TABLE OF CONTENTS

DIVISION 00  PROCUREMENT AND CONTRACTING REQUIREMENTS

<table>
<thead>
<tr>
<th>DOCUMENT</th>
<th>TITLE</th>
<th># of PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 11 16</td>
<td>INVITATION TO BID</td>
<td>1</td>
</tr>
<tr>
<td>00 21 13</td>
<td>INSTRUCTIONS TO BIDDERS (AIA Document A701)</td>
<td>1</td>
</tr>
<tr>
<td>00 22 13</td>
<td>SUPPLEMENTARY INSTRUCTIONS TO BIDDERS</td>
<td>4</td>
</tr>
<tr>
<td>00 41 02</td>
<td>BID FORM</td>
<td>4</td>
</tr>
<tr>
<td>00 43 13</td>
<td>BID SECURITY FORM (AIA Document A310)</td>
<td>1</td>
</tr>
<tr>
<td>00 45 10</td>
<td>CONTRACTOR’S QUALIFICATION STATEMENT (AIA Document A305)</td>
<td>1</td>
</tr>
<tr>
<td>00 52 00</td>
<td>AGREEMENT FORM (AIA Document A101)</td>
<td>9</td>
</tr>
<tr>
<td>00 61 13</td>
<td>PERFORMANCE BOND AND PAYMENT BOND FORM (AIA Document A312)</td>
<td>1</td>
</tr>
<tr>
<td>00 72 00</td>
<td>GENERAL CONDITIONS (AIA Document A201)</td>
<td>1</td>
</tr>
<tr>
<td>00 73 00</td>
<td>SUPPLEMENTARY CONDITIONS</td>
<td>4</td>
</tr>
<tr>
<td>00 73 16</td>
<td>INSURANCE REQUIREMENTS</td>
<td>2</td>
</tr>
<tr>
<td>00 73 39</td>
<td>MINORITY BUSINESS ENTERPRISE REQUIREMENTS</td>
<td>1</td>
</tr>
<tr>
<td>00 73 46</td>
<td>WAGE DETERMINATION SCHEDULE</td>
<td>1</td>
</tr>
<tr>
<td>00 91 13</td>
<td>ADDENDA</td>
<td>1</td>
</tr>
<tr>
<td>00 92 00</td>
<td>LIST OF DRAWING SHEETS</td>
<td>1</td>
</tr>
</tbody>
</table>

SPECIFICATIONS GROUP - Divisions 01 and 26

DIVISION 01  GENERAL REQUIREMENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>TITLE</th>
<th># of PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 11 00</td>
<td>SUMMARY OF WORK</td>
<td>2</td>
</tr>
<tr>
<td>01 20 00</td>
<td>PRICE AND PAYMENT PROCEDURES</td>
<td>4</td>
</tr>
<tr>
<td>01 21 00</td>
<td>ALLOWANCES</td>
<td>3</td>
</tr>
<tr>
<td>01 22 00</td>
<td>UNIT PRICES</td>
<td>2</td>
</tr>
<tr>
<td>01 23 00</td>
<td>ALTERNATES</td>
<td>1</td>
</tr>
</tbody>
</table>

TABLE OF CONTENTS  TC-1
Aharonian & Associates, Inc. – Architects
Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement  Foster, Rhode Island

01 25 00  SUBSTITUTION PROCEDURES  4
01 31 13  PROJECT COORDINATION  3
01 31 19  PROJECT MEETINGS  3
01 33 00  SUBMITTAL PROCEDURES  4
01 45 00  QUALITY CONTROL  3
01 45 29  TESTING LABORATORY SERVICES  3
01 50 00  TEMPORARY FACILITIES AND CONTROLS  11
01 60 00  PRODUCT REQUIREMENTS  4
01 73 29  CUTTING AND PATCHING  4
01 74 00  CLEANING AND WASTE MANAGEMENT  3
01 74 19  CONSTRUCTION WASTE MANAGEMENT  14
01 75 00  STARTING AND ADJUSTING  2
01 78 00  CLOSEOUT PROCEDURES AND SUBMITTALS  5
01 78 39  PROJECT RECORD DOCUMENTS  3
01 81 13  NE-CHPS SUSTAINABLE DESIGN REQUIREMENTS  4

**DIVISION 11  EQUIPMENT**

<table>
<thead>
<tr>
<th>SECTION</th>
<th>TITLE</th>
<th># of PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 66 23</td>
<td>BASKETBALL EQUIPMENT</td>
<td>4</td>
</tr>
</tbody>
</table>
CAPTAIN ISAAC PAINE ELEMENTARY SCHOOL
Gymnasium Backstop Replacement
Foster, Rhode Island

DOCUMENT 00 11 16
INVITATION TO BID

ARCHITECT: AHARONIAN & ASSOCIATES, INC
310 George Washington Highway
Smithfield, Rhode Island 02917
T (401)232-5010  F (401) 232-5080

PROJECT: Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement
160 Foster Center Road
Foster, Rhode Island 02825

Sealed Bids are invited on a General Contract for the above referenced project for the Gymnasium Backstop Replacement at the Captain Isaac Paine Elementary School. All Bids must be on a Lump Sum Basis; segregated Bids will not be accepted. Electronic copies of the Contract Documents are available at www.Paineschool.org

A Mandatory Pre-Bid Conference for this Project will be held on Wednesday, September 25, 2019 at 10:30am at the Captain Isaac Paine Elementary School Business Office. Contractors will be required to visit the job site and be completely familiar with all existing conditions as they relate to the Project.

All questions must be submitted by the end of day Wednesday, October 2, 2019 and will be responded to on Tuesday, October 8, 2019. All questions or concerns should be communicated to John O’Biurka, Director of Buildings & Grounds at Obiurka@FGSchools.com. All Bids must be mailed or delivered to the Captain Isaac Paine Elementary School Business Office located at 160 Foster Center Road, Foster, Rhode Island 02825. Bids must be submitted in a sealed envelope plainly marked on the exterior of the envelope “BID FOR THE CAPTAIN ISAAC PAINE ELEMENTARY SCHOOL GYMNASIUM BACKSTOP REPLACEMENT”. The Business Office will receive bids until Noon, Friday October 11, 2019. Bids received after this time will not be accepted. Faxed Bids will not be accepted. Bids will be opened publicly.

The Bidder must submit a Bid Bond in the amount of 5% of the Bid. The successful Bidder must furnish a Labor and Material Bond and a Performance Bond equal to 100% of the total Bid Price and a Certificate of Insurance naming the Town of Foster as the additional insured on the policy and so stated on the certificate. The Performance Bond and Certificate of Insurance must be provided to the Owner within 7 calendar days after notification of award or the Owner reserves the right to cancel said award. The successful Bidder shall be required to provide Contractor’s Liability Insurance and all other required insurance in the amounts and limits in accordance with the “General Conditions of the Contract for Construction”.

The Bidder shall stipulate the amount of time in calendar days required to complete the Work. The Bidder shall submit a preliminary Construction Progress Schedule reflecting the ability to complete the Work the date established by the Owner.

The Contractor shall be responsible for the cost of obtaining a Building Permit. All other required permits shall be obtained and paid for by the General Contractor or its subcontractors. The successful Bidder shall commence the work within fourteen (14) days of a written Notice to proceed from the Owner. Following the Owner’s Notice to Proceed, the successful bidder shall not begin construction until a copy of the Building Permit is submitted to the Owner.

END OF DOCUMENT 00 11 16
INSTRUCTIONS TO BIDDERS

AIA DOCUMENT A701 - Latest Edition

DOCUMENT 00 21 13

INSTRUCTION TO BIDDERS

Document not bound herewith. The Contractor and Subcontractors may review the Document at the Office of the Architect. The document is also available, for purchase, from the American Institute of Architects.

Failure to review this document will not relieve parties of the contractual requirements contained herein.

END OF DOCUMENT 00 21 13
SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

SUPPLEMENTS

The following supplements modify, change, delete from or add to AIA Document A701, Latest Edition. Where any Article of the Instructions to Bidders is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these supplements, the unaltered provision of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

ARTICLE 2 - BIDDER'S REPRESENTATIONS

Delete subparagraph 2.1.4 in its entirety and substitute the following:

"2.1.4 The Bidder has inspected the site, has familiarized him/herself with the actual conditions under which the Work is to be performed, has correlated the Bidder's personal observations with the requirements of the Contract Documents and has full knowledge of the work required;"

Add the following subparagraph:

"2.1.7 After award of Contract, no claim for additional compensation resulting from misunderstanding of the Contract Documents or resulting from errors in or conflicts within the Contract Documents will be entertained unless interpretations of the Contract Documents specifically relating to the portions thereof, which appear to the Bidder to be in question, error or conflict, are brought to the Owner's attention during the Bidding Period."

ARTICLE 3 - BIDDING DOCUMENTS

Add the following at the end of subparagraph 3.2.2:

"Request for clarification and interpretation may be submitted either as paper copy by mail or electronic copy by email"

Add subparagraph 3.2.4:

"3.2.4 No interpretation of the meaning of the Contract Documents will be made to any Bidder orally. Neither the Owner or Architect will be responsible for any oral instructions."

Add subparagraph 3.2.5:

"3.2.5 Failure of any Bidder to receive any such addendum shall not relieve such bidder from any obligation under this bid as submitted."

Add subparagraph 3.3.6:

"3.3.6 Refer to Division 1 specification sections for additional provisions of this document."

ARTICLE 4 - BIDDING PROCEDURES

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS
Aharonian & Associates, Inc. – Architects  
Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement  
Foster, Rhode Island

Delete subparagraph 4.2.1 in its entirety and substitute the following:

"4.2.1 Each bid shall be accompanied by a bid security in the form and amount required [Five Percent (5%)] as stipulated in the Advertisement For Bids."

Delete subparagraph 4.2.2. in its entirety and substitute the following:

"4.2.2. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and Payment of all obligations arising thereunder. In addition, the Owner shall have any other legal remedies that it is entitled, including but not limited to, any excess of the bid security in relation to the next lowest and qualified bidder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds as required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty."

Subparagraph 4.2.4 in the last sentence after the word "beginning" insert "sixty(60)"

Delete subparagraph 4.3.1 in its entirety and substitute the followings:

"4.3.1 A bidder shall submit its bid as indicated within the Invitation to Bid".

ARTICLE 5 - CONSIDERATION OF BIDS

At the end of paragraph 5.1 add the following:

"No award will be made on the date of Bid Opening."

Add subparagraph 5.2.1:

5.2.1 The Owner may reject any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Conditional bids will not be accepted."

Subparagraph 5.3.1 Delete the word "lowest" and insert "most" in its place in the first sentence.

Subparagraph 5.3.1 in the first sentence after the word "Bidder" insert "in the opinion of Owner."

Add subparagraph 5.3.1.1:

"5.3.1.1 The Owner does not obligate him/herself to accept the lowest or any other bid."

Add subparagraph 5.3.1.2:

"5.3.1.2 If the Base Bid exceeds the amount of funds available to finance the construction Contract, the Owner may reject all Bids or may award the Contract to that responsible Bidder submitting the lowest Bid."

Add subparagraph 5.3.1.3:

"5.3.1.3 Notice of Owner's Method of Award:

1. The Owner will use several factors in determining the method of award to the "Responsive Bidder" as follows:

   a. Lowest responsible Lump Sum
   b. Contractor's qualifications with respect to projects of similar scope.
   c. Timely completion"

ARTICLE 6 – POST-BID INFORMATION

Refer to Paragraph 6.1 Contractor's attention is called to submission of a Contractor's Qualification Statement. Such statement shall illustrate Contractor's previous experience.
Contractor's Qualification Statement shall be submitted with his/her proposal.

Delete subparagraph 6.2 in its entirety.

ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

Delete subparagraph 7.1.1 in its entirety and substitute the following:

"7.1.1 The Bidder shall furnish a Performance Bond in the amount of one hundred percent (100%) of the contract amount and a Labor and Material Bond in the amount of one hundred percent (100%) of the contract amount as security for faithful performance of this Contract and for the payment of persons performing labor on the project under contract."

Delete subparagraph 7.1.2 in its entirety and substitute the following:

"7.1.2 The cost of such bonds shall be included in the Bid."

Delete subparagraph 7.1.3 in its entirety and substitute the following:

"7.1.3 The surety on such bonds shall be a duly authorized surety company satisfactory to the Owner and authorized to do business in the State of Rhode Island."

Delete subparagraph 7.1.4 in its entirety.

Subparagraph 7.2.1 Delete the first sentence in its entirety and substitute the following:

"Simultaneously with his/her delivery of the executed contract, the Contractor shall deliver the required bonds to the Owner."

ARTICLE 8 – EMULATION OF THE PROPOSED CONTRACT DOCUMENTS

Delete paragraph 8.1 and all subparagraphs & replace with the following:

"8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consists of the Documents set forth in the Solicitation and Article 9 of AIA Document A101-2017."

ARTICLE 9 - SUPPLEMENTARY INSTRUCTIONS

Add the following paragraphs:

"9.1 CONDITIONS OF WORK"

"9.1.1 Each bidder must inform him/herself of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all material and labor necessary to carry out the provisions of his/her contract. Insofar as possible, the Contractor, in carrying out his/her work, must employ such methods or means as will not cause any interruption with the work of any other Contractor."

"9.2 LAWS AND REGULATIONS"

"9.2.1 The bidder's attention is directed to the fact that all applicable State Laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full."

"9.3 LIEN RIGHTS"
"9.3.1 The project is municipal property owned by the Town of Foster, Rhode Island and is thus exempt from liens."

"9.4 STATE SALES AND USE TAX EXEMPTION"

"9.4.1 Bidders and their subcontractors and material suppliers shall not include in their Bids any Rhode Island State Sales and Use Taxes relative to the performance of the Work that is covered by the exemption. The Owner will furnish tax exempt numbers required.”
CAPTAIN ISAAC PAINE ELEMENTARY SCHOOL
Gymnasium Backstop Replacement
Foster, Rhode Island

DOCUMENT 00 41 02
BID FORM

Date: __________________________________________

To: Captain Isaac Paine Elementary School
160 Foster Center Road
Foster, Rhode Island 02825

Attn: Business Office

Project: Captain Isaac Paine Elementary School
Gymnasium Backstop Replacement
160 Foster Center Road
Foster, Rhode Island 02825

Submitted By: ___________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________

(Include in the above spaces, the firm’s legal name, address, telephone and fax numbers, contact and e-mail address. All information should be typed or printed)

NOTE: The Owner’s Selection Criteria shall determine the lowest evaluated or responsive Bid.

1. BASE BID

Having thoroughly examined the Project Site and all matters referred to in the Information for Bidders and in the Bid Documents prepared by Aharonian & Associate, Inc., Architect for the above referenced Project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the sum of:

\[
\begin{array}{c}
\$ \text{ }, \text{ }, \text{ }, \text{ }, \text{ } \text{.} \\
\end{array}
\]

(In Numeric)

\[
\begin{array}{c}
\$ \text{ (Written)} \\
\end{array}
\]

In case of discrepancy, the amount shown in words shall govern. Failure to fill out the above item, if providing a Base Bid, will establish the Bid as non-responsive.

WE HAVE INCLUDED THE 5% BID SURETY AS REQUIRED BY THE INVITATION FOR BIDS.
2. **ADDENDA**

The following Addenda have been received. The modifications to the Bid Documents noted therein have been considered and all costs thereto are included in the Bid Sum.

Addendum #___ Dated ________________

Addendum #___ Dated ________________

Addendum #___ Dated ________________

Addendum #___ Dated ________________

3. **BASE BID BREAKOUT COSTS**

The following line item costs ARE INCLUDED IN THE BASE BID amount and are broken out for use by the Owner.

A. Include list of all Subcontractors with Schedule of Values

4. **BID ALTERNATES**

No Alternates have been established for the Project.

5. **SCHEDULE – CONTRACT TIME**

If the Bid is accepted, unless otherwise indicated on the Bid Form, Bidder hereby agrees to commence the Work under this Contract within fourteen (14) calendar days after issuance of a written “Notice to Proceed” by the Owner. (NOTE: The successful bidder shall not begin construction until a copy of the Building Permit is submitted to Owner.)

Bidder hereby agrees to achieve Substantial Completion of the Work on or before June 16, 2020 and to achieve Final Completion of the Work on or before June 30, 2020.

6. **ADDITIONAL WORK - OVERHEAD AND PROFIT**

The Bidder agrees to be bound by the following percentages of cost basis for overhead, supervision, bond and profit and other general expenses for any additional work. If accepted by the Owner in the award of this Contract, these percentages shall be used in establishing the adjustment to the Contract Sum for additions to or deductions from the Work in accordance with the applicable sections of the General Conditions.

A. To the Contractor for Work performed by its own forces: Maximum ____ percent of the cost.

B. To Subcontractors for Work performed by its own forces: Maximum ____ percent of the cost.

C. The combined overhead and profit for Contractor and Subcontractors: Maximum ____ percent of the cost.

7. **ALLOWANCES**

The above Base Bid Price INCLUDES the costs for the following allowances as outlined in Section 012100 "Allowances".

A. No Allowances are established for the Project.
8. UNIT PRICES

A. If accepted by the Owner in the award of this Contract, Unit Prices shall be used in establishing the adjustment to the Contract Sum for additions to or deductions from the Work in accordance with the applicable sections of the General Conditions. The Unit Prices listed shall include all costs, overhead and profit and no further surcharges are to be added to any Unit Price item of Work that may be done. Work deleted from the Contract will be calculated at 100% of the additional work Unit Prices.

B. Bidder agrees that the Unit Prices will not contain anything to alter or void the Lump Sum Bid submitted herein and that applicable contents of this Bid shall be binding on the Unit Prices and the Work involved whether or not specifically stated.

C. Unit Prices for fabricated items shall include all necessary connections and fastenings required to produce a complete assembly.

D. Unit Price Schedule: No Unit Price requirements are established for the Project.

9. BIDDER ACKNOWLEDGMENTS

A. The Bidder understands that the Owner reserves the right to reject any or all Bids and to waive any formalities in the bidding.

B. The Bidder agrees that this Bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receiving Bids.

C. Upon written notice of the acceptance of its Bid by the Owner and in accordance with Article 14 of the Information for Bidders, the Bidder shall provide a Certificate of Insurance covering all operations under this Contract. The certificate meeting all conditions set forth therein shall be submitted to the Owner prior to formal execution of the Contract.

D. Upon written notice of the acceptance of its Bid by the Owner, the Bidder shall execute the formal Contract (Document 00 52 00 of the Project Manual) within ten (10) calendar days and deliver to the Owner a Performance Bond and a Payment Bond (Document 00 61 13 of the Project Manual) as required by the General Conditions.

E. The Bid Surety, in the amount of 5% of the Base Bid, is to become the property of the Owner in the event the Contract and Bonds are not executed within the timeframe set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

F. By submission of this Bid, the Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, that its Bid has been arrived at independently, without consultation, communication or agreement as to any matter relating to this Bid, with any other Bidder or with any competitor.

10. REQUIREMENT FOR LICENSE NUMBER

A. In compliance with the requirements of Rhode Island General Law, Section 5-65-23, my Rhode Island license number for the Work to be performed by this firm as Prime Contractor is:

   LICENSE TYPE:________________________ LICENSE NUMBER:________________________
11. BID FORM SIGNATURE(S)

The undersigned declares: that the only person interested in this proposal as principals are named herein as such; that no official of the Owner and no person acting for or employed by the Owner is interested directly or indirectly in this proposal or any contract which may be made under it or in any expected profits to arise there from; that the proposal is made in good faith, without fraud, collusion or connection with any other person bidding or refraining from bidding for the same work; that the Contract Documents relating to the Contract covered by this proposal and in regard to all conditions pertaining to the Work have been examined and has carefully checked the estimates of cost and from them makes this proposal.

Respectively Submitted,

Name of Firm

SEAL (if Bid is by a corporation)

_____________________________________________________
Signature

_____________________________________________________
Title

_____________________________________________________
Business Address

_____________________________________________________
Telephone Number and Fax Number

The Bidder shall provide an affidavit that the person who has affixed his or her signature to this Bid Form is actively and legally authorized to bind the firm contractually. This affidavit MUST be submitted with and attached to the Bid Form.

END OF DOCUMENT  00 41 02
CAPTAIN ISAAC PAINE ELEMENTARY SCHOOL
Gymnasium Backstop Replacement
Foster, Rhode Island

DOCUMENT 00 43 13
BID SECURITY FORM

AIA DOCUMENT A310 – Latest Edition
BID BOND

Document not bound herewith. Contractors and Subcontractors may review the document at the Office of the Architect. The document is also available, for purchase, from the American Institute of Architects.

Failure to review this document will not relieve parties of the contractual requirements contained herein.

END OF DOCUMENT  00 43 13
CAPTAIN ISAAC PAINE ELEMENTARY SCHOOL
Gymnasium Backstop Replacement
Foster, Rhode Island

DOCUMENT 00 45 10
CONTRACTOR’S QUALIFICATION STATEMENT

AIA DOCUMENT A305 - Latest Edition
CONTRACTOR’S QUALIFICATION STATEMENT

Document not bound herewith. The Contractor and Subcontractors may review the Document at the Office of the Architect. The document is also available, for purchase, from the American Institute of Architects.

Failure to review this document will not relieve parties of the contractual requirements contained herein.

END OF DOCUMENT 00 45 10
CAPTAIN ISAAC PAINE ELEMENTARY SCHOOL
Gymnasium Backstop Replacement
Foster, Rhode Island

DOCUMENT 00 52 00
AGREEMENT FORM

AIA DOCUMENT A101 - Latest Edition
STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR WHERE THE BASIS OF PAYMENT IS A STIPULATED SUM

A copy of this Document, as amended, is bound herewith following this page. Agreement made as of the date of issue of the Purchase Order for this work, and is assumed as executed once the Purchase Order is issued.

Failure to review this document will not relieve parties of the contractual requirements contained herein.

END OF DOCUMENT 00 52 00
SECTION 01 11 00
SUMMARY OF WORK

PART 1  GENERAL

1.01  WORK COVERED BY CONTRACT DOCUMENTS

A. The Project consists of selective Gymnasium renovations for backstop replacement.
B. The Work includes but is not limited to interior finishes & equipment.
C. Coordination with Owner’s separate concurrent contracts, if any.
D. The Work will be constructed under a single prime construction contract.
E. Before starting work, all Contractor workers and Subs are required to obtain and submit a current BCI and State-approved picture ID. The Owner reserves the right to deny access to any worker based on information provided on the submitted BCI. All BCI’s to be from Rhode Island and the Workers State of Residence and be current within six (6) calendar months of start of onsite work.

1.02  RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.03  FUTURE WORK

A. FUTURE CONTRACT: The Owner reserves the right to award contracts for additional work to be performed at the site during construction and following the Substantial Completion. Completion of that future work depends on the progress of, and the successful and timely completion of, the preparatory and related Work of this Contract.

1.04  CONTRACTOR AND CONTRACTOR USE OF PREMISES

A. GENERAL: During the construction period, the Contractor shall have use of the premises for construction operations, including use of the site, to the extent as directed by the Owner. Their use of the premises is also limited 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 or as allowed by the Owner.

1.05  OCCUPANCY REQUIREMENTS

A. PARTIAL OWNER OCCUPANCY: The Owner reserves the right to occupy and to place and install equipment in completed areas of the building prior to Substantial Completion, provided such occupancy
Aharonian & Associates, Inc. – Architects
Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement
Foster, Rhode Island

does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.

1. The Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner occupancy.

2. Obtain a Certificate of Occupancy from local building officials prior to Owner occupancy.

3. Prior to partial Owner occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy, the Owner will operate and maintain mechanical and electrical systems serving occupied portions of the building.

4. Upon occupancy, the Owner will assume responsibility for maintenance and custodial service for occupied portions of the building.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTIONS (Not Applicable)

END OF SECTION 01 11 00
SECTION 00 61 13
PERFORMANCE AND PAYMENT BOND FORM

AIA DOCUMENT A312 – Latest Edition
PERFORMANCE AND PAYMENT BOND

Document not bound herewith. Contractors and Subcontractors may review the document at the Office of the Architect. The document is also available, for purchase, from the American Institute of Architects.

Failure to review this document will not relieve parties of the contractual requirements contained herein.

END OF DOCUMENT 00 61 13
SECTION 00 72 00
GENERAL CONDITIONS

AIA DOCUMENT A201 - 2017 Edition
GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

Document not bound herewith. Contractors and Subcontractors may review the document at the Office of the Architect. The document is also available, for purchase, from the American Institute of Architects.

Failure to review this document will not relieve parties of the contractual requirements contained herein.

END OF DOCUMENT 00 72 00
SUPPLEMENTARY CONDITIONS

SUPPLEMENTS

A. The following supplements modify the “General Conditions of the Contract for Construction”, AIA Document A201-2017. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

B. These Supplementary General Conditions are of the abbreviated or "stream-lined" type and include incomplete sentences. Omission of words or phrases such as "the Contractor shall", "in conformity therewith", "shall be", "as noted on the Drawings", "according to the plans", "a", "an", "the", and "all" are intentional. Omitted words and phrases shall be supplied by inference in the same manner as they are when a note occurs on the Drawings. Words "shall be" or "shall" will be supplied by inference when colon (:) is used within sentences or phrases.

C. The Contractor shall provide all items, articles, materials, operations or methods listed, mentioned or scheduled on the Drawings and/or herein, including all labor, materials, equipment and incidentals necessary and required for their completion.

ARTICLE 2 - OWNER

2.1 GENERAL

2.1.1 Delete the first sentence in Paragraph 2.1.1 and substitute the following “The Owner is the person or entity identified as such in the Agreement between the Owner and the Contractor and is referred to throughout the Contract Documents as if singular in number”.

2.3 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.3.4 At the end of the first sentence in Paragraph 2.3.4, delete “and a legal description of the site “.

ARTICLE 3 – CONTRACTOR

3.1 GENERAL

3.1.1 Delete the first sentence of Subparagraph 3.1.1 and substitute the following: “The Contractor is the person or entity identified in the Agreement between the Owner and Contractor and is referred to throughout the Contract Documents as if singular in number.

3.4 LABOR AND MATERIALS

3.4.2 Add the following Subparagraphs 3.4.2.1 and 3.4.2.2 to Paragraph 3.4.2:

3.4.2.1 After the Contract has been executed, the Owner and the Architect will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications).
3.4.2.2 By making requests for substitutions based on Subparagraph 3.4.2 above, the Contractor:

3.4.2.2.1 represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal to or superior in all respects to that specified;

3.4.2.2.2 represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;

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

3.4.2.2.4 will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

3.8 ALLOWANCES

3.8.2.2 Add the following to the end of Subparagraph 3.8.2.2: “except when installation is specified as part of the allowance in the General Requirements (Division 1 of the Specifications).”

ARTICLE 5 - SUBCONTRACTORS

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

5.2.1 Add the following Subparagraph 5.2.1.1 to Paragraph 5.2.1:

5.2.1.1 Not later than 15 days after the date of commencement, the Contractor shall furnish in writing to the Owner, through the Architect, the names of persons or entities proposed as manufacturers for each of the products identified in the General Requirements (Division 1 of the Specifications) and, where applicable, the name of the installing Subcontractor.

ARTICLE 7 – CHANGES IN THE WORK

7.3 CONSTRUCTION CHANGE DIRECTIVES

7.3.4 In the first sentence, delete the words “a reasonable amount” and substitute “an allowance for overhead and profit in accordance with Subparagraph 7.3.11 below: “

7.3.11 In Subparagraph 7.3.4, the allowance for the combined overhead and profit included in the total cost to the Owner shall be based on the following schedule:

7.3.11.1 For the Contractor, for Work performed by the Contractor’s own forces, (10) ten percent of the cost.

7.3.11.2 For the Contractor, for Work performed by the Contractor’s Subcontractor, (10) ten percent of the amount due the Subcontractor.

7.3.11.3 For each Subcontractor or Sub-subcontractor involved, for Work performed by that Subcontractor’s or Sub-subcontractor’s own forces, (12) twelve percent of the cost.

7.3.11.4 For each Subcontractor, for Work performed by the Subcontractor’s Sub-subcontractors, (10) ten percent of the amount due the Sub-subcontractor.

7.3.11.5 Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.4.

7.3.11.6 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials and Sub-contracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are Sub-contracts, they shall be
Aharonian & Associates, Inc. – Architects
Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement
Foster, Rhode Island

SUPPLEMENTARY CONDITIONS

ARTICLE 9 – PAYMENTS AND COMPLETION

9.3 APPLICATIONS FOR PAYMENT

9.3.1 Add the following sentence to Subparagraph 9.3.1: “The form of Application for Payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet.”

9.8 SUBSTANTIAL COMPLETION

9.8.5 Add the following sentence to Subparagraph 9.8.5: “The payment shall be sufficient to increase the total payments to 95 percent of the Contract Sum, less such amounts the Architect shall determine for incomplete work or unsettled claims.”

ARTICLE 10 – PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.2 If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop work in the affected area and report the condition to the Owner and the Architect in writing. The Owner, Contractor and Architect shall then proceed in the same manner described in Subparagraph 10.1.3.

10.1.3 The Owner shall be responsible for obtaining the services of a licensed laboratory to verify a presence or absence of the material or substance reported by the Contractor and, in the event the material or substance is found to be present, to verify that it has been rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or the Architect has reasonable objection to the persons or entities proposed by the Owner, the Owner shall propose another to whom the Contractor or the Architect has no reasonable objection.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.3 Add the following Subparagraph 10.2.3.1 to Paragraph 10.2.3:

10.2.3.1 When the use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary, the Contractor shall give the Owner reasonable advance notice.

ARTICLE 11 – INSURANCE AND BONDS

11.1.1 Delete the first sentence and replace with the following: “The Contractor shall purchase and maintain insurance & provide bonds of the types and units of liability, containing the endorsements, and subject to the items and conditions as set forth in the Solicitation, Agreement, Section 00 73 16 Insurance Requirements, or elsewhere in the Contract Documents.”

ARTICLE 13 – MISCELLANEOUS PROVISIONS

Add the following Paragraphs to Article 13:

itemized also. In no case will a change involving over $500.00 be approved without such itemization.
13.6 **EQUAL OPPORTUNITY**

13.6.1 The Contractor shall maintain policies of employment as follows:

13.6.1.1 The Contractor and the Contractor’s Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

13.6.1.2 The Contractor and the Contractor’s Subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to their race, religion, color, sex, or national origin.

13.7 **STATE SALES AND USE TAX EXEMPTION**

13.7.1 Bidders and their Subcontractors and material suppliers shall not include in their Bids any Rhode Island State Sales and Use Taxes relative to the performance of the Work that is covered by the exemption. The Owner will furnish tax exempt numbers required.

13.8 **NOTICE OF DEFINITION OF OWNER**

13.8.1 The “Owner” as referred to in these specifications is the Foster School District

END OF DOCUMENT 00 73 00
CAPTAIN ISAAC PAINE ELEMENTARY SCHOOL
Gymnasium Backstop Replacement
Foster, Rhode Island

DOCUMENT 00 73 16
INSURANCE REQUIREMENTS

The successful Bidder shall be required to provide Contractor’s Liability Insurance and all other required insurance in the amounts and limits in accordance with the General Conditions contained in Document 00 52 00 Agreement Form and the following:

1.01 CONTRACTOR’S LIABILITY INSURANCE

A. Liability insurance shall include all major divisions of coverage and be on a comprehensive basis, including:

1. Premises Operations (including X-C and U as applicable).
2. Independent Contractors’ Protective.
5. Contractual, including specified provision for Contractor’s obligation under Paragraph 3.18.
6. Owned, non-owned and hired motor vehicles.
7. Broad Form Property Damage, including Completed Operations.
8. Owner’s Protective.

B. If the General Liability coverage’s are provided by a Commercial General Liability Policy on a claims-made basis, the policy date or Retroactive Date shall predate the Contract; the termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverage’s required to be maintained after final payment.

C. The insurance required shall be written for not less than the following, or greater if required by law:

1. Workers’ Compensation:
   a. State
      Statutory
      a. State
      b. Applicable Federal (e.g., Longshoremen’s) Statutory
      c. Employer’s Liability $500,000 per Accident $500,000 Disease, Policy Limit
         $100,000 Disease, Each Employee

2. Comprehensive or Commercial General Liability (including Premises-Operations; Independent Contractors’ Protective; Products and Completed Operations; Broad Form Property Damage):
   a. Bodily Injury:
      $1,000,000 Each Occurrence
      $1,000,000 Annual Aggregate
   b. Property Damage:
      $1,000,000 Each Occurrence
      $1,000,000 Annual Aggregate
   c. Products and Completed Operations to be maintained for two years after final payment.
   d. Property Damage Liability Insurance shall provide X, C or U coverage.
3. Broad Form Liability Insurance shall provide X, C and U coverage. Contractual Liability:
   a. Bodily Injury:
      $2,000,000 Each Occurrence
      $2,000,000 Aggregate
   b. Property Damage:
      $2,000,000 Each Occurrence
      $2,000,000 Aggregate

4. Personal Injury, with Employment Exclusion deleted:
   a. Personal Injury:
      $1,000,000 Aggregate

5. Business Auto Liability (including owned, non-owned and hired vehicles):
   a. Bodily Injury:
      $1,000,000 Each Person
      $1,000,000 Each Occurrence
   b. Property Damage:
      $1,000,000 Each Occurrence

6. Umbrella Excess Liability:
   a. Excess Liability:
      $2,000,000 Over Primary Insurance

D. If this insurance is written on the Comprehensive General Liability policy form, the Certificates shall be AIA Document G715, ACORD Certificate of Insurance. If this insurance is written on the Commercial General Liability policy form, ACORD Form 25S will be acceptable.

1.02 PROPERTY INSURANCE

A. If this insurance is written on the Comprehensive General Liability policy form, the Certificates shall be AIA Document G715, ACORD Certificate of Insurance. If this insurance is written on the Commercial General Liability policy form, ACORD Form 25S will be acceptable.

B. The insurance required is not intended to cover machinery, tools or equipment owned or rented by the Contractor which are utilized in the performance of the Work but not incorporated into the permanent improvements. The Contractor shall, at the Contractor’s own expense, provide insurance coverage for owned or rented machinery, tools or equipment.

END OF DOCUMENT 00 73 16
It is the policy of the State of Rhode Island that minority business enterprises (MBEs) shall have the maximum opportunity to participate in the performance of all procurements and projects funded in whole or in part with state funds. Rhode Island General Law 37-14.1-6 states that “Minority business enterprises shall be included in all procurements and construction projects under this chapter and shall be awarded a minimum of ten percent (10%) of the dollar value of the entire procurement or project.”

The bidder’s compliance with MBE/WBE participation requirements will be evaluated on the basis of a percentage of the total contract. Bidders agree that the participation commitment shall apply to the total contract price, inclusive of all modifications and amendments, if awarded.

Prior to the approval and issuance of a contract, a letter of approval from the Office of Diversity, Equity and Opportunity (ODEO), Minority Business Enterprise Compliance Office that you have satisfied the requirements of RIGL 37-14.1 will be required. To initiate this process, you must submit a completed “MBE Utilization Plan” form to Dorinda Keene at the Office of Diversity, Equity and Opportunity, MBE Compliance Office, One Capitol Hill, 3rd Floor, Providence, RI 02908. Plans may be submitted electronically to Dorinda.Keene@doa.ri.gov. For further information, call (401) 574-8670, or visit the MBE website located at www.mbe.ri.gov.

The Contract will be awarded to the responsible Bidder submitting the lowest proposal complying with the conditions of the Invitation to Bid provided the Bid is reasonable and it is in the interest of the Owner to accept it. The Bidder to whom the award is made will be notified at the earliest practicable date. The Owner reserves the right to reject any and all Bids and to waive any informalities in Bids received whenever such rejection or waiver is in the interest of the Owner. No Bidder may withdraw its bid within sixty (60) calendar days after the actual date of opening thereof.

END OF DOCUMENT 00 73 39
CAPTAIN ISAAC PAINE ELEMENTARY SCHOOL
Gymnasium Backstop Replacement
Foster, Rhode Island

DOCUMENT 00 73 46
WAGE DETERMINATION SCHEDULE

The State of Rhode Island Department of Labor, Division of Professional Regulation General Decision Modification document, in effect at the time of the Bid issuance for this Project, is an integral part of the Bid Documents for use in fulfilling prevailing wage rate requirements. A copy is available on the web site of the State of Rhode Island Department of Administration, Division of Purchases.

The Division of Purchases Web Site Address:

www.purchasing.ri.gov

Click on “Information”; click on “Prevailing Wage Table”.

Documents are not contained within this Project Manual but may be obtained from the State of Rhode Island, Department of Labor and Training, Division of Professional Regulations, 1511 Pontiac Avenue, Cranston, RI 02920-4407, Tel. No. 401-462-8580.

The Foster School District will require copies of certified payrolls to be submitted with the monthly application for payment. Said Certified payrolls must be submitted to Foster Finance Office, 181 Howard Hill Road, Foster, RI 02825.

END OF DOCUMENT 00 73 46
PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. As of the time of publication of this project manual no addenda had been issued.

B. Should Addenda be issued during the Bid Period, They will augment this Document and become a part of the Project Manual.

C. Such Addenda and Modifications when issued, with reference to the Project Manual, the General Conditions, Supplemental General Conditions, Drawings or Specifications, shall be inserted following this page and become integral parts of the Contract Documents.
PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work specified in this Document.

1.02 REFERENCE

A. The Drawings hereinafter listed represent an integral part of the Contract Documents. They should not be considered as a separate entity, as along with the technical specifications, form a process of disseminating information required to perform the Work of this Project.

B. The Drawings may be issued in multiple packages or phases. The Schedule below will be modified as these packages are issued.

1.03 SCHEDULE

A. The following schedule indicates the Drawings of this Contract. The manner of listing and respective order are for convenience only and do not obligate the Contractor to perform the Work in any specific sequence. The work indicated on each drawing should not be construed as specific work for a specific trade, subcontractor or supplier.

B. SCHEDULE OF DRAWINGS:

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1.1</td>
<td>REFLECTED CEILING PLAN &amp; DETAILS</td>
</tr>
</tbody>
</table>

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF DOCUMENT 00 92 00
SECTION 01 11 00
SUMMARY OF WORK

PART 1  GENERAL

1.01  WORK COVERED BY CONTRACT DOCUMENTS

A. The Project consists of selective Gymnasium renovations for backstop replacement.
B. The Work includes but is not limited to interior finishes & equipment.
C. Coordination with Owner’s separate concurrent contracts, if any.
D. The Work will be constructed under a single prime construction contract.
E. Before starting work, all Contractor workers and Subs are required to obtain and submit a current BCI and State-approved picture ID. The Owner reserves the right to deny access to any worker based on information provided on the submitted BCI. All BCIs to be from Rhode Island and the Workers State of Residence and be current within six (6) calendar months of start of onsite work.

1.02  RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.03  FUTURE WORK

A. FUTURE CONTRACT: The Owner reserves the right to award contracts for additional work to be performed at the site during construction and following the Substantial Completion. Completion of that future work depends on the progress of, and the successful and timely completion of, the preparatory and related Work of this Contract.

1.04  CONTRACTOR AND CONTRACTOR USE OF PREMISES

A. GENERAL: During the construction period, the Contractor shall have use of the premises for construction operations, including use of the site, to the extent as directed by the Owner. Their use of the premises is also limited 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 or as allowed by the Owner.

1.05  OCCUPANCY REQUIREMENTS

A. PARTIAL OWNER OCCUPANCY: The Owner reserves the right 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. The Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner occupancy.

2. Obtain a Certificate of Occupancy from local building officials prior to Owner occupancy.

3. Prior to partial Owner occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy, the Owner will operate and maintain mechanical and electrical systems serving occupied portions of the building.

4. Upon occupancy, the Owner will assume responsibility for maintenance and custodial service for occupied portions of the building.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTIONS (Not Applicable)

END OF SECTION 01 11 00
SECTION 01 20 00
PRICE AND PAYMENT PROCEDURES

PART 1   GENERAL

1.01   SECTION INCLUDES

A.   Procedures for preparation and submittal of applications for progress payments.
B.   Documentation of changes in Contract Sum and Contract Time.
C.   Change procedures.
D.   Defect assessment.
E.   Procedures for preparation and submittal of application for final payment.

1.02   RELATED REQUIREMENTS

A.   Section 00 52 00 – Agreement Form: Contract Sum, retainages, and monetary values of unit prices.
B.   Section 00 72 00 – General Conditions: Additional requirements for progress payment, final payment, changes in the Work.
C.   Section 01 20 00 – Unit Prices: Monetary values of unit prices; Payment and modification procedures relating to unit prices.
D.   Section 01 21 00 – Allowances: Payment procedures relating to allowances.
E.   Section 01 23 00 – Alternates.
F.   Section 01 31 13 – Project Coordination.
G.   Section 01 33 00 – Submittal Procedures.
H.   Section 01 78 00 – Closeout Procedures Submittals: Project Record Documents

1.03   SCHEDULE OF VALUES

A.   Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
B.   Forms filled out by hand will not be accepted.
C.   Submit Schedule of Values in duplicate within 15 days after date established in Notice to Proceed.
D.   Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization, bonds and insurance, general conditions and closeout.
E. Include in each line item, the amount of Allowances specified in Section 01 21 00 Allowances. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.

F. Include separately from each line item, a direct proportional amount of Contractor’s overhead and profit.

G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.

B. Use form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
   1. Prepare a draft version “pencil copy” of each application and distribute via email 5 days prior to due date for review by Architect and Owner’s Representative.
   2. After making agreed revisions, individually sign and notarize with notary’s official seal, all copies. Deliver to Owner’s Representative for further processing and distribution.
   3. For each item, provide a column for listing: Item Number; Description of Work; Scheduled Value. Previous Applications: Work in Place and Stored Materials under this Application: Authorized Change Orders; Total Completed and Stored to Date of Application; Percentage of Completion; Balance to Finish; and Retainage.

C. Forms filled out by hand will not be accepted.

D. Execute certification by signature of authorized officer.

E. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.

F. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.

G. Submit three hard-copies of each Application for Payment.

H. Include the following with the application:
   1. Transmittal letter as specified for submittals in Section 01 33 00.
   2. Construction progress schedule, revised, updated and current.
   3. Partial release of liens from major subcontractors and vendors.
   4. Project record documents as specified in Section 01 78 39, for review by Owner which will be returned to the Contractor.
   5. Affidavits attesting to off-site stored products.
   6. Copies of any/all inspection reports, by the authorities having jurisdiction performed since submission of previous requisitions are to be submitted to Architect prior to or coinciding with applications for payment. Failure to submit inspection reports will be considered grounds for withholding payments.

I. When Architect requires substantiating information, submit data justifying dollar amounts in questions. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.05 CHANGE PROCEDURES

A. The Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by AIA A201/CM Article 12.4 by issuing supplemental instructions on AIA Form G710 Architect’s Supplemental Instruction or other similar form.
B. The Architect may issue a Proposal Request which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit an estimate within 7 days.

C. The Contractor may propose a change by submitting request for change to the Architect, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01 60 00.

D. STIPULATED SUM/PRICE CHANGE ORDER: Based on Proposal Request and Contractor's fixed or maximum price quotation or Contractor's request for a Change Order as approved by Architect.

E. UNIT PRICE CHANGE ORDER: For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under a Construction Change Authorization. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.

F. CONSTRUCTION CHANGE AUTHORIZATION: Architect may issue a directive, on AIA Form G713 Construction Change Authorization or similar form, signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute the change.

G. TIME AND MATERIAL CHANGE ORDER: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Architect will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.

H. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.

I. CHANGE ORDER FORMS: AIA G701 Change Order.

J. EXECUTION OF CHANGE ORDERS: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.06 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of the Architect, it is not practical to remove and replace the work, The Architect will direct an appropriate remedy or adjust payment.

C. The defective Work may remain, but the unit sum will be adjusted to a new sum at the discretion of the Architect.

D. The defective Work will be partially repaired to the instructions of the Architect, and the unit sum will be adjusted to a new sum at the discretion of the Architect.

E. The individual Specification Sections may modify these options or may identify a specific formula or percentage sum reduction.

F. The authority of the Architect to assess the defect and identify a payment adjustment is final.

G. Non-Payment for Rejected Products: Payment will not be made for rejected products for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable
2. Products determined as unacceptable before or after placement
3. Products not completely unloaded from the transporting vehicle
4. Products placed beyond the lines and levels of the required Work.
5. Products remaining on hand after completion of the Work.

1.07 APPLICATION FOR FINAL PAYMENT

A. Reference the General Conditions, and as may otherwise be required in the Contract Documents.

B. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments and sum remaining due.

C. Application for Final Payment will not be considered until the following have been accomplished:
   1. All closeout procedures specified in Section 017800.
   2. Insurance certificates for products and completed operations where required and proof that taxes, fees and similar obligations were paid.
   3. AIA Document G706, "Contractor’s Affidavit of Payment and Debts and Claims".
   4. AIA Document G706A, "Contractor’s Affidavit of Release of Liens".
   5. AIA Document G707, "Consent of Surety to Final Payment".
   6. Evidence that claims have been settled.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTIONS (NOT USED)

END OF SECTION 01 20 00
SECTION 01 21 00
ALLOWANCES

PART 1   GENERAL

1.01   SECTION INCLUDES

A. Cash allowances.
   1. Lump Sum Allowances
   2. Unit-Cost Allowances
B. Contingency allowances.
C. Inspection and testing allowances.
D. Selection & Purchase.
E. Unused materials.

1.02   RELATED SECTIONS

A. Section 01 20 00 – Price and Payment Procedures.
B. Section 01 22 00 – Unit Prices.

1.03   CASH ALLOWANCES

A. COSTS INCLUDED IN ALLOWANCES: Cost of Product to Contractor, or Subcontractor, less applicable trade discounts; delivery to site and applicable taxes.

B. COSTS NOT INCLUDED IN THE ALLOWANCE: Product handling at the site, including unloading, uncrating and storage; protection of Products from elements and from damage and labor for installation and finishing.

C. ARCHITECT RESPONSIBILITIES:
   1. Consult with Contractor in consideration and selection of Products, suppliers and installers.
   2. Select Products in consultation with Owner and transmit decision to Contractor.
   3. Prepare Change Order.

D. CONTRACTOR RESPONSIBILITIES:
   1. Obtain proposals from suppliers and installers and offer recommendations. Assist Architect in selection of Products, suppliers and installers.
2. On notification of selection by Architect, execute purchase agreement with designated supplier and installer.

3. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.

4. Promptly inspect Products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.

E. Funds will be drawn from Cash Allowances only by Change Order.

1.04 CONTINGENCY ALLOWANCES

A. Contractor’s costs for Products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Allowance.

B. Funds will be drawn from Contingency Allowance only by Change Order.

C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

1.05 INSPECTION AND TESTING ALLOWANCES

A. COSTS INCLUDED IN ALLOWANCES: Cost of engaging an inspection or testing firm, execution of inspection or tests, reporting results.

B. COSTS NOT INCLUDED IN THE ALLOWANCE

1. Incidental labor and facilities required to assist inspection or testing firm.

2. Costs of testing laboratory services required by Contractor separate from Contract Document requirements.

3. Costs of retesting upon failure of previous tests as determined by Architect.

C. PAYMENT PROCEDURES

1. Submit one copy of the inspection or testing firm's invoice with next application for payment.

2. Pay invoice on approval by Architect.

D. Funds will be drawn from inspection and testing allowances only by Change Order.

E. At Project closeout, credit unused amounts remaining in the inspection and testing allowance to Owner by Change Order.

1.06 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise the Architect of the date when the final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

B. At the Architect’s request, obtain proposals for each Allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by the Architect from the designated supplier.
1.07 UNUSED MATERIALS

A. Return unused materials to the manufacturer or supplier for credit to the Owner, after installation has been completed and accepted.

1. When requested by the Architect, prepare unused material for storage by Owner where it is not economically practical to return the material for credit. When directed by the Architect, deliver unused material to the Owner's storage space. Otherwise, disposal of unused material is the Contractor's responsibility.

1.08 SCHEDULE OF ALLOWANCES

A. No allowances have been established to date.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Used)

END OF SECTION 01 21 00
PART 1 GENERAL

1.01 SECTION INCLUDES
A. This Section includes administrative and procedural requirements for unit prices.

1.02 RELATED SECTIONS
A. Section 01 20 00 – Price and Payment Procedures.
B. Section 01 21 00 - Allowances

1.03 DEFINITIONS
A. Unit Price: An amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.  The Owner may or may not accept the unit prices proposed by the Contractor at the time of bid.

2. Owner reserves the right to negotiate or renegotiate the unit prices at any time during the contract time.

1.04 PROCEDURES
A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

B. Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

1.05 MEASUREMENT – GENERAL
A. Reference the General Conditions for additional requirements on Unit Price Work.

B. All unit prices which are specified for measurement by the linear foot (LF) shall be measured from the beginning to the termination point of the unit being measured.

C. Units of measure shall be as follows unless specified otherwise.
Aharonian & Associates, Inc. – Architects
Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement Foster, Rhode Island

<table>
<thead>
<tr>
<th>Item</th>
<th>Method of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS</td>
<td>Lump Sum - Unit is one; no measurement will be made.</td>
</tr>
<tr>
<td>EA</td>
<td>Each - Field count by Engineer</td>
</tr>
<tr>
<td>LF</td>
<td>Linear Foot - Field measure by Engineer</td>
</tr>
<tr>
<td>SF</td>
<td>Square Foot - Field measure by Engineer</td>
</tr>
<tr>
<td>SY</td>
<td>Square Yard - Field measured by Engineer</td>
</tr>
<tr>
<td>CY</td>
<td>Cubic Yard – Field measure by Engineer using the Average-End-Area Method to calculate volume</td>
</tr>
<tr>
<td>TON</td>
<td>Ton - Certified truck scale</td>
</tr>
</tbody>
</table>

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 SCHEDULE OF UNIT PRICES

A. No unit prices have been established to date.

END OF SECTION 01 22 00
ALTERNATES

PART 1  GENERAL

1.01 SECTION INCLUDES

A. Administrative and procedural requirements for alternates.

1.02 RELATED DOCUMENTS AND SECTIONS

A. Division 00 Documents and Division 01 Sections.

1.03 DEFINITIONS

A. Alternate: An amount proposed by Bidders and noted on the Bid Form for certain Work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems or installation methods described in the Contract Documents.

1. The cost or credit for each Alternate is the net addition to or deduction from the Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to the Contract Sum.

1.04 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the Alternate into Project.

1. Include as part of each Alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of Alternate.

B. Immediately following award of the Contract, notify each party involved, in writing, of the status of each Alternate. Indicate if Alternates have been accepted, rejected or deferred for later consideration. Include a complete description of negotiated modifications to Alternates.

C. Execute accepted Alternates under the same conditions as other work of the Contract.

D. A Schedule of Alternates is included at the end of this Section.

PART 2  PRODUCTS (Not Applicable)

PART 3 EXECUTIONS

3.01 SCHEDULE OF ALTERNATES

A. No Alternates have been established to date.

END OF SECTION 01 23 00

ALTERNATES
SECTION 01 25 00
SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 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.

1.02 SUMMARY
A. Section includes administrative and procedural requirements for substitutions.

1.03 RELATED SECTIONS
A. Section 01 60 00 –Product Requirements.

1.04 DEFINITIONS
A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by General Contractor.
B. Substitutions for Cause: Changes proposed by General Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
C. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to General Contractor or Owner. No substitutions for convenience are permitted.

1.05 ACTION SUBMITTALS
A. Substitution Requests: Submit one (1) copy of each request, in PDF format, for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section Number and Title, and Drawing Numbers and Titles.

1.  Substitution Request Form: Use form provided at the end of this section.
2.  Documentation: Show compliance with requirements for substitutions and the following, as applicable:
   a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
   b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
   c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
PART 2

1.07 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2  PRODUCTS

2.01 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than fifteen (15) days prior to the time required for preparation and review of related submittals.

1. Conditions: Owner’s representative will consider General Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Owner’s Representative will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.

3. Owner’s Representative Action: If necessary, Owner’s Representative will request additional information or documentation for evaluation within five (5) working days of receipt of request for substitution. Owner’s Representative will notify General Contractor of acceptance or rejection of proposed substitution within ten (10) working days of receipt of request, or five (5) working days of receipt of additional information or documentation, whichever is later.

a. Forms of Acceptance: Change Order, Construction Change Order, or Owner’s Representative Supplemental Instructions for minor changes in the Work.

b. Use product specified if Owner’s Representative does not issue a decision on use of a proposed substitution within time allocated.

1.06 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.
b. Requested substitution provides sustainable design characteristics that specified product provided.
c. Substitution request is fully documented and properly submitted.
d. Requested substitution will not adversely affect General Contractor's construction schedule.
e. Requested substitution has received necessary approvals of authorities having jurisdiction.
f. Requested substitution is compatible with other portions of the Work.
g. Requested substitution has been coordinated with other portions of the Work.
h. Requested substitution provides specified warranty.
i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not permitted.

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION 01 25 00
## SUBSTITUTION PROCEDURES

### Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement

Foster, Rhode Island

<table>
<thead>
<tr>
<th>Request Phase</th>
<th>Pre-Tender □</th>
<th>Post Tender □</th>
</tr>
</thead>
<tbody>
<tr>
<td>(If Pre-tender only) Current Tender Due Date:</td>
<td>Request No.:</td>
<td>Dated:</td>
</tr>
<tr>
<td>Project No.:</td>
<td>Contract No.:</td>
<td></td>
</tr>
<tr>
<td>Project Name/Location:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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: □

**See attached data for both specified and proposed products as required by Section 01 60 00.**

### Data attached:

- Drawings: □
- Product Data: □
- Reports: □
- Samples: □
- Tests: □
- Other: ____________________________________________

### Reason(s) for not providing the Specified Product:

### Similar Installation:

- Project: ___________________________
- Address: ___________________________
- Architect: ___________________________
- Owner: ___________________________
- Date Installed: ___________________________

### Post-Tender:

- Will proposed substitution impact other parts of the Work? □ No □ Yes □ If yes attach explanation by number of Days. _______
- Will proposed substitution increase Contract Time? □ No □ Yes □ number of Days. _______

### Actual Dollar Savings if substitution is accepted:

- $ _______________________

### The undersigned Certifies that the proposed Request for an Equal or Substitute conforms to all of the requirements of Division 01 General Requirements, Section 01 25 00 Substitution Procedures.

**Request Submitted By General Contractor:** ___________________________________________________

**By:**

- (Print Name) ____________________
- (Title) ____________________
- (Signature) ____________________
- (Date) ____________________

### Owner’s Representative Review – This Substitution Request is:

- □ Approved: (Submittals in accordance with Div. 01 General Requirements, Section 01 33 00 Submittal Procedures.)
- □ Approved as Noted: (Submittals in accordance with Div. 01 General Requirements, Section 01 33 00 Submittal Procedures.)
- □ Rejected: Use Specified Materials.
- □ Rejected: Request Not Received Within Specified Time Period – Use Specified Materials.

**Reviewed issue By:**

- (Print Name) ____________________
- (Signature) ____________________
- (Date) ____________________
SECTION 01 31 13
PROJECT COORDINATION

PART 1  GENERAL

1.01  SECTION INCLUDES

A. Administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:

1. General project coordination, administrative procedures and conservation.

2. Submittals.

3. Field engineering.

4. Cleaning and protection.

1.02  RELATED SECTIONS

A. Section 01 31 19 - Project Meetings: Progress and coordination meetings, pre-installation conferences.

B. Section 01 33 00 – Submittal Procedures: Contractor's Construction Schedule.

C. Section 01 60 00 – Product Requirements: Materials and Equipment.

D. Section 01 78 00 – Closeout Procedures and Submittals.

E. Section 01 78 39 - Project Record Documents.

1.03  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 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.

D. CONSERVATION: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water and materials.

1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

1.04 SUBMITTALS

A. COORDINATION DRAWINGS: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components.

1. Show the relationship of components shown on separate Shop Drawings.
2. Indicate required installation sequences.
3. Comply with requirements contained in Section 01 33 00 – Submittal Procedures.

B. STAFF NAMES: Within 15 days of commencement of construction operations, submit a list of the Contractor's principal staff assignments, including the superintendent 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 each temporary telephone.

1.05 FIELD ENGINEERING

A. Employ a Land Surveyor registered in the State of Rhode Island and acceptable to the Architect.

B. Contractor to locate and protect survey control and reference points.

C. Control datum for survey is that shown on Drawings.

D. Provide field engineering services. Establish elevations, lines and levels utilizing recognized engineering survey practices.

E. Submit a copy of registered site drawing and certificate signed by the Land Surveyor that the elevations and locations of the Work are in conformance with the Contract Documents.
PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 GENERAL COORDINATION PROVISIONS

A. INSPECTION OF CONDITIONS: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.02 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 at Substantial Completion.

B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.

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; Excessive internal or external pressures.

2. Excessively high or low temperatures; Thermal shock; Excessively high or low humidity; Water or ice.

3. Air contamination or pollution; Solvents, chemicals, light, radiation; Excessive weathering.

4. Puncture, abrasion, heavy traffic.

5. Soiling, staining and corrosion.

6. Bacteria; Rodent and insect infestation.

7. Combustion; Electrical current.

8. High-speed operation; Improper lubrication; Unusual wear or other misuse; Misalignment.

9. Contact between incompatible materials.

10. Destructive testing;

11. Unprotected storage, improper shipping or handling.

12. Theft or vandalism.

END OF SECTION 01 31 13
SECTION 01 31 19
PROJECT MEETINGS

PART 1    GENERAL

1.01    SECTION INCLUDES
A.    Pre-Construction Conference and Progress Meetings

1.02    REQUIREMENTS INCLUDED
A.    The Contractor shall schedule and administer the Pre-Construction Conference and shall:
1.    Prepare the agenda for the meeting.
2.    Notify all parties required to attend meeting.
3.    Make physical arrangements for meeting.
4.    Preside at meeting.
5.    Record the minutes, including significant proceedings and decisions.
6.    Reproduce and distribute copies of minutes within seven (7) calendar days after the meeting to participants in the meeting and other parties affected by decisions made at the meeting.
B.    The Contractor shall schedule and administer periodic progress meetings, and specially called meetings throughout the progress of the work. The Contractor shall:
1.    Prepare agenda for meetings.
2.    Make physical arrangements for meetings.
3.    Preside at meetings.
4.    Record the minutes, including significant proceedings and decisions.
5.    Reproduce and distribute copies of minutes within five (5) calendar days after each meeting to participants in the meeting and other parties affected by decisions made at the meeting.
C.    Representatives of Contractors, Subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

1.03    PRE-CONSTRUCTION CONFERENCE
A.    ATTENDANCE: Owner and/or representative, Architect, Contractor, Contractor's Superintendent, major Subcontractors, major suppliers and others as appropriate.
B. SUGGESTED AGENDA:

1. Distribution and discussion of
   a. List of major Subcontractors and suppliers.
   b. Projected construction schedules.
2. Critical work sequencing.
3. Major equipment deliveries and priorities.
4. PROJECT COORDINATION: Designation of responsible personnel.
5. Procedures and processing of Field decisions, Proposal requests, Submittals, Change Orders and Applications for Payment.
7. Procedures for maintaining Project Record Documents.
8. USE OF PREMISES:
   a. Office, work and storage areas.
   b. Owner's requirements.
11. Temporary utilities.
15. Place, date and time for regular progress meetings.

1.03 PROGRESS MEETINGS

A. Conduct regular scheduled progress meetings at place, dates and times agreed upon at the Pre-Construction Conference.

B. Conduct additional meetings as progress of the work dictates.

C. ATTENDANCE: Architect and his professional consultants as needed, Owner or representative (when required), Contractor, Contractor's Superintendent, Subcontractors as appropriate to the agenda, suppliers as appropriate to the agenda and others as required.

D. SUGGESTED AGENDA

1. Review approval of minutes of previous meeting.
2. Review of work progress since previous meeting.
3. Field observations, problems and conflicts.
4. Problems that impede construction schedule.
5. Review of off-site fabrication, delivery schedules.
6. Corrective measures and procedures to regain projected schedule.
7. Revisions to construction schedule.
8. Progress schedule during succeeding work period.
10. Pending changes and substitutions.
11. Coordination of schedules.
12. Review submittal schedules; expedite as required.
13. Review proposed changes for:
   A. Effect on Construction Schedule and on completion date.
   B. Effect on subcontracts of the project.
14. Other business.

PART 2  PRODUCTS (Not Applicable)

PART 3  EXECUTION (Not Applicable)

END OF SECTION  01 31 19
CAPTAIN ISAAC PAINE ELEMENTARY SCHOOL  
Gymnasium Backstop Replacement  
Foster, Rhode Island  
AA19027.2

SECTION 01 33 00  
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedural requirements for non-administrative Submittals, including shop drawings, product data, samples and other miscellaneous work-related submittals. Shop drawings, product data, samples and other work-related submittals are required to amplify, expand and coordinate the information contained in the Contract Documents.

1. Refer to other Division 1 Sections and other Contract Documents for specifications on administrative, non-work-related submittals. Such submittals include, but are not limited to the following items:
   a. Permits; Written consents; Manifests
   b. Payment applications; Performance and payment bonds; Insurance certificates.
   c. Inspection and test reports; Progress reports.
   d. Listing of subcontractors; Construction schedules.

B. SHOP DRAWINGS: Technical drawings and data that have been specially prepared for this Project, including but not limited to the following items:

1. Fabrication and installation drawings; Coordination drawings (for use on-site).
2. Schedules.
3. Design-mix formulas.

C. PRODUCT DATA: Standard printed information on manufactured products that has not been specially prepared for this Project, including but not limited to the following items:

1. Manufacturer’s product specifications and installation instructions; Catalog cuts.
2. Roughing-in diagram and templates; Standard wiring diagrams; Operational range diagrams.

D. SAMPLES: Physical examples of work, including but not limited to the following items:

1. Partial sections of manufactured or fabricated work.
2. Small cuts or containers of materials.
3. Complete units of repetitively used materials.

E. MISCELLANEOUS SUBMITTALS: Work-related, non-administrative submittals that do not fit in the three previous categories, including, but not limited to the following:

1. Specially prepared and standard printed warranties; Testing and certification reports.
2. Project photographs; Record Drawings; Field measurement data.
1.02 RELATED DOCUMENTS

A. Drawings, General Provisions of the Contract and Division 1 Specification Sections apply to work of this Section.

1.03 SUBMITTAL PROCEDURES

A. GENERAL: Refer to the General Conditions for basic procedures for submittal handling.

B. COORDINATION: Coordinate the preparation and processing of submittals with the performance of the work. Coordinate each separate submittal with other submittals and related activities such as testing, purchasing, fabrication, delivery and similar activities that require sequential activity.

1. Coordinate the submittal of different units of interrelated work so that one submittal will not be delayed by the Architect’s need to review a related submittal. The Architect reserves the right to withhold action on any submittal requiring coordination with other submittals until related submittals are forthcoming.

C. SCHEDULING: In each appropriate administrative submittal, such as the Progress Schedule, show the principal work-related submittals and time requirements for coordination of submittal activity with related work.

D. COORDINATION OF SUBMITTAL TIMES: Prepare and transmit each submittal to the Architect sufficiently in advance of the scheduled performance of related work and other applicable activities. Transmit different kinds of submittals for the same unit of work so that processing will not be delayed by the Architect’s need to review submittals concurrently for coordination.

E. REVIEW TIME: Allow sufficient time so that the installation will not be delayed as a result of the time required to properly process submittals, including time for re-submittal, if necessary. Advise the Architect on each submittal, as to whether processing time is critical to the progress of the work, and if the work would be expedited if processing time could be shortened.

1. Allow Fourteen (14) calendar days for the Architect’s initial processing of each submittal. Allow a longer time period where processing must be delayed for coordination with subsequent submittals. The Architect will advise the Contractor promptly when it is determined that a submittal being processed must be delayed for coordination.

2. Allow seven (7) calendar days for reprocessing each submittal.

3. No extension of time will be authorized because of the Contractor’s failure to transmit submittals to the Architect sufficiently in advance of the work.

F. SUBMITTAL PREPARATION: Mark each submittal with a permanent label for identification. Provide the following information on the label for proper processing and recording of action taken.

1. Project name; Date.
2. Name and address of Owner, Contractor and Supplier.
3. Name of manufacturer; Number and title of appropriate Specification Section; Drawing number and detail references, as appropriate; Similar definite information as necessary.
4. Provide a space on the label for the Contractor’s review and approval markings, and a space for the Architect’s “Action” marking.

G. SUBMITTAL TRANSMITTAL: Package each submittal appropriately for transmittal and handling. Transmit four (4) copies, plus the number of copies the Contractor wants returned to him after review of each submittal by the Architect, and to other destinations as required, by use of a transmittal form. Prepare a separate transmittal form for each division of work and identify each submittal by Specification Section number on the transmittal form. Submittals received from sources other than the Contractor will be returned to the sender "without action".
1. Record relevant information and requests for data on the transmittal form. On the transmittal form, or on a separate sheet attached to the form, record deviations from the requirements of the Contract Documents, if any, including minor variations and limitations.

2. Submittals will be accepted by the Architect if transmitted via E-mail.

3. **No submittals will be accepted by the Architect if transmitted via FAX machine.**

4. Include the Contractor's signed certification stating that information submitted complies with requirements of the Contract Documents.

5. Sequentially number the transmittal forms; re-submittals to have original number with an alphabetic suffix.

H. **CONTRACTOR’S REVIEW:** Stamp of approval indicates to Owner and Architect that all quantities, dimensions, field construction criteria, materials, catalog numbers and similar data have been determined and verified, and that each submittal has been reviewed or coordinated with requirements of Work and Contract Documents. **Failure to provide the Contractor’s Review Stamp shall be grounds for the Submittal to be returned to the Contractor with no action taken.**

I. No portion of Work requiring shop drawings shall be started or any materials be fabricated, delivered to site or installed prior to approval of such items. Fabrication performed, materials purchased or on-site construction accomplished which does not conform to approved shop drawings and data shall be at Contractor's risk. Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.

J. Project work, materials, fabrications and installation shall conform to approved shop drawings.

1.04 **PERFORMANCE REQUIREMENTS**

A. **MISCELLANEOUS SUBMITTALS**

1. **INSPECTION AND TEST REPORTS:** Classify each inspection and test report as being either “shop drawings” or “product data” depending on whether the report is specially prepared for the project, or a standard publication of workmanship control testing at the point of production. Process inspection and test reports accordingly.

2. **SURVEY DATA:** Provide copies of all survey data collected for property surveys, field measurements, and quantitative records of actual work, damage surveys and similar data required by the individual Sections of these specifications. None of the specified copies will be returned.

3. **STANDARDS:** Where submittal of a copy of standards is indicated, and except where copies of standards are specified as an integral part of a “Product Data” submittal, submit a single copy of standards for the Architect’s use. Where workmanship, whether at the project site or elsewhere, is governed by a standard, furnish additional copies of the standard to installers, Owner’s field representative and others involved in the performance of the Work.

4. **CLOSEOUT SUBMITTALS:** Refer to section "Closeout Procedures and Submittals" and to individual Sections of these specifications for specific submittal requirements of project closeout information, materials, tools and similar items.

   a. **RECORD DOCUMENTS:** Furnish set of original documents as maintained on the project site.

5. **GENERAL DISTRIBUTION:** Provide additional distribution of submittals to Subcontractors, suppliers, fabricators, installers, governing authorities and others as necessary for the proper performance of the Work. Include such additional copies of submittals in the transmittal to the Architect where the submittals are required to receive “Action” marking before final distribution. Record distributions on transmittal forms.

1.05 **ARCHITECT’S ACTION**

A. **GENERAL:** Except for submittals for the record and similar purposes, where action and return on submittals is required or requested, the Architect will review each submittal, mark with appropriate "Action", and where possible return within fourteen (14) calendar days of receipt. Where the submittal must be held for coordination the Architect will so advise the Contractor without delay.
B. ACTION STAMP: The Architect will stamp, sign and date each submittal copy to be returned to Contractor and indicate disposition of each submittal in accordance with the following grading requirements:

1. “Approved” or “Reviewed” indicates that Architect notes no exception to the intent of the Contract Documents. Fabrication of item may commence.
2. "Approved as Noted" or "Furnish as Corrected" indicates that Contractor may begin implementing the Work method or incorporating the material and equipment covered by the submittal in accordance with the noted corrections. Where submittal information will be incorporated in Operation and Maintenance data, a corrected copy shall be provided.
3. “Revise and Resubmit” indicates nonconformance with the Contract requirements or that too many corrections would be necessary. Except at its own risk, Contractor shall not undertake Work covered by this submittal until it has been revised, resubmitted, and returned marked either "Approved" or "Furnish as Corrected".
4. “Rejected” indicates nonconformance with the Contract requirements. The Architect will state the reasons for rejections.

C. ARCHITECT’S REVIEW

1. Architect’s review of submitted drawings and data will cover only general conformity to drawings and specification, external connections and dimensions which affect layout.
2. Architect’s review does not indicate thorough review of all dimensions.
3. Architect’s review of submittals does not relieve Contractor’s responsibility for errors, omissions or deviations, field verification of all dimensions nor responsibility for compliance with Contract Documents.

1.06 RESUBMISSION REQUIREMENTS

A. Make any corrections or changes in the submittals required by the Architect and resubmit until they are denoted “Approved”, “Reviewed”, “Approved as Noted” or “Furnish As Corrected” by the Architect. Resubmission requirements specified in individual specifications Sections, which differ from these requirements, will take precedence over these requirements.

B. SHOP DRAWINGS AND PRODUCT DATA

1. Revise initial drawings or data, and resubmit as specified for the initial submittal.
2. Indicate any changes which have been made other than those requested by the Architect.

C. SAMPLES: Submit new samples as required for initial submittal

1.07 DISTRIBUTION

A. Distribute reproductions of shop drawings and copies of product data which carry the Architect’s stamp denoting “Approved”, “Reviewed”, “Approved as Noted” or “Furnish As Corrected” to:

1. Job site file; Record documents file.
2. Subcontractors; Supplier or fabricator.

B. Distribute samples which carry the Architect’s stamp denoting “Approved”, “Reviewed”, “Approved as noted” or “Furnish as Corrected” as directed by the Architect.
SECTION 01 45 00
QUALITY CONTROL

PART 1    GENERAL

1.01   SECTION INCLUDES

A. Quality assurance and control of installation.

B. References.

C. Field samples.

D. Mock-up.

E. Inspection and testing laboratory services.

F. Manufacturers' field services and reports.

1.02   RELATED SECTIONS

A. Section 01 33 00 – Submittal Procedures: Submission of Manufacturers' Instructions and Certificates.

B. Section 01 45 29 – Testing Laboratory Services.

C. Section 01 60 00 – Product Requirements: Requirements for material and product quality.

1.03   QUALITY ASSURANCE/CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions and workmanship, to produce Work of specified quality.

B. Comply fully with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.

E. Perform work by persons qualified to produce workmanship of specified quality.

F. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.04   REFERENCES

A. Conform to reference standard by date of issue current on date of Contract Documents.

C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.05 FIELD SAMPLES

A. Install field samples at the site as required by individual specifications Sections for review.

B. Acceptable samples represent a quality level for the Work.

C. Where field sample is specified in individual Sections to be removed, clear area after field sample has been accepted by Architect.

1.06 MOCK-UP

A. Assemble and erect specified items, with specified attachment and anchorage devices, flashings, seals and finishes.

B. Where mock-up is specified in individual Sections to be removed, clear area after mock-up has been accepted by Architect.

1.07 INSPECTION AND TESTING LABORATORY SERVICES

A. The Contractor will appoint and employ services of an independent firm, acceptable to the Owner and Architect, to perform inspection and testing. Contractor shall pay for services from an Allowance specified in Section 01 21 00 – Allowances.

B. The independent firm will perform inspections, tests and other services specified in individual specification Sections and as required by the Architect.

C. Reports will be submitted by the independent firm to the Architect, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

D. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.

   1. Notify Architect and independent firm 48 hours prior to expected time for operations requiring services.

   2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.

E. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the Architect. Payment for retesting will be charged to the Contractor by deducting inspection or testing charges from the Contract Sum.

1.08 MANUFACTURERS’ FIELD SERVICES AND REPORTS

A. Submit qualifications of observer to Architect 30 days in advance of required observations. Observer subject to approval of Architect/Owner.

B. When specified in individual specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
C. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers’ written instructions.

D. Submit report in duplicate within 30 days of observation to Architect for review.

PART 2  PRODUCTS (Not Applicable)

PART 3  EXECUTIONS (Not Applicable)

END OF SECTION 01 45 00
SECTION 01 45 29
TESTING LABORATORY SERVICES

PART 1  GENERAL

1.01  SECTION INCLUDES

A. Selection and payment.

B. Contractor submittals.

C. Laboratory responsibilities.

D. Laboratory reports.

E. Limits on testing laboratory authority.

F. Contractor’s responsibilities.

G. Schedule of inspections and tests.

1.02  RELATED SECTIONS

A. Document 00 72 00 - General Conditions: Inspections, testing and approvals required by public authorities.

B. Section 01 33 00 – Submittal Procedures: Manufacturer’s certificates.

C. Section 01 75 00 - Starting and Adjusting.

D. Section 01 78 00 – Closeout Procedures and Submittals: Project Record Documents.

E. Individual Specification Sections: Inspections and tests required and standards for testing.

1.03  REFERENCES


B. ANSI/ASTM E329 - Recommended Practice for Inspection and Testing Agencies for Concrete, Steel and Bituminous Materials as Used in Construction.

1.04  SELECTION AND PAYMENT

A. Contractor will employ services of an independent testing laboratory, acceptable to the Owner and Architect, to perform specified inspection and testing.
Aharonian & Associates, Inc. – Architects
Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement Foster, Rhode Island

B. Contractor shall pay costs of services from an allowance specified in Section 01 21 00 – Allowances on approval of invoices by Architect.

C. Employment of testing laboratory shall in no way relive Contractor of obligation to perform work in accordance with requirements of Contract Documents.

1.05 QUALITY ASSURANCE

A. Comply with requirements of ANSI/ASTM E329 and ANSI/ASTM D3740.

B. LABORATORY: Authorized to operate in State in which Project is located.

C. LABORATORY STAFF: Maintain a full time registered Engineer on staff to review services.

D. TESTING EQUIPMENT: Calibrated at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards (NBS) Standards or accepted values of natural physical constants.

1.06 CONTRACTOR’S SUBMITTALS

A. Prior to start of Work, submit testing laboratory name, address and telephone number, and names of full time registered Engineer and responsible officer.

B. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards (NBS) during most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.

1.07 LABORATORY RESPONSIBILITIES

A. Test samples of mixes submitted by Contractor.

B. Provide qualified personnel at site. Cooperate with Architect/Engineer and Contractor in performance of services.

C. Perform specified inspection, sampling and testing of products in accordance with specified standards.

D.Ascertain compliance of materials and mixes with requirements of Contract Documents.

E. Promptly notify Architect/Engineer and Contractor of observed irregularities or non-conformance of Work or products.

F. Perform additional inspections and tests required by Architect.

G. Attend pre-construction conferences and progress meetings.

1.08 LABORATORY REPORTS

A. After each inspection and test, promptly submit two copies of laboratory report to Architect and to Contractor.

B. INCLUDE:

1. Date issued.

2. Project title and number.

3. Name of inspector.

4. Date and time of sampling or inspection.

5. Identification of product and Specifications Section.
6. Location in the Project.

7. Type of inspection or test.

8. Date of tests.

9. Results of tests.


C. When requested by Architect/Engineer, provide interpretation of test results.

1.09 LIMITS ON TESTING LABORATORY AUTHORITY

A. Laboratory may not release, revoke, alter or enlarge on requirements of Contract Documents.

B. Laboratory may not approve or accept any portion of the Work.

C. Laboratory may not assume any duties of Contractor.

D. Laboratory has no authority to stop the Work.

1.10 CONTRACTOR’S RESPONSIBILITIES

A. Deliver to laboratory, at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.

B. Cooperate with laboratory personnel and provide access to the Work.

C. Provide incidental labor and facilities to provide access to Work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, storage and curing of test samples.

D. Notify Architect/Engineer and laboratory 24 hours prior to expected time for operations requiring inspection and testing services.

E. Arrange with laboratory and pay for additional samples and tests required by Contractor beyond specified requirements.

1.11 SCHEDULE OF INSPECTIONS AND TESTS

A. See individual specification Section for inspection and testing requirements.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01 45 29
SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1  GENERAL

1.01  SECTION INCLUDES

A. Mobilization and demobilization.
B. Temporary Utilities.
C. Construction facilities.
D. Vehicular access and parking.
E. Temporary barriers and enclosures.
F. Protection of Work.
G. Temporary controls.
H. Project identification.

1.02  RELATED SECTIONS

A. Drawings, General Provisions of the Contract and Division 1 Sections apply to work of this Section.

1.03  GENERAL

A. The limits of the site are shown on the Drawings. Areas designated for Contractor staging shall be
    coordinated with the Owner in the field.
B. The limits of the Owner’s property are shown on the Drawings.
C. In the event additional space is required for the Contractor’s operations, the Contractor shall make its own
    arrangements and pay for such additional space.

1.04  PRIVATE LAND

A. The Contractor shall not enter or occupy private land outside of easements, except by written
    permission of the property Owner. Furnish Architect with copies of all agreements the Contractor has
    with property Owners to enter or occupy private lands.

1.05  PERMITS AND TEMPORARY FACILITIES

A. The Contractor shall obtain necessary permits, coordinate and provide all temporary facilities as required
    for performing the work, including any facilities specified for the Owner’s or the Architect’s use.
1.06 CONTROL OF TEMPORARY FACILITIES

A. All temporary facilities shall be subject to the control and direction of the Owner.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

3.01 MOBILIZATION

A. Provide all work necessary to move in personnel and equipment, set up Contractor's temporary offices, buildings, facilities, utilities, prepare the site for construction.

B. Set up construction facilities in a neat and orderly manner within the Contractor's staging area and at a location acceptable to the Architect. Accomplish all required work in accordance with applicable portions of these Specifications. Confine operations within the general work limits shown or established.

3.02 REMOVAL OF TEMPORARY FACILITIES AND CONTROLS

A. Completely remove temporary above grade or buried utilities, equipment, facilities, materials and equipment prior to Substantial completion or when their use is no longer required.

B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.

C. Temporary sheds, utilities, barricades, signs and other appurtenances related to prosecution of the Work and not incorporated in the permanent construction shall be completely removed from the site prior to acceptance of work by Owner.

D. Upon completion of work of all trades and before final acceptance of entire Project, each trade shall remove, at it's own expense, all wiring, appurtenances and accessories used in performance of its respective work.

E. Clean and repair damage caused by installation or use of temporary work.

F. Restore permanent facilities used during construction to specified condition.

3.03 DEMOBILIZATION

A. At the completion of the work and immediately prior to final inspection, clean the entire project area removing all debris, soil and rubbish.

   1. Should Contractor not remove rubbish or debris or not clean the facilities and site as specified above, the Owner reserves the right to have final cleaning done by others at the sole expense of the Contractor.

B. The Contractor shall:

   1. Employ experienced workers or professional cleaners for final cleaning.


   3. Remove from the property temporary structures and materials, equipment and appurtenances not required as part of, or appurtenant to, the completed work.

   4. Leave watercourse, gutters and ditches open and in condition satisfactory to Architect.
3.04 TEMPORARY UTILITIES

A. The Contractor shall coordinate for and obtain the necessary permits for connection to these services.

3.05 TEMPORARY HEATING AND VENTILATION

A. Provide temporary heating when temperature falls below 50 deg. F and as otherwise required to:
   1. Maintain working conditions acceptable to Architect.
   2. Protect all work, materials and equipment against damage from dampness or cold.
   3. Dry out structures. Maintain proper conditions for installation and curing of materials.

B. Ensure that heating equipment and fuels are compatible for particular purpose and include safety devices in accordance with industry standards.

C. Do not use combustion type heaters without proper venting nor in areas where such equipment might introduce a hazard.

D. Ensure that all enclosed areas are ventilated (using forced-draft equipment when necessary) as required to maintain proper conditions for personnel, and work, and to avoid any accumulation of hazardous dust or fumes.

E. Pay costs associated with furnishing, installing, maintaining, operating and removing of heating and ventilation equipment.

3.06 TEMPORARY WATER

A. Owner will provide water supply as required for used in connection with Work to be done under this Contract.

B. The Contractor shall pay for the cost of the water usage.

3.07 TEMPORARY ELECTRICITY AND/OR LIGHTING

A. Arrange with utility company and Owner to provide all power for heating, lighting, operation of equipment or for any other required use. Pay costs for service and for power used.

B. Install circuit and branch wiring, with area distribution boxes located so that power and lighting is available throughout construction by use of construction-type power cords.

C. Provide artificial lighting for areas of work when natural light is not adequate for work, and for areas accessible to public.

D. Furnish all extension cords, sockets, lamps, motors and accessories for work. Ground all outlets.

E. All temporary wiring, service equipment and accessories thereto installed shall be removed at expense of Contractor after serving its purpose.

F. Contractor is required to pay for replacement of all lamps broken and/or removed from premises during construction period and until date of Substantial Completion of Work and written acceptance by Owner.

3.08 TELEPHONE SERVICE

A. Provide, maintain and pay for telephone service to field office at time of project mobilization.
3.09 INTERFERENCE WITH EXISTING STRUCTURES

A. Whenever it may be necessary to cross or interfere with existing culverts, drains, water pipes or fixtures, guardrails, fences, or other structures needing special care, due notice shall be given to the Architect and to the various public and private agencies or individuals responsible for the utility or structure that is interfered with.

B. Whenever required, all objects shall be strengthened to meet any additional stress that the work herein specified may impose upon it, and any damage caused shall be thoroughly repaired.

C. The entire Work shall be the responsibility of the Contractor and the Work shall be performed at no additional expense to the Owner.

D. All damaged items of Work or items required to be removed and replaced due to construction shall be replaced or repaired by the Contractor to the complete satisfaction of the property Owners and/or the Architect at no additional expense to the Owner.

3.10 FIELD OFFICES AND SHEDS

A. OFFICE: Weather-tight, with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture and drawing display table.

B. Provide space for Project meetings, with table and chairs to accommodate 8 persons.

C. Provide separate private office, similarly equipped and furnished, for use of Owner. This office may be located in a job trailer, shared with the Contractor.

D. Coordinate locations of offices and sheds with the Owner and Architect.

E. Contractor’s project signage shall be subject to the direction and control of the Owner.

3.11 TEMPORARY SANITARY FACILITIES

A. Furnish temporary sanitary facilities at site for needs of all construction workers and others performing work or furnishing services on project.

B. Ensure that sanitary facilities are:

   1. Of a capacity acceptable to Architect and authorities having jurisdiction over the Project.

   2. Maintained throughout construction period.

   3. Obscured from public view to greatest extent possible and secured to prevent vandalism.

C. Furnish at least one toilet for each 20 workers if toilets of chemically treated type are used.

D. Service, clean and maintain facilities and enclosures.

E. Enforce use of such sanitary facilities by all personnel at site.

F. Pay costs associated with furnishing, installing, maintaining, operating and removing sanitary facilities.

3.12 VEHICULAR ACCESS

A. Construct and maintain temporary roads accessing public thoroughfares to serve construction area.
B. Extend and relocate as Work progress requires. Provide detours necessary for unimpeded traffic flow.

3.13 PARKING

A. Provide parking facilities for Contractor, Owner and Architect personnel working on the project.
B. Arrange for and provide temporary parking areas to accommodate construction personnel as required.
C. When site space is not adequate, provide additional off-site parking as required.

3.14 EXTERIOR ENCLOSURES

A. Provide temporary insulated weather-tight closure of exterior openings to accommodate acceptable working conditions and protection for products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.
B. Provide temporary roofing as required.

3.15 INTERIOR ENCLOSURES

A. Provide temporary partitions and ceilings as required to separate work areas from Owner occupied areas, to prevent penetration of dust and moisture into Owner occupied areas and to prevent damage to existing materials and equipment.
B. CONSTRUCTION: Framing, plywood and gypsum board sheet materials with closed joints and sealed edges at intersections with existing surfaces; insulated to R-13, STC rating of 35 in accordance with ASTM E90 and maximum Flame Spread Rating of 75 in accordance with ASTM E84.
C. Paint surfaces exposed to view from Owner occupied areas.

3.16 BARRICADES

A. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
B. Provide protection for plant life designated to remain. Replace damaged plant life.
C. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

3.17 FENCING

A. Construct temporary fence as required for the protection of the Contractor's materials, tools and equipment. Maintain fence during construction.
B. CONSTRUCTION: Commercial grade chain link fence, six feet in height.
C. Provide 6-foot high vehicular and gates with locks at access roads into site.

3.18 SECURITY BARRIERS

A. Provide security barriers to prevent unauthorized entry to construction areas to allow for Owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
B. The Contractor shall take all precautions necessary to prevent loss or damage caused by vandalism, theft, burglary, pilferage or unexplained disappearance of property of the Owner or Contractor, whether
or not forming part of the Work, located within the limits of Work. The Contractor shall have full responsibility for the security of such property located in such areas and shall reimburse the Owner for any such loss, damage or injury, except such as may be directly caused by agents or employees of the Owner.

C. Coordinate with Owner's security program.

3.19 PUBLIC SAFETY

A. At all times until final acceptance of Work by Owner, the Contractor shall protect Work and shall take all precautions of preventing injuries to persons or damage to property on or about site.

B. Contractor shall comply with all applicable laws, ordinances, rules and regulations regarding safety of persons or property or with regard to protecting them from damage, injury or loss and shall not load or permit any part of Work to be placed so as to endanger safety of Work.

C. If Contractor constructs temporary bridges or provides temporary crossing of streams, Contractor's responsibility for accidents shall include roadway and sidewalk approaches as well as structure of such crossings.

D. Conduct work such that abutters shall have reasonable access to their property. Contractor shall be responsible for providing such reasonable safe means of access to public way as Architect deems essential. When it is necessary to leave materials and equipment upon highway or city or town way, place them so as to cause least possible obstruction to drainage, pedestrian and other travel.

3.20 CARE AND PROTECTION OF PROPERTY

A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the Work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Architect.

B. All sidewalks which are disturbed by the Contractor's operations shall be restored to their original condition by the use of similar or comparable materials. All curbing shall be restored in a condition equal to the original construction and in accordance with the best modern practice.

C. Along the location of this Work, all fences, walks, bushes, trees, shrubbery and other physical features shall be protected and restored in a thoroughly workmanlike manner. All grass areas beyond the limits of construction which have been damaged by the Contractor shall be regraded and seeded, subject to the approval of the Architect.

D. Trees close to the work shall be boxed or otherwise protected against injury. The Contractor shall trim all branches that are likely to be damaged because of his operations, but in no case shall any tree be cut or removed without prior notification of the Architect. All injuries to bark, trunk, limbs and roots of trees shall be repaired by dressing, cutting and painting according to approved methods, using only approved tools and materials, subject to the approval of the Owner.

E. The protection, removal and replacement of existing physical features along the line of Work shall be a part of the Work under the Contract, and all costs in connection therewith shall be included in the unit and/or lump sum prices established under the items in the proposal.

3.21 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. The Contractor shall assume full responsibility for the protection of all buildings, structures and utilities, public or private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, drains, electric and telephone cables and cesspools adjacent to trench
excavations, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by him at his expense, to the damaged items original condition.

B. The Contractor shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water, gas, electric and telephone services, drain lines and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.

C. Protection and temporary removal and replacement of existing utilities and structures as described in this section shall be a part of the work under the Contract and all costs in connection therewith shall be included in the unit prices established in the proposal.

3.22 PROTECTION OF WORK

A. The Contractor shall at all times protect excavations, trenches, new construction, old construction, all job materials, apparatus and fixtures from rain, wind, snow, ice, dust, dirt, mud, groundwater, back-up or leakage of sewers, drains or other piping, and from water of any other origin, and shall remove promptly any accumulation of the above. He shall provide and operate all pumps, piping and other equipment necessary to this end at no additional cost to Owner.

B. Thoroughly protect all completed work and all stored materials.

C. Provide boards, cloths, planks, waterproof paper, canvas or other approved protection and use as necessary to prevent any damage.

D. Provide protective measures to prevent damage to lawns, trees and shrubs to remain after Project is complete.

E. Protect, at end of each day's work, such Work that may be liable to damage by the elements.

F. Replace or rectify work or materials damaged by workmen, by the elements or by any other cause, to the satisfaction of the Architect and at no additional expense to the Owner.

G. Repair streets, curbs, sidewalks, poles, grass, shrubs, trees or other existing site features, if disturbed by building operations. Leave them in as good condition as they were before being disturbed.

H. Do not allow workmen, including those of any Subcontractor or supplier, to mark finish surfaces with marking pens or other such devices that are not readily erasable.

I. Protect installed Work and provide special protection where specified in individual specification Sections.

J. Provide temporary and removable protection for installed products. Control activity in immediate work area to minimize damage.

K. Provide protective coverings at walls, projections, jambs, sills and soffits of openings.

L. Protect finished floors, stairs and other surfaces from traffic, dirt, wear, damage or movement of heavy objects by protecting with durable sheet materials.

M. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

N. Prohibit traffic from landscaped areas.
3.23 OPEN EXCAVATIONS

A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property.

B. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access to private property during construction shall be removed when no longer required.

C. The length of open trench will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Architect and/or the local authorities having jurisdiction over the Project.

D. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Architect and/or the local authority may require special construction procedures such as limiting the length of open trench, prohibiting stacking excavated material in the street, and requiring that the trench shall not remain open overnight.

E. The Contractor shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment or other obstacles which could be dangerous to the public shall be well lighted at night.

3.24 LENGTH OF TRENCH TO BE OPENED, MAINTAINING PREMISES FREE FROM OBSTRUCTIONS, CROSSES, DIRECTIONAL SIGNS AND LIGHTS

A. The length of trench opened at any time, from the point where ground is being broken to completed backfill and also the amount of space in streets or public and private lands occupied by equipment, trench and supplies, shall not exceed the length or space considered reasonably necessary for installation of Work.

B. In determining the length of open trench or spaces for equipment, materials, supplies and other necessities, the Contractor will consider the nature of the lands or streets where work is being done, types and methods of construction and equipment being used, inconvenience to the public or to private parties, possible dangers and other proper matters.

C. All Work must be constructed with a minimum of inconvenience and danger to the public and all other parties concerned. Trench excavations shall be completely backfilled at the end of each day, or covered with steel traffic plates, as directed by the Architect and/or as required by authorities having jurisdiction over the Project.

D. Whenever any trench obstructs pedestrian and vehicular traffic in or to any public street, private driveway or property entrance, or on private driveway or property entrance, or on private property, the Contractor shall take such means as may be necessary to maintain pedestrian and vehicular traffic and access.

E. Until such time as the Work may have attained sufficient strength to support backfill, or if for any other reason it is not expedient to backfill the trench immediately, the Contractor shall construct and maintain suitable plank crossings and bridges to carry essential traffic in or to the street, driveway or property in question as specified or directed.

F. Suitable signs, lights and such required items to direct traffic shall be furnished and maintained by the Contractor.

G. The Contractor must keep streets and premises free from unnecessary obstructions, debris and all other materials.
H. The Architect or local authority may, at any time, order all equipment, materials, surplus from excavations, debris and all other materials lying outside that length of working space promptly removed, and should the Contractor fail to remove such material within 24 hours after notice to remove the same, the Architect or local authority may cause any part or all of such materials to be removed by such persons as he may employ, at the Contractor's expense, and may deduct the cost thereof from payment which may be or may become due to the Contractor under the Contract. In special cases, where public safety urgently demands it, the Architect or local authority may cause such materials to be removed without prior notice.

3.25 EROSION AND SEDIMENT CONTROL

A. GRADE SITE TO DRAIN. Maintain excavations free of water. Provide, operate and maintain pumping equipment.

B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion and accumulation of sediment in utility structures or other similar undesirable locations.

3.26 REMOVAL OF WATER AND PROTECTION FROM FLOODING

A. The Contractor shall construct and maintain, at no additional expense to the Owner, all pumps, drains, well points or any other facility for the control and collection of groundwater and/or surface water and provide all pumps and piping for the removal of water from the trenches and excavations so that all trenches and excavations may be kept free from water at all times and so that all construction work may be performed in the dry.

B. Any damage resulting from the failure of the dewatering operations of the Contractor and any damage resulting from the failure of the Contractor to maintain the areas of all work in a suitable dry condition shall be repaired by the Contractor as directed by the Architect at no additional expense to the Owner.

C. The Contractor's pumping and dewatering operations shall be carried out in accordance with RIDEM regulations and in such a manner as to prevent damage to existing structures and utilities and the contract Work and so that no loss of ground will result from these operations.

D. Precautions shall be taken to protect existing and new Work from flooding during storms or from other causes. Pumping shall be continuous where directed by the Architect to protect the Work and/or to maintain satisfactory progress.

E. All pipelines or structures not stable against uplift during construction or prior to completion shall be thoroughly braced or otherwise protected.

F. Water from the trenches, excavations and drainage operations shall be disposed of downstream of the water course in such a manner as will neither cause public nuisance, nor cause injury to public health nor to public or private property nor to the Work completed nor to the Work in progress.

G. No extra payment will be made for the removal of water, protection from flooding, drainage work, diversion of existing water courses and such other work, but compensation therefore shall be considered as having been included in the prices stipulated for the appropriate items of work as listed in the bid.

H. The Contractor shall, at his own cost, maintain the flow of water courses during the progress of the work.

3.27 SURFACE AND STORM WATER CONTROL

A. Provide for drainage of storm water and such water as may be applied or discharged on site in performance of Work.

B. Ensure that drainage facilities are adequate to prevent damage to Work, site and adjacent property.
1. Clean, enlarge or supplement existing drainage channels to carry all increased runoff attributable to operation.

2. Construct dikes to:
   a. Divert increased runoff from entering adjacent property (except in natural channels).
   b. Protect the Work.
   c. Direct water to drainage channels or conduits.

### 3.28 DUST CONTROL

A. At no additional cost to the Owner, take measures to prevent unnecessary dust.
   1. Keep earth surfaces subject to dusting moist with water only.
   2. Cover dusty materials in piles or in transit to prevent blowing.

B. Protect buildings or operating facilities that may be affected adversely by dust.

C. Protect existing or new machinery, motors, instrument panels or similar equipment with dust screens. Include proper ventilation with dust screens.

### 3.29 NOISE CONTROL

A. The Contractor shall employ all reasonable measures to avoid unnecessary noise and ensure that noise is appropriate for normal ambient sound levels in the work area during working hours. Where required by agencies having jurisdiction, certain noise-producing work may have to be performed during specified periods only. Noise control measures during normal work hours shall include but not be limited to:
   1. Operate machinery in a manner to cause least noise consistent with efficient performance of work.
   2. Equip all construction machinery and vehicles with sound-muffling devices.
   3. During construction adjacent to or near occupied buildings, erect screens or barriers to reduce noise in building to limits in accordance with applicable codes. Conduct operations in such a manner as to avoid unnecessary noise which might interfere with activities of building occupants.

B. When the Contractor’s work extends beyond normal working hours, the Contractor shall incorporate to the complete satisfaction of the Owner and Architect, adequate noise prevention measures to insure minimum noise impact on the surrounding areas. Noise prevention measures shall include, but not be limited to:
   1. Insulated enclosures.
   2. Hospital grade silencers or mufflers.
   3. Equipment modification.
   4. Special equipment, as necessary to meet Town noise guidelines.
   5. Any other noise prevention measures.

C. Should at any time the Owner and/or Architect determine that noise prevention measures are inadequate, the Contractor shall suspend all such work in question until acceptable measures are
incorporated. Suspension of work due to inadequate noise prevention shall not be a cause for additional cost to the Owner.

D. Prior to the start of any Work outside normal work hours, the Contractor shall submit a Noise Control plan to the Owner and Architect for review. Noise Control plans shall be submitted for:

1. Night work.

2. All Pumping operations and work that may extend beyond normal work day.

3. Any other work as determined by the Architect that warrants special noise prevention measures.

E. All costs associated with noise control measures shall be considered part of the bid price for appropriate work being completed.

3.30 POLLUTION CONTROL

A. Prevent pollution of drains and watercourses by sanitary wastes, sediment, debris and other substances resulting from construction activities.

1. Do not allow sanitary wastes to enter any drain or watercourse other than sanitary sewers.

B. Do not allow sediment, debris or other substance to enter sanitary sewers and take measures to prevent such materials from entering any drain or watercourse.

C. All earthwork, grading, moving of equipment, water control and other operations likely to create silting, shall be planned and conducted so as to avoid pollution of any water courses. Water used for any purpose that has become contaminated with oil, bitumen, salt or other pollutions shall be discharged so as to avoid affecting nearby waters. Under no circumstances shall pollutants be discharged directly into any water courses.

D. All concrete repair work requiring cleaning and removal of debris is to be contained as not to contaminate the surrounding environment.

3.31 PROJECT IDENTIFICATION

A. Provide 8 foot wide x 6 foot high project sign of exterior grade plywood and wood frame construction, painted, with exhibit lettering by professional sign maker, to Architect's design and colors.

B. List title of Project, names of Owner, Architect, professional sub-consultants and Contractor.

C. Erect on site at location established by Owner and/or Architect.

D. No other signs are allowed without Owner permission except those required by law.

END OF SECTION 01 50 00
SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Products, materials and equipment.
B. Transportation and handling.
C. Storage and protection.
D. Product options.
E. Substitutions.

1.02 RELATED SECTIONS
A. Document 00 21 13 - Instructions to Bidders: Product options and substitution procedures.
B. Document 00 22 13 – Supplementary Instructions to Bidders.
C. Section 01 45 00 - Quality Control: Product quality monitoring.

1.03 MANUFACTURED AND FABRICATED PRODUCTS
A. Design, fabricate and assemble in accordance with the best engineering and shop practices.
B. Manufacture like parts of duplicate units to standard sizes and gages, to be interchangeable.
C. Two or more items of the same kind shall be identical, by the same manufacturer.
D. Products shall be suitable for service conditions.
E. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically reviewed by Architect.
F. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.04 MATERIAL AND EQUIPMENT INCORPORATED INTO THE WORK
A. Conform to applicable specifications and standards.
B. Comply with size, make, type and quality specified or as specifically reviewed by the Architect.
1.05 **MANUFACTURER’S INSTRUCTIONS**

A. When the Contract Documents require that installation of Work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, as specified in Section 01 33 00 – Submittal Procedures.

B. Maintain one set of complete instructions at the job site during installation and until completion.

C. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.

D. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Architect for further instructions.

E. Do not proceed with Work without clear instructions.

F. Perform Work in accordance with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by the Contract Documents.

1.06 **CERTIFICATES OF CONFORMANCE AND MANUFACTURE**

A. In addition to other requirements specified herein, the Contractor shall furnish to the Architect, as specified in Section 01 33 00 - Submittals, notarized certificates of conformance and manufacture that all materials and/or equipment to be furnished under this Contract meet the specification requirements. When directed, each shipment of material shall be accompanied by the manufacturer's notarized certificates of conformance and manufacture. Unless otherwise specified, all testing of materials shall be provided by the Contractor at no additional expense to the Owner.

B. Each manufacturer's certificate shall be endorsed or accompanied by the Contractor's certificate that the material certified by the manufacturer will be the material incorporated in the Work.

1.07 **TRANSPORTATION AND HANDLING**

A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with Work and conditions at the site and also when two or more trades, contractors or suppliers are involved.

B. Transport all materials and equipment on legally approved conveyances as required or recommended by the respective manufacturer or supplier.

C. Deliver products in undamaged condition, in manufacturer's original containers or packaging with identifying labels intact and legible.

D. Receive and handle all materials and equipment, at the Project site, by conveyances or methods as recommended by the respective manufacturer or supplier to prevent damage to products.

E. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and reviewed submittals, and that products are properly protected and undamaged.

F. Remove from the site any material or item of equipment damaged during the transportation or handling process, and immediately replace at no additional cost to the Owner.

1.08 **STORAGE AND PROTECTION**

A. Store products in accordance with the manufacturer's instructions, with seals and labels intact and legible.

B. Store products subject to damage by the elements in weathertight enclosures.
Aharonian & Associates, Inc. – Architects
Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement Foster, Rhode Island

C. Maintain temperature and humidity within the ranges required by manufacturer's instructions.

D. Maintain all storage areas in a clean and orderly condition at all times.

1.09 EXTERIOR STORAGE

A. Store fabricated products above the ground, on blocking or skids. Prevent soiling or staining. Cover products that are subject to deterioration with impervious sheet coverings and provide adequate ventilation to avoid condensation.

B. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

C. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions and are free from damage or deterioration.

D. Replace any material or item of equipment damaged due to inadequate storage or protection and immediately replace at no additional cost to the Owner.

1.10 PROTECTION AFTER INSTALLATION

A. Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

1.11 PRODUCT OPTIONS

A. PRODUCTS SPECIFIED BY REFERENCE STANDARDS OR BY DESCRIPTION ONLY: Any product meeting those standards or description.

B. PRODUCTS SPECIFIED BY NAMING ONE OR MORE MANUFACTURERS: Products of manufacturers named and meeting specifications, no options or substitutions allowed.

C. PRODUCTS SPECIFIED BY NAMING ONE OR MORE MANUFACTURERS WITH A PROVISION FOR SUBSTITUTIONS: Submit a request for substitution for any manufacturer not named.

1.12 SUBSTITUTIONS

A. Instructions to Bidders specify time restrictions for submitting requests for Substitutions during the bidding period to requirements specified in this Section.

B. Thereafter, Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.

C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.

D. A REQUEST CONSTITUTES A REPRESENTATION THAT THE CONTRACTOR:

1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.

2. Will provide the same warranty for the Substitution as for the specified product.

3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete, with no additional cost to Owner.

4. Waives claims for additional costs or time extension that may subsequently become apparent.
5. Will reimburse Owner for review or redesign services associated with re-approval by authorities.

E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

F. SUBSTITUTION SUBMITTAL PROCEDURE

1. Submit four copies of request for Substitution for consideration. Limit each request to one proposed Substitution.

2. Submit shop drawings, product data and certified test results attesting to the proposed product equivalence.

3. The Architect will notify the Contractor, in writing, of decision to accept or reject request.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01 60 00
SECTION 01 73 29
CUTTING AND PATCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Administrative and procedural requirements for cutting and patching.

1.02 RELATED SECTIONS

A. Section 01 31 13 – Project Coordination: Procedures for coordinating cutting and patching with other construction activities.

B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.03 SUBMITTALS

A. CUTTING AND PATCHING PROPOSAL: Submit a proposal describing procedures well in advance of the time cutting and patching will be performed if the Owner 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. List products to be used and firms or entities that will perform Work.

4. Indicate dates when cutting and patching will be performed.

5. 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.

6. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with the original structure.

7. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of unsatisfactory work.
1.04 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 of the cutting and patching proposal before cutting and patching the following structural elements:
   a. Foundation construction; Bearing and retaining walls.
   b. Structural concrete; Structural steel and structural decking; Lintels; Miscellaneous structural metals.
   c. Stair systems.
   d. Exterior wall construction.
   e. Equipment supports; 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 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; Water, moisture or vapor barriers.
   c. Membranes and flashings.
   d. Fire protection systems.
   e. Noise and vibration control elements and systems.
   f. Electrical wiring systems; Control systems; Communication 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. If possible, retain the original Installer or fabricator to cut and patch the exposed Work. If it is impossible to engage the original Installer or fabricator, engage another recognized experienced and specialized firm.

1.05 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

2.01 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.

PART 3 EXECUTION

3.01 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, take corrective action before proceeding.
1. Before proceeding, meet at the Project Site with parties involved in cutting and patching. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.02 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 Project 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 utilities serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.03 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.

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 31 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 minimize 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 rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.04 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
SECTION 01 74 00
CLEANING AND WASTE MANAGEMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Provide all necessary material, labor and equipment to maintain the job site free of debris and waste material during construction and to perform final cleaning.

1.02 RELATED SECTIONS

A. Section 01 78 00 – Closeout Procedures and Submittals.

B. Cleaning and protection requirements as described in other Sections of this Project Manual.

1.03 REQUIREMENTS OF REGULATORY AGENCIES

A. SAFETY STANDARDS: Maintain project in accordance with the following safety and insurance standards: Federal Occupational Safety and Health Act of 1970.

B. FIRE PROTECTION: Store volatile waste in covered metal containers and remove from premises daily.

C. POLLUTION CONTROL: Conduct clean-up and disposal operations to comply with local ordinances and anti-pollution laws.
   1. Burning or burying of rubbish and waste materials on the Project site is not permitted.
   2. Disposal of volatile fluid waste (such as mineral spirits, oil or paint thinner) in storm sanitary sewer systems or into streams or waterways is not permitted.

PART 2 PRODUCTS

2.01 CLEANING MATERIALS

A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 EXECUTION

3.01 DURING CONSTRUCTION

A. Oversee cleaning and insure that buildings and grounds are maintained free from accumulations of waste material and rubbish.
B. Do not allow waste materials, rubbish and debris to accumulate and become an unsightly or hazardous condition. At reasonable intervals or as directed by the Architect during the progress of work, clean up site and access and dispose of waste materials, rubbish and debris from the site and legally dispose of at public or private dumping areas off the Owner's property.

C. Immediately after unpacking, remove and dispose of all packing materials, case lumber, excelsior, wrapping or other rubbish from site.

D. Remove all wastes from site and dispose in a manner complying with local ordinances and antipollution laws.

E. Store volatile wastes in covered metal containers and remove daily.

F. Vacuum clean interior building areas when ready to receive finish painting and continue vacuum cleaning on an as-needed basis until building is ready for acceptance or occupancy.

G. Lower waste materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.

H. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet newly painted surfaces.

I. Provide trash receptacles about site and empty containers daily.

J. Neatly stack construction materials, such as concrete forms and scaffolding, when not in use.

K. Promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids and cleaning solution from surfaces to prevent marring or other damage to satisfaction of Architect.

L. Sprinkle dusty debris with water and calcium chloride as needed.

M. Ensure that wastes are not buried or burned on site or disposed into storm drains, sanitary sewers, steams or waterways.

N. Cleanup as determined by Architect will be a condition for recommendation of progress payment application.

1. Contractor shall have full responsibility for cleaning up during and immediately upon completion of work. Remove all rubbish, waste, tools, equipment and appurtenances caused by and used in execution of work, leaving site clean, free of debris and in condition acceptable to Architect.

2. Equipment or material shall not be left within any work area after acceptance of Contract without written permission of Architect. Do not abandon any material at or near site regardless of its value.

3.02 FINAL CLEANING

A. Use experienced workmen or professional cleaners for final cleaning.

B. At completion of construction and just prior to acceptance or occupancy, conduct a final inspection of exposed exterior and interior surfaces.

C. Execute final cleaning prior to final inspection.

D. Remove grease, dust, dirt, stains, labels, fingerprints and other foreign materials from interior and exterior surfaces.

E. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum resilient, carpeted and soft surfaces.
F. Repair, patch and touch-up marred surfaces to match adjacent surfaces.

G. Clean equipment and fixtures to a sanitary condition.

H. Replace filters of operating equipment.

I. Replace air conditioning filters if units were operated during construction.

J. Clean ducts, blowers and coils if air conditioning units were operated without filters during construction.

K. Clean debris from roofs, gutters, downspouts and drainage systems.

L. Broom clean paved surfaces; rake clean other surfaces of grounds.

M. Remove waste and surplus materials, rubbish and construction facilities from the site.

N. Maintain cleaning until the building or portion is accepted by the Owner.

END OF SECTION 01 74 00
SECTION 01 74 19  
CONSTRUCTION WASTE MANAGEMENT & DISPOSAL

PART 1  GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:
   1. Salvaging nonhazardous demolition and construction waste.
   2. Recycling nonhazardous demolition and construction waste.
   3. Disposing of nonhazardous demolition and construction waste.

B. Related Requirements:
   1. Section 02 41 13 “Selective Demolition” for disposal of waste resulting from partial demolition of building materials.

1.3 DEFINITIONS

A. CONSTRUCTION WASTE: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. DEMOLITION WASTE: Building materials resulting from selective demolition operations.

C. DISPOSAL: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. RECYCLE: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. SALVAGE: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

1.4 PERFORMANCE REQUIREMENTS

A. GENERAL: Achieve end-of-Project rates for salvage/recycling of 50 percent by weight of total nonhazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials, including the following:
1. Construction Waste:
   a. Masonry.
   b. Lumber.
   c. Wood sheet materials.
   d. Wood trim.
   e. Metals.
   f. Roofing.
   g. Insulation.
   h. Piping.
   i. Electrical conduit.
   j. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
      1) Paper.
      2) Cardboard.
      3) Boxes.
      4) Plastic sheet and film.
      5) Polystyrene packaging.
      7) Plastic pails.

1.5 ACTION SUBMITTALS
   A. Waste Management Plan: Submit plan within 7 days of date established for the Notice of Award.

1.6 INFORMATIONAL SUBMITTALS
   A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Use Form CWM-7 for construction waste and Form CWM-8 for demolition waste. Include the following information:
      1. Material category.
      2. Generation point of waste.
      3. Total quantity of waste in tons (tonnes).
      4. Quantity of waste salvaged, both estimated and actual in tons (tonnes).
      5. Quantity of waste recycled, both estimated and actual in tons (tonnes).
      6. Total quantity of waste recovered (salvaged plus recycled) in tons (tonnes).
      7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
   
   B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
   
   C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
   
   D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
   
   E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

G. LEED Submittal: LEED letter template for Credit MR 2, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met.

H. Qualification Data: For waste management coordinator and refrigerant recovery technician.

I. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.7 QUALITY ASSURANCE

A. Waste Management Coordinator Qualifications: Experienced firm, with a record of successful waste management coordination of projects with similar requirements, that employs a LEED-Accredited Professional, certified by the USGBC, as waste management coordinator.

B. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

C. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

D. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:

1. Review and discuss waste.
2. Review requirements for documenting quantities of each type of waste and its disposition.
3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
5. Review waste management requirements for each trade.

1.8 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to ASTM E 1609 and requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.


C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Use Form CWM-3 for construction waste and Form CWM-4 for site preparation waste. Include points of waste generation, total quantity of
each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
2. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
4. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Use Form CWM-5 for construction waste and Form CWM-6 for site preparation waste. Include the following:

1. Total quantity of waste.
2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
3. Total cost of disposal (with no waste management).
4. Revenue from salvaged materials.
5. Revenue from recycled materials.
7. Savings in hauling and tipping fees that are avoided.
8. Handling and transportation costs. Include cost of collection containers for each type of waste.
9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

1. Comply with operation, termination, and removal requirements in Division 01 Section "Temporary Facilities and Controls."

B. Waste Management Coordinator: This can be the contractor’s project manager, superintendent or other qualified individual acceptable to the Engineer. Waste management coordinator shall be responsible for implementing, monitoring, and reporting status of waste management work plan.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.

1. Distribute waste management plan to everyone concerned within three days of submittal return.
2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Sale and Donation: Not permitted on Project site.

3.3 RECYCLING WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.

C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Contractor's Option: As this construction site is very limited in area the use of a co-mingled collection system with off site separation is acceptable.
2. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
   a. Inspect containers and bins for contamination and remove contaminated materials if found.
3. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
4. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
5. Store components off the ground and protect from the weather.
6. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING CONSTRUCTION WASTE

A. Packaging:
   1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:
   1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
   2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

C. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

D. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.

3.5 DISPOSAL OF WASTE
A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
   1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.
C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

3.6 ATTACHMENTS
A. Form CWM-1 for construction waste identification.
B. Form CWM-2 for demolition waste identification.
C. Form CWM-3 for construction waste reduction work plan.
D. Form CWM-4 for demolition waste reduction work plan.
E. Form CWM-5 cost/revenue analysis of construction waste reduction work plan.
F. Form CWM-6 cost/revenue analysis of demolition waste reduction work plan.
G. Form CWM-7 for construction waste
H. Form CWM-8 for demolition waste.

END OF SECTION 01 74 19
# FORM CWM-1: CONSTRUCTION WASTE IDENTIFICATION

<table>
<thead>
<tr>
<th>GENERATION POINT</th>
<th>MATERIAL CATEGORY</th>
<th>EST. QUANTITY OF MATERIALS RECEIVED (A)</th>
<th>EST. WASTE % (B)</th>
<th>TOTAL EST. QUANTITY OF WASTE (C = A x B)</th>
<th>EST. VOLUME CY (CM)</th>
<th>EST. WEIGHT TONS (TONNES)</th>
<th>REMARKS AND ASSUMPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging:</td>
<td>Cardboard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boxes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plastic Sheet or Film</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polystyrene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paint Cans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plastics Pails</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lumber: Cut-offs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lumber: Warped Pieces</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plywood or OSB (scrap)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Joint Sealant Tubes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gypsum Board (scrap)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pipe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electrical Conduit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Insert units of measure.
<table>
<thead>
<tr>
<th>MATERIAL DESCRIPTION</th>
<th>EST. QUANTITY</th>
<th>EST. VOLUME CY (CM)</th>
<th>EST. WEIGHT TONS (TONNES)</th>
<th>REMARKS AND ASSUMPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphaltic Concrete Paving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brick</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plywood and OSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Paneling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Trim</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rough Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors and Frames</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glazing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acoustical Tile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet Pad</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demountable Partitions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabinets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbing Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piping Supports and Hangers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valves</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sprinklers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Conduit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper Wiring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lamps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lighting Ballasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Devices</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switchgear and Panelboards</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transformers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## FORM CWM-3: CONSTRUCTION WASTE REDUCTION WORK PLAN

<table>
<thead>
<tr>
<th>MATERIAL CATEGORY</th>
<th>GENERATION POINT</th>
<th>TOTAL EST. QUANTITY OF WASTE TONS (TONNES)</th>
<th>DISPOSAL METHOD AND QUANTITY</th>
<th>HANDLING AND TRANSPORTION PROCEDURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging: Cardboard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Boxes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Plastic Sheet or Film</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Polystyrene</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Pallets or Skids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Crates</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Paint Cans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Plastic Pails</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site-Clearing Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masonry or CMU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber: Cut-Offs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber: Warped Pieces</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plywood or OSB (scraps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Forms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Waste Chutes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Trim (cut-offs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint Sealant Tubes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gypsum Board (scraps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet and Pad (scraps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Conduit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### FORM CWM-4: DEMOLITION WASTE REDUCTION WORK PLAN

<table>
<thead>
<tr>
<th>MATERIAL CATEGORY</th>
<th>GENERATION POINT</th>
<th>TOTAL EST. QUANTITY OF WASTE TONS (TONNES)</th>
<th>DISPOSAL METHOD AND QUANTITY</th>
<th>HANDLING AND TRANSPORTION PROCEDURES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>EST. AMOUNT SALVAGED TONS (TONNES)</td>
<td>EST. AMOUNT RECYCLED TONS (TONNES)</td>
</tr>
<tr>
<td>Asphaltic Concrete Paving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brick</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plywood and OSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Paneling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Trim</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rough Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors and Frames</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glazing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acoustical Tile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet Pad</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demountable Partitions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabinets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbing Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports and Hangers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valves</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sprinklers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Conduit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper Wiring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lamps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lighting Ballasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Devices</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switchgear and Panelboards</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transformers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## FORM CWM-5: COST/REVENUE ANALYSIS OF CONSTRUCTION WASTE REDUCTION WORK PLAN

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>TOTAL QUANTITY OF MATERIALS (VOL. OR WEIGHT) (A)</th>
<th>EST. COST OF DISPOSAL (B)</th>
<th>TOTAL EST. COST OF DISPOSAL (C = A x B)</th>
<th>REVENUE FROM SALVAGED MATERIALS (D)</th>
<th>REVENUE FROM RECYCLED MATERIALS (E)</th>
<th>LANDFILL TIPPING FEES AVOIDED (F)</th>
<th>HANDLING AND TRANSPORTATION COSTS AVOIDED (G)</th>
<th>NET COST SAVINGS OF WORK PLAN (H = D+E+F+G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging: Cardboard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Boxes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Plastic Sheet or Film</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Polystyrene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Pallets or Skids</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Crates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Paint Cans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Plastic Pails</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site-Clearing Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masonry or CMU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber: Cut-Offs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber: Warped Pieces</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plywood or OSB (scraps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Forms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Waste Chutes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Trim (cut-offs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint Sealant Tubes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gypsum Board (scraps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet and Pad (scraps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Conduit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### FORM CWM-6: COST/REVENUE ANALYSIS OF DEMOLITION WASTE REDUCTION WORK PLAN

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>TOTAL QUANTITY (VOL. OR WEIGHT) (A)</th>
<th>EST. COST OF DISPOSAL (B)</th>
<th>REVENUE FROM SALVAGED MATERIALS (D)</th>
<th>REVENUE FROM RECYCLED MATERIALS (E)</th>
<th>LANDFILL TIPPING FEES AVOIDED (F)</th>
<th>HANDLING AND TRANSPORTATION COSTS AVOIDED (G)</th>
<th>NET COST SAVINGS OF WORK PLAN (H = D+E+F+G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphaltic Concrete Paving</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plywood and OSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Trimming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors and Frames</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glazing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acoustic Tile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet Blend</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demountable Partitions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabinets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbing Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heating and Hangers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scaffolding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masonry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Asphaltic Concrete
Concrete
CMU
Lumber
Plywood and OSB
Wood Trimming
Structural Steel
Metal
Roofing
Doors and Frames
Door Hardware
Windows
Glazing
Acoustic Tile
Carpet
Carpet Blend
Demountable Partitions
Equipment
Cabinets
Plumbing Fixtures
Heating and Hangers
Valves
Scaffolding
Masonry
Other:
### FORM CWM-7: CONSTRUCTION WASTE REDUCTION PROGRESS REPORT

<table>
<thead>
<tr>
<th>MATERIAL CATEGORY</th>
<th>GENERATION POINT</th>
<th>TOTAL QUANTITY OF WASTE (TONNES) (A)</th>
<th>QUANTITY OF WASTE SALVAGED</th>
<th>QUANTITY OF WASTE RECYCLED</th>
<th>TOTAL QUANTITY OF WASTE RECOVERED (TONNES) (D = B + C)</th>
<th>TOTAL QUANTITY OF WASTE RECOVERED % (D / A x 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging: Cardboard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Boxes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Plastic Sheet or Film</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Polystyrene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Pallets or Skids</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Crates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Paint Cans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging: Plastic Pails</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site-Clearing Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masonry or CMU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber: Cut-Offs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber: Warped Pieces</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plywood or OSB (scraps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Forms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Waste Chutes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Trim (cut-offs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint Sealant Tubes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gypsum Board (scraps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet and Pad (scraps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Conduit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL 017419 - E13
<table>
<thead>
<tr>
<th>MATERIAL CATEGORY</th>
<th>GENERATION POINT</th>
<th>TOTAL QUANTITY OF WASTE TONS (TONNES) (A)</th>
<th>QUANTITY OF WASTE SALVAGED</th>
<th>QUANTITY OF WASTE RECYCLED</th>
<th>TOTAL QUANTITY OF WASTE RECOVERED TONS (TONNES) (D = B + C)</th>
<th>TOTAL QUANTITY OF WASTE RECOVERED % (D / A x 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphaltic Concrete Paving</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brick</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plywood and OSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Paneling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Trim</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rough Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors and Frames</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glazing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acoustical Tile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet Pad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demountable Partitions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabinets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbing Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports and Hangers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sprinklers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Conduit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper Wiring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lamps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lighting Ballasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Devices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switchgear and Panelboards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transformers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 01 75 00
STARTING AND ADJUSTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Starting systems.
B. Demonstration and instructions.
C. Testing, adjusting and balancing.

1.02 RELATED SECTIONS

A. Section 01 45 00 - Quality Control: Manufacturers field reports.
B. Section 01 78 00 – Closeout Procedures and Submittals: System operation and maintenance data and extra materials.
C. Division 23 Sections pertaining to HVAC systems.
D. Division 26 Sections pertaining to Electrical systems.

1.03 STARTING SYSTEMS

A. Coordinate schedule for start-up of various equipment and systems.
B. Notify Architect and Owner seven 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, control sequence or other conditions which 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 wiring and support components for equipment are complete and tested.
F. Execute start-up under supervision of responsible Contractors' personnel in accordance with manufacturers' instructions.
G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at 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 Section 01 45 00 that equipment or system has been properly installed and is functioning correctly.
1.04 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of final inspection.

B. Demonstrate Project equipment, instructed by qualified Contractor’s representative who is knowledgeable about the Project.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owners' personnel in detail to explain all aspects of operation and maintenance.

E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance and shutdown of each item of equipment at agreed-upon times, at equipment location.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

G. The amount of time required for instruction on each item of equipment and system is that specified in individual Sections.

1.05 TESTING, ADJUSTING AND BALANCING

A. Contractor will appoint and employ services of an independent firm, acceptable to the Owner and Architect, to perform testing, adjusting and balancing. Contractor shall pay for services specified in Section 01 21 00 Allowances.

B. The independent firm will perform services specified in Division 23 Sections.

C. Reports will be submitted by the independent firm to the Architect indicating observations and results of tests and indicating compliance or non-compliance with specified requirements and with the requirements of the Contract Documents.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION 01 75 00
SECTION 01 78 00
CLOSEOUT PROCEDURES AND SUBMITTALS

PART 1  GENERAL

1.01  SECTION INCLUDES

A. Closeout Procedures.
B. Requirements.
C. Substantial Completion.
D. Final Review.
E. Additional Reviews.
F. Submittals.
G. Final Adjustment of Accounts.
H. Final Application for Payment.
I. Adjusting.
J. Operation and Maintenance Data.
K. Warranties.
L. Spare Parts and Maintenance Materials.

1.02  RELATED SECTIONS

A. Section 01 20 00 – Price and Payment Procedures
B. Section 01 21 00 – Allowances.
C. Section 01 75 00 - Starting and Adjusting: System start-up, testing, adjusting and balancing.
D. Section 01 78 39 – Project Record Documents.

1.03  REQUIREMENTS

A. Comply with requirements stated in conditions of the Contract and in specifications for administrative procedures in closing out the Work.
1.04 SUBSTANTIAL COMPLETION

A. When Contractor considers the work is Substantially Complete, he shall submit to the Architect:

1. A written notice that the Work or designated portion thereof, is Substantially Complete.

2. A list of items to be completed or corrected.

B. Within a reasonable time after receipt of such notice, Architect will review the Work to determine the status of completion.

C. Should Architect determine that the Work is not Substantially Complete:

1. Architect will promptly notify the Contractor in writing, giving the reasons therefor.

2. Contractor shall remedy the deficiencies in the work and send out another written notice of substantial completion to the Architect.

3. Architect will again review the work.

D. When Architect concurs that the Work is Substantially Complete, he will:

1. Prepare a Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Architect.

2. Submit the certificate to Owner, Contractor and manufacturer for their written acceptance of the responsibilities assigned to them in the certificate.

1.05 FINAL REVIEW

A. When Contractor considers the Work is complete, he shall submit written certification that:

1. Contract documents have been reviewed.

2. Work has been inspected for compliance with Contract Documents.

3. Work has been completed in accordance with Contract Documents.

4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.

5. Work is completed and ready for final review.

B. Architect will make final review to verify the status of completion with reasonable promptness after receipt of such certification.

C. Should Architect consider that the Work is incomplete or defective:

1. Architect will promptly notify the Contractor in writing, listing the incomplete or defective work.

2. Contractor shall take immediate steps to remedy the stated deficiencies and send out another written certification to Architect that the work is complete.

3. Architect will again review the Work.

4. Should Architect consider that the Work is still incomplete or defective, all subsequent reviews shall be considered as Additional Reviews, subject to the provisions listed in 1.06 below.
D. When the Architect finds that the Work is acceptable under the Contract Documents and that all Punch List items have been accomplished to his satisfaction, he shall request the Contractor to make closeout submittals.

1.06 FEES FOR ADDITIONAL REVIEWS

A. Should Architect perform additional reviews due to failure of the Work to comply with the claims of status of completion made by the Contractor:

1. Owner will compensate Architect for such additional services.

2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.07 CONTRACTOR’S CLOSEOUT SUBMITTALS TO ARCHITECT

A. Provide (2) original copies & (2) digital copies (USB or CD) of all Closeout Documents as described below.

B. OPERATING AND MAINTENANCE DATA: Submit documentation as described in 1.11 below.

C. WARRANTIES, GUARANTEES AND BONDS: Submit documentation as described in 1.12 below.

D. SPARE PARTS AND MAINTENANCE MATERIALS FOR OWNER: Submit documentation as described in 1.13 below.

E. Contractor’s affidavit of payment of debts and claims.

F. Contractor’s affidavit of release of liens.

G. Consent of surety to final payment.

H. Certificate of insurance for products and completed operations.

I. PROJECT RECORD DRAWINGS: Submit documentation as described in Section 01 78 39.

1.08 FINAL ADJUSTMENT OF ACCOUNTS

A. Submit a final statement of accounting to Architect.

B. Statement shall reflect all adjustments to the Contract Sum:

   1. The original Contract Sum.

   2. Additions and deductions resulting from:

      a. Previous Change Orders, allowances and unit prices.

      b. Deductions for uncorrected work, liquidated damages and re-inspection payments.

      c. Other adjustments.

   3. Total Contract Sum, as adjusted.

   4. Previous payments.

   5. Sum remaining due.

C. Architect will prepare a final change order reflecting approved adjustments to the Contract sum that were not previously made by Change Orders.
1.09 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final application for payment in accordance with procedures and requirements stated in the General Conditions.

1.10 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

1.11 OPERATION AND MAINTENANCE DATA

A. Submit one copy of completed volumes in final form 5 days prior to final inspection. This copy will be returned with Architect/Engineer comments. Revise content of documents as required prior to final submittal.

B. Submit Operation and Maintenance Data bound in 8-1/2 x 11 inch text pages, three D side-ring capacity expansion binders with durable plastic covers. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project and subject matter of binder when multiple binders are required.

C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

D. CONTENTS: Prepare a Table of Contents for each volume, with each Product or system description identified, type on 24 pound white paper.

E. PART 1: Directory, listing names, addresses and telephone numbers of Architect, Engineers, Contractor, Subcontractors and major equipment suppliers.

F. PART 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses and telephone numbers of Subcontractors and suppliers. Identify the following:

1. Significant design criteria.
2. List of equipment.
3. Parts list for each component.
4. Operating instructions.
5. Maintenance instructions for equipment and systems.
6. Maintenance instructions for all finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.

G. PART 3: Project documents and certificates, including the following:

1. Shop drawings and product data.
2. Air and water balance reports.
3. Certificates.
4. Photocopies of warranties and bonds.

H. Submit final volumes revised, within ten days after final inspection.
1.12 Warranties

A. Provide duplicate notarized copies.

1. In addition to the Warranty and Guarantee Requirements of the General Conditions, provide all other guarantees, bonds, affidavits and certifications required throughout the Project Manual.

B. Execute and assemble documents from Subcontractors, suppliers and manufacturers.

C. Provide Table of Contents and assemble in three D side-ring binder with durable plastic cover.

D. Submit prior to final Application for Payment.

E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.13 Spare Parts and Maintenance Materials

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.

B. Deliver to Project site and place in location as directed by the Owner; obtain receipt prior to final payment.

PART 2 PRODUCTS (Not Applicable)
PART 3 EXECUTION (Not Applicable)

END OF SECTION 01 78 00
SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1  GENERAL

1.01  SECTION INCLUDES

A. Project Record Documents required for Contract closeout.

1.02  RELATED SECTIONS

A. Section 01 78 00 – Closeout Procedures and Submittals.

1.03  REQUIREMENTS

A. Maintain at the site for the Owner one record copy of:

1. Drawings
2. Specifications
3. Addenda
4. Change Orders and other modifications to the Contract
5. Architect field orders or written instructions
6. Reviewed shop drawings, product data and samples
7. Field test records

B. The Contractor will be required to furnish, at no additional expense to the Owner, the services of a surveyor and/or Engineer registered in the state where the project is located and under whose direction shall be obtained and recorded all surveys, measurements and such other data required for the determination of the as-built records of the construction of all site work.

1.04  MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Store documents and samples in Contractor's field office apart from documents used for construction.

B. Provide locked file cabinet for storage of documents and samples.

C. File documents and samples in accordance with CSI/CSC format.

D. Maintain documents in a clean, dry, legible condition and in good order. Do not use Record Documents for construction purposes.

E. Make documents and samples available at all times for inspection by Architect and Owner.
1.05 MARKING DEVICES

A. Provide felt tip marking pens for recording information in the color code designated by Architect.

1.06 RECORDING

A. Label each document "Project Record" in neat large printed letters.

B. Record information concurrently with construction progress.

C. Do not conceal any work until required information is recorded.

D. DRAWINGS: Principal dimensions, elevations and other data as required shall be recorded for all work, such as:

1. Deviations of any nature made during construction.

2. Location of underground utilities.

3. Field changes of dimension and detail.

4. Changes made by field order or by Change Order.

5. Details not on original Contract Drawings.

E. The marked-up prints shall be inspected weekly by the Architect and shall be corrected immediately if found either inaccurate or incomplete.

F. SPECIFICATIONS AND ADDENDA: Legibly mark each Section to record:

1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.

2. Changes made by field order or by Change Order.

1.07 FINAL MEASUREMENTS

A. The Contractor shall provide qualified personnel and equipment for taking final measurements for quantities and Record Documents.

1.08 RECORD DRAWINGS

A. At the completion of the Project, the Record Drawings shall be submitted to the Architect for final review and comment.

B. The Contractor shall correct, amplify and do all other work as may be required by the Architect to complete the drawings in a manner satisfactory to the Architect and at no additional cost to the Owner.

C. Upon approval, the Contractor shall provide a final Record Drawing set to the Architect on heavyweight bond and electronic format (PDF). The bond and electronic version shall be submitted to the Owner by the Architect.

1.09 SUBMITTAL

A. At Contract close-out, deliver Record Documents to Architect for the Owner.

B. Accompany submittal with transmittal letter in duplicate, containing:

1. Date.
2. Project title and number.

3. Contractor's name and address.

4. Title and number of each record document.

5. Signature of Contractor or his authorized representative.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION 01 78 39
SECTION 01 81 13
NE-CCHPS SUSTAINABLE DESIGN REQUIREMENTS

PART 1 GENERAL

1.01 GENERAL PROVISIONS

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

B. Northeast Collaborative for High Performance Schools (NE-CCHPS) New Construction and Major Renovations Version 3.0 applies to this Section.

1.02 SUMMARY

A. This Section includes general requirements and procedures for achieving NE-CCHPS credits.

B. Sustainable Design Intent: Comply with project requirements intended to achieve NE-CCHPS credits, measured and documented according to the NE-CCHPS Rating.

1. Refer to NE CHPS Scorecard
2. Refer to individual Specification Sections for additional requirements

C. Contractor is responsible for compliance with and completion of all required documentation for all the following NE-CCHPS Requirements:

1. Indoor Environmental Quality EQ7.0: Low Emitting Materials

1.03 RELATED WORK

A. Examine Contract Documents for requirements that affect the work of this Section. Other Specification Sections that relate directly to work of this Section include, but not limited to:

2. Section 099100: Painting

1.04 DEFINITIONS

A. Construction and Demolition Waste: Includes solid wastes, such as building materials, packaging, rubbish, debris, and rubble resulting from construction, remodeling, repair and demolition operations. A construction waste management plan is to be provided by the Contractor as defined in section 017419.

B. NE-CCHPS: Northeast Collaborative for High Performance Schools New Construction and Major Renovations Versions 3.0

C. Sealant: Any material that fills and seal gaps between other materials.
D. Volatile Organic Compounds (VOC’s): Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbon acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reaction. Compounds that have negligible photochemical reactivity, listed in EPA 40 CFR 51, 100(s), are also excluded from this regulatory definition.

1.05 SUBMITTALS

A. GENERAL: Additional Sustainable Design Submittal requirements are included in other section of the Specification

B. SUSTAINABLE DESIGN SUBMITTALS:

1. Interior Paints and Coatings: Submittal for all field-applied paints and coatings, which have a potential impact on indoor air, must include manufacturer’s MSDS’s or other Product data highlighting VOC Content.

1.06 QUALITY ASSURANCE

A. Preconstruction Meeting: After award of Contract and prior to the commencement of the Work, schedule and conduct meeting with Owner, Engineer, and all Subcontractors to discuss the Construction Waste Management Plan, the required Construction Indoor Air Quality (IAQ) Management Plan, and all other Sustainable Design Requirements. The purpose of this meeting is to develop a mutual understanding of the Project’s Sustainable Design Requirements and coordination of the Contractor’s management of these requirements.

B. Construction Job Conferences: the status of compliance with the Sustainable Design Requirements of these specifications will be an agenda item at all regular job meetings conducted during the course of work at the site.

PART 2 PRODUCTS – (Not Used)

PART 3 EXECUTION – (Not Used)
### Collaborative for High Performance Schools (CHPS)

#### Project Scorecard: NE-CHPS Version 3.0

**School Name:** Captain Isaac Paine Elementary School

**Expected Completion:**

<table>
<thead>
<tr>
<th>School District</th>
<th>Current Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**School Address:** 100 Foster Center Road

City: Foster  
State: RI  
Zip:  

**School Contact:**

<table>
<thead>
<tr>
<th>Phone:</th>
<th>E-mail:</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Student Capacity:**  

<table>
<thead>
<tr>
<th>Approximate Square Feet:</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Verification**

Is this the final CHPS Scorecard?

Registered Principal Architect [Signature]  
Project Manager [Signature]

**Use this scorecard to track expected scores. Note that prerequisites have points associated with them even though they are required. This enables project teams to talk more meaningfully about the effort being put into each section of the Criteria. Prerequisite point columns are also highlighted for reference. Mark each credit as ready for review by using the appropriate column for each phase of the review.**

**Key:**  
P - Prerequisite;  
PS - CHPS Plan Sheet Required;  
CD - Construction Documents Required;  
A - Attachment Required

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Title</th>
<th>Prerequisite Points Possible</th>
<th>Points Claimed</th>
<th>Points Targeted</th>
<th>Points Claimed</th>
<th>Ready for Design Review</th>
<th>Ready for Construction Review</th>
<th>Ready for Performance Review</th>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Integration and Innovation**

<table>
<thead>
<tr>
<th>II 1.0</th>
<th>Integrated Design</th>
<th>P</th>
<th>3</th>
<th>CD</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>II 1.1</td>
<td>Enhanced Integrated Design</td>
<td>2</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II 2.1</td>
<td>District Level Commitment</td>
<td>1</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II 3.1</td>
<td>School Master Plan</td>
<td>1</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II 4.1</td>
<td>High Performance Transition Plan</td>
<td>1</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II 5.0</td>
<td>Educational Display</td>
<td>P</td>
<td>CD</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>II 5.1</td>
<td>Demonstration Area</td>
<td>1</td>
<td>CD</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>II 6.1</td>
<td>Educational Integration</td>
<td>2</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II 7.1</td>
<td>Climate Change Action / Carbon Footprint Reporting</td>
<td>3</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II 8.0</td>
<td>Crime Prevention through Environmental Design</td>
<td>P</td>
<td>2</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>II 9.1</td>
<td>Innovation</td>
<td>4</td>
<td>VARIES</td>
<td>VARIES</td>
<td>VARIES</td>
</tr>
</tbody>
</table>

**Subtotal**

**Operations & Metrics**

| OM 1.0 | Facility Staff and Occupant Training | P | 3 | CD | A |
| OM 2.1 | Post-Occupancy Transition | 2 | A |
| OM 3.0 | Performance Benchmarking | P | 2 | A |
| OM 4.1 | High Performance Operations | 4 | A |
| OM 5.1 | Systems Maintenance Plan | P | 3 | A |
| OM 6.0 | Indoor Environmental Management Plan | P | 3 | A |
| OM 7.1 | Green Cleaning | 2 | A |
| OM 8.0 | Integrated Pest Management | P | 1 | FS | A |
| OM 9.0 | Anti-idling Measures | P | 1 | CD | A |
| OM 10.1 | Green Power | P | 2 | A |
| OM 11.0 | ENERGY STAR Equipment and Appliances | P | 2 | A |
| OM 12.1 | Computerized Maintenance Management System | P | 1 | FS | A |

**Subtotal**

**Indoor Environmental Quality**

| EQ 1.0 | HVAC Design - ASHRAE 62.1 | P | 3 | FS |
| EQ 1.1 | Enhanced Filtration | 2 | A |
| EQ 1.2 | Dedicated Outdoor Air System | 3 | CD | A |
| EQ 2.1 | Pollutant and Chemical Source Control | P | 2 | CD | A |
| EQ 3.0 | Outdoor Moisture Management | P | 3 | CD | A |
| EQ 4.1 | Ducted Return | P | 1 | CD | A |
| EQ 5.1 | Construction Indoor Air Quality Management | 5 | CD | A |
| EQ 5.2 | Construction Moisture Management | 1 | CD | A |
| EQ 6.1 | Post Construction Indoor Air Quality | 1 | CD | A |
| EQ 7.0 | Low Emitting Materials | P | 2 | FS | CD | FS | A |
| EQ 7.1 | Additional Low Emitting Materials | 5 | FS | CD | FS | A |
| EQ 8.1 | Low Radon | 1 | CD | A |
| EQ 9.1 | Thermal Comfort - ASHRAE 55 | P | 3 | FS | CD | A |
| EQ 10.1 | Individual Controllability | 1 | CD | A |
| EQ 10.2 | Controllability of Systems | 1 | CD | A |
| EQ 11.0 | Daylighting: glare Protection | P | 4 | CD | A |
| EQ 11.1 | Daylight Availability | 5 | FS | CD | A |
| EQ 12.0 | Views | P | 3 | FS | CD | A |
| EQ 13.1 | Electric Lighting Performance | 3 | CD | A |
| EQ 13.2 | Superior Electric Lighting Performance | 3 | CD | A |
| EQ 14.0 | Acoustical Performance | P | 7 | FS | CD | A |
| EQ 14.1 | Enhanced Acoustical Performance | 6 | FS | CD | A |
| EQ 15.1 | Low-EMF Wiring | 1 | CD | A |
| EQ 15.2 | Low-EMF Best Practices | 2 | CD | A |
| EQ 16.1 | High Intensity Fluorescent Fixtures | 1 | CD | A |

**Subtotal**

**Notes:**

- Use this scorecard to track expected scores.
- Prerequisite point columns are highlighted for reference.
- Mark each credit as ready for review by using the appropriate column for each phase of the review.

**Key:**

- **P** - Prerequisite
- **PS** - CHPS Plan Sheet Required
- **CD** - Construction Documents Required
- **A** - Attachment Required

**Use this scorecard to track expected scores.**

**Notes:**

- **P** - Prerequisite
- **PS** - CHPS Plan Sheet Required
- **CD** - Construction Documents Required
- **A** - Attachment Required
<table>
<thead>
<tr>
<th>Energy</th>
<th>Subtotal</th>
<th>Water</th>
<th>Subtotal</th>
<th>Sites</th>
<th>Subtotal</th>
<th>Materials and Waste Management</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE 1.0</td>
<td>Energy Performance</td>
<td>E6</td>
<td>EE 1.1</td>
<td>Superior Energy Performance</td>
<td>40</td>
<td>EE 1.0</td>
<td>Storage and Collection of Recyclables</td>
</tr>
<tr>
<td>EE 2.0</td>
<td>Zero Net Energy Capable</td>
<td>3</td>
<td>EE 2.1</td>
<td>Energy Efficiency</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 2.1</td>
<td>Building Envelope Commissioning</td>
<td>1</td>
<td>EE 3.0</td>
<td>Commissioning</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 3.1</td>
<td>Additional Commissioning Qualifications</td>
<td>1</td>
<td>EE 3.1</td>
<td>Commissioning</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 3.2</td>
<td>Building Envelope Commissioning</td>
<td>1</td>
<td>EE 3.3</td>
<td>Enhanced Commissioning</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 3.3</td>
<td>Enhanced Commissioning</td>
<td>1</td>
<td>EE 4.0</td>
<td>Environmentally Preferable Refrigerants</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 4.0</td>
<td>Environmentally Preferable Refrigerants</td>
<td>1</td>
<td>EE 5.1</td>
<td>Energy Management System</td>
<td>2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 5.1</td>
<td>Energy Management System</td>
<td>2</td>
<td>EE 5.2</td>
<td>Advanced Energy Management System and Submetering</td>
<td>2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 5.2</td>
<td>Advanced Energy Management System and Submetering</td>
<td>2</td>
<td>EE 6.1</td>
<td>Natural Ventilation and Energy Conservation Interlocks</td>
<td>2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 6.1</td>
<td>Natural Ventilation and Energy Conservation Interlocks</td>
<td>2</td>
<td>EE 7.0</td>
<td>Local Energy Efficiency Incentive and Assistance</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 7.0</td>
<td>Local Energy Efficiency Incentive and Assistance</td>
<td>1</td>
<td>EE 8.1</td>
<td>Variable Air Volume Systems</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 8.1</td>
<td>Variable Air Volume Systems</td>
<td>1</td>
<td>EE 9.1</td>
<td>Renewable Energy Performance Monitoring</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 9.1</td>
<td>Renewable Energy Performance Monitoring</td>
<td>1</td>
<td>EE 10.1</td>
<td>Electric Vehicle Charging</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 10.1</td>
<td>Electric Vehicle Charging</td>
<td>1</td>
<td>EE 11.1</td>
<td>Site Selection</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 11.1</td>
<td>Site Selection</td>
<td>1</td>
<td>EE 12.1</td>
<td>Environmentally Sensitive Land</td>
<td>3</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 12.1</td>
<td>Environmentally Sensitive Land</td>
<td>3</td>
<td>EE 13.1</td>
<td>Minimize Site Disturbance</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 13.1</td>
<td>Minimize Site Disturbance</td>
<td>1</td>
<td>EE 14.1</td>
<td>Construction Site Runoff Control and Sedimentation</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 14.1</td>
<td>Construction Site Runoff Control and Sedimentation</td>
<td>1</td>
<td>EE 15.1</td>
<td>Post-Construction Stormwater Management</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 15.1</td>
<td>Post-Construction Stormwater Management</td>
<td>1</td>
<td>EE 16.1</td>
<td>Central location</td>
<td>2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 16.1</td>
<td>Central location</td>
<td>2</td>
<td>EE 17.1</td>
<td>Located Near Public Transportation</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 17.1</td>
<td>Located Near Public Transportation</td>
<td>1</td>
<td>EE 18.1</td>
<td>Joint Use of Facilities</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 18.1</td>
<td>Joint Use of Facilities</td>
<td>1</td>
<td>EE 19.1</td>
<td>Human-Powered Transportation</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 19.1</td>
<td>Human-Powered Transportation</td>
<td>1</td>
<td>EE 20.1</td>
<td>Reduce Heat Islands - Landscaping and Sites</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 20.1</td>
<td>Reduce Heat Islands - Landscaping and Sites</td>
<td>1</td>
<td>EE 21.1</td>
<td>Reduce Heat Islands - Cool Roofs and Green Walls</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 21.1</td>
<td>Reduce Heat Islands - Cool Roofs and Green Walls</td>
<td>1</td>
<td>EE 22.1</td>
<td>Wood Light Pollution and Unnecessary Lighting</td>
<td>2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 22.1</td>
<td>Wood Light Pollution and Unnecessary Lighting</td>
<td>2</td>
<td>EE 23.1</td>
<td>School Gardens</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 23.1</td>
<td>School Gardens</td>
<td>1</td>
<td>EE 24.1</td>
<td>Use Locally Native Plants for Landscape</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>EE 24.1</td>
<td>Use Locally Native Plants for Landscape</td>
<td>1</td>
<td>EE 25.0</td>
<td>Site and Building Best Practices</td>
<td>E8</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>WE 1.0</td>
<td>Minimum Reduction in Indoor Potable Water Use</td>
<td>E5</td>
<td>WE 2.1</td>
<td>Reduce Potable Water Use for Sewage Conveyance</td>
<td>3</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>WE 2.1</td>
<td>Reduce Potable Water Use for Sewage Conveyance</td>
<td>3</td>
<td>WE 3.1</td>
<td>Irrigation and Exterior Water Budget - Use Reduction</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>WE 3.1</td>
<td>Irrigation and Exterior Water Budget - Use Reduction</td>
<td>1</td>
<td>WE 4.1</td>
<td>Reduce Potable Water Use for Non-Recreational Landscaping</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>WE 4.1</td>
<td>Reduce Potable Water Use for Non-Recreational Landscaping</td>
<td>1</td>
<td>WE 5.1</td>
<td>Reduce Potable Water Use for Recreational landscaping</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>WE 5.1</td>
<td>Reduce Potable Water Use for Recreational landscaping</td>
<td>1</td>
<td>WE 6.0</td>
<td>Irrigation Systems Commissioning</td>
<td>E5</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>WE 6.0</td>
<td>Irrigation Systems Commissioning</td>
<td>E5</td>
<td>WE 7.1</td>
<td>Rainwater Collection and Storage</td>
<td>2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>WE 7.1</td>
<td>Rainwater Collection and Storage</td>
<td>2</td>
<td>WE 8.1</td>
<td>Water Management System</td>
<td>2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 1.0</td>
<td>Site Selection</td>
<td>E2</td>
<td>SS 2.1</td>
<td>Environmentally Sensitive Land</td>
<td>3</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 2.1</td>
<td>Environmentally Sensitive Land</td>
<td>3</td>
<td>SS 3.1</td>
<td>Minimize Site Disturbance</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 3.1</td>
<td>Minimize Site Disturbance</td>
<td>1</td>
<td>SS 4.0</td>
<td>Construction Site Runoff Control and Sedimentation</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 4.0</td>
<td>Construction Site Runoff Control and Sedimentation</td>
<td>1</td>
<td>SS 5.1</td>
<td>Post-Construction Stormwater Management</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 5.1</td>
<td>Post-Construction Stormwater Management</td>
<td>1</td>
<td>SS 6.1</td>
<td>Central location</td>
<td>2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 6.1</td>
<td>Central location</td>
<td>2</td>
<td>SS 7.1</td>
<td>Located Near Public Transportation</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 7.1</td>
<td>Located Near Public Transportation</td>
<td>1</td>
<td>SS 8.1</td>
<td>Joint Use of Facilities</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 8.1</td>
<td>Joint Use of Facilities</td>
<td>1</td>
<td>SS 9.1</td>
<td>Human-Powered Transportation</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 9.1</td>
<td>Human-Powered Transportation</td>
<td>1</td>
<td>SS 10.1</td>
<td>Reduce Heat Islands - Landscaping and Sites</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 10.1</td>
<td>Reduce Heat Islands - Landscaping and Sites</td>
<td>1</td>
<td>SS 11.1</td>
<td>Reduce Heat Islands - Cool Roofs and Green Walls</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 11.1</td>
<td>Reduce Heat Islands - Cool Roofs and Green Walls</td>
<td>1</td>
<td>SS 12.1</td>
<td>Wood Light Pollution and Unnecessary Lighting</td>
<td>2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 12.1</td>
<td>Wood Light Pollution and Unnecessary Lighting</td>
<td>2</td>
<td>SS 13.1</td>
<td>School Gardens</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 13.1</td>
<td>School Gardens</td>
<td>1</td>
<td>SS 14.1</td>
<td>Use Locally Native Plants for Landscape</td>
<td>1</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>SS 14.1</td>
<td>Use Locally Native Plants for Landscape</td>
<td>1</td>
<td>SS 15.0</td>
<td>Site and Building Best Practices</td>
<td>E8</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 1.0</td>
<td>Storage and Collection of Recyclables</td>
<td>E2</td>
<td>MW 2.1</td>
<td>Construction Site Waste Management</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 2.1</td>
<td>Construction Site Waste Management</td>
<td>E2</td>
<td>MW 3.1</td>
<td>Single Attribute - Recycled Content</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 3.1</td>
<td>Single Attribute - Recycled Content</td>
<td>E2</td>
<td>MW 4.1</td>
<td>Single Attribute - Rapidly Renewable Materials</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 4.1</td>
<td>Single Attribute - Rapidly Renewable Materials</td>
<td>E2</td>
<td>MW 5.1</td>
<td>Single Attribute - Certified Wood</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 5.1</td>
<td>Single Attribute - Certified Wood</td>
<td>E2</td>
<td>MW 6.1</td>
<td>Single Attribute - Materials Reuse</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 6.1</td>
<td>Single Attribute - Materials Reuse</td>
<td>E2</td>
<td>MW 7.1</td>
<td>Multi-Attribute Materials Selection</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 7.1</td>
<td>Multi-Attribute Materials Selection</td>
<td>E2</td>
<td>MW 8.1</td>
<td>Building Reuse - Exterior</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 8.1</td>
<td>Building Reuse - Exterior</td>
<td>E2</td>
<td>MW 9.1</td>
<td>Building Reuse - Interior</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 9.1</td>
<td>Building Reuse - Interior</td>
<td>E2</td>
<td>MW 10.1</td>
<td>Health Related Information Reporting</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
<tr>
<td>MW 10.1</td>
<td>Health Related Information Reporting</td>
<td>E2</td>
<td>MW 11.1</td>
<td>Locally Produced Materials</td>
<td>E2</td>
<td>EE 2.0</td>
<td>Construction Site Waste Management</td>
</tr>
</tbody>
</table>

**Total Subtotals:**
- **Energy:** 256
- **Water:** 255
- **Sites:** 255
- **Materials and Waste Management:** 255
SECTION 11 66 23
BASKETBALL EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes: Wall mounted, stationary, basketball backstops with backboard, goal, height adjuster, backboard safety edge padding, and net.

B. Related sections: Drawings, General Provisions of the Contract and Division 1 Sections apply to work of this Section.

1.2 REFERENCES

A. ASTM A500 - Formed Welded Seamless Structural Tubing in Rounds and Shapes.


C. ASTM B221 - Aluminum-Alloy Extruded Bar, Rod, Wire, Shape, and Tube.

1.3 SUBMITTALS

A. Submit in accordance with Section 01 33 00 - Submittal Procedures:

1. List of proposed products and product data.

2. Shop drawings showing layout, elevations, dimensions, fabrication details, method of attachment, requirements for supplemental bracing or structural support members and necessary electrical wiring diagrams.

3. Calculations for actual vertical and horizontal loads to be transmitted to structural walls supporting backstop assemblies.

4. Manufacturer to provide calculations and reports for tests performed by an independent testing laboratory accredited by the American Association of Laboratory Accreditation (A2LA) that demonstrates compliance with minimum safety factors required by these specifications.

5. Copy of warranties required by Paragraph 1.5 for review by Architect.

6. Manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

A. Backstops shall be designed, fabricated, and installed to comply with National Collegiate Athletic Association (NCAA) and National Federation of State High School Associations (NFHS) regulations.

1.5 WARRANTY
Aharonian & Associates, Inc. – Architects
Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement
Foster, Rhode Island

A. Provide under provisions of Section 01 78 00 - Closeout Procedures:
   1. 25 years warranty for basketball backstop structure.
   2. Lifetime warranty against breakage for backboards installed with goal brace.
   3. 8 years warranty for bolt-on safety edge padding.

PARTS 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Draper, Inc., 411 South Pearl Street, Spiceland, Indiana 47385-0425; 765-987-7999.

B. Manufacturers of equivalent products submitted and approved in accordance with Section 01 25 00 - Substitution Procedures.

2.2 MATERIALS

A. Structural steel tubing: Steel, mechanical, round tubing conforming to ASTM A500.

B. Clamps:
   1. Beam clamps: Split-A type with 7 square inches minimum beam flange contact area and secured with 2 all thread bolts at each attachment point. Clamps shall be designed to be capable of supporting a minimum of 20,000 Lbs. each. Superstructure shall be designed with a minimum of four attachment clamps to produce a combined minimum attachment point safety factor of 75 to 1. Superstructure tubes shall be reinforced with bridging and/or bracing when truss centers exceed 10'0".
   2. Component attachment clamps: Full surface type fabricated from 1/4 inch thick steel or saddle style utilizing serrated clamping surface and minimum 5/8" U-Bolt.
   3. Goal brace: Type attaching behind goal mounting plate and directly to backstop main stem transferring load directly to structural frame.

C. Extruded aluminum: ASTM B221, alloy 6063 Temper T5.

D. Aluminum castings: ASTM B85.

E. Finish: Factory applied black powder coat for steel parts.

2.3 WALL MOUNTED STATIONARY BACKSTOP

A. Type: Stationary, wall mounted basketball backstop; Model EZ Fold SW as manufactured by Draper, Inc.

B. Distance from face of backboard to supporting wall: +/- 5'-0". Match existing installed dimension and coordinate with existing painted court lines as required.

C. Support framework: Backstop mounted to wall at four fixed points with two welded, adjustable, rectangular side frames constructed from 2-1/2 inches diameter, 13 gage outer tube and 2-1/4 inches diameter, 14 gage inner tube.
   1. Extension adjustment: Plus or minus 6 inches.
   2. Wall anchor plates: 1/4 inch thick steel plates.
   4. Diagonal support chains: Two 1/4 inch welded link chains with leveling turnbuckles.
D. Wall pads: Provide 2 by 8 inches southern yellow pine pads with chamfered edges and clear polyurethane finish for support frame and chain attachment points.

2.4 BACKBOARD

A. Type: Rectangular, glass, official size backboard to be used with direct attachment goal; Model 503136 as manufactured by Draper, Inc.

B. Size: 72 inches wide by 42 inches high.

C. Construction: 1/2 inch thick fully tempered glass in extruded aluminum frame with mitered corners. Provide steel gusset type mounting corner brackets with slots for mounting backboard to support structure.

D. Goal mounting assembly: Steel assembly secured to aluminum frame and equipped with steel sleeves through glass allowing rear structure to be secured to front mounting plate. Provide with holes and studs to secure backboard and goal directly to goal brace. Front plate provided with holes for goal attachment.

E. Equip frame and goal mounting assembly with neoprene shock absorbing cushions.

F. Permanently etch official white border and target area on front side of glass.

2.5 GOALS

A. Type: Breakaway goal with tube-tie net attachment and designed to withstand shock loads from player slam dunking or hanging on rim; Model 503581 as manufactured by Draper, Inc.

B. Rim shall deflect down when 230 pounds static load is applied and return to playing position when load is removed. Breakaway point shall be adjustable from 160 to 230 pounds.

C. Ring shall have rebound characteristics identical to those of non-moveable ring. Factory set proper flex and rebound requirements. Goal features easy-adjust system to allow users to adjust the breakaway point from 160 pounds to 230 lbs.

D. Ring: Fabricated from 5/8 inch diameter steel rod formed into 18 inches ring. Rigidly brace with die cut steel braces welded to rim.

E. Mounting plate: Heavy duty steel plate bracket with mounting holes and designed to position inside of ring 6 inches from backboard.

F. Provide series of small tubes welded to bottom of rim providing for attachment of net by threading 1/8 inch nylon cord through tubes.

G. Finish: Powder coated orange paint.

H. Anti-whip net: Top half made of durable fibers encased in nylon to prevent net from whipping up on rim. Lower half all nylon. Color white.

I. Mounting hardware: Zinc plated.

2.6 HEIGHT ADJUSTER

A. Type: Mechanism for manually adjusting height of rectangular backboard and goal; Model 503092 Height Adjuster as manufactured by Draper, Inc.

B. Adjustment range: Goal position from 8 to 10 feet above court floor.
Aharonian & Associates, Inc. – Architects
Captain Isaac Paine Elementary School – Gymnasium Backstop Replacement Foster, Rhode Island

C. Construction: Steel angle frame attaching to backboard, double slip tube guide assembly, and required attachment hardware.

D. Operation: Provide 3/4 inch acme threaded rod and nut assembly, Timken bearing, and crank for manual operation.

2.7 SAFETY EDGE PADDING

A. Type: Foam padding for bottom edge and corners of backboard to provide safety protection to meet NCAA and NFHSA requirements; Model 5032XX Safe-Edge Padding as manufactured by Draper, Inc.

B. Construction: Open cell foam, 2 inches wide and wrapping around edges 3/4 inch. Equip with molded-in steel track and bolt-on attachment system. Padding shall cover bottom edge of backboard and extend 15 inches up sides.

C. Color: Gray.

2.8 ACCESSORIES

A. Provide backstop with backstop hangers, clamps, brackets, fasteners, and all other hardware required for complete, functional, rigid assembly and installation.

PART 3 - EXECUTION

3.1 COORDINATION

A. Coordinate provision of basketball backstops with construction of wall supporting basketball backstop to ensure proper support and method of attachment.

B. Coordinate support of backstops to ensure proper distribution of loads and adequacy of attachment points. Provide additional structural framing members as required.

C. Prior to installation, verify exact locations of backstops.

3.2 INSTALLATION

A. Install basketball backstops in accordance with approved shop drawings and manufacturer's instructions.

B. Install backstops, backboards, and goals plumb, level, and rigid. Attach to wall framing with anchors of size and type recommended by manufacturer.

C. Install backboards such that goal is 10 feet above court floor. After installing, verify that mounting height is correct.

D. Operate each backboard and goal height adjuster to ensure proper movement. Adjust mechanism as required to ensure smooth operation and accurate positioning.

3.3 CLEANING AND COMPLETION

A. Remove protective wrappings, wash surfaces, and attach nets.

B. Submit operation and maintenance manuals in accordance with Section 01 78 00 - Closeout Procedures.

END OF SECTION 11 66 23

BASKETBALL EQUIPMENT 11 66 23-4