

PROJECT MANUAL

FOR

MOOSE LODGE 398 FAMILY CENTER  
Remodel and Addition  
330 8<sup>th</sup> Street  
COLUMBUS, IN 47201

PROJECT #: 0811  
MARCH 5, 2012

PREPARED:

NOLAN G BINGHAM ARCHITECT P. C.  
2525 CALIFORNIA STREET, SUITE C  
COLUMBUS, IN 47201

**FOR  
MAINSOURCE 25<sup>TH</sup> STREET BRANCH  
New Structure  
1901 25th Street  
COLUMBUS, IN 47201  
MARCH 5,2012  
1211**

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**BID FORM**  
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**TO:** Moose Lodge 398  
330 8<sup>th</sup> Street  
Columbus, In 47201

**FROM:** \_\_\_\_\_ (Bidder's Name)

\_\_\_\_\_ (Bidder's

Address)

\_\_\_\_\_

\_\_\_\_\_ (Bidder's

Telephone)

\_\_\_\_\_ (Bidder's Fax)

\_\_\_\_\_ (Bidder's Contact

Person)

**FOR:** Remodel And Addition  
Moose Lodge 398 Family Center  
330 8th Street  
Columbus, In 47201

After having visited the site of the proposed construction as defined above, and having become familiar with local conditions affecting the performance and cost of the work and after having examined the Instruction to Bidders, Articles of Agreement, Bid Form, General Conditions, Supplementary General Conditions, Specifications (Specifically the "Summary of the Project"), Drawings and all Addenda to the Documents, the undersigned hereby proposes and agrees to execute the required Articles of Agreement, to furnish the required Insurance, any required bonds, and to furnish all things required for the items of work bid for the Construction of a remodel bank branch of as defined above and as required by the documents prepared by Nolan G. Bingham, Architect P.C., Columbus, Indiana.

**A. BID SCHEDULE:**

**A. GENERAL CONSTRUCTION BID AMOUNT**

(Words) \_\_\_\_\_

\_\_\_\_\_ Dollars \$ \_\_\_\_\_

**BID FORM**  
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38 **B. ELECTRICAL BID AMOUNT**  
39 (Words) \_\_\_\_\_  
40 \_\_\_\_\_ Dollars \$ \_\_\_\_\_

41  
42 **C. MECHANICAL AND PLUMBING BID AMOUNT**  
43 (Words) \_\_\_\_\_  
44 \_\_\_\_\_ Dollars \$ \_\_\_\_\_

45 **TOTAL BID AMOUNT (ADD A, B, & C)**  
46 (Words) \_\_\_\_\_  
47 \_\_\_\_\_ Dollars \$ \_\_\_\_\_

48  
49 **TIME TO COMPLETE:** \_\_\_\_\_ (Calendar Weeks)

50  
51 **ADDENDUM RECEIPT:**  
52 Receipt of the following Addenda to the Contract Documents are acknowledged:  
53 Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_  
54 Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_  
55 Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

56  
57 **BID AGREEMENT:**  
58 Within seven (7) days of receiving Notice of Award, said contractor agrees to  
59 sign the Articles of Agreement and to begin work in furnishing material, or  
60 furnishing material and labor and to work with the Owner on establishing a  
61 schedule of timing for their particular product or work schedule, delivery or  
62 execution time.

63  
64  
65  
66  
67 **BID FORM SIGNATURE(S):**  
68 The Undersigned has checked carefully all the above figures and understands  
69 that the Owner will not be responsible for any errors or omissions on the part of  
70 the undersigned in the preparation of this bid.  
71 A. Please check one of the following:  
72 1. Sole Proprietorship \_\_\_\_\_  
73 2. Partnership \_\_\_\_\_  
74 3. Corporation \_\_\_\_\_

75  
76 Contractor's complete and legal name:

**BID FORM**  
**PROJECT NUMBER 0811**  
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\_\_\_\_\_  
Contractor's complete and legal address:  
\_\_\_\_\_  
\_\_\_\_\_

B. Signed (Signature of person or persons legally bonded to execute contractual agreements for the Contractor or Company putting forth this Bid):

1. By: \_\_\_\_\_
2. If Corporation, signature below:  
By: \_\_\_\_\_

Corporate Seal here:

By: \_\_\_\_\_

*END OF BID FORM*

**INVITATION TO BID**  
**PROJECT NUMBER 0811**  
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1  
2 **NOTICE IS HEREBY GIVEN THAT SEALED BIDS WILL BE RECEIVED FROM**  
3 **SELECTED CONTRACTORS:**

4  
5 BY: Moose Lodge 398  
6 330 8th Street  
7 Columbus, In 47201  
8 FOR: Remodel and Addition  
9 Moose Lodge 398 Family Center  
10 330 8th Street  
11 Columbus, In 47201

12 BIDS WILL BE RECEIVED AT THE OFFICE OF THE ARCHITECT:  
13 Nolan G Bingham Architect P.C.  
14 2525 California Street Suite C  
15 Columbus, IN 47201

16  
17 **UNTIL: 2:00 P.M. LOCAL TIME ON MAY 22, 2012.**

18  
19 BID OPENING: THE OWNER WILL OPEN THE BIDS PRIVATELY AND THE  
20 CONTRACTORS NOTIFIED LATER.

21  
22 CONTRACT TYPE:

- 23 A. The contract will be a Stipulated Sum Contract.  
24 B. All elements of the work will be unified under a single contract.

25  
26 BID DOCUMENTS - SECURING COPIES:

- 27 A. Contractors may obtain contract documents at the Architect's Office located at 2525  
28 California Street Suite C, Columbus, Indiana 47201, (812) 378-4134.

29  
30 DOCUMENT DISTRIBUTION

- 31 A. Distribution of documents will be as follows:  
32 1. Documents will be distributed electronically no sooner than April 30, 2012.  
33  
34 B. Distribution and deposit:  
35 1. Each General Contractor will receive the documents via e-mail. There is no deposit for  
36 documents. The electronic documents can be distributed for bidding only to suppliers  
37 and subcontractors.  
38 2. Distribution of documents in any form other than in complete sets is done so at the  
39 user's sole risk. The drawings and specifications that make up the Work of this project  
40 are interrelated and dependent on every other drawing and specification section. The  
41 contractors, suppliers or manufacturer for any section of specifications or drawing  
42 element shall review all other sections of specifications, drawings element and  
43 addendum to coordinate their work as it relates to this project. If an item is illustrated,  
44 specified or indicated in or on any other specification section, drawing or addendum it  
45 shall be provided for in the contract.

**INVITATION TO BID**  
**PROJECT NUMBER 0811**  
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**DOCUMENT - REVIEW:**

A. All material, sub-contractors, etc., requiring documents may review them at the offices of the Contractors or may review them at the locations enumerated below.

1. Nolan G Bingham Architect P.C.  
2525 California Street Suite C  
Columbus, IN 47201
2. FW Dodge  
6666 East 75th Street Suite 190  
Indianapolis, IN 46250
3. Reed Construction Data  
5804 W. 74th Street  
Indianapolis, IN 46250w sbz
4. Construction League  
603 E. Washington Street 9th Floor  
Indianapolis, IN 46204

**BID HOLDING PERIOD:**

- A. Bid may not be modified, withdrawn or canceled by the bidder for Ninety (90) days following the time and date designated for the receipt of Bids.
- B. The Owner reserves the right to accept or reject any bids and to waive all formalities of the bidding.

**PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND:**

- A. Within five (5) days of being awarded the Bid and prior to execution of the Contract, the Contractor shall provide an acceptable Performance Bond and a Labor and Material Bond in an amount equal to one hundred percent (100%) of the total bid amount.

**PROJECT TIME:**

- A. In the space provided on the Bid Form, each Bidder shall note the number of working days to complete the work defined herein.

**BID SECURITY:**

- A. Either an acceptable Certified Check or Cashier's Check or a Bid Bond, executed by the Bidder and an acceptable surety company, shall accompany each bid. The check or bid bond shall be made payable to the order of Indiana Bank and Trust in an amount not less than Five Percent (5%) of the total bid amount.

**BID PROCEDURES:**

- A. The Bid Form (Project Number 0811) found in the section of these specifications entitled "Bid Form - 0811" shall be filled out completely.
- B. Each Bid proposal shall be accompanied by the following items fully executed:

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- 91 1. Items herein attached:  
92 a. The "Bid Form – Project Number 0811"  
93 b. List of all Sub-Contractors  
94 c. Certificate of Insurance (see supplementary general conditions "Article II" -  
95 insurance and bond)  
96 d. Bid Bond  
97  
98

END OF INVITATION TO BID

**AIA Document A101**  
**Moose Lodge 398 Family Center Addition/Remodel**  
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**PART 1 – GENERAL**

Document A101 is the Standard Form of Agreement Between Owner and Contractor.

END OF SECTION

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**PART 1 – GENERAL**

Document A201-1997 is the General Conditions of the Contract for Construction.

END OF SECTION

# SUPPLEMENTARY GENERAL CONDITIONS

## Moose Lodge 398 Family Center Addition/Remodel

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- 1  
2 A. INTRODUCTION:  
3 1. The "General Conditions of the Contract for Construction", AIA Document A201,  
4 1997, Articles 1 through 14 inclusive, is a part of this Contract, subject to all  
5 changes contained in Addenda to the General and Supplementary Conditions.  
6 2. The following supplements modify, change, delete from or add to the "General  
7 Conditions of the Contract for Construction, AIA Document A201, 1997. Where  
8 any Article of the General Conditions is modified or deleted by these  
9 Supplementary Conditions, the unaltered provisions of that Article, Paragraph,  
10 subparagraph or Clause shall remain in effect.  
11
- 12 B. ARTICLE 1 - GENERAL PROVISIONS:  
13 1. Section 1.2 Correlation and Intent of the Contract Documents -Add the following:  
14 1.2.4 In the case of an inconsistency between Drawings and Specifications or  
15 within either Document not clarified by addendum, the better quality or  
16 greater quantity of Work shall be provided in accordance with the  
17 Architect's interpretation.  
18
- 19 C. ARTICLE 3 - CONTRACTOR:  
20 1. Section 3.6 Taxes - Add the following:  
21 3.6.2 Indiana State Gross Retail and Use Tax:  
22 All bids shall be submitted with inclusion in the bid price for the amounts, if any,  
23 of Gross Retail and Use Tax (generally called the "Sales Tax" adopted in the 1963  
24 Special Session of the Indiana General Assembly as House Enrolled Act 1226,  
25 Sections 1-20) due the State of Indiana for services performed or material  
26 furnished in connection with the work contemplated by the Bidder. This provision  
27 shall apply both to transactions between the Owner and the Contractor and to  
28 transactions between the Contractor and any subcontractor and supplier  
29 furnishing service or material not incorporated in the work shall be paid by the  
30 Contractor if assessed by the State of Indiana and shall not be paid by the owner.  
31
- 32 D. ARTICLE 7 - CHANGES IN THE WORK:  
33 1. Section 7.3 - Construction Change Directives - Add the Following to 7.3.6:  
34 .6 a. Estimates of cost of proposed extra work or change by the  
35 Contractor and his subcontractors shall be presented to the  
36 architect completely broken down in detailed form to indicate  
37 quantities of materials and labor involved, whether added or  
38 deducted, unit costs applied thereto, taxes, insurance, overhead and  
39 profit.  
40  
41 b. For extra work performed by the Contractor, cost to Owner  
42 shall include an allowance for overhead and profit not to exceed  
43 15% of net cost of work as defined or modified below.

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# SUPPLEMENTARY GENERAL CONDITIONS

## Moose Lodge 398 Family Center Addition/Remodel

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44 c. For extra work performed by a subcontractor, the cost to  
45 the Owner shall include the net cost to the Contractor, plus an  
46 allowance not to exceed 15% for the subcontractor's overhead and  
47 profit, plus not to exceed 5% for the Contractor's overhead and  
48 profit.

49  
50 d. "Net Cost" as used herein shall include all items of labor  
51 and materials, the use of power equipment, power, premiums on  
52 Public Liability and Workmen's Compensation Insurance, Social  
53 Security, Old Age and Unemployment Insurance; however, no  
54 percentage for overhead and profit shall be allowed on  
55 items of Social Security, Health and Welfare, Old Age, and  
56 Unemployment Insurance, contributions to pension funds,  
57 education and training funds, industry improvement funds, and  
58 similar fringe benefits.

59  
60 e. In change involving both deductions and additions  
61 including relocation of work or substitution of one material for  
62 another, such deductions and additions shall be balanced and  
63 overhead and profit computed on net amount if addition results. In  
64 case of net deductions, Contractor will not be required to give  
65 further credit for overhead and profit where nominal value is  
66 involved. In case of a major reduction in the scope of the work,  
67 credit for overhead and anticipated profit shall be subject to  
68 negotiation.

69

### 70 E. ARTICLE 8 - TIME:

#### 71 1. Section 8.1 Definitions

72 Delete subparagraph 8.1.4 and substitute the following:

73 8.1.4 The term "day" as used in the Contract Documents shall  
74 mean working day, excluding weekends and holidays.

75

### 76 F. ARTICLE 9 - PAYMENTS AND COMPLETION:

#### 77 1. Section 9.3.1 - Add the following sentence to Subparagraph 9.3.1:

78 9.3.1 The form of Application for Payment shall be a notarized AIA  
79 Document G702, Application and Certification for Payment,  
80 supported by AIA Document G703, Continuation Sheet.

81

#### 82 2. Add the following Clause to 9.3.1:

83 9.3.1.3 Until Substantial Completion, the Owner will pay Ninety Percent  
84 (90%) of the amount due the Contractor on account of Progress  
85 payments.

86

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# SUPPLEMENTARY GENERAL CONDITIONS

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- 87 G. ARTICLE 11 - INSURANCE AND BONDS:  
88 1. Section 11.1 - Contractor's Liability Insurance:  
89 11.1.1 a. Liability Insurance shall include all major divisions of coverage  
90 and be on a comprehensive basis including:  
91 1. Premises Operations (including X, C, U) as applicable.  
92 2. Independent Contractors' Protective.  
93 3. Products and Completed Operations.  
94 4. Personal Injury Liability with Employment Exclusion  
95 deleted.  
96 5. Contractual - including specified provision for Contractor's  
97 obligation under Paragraph 4.3.9.  
98 6. Owner, non-owned and hired motor vehicles.  
99 7. Broad Form Property Damage including Completed  
100 Operations.  
101 8. Umbrella Excess Liability.

102 Add the following Clause to 11.1.2:

103 11.1.2.1 The insurance required by Subparagraph 11.1.1 shall be written  
104 for not less than the following limits, or greater if required by law.

- 105 1. Worker's Compensation:  
106 (a) State: Statutory  
107 (b) Applicable Federal Statutory  
108 (c) Employer's Liability:  
109 \$ 100,000.00 Per Accident  
110 \$ 500,000.00 Disease, Policy Limit  
111 \$ 100,000.00 Disease, Each Employee  
112  
113 2. Comprehensive or Commercial General Liability  
114 (including Premises-Operations; Independent Contractors'  
115 Protective; Products and Completed Operations; Broad  
116 Form Property Damage):  
117 (a) Bodily Injury:  
118 \$ 500,000.00 Each Occurrence  
119 \$1,000,000.00 Aggregate  
120 (b) Property Damage:  
121 \$ 500,000.00 Each Occurrence  
122 \$1,000,000.00 Aggregate  
123 (c) Products and Completed Operations to be  
124 maintained for one (1) year after final payment.  
125 (d) Property Damage Liability Insurance shall provide  
126 X, C, and U Coverage.  
127 (e) Broad Form property Damage Coverage shall  
128 include Completed Operations.  
129

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# SUPPLEMENTARY GENERAL CONDITIONS

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150
3. Contractual Liability:
    - (a) Bodily Injury:  
\$1,000,000.00 Each Occurrence
    - (b) Property Damage:  
\$ 500,000.00 Each Occurrence  
\$1,000,000.00 Aggregate
  4. Personal Injury, with Employment Exclusion deleted:
    - (a) \$1,000,000.00 Aggregate
  5. Business Auto Liability (including owned, non-owned and hired vehicles):
    - (a) Bodily Injury:  
\$ 500,000.00 Each Person  
\$1,000,000.00 Each Occurrence
    - (b) Property Damage:  
\$1,000,000.00 Each Occurrence
  6. Umbrella Excess Liability:  
\$3,000,000.00 over primary insurance

151 Add the following Clause to 11.1.3:

152 11.1.3.1 The Contractor shall furnish within five (5) days of the award of  
153 the contract. Two copies of Certificate of Insurance herein required for  
154 each copy of the Agreement which shall specifically set forth evidence of  
155 all coverage required by Subparagraphs 11.1.1, 11.1.2 and 11.1.3. If the  
156 insurance is written on the Comprehensive General Liability policy form,  
157 the Certificates shall be AIA Document G705, Certificate of Insurance. If  
158 this insurance is written on a Commercial General Liability policy form,  
159 ACCORD form 25S will be acceptable.

160  
161 2. Section 11.4 - Property Insurance:

162 Add the following sentence to Clause 11.4.1.1:

163 11.4.1.1 The form of policy for this coverage shall be Completed Value.

164  
165 Delete Clause 11.4.1.4 and substitute the following:

166 11.4.1.4 The Contractor shall provide insurance coverage for portions of  
167 the Work stored off the site after written approval of the Owner at the  
168 value established in the approval, and also for portions of the Work in  
169 transit.

170  
171 3. Section 11.5 - Performance Bond and Payment Bond:

172 Delete Subparagraph 11.5.1 and substitute the following:

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# SUPPLEMENTARY GENERAL CONDITIONS

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173 11.5.1 The Contractor shall furnish bonds covering faithful  
174 performance of the Contract and payment of obligations arising  
175 thereunder. Bonds may be obtained through the Contractor's usual  
176 source and the cost thereof shall be included in the Contract Sum.  
177 The amount of each bond shall be equal to 100% of the Contract  
178 Sum.

179  
180 11.5.1.1 The Contractor shall deliver the required bonds to the  
181 Owner not later than three (3) days following the date the  
182 Agreement is entered into, or if the Work is to commence prior  
183 thereto in response to a letter of intent the Contractor shall, prior to  
184 the commencement of the Work, submit evidence satisfactory to  
185 the Owner that such bonds will be furnished.

186  
187 11.5.1.2 The Contractor shall require the attorney-in-fact who  
188 executes the required bonds on behalf of the surety to affix thereto  
189 a certified and current copy of the power of attorney.

190  
191 *END OF SUPPLEMENTARY GENERAL CONDITIONS*



**SECTION 01010**  
**SUMMARY OF THE WORK**  
**Moose Lodge 398 Family Center Addition/Remodel**  
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**PART 1 - GENERAL:**

**RELATED DOCUMENTS:**

- A. Refer to Instructions to Bidders, General Conditions, “ Supplementary General Conditions” and “Division 1 - General Requirements”, which hereby form a part of this Specification and govern the Work herein specified.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings, and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

**DESCRIPTION:**

- A. The proposed work shall include but shall not be limited to the following:
  - 1. Remodel and addition to an existing two level to support the activities of the Moose Lodge 398 Columbus, Indiana.
  - 2. The construction shall consist of but not be limited to all General, Mechanical, Plumbing, and Electrical construction as defined in the Contract Documents prepared by The Paris/Bingham Partnership, Corp. and their consultants.
  - 3. The owner has suppliers and contractors for a items as indicated on the documents which the General Contractor for this contract shall coordinate and assist in their installation. The supply of services for these materials shall be part of the contract.

**LOCATION:**

The project is located at 330 8th Street, Columbus, In 47201

END OF SECTION

**SECTION 01200**  
**PROJECT MEETINGS**

**Moose Lodge 398 Family Center Addition/Remodel**

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1  
2 *RELATED DOCUMENTS:*

- 3 A. Drawings and general provisions of the contract, including General and Supplementary  
4 Conditions and other Division 1 Specification Sections, apply to this Section.  
5 B. The drawings and specifications that make up the Work of this project are interrelated and  
6 dependent on every other drawing and specification section. The contractors and suppliers for  
7 this section of specifications shall review all other sections of specifications, drawings, and  
8 addendum to coordinate their work as it relates to this project. If an item related to this  
9 section is illustrated, specified or indicated in or on any other specification section, drawing  
10 or addendum it shall be as if it were part of this section of specifications and shall be  
11 provided for in the contract.  
12

13 *SUMMARY:*

- 14 A. This Section specifies administrative and procedural requirements for project meetings  
15 including but not limited to:  
16 1. Pre-Construction Conference.  
17 2. Progress Meetings.  
18

19 *PRE-CONSTRUCTION OR INSTALLATION CONFERENCE:*

20 The General Contractor shall schedule a preconstruction conference and organizational  
21 meeting at the Project site or other convenient location after execution of the Agreements  
22 and before commencement of construction activities. Conduct the meeting to review  
23 responsibilities and personnel assignments.  
24

25 Attendees: The Owner, Architect and their consultants, the various contractors, major  
26 subcontractors, manufacturers, suppliers and other concerned parties shall each be  
27 represented at the conference by persons familiar with and authorized to conclude  
28 matters relating to the Work. The General Contractor shall conduct the meeting  
29 utilizing the following agenda:  
30

31 Agenda: Discuss items of significance that could affect progress including such topics as:

- 32 1. Tentative construction schedule.  
33 2. Designation of responsible personnel.  
34 3. Procedures for processing field decisions and Change Orders.  
35 4. Procedures for processing Applications for payment.  
36 5. Distribution of Contract Documents.  
37 6. Submittal of Shop Drawings, Product Data and Samples.  
38 7. Use of the premises.  
39 8. Offices, Work and storage areas.  
40 9. Equipment deliveries and priorities.  
41 10. Safety procedures.  
42 11. First Aid.  
43 12. Security.  
44 13. Housekeeping.

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**SECTION 01200  
PROJECT MEETINGS**

**Moose Lodge 398 Family Center Addition/Remodel**

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45 14. Working hours.

46 15. Protection.

47  
48 Record significant discussions and agreements and disagreements along with the  
49 approved schedule. Distribute the record of the meeting to everyone concerned,  
50 promptly, including the Owner and Architect.

51  
52 Do not proceed if the conference cannot be successfully concluded. Initiate whatever  
53 actions are necessary to resolve impediments to performance of Work and reconvene the  
54 conference at the earliest feasible date.

55  
56 *PROGRESS MEETINGS:*

57 Progress meetings will be conducted at the site as established at the preconstruction  
58 meeting. Coordinate dates of meetings with preparation of the payment request.

59  
60 Attendees: In addition to representatives of the Owner and Architect, each subcontractor,  
61 supplier and other entity concerned with current progress or involved in planning,  
62 coordination or performance of future activities shall be represented at these  
63 meetings by persons familiar with the Project and authorized to conclude matters  
64 relating to progress.

65  
66 Agenda: Review and correct or approve minutes of the previous progress meeting.  
67 Review other items of significance that could affect progress. Include topics for  
68 discussion as appropriate to the current status of the Project.

69  
70 Contractor's Construction Schedule: Review progress since the last meeting. Determine  
71 where each activity is in relation to the Contractor's Construction  
72 Schedule, whether on time or ahead or behind schedule. Determine how  
73 construction behind schedule will be expedited; secure commitments from  
74 parties involved to do so. Discuss whether schedule revisions are required  
75 to ensure that current and subsequent activities will be completed within  
76 the Contract Time.

77  
78 Review the present and future needs of each entity present, including such items as:

- 79 1. Interface requirements.  
80 2. Time.  
81 3. Sequences.  
82 4. Deliveries.  
83 5. Off-site fabrication problems.  
84 6. Access.  
85 7. Site utilization.  
86 8. Temporary facilities and services.  
87 9. Hours of Work.  
88 10. Hazards and risks.

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**SECTION 01200  
PROJECT MEETINGS**

**Moose Lodge 398 Family Center Addition/Remodel**

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- 89 11. Housekeeping.
- 90 12. Quality and Work standards.
- 91 13. Change Orders.
- 92 14. Documentation of information for payment requests.
- 93

94 Reporting: No later than 3 days after each progress meeting date the General Contractor  
95 shall distribute copies of minutes of the meeting to each party present and to other parties  
96 who should have been present. Include a brief summary, in narrative form, of progress  
97 since the previous meeting and report.

98  
99 Schedule Updating: Revise the construction schedule after each progress meeting where  
100 revisions to the schedule have been made or recognized. Issue the revised  
101 schedule concurrently with the report of each meeting.

102  
103 *END OF SECTION*

**SECTION 01300**  
**SUBMITTALS AND SUBSTITUTIONS**  
**Moose Lodge 398 Family Center Addition/Remodel**

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**PART 1-GENERAL:**

*RELATED DOCUMENTS:*

- A. Refer to “Instructions to Bidders”, “General Conditions”, “Supplementary General Conditions”, and “Division 1 General Requirements”, which hereby form a part of this Specification and govern the Work hereinafter specified.
  
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

*DESCRIPTION:*

- A. Work Included:
  - 1. Wherever possible throughout the Contract Documents, the minimum acceptable quality of workmanship and materials has been defined either by manufacturer’s name and catalog number or by reference to recognized industry standards.
  - 2. To ensure that the specified products are furnished and installed in accordance with the design intent, procedures have been established for advance submittal of design data and for its review and approval or rejection by the Architect and Owner.
- B. Related Work Specified Elsewhere:
  - 1. Contractual Requirement for Submittals: General Conditions and Supplementary Conditions.
  - 2. Individual Submittals Required in Pertinent Sections of these Specifications.

*PRODUCT HANDLING:*

- A. Make all submittals of Shop Drawings, Samples, etc., requests for substitutions, and other similar items, in strict accordance with the provisions of this Section of these Specifications.

**PART 2 - PRODUCTS:**

*SUBMITTALS:*

- A. Scale Required:
  - 1. Unless otherwise specifically directed by the Architect, make all Shop Drawings accurately to a scale sufficiently large to show all pertinent features of the item and its method of connection to the work.
- B. Type of Prints Required:
  - 1. Submit all shop drawings in the form of one sepia transparency of each sheet plus three blue line or black line prints of each. Blueprint submittals will not be acceptable.
- C. Reproduction of Reviewed Shop Drawings:

**SECTION 01300**  
**SUBMITTALS AND SUBSTITUTIONS**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 44 1. Printing and distribution of reviewed shop drawings will be by the Architect.  
45 2. For Rejected Shop Drawings, the Architect will:  
46 a. Keep one print of the rejected sepia for the Architect's file;  
47 b. Return the rejected sepia to the Contractor.  
48 3. For "Approved" and "Approved as Noted" Shop Drawings, the Architect will:  
49 a. Keep two prints of the sepia for the Architect's file;  
50 b. Send one print of the sepia to the Contractor;  
51 c. Return the sepia to the Contractor.  
52

53 *MANUFACTURER'S LITERATURE:*

54 A. General:

- 55 1. Where contents of submitted literature from manufacturers includes data not pertinent  
56 to the submittal, clearly indicate which portion of the contents is being submitted for  
57 the Architect's review.

58 B. Number of Copies Required:

- 59 1. Submit the number of copies, which are required to be returned plus two copies,  
60 which will be retained by the Architect.  
61

62 *SAMPLES:*

63 A. Accuracy of Sample:

- 64 1. Unless otherwise specifically directed by the Architect, all samples shall be the  
65 precise article proposed to be furnished.

66 B. Number of Samples Required:

- 67 1. Submit all samples in the quantity that is required to be returned plus one which will  
68 be retained by the Architect.  
69

69 *COLORS:*

70 A. General:

- 71 1. Unless the precise color and pattern is specifically described in the Contract  
72 Documents, whenever a choice of color or pattern is available in a specified product,  
73 submit accurate color charts and pattern charts to the Architect for his review and  
74 selection.

75 B. Comparative Analysis:

- 76 1. Unless all available colors and patterns have identical costs and identical wearing  
77 capabilities, and are identically suited to the installation, completely describe the  
78 relative costs and capabilities of each.  
79

80 *SUBSTITUTIONS:*

81 A. The Architect's approval is required as per the following:

- 82 1. The contract is based on the materials, equipment, and methods described in the  
83 Contract Documents.  
84 2. The Architect will consider proposals for substitution of materials, equipment,  
85 and methods only when such proposals are accompanied by full and complete

**SECTION 01300**  
**SUBMITTALS AND SUBSTITUTIONS**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 86 technical data and all other information required by the Architect to evaluate the  
87 proposed substitution. The material shall be clearly marked.
- 88 3. **Do not substitute materials, equipment, or methods unless such substitution**  
89 **has been specifically approved for this work by the Architect.**
- 90 B. “Or-Equal”:
- 91 1. Where the phrase “or equal” or “or equal as approved by the Architect” occurs in  
92 the Contract Documents, do not assume that material, equipment, or methods will  
93 be approved as equal by the Architect unless the item has been specifically  
94 approved for this work by the Architect.
- 95 2. The decision of the Architect shall be final.
- 96 C. Availability of Specified Items:
- 97 1. Verify that all specified items will be available in time for installation during  
98 orderly and timely progress of the work.
- 99 2. In the event specified item or items will not be available, notify the Architect.
- 100 D. Reimbursement of Architect’s Costs:
- 101 1. In the event substitutions are proposed to the Architect after the Contract has been  
102 awarded, the Architect will record all time used by him and by his consultants in  
103 evaluation of each such proposed substitution.
- 104 2. Whether or not the Architect approves a proposed substitution, the Contractor  
105 shall promptly upon receipt of the Architect’s billing reimburse the Architect at  
106 the rate of two and one-half times the direct salary cost to the Architect and his  
107 Consultants for all time spent by them in evaluation of the proposed substitution.

108  
109 **MANUALS:**

- 110 A. General: Where Manuals are required to be submitted covering items included in this  
111 work, prepare all such Manuals in durable plastic binders approximately 8-½ by 11  
112 inches in size and with at least the following:
- 113 1. Identification on, or readable through, the front cover stating general nature of the  
114 Manual.
- 115 2. Neatly typewritten index near the front of the Manual, furnishing immediate  
116 information as to location in the Manual of all emergency data regarding the  
117 installation.
- 118 3. Complete instructions regarding operation and maintenance of all equipment  
119 involved.
- 120 4. Complete nomenclature of all replaceable parts, their part numbers, current cost,  
121 and name and address of nearest vendor for parts.
- 122 5. Copy of all guarantees and warranties issued.
- 123 6. Copy of the approved Shop Drawings with all data concerning all changes made  
124 during construction.
- 125 B. Extraneous Data: Where contents of Manuals include manufacturer’s catalog pages,  
126 clearly indicate the precise items included in this installation and delete or otherwise  
127 clearly indicate all manufacturer’s data with which this installation is not concerned.
- 128 C. Number of Copies Required:

**SECTION 01300**  
**SUBMITTALS AND SUBSTITUTIONS**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 129 1. Unless otherwise specifically directed by the Architect or stipulated in the  
130 pertinent Section of these Specifications, deliver one copy of the Manual to the  
131 Owner and one copy to the Architect.  
132

**PART 3 – EXECUTION:**

*IDENTIFICATION OF SUBMITTALS:*

- 133  
134  
135 A. General:  
136 1. Consecutively number all submittals.  
137 2. Accompany each submittal with a letter of transmittal showing the transmittal  
138 number, date of transmittal, Specification Section or Drawing number to which  
139 the submittal pertains, brief description of the material submitted, and the  
140 company name of the originator of the submittal.  
141 B. Internal Identification:  
142 On at least the first page of each copy of each submittal, indicate the transmittal  
143 number corresponding to the letter of transmittal by which the submittal was  
144 accompanied.  
145 C. Resubmittals:  
146 When material is resubmitted for any reason, transmit under a new letter of  
147 transmittal with a new number; indicate by reference to previous submittal that  
148 this is a resubmittal.  
149 D. Submittal Log:  
150 1. Maintain an accurate submittal log for the duration of the construction period,  
151 showing status of all submittals of all types.  
152 2. Make the log available to the Architect for review upon request.  
153

*COORDINATION OF SUBMITTAL:*

- 154  
155 A. General: Before submittal for Architect's review, use all means necessary to fully  
156 coordinate all material, including the following procedures:  
157 1. Determine and verify all field dimensions and conditions, catalog numbers, and  
158 similar data.  
159 2. Coordinate as required with all trades and with all public agencies involved.  
160 3. Secure all necessary approvals from public agencies and others; signify by stamp  
161 or other means that all required approvals have been obtained.  
162 4. Clearly indicate all deviations from the Contract Documents.  
163 B. Grouping of Submittals:  
164 1. Unless otherwise specifically permitted by the Architect, make all submittals in  
165 groups containing all associated items.  
166 2. The Architect may reject partial submittals as not complying with the provisions  
167 of the Contract Documents.  
168

*TIMING OF SUBMITTALS:*

- 169 A. General:  
170



**SECTION 01300**  
**SUBMITTALS AND SUBSTITUTIONS**  
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1. Make all submittals far enough in advance of scheduled dates for installation to provide all required time for reviews, for securing necessary approvals, for possible revision and resubmittals, and for placing orders and securing delivery.
  2. In scheduling, allow at least eight full working days for the Architect's review following his receipt of the submittal.

*END OF SECTION*

# SECTION 01400 SPECIAL CONDITIONS

## Moose Lodge 398 Family Center Addition/Remodel

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- 1  
2 **PART 1 - GENERAL**  
3 RELATED DOCUMENTS
- 4 A. Drawings and general provisions of Contract, including General and Supplementary  
5 Conditions and other Division 1 - Specification sections apply to work of this section.
- 6 B. The drawings and specifications that make up the Work of this project are interrelated  
7 and dependent on every other drawing and specification section. The contractors and  
8 suppliers for this section of specifications shall review all other sections of specifications,  
9 drawings and addendum to coordinate their work as it relates to this project. If an item  
10 related to this section is illustrated, specified or indicated in or on any other specification  
11 section, drawing or addendum it shall be as if it were part of this section of specifications  
12 and shall be provided for in the contract.
- 13 C. OWNER OCCUPANCY:
- 14 1. During the entire time of the work the owner intends to occupy the facility.  
15 There will be work on two levels and while one level is being remodeled the  
16 Owner will occupy the other level of the facility. The contractor shall include as  
17 part of their bid the coordination of the owner occupancy and the Work of the  
18 contract. The contractor shall provide for proper egress and exit from the levels  
19 during the construction to meet state laws and shall notify the owner two days in  
20 advance if there will be times of minimal disruption to such access. This time  
21 shall be full coordinated with the owner and shall be of short duration. A complete  
22 plan for such access shall be presented to the owner prior to beginning work for  
23 discussion and approval.
- 24 2. The contractor shall construct dust barriers and mechanical equipment  
25 requirement to keep the Owner occupied areas dust free during the work.
- 26 D. DESCRIPTION:
- 27 1. The Owner has broken the project down into a series of separate responsibilities.  
28 2. The bid will include:  
29 a) A unified bid covering the General, Mechanical, Plumbing and Electrical  
30 Construction indicated on the documents.
- 31 3. The Owner will then bid separately the furnishings and installation of the  
32 following items:  
33 a) Under Bar equipment.  
34 b) Cooler equipment  
35 c) Interior Finishes:  
36 1. Carpeting.  
37 2. Blinds and drapes.  
38 3. Furniture and accessory items

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**SECTION 01400  
SPECIAL CONDITIONS**

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4. Certain items of these separate bids require preparation of the building structure to receive these items, along with electrical and plumbing requirements which have been indicated in the documents for the bid. Shop drawings for these items will be submitted to the General Contractor by the Owner so that these preparations can be made in the structure for proper fit of these components.
  5. It shall be the General Contractors responsibility under the bid to coordinate and interface these items into the work based upon shop drawings received from the Owner. The General Contractor shall prepare a schedule of when these elements need to be installed in order to keep the project moving on a timely basis. No penalty will be assessed against the General Contractor for lack of performance by the owner's separate contractor. However, it will be the General Contractor's responsibility to keep the Owner informed as to the performance or lack thereof of these separate Contractors.

END OF SECTION

**SECTION 01500**  
**TEMPORARY FACILITIES**  
**Moose Lodge 398 Family Center Addition/Remodel**

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**PART 1 – GENERAL:**

*RELATED DOCUMENTS:*

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 - Specification sections, apply to the work of this section.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings, and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

*DESCRIPTION OF REQUIREMENTS:*

- A. This section specifies administrative and procedural requirements for temporary services and facilities, including such items as temporary utility services, temporary construction and support facilities, and project security and protection.
- B. Use Charges: No cost or usage charges for temporary services or facilities are chargeable to the Owner or Architect. Cost or use charges for temporary services or facilities will not be accepted as a basis of claims for a change-order extra.
- C. Temporary utility services required for use at the project site include but are not limited to the following:
1. Water service temporary distribution system.
  2. Temporary electric power and light distribution system, system of wire and devices by electrical contractor.
  3. Temporary phone service utilized by the Contractor on the site.
- D. Temporary construction and support facilities required for the project include but are not limited to the following:
1. Temporary heat by HVAC contractor.
  2. Hoists by each contractor requiring hoisting.
  3. First aid station.
  4. Waste disposal services.
  5. Pest control.
- Alternate temporary services and facilities, equivalent to those specified, may be used, subject to acceptance by the Architect.
- E. Security and protection facilities and services required for the project include but are not limited to the following:
1. Temporary fire protection.
  2. Barricades, warning signs, and lights.

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**SECTION 01500**  
**TEMPORARY FACILITIES**  
**Moose Lodge 398 Family Center Addition/Remodel**

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45 Alternate security and protection methods or facilities, equivalent to those  
46 specified, may be used, subject to acceptance by the Architect.  
47

48 *QUALITY ASSURANCE:*

- 49 A. Regulations: Comply with requirements of local laws and regulations governing  
50 construction and local industry standards, in the installation and maintenance of  
51 temporary services and facilities, including but not limited to the following:  
52 1. Building Codes, including local requirements for permits, testing and inspection.  
53 2. Health and safety regulations.  
54 3. Utility company regulations and recommendations governing temporary utility  
55 services.  
56 4. Police and Fire Department rules and recommendations.  
57 5. Environmental protection regulations governing use of water and energy, and the  
58 control of dust, noise and other nuisances and pollutants.  
59
- 60 B. Standards: Comply with the requirements of NFPA Code 241, "Building Construction  
61 and Demolition Operations", the ANSI-A10 Series standards for "Safety Requirements  
62 for Construction and Demolition", and the NECA National Joint Guideline NJG-6  
63 "Temporary job utilities and Services".  
64 1. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and  
65 Services", as prepared jointly by AGC and ASC for industry recommendations.  
66
- 67 C. Inspections: Inspect and test each service before placing temporary utilities in use.  
68 Arrange for required inspections and tests by governing authorities, and obtain required  
69 certifications and permits for use.

70 *JOB CONDITIONS:*

- 71 A. General: Provide each temporary service and facility system ready for use at each  
72 location when the service or facility is first needed to avoid delay in performance of the  
73 work. Maintain, expand as required and modify temporary services and facilities as  
74 needed throughout the progress of the Work. Do not remove until services or facilities  
75 are no longer needed, or are replaced by the authorized use of completed permanent  
76 facilities. With the establishment of the job progress schedule, establish a schedule for  
77 the implementation and termination of service for each temporary utility system. At the  
78 earliest feasible time, and when acceptable to the Owner and Architect, remove  
79 temporary utility service systems to eliminate possible interference with completion of  
80 the work.  
81
- 82 B. Conditions of Use: Operate temporary services and facilities systems in a safe and  
83 efficient manner. Do not overload temporary services or facilities systems, and do not  
84 permit them to interfere with the progress of the work. Do not allow unsanitary  
85 conditions, public nuisances or hazardous conditions to develop or persist on the site.  
86 1. Temporary Utilities Systems: Do not permit the freezing of pipes, flooding or the  
87 contamination of water sources.

**SECTION 01500**  
**TEMPORARY FACILITIES**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 88 2. Temporary Construction and Support Facilities: Maintain temporary facilities in  
89 such a manner as to prevent discomfort to users. Take necessary fire prevention  
90 measures. Maintain temporary support facilities in a sanitary manner as to avoid  
91 health problems and other deleterious effects.
- 92 3. Temporary Heat (Use of Permanent Heating System):
- 93 a. After the building, or any major portion thereof, has been enclosed, the  
94 permanent heating system as specified below may be used for temporary  
95 heat.
- 96 b. The building shall be considered enclosed when it has reached the stage  
97 when all exterior walls have been erected, the roof substantially  
98 completed, all exterior openings closed up either by the permanently  
99 glazed windows and doors or by adequate temporary closing, and the  
100 building is ready for interior operations.
- 101 c. When the building is enclosed and when the permanent heating system, or  
102 a suitable portion thereof, is in operating conditions, the system may be  
103 used for temporary heating, provided that approval is obtained from the  
104 Architect and Owner. The Contractor assumes full responsibility for the  
105 entire heating system, operation, maintenance, and restoration of the  
106 system and shall pay all fuel.
- 107 d. The Contractor shall thoroughly service the system at his expense and  
108 clean all parts of the system before acceptance of the work. He shall  
109 replace all defective parts and place the system in perfect operating  
110 condition. The Contractor shall take note that all equipment warranties  
111 and guarantees shall begin upon date of final completion and acceptance  
112 by the Owner with no exceptions.
- 113
- 114 4. Security and Protection: Maintain site security and protection facilities in a safe,  
115 lawful and publicly acceptable manner. Take necessary measures to prevent  
116 erosion of the site.
- 117

118 **PART 2 - PRODUCTS**

119 *MATERIALS AND EQUIPMENT:*

- 120 A. General: Provide new materials and equipment for temporary services and facilities;  
121 used materials and equipment that are undamaged and in serviceable condition may be  
122 used, if acceptable to the Architect. Provide only materials and equipment that are  
123 recognized as being suitable for the intended use, by compliance with appropriate  
124 standards.
- 125
- 126 B. Temporary Utilities: Where the local utility company provides only a portion of the  
127 temporary utility, provide the remainder with matching, compatible materials and  
128 equipment. Comply with the utility company's recommendations.
- 129 1. Water Hoses: Where shut-off nozzles are used at the water hose discharge,  
130 provide heavy-duty abrasion-resistant hoses with a pressure rating greater than  
131 the maximum pressure of the water distribution system.

**SECTION 01500**  
**TEMPORARY FACILITIES**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 132 a. Where non-potable water is used, provide warning signs on the discharge  
133 end of each length of hose.  
134
- 135 2. Electrical Service: Comply with applicable NEMA, NECA and UL standards and  
136 governing regulations for materials and layout of temporary electric service,  
137 including those requirements included in Division 16 sections.
- 138 a. Voltage Differences: Provide identification warning signs at power outlets  
139 that are other than 110-120 volt power. Provide polarized outlets for plug-  
140 in type outlets, to prevent insertion of 110-12- volt plugs into higher  
141 voltage outlets.
- 142 b. Ground-Fault Protection: Provide receptacle outlets equipped with  
143 ground-fault circuit interrupters, reset button and pilot light, for plug-in  
144 connection of power tools and equipment.
- 145 c. Electrical Power Cords: Use only grounded extension cords; use “hard-  
146 service” cords where exposed to abrasion and traffic. Use single lengths  
147 or use waterproof connectors to connect separate lengths of electric cords,  
148 if single lengths will not reach areas of work.
- 149 d. Lamps and Light Fixtures: Provide general service incandescent lamps of  
150 wattage indicated or required for adequate illumination. Protect lamps  
151 with guard cages or tempered glass enclosures, where fixtures are exposed  
152 to breakage by construction operations. Provide exterior fixtures where  
153 fixtures are exposed to the weather or moisture.  
154
- 155 3. Temporary Construction and Support Facilities: Provide facilities that can be  
156 maintained properly throughout their use at the project site.
- 157 a. Heating Units: Provide temporary heating units that have been tested and  
158 labeled by UL, FM or another recognized trade association related to the  
159 fuel being consumed.
- 160 b. Self-Contained Toilet Units: Provide single-occupant self-contained toilet  
161 units of the chemical, aerated recirculation, or combustion type, properly  
162 vented and fully enclosed with a glass fiber reinforced polyester shell or  
163 similar non-absorbent material units.
- 164 c. Tarpaulins: provide waterproof, fire-resistant, UL labeled tarpaulins with  
165 a flame-spread rating of 15 or less. For temporary enclosures where work  
166 is being or will be performed, provide translucent tarpaulins made of  
167 nylon reinforced laminated polyethylene to admit the maximum amount  
168 of daylight and reduce the need for temporary lighting by contractor  
169 needing protection.
- 170 d. First Aid Supplies: Comply with governing regulations and recognized  
171 recommendations within the construction industry by Owner.
- 172 e. Drinking Water: Provide potable water approved by local health  
173 authorities.  
174
- 175 4. Security and Protection Facilities:

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**SECTION 01500**  
**TEMPORARY FACILITIES**  
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- 176 a. Fire Extinguishers: Provide type “A” fire extinguishers for temporary  
177 offices and similar spaces where there is minimal danger of electrical or  
178 grease-oil-flammable liquid fires. In other locations, provide type “ABC”  
179 dry chemical extinguishers, or a combination of several extinguishers of  
180 NFPA recommended types for the exposures in each case.  
181

**PART 3 – EXECUTION:**

*INSTALLATION, GENERAL:*

- 184 A. General: Use qualified tradesmen for installation of temporary services and facilities  
185 systems. Locate temporary services and facilities where they will serve the entire project  
186 adequately and result in minimum interference with the performance of the Work.  
187 1. Relocate, modify and extend services and facilities as required during the course  
188 of work so as to accommodate the entire work of the project.  
189

*TEMPORARY UTILITY INSTALLATION:*

- 191 A. Water Service:  
192 1. General: Install water service distribution piping of sizes and pressures adequate  
193 for construction purposes during the construction period, connect to existing  
194 service.  
195  
196 B. Temporary Electric Power Service System:  
197 1. General: Provide a weatherproof, grounded temporary electric power service and  
198 distribution system of sufficient size, capacity, and power characteristics to  
199 accommodate performance of work during the construction period. Whenever an  
200 overhead floor or roof deck has been installed, install temporary lighting adequate  
201 to provide sufficient illumination for safe work and traffic conditions in every  
202 area of work.  
203  
204 2. Temporary Service: Install service and grounding in compliance with the National  
205 Electric code (NFPA 70).  
206 a. Installation of electric power service is by the Electrical Contractor (either  
207 overhead or underground is acceptable). However, the service must  
208 comply with governing regulations and must be installed to avoid  
209 construction conflicts.  
210 b. Provide temporary service with an automatic ground-fault interrupter  
211 feature, activated from the circuits of the system.  
212  
213 3. Power Distribution System: Provide circuits of adequate size and proper  
214 characteristics for each use. In general run wiring overhead, and rise vertically  
215 where wiring will be least exposed to damage from construction operations.  
216 Provide rigid steel conduit or equivalent raceways for wiring, which must be  
217 exposed on grade, floors, decks or other areas of possible damage or abuse.  
218 a. Provide metal conduit, tubing or armored cable for protection of  
219 temporary power wiring where exposed to possible damage during



**SECTION 01500**  
**TEMPORARY FACILITIES**  
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- 220 construction operations. Where permitted by code, wiring of circuits not  
221 exceeding 110-120 Volt 20 Amp rating, and wiring of lighting circuits  
222 may be non-metallic sheathed cable in areas where located overhead and  
223 exposed for surveillance. Do not wire temporary lighting with plain,  
224 exposed (insulated) electrical conductors. Provide metal enclosures or  
225 boxes for wiring devices.
- 226 b. Provide overload-protected disconnect switch for each temporary circuit  
227 and each temporary lighting circuit, located at the power distribution  
228 center.
- 229 c. For power hand tools and task lighting, provide temporary 4-gang outlets  
230 at each area, spaced so that a 100-foot extension cord can reach each area  
231 of work. Provide a separate 110-120 Volt, 20 Amp circuit for each 4-gang  
232 outlet (4 outlets per circuit).
- 233
- 234 C. Temporary Lighting:
- 235 1. Provide local switching of temporary lighting, spaced to allow lighting to be  
236 turned off in patterns to conserve energy and retain light suitable for work-in-  
237 progress, access traffic, security check and project lock-up.
- 238 2. Provide not less than one 1-watt incandescent lamp per square foot of floor area  
239 for general construction lighting. In corridors and similar traffic areas provide  
240 one 100-watt incandescent lamp every 50 feet. In stairways and at ladder runs,  
241 provide one 100-watt incandescent lamp minimum per story, located to illuminate  
242 each landing and flight.
- 243 3. Install and operate temporary lighting that will fulfill security and protection  
244 requirements, without the necessity of operating the entire temporary lighting  
245 system.
- 246
- 247 D. Use of Permanent Lighting System:
- 248 1. If the permanent electrical power and lighting system are used for temporary  
249 electricity, the light levels required for temporary power and lighting shall be  
250 maintained. The Contractor shall at substantial completion repair all damage to  
251 the electrical power system making it like new and shall replace all worn parts  
252 and all light bulbs at no cost to the Owner.
- 253
- 254 E. Sewers and Drainage:
- 255 1. General: If existing sewers are available for temporary drainage near the site  
256 prior to completion of permanent sewers, provide temporary connections to  
257 remove effluent that can be lawfully discharged into the sewers. If existing sewers  
258 cannot be used for discharge, provide drainage ditches, dry wells, waste  
259 stabilization ponds and similar discharge facilities to remove effluent that can be  
260 lawfully discharged in that manner. If neither existing sewers nor drainage  
261 facilities can be lawfully used for discharge of effluent, provide containers to  
262 remove and dispose of effluent off the site in a lawful manner.

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**TEMPORARY FACILITIES**  
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- 263 a. Before discharge of liquid wastes into sewers or drainage facilities, filter  
264 out excessive amounts of soil, construction debris, chemicals, oils and  
265 similar contaminants that might clog sewers or pollute waterways. Provide  
266 temporary filter beds, settlement tanks, separators and similar devices to  
267 purify effluent to acceptable levels.
- 268 b. Connect temporary sewers to the municipal sewer systems in the manner  
269 directed by the sewer department officials.
- 270 c. Maintain temporary sewers and drainage facilities in a clean, sanitary  
271 condition, ready for maximum use. Following heavy usage, restore  
272 normal conditions promptly. Provide and maintain temporary earthen  
273 embankments and similar barriers in and around construction excavations  
274 and subgrade construction, sufficient to prevent flooding of the work by  
275 runoff of storm water from heavy rainstorms.  
276

*TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION:*

- 277
- 278 A. Temporary Heat:
- 279 1. General: Provide temporary heat where indicated or needed for performance of  
280 the Work, curing or drying of recently installed work or protection of work in  
281 place from adverse effects of low temperatures or high humidity. Select facilities  
282 known to be safe and without deleterious effect upon the work in place or being  
283 installed. Coordinate with ventilation requirements to produce the indicated  
284 ambient condition required and to minimize the consumption of fuel or energy.
- 285 a. Under no circumstances shall the temperature be allowed to reach a level,  
286 which will cause damage to any portion of the work because of low  
287 temperature.
- 288 b. Maintain a minimum temperature of 45-degree F (7 degree C) in  
289 permanently enclosed portions of the building and areas where finished  
290 work has been installed.  
291
- 292 B. Heating Facilities: Except where conditions make it necessary to use another system, and  
293 where use of the permanent heating system is available and authorized, provide properly  
294 vented self-contained LP gas or fuel oil heaters with individual space thermostatic control  
295 for temporary heat.
- 296 1. Limit use of gasoline-burning space heaters to the indirect-fired type, located  
297 outside the building space or space being heated. Use gasoline-burning space  
298 heaters only where the specified system for temporary heating cannot be used.
- 299 2. Do not use open burning or salamander type heating units where prohibited by  
300 governing regulations, or when combustible materials are located in or near the  
301 space being heated, or when the work installed or being installed includes work  
302 which will be exposed to view in the completed project.  
303
- 304 C. Temporary Ventilation:
- 305 1. Provide adequate ventilation as required to keep the temperature of the building  
306 within 10-degree F of the ambient outdoor temperature when such ambient

March 4, 2012-4/29/2012

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307 temperature exceeds 70 degree F, and to prevent accumulation of excess moisture  
308 or to prevent excess thermal movement in the building. Ventilation equipment  
309 shall be of the Contractor's choice; however, it shall be equal to or exceed all  
310 local state or federal laws regulating its use.

311 D. Temporary Roads and Paving:

312 1. General: To the fullest extent possible, locate temporary roads and paving for  
313 storage areas and temporary parking. To incorporate temporary paving  
314 provisions, review significant modifications of permanent paving requirements  
315 with the Architect for acceptance of the proposed improvements.

316  
317 E. Sanitary Facilities:

318 1. General: Sanitary facilities include temporary toilets, wash facilities and drinking  
319 water fixtures. Comply with governing regulations including safety and health  
320 codes for the type, number, location, operation and maintenance of fixtures and  
321 facilities; provide not less than specified requirements. Install in locations that  
322 will best serve the project's needs.

323 2. Supply and maintain toilet tissue, paper towels, paper cups and similar disposable  
324 materials as appropriate for each facility. Provide appropriate covered waste  
325 containers for used material.

326 3. Toilets: Install self-contained toilet units.

327 4. Drinking Water Fixtures: Provide drinking water fountains where and when piped  
328 potable water is reasonably accessible from permanent or temporary lines.

329 Otherwise, provide containerized tap-dispenser bottled-water type drinking water  
330 units, including the paper supply.

331  
332 F. Use of Permanent Water Supply:

333 1. The permanent water supply system may be used as a source of water for  
334 construction purposes, provided that the Contractor (1) obtains the approval of the  
335 Owner; (2) assumes full responsibility for the entire water distribution system;  
336 and (3) pays for all costs for restoration of the system.

337  
338 G. Temporary Enclosures:

339 1. General: At the earliest practical time provide temporary enclosure of materials,  
340 equipment, work in progress and completed portions of the Work to provide  
341 protection to the Work and employees from effects of exposure, foul weather,  
342 other construction operations, and similar activities on the site.

343 a. Provide temporary enclosures where temporary heat is needed and the  
344 permanent building enclosure is not yet completed, and there is no other  
345 adequate provision for containment of temporary heat. Coordinate  
346 enclosures with ventilating and material drying or curing requirements to  
347 avoid dangerous conditions and effects.

348  
349 2. Enclosures: Provide temporary enclosures by installing tarpaulins or equivalent  
350 materials securely, using a minimum of wood framing and other combustible

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**TEMPORARY FACILITIES**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 351 materials. Individual openings of 25 square feet or less may be closed with  
352 plywood or similar materials.
- 353 a. Close openings through the floor or roof decks and other horizontal  
354 surfaces with substantial load-bearing wood-framed or similar  
355 construction.
- 356 H. Hoists and Temporary Elevator Use:
- 357 1. General: Provide adequate facilities for hoisting materials and employees. Do not  
358 permit employees to ride hoists, which comply only with requirements for  
359 hoisting materials. The Contractor is responsible for selection of type, size and  
360 number of facilities. Truck cranes and similar devices used for hoisting are  
361 considered as being “tools and equipment” and not temporary facilities.
- 362 I. Collection and Disposal of Wastes:
- 363 1. General: Establish a system for daily collection and disposal of waste materials  
364 from construction areas and elsewhere on the site. Enforce requirements strictly.  
365 Do not hold collected materials at the site longer than 7 days during normal  
366 weather or 3 days when the daily temperature is expected to rise above 80 degree  
367 F (27 degree C). Handle waste materials that are hazardous, dangerous, or  
368 unsanitary separately from other inert waste by containerizing appropriately.  
369 Dispose of waste material in a lawful manner.
- 370 a. Burying or burning of waste materials on the site will not be permitted.  
371 b. Washing waste materials down sewers or into waterways will not be  
372 permitted.
- 373 c. Provide rodent proof containers to encourage depositing of garbage and  
374 similar wastes by construction personnel.
- 375 d. Provide a place for concrete truck chute wash down that will be cleaned  
376 by the General Contractor of all solidified wash down products prior to  
377 final installation of topsoil.
- 378
- 379 J. Rodent and Pest Control:
- 380 1. General: Early in the construction process before deep foundation work has been  
381 completed, retain a recognized local exterminator or insect-and-pest control  
382 company to recommend practices that will minimize attraction and harboring of  
383 rodents, roaches and other pest. Employ this service to perform extermination and  
384 controls procedures at regular intervals so that the project will be relatively free  
385 of pests and their residues at substantial completion. Perform control operations  
386 in a lawful manner using environmentally safe materials.
- 387
- 388 K. Construction Aids and Miscellaneous Services and Facilities:
- 389 1. General: Design, construct, and maintain construction aids and miscellaneous  
390 general services and facilities as needed to accommodate performance of the  
391 work. Construction aids and miscellaneous general services and facilities include,  
392 but are not limited to the following:
- 393 a. Guardrails and barriers.  
394 b. Walkways.

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**TEMPORARY FACILITIES**  
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*SECURITY AND PROTECTION FACILITIES INSTALLATION:*

- A. General: Provide a reasonably neat and uniform appearance in security and protection facilities acceptable to the Architect and the Owner.
  - 1. Except for utilization of permanent fire protection facilities, as soon as available in each area, do not change over from use of temporary security and protection facilities to use of permanent facilities until substantial completion, or for longer periods of time as requested by the Architect.
  
- B. Temporary Fire Protection:
  - 1. Until fire protection needs may be fulfilled by permanent facilities, install and maintain temporary fire protection facilities of the types needed to adequately protect against reasonably predictable and controllable fire losses. Comply with the applicable recommendations of NFPA Standard 10 “Standard for Portable Fire Extinguishers”. Locate fire extinguishers where they are most convenient and effective for their intended purpose, but provide not less than one extinguisher on each floor at or near each usable stairwell. Store combustible materials in containers in recognized fire-safe locations.
    - a. Develop and supervise an overall fire prevention and fire-aid fire protection program for personnel at the project site. Review needs with the local fire department officials and establish procedures to be followed. Instruct personnel in methods and procedures to be followed. Post warnings and information and enforce strict discipline. Maintain unobstructed access to fire extinguishers, fire hydrants, and access routes for fighting fires. Prohibit smoking in hazardous fire operations, combustion type temporary heating units, and similar sources of ignition for possible fires.
    - b. Where water outlets are available, provide hoses of sufficient length to reach construction areas. Hang hoses with a warning sign, to the effect that hoses are for fire protection purposes and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.
    - c. Permanent Fire Protection: At the earliest feasible date in each area of the project, complete installation of the permanent fire protection facility, including connected services, and place into operation and use. Instruct key personnel at the site on how to use facilities, which may not be self-explanatory.
    - d. Barricades, Warning Signs and Lights:
      - 1. General: Comply with recognized standards and code requirements for the erection of substantial, structurally adequate barricades where needed to prevent accidents and losses. Paint with appropriate colors, graphics and warning signs to inform personnel at the site and the public, of the hazard being protected against. Provide lighting where appropriate and needed, including flashing red lights where appropriate.

**SECTION 01500**  
**TEMPORARY FACILITIES**  
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- 439  
440 C. Construction Loads On Building Structures:
- 441 1. Structural Design: The structure is designed to support the loads of the finished  
442 building. No provision is included for unusual erection stresses or loads imposed  
443 by construction equipment. If the Contractor desires to place loads in excess of  
444 the design load (shown on the Drawings) on any part of the building structure, he  
445 shall submit Drawings and stress calculations (prepared by and bearing the seal of  
446 a registered professional engineer) of the proposed method for supporting  
447 materials, tower cranes, derricks, scaffolding and/or other items of construction  
448 plant and equipment, for the Architect's review and acknowledgment.  
449 Interference with mechanical, electrical and other work shall be considered in any  
450 proposed permanent design. The cost of engineering and all additional costs and  
451 expenses arising out of such modifications required to support loads other than  
452 design loads shall be borne by the Contractor. No loading of any kind in excess of  
453 design loads shall be placed on any part of the building structure prior to  
454 submission of Drawings and calculations.  
455
- 456 D. Security Enclosure and Locking:
- 457 1. General: Install substantial and durable general temporary enclosure of partially  
458 completed areas of construction. Provide locking entrances adequate to prevent  
459 unauthorized entrance, vandalism, theft and similar deleterious effects and  
460 violations of project security.
- 461 2. Storage: Where materials and equipment must be temporarily stored, prior to and  
462 during construction, and are of substantial value or are attractive for possible  
463 theft, provide a secure lockup and enforce strict discipline in connection with the  
464 timing of installation and release of materials, so that the opportunity for theft and  
465 vandalism is minimized.  
466
- 467 E. Environmental Protection:
- 468 1. General: Provide general protection facilities, operate temporary facilities,  
469 conduct construction activities, and enforce strict discipline for personnel on the  
470 site in ways by methods that comply with environmental regulations, and that  
471 minimize the possibility that air, waterways and subsoil might be contaminated or  
472 polluted, or that other undesirable effects might result from the performance of  
473 work at the site. Avoid the use of tools and equipment, which produce harmful  
474 noise. Restrict the use of noise making tools and equipment to hours of use that  
475 will minimize noise complaints from persons or firms near the project site.  
476
- 477 F. Cold Weather Protection:
- 478 1. The General Contractor shall take special precautions against damage to materials  
479 and work installed in freezing weather by providing special heat and coverings to  
480 prevent damage by the elements, in a manner approved by the Architect. The  
481 ground surfaces under footings and under pipelines and all masonry, concrete and  
482 other work subject to damage shall be protected against freezing or ice

**SECTION 01500**  
**TEMPORARY FACILITIES**  
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483 formations. If unusual low temperatures make it impossible to continue operations  
484 safely in spite of cold weather precautions, the Contractor shall cease work and  
485 shall so notify the Architect.  
486

487 *OPERATION, TERMINATION AND REMOVAL:*

- 488 A. Supervision: Enforce strict discipline in use of temporary services and facilities at the  
489 site to limit availability of temporary services and facilities to essential and intended uses  
490 to minimize waste and abuse. Do not permit temporary installations to be abused or  
491 endangered. Do not allow hazardous, dangerous or unsanitary conditions to develop or  
492 persist on the project site. When temporary facilities are not necessary for the  
493 performance of the work either turn them off or set them at the lowest possible setting.  
494
- 495 B. Maintenance: Operate and maintain temporary services and facilities in good operating  
496 condition throughout the time of use and until removal is authorized. Protect from  
497 damage by freezing temperatures and similar elements. Maintain the operation of  
498 temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities  
499 on a 24-hour day basis where required to achieve indicated results in the Work and to  
500 avoid the possibility of damage to the Work or to temporary facilities. Protection:  
501 Prevent water filled piping from freezing, by use of ground covers, insulation, by keeping  
502 drained or by temporary heating. Maintain distinct markers for underground lines.  
503 Protect from damage during excavation operations.  
504
- 505 C. Termination and Removal: Unless the Architect requests that it be maintained for a  
506 longer period of time, remove each temporary service and facility promptly when the  
507 need for it or a substantial portion of it has ended, or when it has been replaced by the  
508 authorized use of a permanent facility, or no later than substantial completion. Complete,  
509 or, if necessary, restore permanent work, which may have been delayed because of  
510 interference with the temporary service or facility. Repair damaged work, clean exposed  
511 surfaces and replace work, which cannot be satisfactorily repaired. Materials and  
512 facilities that constitute temporary services and facilities are and remain the property of  
513 the Contractor. The Owner reserves the right to take possession of the project  
514 identification signs. At substantial completion, clean and renovate permanent services  
515 and facilities that have been used to provide temporary services and facilities during the  
516 construction period, including but not limited to the following:  
517 1. Replace air filters and clean the inside of ductwork and housings.  
518 2. Replace significantly worn parts that have been subject to unusual operating  
519 conditions.  
520 3. Replace completely lamps in the lighting systems.  
521  
522

*END OF SECTION*

**SECTION 01600**  
**PRODUCT REQUIREMENTS**  
**Moose Lodge 398 Family Center Addition/Remodel**  
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**PART 1 GENERAL**

**GENERAL SPECIFICATION PROVISIONS**

- A. The Drawings and the General Provisions of the contract include: The Agreement, General Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of Specifications.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

**SECTION INCLUDES**

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Procedures for North Vernon Training Center. -Supplied products.
- F. Spare parts and maintenance materials.

**SUBMITTALS**

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.
- D. Indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances

**PART 2 PRODUCTS**  
**PRODUCTS**

- A. Provide interchangeable components of the same manufacture for components being replaced.
- B. Motors: Refer to electrical sections, NEMA MG 1 Type. Specific motor type is specified in individual specification sections.
- C. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Size terminal lugs to NFPA 70, include lugs for terminal



**SECTION 01600**  
**PRODUCT REQUIREMENTS**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 43 box.
- 44 D. Cord and Plug: Provide minimum 6-foot cord and plug including grounding connector for
- 45 connection to electric wiring system. Cord of longer length is specified in individual
- 46 specification sections.

47

48 **PRODUCT OPTIONS**

- 49 A. Products Specified by Reference Standards or by Description Only: Use any product
- 50 meeting those standards or description.
- 51 B. Products Specified by Naming One or More Manufacturers: Use a product of one of the
- 52 manufacturers named and meeting specifications, no options or substitutions allowed.
- 53 C. Products Specified by Naming One or More Manufacturers with a Provision for
- 54 Substitutions:
- 55 D. Submit a request for substitution for any manufacturer not named.
- 56

57

58 **SPARE PARTS AND MAINTENANCE PRODUCTS**

- 59 A. Provide spare parts, maintenance, and extra products of types and in quantities specified
- 60 in individual specification sections.
- 61 B. Deliver to and place in location as directed; obtain receipt prior to final payment.
- 62

63 **PART 3 EXECUTION**

64 **SUBSTITUTION PROCEDURES**

- 65 A. Instructions to Bidders specify time restrictions for submitting requests for substitutions
- 66 during the bidding period. Comply with requirements specified in this section.
- 67 B. The Paris/Bingham Partnership, Corp will consider requests for substitutions only within
- 68 30 days after date of Agreement.
- 69 C. Document each request with complete data substantiating compliance of proposed
- 70 substitution with Contract Documents.
- 71 D. A request for substitution constitutes a representation that the submitter:
- 72 1. Has investigated proposed product and determined that it meets or exceeds the quality
- 73 level of the specified product.
- 74 2. Will provide the same warranty for the substitution as for the specified product.
- 75 3. Will coordinate installation and make changes to other Work, which may be required
- 76 for the Work to be complete with no additional cost to North Vernon Training Center.
- 77 4. Waives claims for additional costs or time extension, which may subsequently
- 78 become apparent.
- 79 5. Will reimburse North Vernon Training Center and The Paris/Bingham Partnership,
- 80 Corp for review or redesign services associated with re-approval by authorities.
- 81 E. Substitutions will not be considered when they are indicated or implied on shop drawing
- 82 or product data submittals, without separate written request, or when acceptance will
- 83 require revision to the Contract Documents.
- 84 F. Substitution Submittal Procedure:
- 85 1. Submit three copies of request for substitution for consideration. limit each request to
- 86 one proposed substitution.

# SECTION 01600 PRODUCT REQUIREMENTS

## Moose Lodge 398 Family Center Addition/Remodel

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- 87 2. Submit shop drawings, product data, and certified test results attesting to the proposed  
88 product equivalence. Burden of proof is on Proposer.  
89 3. The Paris/Bingham Partnership, Corp will notify Contractor in writing of decision to  
90 accept or reject request.  
91

### OWNER-SUPPLIED PRODUCTS

- 92 A. North Vernon Training Center's Responsibilities:  
93 1. Arrange for and deliver North Vernon Training Center reviewed shop drawings,  
94 product data, and samples, to Contractor.  
95 2. Arrange and pay for product delivery to site.  
96 3. On delivery, inspect products jointly with Contractor.  
97 4. Submit claims for transportation damage and replace damaged, defective, or deficient  
98 items.  
99 5. Arrange for manufacturers' warranties, inspections, and service.  
100 B. Contractor's Responsibilities:  
101 1. Review North Vernon Training Center reviewed shop drawings, product data, and  
102 samples.  
103 2. Receive and unload products at site; inspect for completeness or damage jointly with  
104 North Vernon Training Center.  
105 3. Handle, store, install and finish products.  
106 4. Repair or replace items damaged after receipt.  
107  
108

### TRANSPORTATION AND HANDLING

- 109 A. Transport and handle products in accordance with manufacturer's instructions.  
110 B. Promptly inspect shipments to ensure that products comply with requirements, quantities  
111 are correct, and products are undamaged.  
112 C. Provide equipment and personnel to handle products by methods to prevent soiling,  
113 disfigurement, or damage.  
114  
115

### STORAGE AND PROTECTION

- 116 A. Store and protect products in accordance with manufacturers' instructions.  
117 B. Store with seals and labels intact and legible.  
118 C. Store sensitive products in weather tight, climate controlled, enclosures in an  
119 environment favorable to product.  
120 D. For exterior storage of fabricated products, place on sloped supports above ground.  
121 E. Cover products subject to deterioration with impervious sheet covering. Provide  
122 ventilation to prevent condensation and degradation of products.  
123 F. Provide equipment and personnel to store products by methods to prevent soiling,  
124 disfigurement, or damage.  
125 G. Arrange storage of products to permit access for inspection. Periodically inspect to verify  
126 products are undamaged and are maintained in acceptable condition.  
127  
128

129 **END OF SECTION 01600**

**SECTION 01710**  
**CLEANING AND PROTECTION**  
**Moose Lodge 398 Family Center Addition/Remodel**

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1  
2 **PART 1 - GENERAL:**

3 *RELATED DOCUMENTS:*

- 4 A. Refer to "Instructions to Bidders", "General Conditions", "Supplementary General  
5 Conditions", and "Division 1 General Requirements", which hereby form a part of this  
6 Specification and govern the Work hereinafter specified.  
7  
8 B. The drawings and specifications that make up the Work of this project are interrelated  
9 and dependent on every other drawing and specification section. The contractors and  
10 suppliers for this section of specifications shall review all other sections of specifications,  
11 drawings and addendum to coordinate their work as it relates to this project. If an item  
12 related to this section is illustrated, specified or indicated in or on any other specification  
13 section, drawing or addendum it shall be as if it were part of this section of specifications  
14 and shall be provided for in the contract.  
15

16 *DESCRIPTION:*

- 17 A. Work Included:  
18 1. Throughout the construction period, maintain the building and site in a standard  
19 of cleanliness as described in this Section.  
20  
21 B. Related Work Described Elsewhere:  
22 1. In addition to standards described in this Section, comply with all requirements  
23 for cleaning up as described in various other sections of these Specifications.  
24 a. Specifically refer to Section 01400 Special Conditions.  
25

26 *QUALITY ASSURANCE:*

- 27 A. Inspection:  
28 1. Conduct daily inspection, more often if necessary, to verify that requirements of  
29 cleanliness are being met.  
30  
31 B. Codes and Standards:  
32 1. In addition to the standards described in this Section, comply with all pertinent  
33 requirements of governmental agencies having jurisdiction.  
34

35 **PART 2 - PRODUCTS:**

36 *CLEANING MATERIALS AND EQUIPMENT:*

- 37 A. Provide all required personnel, equipment, and materials needed to maintain the specified  
38 standard of cleanliness.  
39

40 *COMPATIBILITY:*

- 41 A. Use only the cleaning materials and equipment that are compatible with the surface being  
42 cleaned, as recommended by the manufacturer of the material or as approved by the  
43 Architect.

**SECTION 01710**  
**CLEANING AND PROTECTION**  
**Moose Lodge 398 Family Center Addition/Remodel**

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44 **PART 3 - EXECUTION:**

45 **PROGRESS CLEANING:**

46 A. General:

- 47 1. Retain all stored items in an orderly arrangement allowing maximum access, not  
48 impeding traffic, and providing the required protection of materials.
- 49 2. Do not allow the accumulation of scrap, debris, waste material, and other items  
50 not required for construction of this work.
- 51 3. At least once each week, more often if necessary, completely remove all scrap,  
52 debris, and waste material from the job site.
- 53 4. Provide adequate storage for all items awaiting removal from the job site,  
54 observing all requirements for fire protection and protection of the ecology.

55  
56 B. Site:

- 57 1. Daily, more often if necessary, inspect the structure, pick up all scrap, debris, and  
58 waste material. Remove all such items to the place designated for their storage.
- 59 2. Weekly, and more often if necessary, inspect all arrangements of materials stored  
60 on the site; restack, tidy, or otherwise service all arrangements to meet the  
61 requirements of Paragraph 3 A.1. above.
- 62 3. Maintain the site in a neat and orderly condition at all times to the approval of the  
63 Architect.

64  
65 C. Structures:

- 66 1. Weekly, more often if necessary, inspect the site, pick up all scrap, debris, and  
67 waste material. Remove all such items to the place designated for their storage.
- 68 2. Weekly, more often if necessary, sweep all interior spaces clean. Except as  
69 otherwise specifically provided. "Clean", for the purpose of this sub-paragraph  
70 shall be interpreted as meaning free from dust and other material capable of being  
71 removed by reasonable diligence using a hand-held broom.
- 72 3. As required preparatory to installation of succeeding materials, clean the  
73 structures or pertinent portions thereof to the degree of cleanliness recommended  
74 by the manufacturer of the succeeding material, using all equipment and materials  
75 required to achieve the required cleanliness.
- 76 4. Following the installation of finish floor materials, clean the finish floor daily  
77 (and more often if necessary) at all times while work is being performed in the  
78 space in which finish materials have been installed. "Clean" for the purpose of  
79 this subparagraph, shall be interpreted as meaning free from all foreign material,  
80 which may be injurious to the finish, floor material.

81  
82 *FINAL CLEANING:*

- 83 A. Definition: Except as otherwise specifically provided, "clean" (for the purpose of this  
84 Article) shall be interpreted as meaning the level of cleanliness generally provided by  
85 commercial building maintenance subcontractors using commercial quality building  
86 maintenance equipment and materials.

**SECTION 01710**  
**CLEANING AND PROTECTION**  
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- 87  
88 B. General: Prior to completion of the work, remove from the job site all tools, surplus  
89 materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as  
90 described in Article 3.01 above.  
91  
92 C. Site: Unless otherwise specifically directed by the Architect, hose down all paved areas  
93 on the site and all public sidewalks directly adjacent to the site. Completely remove all  
94 resultant debris.  
95  
96 D. Structures:  
97 1. Exterior Visually inspect all exterior surfaces and remove all traces of soil, waste  
98 material, smudges, and other foreign matter. Remove all traces of splashed  
99 materials from adjacent surfaces. If necessary to achieve a uniform degree of  
100 exterior cleanliness, hose down the exterior of the structure. In the event of  
101 stubborn stains not removable with water, the Architect may require light  
102 sandblasting or other cleaning at not additional cost to the Owner.  
103 2. Interior Visually inspect all interior surfaces and remove all traces of soil, waste  
104 material, smudges, and other foreign matter. Remove all traces of splashed  
105 materials from adjacent surfaces. Remove all paint dropping, spots, stains, and  
106 dirt from finished surfaces. Use only the specified cleaning materials and  
107 equipment.  
108 3. Glass: Clean all glass inside and outside.  
109 4. Polished Surfaces: To all surfaces requiring the routine application of buffed  
110 polish, apply the specified polish as recommended by the manufacturer of the  
111 material being polished.  
112  
113 E. Timing:  
114 1. Schedule final cleaning as approved by the Architect to enable the Owner to  
115 accept a completely clean project.  
116

117 *CLEANING DURING OWNER'S OCCUPANCY:*

- 118 A. Should the Owner occupy the work or any portion thereof prior to its completion,  
119 responsibility for interim and final cleaning of the occupied spaces shall be as determined  
120 by the Architect in accordance with the General Conditions of the Contract.  
121

*END OF SECTION*

**SECTION 01800**  
**CUTTING AND PATCHING**  
**Moose Lodge 398 Family Center Addition/Remodel**

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**PART 1 - GENERAL:**

*RELATED DOCUMENTS:*

- A. Refer to “Instructions to Bidders,” “General Conditions”, “Supplementary General Conditions”, and “Division 1 - General Requirements”, which hereby form a part of this Specification and govern the Work hereinafter specified.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

*DESCRIPTION:*

- A. The following paragraphs are set forth herein to clarify and supersede all other paragraphs or items concerning cutting and patching throughout the Specifications. The intent of these paragraphs is to clarify responsibility for work not specifically shown on the Drawings or described in the Specifications. Work shown or noted elsewhere in the Drawings or Specifications to be by a specific contractor shall be by that contractor. The term “other contractor” or “other subcontractor” as used in the paragraphs to follow refers to the masonry, plastering, roofing, or acoustical contractor or subcontractor, etc., or the mechanical, or electrical contractor, as appropriate for the type of work to be performed.

*PROCEDURES:*

- A. The mechanical and electrical contractors are each respectively required to furnish and install various types of pipe, conduit, ductwork, etc. that by necessity is to penetrate through the floor construction, walls, ceilings, the roof, or various other areas of construction. The procedures for accomplishing said work shall be as outlined hereinafter.
1. Each of the contractors noted in description above shall be charged with the responsibility for providing the proper sized opening or openings to receive their materials or work that penetrate or that are contained within the floor, walls, ceiling or roof. See Note (a) following. Said contractors shall thoroughly coordinate their work with the work of other contractors to assure cooperation and to assure their work can be installed without any delay to the work of the contractors, or damage to the work of the other contractors.
    - a. NOTE: Structural members are not to be cut under any circumstances without written approval of the Architect. Roof shall be cut, patched, repaired, etc., by the roofing contractor only. Said roofing contractor will inspect the various architectural, mechanical and electrical roof plans to ascertain where same require cuts, patching, etc. His bid shall include the cost of said cuts and patching, complete. Any holes required by any

March 4, 2012-4/29/2012

**SECTION 01800**  
**CUTTING AND PATCHING**  
**Moose Lodge 398 Family Center Addition/Remodel**

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45 contractor not shown on the above plans shall be the responsibility of said  
46 contractor, including payment to the roofing contractor for same.

47  
48 2. Cutting: Regardless of type of material, except for the roof, and unless noted  
49 otherwise on the architectural plans, the Contractor needing a trench or hole cut  
50 through any material shall accomplish same as part of his contract.

51 3. Installation: All contractors are responsible for inserting their materials or  
52 equipment in or through the new work of other contractors as required by the  
53 progress of the progress.

54  
55 *PATCHING:*

56 A. If a cut is required through a finished surface or material by any contractor due to that  
57 contractor's tardy or ill-timed work, the contractor requiring the cut shall pay the  
58 appropriate finishing contractor for the cost of repairing said finished surface or material.

59  
60 *END OF SECTION*

**SECTION 03200**  
**CONCRETE REINFORCEMENT**  
**Moose Lodge 398 Family Center Addition/Remodel**

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**PART 1 GENERAL**

**GENERAL SPECIFICATION PROVISIONS**

- A. The Drawings and the General Provisions of the contract include: The Agreement, General Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of Specifications.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

**SECTION INCLUDES**

- A. Reinforcing steel for cast-in-place concrete.
- B. Supports and accessories for steel reinforcement.

**RELATED SECTIONS**

- A. Section 03300 - Cast-in-Place Concrete.

**REFERENCES**

- A. ACI 301 - Specifications for Structural Concrete for Buildings; ACI international/American Concrete Institute.
- B. ACI318 - Building Code Requirements For Reinforced Concrete; ACI international/American Concrete Institute.
- C. ACI SP-66 - ACI Detailing Manual; ACI international/American Concrete Institute.
- D. ASTM A 82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
- E. ASTM A 185 - Standard Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.
- F. ASTM A 615/A 615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- G. ASTM A 706/A 706M - Standard Specification for Low-Alloy Steel Deformed Bars for Concrete Reinforcement.
- H. AWS D1.4 - Structural Welding Code--Reinforcing Steel; American Welding Society.
- I. CRSI (DA4) - Manual of Standard Practice; Concrete Reinforcing Steel Institute.
- J. CRSI (P1) - Placing Reinforcing Bars; Concrete Reinforcing Steel Institute.

**SUBMITTALS**

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Comply with requirements of ACI SP-B6. Include bar schedules, shapes of bent bars, spacing of bars, and location of splices.

**QUALITY ASSURANCE**

- A. Perform work of this section in accordance with CRSI (DA4).

**PART 2 PRODUCTS**

**REINFORCEMENT**

- A. Reinforcing Steel: ASTM A 615/A 615M Grade 60.
  - 1. Deformed billet-steel bars.
  - 2. Unfinished.
- B. Welded Steel Wire Fabric: ASTM A 185, plain type.



**SECTION 03200**  
**CONCRETE REINFORCEMENT**  
**Moose Lodge 398 Family Center Addition/Remodel**

Page-2 of 2

- 52 1. Mesh Size and Wire Gage: As indicated on drawings.  
53 C. Reinforcement Accessories:  
54 1. Tie Wire: Annealed, minimum 16 gage.  
55 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of  
56 reinforcement during concrete placement.  
57 D. Fiber Reinforcement:  
58 1. **Synthetic Fiber: Fibrillated polypropylene fibers engineered and designed for use**  
59 in concrete, complying with ASTM C 1116, Type III, ½ to 1-½ inches (13 to 38 mm) long.  
60 2. Available Products: Subject to compliance with requirements, products that may be  
61 incorporated into the Work include, but are not limited to, the following:  
62 a. Fibrillated Fibers:  
63 1) Fibrasol F; Axim Concrete Technologies.  
64 2) Fibermesh; Fibermesh, Div. Of Synthetic Industries.  
65 3) Forta; Forta Corporation.  
66 4) Grace Fibers; W.R. Grace & Co., Construction Products Div.  
67

**FABRICATION**

- 68  
69 A. Fabricate concrete reinforcing in accordance with CRSI (DA4) - Manual of Standard Practice.  
70 B. Welding of reinforcement is not permitted.  
71 C. Locate reinforcing splices not indicated on drawings at point of minimum stress.  
72

**PART 3 EXECUTION**

**PLACEMENT**

- 73  
74  
75 A. Place, support and secure reinforcement against displacement. Do not deviate from required  
76 position.  
77 B. Do not displace or damage vapor barrier.  
78 C. Maintain concrete cover around reinforcing as follows:  
79 1. Beams: 1-1/2 inch  
80 2. Supported Slabs and Joists: 3/4 inch.  
81 3. Column Ties: 1-1 1/2 inch.  
82 4. Walls (exposed to weather or backfill): 2 inch.  
83 5. Footings and Concrete Formed Against Earth: 3 inch.  
84  
85

**END OF SECTION 03200**

**SECTION 03300**  
**CAST-IN-PLACE CONCRETE**  
**Moose Lodge 398 Family Center Addition/Remodel**

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1 **PART 1 GENERAL**

2 **GENERAL SPECIFICATION PROVISIONS**

- 3 A. The Drawings and the General Provisions of the contract include: The Agreement, General  
4 Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of  
5 Specifications.
- 6 B. The drawings and specifications that make up the Work of this project are interrelated and  
7 dependent on every other drawing and specification section. The contractors and suppliers for  
8 this section of specifications shall review all other sections of specifications, drawings and  
9 addendum to coordinate their work as it relates to this project. If an item related to this section is  
10 illustrated, specified or indicated in or on any other specification section, drawing or addendum it  
11 shall be as if it were part of this section of specifications and shall be provided for in the contract.

12 **SECTION INCLUDES**

- 13 A. Concrete formwork.
- 14 B. Elevated concrete slabs.
- 15 C. Floors and slabs on grade.
- 16 D. Joint devices associated with concrete work.
- 17 E. Concrete curing.

18 **RELATED SECTIONS**

- 19 A. Section 03200 – Concrete Reinforcement.
- 20 B. Section 07900 – Joint Sealers.

21 **REFERENCES**

- 22 A. ACI 211.1 – Standard Practice for Selecting Proportions for Normal, heavyweight, and Mass  
23 Concrete; American Concrete Institute.
- 24 B. ACI 301 – Specifications for Structural Concrete for Buildings; American Concrete Institute.
- 25 C. ACI 302.1R – Guide for Concrete Floor and Slab Construction; American Concrete Institute.
- 26 D. ACI 304R – Guide for Measuring, Mixing, Transporting, and Placing Concrete; American  
27 Concrete Institute.
- 28 E. ACI 305R – Hot Weather Concreting; American Concrete Institute.
- 29 F. ACI 306R – Cold Weather Concreting; American Concrete Institute.
- 30 G. ACI 308 – Standard Practice for Curing Concrete; American Concrete Institute.
- 31 H. ACI 318 – Building Code Requirements for Reinforcing Concrete; American Concrete Institute.
- 32 I. ASTM C 33 – Standard Specification for Concrete Aggregates.
- 33 J. ASTM C 39 – Standard Test Method for Compressive Strength of Cylindrical Concrete  
34 Specimens.
- 35 K. ASTM C 94 – Standard Specification for Ready-Mixed Concrete.
- 36 L. ASTM C 15 – Standard Specification for Portland Cement.
- 37 M. ASTM C 171 – Standard Specification for Sheet Materials for Curing Concrete.

**SECTION 03300**  
**CAST-IN-PLACE CONCRETE**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 38 N. ASTM C 173 – Standard Test Method for Air Content of freshly Mixed Concrete by the  
39 Volumetric Method.
- 40 O. ASTM C 260 – Standard Specification for Air-Entraining Admixtures for Concrete.
- 41 P. ASTM C 309 – Standard Specification for Liquid Membrane-Forming Compounds for Curing  
42 Concrete.
- 43 Q. ASTM C 494 – Standard Specification for Chemical Admixtures for Concrete.
- 44 R. ASTM C 881 – Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete.
- 45 S. ASTM C 1059 – Standard Specification for Latex Agents for bonding fresh to hardened  
46 Concrete.
- 47 T. ASTM D 994 – Standard Specification for Preformed Expansion Joint Filler for Concrete  
48 (Bituminous Type).
- 49 U. ASTM D 1751 – Standard Specification for Preformed Expansion Joint Filler for Concrete  
50 Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
- 51 V. ASTM E – 1155 Determining Floor Flatness and Levelness using the F-Number System
- 52 W. COE CRD – C 513 – COE Specifications for Rubber Water stops.

53 **SUBMITTALS**

- 54 A. See Section 01300 – Administrative Requirements, for submittal procedures.
- 55 B. Product Data: Submit manufacturer's data on manufactured product.

56 **QUALITY ASSURANCE**

- 57 A. Perform work of this section in accordance with ACI 301 and ACI 318.
- 58 B. Acquire cement from same source and aggregate from same source for entire project.
- 59 C. Conform to ACI 305R when concreting during hot weather.
- 60 D. Conform to ACI 306R when concreting on cold weather.

61 **PART 2 - PRODUCTS**

62 **FORMWORK**

- 63 A. Form Materials: Contractor's choice of standard products with sufficient strength to withstand  
64 hydrostatic head without distortion in excess of permitted tolerances.
- 65 1. Form facing for Exposed Finish Concrete: Contractor's choice of materials that will provide  
66 smooth, stain-free final appearance.
- 67 2. Form Coating: Release agent that will not adversely affect concrete or interfere with  
68 application of coatings.
- 69 3. Form Ties: Cone snap type that will leave no metal within 1½ inches of concrete surface.
- 70 B. Where Excavation will hold a stable vertical surface, footings may be earth formed.

71 **CONCRETE MATERIALS**

- 72 A. Cement: ASTM C 150, Type I – Normal and Type IA – Air Entraining Type.
- 73 B. Fine and Coarse Aggregates: ASTM C 33.
- 74 C. Water: Clean and not detrimental to concrete.

75 **ADMIXTURES**

- 76 A. Air Entrainment Admixture: ASTM C 260.

**SECTION 03300**  
**CAST-IN-PLACE CONCRETE**  
**Moose Lodge 398 Family Center Addition/Remodel**

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77

78 **CONCRETE ACCESSORIES**

- 79 A. Bonding Agent: ASTM C 1059, Type II acrylic non-redispersable type.
- 80 B. Epoxy Bonding System: ASTM C 881, type as required by project conditions.
- 81 C. Vapor Retarder: 6 mil thick clear polyethylene film, type recommended for below grade  
82 application.
- 83 D. Chemical Hardener: Fluosilicate solution designed for densification of cured concrete slabs.
- 84 E. Non-Shrink Grout: ASTM C 1107; premixed compound consisting of non-metallic aggregate,  
85 cement, water reducing and plasticizing agents.
- 86 1. Minimum Compressive Strength at 48 hours: 2,400 psi
- 87 2. Minimum Compressive Strength at 28 days: 7,000 psi
- 88 F. Curing Materials: Comply with requirements of Section 03390.
- 89 G. Moisture-Retaining Cover: ASTM C 171; regular curing paper, white curing paper, clear  
90 polyethylene, white polyethylene, or white burlap-polyethylene sheet.
- 91 H. Liquid Curing Compound: ASTM C 309, Type 1, clear or translucent or class B, 30% minimum  
92 total solids. Must be compatible with all floor finishes scheduled, manufactured by Burke, Euclid,  
93 or Sonneborn.

94 **JOINT DEVICES AND MATERIALS**

- 95 A. Waterstops: Rubber type, COE CRD-C 513.
- 96 B. Waterstops shall be preformed plastic adhesive like SYNKO-FLEX or flexible strip bentonite like  
97 Volclay RX101.
- 98 C. Joint filler: ASTM D 1751, ASTM D994; Asphalt impregnated fiberboard or felt, ¼ inch thick;  
99 tongue and groove profile.
- 100 D. Construction Joint Devices: Integral galvanized steel or metal; formed to tongue and groove  
101 profile.
- 102 E. Sealant and Primer: As specified in Section 07900.

103 **CONCRETE MIX DESIGN**

- 104 A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
- 105 B. Concrete Strength: Establish required average strength for each type of concrete on the basis  
106 of field experience or trial mixtures, as specified in ACI 301.
- 107 1. For trial mixtures method, employ independent testing agency acceptable to The  
108 Paris/Bingham Partnership, Corp. for preparing and reporting proposed mix designs.
- 109 C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates  
110 recommended by manufacturer.
- 111 D. Normal Weight Concrete:
- 112 1. Footing concrete:
- 113 a) Compressive Strength, per ASTM C 39 at 28 days: 3000 psi.
- 114 b) Cement Content: Minimum 517 lb per cubic yard.

**SECTION 03300**  
**CAST-IN-PLACE CONCRETE**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 115                   c)       Maximum Slump: 4 inches.
- 116                   2. All other concrete:
- 117                   d)       Compressive Strength, per ASTM C 39 at 28 days: 4000 psi.
- 118                   e)       Cement Content: Minimum 564 lb per cubic yard.
- 119                   f)       Maximum Slump: 4 inches.
- 120                   E.       Add air-entraining agent to mix for concrete exposed to freeze and thaw.

121 **MIXING**

- 122                   A.       Transit Mixers: Comply with ASTM C 94.

123 **VAPOR RETARDERS**

- 124                   A.       Vapor Retarder: ASTM E 1745, Class C, of one of the following materials; or polyethylene sheet,  
125                   ASTM D 4397, not less than 10 mils (0.25 mm) thick:
- 126                   1.       Nonwoven, polyester-reinforced, polyethylene coated sheet; 10 mils (0.25 mm) thick,  
127                   sheet; 7.8 mils (018 mm) thick.

128 **PART 3 - EXECUTION**

129 **EXAMINATION**

- 130                   A.       Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all  
131                   applied loads until concrete is cured, and for easy removal without damage to concrete.
- 132                   B.       Verify that forms are clean and free of rust before applying release agent.
- 133                   C.       Coordinate placement of joint devices with erection of concrete formwork and placement of  
134                   form accessories.
- 135                   D.       Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in  
136                   accordance with manufacturer's instructions.
- 137                   E.       Install vapor retarder under interior slabs on grade. Lap joints minimum 6 inches and seal  
138                   watertight by taping edges and ends. Cover with sand to depth shown on drawings.
- 139

140 **INSTALLING REINFORCEMENT**

- 141                   A.       Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and  
142                   accurately position, support, and secure in place to achieve not less than minimum concrete  
143                   coverage required for protection.
- 144                   B.       Install wire fabric in maximum possible lengths, and offset end laps in both directions. Splice  
145                   laps with tie wire.
- 146                   C.       Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are  
147                   accurately placed, positioned securely, and will not interfere with concrete placement.
- 148

149 **PLACING CONCRETE**

- 150                   A.       Place concrete in accordance with ACI 304R
- 151                   B.       Place concrete for floor slabs in accordance with ACI 302.1 R
- 152                   C.       Notify The Paris/Bingham Partnership, Corp not less than 24 hours prior to commencement of  
153                   placement operations.
- 154                   D.       Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint
- 155                   E.       Repair vapor retarder damaged during placement of concrete reinforcing. Repair with vapor  
156                   retarder material; lap over damaged areas minimum 6 inches and seal watertight.
- 157                   F.       Separate slabs on grade from vertical surfaces with 1/4-inch thick joint filler.
- 158                   G.       Install joint devices in accordance with manufacturer's instructions.
- 159                   H.       Maintain records of concrete placement. Record date, location, quantity, air temperature, and  
160                   test samples taken.
- 161                   I.       Place concrete continuously between predetermined expansion, control, and construction joints.

**SECTION 03300**  
**CAST-IN-PLACE CONCRETE**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 162 J. Do not interrupt successive placement; do not permit cold joints to occur.
- 163 K. Place floor slabs in checkerboard or saw cut pattern indicated.
- 164 L. Saw cut joints within 24 hours after placing Use 3/16-inch thick blade, cut into 1/4 depth of slab
- 165 thickness.
- 166

**TOLERANCES**

- 167
- 168 A. Provide the specified floor slab tolerances in accordance with AC I 117.
- 169 B. Specified overall flatness shall be F sub F 25 and minimum local flatness shall be F sub F 20.
- 170 C. Specified overall levelness shall be F sub L 20 and minimum local levelness shall be F sub L
- 171 17.
- 172 D. Flatness and Levelness will be measured over the entire slab including perimeter and
- 173 joints.
- 174 E. Provide continuous slope from all points in the room to floor drains.
- 175

**CONCRETE FINISHING**

- 176
- 177 A. Repair surface defects, including tie holes, immediately after removing formwork.
- 178 B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in
- 179 height.
- 180 C. Concrete Slabs: Finish to requirements of ACI 302.1 R, and as follows:
- 181 a. Chemical Hardener: After slab has cured, apply water-diluted hardener in three coats per
- 182 manufacturer's instructions, allowing 24 hours between coats.
- 183

**CURING AND PROTECTION**

- 184
- 185 A. Comply with requirements of ACI 308. Immediately after placement, protect concrete from
- 186 premature drying, excessively hot or cold temperatures, and mechanical injury.
- 187 B. Maintain concrete with minimal moisture loss at relatively constant temperature for period
- 188 necessary for hydration of cement and hardening of concrete.
- 189 1. Normal concrete: Not less than 7 days.
- 190 2. High early strength concrete: Not less than 4 days.
- 191 C. Formed Surfaces: Cure by moist curing with forms in place for full curing period.
- 192 D. Surfaces Not in Contact with Forms:
- 193 1. Start initial curing as soon as free water has disappeared and before surface is dry.
- 194 Keep continuously moist for not less than three days by water ponding, water-saturated
- 195 sand, water-fog spray, or saturated burlap.
- 196 2. Begin final curing after initial curing but before surface is dry.
- 197 a. Moisture-retaining cover: Seal in place with waterproof tape or adhesive.
- 198 b. Curing compound: Apply in two coats at right angles, using application rate
- 199 recommended by manufacturer.
- 200

**FIELD QUALITY CONTROL**

- 201
- 202 A. Testing and analysis of concrete will be performed under provisions of Section 1410.
- 203 B. Maintain records of placed concrete items. Record date, location of pour, quantity, air
- 204 temperature, and test samples taken.
- 205 C. Testing firm will take cylinders and perform slump and air entrainment tests in accordance with
- 206 AC1301.
- 207 D. Four concrete test cylinders will be taken for every 50 or less cu. yds. of concrete placed each
- 208 day. Break one cylinder at 7 days, 2 at 28 days, and retain one as a spare.
- 209 E. Two additional test cylinders will be taken during cold weather and be cured on site under same
- 210 conditions as concrete it represents when the concrete strength is needed for form removal or
- 211 the removal of protection.
- 212 F. One slump test will be taken from each set of test cylinders taken.
- 213 G. Concrete testing procedures shall be performed only by a person holding a current certificate
- 214 for Certified Concrete Field Testing Technician, Grade 1, From the Indiana Chapter of the
- 215 American Concrete Institute or a current certificate issued by the Concrete Technician

**SECTION 03300**  
**CAST-IN-PLACE CONCRETE**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 216 Certification Committee of Indiana.  
217 H. Floor slab tolerance measurements shall be in accordance with ASTM E1155 except that  
218 measurements will be taken over the joints and at the perimeter as well as the field.  
219 I. Tolerance measurement by the F-Number System shall take place immediately following  
220 finishing and prior to curing.  
221 J. Tolerance measurements shall be performed only by a curing.  
222 K. Tolerance measurements shall be performed only by a person fully experienced in floor  
223 measurement by the F- Number System with a Dipstick Auto-Read Floor Profiler manufactured  
224 by Face Construction Technologies.  
225

**PROTECTION**

- 227 A. Protect from injurious action of elements and defacement of any nature during operations.  
228 B. Protect slabs and exposed corners of concrete from *traffic* or damage.  
229 C. Sealed concrete floors shall be protected from damage, staining, or discoloration by the work of  
230 other trades.  
231

**DEFECTIVE CONCRETE**

- 233 A. Test Results: The testing agency shall report test results in writing to The Paris/Bingham  
234 Partnership, Corp and Contractor within 24 hours of test.  
235 B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances  
236 or specified requirements.  
237 C. Repair or replacement of defective concrete will be determined by The Paris/Bingham  
238 Partnership, Corp. The cost of additional testing shall be borne by Contractor when defective  
239 concrete is identified.  
240 D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction  
241 of The Paris/Bingham Partnership, Corp for each individual area.

242 **END OF SECTION 03300**

**Section 04200  
Unit Masonry**

**Moose Lodge 398 Family Center Addition/Remodel**

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1 **PART 1 - GENERAL**

2 **GENERAL SPECIFICATION PROVISIONS**

- 3 A. The Drawings and the General Provisions of the contract include: The  
4 Agreement, General Conditions, Supplemental Conditions, and Addendum apply  
5 to the Work of this Section of Specifications.
- 6 B. The drawings and specifications that make up the Work of this project are  
7 interrelated and dependent on every other drawing and specification section. The  
8 contractors and suppliers for this section of specifications shall review all other  
9 sections of specifications, drawings and addendum to coordinate their work as it  
10 relates to this project. If an item related to this section is illustrated, specified or  
11 indicated in or on any other specification section, drawing or addendum it shall  
12 be as if it were part of this section of specifications and shall be provided for in  
13 the contract.

14  
15 **RELATED DOCUMENTS:**

- 16 A. Drawings and general provisions of Contract, including General and  
17 Supplementary Conditions and Division-1 Specification sections, apply to work of  
18 this section.
- 19 B. Requirements of this section apply to masonry work specified in Division-4  
20 section "Reinforced Unit Masonry".

21  
22 **DESCRIPTION OF WORK:**

- 23 A. Extent of each type of masonry work is indicated on drawings and schedule.

24  
25 **QUALITY ASSURANCE:**

- 26 A. Fire Performance Characteristics: Where indicated, provide materials and  
27 construction which are identical to those of assemblies whose fire endurance has  
28 been determined by testing in compliance with ASTM E 119 by a recognized  
29 testing and inspecting organization or by another means, as acceptable to  
30 authority having jurisdiction.
- 31 B. Single Source Responsibility for Masonry Units: Obtain exposed masonry units of  
32 uniform texture and color, or a uniform blend within the ranges accepted for  
33 these characteristics, from one manufacturer for each different product required  
34 for each continuous surface or visually related surfaces.
- 35 C. Single Source Responsibility for Mortar Materials: Obtain mortar ingredients of  
36 uniform quality, including color for exposed masonry, from one manufacturer for  
37 each cementitious component and from one source and producer for each  
38 aggregate.

39  
40 **SUBMITTALS:**

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- 41 A. Product Data: Submit manufacturer's product data for each type of masonry unit,  
42 accessory, and other manufactured products, including certifications that each  
43 type complies with specified requirements.
- 44 B. Shop Drawings: Submit cutting and setting drawings for stone trim showing  
45 sizes, profiles and locations of each unit required.
- 46 1. Samples for Initial Selection Purposes: Submit samples of the following  
47 materials:
- 48 2. Samples for Verification Purposes: Submit the following samples:
- 49 a. Unit masonry samples for each type of exposed masonry unit  
50 required; include in each set the full range of exposed color and  
51 texture to be expected in completed work.
- 52 b. Include size variation data verifying that actual range of sizes for  
53 brick falls within ASTM C 216 dimension tolerances for brick where  
54 modular dimensioning is indicated.
- 55 c. Stone trim samples not less than 12" in length showing full range of  
56 exposed color and texture to be expected in finish work.
- 57 C. Aluminum weepholes/vents painted in color to match mortar color.
- 58

#### **DELIVERY, STORAGE, AND HANDLING:**

- 60 A. Deliver masonry materials to project in undamaged condition.
- 61 B. Store and handle masonry units to prevent their deterioration or damage due to  
62 moisture, temperature changes, contaminants, corrosion, or other causes.
- 63 C. Limit moisture absorption of concrete masonry units during delivery and until time  
64 of installation to the maximum percentage specified for Type I units for the average  
65 annual relative humidity as reported by the U.S. Weather Bureau Station nearest  
66 project site.
- 67 D. Store cementitious materials off the ground, under cover and in dry location.
- 68 E. Store aggregates where grading and other required characteristics can be  
69 maintained.
- 70 F. Store masonry accessories including metal items to prevent deterioration by  
71 corrosion and accumulation of dirt.
- 72

#### **PROJECT CONDITIONS:**

- 74 A. Protection of Work: During erection, cover top of walls with waterproof sheeting  
75 at end of each day's work. Cover partially completed structures when work is not  
76 in progress.
- 77 B. Extend cover a minimum of 24 inches down both sides and hold cover securely  
78 in place.
- 79 C. Do not apply uniform floor or roof loading for at least 12 hours after building  
80 masonry walls or columns.
- 81 D. Do not apply concentrated loads for at least 3 days after building masonry walls  
82 or columns.

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- 83 E. Staining: Prevent grout or mortar or soil from staining the face of masonry to be  
84 left exposed or painted. Remove immediately grout or mortar in contact with such  
85 masonry.
- 86 F. Protect base of walls from rain-splashed mud and mortar splatter by means of  
87 coverings spread on ground and over wall surface.
- 88 G. Protect sills, ledges, and projections from droppings of mortar.
- 89 H. Cold Weather Protection:
- 90 1. Do not lay masonry units that are wet or frozen.
- 91 2. Remove any ice or snow formed on masonry bed by carefully applying  
92 heat until top surface is dry to the touch.
- 93 3. Remove masonry damaged by freezing conditions.
- 94 I. For clay masonry units with initial rates of absorption (suction) which require  
95 them to be wetted before laying, comply with the following requirements.
- 96 1. For units with surface temperatures above 32 deg F (0 deg C), wet with  
97 water heated to above 70 deg F (21 deg C).
- 98 2. For units with surface temperatures below 32 deg F (0 deg C), wet with  
99 water heated to above 130 deg F (54 deg C).
- 100 J. Perform the following construction procedures while masonry work is  
101 progressing. Temperature ranges indicated below apply to air temperatures  
102 existing at time of installation except for grout. For grout, temperature ranges  
103 apply to anticipated minimum night temperatures. In heating mortar and grout  
104 materials, maintain mixing temperature selected within 10 deg F (6 deg C).
- 105 1. 40 deg F (4 deg C) to 32 deg F (0 deg C):
- 106 a. Mortar: Heat mixing water to produce mortar temperature between  
107 40 deg F (4 deg C) and 120 deg F (49 deg C).
- 108 b. Grout: Follow normal masonry procedures.
- 109 2. 32 deg F (0 deg C) to 25 deg F (-4 deg C):
- 110 a. Mortar: Heat mixing water and sand to produce mortar  
111 temperatures between 40 deg F (4 deg C) and 120 deg F (49 deg  
112 C); maintain temperature of mortar on boards above freezing.
- 113 b. Grout: Heat grout materials to 90 deg F (32 deg C) to produce in-  
114 place grout temperature of 70 deg F (21 deg C) at end of workday.
- 115 3. 25 deg F (-4 deg C) to 20 deg F (-7 deg C):
- 116 a. Mortar: Heat mixing water and sand to produce mortar  
117 temperatures between 40 deg F (4 deg C) and 120 deg F (49 deg  
118 C); maintain temperature of mortar on boards above freezing.
- 119 b. Grout: Heat grout materials to 90 deg F (32 deg C) to produce in-  
120 place grout temperature of 70 deg F (21 deg C) at end of workday.
- 121 c. Heat both sides of walls under construction using salamanders or  
122 other heat sources.
- 123 d. Use windbreaks or enclosures when wind is in excess of 15 mph.
- 124 4. 20 deg F (-7 deg C) and below:

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- 125 a. Mortar: Heat mixing water and sand to produce mortar  
126 temperatures between 40 deg F (4 deg C) and 120 deg F (49 deg  
127 C).  
128 b. Grout: Heat grout materials to 90 deg F (32 deg C) to produce in-  
129 place grout temperature of 70 deg F (21 deg C) at end of workday.  
130 c. Masonry Units: Heat masonry units so that they are above 20 deg F  
131 (-7 deg C) at time of laying.  
132 d. Provide enclosure and auxiliary heat to maintain an air temperature  
133 of at least 40 deg F (4 deg C) for 24 hours after laying units.  
134 K. Do not heat water for mortar and grout to above 160 deg F (71 deg C).  
135 L. Protect completed masonry and masonry not being worked on in the following  
136 manner. Temperature ranges indicated apply to mean daily air temperatures  
137 except for grouted masonry. For grouted masonry, temperature ranges apply to  
138 anticipated minimum night temperatures.  
139 1. 40 deg F (4 deg C) to 32 deg F (0 deg C):  
140 a. Protect masonry from rain or snow for at least 24 hours by covering  
141 with weather-resistive membrane.  
142 2. 32 deg F (0 deg C) to 25 deg F (-4 deg C):  
143 a. Completely cover masonry with weather-resistive membrane for at  
144 least 24 hours.  
145 3. 25 deg F (-4 deg C) to 20 deg F (-7 deg C):  
146 a. Completely cover masonry with weather-resistive insulating  
147 blankets or similar protection for at least 24 hours, 48 hours for  
148 grouted masonry.  
149 4. 20 deg F (-7 deg C) and below:  
150 a. Except as otherwise indicated, maintain masonry temperature  
151 above 32 deg F (0 deg C) for 24 hours using enclosures and  
152 supplementary heat, electric heating blankets, infrared lamps or  
153 other methods proven to be satisfactory. For grouted masonry  
154 maintain heated enclosure to 40 deg F (4 deg C) for 48  
155 hours.  
156

## PART 2 - PRODUCTS

### CONCRETE MASONRY UNITS:

- 159 A. General: Comply with referenced standards and other requirements indicated  
160 below applicable to each form of concrete masonry unit required.  
161 B. Provide special shapes where required for lintels, corners, jambs, sash, control  
162 joints, headers, bonding, and other special conditions.  
163 C. Provide bullnose units for outside corners unless otherwise indicated.  
164 D. Concrete Block: Provide units complying with characteristics indicated below for  
165 Grade, Type, face size, exposed face and, under each form of block included, for  
166 weight classification.

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- 167 E. Grade N.
- 168 F. Grade N except Grade S may be used above grade in exterior walls with weather
- 169 protective coatings and in walls not exposed to weather.
- 170 G. Size: Manufacturer's standard units with nominal face dimensions of 16" long x 8"
- 171 high (15-5/8" x 7-5/8" actual) x thickness' indicated.
- 172 H. Type I, moisture-controlled units.
- 173 I. Cure units by autoclave treatment at a minimum temperature of 350 deg F (176
- 174 deg C) and a minimum pressure of 125 psi.
- 175 J. Type II, nonmoisture-controlled units.
- 176 K. Exposed Faces: Manufacturer's standard color and texture, unless otherwise
- 177 indicated.
- 178 L. Hollow Load-Bearing Block: ASTM C 90 and as follows:
- 179 M. Solid Loadbearing Block: ASTM C 145 and as follows:
- 180 N. Concrete Building Block: Provide units complying with ASTM C 55 and
- 181 characteristics indicated below for grade, type, size and weight classification.
- 182 O. Grade: Same as indicated for concrete block.
- 183 P. Type: Same as indicated for concrete block.
- 184 Q. Size: As indicated.
- 185 R. Non-Modular Standard: 2-1/4" x 3-3/4" x 8".
- 186

#### **MORTAR AND GROUT MATERIALS:**

- 188 A. Portland Cement: ASTM C 150, Type I, except Type III may be used for cold
- 189 weather construction. Provide natural color or white cement as required to
- 190 produce required mortar color.
- 191 B. Masonry Cement: ASTM C 91.
- 192 C. For colored pigmented mortars use premixed colored masonry cements of
- 193 formulation required to produce color indicated, or if not indicated, as selected
- 194 from manufacturer's standard formulations.
- 195 D. Available Products: Subject to compliance with requirements, masonry cements
- 196 which may be incorporated in the work include, but are not limited to, the
- 197 following:
- 198 E. Products: Subject to compliance with requirements, provide one of the following:
- 199 1. "Atlas Custom Color Masonry Cement"; Lehigh Portland Cement Co.
- 200 2. "Flamingo Color Masonry Cement"; The Riverton Corporation.
- 201 F. For colored aggregate mortars use masonry cement of natural color or white as
- 202 required to produce mortar color indicated.
- 203 G. Hydrated Lime: ASTM C 207, Type S.
- 204 H. Aggregate for Mortar: ASTM C 144, except for joints less than 1/4" use
- 205 aggregate graded with 100% passing the No. 16 sieve.
- 206 I. White Mortar Aggregates: Natural white sand or ground white stone.
- 207 J. Colored Mortar Aggregates: Ground marble, granite, or other sound stone, as
- 208 required to match Architect's sample.

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- 209 K. Aggregate for Grout: ASTM C 404.
- 210 L. Colored Mortar Pigments: Natural and synthetic iron oxides and chromium
- 211 oxides, compounded for use in mortar mixes. Use only pigments with record of
- 212 satisfactory performance in masonry mortars.
- 213 M. Available Products: Subject to compliance with requirements, colored mortar
- 214 pigments which may be incorporated in the work include, but are not limited to,
- 215 the following:
  - 216 1. Products: Subject to compliance with requirements, provide one of the
  - 217 following:
    - 218 a. "SGS Mortar Colors", Solomon Grind-Chem Services, Inc.
    - 219 b. "True Tone Mortar Colors"; Davis Colors, A Subsidiary of Rockwood
    - 220 Industries, Inc.
- 221 N. Water: Clean and potable.
- 222 **JOINT REINFORCEMENT, TIES AND ANCHORING DEVICES:**
- 223 A. Materials: Comply with requirements indicated below for basic materials and
- 224 with requirements indicated under each form of joint reinforcement, tie and
- 225 anchor for size and other characteristics:
- 226 B. Zinc-Coated (galvanized) Steel Wire: ASTM A 82 for uncoated wire and with
- 227 ASTM C 641 for zinc coating of class indicated below:
  - 228 1. Class 1 (0.40 oz. per sq. ft. of wire surface).
  - 229 2. Class 3 (0.80 oz. per sq. ft. of wire surface).
  - 230 3. Application: Use where indicated.
  - 231 4. Application: Use for masonry not exposed to exterior or earth.
- 232 C. Hot-Dip Galvanized Steel Wire: ASTM A 82 for uncoated wire and with ASTM A
- 233 123, Class B-2 (1.5 oz. per sq. ft. of wire surface) for zinc coating applied after
- 234 prefabrication into units.
- 235 D. Austenitic Stainless Steel Wire: ASTM A 580, AISI Type 304, (UNS S30400)
- 236 alloy.
- 237 E. Application: Use where indicated.
- 238 F. Application: Use for masonry exposed to exterior and in contact with earth.
- 239 G. Zinc-Coated (Galvanized) Steel Sheet: Carbon steel with zinc coating complying
- 240 with ASTM A 525, Coating Designation G90.
- 241 H. Application: Use for dovetail slots and where indicated.
- 242 I. Hot-Dip Galvanized Carbon Steel Sheet: ASTM A 366, Class 2 of ASTM A 635;
- 243 hot-dip galvanized after fabrication to comply with ASTM A 153, Class B.
- 244 J. Austenitic Stainless Steel Sheet: ASTM A 167 for AISI Type 304 (UNS S30400)
- 245 alloy, No. 1 finish.
- 246 K. Application: Use for anchors.
- 247 L. Joint Reinforcement: Provide welded-wire units prefabricated with deformed
- 248 continuous side rods and plain cross rods into straight lengths of not less than
- 249 10', with prefabricated corner and tee units, and complying with requirements
- 250 indicated below:

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- 251 1. Width: Fabricate joint reinforcement in units with widths of approximately  
252 2" less than nominal width of walls and partitions as required to provide  
253 mortar coverage of not less than 5/8" on joint faces exposed to exterior  
254 and 1/2" elsewhere.
- 255 2. Wire Size for Side Rods: 0.1875" diameter.
- 256 3. Wire Size for Cross Rods: 0.1875" diameter.
- 257 M. For Single-wythe masonry provide type as follows with single pair of side rods:
- 258 1. Truss design with continuous diagonal cross rods spaced not more than  
259 16" o.c.
- 260 N. For multi-wythe masonry provide type as follows:
- 261 1. Truss design with diagonal cross rods spaced not more than 16" o.c. and  
262 number of side rods as follows:
- 263 a. Number of Side Rods for Composite Construction: One side rod for  
264 each face shell of concrete masonry back up and one rod for brick  
265 wythe.
- 266 b. Tab design with single pair of side rods and rectangular box-type  
267 cross ties spaced not more than 16" o.c.; with side rods spaced for  
268 embedment within each face shell of back-up wythe and ties  
269 extended to within 1" of exterior face of facing wythe.
- 270 c. Use units with adjustable 2-piece rectangular ties where horizontal  
271 joints of facing wythe do not align with those of back up.
- 272 O. Bent-Wire Ties: Provide individual prefabricated bent-wire units complying with  
273 requirements indicated below:
- 274 1. Wire Size: 0.1875" diameter.
- 275 2. Wire Size: 0.25" diameter.
- 276 3. Length: Provide units of length indicated but not less than that required  
277 for embedment into each wythe of 1.5" for solid units and for embedment  
278 of tie end into face shells of hollow units, with not less than 5/8" mortar  
279 cover on exterior face joints, 1/2" elsewhere.
- 280 P. Tie Shape for Hollow Masonry Units Laid with Cells Vertical: Rectangular with  
281 ends welded close and not less than 2" wide.
- 282 Q. Tie Shape for Solid Masonry Unit Construction: Z-shaped ties with ends bent 90  
283 degrees to provide hooks not less than 2" long.
- 284 R. Type for Masonry Where Coursing Between Wythes Align: Unit ties bent from  
285 one piece of wire.
- 286 S. Type for Masonry Where Coursing Between Wythes Does Not Align: Adjustable  
287 ties composed of two parts, one with a pintle, the other with an eye.
- 288 T. Flexible Anchors: Where flexible anchors are indicated for connecting masonry  
289 to structural framework, provide 2-piece anchors as described below which  
290 permit vertical or horizontal differential movement between wall and framework  
291 parallel to, but resist tension and compression forces perpendicular to, plane of  
292 wall.

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- 293 U. For anchorage to concrete framework, provide manufacturer's standard anchors  
294 with dovetail anchor section formed from 0.1046" (12 gage) thick sheet metal and  
295 triangular-shaped wire tie section sized to extend within 1" of masonry face.
- 296 V. For anchorage to steel framework provide manufacturer's standard anchors with  
297 crimped 1/4" diameter wire anchor section for welding to steel and triangular-  
298 shaped wire tie section sized to extend within 1" of masonry face.  
299 1. Wire Size: 0.1875" diameter.
- 300 W. Masonry Veneer Anchors: Two-piece assemblies which permit vertical or  
301 horizontal differential movement between wall and framework parallel to, but  
302 resist tension and compression forces perpendicular to, plane of wall; consisting  
303 of wire tie section and metal anchor section for attachment over sheathing to  
304 metal studs and complying with the following requirements:  
305 1. Wire Size: 0.1875" diameter.  
306 2. Wire Tie Shape: Triangular.  
307 3. Wire Tie Length: As required to extend within 1" of masonry veneer face.
- 308 X. Anchor Section: Rib-stiffened sheet metal plate with screw holes top and bottom,  
309 0.0747" (14 gage) x 2-3/4" x 3" high fabricated into tee shape with 2" projecting  
310 tabs, 3/4" wide by 1" long, with slotted holes for connection of vertical legs of  
311 triangular wire tie specially formed to fit anchor section.
- 312 Y. Anchor Section: Sheet metal plate, with screw holes top and bottom and with  
313 raised, rib-stiffened strap stamped into center to provide slot between strap and  
314 plate for connection of wire tie; of overall size and thickness indicated  
315 below:  
316 1. Size: Plate and strap size: 1-1/4" wide for plate, 5/8" for strap x lengths  
317 indicated below; slot clearance formed between face of plate and back of  
318 strap at maximum rib projection: 1/32" + diameter of wire tie.  
319 2. Plate and Strap Lengths: 5" and 3-1/2"; with both sides of plate stiffened  
320 by ribs.  
321 3. Thickness: 0.0747" (14 gage).  
322 4. Thickness: 0.1046" (12 gage).
- 323 Z. Metal Fasteners for Steel Studs: Steel drill screws, #10 diameter x length  
324 required to penetrate steel stud flange by not less than 3 exposed threads,  
325 complying with ASTM C 954 except with hex washer head and neoprene washer,  
326 cadmium-plated.
- 327 AA. Available Products: Subject to compliance with requirements, masonry veneer  
328 anchors which may be incorporated in the work includes, but is not limited to, the  
329 following:  
330 1. Products: Subject to compliance with requirements, provide the following:  
331 a. "D/A 213; Dur-O-Wal, Inc.  
332 b. "DW-10"; Hohmann & Barnard, Inc.  
333 c. "DW-10HS; Hohmann & Barnard, Inc.

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- 334 BB. Rigid Anchors: Provide straps of form and length indicated, fabricated from  
335 sheet metal strips of following width and thickness, unless otherwise indicated.  
336 1. Width: 1".  
337 2. Width: 1-1/4".  
338 3. Thickness: 1/8".  
339 4. Thickness: 3/16".  
340 5. Thickness: 1/4".
- 341 CC. Unit Type Masonry Inserts in Concrete: Furnish cast iron or malleable iron  
342 inserts of type and size indicated.
- 343 DD. Dovetail Slots: Furnish dovetail slots, with filler strips, of slot size indicated,  
344 fabricated from 0.0336" (22 gage) sheet metal.
- 345 EE. Anchor Bolts: Provide steel bolts with hex nuts and flat washers complying with  
346 ASTM A 307, Grade A, hot-dip galvanized to comply with ASTM C 153, Class C,  
347 in sizes and configurations indicated.
- 348 FF. Available Manufacturers: Subject to compliance with requirements,  
349 manufacturers offering products which may be incorporated in the work include,  
350 but are not limited to, the following:
- 351 GG. Manufacturers: Subject to compliance with requirements, provide products of  
352 one of the following:
- 353 1. AA Wire Products Co.
  - 354 2. Dur-O-Wall, Inc.
  - 355 3. Heckman Building Products, Inc.
  - 356 4. Hohmann & Barnard, Inc.
  - 357 5. Masonry Reinforcing Corp. of America.
  - 358 6. National Wire Products Corp.
- 359

#### **CONCEALED FLASHING MATERIALS:**

- 361 A. Sheet Metal Flashing: Fabricated from the following metal complying with  
362 requirements specified in Division-7 section "Flashing and Sheet Metal" and  
363 below:
- 364 1. Stainless Steel: 0.015" thick.
  - 365 2. Copper: 10 oz. weight for fully concealed flashing, 16 oz. elsewhere.
- 366 B. Fabricate through-wall metal flashings with deformation in both directions for  
367 integral mechanical mortar bond.
- 368 C. Fabricate metal expansion joint strips from sheet metal indicated above, formed  
369 to shape indicated.
- 370 D. Asphalt-Coated Copper Flashing: Manufacturer's standard product consisting of  
371 sheet copper of weight per sq. ft. indicated below coated with flexible fibrated  
372 asphalt.
- 373 1. Weight: 5 oz.
- 374 E. Laminated Flashing: Manufacturer's standard laminated flashing of type  
375 indicated below:

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- 376 1. Copper-Fabric Laminate: Copper sheet of weight per sq. ft. indicated
- 377 below, bonded with asphalt between 2 layers of glass fiber cloth.
- 378 a. Weight: 5 oz.
- 379 F. Solder and Sealants for Sheet Metal Flashings: As specified in Division-7 section
- 380 "Flashing and Sheet Metal".
- 381 G. Adhesive for Flashings: Of type recommended by manufacturer of flashing
- 382 material for use indicated.
- 383 H. Available Products: Subject to compliance with requirements, products which
- 384 may be incorporated in the work include, but are not limited to, the following:
- 385 1. Products: Subject to compliance with requirements, provide one of the
- 386 following:
- 387 a. Asphalt-Coated Copper Flashing:
- 388 1. "Cop-A-Cote"; Afco Products Inc.
- 389 2. Coated Copper Flashing; Sandell Manufacturing Co., Inc.
- 390 3. "Copperseal"; York Manufacturing, Inc.
- 391 b. Copper Fabric Laminate Flashing:
- 392 1. Copper Fabric; Afco Products Inc.
- 393 2. Copper Fabric Flashing; Sandell Manufacturing Co., Inc.
- 394 3. Copper Fabric Flashing; York Manufacturing, Inc.

**MISCELLANEOUS MASONRY ACCESSORIES:**

- 396 A. Reinforcing Bars: Deformed steel, ASTM A 615, Grade 60 for bars No. 3 to No.
- 397 18.
- 398 B. Non-Metallic Expansion Joint Strips: Premolded, flexible cellular neoprene
- 399 rubber filler strips complying with ASTM D 1056, Grade RE41E1, capable of
- 400 compression up to 35%, of width and thickness indicated.
- 401 1. Premolded Control Joint Strips: Material as indicated below, designed to
- 402 fit standard sash block and to maintain lateral stability in masonry wall;
- 403 size and configuration as indicated.
- 404 a. Styrene-butadiene rubber compound complying with ASTM D 2000,
- 405 Designation 2AA-805.
- 406 b. Polyvinyl chloride complying with ASTM D 2287, General Purpose
- 407 Grade, Designation PVC-63506.
- 408 C. Bond Breaker Strips: Asphalt-saturated organic roofing felt complying with
- 409 ASTM D 226, Type I (No. 15 asphalt felt).
- 410 D. Weepholes: Provide the following for weepholes:
- 411 1. Plastic Tubing: Medium density polyethylene, outside diameter and length
- 412 as indicated below:
- 413 a. 3/8" x 4".
- 414 E. Cotton Cord: Sash cord of length required to produce 2" exposure on exterior
- 415 and 18" in cavity between wythes.

416  
417 **INSULATION:**

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- 418 A. Extruded Polystyrene Board Insulation: Rigid cellular polystyrene thermal  
419 insulation with closed cells and integral high density skin, formed by the  
420 expansion of polystyrene base resin in an extrusion process to comply with  
421 ASTM C 578, Type IV; 5-year aged r-value of 5 Btu/(hr x sf x deg F) at 75 deg F  
422 (24 deg C); in manufacturer's standard lengths and widths; thickness' as  
423 indicated.
- 424 B. Available Products: Subject to compliance with requirements, products which  
425 may be incorporated in the work include, but are not limited to, the following:
- 426 1. Products: Subject to compliance with requirements, provide one of the  
427 following:
- 428 a. "Styrofoam SM/SB"; Dow Chemical USA.  
429 b. "Foamular 250"; UC Industries.  
430 c. "Certifoam"; Minnesota Diversified Products, Inc.
- 431 2. Adhesive: Type recommended by insulation board manufacturer for  
432 application indicated.  
433

#### MASONRY CLEANERS:

- 435 A. Job-Mixed Detergent Solution: Solution of trisodium phosphate (1/2 cup dry  
436 measure) and laundry detergent (1/2 cup dry measure) dissolved in one gallon of  
437 water.
- 438 B. Acidic Cleaner: Manufacturer's standard strength general purpose cleaner  
439 designed for new masonry surfaces of type indicated; composed of blended  
440 organic and inorganic acids combined with special wetting systems and  
441 inhibitors; expressly approved for intended use by manufacturer of masonry units  
442 being cleaned.
- 443 C. Available Products: Subject to compliance with requirements, a product which  
444 may be used to clean unit masonry surfaces includes, but is not limited to, the  
445 following:
- 446 D. Products: Subject to compliance with requirements, provide the following:  
447 1. "Sure Klean" No. 600 Detergent; ProSoCo, Inc.  
448

#### MORTAR AND GROUT MIXES:

- 450 A. General: Do not add admixtures including coloring pigments, air-entraining  
451 agents, accelerators, retarders, water repellent agents, anti-freeze compounds or  
452 other admixtures, unless otherwise indicated.
- 453 B. Do not use calcium chloride in mortar or grout.
- 454 C. Mixing: Combine and thoroughly mix cementitious, water and aggregates in a  
455 mechanical batch mixer; comply with referenced ASTM standards for mixing time  
456 and water content.
- 457 D. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification, for  
458 types of mortar required, unless otherwise indicated.
- 459 E. Limit cementitious materials in mortar to Portland cement- lime.

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- 460 F. Use Type M mortar for masonry below grade and in contact with earth, and  
461 where indicated.
- 462 G. Use Type S mortar for reinforced masonry and where indicated.
- 463 H. Use Type N mortar for exterior, above grade loadbearing and non-loadbearing  
464 walls; for interior loadbearing walls; and for other applications where another type  
465 is not indicated.
- 466 I. Grout for Unit Masonry: Comply with ASTM C 476 for grout for use in  
467 construction of reinforced and nonreinforced unit masonry. Use grout of  
468 consistency indicated or if not otherwise indicated, of consistency (fine or coarse)  
469 at time of placement which will completely fill all spaces intended to receive  
470 grout.
- 471 J. Use fine grout in grout spaces less than 2" in horizontal direction, unless  
472 otherwise indicated.
- 473 K. Use coarse grout in grout spaces 2" or more in least horizontal dimension, unless  
474 otherwise indicated.
- 475

### **PART 3 - EXECUTION**

#### **INSTALLATION, GENERAL:**

- 476
- 477
- 478 A. Wetting Clay Brick: Wet brick made from clay or shale which have ASTM C 67  
479 initial rates of absorption (suction) of more than 30 grams per 30 sq. in. per  
480 minute. Use wetting methods that ensure each clay masonry unit being nearly  
481 saturated but surface dry when laid.
- 482 B. Do not wet concrete masonry units.
- 483 C. Cleaning Reinforcing: Before placing, remove loose rust, ice, and their coatings  
484 from reinforcing.
- 485 D. Thickness: Build cavity and composite walls, floors, and other masonry  
486 construction to the full thickness shown. Build single- wythe walls (if any) to the  
487 actual thickness of the masonry units, using units of nominal thickness indicated.
- 488 E. Build chases and recesses as shown or required for the work of other trades.  
489 Provide not less than 8" of masonry between chase or recess and jamb of  
490 openings, and between adjacent chases and recesses.
- 491 F. Leave openings for equipment to be installed before completion of masonry  
492 work. After installation of equipment, complete masonry work to match work  
493 immediately adjacent to the opening.
- 494 G. Cut masonry units using motor-driven saws to provide clean, sharp, unchipped  
495 edges. Cut units as required to provide continuous pattern and to fit adjoining  
496 work. Use full-size units without cutting where possible.
- 497 H. Use dry cutting saws to cut concrete masonry units.
- 498

#### **CONSTRUCTION TOLERANCES:**

- 499
- 500 A. Variation from Plumb: For vertical lines and surfaces of columns, walls and  
501 arises do not exceed 1/4" in 10', or 3/8" in a story height not to exceed 20', nor

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- 502 1/2" in 40' or more. For external corners, expansion joints, control joints and  
503 other conspicuous lines, do not exceed 1/4" in any story or 20' maximum, nor  
504 1/2" in 40' or more. For vertical alignment of head joints do not exceed plus or  
505 minus 1/4" in 10', 1/2" maximum.
- 506 B. Variation from Level: For bed joints and lines of exposed lintels, sills, parapets,  
507 horizontal grooves and other conspicuous lines, do not exceed 1/4" in any bay or  
508 20' maximum, nor 1/2" in 40' or more. For top surface of bearing walls, do not  
509 exceed 1/8" between adjacent floor elements in 10' or 1/16" within width of a  
510 single unit.
- 511 C. Variation of Linear Building Line: For position shown in plan and related portion  
512 of columns, walls and partitions, do not exceed 1/2" in any bay or 20' maximum,  
513 nor 3/4" in 40' or more.
- 514 D. Variation in cross-sectional Dimensions: For columns and thickness of walls,  
515 from dimensions shown, do not exceed minus 1/4" nor plus 1/2".
- 516 E. Variation in Mortar Joint Thickness: Do not exceed bed joint thickness indicated  
517 by more than plus or minus 1/8", with a maximum thickness limited to 1/2". Do  
518 not exceed head joint thickness indicated by more than plus or minus 1/8".

519

#### LAYING MASONRY WALLS:

- 521 A. Layout walls in advance for accurate spacing of surface bond patterns with  
522 uniform joint widths and to accurately locate openings, movement-type joints,  
523 returns, and offsets. Avoid the use of less-than-half-size units at corners, jambs  
524 and wherever possible at other locations.
- 525 B. Lay-up walls to comply with specified construction tolerances, with courses  
526 accurately spaced and coordinated with other work.
- 527 C. Pattern Bond; Lay exposed masonry in the bond pattern shown or, if not shown,  
528 lay in running bond with vertical joint in each course centered on units in courses  
529 above and below. Lay concealed masonry with all units in a wythe in running  
530 bond or bonded by lapping not less than 2". Bond and interlock each course of  
531 each wythe at corners. Do not use units with less than nominal 4" horizontal face  
532 dimensions at corners or jambs.
- 533 D. Stopping and Resuming Work: Rack back 1/2-unit length in each course. Do not  
534 tooth. Clean exposed surfaces of set masonry, wet units lightly (if required) and  
535 remove loose masonry units and mortar prior to laying fresh masonry.
- 536 E. Built-in Work: As the work progresses, build-in items specified under this and  
537 other sections of these specifications. Fill in solidly with masonry around built-in  
538 items.
- 539 F. Fill space between hollow metal frames and masonry solidly with mortar, unless  
540 otherwise indicated.
- 541 G. At exterior frames insert extruded polystyrene board insulation around perimeter  
542 of frame in thickness indicated but not less than 3/4" to act as a thermal break  
543 between frame and masonry.

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- 544 H. Where built-in items are to be embedded in cores of hollow masonry units, place  
545 a layer of metal lath in the joint below and rod mortar or grout into core.  
546 I. Fill cores in hollow concrete masonry units with grout 3 courses (24") under  
547 bearing plates, beams, lintels, posts and similar items, unless otherwise  
548 indicated.

549

#### **MORTAR BEDDING AND JOINTING:**

- 551 A. Lay solid brick size masonry units with completely filled bed and head joint; butter  
552 ends with sufficient mortar to fill head joints and shove into place. Do not slush  
553 head joints.
- 554 B. Lay hollow concrete masonry units with full mortar coverage on horizontal and  
555 vertical face shells. Bed webs in mortar in starting course on footings and in all  
556 courses of piers, columns and pilasters, and where adjacent to cells or cavities to  
557 be reinforced or filled with concrete or grout. For starting course on footings  
558 where cells are not grouted, spread out full mortar bed including areas under  
559 cells.
- 560 C. Set stone units in full bed of mortar with all vertical joints slushed full. Fill dowel,  
561 anchor, and similar holes solid. Wet stone joint surface thoroughly before setting;  
562 for stone surfaces which are soiled, clean bedding and exposed surfaces with  
563 fiber brush and soap powder followed by thorough rinsing with clear water.
- 564 D. Maintain joint widths shown, except for minor variations required to maintain  
565 bond alignment. If not shown, lay walls with 3/8" joints.
- 566 E. Cut joints flush for masonry walls that are to be concealed or to be covered by  
567 other materials, unless otherwise indicated.
- 568 F. Tool exposed joints slightly concave using a jointer larger than joint thickness,  
569 unless otherwise indicated.
- 570 G. Remove masonry units disturbed after laying; clean and reset in fresh mortar. Do  
571 not pound corners or jambs to shift adjacent stretcher units that have been set in  
572 position. If adjustments are required, remove units, clean off mortar and reset in  
573 fresh mortar.
- 574 H. Collar Joints: After each course is laid, fill the vertical longitudinal joint between  
575 wythes solidly and with mortar for the following masonry work:
- 576 1. All exterior walls, except cavity walls, and interior walls and partitions.
  - 577 2. Exterior walls, except cavity walls.
  - 578 3. Non-loadbearing interior walls or partitions where metal ties or horizontal  
579 reinforcing are indicated for structural bonding and nominal thickness of  
580 wall or partition is required to meet code requirements for height-to-  
581 thickness ratio.

582

#### **STRUCTURAL BONDING OF MULTI-WYTHE MASONRY:**

- 584 A. Use individual metal ties installed in horizontal joints to bond wythes together.  
585 Provide ties as shown, but not less than one metal tie for 4-sq. ft. of wall area

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- 586 spaced not to exceed 24" o.c. horizontally and vertically. Stagger ties in alternate  
587 courses. Provide additional ties within 1'-0" of all openings and space not more  
588 than 3'-0" apart around perimeter of openings. At intersecting and abutting walls,  
589 provide ties at no more than 24" o.c. vertically.
- 590 B. Use continuous horizontal joint reinforcement installed in horizontal mortar joints  
591 for bond tie between wythes. Install at not more than 16" o.c. vertically.
- 592 C. Use either of the structural bonding systems specified above.
- 593 D. Corners: Provide interlocking masonry unit bond in each course at corners,  
594 unless otherwise shown.
- 595 E. For horizontally reinforced masonry, provide continuity at corners with  
596 prefabricated "L" units, in addition to masonry bonding.
- 597 F. Intersecting and Abutting Walls: Unless vertical expansion or control joints are  
598 shown at juncture, provide same type of bonding specified for structural bonding  
599 between wythes and space as follows:
- 600 1. Provide individual metal ties at not more than 24" o.c. vertically.
- 601 2. Provide continuity with horizontal joint reinforcement using prefabricated  
602 "T" units.
- 603 G. Intersecting Load-bearing Walls: If carried up separately, block or tooth vertical  
604 joint with 8" maximum offsets and provide rigid steel anchors spaced not more  
605 than 4'-0" o.c. vertically, or omit blocking and provide rigid steel anchors at not  
606 more than 2'-0" o.c. vertically. Form anchors of galvanized steel not less than 1-  
607 1/2" x 1/4" x 2'-0" long with ends turned up not less than 2" or with cross-pins. If  
608 used with hollow masonry units, embed ends in mortar-filled cores.
- 609 H. Non-bearing Interior Partitions: Build full height of story to underside of solid floor  
610 or roof structure above, unless otherwise shown.
- 611 I. Wedge non-bearing partitions against structure above with small pieces of tile,  
612 slate or metal. Fill joint with mortar after dead load deflection of structure above  
613 approaches final position.
- 614

#### **HORIZONTAL JOINT REINFORCEMENT:**

- 616 A. General: Provide continuous horizontal joint reinforcement as indicated. Install  
617 longitudinal side rods in mortar for their entire length with a minimum cover of  
618 5/8" on exterior side of walls, 1/2" elsewhere. Lap reinforcing a minimum of 6".
- 619 B. Cut or interrupt joint reinforcement at control and expansion joints, unless  
620 otherwise indicated.
- 621 C. Reinforce walls with continuous horizontal joint reinforcing unless specifically  
622 noted to be omitted.
- 623 D. Reinforce the following walls with continuous horizontal joint reinforcement:
- 624 1. Single wythe walls.
- 625 2. Multi-wythe walls with one or more stack bond wythes.
- 626 3. Hollow concrete masonry walls.
- 627 4. Multi-wythe masonry walls.

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- 628 E. Provide continuity at corners and wall intersections by use of prefabricated "L"  
629 and "T" sections. Cut and bend reinforcement units as directed by manufacturer  
630 for continuity at returns, offsets, column fireproofing, pipe enclosures and other  
631 special conditions.
- 632 F. Space continuous horizontal reinforcement as follows:
- 633 1. For multi-wythe walls (solid or cavity) which are structurally bonded by  
634 masonry headers or individual wire ties, space horizontal reinforcement  
635 24" o.c. vertically.
  - 636 2. For multi-wythe walls (solid or cavity) where continuous horizontal  
637 reinforcement acts as structural bond or tie between wythes, space  
638 reinforcement as required by code but not more than 16" o.c.  
639 vertically.
  - 640 3. For single-wythe walls, space reinforcement at 16" o.c. vertically, unless  
641 otherwise indicated.
  - 642 4. For parapets, space reinforcement at 8" o.c. vertically, unless otherwise  
643 indicated.
- 644 G. Reinforce masonry openings greater than 1'-0" wide, with horizontal joint  
645 reinforcement placed in 2 horizontal joints approximately 8" apart, immediately  
646 above the lintel and immediately below the sill. Extend reinforcement a minimum  
647 of 2'-0" beyond jambs of the opening except at control joints.
- 648 H. In addition to wall reinforcement, provide additional reinforcement at openings as  
649 required to comply with the above.

650

#### **ANCHORING MASONRY WORK:**

- 651
- 652 A. General: Provide anchor devices of type indicated.
- 653 B. Anchor masonry to structural members where masonry abuts or faces structural  
654 members to comply with the following:
- 655 1. Provide an open space not less than 1" in width between masonry and  
656 structural member, unless otherwise indicated. Keep open space free  
657 of mortar or other rigid materials.
  - 658 2. Anchor masonry to structural members with flexible anchors embedded in  
659 masonry joints and attached to structure.
  - 660 3. Space anchors as indicated, but not more than 24" o.c. vertically and 36"  
661 o.c. horizontally.
- 662 C. Anchor single wythe masonry veneer to metal studs with masonry veneer  
663 anchors to comply with the following requirements:
- 664 1. Fasten each anchor section through sheathing to metal studs with 2 metal  
665 fasteners of type indicated.
  - 666 2. Embed tie section in masonry joints. Provide not less than 1" airspace  
667 between back of masonry veneer wythe and face of sheathing.
  - 668 3. Locate anchor section relative to course in which tie section is embedded  
669 to allow maximum vertical differential movement of tie up and down.

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- 670 4. Space anchors as indicated but not more than 16" o.c. vertically and 24"  
671 o.c. horizontally. Install additional anchors within 1'-0" of openings and at  
672 intervals around perimeter not exceeding 3'-0".  
673

#### CONTROL AND EXPANSION JOINTS:

- 674  
675 A. General: Provide vertical and horizontal expansion, control and isolation joints in  
676 masonry where shown. Build-in related items as the masonry work progresses.  
677 B. Build flanges of metal expansion strips into masonry. Lap each joint 4" in  
678 direction of water flow. Seal joints below grade and at junctures with horizontal  
679 expansion joints, if any.  
680 C. Build flanges of factory-fabricated expansion joint units into masonry. See  
681 Division-7 section "Elastic Expansion Joints".  
682 D. Build-in non-metallic joint fillers where indicated.  
683 E. Build in horizontal pressure relieving joints where indicated; construct joints by  
684 either leaving an air space or inserting non-metallic compressible joint filler of  
685 width required to permit installation of sealant and backer rod.  
686 F. Locate horizontal pressure relieving joints beneath shelf angles supporting  
687 masonry veneer and attached to structure behind masonry veneer.  
688  
689

#### LINTELS:

- 690  
691 A. Install steel lintels where indicated.  
692 B. Provide masonry lintels where shown and wherever openings of more than 1'-0"  
693 for brick size units and 2'-0" for block size units are shown without structural steel  
694 or other supporting lintels. Provide precast or formed-in-place masonry lintels.  
695 Cure precast lintels before handling and installation. Temporarily support formed-  
696 in-place lintels.  
697 C. For hollow concrete masonry unit walls, use specially formed U-shaped lintel  
698 units with reinforcement bars placed as shown filled with coarse grout.  
699 D. Provide minimum bearing of 8" at each jamb, unless otherwise indicated.  
700

#### FLASHING OF MASONRY WORK:

- 701  
702 A. General: Provide concealed flashing in masonry work at, or above, shelf angles,  
703 lintels, ledges and other obstructions to the downward flow of water in the wall so  
704 as to divert such water to the exterior. Prepare masonry surfaces smooth and  
705 free from projections that could puncture flashing. Place through-wall flashing on  
706 sloping bed of mortar and cover with mortar. Seal penetrations in flashing with  
707 mastic before covering with mortar. Extend flashings through exterior face of  
708 masonry and turn down to form drip.  
709 B. Extend flashing the full length of lintels and shelf angles and minimum of 4" into  
710 masonry each end. Extend flashing from exterior face of outer wythe of masonry,  
711 through the outer wythe, turned up a minimum of 4", and through the inner wythe

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- 712 to within 1/2" of the interior face of the wall in exposed work. Where interior  
713 surface of inner wythe is concealed by furring, carry flashing completely through  
714 the inner wythe and turn up approximately 2". At heads and sills turn up ends not  
715 less than 2" to form a pan.
- 716 C. Interlock end joints of deformed metal flashings by over-lapping deformations not
  - 717 less than 1-1/2" and seal lap with elastic sealant.
  - 718 D. Install flashing to comply with manufacturer's instructions.
  - 719 E. Provide weepholes in the head joints of the first course of masonry immediately
  - 720 above concealed flashings. Space 24" o.c., unless otherwise indicated.
  - 721 F. Install reglets and nailers for flashing and other related work where shown to be
  - 722 built into masonry work.
  - 723

#### REPAIR, POINTING AND CLEANING:

- 725 A. Remove and replace masonry units which are loose, chipped, broken, stained or
- 726 otherwise damaged, or if units do not match adjoining units as intended. Provide
- 727 new units to match adjoining units and install in fresh mortar or grout, pointed to
- 728 eliminate evidence of replacement.
- 729 B. Pointing: During the tooling of joints, enlarge any voids or holes, except
- 730 weepholes, and completely fill with mortar. Point- up all joints including corners,
- 731 openings and adjacent work to provide a neat, uniform appearance, prepared for
- 732 application of sealants.
- 733 C. Final Cleaning: After mortar is thoroughly set and cured, clean masonry as
- 734 follows:
  - 735 1. Remove large mortar particles by hand with wooden paddles and non-
  - 736 metallic scrape hoes or chisels.
  - 737 2. Test cleaning methods on sample wall panel; leave 1/2 panel uncleaned
  - 738 for comparison purposes. Obtain Architect's approval of sample cleaning
  - 739 before proceeding with cleaning of masonry.
  - 740 3. Protect adjacent stone and non-masonry surfaces from contact with
  - 741 cleaner by covering them with liquid strippable masking agent,
  - 742 polyethylene film, or waterproof masking tape.
  - 743 4. Saturate wall surfaces with water prior to application of cleaners; remove
  - 744 cleaners promptly by rinsing thoroughly with clear water.
  - 745 5. Use bucket and brush hand cleaning method described in BIA "Technical
  - 746 Note No. 20 Revised" to clean brick masonry made from clay or shale,
  - 747 except use masonry cleaner indicated below.
    - 748 a. Detergent.
    - 749 b. Acidic cleaner; apply in compliance with directions of cleaner
    - 750 manufacturer.
- 751 D. Clean concrete unit masonry to comply with masonry manufacturer's directions
- 752 and applicable NCMA "Tek" bulletins.

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Unit Masonry**

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- 753 E. Clean limestone units to comply with recommendations in "ILI Handbook"
- 754 published by Indiana Limestone Institute of America.
- 755 F. Protection: Provide final protection and maintain conditions in a manner
- 756 acceptable to Installer, which ensures unit masonry work being without damage
- 757 and deterioration at time of substantial completion.

758

759

END OF SECTION 04200

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## ROUGH CARPENTRY

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#### **PART 1 - GENERAL**

#### **GENERAL SPECIFICATION PROVISIONS**

- A. The Drawings and the General Provisions of the contract include: The Agreement, General Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of Specifications.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

#### **RELATED DOCUMENTS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### **SUMMARY:**

- A. Types of work in this section include rough carpentry for:
  - 1. Wood grounds, nailers and blocking.
  - 2. Roof Sheathing
  - 3. Wall Sheathing
- B. Finish carpentry is specified in another section within Division 6.

#### **DEFINITIONS:**

- A. Rough carpentry includes carpentry work not specified as part of other sections and which is generally not exposed, except as otherwise indicated.

#### **PRODUCT HANDLING:**

- A. Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.
- B. For lumber and plywood pressure treated with waterborne chemicals, sticker between each course to provide air circulation.

#### **PROJECT CONDITIONS:**

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### ROUGH CARPENTRY

#### Moose Lodge 398 Family Center Addition/Remodel

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- 43 A. Coordination: Fit carpentry work to other work; scribe and cope as required for  
44 accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar  
45 supports to allow attachment of other work.  
46

#### 47 PART 2 - PRODUCTS

##### 48 LUMBER, GENERAL:

- 49 A. Lumber Standards: Manufacture lumber to comply with PS 20 "American  
50 Softwood Lumber Standard" and with applicable grading rules of inspection  
51 agencies certified by American Lumber Standards Committee's (ALSC) Board of  
52 Review.  
53 B. Grade Stamps: Factory-mark each piece of lumber with grade stamp of  
54 inspection agency evidencing compliance with grading rule requirements and  
55 identifying grading agency, grade, species, moisture content at time of surfacing,  
56 and mill.  
57 C. Nominal sizes are indicated, except as shown by detail dimensions. Provide  
58 actual sizes as required by PS 20, for moisture content specified for each use.  
59 D. Provide dressed lumber, S4S, unless otherwise indicated.  
60 E. Provide seasoned lumber with 19 percent maximum moisture content at time of  
61 dressing and shipment for sizes 2" or less in nominal thickness, unless otherwise  
62 indicated.  
63

##### 64 DIMENSION LUMBER:

- 65 A. For light framing (2" to 4" thick, 2" to 4" wide) provide the following grade and  
66 species:  
67 1. Standard grade.  
68 2. Any species graded under WWPA or WCLIB rules.  
69 3. Southern Pine graded under SPIB rules.  
70 B. For structural light framing (2" to 4" thick, 2" to 4" wide), provide the following  
71 grade and species:  
72 Any species of specified grade.  
73 C. For structural framing (2" to 4" thick, 5" and wider), provide the following grade  
74 and species:  
75 1. Any species of specified grade.  
76 2. Hem-Fir graded under WWPA rules.  
77 3. Southern Pine graded under SPIB rules.  
78 D. Any species and grade which meets or exceeds the following values:  
79 1. Fb (minimum extreme fiber stress in bending); 1500 psi.  
80 2. E (minimum modulus of elasticity); 1,500,000 psi.  
81

##### 82 BOARDS:

- 83 A. Exposed Boards: Where boards will be exposed in the finished work, provide the  
84 following:  
85 1. Moisture Content: 19 percent maximum, "S-DRY".

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### **ROUGH CARPENTRY**

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- 86 B. Where painted finish is indicated, provide No. 1 Boards per SPIB rules, Select  
87 Merchantable Boards per WCLIB rules, or No. 2 Common Boards & Better per  
88 WWPA rules.
- 89 C. Concealed Boards: Where boards will be concealed by other work, provide  
90 lumber of 19 percent maximum moisture content (S-DRY) and of following  
91 species and grade:
- 92 1. Redwood Merchantable per RIS rules, Southern Pine No. 3 Boards per  
93 SPIB rules, or any species graded Standard or No. 3 Common Boards per  
94 WCLIB or WWPA rules.
- 95 D. Board Sizes: Provide sizes indicated or, if not indicated (for sheathing,  
96 subflooring, and similar uses), provide 1" x 8" boards.
- 97

#### **MISCELLANEOUS LUMBER:**

- 98
- 99 A. Provide wood for support or attachment of other work including cant strips,  
100 bucks, nailers, blocking, furring, grounds, stripping and similar members. Provide  
101 lumber of sizes indicated, worked into shapes shown, and as follows:
- 102 1. Moisture content: 19 percent maximum for lumber items not specified to  
103 receive wood preservative treatment.
- 104 2. Grade: Standard Grade light framing size lumber of any species or board  
105 size lumber as required. No. 3 Common or Standard grade boards per  
106 WCLIB or WWPA rules or No. 3 boards per SPIB rules.
- 107

#### **CONSTRUCTION PANELS:**

- 108
- 109 A. Identification Requirements: Each panel shall be identified with the appropriate  
110 trademark of the American Plywood Association and shall meet the requirements  
111 of the latest edition of Voluntary Product Standard PS 1, Voluntary Product  
112 Standard PS 2 or APA PRP-108 Performance Standards.
- 113 B. All panels which have any edge or surface permanently exposed to the weather  
114 shall be classed Exterior.
- 115 C. Panel thickness, grade and Group number, or Span Rating shall be at least equal  
116 to that shown on the drawings. Application shall be in accordance with  
117 recommendations of the American Plywood Association.
- 118

#### **MISCELLANEOUS MATERIALS:**

- 119
- 120 A. Fasteners and Anchorages: Provide size, type, material and finish as indicated  
121 and as recommended by applicable standards, complying with applicable Federal  
122 Specifications for nails, staples, screws, bolts, nuts, washers and anchoring  
123 devices. Provide metal hangers and framing anchors of the size and type  
124 recommended by the manufacturer for each use including recommended nails.  
125 Where rough carpentry work is exposed to weather, in ground contact, or in area  
126 of high relative humidity, provide fasteners and anchorages with a hot-dip zinc  
127 coating (ASTM A153).

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### ROUGH CARPENTRY

#### Moose Lodge 398 Family Center Addition/Remodel

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- 128 B. Building Paper: ASTM D 226, Type I; asphalt saturated felt, non-perforated, 15-  
129 lb. type.
- 130 C. Air Infiltration Barrier: Provide 6.1 mil thick fabric composed of very fine, high  
131 density polyethylene fibers with vapor transmission rate of 51.30 grams per  
132 100 sq. in. in 24 hours; weight of 8.81 lbs. per 1000 sq. ft.; bursting strength of  
133 105 psi; tear resistance of 32.5 lbs. for length, 24.8 lbs. for width; air porosity of  
134 7.6 seconds; water resistance of 99.3 cm of water head.
- 135 D. Product: Subject to compliance with requirements, provide Tyvek; Textile Fibers  
136 Dept., DuPont Co.  
137

#### WOOD TREATMENT BY PRESSURE PROCESS:

- 138
- 139 A. Preservative Treatment: Where lumber or plywood is indicated as "Trt-Wd" or  
140 "Treated," or is specified herein to be treated, comply with applicable  
141 requirements of AWPA Standards C2 (Lumber and C9 Plywood) and of AWPB  
142 Standards listed below. Mark each treated item with the AWPB Quality Mark  
143 Requirements.
- 144 B. Pressure-treat aboveground items with water-borne preservatives to comply with  
145 AWPB LP-2. After treatment, kiln-dry lumber and plywood to a maximum  
146 moisture content, respectively, of 19 percent and 15 percent. Treat indicated  
147 items and the following:
- 148 1. Wood cants, roof nailers, nailers, curbs, equipment support bases,  
149 blocking, stripping, and similar members in connection with roofing,  
150 flashing, vapor barriers and waterproofing.
  - 151 2. Wood sills, sleepers, blocking, furring, stripping and similar concealed  
152 members in contact with masonry or concrete.
  - 153 3. Wood framing members less than 18" above grade.
  - 154 4. Wood floor plates installed over concrete slabs directly in contact with  
155 earth.
- 156 C. Fire-Retardant Treatment: Where fire-retardant treated wood ("FRTW") is  
157 indicated, pressure impregnate lumber and plywood with fire-retardant chemicals  
158 to comply with AWPA C20 and C27, respectively, for treatment type indicated  
159 below; identify "FRTW" lumber with appropriate classification marking of  
160 Underwriters Laboratories, Inc., U.S. Testing, Timber Products Inspection or  
161 other testing and inspecting agency acceptable to authorities having jurisdiction.
- 162 1. Interior Type A: Use where "FRTW" wood is indicated for interior  
163 applications.
  - 164 2. Exterior Type: Use where "FRTW" wood is indicated for exterior, exposed  
165 applications.
- 166 D. Inspect each piece of treated lumber or plywood after drying and discard  
167 damaged or defective pieces.  
168

#### PART 3 - EXECUTION

#### INSTALLATION, GENERAL:

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- 171 A. Discard units of material with defects that might impair quality of work, and units  
172 that are too small to use in fabricating work with minimum joints or optimum joint  
173 arrangement.
- 174 B. Set carpentry work to required levels and lines, with members plumb and true to  
175 line, and cut and fitted.
- 176 C. Securely attach carpentry work to substrate by anchoring and fastening as  
177 shown and as required by recognized standards. Countersink nail heads on  
178 exposed carpentry work and fill holes.
- 179 D. Use common wire nails, except as otherwise indicated. Use finishing nails for  
180 finish work. Select fasteners of size that will not penetrate members where  
181 opposite side will be exposed to view or will receive finish materials. Make tight  
182 connections between members. Install fasteners without splitting of wood;  
183 predrill as required.  
184

#### **PLYWOOD BACKING PANELS:**

- 185 A. For mounting electrical or telephone equipment, provide fire-retardant  
186 treated plywood panels with grade designation, APA C-D PLUGGED INT  
187 with exterior glue, in thickness indicated, or, if not otherwise indicated, not less  
188 than 15/32".  
189  
190

#### **WOOD GROUNDS, NAILERS, BLOCKING AND SLEEPERS:**

- 191 A. Provide wherever shown and where required for screeding or attachment of other  
192 work. Form to shapes as shown and cut as required for true line and level of  
193 work to be attached. Coordinate location with other work involved.
- 194 B. Attach to substrates as required to support applied loading. Countersink bolts  
195 and nuts flush with surfaces, unless otherwise indicated. Build into masonry  
196 during installation of masonry work. Where possible, anchor to formwork before  
197 concrete placement.
- 198 C. Provide permanent grounds of dressed, preservative treated, key-beveled lumber  
199 not less than 1-1/2" wide and of thickness required to bring face of ground to  
200 exact thickness of finish material involved. Remove temporary grounds when no  
201 longer required.  
202  
203

#### **WOOD FURRING:**

- 204 A. Install plumb and level with closure strips at edges and openings. Shim with  
205 wood as required for tolerance of finished work.
- 206 B. Firestop furred spaces on walls at each floor level and at ceiling line of top story,  
207 with wood blocking or noncombustible materials, accurately fitted to close furred  
208 spaces.
- 209 C. Furring to Receive Gypsum Drywall: Unless otherwise indicated, provide 1" x 2"  
210 furring at 16" o.c., vertically.  
211  
212

#### **WOOD FRAMING, GENERAL:**

213

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- 214 A. Provide framing members of sizes and on spacings shown, and frame openings  
215 as shown, or if not shown, comply with recommendations of "Manual for House  
216 Framing" of National Forest Products Association (N.F.P.A). Do not splice  
217 structural members between supports.
- 218 B. Anchor and nail as shown, and to comply with "Recommended Nailing Schedule"  
219 of "Manual for House Framing" and "National Design Specifications for Wood  
220 Construction" published by N.F.P.A.
- 221 C. Firestop concealed spaces of wood framed walls and partitions at each floor level  
222 and at the ceiling line of the top story. Where firestops are not automatically  
223 provided by the framing system used, use closely fitted wood blocks of nominal  
224 2" thick lumber of the same width as framing members.
- 225

#### **ROOF SHEATHING:**

- 226
- 227 A. Panel roof sheathing shall be APA Rated Sheathing EXP. Sheathing permanently  
228 exposed to weather shall be classed Exterior. Install with the long dimension or  
229 strength axis of the panel across supports, except where noted, and with panel  
230 continuous over two (2) or more spans. For pitched roofs, place screened  
231 surface or side with skid-resistant coating up if OSB panels are used. Wear skid-  
232 resistant shoes when installing roof sheathing. Suitable edge support shall be  
233 provided where indicated on drawings (or in recommendations of the APA) by  
234 use of panel chips, tongue-and-groove edges, or lumber blocking between  
235 joists. Panel end joints shall occur over framing. Spacing of 1/8" is recommended  
236 at panel ends and edges, unless otherwise indicated by the panel manufacturer.  
237 Nail 6" oc along supported panel edges and 12" oc at intermediate supports,  
238 except that when supports are spaced 48" oc or more, space nails 6" oc at all  
239 supports. Use 6d common nails for panels 1/2" and less and 8d for greater  
240 thicknesses, except that when panels are 1-1/8", use 8d ring-shank or 10d  
241 common. Cover roof sheathing as soon as possible with roofing felt or shingle  
242 underlayment for protection against excessive moisture prior to roofing  
243 applications.
- 244

#### **WALL SHEATHING:**

- 245
- 246 A. Panel wall sheathing shall be APA Structural I Rated Sheathing EXP 1. Spacing  
247 of 1/8" is recommended at panel edges and ends, unless otherwise indicated by  
248 the panel manufacturer. Nail 6" oc along supported panel edges and 12" oc at  
249 intermediate supports with 6d common nails for panels 1/2" and less, and 8d for  
250 greater thicknesses. Apply vapor retarder over panel wall sheathing brick veneer  
251 or other exterior wall finishes in accordance with local building or energy code or  
252 when indicated by the manufacturer of the sheathing or exterior wall finish.
- 253

254 **END OF SECTION 06100**

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**Section 07212**  
**Board and Batt Insulation**  
**Moose Lodge 398 Family Center Addition/Remodel**

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**PART 1 GENERAL**

**GENERAL SPECIFICATION PROVISIONS**

- A. The Drawings and the General Provisions of the contract include: The Agreement, General Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of Specifications.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

**SECTION INCLUDES**

- A. Board insulation and integral vapor retarder at cavity wall construction, perimeter foundation wall, and underside of floor slabs.
- B. Batt insulation in interior framed wall construction.

**REFERENCES**

- A. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- B. ASTM C 665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
- C. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

**SUBMITTALS**

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.

**PART 2 PRODUCTS**

**BOARD INSULATION MATERIALS**

- A. Extruded Polystyrene Board Insulation: ASTM C 578, Type VI; Extruded expanded polystyrene board with cut cell surfaces; with the following characteristics:
  - 1. Board Size: 48 x 96 inch.
  - 2. Board Thickness: 2 inches.
  - 3. Board Edges: Square.
  - 4. Thermal Conductivity (k factor) at 25 degrees F: 0.18.
  - 5. Board Density: 1.8 lb/cu ft.
  - 6. Flame/Smoke Properties: 5 for flame spread/165 for smoke development in accordance with ASTM E 84.
  - 7. Manufacturers:
    - a) Amoco Foam Products Co.
    - b) Dow Chemical USA.
    - c) Minnesota Diversified Products, Inc.
    - d) UC Industries.

**BATT INSULATION MATERIALS**

- A. Batt Insulation: ASTM C 665; preformed glass fiber batt; friction fit, conforming to the following:
  - 1. Facing: Unfaced.
  - 2. Flame/Smoke Properties: for flame spread/50 for smoke development in accordance with

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**Section 07212**  
**Board and Batt Insulation**  
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- 53                   ASTM E 84.  
54                   3. Manufacturers:  
55                   a)       CertainTeed Corp.  
56                   b)       Knauf Fiber Class GmbH.  
57                   c)       Manville Corp ..  
58                   d)       Owens-Corning Fiberglass Corp ..  
59

60 **ACCESSORIES**

- 61       A. Tape: Bright aluminum self-adhering type, mesh reinforced, 2 inch wide.  
62       B. Nails or Staples: Steel wire; electroplated or galvanized; type and size to suit application.  
63       C. Adhesive: Type recommended by insulation manufacturer for application.  
64

65 **PART 3 EXECUTION**

66 **EXAMINATION**

- 67       A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are  
68       ready to receive insulation and adhesive.  
69       B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or  
70       substances that may impede adhesive bond.  
71

72 **BOARD INSTALLATION AT FOUNDATION PERIMETER**

- 73       A. Apply adhesive 10 back of boards:  
74       B. Install boards vertically on foundation perimeter.  
75           1. Place boards to maximize adhesive contact.  
76           2. Install in running bond pattern.  
77           3. Butt edges and ends tightly to adjacent boards and to protrusions.  
78       C. Extend boards over expansion joints, unbonded to foundation on one side of joint.  
79       D. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.  
80

81 **BOARD INSTALLATION AT CAVITY WALLS**

- 82       A. Secure impale fasteners to substrate at a frequency as follows:  
83           1. 6 per insulation board.  
84       B. Adhere a 6-inch wide strip of polyethylene sheet over expansion joints with double beads of  
85       adhesive each side of joint.  
86           1. Tape seal joints between sheets.  
87           2. Extend sheet full height of joint.  
88       C. Apply adhesive to back of boards:  
89           1. Three continuous beads per board length.  
90           2. Full bed 1/8 inch thick.  
91       D. Install boards to fit snugly between wall ties.  
92       E. Install boards horizontally on walls.  
93           1. Place boards to maximize adhesive contact.  
94           2. Install in running bond pattern.  
95           3. Butt edges and ends tightly to adjacent boards and to protrusions.  
96       F. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.  
97       G. Place 6-inch wide polyethylene sheet at perimeter of wall openings, from adhesive vapor retarder  
98       bed to window and doorframes. Tape seal in place to ensure continuity of vapor retarder and air  
99       seal.  
100

101 **BOARD INSTALLATION UNDER CONCRETE SLABS**

- 102       A. Place insulation under slabs on grade plus minimum 2'-0" in from exterior wall after base for slab  
103       has been compacted.  
104       B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.  
105       C. Prevent insulation from being displaced or damaged while placing vapor retarder and placing

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106 slab.

107

108 **BATT INSTALLATION**

- 109 A. Install insulation and vapor retarder in accordance with manufacturer's instructions.
- 110 B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.
- 111 C. Trim insulation neatly to fill spaces. Insulate miscellaneous gaps and voids.
- 112 D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services
- 113 within the plane of the insulation.
- 114 E. Install with factory applied vapor retarder membrane facing warm side of building spaces. Lap
- 115 ends and side flanges of membrane over framing members.
- 116 F. Staple or nail facing flanges in place at maximum 6 inches on center.
- 117 G. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.
- 118 H. Tape seal tears or cuts in vapor retarder.

119

120

121 **PROTECTION OF FINISHED WORK**

- 122 A. Do not permit installed insulation to be damaged prior to its concealment.

123

124

**END OF SECTION 07212**

# SECTION 07900 JOINT SEALERS

## Moose Lodge 398 Family Center Addition/Remodel

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### PART 1 GENERAL

#### GENERAL SPECIFICATION PROVISIONS

- A. The Drawings and the General Provisions of the contract including: The Agreement, General Conditions, Supplementary Conditions, Federal Contract Provisions, Prevailing Wage Rates, and Addendum apply to the Work of this Section of Specifications.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

#### SUMMARY:

- A. Extent of each form and type of joint sealer is indicated on drawings and schedules.
- B. This Section includes joint sealers for the following locations:
  1. Exterior joints in vertical surfaces and non-traffic horizontal surfaces as indicated below.
    - a) Control and expansion joints in cast-in-place concrete.
    - b) Control and expansion joints in unit masonry.
    - c) Joints between different materials listed above.
    - d) Perimeter joints between materials listed above and frames of doors and windows.
    - e) Control and expansion joints in ceiling and overhead surfaces.
    - f) Other joints as indicated.
  2. Exterior joints in horizontal traffic surfaces as indicated below:
    - a) Control, expansion, and isolation joints in cast-in-place concrete slabs for floors and paving.
    - b) Joints between different materials listed above. c. Other joints as indicated.
  3. Interior joints in vertical surfaces and horizontal nontraffic surfaces as indicated below:
    - a) Control and expansion joints on exposed interior surfaces of exterior walls.
    - b) Perimeter joints of exterior openings where indicated.
    - c) Perimeter joints between interior wall surfaces and frames of interior doors, windows.
    - d) Perimeter joints of toilet fixtures. e. Other joints as indicated.
  4. Interior joints in horizontal traffic surfaces as indicated below:
    - a) Control and expansion joints in cast-in-place concrete slabs.
    - b) b. Other joints as indicated.
- C. Sealing joints related to flashing and sheet metal for roofing is specified in Division-7 D. Sealants for glazing purposes are specified in Division-8 Section "Glass and Glazing." 1.03 SYSTEM
- D. Provide joint sealers that have been produced and installed to establish and maintain watertight and airtight continuous seals.

#### SUBMITTALS:

- A. Product Data from manufacturers for each joint sealer product required, including instructions for joint preparation and joint sealer application.
- B. Samples for Initial Selection Purposes: Manufacturer's standard bead samples consisting of strips of actual products showing full range of colors available, for each product exposed to view.
- C. Samples for verification purposes of each type and color of joint sealer required. Install joint sealer samples in //, inch wide joints formed between two 6 inch long strips of material matching the appearance of exposed surfaces adjacent to joint sealers.
- D. Certificates from manufacturers of joint sealers attesting that their products comply with specification requirements and are suitable for the use indicated.
- E. Compatibility and adhesion test reports from Elastomeric sealant manufacturer indicating that materials forming joint substrates and joint sealant backings have been tested for compatibility and adhesion with joint sealants. Include sealant manufacturer's interpretation of test results relative to

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# SECTION 07900 JOINT SEALERS

## Moose Lodge 398 Family Center Addition/Remodel

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56 sealant performance and recommendations for primers and substrate preparation needed to obtain  
57 adhesion.

58 F. Product test reports for each type of joint sealers indicated, evidencing compliance with requirements  
59 specified.  
60

### 61 **QUALITY ASSURANCE:**

62 A. Installer Qualifications: Engage an Installer who has successfully completed within the last 3 years at  
63 least 3 joint sealer applications similar in type and size to that of this Project.

64 B. Single Source Responsibility for Joint Sealer Materials: Obtain joint sealer materials from a single  
65 manufacturer for each different product required.  
66

### 67 **DELIVERY, STORAGE, AND HANDLING:**

68 A. Deliver materials to Project site in original unopened containers or bundles with labels informing about  
69 manufacturer, product name and designation. color, expiration period for use, pot life, curing time, and  
70 mixing instructions for multicomponent materials.

71 B. Store and handle materials in compliance with manufacturers' recommendations to prevent their  
72 deterioration or damage due to moisture, high or low temperatures, contaminants, or other **causes**.  
73

### 74 **PROJECT CONDITIONS:**

75 A. Environmental Conditions: Do not proceed with installation of joint sealers under the following  
76 conditions:

77 1. When ambient and substrate temperature conditions are outside the limits permitted by joint  
78 sealer manufacturers.

79 2. When joint substrates are wet due to rain, frost, condensation, or other causes.

80 B. Joint Width Conditions: Do not proceed with installation of joint sealers where joint widths are less than  
81 allowed by joint sealer manufacturer for application indicated.

82 C. Joint Substrate Conditions: Do not proceed with installation of joint sealers until contaminants capable  
83 of interfering with their adhesion are removed from joint substrates.  
84

### 85 **SEQUENCING AND SCHEDULING:**

86 A. Sequence installation of joint sealers to occur not less than 21 nor more than 30 days after completion  
87 of waterproofing. unless otherwise indicated.  
88

### 89 **PART 2 PRODUCTS**

#### 90 **MATERIALS, GENERAL:**

91 A. Compatibility: Provide joint sealers, joint fillers and other related materials that are compatible with one  
92 another and with joint substrates under conditions of service and application, as demonstrated by  
93 sealant manufacturer based on testing and field experience.  
94

#### 95 **ELASTOMERIC JOINT SEALANTS:**

96 A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, Elastomeric  
97 sealant of base polymer indicated which complies with ASTM C 920 requirements, including those  
98 referenced for Type, Grade, Class, and Uses.

99 B. One-Part Nonacid-Curing Silicone Sealant: Type S, Grade NS, Class 25, and complying with the  
100 following requirements for Uses and additional joint movement capability:

101 1. Uses T, NT, M, G, A, and, as applicable to joint substrates indicated, O.

102 C. Multi-Part Nonsag Urethane Sealant for Use T: Type M, Grade NS, Class 25, and complying with the  
103 following requirements for Uses:

104 1. Uses T, M, A, and, as applicable to joint substrates indicated. O.

105 D. Multi-Part Pourable Urethane Sealant for Use T: Type M, Grade P, Class 25, and complying with the  
106 following requirements for Uses:

107 1. Uses T, M, and, as applicable to joint substrates indicated, O.

108 E. Products: Subject to compliance with requirements, provide one of the following:

109 1. One-Part Nonacid-Curing Silicone Sealant:

110 a) "Chem-Calk 1 000"; Bostik Construction Products Div. b. "Gesil N SCS 2600";  
111 General Electric Co.

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# SECTION 07900 JOINT SEALERS

## Moose Lodge 398 Family Center Addition/Remodel

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- 112 2. Multi-Part. Pourable, Urethane Sealant for Use T:  
113 a) "Sonolastic Paving Joint Sealant"; Sonneborn Building Products Div., Rexnord  
114 Chemical Products Inc.  
115 3. One-Part Nonsag Urethane Sealant for Use NT:  
116 a) "Sonolastic NP 1 "; Sonneborn Building Products Div., Rexnord Chemical Products  
117 Inc.  
118

### JOINT SEALANT BACKING:

- 120 A. General: Provide sealant backings of material and type which are nonstaining; are compatible with  
121 joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by  
122 sealant manufacturer based on field experience and laboratory testing.  
123 B. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer  
124 for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of  
125 joint where such adhesion would result in sealant failure. Provide self adhesive tape where applicable.  
126

### MISCELLANEOUS MATERIALS:

- 128 A. Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of  
129 sealant to joint substrates indicated, as determined from preconstruction joint sealer-substrate tests  
130 and field tests.  
131 B. Cleaners for Nonporous Surfaces: Provide nonstaining, chemical cleaners of type which are  
132 acceptable to manufacturers of sealants and sealant backing materials, which are not harmful to  
133 substrates and adjacent nonporous materials, and which do not leave oily residues or otherwise have  
134 a detrimental effect on sealant adhesion or in-service performance.  
135 C. Masking Tape: Provide nonstaining, nonabsorbent type compatible with joint sealants and to  
136 surfaces adjacent to joints.  
137

### JOINT FILLERS FOR CONCRETE PAVING:

- 138 A. General: Provide joint fillers of thickness and widths indicated.  
139 B. Bituminous Fiber Joint Filler: Preformed strips of composition below, complying with ASTM D  
140 1751: Asphalt saturated fiberboard.  
141  
142

### PART 3 EXECUTION

#### EXAMINATION:

- 145 A. Examine joints indicated to receive joint sealers, with Installer present, for compliance with  
146 requirements for compliance with requirements for joint configuration, installation tolerances and  
147 other conditions affecting joint sealer performance. Do not proceed with installation of joint sealers  
148 until unsatisfactory conditions have been corrected.  
149

#### PREPARATION:

- 151 A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply  
152 with recommendations of joint sealer manufacturers and the following requirements:  
153 1. Remove all foreign material from joint substrates which could interfere with adhesion of  
154 joint sealer, including dust; paints, except for permanent, protective coatings tested and  
155 approved for sealant adhesion and compatibility by sealant manufacturer; old joint  
156 sealers; oil; grease; waterproofing; water repellents; water; surface dirt; and frost.  
157 2. Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint  
158 substrate surfaces, by brushing, grinding, blast cleaning, mechanical abrading, or a  
159 combination of these methods to produce a clean, sound substrate capable of developing  
160 optimum bond with joint sealers.  
161 3. Remove loose particles remaining from above cleaning operations by vacuuming or  
162 blowing out joints with oil-free compressed air.  
163 4. Remove laitance and form release agents from concrete.  
164 5. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile; and other  
165 nonporous surfaces by chemical cleaners or other means which are not harmful to  
166 substrates or leave residues capable of interfering with adhesion of joint sealers.  
167 B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer

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# SECTION 07900 JOINT SEALERS

## Moose Lodge 398 Family Center Addition/Remodel

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168 manufacturer based on preconstruction joint sealer-substrate tests or prior experience. Apply  
169 primer to comply with joint sealer manufacturer's recommendations. Confine primers to areas of  
170 joint sealer bond, do not allow spillage or migration onto adjoining surfaces.

171 C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining  
172 surfaces which otherwise would be permanently stained or damaged by such contact or by  
173 cleaning methods required to remove sealant smears. Remove tape immediately after tooling  
174 without disturbing joint seal.  
175

### INSTALLATION OF JOINT SEALERS:

- 177 A. General: Comply with joint sealer manufacturers' printed installation instructions applicable to  
178 products and applications indicated, except where more stringent requirements apply.
- 179 B. Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C 962 for use  
180 of joint sealants as applicable to materials, applications and conditions indicated.
- 181 C. Installation of Sealant Backings: Install sealant backings to comply with the following  
182 **requirements:**
- 183 1. Install joint fillers of type indicated to provide support of sealants during application and at  
184 position required to produce the cross-sectional shapes and depths of installed sealants  
185 relative to joint widths which allow optimum sealant movement capability.
  - 186 2. Do not leave gaps between ends of joint fillers.
  - 187 3. Do not stretch, twist, puncture, or tear joint fillers.
  - 188 4. Remove absorbent joint fillers which have become wet prior to sealant application and replace  
189 with dry material.
  - 190 5. Install bond breaker tape between sealants and joint fillers, compression seals, or back of  
191 joints where adhesion of sealant to surfaces at back of joints would result in sealant failure.
  - 192 6. Install compressible seals serving as sealant backings to comply with requirements indicated  
193 above for joint fillers.
- 194 D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting  
195 and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and  
196 providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum  
197 sealant movement capability.
- 198 E. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or **curing**  
199 **begins, tool sealants to form smooth, uniform beads of configuration indicated, to** eliminate air  
200 pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants  
201 from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces  
202 or are not approved by sealant manufacturer. Provide concave joint configuration per Figure 6A in  
203 ASTM C 962, unless otherwise indicated.  
204

### CLEANING:

- 205 A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and  
206 with cleaning materials approved by manufacturers of joint sealers and of products in which **joints**  
207 **occur.**  
208  
209

### PROTECTION:

- 210 A. Protect joint sealers during and after curing period from contact with contaminating substances or from  
211 damage resulting from construction operations or other causes so that they are without deterioration or  
212 damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs,  
213 cut out and remove damaged or deteriorated joint sealers immediately and reseal joints with new  
214 materials to produce joint sealer installations with repaired areas indistinguishable from original work.  
215  
216  
217

**END OF SECTION 07900**

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1 **PART 1 GENERAL**

2 **GENERAL SPECIFICATION PROVISIONS**

- 3 A. The Drawings and the General Provisions of the contract include: The Agreement, General  
4 Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of  
5 Specifications.
- 6 B. The drawings and specifications that make up the Work of this project are interrelated and  
7 dependent on every other drawing and specification section. The contractors and suppliers for  
8 this section of specifications shall review all other sections of specifications, drawings and  
9 addendum to coordinate their work as it relates to this project. If an item related to this section is  
10 illustrated, specified or indicated in or on any other specification section, drawing or addendum it  
11 shall be as if it were part of this section of specifications and shall be provided for in the contract.

12

13 **SECTION INCLUDES**

- 14 A. Steel doors and frames. Unrated.

15 **REFERENCES**

- 16 A. ANSI A250.3 - Test Procedure and Acceptance Criteria for Factory-Applied Finish Painted Steel  
17 Surfaces for Steel Doors and Frames; 1999.
- 18 B. ANSI A250.4 - American National Standard Test Procedure and Acceptance Criteria for  
19 Physical Endurance for Steel Doors and Hardware Reinforcings; 2001.
- 20 C. ANSI A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames;  
21 1998.
- 22 D. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for  
23 Steel Doors and Frames; 1998.
- 24 E. ASTM A 366/A 366M - Standard Specification for Commercial Steel (CS) Sheet, Carbon, (0.15  
25 Maximum Percent) Cold-Rolled; 1997.
- 26 F. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or  
27 Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2000.
- 28 G. ASTM A 1008 - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-  
29 Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability; 2001
- 30 H. BHMA A156.7 - American National Standard for Template Hinge Dimensions; Builders  
31 Hardware Manufacturers Association; 1988 (R1997) (ANSI/BHMA A156.7).
- 32 I. DHI A115.1 - Specifications for Preparation of 1-3/8" and 1-3/4" Standard Steel Doors and Steel  
33 Frames for Series 1000 Mortise Locks and Latches; Door and Hardware Institute; 1990  
34 (ANSI/DHI A115.1).
- 35 J. DHI A115.2 - Specifications for Preparation of 1-3/8" and 1-3/4" Standard Steel Doors and  
36 Frames for Series 4000 Bored Locks and Latches; Door and Hardware Institute; 1996  
37 (ANSI/DHI A115.2).
- 38 K. NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association;  
39 1999.
- 40 L. SDI 105 - Recommended Erection Instructions for Steel Frames; Steel Door Institute; 1998.

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- 41 M. SDI 111 - Recommended Standard Details for Steel Doors & Frames; Steel Door Institute;  
42 current edition.
- 43 N. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.  
44

45 **SUBMITTALS**

- 46 A. See Section 01300 - Administrative Requirements, for submittal procedures.
- 47 B. Product Data: Manufacturer's standard details and catalog data indicating compliance with  
48 referenced standards, and manufacturer's installation instructions.
- 49 C. Certificates:  
50 1. Manufacturer's certification that products comply with referenced standards.
- 51 D. Shop Drawings: Door, frame, and hardware schedule in accordance with SDI 111D.  
52

53 **QUALITY ASSURANCE**

- 54 A. Manufacturer Qualifications: Member of the Steel Door Institute and National Association of  
55 Architectural Metal Manufacturers.
- 56 B. Installer Qualifications: Minimum 10 years documented experience installing products specified  
57 this section.

58 **DELIVERY, STORAGE, AND HANDLING**

- 59 A. Protect products from moisture, construction traffic, and damage.
- 60 B. Store products under cover on 4-inch high wood sills to prevent rust or damage. Do not use  
61 non-vented plastic or canvas shelters. Should wrappers become wet, remove immediately.
- 62 C. Provide 1/4-inch space between doors to promote air circulation.

63 **PART 2 PRODUCTS**

64 **MANUFACTURERS**

- 65 A. Acceptable Manufacturer:  
66 1. Steelcraft; 9017 Blue Ash Road, Cincinnati OH 45242; Telephone (513) 745-6400;  
67 <http://www.steelcraft.com>.  
68 2. Ceco Door Products; Division of United Dominion Company
- 69 B. Substitutions: See Section 01600 - Product Requirements.

70 **MATERIALS**

- 71 A. Steel Sheet for Doors and Frames:  
72 1. Cold rolled steel: ASTM A 1008, Designation CS.  
73 2. Galvanized steel: ASTM A 653/A 653M; hot-dipped zinc-coated steel with G60/Z180  
74 coating, minimum, or hot-dipped zinc-iron alloy-coated steel with A40/ZF120 coating,  
75 minimum.

76 **DOORS AND FRAMES**

- 77 A. Steel Doors Type interior doors: Flush type; Steelcraft B Series.  
78 1. Sound Attenuation: STC 35.  
79 2. Physical Endurance: Meet requirements of ANSI A250.4 testing.

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- 80 3. Door Thickness: 1-3/4 inches.  
81 4. Face Sheets: Cold-rolled steel, 16 gage.  
82 5. Core: Full 1-3/4 inches thick rigid polystyrene, adhered to inside door faces with  
83 waterproof adhesive for bond strength and rust prevention.  
84 6. Vertical Edges: Continuous vertical mechanical interlocking joint; edge seams tack  
85 welded, filled, and ground smooth.  
86 7. Provide following reinforcement and accessories, fabricated as specified in article  
87 "FABRICATION" below:  
88 a. Recessed top and bottom closure channels.  
89 b. Hinge preparation for 4-1/2 inches high full mortise hinges, 0.134 inch leaf thickness.  
90 c. Closer Preparation.  
91 d. Lockset preparation for cylindrical lockset.  
92 e. Other hardware as per the Door Schedule.  
93 8. Glazing Bead: Formed aluminum sheet or snap-in "Dezigner" trim.  
94 9. Fire Rated Doors: Supply door units bearing UL Class Labels for fire ratings indicated and  
95 250 degrees F temperature rise where indicated.  
96 10. Finish: Factory primer finish.  
97 11. Finish: Factory baked enamel finish; as selected by the architect color.  
98 12. Steel Doors Type exterior doors: Flush type; Steelcraft B Series.  
99 a. Thermal Insulation: R-value 11.1.  
100 b. Sound Attenuation: STC 35.  
101 c. Physical Endurance: Meet requirements of ANSI A250.4 testing.  
102 d. Door Thickness: 1-3/4 inches.  
103 e. Face Sheets: Cold-rolled steel, 16 gage.  
104 f. Core: Full 1-3/4 inches thick rigid polystyrene, adhered to inside door faces with  
105 waterproof adhesive for bond strength and rust prevention.  
106 g. Core: Vertical stiffeners, hat-shaped, minimum 20 gage steel, type same as face  
107 sheet material, spaced 6 inches apart and spot-welded to face sheets at 6 inches on  
108 center; full-thick glass fiber insulation between stiffeners.  
109 h. Vertical Edges: Continuous vertical mechanical interlocking joint; edge seams tack  
110 welded, filled, and ground smooth.  
111 i. Provide following reinforcement and accessories, fabricated as specified in article  
112 "FABRICATION" below:  
113 1) Recessed top and bottom closure channels.  
114 2) Hinge preparation for 4-1/2 inches high full mortise hinges, 0.134 inch leaf  
115 thickness.  
116 3) Closer Preparation.  
117 4) Lockset preparation for cylindrical lockset.  
118 5) Other hardware as per the Door Schedule.  
119 j. Glazing Bead: Formed aluminum sheet or snap-in "Dezigner" trim.  
120 k. Finish: Factory primer finish.  
121 l. Finish: Factory baked enamel finish; \_\_\_\_\_ color.
- 122 B. Steel Frames for exterior doors exterior wall:  
123 1. Frame Material: Hot-dip galvanized steel, Class A60, 16 gage at exterior.  
124 2. Construction: Factory-welded frames; mitered intersections, back-welded, and ground  
125 smooth.  
126 3. Profile: 2 inch face dimension, 1/2 inch backbend (7/16 inch backbend for 5-3/4 inch jamb  
127 depth), rabbet for 1-3/4 inch thick door, 5/8 inch high stop, types and throat dimensions  
128 indicated.  
129 4. Provide following reinforcement and accessories, fabricated as specified in article  
130 "FABRICATION" below:

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- 131 a. Hinge Preparation for 4-1/2 inches high, standard weight, full mortise hinges; with  
132 plaster guard.  
133 b. Strike preparation (single doors) for 4-7/8 inch universal strike; with plaster guard.  
134 c. Silencers.  
135 5. Finish: Factory primer finish.
- 136 C. Steel Frames for Drywall: Steelcraft DW Series. Interior Doors  
137 1. Frame Material: Cold-rolled steel, 16 gage.  
138 2. Construction: Three-piece knockdown frames; mitered intersections, with locking tab at  
139 each head and jamb intersection.  
140 3. Profile: 2 inch face dimension, 1/2 inch backbend with 5/16 inch return, rabbet for 1-3/4  
141 inch thick door, 5/8 inch high stop, types and throat dimensions indicated.  
142 4. Provide reinforcement and accessories as follows, fabricated as specified in article  
143 "FABRICATION" below:  
144 a. Hinge preparation for 4-1/2 inches high, standard weight, full mortise hinges.  
145 b. Strike preparation (single doors) for 4-7/8 inch universal strike; with plaster guard.  
146 c. Silencers.  
147 5. Base Anchors: Lock-in type; adjustable for stud depth.  
148 6. Finish: Factory primer finish.
- 149 D. Hollow Metal Framing Systems: Steelcraft Architectural Stick Systems.  
150 1. Frame Material: Cold-rolled steel, 16 gage.  
151 2. Fabricate perimeter members of open sections having configuration identical to doorframe  
152 sections.  
153 3. Fabricate intermediate members of closed sections having jamb depth, face dimension,  
154 and stop dimensions identical to open sections.  
155 4. Reinforce closed sections with full-length 16 gage steel reinforcement, spot-welded to both  
156 soffits at 8 inches on center.  
157 5. Provide reinforcement and accessories as follows, fabricated as specified in article  
158 "FABRICATION" below:  
159 a. Hinge preparation for 4-1/2 inches high, standard weight, full mortise hinges; with  
160 plaster guards on open sections.  
161 b. Strike preparation (single doors) for 4-7/8 inch universal strike; with plaster guard.  
162 c. Silencers.  
163 6. Glazing Bead: Formed steel sheet; snap-in installation.  
164 7. Finish: Factory primer finish.

165 **ACCESSORIES**

- 166 A. Anchors: Manufacturer's standard framing anchors, specified in manufacturer's printed  
167 installation instructions for project conditions.
- 168 B. Astragals for Pairs of Doors: Manufacturer's standard for labeled and non-labeled openings.
- 169 C. Weatherstrip:  
170 1. Acceptable Product: Steelcraft PS-074 Weatherstrip.  
171 2. Characteristics: Elastomeric, continuous strip, self-adhering to stop; dust proofing, noise-  
172 reducing; acceptable for fire-rated frames up to 3 hour rating.
- 173 D. Door Bottom Exterior Doors:  
174 1. Acceptable Product: Steelcraft Fas-Seal Door Bottom.  
175 2. Characteristics: Elastomeric, continuous strip, screw-attached to recessed bottom door  
176 channel for concealed installation; double-sealing; acceptable for fire-rated doors up to 3  
177 hour rating.

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- 178 E. Top Filler Channel: Same material as door components; supply for exterior out swinging doors,  
179 and other indicated doors.
- 180 F. Plaster Guards: Same material as door components; provide for all strike boxes.
- 181 G. Silencers: Resilient rubber, beige color; factory installed.
- 182 H. Glazing: Specified in Section 08800.

183 **DOOR FABRICATION**

- 184 A. Fabricate to conform to ANSI A250.8; bevel lock and hinge edge 1/8 inch in 2 inches.
- 185 B. Provide reinforcement as specified, projection-welded to door edge to ensure maximum  
186 strength and proper position, except on stainless steel doors.
- 187 C. Hinge Preparation: Recess for specified hinges, provide hinge reinforcement, tap holes for  
188 hinge attachment; locations in accordance with ANSI/BHMA A156.7 template.  
189 1. Steel doors: 7 gage steel, type same as face sheet material.
- 190 D. Lockset Preparation: Provide cutouts and reinforcement.  
191 1. For cylindrical locksets: In accordance with DHI A115.2, backset 2-3/4 inches.  
192 2. Reinforcement for steel doors: 16 gage steel, type same as face sheet material.
- 193 E. Closer Preparation: 14 gage steel tube, 20 inches long across door width, welded to top  
194 channel; except stainless steel doors, laminated within doors.
- 195 F. Closure Channels: 14 gage steel, type same as face sheet material, welded to top channel;  
196 except stainless steel doors, laminated within doors.
- 197 G. Provide cutouts in doors for lites and louvers in accordance with accepted shop drawings.
- 198 H. Install glazing beads and louvers in doors:  
199 1. In fire rated doors light size is not to exceed NFPA 80 limitations for indicated rating.

200 **FRAME FABRICATION**

- 201 A. Three-piece knock-down frames: Head and jamb intersecting corners die-cut, mitered at 45  
202 degrees, with locking tabs for rigid connection when assembled.
- 203 B. Factory-welded frames: Head and jamb intersecting corners mitered at 45 degrees, with back  
204 welded joints ground smooth.
- 205 C. Hinge Preparation: Recess for specified hinges, provide 7 gage hinge reinforcement of same  
206 material and type as frame; tap holes for hinge attachment; locations in accordance with  
207 ANSI/BHMA A156.7 template.
- 208 D. Strike Preparation for Single Doors: Prepare frames for specified strike in accordance with  
209 ANSI/DHI A115.1 and ANSI/DHI A115.2.
- 210 E. Silencers: Factory installed.  
211 1. At single doorframes, provide three silencers on strike side, spaced 6 inches from top and  
212 bottom of door opening, and at center of door opening.  
213 2. At double doorframes, provide two silencers in head, spaced 6 inches each way from  
214 meeting point of door swings.

215 **FINISHES**

- 216 A. Chemical Treatment: Treat steel surfaces to promote paint adhesion.

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217 B. Factory Primer Finish: Meet requirements of ANSI A250.10.

218 C. Factory Baked Enamel Finish: Meet requirements of ANSI A250.3.

219 **PART 3 EXECUTION**

220 **EXAMINATION**

221 A. Have installer verify that project conditions are acceptable before beginning installation of  
222 frames.

223 1. For wrap-around frames, verify that completed openings are of correct size and thickness.

224 2. For butt type frames, verify that completed openings are of correct size.

225 B. Correct unacceptable conditions before preceding with installation.

226

227 **INSTALLATION**

228 A. Install frames in accordance with SDI 105.

229 B. Install doors plumb and in true alignment and fasten to achieve the maximum operational  
230 effectiveness and appearance of the unit. Maintain clearances specified in ANSI A250.8 and  
231 NFPA 80 whichever is more restrictive.

232 C. Fill welded wrap-around frames in masonry construction with mortar as masonry is laid-up.

233 D. If additives are used in masonry or plaster work during cold weather, field coat inside of steel  
234 frames with bituminous compound to prevent corrosion.

235 **ADJUST AND CLEAN**

236 A. Adjust doors for proper operation, free from binding or other defects.

237 B. Clean and restore soiled surfaces. Remove scraps and debris and leave site in a clean  
238 condition.

239 **END OF SECTION 08110**

**SECTION 08410**  
**ALUMINUM ENTRANCES AND STOREFRONTS**  
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**PART 1 – GENERAL:**

**GENERAL SPECIFICATION PROVISIONS**

- A. The Drawings and the General Provisions of the contract include: The Agreement, General Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of Specifications.
  
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

**SUMMARY:**

- A. Aluminum Storefront Systems types required for the project include:
  - 1. Exterior entrance doors and frames.
  - 2. Interior doors and frames.
  - 3. Fixed windows without operable sash.
  - 4. Drive-in teller window with bullet resistive glass.
- B. RELATED SECTIONS:
  - 1. Sealants: Refer to Division 7 Joint Treatment Section for sealant requirements.
  - 2. Glass and Glazing: Refer to Division 8 Glass and Glazing Section for glass and glazing requirements.

**SYSTEM DESCRIPTION:**

- A. Performance Requirements: Provide aluminum storefront systems that comply with performance requirements indicated, as demonstrated by testing manufacturer's assemblies in accordance with test method indicated.
  - 1. Wind Loads: Completed storefront system shall withstand wind pressure loads normal to wall plane indicated.
    - a. Exterior Walls:
      - 1. Positive Pressure:
      - 2. Negative Pressure:
    - b. Interior Walls (Pressure Acting in Either Direction):
  - 2. Deflection: Maximum allowable deflection in any member when tested in accordance with ASTM E 330-84 with allowable stress in accordance with AA Specifications for Aluminum Structures.
    - a. Without Horizontals: L/175 or 3/4" (19.1 mm) Maximum.
    - b. With Horizontals: L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2m).

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**ALUMINUM ENTRANCES AND STOREFRONTS**  
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- 44 3. Thermal Movement: Provide for thermal movement caused by 180 degrees  
45 F. (82.2 degrees C.) surface temperature, without causing buckling stresses  
46 on glass, joint seal failure, undue stress on structural elements, damaging  
47 loads in fasteners, reduction of performance, or detrimental effects.
- 48 4. Air Infiltration: Completed storefront systems shall have 0.00 CFM/FT<sup>2</sup> (0.00  
49 m<sup>3</sup>/h·m<sup>2</sup>) maximum allowable infiltration when tested in accordance with  
50 ASTM E 283-84 at differential static pressure of 6.24 PSF (299 Pa).
- 51 5. Water Infiltration: No uncontrolled water on indoor face of any component  
52 when tested in accordance with ASTM E 331-86 at a static pressure of 15  
53 PSF (718 Pa).
- 54 6. Thermal Performance: When tested in accordance with AAMA 1503.1-88  
55 Condensation Resistance Factor (CRF), and ASTM C 236-89 Thermal  
56 Transmittance (U Value) as follows:  
57 a. CRF: A minimum of 59.  
58 b. U Value: 0.58 BTU/HR/FT<sup>2</sup>/°F or less.  
59

**SUBMITTALS:**

- 61 A. General: Prepare, review, approve, and submit specified submittals in accordance  
62 with "Conditions of the Contract" and Division 1 Submittals Sections. Product data,  
63 shop drawings, samples, and similar submittals are defined in "Conditions of the  
64 Contract".
- 65 B. Product Data: Submit product data for each type storefront series specified.
- 66 C. Shop drawings: Submit shop drawings showing layout, profiles, and product  
67 components, including anchorage, accessories, finish colors and textures.
- 68 D. Samples: Submit verification samples for colors on actual aluminum substrates  
69 indicating full color range expected in installed systems.
- 70 E. Quality Assurance / Control Submittals:  
71 1. Tests Reports: Submit certified test reports showing compliance with  
72 specified performance characteristics and physical properties.  
73 2. Installer Qualification Data: Submit installer qualification data.
- 74 F. Closeout Submittals:  
75 1. Warranty: Submit warranty documents specified herein.  
76 2. Project Record Documents: Submit project record documents for installed  
77 materials in accordance with Division 1 Project Closeout (Project Record  
78 Documents) Section.  
79

**QUALITY ASSURANCE:**

- 81 A. Qualifications:  
82 1. Installer Qualifications: Installer experienced minimum of 5 years to perform  
83 work of this section who has specialized in the installation of work similar to  
84 that required for this project. If requested by Owner, submit reference list of  
85 completed projects.

**SECTION 08410**  
**ALUMINUM ENTRANCES AND STOREFRONTS**  
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- 86           2.       Manufacturer Qualifications: Manufacturer capable of providing field service  
87                   representation during construction, approving acceptable installer and  
88                   approving application method.  
89    B.       Pre-Installation Meetings: Conduct pre-installation meeting to verify project  
90                   requirements, substrate conditions, manufacturer's installation instructions, and  
91                   manufacturer's warranty requirements.  
92

**PROJECT CONDITIONS / SITE CONDITIONS:**

- 93  
94    A.       Field Measurements: Verify actual measurements/openings by field measurements  
95                   before fabrication; show recorded measurements on shop drawings. Coordinate  
96                   field measurements, fabrication schedule with construction progress to avoid  
97                   construction delays.  
98

**WARRANTY:**

- 99  
100   A.       Project Warranty: Refer to "Conditions of the Contract" for project warranty  
101                   provisions.  
102   B.       Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's  
103                   standard warranty document executed by authorized company official.  
104                   Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner  
105                   may have under the Contract Documents.  
106           1.       Beneficiary: Issue warranty in the legal name of the project Owner.  
107           2.       Warranty Period: 5 years commencing on Date of Substantial Completion.  
108           3.       Warranty Acceptance: Owner is sole authority who will determine  
109                   acceptability of manufacturer's warranty documents.  
110

**PART 2 – PRODUCTS:**

**MANUFACTURERS (Acceptable Manufacturers/Products):**

- 111  
112  
113   A.       Acceptable Manufacturers:  
114           1.       YKK AP America Inc.  
115                   5630 Gwaltney Drive  
116                   Atlanta, GA 30336  
117                   Telephone: (404) 629-3800; Fax: (404) 629-3838  
118                   Window system YKK AP series YES600 (windows), YCW750 (large window  
119                   wall)  
120   B.       Storefront Framing System:  
121           1.       Description: Center set, exterior flush glazed; jambs and vertical mullions  
122                   continuous; head, sill, intermediate horizontal attached by screw spline  
123                   joinery.  
124           2.       Components: manufacturer's standard extruded aluminum mullions, 90-  
125                   degree corner posts, entrance door framing, and indicated shapes.  
126           3.       Thermal Barrier: provide continuous thermal barrier by means of 6/6 nylon  
127                   polyamide glass fiber reinforced pressure extruded bars. Systems  
128                   employing non-structural thermal barriers are not acceptable.

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129 C. Entrance Doors: YKK AP series 35 D Medium style swing doors, color to match  
130 frames.

- 131 1. Glazing Stops: EPDM for 1" glazing.
- 132 2. Weather-stripping: Manufacturers standard pile type.
- 133 3. Hardware:
  - 134 a) Top and bottom pivots – color to match door.
  - 135 b) Surface closer – YKK AP, H-6102 standard hold open, surface  
136 mounted with back check and hold open.
  - 137 c) Panic device – exterior doors only concealed H-5101 panic device  
138 with H-1701 exterior pull, finish to match door.
  - 139 d) Threshold: Model H-8100 mill finish.
  - 140 e) Cylinder provided under scope of Section 08710.

141 **MATERIALS:**

142 A. Extrusions: ASTM B 221 (ASTM B 221M), 6063-T5 Aluminum Alloy.

143 B. Aluminum Sheets:

- 144 1. Anodized Finish: ASTM B 209 (ASTM B 209M), 5005-H14 Aluminum Alloy,  
145 0.050 inch (1.27 mm) minimum thickness.
- 146 2. Painted Finish: ASTM B 209 (ASTM B 209M), 3003-H14 Aluminum Alloy,  
147 0.080 inch (1.95 mm) minimum thickness.

148

149 **ACCESSORIES:**

150 A. Manufacturer's Standard Accessories:

- 151 1. Fasteners: Zinc plated steel concealed fasteners; hardened aluminum alloys  
152 or AISI 300 series stainless steel exposed fasteners, countersunk, finish to  
153 match aluminum color.
- 154 2. Sealant: Non-skinning type, AAMA 803.3.
- 155 3. Glazing: Setting blocks, edge blocks, and spacers in accordance with ASTM  
156 C 864, shore durometer hardness as recommended by manufacturer;  
157 Glazing gaskets in accordance with ASTM C 864.

158 B. Swing Door Operator:

159 Storefront contractor shall incorporate swing door operation into entrance Type  
160 'B' at the main entrance. Operators:

- 161 1. For "in" doors will be push plate located on right-hand brick wall as you  
162 approach the entrance.
- 163 2. For "out" doors locate push plate on freestanding column on right hand  
164 side as you exit.
- 165 3. Push plates shall be installed on boxes built into brick construction, and  
166 fiberglass column construction.
- 167 4. Operators shall be similar to KM Automated Swing Entrance Systems,  
168 series 2000, model 2400, overhead concealed. Entrance frame contractor  
169 shall incorporate transom into door heads.
- 170 5. KM Automated Swing Entrance Systems manufactured by KM System,  
171 Inc., 4910 Starcrest Drive, Monroe, NC 28111-3099, distributed by Kenny

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172 Glass, Inc. Columbus, Indiana, Phone: (812) 372-8834, Fax: (812) 372-  
173 8833.

174

175 **RELATED MATERIALS (Specified In Other Sections):**

176 A. Glass: refer to Division 8 Glass and Glazing Section for glass materials.

177

178 **FABRICATION:**

179 A. Shop Assembly: fabricate and assemble units with joints only at intersection of  
180 aluminum members with hairline joints; rigidly secure, and sealed in accordance  
181 with manufacturer's recommendations.

182 B. Fabrication tolerance:

183 1. Material Cuts: Square to 1/32 inch (0.8 mm) off square, over largest  
184 dimension; proportionate amount of 1/32 inch (0.8 mm) on the two  
185 dimensions.

186 2. Maximum Offset: 1/64 inch (0.4 mm) in alignment between two consecutive  
187 members in line, end to end.

188 3. Maximum Offset: 1/64 inch (0.4 mm) between framing members at glazing  
189 pocket corners.

190 4. Joints (Between adjacent members in same assembly): Hairline and square  
191 to adjacent member.

192 5. Variation (In squaring diagonals for doors and fabricated assemblies): 1/16  
193 inch (1.6 mm).

194 6. Flatness (For doors and fabricated assemblies):  $\pm$  1/16 inch (1.8 mm) off  
195 neutral plane.

196 **FINISHES AND COLORS:**

197 A. Anodized Finish: YKK AP America Inc. Anodized Finish:

198 1. Architect will choose at shop drawing approval from standard matte or gloss  
199 finishes on "Anodized Plus" card.

200 B. Finishing: Prepare aluminum surfaces for specified finish; apply finish in  
201 accordance with the following:

202 1. Anodized coating: Electrolytic color coating followed by an organic top  
203 coating applied to aluminum extrusions produced from quality controlled  
204 billets meeting AA-6063-T5.

205 a. Exposed Surfaces shall be free of scratches and other serious  
206 blemishes.

207 b. Extrusion shall be given a caustic etch followed by an anodic oxide  
208 treatment and sealed with an organic electrodeposition applied  
209 protective top coating.

210 c. Overall coating thickness for finishes shall be a minimum of 0.7 mils.

211 d. Coating shall conform to Aluminum Association (AA) Standard  
212 AAM12C22A4X. A4X designation shall signify an anodic coating of  
213 0.4 mils minimum followed by an organic top coating of a minimum  
214 0.3 mils.

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- 215 e. In addition to Aluminum Standard above, finish shall conform to the  
216 following:  
217 1. AAMA 605.2 Mortar Resistance Test Specifications: Test Method  
218 per ASTM C207, 24-Hour Pat Test.  
219 2. CASS Corrosion Resistance Test: CASS 240/ASTM B368 Test  
220 Method.  
221 3. Other AAMA 605.2 Performance Tests specified in these  
222 specifications such as: 7.3 Dry Film Hardness; 7.8.2 Salt Spray  
223 Resistance; 7.9.1.2 Color Retention, South Florida; 7.9.1.4 Gloss  
224 Retention, South Florida.  
225

226 **PART 3 – EXECUTION:**

227 **MANUFACTURER’S INSTRUCTION / RECCOMENDATIONS:**

- 228 A. Compliance: Comply with manufacturer’s product data, including product technical  
229 bulletins, product catalog installation instructions, and product carton instructions.  
230

231 **EXAMINATION:**

- 232 A. Site Verification of Conditions: Verify substrate conditions (which have been  
233 previously installed under other sections) are acceptable for product installation in  
234 accordance with manufacturer’s instructions.  
235

236 **PREPARATION:**

- 237 A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from  
238 damage during product installation.  
239

240 **INSTALLATION:**

- 241 A. General: Install manufacturer’s system in accordance with shop drawings, and  
242 within specified tolerances.  
243 1. Protect aluminum members in contact with masonry, steel, concrete, or  
244 dissimilar materials using nylon pads or bituminous coating.  
245 2. Shim and brace aluminum system before anchoring to structure.  
246 3. Provide sill flashing at exterior storefront systems. Extend extruded flashing  
247 continuous with splice joints; set in continuous beads of sealant.  
248 4. Verify storefront system allows water entering system to be collected in  
249 gutters and weeped to exterior.  
250 5. Verify weep holes are open, and metal joints are sealed in accordance with  
251 manufacturer’s installation instructions.  
252 6. Seal metal to metal storefront system joints using sealant recommended by  
253 system manufacturer.  
254

255 **FIELD QUALITY CONTROL:**

- 256 A. Manufacturer’s Filed Services: Upon Owner’s request, provide manufacturer’s filed  
257 service consisting of product use recommendations and periodic site visit for  
258 inspection of product installation in accordance with manufacturer’s instructions.

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259

260

**ADJUSTING AND CLEANING:**

261

A. Adjusting: Adjust operating items as recommended by manufacturer.

262

B. Cleaning: The General Contractor shall clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance, and remove construction debris from project site. Legally dispose of debris.

263

264

265

C. Protection: The General Contractor shall protect installed product's finish surfaces from damage during construction.

266

267

268

**END OF SECTION 08410**

# SECTION 08710 DOOR HARDWARE

## Moose Lodge 398 Family Center Addition/Remodel

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### **PART 1 GENERAL**

#### **GENERAL SPECIFICATION PROVISIONS**

- A. The Drawings and the General Provisions of the contract include: The Agreement, General Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of Specifications.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

#### **SECTION INCLUDES**

- A. Hardware for hollow steel doors.
- B. Hardware for fire-rated doors.
- C. Thresholds.
- D. Weather-stripping, seals and door gaskets.

#### **REFERENCES**

- A. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; Door and Hardware Institute.
- B. NFPA 80 - Standard for Fire Doors and Windows.
- C. NFPA 101 - Code for Safety to Life from Fire in Buildings and Structures.
- D. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.
- E. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.

#### **SUBMITTALS**

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings:
  - 1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts,.
- C. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- D. Keys: Deliver with identifying tags to City of Columbus Parks and Recreation Department by security shipment direct from hardware supplier.

#### **QUALITY ASSURANCE**

- A. Perform work in accordance with the following requirements:
  - 1. NFPA 101.
  - 2. NFPA 80.
  - 3. NFPA 252.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.
- C. Hardware Supplier Qualifications: Company specializing in supplying commercial door hardware with five years of documented experience.
- D. Hardware Supplier Personnel: Employ an Architectural Hardware Consultant (AHC) to assist in the work of this section.

#### **REGULATORY REQUIREMENTS**

- A. Conform to applicable code for requirements applicable to fire rated doors and frames.
- B. All Hardware on Fire-Rated Doors: Listed and classified by UL as suitable for the purpose

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# SECTION 08710 DOOR HARDWARE

## Moose Lodge 398 Family Center Addition/Remodel

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53 specified and indicated.

54

### 55 DELIVERY, STORAGE, AND PROTECTION

56 A. Package hardware items individually; label and identify each package with door opening code to  
57 match hardware schedule.

58

### 59 COORDINATION

60 A. Coordinate the work with other directly affected sections involving manufacture or fabrication of  
61 internal reinforcement for door hardware.

62 B. Furnish templates for door and frame preparation.

63 C. Coordinate City of Columbus, Park and Recreation Dept. 's keying requirements during the  
64 course of the Work.

65

### 66 WARRANTY

67 A. See Section 01780 - Closeout Submittals, for additional warranty requirements.

68 B. Provide five-year warranty for door closers.

69

### 70 MAINTENANCE PRODUCTS

71 A. Provide special wrenches and tools applicable to each different or special hardware component.

72 B. Provide maintenance tools and accessories supplied by hardware component manufacturer.

73

### 74 PART 2 PRODUCTS

#### 75 ACCEPTABLE MANUFACTURERS

76 A. Hinges:

77 1. **Hager**

78 2. **Stanley.**

79 B. Latch Sets: **-Best.**

80 C. Push/Pulls: **-Trimco.**

81 D. Cylindrical Locks: **-Best.**

82 E. Exit Devices: **-Von Duprin.**

83 F. Closers: **-LCN.**

84 G. Bifolding Door Hardware: **-Stanley.**

85 H. Weatherstripping –

86 1. National Guard Products

87 2. Pemko Manufacturing Company

88 3. Zero International, Inc.

89 I. Threshold –Hager

90 J. Stops:

91 1. Hager

92 2. Ives

93 K. Substitutions: See Section 01600 - Product Requirements.

94 Note all hardware to meet requirements of the ADA.

95

### 96 KEYING

97 A. Door Locks: Grand master keyed.

98

### 99 FINISHES

100 A. Finishes: Identified in schedule at end of section.

101

### 102 PART 3 EXECUTION

#### 103 EXAMINATION

104 A. Verify that doors and frames are ready to receive work and dimensions are as indicated on shop  
105 drawings.

106

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# SECTION 08710 DOOR HARDWARE

## Moose Lodge 398 Family Center Addition/Remodel

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### 107 **INSTALLATION**

- 108 A. Install hardware in accordance with manufacturer's instructions.  
109 B. Use templates provided by hardware item manufacturer.  
110 C. Mounting heights for hardware from finished floor to center line of hardware item: As listed in  
111 Schedule, unless otherwise noted:  
112 1. For steel doors and frames: Comply with DHI "Recommended Locations for Architectural  
113 Hardware for Steel Doors and Frames."  
114

### 115 **ADJUSTING**

- 116 A. Adjust work under provisions of Section 01700.  
117 B. Adjust hardware for smooth operation.  
118

### 119 **PROTECTION OF FINISHED WORK**

- 120 A. Protect finished Work under provisions of Section 01700.  
121 B. Do not permit adjacent work to damage hardware or finish.  
122

### 123 **SCHEDULE - ATTACHED.**

- 124 A. Hardware Set #1: Door 100  
125 1. Butts BB1191 ANSI A5112 - 4 1/2" x 4 1/2"  
126 2. Lockset #93K7 (SEE DOOR SCHEDULE FOR FUNCTION) 16KSTK626  
127 3. Cylinder by best to fit lockset  
128 4. Closer 4041CUSH US-26 include stop system in closer  
129 5. Weatherstrip 5050 Black  
130 6. Threshold 869 W/Bumper Gasket Alum.  
131  
132 B. Hardware Set #2: Doors 101, 104, 127, 136  
133 1. Butts BB1191 ANSI A5112 - 4 1/2" x 4 1/2"  
134 2. Lockset #93K7 (SEE DOOR SCHEDULE FOR FUNCTION) 16KSTK626  
135 3. Cylinder by best to fit lockset  
136  
137 C. Hardware Set #3: Doors 102A, 102B, 103, 117, 126, 129, 131  
138 1. Butts BB1191 ANSI A5112 - 4 1/2" x 4 1/2"  
139 2. Cylinder by best to fit exit hardware  
140 3. Closer 4041CUSH US-26 include stop system in closer  
141 4. Exit hardware – Von Duprin 88F – 373L  
142  
143 D. Hardware Set #4: Doors 105, 109, 118, 119, 121, 125, 130, 132, 134  
144 1. Butts BB1191 ANSI A5112 - 4 1/2" x 4 1/2"  
145 2. Lockset #93K7 (SEE DOOR SCHEDULE FOR FUNCTION) 16KSTK626  
146 3. Cylinder by best to fit lockset  
147 4. Closer 4041CUSH US-26 include stop system in closer  
148  
149 E. Hardware Set #5: Doors 106, 120, 123, 133, 135  
150 1. Pivots  
151 2. Exit hardware  
152 3. Cylinder by best to fit lockset  
153 4. Closer 4041CUSH US-26 include stop system in closer  
154 5. Weatherstrip 5050 Black  
155 6. Threshold 869 W/Bumper Gasket Alum.  
156  
157 F. Hardware Set #6: Door 107  
158 1. Pivots  
159 2. Exit hardware  
160 3. Cylinder by best to fit lockset

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# SECTION 08710 DOOR HARDWARE

## Moose Lodge 398 Family Center Addition/Remodel

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- 161 4. Closer 4041CUSH US-26 include stop system in closer  
162 5. Weatherstrip 5050 Black  
163 6. Threshold 869 W/Bumper Gasket Alum.  
164  
165 G. Hardware Set #7: Doors 111, 113, 114, 115, 116  
166 1. Butts BB1191 ANSI A5112 - 4 1/2" x 4 1/2"  
167 2. Lockset #93K7 (SEE DOOR SCHEDULE FOR FUNCTION) 16KSTK626  
168 3. Cylinder by best to fit lockset  
169 4. Stop  
170  
171

**End of Section 08710**



# SECTION 08800

## GLAZING

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#### **PART 1 GENERAL**

##### **GENERAL SPECIFICATION PROVISIONS**

- A. The Drawings and the General Provisions of the contract include: The Agreement, General Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of Specifications.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

##### **SECTION INCLUDES**

- A. Glass.
- B. Glazing compounds and accessories.

##### **REFERENCES**

- A. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.
- B. ASTM C 1036 - Standard Specification for Flat Glass.
- C. ASTM C 1048 - Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.
- D. ASTM C 1193 - Standard Guide for Use of Joint Sealants.
- E. ASTM E 773 - Standard Test Methods for Seal Durability of Sealed Insulating Glass Units.
- F. ASTM E 774 - Standard Specification for Sealed Insulating Glass Units.
- G. GANA (GM) - FGMA Glazing Manual; Glass Association of North America.
- H. GANA (SM) - FGMA Sealant Manual; Glass Association of North America.

##### **PERFORMANCE REQUIREMENTS**

- A. Provide glass and glazing materials for continuity of building enclosure vapor retarder and air barrier:
  - 1. To maintain a continuous air barrier and vapor retarder throughout the glazed assembly from glass pane to heel bead of glazing sealant.

##### **SUBMITTALS**

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.

##### **QUALITY ASSURANCE**

- A. Perform Work in accordance with "FGMA Glazing Manual" and "FGMA Sealant Manual" for glazing installation methods.
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum ten years documented experience.

##### **WARRANTY**

- A. See Section 01780 - Closeout Submittals, for additional warranty requirements.
- B. Provide a ten-(10) year warranty to include coverage for sealed glass units from seal failure, interpane dusting or misting, and replacement of same.
- C. Provide a ten-(10) year warranty to include coverage for delamination of laminated glass and replacement of same.

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## SECTION 08800

### GLAZING

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#### 53 PART 2 PRODUCTS

#### 54 FLAT GLASS MATERIALS

- 55 A. Manufacturers:
- 56 1. AFG Industries, Inc: [www.afgglass.com](http://www.afgglass.com)
  - 57 2. Guardian Industries Corp.: [www.guardian.com](http://www.guardian.com)
  - 58 3. PPG Industries, Inc.: [www.ppg.com](http://www.ppg.com)
  - 59 4. Visteon Glass Systems: [www.visteon.com/floatglass](http://www.visteon.com/floatglass)
  - 60 5. Substitutions: Refer to Section 01600 – Product Requirements
- 61 B. Clear Float Glass: Clear, annealed.
- 62 1. Comply with ASTM C 1048, Condition A uncoated, Type 1, transparent flat, Class 1,
  - 63 Quality q3 glazing select.
- 64 C. Safety Glass: Clear; fully tempered with horizontal tempering.
- 65 1. Comply with 16 CFR 1201 test requirements for Category II.
  - 66 2. Comply with ASTM C 1048, Condition A uncoated, Type 1 transparent flat, Class 1,
  - 67 Quality q3 glazing select.
  - 68 3. Comply with ANSI Z97.1.
  - 69 4. Comply with CPSF 16 CFR 1201.
- 70 D. Low E Glass: Float type, heat strengthened, clear.
- 71 1. Coating on inner surface.

72

#### 73 SEALED INSULATING GLASS MATERIALS

- 74 A. Manufacturers:
- 75 1. **Guardian Industries Corp.:** [www.guardian.com](http://www.guardian.com)
  - 76 2. **Viracon, apogee Enterprises, Inc.:** [www.viracon.com](http://www.viracon.com)
- 77 B. Insulated Glass Units: Double pane with glass to elastomer edge seal.
- 78 1. Outer pane of 1/4" glass, inner pane of 1/4" glass.
  - 79 2. Place low E coating on NO.2 surface within the unit.
  - 80 3. Comply with ASTM E 774 and E 773.
  - 81 4. Purge interpane space with dry hermetic air.
  - 82 5. Total unit thickness of 1-inch minimum.
- 83 C. Sealing system, spacer system and corner construction manufacturer's standard.

84

#### 85 GLAZING COMPOUNDS

- 86 A. Manufacturers:
- 87 1. Two-Part Polysulfide Glazing Sealant.
    - 88 a) "Chem-Calk 200"; Bostik Construction Products Div.
    - 89 b) "Synthacalk GC-5"; Pecora Corp.
  - 90 2. One-Part Non-Acid Curing Low-Modulus Silicone Glazing Sealant:
    - 91 a) "Chem-Calk 1000"; Bostik Construction Products Div.
    - 92 b) "Dow Corning 790"; Dow Corning Corp.
    - 93 c) "864"; Pecora Corp.
- 94 B. Polysulfide Sealant: Two component, chemical curing, non-sagging type; ASTM C 920, Type M, Grade NS, Class 25, Use NT, M, G, A, 0 and as applicable to uses indicated; cured Shore A hardness of 15 to 25; color as selected.
- 95 C. Silicone Sealant: Single component; chemical curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C 920, Type S, Grade NS, Class 25, Use NT, G, A, 0, and as applicable to use indicated; cured Shore A hardness of 15 to 25; color as selected.

100

#### 101 GLAZING ACCESSORIES

- 102 A. Compatibility: Provide materials with proven record of compatibility with surfaces contacted in installation.
- 103 1. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.
  - 104 2. Setting Blocks: Neoprene, EPDM or silicone blocks as required for compatibility with glazing sealants, 80 to 90 Shore A durometer hardness.

106

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## SECTION 08800

### GLAZING

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- 107 3. Spacers: Neoprene, EPDM or silicone blocks, or continuous extrusions, as required for  
108 compatibility with glazing sealant, of size, shape and hardness recommended by glass  
109 and sealant manufacturers for application indicated.  
110 4. Edge Blocks: Neoprene, EPDM or silicone blocks as required for compatibility with  
111 glazing sealant, of size and hardness required to limit lateral movement (side-walking) of  
112 glass.  
113 5. Compressible Filler Rods: Closed-cell or waterproof-jacketed rod stock of synthetic  
114 rubber or plastic foam, flexible and resilient, with 5-10 psi compression strength for 25  
115 percent deflection.  
116

#### PART 3 EXECUTION

##### EXAMINATION

- 117  
118  
119 A. Verify that openings for glazing are correctly sized and within tolerance.  
120 B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may  
121 impede moisture movement, weeps are clear, and ready to receive glazing.  
122

##### PREPARATION

- 123  
124 A. Clean contact surfaces with solvent and wipe dry.  
125 B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.  
126 C. Prime surfaces scheduled to receive sealant.  
127 D. Install sealants in accordance with ASTM C 1193 and "FGMA Sealant Manual."  
128 E. Install sealant in accordance with manufacturer's instructions.  
129

##### GLAZING, GENERAL

- 130  
131 A. Comply with combined printed recommendations of glass manufacturers, of manufacturers of  
132 sealants, gaskets and other glazing materials, except where more stringent requirements are  
133 indicated, including those of referenced glazing standards.  
134 B. Glazing channel dimensions as indicated in details are intended to provide for necessary bite on  
135 glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable  
136 tolerances. Adjust as required by job conditions at time of installation.  
137 C. Protect glass from edge damage during handling and installation; use a rolling block in rotating  
138 glass units to prevent damage to glass corners. Do not impact glass with metal framing. Use  
139 suction cups to shift glass units within openings; do not raise or drift glass with a pry bar. Rotate  
140 glass with flares or bevels along one horizontal edge, which would occur in vicinity of setting  
141 blocks so that these are located at top of opening. Remove from project and dispose of glass  
142 units with edge damage or other imperfections of kind that, when installed, weakens glass and  
143 impairs performance and appearance.  
144 D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by pro  
145 construction sealant-substrate testing.  
146

##### GLAZING:

- 147  
148 A. Install setting blocks of proper size in sill rabbet, located one quarter of glass width from each  
149 corner, but with edge nearest corner not closer than 6" from corner, unless otherwise required.  
150 Set blocks in thin course of sealant, which is acceptable for heel bead use.  
151 B. Provide spacers inside and out, of correct size and spacing to preserve required face clearances,  
152 for glass sizes larger than 50 united inches (length plus height), except where gaskets or glazing  
153 tapes with continuous spacer rods are used for glazing. Provide 1/8" minimum bite of spacers on  
154 glass and use thickness equal to sealant width, except with sealant tape use thickness slightly  
155 less than final compressed thickness of tape.  
156 C. Provide edge blocking to comply with requirements of referenced glazing standard, except where  
157 otherwise required by glass unit manufacturer.  
158 D. Set units of glass in each series with uniformity of pattern, draw, bow and similar characteristics.  
159 E. Provide compressible filler rods or equivalent back-up material, as recommended by sealant and  
160 glass manufacturers, to prevent sealant from extruding into glass channel weep systems and

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## SECTION 08800

### GLAZING

#### Moose Lodge 398 Family Center Addition/Remodel

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- 161 from adhering to joints back surface as well as to control depth of sealant for optimum  
162 performance, unless otherwise indicated.
- 163 F. Force sealants into glazing channels to eliminate voids and to ensure complete "wetting" or bond  
164 of sealant to glass and channel surfaces.
- 165 G. Tool exposed surfaces of sealants to provide a substantial "wash" away from glass. Install  
166 pressurized tapes and gaskets to protrude slightly out of channel, so as to eliminate dirt and  
167 moisture pockets.
- 168 H. Where wedge-shaped gaskets are driven into one side of channel 10 pressurize sealant or gasket  
169 on opposite side, provide adequate anchorage to ensure that gasket will not "walk" out when  
170 installation is subjected to movement.
- 171 I. Miter cut wedge-shaped gaskets at corners and install gaskets in manner recommended by  
172 gasket manufacturer to prevent pull away at corners; seal corner joints and butt joints with sealant  
173 recommended by gasket manufacturer.

#### CLEANING

- 174
- 175
- 176 A. Remove glazing materials from finish surfaces.
- 177 B. Remove labels after Work is complete.
- 178 C. Clean glass and adjacent surfaces.
- 179

#### PROTECTION OF FINISHED WORK

- 180
- 181 A. After installation, mark pane with an 'X' by using removable plastic tape or paste ..
- 182
- 183

**END OF SECTION 08800**

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**SECTION 09260**  
**GYP SUM BOARD ASSEMBLIES**  
**Moose Lodge 398 Family Center Addition/Remodel**

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**PART 1 GENERAL**

**GENERAL SPECIFICATION PROVISIONS**

- A. The Drawings and the General Provisions of the contract include: The Agreement, General Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of Specifications.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

**SECTION INCLUDES**

- A. Metal stud wall framing.
- B. Metal channel-ceiling framing.
- C. Acoustic insulation.
- D. Gypsum wallboard.
- E. Joint treatment and accessories.

**REFERENCES**

- A. ASTM C 36 - Standard Specification for Gypsum Wallboard.
- B. ASTM C 475 - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
- C. ASTM C 645 - Standard Specification for Non-Load Bearing (Axial) Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
- D. ASTM C 665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
- E. ASTM C 754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum.
- F. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board.
- G. ASTM C 1002 - Standard Specification for Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases.
- H. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.
- I. GA-201 - Using Gypsum Board for Walls and Ceilings.
- J. GA-216 - Recommended Specifications for the Application and Finishing of Gypsum Board; Gypsum Association.

**SYSTEM DESCRIPTION**

- A. Acoustic Attenuation for Interior Partitions Indicated as Acoustic: 50 STC in accordance with ASTM E 90.

**QUALITY ASSURANCE**

- A. Applicator Qualifications: Company specializing in performing the work of this section with minimum ten years of experience.

**REGULATORY REQUIREMENTS**

- A. Conform to applicable code for fire rated assemblies as indicated on drawings.

**PART 2 PRODUCTS**

**MANUFACTURERS - GYPSUM BOARD SYSTEM**

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**SECTION 09260**  
**GYP SUM BOARD ASSEMBLIES**  
**Moose Lodge 398 Family Center Addition/Remodel**

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- 53 A. Gold Bond Building Products Div.,  
54 B. National Gypsum Co.  
55 C. United States Gypsum Co.  
56

**METAL FRAMING MATERIALS**

- 57  
58 A. Non-loadbearing Framing System Components: ASTM C 645; galvanized sheet steel, size and  
59 gage to comply with ASTM C 754 at spacing indicated; maximum deflection 1/240 at 5 psi.  
60 1. Studs: C shaped with knurled faces.  
61 2. Runners: U shaped, sized to match studs.  
62 3. Ceiling Channels: C shaped.  
63 B. Ceiling Hangers: ASTM C 754.  
64 C. Studs and Track: ASTM C 955; studs formed to channel shape with punched web; U-shaped  
65 track in matching nominal width and compatible height.  
66 1. Gage and depth: 6" studs at 22 gage.  
67 D. Galvanized Joists and Purlins: ASTM A 653/A 653M.  
68 1. Gage and depth: 8" deep studs 14 gage.  
69

**GYP SUM BOARD MATERIALS**

- 70  
71 A. Standard Gypsum Wallboard: ASTM C 36; sizes to minimize Joints in place; ends square cut.  
72 1. Thickness: 5/8 inch.  
73

**ACCESSORIES**

- 74  
75 A. Acoustic Insulation: ASTM C 665; preformed glass fiber, friction fit type, unlaced. Thickness: 3.5  
76 inch.  
77 B. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.  
78 C. Corner Beads: Galvanized steel.  
79 D. Trim: ASTM C 840; Bead type as detailed.  
80 E. Joint Materials: ASTM C 475 and as recommended by gypsum board manufacturer for project  
81 conditions.  
82 F. Screws: ASTM C 1002; self-drilling type; cadmium-plated for exterior locations.  
83

**PART 3 EXECUTION**

**EXAMINATION**

- 84  
85  
86 A. Verify that project conditions are appropriate for work of this section to commence.  
87

**FRAMING INSTALLATION**

- 88  
89 A. Metal Framing: Comply with ASTM C 754 and manufacturer's instructions.  
90 B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.  
91 1. Laterally brace entire suspension system.  
92 C. Studs: Space studs at 16 inches on center.  
93 D. Extend stud framing to structure above and provide a tight seal at deck.  
94

**ACOUSTIC ACCESSORIES INSTALLATION**

- 95  
96 A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around  
97 electrical and mechanical items within partitions, and tight to items passing through partitions.  
98 B. Acoustic Sealant: Install in accordance with manufacturer's instructions.  
99 1. Place one bead continuously on substrate before installation of perimeter framing  
100 members.  
101 2. Place continuous bead at perimeter of each layer of gypsum board.  
102 3. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes.  
103

**GYP SUM BOARD INSTALLATION**

- 104  
105 A. Comply with ASTM C 840. Install to minimize butt end joints, especially in highly visible locations.

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**SECTION 09260**  
**GYPSUM BOARD ASSEMBLIES**  
**Moose Lodge 398 Family Center Addition/Remodel**

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106 B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges  
107 occurring over firm bearing.

108 C. Single-Layer Fire-Rated: Install gypsum board vertically, with edges and ends occurring over firm  
109 bearing.

110 **INSTALLATION OF TRIM AND ACCESSORIES**

111 A. Corner Beads: Install at external corners, using longest practical lengths.

112 B. Edge Trim: Install at locations where gypsum board abuts dissimilar materials and as  
113

114 **JOINT TREATMENT**

115 A. Tape, fill, and sand-exposed joints, edges, and corners to produce smooth surface ready to  
116 receive finishes.

117 **TOLERANCES**

118 A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in  
119 any direction.  
120  
121

**END.OF SECTION 09260**

123

**SECTION 09511**  
**SUSPENDED ACOUSTICAL CEILINGS**  
**Moose Lodge 398 Family Center Addition/Remodel**

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**PART 1 GENERAL**

**GENERAL SPECIFICATION PROVISIONS**

- A. The Drawings and the General Provisions of the contract include: The Agreement, General Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of Specifications.
- B. The drawings and specifications that make up the Work of this project are interrelated and dependent on every other drawing and specification section. The contractors and suppliers for this section of specifications shall review all other sections of specifications, drawings and addendum to coordinate their work as it relates to this project. If an item related to this section is illustrated, specified or indicated in or on any other specification section, drawing or addendum it shall be as if it were part of this section of specifications and shall be provided for in the contract.

**SECTION INCLUDES**

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

**REFERENCES**

- A. ASTM C 635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and lay-in Panel Ceilings.
- B. ASTM C 636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and lay-in Panels.
- C. ASTM E 1264 - Standard Classification for Acoustical Ceiling Products.
- D. UL (FRD) - Fire Resistance Directory; Underwriters laboratories Inc.

**SUBMITTALS**

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate grid layout and related dimensioning.
- C. Product Data: Provide data on suspension system components and acoustical units.
- D. Samples: Submit two samples 12x12 inch in size illustrating material and finish of acoustical units.
- E. Samples: Submit two samples each, 12 inches long, of suspension system main runner.

**QUALITY ASSURANCE**

- A. Fire-Resistive Assemblies: Complete assembly listed and classified by UL for the fire resistance indicated.
- B. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.
- C. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

**ENVIRONMENTAL REQUIREMENTS**

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

**PROJECT CONDITIONS**

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust-generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Install acoustical units after interior wet work is dry.



**SECTION 09511**  
**SUSPENDED ACOUSTICAL CEILINGS**  
**Moose Lodge 398 Family Center Addition/Remodel**

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53 **EXTRA MATERIALS**

- 54 A. See Section 01600 - Product Requirements, for additional provisions.  
55 B. Provide ten percent of total acoustical unit area of each type of acoustical unit for City of  
56 Columbus, Park and Recreation Dept. 's use in maintenance of project.  
57

58 **PART 2 PRODUCTS**

59 **ACOUSTICAL UNITS**

- 60 A. Manufacturers:  
61 1. Armstrong Ceilings.  
62 2. USG Interiors, Inc.  
63 B. Acoustical Units - General: ASTM E 1264, Class A.  
64 1. Units for Installation in Fire-Rated Suspension System: r Listed and classified for the fire-  
65 resistive assembly the suspension system is a part of.  
66 C. Acoustical Panels: ASTM E 1264 Type III, Painted mineral fiber, conforming to the following:  
67 1. Size: 24 x 24 inches and 24 x 48 inches. See Drawings for locations.  
68 2. Thickness: 3/4 inches.  
69 3. Composition: Wet felted.  
70 4. Edge: Reveal edge.  
71 5. Surface Color: White.  
72 6. Product: Sanserra by Armstrong.  
73 7. Product: Sanserra layin Fire Guard by Armstrong.  
74 8. Suspension System: Exposed grid.  
75

76 **SUSPENSION SYSTEM(S)**

- 77 A. Manufacturers:  
78 1. Same as for acoustical units.  
79 B. Suspension Systems - General: ASTM C 635; die cut and interlocking components, with stabilizer  
80 bars, clips, splices, perimeter moldings, and hold down clips as required.  
81 C. Exposed Steel Suspension System: Formed steel, commercial quality cold rolled, with painted  
82 finish; Heavy-duty.  
83 1. Profile: Tee; 15/16 inch wide face.  
84 2. Construction: Double web.  
85 3. Finish: White.  
86 D. Fire-Rated Exposed Steel Suspension System: Formed steel, commercial quality cold rolled, with  
87 painted finish; heavy duty.  
88 1. Profile: Tee; 15/16 inch wide face.  
89 2. Construction: Double web.  
90 3. Finish: White.  
91 4. Product: Prelude XL Fire Guard by Armstrong.  
92

93 **ACCESSORIES**

- 94 A. Support Channels and Hangers: Galvanized steel; size and type to suit application and ceiling  
95 system flatness requirement specified.  
96 B. Perimeter Moldings: Same material and finish as grid.  
97 1. At Exposed Grid: Provide I-shaped molding for mounting at same elevation as face of  
98 grid.  
99 C. Gypsum Board: Fire rated type; 5/8 inch thick, ends and edges square, paper faced.  
100 D. Gasket For Perimeter Moldings: Closed cell rubber sponge tape.  
101 E. Touch-up Paint: Type and color to match acoustical and grid units.  
102

103 **PART 3 EXECUTION**

104 **EXAMINATION**

- 105 A. Verify existing conditions before starting work.

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**SECTION 09511**  
**SUSPENDED ACOUSTICAL CEILINGS**  
**Moose Lodge 398 Family Center Addition/Remodel**

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106 B. Verify that layout of hangers will not interfere with other work.

107

108 **INSTALLATION - SUSPENSION SYSTEM**

- 109 A. Install suspension system in accordance with ASTM C 636 and manufacturer's instructions and  
110 as supplemented in this section.
- 111 B. Rigidly secure system, including integral mechanical and electrical components, for maximum  
112 deflection of 1 :360.
- 113 C. layout system to a balanced grid design with edge units no less than 50 percent of acoustical unit  
114 size.
- 115 D. Install after major above-ceiling work is complete. Coordinate the location of hangers with other  
116 work.
- 117 E. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where  
118 carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- 119 F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest  
120 affected hangers and related carrying channels to span the extra distance.
- 121 G. Do not support components on main runners or cross runners if weight causes total dead load to  
122 exceed deflection capability.
- 123 H. Support fixture loads using supplementary hangers located within 6 inches of each corner, or  
124 support components independently.
- 125 I. Do not eccentrically load system or induce rotation of runners.
- 126 J. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with  
127 other interruptions.
- 128 1. Use longest practical lengths.
- 129 2. Miter corners.
- 130 K. Install light fixture boxes constructed of gypsum board above light fixtures in accordance with fire  
131 rated assembly requirements and light fixture ventilation requirements.

132

133 **INSTALLATION – ACOUSTICAL UNITS**

- 134 A. Install acoustical units in accordance with manufacturer's instructions.
- 135 B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance  
136 and function.
- 137 C. Lay directional patterned units with pattern parallel to longest room axis.
- 138 D. Fit border trim neatly against abutting surfaces.
- 139 E. Install units after above-ceiling work is complete.
- 140 F. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- 141 G. Cutting Acoustical Units:
- 142 1. Make field cut edges of same profile as factory edges.
- 143 2. Double cut and field paint exposed *reveal* edges.
- 144 H. Where round obstructions occur, provide preformed closures to match perimeter molding.
- 145 I. Install hold-down clips on each panel to retain panels tight to grid system; comply with fire rating  
146 requirements.
- 147 J. Install hold-down clips on panels within 20 ft of an exterior door.

148

149 **ERECTION TOLERANCES**

- 150 A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- 151 B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

152

153

**END OF SECTION 09511**

**Section 09900**  
**Paints and Coatings**  
**Moose Lodge 398 Family Center Addition/Remodel**  
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1  
2 **PART 1 GENERAL**

3 **GENERAL SPECIFICATION PROVISIONS**

- 4       A. The Drawings and the General Provisions of the contract include: The Agreement, General  
5       Conditions, Supplemental Conditions, and Addendum apply to the Work of this Section of  
6       Specifications.
- 7       B. The drawings and specifications that make up the Work of this project are interrelated and  
8       dependent on every other drawing and specification section. The contractors and suppliers for  
9       this section of specifications shall review all other sections of specifications, drawings and  
10       addendum to coordinate their work as it relates to this project. If an item related to this section is  
11       illustrated, specified or indicated in or on any other specification section, drawing or addendum it  
12       shall be as if it were part of this section of specifications and shall be provided for in the contract.

13  
14 **SECTION INCLUDES**

- 15       A. Surface preparation.  
16       B. Field application of paints and stains.

17  
18 **SUBMITTALS**

- 19       A. See Section 01300 - Administrative Requirements, for submittal procedures.  
20       B. Product Data: Provide data on all finishing products and special coatings.  
21       C. Samples: Submit two paper chip samples, 4x 4 inch in size illustrating range of colors available  
22       for each surface finishing product scheduled.  
23       D. Maintenance Data: Submit data on cleaning. Touch-up, and repair of painted and coated  
24       surfaces.

25  
26 **QUALITY ASSURANCE**

- 27       A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this  
28       section with minimum ten years documented experience.  
29       B. Applicator Qualifications: Company specializing in performing the work of this section with  
30       minimum ten years documented experience.

31  
32 **REGULATORY REQUIREMENTS**

- 33       A. Conform to applicable code for flame and smoke rating requirements for products and finishes.

34  
35 **DELIVERY, STORAGE, AND PROTECTION**

- 36       A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.  
37       B. Container label: Include manufacturer's name, type of paint, brand name, lot number, brand  
38       code, coverage, surface preparation, drying time, cleanup requirements, color designation, and  
39       instructions for mixing and reducing.  
40       C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90  
41       degrees F, in ventilated area, and as required by manufacturer's instructions.

42  
43 **ENVIRONMENTAL REQUIREMENTS**

- 44       A. Do not apply materials when surface and ambient temperatures are outside the temperature  
45       ranges required by the paint product manufacturer.  
46       B. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the  
47       humidity ranges required by the paint product manufacturer.  
48       C. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for  
49       exterior; unless required otherwise by manufacturer's instructions.  
50       D. Provide lighting level of 80-ft candles measured mid-height at substrate surface.

51  
52 **EXTRA MATERIALS**

# Section 09900 Paints and Coatings

## Moose Lodge 398 Family Center Addition/Remodel

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- 53 A. See Section 01600 - Product Requirements, for additional provisions.  
54 B. Supply 1 gallon of each color; store where directed.  
55 C. Label each container with color in addition to the manufacturer's label.  
56

### PART 2 PRODUCTS

#### MANUFACTURERS

- 59 A. Manufacturers - Paints:  
60 1. Devoe and Reynolds Co. (Devoe).  
61 2. Glidden Coatings and Resins, Division of SCM Corporation.  
62 3. Benjamin Moore and Co. (Moore) ..  
63 4. MAB.  
64 5. Sherwin-Williams.  
65 B. Manufacturers - Masonry Stain:  
66 1. Chemprobe Corporation.  
67 C. Substitutions: See Section 01600 - Product Requirements.  
68

#### PAINTS AND COATINGS - GENERAL

- 70 A. Paints and Coatings: Ready mixed, except field-catalyzed coatings. Prepare pigments:  
71 1. To a soft paste consistency, capable of being readily and uniformly dispersed to a  
72 homogeneous coating.  
73 2. F or good flow and brushing properties.  
74 3. Capable of drying or curing free of streaks or sags.  
75

#### PAINT SYSTEMS - EXTERIOR

- 76 A. Wood, Opaque, Alkyd, 3 Coat:  
77 1. Surface Preparation: sow 23  
78 2. One coat of alkyd primer sealer. (A-100 Alkyd Exterior Wood Primer.)  
79 3. Semi-gloss: Two coats of alkyd; A-100 Gloss Latex House & Trim.  
80 B. Ferrous Metals, Unprimed, Alkyd, 3 Coat:  
81 1. Surface Preparation: sow 10  
82 2. One coat of alkyd primer.  
83 3. Semi-gloss: Two coats of alkyd enamel; Metalastic II Enamel.  
84 C. Paint ME-OP-2A - Ferrous Metals, Primed, Alkyd, 2 Coat:  
85 1. Surface Preparation: sow 12  
86 2. Touch-up with zinc chromate primer.  
87 3. Semi-gloss: Two coats of alkyd enamel; Metalastic II Enamel.  
88 D. Paint MgE-OP-3A - Galvanized Metals, Alkyd, 3 Coat:  
89 1. Surface Preparation: sow 10  
90 2. One coat galvanize primer.  
91 3. Semi-gloss: Two coats of alkyd enamel; Metalastic II Enamel.  
92 E. Paint MaE-OP-3A - Aluminum and Copper, Unprimed, Alkyd, 3 Coat:  
93 1. Surface Preparation: sow 12  
94 2. One coat etching primer.  
95 3. Semi-gloss: Two coats of alkyd enamel; A-100 Gloss Latex House & Trim.  
96 F. Masonry/Concrete, Opaque, Latex, 3 Coat: stain  
97 1. One coat of Conformal Stain. One coat of Conformal Stain is called for; however, the rate  
98 of coverage shall be adjusted to ensure that no natural block color shows through.  
99 Coverage rate at maximum 100 square feet per gallon.  
100 2. Penetrating water repellent coating: One coat of Prime-A-Pell 200; Coverage rate at  
101 maximum 100 square feet per gallon.  
102

#### PAINT SYSTEMS - INTERIOR

- 103  
104 A. Paint CI-OP-3A - Concrete/Masonry, Opaque, Alkyd, 3 Coat:  
105 1. Surface Preparation: sow 12  
106

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# Section 09900 Paints and Coatings

## Moose Lodge 398 Family Center Addition/Remodel

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- 107 2. One coat of block filler. (Heavy Duty Block Filler)  
108 3. Gloss: Two coats of alkyd enamel; ProMar 200 Alkyd Gloss Enamel).  
109 B. Paint MI-OP-3A - Ferrous Metals, Unprimed, Alkyd, 3 Coat:  
110 1. Surface Preparation: sow 14  
111 2. One coat of alkyd primer.  
112 3. Eggshell: Two coats of alkyd eggshell enamel; ProMar 200 Alkyd Eg-Shel Enamel.  
113 C. Paint MI-OP-2A - Ferrous Metals, Primed, Alkyd, 2 Coat:  
114 1. Surface Preparation: sow 14  
115 2. Touch-up with alkyd primer.  
116 3. Eggshell: Two coats of alkyd eggshell enamel; ProMar 200 Alkyd Eg-Shel Enamel.  
117 D. Paint Mgl-OP-3A - Galvanized Metals, Alkyd, 3 Coat:  
118 1. Surface Preparation: sow 10  
119 2. One coat galvanize primer.  
120 3. Eggshell: Two coats of alkyd eggshell enamel; ProMar 200 Alkyd Eg-Shel Enamel.  
121 E. Paint Mal-OP-3A - Aluminum, Unprimed, Alkyd, 3 Coat:  
122 1. Surface Preparation: sow 1  
123 2. One coat etching primer.  
124 F. Eggshell: Two coats of alkyd eggshell enamel; ProMar 200 Alkyd Eg-Shel Enamel.  
125 G. Paint CI-OP-3Af - Concrete/Masonry, Alkyd Floor Enamel, 3 Coat:  
126 1. Surface Preparation: sow 5  
127 2. One coat epoxy primer. (Tile-Clad II Epoxy.)  
128 3. Gloss: Two coats of epoxy floor material; Tile-Clad II Epoxy.  
129 H. Paint GI-OP-3A - Gypsum Board/Plaster, Alkyd, 3 Coat:  
130 1. Surface Preparation: sow 8  
131 2. One coat of Latex primer sealer. (ProMar 200 Latex Wall Primer.)  
132 3. Semi-gloss: Two coats of alkyd enamel; ProMar 200 Alkyd Semi-Gloss Enamel.  
133

### ACCESSORY MATERIALS

- 135 A. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not  
136 specifically indicated but required to achieve the finishes specified; commercial quality.  
137 B. Patching Material: Latex filler.  
138 C. Fastener Head Cover Material: Latex filler.  
139

### PART 3 EXECUTION

#### EXAMINATION

- 142 A. Verify that surfaces are ready to receive Work as instructed by the product manufacturer.  
143 B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition  
144 that may potentially affect proper application.  
145 C. Test shop-applied primer for compatibility with subsequent cover materials.  
146

#### PREPARATION

- 148 A. Surface Appurtenances: Remove electrical plates, hardware, light fixture trim, escutcheons, and  
149 fittings prior to preparing surfaces or finishing.  
150 B. Surfaces: Correct defects and clean surfaces, which affect work of this section.  
151 C. Marks: Seal with shellac those, which may bleed through surface finishes.  
152 D. Impervious Surfaces: Remove mildew by scrubbing with solution of tetra-sodium phosphate and  
153 bleach. Rinse with clean water and allow surface to dry.  
154 E. Concrete and Unit Masonry Surfaces to be Painted: Remove dirt, loose mortar, scale, salt or  
155 alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium  
156 phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals  
157 with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.  
158 F. Gypsum Board Surfaces to be Painted: Fill minor defects with filler compound. Spot prime  
159 defects after repair.  
160 G. Concrete Floors to be Painted: Remove contamination, acid etch, and rinse floors with clear

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- 161 water. Verify required acid-alkali balance is achieved. Allow to dry.  
162 H. Aluminum Surfaces to be Painted: Remove surface contamination by steam or high-pressure  
163 water. Remove oxidation with acid etch and solvent washing. Apply etching primer immediately  
164 following cleaning.  
165 I. Galvanized Surfaces to be Painted: Remove surface contamination and oils and wash with  
166 solvent. Apply coat of etching primer.  
167 J. Uncoated Steel and Iron Surfaces to be Painted: Remove grease, mill scale, weld splatter, dirt,  
168 and rust. Where heavy coatings of scale are evident, remove by hand wire brushing or  
169 sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution,  
170 ensuring weld joints, bolts, and nuts are similarly cleaned. Prime paint entire surface; spot prime  
171 after repairs.  
172 K. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and  
173 rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent Prime  
174 bare steel surfaces.  
175 L. Interior Wood Items to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots,  
176 pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried;  
177 sand between coats. Back prime concealed surfaces before installation.  
178 M. Exterior Wood to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch  
179 streaks, and sappy sections. Fill nail holes with tinted exterior caulking compound after prime coat  
180 has been applied. Back prime concealed surfaces before installation.  
181 N. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.  
182

183 **APPLICATION PAINT**

- 184 A. Apply products in accordance with manufacturer's instructions.  
185 B. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.  
186 C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is  
187 applied.  
188 D. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding  
189 coat unless otherwise approved.  
190 E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to  
191 applying next coat.  
192

193 **APPLICATION MASONRY STAIN**

- 194 A. Apply products in accordance with manufacturer's instructions.  
195 B. Do not apply finishes to surfaces that are not dry.  
196 C. Apply each coat to uniform appearance. The intensity, coloration and hue of the new surfaces  
197 shall consistent -- no streaking or splotching will be acceptable.  
198 D. Begin no exterior surface which cannot be completed before leaving the site for the day. Each  
199 continuous surface shall be uniform in color with no steaking from color difference in material  
200 from container to container.  
201 E. The exterior finish colors may be more than one color.  
202

203 **CLEANING**

- 204 A. Collect waste material which may constitute a fire hazard, place in closed metal containers, and  
205 remove daily from site.  
206

207 **SCHEDULE - SURFACES TO BE FINISHED**

- 208 A. Do Not Paint or Finish the Following Items:  
209 1. Items fully factory-finished unless specifically noted.  
210 2. Fire rating labels, equipment serial number and capacity labels.  
211 3. Stainless steel items.  
212 B. Paint the surfaces described below under Schedule - Paint Systems.  
213 C. Mechanical and Electrical: Use paint systems defined for the substrates to be finished.  
214 1. Paint all insulated and exposed pipes occurring in finished areas to match background

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- 215 surfaces, unless otherwise indicated.  
216 2. Paint shop-primed items occurring in finished areas.  
217 3. Paint interior surfaces of air ducts and convector and baseboard heating cabinets that are  
218 visible through grilles and louvers with one coat of flat black paint to visible surfaces.  
219 4. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to  
220 match face panels.  
221 D. Paint both sides and edges of plywood backboards for electrical and telephone equipment before  
222 installing equipment.  
223  
224

**END OF SECTION 09900**