Conditions), Drawings, Specifications, and Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract, all of which shall constitute the Contract.

**1.25 CONTRACTOR OR GENERAL CONTRACTOR:** A sole proprietor, partnership, firm or Corporation, under direct Contract with the Department of Construction Services, responsible for performing the Work under the Contract Documents. Whenever the words "Contractor" or "General Contractor" are used it shall be understood to mean Contractor.

**1.26 CONTRACTOR'S LIABILITY INSURANCE:** Insurance purchased and maintained by the Contractor that insures the Contractor for claims for property damage, bodily injury or death.

**1.27 CONTRACT START DATE OR DATE OF COMMENCEMENT OF THE WORK:** The date, specified by the Owner in the Notice to Proceed, on which the Contractor is required to start the Work.

**1.28 CONTRACT SUM:** The sum stated in the Contract, which is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

**1.29 CONTRACT TIME:** The period of time allotted in the Contract Documents for Substantial Completion of the Work, including authorized adjustments thereto. The Contract Time is the sum of all Working Days and Non-Working Days as further defined herein and specified in the Contract Documents.

**1.30 DAY:** Whenever the word Day is used it shall be understood to mean calendar day stated on the Bidding Documents, unless stated otherwise.

**1.31 DEPARTMENT OF CONSTRUCTION SERVICES (CT DCS) PROJECT MANAGER:** The individual employed by the Owner, designated and authorized by the Commissioner, to be

responsible for the overall management and oversight of the Project, and to represent the (User) Agency.

**1.32 DIESEL VEHICLE EMISSIONS CONTROL:** The reduction of air pollution emissions from diesel powered vehicles through the use of diesel engine emission control technologies.

**1.33 EQUAL(S):** Any deviation from the Specification which is defined as follows: A replacement for the specified material, device, procedure, equipment, etc., which is recognized and accepted as substantially equal to the first listed manufacturer or first listed procedure specified after review by the Architect/Engineer, and may be rejected or approved at the sole discretion of the Owner. All equals must be substantially equivalent to the first manufacturer or first procedure listed in the Specifications with reference to all of the following areas: the substance and function considering quality, workmanship, economy of operation, durability, and suitability for purposes intended; size, rating, and cost. The equal does not constitute a modification in the scope of Work, the Schedule, or Architect/Engineer's design intent of the specified material, device, procedure, equipment, etc.

**1.34 FINAL INSPECTION:** Review of the Work by the Architect or Engineer and Owner to determine whether Acceptance has been achieved.

**1.35 FINAL PAYMENT:** The last payment made by the Owner to the Contractor, made after notice of the Acceptance. Payment shall include the entire unpaid balance of the Contract Sum as adjusted by modifications.

**1.36 GENERAL CONDITIONS:** The General Conditions of the Contract for Construction, part of Division 00 of the Specifications.

**1.37 GENERAL REQUIREMENTS:** That part of the Contract Documents entitled General Requirements, which is Division 01 of the Specifications.

**1.38 GUARANTEE:** See Warranty.

**1.39 LIQUIDATED DAMAGES:** A sum established in a Contract, usually as a fixed sum per Day, as the predetermined measure of damages to be paid to the Owner due to the Contractor's failure to complete the Work within the Contract Time.

**1.40 LUMP SUM:** An item or category priced as a whole rather than broken down into its elements.

**1.41 MOBILE SOURCE:** A source designed or constructed to move from one location to another during normal operation except portable equipment and includes, but is not limited to, automobiles, buses, trucks, tractors, earth moving equipment, hoists, cranes, aircraft, locomotives operating on rails, vessels for transportation on water, lawnmowers, and other small home appliances.

**1.42 NON-WORKING DAYS:** All Saturdays, Sundays, Legal State Holidays (12), and any other Days identified in the

Contract Documents that the Contractor is not permitted to execute the Work. The restriction of Non-Working Days may be suspended upon the approval or direction of the Commissioner.

**1.43 NOTICE TO BIDDER:** A notice contained in the Bidding Document informing prospective Bidders of the opportunity to submit Bids on a Project.

**1.44 NOTICE TO PROCEED:** Written notice, issued by the Commissioner or the Commissioner's authorized representative, to the Contractor authorizing the Contractor to proceed with the Work and establishing the date for commencement of the Contract Time.

**1.45 OWNER OR DEPARTMENT:** The State of Connecticut, Department of Construction Services acting through its Commissioner or specifically authorized Department personnel or agent.

**1.46 OVERHEAD:** Indirect costs including: supervision (any position over the foreman), field and home office expense, insurance, and small tools and consumables.

**1.47 PAYMENT, BOND, LABOR BOND OR MATERIAL BOND:** A bond in which the Contractor and the Contractor's surety guarantee to the Owner that the Contractor will pay for labor and materials furnished for use in the performance of the Contract, as required by Connecticut General Statutes Section 49-41.

**1.48 PERFORMANCE BOND OR SURETY BOND:** A bond in which the Contractor and the Contractor's surety guarantee to the Owner that the Work will be performed in accordance with the Contract Documents, as required by Connecticut General Statutes Section 49-41.

**1.49 PERFORMANCE SPECIFICATION:** A description of the desired results or performance of a product, material, assembly, procedure, or a piece of equipment with criteria for identifying the standard.

**1.50 PLANS OR DRAWINGS:** All Drawings or reproductions of Drawings pertaining to the construction of the Work contemplated and its appurtenances.

**1.51 PROJECT:** The total construction of which the Work performed under the Contract Documents may be the whole or a part.

**1.52 PROJECT MANUAL:** The set of documents assembled for the Work which includes, but is not limited to, Contract Documents, Bidding Requirements, Sample Forms, General Conditions of the Contract for Construction, General Requirements, and the Specifications.

**1.53 PROPRIETARY SPECIFICATION:** A specification that describes a product, procedure, function, material, assembly, or piece of equipment by trade name and/or by naming the manufacturer(s) or manufacturer's procedure, exact model number, item, etc., of those products acceptable to the Owner.

**1.54 RETAINAGE:** A percentage of each Application for Payment and a percentage of the total Contract Sum retained by the Owner.

**1.55 SCHEDULE:** A Critical Path Method (CPM) or Construction Schedule as required by the Contract Documents which shall be a diagram, graph or other pictorial or written Schedule showing all events expected to occur and operations to be performed and indicating the Contract Time, start dates, durations and finish dates as well as Substantial Completion and Acceptance of the Work, rendered in a form permitting determination of the optimum sequence and duration of each operation.

**1.56 SCHEDULE OF VALUES:** A document furnished by the Contractor to the Architect or Engineer and Owner stating the portions of the Contract Sum allocated to the various portions of the Work, which is to be used for reviewing the Contractor's Applications for Payment.

**1.57 SECONDARY SUBCONTRACTOR:** A sole proprietor, partnership, firm or Corporation under direct Contract with the Subcontractor to the General Contractor.

**1.58 SENSITIVE RECEPTOR SITES:** Areas where concentrations of diesel emissions may be harmful to sensitive populations, including, but not limited to, hospitals, school and university buildings being occupied during a student semester, residential structures, daycare facilities, elderly housing, and convalescent facilities.

**1.59 SHOP DRAWINGS:** Drawings provided to Architect or Engineer and Owner by a Contractor that illustrate construction, materials, dimensions, installation, and other pertinent information for the incorporation of an element or item into the construction as detailed Contract Documents.

**1.60 SPECIFICATIONS:** The description, provisions and other requirements pertaining to the method and manner of performing the Work and/or to the quantities and quality of materials to be furnished under the Contract.

**1.61 SUBCONTRACTOR:** A sole proprietor, partnership, corporation or other business organization under direct Contract with the Contractor supplying labor and/or materials for the Work at the site of the Project.

**1.62 SUBMITTALS:** Documents including, but not limited to, samples, manufacturer's data, Shop Drawing, or other such items submitted to the Owner and Architect or Engineer by the Contractor for the purpose of approval or other action, as required by the Contract Documents.

**1.63 SUBSTANTIAL COMPLETION:** The stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents.

**1.64 SUBSTITUTION:** Any deviation from the specified requirements, which is defined as follows: A replacement for

the specified material, device, procedure, equipment, etc., which is not recognized or accepted as equal to the first manufacturer or procedure listed in the Specification after review by the Architect/Engineer, and may be rejected or approved by the Owner. The Substitution is not equal to the specified requirement in comparison to the first manufacturer or first procedure listed in the Specifications in one or more of the following areas: the substance and function considering quality, workmanship, economy of operation, durability, and suitability for purposes intended; size, cost, and rating. The Substitution constitutes a modification in the scope of Work, the Schedule, or the Architect/Engineer's design intent of the specified material, device, procedure, equipment, etc.

**1.65 SUPERINTENDENT:** The Contractor's representative at the site who is responsible for continuous field supervision, coordination, in, completion of the Work, and, unless another person is designated in writing by the Contractor to the Owner and the Construction Administrator, for the prevention of accidents.

**1.66 SUPPLEMENTAL BID:** The monetary value stated in the Bid to be added to the amount of the Base Bid if the corresponding Work, as described in the Bidding Documents, is accepted.

**1.67 SUPPLEMENTARY CONDITIONS:** An extension in the Bid to be added to the amount of the Base Bid if the corresponding Work, as described in the Bidding Documents, is accepted.

**1.68 THRESHOLD LIMIT BUILDING:** Any proposed (new) structures or additions as defined by the Connecticut General Statutes Section 29-276b.

**1.69 UNIT PRICE:** The monetary value stated by the Owner or the Contractor, as a price per unit of measurement for materials or services as described in the Contract Documents and/or Bidding Documents.

**1.70 WARRANTY:** A written, legally enforceable assurance of specified quality or performance of a product or Work or of the duration of satisfactory performance.

**1.71 WORK:** The construction and services required by the Contract Documents, and including all 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.

## ARTICLE 2 CONDITIONS OF WORK

**2.1** The Contractor shall carefully examine and study the conditions under which the Work is to be performed and the site of the Work, and compare the Contract Documents with each other and to information furnished by the Owner including but not limited to the Plans and Specifications, the form of the Contract, General Conditions, Supplementary Conditions, General Requirements, Bonds and all other Contract Documents associated with the Work.

**2.2** The Contractor shall report to the Construction Administrator all errors, inconsistencies or omissions discovered. The Contractor shall not be liable to the Owner for damage resulting from errors, inconsistencies or omissions in the Contract Documents unless the Contractor recognized such errors, inconsistencies or omission and failed to report it to the Construction Administrator. If the Contractor performs any actions or construction activity knowing it involves an error, inconsistency or omission in the Contract Documents without notice to the Construction Administrator, the Contractor shall assume responsibility for such performance and related costs for the correction and shall not be allowed to submit any claim related to error, inconsistencies or omission.

**2.3** The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Construction Administrator at once; and it will be assumed that the Contractor has been satisfied as to all requirements of the Contract Documents. Any deterrent conditions at the site of the Work which are obvious and apparent upon examination of the site but are not indicated on the Plans shall be corrected by the Contractor without additional compensation.

**2.4** In performing the Work, the Contractor must employ such methods or means as will not cause any interruption of or interference with the Work of any other Contractor, nor any inordinate disruption with the normal routine of the Owner, institution or Agency operating at the site.

**2.5** No claims for additional compensation will be considered when additional costs result from conditions made known to, discovered by, or which should have been discovered by, the Contractor prior to Contract signing.

**2.6** All Communications from the Contractor concerning proposed changes to the Contract Sum, Contract Time, or Work shall be in writing.

**2.7** The Contractor shall perform the Work in accordance with the Contract Documents and approved Submittals pursuant to Article 5.

## ARTICLE 3 CORRELATION OF CONTRACT DOCUMENTS

**3.1** The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. Where discrepancies or conflict occur in the Contract Documents the following order of precedence shall be utilized:

**3.1.1** Amendments and addenda shall take precedence over previously issued Contract Documents.

**3.1.2** The Supplementary Conditions take precedence over the General Conditions.

**3.1.3** The General Conditions take precedence over the General Requirements.

- 3.1.4** The Specifications shall take precedence over the Plans.
- 3.1.5** Stated dimensions shall take precedence over scaled dimensions.
- 3.1.6** Large-scale detail Drawings shall take precedence over small-scale Drawings.
- 3.1.7** The Schedules contained in the Contract Documents shall take precedence over other data on the Plans.

**3.2** Neither party to the Contract shall take advantage of any obvious error or apparent discrepancy in the Contract Documents. The Contractor shall give immediate written notification of any error or discrepancy discovered to the Construction Administrator, who shall take the necessary actions to obtain such corrections and interpretations as may be deemed necessary for the completion of the Work in a satisfactory and acceptable manner. The Contractor shall then promptly proceed under the direction of the Owner and the provisions of Article 13. The Contractor's failure to provide immediate notice shall mean the Contractor will not be entitled to any additional compensation, either monetary or Contract Time adjustment, with respect to any discrepancy.

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

**3.4** 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.

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

#### **ARTICLE 4** **COMMENCEMENT AND PROGRESS OF WORK**

**4.1** The Work shall start upon the date given in the Notice to Proceed. The Contractor shall complete all the Work necessary for Final Payment, including but not limited to Substantial Completion, Contract close-out, testing and demonstration of all systems as required for Acceptance, punchlist Work, training and submission of Record Documents, manuals, Guarantees and Warranties as stated in the Contract Document.

**4.2** Time is of the essence with respect to the Contract Time. By executing the Contract, the Contractor confirms and agrees that the Contract Time is a reasonable period to perform the Work. The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time. The Contractor may, at his discretion, plan to complete the Work and achieve Substantial Completion in less time than the Contract Time.

**4.3** The Contractor's early completion Schedule

notwithstanding, the Owner reserves the right to order Modifications to the Work in accordance with Article 13 at any time during the Contract Time.

**4.4** The Contractor shall not be entitled to costs for delay due to Owner ordered Modifications or any other circumstances for the period of time between the Contractor's elected early completion and the end of the Contract Time. Such costs include, but are not limited to, extended home office costs, field office costs, or supervisory and management costs incurred in performance of the Work. Early completion of the Work shall not merit additional compensation.

**4.5** If the Contractor is delayed at any time in the progress of Work by acts of God, such as fire or flood or any action, injunction or stop order issued by any court, judge or officer of the court or any other court action beyond the Owner's control, then the Contract Time may be extended by Change Order for such reasonable time as demonstrated by the Contractor's Schedule and as the Owner may determine that such event has delayed the Work. In any event, the granting of an extension of time shall be solely within the discretion of the Owner.

**4.6** Except as otherwise may be provided herein, extensions of time shall be the Contractor's sole remedy for such delay. No payment or compensation of any kind shall be made to the Contractor for damages because of hindrance in the orderly progress of Work caused by the aforesaid causes.

**4.7** The Contractor acknowledges that the Contract amount includes and anticipates any and all delays, whether avoidable or unavoidable, from said orders, which may issue from any court, judge, court officer, or act of God, and that such delays shall not, under any circumstances, be construed as compensable delays.

**4.8** Any extension of the Contract Time shall be by Change Order pursuant to Article 13.

**4.9** The Contractor shall employ a competent project manager who shall represent the Contractor. Communications given to the project manager shall be binding as if given to the Contractor. The project manager will be employed full time on the Project and be located and assigned to the Project site during and for the duration of the Work.

**4.10** The Contractor shall employ a competent Superintendent and necessary assistants who will be in attendance at the project site during the performance of the Work.

**4.11** Upon execution of the Contract, materials may be purchased. No material escalation costs will be valid or compensable unless the Owner directs, in writing, a delay in the procurement.

#### **ARTICLE 5** **SUBMITTALS, PRODUCT DATA, SHOP** **DRAWINGS AND SAMPLES**

5.1 Contractor shall review, approve, and submit to the Construction Administrator all Submittals including but not limited to, product data, Shop Drawings, and samples, with such promptness as to cause no delay in the Work.

5.2 Correction or approval of such Submittals, Shop Drawings, product data and samples will be made with reasonable promptness by the Architect or Engineer. Approval will be general only and shall not relieve the Contractor from responsibility for errors in dimensions, for construction and field coordination of the Work or for any departure from the Contract Documents, unless such departure has received the Owner's written approval.

5.3 No Work governed by such Shop Drawings, Schedules or samples shall be fabricated, delivered or installed until approved by the Architect or Engineer.

5.4 No damages for delays or time extensions will be granted, even if approvals deviate from the approved Schedule.

#### **ARTICLE 6 SEPARATE CONTRACTS**

6.1 The Owner reserves the right to perform Work in connection with the Contract with the Owner's own forces, or to let separate contracts relating to the Contract (Project) site or in connection with Work on adjoining sites. In such cases, the Contractor shall afford such parties reasonable opportunity for storage of materials and equipment and coordinate and connect the Work with the work on adjoining sites or other Projects, and shall fully cooperate with such parties in the matter required under Article 7 herein.

6.2 Contractors working in the same vicinity shall cooperate with one another and, in case of dispute, decision of the Owner shall be final and binding to all Contractors involved, including Contractors under separate Contracts.

6.3 The Contractor shall assume all liability, financial or otherwise, in connection with this Contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience or delay which the Contractor may cause other Contractors. If the Contractor experiences a loss because of the presence and operations of other Contractors working adjacent to or within the limits of the same Project, then as between the Owner and the Contractor, the Contractor shall bear such loss.

6.4 Insofar as possible, the Contractor shall arrange the Work and shall place and dispose of the materials being used so as not to interfere with the operations of other Contractors adjacent to or within the limits of the same Project. The Contractor shall join its Work with that of others in an acceptable manner, and perform the Work in proper accordance with that of the others.

6.5 In no event shall the Owner be responsible for any claim or damages that are the result of the Contractor's failure

to coordinate the Work with any other Contractor or Subcontractor.

#### **ARTICLE 7 COOPERATION OF TRADES**

7.1 The Contractor shall be responsible for and shall control all activities of their Subcontractors. The Subcontractors shall consult and cooperate with one another. Each Subcontractor shall furnish all necessary information to other Subcontractors and shall lay out and install their own Work so as to avoid any delays or interference with the Work of others.

7.2 Any cost or changes, cutting and/or repairing, made necessary by the failure to observe the above requirements shall be borne by the party or parties responsible for such failure or neglect or their faulty Work installed.

#### **ARTICLE 8 DAMAGES**

8.1 The Liquidated Damages, provided in the Bidding Documents, will be assessed at two distinct times, as follows:

##### **8.1.1 Liquidated Damages – Substantial Completion:**

If the Contractor fails to achieve Substantial Completion of the Work by the Substantial Completion Date, and such delay is not otherwise excused under this Contract, then the Contractor agrees to pay to the Owner Liquidated Damages for the dollar amount specified in the Bid Proposal Form for this Project, for each Day beyond Substantial Completion that the Contractor fails to achieve Substantial Completion. The parties to this Contract acknowledge and agree that the actual damages that are to be anticipated as a result of the neglect, failure, or refusal of the Contractor to substantially complete the Project by the established Substantial Completion Date are uncertain in amount or extremely difficult to determine. Accordingly, the parties to this Contract do intend and in fact now agree to liquidate damages in advance and stipulate that the amount set forth in this subparagraph is reasonable and an appropriate remedy and is intended to constitute compensatory damages and does not constitute a penalty of any kind. The parties understand and agree that, by including a provision for Liquidated Damages in this Contract, or in pursuing any relief pursuant to such provision:

.1 the parties do not intend to set a price for the privilege not to perform;

.2 the availability of Liquidated Damages may not be relied upon as a basis for argument that the Owner has an adequate remedy at law; and

.3 the remedies available to the Owner under this Agreement are cumulative and not exclusive.

##### **8.1.2 Liquidated Damages – Acceptance:**

If the Contractor fails to complete all of the Work required for Acceptance of the Work within ninety (90) Days of Substantial Completion then the Contractor agrees to pay

to the Owner Liquidated Damages for the dollar amount specified in the Bid Proposal Form for each Day in excess of ninety (90) Days beyond the Substantial Completion Date that the Contractor fails achieve Acceptance. The parties to this Contract acknowledge and agree that the actual damages that are to be anticipated as a result of the failure of the Contractor to complete all of the Work required for Acceptance within ninety (90) Days of the established Substantial Completion Date are uncertain in amount or extremely difficult to determine. Accordingly, the parties to this Contract do intend and in fact now agree to liquidate damages in advance and stipulate that the amount set forth in this subparagraph is reasonable and an appropriate remedy and is intended to constitute compensatory damages and does not constitute a penalty of any kind. The parties understand and agree that, by including a provision for Liquidated Damages in this Contract, or in pursuing any relief pursuant to such provision:

- .1 the parties do not intend to set a price for the privilege not to perform;
- .2 the availability of Liquidated Damages may not be relied upon as a basis for argument that the Owner has an adequate remedy at law; and
- .3 the remedies available to the Owner under this Agreement are cumulative and not exclusive.

**8.2** The Liquidated Damages or any portion thereof may be waived at the sole discretion of the Commissioner.

**8.3** No payment by the Owner, either partial or final, shall be construed to waive the Owner's right to seek Liquidated Damages.

**8.4** In the event a court determines that the Contract herein is null and void for any reason, Contractor agrees that Contractor will not seek or pursue any lawsuit or claim for damages, including, but not limited to, claims for loss of Overhead or anticipated profits, against the Owner and the Owner shall not be liable for any damages which Contractor may incur as a result of such decision. In addition, if the court enjoins the Owner from entering into or proceeding with the Contract herein, the Owner shall not be liable for any damages arising out of or relating to the award of such Contract which Contractor may have incurred as a result of the injunction.

#### **ARTICLE 9 MINIMUM WAGE RATES**

**9.1** In accordance with the provisions of the Connecticut General Statutes Section 31-53, the following applies:

"The wages paid on an hourly basis to any person performing the work of any mechanic, laborer, or worker on the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (h) of this section, 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 public works project is being constructed. Any contractor who is not obligated by agreement

to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each payday."

**9.2** Each Contractor who is awarded a Contract on or after October 1, 2002 shall be subject to provisions of the Connecticut General Statutes, Section 31-53 as amended by Public Act 02-69, "An Act Concerning Annual Adjustments to Prevailing Wages."

No wage adjustment will be made to the Contract for any wage increase under this Article.

#### **ARTICLE 10 POSTING MINIMUM WAGE RATES**

**10.1** The Contractor shall post at conspicuous points on the site of the Contract a Schedule showing all determined wage rates for all trades and all authorized deductions, if any, from wages to be paid.

**10.2** The Contractor shall provide weekly certified payrolls to the Owner for all persons working on the site.

#### **ARTICLE 11 CONSTRUCTION SCHEDULES**

**11.1** Unless otherwise specified in the Contract Documents, within twenty-one (21) Days from the Contract Start Date, the Contractor shall submit the following to the Owner for approval:

**11.1.1** A comprehensive Schedule of Submittals required by the Specifications. Said Schedule shall include Submittal dates, required approval dates and date material must be on site.

**11.1.2** The Contractor shall allow a minimum of 14 Days for the Owner and its agents' review of Submittals. No extension of the Contract Time shall be granted for revisions and resubmission. Further, the Contractor shall allow a minimum of eight weeks for testing and Acceptance of the Work by the Owner.

**11.1.3** When the Contract Documents specify a "CPM Schedule" a detailed Critical Path Method Schedule is required using software approved by the Owner and/or Construction Administrator with as many activities as necessary to make the Schedule an effective tool for planning and monitoring the progress of the Work. The Contractor shall show all pertinent activities requiring coordination between trades.

**11.1.4** When the Contract Documents specify a "Construction Schedule" a detailed Construction Schedule is required using software approved by the Owner as a horizontal bar chart with a separate bar for each major portion of the Work or operation to make the Schedule an effective



tool for planning and monitoring the progress of the Work.

**11.2** Unless otherwise specified under the Contract Documents, the Contractor shall provide a monthly update of the CPM Schedule or Construction Schedule in the format required by the Owner as well as a disk of the updated Schedule and program. If, in the opinion of the Owner, the Work is falling behind Schedule, the Contractor shall submit a revised Schedule demonstrating a recovery plan to ensure Substantial Completion of the Work within the Contract Time.

**11.3** Overtime, increased manpower, and additional shifts: If ordered by the Owner in writing, the Contractor shall work overtime, and/or add additional manpower and/or shifts:

**11.3.1** If the Contractor is not behind Schedule, the Owner will pay the Contractor the actual additional premium portion of the wages for overtime or additional shift work not included in the Contract price, but the Contractor shall not be entitled to Overhead and Profit.

**11.3.2** If the Contractor, through its sole or partial fault or neglect is behind Schedule, the Owner may order the Contractor, at the Contractor's expense, to increase its manpower or to work any overtime or additional shifts or take other action necessary to expedite the Work to meet the Project Schedule.

**11.3.3** If the Schedule is shown to be more than 21 Days behind in any critical activity, overtime, increase manpower and/or additional shifts shall be implemented immediately regardless of who is at fault. A disagreement over the cause of the impact will not relieve the Contractor from the obligation of complying with this Article. Once liability for the impact is determined, compensation will be determined in accordance with 11.3.1 or 11.3.2.

**11.3.4** The Owner reserves the right to suspend activity under Paragraph 11.3. Suspension shall be in writing and at the sole discretion of the Commissioner.

**11.4** Requisitions for partial payment will not be processed until the Contractor has complied with this requirement.

## **ARTICLE 12** **PREFERENCE IN EMPLOYMENT**

**12.1** Should this Contract be for the construction or repair of any building, then 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 at least three (3) months prior to the date hereof, have been residents of the labor market area, as established by the State of Connecticut Labor Commissioner, in which such Work is to be done, and if no such qualified person is available, then to citizens who have continuously resided in the county in which the Work is to be performed for at least three (3) 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.

**12.** Should this Contract be for a Construction Services

Project other than for the construction, remodeling or repairing of public buildings covered by Connecticut General Statutes 31-52, then in the employment of mechanics, laborers or workmen to perform the Work specified herein, preference will be given to residents of the state who are, and continuously for at least six (6) months prior to the date hereof have been residents of this State, and if no such person is available then to residents of other states.

**12.3** The provisions of this Article shall not apply where the state or any subdivision thereof may suffer the loss of revenue granted or to be granted from any Agency or Department of the federal government as a result of this Article or regulations related thereto.

## **ARTICLE 13** **COMPENSATION FOR CHANGES IN THE WORK**

**13.1** At any time, without invalidating the Contract and by a written order and without notice to the sureties, the Owner, through the Construction Administrator, may order modifications in the Work consisting of additions, deletions or other revisions. Upon request, the Contractor shall supply the Construction Administrator promptly with a detailed proposal for the same, showing quantities of and Unit Prices for the Work and that of any Subcontractor involved.

**13.2** Modifications to the Work will be authorized by a written Change Order, or if necessary to expedite the Work, a written Construction Change Directive, issued by the Owner as provided for in Article 25. Change Orders and Construction Change Directives shall be processed in accordance with the terms of the Contract Documents. Upon receipt of the written Change Order, the Contractor shall proceed with the Work when and as directed.

**13.3** If a Change Order makes the Work less expensive for the Contractor, the proper deductions shall be made from the Contract Sum, said deductions to be computed in accordance with the provisions listed in this Article 13.

**13.4** The Contractor shall not be entitled to an extension of time if in the opinion of the Owner the Additional Work in conjunction with the Work can be performed without impact on the Contract Time.

**13.5** The Contractor may request, and the Owner may grant additional Contract Time when, in the opinion of the Owner, the Contractor has demonstrated that the Additional Work cannot be performed in conjunction with the Work without impact on the original Substantial Completion and/or Acceptance (if applicable) date.

**13.6** The amount of compensation to be paid to the Contractor for any Additional or Deleted Work that results in a Change Order shall be determined in one of the following manners:

**13.6.1** **AMOUNT OF COMPENSATION FOR CHANGE ORDER COSTS: LABOR, EQUIPMENT, BENEFITS AND MATERIAL:**

**13.6.1.1 Unit Price:** As stated in the Contract Documents.

**13.6.1.2 Unit Price:** As subsequently agreed upon by the Contractor and Owner

**13.6.1.3 Lump Sum:** Agreed upon sum by the Owner and the Contractor. The Owner may rely on costs, prices, and documentation provided by the Contractor or Subcontractor in agreeing to a Lump Sum. If the Owner believes that additional information is necessary to substantiate the accuracy of the cost, the Owner reserves the right to request and receive additional information from the Contractor. The Lump Sum must be based upon the following itemized costs:

**13.6.1.3.1 Labor:** (Contractor's or Subcontractor's own forces) No Change Order Proposal shall be negotiated if the request is solely for the increased labor rate over those originally carried by the Contractor in its original bid. Additional foreman hours shall not be included unless additional crews are added and/or a compensable time extension is granted. Project Executive time shall not be included as a direct cost as it is part of the overhead mark-up allowed. Project manager hours shall not be included unless a compensable time extension is granted.

**13.6.1.3.2 Material:** (Actual cost to the Contractor or Subcontractor) Cost shall not be based upon list pricing unless it reflects the actual prices being paid and no discounts or other offsets are being received by the Contractor or Subcontractor. No Change Order Proposal shall be negotiated if the request is solely for the escalation of material prices over those originally carried by the Contractor in its original bid.

**13.6.1.3.3 Benefits:** (The established rates of the following benefit costs inherent to the particular labor involved):

- 13.6.1.3.3.1** Workers Compensation.
- 13.6.1.3.3.2** Federal Social Security.
- 13.6.1.3.3.3** Connecticut Unemployment Compensation.
- 13.6.1.3.3.4** Fringe Benefits.

**13.6.1.4 Rented Equipment:** (Used directly on the Work and by the Contractor's or Subcontractor's own forces).

**13.6.1.5 Owned Equipment:** (Used directly on the Work and by the Contractor's or Subcontractor's own forces). Daily rate is not to exceed 3% of the monthly rental rate as identified by a nationally recognized construction cost estimating guide or service.

**13.6.1.6 Small Tools:**  
Include items such as shovels, picks, rakes, ladders, and power tools which are expected to be utilized on a project. Trade related equipment, hand tools, and power tools normally supplied with the labor or are normally expected to be owned in the performance of the typical work for a trade are not compensable. These costs shall not be approved as part of the Direct Cost of a Change Order as they are included in the Contractor's overhead mark-up percentage.

**13.6.2 OVERHEAD AND PROFIT PERCENTAGES:** (Maximum allowable percentages applied to labor, equipment, and material)

**13.6.2.1** Contractor's mark-up for Work performed by its own forces:

Change Order Amount	Overhead and Profit
\$0 to \$ 5,000	20%
\$5,001 to \$15,000	17%
\$15,001 to \$25,000	15%
\$25,000 and greater	12%

**13.6.3 OVERHEAD AND PROFIT PERCENTAGES:** (Maximum allowable percentages applied to labor, equipment, benefits and material)

**13.6.3.1** Contractor's mark-up for Work performed by its Subcontractor's forces and not allowable for any subsidiary in which the Contractor has a majority ownership:

Change Order Amount	Overhead and Profit
\$0 and greater	6%

**13.6.4 OVERHEAD AND PROFIT PERCENTAGES:** (Maximum allowable percentages applied to labor, equipment, benefits and material) Subcontractor's mark-up for Work performed by its own forces:

Change Order Amount	Overhead and Profit
\$0 to \$ 5,000	20%
\$5,001 to \$15,000	17%
\$15,001 to \$25,000	15%
\$25,000 and greater	12%

**13.6.5 OVERHEAD AND PROFIT PERCENTAGES:** (Maximum allowable percentages applied to labor, equipment, benefits and material)

**13.6.5.1** Subcontractor's mark-up for Work performed by its Secondary Subcontractor's forces. Limited to one level (tier) below the Subcontractor and not allowable for any subsidiary in which the Subcontractor has a majority ownership.

Change Order Amount	Overhead and Profit
\$0 and greater	6%

**13.7 BOND COSTS**

**13.7.1** 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.

**13.7.2** The Contractor shall notify the bonding company at each \$500,000 increase to the contract value as the cumulative result of change orders. A copy of the Consent of Surety must be provided to the Owner prior to the execution of any change order which exceeds each cumulative \$500,000.

**13.8** Trade discounts, rebates, and amounts received from the sales by the Contractor of surplus materials and equipment shall accrue to the Owner.

**13.9** If the parties cannot agree upon a Lump Sum, then the Commissioner, through the Project Manager, may at the option of the Commissioner take the following action(s):

**13.9.1** Issue a Construction Change Directive for the Additional or Deleted Work. The amount of compensation shall be computed by the actual net costs to the Contractor determined by time and material or Unit Prices based upon the same information required in Subparagraphs 13.6.1.3.3.1 through 13.6.1.5:

**13.9.1.1 Labor:** (Contractor's or Subcontractor's own forces).

**13.9.1.2 Material:** (Used by Contractor's or Subcontractor's own forces).

**13.9.1.3 Benefits:** (The established rates of the following benefit costs inherent to the particular labor involved):

**13.9.1.3.1 Workers Compensation.**

**13.9.1.3.2 Federal Social Security.**

**13.9.1.3.3 Connecticut Unemployment Compensation.**

**13.9.1.3.4 Fringe Benefits.**

**13.9.1.4 Rented Equipment:** (Used directly on the Work and by the Contractor's or Subcontractor's own forces).

**13.9.1.5 Owned Equipment:** (Used directly on the Work and by the Contractor's or Subcontractor's own forces). Daily rate is not to exceed 3% of the monthly rental rate that can be identified by a nationally recognized construction cost estimating guide or service.

**13.9.2** Issue a Change Order adjusting the Contract Sum in the amount as determined by the Commissioner.

**13.10** For any Change Order or Construction Change Directive the Contractor shall, when requested, promptly furnish in a form satisfactory to the Construction Administrator and the Owner a complete detailed accounting of all costs relating to the Additional Work, including but not limited to certified payrolls and copies of accounts, bills and vouchers to substantiate actual costs. Further, the Owner reserves the right to access and make copies of the Contractor's records at any time upon written request from the Commissioner.

**13.11** Failure of the Contractor to negotiate in good faith issues of time and costs or failure to provide requested documentation within fourteen (14) Days, or a time period accepted by the Commissioner, shall constitute a waiver by the Contractor of any claim. In such cases the Owner may elect to issue a unilateral Change Order in an amount deemed to be fair and equitable by the Commissioner. The provisions hereof shall not affect the power of the Contractor to act in case of emergency, threatened injury to persons, or damage to Work on any adjoining property. In this case the Commissioner, through the Project Manager, shall issue a Change Order for such amount as the Commissioner finds to be reasonable cost of such Work.

#### **ARTICLE 14 DELETED WORK**

**14.1** Without invalidating any of the terms of the Contract, the Commissioner may order deleted from the Contract any items or portions of the Work deemed necessary by the Commissioner.

**14.2** The compensation to be deducted from the Contract Sum for such deletions shall be determined in the manner provided for under the provisions of Article 13 or in the event none of the provisions of Article 13 are applicable then by the value as estimated by the Owner.

#### **ARTICLE 15 MATERIALS: STANDARDS**

**15.1** Unless otherwise specifically provided for in the Specifications, all equipment, materials and articles incorporated in the Work are to be new and of the best grade of their respective kinds for the purposes. Wherever in the Contract Documents a particular brand, make of material, device, or equipment is shown or specified, the first manufacturer listed in the specification section is to be regarded as the standard. When the specification is proprietary and only one manufacturer is listed, the Contractor shall use the named manufacturer and no Substitutions or Equals will be allowed.

**15.2** Any other brand, make of material, device, equipment, procedure, etc. which is a deviation from the specified requirement is prohibited from use, but may be considered by the Owner for approval as an Equal or Substitution. The Contractor is to adhere to the specific requirements of the Contract Documents. Substitutions are discouraged and are only approved by the Commissioner as an exception.

#### **15.3 Submittals – Equals and Substitution Requests:**

**15.3.1** Substitution of Materials and Equipment before Bid Opening. The Owner will consider requests for Equals or Substitutions, if made prior to the receipt of the Bid. The information on all materials shall be consistent with the information herein.

**15.3.1.1** Statement of Variances – a statement of variances must list all features of the proposed Substitution which differ from the Drawings, Specifications and/or product(s) specified and must further certify that the Substitution has no other variant features. A request will be denied if submitted without sufficient evidence.

**15.3.1.2** Substitution Denial – any Substitution request not complying with the above requirements will be denied. Substitution request sent after the deadline established in the Notice to Bidder will be denied.

**15.3.1.3** An addendum shall be issued to inform all prospective Bidders of any accepted Substitution in accordance with Owner's addenda procedures.

**15.3.2 Substitution of Materials and Equipment After Bid Opening:** Subject to the Architect or Engineer's determination, if the material or equipment is Equal to the

one specified or pre-qualified and the CT DCS Project Manager's approval of such determination, Substitution of Material or Equipment may be allowed after the Letter of Award is issued only:

**15.3.2.1** If the specified or pre-qualified item is delayed by unforeseeable contingencies beyond the control of the Contractor which would cause a delay in the Project completion;

**15.3.2.2** If any specified or pre-qualified item is found to be unusable or unavailable due to a change by the manufacturer or other circumstances; or

**15.3.2.3** If the Contractor desires to provide a more recently developed material, equipment, or manufactured model from the same named manufacturer than the one specified or pre-qualified; or

**15.3.2.4** If the specified material and/or equipment inadvertently lists only a single manufacturer.

**15.4** Contractor shall submit each request for Equal or Substitution to the Architect or Engineer who shall review each request and make the following recommendations to the Owner:

**15.4.1** Acceptance or non-acceptance of the adequacy of the submission and required back-up,

**15.4.2** Determination of the category of the request for Substitution or Equal, and

**15.4.3** Overall recommendation for approval or rejection of the Substitution or Equal. The determination of the category as a Substitution may be grounds for an immediate rejection by the Owner.

**15.5** Approval of the Owner for each Equal or Substitution shall be obtained before the Contractor proceeds with the Work. The decision of the Commissioner, in this regard, shall be final and binding on the Contractor.

**15.6** No extension of time will be allowed for the time period required for consideration of any Substitution or Equal. No extension of time will be allowed and no responsibility will be assumed by the Owner when a Contractor submits a request for Substitution or Equal, whether such request be approved or denied, and the Contractor shall not be entitled to any claim for damages for delay.

**15.7** If the Contractor submits any request for an Equal or a Substitution, he shall bear the burden of proof that such requested Equal or Substitution meets the requirements of the Plans and Specifications.

**15.8** The Contractor shall purchase no materials or supplies for the Work which is subject to any chattel mortgage or which are under a conditional sale or other agreement by which an interest is retained by the seller. The Contractor warrants that the Contractor has good title to all materials and supplies used by him in the Work.

**15.9** All products and systems supplied to the State as a result of a purchase by a Contractor shall be certified that, to the best of the supplier's knowledge, there are no materials that are classified as hazardous materials being used within the assembly. Hazardous materials include, but are not limited

to, products such as asbestos, lead, and other materials that have proven to cause a health risk by their presence.

## **ARTICLE 16 INSPECTION AND TESTS**

**16.1** The purpose of the inspections will be to assure that the Work is performed in accordance with the Contract Documents. These inspections shall include, but not be limited to, all inspections and testing as required by the Owner, and any authorities have jurisdiction.

**16.2** All material and workmanship, if not otherwise designated by the Specifications, shall be subject to inspection, examination and test by the Commissioner at any and all times during manufacture and/or construction and at any and all places where such manufacture and/or construction is carried on. The Contract Documents additionally identify the parties responsible for performing and paying for the required testing and inspections. All required tests performed in a laboratory will be obtained and paid for by the Owner, except when the tests show the Work to be defective. The Contractor shall pay for all the costs associated with re-tests and re-inspections for all tests and inspections which fail. The Owner will issue a deduct Change Order to recover said retesting costs from the Contractor. All other tests, unless otherwise specified, shall be made at the Contractor's expense. Notice of the time of all tests to be made at the site shall be given to all interested parties, including the Owner.

**16.3** Without additional cost to the Owner, the Contractor shall promptly furnish facilities, labor and materials necessary to coordinate and perform operational tests and checkout of the Work. The Contractor shall furnish promptly all reasonable facilities, labor, and materials necessary to make all such testing safe and convenient.

**16.4** If, at any time before final payment and Acceptance of the Work, the Commissioner considers it necessary or advisable to examine of any portion of the Work already completed by removing or tearing out the same, the Contractor shall, upon request, furnish promptly all necessary facilities, labor, and materials. If such Work is found to be defective in any material respect, as determined by the Owner, because of a fault of the Contractor or any of the Contractor's Subcontractors, or if any Work shall have been covered without the approval or consent of the Commissioner (whether or not it is found to be defective), the Contractor shall be liable for testing costs and all costs of correction, including removal and/or demolition of the defective Work, including labor, material, and testing, including labor, material, re-testing or re-inspecting, services of required consultants, additional supervision, the Commissioner's and the Construction Administrator's administrative costs, and other costs for services of other consultants.

**16.5 Cost of Systems Commissioning Retesting:** The cost to retest a pre-functional or functional test, if the Contractor is responsible for the deficiency, shall be the Contractor's. If the Contractor is not responsible, any cost

recovery for retesting costs shall be negotiated with the Contractor.

**16.5.1** For a deficiency identified, not related to any pre-functional checklist or start-up fault, the following shall apply: The Commissioning Agent (CxA) and Construction Administrator will direct the retesting of the equipment once at no "charge" to the Contractor for their time. However, the Commissioning Agent's and Construction Administrator's time for additional testing will be charged to the Contractor.

**16.5.2** The time for the Systems Commissioning Agent and Construction Administrator to direct any retesting required because a specific pre-functional checklist or start-up test item, reported to have been successfully completed, but determined during functional testing to be faulty, will be back charged to the Contractor.

**16.5.3** Any required retesting by any Subcontractor shall not be considered a justified reason for a claim of delay or for a time extension by the Contractor.

#### **ARTICLE 17** **ROYALTIES AND PATENTS**

**17.1** If the Contractor desires to use any design, device, material or process covered by a patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the holder of said patent or copyright. The Contractor shall furnish a copy of this legal agreement to the Owner.

**17.2** The Contractor shall indemnify and hold harmless the Owner and Construction Administrator for any costs, expenses and damage which it may be obliged to pay by reason of any infringement of a patent or a copyright, at any time during the prosecution or after the Final payment of the Work.

#### **ARTICLE 18** **SURVEYS, PERMITS AND REGULATIONS**

**18.1** Unless otherwise provided for, the Contractor shall furnish surveys necessary for the execution of the Work. The Owner will furnish the Contractor with two base lines and a benchmark.

**18.2** The Contractor shall obtain and pay for permits and licenses necessary for the execution of the Work and the occupancy and use of the completed Work.

**18.3** The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations including building and fire safety codes relating to the performance of the Work.

**18.4** If underground utilities may be involved in part of the Work the Contractor is required to request "Call-Before-You-Dig" to verify the location of underground utilities at least (3) Working Days, as further defined under Paragraph 1.71 herein, prior to the start of any excavation. The Contractor shall also notify the Owner and Agency at least (3) Working Days prior to the start of any excavation. If "Call-Before-You-Dig" fails or refuses to respond to the Contractor's request, then the Contractor shall obtain the services of a qualified

underground utility locating firm, at no additional cost to the Owner, to verify locations of underground utilities prior to the start of any excavation. The Contractor shall be held responsible for providing safety, protecting the Work and protecting workmen as necessary to perform the Work. The Contractor shall be responsible for maintaining and protecting all original utility mark-out at no additional cost to the Owner.

#### **ARTICLE 19** **PROTECTION OF THE WORK,** **PERSONS AND PROPERTY**

**19.1** The Contractor shall continuously and adequately protect the Work against damage from any cause, and shall protect materials and supplies furnished by the Contractor or Subcontractors, whether or not incorporated in the Work, and shall make good any damage unless it be due directly to errors in the Contract Documents or is caused by agents or employees of the Owner.

**19.2** To the extent required by law, by public authority, or made necessary in order to safeguard the health and welfare of the personnel or occupants of any of the state institutions, the Contractor shall adequately protect adjacent property and persons, and provide and maintain all facilities, including but not limited, to passageways, guard fences, lights, and barricades necessary for such protection.

**19.3** The Contractor shall take all necessary precautions for the safety of employees on the Work and shall comply with applicable provisions of federal and state safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed. The Contractor shall also comply with the applicable provisions of the Associated General Contractors' "Manual of Accident Prevention in Construction", the standards of the Connecticut Labor Department and Occupational Safety and Hazard Association (OSHA).

**19.4** The Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for the protection of employees of the State and the public, and shall post danger signs warning against any dangerous condition or hazard created by such things as protruding nails, well holes, elevator hatchways, scaffolding, window openings, excavations, tripping hazards or slipping, stairways and falling materials.

**19.5** The Contractor shall designate a qualified and responsible on-site staff person, whose duty shall be the prevention of accidents. The name and position of the designated person shall be reported to the Owner by the Contractor at the commencement of the Contract.

**19.6** The Contractor shall at all times protect excavations, trenches, buildings, and all items of Work from damage by rain, water from melted snow or ice, surface water run off and subsurface water usual for the vicinity at the time of operations; and provide all pumps and equipment and enclosures to insure such protection.

**19.7** The Contractor shall construct and maintain all necessary temporary drainage and provide all pumping necessary to keep excavation, basements, footings and foundations free of water.

**19.8** The Contractor shall remove all snow and ice as may be required for access to the site and proper protection and prosecution of the Work.

**19.9** The Contractor shall install bracing, shoring, sheathing, sheet piling, caissons and any other underground facilities as required for safety and proper execution of the Work, and shall remove this portion of the Work when no longer necessary.

**19.10** During cold weather the Contractor shall protect all Work from damage. If low temperature makes it impossible to continue operations safely in spite of cold weather precautions, the Contractor may cease Work upon the written approval of the Commissioner.

#### **ARTICLE 20** **TEMPORARY UTILITIES**

**20.1** Unless expressly provided for otherwise in the Contract Documents, the Contractor shall include in the proposed contract bid price as stated on the Bid Proposal Form, the costs of all temporary utilities required for Project completion and protection of the Work. Said temporary utilities include, but are not limited to, lighting, heating, cooling, electrical power, water, telephone, sanitary facilities, and potable water.

#### **ARTICLE 21** **CORRECTION OF WORK**

**21.1** The Contractor shall promptly and without expense to the Owner remove from the premises all materials rejected by or unacceptable to the Commissioner as failing to conform to the Contract Documents, whether incorporated in the Work or not.

**21.2** The Contractor shall promptly and without expense to the Owner replace any such materials, which do not conform to the Contract Documents, and shall bear the expense of making good all Work of other Contractors or Subcontractors destroyed or damaged by such removal or replacement.

**21.3** If the Contractor, after receipt of notice from the Owner, shall fail to remove such rejected or unacceptable materials within a reasonable time as fixed in said notice, the Owner may remove and store such materials at the expense of the Contractor.

**21.4** Such action shall not affect the obligation of the Contractor to replace and complete assembly and installation of the Work and to bear the expenses referred to above. Prior to the correction of rejected or unacceptable Work or if the Commissioner deems it inexpedient or undesirable to correct any portion of the Work which was rejected, deemed unacceptable, or not done in accordance with the Contract

Documents, the Contract Sum shall be reduced by such amount as, in the judgment of the Commissioner, shall be equitable.

**21.5** No extension of time will be given to the Contractor for correction of rejected or unacceptable Work. All significant punchlist Work shall be completed before Substantial Completion is determined. The remaining minor punchlist Work, as determined by the Commissioner, shall be completed within ninety (90) Days of established Substantial Completion date.

**21.6** Final Payment shall not relieve the Contractor of responsibility for the defects in material or workmanship.

**21.7** Unless expressly provided for otherwise in the Contract Documents, the Contractor shall remedy any rejected or unacceptable Work, and any Work found to be not conforming to the Contract Documents which is discovered within 18 Months after the date of Substantial Completion. The Contractor shall pay for any damage to other Work caused by such nonconforming Work or any damage created in correcting the nonconforming Work.

#### **ARTICLE 22** **GUARANTEES and WARRANTIES**

**22.1** Unless expressly provided for otherwise in the Contract Documents, the Contractor shall provide a Warranty on the Work for an 18-Month period from the date of Substantial Completion. The Contractor shall warrant that the equipment, materials and workmanship are of good quality and new, unless permitted elsewhere by the Contract Documents, and that the Work shall be free from defects not inherent in the quality required or permitted and that the Work conforms to the Contract Documents.

**22.2** Disclaimers and limitations from manufactures, Subcontractors, suppliers or installers to the Contractor shall not relieve the Contractor of the Warranty on the Work. The Contract Documents detail the related damages, reinstatement of Warranty, replacement cost and Owner's recourse.

#### **ARTICLE 23** **CUTTING, FITTING, PATCHING, AND DIGGING**

**23.1** The Contractor will perform or will cause the Subcontractors to perform all cutting, fitting, or patching of the portion(s) of the Work that may be required to make the several parts thereof joined and coordinated in a manner satisfactory to the Commissioner and in accordance with the Plans and Specifications.

**23.2** The responsibility for defective or ill-timed Work shall be with the Contractor, but such responsibility shall not in any way relieve the Subcontractor who performed such Work. Except with the consent of the Commissioner, neither the Contractor nor any of its Subcontractors shall cut or alter the Work of any other Contractor or Subcontractor.

**ARTICLE 24  
CLEANING UP**

**24.1** The Contractor shall, on a daily basis, keep the premises free from accumulations of waste material or rubbish.

**24.2** Prior to Acceptance of the Work, the Contractor shall remove from and about the site of the Work, all rubbish, all temporary structures, tools, scaffolding, and surplus materials, supplies, and equipment which may have been used in the performance of the Work. If the Commissioner in his sole discretion determines that the Contractor has failed to clean the work site, the Owner may remove the rubbish and charge the cost of such removal to the Contractor. A deduct Change Order will be issued by the Owner to recover such cost.

**ARTICLE 25  
ALL WORK SUBJECT TO CONTROL OF THE  
COMMISSIONER**

**25.1** The Commissioner hereby declares that the CT DCS Project Manager is the Commissioner's only authorized representative to act in matters involving the Owner's, and/or Architect's or Engineer's, ability to revoke, alter, enlarge or relax any requirement of the Contract Documents; to settle disputes between the Contractor and the Construction Administrator; and act on behalf of the Commissioner. In all such matters, the provisions of Articles 13 and 14 herein shall guide the CT DCS Project Manager.

**25.2** In no event may the Contractor act on any instruction of the Agency without written consent of the Owner. In the event the Contractor acts without such consent, he does so at his own risk and at his own expense, not only for the Work performed, but for the removal of such Work as determined necessary by the Commissioner.

**25.3** In the performance of the Work, The Contractor shall abide by all orders, directions, and requirements of the Commissioner at such time and places and by such methods and in such manner and sequence as the Commissioner may require.

**25.4** The Commissioner shall determine the amount, quality, acceptability and fitness of all parts of the Work, shall interpret the plans, Specifications, Contract Documents and extra work orders and shall decide all other questions in connection with the Work.

**25.5** The Contractor shall employ no plant, equipment, materials, methods, or persons to which the Commissioner objects and shall remove no plant materials, equipment, or other facilities from the site of the Work without the permission of the Commissioner. Upon request, the Commissioner shall confirm in writing any oral order, direction, requirement or determination.

**25.6** In accordance with Section 4b-24 of the Connecticut General Statutes, the public auditors of the State of Connecticut and the auditors or accountants of the

Commissioner of Construction Services shall have the right to audit and make copies of the books of any Contractor employed by the Commissioner.

**ARTICLE 26  
AUTHORITY OF THE CONSTRUCTION  
ADMINISTRATOR**

**26.1** The Construction Administrator employed by the Commissioner is authorized to inspect all Work for conformance to the Contract Documents. The Construction Administrator is authorized to reject all Work found to be defective, unacceptable and nonconforming to the Contract Documents. Such inspections and rejections may extend to all or any part of the Work, and to the preparation or manufacture of the material to be used.

**26.2** The Construction Administrator is not empowered to revoke, alter, enlarge, or relax any requirements of the Contract Documents, or to issue instructions contrary to the Contract Documents. The Construction Administrator shall in no case act as foreman or perform other duties for the Contractor, nor shall the Construction Administrator interfere with the management of the Work by the Contractor. Any advice, which the Construction Administrator may give the Contractor, shall in no way be construed as binding the Commissioner or Owner in any way, nor releasing the Contractor from the fulfillment of the terms of the Contract.

**26.3** In any dispute arising between the Contractor and the Construction Administrator with reference to inspection and rejection of the Work, the Construction Administrator may suspend Work on the non-compliant portion of the Work until the dispute can be referred to and decided by the Commissioner.

**ARTICLE 27  
SCHEDULE OF VALUES,  
APPLICATION FOR PAYMENT**

**27.1** Immediately after the signing of the Contract, the Contractor shall furnish for the use of the Commissioner, as a basis for estimating partial payments, a certified Schedule of Values, totaling the Contract Sum and broken down into quantities and unit costs, as outlined in the Contract Documents and as directed by the Owner. The Schedule of Values must reflect true costs and be in sufficient detail to be an effective tool for monitoring the progress of the Work Upon request of the Commissioner; the Contractor shall supply copies of signed Contracts, vendor quotations, etc. as back up to the Schedule of Values.

**27.2** Approval of the Schedule of Values by the Commissioner is required prior to any payment by the Owner.

**27.3** The Schedule of Values shall include a breakdown of the Contractor's general condition costs.

**27.3.1** Non-recurring costs, (i.e. Mobilization costs, utility hook-ups, temporary heat) will be paid at the time of occurrence.

**27.3.2** Reoccurring costs will be paid in proportion to the percent of completion of the Project.

**27.3.3** Further detail can be found in the General Requirements 01.29.76; paragraphs 1.3.B.4 for this project.

**27.4** The Schedule of Values shall include a breakdown of Contract closeout costs including systems certification testing and acceptance, training, Warranties, Guarantees, As-Built Drawings and attic stock.

**27.5** The Contractor shall make periodic applications for payment, which shall be subdivided into categories corresponding with the approved Schedule of Values and shall be in such numbers of copies as may be designated by the Commissioner.

### **ARTICLE 28 PARTIAL PAYMENTS**

**28.1** Commissioner will examine the Contractor's Applications For Payments to determine, in the opinion of the Commissioner, the amounts that properly represent the value of the Work completed and the materials suitably stored on the site.

**28.2** In making such Application For Payment for the Work, there shall be deducted **seven** and **one-half** percent (7.5%) of the amount of each Application for Payment to be retained by the Owner as Retainage until Final Completion.

**28.2.1** The Commissioner has the sole discretion in the determination of reduction in Retainage. At fifty percent (50%) completion of the Work the Owner shall issue a "Contractor's Performance Evaluation". If the Contractor receives a performance evaluation score of "Good" or better, then the Retainage withheld may be reduced to five percent (5%). All subsequent Applications for Payment shall be subject to five percent (5%) Retainage. Upon Substantial Completion, the Retainage may be reduced at the request of the Contractor and recommendation of the CT DCS Project Manager. In the event of a reduction in Retainage to below five percent (5%), the minimum Retainage withheld shall not be less than the CT DCS Project Manager's estimate of the remaining Work or two and one-half percent (2.5%), which ever is greater. All requests for Retainage Reduction shall be done on CT DCS Form 7048 General Contractor Retainage Reduction Request, which can be found at the end of the General Conditions.

**28.2.2** Subsequent to Substantial Completion, in limited circumstances, at the sole discretion of the Commissioner, a reduction of Retainage below Two and one-half percent (2.5%) may be considered.

**28.2.3** A "Good" Contractor's Performance Evaluation score shall be defined as a minimum total score of sixty percent (60%).

**28.3** The decision of the Commissioner to reduce the Retainage rate will be based upon the Contractor's Performance Evaluation score for completed portions of the

Work as set out above and other factors that the Commissioner may find appropriate as follows:

**28.3.1** The Contractor's timely submission of an appropriate and complete CPM Schedule or Construction Schedule and Schedule of Values, in compliance with the Contract requirements and the prompt resolution of the Owner's and/or Architect's or Engineer's comments on the submitted material resulting in an appropriate basis for progress of the Work.

**28.3.2** The Contractor's timely and proper submission of all Contract Document required submissions: including, but not limited to, Shop Drawings, material certificates and material samples and the prompt resolution of the Owners and/or Architect's or Engineer's comments on the submitted material, resulting in an appropriate progress of the Work.

**28.3.3** The Contractor's provision of proper and adequate supervision and home office support of the Project.

**28.3.4** The Work completed to date has been installed or finished in a manner acceptable to the Owner.

**28.3.5** The progress of the Work is consistent with the approved CPM Schedule or Construction Schedule.

**28.3.6** All approved credit change orders have been invoiced.

**28.3.7** All Change Order requests for pricing are current.

**28.3.8** The Contractor has and is maintaining a clean worksite in accordance with the Contract Documents.

**28.3.9** All Subcontractor payments are current at the time of reduction request.

**28.3.10** Contractor is compliant with set-aside provisions of the contract.

**28.3.2.11** Pursuant to C.G.S. Sec. 4a-101, the General Contractor shall compile evaluation information during the performance of the contract on each of its subcontractors who are performing work with a value in excess of five hundred thousand dollars (\$500,000.00). The General Contractor shall complete and submit to the State of Connecticut Department of Construction Services (CT DCS) evaluations of each such subcontractor upon fifty percent (50%) completion of the project and upon Substantial Completion of the project. The General Contractor acknowledges that its failure to complete and submit these evaluations in a timely manner may, by statute; result in a delay in project funding and, consequently, payment to the General Contractor.

**28.4** No payments will be made for improperly stored or protected materials or unacceptable Work.

**28.5** At his or her sole discretion, the Commissioner may allow to be included in the monthly requisitions payment requests for materials and equipment stored off the site.

**28.5.1** In the event the Commissioner allows the Contractor to include in its requisitions payment requests for materials and equipment stored off the site, the Contractor shall also submit any additional bonds and/or insurance certificates relating to off-site stored materials



and equipment, and follow such other procedures as may be required by the State to obtain the Commissioner's approval of such requests.

**28.5.2** The Architect or Engineer, or Construction Administrator shall have inspected said materials and equipment and recommended payment therefore. The Contractor shall pay for the cost of the Architect's or Engineer's, or Construction Administrator's time and expense in performing these inspection services.

**ARTICLE 29**  
**DELIVERY OF STATEMENT SHOWING**  
**AMOUNTS DUE FOR WAGES, MATERIALS, AND**  
**SUPPLIES**

**29.1** For each Application for Payment under this Contract, the Owner reserves the right to require the Contractor and every Subcontractor to submit a written verified statement, in a form satisfactory to the Owner, showing in detail all amounts then due and unpaid by such Contractor or Subcontractor for daily or weekly wages to all laborers employed by it for the performance of the Work or to other persons for materials, equipment or supplies delivered at the site.

**29.2** The term "laborers" as used herein shall include workmen, workwomen, and mechanics.

**29.3** Failure to comply with this requirement may result in the Owner withholding the Application for Payment pursuant to Article 28.

**ARTICLE 30**  
**SUBSTANTIAL COMPLETION AND ACCEPTANCE**

**30.1 Substantial Completion:**

**30.1.1** When the Contractor considers that the Work or a portion thereof is Substantially Complete, the Contractor shall request an inspection of said Work in writing to the Construction Administrator. The request shall certify that the Contractor has completed its own inspection prior to the request and that the Contractor is compliant with all requirements of Section 01 77 00 of the General Requirements. The request must also include a statement that a principal or senior executive of the Contractor is ready, willing and able to attend a walk through inspection with the Architect or Engineer.

**30.1.2** Upon receipt of the request, the Architect or Engineer, Construction Administrator and Owner, will make an inspection to determine if the Work or designated portion thereof is Substantially Complete. A principal or senior executive of the Contractor shall accompany the Architect or Engineer during each inspection/re-inspection. If the inspection discloses any item, whether or not included on the inspection list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item.

**30.1.3** The Contractor shall then submit a request for another inspection. The determination of Substantial Completion is solely within the discretion of the Owner. Any

costs for re-inspection beyond one, shall be at the expense of the Contractor and such costs will be recovered by issuance of a credit Change Order. When the Work or designated portion thereof is determined to be Substantially Complete, the Contractor will be provided a Certificate of Substantial Completion from the Owner. The Certificate of Substantial Completion shall establish the date when the responsibilities of the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, are transferred to the Owner and shall fix the time within which the Contractor shall finish all items on the inspection list accompanying the Certificate. If the punch list is not complete in 90 Days, the Owner reserves the right to complete the outstanding punch list items with their own forces or by awarding separate contracts and to deduct the cost thereof from the amounts remaining due to the Contractor.

**30.1.4** The Certificate of Substantial Completion shall be signed by the Construction Administrator, Owner, and Architect or Engineer. Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Construction Administrator and Architect or Engineer, the Owner shall make payment reflecting adjustment in Retainage, if any, for such Work or portion thereof as provided in the Contract Documents.

**30.2 Acceptance:**

**30.2.1** Upon completion of the Work, the Contractor shall forward to the Construction Administrator a written notice that the Work is ready for inspection and Acceptance.

**30.2.2** When the Work has been completed in accordance with terms and conditions of the Contract Document as determined by the Owner a Certificate of Acceptance shall be issued by the Owner.

**ARTICLE 31**  
**FINAL PAYMENT**

**31.1** The Owner reserves the right to retain for a period of thirty (30) Days after filing of the Certificate of Acceptance the amount therein stated less all prior payments and advances whatsoever to or for the account of the Contractor.

**31.2** All prior estimates and payments, including those relating to extra or additional Work, shall be subject to correction by the Final Payment.

**31.3** No Application for Payment, Final or Partial, shall act as a release to the Contractor or the Contractor's sureties from any obligations under this Contract.

**31.4** The Architect or Engineer and Construction Administrator will promptly issue the Certificate for Payment, stating that to the best of their knowledge, information and belief, and on the basis of their observations 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 said Final Payment is due and payable.

**31.5** Final Payment shall not be released until a Certificate of Acceptance and a Certificate of Compliance have been issued.

**31.6** Neither Final Payment nor any Retainage shall become due until the Contractor submits to the Owner the following:

**31.6.1** 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.

**31.6.2** 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 without at least 30 Days prior written notice to the Owner.

**31.6.3** 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.

**31.6.4** Written consent of surety, if any, to Final Payment.

**31.6.5** 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. 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 lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorney's fees.

### ARTICLE 32

#### OWNER'S RIGHT TO WITHHOLD PAYMENTS

**32.1** The Commissioner may withhold a portion of any Payment due the Contractor that may, in the judgment of the Commissioner, be necessary:

**32.1.1** To assure the payment of just claims then due and unpaid to any persons supplying labor or materials for the Work.

**32.1.2** To protect Owner from loss due to defective, unacceptable or non-conforming Work not remedied by the Contractor.

**32.1** To protect the Owner from loss due to injury to persons or damage to the Work or property of other Contractors, Subcontractors, or others caused by the act or neglect of the Contractor or any of its Subcontractors.

**32.2** The Owner shall have the right to apply any amount withheld under this Article as the Owner may deem proper to satisfy protection from claims. The amount withheld shall be considered a payment to the Contractor.

**32.3** The Owner has the right to withhold payment if the Contractor fails to provide accurate submissions of Submittals,

up date the status including but not limited to the following: As-Built Drawings, request for information (RFI) log, Schedule, submittal log, Change Order log, certified payrolls and daily reports and all other requirement of the Contract Documents.

**32.4** 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 lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorney's fees.

### ARTICLE 33

#### OWNER'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

**33.1** The Commissioner shall have the authority to suspend the Work wholly or in part, for such period or periods as the Commissioner considers being in the best interests of the State, or in the interests of public necessity, convenience or safety. During such periods the Contractor shall store all materials and equipment, in such a manner to prevent the materials and equipment from being damaged in any way, and the Contractor shall take precautions to protect the Work from damage.

**33.1.1** If the Commissioner, in writing, orders the performance of all or any portion of the Work to be suspended or delayed for an unreasonable period of time (i.e. not originally anticipated, customary, or inherent in the construction industry) and the Contractor believes that additional compensation and/or Contract Time is due as a result of such suspension or delay, the Contractor shall submit to the Commissioner in writing a request for a Contract adjustment within 7 Days of receipt of the notice to resume Work. The request shall set forth the specific reasons and support for said adjustment.

**33.1.2** The Commissioner shall evaluate any such requests received. If the Commissioner agrees that the cost and/or time required for the performance of the Contract has increased as a result of such suspension and that the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or Subcontractors, and was not caused by weather, then the Commissioner will make a reasonable adjustment, excluding profit, of the Contract terms. The Commissioner will notify the Contractor of the determination as to what adjustments of the Contract, if any, that the Commissioner deems warranted.

**33.1.3** No Contract adjustment will be made unless the Contractor has submitted the request for adjustment within the time prescribed.

**33.1.4** No Contract adjustment will be made under this Article to the extent that performance would have been suspended or delayed by any other cause within the Contractor's control or by any factor for which the Contractor is responsible under the Contract; or that such an adjustment is provided for or excluded under other term or condition of this Contract.

**33.2** Notwithstanding any provision or language in the

Contract to the contrary, the State may terminate the Contract whenever the Commissioner determines at his sole discretion that such termination is in the best interests of the State. Any such termination shall be effected by delivery to the Contractor of a written Notice of Termination specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination shall be effective.

**33.2.1** In the event of such termination, the Contractor shall be entitled to reasonable compensation as determined by the Commissioner, however, no claim for lost Overhead or profits shall be allowed.

**33.2.2** All Work and materials obtained by the Contractor for the Work, that have been incorporated into the Work, inspected, tested as required, accepted by the Commissioner, and paid for by the State, shall become the property of the State.

**33.2.3** Materials obtained by the Contractor for the Work that have been inspected, tested as required, and accepted by the Commissioner, and that are not incorporated into the Work, shall, at the option of the Commissioner, be purchased from the Contractor at actual cost as shown by receipted bills. To this cost shall be added all actual costs for delivery at such points of delivery as may be designated by the Commissioner, as shown by actual cost records.

**33.2.4** Termination of the Contract shall not relieve the Contractor or its Surety of their responsibilities for the completed Work, nor shall it relieve the Contractor's Surety of its obligations to ensure completion of the Work and to pay legitimate claims arising out of Work.

#### **ARTICLE 34**

##### **SUBLETTING OR ASSIGNING OF CONTRACT**

**34.1** The Contract or any portion thereof, or the Work provided for therein, or the right, title, or interest of the Contractor therein may not be sublet, sold, transferred, assigned, or otherwise disposed of to any person, firm, or corporation without the written consent of the Commissioner.

**34.2** No person, firm, or corporation other than the Contractor to whom the Contract was awarded shall be permitted to commence Work at the site of the Contract until such consent has been granted.

#### **ARTICLE 35**

##### **CONTRACTOR'S INSURANCE**

**35.1** The Contractor shall not start Work under the Contract until they have obtained insurance as stated in SECTIONS 00 62 16 CERTIFICATE OF INSURANCE and 00 40 13 BID PROPOSAL FORM, subsections 4.4.2 and 4.4.3, of the Project Manual and until the insurance has been approved by the Owner. The Contractor shall not allow any Subcontractor to start Work until the same insurance has been obtained by the Subcontractor and approved by the Owner or the Contractor's insurance provides coverage on behalf of the Subcontractor. The Contractor shall send Certificates of Liability Insurance to the Bidding and Contracts Unit, Department of Construction Services, 165 Capitol Avenue, Room G-35, Hartford, CT 06106 unless otherwise directed in

writing. Presented below is a narrative summary of the insurance required.

**35.1.1 Commercial General Liability** Insurance including contractual liability, products/completed operations, broad form property damage and independent Contractors. The limits shall be no less than \$1,000,000 each occurrence and \$2,000,000 annual aggregate. Coverage for hazards of explosion, collapse and underground (X-C-U) and for asbestos abatement when applicable to this Contract, must also be included when applicable to the Work to be performed. The State of Connecticut, the Department of Construction Services, and their respective officers, agents, and employees shall be named as an Additional Insured. This coverage shall be provided on a primary basis.

**35.1.2 Owner's and Contractor's Protective Liability** insurance providing a total limit of \$1,000,000 for all damages arising out of bodily injury or death of persons in any one accident or occurrence and for all damages arising out of injury or destruction of property in any one accident or occurrence and subject to a total (aggregate) limit of \$2,000,000 for all damages arising out of bodily injury to or death of persons in all accidents or occurrences and out of injury to or destruction of property during the policy period. This coverage shall be for and in the name of the State of Connecticut.

**35.1.3 Automobile Liability** The operation of all motor vehicles including those owned, non-owned and hired or used in connection with the Contract shall be covered by Automobile Liability insurance providing for a total limit of \$1,000,000 for all damages arising out of bodily injuries to or death of all persons in any one accident or occurrence and for all damages arising out of injury to or destruction of property in any one accident or occurrence. In cases where an insurance policy shows an aggregate limit as part of the automobile liability coverage, the aggregate limit must be at least \$2,000,000. This coverage shall be provided on a primary basis. Should the Contractor not own any automobiles, the automobile & liability requirement shall be amended to allow the Contractor to maintain only hired and non-owned liability coverage.

**35.1.4 Excess Liability** (Other than Umbrella Form) insurance in the amount of \$5,000,000 for bids of \$1,000,000 - \$10,000,000 and in the amount of \$10,000,000 for bids of \$10,000,001 - \$20,000,000. Refer to Section 00 92 00 Amendments of the Project Manual for Excess Liability insurance requirements for bids exceeding \$20,000,000.

**35.1.5 Workers' Compensation and Employer's Liability** as required by Connecticut Law and **Employers' Liability** with a limit of not less than \$100,000 per occurrence, \$500,000 disease policy limit and \$100,000 disease each employee. When Work is on or contiguous to navigable bodies of waterways and ways adjoining, the Contractor shall include the Federal Act endorsement for the U.S. Longshoremen's and Harbor Workers Act.

**35.1.6 Special Hazards Insurance**, if required, will be stated in SECTION 00 40 13 BID PROPOSAL FORM, subsection 4.4.2 of this Project Manual. This includes coverage for explosion, collapse or underground damage and for asbestos abatement when applicable to this Contract and shall be no less than \$1,000,000 each occurrence.

**35.1.7 Builder's Risk Insurance**, if required, will be stated in Section 00 40 13 Bid Proposal Form, subsection 4.4.3 of this Project Manual.

**35.1.8 Inland Marine/Transit Insurance:** With respect to property with values in excess of \$100,000 which is rigged, hauled or situated at the site pending installation, the Contractor shall maintain inland marine/transit insurance provided the coverage is not afforded by a Builder's Risk policy.

**35.1.9** When required to be maintained, the Builder's Risk and/or Inland Marine/Transit Insurance policy shall endorse the State of Connecticut as a Loss Payee and the policy shall state it is for the benefit of and payable to the State of Connecticut.

**35.2 Satisfying Limits Under an Umbrella Policy:** If necessary, the Contractor may satisfy the minimum limits required above for either Commercial General Liability, Automobile Liability, and Employer's Liability coverage under an Umbrella or Excess Liability policy. The underlying limits may be set at the minimum amounts required by the Umbrella or Excess Liability policy provided the combined limits meet at least the minimum limit for each required policy. The Umbrella or Excess Liability policy shall have an Annual Aggregate at a limit not less than two (2) times the highest per occurrence minimum limit required above for any of the required coverages. The State of Connecticut shall be specifically endorsed as an Additional Insured on the Umbrella or Excess Liability policy, unless the Umbrella or Excess Liability policy provides continuous coverage to the underlying policies on a complete "Follow-Form" basis.

**35.3** The Contractor shall, at its sole expense, maintain in full force and effect at all times during the life of the Contract or the performance of Work hereunder, insurance coverage as described herein. Certificates shall include a minimum thirty (30)-day endeavor to notify requirement to the Owner prior to any cancellation or non-renewal.

**35.4** The Contractor shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, coinsurance penalty, or self-insured retention, including any loss not covered because of the operation of such deductible, coinsurance penalty, or self-insured retention.

**35.5** The requirement contained herein as to types and limits of insurance coverage to be maintained by the Contractor are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor.

**35.6 Hold Harmless Provisions:** The Contractor shall at all times indemnify and save harmless the State of Connecticut, the Department of Construction Services, and their respective officers, agents, and employees, on account of any and all claims, damages, losses, litigation, expenses, counsel fees and compensation arising out of injuries (including death) sustained by or alleged to have been sustained by the officers, agents, and employees of said State or Department, or of the Contractor, his Subcontractor, or materialmen and from injuries (including death) sustained by or alleged to have been sustained by the public, any or all persons on or near the Work, or by any other person or property, real or personal (including property of said State or Department) caused in whole or in part by the acts, omissions, or neglect or the Contractor including, but not limited to, any neglect in safeguarding the Work or through the use of unacceptable materials in constructing the Work of the Contractor, any Subcontractor, materialman, or anyone directly employed by them or any of them while engaged in the performance of the Contract, including the entire elapsed time from the date of the Notice to Proceed or the actual Commencement Of The Work whichever occurs first until its completion as certified by the Department of Construction Services.

## **ARTICLE 36 FOREIGN MATERIALS**

**36.1** Preference shall be given to articles or materials manufactured or produced in the United States, Canada, and Mexico, (the members of the North American Free Trade Agreement (NAFTA)); and the products shall meet all of the referenced standards and Specifications for conditions of performance, quality, and price with duty being equal.

**36.2** Only articles or materials manufactured or produced in the United States, Canada, and Mexico, (the members of the North American Free Trade Agreement (NAFTA)), will be allowed. The foregoing provisions shall not apply to foreign articles or materials required by the Contract Documents.

## **ARTICLE 37 HOURS OF WORK**

**37.1** No person shall be employed to work or be permitted to work more than eight (8) hours in any Day or more than forty (40) hours in any week for any Work provided in the Contract, in accordance with Connecticut General Statute Section 31-57.

**37.2** The operation of such limitation of hours of work may be suspended during an emergency, upon the approval of the Commissioner, in accordance with Connecticut General Statute Section 31-57.

## **ARTICLE 38 CLAIMS**

**38.1 General:** When filing a formal claim under Section 4-61 (referred to as "Section 4-61" below) of the Connecticut

General Statutes (as revised), either as a lawsuit in the Superior Court or as a demand for arbitration, the Contractor must follow the procedures and comply with the requirements set forth in this Article. This Section does not, unless so specified, govern informal claims for additional compensation which the Contractor may bring before the Department. The Contractor should understand, however, that the Department may need, before the Department can resolve such a claim, the same kinds of documentation and other substantiation that it requires under this Article. It is the intent of the Department to compensate the Contractor for actual increased costs caused by or arising from acts or omissions on the part of the Department that violate legal or contractual duties owed to the Contractor by the Department.

**38.2 Notice of Claim:** Whenever the Contractor intends to file a formal claim against the Department under Section 4-61, seeking compensation for additional costs, the Contractor shall notify the Commissioner in writing (in strict compliance with Section 4-61) of the details of said claim. Such written notice shall contain all pertinent information described in Paragraph 38.5 below.

Once formal notice of a claim under Section 4-61(b) (as revised) has been given to the Commissioner, the claimant may not change the claim in any way, in either concept or monetary amount, (1) without filing a new notice of claim and demand for arbitration to reflect any such change, and (2) without the minimum period of six months after filing of the new demand commencing again and running before any hearing on the merits of the claim may be held. The only exception to this limitation will be for damages that continue to accrue after submission of the notice, in ways described and anticipated in the notice.

**38.3 Record Keeping:** The Contractor shall keep daily records of all costs incurred in connection with its Work on behalf of the Department. The daily records shall identify each aspect of the Project affected by matters related to any claim for additional compensation that the Contractor has filed, intends to file, or has reason to believe that it may file against the Department; the specific Project locations where Project work has been so affected; the number of people working on the affected aspects of the Project at the pertinent time(s); and the types and number of pieces of equipment on the Project site at the pertinent time(s). Any potential or anticipated effect on the Project's progress or Schedule which may result in a claim by the Contractor shall be noted contemporaneously with the cause of the effect, or as soon thereafter as possible.

**38.4 Claim Compensation:** The payment of any claim, or any portion thereof, that is deemed valid by the Department shall be made in accordance with the following provisions of this Article:

**38.4.1 Compensable Items:** The liability of the Department for claims will be limited to the following specifically identified items of cost, insofar as they have not otherwise been paid for by the Department, and insofar as they were caused solely by the actions or omissions of the Department or its agents (except that with regard to payment for extra work, the Department will pay to the Contractor the Overhead and profit percentages provided for in Article 13.):

**38.4.1.1** Additional Project-site labor expenses.

**38.4.1.2** Additional costs for materials.

**38.4.1.3** Additional, unabsorbed Project-site Overhead (e.g., for mobilization and demobilization).

**38.4.1.4** Additional costs for active equipment.

**38.4.1.5** For each Day of Project delay or suspension caused solely by actions or omissions of the Department either:

**38.4.1.5.1** an additional ten percent (10%) of the total amount of the costs identified in Subparagraphs 38.4.1.1 through 38.4.1.4 above; except that if the delay or suspension period prevented the Contractor from incurring enough Project costs under Subparagraphs 38.4.1.1 through 38.4.1.4 during that period to require a payment by the Department that would be greater than the payment described in Subparagraph 38.4.1.5.2 below, then the payment for affected home office Overhead and profit shall instead be made in the following *per diem* amount :

**38.4.1.5.2** six percent (6%) of the original total Contract amount divided by the original number of Days of Contract Time. Payment under either 38.4.1.5.1 or 38.4.1.5.2 hereof shall be deemed to be complete and mutually satisfactory compensation for any unabsorbed home office overhead and any profit related to the period of delay or suspension.

**38.4.1.6** Additional equipment costs. Only actual equipment costs shall be used in the calculation of any compensation to be made in response to claims for additional Project compensation. Actual equipment costs shall be based upon records kept in the normal course of business and in accordance with generally accepted accounting principles. Under no circumstances shall Blue Book or other guide or rental rates be used for this purpose (unless the Contractor had to rent the equipment from an unrelated party, in which case the actual rental charges paid by the Contractor, so long as they are reasonable, shall be used). Idle equipment, for instance, shall be paid for based only on its actual cost to the Contractor.

**38.4.1.7** Subcontractor costs limited to, and determined in accordance with, Subparagraphs 38.4.1.1 through 38.4.1.5 above and applicable statutory and case law. Such Subcontractor costs may be paid for by the Department only: (a) in the context of an informal claims settlement; or (b) if the Contractor has itself paid or legally assumed, present unconditional liability for those Subcontractor costs.

**38.4.2 Excusable But Not Compensable Items:** The Contractor may be allowed Days but the Department will have no liability for the following non-compensable items:

**38.4.2.1** Abnormal or unusually severe weather

**38.4.2.2** Acts of God

**38.4.2.3** Force Majeure

**38.4.2.4** Concurrent Delay

**38.4.3 Non-Compensable Items:** The Department will have no liability for the following specifically-identified non-compensable items:

- 38.4.3.1** Profit, in excess of that provided for herein.
- 38.4.3.2** Loss of anticipated profit.
- 38.4.3.3** Loss of bidding opportunities.
- 38.4.3.4** Reduction of bidding capacity.
- 38.4.3.5** Home office overhead in excess of that provided for in Subparagraph 38.4.1.5 hereof.
- 38.4.3.6** Attorneys fees, claims preparation expenses, or other costs of claims proceedings or resolution.
- 38.4.3.7** Subcontractor failure to perform
- 38.4.3.8** Any other consequential or indirect expenses or costs, such as tort damages, or any other form of expense or damages not provided for in these specifications or elsewhere in the Contract.

**38.5 Required Claim Documentation:** All claims shall be submitted in writing to the Commissioner, and shall be sufficient in detail to enable the Department to ascertain the basis and the amount of each claim, and to investigate and evaluate each claim in detail. As a minimum, the Contractor must provide the following information for each and every claim and sub-claim asserted:

- 38.5.1** detailed factual statement of the claim, with all dates, locations and items of Work pertinent to the claim.
- 38.5.2** A statement of whether each requested additional amount of compensation or extension of time is based on provisions of the Contract or on an alleged breach of the Contract. Each supporting or breached Contract provision and a statement of the reasons why each such provision supports the claim must be specifically identified or explained.
- 38.5.3** Excerpts from manuals or other texts which are standard in the industry, if available, that support the Contractor's claim.
- 38.5.4** The details of the circumstances that gave rise to the claim.
- 38.5.5** The date(s) on which any and all events resulting in the claim occurred, and the date(s) on which conditions resulting in the claim first became evident to the Contractor.
- 38.5.6** Specific identification of any pertinent document, and detailed description of the substance of any material oral communication, relating to the substance of such claim.
- 38.5.7** If an extension of time is sought, the specific dates and number of Days for which it is sought, and the basis or bases for the extension sought. A critical path method, bar chart, or other type of graphical schedule that supports the extension must be submitted.
- 38.5.8** When submitting any claim over \$50,000, the Contractor shall certify in writing, under oath and in accordance with the formalities required by the contract, as to the following:

- 38.5.8.1** That supporting data is accurate and complete to the Contractor's best knowledge and belief;

- 38.5.8.2** That the amount of the dispute and the dispute itself accurately reflects what the Contractor in good faith believes to be the Department's liability;

- 38.5.8.3** The certification shall be executed by:

- 38.5.8.3.1** If the Contractor is an individual, the certification shall be executed by that individual.

- 38.5.8.3.2** If the Contractor is not an individual, the certification shall be executed by a senior company official in charge at the Contractor's plant or location involved or an officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

**38.6 Auditing of Claims:** All claims filed against the Department shall be subject to audit by the Department or its agents at any time following the filing of such claim. The Contractor and its Subcontractors and suppliers shall cooperate fully with the Department's auditors. Failure of the Contractor, its Subcontractors, or its suppliers to maintain and retain sufficient records to allow the Department or its agents to fully evaluate the claim shall constitute a waiver of any portion of such claim that cannot be verified by specific, adequate, contemporaneous records, and shall bar recovery on any claim or any portion of a claim for which such verification is not produced. Without limiting the foregoing requirements, and as a minimum, the Contractor shall make available to the Department and its agents the following documents in connection with any claim that the Contractor submits:

- 38.6.1** Daily time sheets and foreman's daily reports.
- 38.6.2** Union agreements, if any.
- 38.6.3** Insurance, welfare, and benefits records.
- 38.6.4** Payroll register.
- 38.6.5** Earnings records.
- 38.6.6** Payroll tax returns.
  
- 38.6.7** Records of property tax payments.
- 38.6.8** Material invoices, purchase orders, and all material and supply acquisition contracts.
- 38.6.9** Materials cost distribution worksheets.
- 38.6.10** Equipment records (list of company equipment, rates, etc.).
- 38.6.11** Vendor rental agreements.
- 38.6.12** Subcontractor invoices to the Contractor, and the Contractor's certificates of payments to Subcontractors.
- 38.6.13** Subcontractor payment certificates.
- 38.6.14** Canceled checks (payroll and vendors).
- 38.6.15** Job cost reports.
- 38.6.16** Job payroll ledger.
- 38.6.17** General ledger, general journal (if used), and all subsidiary ledgers and journals, together with all supporting documentation pertinent to entries made in these ledgers and journals.
- 38.6.18** Cash disbursements journals.

**38.6.19** Financial statements for all years reflecting the operations on the Project.

**38.6.20** Income tax returns for all years reflecting the operations on the Project.

**38.6.21** Depreciation records on all company equipment, whether such records are maintained by the company involved, its accountant, or others.

**38.6.22** If a source other than depreciation records is used to develop costs for the Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents.

**38.6.23** All documents which reflect the Contractor's actual profit and overhead during the years that the Project was being performed, and for each of the five years prior to the commencement of the Project.

**38.6.24** All documents related to the preparation of the Contractor's bid, including the final calculations on which the total proposed Contract bid price as stated in the Bid Proposal Form was based.

**38.6.25** All documents which relate to the claim or to any sub-claim, together with all documents that support the amount of damages as to each claim or sub-claim.

**38.6.26** Worksheets used to prepare the claim, which indicate the cost components of each item of the claim, including but not limited to the pertinent costs of labor, benefits and insurance, materials, equipment, and Subcontractors' damages, as well as all documents which establish the relevant time periods, individuals involved, and the Project hours and the rates for the individuals.

**38.6.27** The name, function, and pertinent activity of each Contractor's or Subcontractor's official, or employee, involved in or knowledgeable about events that give rise to, or facts that relate to, the claim.

**38.6.28** The amount(s) of additional compensation sought and a break-down of the amount(s) into the categories specified as payable under Paragraph 38.4 above.

**38.6.29** The name, function, and pertinent activity of each Department official, employee, or agent involved in or knowledgeable about events that give rise to, or facts that relate to, the claim.

### **ARTICLE 39**

#### **DIESEL VEHICLE EMISSIONS CONTROL**

**39.1** The Contractor shall be responsible for compliance with the following provisions:

**39.1.1** All Contractor and Subcontractor diesel powered non-road construction equipment with engine horsepower (HP) ratings of 60 HP and above, that are on the Project or are assigned to the Contract for a period in excess of 30 consecutive Days, shall be retrofitted with emission control devices in order to reduce diesel emissions. In addition, all motor vehicles and/or construction equipment (both on-highway and non-road) shall comply with all pertinent State and Federal regulations relative to exhaust emission controls and safety.

**39.1.2** Retrofit emission control devices shall consist of oxidation catalysts, or similar retrofit equipment control technology that is:

**39.1.2.1** Included on the U.S. Environmental Protection Agency (EPA) "Verified Technology List," as may be amended from time to time  
<http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm>  
and

**39.1.2.** Verified by EPA to provide a minimum emissions reduction of 20% particulate matter (PM<sub>10</sub>), 40% carbon monoxide (CO), and 50% hydrocarbons (HC).

**39.1.3** Construction shall not proceed until all diesel powered non-road construction equipment meeting the criteria in provision 39.1.1 have been retrofitted, unless the Commissioner grants a waiver under provision 39.2.

**39.1.4** The Contractor shall at least monthly, assess which diesel powered non-road construction equipment are subject to these provisions. The Contractor shall notify the CT DCS Project Manager of any violations of these provisions.

**39.1.5** Idling of delivery and/or dump trucks, or other diesel powered equipment shall be limited to three (3) minutes during non-active use in accordance with the Regulations of Connecticut State Agencies Section 22a-74-18(b)(3)(C), which states, in part:

*"[N]o person shall cause or allow a Mobile Source to operate for more than three (3) consecutive minutes when such Mobile Source is not in motion, except as follows:*

*When a Mobile Source is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control,*

*When it is necessary to operate defrosting, heating or cooling equipment to ensure the safety or health of the driver or passengers,*

*When it is necessary to operate auxiliary equipment that is located in or on the Mobile Source to accomplish the intended use of the Mobile Source, (To bring the Mobile Source to the manufacturer's recommended)*

*When a Mobile Source is in queue to be inspected by U.S. military personnel prior to gaining access to a U.S. military installation."*

**39.1.6** All Work shall be conducted to ensure that no harmful effects are caused to adjacent Sensitive Receptor Sites. Diesel powered engines shall be located away from fresh air intakes, air conditioners, and windows.

**39.1.7** If any diesel powered non-road construction equipment is found to be in non-compliance with these provisions by the CT DCS Project Manager, the Contractor will be issued a Non-Conformance Notice and given a 24 hour period in which to bring the equipment into compliance or remove it from the Project. The Contractor's failure to comply with these provisions shall be reason to withhold payment as described in Article 33.

**39.1.8** Any costs associated with these provisions shall be included in the general cost of the contract. In addition, there shall be no time granted to the Contractor for compliance with these provisions. The Contractor's compliance with these provisions and any associated regulations shall not be grounds for a Change Order.

**39.2** The Commissioner reserves the right to waive all or portions of these provisions at his/her discretion. The Contractor may request a waiver to all or portions of these provisions with written justification to the Commissioner as to why the Contractor cannot comply with these provisions. A waiver, to be effective, must be granted in writing by the Commissioner.

**END**



**Appendix 1**



**7048**  
**General Contractor**  
**Retainage Reduction Request**  
**(SAMPLE)**

**To:** Allen V. Herring, P.E., CT DCS Chief Engineer  
Room 265, 165 Capitol Avenue, Hartford, CT 06106

**From:** (Insert GC's Name ), General Contractor

**Subject:** Project No. ( ) Reduction of Retainage at ( )% project completion

In accordance with the General Conditions, Article 28 Progress Payments, (insert GC's name) hereby requests a reduction of retainage to an amount of insert written percent Percent (insert numerical percent%). The following list of items required under the General Conditions is in compliance with the terms of the contract and has been verified by the General Contractor.

- DAS Contractor Performance Evaluation Score is a minimum of **Sixty (60%) Percent**.
- Timely submission of an appropriate and complete CPM Schedule and Schedule of Values, in compliance with the Contract requirements and the prompt resolution of the Owner's and/or A/E's comments on the submitted material resulting in an appropriate basis for progress of the Work.
- Timely and proper submission of all Contract Document required submissions: including but not limited to Shop Drawings, material certificates and material samples and the prompt resolution of the Owner's and/or Architect's or Engineer's comments on the submitted material resulting in an appropriate progress of the Work.
- Proper and adequate supervision and home office support of the Project.
- The Work completed to date has been installed or finished in a manner acceptable to the Owner.
- The progress of the Work is consistent with the approved CPM Schedule.
- All approved credit Change Orders have been invoiced.
- All Change Order requests for pricing are current.
- The General Contractor has and is maintaining a clean worksite in accordance with the Contract Documents.
- All Subcontractor payments are current at the time of reduction request.
- General Contractor is compliant with set-aside provisions of the contract.

**General Contractor Certification:** \_\_\_\_\_  
(Written Name) (Signature) (Date)

**Project Manager Recommendation:** \_\_\_\_\_  
(Written Name) (Signature) (Date)

**Approved:**  
Allen V. Herring, P.E.  
CT DCS Chief Engineer  
\_\_\_\_\_  
(Signature) (Date)





**Supplementary Conditions of the Contract for Construction  
For Design - Bid - Build  
Department of Administrative Services ● Construction Services  
State of Connecticut**

**1.0 Supplementary Conditions:**

- 1.1 These Supplementary Conditions modify the State of Connecticut, Department of Construction Services, Section 00 72 13 General Conditions of the Contract for Construction for Design – Bid- Build (Rev. 03.26.12 ), and other provisions of the Contract Documents as indicated below. All provisions which are not so modified remain in full force and effect.
- 1.2 The terms used in these Supplementary Conditions which are defined in the Section 00 72 13 General Conditions of the Contract for Construction for Design – Bid- Build (Rev. 03.26.12), have the meanings assigned to them in the General Conditions.

**2.0 Section 00 72 13 General Conditions Of The Contract For Construction For Design - Bid – Build:**

- 2.1 **ADD:** Subsection 3.6 to **ARTICLE 3, CORRELATION OF CONTRACT DOCUMENTS**, as follows:

3.6 In accordance with Public Act No. 13-247 (Effective June 19, 2013), wherever the term "Commissioner of Construction Services" is used in the "Bidding Documents" or "Project Manual" the term "Commissioner of Administrative Services" shall be substituted in lieu thereof; and wherever the term "Department of Construction Services" is used in "Bidding Documents" or "Project Manual", the term "Department of Administrative Services" shall be substituted in lieu thereof.

- 2.2 **DELETE:** Subsection 28.2 in its entirety from **ARTICLE 28, PARTIAL PAYMENTS**.

**ADD:** Subsection 28.2 to **ARTICLE 28, PARTIAL PAYMENTS**, as follows:

28.2 In making such Application For Payment for the Work, there shall not be more than **seven** and **one-half percent (7.5%)** deducted from the amount of each Application for Payment to be retained by the Owner as Retainage until Final Completion.

28.2.1 At **fifty percent (50%)** completion of the Work the Retainage shall be reduced to **five percent (5%)**. All subsequent Applications for Payment shall be subject to **five percent (5%) Retainage**. Upon Substantial Completion, and in the Commissioner's sole discretion and based upon the factors set forth in **Section 28.3**, the Retainage may be reduced upon the request of the Contractor and recommendation of the CT DAS Project Manager. In the event of a reduction in Retainage to below **five percent (5%)**, the minimum Retainage withheld shall not be less than the CT DAS Project Manager's estimate of the remaining Work or **two and one-half percent (2.5%)**, whichever is greater. All requests for Retainage Reduction shall be done on **CT DAS Form 7048 General Contractor Retainage Reduction Request**, which can be found at the end of the General Conditions.

28.2.2 Subsequent to Substantial Completion, in limited circumstances, at the sole discretion of the Commissioner and based upon factors set forth in **subsection 28.3**, a reduction of Retainage below **two and one-half percent (2.5%)** may be considered.

28.2.3 A "Good" Contractor's Performance Evaluation score shall be defined as a minimum total score of sixty percent (60%).

- 2.3 **ADD** Subsections **Definitions** to **ARTICLE 1 DEFINITIONS**, as follows:

- 2.3.1 **DELETE:** 1.71 in its entirety from **ARTICLE 1 DEFINITIONS**.

**ADD:** Subsection 1.71 to **ARTICLE 1 PARTIAL DEFINITIONS**, as follows:

1.71 **WORK:** The construction and services required by the Contract Documents, and including all 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 and "Work Phase".

**ADD:** Subsection 1.72 to **ARTICLE 1 DEFINITIONS**, as follows:

1.72 **WORK PHASE:** Construction of the Project by sequence or time intervals, which may include but not be limited to separate Construction Start Dates, Substantial Completion Dates, Application for Payments, Change Orders, Liquidated Damages, Retainage, and Subcontractors for each Work Phase.



2.4 **DELETE:** Appendix 1 from Section 00 72 13.1 in its entirety.  
**ADD:** New Appendix 1 to Section 00 72 13.1 as follows:

	<b>7048</b> <b>General Contractor (GC)</b> <b>Retainage Reduction Request</b> <i>(Sample)</i>
Page 2 of 1	

<b>To:</b>	Department of Administrative Services (DAS) Construction Services Office of Legal Affairs, Policy and Procurement 450 Columbus Blvd, Suite 1302 – North Tower Hartford, CT 06103		
<b>From:</b>	<input type="text" value="GC's Name"/>	General Contractor (GC)	
<b>Subject:</b>	DAS Project Number: <input type="text" value="DAS Project Number"/>		
	Reduction of Retainage at: <input type="text" value="Written Percent"/>	Percent ( <input type="text" value="##.#"/> %)	
<b>Date:</b>	<input type="text" value="Click or tap to enter a date."/>		

In accordance with the General Conditions, Article 28 Progress Payments,  
 ,  
 hereby requests a reduction of retainage to an amount of  Percent (  %)  
 The following list of items required under the General Conditions is in compliance with the terms of the contract and has been verified by the General Contractor (GC).

- DAS Construction Services Contractor Performance Evaluation Score is a minimum of **Sixty (60%) Percent**.
- Timely submission of an appropriate and complete CPM Schedule and Schedule of Values, in compliance with the Contract requirements and the prompt resolution of the Owner's and/or A/E's comments on the submitted material resulting in an appropriate basis for progress of the Work
- Timely and proper submission of all required Contract Document submissions including but not limited to Shop Drawings, material certificates, material samples and the prompt resolution of the Owner's and/or A/E's comments on the submitted material resulting in an appropriate progress of the Work.
- Proper and adequate supervision and home office support of the Project.
- The Work completed to date has been installed or finished in a manner acceptable to the Owner.
- The progress of the Work is consistent with the approved CPM Schedule.
- All approved credit Change Orders have been invoiced.
- All Change Order requests for pricing are current.
- The GC has and is maintaining a clean worksite in accordance with the Contract Documents.
- All Subcontractor payments are current at the time of reduction request.
- GC is compliant with set-aside provisions of the contract.

<b>General Contractor Certification:</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<i>(Written Name)</i>	<i>(Signature)</i>	<i>(Date)</i>
<b>Project Manager Recommendation:</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<i>(Written Name)</i>	<i>(Signature)</i>	<i>(Date)</i>
<b>DAS Chief Engineer or Authorized Representative:</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<i>(Written Name)</i>	<i>(Signature)</i>	<i>(Date)</i>

**END**

CT DAS – 7048 (Rev. 05.22.17) 7000 – Construction Phase Forms

**END OF SECTION**

## Set-Aside Contractor Schedule [SAMPLE ONLY]

**VIA EMAIL**

**Contractor Name**  
**Contractor Address**  
**City, State, Zip Code**

**BID OPENING DATE**

**Re:** DAS Project Description  
 DAS Project Number

**Date:**

**Dear Contractor:**

**Section 00 45 17 Named Subcontractor Bidders Qualification Statement(s)** is / (are) required for this project, only for your Named Subcontractors listed in Table 2.7 of your Section 00 41 00 Bid Proposal Form.

No person whose subcontract exceeds five hundred thousand dollars in value may perform work as a subcontractor on a project, which project is estimated to cost more than five hundred thousand dollars and is paid for, in whole or in part, with state funds, *unless, at the time of bid submission*, the person is prequalified in accordance with the Connecticut General Statutes Section 4a-100, as amended. This includes the contractor's or substantial subcontractor's prequalification classifications, aggregate work capacity ratings and single project limits.

In accordance with **Subsection 2.9 "Set-Aside Requirements" of Section 00 21 13 Instructions to Bidders**, you are required to *list* below the names of each *currently certified set-aside contractor* to be used for this project, along with the dollar *amount* to be paid each set-aside contractor.

The **responsibility** for listing a qualified and certified set-aside contractor rests solely with the **bidder** and not the State. **Listing a set-aside contractor who does not qualify may be considered the same as not listing one at all and the bid may be considered non-responsive and subject to rejection.**

Name	Address	* Amount	Indicate Whether: Subcontractor, Or Supplier, Or Both	** Class of Work
SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE

**\*Amount:** The total dollar amount to be paid to the set aside contractors must not be less than the percentage(s) stated in the Bid Proposal Form.

**\*\*Class of Work:** Means the name of the trade work to be provided by the Subcontractor or Supplier.

**ATTACHMENTS:**

**For Each of the Named Subcontractors:**

- Attach their Section 00 45 17 Named Subcontractor Bidders Qualification Statement(s)

**For Each of the Named Set-Aside SBE/MBE Contractors:**

- Attach their DAS Set-Aside Certificate of Eligibility (SBE and/or MBE)

**For Each of the Named Subcontractors With Subcontracts Greater Than \$500,000:**

- Attach their DAS Prequalification Certificate and Update (Bid) Statement for the Class of Work

\_\_\_\_\_ Date

This Form Must Be Received No Later Than \_\_\_\_\_ At:

State of Connecticut  
 Department of Administrative Services, Construction Services  
 Office of Legal Affairs, Policy, and Procurement  
 450 Columbus Boulevard, Suite 1302  
 Hartford, CT 06103

**Attn:**



**Minimum Rates and Classifications  
 for Building Construction**

**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 pages 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 sub-contractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his hourly wage.

<b>Project Number:</b>	BI-MM-55	<b>Project Town:</b>	Winsted, CT
<b>Project:</b> Winsted Roof and Boiler Department of Motor Vehicles 151 Torrington Road Winsted, CT			

The following pages contain:

Contractors Wage Certification Form	1 page
Notice to all Mason Contractors reference Section 31-53 of C.G.S. (Prevailing Wages)	1 page
Prevailing Wage Rates - English	15 pages
Informational Bulletin - <b>Occupational Classifications</b>	6 pages
Informational Bulletin – <b>The 10-Hour OSHA Construction Safety and Health Course</b>	2 pages
Footnotes	2 pages
Special Notice re: Wage Rate Adjustments	1 pages
Weekly Payroll Certification Form (WWS-CP1)	1 page
Fringe Benefits Explanation (P)	1 page
Weekly Payroll Certification Form (WWS-CP2)	1 page

**As of: March 5, 2019**







Opportunity \* Guidance \* Support



# **THIS IS A PUBLIC WORKS PROJECT**

**Covered by the**

# **PREVAILING WAGE LAW**

**CT General Statutes Section 31-53**

**If you have QUESTIONS regarding your wages  
CALL (860) 263-6790**

Section 31-55 of the CT State Statutes requires every contractor or subcontractor performing work for the state to post in a prominent place the prevailing wages as determined by the Labor Commissioner.



CONNECTICUT DEPARTMENT OF LABOR  
WAGE AND WORKPLACE STANDARDS DIVISION

**CONTRACTORS WAGE CERTIFICATION FORM**  
**Construction Manager at Risk/General Contractor/Prime Contractor**

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 \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

Return to:

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

*Rate Schedule Issued (Date):* \_\_\_\_\_



November 29, 2006

**Notice**  
**To All Mason Contractors and Interested Parties**  
**Regarding Construction Pursuant to Section 31-53 of the**  
**Connecticut General Statutes (Prevailing Wage)**

The Connecticut Labor Department Wage and Workplace Standards Division is empowered to enforce the prevailing wage rates on projects covered by the above referenced statute.

Over the past few years the Division has withheld enforcement of the rate in effect for workers who operate a forklift on a prevailing wage rate project due to a potential jurisdictional dispute.

The rate listed in the schedules and in our Occupational Bulletin (see enclosed) has been as follows:

**Forklift Operator:**

- **Laborers (Group 4) Mason Tenders** - operates forklift solely to assist a mason to a maximum height of nine feet only.
- **Power Equipment Operator (Group 9)** - operates forklift to assist any trade and to assist a mason to a height over nine feet.

The U.S. Labor Department conducted a survey of rates in Connecticut but it has not been published and the rate in effect remains as outlined in the above Occupational Bulletin.

*Since this is a classification matter and not one of jurisdiction, effective January 1, 2007 the Connecticut Labor Department will enforce the rate on each schedule in accordance with our statutory authority.*

Your cooperation in filing appropriate and accurate certified payrolls is appreciated.

**Sec. 31-53b. Construction safety and health course. New miner training program. Proof of completion required for mechanics, laborers and workers on public works projects. Enforcement. Regulations. Exceptions.** (a) Each contract for a public works project entered into on or after July 1, 2009, by the state or any of its agents, or by any political subdivision of the state or any of its agents, described in subsection (g) of section 31-53, shall contain a provision requiring that each contractor furnish proof with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

(b) Any person required to complete a course or program under subsection (a) of this section who has not completed the course or program shall be subject to removal from the worksite if the person does not provide documentation of having completed such course or program by the fifteenth day after the date the person is found to be in noncompliance. The Labor Commissioner or said commissioner's designee shall enforce this section.

(c) Not later than January 1, 2009, the Labor Commissioner shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of subsections (a) and (b) of this section. Such regulations shall require that the ten-hour construction safety and health courses required under subsection (a) of this section be conducted in accordance with federal Occupational Safety and Health Administration Training Institute standards, or in accordance with Federal Mine Safety and Health Administration Standards or in accordance with 29 CFR 1910.268, as appropriate. The Labor Commissioner shall accept as sufficient proof of compliance with the provisions of subsection (a) or (b) of this section a student course completion card issued by the federal Occupational Safety and Health Administration Training Institute, or such other proof of compliance said commissioner deems appropriate, dated no earlier than five years before the commencement date of such public works project.

(d) This section shall not apply to employees of public service companies, as defined in section 16-1, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

(P.A. 06-175, S. 1; P.A. 08-83, S. 1.)

History: P.A. 08-83 amended Subsec. (a) by making provisions applicable to public works project contracts entered into on or after July 1, 2009, replacing provision re total cost of work with reference to Sec. 31-53(g), requiring proof in certified payroll form that new mechanic, laborer or worker has completed a 10-hour or more construction safety course and adding provision re new miner training program, amended Subsec. (b) by substituting "person" for "employee" and adding "or program", amended Subsec. (c) by adding "or in accordance with Federal Mine Safety and Health Administration Standards" and setting new deadline of January 1, 2009, deleted former Subsec. (d) re "public building", added new Subsec. (d) re exemptions for public service company employees and delivery drivers who perform no labor other than delivery and made conforming and technical changes, effective January 1, 2009.





Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

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**Minimum Rates and Classifications  
for Building Construction**

ID# : B 25769

**Connecticut Department of Labor  
Wage and Workplace Standards Division**

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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: BI-MM-55  
State#:

Project Town: Winchester  
FAP#:

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

<b>CLASSIFICATION</b>	<b>Hourly Rate</b>	<b>Benefits</b>
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	38.25	27.96
<hr/>		
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**		
<hr/>		
1c) Asbestos Worker/Heat and Frost Insulator	40.21	29.30

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As of: **Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

2) Boilermaker	38.34	26.01
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3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	34.72	32.55 + a
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3b) Tile Setter	34.90	25.87
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3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
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3d) Tile, Marble & Terrazzo Finishers	26.70	21.75
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3e) Plasterer	33.48	32.06
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**As of: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

-----LABORERS-----

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4) Group 1: Laborers (common or general), acetylene burners, concrete specialists, wrecking laborers, fire watchers.	30.05	20.10
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4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofers/mixer/nozzleman (Person running mixer and spraying fireproof only).	30.30	20.10
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4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	30.55	20.10
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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.	30.55	20.10
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4d) Group 5: Air track operator, sand blaster and hydraulic drills.	30.55	20.10
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**As of: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

4e) Group 6: Blasters, nuclear and toxic waste removal. 31.80 20.10

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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). 31.05 20.10

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4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew. 28.38 20.10

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4h) Group 9: Top men on open air caisson, cylindrical work and boring crew. 27.86 20.10

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4i) Group 10: Traffic Control Signalman 16.00 20.10

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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. 32.60 25.34

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**As of: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

5a) Millwrights	33.14	25.74
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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)	38.82	26.25+3% of gross wage
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7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	53.37	33.705+a+b
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-----LINE CONSTRUCTION-----

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Groundman	26.50	6.5% + 9.00
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Linemen/Cable Splicer	48.19	6.5% + 22.00
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**As of: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

8) Glazier (Trade License required: FG-1,2) 37.18 21.05 + a

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9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection 35.47 35.14 + a

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----OPERATORS----

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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 and Tunnel Boring Machines. (Trade License Required) 39.55 24.30 + a

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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) 39.23 24.30 + a

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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) 38.49 24.30 + a

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**As of: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	38.10	24.30 + a
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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)	37.51	24.30 + a
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Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	37.51	24.30 + a
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Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	37.20	24.30 + a
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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).	36.86	24.30 + a
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Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	36.46	24.30 + a
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Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

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).	36.03	24.30 + a
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Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	33.99	24.30 + a
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Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	33.99	24.30 + a
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Group 12: Wellpoint operator.	33.93	24.30 + a
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Group 13: Compressor battery operator.	33.35	24.30 + a
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Group 14: Elevator operator; tow motor operator (solid tire no rough terrain).	32.21	24.30 + a
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**As of: Tuesday, March 05, 2019**



Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	31.80	24.30 + a
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Group 16: Maintenance Engineer/Oiler.	31.15	24.30 + a
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Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	35.46	24.30 + a
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Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	33.04	24.30 + a
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-----PAINTERS (Including Drywall Finishing)-----

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10a) Brush and Roller	33.62	21.05
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**As of: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

10b) Taping Only/Drywall Finishing	34.37	21.05
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10c) Paperhanger and Red Label	34.12	21.05
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10e) Blast and Spray	36.62	21.05
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11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	42.62	31.21
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12) Well Digger, Pile Testing Machine	37.26	24.05 + a
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13) Roofer (composition)	36.70	19.85
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**As of: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

14) Roofer (slate & tile)	37.20	19.85
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15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	43.70	42.40
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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)	42.62	31.21
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-----TRUCK DRIVERS-----

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17a) 2 Axle	29.13	23.33 + a
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17b) 3 Axle, 2 Axle Ready Mix	29.23	23.33 + a
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**As of: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

17c) 3 Axle Ready Mix	29.28	23.33 + a
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17d) 4 Axle, Heavy Duty Trailer up to 40 tons	29.33	23.33 + a
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17e) 4 Axle Ready Mix	29.38	23.33 + a
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17f) Heavy Duty Trailer (40 Tons and Over)	29.58	23.33 + a
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17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	29.38	23.33 + a
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18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	43.92	15.84 + a
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**As of: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

19) Theatrical Stage Journeyman	25.76	7.34
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Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

*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 \$4.00 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 journeyman 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](http://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: Tuesday, March 05, 2019**

Project: Winsted Roof And Boiler For The Department Of Motor Vehicles

*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: Tuesday, March 05, 2019**





## **Information Bulletin** ***Occupational Classifications***

The Connecticut Department of Labor has the responsibility to properly determine "job classification" on prevailing wage projects covered under C.G.S. Section 31-53(d).

***Note: This information is intended to provide a sample of some occupational classifications for guidance purposes only. It is not an all-inclusive list of each occupation's duties. This list is being provided only to highlight some areas where a contractor may be unclear regarding the proper classification. If unsure, the employer should seek guidelines for CTDOL.***

**Below are additional clarifications of specific job duties performed for certain classifications:**

- **ASBESTOS WORKERS**

Applies all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.

- **ASBESTOS INSULATOR**

Handle, install apply, fabricate, distribute, prepare, alter, repair, dismantle, heat and frost insulation, including penetration and fire stopping work on all penetration fire stop systems.

- **BOILERMAKERS**

Erects hydro plants, incomplete vessels, steel stacks, storage tanks for water, fuel, etc. Builds incomplete boilers, repairs heat exchanges and steam generators.

- **BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, MARBLE MASONS, PLASTERERS, STONE MASONS, PLASTERERS. STONE MASONS, TERRAZZO WORKERS, TILE SETTERS**

Lays building materials such as brick, structural tile and concrete cinder, glass, gypsum, terra cotta block. Cuts, tools and sets marble, sets stone, finishes concrete, applies decorative steel, aluminum and plastic tile, applies cements, sand, pigment and marble chips to floors, stairways, etc.

- **CARPENTERS, MILLWRIGHTS. PILEDRIVERMEN. LATHERS. RESILEINT FLOOR LAYERS, DOCK BUILDERS, DIKERS, DIVER TENDERS**

Constructs, erects, installs and repairs structures and fixtures of wood, plywood and wallboard. Installs, assembles, dismantles, moves industrial machinery. Drives piling into ground to provide foundations for structures such as buildings and bridges, retaining walls for earth embankments, such as cofferdams. Fastens wooden, metal or rockboard lath to walls, ceilings and partitions of buildings, acoustical tile layer, concrete form builder. Applies firestopping materials on fire resistive joint systems only. Installation of curtain/window walls only where attached to wood or metal studs. Installation of insulated material of all types whether blown, nailed or attached in other ways to walls, ceilings and floors of buildings. Assembly and installation of modular furniture/furniture systems. Free-standing furniture is not covered. This includes free standing: student chairs, study top desks, book box desks, computer furniture, dictionary stand, atlas stand, wood shelving, two-position information access station, file cabinets, storage cabinets, tables, etc.

- **LABORER, CLEANING**

- The clean up of any construction debris and the general (heavy/light) cleaning, including sweeping, wash down, mopping, wiping of the construction facility and its furniture, washing, polishing, and dusting.

- **DELIVERY PERSONNEL**

- If delivery of supplies/building materials is to one common point and stockpiled there, prevailing wages are not required. If the delivery personnel are involved in the distribution of the material to multiple locations within the construction site then they would have to be paid prevailing wages for the type of work performed: laborer, equipment operator, electrician, ironworker, plumber, etc.

- An example of this would be where delivery of drywall is made to a building and the delivery personnel distribute the drywall from one "stockpile" location to further sub-locations on each floor. Distribution of material around a construction site is the job of a laborer or tradesman, and not a delivery personnel.

- **ELECTRICIANS**

Install, erect, maintenance, alteration or repair of any wire, cable, conduit, etc., which generates, transforms, transmits or uses electrical energy for light, heat, power or other purposes, including the Installation or maintenance of telecommunication, LAN wiring or computer equipment, and low voltage wiring. ***\*License required per Connecticut General Statutes: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9.***

- **ELEVATOR CONSTRUCTORS**

Install, erect, maintenance and repair of all types of elevators, escalators, dumb waiters and moving walks. *\*License required by Connecticut General Statutes: R-1,2,5,6.*

- **FORK LIFT OPERATOR**

Laborers Group 4) Mason Tenders - operates forklift solely to assist a mason to a maximum height of nine (9) feet only.

Power Equipment Operator Group 9 - operates forklift to assist any trade, and to assist a mason to a height over nine (9) feet.

- **GLAZIERS**

Glazing wood and metal sash, doors, partitions, and 2 story aluminum storefronts. Installs glass windows, skylights, store fronts and display cases or surfaces such as building fronts, interior walls, ceilings and table tops and metal store fronts. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers, which require equal composite workforce.

- **IRONWORKERS**

Erection, installation and placement of structural steel, precast concrete, miscellaneous iron, ornamental iron, metal curtain wall, rigging and reinforcing steel. Handling, sorting, and installation of reinforcing steel (rebar). Metal bridge rail (traffic), metal bridge handrail, and decorative security fence installation. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers which require equal composite workforce.

- **INSULATOR**

- Installing fire stopping systems/materials for "Penetration Firestop Systems": transit to cables, electrical conduits, insulated pipes, sprinkler pipe penetrations, ductwork behind radiation, electrical cable trays, fire rated pipe penetrations, natural polypropylene, HVAC ducts, plumbing bare metal, telephone and communication wires, and boiler room ceilings.

- **LABORERS**

Acetylene burners, asphalt rakers, chain saw operators, concrete and power buggy operator, concrete saw operator, fence and guard rail erector (except metal bridge rail (traffic), decorative security fence (non-metal).

installation.), hand operated concrete vibrator operator, mason tenders, pipelayers (installation of storm drainage or sewage lines on the street only), pneumatic drill operator, pneumatic gas and electric drill operator, powermen and wagon drill operator, air track operator, block paver, curb setters, blasters, concrete spreaders.

- **PAINTERS**

Maintenance, preparation, cleaning, blasting (water and sand, etc.), painting or application of any protective coatings of every description on all bridges and appurtenances of highways, roadways, and railroads. Painting, decorating, hardwood finishing, paper hanging, sign writing, scenic art work and drywall hhg for any and all types of building and residential work.

- **LEAD PAINT REMOVAL**

- Painter's Rate

1. Removal of lead paint from bridges.
2. Removal of lead paint as preparation of any surface to be repainted.
3. Where removal is on a Demolition project prior to reconstruction.

- Laborer's Rate

1. Removal of lead paint from any surface NOT to be repainted.
2. Where removal is on a *TOTAL* Demolition project only.

- **PLUMBERS AND PIPEFITTERS**

Installation, repair, replacement, alteration or maintenance of all plumbing, heating, cooling and piping. ***\*License required per Connecticut General Statutes: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2 S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4.***

- **POWER EQUIPMENT OPERATORS**

Operates several types of power construction equipment such as compressors, pumps, hoists, derricks, cranes, shovels, tractors, scrapers or motor graders, etc. Repairs and maintains equipment. ***\*License required, crane operators only, per Connecticut General Statutes.***

- **ROOFERS**

Covers roofs with composition shingles or sheets, wood shingles, slate or asphalt and gravel to waterproof roofs, including preparation of surface. (demolition or removal of any type of roofing and or clean-up of any and all areas where a roof is to be relaid.)

- **SHEETMETAL WORKERS**

Fabricate, assembles, installs and repairs sheetmetal products and equipment in such areas as ventilation, air-conditioning, warm air heating, restaurant equipment, architectural sheet metal work, sheetmetal roofing, and aluminum gutters. Fabrication, handling, assembling, erecting, altering, repairing, etc. of coated metal material panels and composite metal material panels when used on building exteriors and interiors as soffits, fascia, louvers, partitions, canopies, cornice, column covers, awnings, beam covers, cladding, sun shades, lighting troughs, spires, ornamental roofing, metal ceilings, mansards, copings, ornamental and ventilation hoods, vertical and horizontal siding panels, trim, etc. The sheet metal classification also applies to the vast variety of coated metal material panels and composite metal material panels that have evolved over the years as an alternative to conventional ferrous and non-ferrous metals like steel, iron, tin, copper, brass, bronze, aluminum, etc. Fabrication, handling, assembling, erecting, altering, repairing, etc. of architectural metal roof, standing seam roof, composite metal roof, metal and composite bathroom/toilet partitions, aluminum gutters, metal and composite lockers and shelving, kitchen equipment, and walk-in coolers. To include testing and air –balancing ancillary to installation and construction.

- **SPRINKLER FITTERS**

Installation, alteration, maintenance and repair of fire protection sprinkler systems.

***\*License required per Connecticut General Statutes: F-1,2,3,4.***

- **TILE MARBLE AND TERRAZZO FINISHERS**

Assists and tends the tile setter, marble mason and terrazzo worker in the performance of their duties.

- **TRUCK DRIVERS**

~How to pay truck drivers delivering asphalt is under REVISION~

Truck Drivers are requires to be paid prevailing wage for time spent "working" directly on the site. These drivers remain covered by the prevailing wage for any time spent transporting between the actual construction location and facilities (such as fabrication, plants, mobile factories, batch plant, borrow pits, job headquarters, tool yards, etc.) dedicated exclusively, or nearly so, to performance of the contract or project, which are so located in proximity to the actual construction location that it is reasonable to include them. ***\*License required, drivers only, per Connecticut General Statutes.***

***For example:***

- Material men and deliverymen are not covered under prevailing wage as long as they are not directly involved in the construction process. If, they unload the material, they would then be covered by prevailing wage for the classification they are performing work in: laborer, equipment operator, etc.
- Hauling material off site is not covered provided they are not dumping it at a location outlined above.
- Driving a truck on site and moving equipment or materials on site would be considered covered work, as this is part of the construction process.

➤ *Any questions regarding the proper classification should be directed to:*  
*Public Contract Compliance Unit*  
*Wage and Workplace Standards Division*  
*Connecticut Department of Labor*  
*200 Folly Brook Blvd, Wethersfield, CT 06109*  
*(860) 263-6543.*

# **Informational Bulletin**

## **THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE**

(applicable to public building contracts entered into *on or after July 1, 2007*, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is [http://www.osha.gov/fso/ote/training/edcenters/fact\\_sheet.html](http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html);
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;
- (7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;
- (8) Proof of completion may be demonstrated through either: (a) the presentation of a *bona fide* student course completion card issued by the federal OSHA Training Institute; *or* (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;
- (9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

- (10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;
- (11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;
- (12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;
- (13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;
- (14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and
- (15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.
- (16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>; or by telephone at (860)263-6790.

**THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.**



**Connecticut Department of Labor  
Wage and Workplace Standards Division  
FOOTNOTES**

⇒ Please Note: If the “Benefits” listed on the schedule for the following occupations includes a letter(s) (+ a or + a+b for instance), refer to the information below.

Benefits to be paid at the appropriate prevailing wage rate for the listed occupation.

If the “Benefits” section for the occupation lists only a dollar amount, disregard the information below.

**Bricklayers, Cement Masons, Cement Finishers, Concrete Finishers, Stone Masons**  
(Building Construction) and  
(Residential- Hartford, Middlesex, New Haven, New London and Tolland Counties)

- a. Paid Holiday: Employees shall receive 4 hours for Christmas Eve holiday provided the employee works the regularly scheduled day before and after the holiday. Employers may schedule work on Christmas Eve and employees shall receive pay for actual hours worked in addition to holiday pay.

**Elevator Constructors: Mechanics**

- a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Veterans’ Day, Thanksgiving Day, Christmas Day, plus the Friday after Thanksgiving.
- b. Vacation: Employer contributes 8% of basic hourly rate for 5 years or more of service or 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.

**Glaziers**

- a. Paid Holidays: Labor Day and Christmas Day.

**Power Equipment Operators**  
(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year’s Day, Good Friday, Memorial day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday. Holidays falling on Saturday may be observed on Saturday, or if the employer so elects, on the preceding Friday.

**Ironworkers**

- a. Paid Holiday: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

**Laborers (Tunnel Construction)**

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. No employee shall be eligible for holiday pay when he fails, without cause, to work the regular work day preceding the holiday or the regular work day following the holiday.

**Roofers**

- a. Paid Holidays: July 4<sup>th</sup>, Labor Day, and Christmas Day provided the employee is employed 15 days prior to the holiday.

**Sprinkler Fitters**

- a. Paid Holidays: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

**Truck Drivers**

(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas day, and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

## STATUTE 31-55a

### - SPECIAL NOTICE -

**To: All State and Political Subdivisions, Their Agents, and Contractors**

**Connecticut General Statute 31-55a - Annual adjustments to wage rates by contractors doing state work.**

*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 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.*

- The prevailing wage rates applicable to any contract or subcontract awarded on or after October 1, 2002 are subject to annual adjustments each July 1st for the duration of any project which was originally advertised for bids on or after October 1, 2002.
- Each contractor affected by the above requirement 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 Web Site. The annual adjustments will be posted on the Department of Labor Web page: [www.ctdol.state.ct.us](http://www.ctdol.state.ct.us). 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.

**Any questions should be directed to the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109 at (860)263-6790.**



[New] In accordance with Section 31-53b(a) of the C.G.S. each contractor shall provide a copy of the OSHA 10 Hour Construction Safety and Health Card for each employee, to be attached to the first certified payroll on the project.

In accordance with Connecticut General Statutes, 31-53 Certified Payrolls with a statement of compliance shall be submitted monthly to the contracting agency.											<b>PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS</b>											Connecticut Department of Labor Wage and Workplace Standards Division 200 Folly Brook Blvd. Wethersfield, CT 06109					
CONTRACTOR NAME AND ADDRESS:											SUBCONTRACTOR NAME & ADDRESS						WORKER'S COMPENSATION INSURANCE CARRIER										
PAYROLL NUMBER		Week-Ending Date		PROJECT NAME & ADDRESS											POLICY #												
															EFFECTIVE DATE: EXPIRATION DATE:												
PERSON/WORKER, ADDRESS and SECTION	APPR RATE %	MALE/FEMALE AND RACE*	WORK CLASSIFICATION <small>Trade License Type &amp; Number - OSHA 10 Certification Number</small>	DAY AND DATE							Total ST Hours	BASE HOURLY RATE	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY							
				S	M	T	W	TH	F	S	Total O/T Hours				TOTAL FRINGE BENEFIT PLAN CASH	FICA	FEDERAL WITH-HOLDING	STATE WITH-HOLDING			LIST OTHER						
				HOURS WORKED EACH DAY																							
												\$ Base Rate	1. \$ 2. \$ 3. \$ 4. \$														
												\$ Cash Fringe	5. \$ 6. \$														
												\$ Base Rate	1. \$ 2. \$ 3. \$ 4. \$														
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												\$ Cash Fringe	5. \$ 6. \$														
												\$ Base Rate	1. \$ 2. \$ 3. \$ 4. \$														
												\$ Cash Fringe	5. \$ 6. \$														



**\*FRINGE BENEFITS EXPLANATION (P):**

Bona fide benefits paid to approved plans, funds or programs, except those required by Federal or State Law (unemployment tax, worker’s compensation, income taxes, etc.).

Please specify the type of benefits provided:

- 1) Medical or hospital care \_\_\_\_\_ 4) Disability \_\_\_\_\_
- 2) Pension or retirement \_\_\_\_\_ 5) Vacation, holiday \_\_\_\_\_
- 3) Life Insurance \_\_\_\_\_ 6) Other (please specify) \_\_\_\_\_

**CERTIFIED STATEMENT OF COMPLIANCE**

For the week ending date of \_\_\_\_\_,

I, \_\_\_\_\_ of \_\_\_\_\_, (hereafter known as Employer) in my capacity as \_\_\_\_\_ (title) do hereby certify and state:

**Section A:**

1. All persons employed on said project have been paid the full weekly wages earned by them during the week in accordance with Connecticut General Statutes, section 31-53, as amended. Further, I hereby certify and state the following:

- a) The records submitted are true and accurate;
- b) The rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as defined in Connecticut General Statutes, section 31-53 (h), are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection Connecticut General Statutes, section 31-53 (d), and said wages and benefits are not less than those which may also be required by contract;
- c) The Employer has complied with all of the provisions in Connecticut General Statutes, section 31-53 (and Section 31-54 if applicable for state highway construction);
- d) Each such person is covered by a worker’s compensation insurance policy for the duration of his employment which proof of coverage has been provided to the contracting agency;
- e) The Employer does not receive kickbacks, which means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a prime contractor in connection with a subcontractor relating to a prime contractor; and
- f) The Employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years or both.

2. OSHA~The employer shall affix a copy of the construction safety course, program or training completion document to the certified payroll required to be submitted to the contracting agency for this project on which such persons name first appears.

\_\_\_\_\_ Submitted on (Date)

(Signature) (Title)





**WEEKLY PAYROLL**

PERSON/WORKER, ADDRESS and SECTION	APPR RATE %	MALE/ FEMALE AND RACE*	WORK CLASSIFICATION  Trade License Type & Number - OSHA 10 Certification Number	DAY AND DATE							Total ST Hours  Total O/T Hours	BASE HOURLY RATE  TOTAL FRINGE BENEFIT PLAN CASH	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY
				S	M	T	W	TH	F	S					FICA	FEDERAL WITH- HOLDING	STATE WITH- HOLDING	OTHER		
				HOURS WORKED EACH DAY																
										\$	1. \$									
										Base Rate	2. \$									
											3. \$									
										\$	4. \$									
										Cash Fringe	5. \$									
											6. \$									
										\$	1. \$									
										Base Rate	2. \$									
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										\$	1. \$									
										Base Rate	2. \$									
											3. \$									
										\$	4. \$									
										Cash Fringe	5. \$									
											6. \$									

\*IF REQUIRED



## Additional Forms to Be Submitted After Bond Commission Funding Approval

DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement

<b>Table of Contents</b>	<b>No. of Pages</b>
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<b>Bidder's Certification: Financial Position and Corporate Structure</b>	<b>1</b>

**PERFORMANCE BOND**  
**Know All Men by These Presents**

**THAT** [ ] of the  
Town of [ ], County [ ] and  
State of [ ], as Principal (hereinafter called the Principal),  
and [ ], [ ]

*(Insert place of Business)*

(a surety company authorized to transact business in the State Of Connecticut) as Surety(ies) (hereinafter called the Surety) are held and firmly bound unto the State of Connecticut (hereinafter called the Obligee) in the full penal sum of

[ ]

(\$ [ ] ) Dollars, lawful money of the United States, to be paid to said State of Connecticut, to the which payment well and truly to be made and done, the said Principal binds himself, his heirs, executors, administrators and assigns (or itself, its successors and assigns), and the said Surety (ies) binds itself, its successors and assigns jointly and severally firmly by these presents.

Signed, sealed and delivered this [ ] day of [ ] 20 [ ] .

**THE CONDITION OF THIS OBLIGATION IS SUCH THAT**

**WHEREAS** said Principal will enter into a certain written contract with said Obligee, to be dated-the

[ ] day of [ ] 20 [ ] , which written , as amended, contract shall provide for the following:

- Project Title:** [ ]
- Project Location:** [ ]
- Contract Number:** [ ]
- Project Number:** [ ]

which contract, including any hereafter made extension, modification or alteration thereof, 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 herein fully set forth.

**NOW, THEREFORE**, if the said Principal shall well and truly keep, perform and execute all the undertaking, covenants, terms, conditions, and agreements of said contract, as it may be extended, modified or altered, and during the *period* of any guaranty required under the contract, according to its provisions on his or its part to be kept and performed or shall indemnify and reimburse the Obligee for any loss that it may suffer through the failure of the Principal to faithfully observe and perform each and every obligation and duty imposed upon the Principal by the said contract, as it may be extended, modified or altered, at the time and in the manner therein specified, then this obligation shall be null and void, otherwise it shall remain and be in full force and effect.

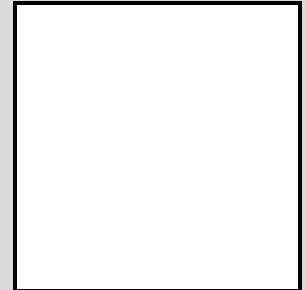
Any alterations which may be made in the terms of the contract, or in the work done or to be done under it, or the giving by the Obligee of any extension of time for the performance of the contract or any other forbearance on the part of either the Obligee or the Principal, one to the other, shall not 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(ies) assumes the contract or obtains a bid or bids for completion of the contract, the Surety(ies) 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.

**IN TESTIMONY WHEREOF**, the said Principal has hereunto set his / its hand and seal, and the said Surety(ies) has/have caused this instrument to be signed by its/their attorney in fact and its corporate seal to be hereunto affixed, the day and year first written.

**Witness as to Principle**

**SEAL**



(Print Name)

, Its

Duly Authorized

(Print Name)

**Witness as to Surety**

**SEAL**



(Print Name)

by

Its attorney in fact

(Print Name)

**Note:** If more than one surety, add additional lines for additional surety name and address, person signing and title, and two witnesses. Obtain Power of Attorney for each surety.

**End Performance Bond**

**LABOR AND MATERIAL BOND  
Know All Men by These Presents**

**THAT** [ ] of the  
Town of [ ], County [ ] and  
State of [ ], as Principal (hereinafter called the Principal),  
and [ ], [ ]  
(Insert place of Business)

(a surety company authorized to transact business in the State Of Connecticut) as Surety(ies) (hereinafter called the Surety) are held and firmly bound unto the State of Connecticut (hereinafter called the Obligee) in the full penal sum of

[ ]  
(\$ [ ]) Dollars, lawful money of the United States, to be paid to said State of Connecticut, to the which payment well and truly to be made and done, the said Principal binds himself, his heirs, executors, administrators and assigns (or itself, its successors and assigns), and the said Surety (ies) binds itself, its successors and assigns jointly and severally firmly by these presents.

Signed, sealed and delivered this [ ] day of [ ] 20 [ ] .

**THE CONDITION OF THIS OBLIGATION IS SUCH THAT**

**WHEREAS** said Principal will enter into a certain written contract with said Obligee, to be dated the [ ] day of [ ] 20 [ ] , which written, as amended, contract shall provide for the following:

- Project Title:** [ ]
- Project Location:** [ ]
- Contract Number:** [ ]
- Project Number:** [ ]

which contract, including any hereafter made extension, modification or alteration thereof, 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 herein fully set forth.

**NOW, THEREFORE**, if the said Principal shall promptly pay for all materials furnished and labor supplied or performed in the prosecution of the work included in and under the aforesaid contract, as it may be extended, modified or altered, and/or required by the General Statutes of Connecticut, as amended, whether or not the material or labor enters into and becomes a component part of the real asset, then this obligation shall be null and void, otherwise it shall remain and be in full force and effect. This bond is provided pursuant to Section 49-41 et seq. of the General Statutes of Connecticut and shall be governed thereby.

Any party, whether a subcontractor or otherwise, who furnishes materials or supplies or performs labor or services in the prosecution of the work under said contract, as it may be extended, modified or altered, and who is not paid therefor, may bring a suit on this bond in the name of the person suing and prosecute the same to final execution and judgment for such sum or sums as may be justly due.

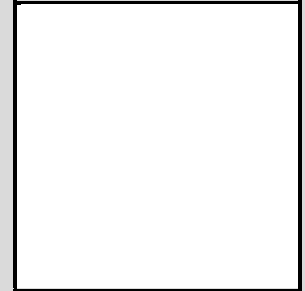
Any alterations which may be made in the terms of the contract, or in the work done or to be done under it, or the giving by the Obligee of any extension of time for the performance of the contract or any other forbearance on the part of either the Obligee or the Principal, one to the other, shall not 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(ies) assumes the contract or obtains a bid or bids for completion of the contract, the Surety(ies) 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.

**IN TESTIMONY WHEREOF**, the said Principal has hereunto set his / its hand and seal, and the said Surety(ies) has/have caused this instrument to be signed by its/their attorney in fact and its corporate seal to be hereunto affixed, the day and year first written.

**Witness as to Principle**

**SEAL**



(Print Name)

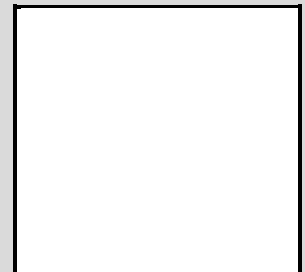
, Its

Duly Authorized

(Print Name)

**Witness as to Surety**

**SEAL**



(Print Name)

by

Its attorney in fact

(Print Name)

**Note:** If more than one surety, add additional lines for additional surety name and address, person signing and title, and two witnesses. Obtain Power of Attorney for each surety.

**End Labor and Material Bond**

## Surety Sheet

State Of Connecticut  
Department of Administrative Services, Construction Services  
Office of Legal Affairs, Policy, and Procurement  
450 Columbus Boulevard, Suite 1302  
Hartford, CT 06103

### 1. Surety Company

Name of Surety Co.:

Address of Home Office:

Telephone Number:

### 2. Agent

Name of Surety Co.:

Address of Agency:

Telephone Number:

Attorney-In-Fact:

Telephone Number:

DAS Project Number:

Contractor's Name:

*End Surety Sheet*



**Bidder's Certification:  
Financial Position and Corporate Structure**

*(Your Name)*

*(Name Of Company)*

Pursuant to C.G.S. § 4b-91(e), as amended, the bidder for this contract (hereinafter "bidder"), certifies under penalty of false statement that the information in the bid is true, that there has been no substantial change in the bidder's financial position or corporate structure since its most recent prequalification certificate was issued or renewed, other than those changes noted in the update statement, and that the bid was made without fraud or collusion with any person.

*(Signature)*

*(Print Name)*

*(Date)*

*(DAS Project Number)*

***End Bidder's Certification: Financial Position and Corporate Structure***

**End of Section 00 92 10  
Additional Forms To Be Submitted After Bond Commission Funding Approval**



## Procedures Regarding Taxation For Nonresident General / Prime Contractor and Subcontractors

**DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement**

According to [Connecticut General Statutes § 12-430\(7\)](#), there are two types of Nonresident Contractors and Subcontractors (*Verified* or *Unverified*) who are required to furnish security for Connecticut taxes arising from jobs performed in Connecticut.

Detailed information can be found by visiting the Connecticut Department of Revenue Services (DRS) website at [www.ct.gov/drs](http://www.ct.gov/drs):

- Under the “**For Businesses**” title, click on “**Withholding Tax**”;
- Click on “**Registering**”;
- Click on “**5. What tax types do I need to register for with DRS**”;
- Read the information for “**Out-of-State**” contractors.
- Click on “[SN 2012\(2\)](#)” for the “Procedure Governing Nonresident Contractors”.

Forms can be downloaded from the DRS website ([www.ct.gov/drs](http://www.ct.gov/drs)) as follows:

- Click on “**Forms**” at the top of the page;
- Under “**Current Year Forms**”:
  - Click on “**Miscellaneous Tax Forms**”;
  - Click on “**Bond Forms**”
- Download the appropriate form.

For questions regarding the nonresident contractor bond law, call **DRS** at **860-541-7538**.

### 1.0 Verified Nonresident Contractors and Subcontractors

Verified Nonresident Contractors are treated just like Resident Contractors. A Verified Nonresident General or Prime Contractor is not required to file a surety bond with DRS. A Verified Nonresident Subcontractor is not required for the General or Prime Contractor to hold back a portion of the amount owed the Subcontractor under the contract.

#### 1.1 Verification Procedure for General/Prime Contractors and Subcontractors:

**1.1.1 Register with DRS** via REG-1 for all appropriate taxes.

**1.1.2 Submit Form AU-960 “Nonresident Contractor Request for Verified Contractor Status” to DRS.** If you have a 3 year filing history with DRS and no delinquencies, then just complete **Part I & Part I**, otherwise go to **Part III**.

**1.1.3 Submit Form AU-961 “Verification Bond” to DRS.**

**1.1.4** If Verified by DRS, submit “**Notice of Verified Status**” (Verification Letter issued by DRS) to the Connecticut Department of Administrative Services / Construction Services (DAS/CS) Office of Legal Affairs, Policy, and Procurement as specified in Section 00 41 00 Bid Proposal Form.

**2.0 Unverified Nonresident Contractors and Subcontractors  
(for Contracts Greater Than \$250,000):**

The requirements for Unverified Nonresident Contractors and Unverified Nonresident Subcontractors (for Contracts greater than \$250,000) are different for General/Prime Contractors and their Subcontractors:

**2.1 Unverified Nonresident General or Prime Contractors:**

- 2.1.1** Submit **Form AU-964 “Surety Bond and Release” to DRS**. The Unverified Nonresident General/Prime Contractor is required to file a good and valid surety bond with DRS using Form AU-964 “Surety Bond and Release” for 5% of the contract price to secure payment of required taxes by both the General/Prime Contractor and its Subcontractors.
- 2.1.2** The General/Prime Contractor must provide proof to DAS/CS that they have posted a good and valid surety bond with DRS by providing a copy of **Form AU-965 “Acceptance of Surety Bond”** that verifies acceptance of the bond by DRS\*.

**2.2 Unverified Nonresident Subcontractors:**

- 2.2.1** The Resident or Verified or Unverified Nonresident General/Prime Contractor is required to hold back 5% of its payments to the Unverified Nonresident Subcontractor. The General/Prime Contractor must keep the hold-backs in a special fund in trust for the state.
- 2.2.2** The Unverified Nonresident Subcontractor can request that the money be released from the General/Prime Contractor by submitting **Form AU-967 “Request for Certificate of Compliance” to DRS**. It must be signed by the General/Prime Contractor and the Nonresident Subcontractor and submitted **to DRS within 90 days of the completion date**.
- 2.2.3** If **Form AU-968 “Certificate of Compliance”** is issued by DRS, DRS will instruct the General/Prime Contractor holding back the 5% to release the withheld amount to the Nonresident Subcontractor. If the “Certificate of Compliance” is denied or not requested within **90 days of the completion date of the contract**, the General/Prime Contractor holding back the 5% will remit the withheld amount on their own Sales & Use tax returns.
- 2.2.4** The 5% holdback does not take the place of any tax returns due from the Unverified Nonresident Contractor.
- 2.2.5** The General/Prime Contractor must give the Unverified Nonresident Subcontractor written notice of the hold-back requirements by the time the Subcontractor begins work under the contract.

\*Document(s) must be submitted to the DAS/CS Office of Legal Affairs, Policy, and Procurement as specified in Section 00 41 00 “Bid Proposal Form”.

**End of Section**

**00 92 30 Procedures Regarding Taxation  
For Nonresident General/Prime Contractor & Subcontractors**

## PART 1 – GENERAL

### 1.1 DEFINITIONS

**A. Contractor:**

Whenever the term "**Contractor**" is used in these Division 01 General Requirements and the Contract Documents, it may be understood to mean either the **Design-Bid-Build (D-B-B) "General Contractor"** or the **Construction Manager at Risk ("CMR")** as applicable to the specific Project.

**B. Subcontractor:**

Whenever the term "**Subcontractor**" is used, it may be understood to mean either a **Subcontractor** or a **Supplier**, as applicable to the specific Project.

**C. Contract:**

Whenever the term "**Contract**" is used in these Division 01 General Requirements and the Contract Documents, it may be understood to mean either the **D-B-B General Contractor's Contract Sum** as stated in their Contract or the **CMR's Contract Sum** as stated in their CMR Agreement, as applicable to the specific Project.

### 1.2 RELATED DOCUMENTS

- A.** The Contract Documents are defined in the D-B-B and CMR Division 00 General Conditions, as applicable to the specific Project.
- B.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.3 WORK COVERED BY CONTRACT DOCUMENTS

**A. Project Delivery Method:**

1.  Design-Bid-Build (DBB);
2.  Construction Manager at Risk (CMR)

**B. Project Number: BI-MM-55.**

**C. Project Title: Winsted Roof and Boiler, Department of Motor Vehicles.**

**D. Project Location: The 151 Torrington Road, located in Winsted, Connecticut.**

**E. The Project Description:**

1. Construction of a building of approximately **9,704** gross square feet.
2. Roof Replacement – Removal of existing built up roofing system down to metal deck, inspect, and repair or replace damaged metal deck, install new insulation boards, additional curbs, fully adhered 90 mil EPDM membrane system, related flashings, new metal fascia edge, new fall protection, new roof drains, reset mechanical equipment.
3. Boiler Replacements – Replacement of oil fire boiler system, new flue piping, new air intake.
4. The Authorities Having Jurisdiction for Threshold Projects, Non-Threshold Projects, and/or Connecticut State University System (CSUS) 2020 Projects, as defined by the Connecticut General Statutes, are the Connecticut Department of Administrative Services (DAS) / Construction Services (CS) Office of State Building Inspector (OSBI) and Office of State Fire Marshal (OSFM).

**F. Owner:**

1. **Owner's Name:** The Owner is the State of Connecticut, Department of Administrative Services.
2. **Authorized Representative for the Owner: DAS/CS Project Manager Name: Lisa Humble.**
  - a. **DAS/CS Project Manager's Location:** The DAS/CS Project Manager is located at 450 Columbus Blvd, Suite 1201, Hartford, CT, 06103.
  - b. **Phone: 860-713-5823;**
  - c. **Fax: 860-713-5823;**
  - d. **Email(s): lisa.humble@ct.gov.**

3. **Authority:** The DAS/CS Project Manager is the only authorized representative for the Department of Administrative Services Commissioner to act in matters involving revoking, altering, enlarging or relaxing any requirement of the Contract Documents.
    - a. **Related Section: Article 25, All Work Subject To Control of the Commissioner,** Division 00 General Conditions of the Contract for Construction.
- G. Agency:**
1. **Agency Name:** The Connecticut State (User) Agency is **CT Department of Motor Vehicles**.
  2. **Agency Representative Name and Title: Angelo Cavaliere.** The Agency Representative's Title is **Director, Engineering/Facilities Management Services**.
    - a. **Agency Representative Location:** The Agency Representative is located at **60 State Street, Wethersfield, CT 06161**.
    - b. **Phone: 860-263-5311;**
    - c. **Fax: 860-263-5575;**
    - d. **Email(s): angelo.cavaliere@ct.gov.**
  3. **Authority:** The Agency Representative has the administrative authority for the facility and or site where the work is being performed but does not have the authority to change the Contract Documents or direct the Contractor.
- H. Architect and Engineer (A/E):**
1. **Architect's Name:** The Architect representing the firm for this project is **Martin A. Benassi, AIA – Architect LLC**.
    - a. **Architect's Location:** The Architect is located at **Two Broadway, Hamden, CT 06518**.
    - b. **Phone: 203-281-5000;**
    - c. **Fax: 203-248-6072;**
    - d. **Email(s): mbenassi@mabarchitect.com or mhelou@mabarchitect.com.**
  2. The Architect and Engineer (A/E) or their accredited representative is referred to in the Contract Documents as "Architect" or "Architects" or "Engineer" or "Engineers" or by pronouns which imply them. As information for the Contractor, the Architect's or Engineer's status is defined as follows:
    - a. The Architect and Engineer will not make interpretations or decisions directly to the Contractor. All interpretations or decisions will be conveyed through the Construction Administrator to the DAS/CS Project Manager.
    - b. As the authorized representative of the Department of Administrative Services Commissioner, the Architect and Engineer is responsible for review of shop drawings, materials, and equipment intended for the work, in accordance with the Division 00 "General Conditions" and "Supplementary Conditions".
  3. Wherever the Architect or Engineer is mentioned in the documents in connection with an administrative function, it shall include the Construction Administrator in that function except for shop drawings.
- I. Construction Administrator (CA):**
1. **Construction Administrator Name: Martin A. Benassi, AIA Architect LLC.**
    - a. **Construction Administrator Location:** The Construction Administrator is located at **Two Broadway, Hamden, CT 06518**.
    - b. **Phone: 203-281-5000;**
    - c. **Fax: 203-248-6072;**
    - d. **Email(s): mbenassi@mabarchitect.com or mhelou@mabarchitect.com.**
  2. **Authority:** As information to the Contractor, the Construction Administrator's status is defined as follows:
    - a. The Construction Administrator (CA) is referred to in the Contract Documents as "Construction Administrator" or by pronouns which imply it. All communications concerning the project will be directed through the Construction Administrator or a designated representative(s).
    - b. The Construction Administrator is the Owner's Agent who will, among other things, monitor and analyze the Contractor's performance, scheduling and construction, process shop drawings,

material, and equipment submittals, review and process periodic billings, review, analyze, and recommend cost changes.

- c. **Related Section: Article 26 “Authority of the Construction Administrator”** of Division 00 “General Conditions of the Contract for Construction”.

3. The Construction Administrator will process all requests for information, interpretations and decisions regarding the meaning and intent of the Contract Documents, consulting with appropriate parties prior to rendering the interpretations or decisions for the Project Manager to the Contractor. All such requests and replies shall be in writing.

**J. Construction Manager (CMR):**

1. **Construction Manager’s Name (CMR): not applicable at this time**

2. **Authority:** Construction Manager is under direct Contract with the Department of Administrative Services, responsible for performing the Work under the Contract Documents. Whenever the words “Contractor” or “General Contractor” are used it shall be understood to mean Construction Manager.

3. **Related Sections:**

- a. **Article 1 “Definitions”** of Division 00 “General Conditions of the Contract for Construction for Construction Manager at Risk (CMR)”; and
- b. **Section 2.3 “Construction Phase”** of Article 2 “Construction Manager At Risk Responsibilities”, in Section 00 52 23 “Standard Form of Agreement Between Owner and Construction Manager-At-Risk (CMR) For Guaranteed Maximum Price (GMP)”.

**K. Work:** The Work Includes but is not limited to the following:

- 1 **Selective Demolition, Asbestos Removal**
- 2 **Roof Removal down to Metal Decking**
- 3 **Metal Decking Repair (Patch) or Replacement as needed, Additional Fastening**
- 4 **Miscellaneous Rough Carpentry, New Curbs, Additional Wood Blocking at existing curbs.**
- 5 **Roofing Insulation – 2 layers polyisocyanurate insulation, staggered joints, ½” cover board**
- 6 **New Fully Adhered 90 mil EPDM Single Ply Membrane Roofing System**
- 7 **Sheet Metal Flashing & Trim, New Metal Fascia Edge, Prefabricated Metal Curbs.**
- 8 **Roof Accessories including Fall Protection Guardrails and Roof Hatch rails**
- 9 **Joint Sealant**
- 10 **New Roof Drains**
- 11 **Reset Rooftop Mechanical Units**
- 12 **Mechanical – New Boiler and Flue, New Air Intake Unit.**

- L. The Contractor will include in their bid, all items required in order to carry out the intent of the Work as described, shown and implied in the Contract Documents.

- M. It shall be the Contractor’s responsibility upon discovery to immediately notify the Construction Administrator, in writing, of errors, omissions, discrepancies, and instances of noncompliance with applicable codes and regulations within the documents, and of any work which will not fit or properly function if installed as indicated on the Contract Documents. Any additional costs arising from the Contractor’s failure to provide such notification shall be borne by the Contractor.

- N. The Work will be constructed under the Contractor’s Contract as applicable to this Project.

- O. The Work will be performed in accordance with the Connecticut Department of Energy and Environmental Protection’s (DEEP) **“General Permit for the Discharge of Stormwater and Dewatering Wastewater from Construction Activities”** (DEEP-WPED-GP-015) and **Stormwater Pollution Control Plan (SPCP)**, including, but not limited to, implementing, maintaining, and updating the SPCP, performing regular inspections, conducting and reporting stormwater monitoring activities, retaining records for the required period of time, and performing all post-construction measures and inspections. See **Section 01 50 00 “Temporary Facilities and Controls”**.

**1.4 WORK UNDER OTHER CONTRACTS**

- A. **Separate Contract:** The Owner has awarded a separate contract for performance of certain construction operations at the site. Those operations are scheduled to be substantially complete before the work under this Contract begins. The separate contract includes the following:

- B. Cooperate fully with separate contractors so that work under those contracts may be carried out smoothly, without interfering with or delaying work under this contract.

#### 1.5 FUTURE WORK

- A. **Future Contract:** The Owner may award a separate contract for additional work to be performed at the site following Substantial Completion. Completion of that work depends on successful completion of preparatory work under this Contract. The Contract for future work includes the following:

#### 1.6 WORK SEQUENCE (PHASES)

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Site Phasing Plan is shown on Drawing Sheet No. A-1.
- C. The entire Project shall be constructed in One Phase(s). Work of these Phase(s) shall be substantially complete, ready for occupancy within 90 Calendar Days of commencement of the Work (the "Contract Time").
  1. **All work shown and specified for Winsted Roof and Boiler, Department of Motor Vehicles.**
  2. **All Division 07 Thermal and Moisture Protection**
  3. **All Mechanical and Electrical Work, materials and labor, as specified and/or as shown on the drawings as follows:**
    - a. **The installation of a complete and functional Boiler Room including all equipment.**

#### 1.7 CONTRACTOR'S USE OF PREMISES

- A. **General:** During the construction period the Contractor shall have full use of the newly constructed premises for construction operations, including use of the site. The Contractor's use of the premises is limited only by the Owner's right to perform work or to retain other contractors on portions of the Project.
- B. **Use of the Site:** Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
  1. **Owner Occupancy:** Allow for Owner occupancy and use by the public of the existing facility.
  2. The Contractor shall confine his operations including storage of materials, supplies, equipment, and apparatus to the areas bounded by the contract limits indicated and as directed in the Contract Documents.
  3. Existing roads, drives, walks, and parking areas which are not within the contract limit line are to be kept free and clear at all times. All deliveries for the project are to enter the property from **the main driveway**. The Contractor shall check all roadways for accessibility and clearances for deliveries of all large material and equipment. The Contractor shall inform the Construction Administrator at least **seventy-two (72)** hours in advance of these deliveries so they can be coordinated with the Agency so appropriate traffic control, etc. can be provided. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
  4. The Contractor shall be responsible for keeping the premises clean and shall pick up rubbish and debris and promptly remove from site.
  5. Parking for the Contractor's employees will be limited to an area designated by the Construction Administrator, and the Contractor may be required to provide identification stickers for all employees' cars.
  6. Special precautions shall be taken to protect all wetland areas designated to remain. Prevent any and all sediment, debris, or other materials from getting into these areas. Should any sediment, debris, or other materials get into these areas or if any damage occurs to the vegetation therein, the Contractor shall immediately contact the Construction Administrator for direction.
  7. The Contractor shall comply with local working hour restrictions, unless specifically approved otherwise in writing by the Owner.
  8. No signs, other than those approved by the Construction Administrator, will be visible on the premises.



- C. Use of the Existing Building:** Maintain the existing building in a weather-tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period. Note: Check with Agency special types of conditions. Contractor personnel are not allowed to use the Cafeteria or vending machines within the existing buildings unless authorized in writing by the agency.

## 1.8 OCCUPANCY REQUIREMENTS

- A. Full Agency Occupancy During Construction:** The Owner reserves the right to allow the Agency to occupy the site and existing building during the entire construction period. Cooperate with the Agency during construction operations to minimize conflicts and facilitate Agency usage. Perform the Work so as not to interfere with the Agency's operations.
1. Provide adequate building and fire code egress from the buildings during the renovation process and/or as indicated on the Contract Documents. The Contractor will be responsible to maintain and protect egress ways during the construction sequence as required and/or indicated in the Contract documents. The Contractor shall be responsible for preparing egress plans for Owner approval and for DAS/CS Office of State Building Official and Office of State Fire Marshal for approval if required.
- B. Partial Agency Occupancy:** The Owner reserves the right to allow the Agency to occupy and to place and install equipment in completed areas of the building prior to Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.
1. Should it become necessary or advisable, as the work nears final completion, for the Agency to occupy a portion of the building prior to final acceptance, the Contractor shall cooperate in completing such areas and making same accessible.
  2. The Construction Administrator will determine whether such occupancy or use is possible and, if so, will make arrangements for holding a job inspection with the DAS/CS Project Manager, Agency Representative, and Contractor.
  3. A comprehensive list of items to be completed or corrected as issued by the Contractor, together with the status of completion and terms of occupancy, will be forwarded to the DAS/CS Project Manager by the Construction Administrator. A letter will be issued by the DAS/CS Project Manager and Contractor to Construction Administrator granting such occupancy and will state the terms and conditions of occupancy.
  4. Prior to partial Agency occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy, the Agency will operate and maintain mechanical and electrical systems serving occupied portions of the building.
  5. The Architect will prepare a "Certificate of Substantial Completion" for each specific portion of the Work to be occupied prior to Agency occupancy. Use the "Certificate of Substantial Completion" form as required by the Owner and forward the Certificate to the DAS/CS Office of State Building Inspector for a Certificate of Occupancy and obtain the same after his review and approval.
  6. The DAS/CS Project Manager will request a signed "Certificate of Compliance" from the Architect and Contractor, and forward the Certificate to the Office of State Building Inspector for a Certificate of Occupancy and obtain the same after his review and approval.
  7. A letter from the DAS/CS Project Manager to the Agency Representative with copy to the Contractor granting occupancy will state the terms and conditions of occupancy and that fire insurance coverage has been requested, the effective date of which will indicate to the Contractor that they may cancel fire insurance coverage for that portion of the project.
  8. Upon occupancy, the Agency will assume responsibility for maintenance and custodial service for occupied portions of the building.
  9. **Work after Partial Agency Occupancy:**
    - 9.1 For all work to complete the area occupied, warranty work, the balancing and Commissioning (Cx) of systems, repair of latent defects and adjustments after partial occupancy, the Contractor is responsible for all costs associated with working in occupied buildings.
- C. Agency Occupancy:**
1. The Construction Administrator will determine whether such occupancy is possible and, if so, will make arrangements for holding a job inspection with the DAS/CS Project Manager, Agency Representative, and Contractor.

2. A comprehensive list of items to be completed or corrected as issued by the Contractor, together with the status of completion and terms of occupancy, will be forwarded to the DAS/CS Project Manager and the Contractor by the Construction Administrator. A letter will be issued by the DAS/CS Project Manager and Contractor to Construction Administrator granting such occupancy and will state the terms and conditions of occupancy.
3. Prior to Agency occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy, the Agency will operate and maintain mechanical and electrical systems serving occupied portions of the building.
4. The Architect will prepare a "Certificate of Substantial Completion" for the Work to be occupied prior to Agency occupancy. Use the "Certificate of Substantial Completion" form as required by the Owner.
5. The DAS/CS Project Manager will request a signed "Certificate of Compliance" from the Architect and Contractor, and forward the Certificate to the Office of State Building Inspector for a Certificate of Occupancy and obtain the same after his review and approval.
6. A letter from the DAS/CS Project Manager to the Agency Representative with copy to the Contractor granting occupancy will state the terms and conditions of occupancy and that fire insurance coverage has been requested, the effective date of which will indicate to the Contractor that they may cancel fire insurance coverage for the project.
7. Upon occupancy, the Agency will assume responsibility for maintenance and custodial service for occupied portions of the building.
8. **Work after Agency Occupancy:**
  - 8.1 For all work to complete the occupied building, warranty work, the balancing and commissioning of systems, repair of latent defects and adjustments after occupancy, the Contractor is responsible for all costs associated with working in occupied buildings.

#### 1.9 PRODUCTS ORDERED IN ADVANCE

- A. General:** The Owner has negotiated purchase orders with suppliers of material and equipment to be incorporated into the Work. The Owner has assigned these purchase orders to the Contractor. Costs for receiving handling and storage, and installation are included in the contract sum.
1. The Contractor's responsibilities are the same as if the contractor negotiated the purchase orders. If necessary, the Contractor shall renegotiate purchase and execute final purchase-order agreements.
  2. A "Schedule of Products Ordered in Advance" is included at the end of this section.

#### 1.10 OWNER-FURNISHED PRODUCTS

- A.** The Owner may furnish various products such as indicated in the construction documents. The Work includes providing support systems to receive Owner's equipment, and mechanical and electrical connections.
1. The Owner will arrange for and deliver necessary shop drawings, product data, and samples to the Contractor.
  2. The Owner will arrange and pay for delivery of Owner-furnished items according to the Contractor's Construction Schedule.
  3. Following delivery, the Owner will inspect items delivered for damage.
  4. If Owner-furnished items are damaged, defective, or missing, the Owner will arrange for replacement.
  5. The Owner will arrange for manufacturer's field services and for the delivery of manufacturer's warranties to the appropriate Contractor.
  6. The Contractor shall designate delivery dates of Owner-furnished items in the Contractor's Construction Schedule.
  7. The Contractor shall review shop drawings, product data, and samples and return them to the Architect noting discrepancies or problems anticipated in use of the product.
  8. The Contractor is responsible for receiving, unloading, and handling Owner-furnished items at the site.

9. The Contractor is responsible for protecting Owner-furnished items from damage, including damage from exposure to the elements. The Contractor shall repair or replace items damaged as a result of his operations.

## 1.11 MISCELLANEOUS PROVISIONS

### A. Examination of Site:

1. It is not the intent of the Documents to show all existing conditions. All Contractors and Subcontractors are advised to attend the Pre-Bid Meeting prior to submitting their Bid Proposals. This is the only official opportunity to visit and examine the site with the Owner, Agency, Architect, Engineer and Construction Administrator.
2. The Contractor should investigate and satisfy himself as to the conditions affecting the work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, uncertainties of weather, roads or similar physical conditions of the ground, the character of equipment, and facilities needed preliminary to and during the prosecution of the Work. The Contractor should further satisfy himself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the Contract Documents. Any failure by the Contractor to acquaint himself with the available information shall not relieve him from the responsibility for estimating properly the difficulty and cost of successfully performing the Work.
3. If tests have been done for Asbestos Containing Material (ACM), Lead-Based Paint (LBP) Containing Material, Polychlorinated Biphenyls (PCBs) in Building Materials and/or Mold, then the results are referenced in **Section 00 30 00 Available Information and provided in Division 50 00 00 Project-Specific Available Information**. See **Section 01 35 16 "Alteration Project Procedures"** for **removal responsibility** and additional information.
4. If tests have been done for Contaminated Soils and/or Contaminated Groundwater, then the results are referenced in **Section 00 30 00 Available Information and provided in Division 50 00 00 Project-Specific Available Information**. See **Section 01 35 16 "Alteration Project Procedures"** for **removal responsibility** and additional information.
5. If tests have been done for Work Involving Hazardous Materials, Wastes, and Items and Universal Wastes (Including Products Containing Persistent Bioaccumulative Toxic Chemicals" [PBTs] such as PCBs, Di-2-ethylhexyl Phthalate [DEHP], and Mercury), the results are referenced in **Section 00 30 00 Available Information and provided in Division 50 00 00 Project-Specific Available Information**. See **Section 01 35 16 "Alteration Project Procedures"** for **exposure limits and removal responsibility**.
6. **Subsurface Geotechnical Investigations:**
  - a. If Boring logs have been prepared for the site of this work they are in the Contract Documents.
  - b. If Geotechnical Reports(s) have been prepared for this project they are referenced in **Section 00 30 00 Available Information and provided in Division 50 00 00 Project-Specific Available Information**.
    - 1) The Contractor must interpret the Geotechnical Report (s) according to his own judgement and acknowledges that he is not relying upon the data as accurately describing the subsurface conditions which may be found to exist.
    - 2) The Contractor further acknowledges that he assumes all risk contingents upon the nature of the subsurface conditions, which shall be actually encountered by him in performing the Work of this Contract.
    - 3) The Contractor should visit the site and become acquainted with all existing conditions and may make their own subsurface investigations to satisfy themselves as to the subsurface conditions. Such investigations shall be conducted only under time schedules and arrangements approved in advance by the Owner.
7. No attempt has been made to locate hazardous material associated with existing site utilities, though it is presumed that at least some asbestos may be discovered associated with underground piping during the course of site and site utilities work. If and when such materials appear, the Contractor shall notify the Owner, who shall direct additional work outside of this Contract to assist in cutting up and disposing of same. The Contractor shall assist the hazardous materials contractor(s) with excavating, heavy lifting, and the like at no additional cost to the Owner.

**B. Pre-Bid Meeting:**

1. A Pre-Bid Meeting and tour of the site will be conducted as scheduled in Division 00 Section 00 11 16 "Invitation to Bid". This scheduled meeting is the only official opportunity for the bidders to tour the site with the Owner, Architect, Engineer, Construction Administrator, and Agency.

**C. Project Documents:**

1. The Specifications and Drawings are intended to describe and illustrate the materials and labor necessary for the work of this Project.
2. Throughout the Technical Specifications, the Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction Form 816, current edition including any interim and supplemental specifications are referenced. Where so referenced the requirements set forth therein are applicable and made a part hereof. Copies of Form 816 are available from the Connecticut Department of Transportation at a nominal charge.

**D. Site Logistics Plan(s):** Site Logistics Plan(s) for this Project are in the Contract Documents. The Site Logistics Plan(s) describe in detail the proposed use of the Site and Building, both inside and outside the Contract Limit Area.

1. **Related Section:** Section 01 31 00 "Project Management and Coordination", 1.5 Submittals, A, (4).
2. The **Site Logistics Plan(s)** include, but are not be limited to the following information:
  - a. **phasing requirements;**
  - b. **proposed vehicle and equipment access routes;**
  - c. **locations of proposed staging/lay-down and storage areas, utility connections;**
  - d. **utilization of maintaining at least one elevator in use at all times;**
  - e. **occupant access to the elevator during construction;**
  - f. **delivery access of materials, handicap access;**
  - g. **building egress, proposed pedestrian traffic flows in the interior and exterior of the building;**
  - h. **temporary access-ways;**
  - i. **office trailer and dumpster locations;**
  - j. **location of perimeter construction fencing and gates;**
  - k. **other protection measures around and in the building(s);**
  - l. **temporary partitions, proposed pedestrian traffic flows around and in each building;**
  - m. **proposed building access points;**
  - n. **proposed protection measures for trees, shrubs and plantings, interior access-ways;**
  - o. **coordination of activities that relate to building occupants and other field applied measure to protect and coordinate the work including any relocation of utilities.**

**E. Scope Review:**

1. Prior to signing a Contract with the State, DAS/CS will conduct a full scope review with the apparent Low Bidder to ensure that all of the requirements have been included within the bid. This scope review will highlight all of the specific requirements of the project, a review of the DAS/CS procedures and all of the Technical sections of the contract documents.
2. This process will ensure that all of the scope of work included in the contract documents has indeed been included.

**F. Specifications, Drawings, and Electronic Data Storage Devices Furnished:**

1. The Contractor shall receive **five (5)** sets of the Contract Documents on or about the time of execution of the Contract, free of charge. If additional copies are wanted, they will be available at the direct additional cost of their reproduction, to the Contractor.
2. The Contractor shall receive **one (1)** set of AutoCAD compatible (latest version) Floor Plans on Electronic Data Storage Devices at no cost on or about the time of execution of the Contract from the Architect. Additional sets of AutoCAD compatible (latest version) Floor Plans on Electronic Data Storage Devices from the Architect shall be available at the cost of their reproduction, to the Contractor.

**G. Construction Responsibility:**

1. The Contractor shall be responsible for his construction means, methods, techniques, sequences, and procedures employed in the performance of his work and shall have full responsibility for his failure to carry out any part of his work in accordance with the Contract Documents.

**H. Overtime Requests:**

1. The Contractor shall request approval from the Owner to work overtime. Said request shall be made **forty eight (48) hours** in advance. All costs for overtime are included in the Contract Sum as stated in Division 00 Section 00 41 00 "Bid Proposal Form."

**I. PMWeb Project Management:**

1. DAS/CS is using PMWeb as the project management collaborative software tool for this project.
2. The Contractor is required to utilize PMWeb for the duration of this project and shall provide all project information via this program management software. This includes, but is not limited to contracts, applications for payment, change orders, change order proposals, requests for information, etc.
3. The DAS/CS Project Manager **or the Construction Administrator (CA)** shall arrange for training. This training is for the Contractor's Staff, the DAS/CS Project Manager, the Construction Administrator, the A/E, and their representatives.
4. DAS/CS will be establishing a project specific email "file" address for this project. The Contractor shall send an electronic "file" copy of all project documents to this email address, to include but not limited to all project correspondence, project emails, forms, etc.
5. The Contractor is required to scan all documents that contain wet (ink) signatures and send a copy of those documents electronically to the DAS/CS Project Manager and the project specific email "file" address. The hard copy of the wet signature documents shall be transmitted as directed by the DAS/CS Project Manager. This includes, but is not limited to all contracts, change orders, applications for payment, closeout documentation, etc.

**J. Subcontractor Performance Evaluations:**

1. Pursuant to C.G.S. Sec. 4a-101, the Contractor shall compile evaluation information during the performance of the contract on each of its subcontractors who are performing work with a value in excess of five hundred thousand dollars (\$500,000.00). The Contractor shall complete and submit to DAS/CS evaluations of each such subcontractor upon fifty percent (50%) completion of the project and upon Substantial Completion of the project. The Contractor acknowledges that its failure to complete and submit these evaluations in a timely manner may, by statute, result in a delay in project funding and, consequently, payment to the Contractor. The Contractor agrees to indemnify and hold the State harmless from any loss, damage, or expense that results from or is caused by the Contractor's failure to complete and submit the evaluations to DAS/CS in accordance with this provision.

**K. Reporting and Contracting Requirements for Contractor and Subcontractor Payments:**

1. For compliance with **C.G.S. Sec. 4b-95 and 49-41**, DAS/CS requires every Contractor (and its Subcontractors) who has been awarded a DAS/CS construction contract to log on to the State of Connecticut web-based platform, BizNet, **each month** and **enter payments** they have received from the state, from the Contractor, or from a higher tier Subcontractor (as applicable).
2. The process is described as follows: The state will pay the Contractor on a monthly basis for work performed (and purchases made) by it and its Subcontractors. The Contractor will input the payment date and amount they receive from the state on a monthly basis. The Contractor's first-level Subcontractor (Tier 1 Subcontractor) will input the payment they receive from the Contractor. The second-level Subcontractor (Tier 2 Subcontractor) will input the payment they receive from the Tier 1 Subcontractor. And so on.
3. Contractors awarded a DAS/CS construction contract shall contain a **provision in their subcontract agreements** requiring their Subcontractors to enter payment receipt from the Contractor in the State of Connecticut web-based platform, BizNet, for work performed or purchases made in relation to state projects.
4. Detailed instructions can be found in the DAS/CS publication, "**6002 Instructions to Contractors/Subcontractors for Entering Payments in BizNet**", available for download by going to the DAS Homepage ([www.ct.gov/DAS](http://www.ct.gov/DAS)) and selecting Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 6000 Series.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 11 00**

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

- A. Contract Documents and general provisions of the Contract, including General and Supplementary Conditions, other Division 01 Specification Sections, and Section 00 41 00 "Bid Proposal Form" apply to this Section.

### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Allowances.
  - 2. Unit Prices.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
  - Section 01 26 00 Contract Modification Procedures
  - Section 01 29 76 Progress Payment Procedures
  - Section 01 35 16 Alteration Project Procedures
  - Section 01 35 26 Government Safety Requirements
  - Section 01 50 00 Temporary Facilities And Controls
  - Section 01 77 00 Closeout Procedures
  - Section 02 41 00 Selective Demolition
  - Section 02 82 13 Asbestos Abatement

### 1.3 ALLOWANCES

- A. This Section includes administrative and procedural requirements for Allowances.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section 01 26 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
- C. **Cash Allowances:**
  - 1. The Contractor's costs for unloading and handling, labor, installation costs, storage, insurance, overhead and profit and other expense related to the Allowance item shall be included in the Contractor's Lump Sum Base Bid Amount and not in the Allowance unless stated otherwise in the Allowance Schedule of this section.
  - 2. **Architect/Engineer Responsibilities:**
    - a. Consult with Contractor for consideration of Products, suppliers and installers.
    - b. Select Products in consultation with the DAS/CS Project Manager and Agency Representatives and transmit decision to Construction Administrator.
    - c. Prepare Change Order.
  - 3. **Construction Administrator Responsibilities:**
    - a. Consult with Architect/Engineer, Contractor, DAS/CS Project Manager and Agency Representatives for consideration of Products, suppliers and installers.
    - b. Select Products in consultation with Architect/Engineer, DAS/CS Project Manager and Agency Representatives and transmit decision to Contractor.
    - c. Prepare Change Order.
  - 4. **Contractor Responsibilities:**
    - a. Assist Architect/Engineer and Construction Administrator in selection of Products and Suppliers.
    - b. Obtain proposals from Suppliers and offer recommendations.

- c. On notification of selection by Construction Administrator execute purchase agreement with designated supplier.
- d. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
- e. If the actual cost of an Allowance item is more or less than the given amount, the Contract Sum will be adjusted by Change Order.

#### 1.4 DEFINED UNIT PRICES - GENERAL

- A. This Section includes administrative and procedural requirements for unit prices.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section 01 26 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
  - 2. Division 01 Section 01 29 76 "Progress Payment Procedures" for procedures for submitting Application for Payments.
- C. **Definition - Unit Price:** Amount the Contractor acknowledges in the Bid Proposal Form as a price per unit of measurement for materials or services as described in the Contract Documents.
- D. **Procedures:**
  - 1. Unit Prices included in the Contract Documents are to be used for determining compensation to the Contractor or Owner for changes to the scope of the work indicated in the Contract Documents, and included in the Lump Sum Contract Price. Special Unit Prices are for items complete, in place, and shall be inclusive of furnishing and installing of all material, labor, trucking, overhead, profit, equipment, hoisting, excavation, stockpiling, loading, engineering, scaffolding, power hookups, protection, shop drawings, taxes, permits, appliances, delivery, disposal, insurance, supervision, cost of bond, etc. and shall remain in effect until completion of the Contract.
  - 2. **Unit Price:** Is identified by the Owner as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if the estimated quantities of Work required by the Contract Documents are increased or decreased.
  - 3. **Increases or Decreases:** Should the amount of the Work required be increased or decreased because of changes in the work ordered in writing by the DAS/CS Project Manager, the Contractor agrees that the following supplemental UNIT PRICES will be decreased 10% for a reduction of work. Each Unit Price shall include all equipment, tools, labor, permits, fees, etc., incidental to the completion of the work involved. All items marked with an asterisk (\*) in the unit price schedules shall include the completion of the excavation, formation and compaction of sub-grade and the disposal of surplus or unsuitable materials in accordance with the Plans and Specifications or as directed by the Construction Administrator.
  - 4. The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.
  - 5. **Defect Assessment:** Replace the Work, or portions of the Work, not conforming to the specified requirements. If, in the opinion of the Architect/Engineer, it is not practical to remove and replace the work the Architect/Engineer will direct an appropriate remedy or adjust the payment.
  - 6. **Unit Price Schedules:** "Unit Price Schedules" are included in this Section. Specification Sections referenced in the Schedule sections contain requirements for materials described under each unit price.

#### 1.5 UNIT PRICE SCHEDULE – EARTH AND ROCK EXCAVATION

This Section includes administrative and procedural requirements for the following unit prices and provisions that are to be included in and become part of this Contract to be used in evaluating additions to or deductions from the work called for in the specifications and/or plans.

##### A. Earth and Rock Excavation:

- 1. Unless otherwise specified elsewhere in these documents, Contractors are to assume that all excavation is earth; however, if unspecified rock is encountered, it will be paid for at the given unit prices listed in Paragraph "C". Rock prices are net in that allowances for reduced quantities of earth



are also included in the unit prices. The prices given include all costs for overhead, profit and rock surveys.

2. Wherever rock to be excavated is encountered, the Contractor shall strip or expose the rock to such an extent that in the Owner's opinion the necessary measurements can be taken. The Contractor shall provide the Owner with a survey by a licensed land surveyor indicating top of rock elevations at points of intersection on a rectilinear grid with lines spaced sufficiently close to show accurately the rock surface contours. At the Owner's option, an additional survey may be furnished by the Owner from a licensed surveyor.
3. If the conditions of the excavation work indicated are clearly of a special nature, the Contractor may ask the Owner for reconsideration of the established unit prices and if granted, the unit prices will not apply, and prices will be negotiated in accordance with Article 13 of the General Conditions.

**B. Definitions:**

1. **"EARTH"** - is defined as excavation and shall include removal of all materials other than 'water' and 'rock'.
2. **"ROCK"** - is defined as a boulder of one cubic yard or more in volume (1/2 cubic yard for a boulder in trenches), rock in definite ledge formation, and masonry structures of one cubic yard or more in volume, the removal of which requires the use of mechanical equipment or the use of explosives. Rock removed by scarification or ripping method is considered as a separate classification under Paragraph 4.c.1.0.
3. **"ORIGINAL GRADE"** - is defined as being the grade which exists at the time of Contract Award.
4. **"ROUGH GRADE"** - is defined as being the completed surface of required excavations greater than 13' in width.
5. **"MASS"** - excavation is to be considered as an open area whose minimum horizontal dimensions exceed 13'.
6. **"TRENCH"** - is defined as excavation is defined as the removal of material from areas 13 feet or less in its minimal horizontal dimensions and below the elevation of rough grade or original grade, whichever is lower.

**C. Procedures:**

1. **Rock Excavation in Trenches: Basis for Horizontal Measurement:**
  - a. **Horizontal Measurements:** Will be taken between the vertical planes as defined below.
  - b. **The Minimum Width of Trenches in Rock:** Will be taken as 3' 0".
  - c. **Excavation For Walls Or Piers With Footings:** The measurements will be taken parallel to and one foot outside of the edges of the concrete footings as called for in the plans (i.e. for 4' 0" footing, rock will be taken as 6' 0" in width).
  - d. **Excavation For Walls Or Piers Without Footings:** The limits of the excavation will be 1' 6" outside of the line of concrete at bottom as shown or called for in the plans (i.e. for a wall with a bottom thickness of 1' 0", the width of the trench will be considered to be 4' 0"). (Caissons are excluded from these measurements).
  - e. **Excavation for Pipe Lines:** Will be measured at 2' 0" more than the nominal inside diameter of the pipe but in no case less than 3' 0" wide.
  - f. **Excavation For Tanks, Vaults, Manholes, Pits, Etc.:** Will be measured as 2' 0" greater in both length and width or diameter than the actual exterior dimensions of the structures and this excavation is considered to be trench only if any measured horizontal dimensions is 13' or less.
  - g. No allowance will be made for rock removed beyond the above limits.
2. **Rock Excavation in Trenches - Basis for Vertical Measurement:**
  - a. To determine depth of trench, vertical measurements will be taken from original grade or rough grade, (whichever is applicable), to the bottom of required excavation. These measurements will define the maximum depths for payments.
  - b. To determine quantity of rock in trench, vertical measurements will be taken from the top of rock as encountered in the trench to 12" below the bottom of required rock excavation. Any over excavation below the required elevation shall be filled with concrete or other material as specified at no cost to the Owner.
  - c. No allowance will be made for rock removed beyond the above limits.

- 3. Earth Excavation in Trenches - Basis of Measurement: (Horizontal & Vertical):** The basis of measurements and allowance limit for earth excavation in trenches is identical to that indicated for rock excavation in trenches, except that there will be no allowance for 12" below the required elevation. In addition the following will prevail:

- a. Maximum allowable widths for earth excavation in trenches without shoring:**

Trench Depth - Classification		Add To Nominal ID Of Pipe Or To Footing Width
	0 ft. - 6 ft.	3 ft.
Over	6 ft. - 10 ft.	5 ft.
Over	10 ft. - 15 ft.	7 ft.
Below 15 ft. deep the width of the trench shall be based on the individual case. The final depth of trench will determine the actual width for payment.		

- b.** If shoring is required the measurement shall be taken between the exterior walls of the shoring not to exceed 4' plus the I.D. of the pipe (for all depths).
- c.** To determine quantity of earth in trench, vertical measurements will be taken from the original or rough grade to actual bottom of earth excavation required.

- 4. Unit Prices - Earth and Rock Excavation (Basis for Payment):** Prices include backfill with excavated material if it is suitable. Prices also include all excavation and disposal of all surplus or unsuitable material. Where replacement with the excavated material is prohibited or a particular backfill material is specified, the cost of the delivered replacement material in a volume equal to the above excavation pay limits minus the volume of the items installed in the trench shall be paid for at a prior negotiated price. Prices do not include costs of shoring and de-watering but do include sloping for sides of excavation. Payment and credit amounts shall be determined in the following manner: Widths and depths of trench excavation as indicated. The total quantity of earth or rock excavation encountered in each depth payment category shall be paid for at its respective unit price as shown below. For example, in a 15' trench excavated by machine, the first 6' will be paid for at the 0' - 6' price; the next 4' will be paid for at the over 6' - 10' price and the next 5' will be paid for at the over 10' - 15' price. Thus three different price brackets will prevail.

1.5 Unit Price Schedule – Earth and Rock Excavation					
<b>a.</b>	<b>EARTH EXCAVATION - HAND</b>		<b>UNIT</b>	<b>\$ ADD</b>	<b>\$ DEDUCT</b>
1.0	In Trenches (0' - 6' deep)		C.Y.	36.00	28.80
2.0	In Trenches (below 6' deep)		Prices Must Be Negotiated Before Work Is Started.		
<b>b.</b>	<b>EARTH EXCAVATION - MACHINE</b>		<b>UNIT</b>	<b>\$ ADD</b>	<b>\$ DEDUCT</b>
1.0	Open Area (All Depths)		C.Y.	18.81	15.05
2.0	In Trenches:				
	2.1	In trenches (0' - 6' deep)	C.Y.	14.27	11.40
	2.2	In trenches (6' - 10' deep)	C.Y.	19.71	15.75
	2.3	In trenches (10' - 15' deep)	C.Y.	35.00	28.00
	2.4	In trenches (15' - 20' deep)	C.Y.	75.00	60.00
<b>c.</b>	<b>ROCK EXCAVATION</b>		<b>UNIT</b>	<b>\$ ADD</b>	<b>\$ DEDUCT</b>
1.0	Open Areas, Rock Removed By Ripping (Any Amount) – Net Rock		C.Y.	103.50	82.80
2.0	Open Areas, With Explosives:				
	2.1	Net Rock (Total Quantity Up To 100)	C.Y.	126.00	100.80
	2.2	Net Rock (Total Quantity Up To 1,000)	C.Y.	60.00	48.00
	2.3	Net Rock (Total Quantity More Than 1,000)	C.Y.	28.00	22.40
3.0	In Trenches, Boulders, Remove By Machine		C.Y.	45.00	36.00
4.0	In Trenches, Ripping Of Rock By Machine		C.Y.	105.00	84.00
5.0	In Trenches, With Explosives:				
	5.1	Net Rock (0' - 4' Deep)	C.Y.	95.60	76.50
	5.2	Net Rock (4' - 10' Deep)	C.Y.	125.00	100.00
	5.3	Net Rock (10' - 15' Deep)	C.Y.	150.00	120.00
	5.4	Net Rock (15' - 20' Deep)	C.Y.	200.00	160.00
	5.5	Net Rock (Over 20' Deep)	Prices Must Be Negotiated Before		

		Work Is Started.		
6.0	Jack Holes (For Hydraulic Lift/Elevators)	L.F.	95.00	76.00
7.0	Open Or Mass Areas (If Explosives Are Prohibited): Net Rock	C.Y.	125.00	100.00
8.0	Trench Excavation With Rock Splitters and Jack Hammer or Hoe Ram (If Explosives Are Prohibited): Net Rock	C.Y.	150.00	120.00

**1.6 UNIT PRICE SCHEDULE – MISCELLANEOUS ITEMS**

This Section includes administrative and procedural requirements for the following unit prices and provisions that are to be included in and become part of this Contract to be used in evaluating additions to or deductions from the work called for in the specifications and/or plans.

- A. Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Unit Price Schedule – Miscellaneous Items:**

1.6 Unit Price Schedule – Miscellaneous Items						
Section Number &/or Drawing Number	Item Description	Base Bid Quantity	Unit of Measurement		\$ Add Unit Price	\$ Deduct Unit Price
05 31 00	Metal Decking – Patching	500	SF	\$	3.50	\$ 3.00
05 31 00	Metal Decking – Deck Replacement	1000	SF	\$	8.00	\$ 7.00
05 31 00	Metal Decking – Prep and Paint	500	SF	\$	2.00	\$ 1.75
06 10 53	Rough Carpentry - Wood Blocking	500	LF	\$	4.50	\$ 4.00

- C.** The **\$Add** and **\$Deduct** Unit Prices shown in the table above are a **price per unit measurement** for materials, services, or work added to or deducted from the Contract Sum by appropriate modification **if the Base Bid Quantities** of the Work listed in the above Schedule and described in the corresponding Section and/or Drawing are **increased or decreased**.
- D.** The **Base Bid Quantities** for each type of Work listed in the above Schedule and described in the corresponding Section shall be included in the Contractor's **Lump Sum Base Bid**.
- E.** Unit Prices shall be negotiated if there is a change in scope of work.

**1.7 UNIT PRICE SCHEDULE – ALTERATIONS**

This Section includes administrative and procedural requirements for the following unit prices and provisions that are to be included in and become part of this Contract to be used in evaluating additions to or deductions from the work called for in the specifications and/or plans.

- A. Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Unit Price Schedule – Alterations:**

1.7 Unit Price Schedule - Alterations						
Section Number &/or Drawing Number	Item Description	Base Bid Quantity	Unit of Measurement		\$ Add Unit Price	\$ Deduct Unit Price

- C.** The **\$Add** and **\$Deduct** Unit Prices shown in the table above are a **price per unit measurement** for materials, services, or work added to or deducted from the Contract Sum by appropriate modification **if the Base Bid Quantities** of the Work listed in the above Schedule and described in the corresponding Section and/or Drawing are **increased or decreased**.
- D.** The **Base Bid Quantities** for each type of Work listed in the above Schedule and described in the corresponding Section shall be included in the Contractor's **Lump Sum Base Bid**.
- E.** Unit Prices shall be negotiated if there is a change in scope of work.

**1.8 UNIT PRICE SCHEDULE – ENVIRONMENTAL REMEDIATION**

This Section includes administrative and procedural requirements for the following unit prices and provisions that are to be included in and become part of this Contract to be used in evaluating additions to or deductions from the work called for in the specifications and/or plans.

**A. Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions, other Division 01 Specification Sections, and Technical Specifications apply to this Section.

**B. Unit Price Schedule – Environmental Remediation:**

1.8 Unit Price Schedule – Environmental Remediation					
Section Number &/or Drawing Number	Environmental Remediation Items		Base Bid Quantity (C.Y.)	Base Bid Quantity (TON) (C.Y. x 1.5)	\$ ADD/ DEDUCT UNIT PRICE PER 1 TON
ER-01	Removal of <b>Hazardous Soil/Fill Material:</b> Excavate, Stockpile, Load Out, Transport, and Dispose				\$380
ER-02	Removal of <b>Contaminated Soil/Fill Material:</b> Excavate, Stockpile, Load Out, Transport, and Dispose				\$120
ER-03	Removal of <b>Polluted Soil/Fill Material:</b> Excavate, Stockpile, Load Out, Transport, and Dispose				\$60

**C.** The Add/Deduct Unit Prices shown in the table above are a **price per unit measurement** for materials, services, or work added to or deducted from the Contract Sum by appropriate modification **if the Base Bid Quantities** of the Work listed in the above Schedule and described in the corresponding Section and/or Drawing are **increased or decreased**.

**D.** The **Base Bid Quantities** for each type of Work listed in the above Schedule and described in the corresponding Section shall be included in the Contractor's **Lump Sum Base Bid**.

**E.** Unit Prices shall be negotiated if there is a change in scope of work.

**1.9 UNIT PRICE SCHEDULE – HAZARDOUS BUILDING MATERIALS ABATEMENT**

This Section includes administrative and procedural requirements for the following unit prices and provisions that are to be included in and become part of this Contract to be used in evaluating additions to or deductions from the work called for in the specifications and/or plans.

**A. Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions, other Division 01 Specification Sections, and Technical Specifications apply to this Section.

**B. Unit Price Schedule – Hazardous Building Materials Abatement:**

1.9.1 ASBESTOS ABATEMENT		UNIT	\$ ADD/ DEDUCT
AR-001	CLEAN-UP OF ACM DEBRIS BY HEPA VACUUMING	SF	\$0.23
AR-002	REMOVAL OF PIPE INSULATION INCLUDING FITTINGS (FULL CONTAINMENT - < 6" DIA)	LF	\$1.63
AR-003	REMOVAL OF PIPE INSULATION INCLUDING FITTINGS(FULL CONTAINMENT - 6" - 12" DIA)	LF	\$2.68
AR-004	REMOVAL OF PIPE INSULATION INCLUDING FITTINGS(FULL CONTAINMENT - >12" DIA)	LF	\$3.65
AR-005	GLOVE BAG REMOVAL OF PIPE OR FITTING INSULATION (MINI-CONTAINMENT - FIRST 25)	EA	\$26.05
AR-006	GLOVE BAG REMOVAL OF PIPE OR FITTING INSULATION (MINI-CONTAINMENT - QUANTITY BETWEEN 25-50)	EA	\$20.56
AR-007	GLOVE BAG REMOVAL OF PIPE OR FITTING INSULATION (MINI-CONTAINMENT - QUANTITY IN EXCESS OF 50)	EA	\$18.30
AR-008	REMOVAL OF EQUIPMENT INSULATION	SF	\$3.81
AR-009	REMOVAL OF HVAC DUCT INSULATION	SF	\$3.81
AR-010	REMOVAL OF HVAC DUCT SYSTEM FLEXIBLE CONNECTOR	SF	\$2.77
AR-011	REMOVAL OF RESILIENT FLOORING INCLUDING MASTIC	SF	\$1.05

AR-012	REMOVAL OF RESILIENT FLOORING (NO MASTIC)	SF	\$0.67
AR-013	REMOVAL OF SPRAYED ON FIREPROOFING	SF	\$2.61
AR-014	REMOVAL OF PLASTER CEILING SYSTEM (INCLUDING BLACK IRON AND METAL LATH)	SF	\$2.68
AR-015	REMOVAL OF ACOUSTIC OR METAL PAN CEILING SYSTEM (INCLUDING GRID )	SF	\$1.74
AR-016	REMOVAL OF ACOUSTIC CEILING PANELS (CLEAN GRID FOR REUSE)	SF	\$1.45
AR-017	REMOVAL OF ACOUSTIC PLASTER FINISH MATERIAL (SCRAPE)	SF	\$2.45
AR-018	PATCH AND/OR SEAL DAMAGED INSULATION	SF	\$1.05
AR-019	REMOVAL OF CONTAMINATED SOIL (2" DEPTH)	SF	\$1.69
AR-020	REMOVAL OF TRANSITE MATERIAL	SF	\$0.92
AR-021	REMOVAL OF ROOFING OR ROOF FLASHING MATERIAL	SF	\$1.34
AR-022	REMOVAL OF UNDERGROUND PIPE OR PIPE INSULATION (INCLUDING HAND EXCAVATION)	LF	\$10.75
AR-023	REMOVAL OF CARPET OVER RESILIENT FLOORING	SF	\$0.83
AR-024	REMOVAL OF WALL BASE AND MASTIC	LF	\$0.95
AR-025	REMOVAL OF DRYWALL PARTITION (INCLUDING WALL FRAMING)	SF	\$0.90
AR-026	REMOVAL OF CMU WALL	SF	\$1.82
AR-027	PREP WORK AREA	SF	\$1.09
AR-028	SOLID BARRIERS OR ACCESS TUNNELS (2"x4"@16", 1/2" PLYWOOD)	SFSA	\$1.26
AR-029	SELECTIVE DEMOLITION TO ACCESS CONCEALED ACM	SF	\$1.11
AR-030	REMOVAL OF FLOOR LEVELING MATERIAL	SF	\$0.79
AR-031	SMALL CONTAINMENT PREPARATION TO ENCLOSE ASBESTOS ABATEMENT AREAS (>160 SF/260 LF)	CONTAINMENT	\$1,500.00
AR-032	LARGE CONTAINMENT PREPARATION TO ENCLOSE ASBESTOS ABATEMENT AREAS (>160 SF/260 LF)	CONTAINMENT	\$3,500.00
AR-033	CEMENTITIOUS ROOF SHINGLES REMOVAL AND DISPOSAL AS ACM	SF	\$10.00
AR-034	ROOF DRAIN CAULKING REMOVAL AND DISPOSAL AS ACM	LF	\$20.00
AR-035	ROOFING DEBRIS REMOVAL AND DISPOSAL AS ACM	EA	\$25.00
AR-036	MUDDIED PIPE FITTING INSULATION REMOVAL AND DISPOSAL AS ACM	EA	\$50.00
AR-037	FLOOR TILE AND ASSOCIATED MASITC REMOVAL AND DISPOSAL AS ACM	SF	\$7.00
AR-038	PLASTER REMOVAL AND DISPOSAL AS ACM	SF	\$7.00
AR-039	MIRROR GLUE REMOVAL AND DISPOSAL AS ACM	SF	\$10.00
AR-040	WINDOW CAULKING REMOVAL AND DISPOSAL AS ACM	LF	\$16.00
AR-041	EXPANSION JOINT CAULKING REMOVAL AND DISPOSAL AS ACM	LF	\$12.00
AR-042	DOOR CAULKING REMOVAL AND DISPOSAL AS ACM	LF	\$15.00
AR-042	CEMENTITIOUS SOFFIT PANELING REMOVAL AND DISPOSAL AS ACM	SF	\$15.00
AR-043	CAULKING ASSOCIATED WITH FASCIA REMOVAL AND DISPOSAL AS ACM	LF	\$15.00
AR-044	ROOFING MATERIALS (BUILT-UP ROOF LAYERS, FLASHING, TARS) REMOVAL AND DISPOSAL AS ACM	SF	\$200.00
AR-045	FIRE DOOR REMOVAL AND DISPOSAL AS ACM	EA	\$1.45
AR-046	DAMPPROOFING REMOVAL AND DISPOSAL AS ACM	SF	\$25.00
AR-047	VAPOR BARRIER UNDER CONCRETE FLOOR REMOVAL AND DISPOSAL AS ACM	SF	\$35.00

<b>1.9.2 LEAD-BASED PAINT ABATEMENT</b>		<b>UNIT</b>	<b>\$ ADD/ DEDUCT</b>
SP-001	REMOVE LOOSE PAINT FROM WALLS OR CEILINGS (WET SCRAPING OR BRUSHING)	SF	\$0.89
SP-002	STRIP PAINT FROM FLAT SURFACES	SF	\$2.93
SP-003	STRIP PAINT FROM COLUMNS AND STRUCTURAL FRAMING MEMBERS	SF	\$3.68
SP-004	STRIP PAINT FROM STAIR TREADS, RISERS AND STRINGERS	SF	\$5.08
SP-005	STRIP PAINT FROM TRIM	LF	\$2.82
SP-006	STRIP PAINT FROM DOORS (DOOR OPENING SIZE)	SF	\$4.54
SP-007	STRIP PAINT FROM WINDOW (WINDOW SIZE)	SF	\$7.08
SP-008	STRIP PAINT FROM RADIATOR	SF	\$8.75
SP-009	STRIP PAINT FROM HANDRAIL	LF	\$7.35
SP-010	STRIP PAINT FROM PIPING	SF	\$6.30

SP-011	CLEAN-UP OF MATERIALS CONTAINING LEAD (DIRT, BUILDING DEBRIS, ETC.)	CF	\$3.43
SP-012	HEPA VACUUMING AND WASHING SURFACE (SMOOTH SURFACE)	SF	\$0.63
SP-013	HEPA VACUUMING AND WASHING SURFACE (POROUS SURFACE)	SF	\$1.05
SP-014	REMOVE EXTERIOR SOIL (6" DEPTH)	SF	\$4.50

1.9.3 PCBs IN BUILDING MATERIAL ABATEMENT		UNIT	\$ ADD/ DEDUCT
HM-001	REMOVE LOOSE PCB CONTAMINATED CAULK (WET SCRAPING OR BRUSHING)	LF	\$6.20
HM-002	REMOVE PCB CONTAMINATED CAULK AND 6 INCHES OF BUILDING MATERIALS	LF	\$28.00
HM-003	REMOVE PCB CONTAMINATED CAULK AND 12 INCHES OF BUILDING MATERIALS	LF	\$37.00
HM-004	REMOVE INTACT PCB CONTAMINATED CAULK WITH NO REMOVAL OF BUILDING MATERIALS	LF	\$8.50
HM-005	STRIP PAINT FROM FLAT SURFACES	SF	\$2.94
HM-006	HEPA VACUUMING AND WASHING SURFACE (SMOOTH SURFACE)	SF	\$0.60
HM-007	HEPA VACUUMING AND WASHING SURFACE (POROUS SURFACE)	SF	\$1.05
HM-008	REMOVE EXTERIOR SOIL (6" DEPTH)	SF	\$4.88
HM-009	EXCAVATE, TRANSPORT, AND DISPOSE OF PCB CONTAMINATED SOIL (1 TON)	TON	\$400

1.9.4 MOLD ABATEMENT		UNIT	\$ ADD/ DEDUCT
IAQ-001	CLEANING AND HEPA VACUUMING OF CONTAMINATED COMPONENTS OR MATERIALS	SF	\$0.61
IAQ-002	REMOVAL OF CONTAMINATED PIPE INSULATION	LF	\$0.61
IAQ-003	REMOVAL OF CONTAMINATED BUILDING INSULATION	SF	\$0.61
IAQ-004	REMOVAL OF CONTAMINATED HVAC DUCT OR EQUIPMENT INSULATION	SF	\$0.61
IAQ-005	REMOVAL OF CONTAMINATED CARPET	SF	\$0.88
IAQ-006	REMOVAL OF CONTAMINATED DRYWALL PARTITION (INCLUDING WALL FRAMING)	SF	\$1.05
IAQ-007	REMOVAL OF CONTAMINATED PLASTER	SF	\$1.87
IAQ-008	REMOVAL OF CONTAMINATED SUSPENDED CEILING PANELS	SF	\$0.59
IAQ-009	PREP WORK AREA	SF	\$0.99
IAQ-010	SOLID BARRIERS OR ACCESS TUNNELS (2"x4"@16", 1/2" PLYWOOD)	SFSA	\$2.09
IAQ-011	SELECTIVE DEMOLITION TO ACCESS CONTAMINATED COMPONENTS OR MATERIALS	SF	\$1.15

1.9.5 REWORK ITEMS DURING ABATEMENT ACTIVITIES		UNIT	\$ ADD/ DEDUCT
RW-001	REINSULATE PIPE 1" THICK FIBERGLAS ASJ	SF	\$2.83
RW-002	REINSULATE PIPE 1 1/2" THICK FIBERGLAS ASJ	SF	\$3.62
RW-003	REINSULATE PIPE 2" THICK FIBERGLAS ASJ	SF	\$4.30
RW-004	REINSULATE PIPE FITTING 1" THICK FIBERGLAS ASJ	EA	\$4.37
RW-005	REINSULATE PIPE FITTING 1 1/2" THICK FIBERGLAS ASJ	EA	\$5.34
RW-006	REINSULATE PIPE FITTING 2" THICK FIBERGLAS ASJ	EA	\$6.50
RW-007	REINSULATE MECHANICAL EQUIPMENT 3 PCF, 2" THICK	SF	\$3.50
RW-008	REINSULATE HVAC DUCT SYSTEM (FLEXIBLE DUCT WRAP) 0.75 PCF, 1 1/2" THICK	SF	\$2.25
RW-009	REINSULATE HVAC DUCT SYSTEM (RIGID BOARD) 3 PCF, 1 1/2" THICK	SF	\$6.00
RW-010	REPLACE HVAC DUCT SYSTEM FLEXIBLE CONNECTOR	SF	\$7.83
RW-011	REPLACE TRIM COMPONENT (WOOD CASING, JAMB, APRON, ETC.)	LF	\$1.26
RW-012	REPLACE INTERIOR DOOR (SOLID CORE FLUSH OR 6-PANEL PINE)	EA	\$207.50
RW-013	REPLACE WINDOW (SASH ONLY)	EA	\$207.50
RW-014	REPLACE WINDOW (COMPLETE UNIT INCLUDING FRAME)	EA	\$375.00
RW-015	PAINT FLAT SURFACES (PRIMER + FINISH COAT)	SF	\$0.27
RW-016	PAINT COLUMNS AND STRUCTURAL FRAMING MEMBERS (PRIMER + FINISH COAT)	SF	\$2.89
RW-017	PAINT STAIR TREADS, RISERS AND STRINGERS (PRIMER + FINISH	SF	\$2.89

	COAT)		
RW-018	PAINT HANDRAIL (PRIMER + FINISH COAT)	LF	\$0.27
RW-019	PAINT TRIM COMPONENT (CASING, JAMB, APRON, ETC., PRIMER + FINISH COAT)	LF	\$0.83
RW-020	PAINT DOORS (DOOR OPENING SIZE - INCLUDES BOTH FACES PRIMER + FINISH COAT)	SF	\$1.67
RW-021	PAINT WINDOW (INCLUDES INTERIOR & EXTERIOR PRIMER + FINISH COAT)	SF	\$1.97
RW-022	PAINT RADIATOR (PRIMER + FINISH COAT)	SF	\$2.97
RW-023	PAINT PIPING (PRIMER + FINISH COAT)	LF	\$0.29
RW-024	REPLACE EXTERIOR SOIL (6" LOAM AND SEED)	SF	\$7.19
RW-025	ASPHALT PAVING	SF	\$3.43

1.9.6 MISCELLANEOUS ABATEMENT ITEMS		UNIT	\$ ADD/ DEDUCT
MI-001	MOBILIZATION (1 PER WORK AREA)	EA	\$262.50
MI-002	WORKER DECON (1 PER WORK AREA)	EA	\$262.50
MI-003	CONTAINMENT BARRIERS TO SEPARATE THE WORK AREA (SOFT BARRIER)	SF	\$1.02
MI-004	CONTAINMENT BARRIERS TO SEPARATE THE WORK AREA (HARD BARRIER)	SF	\$2.55
MI-005	TEMP ELECTRICAL CONNECTION (LICENSED ELECTRICIAN)	EA	\$450.00
MI-006	TEMP ELECTRICAL GENERATOR	DY	\$375.00
MI-007	DISPOSAL OF ACM WASTE (INCLUDES TRANSPORTATION)	CY	\$60.00
MI-008	DISPOSAL OF HAZARDOUS WASTE MATERIAL (INCLUDES TRANSPORTATION)	TON	\$380.00
MI-009	DISPOSAL OF CONSTRUCTION DEBRIS (INCLUDES TRANSPORTATION)	TON	\$30.00
MI-010	ABATEMENT SUPERVISOR (LICENSED)	HR	\$81.00
MI-011	STAND-BY ABATEMENT PERSONNEL (EACH LICENSED WORKER)	HR	\$74.00
MI-012	ENCAPSULATION UTILIZING LIQUID COATING SYSTEM	SF	\$0.69
MI-013	ENCAPSULATION UTILIZING HEAVY BODIED REINFORCED COATING SYSTEM	SF	\$1.03
MI-014	FIXED SCAFFOLDING	SF	\$16.00
MI-015	EXCAVATION TO EXPOSE UNDERGROUND PIPE	CY	\$25.00
MI-016	PROJECT NOTIFICATION AND FEES	EA	\$0.00
MI-017	PROJECT BOND ( 3% OF CONTRACT)	EA	\$0.00

1.9.7 COMPONENT REPLACEMENT DURING ABATEMENT ACTIVITIES		UNIT	\$ ADD/ DEDUCT
CR-001	REMOVE TRIM COMPONENT (CASING, BASE, APRON, ETC.)	LF	\$0.49
CR-002	REMOVE DOOR (DOOR ONLY)	SF	\$0.27
CR-003	REMOVE DOOR (INCLUDING JAMB, NO TRIM)	SF	\$0.61
CR-004	REMOVE WINDOW (SASH ONLY)	SF	\$0.40
CR-005	REMOVE WINDOW (COMPLETE UNIT INCLUDING FRAME)	SF	\$0.92
CR-006	REMOVE RADIATOR	SF	\$0.77
CR-007	REMOVE MISCELLANEOUS ITEM	CF	\$7.56

- C. The \$Add and \$Deduct Unit Prices shown in the tables above are a **price per unit measurement** for materials, services, or work added to or deducted from the Contract Sum by appropriate modification **if the Base Bid Quantities** of the Work listed in the Contract Documents are **increased or decreased**.
- D. The **Base Bid Quantities** for each type of Work listed in the above Schedule and described in the Contract Documents shall be included in the Contractor's **Lump Sum Base Bid**.
- E. Unit Prices shall be negotiated if there is a change in scope of work.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 20 00**



## **PART 1 - GENERAL**

### **1.1 RELATED DOCUMENTS**

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

### **1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for handling requests for equals and substitutions made after award of the Contract.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for submitting the Contractor's Construction Schedule and the Submittal Schedule.
  - 2. Division 01 Section 01 42 20 "Reference Standards and Definitions" specifies the applicability of industry standards to products specified.
  - 3. Division 01 Section 01 60 00 "Product Requirements" specifies requirements governing the Contractor's selection of products and product options.

### **1.3 DEFINITIONS**

- A. Definitions in this Article do not change or modify the meaning of other terms used in the Contract Documents.
- B. **Equals or Substitutions General:** Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract.

### **1.4 SUBMITTALS**

- A. **Equals and Substitution Request Submittals:** The Owner will consider requests for equals or substitutions if made prior to the Receipt of the Competitive Bid. The information on all materials shall be consistent with the information herein. After the contract award, substitutions will be considered for materials or systems specified that are no longer available. It will not be considered if the product was not purchased in a reasonable time after award. The Contractor shall submit all equal and substitutions requests on the "**Equal or Substitute Product Request (Form 7001)**", an example of which is shown at the end of this Section. The Form is available from the Construction Administrator (CA). See Article 15 in the General Conditions for further refinement and information.
- B. The Contractor is required to prepare and submit three (3) copies of the required data for the first manufacturer listed or procedure listed in the specifications section with reference to all of the following areas: the substance and function considering quality, workmanship, economy of operation, durability and suitability for purposes intended including the size, rating performance, LEED® compliance, and cost. All submissions must include all the required data for the first listed manufacturer or procedure as specified, as well as the required data for the proposed Equal or Substitution. This will enable the Owner and Architect to determine that the proposed Equal or Substitution is or is not substantially equal to the first listed manufacturer or procedure.
  - 1. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers.
  - 2. Provide complete documentation showing compliance with the requirements for equals or substitutions, and the following information, as appropriate:
    - a. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate contractors that will be necessary to accommodate the proposed Equal or Substitution.

- b. A detailed comparison chart of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements, such as performance, weight, size, durability, and visual effect.
  - c. Product Data, including Shop Drawings and descriptions of products and fabrication and installation procedures.
  - d. Samples, where applicable or requested.
  - e. A statement indicating the effect on the Contractor's Construction Schedule or CPM Schedule compared to the schedule without approval of the Equal or Substitution. Indicate the effect on overall Contract Time.
  - f. Cost information, broken down, including a proposal of the net change, if any in the Contract Sum.
  - g. The Contractor's certification that the proposed Equal or Substitution conforms to requirements in the Contract Documents in every respect and is appropriate for the applications indicated.
  - h. The Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the Equal or Substitution to perform adequately.
3. **Architect's Action:** If necessary, the Architect will request additional information or documentation for evaluation within **seven (7) days** of receipt of the original request for equal or substitution request. The Architect will notify the Construction Administrator who will notify the Owner of recommended acceptance or rejection of the proposed equal or substitution, within **fourteen (14) days** of receipt of the request, or **seven (7) days** of receipt of additional information or documentation, whichever is later. The Construction Administrator will give final acceptance or rejection by the Owner not less than **seven (7) days** after notification.
- a. Any request deemed an "Equal" and accepted by the Construction Administrator, Architect, Owner, and Agency will result in written notification to the Contractor and will not be in the form of a change order for an "Equal".
  - b. Any request deemed a "Substitution" and rejected or approved by Construction Administrator, Architect, and Owner may result in written notification to the Contractor and may be in the form of a change order if the "Substitution" is approved.

## PART 2 - PRODUCTS

### 2.1 EQUAL OR SUBSTITUTIONS

- A. **Conditions:** The Architect will consider the Contractor's request for Equal or Substitution of a product or method of construction when one or more of the following conditions are satisfied, as determined by the Architect. If the following conditions are not satisfied, the Architect will return the requests to the Construction Administrator without action except to record noncompliance with these requirements.
- 1. The proposed request does not require extensive revisions to the Contract Documents.
  - 2. The proposed request is in accordance with the general intent of the Contract Documents.
  - 3. The proposed request is timely, fully documented, and/or properly submitted.
  - 4. The proposed request can be provided within the Contract Time. However, the Architect will not consider the proposed request if it is a result of the Contractor's failure to pursue the Work promptly or coordinate activities properly.
  - 5. The proposed request will offer the Owner a substantial advantage, in cost, time, energy conservation, or other considerations, after deducting additional responsibilities the Owner must assume. However, if the proposed request requires the Owner to incur additional responsibilities, including but not limited to, additional compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner or similar considerations, then the Owner will have just cause to reject the request for Equal or Substitution.

6. The proposed request can receive the necessary approvals, in a timely manner, required by governing authorities having jurisdiction.
  7. The proposed request can be provided in a manner that is compatible with the Work as certified by the Contractor.
  8. The proposed request can be coordinated with the Work as certified by the Contractor.
  9. The proposed request can uphold the warranties required by the Contract Documents as certified by the Contractor.
- B.** The Contractor's submission and the Architect's review of Submittals, including but not limited to, Samples, Manufacturer's Data, Shop Drawings, or other such items, which are not clearly identified as a request for an Equal or Substitution, will not be considered or accepted as a valid request for an Equal or Substitution, nor does it constitute an approval.

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 25 00**



**7001  
 Equal or Substitute  
 Product Request**

Page 1 of 2

Request Phase: Pre-Bid  Post Bid  (See Article 15 Materials: Standards, General Conditions)

(If Pre-bid only) Current Bid Due Date:  Request No.:  Dated:

To: State of Connecticut  
 Department of Administrative Services,  
 Construction Services

DAS Project No.:

Project Name / Location:

References: Specification(s):  Section(s):  Paragraph(s):

Drawing(s): Drawing(s) No(s):  Detail(s) No(s):

Contractually Specified Product:

Contractor Proposed Product:

Proposed Product is: Equal:  Substitute:  Model No.:

**IMPORTANT:**  
 See Attached Data For Both Specified And Proposed Products  
 As Required By Article 15 General Conditions.

Data attached: Drawings:  Product Data:  Reports:  Samples:

Tests:  Other:

Reason(s) for not providing the Specified Product:

Similar Installation:

Project Name:  Architect's Name:

Project Location:  Owner's Name:

Date Installed:



7001  
Equal or Substitute  
Product Request

Page 2 of 2

Will proposed substitution impact other parts of the Work?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>	<i>If Yes Attach An Explanation.</i>	
Will proposed substitution increase Contract Time?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>	<i>By Number Of Calendar Days</i> <input style="width: 50px;" type="text"/>	
Actual Dollar Savings to the State of Connecticut if substitution is accepted:     \$ <input style="width: 150px;" type="text"/>						
<b>The Undersigned Certifies:</b> <b>That The Proposed Request For An Equal Or Substitute Product Conforms To All Of The Requirements Of Division 01 General Requirements, Section 01 25 00 Substitution Procedures.</b>						
Request Submitted By General Contractor / CMR: <input style="width: 300px;" type="text"/> <div style="text-align: right; font-size: small;"><i>(Firm's Typed Name)</i></div>						
By:	<input style="width: 150px;" type="text"/> <div style="font-size: x-small;"><i>(Typed Name)</i></div>	<input style="width: 100px;" type="text"/> <div style="font-size: x-small;"><i>(Title)</i></div>	<input style="width: 150px;" type="text"/> <div style="font-size: x-small;"><i>(Signature)</i></div>	<input style="width: 80px;" type="text"/> <div style="font-size: x-small;"><i>(Date)</i></div>		
Contractor / CMR Send copies to :     DAS PM: <input type="checkbox"/> CA: <input type="checkbox"/>						
Consultant's Request Received on (Date): <input style="width: 80px;" type="text"/> Consultant's Review – This Substitution Request is:						
<input type="checkbox"/>	Approved:	<i>(Submittal(s) in accordance with Div. 01 General Requirements, Section 01 33 00 Submittal Procedures.)</i>				
<input type="checkbox"/>	Approved as Noted:	<i>(Submittals in accordance with Div. 01 General Requirements, Section 01 33 00 Submittal Procedures.)</i>				
<input type="checkbox"/>	Rejected:	Use Specified Materials.				
<input type="checkbox"/>	Rejected:	Request Not Received Within Specified Time Period - Use Specified Materials.				
Reviewed Issued By:						
		Name: <input style="width: 250px;" type="text"/> <div style="text-align: right; font-size: x-small;"><i>(Typed Name)</i></div>				
		Title: <input style="width: 250px;" type="text"/>				
		Signature: <input style="width: 150px;" type="text"/> <div style="text-align: right; font-size: x-small;"><i>(Signature)</i></div>		<input style="width: 80px;" type="text"/> <div style="text-align: right; font-size: x-small;"><i>(Date)</i></div>		
CONSULTANT Send copies to:     DAS PM <input type="checkbox"/> CA <input type="checkbox"/> Chief Architect <input type="checkbox"/> Chief Engineer <input type="checkbox"/>						
If Approved: As noted by Consultant, DAS Chief Architect: <input style="width: 200px;" type="text"/> <div style="text-align: right; font-size: x-small;"><i>(Signature)</i></div>						
<div style="text-align: right;"><input style="width: 80px;" type="text"/> <div style="font-size: x-small;"><i>(Date)</i></div></div>						
Copies:     Project File     Red R2						

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## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing contract modifications.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 20 00 "Contract Considerations" for administrative requirements governing use of Unit Prices.
  2. Division 01 Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after award of the Contract.
  3. Division 01 Section 01 29 76 "Progress Payment Procedures" for administrative procedures governing Applications for Payment.
  4. Division 01 Section 01 32 16.13 "CPM Schedules" for requirements for CPM scheduling and reporting progress of work.
  5. Division 01 Section 01 33 00 "Submittal Procedures" for requirements for submittal of the Construction Progress Schedule or CPM Schedule.
  6. General Conditions "Article 13 - Compensation for Changes in the Work".
- C. All Forms referenced in this Section are available for download from the DAS website ([www.ct.gov/DAS](http://www.ct.gov/DAS))> Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 7000 Series - Construction Phase Forms.

### 1.3 REQUESTS FOR INFORMATION

- A. In the event that the Contractor or subcontractor, at any tier, determines that some portion of the drawings, specifications, or other contract documents requires clarification or interpretation by the Architect, the Contractor shall submit a "Request for Information" in writing to the Architect via the Construction Administrator. "Requests for Information" may only be submitted by the Contractor and shall only be submitted on the "Request for Information" forms as required by the Owner.
1. In the "Request for Information", the Contractor shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed from the Architect.
  2. In the "Request for Information", the Contractor shall set forth an interpretation or understanding of the requirement along with reasons why such an understanding was reached.
  3. The Owner acknowledges that this is a complex project. Based upon the owner's past experience with projects of similar complexity, the Owner anticipates that there will probably be some "Requests for Information" on this project.
  4. The Architect will review all "Requests for Information" to determine whether they are valid "Requests for Information". If it is determined that the document is not a valid "Request for Information", it will be returned to the Contractor, unreviewed as to content, for resubmittal on the proper form and in the proper manner.
  5. A "Request for Information Response" shall be issued within seven (7) days of receipt of the request from the Contractor unless the Owner determines that a longer time is necessary to provide an adequate response. If a longer time is determined necessary by the Owner, the Owner will, within seven (7) days of receipt of the request, notify the Contractor of the

anticipated response time. If the Contractor submits a "Request for Information" on an activity with seven (7) days or less of float on the current project schedule, the Contractor shall not be entitled to any time extension due to the time it takes the Architect to respond to the request provided that the Architect responds within the seven (7) days set forth above.

6. A "Request for Information Response" from Architect will not change any requirement of the Contract Documents. In the event the Contractor believes that the "Request for Information Response" will cause a change to the requirements of the Contract Documents, the Contractor shall within five (5) days give written notice to the Construction Administrator stating that the Contractor believes the "Request for Information Response" will result in a "Change Order" and the Contractor intends to submit a "Change Order Proposal" request. Failure to give such written notice within five (5) days shall waive the Contractor's right to seek additional time or cost under the requirement these Requirements.

#### 1.4 MINOR CHANGES IN THE WORK

- A. The Architect, through the Construction Administrator, will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on the "Supplemental Instructions" form as required by the Owner.

#### 1.5 PROPOSAL REQUEST

- A. Architect/Owner-Initiated Requests For Proposals: The Architect or Owner will issue a detailed description of proposed changes in the Work via the Construction Administrator that will require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications. Such requests shall be on a "Proposal Request" form as required by the Owner.
  1. "Proposal Request" is issued for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
  2. Within **(14) days** of receipt of a "Proposal Request", submit a "Change Order Proposal" with the required information necessary to execute the change to the Construction Administrator for the Architect's/Owner's review.
    - a. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
    - d. The Agency is tax exempt. All Contractor and Subcontractor services provided under your Contract with the State of Connecticut may not be exempt from taxes. The Department of Revenue Services can guide you as to which services are exempt and which are not. Please contact the State of Connecticut, Department of Revenue Services at 1-800-382-9463 or 860-541-3280.
    - e. Dollar values shown on the Schedule of Values shall not be the governing (or deciding) final amounts for change orders involving either additional charges or deletions.

#### 1.6 CHANGE ORDER PROPOSAL

- A. When either a "Request for Information" from the Contractor or a "Proposal Request" from the Architect or Owner results in conditions that may require modifications to the Contract, the Contractor may propose changes by submitting a request for a "Change Order Proposal" to the Architect via the Construction Administrator on forms as required by the Owner. These forms shall also include "Change Order Proposal Workbook(s)" as required by the Owner.
  1. Include statements outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.



2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities as directed by Article 13 of the General Conditions of the Contract for Construction.
3. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
4. Comply with requirements in Division 01 Section 01 25 00 "Substitution Procedures" if the proposed change requires an equal or substitution of one product or system for a product or system specified.
5. The State of Connecticut construction contract has the following tax exemptions:
  - a. Purchasing of materials which will be physically incorporated and become a permanent part of the project.
  - b. Tools, supplies and equipment used in fulfilling the construction contract are not exempt.
  - c. Services that are resold by the Contractor are exempt, i.e. if a Contractor hires a plumber, carpenter or electrician, a resale certificate may be issued to the subcontractor because these services are considered to be integral and inseparable component parts of the building contract
- C. "Change Order Request" Forms: Use "Change Order Proposal" and "Change Order Proposal Worksheets" forms as required by Owner.
- D. A "Change Order Proposal" cannot be submitted without either prior submission of a "Request for Information" from the Contractor or as a response to a "Proposal Request" submitted by the Architect or Owner.
- E. Any "Change Order Request" submitted without a prior submittal of a "Request for Information" or as a response to a "Proposal Request" will be immediately rejected and returned to the Contractor.

## 1.7 CONSTRUCTION CHANGE DIRECTIVE

### A. "Construction Change Directive":

When the Owner and the Contractor disagree on the terms of a "Change Order Proposal" resulting from either a "Request for Information" or "Proposal Request", then the Architect through the Construction Administrator may issue a "Construction Change Directive" on a "Construction Change Directive" form as authorized by the Owner. The "Construction Change Directive" instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a "Change Order".

1. The "Construction Change Directive" contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.
  2. Contractor must proceed with the Work once a "Construction Change Directive" is issued.
  3. The change in the Contract Sum and Contract Time resulting from the issuance of a "Construction Change Directive" will be based on "Time & Material" or "Unit Prices".
  4. Issuance of "Construction Change Directive" does not guarantee payment for the Work described in the "Construction Change Directive".
- B. Documentation: The Contractor shall maintain detailed records on a time and material basis of work required by the "Construction Change Directive".
1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
  2. The final value shall be negotiated based on the supporting data to determine the value of the work.

**1.8 CHANGE ORDER PROCEDURES**

- A. Upon the Owner's approval of a Contractor's "Change Order Proposal", the Construction Administrator will issue a "Change Order" for signatures of the Architect, Owner and the Contractor on a "Change Order" form as required by the Owner.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 26 00**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section specifies procedures for preparation and submittal of the Contractor's Applications for Payment.
- B. Related Sections: The following Sections contain requirements that relate to this Section.
1. Notice to Bidders: Article 10
  2. General Conditions: Articles: 27 "Schedule of Values, Application for Payment"; 28 "Partial Payments"; 31 "Final Payment"; and 32 "Owner's Right to Withhold Payments".
  3. Division 01 Section 01 32 16.13 "CPM Schedules" for requirements for CPM scheduling and reporting progress of work.
  4. Division 01 Section 01 33 00 "Submittal Procedures".
  5. Division 01 Section 01 77 00 "Closeout Procedures" for requirements for Final Payment.

**1.3 SCHEDULE OF VALUES**

- A. **Coordination:** Coordinate preparation of the "Schedule of Values" with preparation of the CPM Schedule or Construction Schedule. Use "Schedule of Values" form as required by the Owner
1. Submit the "Schedule of Values" to the Construction Administrator at the earliest possible date but no later than **twenty-one (21)** days after Contract Start Date.
  2. **Sub-schedules:** Where Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B. **Format and Content:** Use the Project Manual Table of Contents as a guide to establish the format for the "Schedule of Values". Provide at least one line item for each Specification Section on electronic media printout.
1. **Identification:** Project identification on the Schedule of Values shall include, but not be limited to, the following:
    - a. **Owner**
    - b. **Project Number**
    - c. **Project Name**
    - d. **Project Location**
    - e. **Contractor's name and address.**
  2. Arrange the "Schedule of Values" in tabular format as required by the Owner, containing separate columns including, but not limited to, the following Items:
    - a. **Item Number.**
    - b. **Description of Work with Related Specification Section or Division Number.**
    - c. **Scheduled Values broken down by description number, type material, units of each material.**
      - 1) **Include break down of General Condition requirements, i.e. bonds, insurance premiums, taxes, job mobilization, temporary facilities, field supervision and layout, operation and maintenance manuals, punch list activities, project**

record documents, demonstration and training, overhead, and profit as separate line items.

- d. **Name of subcontractor.**
  - e. **Name of manufacturer or fabricator.**
  - f. **Name of supplier.**
  - g. **Retainage.**
  - h. **Contract sum in sufficient detail.**
3. Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
  4. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual Table of Contents. Break principal subcontract amounts down into several line items. In addition, the following items listed below must be included.
    - a. **Site Logistics Plan (01 31 00):** a lump sum at 1/20 of one percent of the base bid total project cost at the time of submission of this plan.
    - b. **Coordination Drawings (01 31 00):** a lump sum of this cost for payment at the submittal of this product a minimum cost of 1/10<sup>th</sup> of one percent of the base bid total project cost or \$5,000 whichever is greater.
    - c. **Photographic Documentation (01 32 33):** a monthly cost of \$1,000 per month to be paid each month upon receipt of the photographs or forfeit of that month's payment.
    - d. **Submittal Schedule (01 33 00):** a lump sum payment calculated at 1/20<sup>th</sup> of 1% of the base bid total project cost upon receipt of the schedule
    - e. **Waste Collection & Cleaning (01 50 00):** a monthly cost. A minimum payment of \$1,000 to \$3,000 (based on size & complexity of the project) with forfeit of that monthly payment if not done.
    - f. **As-Built Updates (01 31 00):** a monthly cost, a minimum payment of \$1,000 with forfeit of that monthly payment if not done.
    - g. **Start-up and Adjusting (01 75 00):** a lump sum cost upon completion. (to be determined by the DAS/CS Project Manager (PM) with Architect/Engineer and Construction Administrator (CA) advice)
    - h. **Schedule (01 32 16.13):** a lump sum payment upon receipt of the base line schedule. A payment of 40% of the total amount of the total cost which is to be calculated at 1/8<sup>th</sup> of one percent of the base bid total project cost. Monthly updates using the remainder of the cost divided evenly over the accepted schedule duration with a forfeit of the monthly payment of the update is not received on time.

Any forfeited amounts being withheld by the CA for non-performance will be adjusted at the final payment by a credit change order to the owner.
  5. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.
  6. **Unit-Cost Allowances:** Show the line-item value of unit-cost allowances, as a product of the unit cost, multiplied by the measured quantity. Estimate quantities from the best indication in the Contract Documents.
  7. **General Conditions:** Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin for each item.
    - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at the Contractor's option.

**1.4 APPLICATIONS FOR PAYMENT**

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and Construction Administrator and paid for by the Owner.
1. The initial "Application for Payment", the "Application for Payment" at time of "Substantial Completion", and the final "Application for Payment", involve additional requirements.
- B. **Payment-Application Terms:** The Owner will process monthly progress payments. The Contractor may submit applications for payment on a monthly basis.
- C. **Payment-Application Forms:** Use the "Application for Payment" form as required by the Owner. Present the required information on electronic media printout or Owner approved form; multiple pages should be used if required.
1. For each item, provide a column including but not limited to the following items:
    - a. Item Number.
    - b. Description of Work and Related Specification Section or Division.
    - c. Scheduled Value, break down by units of material and units of labor.
    - d. Work Completed from previous application.
    - e. Work Completed this period.
    - f. Materials presently stored.
    - g. Total Completed and stored to date of application.
    - h. Percentage of Completion.
    - i. Balance to Finish.
    - j. Retainage.
- D. **Application Preparation:** Complete every entry on the Application form. At the time of Final Payment only, include an executed Application form by a person authorized to sign legal documents on behalf of the Contractor. The Construction Administrator will return incomplete Applications without action.
1. Entries shall match data on the "Schedule of Values".
  2. Include amounts of Change Orders issued prior to the last day of the construction period covered by the application.
- E. **Transmittal:** Except for final payment, submit to the Construction Administrator by a method ensuring receipt within **forty-eight (48)** hours. **One (1)** complete, signed and notarized original of each Application for Payment, including lien waivers and similar attachments when required, along with **six (6)** copies. For Final Payment, **nine (9)** complete, signed and notarized copies shall be submitted.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.
- F. **Applications for Payment:** Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment and all subsequent Application for Payments including, but not limited to, the following items:
1. List of subcontractors and suppliers' name, FEIN/Social Security numbers, and Connecticut Tax Registration Numbers.
  2. List of principal suppliers and fabricators.
  3. Schedule of Values.
  4. Contractor's Construction Schedule (preliminary if not final).
  5. Schedule of principal products.
  6. Submittal Schedule (preliminary if not final).

7. List of Contractor's staff assignments.
8. List of Contractor's principal consultants.
9. Copies of all applicable permits.
10. Copies of authorizations and licenses from governing authorities for performance of the Work.
11. Proof that subcontractors have been paid amounts included on the Contractor's Application for Payment within thirty (30) days after the Owner has paid the Contractor for the particular Application for Payment in accordance with Connecticut General Statute § 49-41a (a)(1).
12. Releases of Lien from subcontractors with amounts included on the Contractor's Application for Payment when Contractor has been paid by the Owner for the particular Application for Payment but the subcontractors have not been paid.
13. Proof that as-built documents are updated as required by Section 01 77 00 "Closeout Procedures.
14. Initial as-built survey and damage report, if required.
15. Update the "Contractor's Master Subcontract Agreement List" and submit copies all recently executed Subcontract Agreements in accordance with CGS § 4b-96.
  - 15.1. The "Contractor's Master Subcontract Agreement List" shall list all Subcontract Agreements in order of Contract Sum magnitude (from high to low) in the following format:

<b>Contractor's Master Subcontract Agreement List</b>				
<b>Subcontractor Name</b>	<b>Minority Or Small Business Designation</b>	<b>Trade</b>	<b>Address</b>	<b>Contract Sum</b>

16. In accordance with CGS § 42-158j (b):  
 Each payment requisition submitted 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 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 section, "pending 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 and identified by an official Change Order Number or Construction Change Directive Number assigned by the State of Connecticut.**

- G. **Application for Payment at Substantial Completion:** Following issuance of the Certificate of Substantial Completion submit an Application for Payment form; use the form as required by the Owner. Present the required information on electronic media printout as applicable that include, but are not limited, to the following:
  1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
  2. Administrative actions and submittals that shall precede or coincide with this application include, but are not limited to, the following:
    - 2.1 Occupancy permits and similar approvals.
    - 2.2 Warranties (guarantees) and maintenance agreements.
    - 2.3 Test/adjust/balance records.
    - 2.4 Maintenance instructions.

- 2.5 Meter readings.
- 2.6 Startup performance reports.
- 2.7 Changeover information related to Owner's occupancy, use, operation, and maintenance.
- 2.8 Final cleaning.
- 2.9 Application for reduction of retainage and consent of surety.
- 2.10 Advice on shifting insurance coverage.
- 2.11 Final progress photographs.
- 2.12 List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

**H. Final Payment Application:** Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include, but are not limited, to the following:

1. Completion of Project Closeout requirements.
2. Completion of list of items remaining to be completed as indicated on the attachment to the Certificate of Substantial Completion.
3. Ensure that unsettled claims will be settled.
4. Ensure that incomplete Work is not accepted and will be completed in accordance with a schedule prepared by the Contractor which is acceptable to the Owner.
5. Transmittal of required Project construction records to the Owner (including as-built documents specified in Section 01 77 00 "Closeout Procedures").
6. Certified property survey.
7. Proof that taxes, fees, and similar obligations were paid.
8. Removal of temporary facilities and services.
9. Removal of surplus materials, rubbish, and similar elements (Reference Section 01 74 19 "Construction Waste Management & Disposal").
10. Change of door locks to Owner's access.
11. The requirements of the General Conditions and Supplementary Conditions for Final Acceptance, Final Completion, Final Inspection, and Final Payment.
12. Asbestos, lead or other hazardous material manifests.
13. Completion of "Building Contractor Reporting Form" as supplied by Department of Construction Services, for all Contractors, Subcontractors, Vendors, Suppliers, etc. who work on the Contract. The form includes the following information:
  - a. Contractor/Subcontractor name.
  - b. FEIN/Social Security Numbers
  - c. Connecticut Tax Registration Numbers
  - d. Type of work
  - e. Name of business and address
  - f. Remittance address.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 29 76**

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**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A.** This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
1. General project coordination procedures.
  2. Conservation.
  3. Coordination Drawings, including Site Logistics Plans.
  4. Administrative and supervisory personnel.
  5. Cleaning and protection.
- B. Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 29 76 "Progress Payment Procedures" for Schedule of Values items
  2. Division 01 Section 01 31 19 "Project Meetings" for progress meetings, coordination meetings, and pre-installation conferences.
  3. Division 01 Section 01 32 16.13 "CPM Schedules" for requirements for CPM scheduling and reporting progress of work.
  4. Division 01 Section 01 50 00 "Temporary Facilities and Controls".
  5. Division 01 Section 01 60 00 "Product Requirements" for coordinating general installation.
  6. Division 01 Section 01 71 23 "Field Engineering" specifies procedures for field engineering services, including establishment of benchmarks and control points.
  7. Division 01 Section 01 77 00 "Closeout Procedures" for coordinating contract closeout.
  8. Division 01 Section 01 91 00 "Commissioning" defines the commissioning process.

**1.3 CONSTRUCTION ADMINISTRATOR**

**A. Construction Administrator:**

1. The Construction Administrator is identified in Division 01 Section 01 11 00 "Summary of Work".
2. **Construction Mobilization:**
  - a. Cooperate with the Construction Administrator in the allocation of mobilization areas of the site, for field offices and sheds, for agency facility access, traffic, and parking facilities.
  - b. During Construction, coordinate use of site and facilities through the Construction Administrator.
  - c. Comply with Construction Administrator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
  - d. Comply with instructions of the Construction Administrator for use of temporary utilities and construction facilities.
  - e. Coordinate field engineering layout as specified in Division 01 Section 01 71 23 "Field Engineering" for work under the instructions of the Construction Administrator.

#### 1.4 COORDINATION

- A.** Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.
1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
  3. Make provisions to accommodate items scheduled for later installation.
- B.** Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
1. Prepare similar memoranda for the Construction Administrator, Owner and separate contractors where coordination of their work is required.
- C. Administrative Procedures:** Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of schedules.
  2. Installation and removal of temporary facilities.
  3. Delivery and processing of submittals.
  4. Progress meetings.
  5. Project closeout activities.
  6. As-Builts - coordinate monthly meetings to assure up-dates being performed.

#### 1.5 SUBMITTALS

- A. Coordination Drawings:** Prepare coordination drawings to complete detailed coordination of systems and components and to integrate information about fabrication and installation.
1. Thoroughly prepare coordination drawings, as further stipulated in Part 3 "Execution", reviewing all contract documents and consulting with all entities contributing to or involved with each portion of the work under consideration.
    - a. Show the relationship of all components shown on any separate Shop Drawings.
    - b. Indicate required desired installation sequences.
    - c. Comply with requirements contained in Division 01 Section 01 33 00 "Submittal Procedures".
  2. Prepare coordination drawings for installation of all products and materials fabricated by separate entities.
  3. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components, including but not limited to: all site-utility entry points; all ceiling and roof cavities in all areas; all electrical, telecommunications and mechanical rooms; all stage-boundary interface areas; all laboratories, animal-handling rooms and data rooms; all classrooms and seminar rooms; all lecture halls and their support spaces; all video studios, broadcast classrooms and their support facilities; and all such other conditions required to coordinate the work.
  4. **Prepare a Site Logistics Plan(s) showing:** The entire project area and limits; all routes into and out of site; all staging and stockpiling and lay-down areas; all aspects of phasing/staging; all parking, paving and fencing; and all specific provisions to satisfy requirements of

Division 01 Sections, including but not limited to Field Engineering and Temporary Facilities and Controls. The Site Logistics Plan shall coincide with and complement the general staging plans and site plans outlined in the contract bidding documents. It is intended that the Contractor shall present this refined plan for approval by the Construction Administrator. The fencing shown on this plan is required for all phases. Exact placement and timing of installations and removals will be reviewed and approved by the Construction Administrator prior to implementation. An additional allotment of various fencing is specified in Division 32, which the Contractor shall provide, install, and relocate at various intervals, for installation and removal by the Contractor per the direction of the project's Construction Administrator. This staging and logistics plan will require refinement and change for each phase/stage of the project. The Site Logistics Plan(s) shall be drawn at a scale no smaller than 1"=40' and shall be submitted as stipulated in Division 01 Section 01 29 76 "Progress Payment Procedures", but in no case later than (30) days after Notice to Proceed.

5. Prepare coordination drawings showing locations of surface recesses and voids, as well as offsets and breaks, requiring filling and/or feathering, both those initially visible and those discovered during the course of work. Review with Owner and Architect to obtain direction for filling and feathering. Revise drawing(s) to record directions for same for field and record purposes.
- B. Staff Names:** Prior to the contract start date, submit a list of the Contractor's principal staff assignments, including the superintendent, project safety officer, and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.
1. Post copies of the list in the Project meeting room, the temporary field office, and at each temporary telephone.
  2. Provide resumes of each staff member proposed for the Project. This shall include the Project Manager, Project Superintendent and Safety Officer.

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION

### 3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions:** The Contractor shall require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed and coordinate such inspections with the Construction Administrator and authorities having jurisdictions. If unsatisfactory conditions exist notify the Construction Administrator immediately. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B.** The Contractor shall coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.
- C. Coordination Drawings:** Before construction work can begin, the Contractor shall submit to the Architect coordination drawings in the form of (a) reproducible (vellum) transparencies at not less than 1/4-inch scale and (b) CAD files of the coordination drawings on CDROM. Such drawings will be required throughout all areas for trades as described below. These drawings shall show resolutions of trade conflicts in congested areas. The Architect will supply base drawings (with the title blocks removed), including floor plans, reflected ceiling plans, and structural framing plans, in the form of electronic CAD files on CDROM, using the AutoCAD release edition specified with the files, to the Contractor for distribution to the trades for use in developing the coordination drawings. Each trade contractor shall create separate layers within the CAD files to show the work of their trade. Prepare coordination drawings as follows:
  1. The HVAC subcontractor shall initiate 1/4-inch scale drawings done on AutoCAD (latest version) showing ducts and piping in plan and section. Sheet metal shop drawings must be approved prior to starting coordination drawings.

2. The Sprinkler subcontractor shall then add layers to superimpose his piping layout on the coordination drawings.
  3. The Electrical subcontractor shall then add layers to superimpose all the electrical information on the coordination drawings. Said information is to include but not necessarily be limited to cable trays, equipment, lighting, conduits, bus duct, etc. Show space allowances reserved for work under other contracts, such as audio-visual wiring and equipment.
  4. The Plumbing subcontractor shall then add layers to complete the coordination drawing by drawing his piping (including pitch) on the coordination drawings.
  5. Subcontractors for specialties, furnishings, equipment and special construction shall add layers to show their work to assure full coordination of all systems.
  6. The Construction Administrator shall review the completed coordination drawings for general compliance and then submit them to the Architect for his review. All subcontractors shall rework the drawings until all systems are properly coordinated.
  7. The Ceiling subcontractor shall utilize the drawings to prepare acoustic panel ceiling drawings and any other suspended ceiling drawings, and shall indicate areas of conflict with the work of other trades by drafting the location of grids, panels and tiles.
  8. The Contractor shall indicate Architectural/Structural conflicts or obstacles and coordinate to suit the overall construction schedule. The Contractor shall locate all precut and prefabricated holes and openings in structural steel on the CAD coordination drawing files as required for HVAC, plumbing, fire protection and electrical work. The Contractor shall coordinate these holes and openings with the structural steel fabricator during the structural steel shop drawing development phase. Coordination to take place on schedule so as to permit shop fabrication of all structural steel holes and openings. The Owner will not be held responsible for the costs associated with field fabrication of structural openings resulting from the lack of timely and thorough coordination.
  9. The Contractor shall expedite all drawing work and coordinate to suit the construction schedule. The Contractor shall then review these drawings and compare them with the Architectural, Structural, Equipment, and other drawings and determine that all of the work can be installed without undue interference. Prior to the submittal to the Architect, areas of potential conflict shall be brought to the attention of the Contractor who shall convene a coordination meeting of all parties involved, for the purpose of resolving all utility conflicts. The Contractor shall supervise and direct corrective measures and have all trades sign acceptance of the drawings. Submit four (4) hard copies of each drawing to the Architect and two (2) copies to the Construction Administrator for the record, and only after all conflicts have been accommodated.
  10. If the coordination meeting fails to resolve coordination conflicts, the Contractor shall indicate the nature of such conflicts in a detailed RFI, proposing the most economical solution.
  11. The Contractor shall not permit work by trades to proceed in a given bay or area until all trade foremen agree on the exact arrangements for each room or area. If a given trade proceeds prior to trades approval, then if necessary, that trade shall revise their work, if necessary, at no extra cost, in order to permit other trades to proceed.
  12. Submit all coordination drawings on CD-ROM, in addition to hard copy.
- D. The Construction Administrator will meet with the Contractor on all major items of coordination.

### **3.2 CLEANING AND PROTECTION**

- A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering, where required, to assure protection from damage or deterioration.
- B. Clean and provide maintenance on completed construction as construction per manufacturers requirements through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.

- C. Limiting Exposures:** Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
1. Excessive static or dynamic loading.
  2. Excessive internal or external pressures.
  3. Excessively high or low temperatures.
  4. Thermal shock.
  5. Excessively high or low humidity.
  6. Air contamination or pollution.
  7. Water or ice.
  8. Solvents.
  9. Chemicals.
  10. Light.
  11. Radiation.
  12. Puncture.
  13. Abrasion.
  14. Heavy traffic.
  15. Soiling, staining, and corrosion.
  16. Bacteria.
  17. Rodent and insect infestation.
  18. Combustion.
  19. Electrical current.
  20. High-speed operation.
  21. Improper lubrication.
  22. Unusual wear or other misuse.
  23. Contact between incompatible materials.
  24. Destructive testing.
  25. Misalignment.
  26. Excessive weathering.
  27. Unprotected storage.
  28. Improper shipping or handling.
  29. Theft.
  30. Vandalism.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 31 00**

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## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:
1. **Start Date meeting (establishes start date)**
  2. **Pre-construction conferences.**
  3. **Pre-installation conferences.**
  4. **Progress meetings.**
  5. **Safety**
  6. **Coordination**
  7. **As-built drawings review**
  8. **And as required**
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating project meetings with other construction activities.
  2. Division 01 Section 01 32 16.13 "CPM Schedules" for requirements for CPM scheduling and reporting progress of work.
  3. Division 01 Section 01 33 00 "Submittal Procedures" for submitting the Construction Schedule or CPM Schedule.
  4. Division 01 Section 01 35 26 "Government Safety Requirements specifies the requirements for safety plans, reports, and investigation submittals.
  5. Division 03 Section 03 45 00 "Precast Architectural Concrete" for pre-installation/erection conferences.
  6. Division 07 Section 07 50 00 "Membrane Roofing" for pre-construction conferences.

### 1.3 PRE-CONSTRUCTION CONFERENCE

- A. The Contractor will attend a pre-construction conference before starting construction, as scheduled by the Construction Administrator convenient to the Owner, the Construction Administrator, Architect, and Contractor. This meeting will take place at least **fourteen (14)** days prior to official Start Date. Hold the conference at the Project Site or another convenient location as directed by the Construction Administrator. The Construction Administrator shall conduct the Pre-construction Conference to review the Contractor and Subcontractor responsibilities and personnel assignments.
- B. **Attendees:** Authorized representatives of the Construction Administrator, Owner, Architect, and their consultants; the Contractor and its superintendent; major subcontractors; agency; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- C. **Agenda:** Discuss items of significance that could affect progress, including the following:
1. **Tentative construction schedule.**
  2. **Critical work sequencing.**
  3. **Progress meeting schedule.**

4. Designation of responsible personnel.
5. Procedures for processing field decisions and Change Orders.
6. Procedures for processing Applications for Payment.
7. Distribution of Contract Documents.
8. Submittal of Shop Drawings, Product Data, and Samples.
9. Preparation of record documents.
10. Use of the premises.
11. Parking availability.
12. Office, work, and storage areas.
13. Equipment deliveries and priorities.
14. Safety procedures.
15. First aid.
16. Security.
17. Housekeeping.
18. Working hours.
19. Coordination with Audio Visual and Telecommunications.

#### 1.4 PRE-INSTALLATION/CONSTRUCTION CONFERENCES

- A. The Contractor will schedule a pre-installation conference(s) at the Project Site before each construction activity that requires coordination with other construction. The Contractor shall be responsible to notify in writing the Construction Administrator and the appropriate Subcontractor(s), etc., of the date and time of all Pre-installation/Construction Conferences. Notification shall be at least seven (7) days, prior to the Conference. The Contractor shall be responsible for coordination and attendance of all Subcontractors, etc., involved in or affected by the installation for all Pre-installation/Construction Conferences.
- B. **Attendees:** The Construction Administrator, Contractor, Subcontractors, Owner and Architect, the installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. The Contractor shall advise all attendees of the scheduled Pre-installation/Construction Conferences dates.
- C. **Agenda:** Review the progress of other construction activities and preparations for the particular activity under consideration at each Pre-installation/Construction Conference, including but not limited to the following requirements:
  1. Contract Documents.
  2. Options.
  3. Related Change Orders.
  4. Purchases.
  5. Deliveries.
  6. Shop Drawings, Product Data, and quality-control samples.
  7. Review of mockups.
  8. Possible conflicts.
  9. Compatibility problems.



10. Time schedules.
11. Weather limitations.
12. Manufacturer's recommendations.
13. Warranty requirements.
14. Compatibility of materials.
15. Acceptability of substrates.
16. Temporary facilities.
17. Space and access limitations.
18. Governing regulations.
19. Safety.
20. Inspecting and testing requirements.
21. Required performance results.
22. Recording requirements.
23. Protection.

- D. The Construction Administrator will record significant discussions and agreements and disagreements of each Pre-installation/Construction Conference, and the approved schedule. The Construction Administrator will promptly distribute the record of the Pre-installation/Construction Conference to all attendees.
- E. The Contractor shall not proceed with the installation/construction if the conference cannot be successfully concluded. The Contractor shall be responsible to initiate whatever actions are necessary to resolve impediments to performance of Work and schedule and reconvene another Pre-installation/Construction Conference at the earliest feasible date. Failure of the contractor to resolve impediments to the performance of the work will not result in an extension of days.

## 1.5 PROGRESS MEETINGS

- A. The Construction Administrator will conduct progress meetings, bi-weekly, at the Project Site or at regular intervals as agreed upon at the Pre-construction Conference. The Construction Administrator will notify the Owner, the Architect, and the Contractor of the scheduled Progress Meeting dates. Coordinate dates of Progress Meetings with preparation of Application for Payment requests.
- B. **Attendees:** In addition to representatives of the Contractor, Construction Administrator, Owner and the Architect, subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities may be requested to attend these meetings on an as needed basis. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work. The Contractor shall include the site superintendent as a minimum.
- C. **Agenda:** Progress Meetings shall review and correct or approve minutes of the previous Progress Meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.
  1. **Construction Schedule or CPM Schedule:** Review progress since the last Progress Meeting. Determine where each activity is in relation to the required Contractor's "Construction Schedule" or "CPM Schedule" and whether each activity is on time or ahead or behind Schedule. Determine how Work that is behind Schedule will be expedited; secure commitments from parties involved to do so. Discuss whether Schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
  2. Review the present and future needs of each entity present, including the following:
    - a. **Interface requirements.**

- b. Time.
- c. Sequences.
- d. Status of submittals.
- e. Deliveries.
- f. Off-site fabrication problems.
- g. Access.
- h. Site utilization.
- i. Temporary facilities and services.
- j. Hours of work.
- k. Hazards and risks.
- l. Housekeeping.
- m. Quality and work standards.
- n. Change Orders.
- o. Documentation of information for payment requests.

**D. Reporting:** The Construction Administrator will distribute minutes of the meeting to each party present, promptly and before the next scheduled meeting, and to parties who should have been present.

**1.6 SUBCONTRACTOR/COORDINATION/SAFETY MEETINGS**

- A.** The Contractor shall conduct Subcontractor/coordination meetings.
- B.** The Contractor shall conduct a separate safety meeting after the safety plan is submitted. The Contractor shall take meeting minutes. These minutes shall be made available upon request. The Contractor shall notify the Construction Administrator of the times and dates of these meetings, who may elect to attend these meetings as an observer when necessary. A minimum of one safety meeting will be held per month.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 31 19**

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the preparation, submittal, and updating of the Contractor's construction schedules and reporting progress of the Work.
  - 1. Refer to the General Conditions and the Agreement for definitions and specific dates of Contract Time.
- B. This Section includes the following:
  - 1. Format.
  - 2. Content.
  - 3. Revisions to schedules.
  - 4. Submittals.
  - 5. Distribution.
- C. **Related Sections:** The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section 01 29 76 "Progress Payment Procedures" specifies requirements for submitting Schedule of Values and Application for Payments.
  - 2. Division 01 Section 01 31 19 "Project Meetings" specifies requirements for submitting and distributing meeting and conference minutes.
  - 3. Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for submitting the Submittal Schedule.
  - 4. Division 01 Section 01 45 00 "Quality Control" specifies requirements for submitting inspection and test reports.
  - 5. Division 01 Section 01 60 00 "Product Requirements" specifies requirements for submitting the list of products.

### 1.3 DEFINITIONS

- A. **Construction Schedule:** A method of planning and scheduling a construction project utilizing a horizontal bar chart with a separate bar for each major portion of the Work or operation to make the schedule an effective tool for planning and monitoring the progress of the work.

### 1.4 QUALITY ASSURANCE

- A. **The Contractor's Consultant:** Retain a consultant to provide planning, evaluating, and reporting by CPM scheduling.
  - 1. **In-House Option:** The Owner may waive the requirement to retain a consultant if the Contractor can demonstrate that:
    - a. The Contractor has the computer equipment required to produce construction schedules.
    - b. The Contractor employs skilled personnel with experience in construction scheduling and reporting techniques.
  - 2. **Program:** Use **Microsoft Project** latest version.
  - 3. **Standards:** Comply with procedures contained in AGC's "Construction Planning & Scheduling."

**1.5 PRELIMINARY SCHEDULE**

- A. Preliminary Gantt schedule is to be prepared by the Contractor and submitted to the Construction Administrator within **seven (7)** days of award of contract. This schedule is to cover all items of Work from the start of the project up to the completion of the project. This schedule must be revised when the actual schedule of significant items varies more than one week from the proposed schedule.

**1.6 CONSTRUCTION SCHEDULE FORMAT**

1. **Format:** Utilize a horizontal bar chart (Gantt) with a separate bar for each major portion of the Work or operation, identifying first work day of each week.
2. **Program:** Use **Microsoft Project**, latest version.
3. **Sequence of Listings:** Utilize the Table of Contents of this Project Manual and the chronological order **of the start of each item of work.**
4. **Scale and Spacing:** Provide space for notations and revisions.
5. **Sheet Size:** To be coordinated with Construction Administrator.
6. **Weather Days Allowance:** The Contractor shall include as a separate identifiable activity on the Critical Path of the Construction Schedule, and activity labeled "Weather Days Allowance." Insert this activity immediately prior to the substantial completion milestone.

6.1 The Contractor shall be fully responsible for determining the number of weather delay days to be included in the Construction Schedule. This determination shall be based on the normal anticipated weather for the project location and the nature of the project work. The Construction Schedule shall be based on the contractor's determined weather delay allowance. The weather delay activity shall be included in the construction schedule immediately prior to the Substantial Completion milestone.

6.2 The minimal allowed duration of the Weather Days Allowance shall be calculated as follows (decimals rounded to nearest whole number):

$$\frac{\text{Contract Time (Calendar Days)}}{365} \text{ multiplied by } 7 \text{ equals Weather Days Allowance (Calendar Days)}$$

6.3 The Contractor shall insert an activity in the Critical Path of the Construction Schedule to reflect weather day occurrences when weather days are experienced and accepted by the Owner. Identify this activity as a weather delay.

6.4 The Contractor shall reduce duration of Weather Days Allowance activity as weather delays are experienced and inserted into the schedule. Remaining weather days in Weather Day Allowance at completion of project is considered float. Weather delay, when justified, are considered allowable, non compensable.

**1.7 CONTENT**

- A. Show complete sequence of construction by activity, with dates beginning and completion of each element of construction.
- B. Identify each item by specification section numbers.
- C. Identify work of separate phases and other logically grouped activities.
- D. Show accumulated percentages of completion of each item, and total percentage of Work completed, as of the **first** day of each month.
- E. Provide separate schedule of submittal dates for shop drawings, product data, and samples, Owner/Agency furnished products and any products identified as under Allowances, and dates reviewed submittals will be required from Architect/Engineer. Indicate decision dates for selection of finishes.

- F. Indicate delivery dates for Owner/Agency furnished products and any products identified as under Allowances.
- G. Indicate critical path with original baseline indicated.
- H. Coordinate content with Schedule of Values specified in Section 01 29 76 "Progress Payment Procedures."

**1.8 SUBMITTALS AND REVISIONS TO SCHEDULES**

- A. An initial bar graph schedule is to be prepared by the Contractor and submitted to the Construction Administrator. Refer to Article 1.5.
- B. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- C. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- D. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect.
- E. Schedules must be revised monthly and when the actual schedule of significant items varies more than **seven (7) days** from the proposed schedule.
- F. Submit revised Construction Schedules for each Application for Payment.
- G. Submit **four (4)** copies of the Construction Schedule to the Construction Administrator.

**1.9 DISTRIBUTION**

- A. Distribute copies of the Construction Schedules to Construction Administrator, Architect, Owner, Subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problem anticipated by projections indicated in schedules.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 32 16**

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## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for construction photographs.
- B. **Related Sections:** The following Section contains requirements that relate to construction photographs:
1. Division 01 Section 01 33 00 "Submittal Procedures" specifies general requirements for submitting digital construction photographs.

### 1.3 SUBMITTALS

- A. **Photographs:** Provide a digital camera to take **twenty-four (24)** or more photos each time. Deliver **two (2)** sets of photo files on **one (1)** CD-ROM and **one (1)** set of prints (8x10) to the Construction Administrator for the Department.
- B. **Extra Sets:** When requested by the Owner, the photographer shall prepare extra sets of prints or CD-ROM. The photographer shall distribute these directly to the designated parties who will pay the costs for the extra sets directly to the photographer.

### 1.4 QUALITY ASSURANCE

- A. Engage a qualified commercial photographer to take photographs during construction.
- B. **Photographer's Qualifications:** Photographer shall be an individual of established reputation who has been regularly engaged as a professional photographer for not less than **three (3)** years.

## PART 2 - PRODUCTS

### 2.1 PHOTOGRAPHIC COPIES

- A. On the date the work is begun and every **thirty (30) days** thereafter (until the work is at least 95 percent complete), the Contractor shall have digital photographs of the construction taken by a professional photographer.
- B. **Identification:** Label each CD-ROM with project name and date the photographs were taken. With each submittal provide an applied label, rubber-stamped or index sheet with the following information:
1. **Name of the Project.**
  2. **Name and address of the photographer.**
  3. **Name of the Architect.**
  4. **Name of the Contractor.**
  5. **Date the photographs were taken.**
  6. **Vantage Point: Description of vantage point, in terms of location, direction (by compass point), and elevation or story of construction.**

**PART 3 – EXECUTION**

**3.1 PRECONSTRUCTION PHOTOGRAPHS**

- A. Before starting construction, take digital photos of the site and surrounding properties from different points of view, as selected by the Construction Administrator.
  - 1. Take digital photos in sufficient number to show existing site conditions before starting Work.
  - 2. Take digital photos of adjacent existing buildings either on or adjoining the property in sufficient detail to record accurately the physical conditions at the start of construction.

**3.2 PHOTOGRAPHIC REQUIREMENTS**

- A. Take **twenty-four (24)** or more digital photographs monthly, coinciding with the cutoff date associated with each Application for Payment. The Construction Administrator shall select the vantage points for each shot to best show the status of construction and progress since the last photos were taken.
- B. As the digital photographs are a record of the work progress, they shall be taken each month, whether or not they show work done during the preceding month. Deliver the CD-ROMs and prints within **ten (10) days** of their taking.
- C. Provide and coordinate the use of photographic software to assure that the photos are viewable by all interested parties.

**D. PART 2 - PRODUCTS (Not Applicable)**

**E. PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 32 33**



**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including but not limited to the following:
1. **Submittal schedule.**
  2. **Shop Drawings.**
  3. **Product Data.**
  4. **Samples.**
  5. **Quality assurance submittals.**
  6. **Proposed "Substitutions/Equals".**
  7. **Warrantee samples.**
  8. **Coordination Drawings.**
  9. **O & M Manuals**
- B. Administrative Submittals: Refer to other Division 01 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
1. **Permits.**
  2. **Applications for Payment.**
  3. **Performance and payment bonds.**
  4. **Contractor's construction schedule.**
  5. **Daily construction reports.**
  6. **Construction Photographs.**
  7. **Insurance certificates.**
  8. **List of subcontractors.**
  9. **Subcontractors/Suppliers FEIN number's and Connecticut tax registration number.**
- C. **Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 25 00 "Substitution Procedures" specifies requirements for submittal of requests for equals and substitutions.
  2. Division 01 Section 01 29 76 "Progress Payment Procedures" specifies requirements for submittal of the Schedule of Values.
  3. Division 01 Section 01 31 00 "Project Management and Coordination" specifies requirements governing preparation and submittal of required Coordination Drawings.
  4. Division 01 Section 01 31 19 "Project Meetings" specifies requirements for submittal and distribution of meeting and conference minutes.
  5. Division 01 Section 01 32 16. Construction Progress Schedules" for requirements for scheduling and reporting progress of work.
  6. Division 01 Section 01 32 33 "Photographic Documentation" specifies requirements for submittal of periodic construction photographs.

7. Division 01 Section 01 35 26 "Government Safety Requirements specifies the requirements for safety plans, reports, and investigation submittals.
8. Division 01 Section 01 45 00 "Quality Control" specifies requirements for submittal of inspection and test reports and mockups..
9. Division 01 Section 01 77 00 "Closeout Procedures" specifies requirements for submittal of Project Record Documents and warranties at project closeout.
10. Division 01 Section 01 78 30 "Warranties and Bonds".

### 1.3 DEFINITIONS

- A. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended and as identified in the Specification Divisions 02 through 49.
  1. Preparation of Coordination Drawings is specified in Division 01 Section 01 31 00 "Project Management and Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
- B. Field samples are full-size physical examples erected on-site to illustrate finishes, coatings, or finish materials. Field samples are used to establish the standard by which the Work will be judged.
- C. Mockups are full-size assemblies for review of construction, coordination, testing, or operation; they are not Samples.

### 1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
  1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
    - a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
    - b. The Architect reserves the right to reject incomplete submitted packages.
  3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for re-submittals.
    - a. Allow **fourteen (14) days** for initial review. Allow additional time if the Architect must delay processing to permit coordination with subsequent submittals.
    - b. If an intermediate submittal is necessary, process the same as the initial submittal.
    - c. Allow **fourteen (14) days** for reprocessing each submittal.
    - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
- B. **Submittal Preparation:** Place a permanent label, title block or **8-1/2 inches x 11 inches** cover page approved by the Architect, on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
  1. The minimum number of copies required for each submittal shall be **seven (7)** or as determined otherwise at the pre-construction conference or by the Construction Administrator.

2. Provide a space approximately **4 inches by 5 inches** on the label, beside the title block or on the cover page on Shop Drawings to record the Contractor's review and approval markings and the action taken.
3. Include the following information on the label for processing and recording action taken.
  - a. **Project Name and State of Connecticut Project Number.**
  - b. **Date.**
  - c. **Name and address of the Architect, Construction Administrator, and Owner Representative.**
  - d. **Name and address of the Contractor.**
  - e. **Name and address of the subcontractor.**
  - f. **Name and address of the supplier.**
  - g. **Name of the manufacturer.**
  - h. **Number and title of appropriate Specification Section.**
  - i. **Drawing number and detail references, as appropriate.**
  - j. **Indicate either initial or resubmittal.**
  - k. **Indicate deviations from Contract Documents.**
  - l. **Indicate if "equal" or "substitution".**
- C. **Submittal Transmittal:** Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect using a transmittal form. Copy the Construction Administrator on the transmittal. The Architect will return all submittals to the Contractor after action is taken with a complete copy of the submittal package and one complete copy of the submittal package. The Architect will not accept submittals received from sources other than the Contractor.
  1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

## 1.6 SUBMITTAL SCHEDULE

- A. After development and review by the Owner and Architect acceptance of the Contractor's Construction or CPM schedule prepare a complete schedule of submittals. Submit the schedule to the Construction Administrator within **thirty (30)** days of Contract Award.
  1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Contractor's Construction or CPM Schedule.
  2. Prepare the schedule in chronological order. Provide the following information:
    - a. Schedule date for the initial submittal.
    - b. Related section number.
    - c. Submittal category (Shop Drawings, Product Data, or Samples).
    - d. Name of Subcontractor.
    - e. Description of the part of Work covered.
    - f. Scheduled date for resubmittal.
    - g. Scheduled date for the Architect's final release of approval.
- B. **Submittal Schedule:** Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making

corrections or modifications to submittals noted by the Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's Contractor's Construction or CPM Schedule.
  2. **Initial Submittal:** Submit concurrently with start-up construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
  3. **Final Submittal:** Submit concurrently with the first complete submittal of Contractor's construction schedule.
    - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
- C. Coordination:** Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each specification section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  3. Submit action submittals and informational submittals required by the same specification section as separate packages under separate transmittals.
  4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. **Architect and Construction Manager reserve** the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- D. Processing Time:** Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on **Architect's** receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. **Initial Review:** Allow **fifteen [15]** days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. **Architect** will advise Contractor when a submittal being processed must be delayed for coordination with related submittals not yet received. Additional time will be required if processing must be delayed to permit review of related subsequent submittals.
  2. **Intermediate Review:** If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. **Resubmittal Review:** Allow **fifteen [15]** days for review of each resubmittal.
  4. **Mass Submittals:** **Six (6)** or more submittals in **one (1) day** or **twenty (20)** or more submittals in **one (1) week**. If "Mass Submittals" are received, Architect's review time stated above may be extended as necessary to perform proper review. Architect will review "Mass Submittals based upon priority determined by Architect after consultation with Owner and Contractor.
- E. Distribution:** Following response to the initial submittal, print and distribute copies to the Construction Administrator, Architect, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- A. Schedule Updating:** Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

## 1.7 DAILY CONSTRUCTION REPORTS

- A. Prepare a daily construction report recording the following information concerning events at the site, and submit duplicate copies to the Construction Administrator at weekly intervals:
1. **List of subcontractors at the site.**
  2. **Approximate count of personnel at the site.**
  3. **High and low temperatures, general weather conditions.**
  4. **Accidents and unusual events.**
  5. **Meetings and significant decisions.**
  6. **Stoppages, delays, shortages, and losses.**
  7. **Meter readings and similar recordings.**
  8. **List of equipment on site and identify if idle or in use.**
  9. **Orders and requests of governing authorities.**
  10. **Change Orders received, start and end dates.**
  11. **Services connected, disconnected.**
  12. **Equipment or system tests and startups.**
  13. **Partial Completion's, occupancies.**
  14. **Substantial Completion's authorized.**
  15. **Equals or Substitutions approved or rejected.**

## 1.8 SHOP DRAWINGS

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:
1. Dimensions.
  2. Identification of products and materials included by sheet and detail number.
  3. Compliance with specified standards.
  4. Notation of coordination requirements.
  5. Notation of dimensions established by field measurement.
  6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least **8-1/2 by 11 inches** but no larger than **36 by 48 inches**.
  7. Submit **one (1)** reproducible media and **seven (7)** prints as directed by the Construction Administrator. The Contractor's submittal shall identify the specification section and/or drawing number applicable to the submittal.
  8. Details shall be large scale and/or full size.
- C. The Contractor shall review the Shop Drawings, stamp with this approval, and submit them with reasonable promptness and in orderly sequence so as to cause no delay in his Work or in the Work of any subcontractor. Shop Drawings shall be properly identified as specified for item, material, workmanship, and project number. At the submission, the Contractor shall inform the Architect, in writing of any deviation in the shop drawings from the requirements of the Contract Documents.
- D. The Architect will review and comment on shop drawings with reasonable promptness so as to cause no delay, but only for conformance with the design concept of the project and with the

- information given in the Contract Documents. Refer to Article 5 of the General Conditions. Shop Drawings received by the Architect that indicate insufficient study of drawings and specifications, illegible portions or gross errors, will be rejected outright. Such rejections shall not constitute an acceptable reason for granting the Contractor additional time to perform the work.
- E. The Contractor shall make any corrections required by the Architect and shall resubmit the required number of corrected copies of Shop Drawings until fully reviewed.
  - F. Upon final review submit **four (4)** additional prints, same as submitted, for use by the Construction Administrator.
  - G. The Architect's review and comments on Shop Drawings shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents.
  - H. Only final reviewed Shop Drawings are to be used on the Project site.
  - I. The Work installed shall be reviewed in accordance with the Shop Drawings and the drawings and specifications. Final Review of the Shop Drawings by the Architect shall constitute acceptance by the State and the Architect of a variation or departure that is **clearly identified**. If the contractor believes notations made by the A/E increases the value or scope of the CD's, the contractor must provide written notice to the CA within **seven (7)** days of this issue. Final reviewed Shop Drawings shall not replace or be used as a vehicle to issue or incorporate change orders or substitutions. Substitutions shall be submitted in accordance with Division 01 Section 01 25 00 "Substitution Procedures".

#### 1.10 SHOP DRAWINGS FOR ROOFING SYSTEMS:

- A. **Construction Phase Requirements:** During product submittals and shop drawing review for Roofing Systems the Consultant shall verify FM Global requirements are satisfied for all relevant components. The DAS/CS PM and Construction Administer for the Project shall submit the Contractor's roofing systems product information and shop drawings to the Consultant and FM Global. Shop drawings for roofing systems shall comply with all of the requirements in the section above "Shop Drawings". **Two (2)** sets of information [as noted in this Section 01 33 00 "Submittal Procedures"] shall be submitted to the State's Insurance Carrier (SIC):
  - 1. **State Insurance Carrier (SIC):**  
FM Global Boston Operations  
Plan Review  
1175 Boston-Providence Turnpike  
PO Box 9102  
Norwood, MA 02062  
Tel: (781) 440-8241 or FAX (781) 440-8742  
[bostonleadengineer@fmglobal.com](mailto:bostonleadengineer@fmglobal.com)
- B. The State Insurance Carrier requires **two (2)** weeks prior notice of roofing system shop drawing reviews.
- C. See Section **00 30 60 General Statement For FM Global Checklist For Roofing Systems** and **Section 50 60 00 FM Global Checklist for Roofing Systems**.

#### 1.11 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, schedules, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
  - 1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
    - a. **Manufacturer's printed recommendations.**
    - b. **Compliance with trade association standards.**

- c. **Compliance with recognized testing agency standards.**
        - d. **Application of testing agency labels and seals.**
        - e. **Notation of dimensions verified by field measurement.**
        - f. **Notation of coordination requirements.**
2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
3. **Preliminary Submittal:** Submit a preliminary single copy of Product Data where selection of options is required.
4. **Submittals:** Submit **seven (7)** copies of each required submittal; submit **five (5)** copies where required for maintenance manuals. The Architect will retain **one (1)** and will return the other marked with action taken and corrections or modifications required.
  - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
5. **Distribution:** Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
  - a. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
  - b. Do not permit use of unmarked copies of Product Data in connection with construction.

#### 1.12 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
  1. Store, mount or display Samples on site in the manner to facilitate review of qualities indicated. Prepare Samples to match the Architect's sample. Include the following:
    - a. **Specification Section number and reference.**
    - b. **Generic description of the Sample.**
    - c. **Sample source.**
    - d. **Product name or name of the manufacturer.**
    - e. **Compliance with recognized standards.**
    - f. **Availability and delivery time.**
  2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
    - a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least **three (3)** multiple units that show approximate limits of the variations.
    - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
    - c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.

- d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.
- 3. **Preliminary Submittals:** Submit a full set of choices where Samples are submitted for selection of color, pattern, texture, or similar characteristics from a range of standard choices, unless otherwise noted in specification section.
  - a. The Architect will review and return preliminary submittals with the Architects notation, indicating selection and other action.
- 4. **Submittals:** Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit **three (3)** sets. The Architect will return **one (1)** set marked with the action taken.
- 5. Maintain sets of Samples, as returned, at the Project Site, for quality comparisons throughout the course of construction.
  - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
  - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. Distribution of Samples:** Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.
  - 1. Field samples are full-size examples erected on-site to illustrate finishes, coatings, or finish materials and to establish the Project standard.
    - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

#### 1.13 QUALITY ASSURANCE SUBMITTALS

- A.** Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- B. Certifications:** Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
  - 1. **Signature:** Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.
- C. Inspection and Test Reports:** Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 01 Section 01 45 00 "Quality Control."

#### 1.14 ARCHITECT'S ACTION

- A.** Except for submittals for the record or information, where action and return is required, the Architect will review each submittal, mark to indicate action taken, and return promptly.
  - 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp:** The Architect will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:
  - 1. **Final Unrestricted Release:** When the Architect marks a submittal "Approved for fabrication," the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
  - 2. **Final-But-Restricted Release:** When the Architect marks a submittal "Incorporate Notations," the Work covered by the submittal may proceed provided it complies with



notations or corrections on the submittal and requirements of the Contract Documents. Submit corrected copies for record. Final payment depends on that compliance.

3. **Returned for Resubmittal:** When the Architect marks a submittal "Rejected, or Revise and Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
    - a. Do not use, or allow others to use, submittals marked "Rejected, or Revise and Resubmit" at the Project Site or elsewhere where Work is in progress.
  4. **Other Action:** Where a submittal is for information or record purposes or special processing or other activity, the Architect will return the submittal marked "Action Not Required."
- C. **Unsolicited Submittals:** The Architect will discard unsolicited submittals without action.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 33 00**

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**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Division 00 General Conditions of the Contract for Construction for Design-Bid-Build and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for performing alteration and renovation Work.

- B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 00 Section 00 30 00 "General Statements for Available Information" for information that is available in addition to the Bidding Documents for review by bidders. Such information may include an existing conditions survey, contaminated soil reports, contaminated groundwater reports, hazardous building material reports, geotechnical data, etc.
2. Division 01 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating cutting and patching with other construction activities.
3. Division 01 Section 01 73 29 "Cutting and Patching" for procedures for cutting and patching.
4. Division 01 Section 01 74 19 "Construction Waste Management & Disposal" for the requirements for waste management goals, waste management plan and waste management plan implementation.
5. Division 02 Section 02 41 00 "Selective Demolition" for demolition of selected portions of the building for alterations.
6. Division 02 Section 02 82 13 "Asbestos Abatement" for abatement and removal of asbestos.
7. Division 50 00 00 "Project-Specific Available Information" for information that is referenced in Section 00 30 00 "General Statements for Available Information"
8. Refer to other Sections for specific requirements and limitations applicable to performing alteration Work with individual parts of the Work.
9. Requirements of this Section apply to mechanical and electrical installations. Refer to Drawings M1 and M2 for other requirements and limitations applicable to renovation Work by mechanical and electrical installations.

**C. Definitions:**

1. Clean Fill: Either (1) natural soil or (2) rock, brick, ceramics, concrete, and asphalt paving fragments which are virtually inert and pose neither a pollution threat to ground or surface waters nor a fire hazard.
2. Contaminated Soil: Treated or untreated soil and/or sediment affected by a known or suspected release and determined, or reasonably expected to contain substances exceeding Residential Direct Exposure Criteria or GA Pollutant Mobility Criteria, as these terms are defined in the Remediation Standard Regulations (RCSA Section 22a-133k-1).
3. Hazardous Soil: Soil that is classified as a hazardous waste. Soil is classified as hazardous waste if it exhibits a hazardous waste characteristic or if it contains RCRA-listed hazardous constituents above Connecticut's RCRA "Contained-In" Policy dated May 2002.
4. Natural Soil: Soil in which all substances naturally occurring therein are present in concentrations not exceeding the concentrations of such substance occurring naturally in the environment and in which soil no other substance is analytically detectable.

5. Polluted Soil: Soil affected by a release of a substance at a concentration above the analytical detection limit for such substance in accordance with RCSA 22a-133k-1(a)(45) or for naturally occurring substance at a concentration that exceeds concentrations that naturally occur in the environment.
6. Regulated Soil: Includes Polluted Soil, Contaminated Soil, and Hazardous Soil.
7. Groundwater Remediation Wastewater: Wastewater generated in connection with investigating pollution or remediating polluted groundwater or soil. Groundwater remediation wastewater includes without limitation groundwater withdrawn from a groundwater recovery well; groundwater which collects in an excavation or foundation drain or other subsurface facility or structure; groundwater contaminated runoff and stormwater impacted by on-site pollutants from any construction activity; condensate resulting from construction or maintenance of a soil vapor extraction system; and wastewater generated by developing, testing, sampling, or purging a well.

## PART 2 - PRODUCTS

### 2.1 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New materials: As specified in product sections; match existing Products and Work for patching and extending Work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing Products where necessary, referring to existing Work as a standard.

### 2.2 SALVAGEABLE MATERIALS

- A. The **Contractor** shall be responsible for removing the following salvageable items from premises and transporting said items.
- B. The **Contractor** shall notify the Construction Administrator in writing **seven (7)** days prior to removing all salvageable items from the existing alteration project location and unloading all salvageable items and store items in the appropriate location as directed by personnel.

## PART 3 - EXECUTION

### 3.1 INSPECTION

#### A. General:

1. Observe all existing conditions prior to submitting a bid. Include in the bid, existing conditions and their impact, particularly to cost and health and safety of workers and occupants, and proper function and operation of the facility. Be aware of other work being performed. Failure to visit the site shall in no way provide relief from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the Contract Documents without additional cost to the Owner. All site visits shall be scheduled with the Owner.
2. The quantities, locations and the extent of work indicated are best estimates, which are limited by the physical constraints imposed by occupancy of the facility. Consider all aspects of the substrates within the identified plan area. Material information and quantities were obtained from site surveys. Accordingly, variations (plus or minus 10 percent) in quantities within the limits of the work area are considered as having no impact on contract sum and contract performance period. Where additional abatement work is required beyond the above variations, the contract sum and contract performance period shall be adjusted under provisions of Division 01 of the Specifications.
3. Verify that demolition is complete and areas are ready for installation of new Work.
4. Beginning of restoration Work means acceptance of existing conditions.

**B. Project Procedures for Work Involving Asbestos Containing Material (ACM):**

1. The **Contractor** is responsible for abating all **Asbestos Containing Material (ACM)** that is visible and accessible.
2. In **demolition projects, every attempt** should be made by the **Contractor** to **remove all ACM**.
3. If testing for asbestos has been conducted at the facility scheduled for renovation, demolition, reconstruction, alteration, remodeling, or repair, then the results of the asbestos testing are summarized in **Division 50 00 00 Project-Specific Available Information, Section 50 30 00 Hazardous Building Materials Inspection and Inventory** at the end of the Technical Specification Sections. Under no circumstance shall this information be the sole means used by the Contractor for determining the extent of asbestos. The Contractor shall be responsible for verification of all field conditions affecting performance of the Work.
4. If the Contractor should encounter any material suspected or known to contain asbestos **not previously identified and assigned as the Contractor's responsibility**, then the Contractor should immediately notify the Construction Administrator **in writing** of same. It is the Owner's responsibility to have the material tested and abated (if necessary). The Owner will respond within **twenty four (24) hours** after receiving the Contractor's written request to the Construction Administrator for testing the suspect material. **If necessary, the Contractor will abate ACM within a reasonable time period after the Owner's issuance of a Change Order for the additional abatement work.**
  - 4.1 When the **Owner** requests the **Contractor** undertake the responsibilities for the **abatement and disposal of the ACM**, then the compensation to the Contractor by Owner for the Work shall be determined by the **"Unit Prices"** stated in **Section 01 20 00 Contract Considerations**.
5. No attempt has been made to locate hazardous material associated with existing site utilities, though it is presumed that at least some asbestos may be discovered associated with underground piping during the course of site and site utilities work. If and when such materials appear, the Contractor shall notify the Owner, who shall direct additional work outside of this Agreement to assist in cutting up and disposing of same. The Contractor shall assist the hazardous materials contractor(s) with excavating, heavy lifting, and the like at no additional cost to the Owner.

**3.2 PREPARATION**

- A. Cut, move, or remove items as are necessary for access to alteration and renovation Work. Replace and restore at completion.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Prepare surface and remove surface finishes to provide for proper installation of new Work and finishes.
- E. Close openings in exterior surfaces to protect existing Work **[and salvageable items]** from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.

**3.3 INSTALLATION**

- A. Coordinate alteration and renovation Work to expedite completion, and if required sequence Work to accommodate Owner occupancy.
- B. Remove, cut and patch Work in a manner to minimize damage and to provide restoring products and finishes to original and or specified condition in accordance with **Section 01 73 29 "Cutting and Patching"**.

- C. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with neat transition to adjacent finishes in accordance with **Section 01 73 29 "Cutting and Patching"**.
- D. In addition to specified replacement of **[equipment and fixtures, restore existing plumbing, heating, ventilation, air conditioning, and electrical systems]** to full operational condition.
- E. Recover and refinish Work that exposes mechanical and electrical Work exposed accidentally during the Work.
- F. Install products as specified in individual specification sections.

**3.4 TRANSITIONS**

- A. Where new Work abuts or aligns with existing, perform a smooth and even transition. Patch work to match existing adjacent Work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect/Engineer.

**3.5 ADJUSTMENTS**

- A. Where removal of partitions or walls result in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
- B. Where a change of plane of **1/4-inch** in **(12) inches** or more occurs, request recommendation from Architect/Engineer for providing a smooth transition.
- C. Trim existing doors as necessary to clear new floor finish. Refinish trim as required.
- D. Fit Work at penetrations of surfaces as specified in **Section 01 73 29 "Cutting and Patching"**.

**3.6 REPAIR OF DAMAGED SURFACES**

- A. Patch or replace portions of existing surfaces that are damaged, lifted, discolored, or showing imperfections.
- B. Repair substrate prior to patching finishes.

**3.7 FINISHES**

- A. Finish surfaces as specified in individual product specification sections.
- B. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

**3.8 CLEANING**

- A. In addition to cleaning specified in **Section 01 50 00 "Temporary Facilities and Controls"**, clean Agency occupied areas of Work.

**END OF SECTION 01 35 16**

**PART 1 GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

A. This guide specification covers construction safety requirements and requirements for the protection of people, property, and resources. It is intended for use in construction, renovation, and demolition projects for the State of Connecticut Department of Administrative Services (DAS) / Construction Services (CS).

B. **Related Sections:** The following Sections contain requirements that relate to this Section:

1. Division 01 Section 01 33 00 Submittal Procedures specifies the requirements for submittal requirements;
2. Division 01 Section 01 31 19 "Project Meetings" specifies requirements for submittal and distribution of meeting and conference minutes.

**1.2 REFERENCES**

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

<b>AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)</b> <a href="http://www.asse.org/publications/">www.asse.org/publications/</a>	
ASSE/SAFE A10.32	(2004) Fall Protection
ASSE/SAFE A10.34	(2001; R 2005) Protection of the Public on or Adjacent to Construction Sites
ASSE/SAFE Z359.1	(2007) Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components
<b>AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) <a href="http://www.asme.org/Codes/">www.asme.org/Codes/</a></b>	
ASME B30.22	(2005) Articulating Boom Cranes
ASME B30.3	(2004) Construction Tower Cranes
ASME B30.5	(2004) Mobile and Locomotive Cranes
ASME B30.8	(2004) Floating Cranes and Floating Derricks
<b>NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)</b> <a href="http://www.nfpa.org/">www.nfpa.org/</a>	
NFPA 10	(2007) Portable Fire Extinguishers
NFPA 51B	(2009) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work
NFPA 241	(2004) Safeguarding Construction, Alteration, and Demolition Operations
NFPA 70	(2008) National Electrical Code
NFPA 70E	Standard for Electrical Safety in the Workplace
<b>CODE OF FEDERAL REGULATIONS (CFR)</b> <a href="http://www.archives.gov/federal-register/cfr/">www.archives.gov/federal-register/cfr/</a>	
10 CFR	Standards for Protection Against Radiation
29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.28	Safety Requirements For Scaffolding.
29 CFR 1910.146	Permit-required Confined Spaces

29 CFR 1910.147	Control Of Hazardous Energy (Lockout/Tagout)
29 CFR 1910.178	Powered industrial trucks.
29 CFR 1915	Confined and Enclosed Spaces and Other
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926.500	Fall Protection
29 CFR 1926.550	Cranes and Derricks
<b>US Army Core of Engineers (USACE)</b> <b><a href="http://www.iwr.usace.army.mil">www.iwr.usace.army.mil</a></b>	
EM 385-1-1	Safety, and Health Requirements Manual (2008),

**1.3 SUBMITTALS**

- A. An "O" followed by "A" indicates that the Owner acceptance; submittals not having an "O" designation are for Contractor Quality Control approval.
- B. **Submittal Procedures:**
  - 1. **Preconstruction Submittals:**
    - a. Accident Prevention Plan (APP): "O, A";
    - b. Activity Hazard Analysis (AHA); "O, A";
    - c. Crane Critical Lift Plan; "O, A";
    - d. Proof of qualification for Crane Operators; O, A.
  - 2. **Test Reports:** Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."
    - a. Accident Reports;
    - b. Monthly Exposure Reports;
    - c. Crane Reports;
    - d. Regulatory Citations and Violations;
    - e. Gas Protection.
  - 3. **Certificates:**
    - a. Confined Space Entry Permit;
    - b. Hot work permit;
    - c. License Certificates.
    - d. Certificate of Compliance – Crane

**1.4 DEFINITIONS**

- A. **Competent Person.** A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
- B. **Competent Person for Fall Protection.** A person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as their application and use with related equipment, and has the authority to take prompt corrective measures to eliminate the hazards of falling.
- C. **Confined Space:** A space which by design has limited openings for entry and exit, unfavorable natural ventilation which could contain or produce dangerous air contaminants, and which is not intended for continuous employee occupancy. Confined spaces include, but are not limited to storage tanks, process vessels, pits, silos, vats, degreasers, reaction vessels, boilers, ventilation and exhaust ducts, sewers, tunnels, underground utility vaults, and pipelines.
- D. **High Visibility Accident:** Any mishap which may generate publicity and/or high visibility.



- E. **Medical Treatment;** Medical treatment includes treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even though provided by a physician or registered personnel.
- F. **Operating Envelope:** The area surrounding any crane. Inside this "envelope" is the crane, the operator, riggers and crane walkers, rigging gear between the hook and the load, the load and the crane's supporting structure (ground, rail, etc.).
- G. **Qualified Person for Fall Protection:** A person with a recognized degree or professional certificate and with extensive knowledge, training and experience in the field of fall protection; who is capable of performing design, analysis, and evaluation of fall protection systems and equipment.
- H. **Recordable Injuries or Illnesses:** Any work-related injury or illness that results in:
  - 1. Death, regardless of the time between the injury and death, or the length of the illness;
  - 2. Days away from work (any time lost after day of injury/illness onset);
  - 3. Restricted work;
  - 4. Transfer to another job;
  - 5. Medical treatment beyond first aid;
  - 6. Loss of consciousness; or
  - 7. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.
- I. **Weight Handling Equipment (WHE) Accident:** A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; and/or collision, including unplanned contact between the load, crane, and/or other objects. A dropped load, derailment, two-blocking, overload and collision are considered an accident even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.).]

## 1.5 REGULATORY REQUIREMENTS

- A. In addition to the detailed requirements included in the provisions of this Section see, **Division 01, Section 01 42 20 "Reference Standards and Definitions"** for other state laws, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, regulations, and referenced documents vary, the most stringent requirements govern.

## 1.6 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

### A. Personnel Qualifications:

### B. Site Safety and Health Officer (SSHO):

- 1. Provide a Site Safety and Health Officer (SSHO) at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The Contractor Quality Control (QC) person **[cannot be the SSHO on this project, even though the QC has safety inspection responsibilities as part of the QC duties.] [can be the SSHO on this project.]** Meet the following requirements within the SSHO:

**Level 3:** A minimum of **five (5) years** safety work on similar projects. 30-hour OSHA construction safety class or equivalent within the last **five (5) years**. An average

of at least 24 hours of formal safety training each year for the past 5 years.  
Competent person training as needed.

**C. Crane Operators:**

Meet the Crane Operators and Crane Operation requirements of the Connecticut Bureau of License and Permits – Cranes, Department of Administrative Services, Office of State Fire Marshal pursuant to C.G.S § 29-221 through 29-230. Provide proof of current license and qualification. For more information visit the DAS website ([www.ct.gov/DAS](http://www.ct.gov/DAS)) > Licensing, Certification, Permitting and Codes > Cranes, or call (860) 713-5580 or (860) 713-5529.

**D. Personnel Duties:**

**1. Site Safety and Health Officer (SSHO):**

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the Contractors' daily **[production][quality control]** report.
- b. Conduct mishap investigations and complete required reports. Maintain the **OSHA Form 300 and Daily Production** reports for prime and sub-contractors. For more information visit the OSHA website at [www.osha.gov](http://www.osha.gov) > Employers > Recordkeeping Requirements and Forms.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.
- e. Implement and enforce accepted APPS and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. Post a list of unresolved safety and health deficiencies on the safety bulletin board.
- g. Ensure sub-contractor compliance with safety and health requirements.

Failure to perform the above duties will result in dismissal of the superintendent and/or SSHO, and a project work stoppage. The project work stoppage will remain in effect pending approval of a suitable replacement.

**G. Meetings:**

**1. Preconstruction Conference:**

- a. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the **Accident Prevention Plan (APP)**; (including the **Activity Hazard Analyses (AHAs)**, and special plans, program and procedures associated with it).
- b. Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Owner's Representative(s) as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, review, and acceptance of AHAs to preclude project delays.
- c. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Do not begin work until there is an accepted APP.

**2. Safety Meetings:**

Safety meetings shall be conducted to review past activities, plan for new or changed operations, review pertinent aspects of appropriate AHA (by trade), establish safe working procedures for anticipated hazards, and provide pertinent safety and health training and motivation.

- a. Meetings shall be conducted at least once a month for all supervisors on the project location and at least once a week for all workers by supervisors or foremen.
- b. Meetings shall be documented, including the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Documentation shall be maintained and copies furnished to the Construction Administrator (CA) on request.
- c. The Construction Administrator (CA) shall be informed of all scheduled meetings in advance and be invited to attend.

**1.7 ACCIDENT PREVENTION PLAN (APP):**

- A. Use a qualified person to prepare the written site-specific APP.
  1. Prepare the APP in accordance with the format and requirements of **US Army Core of Engineers (USACE), Safety, and Health Requirements Manual, EM 385-1-1**, or as approved by the CA and as supplemented herein. Cover all paragraphs and subparagraph elements in **USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Accident Prevention Plan"** or as approved by the CA. The USACE Safety, and Health Requirements Manual, EM 385-1-1 is available at the USACE Website [www.iwr.usace.army.mil](http://www.iwr.usace.army.mil).
  2. Specific requirements for some of the APP elements are described in "B" below. The APP shall be job-specific and address any unusual or unique aspects of the project or activity for which it is written.
- B. The APP shall interface with the Contractor's overall safety and health program. Include any portions of the Contractor's overall safety and health program referenced in the APP in the applicable APP element and made site-specific. The Owner considers the Prime General Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer and any designated Certified Safety Professional (CSP) and/or Certified Industrial Hygienist (CIH).
- C. Submit the APP to the DAS/CS Project Manager and Construction Administrator **Fourteen (14) Calendar Days** prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP. Once accepted by the DAS/CS Project Manager and Construction Administrator, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the DAS/CS Project Manager and Construction Administrator, until the matter has been rectified. Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the DAS/CS Project Manager and Construction Administrator, project superintendent, Site Safety and Health Officer (SSHO) and quality control manager. Should any hazard become evident, stop work in the area, secure the area, and develop a plan to remove the hazard. Notify the DAS/CS Project Manager and Construction Administrator within **Twenty (24) hours** of discovery. Eliminate/remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by **American Society of Safety Engineers, ASSE/SAFE A10.34 - Protection of the Public on or Adjacent to Construction Sites, see [www.asse.org](http://www.asse.org)**) and the environment.

Copies of the accepted plan will be maintained at the Construction Administrator's office at the job site. Continuously reviewed and amended the APP, as necessary, throughout the life of the contract. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered.

**D. APP Contents:**

The contents of the Accident Prevention Plan (APP) shall be in accordance with **Appendix A** of the US Army Corps of Engineers, **EM 385-1-1 Safety and Health Requirements Manual**, Appendix A, Minimum Basic Outline for Accident Prevention Plans or as approved by the CA. For more information visit the USACE Website at [www.usace.army.mil/Library](http://www.usace.army.mil/Library).

**1.8 ACTIVITY HAZARD ANALYSIS (AHA):** Activity Hazard Analyses (AHAs) define the activities being performed and identify the sequences of work, the specific hazards anticipated, site conditions, equipment, materials, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level of risk. The Activity Hazard Analysis (AHA) format shall be in accordance with US Army Corps of Engineers, **EM 385-1-1 Safety and Health Requirements Manual** or as approved by the CA.

**A. Submittals:**

1. Submit initial AHA to CA for review at least **[15] Calendar Days** prior to the start of each phase. Format subsequent AHAs as amendments to the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.
2. The AHA list will be reviewed monthly at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change. Develop the activity hazard analyses using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier or subcontractor and provided to the prime contractor for submittal to the CA.

**1.9 DISPLAY OF SAFETY INFORMATION**

Within **[1] Calendar Days** after commencement of work, erect a safety bulletin board at the job site. Include and maintain information on safety bulletin board as required by US Army Corps of Engineers, **EM 385-1-1 Safety and Health Requirements Manual**, Section 01.A.06 or as approved by the CA. Additional items required to be posted include:

**A.** Confined space entry permit.

**B.** Hot work permit.

**1.10 SITE SAFETY REFERENCE MATERIALS**

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturer's manuals.

**1.11 EMERGENCY MEDICAL TREATMENT**

Contractors will arrange for their own emergency medical treatment. The Owner has no responsibility to provide emergency medical treatment.

**1.12 REPORTS**

**A. Accident Reports**

1. Conduct an accident investigation for recordable injuries and illnesses, and property damage accidents resulting in at least **Two Thousand Dollars (\$2,000 )** in damages, to establish the root cause(s) of the accident, complete "Accident Report Form" approved by the CA. Provide the report to the CA within **[ 5 ] Calendar Days** of the accident.

**B. Accident Notification**

Notify the CA as soon as practical, but not later than **four hours** after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$2,000, or any weight handling equipment accident.

1. Within notification include the following:
  - a. contractor name;
  - b. contract title;
  - c. type of contract;
  - d. name of activity,
  - e. installation or location where accident occurred;
  - f. date and time of accident;
  - g. names of personnel injured;
  - h. extent of property damage, if any; extent of injury, if known, and brief description of accident **[to include type of construction equipment used, Personal Protective Equipment (PPE) used, etc.]**. Preserve the conditions and evidence on the accident site until the U.S. Department of Labor, Occupational Safety and Health Administration (USDOL-OSHA) investigation team arrives on-site and USDOL-OSHA investigation is conducted.

**C. Monthly Exposure Reports**

Monthly exposure reporting to the CA is required to be attached to the monthly Application for Payment request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. Provide on a form approved by the CA.

**D. Crane Reports**

Submit crane inspection reports on a form approved by the CA and as specified herein with Daily Reports of Inspections.

**E. HOT WORK**

Hot Work shall only be performed in accordance with the requirements of **NFPA 51B "Fire Prevention During Welding, Cutting and Other Hot Work Standard**.

**1. Definitions:**

- a. **Hot Work:** Work involving burning, welding, or a similar operation that is capable of initiating fires or explosions. Examples listed by NFPA include arc welding, oxygen-fuel gas welding, open-flame soldering, brazing, thermal spraying, oxygen cutting, and arc cutting.
  - b. **Permit Authorizing Individual (PAI).** Means the individual designated by the General Contractor to authorize hot work. The PAI is permitted to be, among others, the General Contractor's project executive, supervisor, foreperson, or designated safety administrator. The PAI CANNOT be the hot work operator, except as permitted in **NFPA 51B**. The PAI is aware of the fire hazards involved and is familiar with the provisions of this standard.
2. **Permit:** Submit and obtain a written permit from the PAI prior to performing "Hot Work" (welding, cutting, etc.) or operating other flame-producing/spark producing devices, from the PAI. **CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED.** The General Contractor will provide at least **two (2)** twenty (20) pound 4A:20 BC rated extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal.
  3. **Fire Watch:** It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch shall be trained in accordance with **NFPA 51B Standard for Fire Prevention During Welding, Cutting, and Other Hot Work** and remain on-site for a minimum of 30 minutes after completion of the task or as specified on the hot work permit. When starting work in the facility, require personnel to familiarize

themselves with the location of the nearest fire alarm boxes and place in memory the local fire department emergency phone number(s). ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED TO THE LOCAL FIRE DEPARTMENT, GENERAL CONTRACTOR'S AUTHORIZED REPRESENTATIVE, AND OWNER'S CA IMMEDIATELY.

**1.13 FACILITY OCCUPANCY CLOSURE**

Streets, walks, and other facilities occupied and used by the state User Agency shall not be closed or obstructed without written permission from the CA.

**1.18 SEVERE STORM PLAN**

In the event of a severe storm warning, the Contractor must:

- A. Secure outside equipment and materials and place materials that could be damaged in protected areas.
- B. Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.
- C. Ensure that temporary erosion controls are adequate.

**PART 2 PRODUCTS**

NOT USED.

**PART 3 EXECUTION**

**3.1 CONSTRUCTION AND/OR OTHER WORK**

Comply with the Connecticut State Building and Fire Safety Codes, OSHA regulations, and other references regulations. The most stringent standard prevails.

**3.1.2 HAZARDOUS MATERIAL EXCLUSIONS**

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with **USACE EM 385-1-1** such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint are prohibited. The CA, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

**3.1.3 UNFORESEEN HAZARDOUS MATERIAL**

- A. Related Section: Division 01, Section 01 35 16, Alteration Project Procedures.

**3.2 PRE-OUTAGE COORDINATION MEETING**

Contractors are required to apply for utility outages at least **[15] Calendar Days** in advance. As a minimum, the request should include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Special requirements for electrical outage requests are contained elsewhere in this specification section. Once approved, and prior to beginning work on the utility system requiring shut down, attend a pre-outage coordination meeting with the CA, User Agency Representative, and Public Utilities representative to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

**3.3 SAFETY LOCKOUT/TAGOUT PROCEDURES**

- A. The General Contractor shall ensure that each employee is familiar with and complies with these procedures and **OSHA 29 CFR 1910.147 Control Of Hazardous Energy (Lockout/Tagout)**.

1. The General Contractor's "Authorized Employee" shall apply lockout/tagout tags and take other actions that, because of experience and knowledge, are known to be necessary to make the particular equipment safe to work on.
2. No person, regardless of position or authority, shall operate any switch, valve, or equipment that has an official lockout/tagout tag attached to it, nor shall such tag be removed except as provided in this section.
3. No person shall work on any equipment that requires a lockout/tagout tag unless he, his immediate supervisor, project leader, or a subordinate has in his possession the stubs of the required lockout/tagout tags. Only qualified personnel shall perform work on electrical circuits.
4. A supervisor who is required to enter an area protected by a lockout/tagout tag will be considered a member of the protected group provided he notifies the holder of the tag stub each time he enters and departs from the protected area.
5. Identification markings on building light and power distribution circuits shall not be relied on for established safe work conditions.
6. Before clearance will be given on any equipment other than electrical (generally referred to as mechanical apparatus), the apparatus, valves, or systems shall be secured in a passive condition with the appropriate vents, pins, and locks. Pressurized or vacuum systems shall be vented to relieve differential pressure completely. Vent valves shall be tagged open during the course of the work. Where dangerous gas or fluid systems are involved, or in areas where the environment may be oxygen deficient, system or areas shall be purged, ventilated, or otherwise made safe prior to entry.

**B. Tag Placement**

Lockout/tagout tags shall be completed in accordance with the regulations printed on the back thereof and attached to any device which, if operated, could cause an unsafe condition to exist. If more than one group is to work on any circuit or equipment, the employee in charge of each group shall have a separate set of lockout/tagout tags completed and properly attached. When it is required that certain equipment be tagged, the State of Connecticut Authority Having Jurisdiction will review the characteristics of the various systems involved that affect the safety of the operations and the work to be done; take the necessary actions, including voltage and pressure checks, grounding, and venting, to make the system and equipment safe to work on; and apply such lockout/tagout tags to those switches, valves, vents, or other mechanical devices needed to preserve the safety provided. This operation is referred to as "Providing Safety Clearance."

**C. Tag Removal**

When any individual or group has completed its part of the work and is clear of the circuits or equipment, the supervisor, project leader, or individual for whom the equipment was tagged shall turn in his signed lockout/tagout tag stub to the Contractor. That group's or individual's lockout/tagout tags on equipment may then be removed on authorization by the Contractor.

**3.4 FALL HAZARD PROTECTION AND PREVENTION PROGRAM**

Establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. Within the program include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.

**A. Training**

Institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, provide training for each employee who might be exposed to fall hazards. Provide training by a competent person for fall protection in accordance with **USACE EM 385-1-1**, Section 21.A.16.

**B. Fall Protection Equipment and Systems**

Enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee

is exposed to a fall hazard. Protect employees from fall hazards as specified in **USACE EM 385-1-1, section 21**. In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with **USACE EM 385-1-1, paragraphs 05.H. and 05.I**. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems are required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, or travel. Fall protection must comply with **OSHA 29 CFR 1926.500, Fall Protection, Subpart M, and ASSE/SAFE A10.32, Fall Protection**.

**1. Personal Fall Arrest Equipment**

Personal fall arrest equipment, systems, subsystems, and components shall meet **ASSE/SAFE Z359.1, Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components**. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 1.8 m 6 feet. The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken

**2. Fall Protection for Roofing Work**

Implement fall protection controls based on the type of roof being constructed and work being performed. Evaluate the roof area to be accessed for its structural integrity including weight-bearing capabilities for the projected loading.

**a. Low Sloped Roofs:**

**(i)** For work within 6 feet (6 feet (1.8 m) of an edge, on low-slope roofs, Protect personnel from falling by use of personal fall arrest systems, guardrails, or safety nets.

**(ii)** For work greater than (6 feet (1.8 m) from an edge, erect and install warning lines in accordance with **OSHA 29 CFR 1926.500, Fall Protection**.

**b. Steep-Sloped Roofs:** Work on steep-sloped roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

**3. Existing Anchorage**

Certified (or re-certified) by a qualified person for fall protection existing anchorages, to be used for attachment of personal fall arrest equipment in accordance with **ASSE/SAFE Z359.1, Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components**. Existing horizontal lifeline anchorages must be certified (or re-certified) by a registered professional engineer with experience in designing horizontal lifeline systems.

**4. Horizontal Lifelines**

Design, install, certify and use under the supervision of a qualified person horizontal lifelines for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 (**OSHA 29 CFR 1926.500 Fall Protection**).

**5. Guardrails and Safety Nets**



Design, install and use guardrails and safety nets in accordance with **29 CFR 1926, Safety and Health Regulations for Construction Subpart M.**

**6. Rescue and Evacuation Procedures**

When personal fall arrest systems are used, the contractor must ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. Prepare a Rescue and Evacuation Plan and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan within the Activity Hazard Analysis (AHA) for the phase of work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP).

**3.5 SCAFFOLDING**

**A.** The Contractor shall provide all employees with a safe means of access to the work area on the scaffold in accordance with **OSHA 29 CFR 1910.28 Safety Requirements For Scaffolding** and as contained in this section.

1. Climbing of any scaffold braces or supports not specifically designed for access is prohibited.
2. Access scaffold platforms greater than 20 feet (6 m) maximum in height by use of a scaffold stair system.
3. Do not use vertical ladders commonly provided by scaffold system manufacturers for accessing scaffold platforms greater than 20 feet (6 m) maximum in height.
4. The use of an adequate gate is required.
5. Ensure that employees are qualified to perform scaffold erection and dismantling.
6. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection and prevention plan.
7. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward.
8. Give special care to ensure scaffold systems are not overloaded. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material are prohibited.
9. The first tie-in shall be at the height equal to 4 times the width of the smallest dimension of the scaffold base. Place work platforms on mud sills. Scaffold or work platform erectors shall have fall protection during the erection and dismantling of scaffolding or work platforms that are more than six feet. Delineate fall protection requirements when working above six feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

**B. Stilts**

The use of stilts for gaining additional height in construction, renovation, repair or maintenance work is **PROHIBITED**.

**3.6 EQUIPMENT**

**A. Material Handling Equipment**

Material Handling Equipment shall be in accordance with **OSHA 29 CFR 1910.178 Powered Industrial Trucks** and as contained in this section.

1. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.
2. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.
3. Operators of forklifts or power industrial trucks shall be licensed in accordance with OSHA.

**B. Weight Handling Equipment**

1. Equip cranes and derricks as specified in **ASME B30.5** or **ASME B30.22** or **ASME B30.8** as applicable.
2. Comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in **ASME B30.5**). Perform all testing in accordance with the manufacturer's recommended procedures.
3. Comply with **ASME B30.5** for mobile and locomotive cranes, **ASME B30.22** for articulating boom cranes, **ASME B30.3** for construction tower cranes, and **ASME B30.8** for floating cranes and floating derricks.
4. Under no circumstance shall a Contractor make a lift at or above 90% of the cranes rated capacity in any configuration.
5. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and follow the requirements of **ASME B30.5** or **ASME B30.22** as applicable.
6. Do not crane suspended personnel work platforms (baskets) unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Do not lift personnel with a line hoist or friction crane.
7. Inspect, maintain, and recharge portable fire extinguishers as specified in **NFPA 10, Standard for Portable Fire Extinguishers**.
8. All employees must keep clear of loads about to be lifted and of suspended loads.
9. Use cribbing when performing lifts on outriggers.
10. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.
11. A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.
12. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by CA.
13. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by CA.

14. Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

**C. USE OF EXPLOSIVES**

Explosives shall not be used or brought to the project site without prior written approval from the CA. Such approval shall not relieve the Contractor of responsibility for injury to persons or for damage to property due to blasting operations. Storage of explosives, when permitted on State property, shall be only where directed and in approved storage facilities. These facilities shall be kept locked at all times except for inspection, delivery, and withdrawal of explosives. Explosive work shall be performed in accordance with the requirements of C.G.S. § 29-343 through 29-355 and as required by the Office of State Fire Marshal, CT Department of Construction Services.

**3.7 EXCAVATIONS**

- A. Perform soil classification by a competent person in accordance with **29 CFR 1926 Safety and Health Regulations for Construction.**

1. **Utility Locations**

All underground utilities in the work area must be positively identified by and coordinated in accordance with **Division 00, General Conditions, Article 18 Surveys, Permits, And Regulations.** All underground utilities in the work area must be positively identified by a private utility locating service and coordinated with the public utility company. Any markings made during the utility investigation must be maintained by the General Contractor throughout the contract.

2. **Utility Location Verification**

The Contractor must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system. Digging within **Two (2) feet (610 mm)** of a known utility must not be performed by means of mechanical equipment; hand digging shall be used. If construction is parallel to an existing utility expose the utility by hand digging every **100 feet (30.5 m)** if parallel within **Five (5) feet (1.5 m)** of the excavation.

3. **Shoring Systems**

Trench and shoring systems must be identified in the accepted safety plan and AHA. Manufacture tabulated data and specifications or registered engineer tabulated data for shoring or benching systems shall be readily available on-site for review. Job-made shoring or shielding must have the registered professional engineer stamp, specifications, and tabulated data. Extreme care must be used when excavating near direct burial electric underground cables.

4. **Trenching Machinery**

Operate trenching machines with digging chain drives only when the spotters/laborers are in plain view of the operator. Provide operator and spotters/laborers training on the hazards of the digging chain drives with emphasis on the distance that needs to be maintained when the digging chain is operating. Keep documentation of the training on file at the project site.

**3.8 UTILITIES WITHIN CONCRETE SLABS**

- A. Utilities located within concrete slabs or pier structures, bridges, and the like, are extremely difficult to identify due to the reinforcing steel used in the construction of these structures. Whenever contract work involves concrete chipping, saw cutting, or core drilling, the existing utility location must be coordinated with utility company in addition to a private locating service. Outages to isolate utility systems must be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the contractor from meeting this requirement.

**3.9 ELECTRICAL**

**A. Conduct of Electrical Work**

Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the CA and utility company for identification. The CA will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in energized substations, only qualified electrical workers will be permitted to enter. When work requires Contractor to work near energized circuits as defined by the **NFPA 70**, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. In addition, provide electrical arc flash protection for personnel as required by **NFPA 70E**. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA.

**B. Portable Extension Cords**

Size portable extension cords in accordance with manufacturer ratings for the tool to be powered and protected from damage. Immediately remove from service all damaged extension cords. Portable extension cords shall meet the requirements of **NFPA 70**.

**3.10 WORK IN CONFINED SPACES**

- A.** Comply with the requirements in **OSHA 29 CFR 1910.146** and **OSHA 29 CFR 1926.21(b)(6)**. Any potential for a hazard in the confined space requires a permit system to be used.
1. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.
  2. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.
  3. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

**END OF SECTION 01 35 26**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 DEFINITIONS**

- A. **General:** Basic contract definitions are included in the General Conditions of the Contract for Construction.
- B. **"Indicated":** The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the reader locate the reference. Location is not limited to this term.
- C. **"Directed":** Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.
- D. **"Approved":** The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.
- E. **"Regulations":** The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. **"Furnish":** The term "furnish" means supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. **"Install":** The term "install" describes operations at the Project Site including the actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. **"Provide":** The term "provide" means to furnish and install, complete and ready for the intended use.
- I. **"Installer":** An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
  - 1. The term **"experienced,"** when used with the term **"installer,"** means having a minimum of **five (5)** previous projects similar in size and scope to this Project, being familiar with the special requirements indicated, and having complied with requirements of authorities having jurisdiction.
  - 2. **Trades:** Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.
  - 3. **Assigning Specialists:** Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.
    - a. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.

- J. **"Project Site"** is the space available to the Contractor for performing construction activities, either exclusively or in conjunction, with others performing other Work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
- K. **"Testing Agencies"**: A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

### 1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. **Specification Format**: These Specifications are organized into Divisions and Sections based on CSI's "MasterFormat" 49-Division format and numbering system.
- B. **Specification Content**: This Specification uses certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
  - 1. **Abbreviated Language**: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated, as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
  - 2. **Streamlined Language**: The Specifications generally use the imperative mood and streamlined language. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.
    - a. The words **"shall be"** are implied where a colon (:) is used within a sentence or phrase.

### 1.4 INDUSTRY STANDARDS

- A. **Applicability of Standards**: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. **Publication Dates**: Comply with the standards in effect as of the date of the Contract Documents unless a specific date is indicated in the Contract Documents or the governing regulations cited herein.
- C. **Conflicting Requirements**: Where compliance with **two (2)** or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent and highest quality requirement. Request a decision from the Architect before proceeding on requirements that are different but apparently equal, and where it is uncertain which requirement is the most stringent.
  - 1. **Minimum Quantity or Quality Levels**: The quantity or quality level shown or specified shall be the minimum acceptable. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Request a clarification from the Architect regarding uncertainties before proceeding.
- D. **Copies of Standards**: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - 1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source.

**E. Abbreviations and Names:** Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-generating organization, authorities having jurisdiction, or other entity applicable to the context of the text provision. Refer to Thompson Gale's "Encyclopedia of Associations," available in most libraries.

## 1.5 GOVERNING REGULATIONS AND AUTHORITIES

**A. Copies of Regulations:** Obtain copies of the “**latest applicable State Codes**” and the following regulations and retain at the Project Site to be available for reference by parties who have a reasonable need during submittals, planning, and progress of the Work, until Substantial Completion.

1. Connecticut State Building Code - 2016.
  - 1.1 CT Supplement - 2016
  - 1.2 CT Amendments - 2016
  - 1.3 International Building Code - 2012
  - 1.4 International Existing Building Code - 2012
  - 1.5 International Mechanical Code - 2012
  - 1.6 International Plumbing Code - 2012
  - 1.7 International Energy Conservation Code - 2012
  - 1.8 National Electric Code (NFPA 70) - 2014
  - 1.9 ICC/ANSI A117.1-Accessible and Usable Buildings and Facilities - 2009
2. Connecticut Fire Safety Code - 2016
  - 2.1 CT Supplement - 2016
  - 2.2 CT Amendments - 2016
  - 2.3 International Fire Safety Code - 2012
  - 2.4 NFPA 101 - 2012
3. Connecticut Fire Prevention Code - 2016
  - 3.1 NFPA 1 - 2012
4. Occupational Safety and Health Administration (OSHA)
  - 4.1 OSHA 29 CFR Part 1910 Occupational Safety and Health Regulations
  - 4.2 OSHA 29 CFR Part 1926 Occupational Safety and Health Regulations for Construction -

**B.** The “**latest applicable State Codes**” are available for download from the DAS website ([www.ct.gov/das](http://www.ct.gov/das)) > Doing Business With The State > State Building Construction > Publications and Forms > Office of State Building Inspector *and* Office of State Fire Marshal. Also visit the [www.ctdol.state.ct.us](http://www.ctdol.state.ct.us) Connecticut Department of Labor website.

## 1.6 SUBMITTALS

**A. Permits, Licenses, and Certificates:** For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01 42 20



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**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for quality-control services.
- B. Quality-Control services include fire alarm acceptance testing, inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by the Owner.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  2. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
  3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- E. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for development of a schedule of required tests and inspections.
  2. Division 01 Section 01 73 29 "Cutting and Patching" specifies requirements for repair and restoration of construction disturbed by inspection and testing activities.
  3. Division 01 Section 01 77 00 "Closeout Procedures", specific requirements for contract closeout procedures.
  4. Division 28 Section 28 31 00 "Fire Detection and Alarm" specifies field quality control for the Alarm System.

**1.3 RESPONSIBILITIES**

- A. Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, the Owner, through the Construction Administrator, shall provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction. All tests required by the individual specification sections are required to be scheduled and notification given to the Construction Administrator **48** hours in advance of the test/inspection as applicable. Costs for these services are not included in the Contract Sum.
1. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Contractor's responsibility, the Contractor shall employ and pay a qualified independent testing agency to perform quality-control services. Costs for these services are included in the Contract Sum.
  2. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Owner's responsibility, the Owner will employ and pay a qualified independent testing agency to perform those services.

- a) Such services include Special Inspections as required by the latest edition of the "Connecticut State Building Code".
  - b) Where the Owner has engaged a testing agency for testing and inspecting part of the Work, and the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner. The Owner will engage the services of a qualified Special Inspector for this project. The Special Inspector, as a representative of the Owner, shall document and confirm compliance with the provisions of the Connecticut State Building Code for Special Inspections.
  - c) Materials and assemblies for this project will be tested and construction operations inspected as the work progresses. Failure to detect any defective work or material shall not in any way prevent later rejection when such defect is discovered nor shall it obligate the State for final acceptance.
  - d) The Owner's use of testing and inspection services shall in no way relieve the Contractor of the responsibility to furnish materials and finished construction in full compliance with the Contract Documents and the Connecticut State Building Code.
- B. Retesting: The Contractor is responsible for retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.
- 1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated non-compliance with Contract Document requirements.
  - 2. The Owner will issue a credit change order to cover all costs incurred related to all re-tests/re-inspections due to non-compliance to the Contract Documents, including but not limited to the Owner's costs and the Consultant's costs.
- C. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the Agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
- 1. *Provide access to the Work.*
  - 2. *Furnish incidental labor and facilities necessary to facilitate inspections and tests.*
  - 3. *Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.*
  - 4. *Provide facilities for storage and curing of test samples.*
  - 5. *Deliver samples to testing laboratories.*
  - 6. *Provide an approved design mix proposed for use for material mixes that require control by the testing agency.*
  - 7. *Provide security and protection of samples and test equipment at the Project Site.*
- D. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual Sections shall cooperate with the Construction Administrator, Architect and the Contractor in performance of the testing agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.
- 1. The testing agency shall notify the Construction Administrator and the Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  - 2. The testing agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
  - 3. The testing agency shall not perform any duties of the Contractor.
- E. Owner will pay for the services of an independent testing agency laboratory to perform inspections, tests and other services required by the Specifications except as noted below, listed

for which the Owner will issue a deduct change order to cover the cost associated with these tests:

1. When the Contractor notifies the Construction Administrator and/or Testing Agency less than 24 hours before the expected time of testing.
  2. When the Contractor requires testing for his own convenience.
  3. When the Contractor schedules a test and is not ready for the required test.
- F. Submit reports of tests that are part of the submittal requirements which indicate compliance or non-compliance with the specified standard.
- G. See also General Conditions Article 16 "Inspections & Tests".

**H. Fire Alarm/Acceptance Testing Procedures:**

1. For **all** buildings (exceeding the threshold limit and not exceeding the threshold limit), the fire alarm testing shall be as the authority having jurisdiction shall dictate. This will be as determined by the Office of the State Fire Marshal (OSFM), and shall include, but not be limited to, the requirements as set below:
  - a. Protective Signaling Systems: All protective signaling systems shall meet with acceptance testing requirements of the applicable standards listed NFPA 101/[ and NFPA 13/
  - b. Prior Test Notification: At least **five (5)** working days prior to testing, the Fire Alarm Contractor shall notify (in writing) the following people of the proposed date the acceptance tests are to be performed (Also, see Part 2 of Certificate of Compliance).
    - Department of Administrative Services – OSFM Representative
    - General Contractor
    - Engineer of Record
    - Equipment Supplier Representative
    - Sprinkler Contractor
  - c. **Certificates of Compliance:**
    - 1) A Fire Alarm System Inspection and Testing Certification and Description form shall be prepared for each system (See NFPA 72]).
    - 2) Parts 1 and 3 through 9, shall be completed after the system is installed and the installation of the wiring has been checked. Every alarm device must also be pre-tested to ensure proper operation and correct annunciation at each remote annunciator and control panel. Part 1 of the form (Certification of System Installation) shall be signed by the fire alarm contractor. The signed and completed preliminary copies of the Certification form shall be forwarded to all parties along with the Prior Test Notification.
    - 3) Part 2, of each applicable form, shall be completed after the operational tests have been completed.
    - 4) After the completion of the operational acceptance tests and sign-off of test witness (with stipulations noted), final copies of the Certificates shall be forwarded to the Department of Construction Services Representatives.
  - d. **Tests:**
    - 1) All tests shall be conducted in accordance with the Manufacturer's Testing Recommendations.
    - 2) All testing equipment, apparatus (i.e. sound level decibel meter, 2-way radio communication, test devices, ladders, tools, lighting, etc.) and personnel shall be supplied by the Fire Alarm Contractor and Sprinkler Contractor.

- e. **System Documentation:** Every system shall include the following documentation, which shall be delivered to the Department of Construction Services Representatives upon final acceptance of the system. An owner's manual or manufacturer's installation instructions covering all system equipment, including the following:
- 1) A detailed narrative description of the system inputs, evacuation signaling, ancillary functions, annunciation, intended sequence of operations, expansion capability, application considerations, and limitations.
  - 2) Operator's instructions for basic systems operations including alarm acknowledgment, system reset, interpreting system output (LED's CRT display, and printout), operation of manual evacuation signaling and ancillary function controls, changing printer paper, etc.
  - 3) A detailed description of routine maintenance and testing as required and recommended and as would be provided under a maintenance contract, including testing and maintenance instructions for each type of device installed. This information should include:
    - (a) A listing of individual system components that require periodic testing and maintenance.
    - (b) Step by step instructions detailing the requisite testing and maintenance procedures and the intervals at which those procedures should be performed.
    - (c) A schedule that correlates the testing and maintenance procedures required by paragraph (2) above and with the listing required by paragraph (1) above.
  - 4) Detailed troubleshooting instructions for each type of trouble condition recognized by the system, including opens, grounds, parity errors, "loop failures," etc. These instructions should include a list of all trouble signals, and step by step instructions describing how to isolate those problems and correct them (or call for service as appropriate).
  - 5) A service directory, including a list of names and telephone numbers for those who should be called to service the system.
- f. **As-Built Drawings:**
- 1) The Contractor will produce two (2) sets of as-built drawings and specifications for the fire alarm system, indicating the location (and programmed address, if applicable) of all devices and appliances, the wiring sequences, wiring methods, connection of the components, and sequence of operation of the protective signaling system as installed, shall be given to the Department of Construction Services representatives. This shall be in Accordance with NFPA 72 Refer also to Section 01 77 00 "Closeout Procedures".

#### 1.4 SUBMITTALS

- A. Unless the Contractor is responsible for this service, the independent testing agency shall submit a certified written report, in duplicate, of each inspection, test, or similar service to the Construction Administrator. If the Contractor is responsible for the service, submit a certified written report, in duplicate, of each inspection, test, or similar service through the Contractor.
1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
  2. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:
    - a. Date of issue.
    - b. Project title and number.

- c. Name, address, and telephone number of testing agency.
- d. Dates and locations of samples and tests or inspections.
- e. Names of individuals making the inspection or test.
- f. Designation of the Work and test method.
- g. Identification of product and Specification Section.
- h. Complete inspection or test data.
- i. Test results and an interpretation of test results.
- j. Ambient conditions at the time of sample taking and testing.
- k. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
- l. Name and signature of laboratory inspector.
- m. Recommendations on re-testing.

### 1.5 QUALITY ASSURANCE

- A. Qualifications for Service Agencies:** Engage inspection and testing service agencies, including independent testing laboratories, that are pre-qualified as complying with the National Voluntary Laboratory Accreditation Program and that specialize in the types of inspections and tests to be performed.
1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the state where the Project is located.
- B. Mockups:** Provide full-size, physical assemblies that are constructed on-site. Mockups will be used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not samples. **[Approved mockups establish the standard by which the Work will be judged.]**

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION

### 3.1 MOCKUPS

- A.** Build site-assembled mockups using installers who will perform same tasks for project.
- B.** Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect **[or Construction Administrator]**.
  2. Notify Architect **[and Construction Administrator]** seven (7) days in advance of dates and times when mockups will be constructed.
  3. Demonstrate the proposed range of aesthetic effects and workmanship.
  4. Obtain Architect's **[and Construction Administrator's]** approval of mockups before starting work, fabrication, or construction.
  5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  6. Demolish and remove mockups when directed, unless otherwise indicated.

**3.2 REPAIR AND PROTECTION**

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with Contract Document requirements for Division 01 Section 01 73 29 "Cutting and Patching."
- B. Protect constructions exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

**END OF SECTION 01 45 00**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Division 00 General Conditions of the Contract for Construction for Design-Bid-Build and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section includes requirements for identification badges, parking stickers, construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities include, but are not limited to, the following:
  - 1. **Temporary water service and distribution.**
  - 2. **Temporary electric power and lighting services.**
  - 3. **Temporary heating, cooling and ventilation**
  - 4. **Temporary sanitary facilities, including drinking water.**
- C. Support facilities include, but are not limited to, the following:
  - 1. **Field offices – Contractor, Subcontractor, Owner, and Construction Administrator.**
  - 2. **Storage and fabrication sheds.**
  - 3. **Dewatering facilities and drains.**
  - 4. **Temporary enclosures.**
  - 5. **Temporary lifts, hoists and elevator use.**
  - 6. **Temporary project identification signs.**
  - 7. **Temporary exterior lighting.**
  - 8. **Collection and disposal of waste and cleaning.**
  - 9. **Stairs.**
- D. Security and protection facilities include, but are not limited to, the following:
  - 1. **Temporary fire protection.**
  - 2. **Permanent fire protection.**
  - 3. **Security for site and Agency.**
  - 4. **Barricades, warning signs, and lights.**
  - 5. **Enclosure fence.**
  - 6. **Security enclosure and lockup.**
  - 7. **Protection.**
  - 8. **Environmental protection.**
  - 9. **Identification badges for Contractor's personnel & parking stickers.**

**1.3 RELATED SECTIONS**

- A. Division 01 Section 01 57 30 "Indoor Environmental Control" for additional provisions governing temporary heating, ventilating and air conditioning.

#### 1.4 SUBMITTALS

- A. **Temporary Utilities:** Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. **Implementation and Termination Schedule:** Within **twenty-one (21)** days of the date established for commencement of the Work, submit a schedule indicating implementation and termination of each temporary utility.

#### 1.5 QUALITY ASSURANCE

- A. **Regulations:** Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
  - 1. **Building and fire code requirements.**
  - 2. **Health and safety regulations.**
  - 3. **Utility company regulations.**
  - 4. **Police, fire department, and rescue squad rules.**
  - 5. **Environmental protection regulations.**
  - 6. **Americans with Disabilities Act.**
- B. **Standards:** OSHA. Comply with NFPA 241 "Standard for Safeguarding Construction, Alteration, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA 200 "Recommended Practice for Installing and Maintaining Temporary Electric Power at Construction Sites."
  - 1. **Electrical Service:** Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
- C. **Inspections:** Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

#### 1.6 PROJECT CONDITIONS

- A. **Temporary Utilities:** Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, the Construction Administrator will direct the change over from use of temporary service to use of permanent service.
- B. **Conditions of Use:** Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. **General:** Provide new materials. If acceptable to the Architect, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. **Lumber and Plywood:** Comply with requirements in Division 06 Section 06 10 00 "Rough Carpentry."
  - 1. For signs and directory boards, provide 3/4-inch exterior grade, Grade A-B Fir plywood. Mount sign on preservative treated Fir posts.



- a. Project sign shall be 4' x 8' painted and supported on 4-inch x 4-inch posts, of a design to be provided by the Owner via the Construction Administrator.
- 2. **Vision Barriers:** Provide minimum 1/2-inch thick exterior plywood.
- 3. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch thick exterior plywood.
- C. **Paint:**
  - 1. For sign and directory boards applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer unless otherwise indicated.
- D. **Tarpaulins:** Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- E. **Water:** Provide potable water approved by local health authorities.
- F. **Enclosure Fencing:** Provide 0.120-inch thick, galvanized 2-inch chain link fabric fencing six (6) feet high galvanized steel pipe posts, 1-1/2 inches knuckle both bottom and top I.D. for line posts and 2-1/2 inches I.D. for corner posts.

## 2.2 EQUIPMENT

- A. **General:** Provide new equipment. If acceptable to the Architect, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
  - 1. The Contractor shall furnish tools, apparatus and appliances, hoists and/or cranes and power for same, scaffolding, runways, ladders, temporary supports and bracing and similar work or material necessary to insure convenience and safety in the execution of the Contract except where this is otherwise specified in any Specification Section. All such items shall meet the approval of the Owner but responsibility for design, strength and safety shall remain with the Contractor. All such items shall comply with Federal OSHA regulations and applicable codes, statutes, rules and regulations, including compliance with the requirements of the current edition of the "Manual of Accident Prevention in Construction" published by the Associated Contractors (AGC) and the standards of the State Labor Department.
  - 2. Staging, exterior and interior, required for the execution of this Contract, shall be furnished, erected, relocated if necessary and removed by the Contractor. Staging shall be maintained in a safe condition without charge to and for the use of all trades as needed.
- B. **Water Hoses:** Provide 3/4-inch, heavy-duty, abrasion-resistant, flexible rubber hoses with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge and backflow preventers.
- C. **Electrical Outlets:** Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- D. **Electrical Power Cords:** Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- E. **Lamps and Light Fixtures:** Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.

- F. **Heating Units:** Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
- G. **Temporary Field Offices:** Provide prefabricated or mobile units with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- H. **Temporary Toilet Units:** Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- I. **Fire Extinguishers:** Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
  - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- C. **Storm Water Pollution Control:**
  - 1. The **Architect/Engineer** shall electronically register the Connecticut Department of Energy and Environmental Protection's (DEEP) "General Permit for the Discharge of Stormwater and Dewatering Wastewater from Construction Activities" (DEEP-WPED-GP-015) and Stormwater Pollution Control Plan (SPCP) through the **DEEP ezFile Portal**. The SPCP is attached to technical Section 31 20 05 "Sedimentation and Erosion Control".
  - 2. Once under contract, and prior to construction activities, the Contractor shall assume responsibility for storm water pollution control and conform to the General Permit obligations and requirements. The Contractor shall sign, and cause to be signed by each appropriate Subcontractor, the "Contractor Certification Statement" section of the SPCP and the DEEP "License Transfer Form" (DEEP-APP-006), as directed by the Architect/Engineer. The signed Certification Statement and License Transfer Form shall be attached to the "on-site" SPCP and submitted to the DEEP by the Architect/Engineer.
  - 3. The Owner shall be responsible for the General Permit registration fee and License Transfer notification fee.
  - 4. The Contractor shall retain an updated copy of the SPCP at the construction site from the date construction is initiated at the site until the date construction at the site is completed.
  - 5. The Contractor shall conform to the SPCP or use another plan, prepared at the Contractor's expense, which has been approved by the Owner and the DEEP *prior to construction activities*. The Contractor shall be responsible for implementing, maintaining, and updating the SPCP, including, but not limited to, performing regular inspections, conducting and reporting all stormwater monitoring activities, retaining

records for the required period of time, and performing **all** post-construction measures and inspections.

6. The Contractor shall ensure all post-construction measures are installed, cleaned, and functioning and the site has been stabilized for at least **three (3) months** following the cessation of construction activities in order for the project to be considered complete. A site is considered stabilized when there is no active erosion or sedimentation present and no disturbed areas remain exposed for **all phases**. Once the site has been stabilized for at least three (3) months, the Contractor shall have the site inspected by a Qualified Inspector to confirm final stabilization. If stabilized, the Contractor shall submit a Notice of Termination (DEP-PED-NOT-015) to the DEEP in order to terminate the Construction Stormwater General Permit.
7. The Contractor shall submit a final copy of the SPCP, the Notice of Termination, and all inspection records to the Architect/Engineer and DAS/CS Project Manager at completion of all post-construction measures.
8. The Contractor shall retain copies of the SPCP and all reports required by the General Permit, and records of all data used to complete the registration for the General Permit, for a period of at least five (5) years from the date that the project is complete. Inspection records must be retained as part of the SPCP for a period of five (5) years after the date of inspection.
9. For sites involving total soil disturbance of less than one (1) acre, the Contractor shall be responsible for sediment and erosion control and utilize best management practices as identified in the "2002 Connecticut Guidelines for Soil Erosion and Sediment Control" (DEEP Bulletin 34), as amended, and any sediment and erosion control plans prepared for the project.

### 3.2 TEMPORARY UTILITY INSTALLATION

- A. **General:** Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
  1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
  2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
  3. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.
  4. **Use Charges:** If cost or use charges for temporary facilities are specified by this section to be borne by the Owner the cost or use charges for temporary facilities will be borne not longer than **thirty (30)** days after final acceptance of the project.
- B. **Temporary Water Service and Distribution:**
  1. Water for construction purposes may be taken from the existing service. The Contractor shall provide connections, approved backflow prevention device, meter and pipe to the water main or nearest hydrant, subject to the approval of the Owner. Upon completion of work, the Contractor shall remove the temporary connections and backfill if necessary. If new water service is installed before construction is complete, the new system may be used provided it is returned to the Owner in as-new condition. The Contractor shall pay for the water used, as metered.
- C. **Temporary Electric Power and Lighting Services:**

1. Power and lighting may be taken from the power company's nearest pole with temporary poles, if needed, to extend the line to project. If permanent power lines have been installed before beginning project, then temporary lines can be brought in from the last pole.
2. Provide service required for construction with branch wiring and distribution boxes located to provide power and lighting by construction-type extension cords. Meter shall be provided and installed by the Contractor.
3. The Contractor shall pay all costs of temporary power and light.

**D. Temporary Heating, Cooling and Ventilating:**

1. Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
  - a. **Heating Facilities:** Except where the Owner authorizes use of the permanent system, provide vented, self-contained, LP-gas or fuel oil heaters with individual space thermostatic control.
  - b. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.
2. Provide temporary heat during construction for interior areas included in the Contract to counteract low temperatures or excessive dampness. Maintain during said period or periods until final completion of the Contract, unless otherwise approved by the Owner in writing. Windows, doors, ventilators and similar openings shall be temporarily closed. Provide heat and ventilation to maintain specified conditions for construction operations and to protect materials and finishes from damage by temperature or humidity. The permanent heating system is not to be used for temporary heating unless approved, in writing, by the Owner. If approved, use of the permanent heating system by the Contractor does not constitute beneficial use by the Owner. The warrantee for said system will not commence until Substantial Completion is granted. Costs shall be paid by the Contractor. See individual Sections for temperature/humidity limits. Temporary heating methods shall comply with OSHA regulations and other applicable codes, statutes, rules and regulations and shall be approved by the Architect/Engineer and Owner.
3. Permanent air handling equipment, when used for temporary heating, shall be equipped with disposable "construction" filters. The construction filters shall have an average efficiency at least equal to the filters specified under Division 23, but not less than 30 percent when tested in accordance with ASHRAE 52.2 "Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size." The filters shall have an average arrestance of not less than 90 percent efficiency on one (1) micron size particles. Before turning over the system for final acceptance, the contractor shall remove and dispose of the construction filters; clean the ductwork; spray clean the heating and cooling coils, and drain pans to "like new" condition; and install the filters specified in Division 23 Section 23 40 00 "HVAC Air Cleaning Devices."
4. The Contractor may use the existing heating system with temporary extensions, radiators or unit heaters, but such use is subject to the Owner's approval. Coordinate use of existing facilities with Owner. Provide additional, temporary extensions and units to satisfy the criteria given in the preceding paragraph. Owner will pay cost of energy used. Take measures to conserve energy. At the termination of construction, return the facilities to their original condition. Before operation of permanent facilities, verify that installation is approved for operation and that filters are in place.

5. Steam from the Agency's lines shall be metered and paid for by the Contractor at a price approved by the Agency and Owner. The Contractor shall arrange with his Heating Subcontractor to install and maintain temporary piping, radiators or unit heaters, reducing valves, steam traps and other necessary fittings and accessories. Traps shall be provided to prevent steam from entering main returns. The temporary layout shall meet the approval of the Architect/Engineer. Condensate meter (or meters) shall be installed to record usage of steam.  
At the termination of construction, return the facilities to their original condition.
  6. Refer to Section 01 57 30 "Indoor Environmental Control" for additional requirements regarding means and methods of providing temporary heating, cooling and ventilating. Meet manufacturer's standards for minimum and maximum temperatures and humidity governing installation of materials and systems.
- E. Temporary Telephone Service and Data:** Provide temporary telephone service throughout the construction period for all personnel engaged in construction activities. Install telephone on a separate line for each temporary office and first aid station. Contractor shall provide telephone service in his office and separate telephone service in the DAS/CS Office and Construction Administrator's Office, if provided. It is preferred that the Contractor use a cellular phone. Basic service and local calls will be paid for by the Contractor. Toll calls will be paid for by the respective users.
1. **Separate Telephone Lines:** Provide additional telephone lines for the following:
    - a. Where an office has more than **two (2)** occupants, install a telephone for each additional occupant or pair of occupants.
    - b. Provide dedicated telephone lines for a separate fax machine in both the Contractor's office and the DAS/CS / CA office.
  2. At each telephone, post a list of important telephone numbers.
- F. Temporary Sanitary Facilities, Including Drinking Water:** Temporary sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.
1. Provide toilet tissue, wash basins with water, soap and paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material. The Contractor shall maintain the facilities in a sanitary condition.
  2. **Toilets:** The Contractor shall install self-contained chemical toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted. Provide separate facilities for male and female personnel.
  3. **Water Coolers:** Where power is accessible, provide electric hot/cold water coolers to maintain dispensed cold water temperature at 45 to 55 degrees F. Provide bottled water service and cup supplies and maintain in a clean sanitary condition.
- G. Storm and Sanitary Sewer:** If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully.
1. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
  2. Connect temporary sewers to the municipal system, as directed by sewer department officials.
  3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.
- H. Storm Water Pollution Control:** Provide earthen embankments and similar barriers in and around excavations and sub-grade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

**3.3 SUPPORT FACILITIES INSTALLATION**

**A. General:** Locate field offices, storage sheds, and other temporary construction and support facilities in designated area as shown on the Contract Documents. The location of support facilities on the Drawings is diagrammatic in nature. Final placement of support facilities is to be approved by the Construction Administrator.

1. Maintain support facilities until Final Completion. Remove prior to Final Completion with permission from the Owner.

**B. Field Offices:** Provide insulated, weathertight temporary offices of sufficient size to accommodate required office personnel at the Project Site. Keep all offices clean and orderly, sweep weekly and remove rubbish on a daily basis. Furnish and equip offices as follows:

1. The Contractor shall provide an office for their own use and a method to contact them by e-mail and telephone at any point and time.
2. **OPTION "A"**

**State User Agency Provided Field Offices:** The State User Agency will furnish, without charge, **one (1)** room for the Contractor's use as an office in an existing building. The Owner and Construction Administrator will share space with the Contractor. The Contractor shall provide and install a 5-lb ABC fire extinguisher and an approved first aid kit. The Contractor shall be responsible for furniture and shall keep this area clean and return it to its original condition after use. The Contractor shall provide the following furniture and equipment, which will remain his property. The furniture may be used but shall be in good condition as judged by the Owner and Construction Administrator.

	<b>One (1) Plan table</b>
	<b>Six (6) Conference chairs and One (1) conference table (approx. 4 feet x 8 feet).</b>
	<b>One (1) Wall mounted, cork display boards (3 foot x 4 foot).</b>
	<b>One (1) Wall mounted, white, wipe-off board, with markers (3 foot x 4 foot).</b>
	<b>Two (2) File cabinets (lockable four drawer letter size).</b>
	<b>Two (2) Bookshelves each with 4 linear feet x 12 inch wide shelving.</b>
	<b>Two (2) Waste receptacles.</b>
	<b>One (1) Plain paper, Fax Machine with dedicated telephone line approved by Owner.</b>
	<b>Two (2) Telephones with telephone lines and voice mail.</b>
	<b>One (1) Telephones lines (dedicated to computer use) with high-speed Internet connection (minimum of DSL or cable modem service).</b>

3. **Field Office Computer System**  
 The Contractor shall provide **One (1)** Field Office Computer System for the Department's exclusive use for each field office specified. The Contractor has the option to provide **either** a desktop **or** a laptop computer system in accordance with the minimum requirements listed below.

**3.1 Field Office Desktop Computer System:**

<b>.1</b>	<b>Processor:</b>	
<b>.2</b>	<b>Memory:</b>	
<b>.3</b>	<b>Hard Drive:</b>	
<b>.4</b>	<b>Optical Drive:</b>	
<b>.5</b>	<b>Ports:</b>	
<b>.6</b>	<b>Network/Wireless:</b>	Ethernet or wireless card to be compatible with the selected internet and office network connections;
<b>.7</b>	<b>Graphics:</b>	
<b>.8</b>	<b>Monitor:</b>	

.9	Keyboard:	
.10	Mouse:	

**OR:**

**3.1 Field Office Laptop Computer System:**

.1	Processor:	
.2	Memory:	
.3	Hard Drive:	
.4	Optical Drive:	
.5	Ports:	
.6	Network/Wireless:	Ethernet or wireless card to be compatible with the selected internet and office network connections;
.7	Graphics:	
.8	Display:	
.9	Battery:	
.10	External Monitor:	
.11	External Keyboard	
.12	External Mouse:	
.13	Miscellaneous:	One compatible port replicator with AC adapter, one additional AC adapter, one DC adapter and one padded carrying case

**4. Computer Software:**

The Contractor shall provide software for the computer system in accordance with the minimum requirements listed below.

4.1	Operating System Software:	
4.2	Productivity Software:	
4.3	Security Software:	
4.4	All software shall include the most current updates and patches at the time the computer system is provided to the Owner. The Construction Manager shall provide for installation of updates and patches for the operating system, productivity and security software during the term of use of the computer system by the Owner. Updates and patches shall be provided by an automatic update method.	
4.5	The Owner may install and maintain proprietary software on the computer in order to run the Owner's construction management programs.	

**5. Miscellaneous Computer Requirements**

The initial condition of the computer system shall be nearly pristine. All owner installed e-mail accounts, games, spyware, online services, applications, network or other profiles previously set up on the system shall be removed prior to placement in the field office. If the system was provided for a previous DAS/CS contract, all software not specified shall be removed prior to placement in the current field office.

- 5.1** The Contractor shall provide an uninterruptible power supply (UPS), minimum **1000** VA, **600** Watts and full time surge suppression for each field office computer system specified in this Section.
- 5.2** The Contractor shall provide all cables, connections and software required to connect the field office computer system to the printer and the scanner.
- 5.3** When more than one computer system is specified for a field office, the Contractor shall provide either an Ethernet or wireless office network to allow all computer systems in the field office to access the field office internet service, the printer and the scanner.
- 5.4** The Contractor shall provide appropriate dust covers for all field office desktop computer systems.

- 5.5 The Contractor shall provide all manuals necessary for operation of the computer system and software with the system and shall include all documentation normally furnished with the equipment and software when purchased.
  - 5.6 The Owner will be utilizing the computer system to run or access Owner provided construction management software applications. These applications are known to run on Intel and AMD compatible equipment when using the Windows operating system. If the Owner experiences problems running these applications due to hardware or software compatibility, the Contractor shall replace the equipment to ensure compatibility to the satisfaction of the Owner within **five (5)** business days.
  - 5.7 The computer system shall be maintained in good working order. If a portion of the system becomes defective, inoperable, damaged, or stolen, that portion shall be repaired or replaced within **five (5)** business days after the Contractor is notified by the Owner. If the computer system and related accessories are not maintained by the Contractor as required, the Owner may withhold partial payments until the computer system is operational to the Owner's satisfaction.
6. **Field Office Internet Service:**  
The Contractor shall provide broadband internet service for the field office. Broadband internet service shall be capable of a minimum average upload speed of **1000 Mbps** unless otherwise approved by the Owner.
- C. **Storage and Fabrication Sheds:** Install storage and fabrication sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on-site.
1. Storage sheds for tools, materials and equipment shall be weathertight with heat, lighting and ventilation for products requiring controlled conditions.
  2. Remove temporary materials, equipment services and construction before Substantial Completion.
  3. Clean and repair damage caused by installation or use of temporary facilities. Restore existing facilities used during construction to specified or original condition.
- D. **Dewatering Facilities and Drains:** For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division 31 Sections. Where feasible, utilize the same facilities. Maintain the site, excavations, and construction free of water.
- E. **Temporary Enclosures:** Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
  2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25-sq ft or less with plywood or similar materials.
  3. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
  4. Where temporary enclosure exceeds 100-sq ft in area, use UL-labeled, fire-retardant-treated material for framing and main sheathing.
- F. **Temporary Lifts, Hoists and Elevator Use:**



1. Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
  2. Refer to Division 14 Sections for elevators.
- G. Temporary Project Identification Signs:** Prepare project identification and other signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.
1. **Project Sign:** Engage an experienced sign painter to apply graphics. Comply with details to be furnished by the Construction Administrator.
    - a. **Temporary Tripod Frame:** For groundbreaking ceremonies only, provide a temporary tripod for the sign illustrated and described below. Make the tripod of 12 ft long 2" x 4"s (Stud Grade), beveled and bolted at the top. Provide approximately 5-ft between legs at grade. Provide a 6-ft long, 2" x 4" seat for the sign; locate 5-ft above grade and nail in place. Nail sign at four (4) places where edges intersect tripod legs. Drive a 24" long, pointed 2" x 4" stake into the earth next to each leg and nail to legs.
    - b. **Project Sign:** The Contractor shall contact the Construction Administrator for the proper wording for the project sign. Fabricate sign of 3/4" Exterior Grade A-B Fir plywood. Mount sign on preservative treated Fir posts. The Owner shall provide design, color selection and illustration of the Project Sign. Paint both sides and all edges of sign and the posts with two (2) coats of exterior, white, alkyd primer. Paint the border and letters with "bulletin" (sign) paint. Letter sizes, colors and related information are given on the illustration below. A self-adhesive decal of the State seal will be furnished at the Contract signing. Erect the sign within two (2) weeks after execution of the Contract and remove the sign within one (1) week after completion of the project.
    - c. **Project Sign Detail:** Sign letter sizes, fonts, colors and related information are shown in the illustration available for download from the DAS website ([www.ct.gov/das](http://www.ct.gov/das)) > Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 3000 Series - Design Phase Forms.
- H. Temporary Exterior Lighting:** Install exterior yard and sign lights so signs are visible when Work is being performed.
- I. Collection and Disposal of Waste and Cleaning:**
1. Collect waste within the contract limit line from construction areas daily. Provide separate containers for proper waste recycling. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.
  2. Maintain areas under Contractor's control free of waste materials, debris and rubbish. Maintain in a clean and orderly condition.
  3. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces before closing the space.
  4. Periodically clean interior areas before start of surface finishing and continue cleaning on an as-needed basis.

5. Control cleaning operations so that dust and other particulates will not adhere to wet or newly coated surfaces.
- J. Temporary Environmental Controls:** Contractor is to provide the following controls.
1. Rodent and Pest Control: Before deep foundation work has been completed, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Employ this service to perform extermination and control procedures at regular intervals so the Project will be free of pests and their residues at materials.
  2. Dust Control (construction and demolition).
  3. Noise Control.
  4. Erosion and Sediment Control.
  5. Pollution Control.
  6. Traffic Control.
- K. Stairs:** Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished permanent stairs with a protective covering of plywood or similar material so finishes will be undamaged at the time of acceptance.
- 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION (listed in Paragraph 1.2 D)**
- A.** Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Owner.
- B. Temporary Fire Protection:** Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
1. Provide and locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
  2. Store combustible materials in containers in fire-safe locations.
  3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
  4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
  5. The Contractor, during construction, shall be responsible for loss or damage by fire to the work of the Contract until completion. Any fire used within the structure for working purposes shall be extinguished when not in use. Bitumen or tar shall be melted on the ground only. No flammable material shall be stored in the structure in excess of amounts allowed by the authorities. No gasoline shall be stored in or close to the building at any time. The Contractor shall assign a responsible employee to be in charge of fire protection measures.
  6. If an EPDM or other single-ply roof is included in the work that requires cleaning of mating surfaces of laps with gasoline, limit amount of gasoline on roof to two (2) gallons which shall be in UL listed containers. Also provide one 30 B:C fire extinguisher within 75 feet of any point on the roof.
- C. Permanent Fire Protection:** At the earliest feasible date in each area of the Project, complete installation of the permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.

**D. Security for Site and Agency:**

1. Provide security program and facilities to protect work, existing facilities and the Owner and Agency's operations from unauthorized entry, vandalism and theft. Coordinate with the Owner's and Agency's security program.
2. The Contractor shall be solely responsible for damage, loss or liability due to theft or vandalism.

**E. Barricades, Warning Signs, and Lights:** Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.

1. Provide covered walkways as required by governing authorities for public rights-of-way and for public access to existing buildings.
2. Provide temporary, insulated, weathertight closures at openings to the exterior to provide acceptable working conditions and protection for materials, to allow for temporary heating and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.
3. Barriers and enclosures shall be in conformance with code requirements. Do not block egress from occupied buildings unless necessary to further the work of the Contract. In this case, secure the Owners approval of an alternate egress plan.
4. See also General Conditions Article 19, "Protection of the Work, Persons and Property".

**F. Enclosure Fences:** Before excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated on the Construction Documents, or enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.

1. Provide chain link construction fencing with posts set in a compacted mixture of gravel and earth. Use existing fence to the extent possible.

**G. Security Enclosure and Lockup:** Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Provide keys to the Construction Administrator.

1. **Storage:** Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

**H. Protection:**

1. Protect buildings, equipment, furnishings, grounds and plantings from damage. Any damage shall be repaired or otherwise made good at no expense to the Owner.
2. Provide protective coverings and barricades to prevent damage. The Contractor shall be held responsible for, and must make good at his own expense, any water or other type of damage due to improper coverings. Protect the public and building personnel from injury.
3. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.
4. Provide protective coverings for walls, projections, jambs, sills and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects and storage. Prohibit traffic and storage on waterproofed and roofed surfaces and on lawn and landscaped areas.

5. Provide temporary partitions and ceilings to separate work areas from Agency-occupied areas to prevent penetration of dust and moisture into Agency-occupied areas and equipment. Erect framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces.
  6. See also General Conditions Article 19, "Protection of the Work, Persons and Property".
- I. **Environmental Protection:** Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result.
- J. **Traffic Ways:**
1. The Contractor may use on-site paved roads and parking areas but shall not encumber same or their access. Public highways shall not be blocked by standing trucks, parked cars, material storage, construction operations or in any other manner.
  2. Public roads and existing paved roads, drives and parking areas on Owner's property shall be kept free from scrap or debris due to construction operations and any damage to their surface caused by the Contractor shall be repaired by him at his own expense.
  3. If the work of the Contract affects public use of any street, road, highway or thoroughfare, the Contractor shall confer with the police authority having jurisdiction to determine if and how many police are needed for public safety in addition to any barriers and signals that may be needed. The Contractor will be responsible for payment of any needed police services.
- K. **Identification Badges for Contractor's Personnel, Visitors & Parking Stickers:**
1. The Contractor will provide each person working or visiting at the site with an identification badge, bearing the name of the Contractor and a number. As badges are assigned, a record shall be kept by the Contractor and given to the Construction Administrator and Agency Administrator. Update and correct the records of all badges issued on a semi-monthly basis.
  2. Badges are to be worn on outer garment where visible at all times while at the construction site, return them to the Contractor's field office at the end of each day and pick them up there each morning.
  3. All vehicles parking in the Contractor's parking lot and those used around the site require an ID sticker. They will be issued by the Agency. Each contractor shall apply for parking stickers through the Construction Administrator no more than semi-monthly and shall keep record of all stickers issued.

### 3.5 OPERATION, TERMINATION, AND REMOVAL

- A. **Supervision:** Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. **Maintenance:** Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
  2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. **Termination and Removal:** Unless the Architect/CA requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use

of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are the Contractor's property. The Owner reserves the right to take possession of project identification signs.
2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances, as required by the governing authority.
3. At Substantial Completion, clean and renovate permanent facilities used during the construction period including, but not limited to, the following:
  - a. Replace air filters and clean inside of ductwork and housings.
  - b. Replace significantly worn parts and parts subject to unusual operating conditions.
  - c. Replace lamps burned out or noticeably dimmed by hours of use.

**END OF SECTION 01 50 00**

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## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 25 00 "Substitution Procedures" specifies administrative procedures for handling requests for substitutions made after award of the Contract.
  2. Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for submittal of the Contractor's Construction Schedule and the Submittal Schedule.
  3. Division 01 Section 01 42 20 "Reference Standards and Definitions" specifies the applicability of industry standards to products specified.

### 1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
    - a. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature, which is current as of the date of the Contract Documents.
  2. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
  3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

### 1.4 QUALITY ASSURANCE

- A. **Source Limitations:** To the fullest extent possible, provide products of the same kind from a single source.
- B. **Compatibility of Options:** When the Contractor is given the option of selecting between two (2) or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- C. **Nameplates:** Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.
  2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous

in occupied spaces. The nameplate shall contain the following information and other essential operating data:

- a. Name of product and manufacturer.
- b. Model and serial number.
- c. Capacity.
- d. Speed.
- e. Ratings.

### **1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING**

- A.** Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
  2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing. Store products in accordance with manufacturers' instructions and maintain within temperature and humidity range required by manufacturer.
  4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
  5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
  6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
  7. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation.
  8. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
  9. Store loose granular material on solid surfaces in a well-drained area; prevent mixing with foreign matter.
  10. Arrange storage to provide access for inspection. Periodically inspect to insure products are undamaged and are maintained under required conditions. Keep log showing date, time and problems, if any.
  11. Stone, masonry units and similar materials shall be stored on platforms or dry skids and shall be adequately covered and protected against damage.
  12. Materials and equipment shall be delivered, stored and handled to prevent intrusion of foreign matter and damage by weather or breakage. Packaged materials shall be delivered and stored in original, unbroken packages.
  13. Promptly inspect shipments to assure that products comply with requirements, that quantities are correct and products are undamaged.
  14. Packages, materials and equipment showing evidence of damage will be rejected and replaced at no additional cost to the Owner.



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## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION

- A. General Product Requirements:** Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
  2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures:** The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
1. Semi-proprietary Specification Requirements: Where Specifications name two (2) or more products or manufacturers, provide one (1) of the products indicated. Comply with the requirements of Division 01 Section 01 25 00 "Substitution Procedures."
  2. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
  3. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.
  4. Visual Selection: Where specified product requirements include the phrase "*...as selected from manufacturer's standard colors, patterns, textures...*" or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Architect will select the color, pattern, and texture from the product line selected.

## PART 3 - EXECUTION

### 3.1 INSTALLATION OF PRODUCTS

- A.** Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

**END OF SECTION 01 60 00**

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**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for cutting and patching.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating cutting and patching with other construction activities.
  2. Division 01 Section 01 35 16 "Alteration Project Procedures" for procedures for coordinating cutting and patching with other construction activities.
  3. Division 02 Section **02 41 00 "Selective Demolition"** for demolition of selected portions of the building for alterations.
  4. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
    - a. Requirements of this Section apply to mechanical and electrical installations. Refer to Drawings M1 and M2 for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

**1.3 SUBMITTALS**

- A. **Cutting and Patching Proposal:** Submit a proposal to the Construction Administrator describing procedures well in advance of the time cutting and patching will be performed and if the Owner's Representative and/or Architect/Engineer requires approval of these procedures before proceeding. Request approval to proceed. Include the following information, as applicable, in the proposal:
1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
  2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
  3. Describe affects to integrity of weather exposed or moisture resistant element.
  4. Describe affects to efficiency, maintenance, or safety of any operational element.
  5. Describe affects to Work of Owner or separate contractor.
  6. List products to be used and firms or entities that will perform Work.
  7. Indicate dates when cutting and patching will be performed.
  8. **Utilities:** List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
  9. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations sealed by an Engineer registered in the State of Connecticut showing integration of reinforcement with the original structure.
  10. Approval by the Construction Administrator to proceed with cutting and patching does not waive the Architect/Engineer of Record's rights to later require complete removal and replacement of unsatisfactory Work.

#### 1.4 QUALITY ASSURANCE

- A. Requirements for Structural Work:** Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
1. Obtain approval from the Architect/Engineer of the cutting and patching proposal before cutting and patching the following structural elements:
    - a. **Equipment supports.**
    - b. **Piping, ductwork, vessels, and equipment.**
- B. Operational Limitations:** Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.
1. Obtain Architect/Engineer's approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
    - a. **Primary operational systems and equipment.**
    - b. **Air or smoke barriers.**
    - c. **Water, moisture, or vapor barriers.**
    - d. **Membranes and flashings.**
    - e. **Fire protection systems.**
    - f. **Noise and vibration control elements and systems.**
- C. Visual Requirements:** Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner.

#### 1.5 WARRANTY

- A. Existing Warranties:** Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS, GENERAL

- A.** Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.
- B.** The Contractor shall install sleeves, inserts and hangers furnished by the trades needing same.

### PART 3 - EXECUTION

#### 3.1 INSPECTION

- A.** Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, notify the Construction Administrator and Architect, before proceeding with corrective action.
- B.** Openings and chases may not be shown on the Drawings. It is the responsibility of the Contractor to examine the Architectural, Electrical, Heating, Cooling, Ventilating and Plumbing Drawings and to provide chases, channels or openings where needed.

1. After installing Work into openings, channels and/or chases, the Contractor shall close same. If finishes are to be restored, the new Work shall match the original and shall be done by the trade customarily responsible for the particular kind of Work.
- C. The Contractor shall verify dimensions for built-in Work and/or Work adjoining that of other trades before ordering any material or doing any Work. Discrepancies shall be submitted to the Construction Administrator before proceeding with the Work.
- D. See also General Conditions Article 23 "Cutting, Fitting, Patching & Digging".

### 3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Work that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

### 3.3 PERFORMANCE

- A. **General:** Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
  1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
  2. DO perform cutting and patching to integrate elements of Work. Provide penetrations of existing surfaces. Provide samples for testing. Seal penetrations through floors, walls, ceilings and roofs, as applicable; restore or preserve fire-rated and smoke-barrier construction. Construction and finishes shall match original Work.
- B. **Cutting:** Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
  1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
  3. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
  4. Comply with requirements of applicable Division 32 Sections where cutting and patching requires excavating and backfilling.
  5. Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. **Patching:** Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
  1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
  2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

3. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
  - a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
4. Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

**3.4 CLEANING**

- A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

**END OF SECTION 01 73 29**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes requirements for waste management goals, waste management plan and waste management plan implementation.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section 01 11 00 "Summary of Work".
  - 2. Division 01 Section 01 20 00 "Price and Payment Procedures".
  - 3. Division 01 Section 01 25 00 "Substitution Procedures".
  - 4. Division 01 Section 01 31 19 "Project Meetings".
  - 5. Division 01 Section 01 33 00 "Submittal Procedures".
  - 6. Division 01 Section 01 45 00 "Quality Control".
  - 7. Division 01 Section 01 50 00 "Temporary Facilities and Controls".
  - 8. Division 01 Section 01 60 00 "Product Requirements".
  - 9. Division 01 Section 01 77 00 "Closeout Procedures".
  - 10. Division 01 Section 01 81 13 "Sustainable Design Requirements".

**1.3 DEFINITIONS**

- A. **Construction Waste:** Solid wastes such as building materials, packaging and rubble resulting from construction, paving and infrastructure.
- B. **Demolition Waste:** Solid wastes such as concrete, wood, brick, plaster, roofing materials, wallboard, metals, carpeting, insulation, and clean fill resulting from demolition or selective demolition of structures.
- C. **Recyclable Materials:** Products and materials that can be recovered and remanufactured into a new product. Recyclable materials include, but are not limited to, the following:
  - 1. Metals (ferrous and non-ferrous), including banding, metal studs, ductwork, and piping.
  - 2. Asphaltic concrete paving.
  - 3. Portland cement concrete.
  - 4. Gypsum products.
  - 5. Paper and cardboard.
  - 6. Wood products, including structural, finish, crates, and pallets.
  - 7. Brick and masonry.
  - 8. Carpet and padding.
  - 9. Plastics.
  - 10. Copper wiring.
- D. **Recycling Facility:** A business that specializes in collecting, handling, processing, distributing, or remanufacturing waste materials generated by new construction projects, into products or materials that can be used for this project or by others.
- E. **Salvage and Reuse:** Existing usable product or material that can be saved and reused in some manner on the project site. Materials for reuse must be approved by the Architect. Materials that

can be salvaged and reused must comply with applicable technical specifications and include, but are not limited to, the following:

1. Dimensional lumber and other wood products.
  2. Structural steel.
  3. Soil.
  4. Masonry products.
  5. Plants.
- F. **Salvage for Resale:** Existing usable product that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.

#### 1.4 WASTE MANAGEMENT GOALS

- A. The Owner has established that this Project shall generate the least amount of waste possible and that processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors shall be employed.
- B. The Contractor shall use all means available to divert the greatest extent practical and economically feasible, construction waste from landfills and incinerators.
- C. Of the inevitable waste that is generated, as many of the waste materials as economically feasible shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized.
- D. Recycle and/or salvage a minimum of **[50] [75]** percent of non-hazardous construction **[and demolition]** waste by weight of the total solid waste generated by the Project.
- E. With regard to these goals the Contractor shall develop, for the Architect's review, a Waste Management Plan for this Project.
- F. Take a pro-active, responsible role in management of construction waste and require all subcontractors, vendors, and suppliers to participate in the effort. Establish a construction waste management program that includes the following categories:
  1. Minimizing packaging waste.
  2. Salvage and reuse.
  3. Salvage for resale or donation.
  4. Recycling.
  5. Disposal.

#### 1.5 SUBMITTALS

- A. **Draft Waste Management Plan:** Within 30 days after receipt of Notice of Award of Bid, or prior to any waste removal, whichever occurs sooner, the Contractor shall submit **[three (3)]** copies of a Draft Waste Management Plan to the Construction Administrator.
- B. **Final Waste Management Plan:** Once the Owner has determined which of the recycling options addressed in the Draft Waste Management Plan are acceptable, the Contractor shall submit within 10 days **[three (3)]** copies of a Final Waste Management Plan.
- C. **Progress Reports:** Submit **[three (3)]** copies of monthly progress reports, at the same time as the Application for Payment, documenting the following:
  1. Material category.
  2. Point of waste generation.
  3. Total quantity of waste in tons.
  4. Quantity of waste salvaged, in tons.
  5. Quantity of waste recycled, in tons.
  6. Total quantity of waste recovered (salvaged plus recycled) in tons.



7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- D. Calculations:** Submit **[three (3)]** copies of calculations indicating the end-of-project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Project prior to Substantial Completion.
- E. Record Submittals:**
  1. **Donations:** Indicate which salvageable materials were donated, who they were donated to, and whether the recipient is tax exempt. Submit documentation indicating receipt of donations.
  2. **Sales:** Indicate which salvageable materials were sold, who they were sold to, and whether the recipient is tax exempt. Submit documentation indicating receipt of materials.
  3. **Recycling:** Indicate which materials were recycled and the name of the facility licensed to accept them. Submit documentation such as manifests, weight tickets, receipts, and invoices.
  4. **Waste Disposal:** Indicate which materials were accepted as waste by landfills and incinerator facilities licensed to accept them. Submit documentation indicating receipt of materials.

## 1.6 QUALITY ASSURANCE

- A. Regulatory Requirements:** Comply with regulations of State of Connecticut Department of Environment Protection, Waste Management Bureau Recycling Program.
- B. Waste Management Conference:** Review and discuss the waste management plan, requirements for documenting quantities of each type of waste and its disposition, procedures for materials separation, procedures for periodic collection and transportation to recycling and disposal facilities. Review waste management requirements for each trade. Verify availability of containers and bins needed to avoid delays.

## 1.7 WASTE MANAGEMENT PLAN

- A. Draft Waste Management Plan:** Include the following in the Draft Plan:
  1. Analysis of the proposed jobsite waste to be generated, including types and quantities.
  2. **Landfill Options:** The name of the landfill(s) where trash will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all Project waste in the landfill(s).
  3. **Alternatives to Landfilling:** A list of each material proposed to be salvaged, reused, or recycled during the course of the Project, the proposed local market for each material, and the estimated net cost savings or additional costs resulting from separating and recycling (versus landfilling) each material. "Net" means that the following have been subtracted from the cost of separating and recycling:
    - a. Revenue from the sale of recycled or salvaged materials and
    - b. Landfill tipping fees saved due to diversion of materials from the landfill. The list of these materials is to include, at a minimum, the following materials:
      - i) Cardboard.
      - ii) Clean dimensional wood.
      - iii) Beverage containers.
      - iv) Land clearing debris.
      - v) Concrete.
      - vi) Bricks.
      - vii) Concrete Masonry Units (CMU).
      - viii) Asphalt.

ix) Metals from banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.

**B. Resources for Development of Waste Management Plan:** The following sources may be useful in developing the Draft Waste Management Plan:

1. **Recycling Haulers and Markets:** Local haulers and markets for recyclable materials. For more information, contact the State of Connecticut Department of Environmental Protection, Waste Management Bureau Recycling Program, (860) 424-3365, [www.dep.state.ct.us/wst/recycle/ctrecycle.htm](http://www.dep.state.ct.us/wst/recycle/ctrecycle.htm).

**C. Final Waste Management Plan:** The Final Waste Management Plan shall contain the following:

1. Analysis of the proposed jobsite waste to be generated, including types and quantities.
2. **Landfill Options:** The name of the landfill(s) where trash will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all Project waste in the landfill(s).
3. **Alternatives to Landfilling:** A list of the waste materials from the Project that will be separated for reuse, salvage, or recycling.
4. **Meetings:** A description of the regular meetings to be held to address waste management. Refer to Section 01 31 19 "Project Meetings".
5. **Materials Handling Procedures:** A description of the means by which any waste materials identified in item (3) above will be protected from contamination, and a description of the means to be employed in recycling the above materials consistent with requirements for acceptance by designated facilities.
6. **Transportation:** A description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site) and destination of materials.

## 1.8 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. **Manager:** The Contractor shall designate an on-site party (or parties) responsible for instructing workers and overseeing and documenting results of the Waste Management Plan for the Project.
- B. **Distribution:** The Contractor shall distribute copies of the Waste Management Plan to the Job Site Foreman, each Subcontractor, the Owner, and the Architect.
- C. **Instruction:** The Contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Project.
- D. **Separation Facilities:** The Contractor shall lay out and label a specific area to facilitate separation of materials for potential recycling, salvage, reuse, and return. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials.
- E. **Hazardous Wastes:** Hazardous wastes shall be separated, stored, and disposed of according to local regulations.
- F. **Application for Progress Payments:** The Contractor shall submit with each Application for Progress Payment a Summary of Waste Generated by the Project. Failure to submit this information shall render the Application for Payment incomplete and shall delay Progress Payment. The Summary shall be submitted on a form acceptable to the Owner and shall contain the following information:
  1. The amount (in tons or cubic yards) of material landfilled from the Project, the identity of the landfill, the total amount of tipping fees paid at the landfill, and the total disposal cost. Include manifests, weight tickets, receipt, and invoices.
  2. For each material recycled, reused, or salvaged from the Project: the amount (in tons or cubic yards), the date removed from the jobsite, the receiving party, the transportation cost, the

amount of any money paid or received for the recycled or salvaged material, and the net total cost or savings of salvage or recycling of each material shall be indicated. Attach manifests, weight tickets, receipts, and invoices.

## **PART 2 – PRODUCTS**

(Not Applicable)

## **PART 3 – EXECUTION**

### **3.1 PLAN IMPLEMENTATION**

- A.** Implement the waste management plan as approved by **Owner**
- B.** Provide training of workers, contractors, subcontractors, and suppliers on proper waste management procedures.
  - 1. Distribute waste management plan to all parties involved in the Project within **three (3)** days of submittal return.
  - 2. Distribute plan to parties when they first begin working on the Project site. Review plan procedures and locations established for salvage, recycling, and disposal.

### **3.2 SEPARATION OF RECYCLABLE WASTE MATERIALS**

- A.** Provide the necessary containers and bins, to facilitate the waste management program, that are clearly and appropriately marked. Prevent contamination of recyclable materials from incompatible products and materials. Separate construction waste at the project site by one of the following methods:
  - 1. **Source Separated Method:** Waste products and materials, that are recyclable, are separated from trash and sorted into appropriately marked separate containers and then transported to the respective recycling facility for further processing. Trash is transported to a landfill or incinerator.
  - 2. **Co-Mingled Method:** All construction waste is placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed and the remaining trash is transported to a landfill or incinerator.
  - 3. Other methods proposed by the Contractor and approved by the **[Architect] [Owner] [Construction Administrator]**.

**END OF SECTION 01 74 19**

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**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for handling requests for building system start up and system demonstration and includes the following:
  - 1. Starting Systems.
  - 2. Demonstration and instructions.
  - 3. Testing, adjusting, and balancing.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section 01 45 00 "Quality Control" specifies quality assurance and inspecting services.
  - 2. Division 01 Section 01 77 00 "Closeout Procedures" specifies requirements for contract close out requirements for system operation and maintenance data and extra materials.
  - 3. Division 01, Section 01 91 00 "Commissioning" specifies process requirements for system commissioning.
  - 4. Division 23, Section 23 08 00 "Commissioning of HVAC" specifies requirements HVAC&R system commissioning.

**1.3 STARTING SYSTEMS**

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Provide written notification to the Construction Administrator **30 days** prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, and control sequence for other conditions that may cause damage.
- D. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components are complete and tested.
- F. Execute the start-up under supervision of manufacturer's representative, in accordance with manufacturer's instructions.
- G. When referenced in individual specification sections, require manufacturer to provide an authorized representative to be present at the site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report in accordance with Division 01 Section 01 45 00 "Quality Control" that the equipment or system has been properly installed and is functioning properly.

**1.4 DEMONSTRATION AND INSTRUCTIONS**

- A. Demonstrate operation and maintenance of Products to Owner and Agency Personnel **fourteen (14)** days prior to substantial completion.
- B. Demonstrate Project equipment and instruct in a classroom environment at location designated by the Construction Administrator and instructed by a qualified manufacturer's representative who is knowledgeable about the Project.

- C. For equipment or systems requiring seasonal operation perform demonstration for season within **six (6)** months.
- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner and Agency Personnel in detail to explain all aspects of operation and maintenance.
- E. Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, and maintenance, and shutdown of each item at agreed upon scheduled time and at equipment or designated location.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during demonstration.
- G. Starting and adjusting equipment does not constitute acceptance by the owner since commissioning is a requirement of this contract. Additionally, the warranty does not begin until substantial completion has been granted for that specific item.

**1.5 TESTING, ADJUSTING, AND BALANCING**

- A. The Contractor will employ and pay for the testing services of an independent consultant to verify the testing, adjusting, and balancing.
  - 1. Comply with the requirements of Division 01 Section 01 91 00 "Commissioning" as they relate to the Work of this Section.
- B. Reports will be submitted by the independent testing consultant to the Construction Administrator indicating observations and results of tests and indicating compliance or non-compliance with the requirements of the Contract Documents.
- C. The Owner may employ and pay for the services of an independent consultant to verify testing, adjusting, and balancing which was performed by the Contractor.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 75 00**

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
1. Inspection procedures.
  2. Project record document submittal.
  3. Operation and maintenance manual submittal.
  4. Submittal of warranties.
  5. Final cleaning.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 11 00 "Summary of Work".
  2. Division 01 Section 01 29 76 "Progress Payment Procedures".
- C. Closeout requirements for specific construction activities may be included in the appropriate Sections in Divisions 02 through 49.

### 1.3 SUBSTANTIAL COMPLETION

- A. **General:** Basic contract definitions are included in Article 1 of the General Conditions of the Contract for Construction.
- B. **Preliminary Procedures:** Before requesting inspection for Certification of Substantial Completion, complete the following. List exceptions in the request.
1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
    - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
    - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
  2. Advise the Owner of pending insurance changeover requirements.
  3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
  4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, certificates of compliance, operating certificates, and similar releases.
  5. Submit record drawings, maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
  6. Deliver tools, spare parts, extra stock, and similar items.
  7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
  8. Demonstrate, thru operation and testing, the functions of all systems and/or equipment to the satisfaction of the Owner for compliance to the Contract. Complete testing of systems and instruction of the Owner's operation and maintenance personnel. Discontinue and remove

temporary facilities from the site, along with mockups, construction tools, and similar elements.

9. Complete final cleanup requirements.
  10. Certify that required training of personnel is complete.
- C. Inspection Procedures:** The Contractor shall be ready and prepared when they request a Substantial Completion inspection. If the inspection reveals that the work is not complete, that there are extensive punchlist items that will take more than **ninety (90)** days to complete and as the items listed in Article 1.3 above are not complete, the Construction Administrator, Architect, and Owner will determine the inspection has failed.
- D.** The Contractor is responsible for all costs to re-inspect due to a failed inspection. The Owner will issue a deduct change order to cover all costs for re-inspection.
1. The Architect will repeat inspection when requested and assured that the Work is substantially complete.
  2. Results of the completed inspection will form the basis of requirements for final acceptance.

#### 1.4 ACCEPTANCE

- A. Preliminary Procedures:** Before requesting final inspection for "Certificate of Acceptance" and final payment, complete the following. List exceptions in the request.
1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
  2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
  3. Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, endorsed and dated by the Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect.
  4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.
  5. Submit consent of surety to Final Payment.
  6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  7. Touch up and otherwise repair and restore marred, exposed finishes, including touchup painting.
- B. Re-inspection Procedure:** The Inspection Group will re-inspect the Work upon receipt of notice from the Construction Administrator that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Owner.
1. Upon completion of re-inspection, the Construction Administrator will prepare a Certificate of Acceptance. If the Work is incomplete, the Construction Administrator will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

#### 1.5 AS-BUILT DOCUMENT SUBMITTALS

- A. General:** The Contractor shall not use As-built Drawings for construction purposes. Protect contractor As-built Drawings from deterioration and loss in a secure, fire-resistant location. Provide access to As-built Drawings for the Architect's reference during normal working hours. Keep documents current; do not permanently conceal any work until required information has



been recorded. **IMPORTANT NOTE: Failure to keep As-built Documents current is sufficient cause to withhold progress payments.**

1. The Contractor shall also hire the services of a Surveyor registered in the State of Connecticut to conduct a final survey to determine the location of exterior underground utility lines and to record the results, and update existing electronic media.
2. The record of exterior underground utilities shall be made at the time of installation on Mylar film drawing and AutoCAD (latest version) compatible disks. The drawing shall bear the seal of the Land Surveyor and a statement of accuracy.

**B. As-built Drawings:** The Contractor shall maintain **one (1)** clean, complete undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date. Update As-built Drawings on a monthly basis coincident with the submittal of the Application for Payment.

1. Mark record sets with erasable pencil to distinguish between variations in separate categories of the Work.
2. Mark all new information that is not shown on Contract Drawings.
3. Note related change-order numbers where applicable.
4. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.
5. Upon completion of the work, the Contractor shall submit Record Drawings to the Construction Administrator for the Owner's Records who will pass them on to the Architect or Engineer for transferring the changes to the Record Drawing Mylar Tracings.
6. Submit electronic format data of all Coordination Drawings as required by the Owner, at no additional cost.
7. Refer to Section 01 45 00 "Quality Control" Article 1.3 for required as-built drawings and specifications for fire alarm systems.

**C. Record Specifications:** The Contractor shall maintain one (1) complete copy of the Project Manual, including Addenda. Include with the Project Manual one (1) copy of other written construction documents, such as Change Orders and modifications issued in printed form during construction.

1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
2. Give particular attention to equals and substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
3. Note related record drawing information and Product Data.
4. Upon completion of the Work, submit Record Specifications to the Construction Administrator for the Owner's records.

**D. Record Product Data:** The Contractor shall maintain one (1) copy of each Product Data submittal. Note related Change Orders and markup of record drawings and Specifications.

1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
2. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation.

3. Upon completion of markup, submit complete set of Record Product Data to the Construction Administrator for the Owner's records.
- E. Record Sample Submitted:** Immediately prior to Substantial Completion, the Contractor shall meet with the Construction Administrator, Architect and the Owner's personnel at the Project Site to determine which Samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's Sample storage area.
- F. Miscellaneous Record Submittals:** Refer to other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Construction Administrator for the Owner's records.
- G. Maintenance Manuals:** Organize operation and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, **2-inch**, 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder according to Division 01 Section 01 78 23 "Operation & Maintenance Data". Included but not limited to the following types of information:
  1. Emergency instructions.
  2. Spare parts list.
  3. Copies of warranties.
  4. Wiring diagrams.
  5. Recommended "turn-around" cycles.
  6. Inspection procedures.
  7. Shop Drawings and Product Data.
  8. Fixture lamping schedule.

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION

### 3.1 CLOSEOUT PROCEDURES

- A. Operation and Maintenance Instructions:** Arrange for each Installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
  1. Maintenance manuals.
  2. Record documents.
  3. Spare parts and materials.
  4. Tools.
  5. Lubricants.
  6. Fuels.
  7. Identification systems.
  8. Control sequences.
  9. Hazards.
  10. Cleaning.

11. Warranties and bonds.
  12. Maintenance agreements and similar continuing commitments.
- B.** As part of instruction for operating equipment, demonstrate the following procedures:
1. Startup.
  2. Shutdown.
  3. Emergency operations.
  4. Noise and vibration adjustments.
  5. Safety procedures.
  6. Economy and efficiency adjustments.
  7. Effective energy utilization.

### 3.2 FINAL CLEANING

- A. General:** The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 01 Section 01 50 00 "Temporary Facilities and Controls."
- B. Cleaning:** Employ professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion and Certification of Occupancy.
  2. Interior:
    - a. Remove labels that are not permanent labels.
    - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Remove paint spots; wash and polish glass.
    - c. Clean exposed interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
    - d. Wash washable surfaces of mechanical, electrical equipment and fixtures and replace filters, clean strainers on mechanical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
    - e. Clean and polish finish hardware.
    - f. Clean and polish tile and other glazed surfaces.
    - g. Clean floors; wax and buff resilient tile. Clean vinyl or rubber base.
    - h. Vacuum and/or dust walls, ceilings, lighting fixtures, ceiling diffusers and other wall and ceiling items.
    - i. Remove defacements, streaks, fingerprints and erection marks.
  3. Exterior:
    - a. Clean the site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth, even-textured surface.
    - b. Clean exposed exterior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances.

- c. Clean roofs, gutters and downspouts.
  - d. Remove waste and surplus materials, rubbish and construction equipment and facilities from the site, and deposit it legally elsewhere.
  - e. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Remove paint spots; wash and polish glass.
- C. Pest Control:** Engage an experienced, licensed exterminator to make a final inspection and rid the work of rodents, insects, and other pests. Provide results of final inspection in writing.
- D. Removal of Protection:** Remove temporary protection and facilities installed for protection of the Work during construction.
- E. Compliance:** Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.
- 1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Construction Administrator.
  - 2. Leave building clean and ready for occupancy. If the Contractor fails to clean up, the Owner may do so, with the cost charged to the Contractor. The Owner will issue a credit change order to cover the costs.

**END OF SECTION 01 77 00**

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 General Conditions and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for operation and maintenance manuals, including the following:
  - 1. Preparing and submitting operation and maintenance manuals for building operating systems and equipment.
  - 2. Preparing and submitting instruction manuals covering the care, preservation, and maintenance of architectural products and finishes.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section 01 33 00 "Submittal Procedures" specifies preparation of Shop Drawings and Product Data.
  - 2. Division 01 Section 01 75 00 "Starting and Adjusting" specifies instruction of the Owner and Agency operating personnel in the operation and maintenance of building systems and equipment and the general requirements for starting-up equipment and systems.
  - 3. Division 01 Section 01 77 00 "Closeout Procedures" specifies general closeout requirements.
  - 4. Division 01 Section 01 78 30 "Warranties and Bonds" specifies requirements for submittal of warranties and bonds.
  - 5. Appropriate Sections of Divisions 02 through 49 specify special operation and maintenance data requirements for specific pieces of equipment or building operating systems.

### 1.3 QUALITY ASSURANCE

- A. **Maintenance Manual Preparation:** In preparation of maintenance manuals, use personnel thoroughly trained and experienced in operation and maintenance of equipment or system involved.
  - 1. Where maintenance manuals require written instructions, use personnel skilled in technical writing where necessary for communication of essential data.
  - 2. Where maintenance manuals require drawings or diagrams, use draftsmen capable of preparing drawings clearly in an understandable format.
- B. **Instructions for the Owner and Agency Personnel:** The Construction Manager must use experienced instructors thoroughly trained and experienced in operation and maintenance of equipment or system involved, to instruct the Owner's operation and maintenance personnel.

### 1.4 SUBMITTALS

- A. **Submittal Schedule:** Comply with the following schedule for submitting operation and maintenance manuals:
  - 1. Before Substantial Completion, when each installation that requires operation and maintenance manuals is nominally complete, submit **four (4)** draft copies of each manual to the Owner's Representative, Commissioning Agent (CxA), Agency Representative, and Architect for review. Include a complete index or table of contents of each manual.
    - a. The Owner's Representative will return **one (1)** copy of the draft with comments within **twenty - one (21)** calendar days of receipt.



5. **Operating instructions.**
  6. **Emergency instructions.**
  7. **Wiring diagrams.**
  8. **Inspection and test procedures.**
  9. **Maintenance procedures and schedules.**
  10. **Precautions against improper use and maintenance.**
  11. **Copies of warranties.**
  12. **Repair instructions including spare parts listing.**
  13. **Sources of required maintenance materials and related services.**
  14. **Manual index.**
- B.** Organize each manual into separate sections for each piece of related equipment. As a minimum, each manual shall contain a title page; a table of contents; copies of product data, supplemented by drawings and written text; and copies of each warranty, bond, and service contract issued.
1. **Title Page:** Provide a title page in a transparent, plastic envelope as the first sheet of each manual. Provide the following information:
    - a. **Subject matter covered by the manual.**
    - b. **Name and address of the Project.**
    - c. **Date of submittal.**
    - d. **Name, address, and telephone number of the Construction Manager.**
    - e. **Name and address of the Architect and Owner's Representative.**
    - f. **Cross-reference to related systems in other operation and maintenance manuals.**
  2. **Table of Contents:** After title page, include a typewritten table of contents for each volume, arranged systematically according to the Project Manual format. Include a list of each product included, identified by product name or other appropriate identifying symbol and indexed to the content of the volume.
    - a. Where a system requires more than one volume to accommodate data, provide a comprehensive table of contents for all volumes in each volume of the set.
  3. Provide a general information section immediately following table of contents, listing each product included in the manual, identified by product name. Under each product, list the name, address, and telephone number of the subcontractor or Installer and the maintenance subcontractor. Clearly delineate the extent of responsibility of each of these entities. Include a local source for replacement parts and equipment.
  4. **Product Data:** Where the manuals include manufacturer's standard printed data, include only sheets that are pertinent to the part or product installed. Mark each sheet to identify each part or product included in the installation. Where the Project includes more than one (1) item in a tabular format, identify each item, using appropriate references from the Contract Documents. Identify data that is applicable to the installation, and delete references to information that is not applicable.
  5. **Written Text:** Prepare written text to provide necessary information where manufacturer's standard printed data is not available, and the information is necessary for proper operation and maintenance of equipment or systems. Prepare written text where it is necessary to provide additional information or to supplement data included in the manual. Organize text in a consistent format under separate headings for different procedures. Where necessary, provide a logical sequence of instruction for each operation or maintenance procedure.
  6. **Drawings:** Provide specially prepared drawings where necessary to supplement manufacturer's printed data to illustrate the relationship of component parts of equipment or

systems or to provide control or flow diagrams. Coordinate these drawings with information contained in project record drawings to assure correct illustration of the completed installation.

a. Do not use original Record Documents as part of operation and maintenance manuals.

7. **Warranties and/or Bonds:** Provide a copy of each warranty and/or bond in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to follow in the event of product failure. List circumstances and conditions that would affect validity of warranty or bond.

## 1.6 MATERIAL AND FINISHES MAINTENANCE MANUAL

A. Submit **four (4)** copies of each manual, in final form, on material and finishes to the Owner's Representative for distribution. Provide **one (1)** section for architectural products, including applied materials and finishes. Provide a second section for products designed for moisture protection and products exposed to the weather.

1. Refer to individual Specification Sections for additional requirements on care and maintenance of materials and finishes.

B. **Architectural Products:** Provide manufacturer's data and instructions on care and maintenance of architectural products, including applied materials and finishes.

1. **Manufacturer's Data:** Provide complete information on architectural products, including the following, as applicable:

- a. Manufacturer's catalog number.
- b. Size.
- c. Material composition.
- d. Color.
- e. Texture.
- f. Reordering information for specially manufactured products.

2. **Care and Maintenance Instructions:** Provide information on care and maintenance, including manufacturer's recommendations for types of cleaning agents to be used and methods of cleaning. Provide information on cleaning agents and methods that could prove detrimental to the product. Include manufacturer's recommended schedule for cleaning and maintenance.

C. **Moisture Protection and Products Exposed to the Weather:** Provide complete manufacturer's data with instructions on inspection, maintenance, and repair of products exposed to the weather or designed for moisture-protection purposes.

1. **Manufacturer's Data:** Provide manufacturer's data giving detailed information, including the following, as applicable:

- a. **Applicable standards.**
- b. **Chemical composition.**
- c. **Installation details.**
- d. **Inspection procedures.**
- e. **Maintenance information.**
- f. **Repair procedures.**

## 1.7 EQUIPMENT AND SYSTEMS MAINTENANCE MANUAL

A. Submit **four (4)** copies of each manual, in final form, on equipment and systems to the Owner's Representative for distribution. Provide separate manuals for each unit of equipment, each operating system, and each electric and electronic system.



1. Refer to individual Specification Sections for additional requirements on operation and maintenance of the various pieces of equipment and operating systems.
- B. Equipment and Systems:** Provide the following information for each piece of equipment, each building operating system, and each electric or electronic system.
  1. **Description:** Provide a complete description of each unit and related component parts, including the following:
    - a. **Equipment or system function.**
    - b. **Operating characteristics.**
    - c. **Limiting conditions.**
    - d. **Performance curves.**
    - e. **Engineering data and tests.**
    - f. **Complete nomenclature and number of replacement parts.**
  2. **Manufacturer's Information:** For each manufacturer of a component part or piece of equipment, provide the following:
    - a. **Printed operation and maintenance instructions.**
    - b. **Assembly drawings and diagrams required for maintenance.**
    - c. **List of items recommended to be stocked as spare parts.**
  3. **Maintenance Procedures:** Provide information detailing essential maintenance procedures, including the following:
  4. **Operating Procedures:** Provide information on equipment and system operating procedures, including the following:
    - a. **Startup procedures.**
    - b. **Equipment or system break-in.**
    - c. **Routine and normal operating instructions.**
    - d. **Regulation and control procedures.**
    - e. **Instructions on stopping.**
    - f. **Shutdown and emergency instructions.**
    - g. **Summer and winter operating instructions.**
    - h. **Required sequences for electric or electronic systems.**
    - i. **Special operating instructions.**
  5. **Servicing Schedule:** Provide a schedule of routine servicing and lubrication requirements, including a list of required lubricants for equipment with moving parts.
  6. **Controls:** Provide a description of the sequence of operation and as-installed control diagrams by the control manufacturer for systems requiring controls.
  7. **Identification Drawings:** Provide each Subcontractor's Identification Drawings.
    - a. Provide as-installed, color-coded, piping diagrams, where required for identification.
  8. **Valve Tags:** Provide charts of valve-tag numbers, with the location and function of each valve.
  9. **Circuit Directories:** For electric and electronic systems, provide complete circuit directories of panel boards, including the following:
    - a. Controls.
    - b. Communication.
- C. Electronic Media:**

1. For equipment which requires maintenance by operational personnel, provide a professionally developed **DVD** for the use of maintenance training for the facility. Each **DVD** will be accompanied by a written index which can be utilized to find any specific item of information by time or place on the **DVD**.
2. The Construction Manager is responsible for this production. This **DVD** will be provided to the Owner's Representative at the same time as the delivery of the other maintenance material.
3. The **DVD** must be able to be edited for future changes to the equipment and modifications as they occur.

**1.8 COMMISSIONING RECORD AND TESTING DATA MANUAL**

The Contractor shall cooperate with Commissioning Agent (CxA) in the preparation of a separate Manual dedicated to documenting the Commissioning process which will include all certifications and testing data and some repeating of O&M data. Description of this Manual is found in Section 01 91 00 Commissioning and shall be prepared by the Commissioning Agent (CxA).

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 78 23**

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**PART 1 – GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A.** This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
1. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.
- B. Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 33 00 "Submittal Procedures" specifies procedures for submitting warranties.
  2. Division 01 Section 01 77 00 "Closeout Procedures" specifies contract closeout procedures.
  3. Division 01 Section 01 78 23 "Operation and Maintenance Data" specifies required operation and maintenance data.
  4. Divisions 02 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.
  5. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- C. Disclaimers and Limitations:** Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

**1.3 WARRANTY REQUIREMENTS**

- A. Related Damages and Losses:** When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
- B. Reinstatement of Warranty:** When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost:** Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse:** Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

- E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.
- F. The Contractor shall guarantee all materials and workmanship for a period of **eighteen (18)** months from the date of Substantial Completion of the Work. In addition, the Contractor shall furnish the warranties listed below. Submit four (4) copies of each to the Construction Administrator in the supplier's standard form or in the form given below if there is no standard form available.
- G. **Specification/Warranty Table:** The General Contractor shall provide for all warranties as shown in the Specification/Warranty table:

<b>Specification / Warranty Table</b>			
Item No.	Section No.	Specification Product/Warranty	
3.	07 <u>53 23</u>	<b>Single-Ply Membrane Roofing, Base Flashing and Insulation:</b> 25 year unlimited, materials and installation [the manufacturer's no dollar limit (NDL) warranty], and; 2 year General Contractor's warranty for installation.	
12.	07 <u>92 00</u>	<b>Exterior - Interior Caulking and Sealants:</b> 5 year, material and workmanship.	
13.	07 <u>62 00</u>	<b>Metal Flashing and Sheet Metal:</b> 3 year, material and workmanship.	
13.	22 <u>14 26 13</u>	<b>Roof Drains - 2 years material and workmanship</b>	

- H. Submit certification that finish materials are fire rated as specified.
- I. Form of Warranty: Warranties shall be submitted in following format:

<b>Warranty</b>			
<i>Commissioner: Melody A. Currey Department of Administrative Services DAS Commissioner's Office 450 Columbus Boulevard, Suite 1501 Hartford, CT 06103</i>			
<i>Project Number: BI-MM-55 Project Title: WINSTED ROOF AND BOILER DEPARTMENT OF MOTOR VEHICLES</i>			
<b>I (We) hereby warranty</b>			
the _____	<b>work on the referenced project for a</b>		_____ <b>years</b>
<b>period of</b>			
from _____, 20 ____	<b>against failures of workmanship and materials in accordance</b>		
<b>with the requirements of _____, _____, _____, of the Specifications.</b>			
<b>Section</b>	<b>Page</b>	<b>Paragraph</b>	
<b>Installer</b> <input type="checkbox"/>	<b>Subcontractor</b> <input type="checkbox"/>	<b>Vendor/Suppliers</b> <input type="checkbox"/>	<b>Manufacturer</b> <input type="checkbox"/>
<b>Installer or Subcontractor or Vendor/Suppliers or Manufacturer Name:</b> _____			
<b>Installer or Subcontractor or Vendor/Suppliers or Manufacturer Signature:</b> _____			
<b>General Contractor's Name</b> _____			
<b>General Contractor's Signature:</b> _____			
<b>or</b>			
<b>General Contractor's Authorized Agent Signature:</b> _____			

- J. Bonds shall be by approved Surety Companies, made out to the Commissioner, Department of Administrative Services on companies' standard form.
- K. Warranties, Guarantees, or bonds supplied by the General Contractor's Subcontractors or Vendors/Suppliers or Manufacturers shall reference the project name, number, and location and be certified by the General Contractor to be for the product and installation on the project and must be countersigned by the General Contractor.
- L. Bonds shall be by approved Surety Companies, made out to the Commissioner, Department of Administrative Services, on company's standard form.
- M. Guarantees, warranties or bonds supplied by Subcontractors, Suppliers or Manufacturers shall reference the project name, number, and location and be certified by the Contractor to be for the product and installation on the project and must be countersigned by the Contractor.

**1.4 SUBMITTALS**

- A. Submit written warranties prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
- B. Forms for special warranties are included in this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Submit a draft to the Owner, through the Construction Administrator, for approval prior to final execution.
  - 1. Refer to Divisions 02 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. **Form of Submittal:** At Final Completion compile **two (2)** copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- D. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive **8-1/2-by-11-inch** paper.
  - 1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.
  - 2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.
  - 3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not applicable)**

**END OF SECTION 01 78 30**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. Scope of work includes the removal of existing roofing assembly and its associated components down to steel deck, inspection and replacement of damaged deck, and removal of other items as called for on the Drawings.
  - 1. Refer to Section 07 01 50.23 Roof Removal and the Drawings for more complete description of items to be removed.

**1.2 RELATED WORK**

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Section 01 74 19 Construction Waste Management
  - 2. Section 02 82 03 Asbestos Abatement
  - 3. Section 06 10 53 Misc. Rough Carpentry
  - 4. Section 07 62 00 Sheet Metal Flashing & Trim
  - 5. Section 07 01 50.23 Roof Removal

**1.3 QUALITY ASSURANCE**

- A. Use skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

**1.4 PROTECTION, HANDLING, AND STORAGE**

- A. Protect the building, building occupants, landscaping, site work, and building contents against all risks associated with this work.
- B. The Contractor is solely responsible for the water-tight integrity of the roof, window openings, and adjacent building components at all times during the construction.
- C. Repair any damage to original conditions caused by this work to the satisfaction of the Owner using mechanics skilled in the appropriate trade.
- D. Provide protection at all windows as required. Vision at windows may be obstructed only within the scheduled work areas. Remove protection only as work areas are completed, prior to relocating to a new area.

**1.5 SUBMITTALS**

- A. General: Refer to Section 01 33 00 Submittal Procedure
- B. Provide for approval a detailed plan of the demolition process, equipment to be used, and any materials required to complete the work.

- C. Submit a schedule indicating proposed methods and sequence of operations for selective removals and demolition of Work prior to commencement of operations.
- D. Include procedures and details for protection of interior and exterior building finishes.

**1.6 TEMPORARY CONTROLS**

- A. Every effort must be made to control noise, dust, and debris.
- B. It is recognized that, in certain areas of operation, noise abatement is impracticable. The Contractor shall, however, make every effort to correct inordinately noisy equipment, the correction of which would result from repair, lubrication, or maintenance.
- C. During removals, controlled dampening to reduce dust generation and airborne particulate matter will be permitted.
  - 1. The Contractor will be held fully responsible for water penetration into the building and any damage to finishes and contents resulting therefrom.
- D. Debris, of whatever nature, resulting from the operation of the Work must be contained. Any scattering of other soil on roof, sills, paving, equipment, vehicles or the like must be thoroughly cleaned up and disposed of each day.

**1.7 SECURITY**

- A. Provide security and facilities to protect Work, and existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate with Owner's security program.

**PART 2 - PRODUCTS**

(No products are required under this Section)

**PART 3 - EXECUTION**

**3.1 SURFACE CONDITIONS**

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. Contractor is to coordinate the Work of this Section with all other trades prior to any demolition.

**3.2 DEMOLITION**

- A. By careful study of the Contract Documents, determine the location and extent of selective demolition to be performed.
- B. In company with the Owner, visit the site and verify the extent and location of selective demolition required.
  - 1. Carefully identify limits of selective demolition.



2. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place and intact.
- C. Prepare and follow an organized plan for demolition and removal of items.
1. Shut off, cap, and otherwise protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction, if applicable.
  2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere.
  3. In all activities, comply with pertinent regulation of governmental agencies having jurisdiction.
  4. Demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site.
  5. Use means necessary to prevent dust from becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

### **3.3 REFUSE AND DEBRIS**

- A. Contractor shall notify the Owner's representative at least **48 hours** in advance of exact locations for refuse receptacle areas, chute locations, equipment set-up areas, and the like in order to permit the owner to make provisions to have these areas available to the Contractor.
- B. Contractor has responsibility to dispose of all refuse from the removal work as part of his Contract obligations.
1. Contractor shall make sure that no more than **two (2) containers of refuse of 40 cubic yards** maximum size are allowed to accumulate and remain on the Owner's premises.
  2. In the event that the Owner's operation of his facilities prohibits making these exact locations available for the Contractor's use, alternate locations shall be mutually agreed upon.
- C. **Contractor to cover all dumpsters.**

### **3.4 REPLACEMENTS**

- A. In the event of demolition of items not scheduled to be demolished, promptly replace such items to the acceptance of the Architect and at no additional cost to the Owner.

### **3.5 SCHEDULE / SALVAGEABLE MATERIALS**

- A. Existing wood blocking to remain for reuse if in sound condition.
- B. Existing sheet metal counter flashing to remain for reuse if in sound condition.
- C. Existing roof drains to remain for reuse if in sound condition.

**END OF SECTION 02 41 00**

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## **PART 1 GENERAL**

### **1.1 SCOPE**

- A. Work under this item shall include the abatement of asbestos containing materials (ACM) and associated work by persons who are knowledgeable, qualified, trained and licensed in the removal, treatment, handling, and disposal of ACM and the subsequent cleaning of the affected environment. ACM shall include material composed of any type of asbestos in amounts greater than one percent (1%) by weight. The Contractor performing this work shall possess a valid Asbestos Abatement Contractor license issued by the Connecticut Department of Public Health (CTDPH).
- B. These Specifications govern all work activities that disturb asbestos containing materials. All activities shall be performed in accordance with, but not limited to, the current revision of the Occupational Safety and Health Administration (OSHA) General Industry Standard for Asbestos (29 CFR 1926.1001), the OSHA Asbestos in Construction Regulations (29 CFR 1926.1101), the United States Environmental Protection Agency (USEPA) Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) Regulations (40 CFR Part 61 Subpart M), the CTDPH Standards for Asbestos Abatement, Licensure and Training (19a-332a-1 through 16, 20-440-1 through 9 & 20-441), and the Connecticut Department of Energy and Environmental Protection (CTDEEP) Special Waste Disposal Regulations (22a-209-8(i)).
- C. The asbestos abatement work shall include the removal and disposal of all exterior ACM roofing as identified on the Contract drawings and Specifications prior to the planned renovation/demolition project. A limited asbestos NESHAP survey was performed by TRC, Inc. for this site. The CT Department of Administrative Services/Construction Services (CTDAS/CS) will retain the services of a State of Connecticut licensed Project Monitor for protection of its interests and those using the building.
- D. Deviations from these Specifications require the written approval of the Engineer and Owner.
- E. The Contractor may elect to utilize an Alternative Work Practice (AWP), if approved by the CTDPH and the Engineer/Owner prior to the initiation of the abatement activities. An AWP is a variance from certain CTDPH asbestos regulatory requirements, which must provide the equivalent or a greater measure of asbestos emission control than the standard work practices prescribed by the CTDPH.
- F. The Engineer/Project Monitor for this project will be TRC, Inc. for the asbestos removal portion of this project ONLY.

### **1.2 DESCRIPTION OF WORK**

- A. The following details the extent of each phase of operation designated for this project. Phase areas may be combined or divided at the direction of the Engineer/Construction Manager. Proceed through the sequencing of the work phases under the direction of the Engineer/Construction Manager.

- B. The asbestos abatement work shall include the removal of asbestos-containing materials as specified herein. This abatement project was designed by Mr. Donald LePage, a State of Connecticut licensed Asbestos Project Designer (#000233).

**Exterior – Roof**

**Includes the removal of:**

- **Built-Up Roofing (R1) (~9,800 SF)**
- **Grey Flashing Tar (FL1) (~450 SF)**

**Notes:**

- **Refer to drawing ASB-1 located in Division 50 00 00 Project-Specific Available Information at the end of the Technical Specification Sections for the location of ACM listed above.**
- **A Pre-Renovation Investigative Survey for Asbestos-Containing Materials has been performed for the Winsted DMV Roof & Boiler Replacement Project. The report can be found in the Division 50 00 00 Project-Specific Available Information at the end of the Technical Specification Sections.**

**A regulated area(s) shall be established at the perimeter of the work area(s), and access shall be controlled by the Contractor. A remote personnel decontamination unit shall be utilized. Removal shall be undertaken in accordance with OSHA Class II and USEPA Asbestos NESHAP requirements. Visual inspection shall be performed by project monitor prior to work area being deregulated. No containment is required for exterior abatements.**

**Additional Notes:**

**The scope of work for this project includes the replacement of the roof and boiler along with associated piping and equipment within the boiler room. The pre-renovation asbestos survey was limited to these areas. Additional asbestos materials may exist within the building, but are not expected to be impacted during the course of this project. Should the scope of work for this project change, and additional materials that have not been sampled for asbestos require impact, these material should be presumed to be asbestos containing until such time as the engineer can sample and confirm they are not asbestos containing.**

1.3 **DEFINITIONS**

**Accessible** - A space easily accessed and which can be entered or seen without demolition.

**Adequately Wet** - Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

**AHERA** - Asbestos Hazard Emergency Response Act - U. S. EPA regulation 40 CFR Part 763 under Section 203 of Title II of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2643. This rule mandates inspections, accreditations of persons involved with asbestos, and -final air clearances following abatement in public and private schools, and public and commercial buildings.

**Alternative Work Practice (AWP)** - State of Connecticut Department of Public Health - approved deviation from Asbestos Standards (Sections 19a-332a-1 to 19a-332a-16 inclusive). Alternative Work Practice methods may be used if pre-approved by DPH or with the approval of DPH, the Design Consultant and the CTDAS/CS Project Monitor when not pre-approved. Approval of alternative work practice procedures shall not relieve the Contractor from any codes, regulations or standards required by this specification.

**Asbestos** - The term asbestos includes chrysotile, amosite, crocidolite, asbestiform tremolite, asbestos, anthophyllite asbestos, actinolite asbestos and any of these minerals that has been chemically treated and/or altered.

**Asbestos Abatement** - The removal, encapsulation, enclosure, renovation, repair, demolition or other disturbance of asbestos-containing materials except activities which are related to the removal or repair of asbestos cement pipe and are performed as defined in Section 25-32a of the Connecticut General Statutes.

**Asbestos-Containing Waste Materials** - Mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the provisions of this subpart. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovations operations, this term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing.

**Asbestos Control Area** - An area where asbestos abatement operations are performed which is isolated by physical boundaries which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris. Two examples of an Asbestos Control Area are a "full containment" and a "glovebag".

**Asbestos Fiber** - A particulate form of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals having a length of five micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

**Authorized Asbestos Disposal Facility** - A location approved by the Connecticut Department of Environmental Protection for handling and disposing of asbestos waste or by an equivalent regulatory agency if the material is disposed of outside the State of Connecticut.

**Category I Non-Friable Asbestos-Containing Material (ACM)** - Asbestos-containing packings, gaskets, resilient Floor coverings and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

**Category II Non-Friable ACM** - Any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

**Class I Asbestos Work** - Activities involving the removal of TSI and surfacing ACM and PACM.

**Class II Asbestos Work** - Activities involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

**Class III Asbestos Work** - Repair and maintenance operations, where ACM, including TSI and surfacing material, is likely to be disturbed.

**Class IV Asbestos Work** - Maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM and PACM.

**Competent Person** - In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f); in addition, for Class I and Class II work who is specifically trained in a training course which meet the criteria of EPA's Model Accreditation Plan (40 CFR 763).

**Concealed Space** - Space which is out of sight. Examples of a concealed space include area above ceilings; below floors; between double walls; furred-in areas; pipe and duct shafts; and similar spaces.

**Critical Barrier** - A minimum of two layers of six (6) mil polyethylene sheeting taped securely over windows, doorways, diffusers, grilles and any other openings between the Work Area and uncontaminated areas outside of the Work Area, including the outside of the building.

**Decontamination Enclosure System** - A series of rooms separated from the Work Area and from each other by air locks, for the decontamination of workers and equipment.

**Demolition** - The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

**DEEP** - The Connecticut Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106.

**DPH** - The Connecticut Department of Public Health, 410 Capitol Avenue, Hartford, CT 06134.

**Differential Pressure** - A difference in the static air pressure between the Work Area and occupied areas, and is developed by the use of HEPA filtered exhaust fans. This differential is generally in the range of 0.02 to 0.04 inches of water column.

**Encapsulant** - Specific materials in various forms used to chemically entrap asbestos fibers in various configurations to prevent these fibers from becoming airborne. There are four types of encapsulant as follows:

1. Removal Encapsulant (can be used as a wetting agent).
2. Bridging Encapsulant (used to provide a tough durable surface coating to asbestos-containing material).

3. Penetrating Encapsulant (used to penetrate the asbestos containing material down to substrate, encapsulating all asbestos fibers).
4. Lock-down Encapsulant (used to seal off "lock-down" minute asbestos fibers left on surfaces from which asbestos containing materials have been removed).

**Encapsulation** - The application of an encapsulant to asbestos-containing building materials to control the possible release of asbestos fibers into the air.

**Engineering Controls** - Controls to include, but not be limited to, pressure differential equipment, decontamination enclosures, critical barriers and related procedures.

**Equipment Decontamination Enclosure System** - The portion of a Decontamination Enclosure System designed for controlled transfer of materials and equipment into or out of the Work Area, typically consisting of a Washroom and a Holding Area.

**Exposed** - Open to view.

**Finished Space** - Space used for habitation or occupancy where rough surfaces are plastered, paneled or otherwise treated to provide a pleasing appearance.

**Fixed Critical Barrier** - Barrier constructed of 2" x 4" wood or metal framing 16" O.C., with plywood on the occupied side and two layers of six (6) mil polyethylene sheeting on the Work Area side to prevent unauthorized access or air flow.

**Fixed Object** - A piece of equipment or furniture in the Work Area which cannot be removed from the Work Area, as determined by the Design Consultant.

**Friable Asbestos Material** - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy, that when dry can be crumbled, pulverized or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

**Glovebag** - A sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used glovebags provide a small Work Area enclosure typically used for small scale asbestos stripping operations. Information on glovebag installation, equipment and supplies, and work practices is contained in 29 CFR 1926.1101).

**Glovebag Technique** - A method with limited applications for removing small amounts of friable asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contaminated work area. The glovebag assembly is a manufactured or fabricated device consisting of a glovebag (typically constructed of six (6) mil polyethylene or polyvinyl chloride plastic), two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. This technique requires AWP application and may only be used if pre-approved by DPH or with the approval of the Design Consultant and DPH when not pre-approved.

**HEPA Filter Equipment** - High-efficiency particulate air (HEPA) filtered vacuum and/or exhaust ventilation equipment with a filter system capable of trapping and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns in diameter or larger.

**Inaccessible** - A space not accessible and which cannot be entered or seen without demolition.

**Lock-Down** - The procedure of spraying polyethylene sheeting and building materials with an encapsulant type sealant to seal in non-visible asbestos-containing residue.

**Mini-Containment** - A procedure using a single layer of polyethylene sheeting to contain the Work Area. Access to the mini-containment is controlled by an air lock which also serves as a Holding Area. This procedure requires AWP application and may only be used if pre-approved by DPH or with the approval of the Design Consultant and DPH when not pre-approved.

**Movable Object** - A piece of equipment or furniture in the Work Area which can be removed from the Work Area, as determined by the Design Consultant.

**Negative Exposure Assessment** - For any one specific asbestos job which will be performed by employees who have been trained in compliance with the standard, the employer may demonstrate that employee exposures will be below the PELs by data which conform to the following criteria:

1. Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for releasing asbestos; or
2. Where the employer has monitored prior asbestos jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with the asbestos standard in effect; and the data were obtained during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the operations were conducted by employees whose training and experience are not more extensive than that of employees performing the current job, and these data show that under the conditions prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or
3. The results of initial exposure monitoring of the current job made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

**Non-Friable Asbestos-Containing Material** - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy, which when dry cannot be crumbled, pulverized or reduced to powder by hand pressure.

**NPE** - Negative pressure enclosure.



**Owner or Operator of a Demolition or Renovation Activity** - Any person who owns, leases, operates, controls and supervises the facility being demolished or renovated or any person who owns, leases, operates, controls or supervises the demolition or renovation, or both.

**Permissible Exposure Limit (PEL)** - (1) time-weighted average unit (TWA). The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter (f/cc) or air as an eight (8) hour time-weighted average time (TWA). (2) excursion limit. The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fibers per cubic centimeter of air (f/cc) as averaged over a sampling period of thirty (30) minutes.

**Personal Monitoring** - Air sampling within the breathing zone of an employee.

**Pre-Clean** - The process of cleaning an area before asbestos abatement activities begin to ensure all dust and debris in the area considered to be asbestos-containing are properly contained and disposed of. This increases the likelihood the area will pass aggressive air sampling clearance requirements after asbestos-containing materials have been removed.

**Presumed Asbestos-Containing Material (PACM)** - TSI and surfacing material found in buildings constructed no later than 1980.

**Project Monitor** - The certified and licensed individual contracted or employed by the building owner or contractor to supervise and/or conduct air monitoring and analysis schemes. This individual is responsible for recognition of technical deficiencies in procedures during both planning and on-site phases of an abatement project. Requirements for Project Monitor are defined in the Connecticut DPH regulations (Sections 20-440-1 through 9). In addition to these requirements, this person shall be listed in the American Industrial Hygiene Association's Asbestos Analysts Registry.

**Regulated Area** – An area established by the employer to demarcate areas where Class I, II and III work is conducted and any adjoining area where debris and waste from such asbestos work accumulate; a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed the Permissible Exposure Limit.

**Regulated Asbestos-Containing Material (RACM)** - (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

**Renovation** - Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting members are wrecked or taken out are demolitions.

**Repair** - Overhauling, rebuilding, reconstructing or reconditioning of structures or substrates where asbestos, tremolite, anthophyllite or actinolite is present.

**Thermal System Insulation (TSI)** - Materials applied to pipes, fittings, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

**Unfinished Space** - Space used for storage, utilities or work area where appearance is not a factor. Examples of an unfinished space include crawlspace; pipe tunnel and similar spaces.

**Visible Emissions** - Any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

**Visible Residue** - Any debris or dust on surfaces in areas within the Work Area where asbestos abatement has taken place and which is visible to the unaided eye. All visible residue is assumed to contain asbestos.

**Waste Generator** - Any owner or operator of a source whose act or process produces asbestos-containing waste material.

**Waste Shipment Record** - The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

**Wet Cleaning** - The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

**Work Area** - Specific area or location where the actual work is being performed or such other area of a facility which the Design Consultant determines may be hazardous to public health as a result of such asbestos abatement.

**Worker Decontamination Enclosure System** - The portion of a Decontamination Enclosure System designed for controlled passage of workers and authorized visitors, typically consisting of a Clean Room, a Shower Room and an Equipment Room.

#### 1.4 SUBMITTALS AND NOTICES

- A. The Contractor shall submit, in accordance with CTDPH Standard 19a-332a-3 and EPA 40 CFR 61.145 (b), proper notification using the prescribed form, to the Commissioner, State of Connecticut, Department of Public Health and EPA Region 1 not fewer than ten (10) days (10 business days) prior to the commencement of work as follows:
  - 1. Asbestos abatement projects involving greater than ten (10) linear feet (LF) or twenty-five (25) square feet (SF) of ACM (friable or non-friable) within a facility (i.e. interior abatement) and/or greater than 10 LF or 25 SF of friable ACM outside a facility, require an CTDPH Asbestos Abatement Notification. Also, abatement projects greater than one hundred sixty (160) SF, two hundred sixty (260) LF of interior/exterior or 35 cubic feet (CF) of interior/exterior Regulated Asbestos containing materials (RACM) require Notification of Demolition & Renovation to EPA Region 1.

2. At sites scheduled for demolition, asbestos abatement of exterior non-friable ACM or interior abatement involving less than 10 LF or 25 SF of ACM (friable or non-friable), and/or exterior abatement involving less than 10 LF or 25 SF of friable ACM require a CTDPH Demolition Notification. In most cases, the Demolition Contractor is responsible for filing the CTDPH Demolition Notification not fewer than ten (10) days prior to the commencement of demolition. However, if a portion of the demolition activities are scheduled to be conducted in conjunction with and/or under the supervision of an Asbestos Abatement Contractor (i.e. in the event of a structure which has been condemned, structurally damaged, and/or deemed unsafe for asbestos abatement activities); then it is the responsibility of the Asbestos Abatement Contractor to submit the CTDPH Demolition Notification.
  3. In the event that a CTDPH Asbestos Abatement Notification and EPA Notification of Demolition & Renovation have been submitted and the subject facility is scheduled for demolition, separate Demolition Notification forms do not need to be submitted. In such cases, the submission of the CTDPH Asbestos Abatement Notification and EPA Notification of Demolition & Renovation forms shall be deemed as satisfying the requirement for the notification of the demolition of the facility.
  4. The Contractor filing the proper notification is responsible for all associated fees.
  5. If the Contractor intends to dispose of ACM waste within the State of Connecticut, a copy of the CTDPH Asbestos Abatement and EPA Notification of Demolition & Renovation/Demolition Notification must also be submitted to the Department of Environmental Protection, Solid Waste Management Unit, and the Contractor must obtain a CTDEEP Special Waste Disposal authorization.
- B. Any Alternative Work Practice (AWP) specifically described in these Specifications is pre-approved and is to be utilized at all times. Additional AWP methods may be used if approved by CTDPH and/or EPA and the Engineer. Should the Contractor desire to use AWP procedures that have not been pre-approved, the Contractor shall submit in writing a description of the proposed methods to the Engineer, CTDPH and/or EPA for review and approval. Alternative procedures shall provide equivalent or greater protection than procedures which they replace. The Contractor is responsible for all fees associated with filing AWP applications which have not been pre-approved. Submission of AWP applications requires a CTDPH Project Designer License. The Contractor shall not proceed with any AWP other than those listed in this Specification without approval from both the CTDPH and/or EPA and the Engineer/Owner.
- C. Seven (7) working days prior to the commencement of asbestos abatement work (Pre-abatement Meeting), the Contractor shall submit to the Engineer/Owner for review and acceptance and/or acknowledgment of the following:
1. Copies of all required notifications.
  2. AWP applications/approvals.

SECTION 028213 – ASBESTOS ABATEMENT  
STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES  
DIVISION OF CONSTRUCTION SERVICES  
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3. Permits and licenses for the removal, transport, and disposal of asbestos-containing or contaminated materials, including a CTDPH valid asbestos removal contractor's license.
  4. Documentation dated within the previous twelve (12) months, certifying that all employees have received USEPA Model Accreditation Plan approved asbestos worker/supervisor training in the proper handling of materials that contain asbestos; understand the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of respiratory equipment to be used; and understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment as indicated in 29 CFR 1926.1101 on an initial and annual basis, and copies of all employees CTDPH asbestos worker and/or supervisor licenses. In lieu of the training requirements set forth in the EPA Model Accreditation Plan, for work with asbestos containing roofing materials, flooring materials, siding materials, ceiling tiles, or transite panels, training shall include at a minimum all the elements included in paragraph (k)(9)(viii) of the OSHA Asbestos in Construction Standard and in addition, the specific work practices and engineering controls set forth in paragraph (g) which specifically relate to that category. Such course shall include "hands-on" training and shall take at least 8 hours.
  5. Documentation from the Contractor, typed on company letterhead and signed by the Contractor, certifying that all employees listed herein have received the following:
    - a. Medical monitoring within the previous twelve (12) months, as required in 29 CFR 1926.1101
    - b. Respirator fit testing within the previous twelve (12) months, as detailed in 29 CFR 1910.134 (for all employees who must also don a tight-fitting face piece respirator)
  6. Copies of the EPA/State-approved certificates for the proposed asbestos landfill.
  7. Name and qualifications of the Asbestos Abatement Site Supervisor. This individual shall be the OSHA Competent Person for the abatement activities, shall have a minimum of three years working experience as an Asbestos Abatement Site Supervisor, shall be capable of identifying existing asbestos hazards and shall have the authority to implement corrective measures to eliminate such hazards. The Asbestos Abatement Site Supervisor shall be on-site at all times asbestos abatement is occurring, shall comply with applicable Federal, State and Local regulations which mandate work practices, and shall be capable of performing the work of this contract.
- D. No abatement shall commence until a copy of all required submittals have been received and found acceptable to the Engineer. Those employees added to the Contractor's original list will be allowed to perform work only upon submittal to, and receipt of, all required paperwork by the Engineer.

- E. Provide the Engineer/Owner, within 30 days of completion of asbestos abatement, a compliance package; which shall include, but not be limited to, the following:
1. Asbestos Abatement Site Supervisor job log;
  2. OSHA personnel air sampling data and exposure assessments;
  3. Completed waste shipment records.

## 1.5 SEQUENCE OF WORK

- A. The Contractor shall proceed in accordance with the sequence of work as directed by the Engineer/Construction Manager. Work shall be divided into convenient Work Areas, each of which is to be completed as a separate unit.
- B. The Contractor shall use the following sequence for the asbestos abatement work:
1. Release of work area to Contractor.
  2. A visual inspection of the work area to determine pre-existing damage to facility components.
  3. Removal of all moveable objects from the Work Areas undergoing abatement by the Contractor.
  4. All temporary utilities required for the project shall be on site and operational prior to the initiation of asbestos work.
  5. Abatement of all asbestos-containing materials by the Contractor.
  6. Final visual inspections by the Project Monitor.
  7. Interior NPE work area air sampling by the Project Monitor for re-occupancy (if applicable).
  8. Cleanup by the Contractor. Work Areas must be returned to their original condition or as directed by the Engineer/Project Monitor.
  9. Removal of waste from the site.

## PART 2 PRODUCTS

### 2.1 MATERIALS

- A. All materials to be used for abatement shall be delivered to the job site in the original packages, containers, or bundles bearing the name of the manufacturer, the brand name and product technical description.
- B. No damaged or deteriorating materials shall be used. If material becomes contaminated with asbestos, the material shall be decontaminated or disposed of as asbestos-containing

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waste material. The cost to decontaminate and dispose of this material shall be at the expense of the Contractor.

- C. Fire retardant polyethylene sheet shall be in roll size to minimize the frequency of joints, with factory label indicating four (4) or six (6) mil thickness.
- D. Six (6) mil polyethylene disposable bags shall have pre-printed OSHA/EPA/DOT labels and shall be transparent.
- E. Tape (or equivalent) capable of sealing joints in adjacent polyethylene sheets and for the attachment of polyethylene sheets to finished or unfinished surfaces must be capable of adhering under both dry and wet conditions.
- F. Surfactant is a chemical wetting agent added to water to improve penetration and shall consist of fifty (50) percent polyoxyethylene ether and fifty (50) percent polyoxyethylene ester, or equivalent. The surfactant shall be mixed with water to provide a concentration one (1) ounce surfactant to five (5) gallons of water, or as directed by the manufacturer.
- G. Spray equipment must be capable of mixing necessary chemical agents with water, generating sufficient pressure and volume; and equipped with adequate hose length to access all necessary work areas.
- H. Mechanical mastic removal equipment shall be suitable for the application and shall be operated in a manner which prevents damage to the underlying floor. Sanders, grinders, wire brushes and needle-gun type removal equipment shall be equipped with a High Efficiency Particulate Air (HEPA) filtered vacuum dust collection system.
- I. Containers for storage, transportation and disposal of asbestos containing waste material shall be impermeable and both air and watertight.
- J. Labels and warning signs shall conform to OSHA 29 CFR 1926.1101, USEPA 40 CFR Part 61.152, and USDOT 49 CFR Part 172 as appropriate.
- K. Encapsulant, a material used to chemically entrap asbestos fibers to prevent these fibers from becoming airborne, shall be of the type which has been approved by the Engineer. Use shall be in accordance with manufacturer's printed technical data. The encapsulant shall be clear and must be compatible with new materials being installed, if any.
- L. Glovebag assembly shall be manufactured of six (6) mil transparent polyethylene or PVC with two (2) inward projecting long sleeve gloves, an internal pouch for tools, and an attached labeled receptacle for waste.
- M. Any planking, bracing, shoring, barricades and/or temporary sheet piling, necessary to appropriately perform work activities shall conform to all applicable federal, state and local regulations.
- N. Air filtration devices and vacuum units shall be equipped with HEPA filters.

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2.2 TOOLS AND EQUIPMENT

- A. Air monitoring equipment of the type and quantity required to monitor operations and conduct personnel exposure surveillance shall conform to OSHA requirements.
- B. Protective clothing, respirators, filter cartridges, air filters and sample filter cassettes shall be provided in sufficient quantities for the project.
- C. Electrical equipment, protective devices and power cables shall conform to all applicable codes.
- D. Shower stalls and plumbing shall include sufficient hose length and drain system or an acceptable alternate. Showers shall be equipped with hot and cold or warm running water. One shower stall shall be provided for each eight workers. Water is filtered through a 5 micron and a 10 micron filter prior to being discharged into the city sewer/sanitary system. The contractor may need to supply their own water as the closest operating water supply is at the Visitors Center.
- E. The Contractor may need to supply electrical power to the site by either fuel operated generator(s) or temporary restoration of electrical service. Electrical power supply will be sufficient for maintaining in operation all equipment required for this project throughout the duration of the project.
- F. Exhaust air filtration units shall be equipped with HEPA filters capable of providing sufficient air exhaust to create a minimum pressure differential of 0.02 inches of water column, and to allow a sufficient flow of air through the area providing 4 air changes per hour. An automatic warning system shall be incorporated into the equipment to indicate pressure drop or unit failure. No air movement system or air filtering equipment shall discharge unfiltered air outside the Regulated Area. The Contractor shall provide actual airflow measurement of filtration units while the unit is in place and calculate actual air exchange rates.
- G. Pressure differential monitoring equipment shall be provided to ensure exhaust air filtration devices provide the minimum pressure differential required between the Work Area and occupied areas of the facility.
- H. Vacuum units, of suitable size and capabilities for the project, shall have HEPA filters capable of trapping and retaining at least 99.97 percent of all monodispersed particles of three micrometers in diameter or larger.
- I. Ladders and/or scaffolds shall be of adequate length, strength and sufficient quantity to support the work schedule.
- J. Other materials such as lumber, nails and hardware necessary to construct and dismantle the decontamination enclosures and the barriers that isolate the Work Area shall be provided as appropriate for the work.

- K. Spray equipment shall be capable of mixing wetting agent with water and capable of generating sufficient pressure and volume. Hose length shall be sufficient to reach all of the Regulated area.
- L. Mechanical mastic removal equipment shall be suitable for the application and shall be operated in a manner which prevents excessive damage to the underlying floor.

### **PART 3 EXECUTION**

#### **3.1 GENERAL REQUIREMENTS**

- A. The Abatement Contractor/Subcontractor shall possess a valid State of Connecticut Asbestos Contractor License. Should any portion of the work be subcontracted, the subcontractor must also possess a valid State of Connecticut Asbestos Contractor License. The Asbestos Abatement Site Supervisor employed by the Contractor shall be in control on the job site at all times during asbestos abatement work. All employees of the Contractor who shall perform work (i.e. Asbestos Abatement Site Supervisor, Asbestos Abatement Worker) shall be properly certified/licensed by the State of Connecticut to perform such duties.
- B. All labor, materials, tools, equipment, services, testing, insurance (with specific coverage for work on asbestos), and incidentals which are necessary or required to perform the work in accordance with applicable governmental regulations, industry standards and codes, and these Specifications shall be provided by the Contractor. The Contractor shall be prepared to work all shifts and weekends throughout the course of this project.
- C. Prior to beginning work, the Engineer and Contractor shall perform a visual survey of each work area and review conditions at the site for safety reasons. In addition, the Contractor shall instruct all workers in all aspects of personnel protection, work procedures, emergency evacuation procedures and use of equipment including procedures unique to this project.
- D. The Contractor shall:
  - 1. Shutdown and isolate heating, cooling, and ventilating air systems to prevent contamination and fiber dispersal to the other areas of the building.
  - 2. Shut down and lock out electrical power, including all receptacles and light fixtures, when feasible. The use or isolation of electrical power will be coordinated with all other ongoing uses of electrical power at the site.
  - 3. Coordinate all power and fire alarm isolation with the appropriate representatives.
  - 4. When necessary, provide temporary power and adequate lighting and ensure safe installation of electrical equipment, including ground fault protection and power cables, in compliance with applicable electrical codes and OSHA requirements. The Contractor is responsible for proper connection and installation of electrical wiring.



- E. If sufficient electrical service is unavailable, the Contractor may need to supply electrical power to the site by fuel operated generator(s). Electrical power supply shall be sufficient for all equipment required for this project in operation throughout the duration of the project. If the Contractor elects to supply electrical power to the work site through the use of generators, the Contractor shall ensure that each work area is a manageable size such that removal, final cleaning and re-occupancy testing can be accomplished within one work shift while negative air machines are operating.
- F. Negative pressure must be continuously maintained in each work area, until the area achieves satisfactory re-occupancy criteria and is approved by the Project Monitor to be deregulated. Negative air pressure must be maintained twenty-four (24) hours per day and the Contractor shall establish temporary electrical service to the site, rather than utilize generators.
- G. Water service may not be available at the site. Contractor shall supply sufficient water for each shift to operate the decontamination shower units as well as to maintain the work areas adequately wet.
- H. Ladders and/or scaffolds shall be in compliance with OSHA requirements, and of adequate length, strength and sufficient quantity to support the scope of work. Use of ladders/scaffolds shall be in conformance with OSHA 29 CFR 1926 Subpart L and X requirements.
- I. Work performed at heights exceeding six feet (6') shall be performed in accordance with the OSHA Fall Protection Standard 29 CFR 1926 Subpart M including the use of fall arrest systems as applicable.
- J. Data provided regarding asbestos sampling conducted throughout the structure(s) is for informational purposes only. Under no circumstances shall this information be the sole means used by the Contractor for determining the presence and location of all asbestos containing materials. The Contractor shall verify all field conditions affecting performance of the work as described in these Specifications in accordance with OSHA, USEPA, USDOT, CTDPH and CTDEEP standards. Compliance with the applicable requirements is solely the responsibility of the Contractor.
- K. The Owner will provide a Project Monitor to oversee the activities of the Contractor. No asbestos work shall be performed until the Project Monitor is on-site. Pre-abatement, during abatement and post-abatement air sampling will be conducted as deemed necessary by the Project Monitor. Waste stream testing will be performed, as necessary, by the Project Monitor prior to waste disposal.

### 3.2 PREPARATION OF WORK AREA ENCLOSURE SYSTEM

- A. Pre-clean the work areas using HEPA filtered equipment (vacuum) and/or wet methods as appropriate, collecting and properly containing all dust and debris as asbestos-containing/asbestos contaminated waste. Vacuum units, of suitable size and capabilities for the project, shall have HEPA filters capable of trapping and retaining at least 99.97 percent of all monodispersed particles of three micrometers in diameter or larger. Do not

use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

- B. After pre-cleaning, movable objects shall be removed from the work areas with the utmost care to prevent damage of any kind and relocated to a temporary storage location coordinated with the Engineer. The Contractor is responsible for protecting all fixed objects that are permanent fixtures or are too large to remove and remain inside the Regulated Area. Fixed objects shall be enclosed with one layer of six (6) mil polyethylene sheeting sealed with tape.
- C. Where non-ACM insulation exists within a Regulated Area, the Contractor has the option of removing the non-ACM insulation material and disposing of as ACM debris, or decontaminating and protecting non-ACM insulation material with two (2) layers of six (6) mil polyethylene sheeting. Any non-ACM insulation removed shall be replaced with new material of equal or better quality at the Contractor's expense.

### 3.3 WORKER DECONTAMINATION ENCLOSURE SYSTEM

- A. The Contractor shall establish contiguous to the Regulated Area, a Worker Decontamination Enclosure System consisting of Equipment Room, Shower Room and Clean Room in series, as detailed below. Access to the Regulated Area shall only be through this enclosure.
- B. Access between rooms in the Worker Decontamination Enclosure System shall be through airlocks. Other effective designs are permissible. The Clean Room, Shower Room and Equipment Room located within the Worker Decontamination Enclosure, shall be contiguously connected with taped airtight edges, thus ensuring the sole source of airflow originates from outside the regulated areas, once the negative pressure differential within the Regulated Area is established.
- C. The Clean Room shall be adequately sized to accommodate workers and shall be equipped with a suitable number of hooks, lockers, shelves, etc., for workers to store personal articles and clothing. Changing areas of the Clean Room shall be suitably screened from areas occupied by the public.
- D. The Shower Room shall be of sufficient capacity to accommodate the number of workers. One shower stall shall be provided for each eight (8) workers. Showers shall be equipped with hot and cold or warm running water through the use of electric hot water heaters supplied by the Contractor. No worker or other person shall leave a Regulated Area without showering. Shower water shall be collected and filtered using best available technology and dumped down an approved sanitary drain. Shower stalls and plumbing shall include sufficient hose length and drain system or an acceptable alternate.

### 3.4 EQUIPMENT DECONTAMINATION ENCLOSURE SYSTEM

- A. The Contractor shall establish contiguous to the Regulated Area an Equipment/Waste Removal Decontamination Enclosure System consisting of two (2) totally enclosed chambers divided by a double flap curtained opening. Other effective designs are

permissible. This enclosure must be constructed so as to ensure that no personnel enter or exit through this unit.

- B. The Contractor shall ensure that no personnel or equipment be permitted to leave the Regulated Area until proper decontamination procedures (including HEPA vacuuming, wet wiping and showering) to remove all asbestos debris have occurred. No asbestos-contaminated materials or persons shall enter the Clean Room.

### 3.5 SEPARATION OF WORK AREAS FROM OCCUPIED AREAS

- A. Seal off all windows, doorways, skylights, ducts, grilles, diffusers, vents, light fixtures, electrical receptacles, suspended ceiling tile systems and any other openings between the Regulated Area and the uncontaminated areas outside of the Regulated Area, including the outside of the building, with critical barriers consisting of a minimum of one (1) layer of six (6) mil polyethylene sheeting securing the edges with tape. Doorways and corridors which will not be used for passage during work and separate the regulated areas from occupied areas must be sealed with fixed critical barriers constructed of 2" x 4" wood or metal framing 16" O.C., with ½" plywood on the occupied side and two layers of six (6) mil polyethylene sheeting on the Regulated Area side to prevent unauthorized access or air flow.
- B. The Contractor shall create a negative pressure differential in the range of 0.02 to 0.04 inches of water column between the Regulated Area and surrounding areas by the use of acceptable negative air pressure equipment. Exhaust air filtration units shall be equipped with HEPA filters capable of providing sufficient air exhaust to create a minimum pressure differential of 0.02 inches of water column, and to allow a sufficient flow of air through the area providing 4 air changes per hour. The Contractor shall provide a sufficient quantity of HEPA air filters to maintain the pressure differential throughout the duration of the project. An automatic warning system shall be incorporated into the equipment to indicate pressure drop or unit failure. Continuously monitor the pressure differential between the Regulated Area and surrounding area to ensure exhaust air filtration equipment maintains a minimum pressure differential of 0.02 inches of water column. The Contractor shall provide actual air flow measurement of filtration units while the unit is in place and calculate actual air exchange rates. No air movement system or air filtering equipment shall discharge unfiltered air outside the Regulated Area.
- C. A Negative Pressure Enclosure (NPE) shall be constructed via covering of floor and wall surfaces with polyethylene sheeting sealed with tape. Polyethylene shall be applied alternately to floors and walls. Cover floors first, with a layer of six (6) mil polyethylene sheeting, so that polyethylene extends at least twelve (12) inches up on wall. Cover wall with a layer of four (4) mil polyethylene sheeting to twelve (12) inches beyond the wall/floor intersection, thus overlapping the floor material by a minimum of twenty-four (24) inches. Repeat the process for the second layer of polyethylene. There shall be no seams at wall-to-floor joints. Protect carpet and floor tile with two additional layers of six (6) mil reinforced polyethylene in addition to the prior two layers required.
- D. Conspicuously label and maintain emergency and fire exits from the Regulated Area satisfactory to fire officials.

- E. Post warning signs meeting the specifications of OSHA 29 CFR 1910.1001 and 29 CFR 1926.1101 at each Regulated Area. In addition, signs shall be posted at all approaches to Regulated Areas so that an employee or building occupant may read the sign and take the necessary protective steps before entering the area. Additional signs may require posting following construction of workplace enclosure barriers.

### 3.6 ALTERNATE EXTERIOR NON-FRIABLE ASBESTOS SET-UP PROCEDURES

- A. In lieu of the establishment of a negative pressure enclosure (NPE) system as described by CTDPH Sections 19a-332a-5(c), 5(d), 5(e), and 5(h), non-friable ACM will be removed from exterior work areas within an outdoor Regulated Area(s). The regulated work area will be established by the use of appropriately labeled barrier tape and postings in compliance with CTDPH 19a-332a-5(a) as well as OSHA 29 CFR 1926.1101. A remote personnel decontamination unit as specified in Section 19a-332a-6 will be required. This method shall only be utilized provided exposure assessment air sampling data collected during the removal of the exterior non-friable materials indicates that the exposure levels during removal of such materials do not exceed 0.1 asbestos f/cc. Should exposure assessment air sampling data exceed this level, and engineering efforts to reduce the airborne fiber levels not be successful in reducing the levels to less than 0.1 f/cc, removal shall occur within these areas under full containment conditions.

### 3.7 ALTERNATE “SPOT REPAIR” ASBESTOS PROCEDURES

- A. In lieu of the establishment of a negative pressure enclosure (NPE) system as described by CTDPH Sections 19a-332a-5(c), 5(d), 5(e), and 5(h), less than 3 LF or 3 SF of ACM will be removed as a “spot repair” in accordance with CTDPH Section 19a-332a-10. A regulated area will be established by the use of appropriately labeled barrier tape and postings in compliance with CTDPH 19a-332a-5(a) as well as OSHA 29 CFR 1926.1101. A remote personnel decontamination unit as specified in Section 19a-332a-6 will be required. Air-tight barriers will be constructed to assure that asbestos fibers released during abatement activities are contained within the work area. (Glovebags are permitted, as specified below.) ACM will be adequately wet prior to disturbance and remain wet until placed in leak-tight container. Following abatement, clean-up methods within the work area will include HEPA-filtered vacuuming or wet cleaning techniques until no visible residue remains.
- B. Glovebags utilized to perform “spot repair” activities on asbestos containing pipe insulation/mudded fitting insulation, in conformance with OSHA 29 CFR 1926.1101(g)(5)(ii), shall be:
  - 1. constructed of 6 mil poly, seamless at bottom, unmodified
  - 2. installed so that it completely covers the circumference of pipe or other structure where work is to be done, with impermeable dropcloths placed on all surfaces beneath the work area
  - 3. smoke-tested for leaks and sealed, as needed
  - 4. used only once, may not be moved
  - 5. used only on surfaces with temperatures <150°F
  - 6. collapsed by removing air via HEPA-vacuum, prior to disposal

7. adhered to surfaces which are intact, surfaces with loose and friable material shall be sealed in two layers of 6 mil poly or otherwise rendered intact
  8. capable of sustaining integrity at connection site to attached waste bag, which must have equivalent of sliding valve for disconnection (as applicable)
  9. performed by a minimum of two (2) persons
- C. Glovebags may also be used for “spot repair” abatement procedures involving additional materials (e.g. floor tile/linoleum, transite, etc.) provided that the glovebag is capable of fully enclosing the material to be removed.

### 3.8 PERSONNEL PROTECTION

- A. The Contractor shall utilize all appropriate engineering controls and safety and protective equipment while performing the work in accordance with OSHA, USEPA, USDOT, CTDEEP and CTDPH regulations.
- B. The Contractor shall provide and require all workers to wear protective clothing in the Regulated Areas where asbestos fiber concentrations may reasonably be expected to exceed the OSHA established Permissible Exposure Limits (PEL) or where asbestos contamination exists. Protective clothing shall include impervious coveralls with elastic wrists and ankles, head covering, gloves and foot coverings.
- C. Respiratory protection shall be provided and selection shall conform to the requirements of OSHA 29 CFR 1910.134 and 29 CFR 1926.1101 as well as the requirements of the CTDPH regulations and 42 CFR Part 84. A formal respiratory protection program must be implemented in accordance with 29 CFR 1926.1101 and 29 CFR 1910.134.
- D. All other necessary personnel protective equipment (i.e. hardhat, work boots, safety glasses, hearing protection, etc.) required to perform the asbestos abatement work activities shall conform to all applicable federal, state and local regulations.
- E. All other qualified and authorized persons entering into a Regulated Area (i.e. Project Monitor, Regulatory Agency Representative) shall adhere to the requirements of personnel protection as stated in this section.

### 3.9 ASBESTOS ABATEMENT PROCEDURES

- A. The Asbestos Abatement Site Supervisor, as the OSHA Competent Person shall be at the site at all times.
- B. The Contractor shall not begin abatement work until authorized by the Project Monitor, following a pre-abatement visual inspection.
- C. All workers and authorized persons shall enter and leave the Regulated Area through the Worker Decontamination Enclosure System, leaving contaminated protective clothing in the Equipment Room for reuse or disposal of as asbestos contaminated waste. No one shall eat, drink, smoke, chew gum or tobacco, or apply cosmetics while in a Regulated Area.

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- D. During removal, the Contractor shall spray asbestos materials with amended water using airless spray equipment capable of providing a "mist" application to reduce the release of airborne fibers. Spray equipment shall be capable of mixing wetting agent with water and capable of generating sufficient pressure and volume. Hose length shall be sufficient to reach all of the Regulated Area. Do not "flood" the area with hose type water supply equipment with the potential to create water releases from the regulated area.
- E. The Contractor shall continue to spray the asbestos materials with amended water, as necessary, throughout removal activities to ensure the asbestos materials remain adequately wet. The asbestos materials shall not be allowed to dry out.
- F. In order to minimize airborne asbestos concentrations inside the Regulated Area, the Contractor shall remove the adequately wetted asbestos in manageable sections. In addition, asbestos materials removed from any elevated level shall be carefully lowered to the floor.
- G. The Contractor shall promptly place the adequately wet asbestos material in disposal containers (six (6) mil polyethylene bags/fiber drum/poly-lined dumpsters, etc.) as it is removed. Large components removed intact may be wrapped in two (2) layers of six (6) mil polyethylene sheeting secured with tape. As the disposal containers are filled, the Contractor shall promptly seal the containers, apply caution labels and clean the containers before transportation to the equipment decontamination area. Bags shall be securely sealed to prevent accidental opening and leakage by taping in gooseneck fashion. Small components and asbestos-containing waste with sharp-edged components (e.g. nails, screws, metal lath, tin sheeting) which could tear polyethylene bags and sheeting shall be placed in clean drums and sealed with locking ring tops. All waste containers shall be leak-tight, (typically consisting of two layers of 6 mil poly (or bags)), and shall be properly labeled and placarded with OSHA Danger labels, DOT shipping labels, markings and placards and USEPA NESHAP generators labels. Containers shall be decontaminated by wet cleaning and HEPA vacuuming within the equipment decontamination area prior to exiting the regulated area. Wet clean each container thoroughly before moving to Holding Area.
- H. If at any time during asbestos removal, the Project Monitor should suspect contamination of areas outside the Regulated Area, the Contractor shall immediately stop all abatement work and take steps to decontaminate these areas and eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering contaminated areas until air sampling and/or visual inspections determine decontamination.
- I. After completion of abatement work, all surfaces from which asbestos has been removed shall be wet brushed, using a nylon brush, wet wiped and sponged or cleaned by an equivalent method to remove all visible material (wire brushes are not permitted). During this work the surfaces being cleaned shall be kept wet. Cleaning shall also include the use of HEPA filtered vacuum equipment.

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3.10 CLEAN-UP PROCEDURES

- A. The Contractor shall also remove and containerize all visible accumulations of asbestos-containing and/or asbestos-contaminated debris which may have splattered or collected on the polyethylene engineering controls/barriers.
- B. The Contractor shall clean surfaces of contaminated containers and equipment thoroughly by vacuuming with HEPA filtered equipment and wet sponging or wiping before moving such items into the Equipment Decontamination Enclosure System for final cleaning and removal to uncontaminated areas.
- C. The Contractor shall remove contamination from the exteriors of the air filtration devices, scaffolding, ladders, extension cords, hoses and other equipment inside the Regulated Area. Cleaning may be accomplished by brushing, HEPA vacuuming and/or wet cleaning. The Contractor shall wet wipe the Regulated Area beginning at the point farthest away from the negative air filtration units using cotton rags or lint free paper towels. Rags and towels shall be disposed of after each use. Workers should avoid the use of dirty rags to insure proper cleaning of surfaces. Mop the entire floor with a clean mop head and amended water. Water shall be changed frequently. For those Regulated Areas where lead is also disturbed, the cleaning shall also include a wet washing with a high phosphate detergent solution and HEPA vacuuming. Waste water shall be filtered using best available technology into leak-proof containers prior to being transported to a sanitary sewer for discharge.
- D. Once the Regulated Area surfaces have dried, the Project Monitor shall perform a thorough post abatement visual inspection utilizing protocols from the ASTM Standard E1368-90 *Standard Practice for Visual Inspection of Asbestos Abatement Projects*. All surfaces within the Regulated Area, including but not limited to ledges, beams, and hidden locations shall be inspected for visible residue. Evidence of asbestos contamination identified during this inspection will necessitate further cleaning as heretofore specified. The area shall be re-cleaned at the Contractor's expense, until the standard of cleaning is achieved.
- E. Once the area has received a satisfactory post-abatement visual inspection, any equipment, tools or materials not required for completion of the work, shall be removed by the Contractor from the Regulated Area. Negative air filtration devices shall remain in place and operating for the remainder of the clean-up operation.
- F. Following the post-abatement visual, the Contractor shall apply a lock-down encapsulant to all surfaces within the Regulated Area from which asbestos has been removed and the cleaned inner layer of polyethylene.

3.11 AIR MONITORING REQUIREMENTS

- A. The Contractor shall:
  - 1. Provide air monitoring equipment including sample filter cassettes of the type and quantity required to properly monitor operations and personnel exposure surveillance throughout the duration of the project.

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2. Conduct personnel exposure assessment air sampling, as necessary, to assure that workers are using appropriate respiratory protection in accordance with OSHA Standard 1926.1101. Documentation of air sampling results must be recorded at the work site within twenty-four (24) hours and shall be available for review until the job is complete.
- B. The Project Monitor, acting as the representative of the Engineer during abatement activities, will:
1. Collect air samples in accordance with the current revision of the NIOSH 7400 Method of Air Sampling for Airborne Asbestos Fibers while overseeing the activities of the Abatement Contractor. Frequency and duration of the air sampling during abatement will be representative of the actual conditions at the abatement site. The size and configuration of the asbestos project will be a factor in the number of samples required to monitor the abatement activities and shall be determined by the Project Monitor. The following schedule of samples may be collected by the Project Monitor:
    - a. Pre-Abatement (Optional)
      - i. Background areas
      - ii. Area(s) adjacent to Work Area(s)
      - iii. Work Area(s)
    - b. During Abatement (Optional)
      - i. At the exhaust of air filtering device
      - ii. Within Regulated Area(s)
      - iii. Area(s) adjacent to Regulated Areas(s)  
(exterior to critical barriers)
      - iv. At the Decontamination Enclosure System
    - c. Post-Abatement (re-occupancy air clearance testing) **(REQUIRED)**
      - i. Interior Regulated NPE Area - At least five (5) per homogenous area

Abatement Activity	Pre-Abatement	During Abatement	Post-Abatement
Greater than 160 SF/260 LF – Interior	PCM	PCM	TEM
Greater than 3 LF/3 SF and Less than 160 SF/260 LF – Interior	PCM	PCM	PCM
Spot Removal and Glovebag Procedures (<3 LF/3 SF)	---	PCM	---
Exterior Friable/Non-Friable	---	PCM	---

- C. If air samples collected outside of the Regulated Area during abatement activities indicate airborne fiber concentrations greater than original background levels, or greater than 0.1 f/cc, as determined by Phase Contrast Microscopy, whichever is larger, an examination of the Regulated Area perimeter shall be conducted and the integrity of barriers shall be restored. Cleanup of surfaces outside the Regulated Area using HEPA vacuum equipment or wet cleaning techniques shall be done prior to resuming abatement activities.



3.12 POST-ABATEMENT RE-OCCUPANCY PROCEDURES

- A. For interior NPE Regulated Areas, clearance air sampling will be performed by the Project Monitor as specified in the Air Sampling Schedule. Clearance sampling will be undertaken using aggressive sampling techniques. Sampling and analysis of clearance samples will follow State of Connecticut Regulations, Section 19a-332a-12. Areas which do not comply shall continue to be cleaned by and at the Contractors expense, until the specified Standard of Cleaning is achieved as evidenced by results of air testing. When the Regulated Area passes the re-occupancy clearance, controls established by these Specifications may be removed.
1. Air sampling will not begin until after the area has received an acceptable post abatement visual inspection, encapsulation has been completed, and no visible water, liquid encapsulant or condensation remain in the Regulated Area.
  2. Sampling equipment will be placed at random throughout the Regulated Area.
  3. The following aggressive air sampling procedures will be used within the Regulated Area during all air clearance monitoring:
    - a. Before starting the sampling pumps, direct the exhaust from forced air equipment (such as a 1 horsepower leaf blower) against all walls, ceilings, floors, ledges and other surfaces in the Regulated Area.
    - b. Pre-calibrate the sampling pump flow rates through the use of a rotameter calibrated to a primary standard.
    - c. Start the sampling pumps and sample for the required time.
    - d. Post-calibrate the sampling pump flow rates.
  4. Air volumes taken for clearance sampling shall be sufficient to accurately determine (to a 95 percent probability) fiber concentrations to 0.010 f/cc of air (1,200 liters).
  5. Analysis shall follow the requirements of CTDPH 19a-332a-12.
  6. Each homogeneous Regulated Area which does not meet the clearance criteria shall be thoroughly re-cleaned using HEPA vacuuming and/or wet cleaning, with the negative pressure ventilation system in operation. New samples shall be collected in the Regulated Area as described above. The process shall be repeated until the Regulated Area passes the test, with the cost of repeat sampling being borne entirely by the Contractor.
  7. For an asbestos abatement project with more than one homogeneous Regulated Area, the release criterion shall be applied independently to each Regulated Area.
  8. These clearance sampling procedures may also be implemented for exterior NPE work areas at the discretion of the Engineer.

3.13 POST ABATEMENT WORK AREA DEREGULATION

- A. The Contractor shall remove all remaining polyethylene, including critical barriers, and Decontamination Enclosure Systems leaving negative air filtration devices in operation. HEPA vacuum and/or wet wipe any visible residue which is uncovered during this process. All waste generated during this disassembly process shall be discarded as ACM waste.
- B. A final visual inspection of the work area shall be conducted by the Competent Person and the Project Monitor to ensure that all visible accumulations of suspect materials have been removed and that no equipment or materials associated with the abatement project remain.
- C. The Contractor shall restore all work areas and auxiliary areas utilized during work to conditions equal to or better than original. Any damage caused during the performance of the work activity shall be repaired by the Contractor at no additional expense to the Engineer.

3.14 WASTE DISPOSAL

- A. Unless otherwise specified, all removed materials and debris resulting from execution of this project shall become the responsibility of the Contractor and removed from the premises. Materials not scheduled for reuse shall be removed from the site and disposed of in accordance with all applicable Federal, State and Local requirements.
- B. Waste removal dumpsters and cargo areas of transport vehicles shall be lined with a layer of six (6) mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first, and shall be extended up sidewalls 12-inches. Wall sheeting shall overlap floor sheeting 24-inches and shall be taped into place.
- C. OSHA “Danger” signs must be attached to vehicles used to transport asbestos-containing waste prior to loading ACM waste. The signs must be posted so that they are plainly visible.
- D. Waste haulers and disposal facilities utilized shall match those indicated on the submitted CTDPH notification.
- E. Ensure all waste containers (bags, drums, etc.) are properly packed, sealed and labeled with USEPA NESHAP generator labels, OSHA danger labels and DOT shipping labels. For each shipment of ACM waste, the Contractor shall complete an EPA-approved asbestos waste shipment record.
- F. Authorized representatives signing waste shipment records on behalf of the generator must have USDOT Shipper Certification training in accordance with HMR 49 CFR Parts 171-180.
- G. Transport vehicles hauling ACM waste shall have appropriate USDOT placards visible on all four (4) sides of the vehicle.
- H. The Contractor shall dispose of asbestos-containing and/or asbestos contaminated material at an EPA authorized site and must be in compliance with the requirements of the Special

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DIVISION OF CONSTRUCTION SERVICES  
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Waste Provisions of the Office of Solid Waste Management, Department of Environmental Protection, State of Connecticut, or other designated agency having jurisdiction over solid waste disposal.

- I. Any asbestos-containing and/or asbestos-contaminated waste materials which also contain other hazardous contaminants shall be disposed of in accordance with the EPA's Resource Conservation and Recovery Act (RCRA), CTDEEP and ConnDOT requirements. Materials may be required to be stored on-site and tested by the Project Monitor to determine proper waste disposal requirements.

END OF SECTION 02 82 13

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**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A.** The Work generally involves the patching and replacement of deteriorated and unsound steel decking; re-securement of decking where existing fasteners have failed; cleaning and priming of rusted areas and such incidental or other work as may be necessitated by these operations and called for by the Drawings.

**1.2 ADDITIONAL DECK FASTENING**

- A.** Additional deck fastening required to be in compliance with FM 1-29 - Roof Deck Securement and Above Deck Components.
- 1.** FM Global approved deck fasteners should be used for the securement of the steel deck (existing deck fastening pattern is unknown):
    - a.** Metal deck within Field of roof:  
deck fasteners spaced a maximum of 12-inch on center (every other rib for 1½-inch deck) at all supports
    - b.** Metal deck within Perimeter roof area:  
deck fasteners spaced a maximum of 6-inch on center (every rib for 1½-inch deck) at all supports
    - c.** Metal deck within Corner roof areas:  
deck fasteners spaced a maximum of 6-inch on center (every rib for 1½-inch deck) at all supports
  - 2.** FM Global should be notified by the Contractor at least two weeks prior to the start date of the installation of the roof to conduct a field evaluation (i.e., deck securement, confirmation of materials to be used and securement of above-deck components).

**1.3 DECK REINFORCEMENT**

- A.** Deck reinforcement and patching resulting from the removal or demolishing of items is to be included in the Base Bid amount. It is NOT part of the unit pricing quantities

**1.4 UNIT PRICE QUANTITIES**

- A.** Unit Price quantities for certain work of this Section are listed below. Unit prices listed under Section 012000 Contract Considerations - Unit Price Schedule are for work performed beyond the Base Bid Amount. The actual quantity used will be verified by the General Contractor and Architect.
- B.** Total area of metal deck work to be included in the Base Bid amount are as follows (measurement will be taken in plan view and not following actual profile of metal decking):
- 1.** Preparation & painting of existing rusted metal deck: **500 SF**  
Deck to be painted on all exposed exterior surfaces
  - 2.** Metal deck replacement: **1000 SF**
  - 3.** Metal deck reinforcement (with flat galvanized sheet stock): **500 SF**

**1.5 RELATED WORK SPECIFIED ELSEWHERE**

- A. Section 06 10 53: Miscellaneous Rough Carpentry
- B. Section 07 22 00: Roofing Insulation
- C. Section 07 01 50.23: Roofing Removal
- D. Section 07 53 23: Ethylene-Propylene-Diene-Monomer Roofing

**1.6 QUALITY ASSURANCE**

- A. Reference Standards
  - 1. American Society for Testing and Materials (ASTM):
    - a. A 36-77a, or latest revision; Specifications for Structural Steel
    - b. A 446-76, or latest revision; Specifications for Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process, Structural (Physical) Quality
    - c. A 525-79, or latest revision; Specifications for Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process, General Requirements.
    - d. A 570-79, or latest revision; Specifications for Hot-Rolled Carbon Steel Sheet and Strip, Structural Quality.
  - 2. Federal Specifications (FS):
    - a. AA-S-775E INT AMD 1 for Steel Sheets, Carbon, Zinc-coated (Galvanized) by the Hot Dip Process.
  - 3. Steel Deck Institute (SDI):
    - a. Design Manual for Floor Decks and Roof Decks.

**1.7 PRODUCT HANDLING**

- A. Use all means necessary to protect materials of this Section before, during and after installation and to protect work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no cost to the Owner.

**1.8 SUBMITTALS**

- A. Manufacturer's Technical Data and Literature on:
  - 1. Steel Decking
  - 2. Deck Fasteners
  - 3. Paint Materials
- B. See items also listed in Article 1.2 above.

## 1.9 EXISTING CONDITIONS

- A. Temporary patches will have been made to the existing roof prior to commencement of Work under this Contract. These patches are not included under this contract.
  - 1. These repairs were of the temporary nature and any materials installed which are not in conformance with these specifications, are to be removed and reconstructed to conform.

## 1.10 FM GLOBAL REPORTING

- A. Contractor shall forward report to FM Global Regarding condition of the existing metal deck and the extent of the required cut-and-patch repair work.

## PART 2 - PRODUCTS

### 2.1 METAL DECK PATCHES (REINFORCEMENT)

- A. Deck patches shall be sections cut from 16 gauge hot dipped galvanized steel sheets. Length shall be sufficient to lap over existing deck at least 3-inches at each end; width shall overlap existing by one full rib or flute on each side of the opening to provide for secure fastening and weight transfer.
  - 1. Pieces for patching shall be hot dip galvanized, 1.25 ounces per square foot.
  - 2. Patches are for openings up to 24-inches in diameter. Larger openings will be patched using metal decking of gauge, profile and rib width to match existing - see unit pricing above.

### 2.2 METAL DECKING

- A. Deck shall be 1 1/2-inch, 18 gauge - B profile – to match existing, and shall be produced by a member firm of the Steel Deck Institute.
- B. Finish shall be galvanized with zinc coating on both sides meeting the requirements of ASTM A525, for the coating class 1.25 commercial, and FS QQ-S-775E INT AMD 1 for Type 1, Class D or E.

### 2.3 PRIMER

- A. Steel deck primer shall be a modified acrylic rust-inhibitive primer.
  - 1. Benjamin Moore - Super Spec HP, D.T.M. Acrylic, low lustre P25 (self priming, 100% acrylic latex)
  - 2. TNEMEC 10-99 - Ironclad Retardo
  - 3. Rust-O-Leum 1060
- B. All accessory products shall be as approved by the primer manufacturer.

### 2.4 FASTENERS

- A. Deck fasteners for use at bearing, side laps and deck patches shall be: **FM Approved** Size #12-14x3/4-inch, 1/2 in integral washer or 3/4" hex washer headed. In accordance with FM

Global Data Sheet 1-29, Table 2.

1. TEKS/3 as produced by the Buildex Division of Illinois Tool Works
2. DrillPro by Rockford
3. Twin Fast by Power Fasteners
4. Hilti.

### **PART 3 - EXECUTION**

#### **3.1 GENERAL**

- A.** As soon as the existing roofing and wet insulation have been removed and the decking swept clean, the Architect's representative will inspect the decking for rust and soundness. He will then direct the Contractor concerning patching, repairs, rust removal, priming, and fastener requirements.

#### **3.2 DECK PATCHING (REINFORCEMENT)**

- A.** Where minor areas of deck are unsound or openings resulting from discontinued penetrations are found, either of which having a maximum dimension of 24-inches, deck patching will be directed.
1. Surface rusting which would be completely covered by the patch shall be thoroughly cleaned with a power-driven wire brush and primed.
    - a.** This cleaning and priming is not included as part of the Unit Price square footage of priming referred to in 1.1.B.1 above.
    - b.** For deck patching (reinforcement) (referred to in 3.2.A), the rust removal and priming is considered to be an integral part.
    - c.** Surface rusting which cannot be covered by the patch is to be considered as a part of the quantity of deck to be cleaned and primed.
- B.** Should rusting be observed in the area to be patched, prepared the deck and prime as required by Article 3.4 below.
- C.** Center the patch plate over the deficient area, adjusting the patch positioning so as to have approximately equal bearing on deck ribs, and secure the patch to the deck with a minimum of four fasteners so as to result in one fastener to each deck rib and one fasteners on each corner.

#### **3.3 DECK REPLACEMENT**

- A.** Sections of decking directed for replacement shall be neatly and squarely cut just shy of the joist bearing. Deck replacement lengths shall be not less than the center to center distance of two spans (3 bearings) plus 4 inches to provide minimum of 2 inches overlap both sides.
- B.** Ends shall be nested onto existing decking, lapping so as to equalize the bearing over each of the joists under the end.
1. Nest side laps



- C. Fasten deck units to bearings.
  - 1. Fastening at ends shall be as listed in Article 1.2 above.
- D. Install one fastener, on each side, at mid-point between bearings at side laps.

### 3.4 DECK PRIMING

- A. Completely remove all rust from the ribs and flutes by power wire brushing. Blow out all dust.
  - 1. Retouch where necessary to produce a bright metal surface.
- B. Thoroughly coat the area with the primer, following manufacturer's recommendations and requirements.

### 3.5 DECK SECUREMENT

- A. Add extra fasteners per Article 1.2 above in perimeter, field, and corner areas and as noted on drawings and as shown in FM Global Data Sheet 1-29. Secure the deck to bearing using the specified self-drilling fastener.
  - 1. Particular attention shall be given to side laps:
    - a. Add extra fasteners 30-inch on center along side laps.
    - b. Ensure securement penetrates all deck panels at the laps.
    - c. Do not weld side laps.
- B. No change in the Contract amount will be granted for fasteners used in Article 1.2 above. Contractor is to have at the site an adequate supply of fasteners at all times.

### 3.6 CLEANING

- A. Daily clean up and removal from the site of all removed decking, fasteners, scraps, loose particles and other debris resulting from these operations is required.

**END OF SECTION 05 31 00**

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**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A.** The principal items of Work are related to providing miscellaneous blocking for roofing related items such as flashing, edge detail, curbs, sheet metal and including any incidental work necessitated by these operations and such other work as may be called for by the Drawings.
  
- B.** Related Work Specified Elsewhere:
  - 1. Section 07 01 50.23: Roofing Removal
  - 2. Section 07 22 00: Roofing Insulation
  - 3. Section 07 53 23: Ethylene-Propylene-Diene-Monomer Roofing
  - 4. Section 07 62 00: Sheet Metal Flashing and Trim

**1.2 UNIT PRICES**

- A.** Unit prices for certain work of this section are listed in Specification Section 012000 – Contract Considerations - Unit Price Schedule. Unit prices listed are for work performed beyond the Base Bid Amount. The actual quantity used shall be verified by the General Contractor and the Construction Administrator.
  
- B.** The Base Bid shall include new and replacement of wood blocking above and beyond that which is shown on the drawings – size and profile to match existing.
  - 1. Base Bid is to include additional **500** linear feet (any size)

**1.3 QUALITY ASSURANCE**

- A.** Lumber Grading Rules and Wood Species to be in conformance with Products Standards, PS 1 and PS 2.
  
- B.** Grading Rules of following associations apply to materials furnished under this Section:
  - 1. Southern Pine Inspection Bureau (SPIB).
  - 2. West Coast Lumber Inspection Bureau (WCLIB)
  - 3. Western Wood Products Association (WWPA)
  
- C.** Grade Marks:
  - 1. Identify lumber of official grade mark. Grade stamp to contain symbol of grading agency certified by Board of Review, American Lumber Standards Committee, mill number or name, grade of lumber, specie or species grouping or combination designation, rules under which graded & where applicable, and condition of seasoning at time of manufacture.
  
- D.** Reference Standards:
  - 1. American Society for Testing and Materials (ASTM):

- a. D1761-88 Standard Test Methods for Mechanical Fasteners in Wood.
- b. A 153-82 Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- 2. American Wood Preserves Bureau (AWPB), LP-2, Standard for Softwood Lumber, Timberland Plywood Pressure Treated Waterborne Preservations for Above Ground Use.
- 3. Federal Specifications (FS):
  - a. FF-B-575C, Bolts, Hexagon and Square.
  - b. F-N-105B (3) INT AMD 4, Nails, Brads, Staples and Spikes: Wire, Cut, and Wrought.
  - c. FF-S-85C (1), Screw, Cap, Slotted and Hexagon Head.
  - d. FF-S-107C (2), Screws, Tapping, and Drive.
  - e. FF-S-11D, Screw, Wood.
- 4. National Forest Products Association (NFPA):
  - a. Working Stresses for Joists and Rafters.
  - b. Wood Structural Design Data.
- 5. Southern Pine Inspection Bureau (SPIB), Standard Grading Rules for Southern Pine Lumber.

#### **1.4 PRODUCT DELIVERY, STORAGE AND HANDLING**

- A. Immediately upon delivery to the job site, place materials in an area protected from weather. Coordinate with Owner for storage space assignment before delivery is expected.
- B. Store materials a minimum of 5-inches above grade or floor on framework or blocking and cover with protective waterproof covering providing for adequate air circulation or ventilation.
  - 1. Polyethylene or other impervious films may not be used. Woven tarpaulins or other "non-sweating" coverings are required.
- C. Do not store seasoned materials in wet or damp locations.

### **PART 2 - PRODUCTS**

#### **2.1 WOOD MATERIALS**

- A. All nailers and blocking material to be Pressure Treated with Water-borne Preservatives for above ground use. Reference AWPA, Standard U1 – refer to section 3 of Standard U1 for different types of applications and their use categories
- B. Wood Blocking and Framing:
  - 1. Wood blocking sized to match thickness of insulation and/or as shown on the Drawings. Boards shall be nominal 1-inch thick, minimum No. 3 Common or Standard Grade of Southern Pine, square edged, S4S.

2. Wood for framing to be #2 Douglas Fir Larch – size as noted on Drawings or to match existing. (E = 1,700,000 psi; Fb = 1,450 psi)

C. Plywood: 3/4-inch thick, C-D Ext-APA.

## **2.2 FASTENERS**

A. Rough Hardware shall conform to the following Federal Specifications:

1. Screws: FF-S-111D, Screws, Wood.
2. Nails: FF-N-105B (3), Nails, Wires, Brads, and Staples.
  - a. Nails for securing materials with nominal 1-inch thickness or less shall be 8d (22-inch) Cement or Zinc Coated common nail.
  - b. Nails for securing members between nominal 1-inch thickness and nominal 2-inch thickness shall be 10d (3-inch) Cement or Zinc Coated Common Nail.
  - c. Use stainless steel fasteners at all pressure treated wood.

B. Fasteners for securement to masonry shall be: TAPPERS as produced by Powers Fasteners, 2 Powers Lane, Brewster, New York, NY 10509; or Triangle Fastener Corporation, 1925 Preble Avenue, Pittsburgh, Pennsylvania 15233; or Secure Fastener & Tool Company Inc., 401 Meadow Lane, Carlstadt, New Jersey 07072.

1. Fasteners shall be long enough to penetrate the masonry or concrete not less than 1-inch, Phillips flat-head, type 304 stainless steel.

C. Fasteners for assembling wood equipment bases, curbs and alike shall be No. 12 by 3 inch flat-headed wood screws, type 304 stainless steel.

## **PART 3 - EXECUTION**

### **3.1 GENERAL**

- A. Once exposed, the securement of all wood blocking to remain should be inspected to confirm the minimum fastening requirements are met. If these criteria are not met, additional securement should be added as needed. This is to be included in the Base Bid.
- B. Blocking and nailers shown on the Drawings are shown generically to indicate the intended purpose. Select the proper thickness for each piece to allow blocking to be placed in the proper configuration
- C. No cutting or dipping shall be done on any new or existing roofing on buildings not to be reroofed hereunder.
- D. Where removals are made, all existing nails will be removed, not driven.
  1. In instances where nails have been rusted to the point that the shaft breaks in removal attempts, it will be permitted to drive them.

### **3.2 WORKMANSHIP**

- A. Replace existing deteriorated wood blocking as directed or determined by the Construction Administrator.

### **3.3 BLOCKING/NAILERS**

- A.** Height of perimeter blocking shall match the total thickness of the insulation boards or as shown on the Drawings.
  - 1. Blocking depicted elsewhere in the Drawings is shown generically, to indicate the intended purpose. Contractor is responsible for selecting proper thickness of each piece of pieces to allow blocking to be placed in a configuration to achieve the intent indicated by the Drawings.
- B.** Secure blocking to existing wood blocking, decking or masonry with fasteners at not over 24-inches on centers.
  - 1. Pre-drill holes through base course of blocking and into the concrete, using only carbide-tipped drills designed for the purpose.
  - 2. Fastener length shall be selected to provide minimum embedment of 1 1/4 inch.
  - 3. Countersink Phillips flat head fasteners to be flush with the surface of the wood member being fastened.
  - 4. Counter bore hex head fasteners to below the surface of the wood member being fastened.
  - 5. Secure blocking to blocking at 8-inch centers.
  - 6. Where blocking is over 8 inches wide, use 2 rows of fasteners, staggered 12 inches on center.
- C.** Each piece of blocking shall have not less than 2 fasteners.
- D.** Space pieces of blocking so that the ends are not tightly butted, and so the gap between them does not exceed 1/8-inch.
- E.** Where blocking is more than one layer, stagger the joints between layers.

### **3.4 GROUTING**

- A.** Where required to provide an even solid substrate for wood blocking, set blocking in a bed of full grout working it into place, extruding excess mortar from under the blocking.
- B.** Remove excess grout and secure blocking to substrate with specified fasteners.

### **3.5 EQUIPMENT BASES AND SUPPORTS**

- A.** Coordinate with other Sections of the Specifications.
- B.** Fabricate curbs as detailed and install so that tops of bases to receive equipment are level.
- C.** Where cutting of the lumber is required, the freshly cut ends, before assembly, shall be treated with preservative as required above.
- D.** Ensure curb height is a minimum of 8-inches above finished roof. This will require increasing the height of the curb as noted on the Drawings.

- E.** Contractor is to include in his price, all material and equipment necessary to raise the curb including electrical and ductwork extensions.

**3.6 CLEANING UP**

- A.** Keep the premises in neat, safe, and orderly condition at all times during execution of the Work, free from accumulation of sawdust, out-ends, and debris.
- B.** Sweeping: At the end of each working day, and more often if necessary, thoroughly sweep surfaces where refuse from this portion of the Work has settled.
  - 1.** Remove refuse to the area of the job site set aside for its storage.
  - 2.** Upon completion of this portion of the Work, thoroughly broom clean all surfaces

**END OF SECTION 06 10 53**

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**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A.** The Work involves the complete removal of existing roofing and related flashings down to decking, cleaning of decking, disposal of removed materials, protection of all roofing over which traffic from these operations will move and any additional related work as specified or noted on the Drawings.
- B.** Related Work Specified Elsewhere:
1. Section 06 10 53: Miscellaneous Rough Carpentry
  2. Section 07 22 00: Roofing Insulation
  3. Section 07 53 23: Ethylene Propylene Diene Monomer Roofing
  4. Section 07 62 00: Sheet Metal Flashing and Trim

**1.2 QUALITY ASSURANCE**

- A.** Foreman Qualifications: The foreman of the crew performing roof removals must be a qualified roofing journeyman with at least five (5) years experience in membrane roofing replacement including associated removals.

**1.3 JOB CONDITIONS**

- A.** Existing Conditions:
1. Portions of the decking may be unsound. The Contractor will exercise whatever measures he deems necessary to preclude injury to personnel, or equipment falling through any of the suspect areas, the limits of which cannot be defined until roofing removals have been made. The Contractor shall hold the Owner and Architect harmless from any claims resulting from traffic across unsound areas of decking that have not been adequately protected. Heavy equipment may not be allowed on roofs.
  2. Contractor to provide protection board (1-inch rigid insulation overlaid with 1/2-inch plywood) over roof areas to help distribute weight evenly.
  3. Provide alternative drainage acceptable to owner to remove water from the roof should drains become clogged during construction.
- B.** Protection:
1. Provide traffic ways, erect barriers, fences, guard rails, enclosures, chutes, and the like to protect personnel, existing roofs, structures, vehicles, utilities, and landscaping.
  2. **Building is occupied.** Days and hours of operation are Tuesday and Friday 7:45 a.m. to 4 p.m., Thursday 9:15 a.m. to 5:30 p.m. and Saturday 8:00 a.m. to 12:30 p.m. Contractor is to take all necessary precautions to protect occupants and materials inside the building during the Work.
- C.** Maintaining Traffic:
1. Ensure minimum interference with roads, streets, drives, and adjacent facilities.
  2. Do not close or obstruct drives, fire lanes, parking areas, rails, alleys or

passageways without prior permission from the Owner.

- D. Test cuts:
  - 1. Test cuts of the existing roofing membrane have been taken and materials tested for asbestos content. See Section 00 30 00.

## **PART 2 - PRODUCTS**

(Not Applicable)

## **PART 3 - EXECUTION**

### **3.1 SCHEDULING**

- A. Coordinate with Section 06 10 53, 07 22 00, 07 52 00 and 07 62 00. **Ensure that no more roofing is removed in any one day that can be properly protected and made watertight at the close of Work each day.** No exception to this requirement will be made.
- B. **Roofs on which work is being done must be secured from the weather at the close of each day's work.**
  - 1. **The Contractor assumes any real or incidental damages that occur from improper securement or termination.**

### **3.2 CUTTING**

- A. Care must be taken when cutting materials free that existing materials scheduled to remain are not damaged.

### **3.3 REMOVALS**

- A. Removal of existing roofing and insulation shall be complete, down to the decking.
  - 1. All existing nails, fasteners, etc. will be removed.
- B. Materials resulting from these operations must be removed from the roofs. No stacking will be permitted without special permission.
- C. Remove all curbs, mechanical units, and other units scheduled for demolition.
  - 1. Patch openings with specified materials to match existing.
  - 2. Only full planks, slabs, or tiles are to be used.
  - 3. Ensure deck is level and acceptable for roofing system specified.
  - 4. Any existing wood blocking found to be sound and in good condition can remain.

### **3.4 DISPOSAL**

- A. Receptacle locations will be coordinated with the Owner's representative.
- B. Receptacles are to be removed from the site as soon as they are filled and disposed of off the premises.
  - 1. Arrangements can be made for a stand-by receptacle.
- C. The Contractor is to follow all State, Federal and local codes and regulations regarding the handling and disposal of hazardous materials.

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**3.5 CLEANING**

- A.** As soon as removals are made, the roof decking surfaces shall be swept clean.
- B.** All dust and debris resulting from these operations that might have fallen or been blown onto buildings, roofs, Owner's equipment, apparatus, and the grounds must be thoroughly cleaned up at the end of each day's work.
  - 1.** No accumulations will be permitted.

**END OF SECTION 07 01 50.23**

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**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. Contractor is to provide all labor, materials, tools, and equipment and supervision necessary to install protection board and rigid polyisocyanurate insulation board mechanically attached to existing metal decking, including all saddles, crickets, cants, tapered edge strips, and any incidental work necessitated by these operations and such other work as may be called for by the Drawings.

**1.2 RELATED WORK SPECIFIED ELSEWHERE**

- A. Section 06 10 53: Miscellaneous Rough Carpentry
- B. Section 07 01 50.23: Roof Removal
- C. Section 07 53 23: Ethylene-Propylene-Diene-Monomer Roofing
- D. Section 07 62 00: Sheet Metal Flashing and Trim

**1.3 QUALITY ASSURANCE**

- A. Federal Specification (FS):
1. FS HH-I-1972/2 Faced Polyisocyanurate Thermal Insulation Board.
- B. Insulation shall meet Class-C fire rating for assembly specified.
- C. American Society for Testing and Materials (ASTM):
1. ASTM 1621 - 73 Test Method for Compressive Properties of Rigid Cellular Plastics.
  2. ASTM E 84-01 Test Method for Surface Burning Characteristics of Building Materials.
  3. ASTM D2126 – 87 Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.
  4. ASTM C236 - 89 Test Method for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box.
  5. ASTM C273 Shear Test in Flat wise Plane of Flat Sandwich Constructions or Sandwich Cores.
  6. ASTM C 578 Preformed, Cellular Polystyrene Thermal Insulation.
  7. D1623 Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
  8. FM 4450 Approval Standard for Class 1 Insulated Steel Deck Roofs.
  9. UL 1256 Fire Test of Roof Deck Constructions
- D. FM requirements: Provide insulation, protection board, fasteners and adhesives as part of a total roof assembly system meets the requirements specified under the roofing

membrane Section 07 53 23.

- E. When reroofing, inspect the existing steel deck securement and, if necessary, fasten the deck per FM 1-28, Wind Design, prior to installation of the above-deck components. Verify design and method of securement with Architect prior to any repair work.

- 1. See Section 05 31 00 Metal Deck for deck fastening.

#### 1.4 SUBMITTALS

- A. Comply with pertinent provisions of Section 01 33 00 Submittal Procedures
- B. Product Data: Provide data on all products - characteristics, performance criteria and limitations of insulation.
- C. Manufacturer's Instructions: Indicate special environmental conditions and techniques required for installation.
- D. Manufacturer's Certificate: Certify that all products meet or exceed specified requirements.
- E. Provide samples (8-inch x 8-inch) of protection board, rigid insulation, and roofing membranes.
- F. **Pull-out test required** for fasteners on metal decking. Minimum of **360 lbs.** required.
  - 1. Test to be performed by manufacturer of fastener to be used.
  - 2. Copy of test report will be submitted by Contractor to FM Global.
- G. Shop drawing showing insulation layout from material manufacturer.

#### 1.5 DELIVERY, HANDLING AND STORAGE

- A. Deliver in manufacturer's original unopened containers with labels intact and legible, indicating name, thermal conductance, production date and/or product code.
- B. Materials must be stored under cover to protect them from the weather, in an area where the temperature is within the limits specified by the manufacturer.
  - 1. Polyethylene films will not be permitted as protective covering for the insulation.
    - a. Should the material be received from the manufacturer protectively wrapped in polyethylene film, this film, if undamaged will be permitted. Should the film have or develop ruptures, tear, or otherwise be damaged, it will be removed and the material otherwise protected.
    - b. When stored outdoors, insulation shall be stacked on pallets or dunnage at least four inches above ground level and covered as outlined above.
  - 2. Tarpaulins or other "non-sweating" coverings will be used.
- C. All materials shall be stored to comply with fire and safety regulations.
  - 1. **KEEP OUT OF THE REACH OF CHILDREN.**

**1.6 JOB CONDITIONS**

- A. Board insulation shall not be installed when weather conditions are such that the deck is wet or when there is no assurance the insulation will be protected by the end of the day.
- B. Insulation which has been wet or is wet will not be used.

**1.7 WARRANTIES AND GUARANTEES**

- A. As part of the "Full System Warranty" supplied by the membrane manufacturer and noted under Section 07 53 23
- B. For all EPDM Roofing Assemblies, the use of insulation by others is not acceptable when a roof membrane system warranty is specified. The use of protection board by others may not be acceptable when a roof membrane system warranty is specified.

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

**A. Polyisocyanurate insulation**

**1. Acceptable Manufacturers:**

- a. Carlisle SynTec (Basis of Design)      Insulbase  
P.O. Box 7000  
Carlisle, PA 17013
- b. Johns Manville      Enrgy 3  
717 17<sup>th</sup> Street  
Denver, CO
- c. Firestone Building Products      ISO 95+ GL  
525 Congressional Boulevard  
Carmel, IN

**2. Polyisocyanurate Insulation is flat (non-tapered) rigid-roof insulation panel composed of a closed-cell polyisocyanurate foam core bonded on each side medium weight organic/ inorganic facing. Insulation must be approved for direct application to steel decks.**

Thermal Resistance      LTTR 5.7 per inch min.  
(Long Term Thermal Resistance)

Top layer      2.5 inches

Bottom layer      2.0 inches (Staggered joints)

Board Size      4-foot x 8-foot  
Mechanically fastened

Compressive Strength      Minimum 25 psi

Edges	Square Edges
Facing	Factory applied skin of organic/inorganic felt facer on both sides.

**B. Cover board**

1. Acceptable Manufacturers:

a.	Carlisle SynTec (Basis of Design)	Carlisle DensDeck Prime
b.	Johns Manville	JM Densdeck Prime
c.	Firestone Building Products	Firestone Densdeck Prime

2. Cover Board shall be a highly mold resistant, non-combustible core of specially treated gypsum with glass mat facing approved by the membrane manufacturer.

Thermal Resistance:	R = .56
Thickness:	½-inch
Board Size:	4-footx4-foot
Edges:	square edges
Facing:	Surface Glass Mat

**2.2 MISCELLANEOUS**

- A. Tapered edge** for slope at cricket or where shown on the Drawings and as needed to make a smooth transition between surfaces to be a high density laminated board, 18-inches long by 36-inch with an 1/2-inch per foot minimum slope made of a high-strength fibers and moisture resistant, fiberboard complying with ASTM C208.

**2.3 FASTENERS**

- A.** Mechanical fasteners for securement of insulation to metal decking shall be as manufactured or approved by the membrane or roofing manufacturer.
1. The same brand fastener is to be used throughout the Work.
  2. Number of fasteners per board and layout as shown on drawings.
  3. Length of fastener shall be determined by the thickness of the insulation and type of decking. Fasteners shall be of appropriate length to achieve a minimum of **3/4-inch longer than the assembly being secured** with engagement in the top flange.
  4. Fasteners are to be fitted with the manufacturer's standard **3-inch metal plate**.

**PART 3 - EXECUTION**



**3.1 INSTALLATION**

- A.** Thoroughly clean off the existing deck, sweeping off all particulate matter.
  - 1. Remove all existing asphalt from the deck.
- B.** Patch any holes or defects in the existing decking using the specified material as per the manufacturer's specifications.
- C.** Install insulation boards as per manufacturer's specifications in two layers with staggered joint with protection board on top (and bottom if detailed as such). **Top insulation board to be minimum 2-inch thick.**
  - 1. All joints shall be closely butted with gaps no more than ¼".
  - 2. Neatly scribe all cuts at vertical projection.
  - 3. Install top layer so as to break longitudinal and end joints to the board below.
- D.** FM approvals for fasteners and adhesive patterns at field, perimeter and corner depends upon the individual project building velocity pressures as determined by the most current ASCE Design Calculation Document. Contractor is to contact the membrane manufacturer for these Patterns and for Approved insulation patterns for Warranty Wind Rider Projects.
  - 1. Also, see Section 07 53 23 for additional information on FM requirements.
  - 2. Ensure any whole or partial insulation board that falls within the calculated perimeter or corner, has the increased securement applied over the entire board.
  - 3. Manufacturer to provide specified Warranty Wind Riders to select roofing project as required by the project specifications or negotiated by the building owner or its designee. Warranty Wind Riders are limited to predetermined wind speeds and/or wind uplift pressures.
- E.** Install crickets and saddles of tapered insulation where shown on the drawings and wherever necessary to divert water and provide positive slope to drains and gutters.

**3.2 CLEANING**

- A.** Daily clean-up and removal from the site of all wrappings, empty containers, loose particles of insulation board, nails, fasteners, discs or plates, and other debris is required.

**END OF SECTION 07 22 00**

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**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A.** Work involves new Re-Roof with Terpolymer of Ethylene, Propylene and Diene (EPDM) roofing membrane. Provide all labor, materials, tools and equipment and supervision necessary for reattachment of decking as necessary, mechanically fastened insulation and cover board, fully adhered 90 mil thick, cured, non-reinforced EPDM membrane including flashings, accessories as specified herein and as indicated on drawings in accordance with manufacturer's current specifications and details for FM Global approval and **25 year warranty**.
1. New Roof Assembly:  
Single Ply EPDM membrane 90 mil un-reinforced, fully adhered to ½ inch cover board on 4.5 inches Polyisocyanate Insulation, mechanically attached to metal decking.
- Existing Roof Assembly to be removed down to metal decking:  
Flood coat and gravel surface on 4-ply built-up roofing with 2 layers of ½" fiberglass insulation on metal decking.
- B.** Related Work Specified Elsewhere:
- |    |                      |                               |
|----|----------------------|-------------------------------|
| 1. | Section 06 10 53:    | Miscellaneous Rough Carpentry |
| 2. | Section 05 31 00:    | Metal Decking                 |
| 3. | Section 07 01 50.23: | Roofing Removal               |
| 4. | Section 07 22 00:    | Roofing Insulation            |
| 5. | Section 07 62 00:    | Sheet Metal Flashing and Trim |

**1.2 QUALITY ASSURANCE**

- A.** Submit certification by the manufacturer of the system materials used that these Specifications and Drawing Details are acceptable to them for the deck and surfacing to which they are to be applied.
1. For manufacturer's systems proposed, if any details in these Drawings or Specifications are not acceptable to the manufacturer, submit corresponding details proposed for the particular application, together with the manufacturer's reasons for not accepting the conditions depicted in the Specifications or Drawings. No alternate details will be considered without evidence of valid objections on the part of the manufacturer to the Contract requirements.
2. There shall be no deviation made from this Specification without prior written approval by the manufacturer; submit such approval to the Architect.
- B.** Applicator qualifications: Approved by the manufacturer for type of system and warranty specified prior to the bidding period and throughout the installation and able to present a copy of his certification upon request by the Architect or Owner.
1. Applicator must have installed at least five roofs of the same materials and methods specified for this project that have been guaranteed for twenty years by the manufacturer of the product that will be used in the Work.



Roof Area: **9,704 square feet**

Perimeter: **8'**

Corner: **8' x 8'**

- f. Wind speed at project site – **95 mph**
- g. Wind Pressure Ratings: Final roofing systems to meet or exceed the following design requirements per FM Global Loss Prevention Data 1-28, 1-29 and 1-49:

Zone 1 (field): **31 psf**

Zone 2 (perimeter): **47 psf**

Zone 3 (corners): **67 psf**

- h. Wind Uplift Ratings: Final roofing systems to meet or exceed the following design requirements per FM Global Loss Prevention Data 1-28, 1-29 and 1-49:

Zone 1 (field): **75 psf**                      FM Approved 1-75

Zone 2 (perimeter): **105 psf**                      FM Approved 1-105

Zone 3 (corners): **135 psf**                      FM Approved 1-135

**1.3 PRE-INSTALLATION CONFERENCE**

- A. Convene two weeks prior to commencing work of this section to review preparation and installation procedures, coordinating and scheduling required with related work.

**1.4 SUBMITTALS**

- A. Products data sheets on all materials proposed for use.
- B. Specimen copy of the manufacturer's roofing systems standard warranty.
- C. U. L. and F. M. compliance data.

**1.5 DELIVERY, HANDLING AND STORAGE**

- A. Deliver in manufacturer's original unopened containers with labels intact and legible.
  - 1. All materials shall be labeled with batch number or lot number.
- B. Materials must be stored under cover to protect them from the weather and in an area where the temperature is within the limits specified by the manufacturer.
  - 1. Adhesives shall be stored between 60°F and 80°F. Should they be exposed to lower temperatures, restore to room temperature for three to five days prior to use. Do not use materials damaged in handling or storage.
  - 2. All cardboard containers should be stored in a DRY area.

3. During cold weather, the Contractor is to deliver to the job site all flammable materials and adhesives for that day's work. No storage of these materials at the site will be permitted.

C. All materials shall be stored to comply with fire and safety regulations.

#### 1.6 JOB CONDITIONS

A. Surfaces on which the roofing membrane system is to be applied shall be clean, smooth, dry, and free of fins, sharp edges, loose and foreign materials, oil and grease.

1. Roofing cement and metal counter flashing that may be on vertical surfaces shall be removed to the extent required to provide a plane surface, free of lumps or projections that would interfere with obtaining a good adhesive bond between new flashing membranes and the vertical surface.
2. Before beginning work, a representative of the manufacturer shall examine the roof surfaces in order to ensure that the substrate is acceptable.
3. All surface voids greater than ¼-inch wide shall be properly filled with an acceptable fill material.

B. The Contractor is cautioned that the membrane may be incompatible with cooking fats and some chemicals. Special care is to be taken not to store materials on the roof where such chemicals exist.

1. The Contractor shall consult with the manufacturer regarding methods required to prevent unacceptable reactions between incompatible materials.
2. Submit Manufacturer's information and shop drawings to the Architect.

#### 1.7 SCHEDULING

A. The Owner may be contracting for additional work with various contractors while roofing work is being performed.

B. Submit schedule of operational sequences and materials handling methods proposed for the Work to the Architect and Owner for review and acceptance.

C. Contractor to coordinate with building superintendent and Owner turning off of mechanical unit or air intake during application of roofing membrane adhesives.

#### 1.8 GUARANTEE

A. Refer to Section 01 78 30, "Warranties and Bonds".

B. Contractor is to guarantee all work for installation for a **period of two (2) years** following Substantial Completion of the Work.

C. Upon completion work furnish manufacturer's **25 Year** Full System Warranty with no dollar limit (NDL) covering workmanship and materials and installation insuring a watertight roofing system. Maximum wind speed coverage shall be peak gusts of 72 mph measured at 10 meters above ground level.

D. Warranty should also cover leaks caused by accidental punctures up to 32 man-hours per year.

- E. For all EPDM Roofing Assemblies, the use of some components such as insulation by others is not acceptable when a roof membrane system warranty is specified.
- F. Submit **(2) executed copies** of both the manufacturer and applicator warranties for the periods stipulated, starting from the date of substantial completion. **Each warranty must be signed by an authorized representative of the issuing company. All subcontractor's warranties shall also be signed by the Contractor**

## **PART 2 - PRODUCTS**

### **2.1 NEW ROOF ASSEMBLIES**

- A. The EPDM membrane system and all associated products and accessories shall be the same manufacturer and shall be specifically formulated for the applications and purposes for which proposed.
- B. Products and systems of the following manufacturers will be acceptable.
  - 1. Carlisle SynTec (Basis of Design)  
P. O. Box 7000  
Carlisle, PA Sure-Seal
  - 2. Johns Manville  
717 17<sup>th</sup> Street  
Denver, CO UltraGuard
  - 3. Firestone Building Products  
525 Congressional Boulevard  
Carmel, IN RubberGuard Platinum
- C. EPDM Roofing membrane shall be 90 mil thick, non-reinforced compounded elastomer sheet fabricated Terpolymer of Ethylene, Propylene and Diene (EPDM) available in ten foot widths or greater.
  - 1. Widths greater than 10 feet are acceptable; less than 10 feet will not be accepted.
  - 2. Include membrane seam details as required by manufacturer for 25 year warranty and as shown on drawings.
- D. Flashings shall be EPDM 60 mil thick non-reinforced compounded EPDM and furnished by the membrane manufacturer for the system chosen.
  - 1. All flashing membrane including wall and curb flashing shall be cured 60 mil thick EPDM and furnished by the membrane manufacturer for the system chosen.
    - a. Carlisle SynTec: Sure-Seal EPDM Pressure-Sensitive Curb Flashing
    - b. Johns Manville: UltraGuard EPDM Curb Flashing
    - c. Firestone: RubberGard QuickSeam Curb Flashing
  - 2. Uncured EPDM flashing must be limited to the overlayment of vertical seams, flashing of inside/outside corners, vent pipes, scuppers and other unusually shaped penetrations when the use of cured EPDM membrane is not practical.

- a. Carlisle SynTec: Sure-Seal EPDM Elastoform Flashing
  - b. Johns Manville: JM EPDM Peel and Stick
  - c. Firestone: RubberGard FormFlash Flashing
3. Include flashing enhancements including 2 ply corner details as required by manufacturer for 25 year warranty and as shown on drawings.

## 2.2 COMPOUNDS

- A. All compounds used in the Work shall be **low VOC** and furnished by the manufacturer of the membrane being used and specially formulated for the intended application.
- 1. Bonding adhesive shall be compatible with all materials to which the membranes are to be bonded:
    - a. Carlisle SynTec: EPDM x-23 Low VOC Bonding Adhesive  
Over substrate application: 0.83 gals/square and  
Underside application: 0.83 gals/square
    - b. Johns Manville: UltraGuard Bonding Cement
    - c. Firestone: BA-2004 Bonding Adhesive
  - 2. Sheet Lap Securement
    - a. Carlisle SynTec: Sure-Seal SecureTape 6" wide
    - b. Johns Manville: UltraGuard EPDM Seam Tape
    - c.
    - d. Firestone: Rubberguard Quickseam Tape
  - 3. Water cut-off mastic shall be trowel or gun application consistency:
    - a. Carlisle SynTec: Water Cut-Off Mastic
    - b. Johns Manville: UltraGuard EPDM Sealing Mastic
    - c. Firestone: Waterblock
  - 4. Compound for sealing pitch boxes and the like:
    - a. Carlisle SynTec: Sure-Seal EPDM Pourable Sealer
    - b. Johns Manville: UltraGuard EPDM Pourable Sealer
    - c. Firestone: RubberGard Pourable Sealer S-10 Part A & B
  - 5. Cleaning solvents by Membrane Manufacturer:
    - a. Carlisle SynTec: Weathered Membrane Cleaner
    - b. Johns Manville: UltraGuard EPDM Primer/Wash



- c. Firestone: Splice Wash SW-100
- 6. Seam tape:
  - a. Carlisle SynTec: Sure-Seal SecurTape
  - b. Johns Manville: UltraGuard EPDM Seam Tape
  - c. Firestone: Quick Seam Splice Tape
- 7. Primer:
  - a. Carlisle SynTec: Low VOC EPDM PRIMER
  - b. Johns Manville: UltraGuard EPDM Tape Primer/Wash
  - c. Firestone: QuickPrime Plus LVOC

### 2.3 FASTENING COMPONENTS

- A. Securement Strips (RUSS) (Reinforced Universal Securement Strip): 45 mil thick clean, cured reinforced EPDM black membrane with laminated tape
  - 1. 6" wide Pressure-Sensitive RUSS is used horizontally or vertically at the base of walls, curbs, etc. in conjunction with Fastening Plates or Bars below the EPDM Deck membrane for additional membrane securement.
  - 2. 9" wide Pressure Sensitive RUSS used for perimeter membrane securement on sure seal mechanically fastened roofing systems and primary securement on metal retrofit roofing systems.
- B. Cover and Insulation Board Securement to Steel Deck: Basis of Design: Carlisle SSSP14645 System.
  - 1. Fastener - #12 diameter fastener, 22 ga, 2"-8" increments; Basis of Design: Carlisle InsulFast Fastener
  - 2. Insulation Fastening Plate – 3 inch diameter metal plate; Basis of Design: Carlisle.

### 2.4 EDGES AND TERMINATIONS

- A. Termination Bar: A 1" wide and 98 mil thick 6063-T6 extruded aluminum bar pre-punched 6" on center which incorporates a sealant ledge to support lap sealant and provide increased stability for membrane terminations.
  - 1. Fasteners for securement to wood shall be No. 8 by 1-1/4-inch stainless steel round head wood screws, or as manufactured by membrane supplier.
  - 2. Fasteners for securement to masonry shall be slotted hex washer head, 1/4-inch diameter by 1-3/4-inch long self-tapping screws as produced by the manufacturer of the roofing membrane being used or approved equal.
  - 3. Fasteners shall penetrate the masonry a minimum of 1-inch.

### 2.5 ACCESSORIES

- A. All accessories are to be supplied by the manufacturer of membranes being used.
- B. Field fabricated pipe seals may be used in lieu of prefabricated units and formed of the uncured 60 mil EPDM sheet, following the system manufacturer's recommendations.
- C. Each fastener exposed to view in the finished work shall be provided with a gasket, not less than 1/16-inch thick, and fabricated of cured neoprene sized to snugly fit the fastener shank and extend beyond the head edge by not less than 1/8-inch.
- D. Clamping rings for securing prefabricated or field fabricated pipe seals, and elsewhere as required, shall be worm drive hose clamp all stainless steel, sized to fit the application.

## 2.6 MISCELLANEOUS

- A. Walkway pads shall be Pressure Sensitive with 3 rows of splice tape factory installed on bottom and manufactured and supplied by the roofing membrane manufacturer.
  - 1. Color to be black.
  - 2. Size: Pads 24-inch x 24-inch
    - a. Carlisle SynTec - Sure-Seal EPDM Walkway Pads
    - b. Johns Manville - UltraGuard EPDM Walkway Pads
    - c. Firestone - Quick Seam Walkway Pads

## PART 3 - EXECUTION

### 3.1 MEMBRANE

- A. Position roofing membrane without stretching. Allow the membrane to relax for approximately one hour before bonding. Fold the sheet back onto itself so that one half of the underside of the sheet is exposed.
  - 1. It is essential that the fold in the sheet is smooth, with no wrinkles or buckles, as these could result in wrinkling in the sheet after it is bonded.
- B. Apply the bonding adhesive in accordance with the manufacturer's published instructions, to both the sheet and the substrate, using a 9-inch solvent resistant paint roller. Apply the bonding adhesive evenly, avoid globs and puddles. Allow the adhesive to dry until it does not string or stick to a dry finger touch.
  - 1. Roll the membranes into the adhesive, being careful to avoid wrinkles. Brush down the bonded half of the sheet with a push broom to achieve maximum contact.
  - 2. Fold back the unbonded half of the sheet and repeat the bonding procedure.
- C. Apply adjoining sheets in the same manner as specified above, lapping the edge a minimum of 6-inches with 6" wide Factory Applied Tap. Do not apply bonding adhesive to the splice area.
- D. In making splices use splice tape method.
  - 1. Position membrane sheet to allow for required splice overlap. Mark the bottom

sheets with an indelible marker approximately 1/4" to 1/2" from the top sheet edge. The pre-marked line on the membrane edge can also be used as a guide for positioning splice tape.

2. When the membrane is contaminated with dirt, fold the top sheet back and clean the dry splice area (minimum 3" wide) of both membrane sheets by scrubbing with clean natural fiber rags saturated with Weathered Membrane Cleaner. When using PRE-KLEENED membrane, cleaning the splice area is not required unless contaminated with field dirt or other residue.
  3. Apply Low VOC EPDM Primer to splice area and permit to flash off.
  4. When adhering Factory Applied Tape (FAT), pull the poly backing from FAT beneath the top sheet and allow the top sheet to fall freely onto the exposed primed surface. Press top sheet on to the bottom sheet using firm even hand pressure across the splice towards the splice edge
  5. For end laps, apply 6" Splice Tape to the primed membrane surface in accordance with the manufacturer's specifications. Remove the poly backing and roll the top sheet onto the mating surface.
  6. Tape splices must be a minimum of 5-1/2" wide using 6" wide Splice Tape extending 1/8" minimum to 1/2" maximum beyond the splice edge. Field splices at roof drains must be located outside the drain sump.
  7. Immediately roll the splice using positive pressure when using a 2" wide steel roller. Roll across the splice edge, not parallel to it. H.
  8. At all field splice intersections, apply Lap Sealant along the edge of the membrane splice to cover the exposed SecurTAPE 2" in each direction from the splice intersection. Install 6" x 6" Pressure-Sensitive "T" Joint Covers or a 6" wide section (with rounded corners) of Pressure-Sensitive Uncured EPDM Flashing over the field splice intersection. Overlay initial tee-lap patch with 12" x 12" Pressure-Sensitive "T" Joint Cover or a 12" wide section (with rounded corners) of Pressure-Sensitive Uncured EPDM Flashing.
- E.** The membrane shall be secured at the roof perimeter and curb flashing, skylights, interior walls, penthouse, at any inside angle change where slope exceeds 2" in one horizontal foot and at other penetrations as noted on drawings with Pressure-Sensitive RUSS (Reinforced Universal Securement Strip)
1. Loose lay the 6" wide RUSS along parapet walls 6" to 9" from corners and fasten with Seam Fastening Plates and fasteners to roof deck or into parapet walls. Spacing of the Seam Fastening Plates shall be maximum of 6" on center for 25 year warranty.
    - a. For horizontal attachment, the RUSS strip must be positioned a minimum of 1/8" to 6" maximum from the angle change with pressure sensitive side facing away from the parapet and towards the roof plane.
    - b. For vertical attachment, the reinforced strip must be attached to the vertical wall with pressure sensitive side extending onto the roof surface.
  2. Adjoining sections of the RUSS strip need not be overlapped. However, gaps between adjoining sections must not exceed 1".

3. When using Pressure-Sensitive RUSS, clean the underside of the membrane with Primer and allow proper flash-off prior to removing the release film.
4. On adhered systems discontinue bonding adhesive application on the underside of the membrane in area of the sheet where contact with the pressure-sensitive RUSS is to occur.

### 3.2 FLASHINGS

- A. Perimeter flashing and flashing around vents, curbs, etc., shall be done with the specified flashing materials, using the longest pieces practicable.
- B. Comply with manufacturer's 25 year warranty enhancements for all flashing details.
- C. The splice between the flashing and the main roof sheet should be completed before bonding the flashing to the vertical surface. The splice must be sealed at least six (6) inches onto the roof membrane and a minimum of three (3) inches beyond the fasteners which attach the horizontal membrane of flange to the wood perimeter.
  1. A minimum vertical dimension of 8-inches is required or under all circumstances at least above the level of potential water resulting from deluging rains or poor drainage.
    - a. When the minimum 8-inch dimension can not be adhered to, the Contractor is to verify the height dimension with the Architect prior to any work.
- D. Apply a thin, uniform layer of bonding adhesive to the inside face of the vertical surface.
  1. Bonding adhesive shall be applied to both the membrane and surface to which it is being bonded. After the bonding adhesive has dried to the point where it does not string or stick to a dry finger touch, roll the flashing into the adhesive.
    - a. Care must be taken to assure that the flashing is not bridging where there is any change in the direction of the flashing such as where vertical walls or curbs meet the roof deck.
- E. Flash all projections (pipes, conduits, and so forth) passing through the membrane.
  1. All flashings and terminations shall be done in accordance with the manufacturer's recommended details for 25 year warranty, these Specifications and as shown on the Drawings.

### 3.3 CUT-OFFS

- A. Care shall be exercised to ensure that water does not flow beneath any completed section of roof, by temporarily sealing the loose edge of the membrane with the specified Night Seal.
  1. Apply the night seal at the rate of 100 lineal feet per gallon, 12-inches back from the edge of the sheet.
    - a. Mix night seal per manufacturer's instructions.
    - b. It may be necessary to use a trowel to spread the materials in order to achieve the prescribed coverage and achieve complete seal. Also apply onto existing roof system.

- B. After embedding the membrane in the night seal, check for continuous contact of the membrane and the night seal, then weight the edge providing continuous, uniform pressure over the length of the cut-off.
- C. When the work is resumed, pull the sheet free before the installation is continued.
- D. Follow membrane manufacturer's specifications for long term tie-in use.

**3.4 VENT PIPES**

- A. Prefabricated pipe seals shall be used to the greatest extent practicable, but never around flexible penetrations.
- B. Pre-molded pipe seal must have intact rib at top edge, regardless of pipe diameter.
- C. Seal perimeter with lap sealant as specified above.

**3.5 WALKWAYS**

- A. Install pressure sensitive walkway pads in those locations outlined on Roof Plans.
- B. Remove excess dust and dirt from membrane by wiping with a clean rag.
- C. Clean the dry roof membrane surface with low-VOC Primer.
- D. Adhere Pressure Sensitive Walkway pads to clean roof membrane.

**3.6 SUPPORTS**

- A. Provide pre-fabricated pipe supports or 6"x 6" P.T. wood blocking with chamfered edges bonded to a continuous piece of walkway membrane for mechanical support. Space blocking as required or match existing. Secure curb to blocking with clips screwed in place.

**3.7 MECHANICAL CURBS**

- A. Properly clean and prime metal surface as per manufacturer's specification.
- B. Install surface membrane with enough material to run up the face of the curb and under the lip.
- C. Fully adhere the membrane as per this Section under Article - Membrane.
- D. Flash curb along base using fasteners and cured membrane as per the Section under Article - Flashings.

**3.8 CLEANING**

- A. Daily clean-up and removal from the site, of all wrappings, empty containers, paper, tubes, loose particles and other debris resulting from these operations is required.

**END OF SECTION 07 53 23**

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**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. The work includes installation of pre-fabricated metal edge system, counter flashing, and such other work as may be called for by the Drawings or incidental to and necessitated by these operations.

**1.2 RELATED WORK SPECIFIED ELSEWHERE:**

- A. Section 06 10 53: Miscellaneous Rough Carpentry
- B. Section 07 01 50.23: Roofing Removal
- C. Section 07 53 23: Ethylene-Propylene-Diene-Monomer Roofing
- D. Section 07 59 00: Roof Maintenance and Repairs
- E. Section 07 92 00: Joint Sealant

**1.3 QUALITY ASSURANCE**

- A. The Contractor must have been in the sheet metal business for not less than five (5) years, have a fully equipped sheet metal work shop, be a member firm of the Sheet Metal and Air Conditioning Contractors National Association, Inc., (SMACNA).
- B. Personnel engaged in and about the Work must be qualified sheet metal journeyman who may be assisted by sheet metal apprentices qualifying for their journeyman status.
- C. The foreman of the crew must have at least five (5) years of experience.
- D. Applicable Standards:
  - 1. American Society for Testing and Materials (ASTM).
  - 2. Sheet Metal and Air Conditioning Contractors National Association, Inc., (SMACNA).
- E. FM Global Listing: Provide insulation, membrane, base flashings, and component materials that meet requirements of a roofing system that is listed in FM's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FM markings.
- F. Edge Securement: Low-slope membrane roof systems metal edge securement, except gutters, shall be installed and designed in accordance with ANSI/SPRI ES-1 for wind speed as noted under Section 07 52 00 and in compliance with FM Global Property Loss Prevention Data Sheet 1-49 Perimeter Flashing – approved assembly rated for 1-120 (33.1 psf).

**1.4 JOB CONDITIONS**

- A. The Contractor for the work of this Section is held to have carefully examined the Contract Documents and to have inspected the site and area of work to satisfy himself as to all conditions and the work of other trades that might affect the Work contemplated hereunder.
- B. Any discrepancy between the Contract Documents or any inconsistency between the Contract and actual conditions shall be brought to the Owner's and Architect's attention, confirmed in writing, before starting the Work.

**1.5 GUARANTEE**

- A. See Section 01 78 30 – “Warranties and Bonds”.
- B. Guarantee all work against defects **3 (three) year in materials and workmanship and 3 (three) year general contractor’s warranty for installation** following Substantial Completion of the Work.
- C. Prefabricated scuppers, downspouts, roof edging, coping etc. – **20 year material warranty from manufacturer and 20 year Kynar finish and color warranty from manufacturer**
- D. Prefabricated coping – **20 year material warranty from manufacturer and 20 year Kynar finish and color warranty from manufacturer.**
- E. Prefabricated roof edge / fascia – **20 year material warranty from manufacturer and 20 year Kynar finish and color warranty from manufacturer.**

**1.6 SUBMITTALS**

- A. Comply with pertinent provisions of the General Requirement - Samples and Submittals, and Shop Drawings.
- B. Provide Shop Drawings for all sheet metal parts to be fabricated.
  - 1. Submit samples of material to be used. Size: 6-inch x 6-inch.
  - 2. Submit color samples on actual material size 6-inch x 6-inch.
- C. Provide manufacturer's technical data and shop drawings on products which are pre-fabricated.
- D. Contractor must obtain acceptance prior to fabrication or installation of any sheet metal work.

**PART 2 - PRODUCTS**

**2.1 METALS**

- A. Sheet Lead-Coated Copper for vents, panning, counter flashing and miscellaneous other locations called for on the Drawings: ASTM B101-07, Type 1, Class A; 20 oz. copper, shall be coated on both sides with lead weighing 6 to 7 pounds per 100 sq. ft. for each side.
- B. Cleats: Stainless steel: 24 gauge (.025 inch thick), type 302/304 soft temper.
  - 1. The Contractor may, at his option, use plain copper, 24 ounce, when securing lead coated copper sheet metal. All other applications to be stainless steel cleats.
- C. Aluminum with Kynar finish for pre-fabricated Metal Fascia
- D. Metal termination bars shall be 1/8-inch thick by 1-inch wide type 302/304 stainless steel as per ASTM A167-83, pre-punched with 5/16-inch holes 8 inches on center, or as manufactured by the membrane supplier.

**2.2 ALUMIMUM PREFABRICATED FASCIA, & CLEATS**

- A. All products to be prefabricated and FM Global approved.
- B. All products to have Warranty for 20 years.



- C. All products to meet maximum wind uplift requirements for FM Global.
- D. Aluminum to conform to ASTM B209. Alloy and temper 3003-H-14.
  - 1. Continuous cleats: .063-inch thick or 20 ga steel
  - 2. Fascia: .063 inch thick
- E. Approved manufacturers:
  - 1. Metal-Era, 1600 Airport Road, Waukesha, WI 53188  
Basis of Design  
Anchor-Tite Aluminum Extended Fascia – Single Ply Version  
0.050 in Aluminum Fascia Cover. 2- ga Steel Cleat, Ext Aluminum Anchor Bar  
10" face height, 180 psf perimeter, 135 psf corner
  - 2. Hickman, P.O. Box 15005, Asheville, NC 28813-0005
  - 3. Versico Roofing Systems, PO Box 1289, Carlisle, PA
  - 4. Petersen Aluminum, 1005 Tonne Road, Elk Grove Village, IL 60007
- F. Aluminum shall be prefinished with Kynar Fluoropolymer. Color to be selected by architect from manufacturer's standard selection.

### 2.3 SOLDER AND FASTENERS

- A. Soldering:
  - 1. Flux:
    - a. For pretinning: rosin type.
    - b. For other uses: phosphoric acid base.
  - 2. Solder:
    - a. 40% pig lead and 60% block tin for lead-coated copper.
    - b. 50% pig lead and 50% block tin for plain copper.
- B. Fasteners:
  - 1. Rivets: Stainless Steel or Copper, buttoned, 3/32-inch diameter.
  - 2. Nails:
    - a. For nailing into wood, use barbed flat head wire nails 1-1/4-inch long by 12 gauge – stainless steel.
    - b. Masonry - stainless steel or bronze nails.

### 2.4 GASKETS

- A. All fasteners exposed to view, except rivets and those fasteners furnished with their own rubber gaskets, shall be fitted with 1/16-inch thick cured neoprene gaskets. Gaskets shall be cut so as to fit the fastener shank tightly and extend not less than 1/16-inch beyond the fastener head.

1. All exposed fasteners are to receive a bead of high sealant.

## 2.5 MISCELLANEOUS

- A. Acid prep for preparing existing plain copper which is to have new copper attached by soldering to be Hydrochloric Acid.
  1. Rinse thoroughly with water.
  2. For use in contact with masonry or metal – Dow Corning 795 one-part silicone, color to match sheet metal. See also 07 92 00 Joint Sealant.
- B. Fasteners:
  1. Bolts: 1/4 x 20 hex head stainless steel bolts with lock washers.
  2. Screws: Self-tapping stainless steel type 304, 8-18 x 3/4-inch hex head screw by Power Fastener, 2 Power Square, New Rochelle, NY.

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. General area of existing sheet metal remaining to be patched or repaired will be as directed or determined by the Owner and/or Architect.

### 3.2 WORKMANSHIP

- A. General:
  1. Form sheet metal accurately and to the dimensions and shapes required, finishing molded and broken surfaces with true, sharp, and straight lines and angles and, where intercepting other members, coping to an accurate fit and soldering securely.
  2. Unless otherwise specifically permitted by the Architect turn hem exposed edges back 1/2-inch.
- B. Provide isolation membrane between pressure treated wood and all aluminum materials.
- C. Form fabricate, and install sheet metal so as to adequately provide for expansion and contraction in the finished Work.
- D. Weatherproofing:
  1. Finish work to be free from water leakage under ALL weather conditions. Correct any defects at no additional cost to the Owner.
  2. Make lock seam work flat and true to line, sweating full of solder.
  3. Make lock seams and lap seams, when soldered, at least 2-inch wide.

4. Where lap seams are not soldered, lap according to pitch, but in no case less than 3-inch.
  5. Make flat and lap seams in the direction of flow.
- E. Joints:
1. Join parts with rivets where necessary for strength and stiffness.
  2. Provide suitable watertight expansion joints for runs of more than 20-feet, except where closer spacing is indicated on the Drawings or required for proper installation.
- F. Nailing:
1. Secure metal by means of clips or cleats, without nailing through the exterior metal.
  2. In general, space nails, rivets, and screws not more than 8-inch apart and, where exposed to the weather, use specified washers.

### 3.3 ROOF EDGE FASCIA (PREFABRICATED)

- A. Ensure waterproofing membrane base sheet has been installed and extends beyond wood blocking and onto roofing.
- B. Continuous cleats with butted joints. Fasten using specified nails at spacing not exceeding 6-inch centers.
- C. Workmanship and methods employed for anchoring, joining, and allowance for expansion and contraction must conform to details shown, these specifications, and the specification of the manufacturer.
- D. Position joints so that they occur no closer than 2-feet from a joint of the edge cleat.
- E. Corners to be prefabricated.
- F. All components shall be installed with lines, brakes and angles sharp and true with surfaces free from objectionable wave, warp, or buckle.
- G. Install electrolytic isolation materials where required.

### 3.4 PENETRATION BOXES

- A. Penetration boxes shall be formed from lead coated copper and so that the horizontal cross sectional size of the box will be large enough to provide not less than 2-inch clearance between the penetrating line face and the vertical edge of the box.
- B. Penetration boxes shall be formed with side walls that project not less than 8 inches above the roofing membrane line and have been provided with a 1/2 -inch inside hem. Flanges shall be not less than 3-1/2-inch wide.
  1. Flange corner plates will be lapped 2-inch and sweated full with solder.
    - a. Round corners.
  2. Fabricate with a single corner seam, 4-ply, malleted tight and soldered.
  3. Filling of boxes is outlined under the appropriate roofing section.

**3.5 SOLDERING**

- A.** Edges of metal shall be thoroughly cleaned and pretinned before soldering is begun.
  - 1.** Tin edges of plain copper sheets to be soldered for a width of 12-inch both sides.
  - 2.** Tinning of lead-coated copper is not required.
    - a.** Wire brush lead in contact with solder to produce a bright surface.
  - 3.** Prep areas of existing copper to remain with Hydrochloric Acid.
    - a.** Rinse thoroughly with water.
- B.** Soldering shall be done slowly with well heated soldering irons so as to thoroughly heat the seams and completely sweat the solder through the full width of the seam.
- C.** Perform soldering with a heavy soldering copper of blunt design, properly tinned for use.
- D.** Make exposed soldering on finished surfaces neat, full flowing, and smooth.
- E.** Upon completion of soldering, the flux residue shall be thoroughly cleaned from the sheet metal with a solution of washing soda in water and rinsed with clean water.

**3.6 THERMAL MOVEMENT**

- A.** Provisions for expansion and contraction in sheet metal shall be provided at not over 20-foot intervals, except at gutters which may not exceed 30 feet. Follow manufacturer's recommendations on prefabricated items.
- B.** Thermal movement at building tie-ins shall be compensated for by expansion joints as detailed.
  - 1.** Omit soldering of lapped and hemmed seam every 20 feet to allow for movement.
- C.** No exception to the above details or specifications will be permitted.

**3.7 CLEANING UP**

- A.** All exposed new sheet metal shall be cleaned at the completion of installation. Grease and oil films, handling marks, contamination from steel wool, fitting and drilling debris shall be removed and the Work scrubbed clean. All new exposed metal surfaces shall be free of dents, creases, waves, scratch marks, and solder or welder marks.
- B.** Daily cleanup and removal from the site of all shavings, clippings, shearing, rivets, fasteners, and whatever other debris resulting from these operations is required.
- C.** Contractor is to unclog any downspouts and roof drains to ensure proper flow of rain water runoff from roof.

**3.8 TESTS**

- A.** Upon request of the Owner or the Architect, demonstrate by hose or standing water that the flashing and sheet metal are completely watertight.

**END OF SECTION 07 62 00**

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**PART 1 – GENERAL**

**1.1 DESCRIPTION**

- A. Provide and install freestanding roof edge protection system, including pipe railings, uprights, bases, counterweights, fittings and delivery to site.
- B. Provide and install roof hatch curb mounted guardrail and gate system at existing roof hatch.
- C. Provide and install per manufacturer specifications new prefabricated equipment roof curbs for existing rooftop HVAC unit and new intake ventilator unit.

**1.2 RELATED WORK SPECIFIED ELSEWHERE**

- A. Section 07 56 00: Ethylene-Propylene-Diene-Monomer Roofing
- B. Section 07 62 00: Sheet Metal Flashing and Trim
- C. Section 23 01 00: Mechanical Units

**1.3 REFERENCE**

- A. American National Standards Institute (ANSI) - A21.1 Safety Requirements for Floor and Wall Openings, Railings and Toe Boards.
- B. American National Standards Institute (ANSI) - A58.1 Minimum Design Loads in Buildings and Other Structures.
- C. American National Standards Institute (ANSI) - A17.1 Accessible and Usable Buildings and Facilities.
- D. American Society of Testing and Materials (ASTM) A47 - Standard Specification for Ferrite Malleable Iron Castings.
- E. American Society of Testing and Materials (ASTM) A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- F. American Society of Testing and Materials (ASTM) A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- G. American Society of Testing and Materials (ASTM) A500 - Standard Specification for cold-formed welded and seamless carbon steel structural tubing.
- H. Occupational Safety & Health Administration (OSHA): 1910.23 - Guarding Floor and Wall Openings and Holes.
- I. Occupational Safety & Health Administration (OSHA): 1926.502 - Fall Protection

**1.4 SUBMITTALS**

- A. Freestanding Roof Edge Protection Guardrail Systems
  - 1. Manufacturer's data sheets on each product to be provided, including: Preparation instructions and recommendations.

2. Field Measurements: Verify field measurements prior to assembly and/or ordering. Storage and handling requirements and recommendations.
3. Shop Drawings: Drawings showing fabrication and installation of handrails and guardrails including plans, elevations, sections, details of components, anchor details, and attachment to adjoining units of work.
4. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
5. Warranty: Submit executed copy of manufacturer's standard warranty.
6. Submit manufacturer calculations for ASCE wind load and wind uplift to FM Global.

**B. Roof Hatch Guard Railing System**

1. Manufacturer's data sheets on each product to be provided, including: Preparation, instructions, and recommendations.
2. Field Measurements: Verify field measurements prior to assembly and/or ordering. Storage and handling requirements and recommendations.
3. Shop Drawings: Drawings showing fabrication and installation of handrails, guardrails, gates, supports, including plans, elevations, sections, details of components, anchor details, and attachment to adjoining units of work.
4. Selection Samples: two complete sets of color chips representing manufacturer's full range of available colors and patterns.
5. Submit manufacturer calculations for ASCE wind load and wind uplift to FM Global.

**C. Prefabricated Equipment Roof Curbs**

1. Manufacturer's data sheets on each product to be provided, including: Preparation, instructions, and recommendations.
2. Field Measurements: Verify field measurements prior to assembly and/or ordering. Storage and handling requirements and recommendations.
3. Shop Drawings: Drawings showing fabrication and installation of prefabricated metal curbs including plans, elevations, sections, details of components, anchor details, and attachment to adjoining units of work.

**1.5 QUALITY ASSURANCE**

- A. Handrail, wall rail and guardrail assemblies and attachments shall withstand a minimum concentrated load of 200 pounds (90719 g) applied in any direction on the top rail.
- B. Infill area of guardrail system capable of withstanding a horizontal concentrated load of 200 pounds (90719 g) applied to one square foot (8165 g/sm) at any point in the system. Load not to act concurrently with loads on top rail of system in determining stress on guardrail.
- C. Meet all other application OSHA 1926.502 requirements.

**1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Materials to be delivered to the job site in good condition and adequately protected against damage as handrails are a finished product.
- B. Store products in manufacturer's unopened packaging until ready for installation.

**1.7 PROJECT CONDITIONS**

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Field Measurements: Where guardrail and anchor systems are indicated to fit to other construction, check actual dimensions of other construction by accurate field measurements before fabrication; show recorded measurements on final shop drawings.
  - 1. Where field measurements cannot be made without delaying fabrication and delivery, obtain guaranteed dimensions in writing by the Contractor and proceed with fabrication of products to not delay fabrication, delivery and installation.
- C. Coordinate fabrication and delivery schedule of handrails and anchor systems with construction progress and sequence to avoid delay of installation.

**1.8 WARRANTY**

Manufacturer's Warranty: Provide manufacturer's standard warranty. Materials shall be free of defects in material and workmanship for a period of five years from the date of purchase. Should a part fail to function in normal use within this period, manufacturer shall furnish a new part at no charge.

**PART 2 – PRODUCTS**

**2.1 FREESTANDING ROOF EDGE PROTECTION GUARDRAILS**

- A. Acceptable Manufacturer:
  - 1. Kee Safety, Inc., KeeGuard Contractor Series, Basis of Design  
100 Stradtman St.  
Buffalo, NY 14206;  
Tel: 800-851-5181  
[www.keesafety.com](http://www.keesafety.com)
  - 2. Safety Rails Systems  
Tel: 888-280-0565  
[www.safetyrailssystemsusa.com](http://www.safetyrailssystemsusa.com)
  - 3. CAI Safety Systems  
Tel: 888-246-6999  
[www.caisafety.com](http://www.caisafety.com)
- B. Roof Edge Protection Guardrails: Provide freestanding counterweighted Roof Edge Protection System, including pipe railings, uprights, bases, counterweights and fittings with 42 inch (1067 mm) minimum height to provide a egress barrier on the roof to withstand a minimum load of 200 lb (90719 g) in any direction to the top rail per OSHA Regulation 29

CFR 1926.500 Guardrail Systems.

**C. Materials**

1. Pipe: Steel, 1-1/2 inches (48 mm) schedule 40, galvanized.
2. Tube: Galvanized tube, 12 gauge, 1-1/2 inches, 1.90 inches (48 mm) OD.
3. Rails and Posts: Galvanized Tube, 12 gauge, 1-1/2 inches 1.90 inches (38 mm) diameter.
4. Mounting Bases: Steel bases are galvanized and are supplied with a rubber pad on underside of the component.
5. Fasteners: stainless steel or galvanized.
6. Fittings, Including Elbows, Crossovers, Wall flanges, Tees, Couplings:
7. Galvanized Malleable Cast Iron: structural pipe fittings, ASTM A447 with ASTM A153 galvanizing.
8. Galvanized Finish. Powder coated. Color to be selected by Architect.
9. Custom Design: Provide pipe, fittings, and accessories as indicated or required by Drawings to match design indicated.

**D. Fabrication**

1. Fit and shop assemble components in largest practical sizes for delivery to site.
2. Upright tops shall be plugged with weather and light resistant material.
3. Assemble components with joints tightly fitted and secured. Accurately form components to suit installation.

**2.2 ROOF HATCH GUARDRAIL SYSTEM**

**A. Acceptable Manufacturer:**

1. Kee Safety, Inc., Basis of Design: Kee Hatch  
100 Stradtman St.  
Buffalo, NY 14206;  
Tel: 800-851-5181  
[www.keesafety.com](http://www.keesafety.com)
2. The Bilco Company  
P.O. Box 1203  
New Haven CT 06505  
Tel: 800-366-6530  
[www.bilco.com](http://www.bilco.com)
3. Precision Ladders  
P.o. Box 2279  
Morristown TN 37816-2279  
Tel: 423-586-2265  
[www.precisionladders.com](http://www.precisionladders.com)



**B.** Roof Hatch Guardrail System

1. Furnish and install where indicated on plans hatch rail system, Special Size Roof Hatch Guardrail – Single Leaf. Verify Dimensions in Field. The hatch rail system shall be field assembled and installed per the manufacturer's instructions.
2. Performance characteristics:
  - a. Galvanized finish. Powder Coated. Color to be selected by Architect.
  - b. Hatch rail system shall attach to the cap flashing of the roof hatch and shall not penetrate any roofing material.
  - c. Hatch rail system shall satisfy the requirements of OSHA 29 CFR 1910.23 and shall meet OSHA strength requirements with a factor of safety of two.
  - d. Corrosion resistant construction with a five-year warranty.
  - e. Hinged safety gate option shall ensure continuous barrier around the roof hatch.
  - f. Self-closing gate hinge and positive latching system provided with hatch rail system.
3. Posts and Rails: 1-1/4" (32mm) 6061 T6 schedule 40 pipe
4. Custom Design: Provide pipe, fittings, and accessories as indicated or required by Drawings to match design indicated.
5. Hardware: Mounting brackets shall be 3/8" (9mm) thick extruded aluminum. Pivoting post guides with compression fittings and latching mechanism shall be cast aluminum. Self-closing hinges and all fasteners shall be type 316 stainless steel.

**2.3** **PRE-FABRICATED EQUIPMENT ROOF CURBS**

**A.** Acceptable Manufacturer:

1. Carrier  
Basis of Design- At Existing Rooftop Unit –Model CRRFCURB047A00, 14" high.  
(For Existing Carrier Single Package Rooftop Unit Model 50TCQD size 24.)  
780 Dedham St Ste 100  
Canton, MA 02021  
Tel: 1-800-227-7437  
[www.carrier.com](http://www.carrier.com)
2. Loren Cook Company  
Basis of Design- At New Intake Gravity Hood – Model RCA-26 with opt.13.5 " high.  
2015 East Dale Street  
Springfield, MO 65808  
Tel: 417-869-6474  
Fax: 417-862-3820  
[www.lorencook.com](http://www.lorencook.com)

3. LMCurbs  
827 Fisher Road  
Longview, Texas 75604  
Tel: 1-903-759-1331, 1-800-284-1412  
Fax: 1-903-759-0879  
[www.lmcurbs.com](http://www.lmcurbs.com)

**B. Fabrication**

1. Provide 18 gauge minimum galvanized steel sheet curb sections. Frame duct openings with 18 gauge curb sections level with perimeter curb sections, corners mitered or enclosed and fully welded; Shop prime welded connections with zinc-rich paint complying with SSPC-Paint 20.
2. Curb Height: As noted on basis of design products. Comply with local code requirements for minimum curb height, but in no case shall curb height be less than 12 inches as measured from top of roof membrane to top of curb.
3. Label curb with "FRONT" designating the curb orientation to the front of store prior to shipment.
4. Insulated Pans 18 gauge steel minimum with ½ Inch Neoprene Insulation.
5. Liner: Same material as curb, of manufacturer's standard thickness and finish
6. Nailer: Factory-installed 2 inch by 4 inch pressure treated wood nailer under top flange on side of curb continuous around curb perimeter mechanically fastened with corrosion resistant fasteners at 12 inches on center to exterior face of curb.
7. Factory insulated with 1-1/2-inch thick glass-fiber board insulation if available or field supplied.
8. Cap Gasket to be supplied with Curbs.
9. Wind Restraint Straps and Base Flange Attachment: Provide wind restraint straps, welded strap connectors, and base flange attachment to roof structure at perimeter of curb, of size and spacing required to meet wind uplift requirements.

**PART 3 – EXECUTION**

**3.1 FREESTANDING ROOF EDGE PROTECTION GUARDRAILS**

- A. Assemble and Install in accordance with manufacturer's instructions.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result
- C. Ensure roof is free from debris, oil, algae, etc.
- D. Fit exposed connections accurately together to form tight joints.
- E. For all connections with fittings, each set screw is to be tightened to 29 foot pounds (39 N-m) of torque.
- F. Perform cutting, and fitting required for installation of handrails. Set accurately in location,

alignment, and elevation, measured from established lines and levels.

### **3.2 ROOF HATCH GUARDRAIL SYSTEM**

#### **A. Examination**

1. Examine substrates and openings for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

#### **B. Installation**

1. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.
2. Test units for proper function and adjust until proper operation is achieved.
3. Repair finishes damaged during installation.
4. Restore finishes so no evidence remains of corrective work.

#### **C. Adjusting and Cleaning**

1. Clean exposed surfaces using methods acceptable to the manufacturer which will not damage finish.

### **3.3 PRE-FABRICATED EQUIPMENT ROOF CURBS**

**A.** Assemble and install prefabricated roof curbs in accordance with manufacturer's instructions.

**B.** Install gasket supplied with roof curbs. Improperly applied gasket can result in air leaks and poor unit performance.

**C.** Curb should be level. This is necessary for unit drain to function properly. Install to unit tolerances provided in manufacturer installation instructions.

**D.** Install all accessories as shown in manufacturer installation instructions and as shown on drawings.

### **3.4 PROTECTION**

**A.** Protect installed products until completion of project.

**B.** Touch-up, repair or replace damaged products before Substantial Completion.

**END OF SECTION 07 72 00**

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**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. The Work generally involves the installation of new sealant and such other Work as may be necessitated by these operations and as shown on the Drawings.
- B. Related Work specified elsewhere:
  - 1. Section 07 62 00: Sheet Metal Flashing and Trim

**1.2 QUALITY ASSURANCE**

- A. SWI (Sealant and Waterproofers Institute) - Sealant and Caulking Guide Specifications.
- B. FS TT-230 - Sealing Compound, Silicone Rubber Base, Type II, Class B.
- C. ASTM 6290 Grade N5, Class 12.5.

**1.3 DELIVERY, HANDLING AND STORAGE**

- A. Deliver in manufacturer's original unopened containers with labels intact and legible.
- B. All materials shall be carefully handled and stored to prevent the intrusion of foreign materials, or exposure to temperatures exceeding 95 degrees F.

**1.4 JOB CONDITIONS**

- A. Joints shall be prepared as recommended by the manufacturer of the materials being used.
- B. Surfaces to which sealant is to be applied shall be dry, free from dust, oil, grease, loose particles or other deleterious materials which would reduce adhesion.
- C. Follow manufacturer's recommendations concerning weather limitations.

**1.5 GUARANTEE**

- A. Refer to Section 01 78 30, "Warranties and Bonds".
- B. Contractor is to guarantee all work against defects in materials and workmanship for a **period of five (5) years** following Substantial Completion of the Work.

**PART 2 - PRODUCTS**

**2.1 SEALANT**

- A. Masonry, glass and metal applications - A one-part silicone high-performance glazing and weatherproofing sealant/adhesive, non-sagging, non-staining, non-bleeding, color to match adjoining surfaces.

**MANUFACTURER**

**PRODUCT**

- 1. Dow Corning Corp:  
Midland, MI

795

2. General Electric: L-123-1
  3. Pecora Corp.: 895  
165 Wambold Road  
Harleysville, PA
- B. Hot pipe / chimney flue applications - A one-part silicone heat resistant sealant, non-sagging, non-staining, non-bleeding, (color usually red).

**MANUFACTURER**

**PRODUCT**

- |                                     |                                 |
|-------------------------------------|---------------------------------|
| 1. Dow Corning Corp:<br>Midland, MI | 736                             |
| 2. Red Devil<br>Pryor, OK           | Industrial Grade Heat Resistant |
| 3. Rutland Fire Clay Company        | 500 Degree High Heat            |

**2.2 ACCESSORIES**

- A. Primer, non-staining type. Use primer as recommended by the sealant manufacturer for each particular sealant and substrate, with choice to be confirmed by adhesion test.
- B. Joint cleaner: non-corrosive and non-staining type, recommended by sealant manufacturer, compatible with joint forming materials.

**PART 3 - EXECUTION**

**3.1 INSPECTION OF SURFACES**

- A. Verify that work of other trades that might affect the work of this Section has been completed.
- B. Examine surfaces for inadequate anchorage, foreign materials, moisture, and whatever would prevent the execution and quality of sealant application.
- C. Do not proceed with the work of this Section until all defects are corrected.

**3.2 SURFACE PREPARATION**

- A. Concrete or other masonry surfaces to receive sealant shall be cleaned by wire brushing to remove all loose particles, laitance, efflorescence and loose mortar. Cut out existing sealant and backer material, grind masonry surfaces to remove all sealant residue.
  1. All traces of existing sealant and backing material must be removed to a minimum of 1-inch depth.
- B. All surfaces to receive primer, bond breaker, or sealant shall be clean, dry, and free of loose materials, dirt, dust, oil, frost, or bitumen.
- C. Replace existing, deteriorated, defective sealant as directed or determined by the Owner or Architect.

**3.3 BACKER ROD INSTALLATION**

- A. Install backer rod at joints where and as shown on the Drawings using a blunt instrument. Do not twist or puncture rod.
  - 1. Install backer rod so that resulting sealant joint depth is 50% of joint width.

**3.4 SEALANT**

- A. Depth of sealants in joints, exclusive of backing, shall be as recommended by the sealant manufacturer unless otherwise indicated or specified.
- B. Application may be cartridge-type caulk gun or bulk-type caulk gun, either hand or air pressure activated.
  - 1. Run a bead slowly enough to be certain that entire cavity is filled from the bottom up. Air pockets or voids along edges are not acceptable.
  - 2. Neatly point or tool all sealants applied. Tooling with soap or detergent solutions is not allowed.
- C. Unless otherwise approved by the Architect, all work adjacent to sealants shall be protected by masking with pressure sensitive tape.
  - 1. Drop cloths shall be provided over all horizontal surfaces liable to receive droppings of sealant operations.

**3.5 CLEANING UP**

- A. Misapplied sealant and droppings shall be immediately removed by methods and materials recommended in writing from the manufacturer of the sealant used.
- B. After material is applied and tooled, the Contractor shall remove all masking and other protection, and clean up any remaining defacement caused by his work.
- C. Daily cleanup and removal from the site of all empty containers, bits of tape, scrapings, and whatever other debris results from these operations is required.

**END OF SECTION 07 92 00**

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**PART 1 - GENERAL****1.1 DESCRIPTION**

- A. The work of this Section is primarily concerned with the replacement of existing roof drains with all new roof drain assemblies and associated operations as may be necessitated by these operations and called for on the Drawings.

**1.2 RELATED WORK SPECIFIED ELSEWHERE**

- A. Section 06 10 53: Miscellaneous Rough Carpentry
- B. Section 07 01 50.23: Roofing Removal
- C. Section 07 22 00: Roofing Insulation
- D. Section 07 53 23: Ethylene Propylene Diene Monomer Roofing

**1.3 QUALITY ASSURANCE**

- A. Where licensing is required, General Contractor is to hire journeyman who hold valid licenses.
- B. Use skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- C. Contractor is to maintain roof drains in functional condition at the end of each workday.

**1.4 REFERENCE STANDARDS**

- A. American Society for Testing and Materials (ASTM):
1. A 48-76 Gray Iron Castings
  2. A 74-80, Cast Iron Soil Pipe and Fittings.
  3. C 564-70(76) Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
  4. A33, A-210 Steel Piping
  5. ASTM 88 Copper Tubing
- B. ANSI/ASME A112.21.2M – Roof Drains
- C. ASA – 16 Pipe Fittings

**1.5 DELIVERY, HANDLING AND STORAGE**

- A. Handle products carefully to avoid damage to hubs, ends or roof drain components.
- B. Security for materials stored on the premises is the responsibility of the Contractor for the work of this Section.

**1.6 SUBMITTALS**

- A. Comply with Section 01341 – Samples and Submittals.
- B. Submit manufacturer's product data, including installation instructions for drains.

### 1.7 CODE REQUIREMENTS

- A. All work, equipment and materials under this Division of the Specifications shall comply strictly with the State of Connecticut State Building Code, U.L., N.E.M.A., O.S.H.A., N.F.P.A., Connecticut State Fire Safety Code, A.N.S.I., A.D.A, and with all requirements of all governmental departments having jurisdiction, and requirements of local utility companies. Requirements of the above shall take precedence over plans and specifications.

### 1.8 WARRANTY

- A. All parts of the work shall be guaranteed for a period of two (2) years from date of acceptance of the job by the Owner. If during that period of general guarantee, any part of the work installed fails, becomes unsatisfactory or does not function properly due to any fault in material or workmanship whether or not manufactured , or job built, each section shall, upon notice from the Owner, promptly proceed to repair or replace such faulty material or workmanship without expense to the Owner, including cutting, patching and painting, or other work involved, and including repair or restoration of any damaged sections of the premises resulting from such faults.
- B. In event that a repetition of any one defect occurs indicating the probability of further failure and which can be traced to faulty design, material or workmanship, then repairs or replacement shall not continue to be made, but the fault shall be remedied by a complete replacement of the entire defective unit.
- C. In addition to general guarantee, obtain and transmit to the Owner, any guarantees or warranties from manufactures of specialties, but only as a supplement to the general guarantee which will not be invalidated by same.

## PART 2 - PRODUCTS

### 2.1 GENERAL

- A. All equipment and materials shall be new and of first quality, suitable for the purpose intended and conditions encountered.
- B. All work shall be performed in neat and workmanlike manner, with due regard for good practice and best finished appearance.
- C. All unsatisfactory work, equipment or materials shall be corrected or replaced at once, without cost to the Owner.
- D. Every part of the plumbing installation shall be tested with air as required by the Engineer and left in proper working order.
- E. If required during the course of the Work, the contractor shall furnish the electrical contractor with wiring schematics, at the proper time, for all Plumbing, or H.V.A.C. equipment and controls requiring connections.

### 2.2 CAST IRON STORM WATER PIPE AND FITTINGS



---

**2.4 PIPE INSULATION**

- A. Products shall be manufactured by: Manville, Owens-Corning, or Rubatex.
- B. Insulate underside of all new roof drains bowls and new pipes continuous through hanger with vapor barrier insulation applied with insulation adhesive.
- C. Fiberglass pipe wrap, 35-ft. roll x 3-inch wide, 1/2-inch thick, R = 3.0.
- D. Insulation sheet – 1/2-inch thick 36-inch x 4-inch, R =3.0.
- E. Contact adhesive as approved by insulation manufacturer.

**2.5 HANGERS**

- A. All pipe hangers shall be manufactured by: Grinnel, Carpenter, Patterson.
- B. Pipe hangers, anchors and inserts shall comply with installation requirements of current codes, their supplements, amendments, and N.F.P.A.

**PART 3 - EXECUTION****3.1 EXAMINATION**

- A. Examine areas to receive roof drains. Notify Architect of conditions that would adversely affect installation or subsequent use. Do not proceed with installation until unsatisfactory conditions are corrected.
- B. Remove, store at safe location, and reinstall ceiling tiles as necessary to allow for drain replacement and storm tie-in.
- C. General Contractor to demolished ceiling or walls as necessary to allow for connection of existing drain pipes and restore in like and kind. All connections must be verified by Construction Administrator, DAS or engineer/architect.

**3.2 DRAINS – ROOF**

- A. Remove existing roof drains.
- B. Where decking is required to be cut or chopped to receive the new drains, it shall be cut in whatever method the Contractor deems necessary.
  - 1. The cut/chopped area is to be neatly patched using material to match existing and to properly fit the new drain.
  - 2. Patching of decking related to the removal and installation of roof drains is to be included in the base bid amount and not part of any unit price quantities listed elsewhere in the specifications.
  - 3. Existing piping shall be removed to the extent necessary to allow for the tie-in of new drain assembly.
  - 4. See drawings for location of roof drains.
- C. Install new drain bowls as per manufacturer's specifications, secure in place with the deck clamp, and install any additional plumbing required to connect the new drain bowls with the

existing drain lines.

- D. Insulate underside of all new roof drains bowls and new pipes with vapor barrier insulation applied with insulation adhesive from interior to prevent condensation. Remove existing roof drains and piping.
- E. Piping shall be removed to the extent required to allow for tie-in of new drains.

### 3.3 PIPING – ROOFING

- A. Hubless joint:
  - 1. Comply with requirements of Cast Iron Soil Pipe Institute Standard HSN-75.
  - 2. Provide hangers on the piping at each side of and within 6 inches of hubless pipe coupling so that the coupling will bear no weight.
  - 3. Provide hangers adequate to maintain alignment and to prevent sagging of the pipe.
- B. Support suspended piping with hangers and rods. Space hangers and supports for horizontal pipes at 8 feet maximum.
  - 1. Provide sway bracing on hangers as required.
- C. Provide batt insulation around new pipe and new drain bowl continuous through hangers.

### 3.4 OTHER TESTING AND ADJUSTING

- A. Provide personnel and equipment and arrange for and pay the costs of all tests and inspections required by governmental agencies having jurisdiction.
- B. Contractor is to test all drain lines for proper flow to the nearest catch basin.
  - 1. Any clogged or defective drain lines will be reported to the Architect and Owner for review.
  - 2. Cleaning out of defective or clogged drain lines may be handled by the Owner by a separate contractor. Should the damaged or clogged drain line be the result of work under this Contract, the Contractor will compensate the Owner for all repairs necessary to correct the issue.

### 3.5 SEISMIC REQUIREMENTS

- A. Contractor is responsible for all equipment, labor, and materials necessary to complete the Work under this Section and is to include all costs in the base bid amount.
- B. All equipment, whether isolated or not, shall be bolted to structure to allow for minimum  $\frac{1}{2}$  G of acceleration.
- C. All structurally suspended overhead equipment isolated or non-isolated shall be four point independently braced seismic restraining system.
- D. Install seismic restraining system taut for overhead suspended non-isolated equipment, piping or ductwork and slack with  $\frac{1}{2}$ " cable deflection for isolated systems.

- 
- E. Seismically restrain all piping and ductwork in accordance with guideline as outlined below.
1. Piping, Schedule 10, 20, or 40 weld or vertically braced at 40 foot intervals and at turns of more than 4 feet. Lateral bracing at 80 foot intervals. No hub piping to be braced at 20 foot intervals or 40 feet using  $\frac{1}{2}$  G acceleration rated couplings.
- F. If equipment is mounted on housekeeping pads, pads to be properly doweled or expansion shielded to deck to meet acceleration criteria.
- G. Seismic restraints are not required for the following:
1. Gas piping less than 1" I.D.
  2. All rectangular ducts less than 6 sq. ft. in cross sectional area.
  3. All round ducts less than 28" in diameter.
  4. All clevis piping suspended by individual hangers 12" in length or less from the top of the pipe to the bottom of the support for the hanger.
  5. All top supported ducts suspended by hangers 12" or less in length from the top of the duct to the bottom of the support for the hanger.
- H. For overhead supported equipment, over-stress of the building structure must not occur. Bracing can occur from:
1. Flanges of structural beams
  2. Upper or lower truss chords in bar joist construction at the panel points.
  3. Cast in place inserts or drilled and shielded inserts in concrete structures.
  4. Pipe risers through cored shafts require no further seismic bracing. (Core diameter to be maximum 2" larger than pipe O.D.)

### 3.6 CLEANING

- A. Keep the roof clean of rubbish and unused materials. At the end of each day's work remove all rubbish, debris and surplus materials caused by the work of this Section.
- B. Repair any damaged ceiling or other interior surfaces scared during and/or by the work of this section to the satisfaction of the Owner and Architect.

**END OF SECTION 22 14 26.13**

---

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. The Work involves the testing, temporary removal of roof top units to permit roof replacement, re-securement of conduit and pipes, and such other work including electrical as may be called for by the Drawings or incidental to and necessitated by these operations.
1. Test units with the Owner to note deficiencies before removal, and retest after resetting.
  2. Move ducts, conduits and lines to extent required to permit work of this project.
  3. All roof-mounted equipment and fixtures shall be secured to decking to withstand wind speed of **95 mph**. This includes securement of equipment to curb, curb to deck, and equipment panels. See Details on Drawing for additional information.

**1.2 RELATED WORK SPECIFIED ELSEWHERE**

- |    |                      |  |
|----|----------------------|--|
| A. | Section 06 10 53:    | Miscellaneous Rough Carpentry            |
| B. | Section 07 22 00:    | Roofing Insulation                       |
| C. | Section 07 01 50.23: | Roofing Removal                          |
| D. | Section 07 53 23:    | Ethylene Propylene Diene Monomer Roofing |
| E. | Section 07 62 00:    | Sheet Metal Flashing and Trim            |

**1.3 QUALITY ASSURANCE**

- A. All work must be performed by journeymen skilled in the particular task being performed. Where the State requires licensing for the work being done, such journeymen must hold valid licenses.

**1.4 REFERENCE STANDARDS**

1. ARI Standard 310-70: Packaged Terminal Air Conditioners
2. ASHRAE Standard 62-73, or latest revision: Natural and Mechanical Ventilation
3. Connecticut State Building Code & all applicable supplements.
4. National Electric Code (NEC) & all applicable supplements.
5. Connecticut Fire Safety Code & all applicable supplements

**1.5 DELIVERY, HANDLING AND STORAGE**

- A. Security for materials stored on the premises is the responsibility of the Contractor for the work of this Section.

**1.6 SUBMITTALS**

- A. Comply with Section 01 33 00, "Submittal Procedures".

**1.7 JOB CONDITIONS**

- A. Careful coordination with all other Sections of the Work is required.
- B. Contractor is to provide Owner with written schedule so occupants of the building can adjust their schedule around possible shut-down of mechanical systems. Contractor must provide the Owner with 48 hours notice prior to disconnection of any mechanical unit.
  - 1. If any unit is down for more than 48 hours the Contractor is to provide temporary portable air conditioning or heating as required. There is to be no additional charge for this temporary service.

**PART 2 - PRODUCTS**

**2.1 LINES**

- A. Where supply and/or return, or other gas or liquid-carrying lines are required to be extended as a result of bases that are higher than original location, the materials to be used and connection system shall be the same as the existing.
  - 1. Should pipe insulation be involved, the extensions shall be insulated the same as existing.
  - 2. Where existing insulation has been damaged by these operations, the new insulation shall be the same type and thickness, having the same thermal characteristics as the existing.
  - 3. All fittings to be used in the work shall be solder type. No wedge or flared type fittings will be permitted.
- B. Where electrical service lines are required to be relocated, temporarily removed or extended, conductors, connections, conduit and fittings shall conform to the NEC.
- C. Prefabricated pipe supports as shown on Drawings, size to fit piping and as specified under Section 07 53 23.

**2.2 SCREWS**

- A. Screws shall be self-tapping, flat-headed, sheet metal screws. Provide gasket where gasketed screws were original equipment.
  - 1. Screws shall be sized to be fully anchored when fully tightened.
  - 2.

**PART 3 - EXECUTION**

**3.1 INITIAL TEST**

- A. Before disconnecting any units, test them, in the presence of the Owner's Representative, noting any operating or performance deficiencies, including other than



normal noises or sounds.

1. Found deficiencies will be noted and made a matter of record.

### **3.2 REMOVALS**

- A. Disconnect and move units a sufficient distance to permit other required operations in the concerned area.
  1. Disconnected units will be moved, whenever possible, onto existing roofing not yet removed, or if not possible, then at grade. Protection to be 1-inch rigid insulation with 1/2-inch plywood - type CDX.
- B. Lines to be capped shall be fitted with previously approved refrigerant line caps to have their ends pinched and soldered. No tape of any kind will be permitted.

### **3.3 LINE PROXIMITY**

- A. Where lines are relocated, electrical and refrigeration lines shall be run through the same opening. In positioning lines, insure that not less than 1-inch separation is maintained between the individual lines so that pourable sealer can flow between the lines to optimize waterproofing.

### **3.4 WEATHER TIGHTNESS**

- A. Provide temporary weather seals over all openings through the roofs or walls resulting from these operations.
  1. Type and method of weatherproofing shall be such as not to interfere with the work of other trades.
  2. Assume full responsibility for any damage resulting from water entry due to any failure of the protection.

### **3.5 RESETTING**

- A. As soon as practicable after the roofing operations in the areas are completed and all curbs and bases have been installed:
  1. Install any required duct, wet line or gas line, and electrical extensions.
    - a. New filter dryers must be installed on liquid and vapor lines.
  2. Reinstall the roof top units and reconnect for operation.
    - a. Place free standing units on walkway pads.
  3. Before recharging units, the system must be evacuated and tested for leaks. This testing must be witnessed by the Owner's Representative.
    - a. If tests are not satisfactory, leaks will be located and repaired. Units must then be retested in the presence of the Owner's Representative.
    - b. When tests prove satisfactory, units may be recharged.
  4. After retesting and performing whatever remedial work may be required, carefully examine each unit, tightening all screws and installing new ones where they are

found missing.

- B.** Seal all panels requiring sealing. Place sealant with approved type pressure gun, forcing material into place, filling voids solidly.
  - 1. Neatly tool and smooth off, avoiding the use of slicking agents.
- C.** Where gasketed panels have been removed, and such removal results in or reveals damaged or broken gaskets, they shall be replaced.
- D.** Notify the Owner at least 48 hours in advance of any service interruption, indicating the service to be interrupted and the length of time it will be out.
- E.** Traffic over completed roofing must be kept to a minimum.
  - 1. Repair any damage immediately.

### **3.6 RETESTING**

- A.** As soon as units have been reconnected and are serviceable, retest them under the supervision of the Owner's Representative to assure that they are fully operational and do not evidence any deficiencies not previously noted.
  - 1. Should any new deficiencies appear, they must be corrected at no cost to the Owner.

### **3.7 CONDUIT AND PIPING**

- A.** Temporarily move existing conduit and piping to the extent required to permit operations to be performed under the Scope of Work and other trades.
- B.** As soon as practicable after the work operations in the concerned areas are completed, and new conduit or pipe supports have been installed, replace and resecure the conduit or pipe with clips.
  - 1. When securing into masonry, use lead plugs and stainless steel screws.
- C.** Set pipes, ducts and conduit on new supports sized accordingly. Set supports on membrane walkway pads specified under Section 07 53 23.

### **3.8 CLEANING**

- A.** Keep the areas clean of all rubbish and unused materials. At the end of each day's work, remove all rubbish, debris, and surplus materials caused by the work.
  - 1. Particular attention must be give to pieces of wiring, screws, washers, and such other materials which will damage the completed roof if stepped on.
  - 2. Repair any damaged ceiling or other interior surfaces scared during and/or by the work of this section to the satisfaction of the Owner and Architect.

**END OF SECTION 23 01 00**

# **Section 50 30 00 Hazardous Building Materials Inspection and Inventory**

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# **REPORT**

## **PRE-RENOVATION INVESTIGATIVE SURVEY FOR ASBESTOS- CONTAINING MATERIALS WINSTED DEPARTMENT OF MOTOR VEHICLES – ROOF & BOILER WINSTED, CONNECTICUT**

Project No. 18-MM-HAZ-55  
DCS No. 67320

*Prepared for*

**State of Connecticut**  
**Department of Administration Services**  
**Division of Construction Services**  
Hartford, Connecticut

*Prepared by*

**TRC**  
Windsor, Connecticut

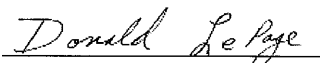
May 1, 2018

**PRE-RENOVATION  
INVESTIGATIVE SURVEY FOR  
ASBESTOS-CONTAINING MATERIALS  
WINSTED DEPARTMENT OF MOTOR  
VEHICLES – ROOF & BOILER  
WINSTED, CONNECTICUT**

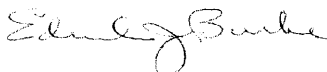
**Project No. 18-MM-HAZ-55  
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*Prepared for*  
State of Connecticut  
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Hartford, Connecticut

*Prepared by*  
**TRC**  
Windsor, Connecticut



Donald LePage  
Project Manager



Edmund J. Burke, P.E.  
Engineer in Charge

TRC Project No. 303262-0000-0000  
May 1, 2018

**TRC**  
21 Griffin Road North  
Windsor, Connecticut 06095  
Telephone (860) 298-9692  
Facsimile (860) 298-6399

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## **EXECUTIVE SUMMARY**

On April 11, 2018 TRC of Windsor, Connecticut conducted an inspection for suspect asbestos-containing materials (ACM) at the Winsted Department of Motor Vehicles, 159 Torrington Road in Winsted, Connecticut. The inspection was initiated prior to planned renovation activities in accordance with USEPA Asbestos National Emissions Standard for Hazardous Air Pollutants (NESHAPS) requirements.

The scope of the inspection was limited to the roof and boiler areas at the subject site. A Connecticut licensed asbestos inspector from TRC conducted the inspection in accordance with USEPA AHERA protocols and ASTM Standard E2356-04. Bulk samples of suspect materials were collected and analyzed via polarized light microscopy (PLM) and/or PLM gravimetric analysis methods at a CTDPH/NVLAP accredited laboratory. ACM was identified as built-up roofing and grey flashing tar in the subject area. ACM to be impacted by renovation activities must be removed prior to disturbance in accordance with OSHA, USEPA, CTDPH, and CTDEEP standards for asbestos abatement/disposal. Detailed results of the asbestos survey can be found in Tables 1-3 and Appendices A through D.



## PROJECT OUTLINE

Project Address: Winsted DMV  
159 Torrington Road, Winsted, CT

DCS Contract No. 13PSX0017

DCS Project Manager: Michael Sanders

DCS Project No.: 18-MM-HAZ-55

DCS Building No: 67320

TRC Project No.: 303262-0000-0000

TRC Project Manager: Don LePage

Asbestos Inspector: Jonathan Gentile (LIC #000603)

Date of Inspection: 4/11/18

Asbestos Identified: Yes

### Additional Notes:

The site investigation was limited to the collection and analysis of suspect asbestos-containing materials from the roof and boiler areas of the building.

## **TABLES**

**TABLE 1  
BULK SAMPLE SUMMARY OF SUSPECT ASBESTOS CONTAINING MATERIALS  
WINSTED DEPARTMENT OF MOTOR VEHICLES  
WINSTED, CONNECTICUT**

Sample No.	Sample Location	Homogeneous Material	% and Type Asbestos
01	West Side	R1 – Built-up Roofing (Top Layer)	3% chrysotile
02	South side	R1 – Built-up Roofing (Top Layer)	NA/PS
03	North End by Hatch	R2 – Rolled-On Asphalt Sheet Roofing	ND
04	North End by Hatch	R2 – Rolled-On Asphalt Sheet Roofing	ND*
05	West Side	TP1 – Tar Paper Material	ND
06	South Side	TP1 – Tar Paper Material	ND*
07	West Side	RT1 – Black Roofing Tar on Deck	ND
08	South Side	RT1 – Black Roofing Tar on Deck	ND*
09	North End by Hatch	RT2 – Black Roofing Tar assoc. w/R2	ND
10	North End by Hatch	RT2 – Black Roofing Tar assoc. w/R2	ND*
11	Pitch Box by AHU	PBT1 – Black Pitch Box Tar	ND
12	Antenna Pitch Box	PBT1 – Black Pitch Box Tar	ND*
13	West Side	FL1 – Grey Flashing Tar	10% chrysotile
14	South Side	FL1 – Grey Flashing Tar	NA/PS
15	Roof Hatch	FL2 – Flashing Tar around Roof Hatch	ND
16	Roof Hatch	FL2 – Flashing Tar around Roof Hatch	ND*
17	Boiler Exhaust	EBI1 – Boiler Exhaust Breeching Insulation	ND
18	Boiler Exhaust	EBI1 – Boiler Exhaust Breeching Insulation	ND
19	Boiler Exhaust	EBI1 – Boiler Exhaust Breeching Insulation	ND
20	Boiler Exhaust Vent	C1 – Grey Rubbery/Sticky Caulk	ND
21	Boiler Exhaust Vent	C1 – Grey Rubbery/Sticky Caulk	ND*

NA/PVA Not analyzed/positive via inseparable association with a confirmed positive ACM

NA/PS Not analyzed/positive stop, homogeneous to sample proven to contain asbestos

ND<1% Non-detected, less than 1%

NAD No asbestos detected

+ Although found to be negative by analysis, material is homogeneous to a determined ACM and therefore must be considered positive

1 NOB material; result confirmed by TEM analyses

\* Analyzed by EPA/600/R-93/116 with gravimetric reduction

**TABLE 2**  
**IDENTIFIED ASBESTOS CONTAINING MATERIALS (>1%)**  
**WINSTED DEPARTMENT OF MOTOR VEHICLES**  
**WINSTED, CONNECTICUT**

Material	Sampled-Assumed (mo/yr)	General Location	NESHAP Category	AHERA Category	Estimated Quantity
R1 – Built-up Roofing	Sampled 4/18	Whole roof – top layer	Category I Non-friable	Miscellaneous	9,800 SF
FL1 – Grey Flashing Tar	Sampled 4/18	West side, East side, South side, Roof Vents	Category I Non-friable	Miscellaneous	450 SF

*\* Roof tars have been completely exempted from OSHA Asbestos regulations and, as a Category I Non-friable material, do not need to be removed from a structure prior to renovation/demolition under EPA Asbestos NESHAP regulations and, so long as the materials are exterior to a structure and will remain Category I Non-friable materials during renovation/demolition, are not covered under the CTDPH Asbestos Abatement standards. In addition, as Category I Non-friable materials, the roof tars do not need to be disposed of as asbestos waste under the EPA Asbestos NESHAP regulations; however, the CTDEEP special waste regulations would not allow the material to be disposed of as general construction waste within the State of Connecticut. Disposal of the roof tars as general construction waste (so long as the materials are not rendered into a state which would define them as regulated asbestos-containing materials (RACM), i.e., friable) is, however, allowed in other states such as Massachusetts.*

AHERA Categories = thermal system insulation (TSI), surfacing material or miscellaneous  
 NESHAP Categories = friable, category I non-friable or category II non-friable  
 Friable = crumbled, pulverized or reduced to powder by hand pressure when dry  
 Category I Non-friable = packings, gaskets, resilient floor covering and asphalt roofing  
 Category II Non-friable = all non-friable that is not Category I

**TABLE 3  
 CONFIRMED NON-ASBESTOS CONTAINING MATERIALS  
 WINSTED DEPARTMENT OF MOTOR VEHICLES  
 WINSTED, CONNECTICUT**

<b>Material</b>	<b>General Location</b>
R2 – Rolled-On Asphalt Sheet Roofing	North End by Hatch
TP1 – Tar Paper Material	Whole roof – under built-up roofing (R1)
RT1 – Black Roofing Tar on Deck	Whole roof – bottom layer under built-up roofing and tar paper, West and East sides under grey flashing tar (FL1) and built-up roofing (R1)
RT2 – Black Roofing Tar assoc. w/R2	North End by Hatch
PBT1 – Black Pitch Box Tar	Antenna Pitch Boxes, Pitch Boxes by AHU
FL2 – Flashing Tar around Roof Hatch	North End Roof Hatch
EBI1 – Boiler Exhaust Breeching Insulation	Boiler Exhaust
C1 – Grey Rubbery/Sticky Caulk	Boiler Exhaust Vent

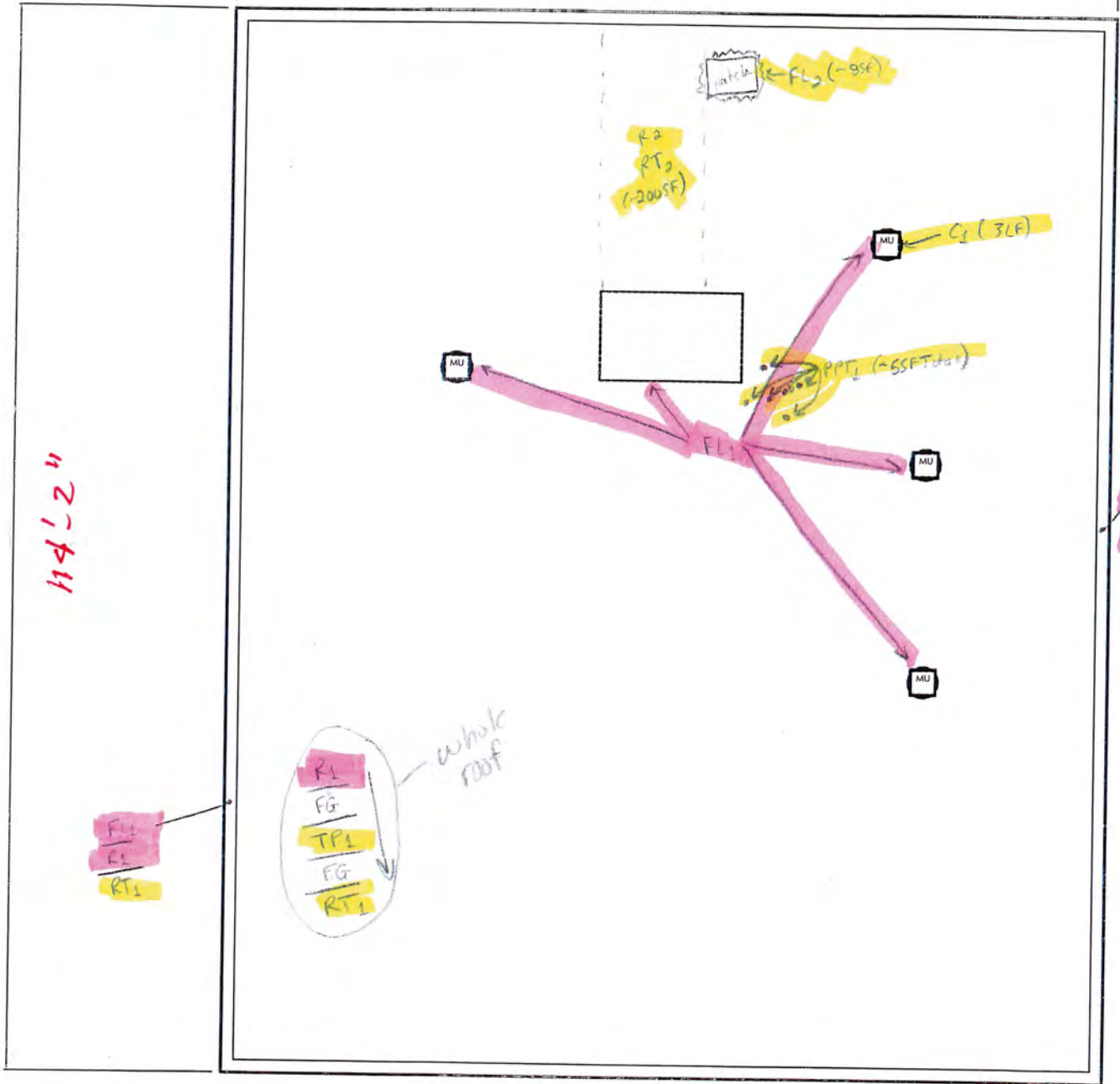
**APPENDIX A**  
**SITE SKETCH**

↑ N.

85'

100-0'

114' x 2"



- ✓ R<sub>1</sub> - Built-up Roofing
- ✓ TP<sub>1</sub> - Tar Paper b/w FG Insul layers
- ✓ RT<sub>1</sub> - Poured on Roof Tar
- ✓ FL<sub>1</sub> - Grey Flashing Cement
- ✓ PPT<sub>1</sub> - Pitch Pocket Tar
- ✓ RT<sub>2</sub> - Black Roofing Tar on Asphalt Sheeting Patch
- ✓ R<sub>2</sub> - Asphalt Potted on Sheeting

- ✓ C<sub>1</sub> - Grey Rubber/Sheety Caulk
- ✓ FL<sub>2</sub> - Flashing Tar around Hatch
- ✓ EBL<sub>1</sub> - Germaist Breeding Insul (-50SF)

**APPENDIX B**

**LABORATORY AND INSPECTOR ACCREDITATIONS**





State of Connecticut

## Lookup Detail View

Name

Name
JONATHAN D GENTILE

License Information

lookup

License Type	License Number	Expiration Date	Granted Date	License Name	License Status	Licensure Actions or Pending Charges
Asbestos Consultant-Inspector	603	10/31/2018	11/10/2004	Jonathan D. Gentile	ACTIVE	None

Generated on: 2/2/2018 7:56:51 PM

# CERTIFICATE OF ACHIEVEMENT

*This certifies that*

**Jonathan Gentile**

*has successfully completed the*  
**Asbestos Site Inspector Refresher Training  
Asbestos Accreditation Under TSCA Title II  
40 CFR Part 763**

*conducted by*

*ATC Group Services LLC  
73 William Franks Drive  
West Springfield, MA 01089  
(413) 781-0070*



Principal Instructor: Marcuis Souira  
November 16, 2017

Date of Course

November 16, 2018

Expiration Date



Regional Training Manager: Gregory Morsch  
SIAR-5870

Certificate Number

November 16, 2017

Examination Date

*State of Connecticut, Department of Public Health*  
*Approved Environmental Laboratory*

THIS IS TO CERTIFY THAT THE LABORATORY DESCRIBED BELOW HAS BEEN APPROVED BY THE STATE DEPARTMENT OF PUBLIC HEALTH PURSUANT TO APPLICABLE PROVISIONS OF THE PUBLIC HEALTH CODE AND GENERAL STATUTES OF CONNECTICUT FOR MAKING ILL EXAMINATIONS, DETERMINATIONS OR TESTS SPECIFIED BELOW WHICH HAVE BEEN AUTHORIZED IN WRITING BY THAT DEPARTMENT.

**TRC ENVIRONMENTAL CORPORATION**

WINDSOR, CT 06095

24 Church Road North

IN

AND REGISTERED IN THE NAME OF

Eric Hampton

THIS CERTIFICATE IS ISSUED IN THE NAME OF

Kathleen Williamson

BY THE REGISTERED OWNER/AUTHORIZED AGENT TO BE IN CHARGE OF THE LABORATORY WORK COVERED BY THIS CERTIFICATE OF APPROVAL AS FOLLOWS:

BUILDING MATERIALS  
ASBESTOS FIBERS - PCM  
EULK IDENTIFICATION - PLM

WHO HAS BEEN DESIGNATED

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

THIS CERTIFICATE EXPIRES

DECEMBER 31, 2017

AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT, THIS

7

DAY OF

December 2015

Registration No

PH 04926

SUZANNE BLANCAFLOR, MS

OFFICE, ENVIRONMENTAL HEALTH SECTION

United States Department of Commerce  
National Institute of Standards and Technology



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# Certificate of Accreditation to ISO/IEC 17025:2005

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NVLAP LAB CODE: 101424-0

**TRC Environmental Corporation**  
Windsor, CT

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:

## **Asbestos Fiber Analysis**

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality  
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

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2017-07-01 through 2018-06-30

Effective Dates

A handwritten signature in black ink, appearing to read "Peter S. D'Amico".

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For the National Voluntary Laboratory Accreditation Program



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005**

**TRC Environmental Corporation**  
21 Griffin Road North  
Windsor, CT 06095  
Ms. Kathleen Williamson  
Phone: 860-298-6392 Fax: 860-298-6214  
Email: [kwilliamson@trcsolutions.com](mailto:kwilliamson@trcsolutions.com)  
<http://www.trcsolutions.com>

**ASBESTOS FIBER ANALYSIS**

**NVLAP LAB CODE 101424-0**

**Bulk Asbestos Analysis**

<u>Code</u>	<u>Description</u>
18/A01	EPA -- Appendix E to Subpart E of Part 763 -- Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

A handwritten signature in black ink, appearing to read "Kathleen Williamson".

For the National Voluntary Laboratory Accreditation Program

**APPENDIX C**

**ASBESTOS BULK SAMPLE CHAIN OF CUSTODY  
FORMS**



21 GRIFFIN ROAD NORTH  
WINDSOR, CONNECTICUT 06095  
TELEPHONE (860) 298-9692  
FAX (860) 298-6380

## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009  
Supersede Previous Edition

PROJECT NUMBER <i>303262.0001.0000</i>		PROJECT NAME CTDCS Winsted DMV Roof & Boiler Replacement 159 Torrington Rd, Winsted, CT		LAB ID #. <i>52112</i>	
SIGNATURE 		INSPECTOR Jonathan Gentile		PARAMETERS	
FIELD SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)
					PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)
					ANALYZE BY LAYER
					POINT COUNT (IF >1% & >10%)
					TEM NY NOR 1984 (IF PLM SERIES NEG)
01	4/11/18	12:00	X	West Side	R1 - Built-up Roofing (Note: Top Layer)
02	4/11/18	12:10	X	South side	R1 - Built-up Roofing (Note: Top Layer)
03	4/11/18	12:27	X	North End by Hatch	R2 - Rolled-On Asphalt Sheet Roofing
04	4/11/18	12:28	X	North End by Hatch	R2 - Rolled-On Asphalt Sheet Roofing
05	4/11/18	12:02	X	West Side	TP1 - Tar Paper Material
06	4/11/18	12:12	X	South Side	TP1 - Tar Paper Material
07	4/11/18	12:03	X	West Side	RT1 - Black Roofing Tar on Deck
08	4/11/18	12:13	X	South Side	RT1 - Black Roofing Tar on Deck
09	4/11/18	12:20	X	North End by Hatch	RT2 - Black Roofing Tar assoc. w/R2
10	4/11/18	12:23	X	North End by Hatch	RT2 - Black Roofing Tar assoc. w/R2

Relinquished by: (Signature) 	Date: 4/11/18	Received by: (Signature) 	Date: 4/11/18
(Printed) Jonathan Gentile	Time: 1500	(Printed) 	Time: (Printed)
Remarks:		Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Comments: Page 1 of 3	



21 GRIFFIN ROAD NORTH  
WINDSOR, CONNECTICUT 06095  
TELEPHONE (860) 298-9692  
FAX (860) 298-6380

## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009  
Supersede Previous Edition

LAB ID #. 52112

PROJECT NUMBER		PROJECT NAME		PARAMETERS				TURNAROUND TIME							
								PLM:	TEM:	8hr	24hr	48hr	3day		
SIGNATURE		INSPECTOR		ANALYZE BY LAYER				MATERIAL							
FIELD SAMPLE NUMBER		DATE		TIME		SAMPLE LOCATION		PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	POINT COUNT (IF >1% & <10%)	TEM NY NOR 1984 (IF PLM SERIES NEG)	24hr	48hr	3day	
		TYPE	COMP	GRAB	DATE	TIME	TYPE	COMP	GRAB	DATE	TIME	24hr	48hr	3day	
		Jonathan Gentile													
		Jonathan Gentile													
11		4/11/18	12:18	X		X	Pitch Box by AHU	X							
12		4/11/18	12:22	X		X	Antenna Pitch Box	X							
13		4/11/18	12:05	X		X	West Side	X							
14		4/11/18	12:14	X		X	South Side	X							
15		4/11/18	12:34	X		X	Roof Hatch	X							
16		4/11/18	12:34	X		X	Roof Hatch	X							
17		4/11/18	12:40	X		X	Boiler Exhaust	X							
18		4/11/18	12:41	X		X	Boiler Exhaust	X							
19		4/11/18	12:42	X		X	Boiler Exhaust	X							
20		4/11/18	12:30	X		X	Boiler Exhaust Vent	X							
21		4/11/18	12:30	X		X	Boiler Exhaust Vent	X							

Relinquished by: (Signature) 	Date: 4/11/18	Received by: (Signature) 	Date: 4/11/18
(Printed) Jonathan Gentile	Time: 15:00	(Printed) Jonathan Gentile	Time: (Printed)
Remarks:		Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Comments: Page 2 of 3	



PLM Gravimetric Analysis

Date	Analyst	Lab Log #	Sample ID	Crucible ID	g crucible	g crucible plus sample	g after 480°	decimal Residue	% Asb in residue	% Asb total Sample
4/13/2018	KW	52112	04	116	20.544	21.113	20.9278	0.675	0.00	0.00
			06	117	20.4662	20.8194	20.4981	0.090	0.00	0.00
			08	118	23.292	24.0582	23.7647	0.617	0.00	0.00
			10	119	26.9569	27.4127	27.1191	0.356	0.00	0.00
			12	120	26.5878	26.772	26.6769	0.484	0.00	0.00
			14	121	25.0689	25.8285	25.2865	0.286	0.00	0.00
			16	122	19.735	19.9594	19.8683	0.594	0.00	0.00
			21	123	26.2333	26.3151	26.2695	0.443	0.00	0.00

## **APPENDIX D**

### **PLM LABORATORY ANALYSIS DATA**

**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Construction Services

Lab Log #: 0052112  
 Project #: 303262.0001.0000  
 Date Received: 04/11/2018  
 Date Analyzed: 04/13/2018

Site: Winsted DMV Roof & Boiler, 159 Torrington Road, Winsted, CT

**POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116**

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
01	Black/Yellow (built up roofing)	Yes	No	--	20% fibrous glass	3%	Chrysotile
02	--	--	--	--	--	NA/PS	--
03	Black/White (rolled on roofing)	Yes	No	--	20% fibrous glass	ND	None
04♣	Black/White (rolled on roofing)	Yes	No	--	20% fibrous glass	ND	None
05	Black (tar paper)	Yes	No	--	20% cellulose 20% fibrous glass	ND	None
06♣	Black (tar paper)	Yes	No	--	20% fibrous glass	ND	None
07	Black (roofing tar)	Yes	No	--	---	ND	None
08♣	Black (roofing tar)	Yes	No	--	---	ND	None
09	Black (roofing tar)	Yes	No	--	20% cellulose	ND	None
10♣	Black (roofing tar)	Yes	No	--	---	ND	None
11	Black (tar)	Yes	No	--	30% cellulose	ND	None
12♣	Black (tar)	Yes	No	--	---	ND	None
13	Black/Grey (flashing tar)	Yes	No	--	10% cellulose 10% fibrous glass	10%	Chrysotile
14	--	--	--	--	--	NA/PS	--
15	Black (flashing tar)	Yes	No	--	10% cellulose	ND	None
16♣	Black (flashing tar)	Yes	No	--	---	ND	None
17	Grey/Beige (boiler insulation)	Yes	No	--	10% cellulose	ND	None

**TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS**

NVLAP Lab Code 101424-0    AIHA-LAP,LLC #100122    CT #PH-0426    ME LA-0075, LB-0071    MA #AA000052    NY #10980    WV# LT000411  
 RI #AAL-007    TX #300354    VT #AL014538 LA#05011    VA #3333 000283    AZ #A20944    HI #L-09-004    NJ #CT004    CA #2907  
 CO# AL-15020    PHIL# 461    PA#68-03387



**POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116**

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
18	Grey/Beige (boiler insulation)	Yes	No	--	10% cellulose	ND	None
19	Grey/Beige (boiler insulation)	Yes	No	--	10% cellulose	ND	None
20	Grey (caulk)	Yes	No	--	---	ND	None
21♣	Grey (caulk)	Yes	No	--	---	ND	None

♣Samples analyzed by EPA/600/R-93/116 with gravimetric reduction

Reporting limit- asbestos present at 1%

ND - asbestos was not detected

Trace - asbestos was observed at level of less than 1%

NA/PS - Not Analyzed / Positive Stop

SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2018. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2018. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

This report shall not be reproduced, except in full, without the written approval of TRC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the items tested.

Analyzed by: K. Williamson Reviewed by: Cathryn Lemire Date Issued: 04/13/2018  
 Kathleen Williamson, Laboratory Manager Cathryn Lemire, Approved Signatory

**TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS**


NVLAP Lab Code 101424-0 AIHA-LAP,LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV# LT000411  
 RI #AAL-007 TX #300354 VT #AL014538 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907  
 CO# AL-15020 PHIL# 461 PA#68-03387



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# **Section 50 60 00 FM Global Checklist for Roofing Systems**

SAMPLE FM GLOBAL CHECKLIST FOR ROOFING SYSTEMS – page 1



## CHECKLIST FOR ROOFING SYSTEM

<b>CONTACT INFORMATION:</b>		<b>INDEX NUMBER:</b>	
ROOFING CONTRACTOR (NAME & ADDRESS)		TELEPHONE NO.:	FAX:
		E-MAIL ADDRESS:	CONTACT:
CLIENT (NAME & ADDRESS)		TELEPHONE NO.:	FAX:
		E-MAIL ADDRESS:	CONTACT:

**OVERVIEW OF WORK:** *(Submit 1 form per roof area)*

Building Name & Number:			
Building Dimensions: Length:	ft/m;	Width:	ft/m;
		Height	ft/m.
Roof Slope:			
Parapet Height ,max (in./m):		Parapet Height ,min (in./m):	
Type of Work: <input type="checkbox"/> New Construction <input type="checkbox"/> Recover (New roof over existing Roofing System)			
<input type="checkbox"/> Reroof (New cover/remove existing roofing system to deck) <input type="checkbox"/> Other			
FM Approved RoofNav Assembly Numbers:			

**ROOF SURFACING:**

<input type="checkbox"/> None			
<input type="checkbox"/> Coating		<i>(Trade Name/Application Rate)</i>	
<input type="checkbox"/> Granules		<i>(Application Rate)</i>	
<input type="checkbox"/> Gravel/Slag		<i>(Application Rate)</i>	
<input type="checkbox"/> Ballast:	<input type="checkbox"/> Stone Size	<input type="checkbox"/> Pavers	<i>(Beveled or square edge);</i>
Ballast Weight (psf): Field:		Perimeter:	Comers:
<input type="checkbox"/> Other:			

**ROOF COVER/MEMBRANE:**  
*(Please provide ALL applicable details including trade name, type, number of plies, thickness, reinforced, adhesive)*

<input type="checkbox"/> Panel:			
<input type="checkbox"/> Through Fastened Metal			
<input type="checkbox"/> Standing Seam metal			
<input type="checkbox"/> Fiber Reinforced Plastic (FRP)			
<input type="checkbox"/> Other:			
<input type="checkbox"/> Built Up Roofing (BUR)			
<input type="checkbox"/> Modified Bitumen			
<input type="checkbox"/> Single Ply:	<input type="checkbox"/> Adhered	<input type="checkbox"/> Fastened	<input type="checkbox"/> Ballasted
<input type="checkbox"/> Spray Applied			
<input type="checkbox"/> Other:			

**BASE SHEET:**  
*(Please include Trade Name, Type, and Width)*

<input type="checkbox"/> None			
Trade Name:		Width: <input type="checkbox"/> 36 in. <input type="checkbox"/> 1 meter (39 in.)	
<input type="checkbox"/> Fastened		<input type="checkbox"/> Adhered	
<input type="checkbox"/> Secured per RoofNav		OR	<input type="checkbox"/> Per FM Global Loss Prevention Data Sheet 1-29
Comments:			
<input type="checkbox"/> Air Retarder			
<input type="checkbox"/> Vapor Retarder			

**INSULATION**

Layer	Trade Name	Thickness (In.)	Fastened	Adhered	Tapered
1. Top			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Next			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Next			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Next			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/> Glass Fiber/Mineral Wool/Batt	<input type="checkbox"/> Facer Type/Vapor Barrier
<input type="checkbox"/> Thermal Barrier	

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SAMPLE FM GLOBAL CHECKLIST FOR ROOFING SYSTEMS – page 2

CHECKLIST FOR ROOFING SYSTEM



<input type="checkbox"/> Other:
<input type="checkbox"/> None

**DECK:**

*(Please include manufacturer, type, yield strength, thickness/gage, etc.)*

<input type="checkbox"/> Steel:	
<input type="checkbox"/> LWIC (Form Deck):	<input type="checkbox"/> Cementitious Wood Fiber:
<input type="checkbox"/> Concrete: <input type="checkbox"/> Pre-cast panels or <input type="checkbox"/> Cast in Place	
<input type="checkbox"/> Wood	
<input type="checkbox"/> Fiber Reinforced Cement	<input type="checkbox"/> Fiber Reinforced Plastic
<input type="checkbox"/> Gypsum: <input type="checkbox"/> Plank	<input type="checkbox"/> Poured
<input type="checkbox"/> Other:	
Comments:	

**ROOF STRUCTURE (Include Size, Gage, Etc.):**

<input type="checkbox"/> Purlins <input type="checkbox"/> "C" OR <input type="checkbox"/> "Z"		
<input type="checkbox"/> Joists <input type="checkbox"/> Wood OR <input type="checkbox"/> Steel		
<input type="checkbox"/> Beams <input type="checkbox"/> Wood OR <input type="checkbox"/> Steel		
<input type="checkbox"/> Other:		
Spacing: Field:	Perimeter:	Corners:
Comments:		

**FASTENERS USED IN ROOF ASSEMBLY:**

Roof Cover Fasteners: Trade Name:		Length:	Diameter:
Stress Plate/Batten:			
Spacing: Field: X	Perimeter: X	Corners: X	
Insulation Fasteners: Trade Name:		Type:	
Size:		Stress Plate:	
Spacing: Field:	Perimeter:	Corners:	
Deck Or Roof Panels Fasteners:		Type:	
Trade Name:		Size Washer:	
Length:		Washer:	
If Weld: Size:	Weld:	Washer:	
Deck Side Lap Fasteners: Field: X	Perimeter: X	Corners: X	
Spacing: Field: X	Perimeter: X	Corners: X	
Base Sheet Fasteners		Type:	
Trade Name:		Length:	
Head Diameter:			
Spacing: (Attached Sketches as necessary)			
Spacing Along Laps: Field:		Perimeter:	Corners:
No. Intermediate Rows: Field:		Perimeter:	Corners:
Spacing Along Intermediate Rows: Field:		Perimeter:	Corners:

**PERIMETER FLASHING:**

*(Attach a detailed sketch of metal fascia, gravel stop, nailer, coping, etc.)*

<input type="checkbox"/> FM Approved Flashing	<input type="checkbox"/> Per FM Global Loss Prevention Data Sheet 1-49
<input type="checkbox"/> Other:	Comments:

**DRAINAGE:**

For new construction: Has roof drainage been designed by a Qualified Engineer per FM Global Loss Prevention Data Sheet 1-54 and the local building code? <input type="checkbox"/> Yes <input type="checkbox"/> No (Attach details)
For re-roofing and recovering: will the roof drainage be changed from the original design (for example: drain inserts, drains covered or removed, new expansion joints, blocked or reduced scupper size)? <input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, were the changes reviewed by a Qualified Engineer? <input type="checkbox"/> Yes <input type="checkbox"/> No (Attach details)
Is secondary (emergency) roof drainage provided per FM Global Data Sheet 1-54? <input type="checkbox"/> Yes <input type="checkbox"/> No (Attach details)

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