PROJECT MANUAL
including Specifications

NEW FOLDING PARTITION
FOR

OREM SHARON STAKE

545 South 800 East
Orem, UT 84059

Property No. 504895817020101

June 2017

Prepared By:

RVA ARCHITECTS, INC.

32 West Center St. Suite #203
Provo, Utah 84601
(801) 374-2100

PROJECT DIRECTORY

Owner:	Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints A Utah Corporation Sole 50 East North Temple Street Salt Lake City, UT 84150
Facilities Manager:	Orem South FM Group 1035 South 800 East Orem, UT 84059 801-222-3160
Architect:	RVA Architects, Inc. 32 West Center St. #203 Provo, UT 84601 801-374-2100
Structural Engineer:	CKR Engineers 1295 N. State St. Orem, UT 84057 801-222-0922

End of Project Directory

TABLE of CONTENTS

PROCUREMENT AND CONTRACTING REQUIREMENTS GROUP

INTRODUCTORY INFORMATION

DIVISI0N 00: PROCUREMENT AND CONTRACTING REQUIREMENTS

PROCUREMENT REQUIREMENTS SUBGROUP

00 1000 SOLICITATION

00 2000 INSTRUCTIONS FOR PROCUREMENT

00 3000 AVAILABLE INFORMATION

00 4000 PROCUREMENT FORMS AND SUPPLEMENTS

CONTRACTING REQUIREMENTS SUBGROUP

00 5000 CONTRACTING FORMS AND SUPPLEMENTST

00 7000 CONDITIONS OF THE CONTRACT

SPECIFICATIONS GROUP

GENERAL REQUIREMENTS SUBGROUP

DIVISI0N 01: GENERAL REQUIREMENTS

01 1000 SUMMARY

01 3000 ADMINISTRATIVE REQUIREMENTS

FACILITY CONSTRUCTION SUBGROUP

INVITATION TO BID (U.S.)

1. GENERAL CONTRACTORS INVITED TO BID THE PROJECT:

Dynamic Construction
Majestic Builders
Painter Building Inc.
Philipoom Construction
SRFCO

2. PROJECT:

Orem Sharon Stake Folding Partition

3. LOCATION:

545 South 800 East
Orem, UT

4. OWNER:

Corporation of the Presiding Bishop of
The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole
Orem South FM Group
1035 South 800 East
Orem, UT 84059
801-222-3160

5. CONSULTANT:

RVA Architects, Inc.
32 W. Center St. #203
Provo, UT 84601
801-374-2100

6. DESCRIPTION OF PROJECT:

A. New Folding Partition at Stage Opening

B. Products or systems may be provided under a Value Managed Relationship (VMR) the Owner has negotiated with the supplier. VMR products and systems are indicated as such in the Specifications.

7. PRE-BID CONFERENCE: A pre-bid conference will be held on **Wednesday, June 14, 2017 @ 2:00 pm** at the job site located at 545 South 800 East Orem, UT.

8. TYPE OF BID: Bids will be on a lump-sum basis. Segregated bids will not be accepted.

9. TIME OF SUBSTANTIAL COMPLETION: The time limit for substantial completion of this work will be 45 calendar days and will be as noted in the Agreement.

10. BID OPENING: Sealed bids will be received until **3:00 pm on Wednesday, June 28.** at the Orem South FM Group located at 1035 South 800 East Orem, UT. Bids will be publicly opened at that time.

11. BIDDING DOCUMENTS:

A. Bidding Documents may be examined at the following plan room locations:

1. Mountainlands Area Plan Room
   3560 South 583 West, Suite 4
   Salt Lake City, UT 84115
   801-288-1188
   www.mapronline.com

2. McGraw Hill/Dodge Area Plan Room
   http://dodgeprojects.construction.com

12. BIDDER'S QUALIFICATIONS: Bidding by the General Contractors will be by invitation only.

13. OWNER'S RIGHT TO REJECT BIDS: The Owner reserves the right to reject any or all bids and to waive any irregularity therein.

END OF DOCUMENT

INSTRUCTIONS TO BIDDERS (U.S.)

1. DOCUMENTS:

A. Bidding Documents include Bidding Requirements and proposed Contract Documents. Proposed Contract Documents consist of:
   1) Contractor's Bid Proposal and R & I Project Agreement (U.S.)
   2) Other documents included by reference
   3) Addenda.

B. Bidding Requirements are those documents identified as such in proposed Project Manual.

C. Addenda are written or graphic documents issued prior to execution of the Contract which modify or interpret the Bidding Documents. They become part of the Contract Documents as noted in the Contractor's Bid Proposal and R & I Project Agreement (U.S.) upon execution of the Agreement by Owner.

2. BIDDER'S REPRESENTATIONS:

A. By submitting a bid proposal, bidder represents that
   1) Bidder has carefully studied and compared Bidding Documents with each other. Bidder understands the Bidding Documents and the bid is fully in accordance with the requirements of those documents,
   2) Bidder has thoroughly examined the site and any building located thereon, has become familiar with local conditions which might directly or indirectly affect contract work, and has correlated its personal observations with requirements of proposed Contract Documents, and
   3) Bid is based on materials, equipment, and systems required by Bidding Documents without exception.

3. BIDDING DOCUMENTS:

A. Copies
   1) Owner will provide the Bidding Documents as set forth in the Invitation to Bid.
   2) Partial sets of Bidding Documents will not be issued.

B. Interpretation or Correction of Bidding Documents
   1) Bidders will request interpretation or correction of any apparent errors, discrepancies, and omissions in the Bidding Documents.
   2) Corrections or changes to Bidding Documents will be made by written Addenda.

C. Substitutions and Equal Products
   1) Equal products may be approved upon compliance with Contract Document requirements.
   2) Base bid only on materials, equipment, systems, suppliers or performance qualities specified in the Bidding documents.
   3) Where a specified product is identified as a "quality standard", products of other manufacturers that meet the performance, properties, and characteristics of the specified "quality standard" may be used without specific approval as a substitute.

D. Addenda. Addenda will be sent to bidders and to locations where Bidding Documents are on file no later than one week prior to bid opening or by fax no later than 48 hours prior to bid opening.

4. BIDDING PROCEDURES:

A. Form and Style of Bids
1) Use Owner's Bid Form titled "Contractor's Bid Proposal and R & I Project Agreement (U.S.)".
2) Bid will be complete and executed by authorized representative of Bidder.
3) Do not delete from or add to the information requested on bid form.

B. Submission of Bids
1) Submit bid in sealed opaque envelope containing only bid form.
2) It is bidder's sole responsibility to see that its bid is received at or before the specified time. Bids received after specified bid opening time may be returned to bidders unopened.
3) No oral, facsimile transmitted, telegraphic, or telephonic bids, modifications, or cancellations will be considered.

C. Modification or Withdrawal of Bid
1) Bidder guarantees there will be no revisions or withdrawal of bid amount for 45 days after bid opening.
2) Prior to bid opening, bidders may withdraw bid by written request or by reclaiming bid envelope.
3) Prior to bid opening, bidder may mark and sign on the sealed envelope that bidder acknowledges any or all Addenda.

5. CONSIDERATION OF BIDS:

A. Opening Of Bids - See Invitation To Bid.

B. Acceptance Of Bid
1) No bidder will consider itself under contract after opening and reading of bids until Owner accepts Contractor's Bid Proposal by executing same.
2) Bidder's past performance, organization, subcontractor selection, equipment, and ability to perform and complete its contract in manner and within time specified, together with amount of bid, will be elements considered in award of contract.

6. FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR:

A. Agreement form will be "Contractor's Bid Proposal and R & I Project Agreement (U.S.)" provided by Owner.

7. MISCELLANEOUS:

A. Pre-Bid Conference. A pre-bid conference may be held 2:00 pm, Wednesday, June 14, 2017 at the job site located at 545 South 800 East Orem, UT.

B. Examination Scheduling for Existing Building and Site
1) Nick Cluff 801-222-3160

END OF DOCUMENT

INFORMATION AVAILABLE TO BIDDERS (U.S.)

1. ASBESTOS-CONTAINING MATERIAL (ACM)

A. The building upon which work is being performed has been examined for asbestos-containing material. The following have been identified as containing asbestos in the areas of the building being worked on as part of this Project:
1) Drywall ceiling texture.

B. Owner will retain a qualified abatement company for abatement of existing asbestos containing materials prior to Contractor commencing demolition work. Due to project phasing, Contractor shall coordinate with abatement company for scheduling of the work.

END OF DOCUMENT

CONSTRUCTION MATERIAL ASBESTOS STATEMENT (U.S.)

Building Name: Orem Sharon Stake

Building Plan ype: Folding Partition

Building Address: 545 South 800 East

Orem, UT 84057

Building Owner: Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole.

Project Number: 504895817020101

Completion Date:

As PROJECT CONSULTANT and principal in charge; based on my best knowledge, information, inspection, and belief; I certify that on the above referenced Project, no asbestos-containing building materials were specified in the construction documents or given approval in shop drawings or submittals.

Project Consultant and Principal in Charge (signature) | Date

RVA Architects, Inc.
Company Name

As GENERAL CONTRACTOR in charge of construction; based on my best knowledge, information, inspection, and belief; I affirm that on the above-referenced Project, no asbestos-containing building materials were used in the construction.

General Contractor (signature) | Date

Company Name

CONTRACTOR BID PROPOSAL AND R & I PROJECT AGREEMENT (U.S.)

Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole, ("Owner") and the undersigned Contractor ("Contractor") enter into this *Contractor Bid Proposal and R & I Project Agreement (U.S.)* ("Agreement") and agree as follows:

1. **Property/Project.**

Property/Project Number:	504895817020101
Property Address ("Project Site"):	545 South 800 East Orem, UT
Project Type:	Folding Partition
Project Name ("Project"):	Orem Sharon Stake Bldg.
Stake Name:	Orem UT Sharon

2. **Scope of the Work.** Contractor will furnish all labor, materials, and equipment necessary to complete the Work in accordance with the Contract Documents. The Work is all labor, materials, equipment, construction, and services required by the Contract Documents.

3. **Contract Documents.** Contract Documents consist of:
   a. This Agreement;
   b. Supplementary Conditions R & I Project Agreement (U.S.) _____;
   c. The Specifications (Division 01 and Divisions 02,04,05,06,09,10);
   d. Drawings entitled New Folding Partition for Sharon Stake and dated June 2017;
   e. Addendum No. _____ and dated _____; and
   f. All written Field Changes, written Construction Change Directives and written Change Orders when prepared and signed by Owner and Contractor.

4. **Compensation.** Owner will pay Contractor for performance of Contractor's obligations under the Contract Documents the sum of _____ Dollars ($_____). This is the Contractor's Bid Proposal Amount.

5. **Payment.**
   a. If the Contractor's Bid Proposal Amount is over $100,000, Contractor will submit to Owner a schedule of values which allocates the Contractor's Bid Proposal Amount to various portions of the Work. This schedule, when accepted by Owner will be used as a basis for reviewing Contractor's payment requests.
   b. Not more than once each month, Contractor will submit a payment request to Owner. Owner will pay Contractor for work completed within thirty (30) days after Owner receives:
      1) Contractor's payment request for work to date;
      2) a certification by Contractor that Contractor has paid for all labor, materials, and equipment relating to the Work covered by prior payment requests and that Contractor will pay for all labor, materials, and equipment relating to the Work covered by the current payment request; and
      3) releases of all mechanics' liens and claims of subcontractors, laborers, or material suppliers who supplied labor and/or materials for the Work covered by the payment request.
      4) updated Construction Schedule.
   c. Owner may modify or reject the payment request if, in Owner's opinion, the Work for which payment is requested is not acceptable or is less complete than represented on the payment request.

6. **Extras and Change Orders.** Owner may order changes in the Work by altering, adding to, or deducting from the Work. In the event of such a change, Contractor's compensation and/or the time of completion will be adjusted to reflect the change. Contractor will not commence work on any change until either: (a) Contractor and Owner have agreed in writing to the amount of the adjustment resulting from the change; or (b) Owner has issued a written order for the change acknowledging that there is a dispute regarding the compensation adjustment relating to the change. If Contractor proceeds with a change in the Work without complying with the preceding sentence, Contractor agrees that it will not be entitled to any additional compensation for such change.

7. **Correction of Work.** Contractor will promptly correct, at its own expense,
   a. any portion of the Work which
      1) fails to conform to the requirements of the Contract Documents, or
      2) is rejected by the Owner as defective or because it is damaged or rendered unsuitable during installation or resulting from failure to exercise proper protection.
   b. any defects due to faulty materials, equipment, or workmanship which appear within a period of one year from the date of Substantial Completion or within such longer period of time as may be pre-scribed by law or the terms of any applicable special warranty required by the Contract Documents.

8. **Time of Completion.** Contractor will complete the Work and have it ready for Owner's inspection within Forty-five (45) calendar days from Notice to Proceed issued by Owner. Time is of the essence. If Contractor is delayed at any time in the progress of the Work by any act or neglect of Owner, or by changes in the Work, or by strikes, lockouts, unusual delay in transportation, unavoidable casualties, or acts of nature beyond Contractor's control, then the time for completion will be extended by the time that completion of the Work is delayed. However, Contractor expressly waives any damages for any such delays other than those delays willfully caused by Owner.

9. **Permits, Surveys, and Taxes.** Contractor will obtain and pay for all permits and licenses, and also pay any applicable taxes. Contractor will also obtain and pay for any surveys it needs to perform the Work. Contractor will conform to all ordinances and covenants governing the Project Site and/or Work.

10. **Compliance with Laws.** Contractor will comply with all applicable laws, ordinances, rules, regulations, and orders of any public authorities relating to performance of the Work.

11. **Payment of Subcontractors and Materialmen.** Contractor will promptly pay for all labor, materials, and equipment used to perform the Work.

12. **Contractor's Insurance.** Prior to performing any work, Contractor will obtain and maintain during the term of this Agreement the following insurance:
    a. Workers Compensation Insurance.
    b. Employers Liability Insurance with minimum limits of the greater of $500,000 E.L. each accident, $500,000 E. L. disease-each employee, $500,000 E.L. disease-policy limit or as required by the law of the state in which the Project is located.
    c. Commercial General Liability Insurance – ISO Form CG 00 01 (12/07) or equivalent Occurrence policy which will provide primary coverage to the additional insureds (the Owner and the Architect) in the event of any Occurrence, Claim, or Suit with:
       1) Limits of the greater of: Contractor's actual coverage amounts or the following:
          a) $2,000,000 General Aggregate;
          b) $2,000,000 Products - Comp/Ops Aggregate;
          c) $1,000,000 Personal and Advertising Liability;
          d) $1,000,000 Each Occurrence; and
          e) $50,000 Fire Damage to Rented Premises (Each Occurrence)
       2) Endorsements attached to the General Liability policy including the following or their equivalent:
          a) ISO Form CG-25-03 (05/09), Amendment of Limits of Insurance (Designated Project or Premises) describing the Agreement and specifying limits as shown above.
          b) ISO Form CG 20 10 (07/04), Additional Insured – Owners, Lessees, Or Contractors (Form B), naming Owner and Architect as additional insureds.
    d. Automobile Liability Insurance, with:
       1) Combined Single Limit each accident in the amount of $500,000 or Contractor's actual coverage, whichever is greater; and
       2) Coverage applying to "Any Auto" or its equivalent.

    Contractor will provide evidence of these insurance coverages to Owner by providing an ACORD 25 (2010/05) Form or its equivalent: (1) listing Owner as the Certificate Holder and Additional Insured on the general liability and any excess liability policies, (2) listing the insurance companies providing coverage (all companies listed must be rated in A.M. Best Company Key Rating Guide-Property-Casualty and each

company must have a rating of B+ Class VII or higher), (3) attaching the endorsements set forth above for the Certificate of Liability Insurance, and (4) bearing the name, address and telephone number of the producer and signed by an authorized representative of the producer. (The signature may be original, stamped, or electronic.) Notwithstanding the foregoing, Owner may, in writing and at its sole discretion, modify these insurance requirements.

13. **Independent Contractor Relationship.** The parties expressly agree that Contractor is not an agent or employee of Owner but is an independent contractor solely responsible for all expenses relating to Contractor's business.

14. **Comply with Intellectual Property Rights of Others.** Contractor represents and warrants that no Work (with its means, methods, goods, and services attendant thereto), provided to Owner will infringe or violate any right of any third party and that Owner may use and exploit such Work, means, methods, goods, and services without liability or obligation to any person or entity (specifically and without limitation, such Work, means, methods, goods, and services will not violate rights under any patent, copyright, trademark, or other intellectual property right or application for the same).

15. **Confidentiality / Property Rights.**
    a. Owner will retain ownership and intellectual property rights in all plans, designs, drawings, documents, concepts, and materials provided by or on behalf of Owner to Contractor and to all work products of Contractor for or relative to Work performed under this Agreement, such products, services, and Work of Contractor constituting works made for hire. Contractor will not reuse any portions of such items provided by Owner or developed by Contractor for Owner pursuant to this Agreement, or disclose any such items to any third party without the prior written consent of Owner. Owner may withhold its consent in its' absolute discretion.
    b. In addition, Contractor shall ensure that Contractor, Subcontractors, and the employees, agents and representatives of Contractor and its Subcontractors maintain in strict confidence, and shall use and disclose only as authorized by Owner all Confidential Information of Owner that Contractor receives in connection with the performance of this Agreement. Notwithstanding the foregoing, Contractor may use and disclose any information to the extent required by an order of any court or governmental authority, but only after it has notified Owner and Owner has had an opportunity to obtain reasonable protection for such information in connection with such disclosure. For purposes of this Agreement, "Confidential Information" means:
        1) The name or address of any affiliate, customer or contractor of Owner or any information concerning the transactions of any such person with Owner;
        2) Any information relating to contracts, agreements, business plans, budgets or other financial information of Owner to the extent such information has not been made available to the public by the Owner; and
        3) Any other information that is marked or noted as confidential by the Owner at the time of its disclosure.

16. **Ownership and Use of Renderings and Photographs.** Renderings representing the Work are the property of Owner. All photographs of the Work, whether taken during performance of the Work or at completion, are the property of the Owner. The Owner reserves all rights including copyrights to renderings and photographs of the Work. No renderings or photographs shall be used or distributed without written consent of the Owner.

17. **Public Statements Regarding Work or Property.** Contractor will not make any statements or provide any information to the media about the Work or Property without the prior written consent of Owner. If Contractor receives any requests for information from media, Contractor will refer such requests to Owner.

18. **No Commercial Use of Transaction or Relationship.**
    a. Without the prior written consent of Owner, which Owner may grant or withhold in its sole discretion, neither Contractor nor Contractor's affiliates, officers, directors, agents, representatives, shareholders, members, Subcontractors, or employees shall make any private commercial use of their relationship to Owner or the Work or Property, including, without limitation:
        1) By referring to this Agreement, Owner, or the Work or Property verbally or in any sales, marketing or other literature, letters, client lists, press releases, brochures or other written materials except as may

be necessary for Contractor to perform Contractor's obligations under the terms of this Agreement;

2) By using or allowing the use of any photographs of the Work or any part thereof, or of any service marks, trademarks or trade names or other intellectual property now or which may hereafter be associated with, owned by or licensed by Owner in connection with any service or product; or
3) By contracting with or receiving money or anything of value from any person or commercial entity to facilitate such person or entity obtaining any type of commercial identification, advertising or visibility in connection with the Work or Property.

b. Notwithstanding the foregoing, Contractor may include a reference to Owner and the services and equipment provided under this Agreement in a professional résumé or other similar listing of Contractor's references without seeking Owner's written consent in each instance; provided, that such reference to Owner, the services and equipment is included with at least several other similar references and is given no more prominence than such other references.

19. **Indemnity and Hold Harmless.**
    a. Contractor will indemnify and hold harmless Owner and Owner's representatives, employees, agents, architects, and consultants from and against any and all claims, damages, liability, demands, costs, judgments, awards, settlements, causes of action, losses and expenses (collectively "Claims" or "Claim"), including but not limited to attorney fees, consultant fees, expert fees, copy costs, and other costs and expenses, arising out of or resulting from performance of the Work, attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of real or personal property, including loss of use resulting therefrom, except to the extent that such liability arises out of the negligence of Owner, its representatives, agents, and employees. This indemnity includes, without limitation, indemnification of Owner from all losses or injury to Owner's property, except to the extent that such loss or injury arises out of the negligence of Owner, its representatives, agents, and employees. This indemnity applies, without limitation, to include Claims occurring both during performance of the Work and/or subsequent to completion of the Work. In the event that any Claim is caused in part by a party indemnified hereunder, that party will bear the cost of such Claim to the extent it was the cause thereof. In the event that a claimant asserts a Claim for recovery against any party indemnified hereunder, the party indemnified hereunder may tender the defense of such Claim to Contractor. If Contractor rejects such tender of defense and it is later determined that the negligence of the party indemnified hereunder did not cause all of the Claim, Contractor will reimburse the party indemnified hereunder for all costs and expenses incurred by that party in defending against the Claim. Contractor will not be liable hereunder to indemnify any party for damages resulting from the sole negligence of that party.
    b. In addition to the foregoing, Contractor will be liable to defend Owner in any lawsuit filed by any Subcontractor relating to the Project. Where liens have been filed against Owner's property, Contractor (and/or its bonding company which has issued bonds for the Project) will obtain lien releases and record them in the appropriate county and/or local jurisdiction and provide Owner with a title free and clear from any liens of Subcontractors. In the event that Contractor and/or its bonding company are unable to obtain a lien release, Owner in its absolute discretion may require Contractor to provide a bond around the lien or a bond to discharge the lien, at Contractor's sole expense.
    c. In addition to the foregoing, Contractor will indemnify and hold Owner harmless from any claim of any other contractor resulting from the performance, nonperformance or delay in performance of the Work by Contractor.
    d. The indemnification obligation herein will not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or a Subcontractor under worker's compensation acts, disability benefit acts, or other employee benefit acts.

20. **Resolution of Disputes.** In the event there is any dispute arising under the Contract Documents which cannot be resolved by agreement between the parties, either party may submit the dispute with all documentation upon which it relies to Director of Architecture, Engineering, and Construction, 50 East North Temple, Salt Lake City, Utah 84150, who will convene a dispute resolution conference within thirty (30) days. The dispute resolution conference will constitute settlement negotiations and any settlement proposal made pursuant to the conference will not be admissible as evidence of liability. In the event that the parties do not resolve their dispute pursuant to the dispute resolution conference, either party may commence legal action to resolve the dispute. Any such action must be commenced within six (6) months from the first day of the dispute resolution conference or be time barred. Submission of the dispute to the Director as outlined above

is a condition precedent to the right to commence legal action to resolve any dispute. In the event that either party commences legal action to adjudicate any dispute without first submitting the dispute to the Director, the other party will be entitled to obtain an order dismissing the litigation without prejudice and awarding such other party any costs and attorneys fees incurred by that party in obtaining the dismissal, including without limitation copy costs, and expert and consultant fees and expenses.

21. **Termination of Agreement by Contractor.** In the event Owner materially breaches any term of the Contract Documents, Contractor will promptly give Written Notice of the breach to Owner. If Owner fails to cure the breach within ten (10) days of the Written Notice, Contractor may terminate this Agreement by giving Written Notice to Owner and recover from Owner the percentage of the Contract Sum represented by the Work completed on the Project site as of the date of termination together with any out of pocket loss Contractor has sustained with respect to materials and equipment as a result of the termination prior to completion of the Work, less any offsets. Contractor will not be entitled to unearned profits or any other compensation or damages as a result of the termination and hereby waives any claim therefor. Contractor will provide to Owner all warranty, as built, inspection, and other close out documents as well as materials that Contractor has in its possession or control at the time of termination. Without limitation, Contractor's indemnities and obligations as well as all warranties relative to Work provided through the date of termination survive a termination hereunder.

22. **Termination of Agreement by Owner for Cause.** Should Contractor make a general assignment for the benefit of its creditors, fail to apply enough properly skilled workmen or specified materials to properly prosecute the Work in accordance with Contractor's schedule, or otherwise materially breach any provision of the Contract Documents, then Owner may, without any prejudice to any other right or remedy, give Contractor Written Notice thereof. If Contractor fails to cure its default within ten (10) days, Owner may terminate this Agreement by giving Written Notice to Contractor, take possession of the premises and all materials, tools, and appliances thereon, and finish the Work by whatever method Owner deems expedient. In such case, Contractor will not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Sum exceeds the expense of finishing the Work, including compensation for additional administrative, architectural, consultant, and legal services (including without limitation attorneys fees, expert fees, copy costs, and other expenses), such excess will be paid to Contractor, less any offsets and recoupment. If such expense exceeds the unpaid balance, Contractor will pay the difference to Owner. Contractor will provide to Owner all warranty, as built, inspection, and other close out documents as well as materials that Contractor has in its possession or control at the time of termination. Without limitation, Contractor's indemnities and obligations as well as all warranties relative to Work provided through the date of termination survive a termination hereunder.

23. **Termination of Agreement by Owner for Convenience.** Notwithstanding any other provision contained in the Contract Documents, Owner may, without cause and in its absolute discretion, terminate this Agreement at any time. In the event of such termination, Contractor will be entitled to recover from Owner the percentage of the Contract Sum equal to the percentage of the Work which Owner and/or its architect determines has been completed on the Project site as of the date of termination together with any out of pocket loss Contractor has sustained with respect to materials and equipment as a result of the termination prior to completion of the Work, less any offsets and recoupment. Contractor will not be entitled to unearned profits or any other compensation as a result of the termination and hereby waives any claim therefor. Contractor will provide to Owner all warranty, as built, inspection, and other close out documents as well as materials that Contractor has in its possession or control at the time of termination. Owner may, in Owner's sole discretion, take legal assignment of subcontracts and other contractual rights of Contractor. Without limitation, Contractor's indemnities and obligations as well as all warranties relative to Work provided through the date of termination survive a termination hereunder.

24. **Assignment of Contract.** The parties hereto will not assign any rights or obligations under this Agreement without the prior written consent of the other party.

25. **Integration Clause.** The Contract Documents reflect the full agreement of the parties with respect to the Project and the Work and supersede all prior discussions, agreements, and representations regarding the subject matter of the Contract Documents. The Contract Documents may be amended only in a written document signed by both parties hereto.

26. **Applicable Law.** The parties acknowledge that the Contract Documents have substantial connections to the State of Utah. The Contract Documents will be deemed to have been made, executed, and delivered in Salt Lake City, Utah. To the maximum extent permitted by law, (i) the Contract Documents and all matters related to their creation and performance will be governed by and enforced in accordance with the laws of the State of Utah, excluding conflicts of law rules, and (ii) all disputes arising from or related to the Contract Documents will be decided only in a state or federal court located in Salt Lake City, Utah and not in any other court or state. Toward that end, the parties hereby consent to the jurisdiction of the state and federal courts located in Salt Lake City, Utah and waive any other venue to which they might be entitled by virtue of domicile, habitual residence, place of business, or otherwise.

27. **Enforcement.** In the event either party commences legal action to enforce or rescind any term of the Contract Documents, the prevailing party will be entitled to recover its attorneys fees and costs, including without limitation all copy costs and expert and consultant fees and expenses, incurred in that action and on all appeals, from the other party.

28. **Bid Proposal/Agreement.** Contractor's submission to Owner of this agreement signed by Contractor will constitute Contractor's offer and bid proposal to perform the Work described in this agreement according to the terms thereof. Owner's signing of this agreement and delivery to Contractor of a signed copy will constitute acceptance of Contractor's offer and will convert this document to a binding agreement.

29. **Effective Date.** The effective date of this Agreement is the date indicated by the Owner's signature.

OWNER:	**CONTRACTOR:**
Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole.	(company)
Signature:	Signature:
Print Name:	Print Name:
Title:	Title:
Address:	Address:
Telephone No:	Telephone No:
Facsimile No:	Facsimile No:
Email:	Email:
Effective Date:	Fed. I.D. or SSN:
	License No:
Reviewed By:	Date Signed:

SUPPLEMENTARY CONDITIONS

FOR CONTRACTOR BID PROPOSAL AND R & I PROJECT AGREEMENT (U.S.)

ITEM 1 - GENERAL

1. Conditions of the Contract apply to each Division of the Specifications.

2. Provisions contained in Division 01 apply to all Divisions of the Specifications.

ITEM 2 - LIQUIDATED DAMAGES PAYABLE TO OWNER

Not applicable.

ITEM 3 - STATE SPECIFIC SUPPLEMENTARY CONDITIONS

Utah

UTAH STATE SALES TAX:

Add the following to the Bid Proposal and R & I Project Agreement:

1. Contractors should be exempt on purchases of material installed or converted into real property to be used by the Owner. The Contractor will furnish each vendor with a completed Exemption Certificate Form TC-721. The certificate will be prepared by the Contractor for each vendor in order to obtain the exemption.

2. The Owner's tax exempt number is 11871701-002-STC.

UTAH NOTICE OF INTENT TO OBTAIN FINAL COMPLETION:

Add the following to the Bid Proposal and R & I Project Agreement:

A. Contractor shall file with the State Construction Registry, on its own behalf and/or on behalf of Owner, a notice of intent to obtain final completion at least 45 days before the day on which the Owner or Contractor files or could file a notice of completion under Utah Code Ann. Section 38-1a-506 if:
    1. The completion of performance time under the original contract for construction work is greater than 120 days;
    2. The total original construction contract price exceeds $500,000; and
    3. The original contractor or owner has not obtained a payment bond in accordance with Utah Code Ann. Section 14-2-1.

UTAH NOTICE OF COMPLETION:

Add the following to the Bid Proposal and R & I Project Agreement:

A. Within five (5) calendar days of final completion of the Project and in compliance with Section 38-1a-507 Utah Code Annotated, Contractor shall file with the State Construction Registry, and copy to Owner, a notice of completion which shall include, without limitation, the following:
    1. The name, address, telephone number, and email address of the person filing the notice of completion;
    2. The name of the county in which the Project and/or Project site is located;
    3. The date on which final completion is alleged to have occurred;
    4. The method used to determine final completion; and

5. One of the following:
    a. The tax parcel identification number of each parcel included in the Project and/or Project site;
    b. The entry number of a preliminary notice on the same project that includes the tax parcel identification number of each parcel included in the Project and/or Project site; or
    c. The entry number of the building permit issued for the Project.

B. Notwithstanding any other provision of the Contract Documents to the contrary, Contractor and Owner agree that any breach or failure to comply with this Section by the Contractor will constitute a breach of contract and the Contractor will be liable for any direct, indirect, or consequential damages to the Owner flowing from this breach.

UTAH STATE PROGRESS PAYMENTS AND FINAL PAYMENT:

Replace paragraph 5 of the Bid Proposal and R & I Project Agreement with the following:

5. Payment

a. If the Contractor's Bid Proposal Amount is over $100,000.00, Contractor will submit to Owner a schedule of values which allocates the Contractor's Bid Proposal Amount to various portions of the Work. This schedule, when accepted by Owner, will be used as a basis for reviewing Contractor's payment requests.

b. Progress Payments: Not more than once each month, Contractor will submit a payment request to Owner. Owner will pay Contractor progress payments for work completed within fifteen (15) days after Owner receives:
    1. Contractor's progress payment request for work to date;
    2. A certification by Contractor that Contractor has paid for all labor, materials, and equipment relating to the Work covered by prior payment requests and that Contractor will pay for all labor, materials, and equipment relating to the Work covered by the current payment request; and
    3. Conditional Waiver and Release Upon Progress Payment documents submitted by Contractor (in content complying with Utah Code § 38-1a-802) executed by each of the subcontractors performing work and/or providing materials covered by the Contractor's progress payment request.

c. Final Payment: Owner will make full and final payment of the Contract Sum due within thirty (30) days of the completion of all of the following requirements:
    1. Contractor has submitted its final payment request;
    2. Contractor has submitted a certification that Contractor has paid for all labor, materials, and equipment relating to the Work covered by prior payment requests and that Contractor will pay for all labor, materials, and equipment relating to the Work covered by the final payment request; and
    3. Contractor has submitted Waiver and Release Upon Final Payment documents (in content complying with Utah Code § 38-1a-802) executed by each of the subcontractors performing work and/or providing materials covered by the Contractor's final payment request.

Acceptance of final payment by Contractor or any Subcontractor will constitute a waiver of claims by the payee except for those claims previously made to Owner in writing and identified by Contractor in its affidavit as still pending.
If the aggregate of previous payments made by Owner exceeds the amount due Contractor, Contractor will reimburse the difference to Owner.

d. Owner may modify or reject any payment request if, in Owner's opinion, the Work for which payment is requested is not acceptable or is less complete than represented on the payment request.

e. Upon receipt of any payment from Owner, Contractor will pay to each Subcontractor the amount paid to Contractor on account of such Subcontractor's portion of the Work.

f. Contractor will maintain a copy of each payment request at the Project site for review by the Subcontractors.

g. No payment made, either in whole or in part, by Owner will be construed to be an acceptance of defective or improper materials or workmanship.

END OF DOCUMENT

DIVISION 01

SECTION 01 0000

GENERAL REQUIREMENTS: R&I PROJECT

SECTION 01 1000 SUMMARY

A. Provisions contained in Division 01 apply to all other sections and divisions of Specifications. All instructions contained in Specifications are directed to Contractor. Unless specifically provided otherwise, all obligations set forth in Specifications are obligations of Contractor.

B. Comply with applicable laws and regulations.

C. Owner may provide furnishings and/or equipment for Project. Contractor will receive, store, and protect such items on site until the date Owner accepts Project.

D. Work by Owner: Owner may furnish and install some portions of the Work with its own forces. Complete the Work necessary to accommodate the Work to be performed by Owner before scheduled date for performance of such Work.

SECTION 01 1200 MULTIPLE CONTRACT SUMMARY

A. Separate Contracts may be issued by Owner for performance of certain construction operations at Project site. Contractor will afford other contractors reasonable opportunity to place and store their materials and equipment on site and to perform their work and will properly connect and coordinate its work with theirs where applicable.

SECTION 01 1400 WORK RESTRICTIONS

A. During construction period, Contractor will have use of premises for construction operations. Contractor will ensure that Contractor, its employees, subcontractors, and employees comply with following requirements:
   1. Confine operations to areas within Contract limits shown on Drawings. Do not disturb portions of site beyond Contract limits.
   2. Do not allow alcoholic beverages, illegal drugs, or persons under their influence on Project Site.
   3. Do not allow use of tobacco in any form on Project Site.
   4. Do not allow pornographic or other indecent materials on site.
   5. Do not allow work on Project Site on Sundays except for emergency work.
   6. Refrain from using profanity or being discourteous or uncivil to others on Project Site or while performing The Work.
   7. Wear shirts with sleeves, wear shoes, and refrain from wearing immodest, offensive, or obnoxious clothing, while on Project Site.

8. Do not allow playing of obnoxious and loud music on Project Site. Do not allow playing of any music within existing facilities.
9. Do not build fires on Project Site.
10. Do not allow weapons on Project Site, except those carried by law enforcement officers and/or other uniformed security personnel who have been retained by Owner or Contractor to provide security services.

B. Existing Facilities:
   1. Owner will occupy existing building. Reasonably accommodate use of existing facilities by Owner.

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

A. Coordinate construction activities to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations that are dependent upon each other for proper installation, connection, and operation. Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

SECTION 01 3100 PROJECT MANAGEMENT AND COORDINATION

A. Multiple Contract Coordination:
   1. Contractor shall be responsible for coordination of Temporary Facilities and Controls, Construction Waste Management and Disposal services, and Final Cleaning for entire Project unless directed otherwise by Owner's Representative for those who perform work on Project from Notice to Proceed to date of Substantial Completion.

B. Preconstruction Conference:
   1. Attend preconstruction conference and organizational meeting scheduled by Architect or Owner Representative at Project site or other convenient location.
   2. Be prepared to discuss items of significance that could affect progress, including such topics as:
      a. Construction schedule, equipment deliveries, general inspection of tests, preparation of record documents and O&M manuals, project cleanup, security, shop drawings, samples, use of premises, work restrictions, and working hours.

SECTION 01 3300 SUBMITTAL PROCEDURES

A. Coordination preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently before performance of related construction activities to avoid delay.

B. Allow sufficient review time so installation will not be delayed by time required to process submittals.

C. Place permanent label or title block on each submittal for identification. Include name of entity that prepared each submittal on label or title block.

D. Package each submittal appropriately for transmittal and handling.

SECTION 01 4000 QUALITY REQUIREMENTS

A. Conflicting Requirements: If compliance with two or more standards is specified and standards establish different or conflicting requirements for minimum quantities or quality levels, comply with most stringent requirement.

B. Minimum Quantity or Quality Levels: Quantity or quality level shown or specified shall be the minimum provided or performed. Actual installation may comply exactly with minimum quantity or quality specified, or it may exceed minimum within reasonable limits.

C. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to verify compliance and guard against defects and deficiencies and substantiate that proposed construction will comply with requirements. Owner or Owner's designated representative(s) will perform quality assurance to verify compliance with Contract Documents.

D. Quality Control Services: Quality Control will be sole responsibility of Contractor. Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements performed by Contractor. They do not include inspections, tests or related actions performed by Architect or Owner Representative, governing authorities or independent agencies hired by Owner or Architect. Quality assurance performed by Owner will be used to validate Quality Control performed by Contractor:
   1. Where services are indicated as Contractor's responsibility, engage qualified Testing Agency to perform these quality control services:
      a. Contractor will not employ same testing entity engaged by Owner, without Owner's written approval.

E. Notify Owner immediately if asbestos-containing materials or other hazardous materials are encountered while performing the Work.

F. Submit to Owner permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records establishing compliance with standards and regulations bearing upon performance of the Work.

G. Repair And Protection:
   1. On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
   2. Protect construction exposed by or for Quality Assurance and Quality Control activities.
   3. Repair and protection are Contractor's responsibility, regardless of assignment of responsibility for Quality Assurance and Quality Control Services.

SECTION 01 4301 QUALITY ASSURANCE - QUALIFICATIONS

A. Qualifications: Qualifications in this Section establish minimum qualification levels required; individual Specification Sections specify additional requirements:
   1. Fabricator / Supplier / Installer Qualifications:
      a. Firm experienced in producing products similar to those indicated for this Project and with record of successful in-service performance, as well as sufficient production capacity to produce required units:
         1) Where heading *'VMR (Value Managed Relationship) Suppliers / Installers*' is used to identify list of specified suppliers or installers, Owner has established relationships that extend beyond requirements of this Project. No other suppliers / installers will be acceptable. Follow specified procedures to preserve relationships between Owner and specified suppliers / installers and advantages that accrue to Owner from those relationships.
         2) Where heading 'Acceptable or Approved Suppliers / Installers / Fabricators' is used to identify list of specified suppliers / installers / fabricators, use only one of listed suppliers / installers / fabricators. No others will be acceptable.
   1. Factory-Authorized Service Representative Qualifications:
      a. Authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
   2. Installer Qualifications:
      a. Firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with record of successful in-service performance.
   3. Manufacturer Qualifications:
      a. Firm experienced in manufacturing products or systems similar to those indicated for this Project and with record of successful in-service performance, as well as sufficient production capacity to produce required units.
   4. Manufacturer's Field Services Qualifications:
      a. Experienced authorized representative of manufacturer to inspect field-assembled components and equipment installation, including service connections.
   5. Professional Engineer Qualifications:
      a. Professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of kind indicated:
         1) Engineering services are defined as those performed for installations of system, assembly, or products that are similar to those indicated for this Project in material, design, and extent.

6. Specialists:
   a. Certain sections of Specifications require that specific construction activities will be performed by entities who are recognized experts in those operations:
      1) Specialists will satisfy qualification requirements indicated and will be engaged for activities indicated.
      2) Requirement for special will not supersede building codes and regulations governing the Work.

SECTION 01 6100 PRODUCT REQUIREMENTS

A. Provide products that comply with Contract Documents, are undamaged, and, unless otherwise indicated, are new and unused at time of installation. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for complete installation and for intended use and effect.

SECTION 01 6200 PRODUCT OPTIONS

A. Product selection is governed by Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include:
   1. Substitutions And Equal Products:
      a. Generally speaking, substitutions for specified products and systems, as defined in Uniform Commercial Code, are not acceptable. However, equal products may be approved upon compliance with Contract Document requirements.
      b. Approved Products / Manufacturers / Suppliers / Installers:
         1) Category One:
            (a) Owner has established 'Value Managed Relationships' that extend beyond requirements of this Project. No substitutions or equal products will be allowed on this Project.
            (b) Follow specified procedures to preserve relationships between Owner and specified manufacturers / suppliers and advantages that accrue to Owner from those relationships.
         2) Category Two:
            (a) Owner has established National Contracts that contain provisions extending beyond requirements of this Project. No substitutions or equal products will be allowed on this Project.
            (b) Follow specified procedures to preserve relationships between Owner and specified manufacturers / suppliers and advantages that accrue to Owner from those relationships.
         3) Category Three:
            (a) Specified products are provided to Church Projects under a National Account Program. Use these products to preserve advantages that accrue to Owner from those programs. No substitutions or equal products will be allowed on this Project.
         4) Category Four:
            (a) Provide only specified products available from manufacturers listed. No substitutions, private-labeled, or equal products, or mixing of manufacturers' products is allowed on this Project.
            (b) In Sections where lists recapitulating Manufacturers previously mentioned in Section are included under heading '*Manufacturers*' or '*Approved Manufacturers*', this is intended as convenience to Contractor as listing of contact information only. It is not intended that all manufacturers in list may provide products where specific products and manufacturers are listed elsewhere in Section.
      c. Acceptable Products / Manufacturers / Suppliers / Installers:
         1) Type One: Use specified products / manufacturers unless approval to use other products / manufacturers has been obtained from Architect or Owner Representative by Addendum.
         2) Type Two: Use specified products / manufacturers unless approval to use other products and manufacturers has been obtained from Architect or Owner Representative in writing before installing or applying unlisted or private-labeled products.
         3) Use 'Equal Product Approval Request Form' to request approval of equal products, manufacturers, or suppliers before bidding or before installation, as noted in individual Sections.
      d. Quality / Performance Standard Products / Manufacturers:
         1) Class One: Use specified product / manufacturer or equal product from specified manufacturers only.
         2) Class Two: Use specified product / manufacturer or equal product from any manufacturer.
         3) Products / manufacturers used will conform to Contract Document requirements.

SECTION 01 6400 OWNER-FURNISHED PRODUCTS

A. Install items furnished by Owner or receive and store in safe condition items purchased directly by Owner according to requirements of Contract Documents.

SECTION 01 6600 DELIVERY, STORAGE, AND HANDLING REQUIREMENTS

A. Deliver, store, and handle products according to manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.

B. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

C. Deliver products to site in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

D. Inspect products upon delivery to ensure compliance with Contract Documents, and to ensure that products are undamaged and properly protected.

E. Store products at site in manner that will simplify inspection and measurement of quantity or counting of units.

F. Store heavy materials away from Project structure so supporting construction will not be endangered.

G. Store products subject to damage by elements above ground, under cover in weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

SECTION 01 7000 EXECUTION REQUIREMENTS

A. Design, furnish, and install all shoring, bracing, and sheathing as required for safety and for proper execution of the Work and, unless otherwise required, remove same when the Work is completed.

B. Require installer of each major component to inspect both substrate and conditions under which the Work is to be done:
   1. Notify Owner in writing of unsatisfactory conditions.
   2. Do not proceed until unsatisfactory conditions have been corrected.
C. Provide attachment and connection devices and methods necessary for securing the Work:
   1. Secure the Work true to line and level.
   2. Allow for expansion and building movement.
D. Recheck measurements and dimensions before starting each installation.

E. Where mounting heights are not shown, install individual components at standard mounting heights recognized within industry or local codes for that application. Refer questionable mounting height decisions to Owner for final decision.

F. Cover and protect furniture, equipment, and fixtures from soiling and damage when demolition the Work is performed in rooms and areas from which such items have not been removed.

G. Completion Inspection:
   1. Upon 100 percent completion of Project, Contractor will request Substantial Completion Inspection.
   2. Owner will conduct Substantial Completion Inspection in presence of Contractor and furnish list of items to be corrected.
   3. Contractor will notify Owner in writing when items have been corrected.

SECTION 01 7400 CLEANING AND WASTE MANAGEMENT

A. Disposal Of Waste:

1. Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in landfill or incinerator acceptable to authorities having jurisdiction:
   a. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
   b. Remove and transport debris in manner that will prevent spillage on adjacent surfaces and areas.
2. Burning: Do not burn waste materials.
3. Disposal: Transport waste materials off Owner's property and legally dispose of them.

B. Progress Cleaning:
1. Keep premises broom-clean during progress of the Work.
2. During handling and installation, protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from soiling, damage, or deterioration until Substantial Completion.
3. Clean and maintain completed construction as frequently as necessary throughout construction period.
4. Remove waste materials and rubbish caused by employees, subcontractors, and contractors under separate contract with Owner and dispose of legally.

C. Final Cleaning:
1. Clean each surface or unit to condition expected in normal, commercial-building cleaning and maintenance program. Comply with manufacturer's instructions. Remove all rubbish from under and about building and leave building clean and habitable.
2. In addition to general cleaning noted above, perform cleaning for all trades at completion of the Work in areas where construction activities have occurred.
3. If Contractor fails to clean up, Owner may do so and charge cost to Contractor.

SECTION 01 7700 CLOSEOUT PROCEDURES

A. General:
1. Closeout process consists of three specific project closeout inspections. Contractor shall plan sufficient time in construction schedule to allow for required inspections before expiration of Contract Time.
2. Contractor shall conduct his own inspections of The Work and shall not request closeout inspections until The Work of the contract is reasonably complete and correction of obvious defects or omissions are complete or imminent.
3. Date of Substantial Completion shall not occur until completion of construction work, unless agreed to by Architect / Owner's Representative and included on Certificate of Substantial Completion.

B. Preliminary Closeout Review:
1. When Architect, Owner and Contractor agree that project is ready for closeout, Pre-Substantial Inspection shall be scheduled. Preparation of floor substrate to receive carpeting and any work which could conceivably damage or stain carpet must be completed, as carpet installation will be scheduled immediately following this inspection.
2. Prior to this inspection, completed test and evaluation reports for HVAC system and font, where one occurs, are to be provided to Project Manager, Architect, and applicable consultants.
3. Architect, Owner and Contractor review completion of punch list items. When Owner and Architect confirm that Contractor has achieved Substantial Completion of The Work, Owner, Architect and Contractor will execute Certificate of Substantial Completion that contains:
   a. Punch list of items requiring completion and correction will be created.
   b. Time frame for completion of punch list items will be established, and date for Substantial Completion Inspection shall be set.

C. Substantial Completion Inspection:
1. When Architect, Owner and Contractor agree that project is ready for Substantial Completion, an inspection is held. Punch list created at Pre-Substantial Inspection is to be substantially complete.
2. Prior to this inspection, Contractor shall discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups and similar elements.
3. Architect, Owner and Contractor review completion of punch list items. When Owner and Architect confirm that Contractor has achieved Substantial Completion of The Work, Owner, Architect and Contractor will execute Certificate of Substantial Completion that contains:
   a. Date of Substantial Completion.
   b. Punch List Work not yet completed, including seasonal and long lead items.
   c. Amount to be withheld for completion of Punch List Work.

d. Time period for completion of Punch List Work.
e. Amount of liquidated damages set forth in Supplementary Conditions to be assessed if Contractor fails to complete Punch List Work within time set forth in Certificate.

4. Contractor shall present Closeout Submittals to Architect and place tools, spare parts, extra stock, and similar items required by Contract Documents in locations as directed by Facilities Manager.

D. Final Acceptance Meeting:
1. When punch list items except for any seasonal items or long lead items which will not prohibit occupancy are completed, Final Acceptance Meeting is held.
2. Owner, Architect and Contractor execute Owner's Project Closeout - Final Acceptance form, and verify:
a. All seasonal and long lead items not prohibiting occupancy, if any, are identified, with committed to completion date and amount to be withheld until completion.
b. Owner's maintenance personnel have been instructed on all system operation and maintenance as required by the Contract Documents.
c. Final cleaning requirements have been completed.
3. If applicable, once any seasonal and long lead items are completed, Closeout Inspection is held where Owner and Architect verify that The Work has been satisfactorily completed, and Owner, Architect and Contractor execute Closeout portion of the Project Closeout - Final Acceptance form.
4. When Owner and Architect confirm that The Work is satisfactorily completed, Architect will authorize final payment.

SECTION 01 7800 CLOSEOUT SUBMITTALS

A. Operations And Maintenance Data: Operations And Maintenance Manual that include:
1. Project Manual:
a. Copy of complete Project Manual including Addenda, Modifications as defined in General Conditions, and other interpretations issued during construction:
(1) Mark these documents to show variations in actual Work performed in comparison with text of specifications and Modifications. Show substitutions, selection of options, and similar information, particularly on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
(2) Note related record drawing information and Product Data.
2. Operations and Data:
a. Operations and maintenance submittals required by Contract Documents.
3. Warranty Documentation:
a. Copies of warranties required by Contract Documents.
4. Record Documentation:
a. Certifications required by Contract Documents.
b. Documentation submittals required by Contract Documents.
c. Testing and Inspection Reports required by Contract Documents.

B. Warranties:
1. When written guarantees beyond one (1) year after substantial completion are required by Contract Documents, secure such guarantees and warranties properly addressed and signed in favor of Owner. Include these documents in Operations & Maintenance Manual(s) specified above.
2. Delivery of guarantees and warranties will not relieve Contractor from obligations assumed under other provisions of Contract Documents.

C. Project Record Documents:
1. Do not use record documents for construction purposes:
a. Protect from deterioration and loss in secure, fire-resistive location.
b. Provide access to record documents for reference during normal Working hours.
2. Maintain clean, undamaged set of Drawings. Mark set to show actual installation where installation varies from the Work as originally shown. Give particular attention to concealed elements that would be difficult to measure and record at later date.
a. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
b. Mark new information that is important to Owner, but was not shown on Contract Drawings.
c. Note related Change Order numbers where applicable.

END OF SECTION

SECTION 02 4119

SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Demolition and removal of selected portions of building or structure.
   2. Salvage of existing items to be reused or recycled.

1.2 REFERENCES

A. Reference Standards:
   1. National Fire Protection Association / American National Standards Institute:
      a. NFPA 241, 'Standard for Safeguarding Construction, Alteration, and Demolition Operations', 2013 Edition.
   2. American Society of Safety Engineers:
      a. ASSE A10.6-2006, 'Safety Requirements for Demolition Operations'.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Storage or sale of removed items or materials will not be permitted on-site.

1.4 QUALITY ASSURANCE

A. Regulatory Agency Sustainability Approvals:
   1. Comply with governing EPA notification regulations before beginning selective demolition.
   2. Comply with hauling and disposal regulations of authorities having jurisdiction.
   3. Standards: Comply with ANSI A10.6 and NFPA 241.

1.5 FIELD CONDITIONS

A. Existing Conditions:
   1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

PART 2 - PRODUCTS: Not Used

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification Of Conditions:
   1. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
      a. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

B. Evaluation And Assessment:
   1. Hazardous Materials:
      a. It is not expected that hazardous materials will be encountered in the Work. Identified hazardous materials will be removed by Owner before start of the Work.
      b. If materials suspected of containing hazardous materials are encountered, do not disturb and immediately notify Architect.
   2. Inventory and record condition of items to be removed and reinstalled and items to be removed and salvaged.
   3. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure nature and extent of conflict. Promptly submit written report to Architect.
   4. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
   5. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 PREPARATION

A. Temporary Facilities:
   1. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
   2. Maintain fire-protection facilities in service during selective demolition operations.

B. Temporary Shoring:
   1. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
   2. Strengthen or add new supports when required during progress of selective demolition.

C. Utility Services:
   1. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
   2. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
      a. Arrange to shut off indicated utilities with utility companies.
      b. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3.3 SELECTIVE DEMOLITION

A. General:
   1. Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
   2. Demolish and remove existing construction only to extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
      a. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
      b. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
      c. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
      d. Maintain adequate ventilation when using cutting torches.

e. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
f. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
g. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
h. Dispose of demolished items and materials promptly.

B. Selective Demolition Procedures For Specific Materials:
1. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

C. Removed and Salvaged Items:
1. Relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.
a. Clean salvaged items as directed by Owner.
b. Pack or crate items after cleaning. Identify contents of containers.
c. Store items in a secure area until delivery to Owner.
d. Transport items to Owner's storage area designated by Owner.
e. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain:
1. Protect construction indicated to remain against damage and soiling during selective demolition.
2. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.4 CLEANING

A. General:
1. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.
2. Return adjacent areas to condition existing before selective demolition operations began.

B. Waste Management:
1. Disposal of Demolished Materials:
a. Remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill. Do not burn demolished materials.
1) Do not allow demolished materials to accumulate on-site.
2) Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3) Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

END OF SECTION

SECTION 04 0516

MASONRY GROUTING

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Quality of masonry grout used on Project.

B. Related Requirements:
   1. Section 01 4000: 'Quality Requirements' for administrative and procedural requirements for quality assurance and quality control.
   2. Section 01 4301: 'Quality Assurance – Qualifications' establishes minimum qualification levels required.

1.2 REFERENCES

A. Definitions:
   1. Grout: Mixture of cementitious material and aggregate to which sufficient water is added to produce pouring consistency without segregation of the constituents.

B. Reference Standards:
   1. ASTM International:
      a. ASTM C94/C94M-16, 'Standard Specification for Ready-Mixed Concrete'.
      b. ASTM C150/C150M-16, 'Standard Specification for Portland Cement'.
      c. ASTM C207-06(2011), 'Standard Specification for Hydrated Lime for Masonry Purposes'.
      d. ASTM C404-11, 'Standard Specification for Aggregates for Masonry Grout'.
      e. ASTM C476-16, 'Standard Specification for Grout for Masonry'.
      f. ASTM C1019-16, 'Standard Test Method for Sampling and Testing Grout'.

1.3 SUBMITTALS

A. Informational Submittals:
   1. Source Quality Control Submittals:
      a. If pre-blended dry grout is to be used, provide certification from Manufacturer or Supplier verifying that mixes meet specification requirements.
      b. If grout is to be mixed in field, provide written description of proposed procedure for measuring and mixing of materials.

PART 2 - PRODUCTS

2.1 SYSTEM

A. Performance
   1. Minimum Compressive Strength for laboratory cured specimens at 28 Days:
      a. 2000 psi (13.8 MPa).

B. Materials:
   1. Portland Cement:
      a. Meet requirements of ASTM C150/C150M.

b. Use Type II Low Alkali in exterior walls and in walls subject to moisture, unless approved otherwise in writing by Architect.

2. Hydrated Lime:
   a. Meet requirements of ASTM C207, Type S.
3. Aggregate:
   a. Meet requirements of ASTM C404, Table 1.

      1) Grading Requirements for Fine Aggregate, Natural, Size 2.

Sieve	Sieve	Percent Passing
No. 4	4.750 mm	100
No. 8	2 360 mm	95 - 100
No. 16	1 191 mm	60 - 100
No. 30	0.595 mm	35 - 70
No. 50	0.297 mm	15 - 35
No. 100	0.150 mm	2 - 15

      2) Grading Requirements for Coarse Aggregate, Size 8.

Sieve	Sieve	Percent Passing
1/2 Inch	12 7 mm	100
3/8 Inch	9.5 mm	85 - 100
No. 4	4.750 mm	10 - 30
No. 8	2 360 mm	0 - 10
No. 16	0.150 mm	0 - 5

4. Water:
   a. Clean and free of acids, alkalis, and organic materials.
5. Admixtures:
   a. No additives are allowed which will increase air entrainment. Other additives may be used as approved in writing by Architect before use.

C. Mixes:
1. Procedure:
   a. Use of pre-blended dry grout mix is allowed only with submission of certification that material specification requirements have been complied with.
   b. Use method of measuring and mixing materials that will ensure consistently proportioned grout batches throughout installation of masonry work. No measuring of materials by 'shovels full' is permitted for field mixed grout.
   c. Batch, mix, and deliver transit-mixed grout in accordance with requirements of ASTM C94/C94M.
2. Proportions by Volume:
   a. Water: Enough to give creamy pouring consistency, usually slump of between 8 and 10.

Material	Fine Grout		Coarse Grout	
Portland Cement	One cu ft	0.028 cu m	One cu ft	0.028 cu m
Hydrated Lime (optional)	1/10 cu ft	0.0028 cu m	1/10 cu ft	0.0028 cu m
Damp, Loose Sand	2-1/4 to 3 cu ft	0.063 to 0.084 cu m	2-1/4 to 3 cu ft	0.063 to 0.084 cu m
Pea Gravel	none	none	1 to 2 cu ft	0.028 to 0.056 cu m

PART 3 - EXECUTION

3.1 INSTALLATION

A. Use fine grout for cavities 2 inches (50 mm) and smaller in smallest dimension. Use coarse grout for cavities greater than 2 inches (50 mm) in smallest dimension.

END OF SECTION

SECTION 05 0503

SHOP-APPLIED METAL COATINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Quality of factory or shop-applied priming applied to steel supplied to Project without finish coat.
   2. Quality of and procedures for field touch-up and repair of factory-applied priming and galvanizing.

B. Related Requirements:
   1. Sections under 09 9000 heading: Finish painting.

1.2 REFERENCES

A. Reference Standards:
   1. ASTM International:
      a. ASTM A780/A780M-09(2015), 'Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings'.
      b. ASTM B695-04(2009), 'Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel'.

PART 2 - PRODUCTS

2.1 FINISHES

A. Factory And Shop-Applied Primer:
   1. Compatible with and of equal or better quality than finish paint system to be applied by Sections under 09 9000 heading.
   2. Primer on unexposed, unfinished surfaces may be fabricator's standard shop coat.

B. Repairs To Primed Surface:
   1. Unless otherwise specified, use primer which matches characteristics of original primer and is compatible with and of equal or better quality than finish paint system to be applied by Sections under 09 9000 heading.

C. Material For Repairs Of Galvanized Surfaces:
   1. Non-Structural, Non-Load-Bearing Items Not Exposed To Weather:
      a. Zinc-Rich Paints:
         1) Zinc-Dust Content: Dried film shall contain 94 percent minimum of zinc-dust by weight.
         2) Type One Acceptable Manufacturers:
            a) Galvax by Alvin Products Inc, Everett, MA www.alvinproducts.com.
            b) ZRC Galvilite by ZRC Worldwide, Marshfield, MA www.zrcworldwide.com.
            c) Equal as approved by Architect before bidding. See Section 01 6200.
   2. Structural, Load-Bearing Items And Items Exposed To Weather:
      a. Zinc-Based Solders, Powder, Or Rod:
         1) Zinc-Cadmium solder with liquidus temperature range from 518 to 527 deg F (270 to 275 deg C), or
         2) Zinc-Tin-Lead alloy with liquidus temperature range from 446 to 500 deg F (230 to 260 deg C).
      b. Sprayed Zinc: Wire, ribbon, or powdered zinc suitable for process.

PART 3 - EXECUTION

3.1 PREPARATION

A. Surface Preparation:
   1. General:
      a. Clean, grind, or otherwise prepare welds in steel that is to be coated within limits acceptable to welder responsible for structural integrity.
      b. Surfaces to be coated shall be clean, dry and free of oil, grease, and corrosion products.
   2. Preparation Of Primed, Ungalvanized Surfaces:
      a. Clean welds and grind serious abrasions.
   3. Preparation Of Galvanized Surfaces:
      a. Follow requirements of ASTM A780/A780M and following:
      b. For Repair Using Zinc-Rich Paints:
         1) Blast clean surfaces to near-white metal, in accordance with SSPC-SP10 (1 to 2 mil anchor pattern), as minimum.
         2) Where circumstances do not allow blast cleaning, power disk sand to bright metal finish.
         3) Extend surface preparation into undamaged galvanized area.
         4) Remove flux residue and weld spatter from welded areas.
      c. For Repair Using Zinc-Based Alloys:
         1) Clean surface to be reconditioned using wire brush, light grinding action, or mild blasting.
         2) Extend surface preparation into surrounding, undamaged galvanized areas.
         3) Remove flux residue and weld spatter from welded areas.
         4) Preheat cleaned area to at least 600 deg F (316 deg C).
            a) Do not overheat surface beyond 750 deg F (400 deg C) or allow surrounding galvanized coatings to be burned.
            b) Wire brush surface during preheating.
      d. For Repair Using Sprayed Zinc (Metallizing):
         1) Blast clean surfaces to near-white metal, in accordance with SSPC-SP5 as minimum.
         2) Extend surface preparation into undamaged galvanized area.
         3) Remove flux residue and weld spatter from welded areas.

3.2 REPAIR / RESTORATION

A. Repairs To Primed, Ungalvanized Surfaces:
   1. Thoroughly clean metal and give one (1) prime coat of specified material, well-worked into metal joints and open spaces. Match existing primed finish as required.
      a. Do not apply primer at temperatures below 45 deg F (7 deg C).
      b. Protect un-primed machine-finished surfaces against corrosion by priming.

B. Repairs To Galvanized Surfaces:
   1. Non-Structural, Non-Load-Bearing Items Not Exposed To Weather:
      a. Repair Using Zinc-Rich Paints: Spray- or brush-apply zinc-rich paint to prepared area. Apply paint in single application employing multiple spray passes to achieve dry film thickness of 2 mils.
   2. Structural, Load-Bearing Items And Items Exposed To Weather:
      a. Repair Using Zinc-Based Alloys:
         1) Rub cleaned, pre-heated areas with repair stick to deposit evenly distributed layer of zinc alloy. If powdered zinc alloys are used, sprinkle powder on surface and spread out with spatula or similar tool.
         2) Remove flux residue by rinsing with water or wiping with damp cloth.
      b. Repair Using Sprayed Zinc (Metallizing): Apply 2 mil minimum coating by means of metal-spraying pistols fed with either zinc wire or zinc powder in accordance with requirements of ASTM B695, Type I.
   3. All Items:

a. Apply repair materials immediately after surface preparation is complete.
b. Take thickness measurements, with either magnetic or electromagnetic gauge, to ensure applied coating is as specified or agreed to.

END OF SECTION

SECTION 05 0523

METAL FASTENING

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Quality of structural metal-to-metal, wood-to-metal, and wood-to-wood bolts used on Project.
   2. Requirements and standards for site welded metal-to-metal connections.

B. Related Requirements:
   1. Furnishing and installing of structural bolts specified under Section concerned.
   2. Performance of welding specified under Section concerned.

1.2 REFERENCES

A. Reference Standards:
   1. American National Standards Institute / American Welding Society:
      a. ANSI/AWS D1.1/D1.1M:2010, ‘Structural Welding Code - Steel’.
      b. ANSI/AWS D1.3/D1.3M:2010, ‘Structural Welding Code - Sheet Steel’.
   2. ASTM International:
      a. ASTM A36/A36M-08, ‘Standard Specification for Carbon Structural Steel'.
      b. ASTM A307-10, ‘Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength'.
      c. ASTM A325-10, ‘Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength'.

1.3 QUALITY ASSURANCE

A. Qualifications: Requirements of Section 01 4301 applies, but not limited to the following:
   1. Welders shall be certified 30 days minimum before beginning work on Project. If there is doubt as to proficiency of welder, Architect may require welder to take another test, at no expense to Owner. Certification shall be by Pittsburgh Laboratories or other authority approved by Architect.

B. Certifications:
   1. Maintain welder's certifications on job-site.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

A. Materials:
   1. Bolts And Threaded Fasteners:
      a. Bolts: Conform to requirements of ASTM A307, Grade A.

2.2 ACCESSORIES

A. Arc-Welding Electrodes: Type E70XX AWS Iron and Steel Arc-welding electrodes and meeting current AISC Specifications.

PART 3 - EXECUTION

3.1 PERFORMANCE

A. Welding shall meet requirements of ANSI / AWS D1.1 and D1.3.

B. Minimum weld sizes, unless detailed otherwise.
   1. Weld connection side plates to base plates with 1/4 inch (6 mm) fillet weld all along outside edges.

END OF SECTION

SECTION 05 1200

STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Furnish and install structural steel framing as part of building structure as described in Contract Documents.

B. Related Requirements:
   1. Section 01 0000: 'General Requirements':
      a. Section 01 4000: 'Quality Requirements' for administrative and procedural requirements for quality assurance and quality control.
      b. Section 01 4301: 'Quality Assurance – Qualifications' establishes minimum qualification levels required.

1.2 REFERENCES

A. Association Publications:
   1. American Institute of Steel Construction:
      a. AISC 'Guide to Design Criteria for Bolted and Riveted Joints' (2nd Edition).
      b. AISC 'Steel Construction Manual' (14th Edition).

B. Reference Standards:
   1. American Institute of Steel Construction / The Society for Protective Coatings:
      a. AISC 420-10/SSPC-QP 3, 'Certification Standard for Shop Application of Complex Protective Coating Systems'.
   2. American National Standards Institute / American Institute of Steel Construction:
      a. ANSI/AISC 340-14, 'Specification for Structural Joints using High-Strength Bolts'.
      b. ANSI/AISC 341-10, 'Seismic Provisions for Structural Steel Buildings'.
      c. ANSI/AISC 358-10, 'Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications'.
      d. ANSI/AISC 360-10, 'Specification for Structural Steel Buildings'.
   3. American National Standards Institute / American Society for Nondestructive Testing (Following are specifically referenced for Structural Steel testing):
      a. ANSI/ASNT CP-189-2011, 'Standard for Qualification and Certification of Nondestructive Testing Personnel'.
      b. ANSI/ASNT SNT-TC-1A-2011, 'Personnel Qualification and Certification in Nondestructive Testing'.
   4. American National Standards Institute / American Welding Society (Following are specifically referenced for Structural Steel testing):
      a. ANSI/AWS D1.1/D1.1M:2015, 'Structural Welding Code - Steel'.
      b. ANSI/AWS D1.3/D1.3M:2008, 'Structural Welding Code - Sheet Steel'.
      c. ANSI/AWS D1.4/D1.4M:2011, 'Structural Welding Code - Reinforced Steel'.
   5. American Welding Society:
      a. AWS QC1:2007, 'Standard for AWS Certification of Welding Inspectors'.
   6. ASTM International:
      a. ASTM A36/A36M-14, 'Standard Specification for Carbon Structural Steel.'
      b. ASTM A53/A53M-12, 'Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.'
      c. ASTM A435/A435M-90(2012), 'Standard Specification for Straight-Beam Ultrasonic Examination of Steel Plates'.

d. ASTM A500/A500M-13, ‘Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.'
e. ASTM A992/A992M-11(2015), ‘Standard Specification for Structural Steel Shapes.'
f. ASTM F3125/F3125M-15a, ‘Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions’.

7. International Code Council (IBC) (2015):
   a. IBC Chapter 17, ‘Special Inspections And Tests’.
      1) Section 1704, 'Special Inspections And Tests, Contractor Responsibility And Structural Observations'.

1.3 SUBMITTALS

A. Action Submittals:
   1. Shop Drawings:
      a. Shop drawings and calculations, prepared and stamped by structural engineer, shall include, but not be limited to, plans, elevations, and large scale details of typical sections, connections, joining, and accessories.
      b. Show other fabricated work.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Delivery And Acceptance Requirements:
   1. Deliver material to job site at such intervals as to insure uninterrupted progress of Work.
   2. Deliver anchor bolts, bearing plates and other items to be set by other Contractors shall be delivered to site in ample time for installation and with templates and/or setting instructions.

B. Storage And Handling Requirements:
   1. Structural steel shall not be handled until paint has thoroughly dried. Care must be exercised to avoid abrasions and other damage.
   2. Material shall be stocked out of mud and dirt and proper drainage shall be provided. Structural steel must be protected from damage or soiling by adjacent construction operations.

PART 2 - PRODUCTS

2.1 COMPONENTS

A. Materials:
   1. Angles, Channels, and Miscellaneous steel parts of steel framing systems.
      a. Meet requirements of ASTM A36/A36M.
      b. S, HP, C, or TEE shapes in horizontal or vertical application, together with angles, plates, etc, as shown on Drawings.
   2. Beams 'W' shapes: Meet requirements of ASTM A992/A992M without supplementary requirements.

B. Fabrication:
   1. Requirements: Structural metal shall be product of domestic mill.
   2. ANSI/AISC 360 shall serve as minimum standard.
   3. Fabricate items to be embedded in concrete or masonry according to approved details of work to be connected.

C. Finishes: Shop prime structural steel.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification Of Conditions:
   1. Do not begin structural steel framing erection until structural support components have been installed and are in suitable condition to receive framing.

3.2 ERECTION

A. Special Techniques:
   1. Standards:
      a. AISC's 'Specification for Structural Steel Buildings' and 'Code of Standard Practice for Steel Buildings and Bridges' shall serve as minimum standards. Erection includes setting, aligning, and bracing as necessary.
   2. Do not overload or exceed carrying capacity of any structural steel element during construction period.
   3. Bridging installation shall proceed concurrently with truss erection and be completed before trusses are subjected to construction loads.
      a. Do not remove bridging after construction is complete.
   4. Plates or Channels Embedded in Concrete:
      a. Tack weld bolts to plates or channels to prevent bolts from turning when nuts are tightened.
   5. Immediately after erection, clean completed field connections and damaged surfaces with solvents and hand or power tools. After cleaning, apply corrosion-resistant primer compatible with factory-applied primer.

B. Interface With Other Work:
   1. Furnish items to be embedded in concrete or masonry to Division 03 or 04 respectively in time to be securely tied in place before placing concrete and grout.

3.3 FIELD QUALITY CONTROL

A. Field Tests And Inspections:
   1. General Requirements:
      a. Furnish items to be embedded in masonry to Division 04 in time to be securely tied in place before placing concrete and grout.
   2. Structural Steel - General:
      a. Inspection during fabrication is not required if fabricator is registered and approved to perform such work without inspection. Field testing and field inspection of steel is not required.

END OF SECTION

SECTION 06 1011

WOOD FASTENINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Quality of wood fastening methods and materials used for Rough Carpentry unless specified otherwise.

B. Related Requirements:
   1. Section 05 0523: 'Metal Fastenings' for Quality of bolts used for Rough Carpentry.
   2. Furnishing and installing of other fasteners are specified in individual Sections where installed.

1.2 REFERENCES

A. Reference Standards;
   1. APA-The Engineered Wood Association:
      a. APA AFG-01: Adhesives for Field-Gluing Plywood to Wood Framing (September 1974).
   2. ASTM International:
      a. ASTM A153/A153M-09, 'Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware'.
      b. ASTM D3498-03(2011), 'Standard Specification for Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems'.
      c. ASTM F1667-15, 'Standard Specification for Driven Fasteners: Nails, Spikes, and Staples'.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

A. Description:
   1. Nail Terminology:
      a. When following nail terms are used in relation to this Project, following lengths and diameters will be understood. Refer to nails of other dimensions by actual length and diameter, not by one of listed terms:

Nail Term	Length	Diameter	Length	Diameter
8d Box	2-1/2 inches	0.113 inch	63.5 mm	2.827 mm
8d Common	2-1/2 inches	0.131 inch	63.5 mm	3.389 mm
10d Box	3 inches	0.128 inch	76.2 mm	3.251 mm
10d Common	3 inches	0.148 inch	76.2 mm	3.759 mm
16d Box	3-1/2 inches	0.135 inch	88.9 mm	3.411 mm
16d Sinker	3-1/4 inches	0.148 inch	82.6 mm	3.759 mm
16d Common	3-1/2 inches	0.162 inch	88.9 mm	4.115 mm

B. Materials:
   1. Fasteners:
      a. General:
         1) Fasteners for preservative treated and fire-retardant-treated wood shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronzed, or copper. Coating weights for zinc-coated fasteners shall be in accordance with ASTM A153/A153M.
      b. Nails:
         1) Meet requirements of ASTM F1667.

2) Unless noted otherwise, nails listed on Drawings or in Specifications shall be common nail diameter, except 16d nails, which shall be box diameter.

c. Wood Screws:
1) SDS Screws:
a) Category Four Approved Products. See Section 01 6200 for definitions of categories.
(1) SDS Screws by Simpson Strong Tie Co, Dublin, CA www.strongtie.com.
2) All Other: Standard type and make for job requirements.

d. Powder-Actuated Fasteners:
1) Type One Quality Standard: Hilti X-DNI 62P8.
2) Manufacturers:
a) Hilti, Tulsa, OK www.us.hilti.com.
b) Redhead Division of ITW, Wood Dale, IL www.itw-redhead.com and Markham, ON www.itwconstruction.ca.
c) Equals as approved by Architect through shop drawing submittal before installation. See Section 01 6200.

2. Adhesives:
a. Construction Mastics:
1) Meet requirements of 'APA-The Engineered Wood Association' Specification AFG-01 or ASTM D3498.
2) Use phenol-resorcinol type for use on pressure treated wood products.

3. Framing Anchors:
a. Framing anchors and associated fasteners in contact with preservative hot dipped zinc-coated galvanized steel or stainless steel. Do not use stainless steel items with galvanized items.
b. Type Two Acceptable Products:
1) KC Metals Inc, San Jose, CA www.kcmetals.com.
2) Simpson Strong Tie Co, Dublin, CA www.strongtie.com.
3) United Steel Products Co Inc (USP), Montgomery, MN www.uspconnectors.com.
4) Equals as approved by Architect through shop drawing submittal before installation. See Section 01 6200.

PART 3 - EXECUTION

3.1 ERECTION

A. Secure one Manufacturer approved fastener in each hole of framing anchor that bears on framing member unless approved otherwise in writing by Architect.

B. Provide washers with bolt heads and with nuts bearing on wood.

END OF SECTION

SECTION 06 1100

WOOD FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Furnish and install wood framing and blocking as described in Contract Documents.

B. Products Installed But Not Furnished Under This Section:
   1. Miscellaneous structural steel elements.
   2. Wood panel product sheathing.

C. Related Requirements:
   1. Section 06 1636: 'Wood Panel Product Sheathing'.
   2. Sections under 06 4000 Heading: 'Architectural Woodwork' for wall blocking requirements.

1.2 REFERENCES

A. Reference Standards:
   1. American Lumber Standard Committee (ALSC) (Maintains NIST standard):
      a. Voluntary Product Standard:
         1) PS 20-15, 'American Softwood Lumber Standard'.
   2. National Institute of Standards and Technology (NIST), U. S. Department of Commerce:
      a. Voluntary Product Standard DOC PS 20-15, 'American Softwood Lumber Standard'.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Delivery And Acceptance Requirements:
   1. Protect lumber and sheathing and keep under cover in transit and at job site.
   2. Do not deliver material unduly long before it is required.

B. Storage And Handling Requirements:
   1. Store lumber and sheathing on level racks and keep free of ground to avoid warping.
   2. Stack to insure proper ventilation and drainage.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Dimension Lumber:
   1. Design Criteria:
      a. Meet requirements of PS 20 and National Grading Rules for softwood dimension lumber.
      b. Bear grade stamp of WWPA, SPIB, or other association recognized by American Lumber Standards Committee identifying species of lumber by grade mark or by Certificate of Inspection.
      c. Lumber 2 inches (50 mm) or less in nominal thickness shall not exceed 19 percent in moisture content at time of fabrication and installation and be stamped 'S-DRY', 'K-D', or 'MC15'.

B. Lumber Ledgers:

1. Design Criteria:
   a. No. 2 Douglas Fir-Larch, or Southern Pine.

C. See drawings for additional requirements.

2.2 ACCESSORIES

A. Folding Partition Headers:
   1. New, unused plywood conforming to plywood specification requirements of Section 06 1636.

B. Blocking:
   1. Sound lumber without splits, warps, wane, loose knots, or knots larger than 1/2 inch (13 mm).

C. Furring Strips:
   1. Utility or better.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:
   1. Use preservative treated wood for wood members in contact with concrete or masonry, including wall, sill, and ledger plates, door and window subframes and bucks, etc.

B. Interface With Other Work:
   1. Coordinate with other Sections for location of blocking required for installation of equipment and building specialties. Do not allow installation of gypsum board until required blocking is in place.
   2. Where manufactured items are to be installed in framing, provide rough openings of dimensions within tolerances required by manufacturers of such items. Confirm dimensions where not shown on Contract Drawings.

C. Tolerances:
   1. Walls:
      a. 1/4 inch (6 mm) in 20 feet (6 meters), non-cumulative in length of wall.
      b. 1/8 inch (3 mm) in 10 feet (3 meters) with 1/4 inch (6 mm) maximum in height of wall.
      c. Distances between parallel walls shall be 1/4 inch (6 mm) maximum along length and height of wall.

D. Walls:
   1. Openings: Single, bearing stud supporting header and one adjacent (king) stud continuous between top and bottom plates, unless shown otherwise.
   2. Corners And Partition Intersections: Triple studs.
   3. Top Plates In Bearing Partitions: Doubled or tripled and lapped. Stagger joints at least 48 inches (1 200 mm).
   4. Ends Of Stud Wall To Masonry. Use one of the following methods:
      a. Connect with 1/2 inch (13 mm) machine bolts 6 inches (150 mm) from top, 6 inches (150 mm) from bottom, and 48 inches (1 200 mm) maximum on center. Use three bolts minimum in height of 6 foot (1 800 mm) or higher wall.
      b. Secure wood to masonry using continuous 1/4 inch (6 mm) minimum bead of construction adhesive and powder actuated fasteners installed at 32 inches (800 mm) on center minimum.
   5. Firestops:
      a. Horizontal or vertical concealed spaces in walls, light coves, soffits, drop ceilings, and other features over 10 feet (3 000 mm) in length or height, and at stairs, ceiling levels, floor levels, and other junctures of horizontal to vertical concealed spaces.
   6. Nailing:

a. Stud to plate:

2 by 4 inch nominal	38 by 89 mm	End nail, two 16d OR toe nail, four 8d
2 by 6 inch nominal	38 by 140 mm	End nail, three 16d OR toe nail, four 8d
2 by 8 inch nominal	38 by 184 mm	End nail, four 16d OR toe nail, six 8d
2 by 10 inch nominal	38 by 235 mm	End nail, five 16d OR toe nail, six 8d
1-3/4 by 5-1/2 inch LVL	44 by 140 mm LVL	End nail, three 16d OR toe nail, four 8d
1-3/4 by 7-1/4 inch LVL	44 by 184 mm LVL	End nail, four 16d OR toe nail, six 8d
1-3/4 by 9-1/4 inch LVL	44 by 235 mm LVL	End nail, five 16d OR toe nail, six 8d
1-3/4 by 11-1/4 inch LVL	44 by 286 mm LVL	End nail, six 16d OR toe nail eight 8d

b. Top plates: Spiked together, 16d, 16 inches (400 mm) on center.
c. Top plates: Laps, lap members 48 inches (1200 mm) minimum and nail with 16d nails 4 inches (100 mm) on center
d. Top plates: Intersections, three 16d.
e. Backing And Blocking: Three 8d, each end.
f. Corner studs and angles: 16d, 16 inches (400 mm) on center.

E. Folding Partition Structural Headers:
1. Provide for double or single track as required by Folding Partition Manufacturer.
2. Stagger joints in plywood.
3. Glue plywood layers together with continuous bead 2 inches (50 mm) in from each edge and every 4 inches (100 mm) on center between. In addition, Screw layers together with 1/4 inch (6.4 mm) by 3 inch (76 mm) screws one inch (25 mm) in from each edge and 12 inches (300 mm) on center for length of header.
4. Secure headers and header backing to structure as described in Contract Documents.

F. Accessory / Equipment Mounting And Gypsum Board Back Blocking (nailers):
1. Furnish and install blocking in wood framing required for hardware, specialties, equipment, accessories, and mechanical and electrical items, etc.

G. Furring Strips:
1. On Wood: Nail or screw as required to secure firmly.
   a. Ceiling:
      1) Attach furring strips to the underside of structural elements with #8 wood screws, of length to penetrate wood framing 1 inch (25 mm) minimum.
2. On Masonry:
   a. Back up furring strips on exterior walls or walls in contact with earth with 15 lb (6.8 kg) felt strip.
   b. Nail at 12 inches (300 mm) on center maximum.

END OF SECTION

SECTION 06 1636

WOOD PANEL PRODUCT SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Furnish and install wood panel product sheathing required for accordion folding partition headers as described in Contract Documents.

B. Related Requirements:
   1. Section 01 0000: 'General Requirements':
      a. Section 01 4000: 'Quality Requirements' for administrative and procedural requirements for quality assurance and quality control.
      b. Section 01 4301: 'Quality Assurance – Qualifications' establishes minimum qualification levels required.
      c. Section 01 6200: Administrative and procedural requirements for product options.
   2. Section 06 1100: 'Wood Framing'.

1.2 REFERENCES

A. Association Publications:
   1. Council of American Structural Engineers. CASE Form 101: *Statement of Special Inspections*. Washington, DC: CASE, 2001. (c/o American Council of Engineering Companies, 1015 15th St., NW, Washington, DC 20005; 202-347-7474; www.acec.org).
   2. National Institute of Standards and Technology (NIST), U. S. Department of Commerce:
      a. Voluntary Product Standard DOC PS 1-09. 'Structural Plywood'.
      b. Voluntary Product Standard DOC PS 2-04. 'Performance Standard for Wood-Based Structural-Use Panels'.
   3. The Engineered Wood Association (APA), Tacoma, WA www.apawood.org.
      a. Performance Rated Panels, 'Product Guide' (for products bearing the APA trademark) December 2011.
      b. Voluntary Product Standard:
         1) PS 1-09. 'Structural Plywood'.
         2) PS 2-04. 'Performance Standard for Wood-Based Structural-Use Panels'.
      c. PRP-108 'Performance Standards and Policies for Structural-Use Panels'.
   4. TECO, Cottage Grove, WI www.tecotested.com.
      a. TECO PRP-133: ('Fire Rated Assemblies – OSB substitution for plywood in UL fire-rated assemblies that specify plywood).

B. Definitions:
   1. Field Quality Control: Testing, Inspections, Special Testing and Special Inspections to assure compliance to Contract Documents.
   2. Inspection/Special Inspection: Inspection of materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with approved construction documents and referenced standards:
      a. Inspection: Not required by code provisions but may be required by Contract Documents.
      b. Special Inspection: Required by code provisions and by Contract Documents.
      c. Inspection-Continuous: Full-time observation of the Work requiring inspection by approved inspector who is present in area where the Work is being performed.
      d. Inspection-Periodic: Part-time or intermittent observation of the Work requiring inspection by approved inspector who is present in area where the Work has been or is being performed and at completion of the Work.

3. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform particular construction operation, including installation, erection, application, and similar operations.
4. Observation: Visual observation of building / site elements or structural system by registered design professional for general conformance to approved construction documents at significant construction stages and at completion. Observation does not include or waive responsibility for performing inspections or special inspections.
5. Owner's Representative: Owner's Designated Representative (Project Manager or Facilities Manager) who will have express authority to bind Owner with respect to all matters requiring Owner's approval or authorization.
6. Product Testing: Tests and inspections that are performed by testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
7. Quality Assurance: Testing, Inspections, Special Testing and Special Inspections provided for by Owner.
8. Quality Control: Testing, Inspections, Special Testing and Special Inspections provided for by Contractor.
9. Special Inspection: See Inspection.
10. Testing Agency: Entity engaged to perform specific tests, inspections, or both.
11. Verification: Act of reviewing, inspecting, testing, etc. to establish and document that product, service, or system meets regulatory, standard, or specification requirements.

C. Reference Standards:
1. International Code Council (IBC) (2015):
   a. IBC Chapter 17, 'Special Inspections And Tests'.
      1) Section 1704, 'Special Inspections And Tests, Contractor Responsibility And Structural Observations'.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Delivery And Acceptance Requirements:
1. Do not deliver material unduly long before it is required.
2. Protect sheathing and keep under cover in transit and at job site.

B. Storage And Handling Requirements:
1. Store sheathing on level racks and keep free of ground.
2. Stack to insure proper ventilation and drainage.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

A. Performance:
1. Design Criteria:
   a. Meet requirements of PS 1, PS 2, or PRP-133 (TECO). Except where plywood is specifically indicated on Construction Drawings, oriented strand board (OSB) is acceptable.

B. Materials:
1. Sheathing:
   a. Sheathing shall bear grade stamp from American Plywood Association (APA) or equal grading organization.
   b. Sheathing shall not exceed 18 percent moisture content when fabricated or more than 19 percent when installed in Project.
   c. Sheathing 23/32 inch (18.3 mm) thick and thicker used for single-layer subflooring shall be tongue and groove.

d. Sheathing used for same purpose shall be of same thickness. In all cases, thickness specified is minimum required regardless of span rating.
e. Minimum span ratings for given thicknesses shall be as follows:

Thickness		Span Rating
3/8 inch	9.5 mm	24 / 0
7/16 inch nominal	11 mm nominal	24 / 16
15/32 inch actual	11.9 mm actual	32 / 16
1/2 inch nominal	12.5 mm nominal	32 / 16
19/32 inch actual	15.1 mm actual	40 / 20
5/8 inch nominal	15.9 mm nominal	40 / 20
23/32 inch actual	18.3 mm actual	48 / 24
3/4 inch nominal	19 mm nominal	48 / 24

2.2 ACCESSORIES

A. Nails:
1. As indicated on Drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:
1. Top of nail heads shall be flush with sheathing surface.
2. Use of edge clips to provide spacing between sheathing panels is acceptable.

B. Wall Sheathing:
1. Spacing:
   a. Provide 1/8 inch (3 mm) space between sheets at end and edge joints.
2. Edge Bearing And Blocking:
   a. Panel edges shall bear on framing members and butt along their center lines.
   b. Back block panel edges, which do not bear on framing members, with 2 inch nominal (45 mm) framing.
3. Nail Spacing:
   a. As indicated on Drawings.
   b. Place nails not less than 3/8 inch (9.5 mm) in from edge.
4. Thickness:
   a. As indicated on Drawings.
5. Do not install any piece of wall sheathing with shortest dimension of less than 12 inches (300 mm).

END OF SECTION

SECTION 06 4001

COMMON ARCHITECTURAL WOODWORK REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. General standards for materials and fabrication of Architectural Woodwork and for hardware associated with Architectural Woodwork.

B. Related Requirements:
   1. Section 06 1100: 'Wood Framing' for furring and blocking.
   2. Section 06 4512: ‘Architectural Woodwork Wood Trim’.
   3. Section 09 9324: ‘Interior Clear-Finished Hardwood’ for filling of nail holes and finishing.

1.2 REFERENCES

A. Association Publications:
   1. Architectural Woodwork Institute / Architectural Woodwork Manufacturers Association of Canada / Woodwork Institute, 46179 Westlake Drive, Suite 120, Potomac Falls, VA www.awinet.org.
      a. Architectural Woodwork Standards (AWS), 2nd Edition, 2014.

B. Definitions:
   1. Grade: Unless otherwise noted, this term means Grade rules for Economy, Custom, and/or Premium Grade:
      a. Custom Grade: Typically specified for and adequately covers most high-quality architectural woodwork, providing a well-defined degree of control over a project’s quality of materials, workmanship, or installation.

1.3 QUALITY ASSURANCE

A. Qualifications: Requirements of Section 01 4301 applies, but not limited to following:
   1. Fabricator:
      a. Fabricator Firm specializing in performing work of this section.
         1) Firm experience in supplying products indicated for this Project.
         2) Firm with sufficient production capacity to produce required units.
         3) Firm will comply with specifications and Contract Documents for this Project.
         4) Minimum five (5) years experience in Woodwork installations.
         5) Minimum five (5) satisfactorily completed installations in past three (3) years of projects similar in size, scope, and installation procedures required for this project before bidding.
      b. Upon request by Architect or Owner, submit documentation.

1.4 DELIVERY, HANDLING, AND STORAGE

A. Delivery And Acceptance Requirements:
   1. Assemble architectural woodwork at Architectural Woodwork Fabricator's plant and deliver ready for erection insofar as possible.
   2. Protect architectural woodwork from moisture and damage while in transit to job site.
   3. Report damaged materials received within two (2) days from delivery at project site.

B. Storage And Handling Requirements:

1. Unload and store in place where it will be protected from moisture and damage and convenient to use.

PART 2 - PRODUCTS

2.1 FABRICATORS

A. Approved Fabricators. See Section 01 4301:
   1. Meet Quality Assurance Fabricator Qualifications as specified in Part 1 of this specification.

2.2 ASSEMBLIES

A. Design Criteria:
   1. General:
      a. AWS Custom Grade is minimum acceptable standard, except where explicitly specified otherwise, for materials, construction, and installation of architectural woodwork.
   2. Materials:
      a. Lumber:
         1) Grade:
            a) No defects in boards smaller than 600 sq in (3 871 sq cm).
            b) One defect per additional 150 sq inches (968 sq cm) in larger boards.
            c) Select pieces for uniformity of grain and color on exposed faces and edges.
            d) No mineral grains accepted.
         2) Allowable Defects:
            a) Tight knots not exceeding 1/8 inch (3 mm) in diameter. No loose knots permitted.
            b) Patches (dutchmen) not apparent after finishing when viewed beyond 18 inches (450 mm).
            c) Checks or splits not exceeding 1/32 inch by 3 inches (1 mm by 75 mm) and not visible after finishing when viewed beyond 18 inches (450 mm).
            d) Stains, pitch pockets, streaks, worm holes, and other defects not mentioned are not permitted.
            e) Normal grain variations, such as cats eye, bird's eye, burl, curl, and cross grain are not considered defects.
         3) Use maximum lengths possible, but not required to exceed 10 feet (3 meters) without joints. No joints shall occur closer than 72 inches (1 800 mm) in straight runs exceeding 18 feet (3 600 mm). Runs between 18 feet (3 600 mm) and 10 feet (3 meters) may have no more than one joint. No joints shall occur within 72 inches (1 800 mm) of outside corners nor within 18 inches (450 mm) of inside corners.
         4) Moisture content shall be six (6) percent maximum at fabrication. No opening of joints due to shrinkage is acceptable.

B. Fabrication:
   1. Follow Architectural Woodwork Standards (AWS) for fabrication of Architectural Woodwork.
   2. Tolerances:
      a. No planer marks (KCPI) allowed. Sand wood members and surfaces with 100 grit or finer.
      b. Maximum Gap: None allowed.
      c. Flushness Variation: 0.015 inch (0.4 mm) maximum.
      d. Sanding Cross Scratches: 1/4 inch (6 mm) maximum.
      e. Plug screw holes. Screw locations not to be visible beyond 18 inches (450 mm).
   3. Fabricate work in accordance with measurements taken on job site.
   4. 'Ease' sharp corners and edges of exposed members to promote finishing and protect users from slivers. Radius of 'easing' shall be uniform throughout Project and between 1/32 and 1/16 of an inch (0.8 and 1.6 of a millimeter).
   5. Fabricate so veneer grain is vertical.
   6. Joints:
      a. Use lumber pieces with similar grain pattern when joining end to end.

b. Compatibility of grain and color from lumber to panel products is required.

7. Install hardware in accordance with Manufacturer's directions. Leave operating hardware operating smoothly and quietly.
8. Remove or repair damaged surface of or defects in exposed finished surfaces of architectural woodwork to match adjacent similar undamaged surface.

PART 3 - EXECUTION: Not Used

END OF SECTION

SECTION 06 4512

ARCHITECTURAL WOODWORK WOOD TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Products Furnished But Not Installed Under This Section:
   1. Accordion folding partition hardwood jambs and trim.
   2. Chair rails.
   3. Hardwood base.

B. Related Requirements:
   1. Section 06 1100: 'Wood Framing' for wall blocking required for Wood Trim.
   2. Section 06 4001: 'Common Architectural Woodwork Requirements':
      a. General standards for materials and fabrication of Architectural Woodwork.
   3. Section 09 9324: ‘Interior Clear-Finished Hardwood’.
   4. Section 10 2233: 'Accordion Folding Partitions'.

1.2 REFERENCES

A. Association Publications:
   1. Architectural Woodwork Institute / Architectural Woodwork Manufacturers Association of Canada / Woodwork Institute, 46179 Westlake Drive, Suite 120, Potomac Falls, VA www.awinet.org.
      a. Architectural Woodwork Standards (AWS), 2nd Edition, 2014.

B. Definitions:
   1. Grade: Unless otherwise noted, this term means Grade rules for Economy, Custom, and/or Premium Grade.
      a. Custom Grade: Typically specified for and adequately covers most high-quality architectural woodwork, providing a well-defined degree of control over a project’s quality of materials, workmanship, or installation.
   2. Plain Slicing: Most commonly used for hardwood plywood. The log is cut in half, and one half is placed onto a carriage and moved up and down past a fixed knife to produce the veneers. Veneer is sliced parallel to the pith of the log and approximately tangent to the growth rings to achieve flat-cut veneer. Each piece is generally placed in a stack and kept in order. One half log, sliced this way, is called a “flitch".
   3. Plain-Sawn: A hardwood figure developed by sawing a log lengthwise at a tangent to the annual growth rings. It appears as U-shaped or straight markings in the board’s face.
   4. Running Trim: Generally combined in the term “standing and running trim” and refers to random, longer length trims delivered to the jobsite (e.g., baseboard, chair rail, crown molding).

PART 2 - PRODUCTS

2.1 MATERIALS

A. Manufacturers:
   1. Approved Fabricators. See Section 06 4001 for Approved Fabricators.

B. Performance / Design Criteria: Conform to requirements of Section 06 4001 ‘Common Architectural Woodwork Requirements’.
   1. Glue: Waterproof and of best quality.
   2. Factory-finish to match Owner selected sample as specified in Section 09 9324.

C. Architectural Woodwork Wood Trim:
   1. Interior Hardwood For Transparent Finish:
      a. Design Criteria:
         1) Solid wood shall be plain sawn Red Oak.
         2) Finish to match Owner selected sample as specified in Section 09 9324.
      b. Match existing Project Color Scheme:
         1) Control Sample provided by Owner:
            a) Control Sample will be existing wood item from Project.

2.2 SOURCE QUALITY CONTROL

A. Inspections:
   1. Clear Finished Hardwood:
      a. Color matches Owner provided sample specified in Section 09 9324.

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 09 2900

GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Furnish and install gypsum board as described in Contract Documents.

B. Related Requirements:
   1. Section 09 9413: 'Interior Textured Finishing'.

1.2 REFERENCES

A. Definitions:
   1. Accessories: Metal or plastic beads, trim, or moulding used to protect or conceal corners, edges, or abutments of the gypsum board construction.
   2. Drywall Primer: Paint material specifically formulated to fill the pores and equalize the suction difference between gypsum board surface paper and the compound used on finished joints, angles, fastener heads, and accessories and over skim coatings.
   3. Skim Coat: Either a thin coat of joint compound trowel applied, or a material manufactured especially for this purpose and applied in accordance with manufacturer's recommendations, over the entire surface.
   4. Texturing: Regular or irregular patterns typically produced by applying a mixture of joint compound and water, or proprietary texture materials including latex base texture paint, to a gypsum board surface previously coated with drywall primer.

B. Reference Standards:
   1. ASTM International:
      a. ASTM C11-15, 'Standard Terminology Relating to Gypsum and Related Building Materials and Systems'.
      b. ASTM C475/C475M-15, 'Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board'.
      c. ASTM C840-13, 'Standard Specification for Application and Finishing of Gypsum Board'.
      d. ASTM C1002-14, 'Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs'.
      e. ASTM C1047-14a, 'Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base'.
      f. ASTM C1178/C1178M-13, 'Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel'.
      g. ASTM C1396/C1396M-14, 'Standard Specification for Gypsum Board'.
      h. ASTM E84-15, 'Standard Test Method for Surface Burning Characteristics of Building Materials'.
      i. ASTM E119-15, 'Standard Test Method for Fire Tests of Building Construction and Materials'.
   2. Gypsum Association:
      a. GA-214-15, 'Recommended Levels of Gypsum Board Finish'.
      b. GA-216-10: 'Application and Finishing of Gypsum Panel Products'.
      c. GA-600-15, 'Fire Reference Design Manual'.
      d. GA-801-07, 'Handling and Storage of Gypsum Panel Products: A Guide for Distributors, Retailers, and Contractors'.
   3. International Building Code (IBC) (2015 or latest approved version):

a. Chapter 25, 'Gypsum Board And Plaster'.
4. Underwriters Laboratories, Inc.
a. UL 263: 'Test Method for Fire Tests of Building Construction and Materials' (14th Edition).
b. UL 723: 'Test for Surface Burning Characteristics of Building Materials; (10th Edition).

1.3 DELIVERY, STORAGE, AND HANDLING

A. General:
1. Following recommendations of GA-801 Guide for Handling and Storage of Gypsum Panel Products unless local, state or federal laws or agency rules differing from the recommendations shall take precedence.

B. Delivery And Acceptance Requirements:
1. Deliver materials in original packages, containers, or bundles bearing brand name, applicable standard designation, and Manufacturer's name.

C. Storage And Handling Requirements:
1. Store material under roof and keep dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack gypsum board flat to prevent sagging.

1.4 FIELD CONDITIONS

A. Ambient Conditions:
1. Comply with ASTM C840 or GA-216 requirements, whichever are more stringent:
a. Do not install interior products until installation areas are enclosed and conditioned.
1) Temperature shall be 50 deg F (10 deg C) and 95 deg F (35 deg C) maximum day and night during entire joint operation and until execution of Certificate of Substantial Completion.
2) Provide ventilation to eliminate excessive moisture.
3) Avoid hot air drafts that will cause too rapid drying.
b. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Manufacturers:
1. Manufacturer Contact List:
a. American Gypsum, Dallas, TX www.americangypsum.com.
b. CertainTeed Gypsum, Inc; Tampa, FL www.certainteed.com.
c. Georgia Pacific, Atlanta, GA www.gp.com.
d. National Gypsum, Charlotte, NC www.nationalgypsum.com.
e. Pabco Gypsum, Newark, CA www.pabcogypsum.com.
f. United States Gypsum Co, Chicago, IL www.usg.com.

B. Materials:
1. Interior Gypsum Board:
a. General:
1) Size:
a) Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.
2) Class Two Quality Standard:

a) Core: Fire-resistant rated gypsum core.
b) Complies with Type X requirements of ASTM C1396/C1396M (Section 5).
c) Surface paper: Face paper suitable for painting.
d) Long edges: Tapered edge.
e) Overall thickness: 5/8 inch (15.9 mm).

2.2 ACCESSORIES

A. Manufacturers:
1. Manufacturer Contact List:
a. Kinetics Noise Control, Dublin, OH www.kineticsnoise.com.
b. Magnum Products, Lenaxa, KS www.levelcoat.com.
c. National Gypsum, Charlotte, NC www.nationalgypsum.com.
d. Soundproofing Co, San Marcos, CA www.soundproofing.org.
e. United States Gypsum Co, Chicago, IL www.usg.com.
f. Westpac Materials Inc, Orange, CA www.westpacmaterials.com.
g. Wm. Zinsser & Co, Somerset, NJ www.zinsser.com.
2. Gypsum Board Mounting Accessories:
a. Furring Channels:
1) Class Two Quality Standards. See Section 01 6200 for definitions:
a) Walls: Galvanized DWFC-25.
b) Ceilings: Galvanized DWFC-20.
2) Accessories as required by Manufacturer's fire tests to provide necessary fire ratings.
b. Corner And Edge Trim:
1) Metal, paper-faced metal, paper-faced plastic, or solid vinyl meeting requirements of ASTM C1047. Surfaces to receive bedding cement treated for maximum bonding.
3. Joint Compound:
a. Best grade or type recommended by Board Manufacturer and meeting requirements of ASTM C475/C475M.
1) Use Taping Compound for first coat to embed tape and accessories.
2) Use Taping Compound or All-Purpose Compound for subsequent coats except final coat.
3) Use Finishing Compound for final coat and for skim coat.
4. Joint Reinforcing:
a. Paper reinforcing tape acceptable to Gypsum Board Manufacturer.
5. Fasteners:
a. Bugle head screws meeting requirements of ASTM C1002:
1) Gypsum Board:
a) Type W: For fastening gypsum board to wood members, of length to penetrate wood framing 5/8 inch (15.9 mm) minimum.
b) Type S: For fastening gypsum board to steel framing and ceiling suspension members, of length to penetrate steel framing 3/8 inch (9.5 mm) minimum.

B. Primer / Surfacer On Surfaces To Receive Texturing:
1. Type Two Acceptable Products:
a. Sheetrock First Coat by USG.
b. Prep Coat by Westpac Materials.
c. Level Coat by Magnum Products.
d. Equal as approved by Architect before bidding. See Section 01 6200.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification Of Conditions:

1. Examine substrate and verify framing is suitable for installation of gypsum board.
2. Examine gypsum board before installation. Reject panels that are wet, moisture damaged, and mold damaged.
3. Notify Architect of unsuitable conditions in writing.
   a. Do not install board over unsuitable conditions.
4. Commencement of Work by installer is considered acceptance of substrate.

3.2 INSTALLATION

A. Interface With Other Work:
   1. Coordinate with Division 06 for location of backblocking for edges and ends of gypsum board and for blocking required for installation of equipment and building specialties.
   2. Do not install gypsum board until required blocking is in place.

B. General: Install and finish as recommended in ASTM C840 or GA-216 unless specified otherwise in this Section.

C. Mounting Accessories:
   1. Furring Channels: Apply with screws through flanges into each framing member.

D. Interior Gypsum Board:
   1. General:
      a. Install so trim and reinforcing tape are fully backed by gypsum board. No hollow spaces between pieces of gypsum board over 1/8 inch (3 mm) wide before taping are acceptable.
      b. Rout out backside of gypsum board to accommodate items that extend beyond face of framing, but do not penetrate face of gypsum board, such as metal door frame mounting brackets, etc.
      c. On walls over 108 inches (2 700 mm) high, apply board perpendicular to support
      d. Butt edges in moderate contact. Do not force in place. Shim to level.
      e. Leave facings true with joint, finishing flush. Vertical work shall be plumb and ceiling surfaces level.
      f. Scribe work closely:
         1) Keep joints as far from openings as possible.
         2) If joints occur near an opening, apply board so vertical joints are centered over openings.
         3) No vertical joints shall occur within 8 inches (200 mm) of external corners or openings.
      g. Install board tight against support with joints even and true. Tighten loose screws.
      h. Caulk perimeter joints in sound insulated rooms with specified acoustical sealant.
   2. Ceilings:
      a. Apply ceilings first using minimum of two (2) men.
      b. Use board of length to give minimum number of joints.
      c. Apply board perpendicular to support.
   3. Fastening:
      a. Apply from center of board towards ends and edges.
      b. Apply screws 3/8 inch (9.5 mm) minimum from ends and edges, one inch (25 mm) maximum from edges, and 1/2 inch (13 mm) maximum from ends.
      c. Spacing:
         1) Ends: Screws not over 7 inches (175 mm) on center at edges where blocking or framing occurs.
         2) Wood Framed Walls And Ceilings: Screws 7 inches (175 mm) on center in panel field.
         3) Metal Framed Walls: Screws 12 inches (300 mm) on center in panel field.
      d. Set screw heads 1/32 inch (0.8 mm) below plane of board, but do not break face paper. If face is accidentally broken, apply additional screw 2 inches (50 mm) away.
      e. Screws on adjacent ends or edges shall be opposite each other.
      f. Drive screws with shank perpendicular to face of board.
   4. Trim:
      a. Corner Beads:

1) Attach corner beads to outside corners.
   a) Attach metal corner bead with staples spaced 4 inches (100 mm) on center maximum and flat taped over edges of corner bead. Also, apply screw through edge of corner bead where wood trim will overlay corner bead.
   b) Set paper-faced trim in solid bed of taping compound.

b. Edge Trim: Apply where gypsum board abuts dissimilar material.

5. Finishing:
   a. General:
      1) Tape and finish joints and corners throughout building as specified below to correspond with final finish material to be applied to gypsum board. When sanding, do not raise nap of gypsum board face paper or paper-faced trim.
      2) First Coat:
         a) Apply tape over center of joint in complete, uniform bed of specified taping compound and wipe with a joint knife leaving a thin coating of joint compound. If metal corner bead is used, apply reinforcing tape over flange of metal corner bead and trim so half of tape width is on flange and half is on gypsum board.
         b) Completely fill gouges, dents, and fastener dimples.
         c) Allow to dry and sand lightly if necessary to eliminate high spots or excessive compound.
      3) Second Coat:
         a) Apply coat of specified joint compound over embedded tape extending 3-1/2 inches (88 mm) on both sides of joint center. Use finishing compound only if applied coat is intended as final coat.
         b) Re-coat gouges, dents, and fastener dimples.
         c) Allow to dry and sand lightly to eliminate high spots or excessive compound.
      4) Third Coat: Apply same as second coat except extend application 6 inches (150 mm) on both sides of joint center. Allow to dry and sand with fine sandpaper or wipe with damp sponge.
      5) Fourth Coat: Apply same as second coat except extend application 9 inches (425 mm) on both sides of joint center. Allow to dry and sand with fine sandpaper or wipe with damp sponge.
   a. Finishing Levels: Finish panels to levels indicated below and according to ASTM C840, GA-214 and GA-216:
      1) Gypsum Board Surfaces to Receive: Painted Texturing - Section 09 9413: 'Interior Textured Finishing':
         a) GA-214 Level 4: 'All and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over all flat joints and one separate coat of joint compound applied over interior angles. Fastener heads and accessories shall be covered with three separate coats of joint compound. All joint compound shall be smooth and free of tool marks and ridges. Coat prepared surface with specified primer'.

3.3 FIELD QUALITY CONTROL

A. Non-Conforming Work:
   1. Remove and replace panels that are wet, moisture damaged, and mold damaged.
      a. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
      b. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

3.4 CLEANING

A. Remove from site debris resulting from work of this Section including taping compound spills.

END OF SECTION

SECTION 09 9001

COMMON PAINTING AND COATING REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Common procedures and requirements for field-applied painting and coating.

B. Related Requirements:
   1. Section 05 0503: 'Shop-Applied Metal Coatings' for quality of shop priming of steel and iron.
   2. Sections under 09 9000 heading ‘Paints and Coatings’.

1.2 REFERENCES

A. Definitions:
   1. Damage Caused By Others: Damage caused by individuals other than those under direct control of Painting Applicator (MPI(a), PDCA P1.92).
   2. Gloss Levels:
      a. Specified paint gloss level shall be defined as sheen rating of applied paint, in accordance with following terms and values, unless specified otherwise for a specific paint system.

Gloss Level ‘1’	Traditional matte finish - flat	0 to 5 units at 60 degrees to 10 units maximum at 85 degrees.
Gloss Level ‘2’	High side sheen flat - 'velvet-like' finish	10 units maximum at 60 degrees and 10 to 35 units at 85 degrees.
Gloss Level ‘3’	Traditional 'eggshell-like finish	10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees.
Gloss Level ‘4’	'Satin-like' finish	20 to 35 units at 60 degrees and 35 units minimum at 85 degrees.
Gloss Level ‘5’	Traditional semi-gloss	35 to 70 units at 60 degrees.
Gloss Level ‘6’	Traditional gloss	70 to 85 units at 60 degrees.
Gloss Level “7’	High gloss	More than 85 units at 60 degrees.

   3. Properly Painted Surface:
      a. Surface that is uniform in appearance, color, and sheen and free of foreign material, lumps, skins, runs, sags, holidays, misses, strike-through, and insufficient coverage. Surface free of drips, spatters, spills, and overspray caused by Paint Applicator. Compliance will be determined when viewed without magnification at a distance of 5 feet (1.50 m) minimum under normal lighting conditions and from normal viewing position (MPI(a), PDCA P1.92).
   4. Latent Damage: Damage or conditions beyond control of Painting Applicator caused by conditions not apparent at time of initial painting or coating work.

B. Reference Standards:
   1. The latest edition of the following reference standard shall govern all painting work:
      a. MPI(a), 'Architectural Painting Specification Manual' by Master Painters Institute (MPI), as issued by local MPI Accredited Quality Assurance Association having jurisdiction.
      b. MPI(r), 'Maintenance Repainting Manual' by Master Painters Institute (MPI), as issued by local MPI Accredited Quality Assurance Association having jurisdiction.

1.3 SUBMITTALS

A. Action Submittals:
1. Product Data:
a. Include following information for each painting product, arranged in same order as in Project Manual.
1) Manufacturer's cut sheet for each product indicating ingredients and percentages by weight and by volume, environmental restrictions for application, and film thicknesses and spread rates.
2) Provide one (1) copy of 'MPI Approved Products List' showing compliance for each MPI product specified.
a) MPI Information is available from MPI Approved Products List using the following link: http://www.paintinfo.com/mpi/approved/index.shtml.
3) Confirmation of colors selected and that each area to be painted or coated has color selected for it.

B. Informational Submittals:
1. Manufacturer Instructions:
a. Manufacturer's substrate preparation instructions and application instruction for each painting system used on Project.
2. Qualification Statement:
a. Applicator:
1) Provide Qualification documentation if requested by Architect or Owner.

C. Closeout Submittals:
1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
a. Record Documentation:
1) Manufacturer's documentation:
a) Manufacturer's cut sheet for each component of each system.

1.4 QUALITY ASSURANCE

A. Regulatory Agency Sustainability Approval:
1. Conform to work place safety regulations and requirements of those authorities having jurisdiction for storage, mixing, application and disposal of all paint and related hazardous materials.
2. Paint and painting materials shall be free of lead and mercury, and have VOC levels acceptable to local jurisdiction.
3. Master Painters Institute (MPI) Standards:
a. Products: Comply with MPI standards indicated and listed in 'MPI Approved Products List'.
b. Preparation and Workmanship: Comply with requirements in 'MPI Architectural Painting Specification Manual' for products and coatings indicated.

B. Qualifications:
1. Applicator: Requirements of Section 01 4301 applies, but not limited to following:
a. Minimum five (5) years experience in painting installations.
b. Minimum five (5) satisfactorily completed projects of comparable quality, similar size, and complexity in past three (3) years before bidding.
c. Maintain qualified crew of painters throughout duration of the Work.
d. Upon request, submit documentation.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery And Acceptance Requirements:
1. Deliver specified products in sealed, original containers with Manufacturer's original labels intact on each container.
2. Deliver amount of materials necessary to meet Project requirements in single shipment.

B. Storage And Handling Requirements:
   1. Store materials in single place.
   2. Keep storage area clean and rectify any damage to area at completion of work of this Section.
   3. Maintain storage area at 55 deg F (13 deg C) minimum.

1.6 FIELD CONDITIONS

A. Ambient Conditions:
   1. Perform painting operations at temperature and humidity conditions recommended by Manufacturer for each operation and for each product for both interior and exterior work.
   2. Apply painting systems at lighting level of 540 Lux (50 foot candles) minimum on surfaces to be painted.
      a. Inspection of painting work shall take place under same lighting conditions as application.
      b. If painting and coating work is applied under temporary lighting, deficiencies discovered upon installation of permanent lighting will be considered latent damage as defined in MPI Manual, PDCA P1-92.

PART 2 - PRODUCTS

2.1 SYSTEMS

A. Performance:
   1. Design Criteria:
      a. Provide materials for use within each coating system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
      b. All materials, preparation and workmanship shall conform to requirements of ‘Architectural Painting Specification Manual’ by Master Painters Institute (MPI).
      c. All paint manufacturers and products used shall be as listed under Approved Product List section of MPI Painting Manual.
      d. Provide Premium Grade systems (2 top coats) as defined in MPI Architectural Painting Specification Manual, except as otherwise indicated.
      e. Where specified paint system does not have Premium Grade, provide Budget Grade.
      f. Provide products of same manufacturer for each coat in coating system.
      g. Where required to meet LEED (Leadership in Energy and Environmental Design) program requirements, use only MPI listed materials having an “L” rating designation.
      h. Color Levels:
         1) Color Level II:
            a) Number and placement of interior and exterior paint colors and gloss levels shall be as defined by Color Level II from MPI Manual, PDCA P3-93 as modified in following paragraph.
            b) No more than one paint color or gloss level will be selected for same substrate within designated interior rooms.

B. Materials:
   1. Materials used for any painting system shall be from single manufacturer unless approved otherwise in writing by painting system manufacturers and by Architect. Include manufacturer approvals in Product Data submittal.
   2. Linseed oil, shellac, turpentine, and other painting materials shall be pure, be compatible with other coating materials, bear identifying labels on containers, and be of highest quality of an approved manufacturer listed in MPI manuals. Tinting color shall be best grade of type recommended by Manufacturer of paint or stain used on Project.

PART 3 - EXECUTION

3.1 APPLICATORS

A. Approved Applicators:
   1. Meet Quality Assurance Applicator Qualifications as specified in Part 1 of this specification.

3.2 EXAMINATION

A. Verification Of Conditions:
   1. Directing applicator to begin painting and coating work will indicate that substrates to receive painting and coating materials have been previously inspected as part of work of other Sections and are complete and ready for application of painting and coating systems as specified in those Sections.

B. Pre-Installation Testing:
   1. Before beginning work of this Section, examine, and test surfaces to be painted or coated for adhesion of painting and coating systems.
   2. Report in writing to Architect of conditions that will adversely affect adhesion of painting and coating work.
   3. Do not apply painting and coating systems until party responsible for adverse condition has corrected adverse condition.

C. Evaluation And Assessment:
   1. Report defects in substrates that become apparent after application of primer or first finish coat to Architect in writing and do not proceed with further work on defective substrate until such defects are corrected by party responsible for defect.

3.3 PREPARATION

A. Protection Of In-Place Conditions:
   1. Protect other finish work and adjacent materials during painting. Do not splatter, drip, or paint surfaces not intended to be painted. These items will not be spelled out in detail but pay special attention to the following:
      a. Do not paint finish copper, bronze, chromium plate, nickel, stainless steel, anodized aluminum, or monel metal except as explicitly specified.
      b. Keep cones of ceiling speakers completely free of paint. In all cases where painting of metal speaker grilles is required, paint without grilles mounted to speakers and without grilles on ceiling.
      c. On existing work where ceiling is to be painted, speakers and grilles are already installed, and ceiling color is not being changed, mask off metal grilles installed on ceiling speakers. If ceiling color is being changed, remove metal grilles and paint, and mask off ceiling speakers.

B. Surface Preparation:
   1. Prepare surfaces in accordance with MPI requirements and requirements of Manufacturer for each painting system specified, unless instructed differently in Contract Documents. Bring conflicts to attention of Architect in writing.
   2. Fill minor holes and cracks in wood surfaces to receive paint or stain.
   3. Surfaces to be painted shall be clean and free of loose dirt. Clean and dust surfaces before painting or finishing.
   4. Do no exterior painting while surface is damp, unless recommended by Manufacturer, nor during rainy or frosty weather. Interior surfaces shall be dry before painting. Moisture content of materials to be painted shall be within tolerances acceptable to Paint Manufacturer.
   5. Sand woodwork smooth in direction of grain leaving no sanding marks. Clean surfaces before proceeding with stain or first coat application.

3.4 APPLICATION

A. Interface With Other Work:
   1. Coordinate with other trades for materials and systems that require painting before installation.
   2. Schedule painting and coating work to begin when work upon which painting and coating work is dependent has been completed. Schedule installation of pre-finished and non-painted items, which are to be installed on painted surfaces, after application of final finishes.

B. Apply sealant in gaps 3/16 inch (5 mm) and smaller between two substrates that are both to be painted or coated. Sealants in other gaps furnished and installed under Section 07 9213.

C. On wood to receive a transparent finish, putty nail holes in wood after application of stain using natural colored type to match wood stain color. Bring putty flush with adjoining surfaces.

D. In multiple coat paint work, tint each succeeding coat with slightly lighter color, but approximating shade of final coat, so it is possible to check application of specified number of coats. Tint final coat to required color.

E. Spread materials smoothly and evenly. Apply coats to not less than wet and dry film thicknesses and at spreading rates for specified products as recommended by Manufacturer.

F. Touch up suction spots after application of first finish coat.

G. Paint shall be thoroughly dry and surfaces clean before applying succeeding coats.

H. Use fine sandpaper between coats as necessary to produce even, smooth surfaces.

I. Make edges of paint adjoining other materials or colors clean, sharp, and without overlapping.

J. Finished work shall be a 'Properly Painted Surface' as defined in this Section.

3.5 FIELD QUALITY CONTROL

A. Non-Conforming Work:
   1. Correct deficiencies in workmanship as required to leave surfaces in conformance with 'Properly Painted Surface,' as defined in this Section.
   2. Correction of 'Latent Damage' and 'Damage Caused By Others,' as defined in this Section, is not included in work of this Section.

3.6 CLEANING

A. General:
   1. As work proceeds and upon completion of work of any painting Section, remove paint spots from floors, walls, glass, or other surfaces and leave work clean, orderly, and in acceptable condition.

B. Waste Management:
   1. Remove rags and waste used in painting operations from building each night. Take every precaution to avoid danger of fire.
   2. Paint, stain and wood preservative finishes and related materials (thinners, solvents, caulking, empty paint cans, cleaning rags, etc.) shall be disposed of subject to regulations of applicable authorities having jurisdiction.
   3. Remove debris caused by work of paint Sections from premises and properly dispose.
   4. Retain cleaning water and filter out and properly dispose of sediments.

END OF SECTION

ATTACHMENTS

PART 4 - PAINT COLOR SCHEDULE

A. Related Requirements:
   1. Section 09 9122 'Interior Painted CMU'.
   2. Section 09 9123 'Interior Painted Gypsum Board-Plaster'.
   3. Section 09 9324 'Interior Clear-Finished Hardwood'.

B. Colors:
   1. Interior:
      a. Interior Clear Finished Wood (See Section 09 9324):
         1) Match other interior clear finished wood building elements.

      b. Interior CMU (See Section 09 9122):
         1) Match existing.

      c. Interior Gypsum Board, Plaster (See Section 09 9123):
         1) Match existing.

SECTION 09 9122

INTERIOR PAINTED CMU

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Preparing and painting existing interior CMU surfaces listed below as described in Contract Documents:
      a. Walls.

B. Related Requirements:
   1. Section 09 9001: 'Common Painting And Coating Requirements':
      a. 'Attachment: Paint Color Schedule' for O&M / R&I Projects.

PART 2 - PRODUCTS

2.1 SYSTEM

A. Manufacturer:
   1. Category Four Approved Products and Manufacturers. See Section 01 6200 for definitions of Categories:
      a. Products listed in edition of MPI Approved Product List current at time of bidding and later are approved, providing they meet VOC requirements in force where Project is located.

B. Description:
   1. All Rooms:
      a. Previously Finished Surfaces: Use MPI(r) REX 4.2H Latex Finish system.

C. Performance:
   1. Design Criteria:
      a. Deteriorated Existing Surfaces: MPI Premium Grade finish requirements.
      b. Sound Existing Surfaces: MPI Custom Grade finish requirements.
      c. Gloss / Sheen Level Required: Gloss Level 5.

D. Materials:
   1. Finish Coats: MPI Product 141: ‘Latex, Interior, High Performance Architectural, Semi-Gloss (MPI Gloss Level 5)’.

PART 3 - EXECUTION

3.1 APPLICATION

A. General: See appropriate paragraphs of Section 09 9001.

B. Existing Painted Surfaces:
   1. Remove deteriorated existing paint by scraping or sanding. Wash surfaces that have been defaced with marking pens, crayons, lipstick, etc, with solvent recommended by Paint Manufacturer. Spot prime such surfaces.
   2. Sand areas of existing sound paint if necessary for bonding of new paint system. Clean existing painted surfaces, sanded or not, with mild soap and water, or with tri-sodium phosphate (TSP).

3. Fill large holes with patching and small holes and cracks with spackle.
4. Apply one coat primer to scraped and sanded areas.
5. Apply one finish coat. Completely cover voids in masonry block but do not fill.

END OF SECTION

SECTION 09 9123

INTERIOR PAINTED GYPSUM BOARD, PLASTER

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Preparing, priming, and finish painting new interior gypsum board and plaster surfaces as described in Contract Documents.
   2. Preparing and painting following existing interior gypsum board and plaster surfaces as described in Contract Documents:
      a. Ceilings.
      b. Soffits.

B. Related Requirements:
   1. Section 09 9001: 'Common Painting And Coating Requirements':
      a. 'Attachment: Paint Color Schedule' for O&M / R&I Projects.
   2. Section 09 9413: 'Interior Textured Finishing' for textured finishes.

PART 2 - PRODUCTS

2.1 SYSTEM

A. Manufacturers:
   1. Category Four Approved Manufacturers and Products. See Section 01 6200 for definitions of Categories.
      a. Products listed in edition of MPI Approved Product List current at time of bidding and later are approved, providing they meet VOC requirements in force where Project is located.

B. Description:
   1. All Rooms:
      a. New Surfaces: Use MPI(a) INT 9.2B Latex Finish system.
      b. Previously Finished Work: Use MPI(r) RIN 9.2B Latex Finish system.

C. Performance:
   1. Design Criteria:
      a. New Surfaces: MPI Premium Grade finish requirements.
      b. Deteriorated Existing Surfaces: MPI Premium Grade finish requirements.
      c. Sound Existing Surfaces: MPI Custom Grade requirements.
      d. Gloss / Sheen Required:
         1) Gloss Level 5.

D. Materials:
   1. Primers:
      a. MPI Product 50, 'Primer Sealer, Latex, Interior'.
   2. Finish Coats:
      a. MPI Product 141, 'Latex, Interior, High Performance Architectural, Semi-Gloss (MPI Gloss Level 5)'.

PART 3 - EXECUTION

3.1 APPLICATION

A. General: See appropriate paragraphs of Section 09 9001.

B. New Surfaces:
   1. Primer: Apply primer to be covered with other paint coats with roller only, or with spray gun and back-rolled.

C. Existing Painted Surfaces:
   1. Remove deteriorated existing paint down to sound substrate by scraping or sanding. Feather edges of existing paint by sanding to be smooth with adjacent surfaces.
   2. Clean surface with mild soap and water, or with tri-sodium phosphate (TSP). Wash surfaces that have been defaced with marking pens, crayons, lipstick, etc, with solvent recommended by Paint Manufacturer. Spot prime such surfaces.
   3. Spackle and tape cracks. Sand to smooth finish and spot prime.
   4. Sand or chemically etch existing painted surface as required to prepare surface to accept new paint.
   5. Re-clean surface.
   6. Apply primer coat.
   7. Apply finish coats.

END OF SECTION

SECTION 09 9324

INTERIOR CLEAR-FINISHED HARDWOOD

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Preparing and finishing of new interior clear finished hardwood as described in Contract Documents.

B. Related Requirements:
   1. Section 06 4512: 'Architectural Woodwork Wood Trim'.
   2. Section 09 9001: 'Common Painting And Coating Requirements':
      a. 'Attachment: Paint Color Schedule' for O&M / R&I Projects.

1.2 REFERENCES

A. Association Publications:
   1. Architectural Woodwork Institute / Architectural Woodwork Manufacturers Association of Canada, 46179 Westlake Drive, Suite 120, Potomac Falls, VA www.awinet.org.
      a. Architectural Woodwork Standards (AWS), 1st Edition, 2009.

PART 2 - PRODUCTS

2.1 SYSTEM

A. Materials:
   1. Stain: MPI 90, 'Stain, Semi-Transparent, for Interior Wood'.
   2. Clear Finish Coats:
      a. Field Finished:
         1) Chemcraft International Inc:
            a) First, Second, And Third Coats: 20 Sheen Opticlear Pre-Catalyzed Lacquer.
         2) ICI Dulux / Trinity:
            a) First Coat: ICE Vinyl Sanding Sealer.
            b) Second And Third Coats: ICI Pre-Catalyzed Lacquer.
         3) Lilly / Valspar:
            a) First, Second, And Third Coats: 20 Sheen Pre-Catalyzed Lacquer 587E208.
         4) Sherwin-Williams:
            a) First Coat: T67F3 Vinyl Sealer.
            b) Second And Third Coats: T77F38 Sherwood Pre-Catalyzed Lacquer DRE.
      b. Mill Finished: Architectural Woodwork finished in a mill may use one (1) coat of Vinyl Sealer and two (2) coats of Conversion Varnish or three (3) coats of Conversion Varnish from one (1) of the approved Finish Manufacturers, as recommended by Finish Manufacturer.
      c. Products meeting testing requirements for finishes of ANSI / KCMA A161.1 may be used upon approval of submission by Architect before use. See Section 01 6200.
   3. Color:
      a. Design Criteria:
         1) Finish to match Owner selected sample.
      b. Approved Finish:
         1) Performance standard: Owner provided sample of existing wood item from existing project to be used as Control Sample.

B. Performance:
   1. Design Criteria: General: See appropriate paragraphs of Section 09 9001.

PART 3 - EXECUTION

3.1 APPLICATION

A. General:
   1. See appropriate paragraphs of Section 09 9001.
   2. Sand entire exposed surface of item to be finished lightly with 120 to 150 non-stearated sandpaper and clean before applying dye or stain.
   3. Apply stain in accordance with Manufacturer's recommendations and as necessary to attain correct color.
   4. Scuff sand with 220 non-stearated sandpaper between application of application stain and first finish coat.
   5. If wood is finished before installation, finish cut ends and other unfinished, exposed surfaces same as previously finished surfaces after installation of wood.

B. Where back-priming is required, apply one coat of finish material.

END OF SECTION

SECTION 09 9413

INTERIOR TEXTURED FINISHING

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Furnish and apply texturing on walls and ceilings as described in Contract Documents.

B. Related Requirements:
   1. Section 09 2900: 'Gypsum Board' for priming.
   2. Section 09 9123: 'Interior Painted Gypsum Board, Plaster' for finish painting.

1.2 REFERENCES

A. Definitions:
   1. Drywall Texture: Compound rolled, sprayed, or troweled onto sheetrock after taping and floating of joints is complete. Uses same material as joint compound, but thinned down with water and applied to wall surface:
      a. Light Orange Peel: Sprayed texture leaves light splatter on walls and ceilings. Resembles peel of orange. If done with fine spray, can be one of the lightest, least noticeable of the texture styles.

1.3 SUBMITTALS

A. Action Submittals:
   1. Samples:
      a. Light Orange Peel Texture:
         1) Provide minimum of three (3) 24 inch (600 mm) square control samples on primed gypsum wallboard of ‘light orange peel’ texture to show possible variations.

1.4 QUALITY ASSURANCE

A. Field Samples:
   1. Before performing work of this Section, prepare control samples.
   2. Architect will inspect control sample following preparation of control sample. When sample is approved, work of this Section may proceed. Approved samples will be kept at site at all times work of this section is being performed.

PART 2 - PRODUCTS

2.1 SYSTEM

A. Manufacturers:
   1. Manufacturer Contact List:
      a. National Gypsum, Charlotte, NC www.nationalgypsum.com.
      b. U S Gypsum Co, Chicago, IL www.usg.com.

B. Materials:
   1. Class Two Quality Standards: See Section 01 6200.

a. ProForm Perfect Spray EM/HF by National Gypsum.
b. Sheetrock Wall & Ceiling Texture by U S Gypsum.

PART 3 - EXECUTION

3.1 APPLICATION

A. Location:
1. Walls:
a. Light Orange Peel Texture.
2. Ceilings:
a. Light Orange Peel Texture.

B. Finishing:
1. Light Orange Peel Texture:
a. After gypsum board is taped and sanded, apply texture. Closely match samples accepted by Architect.
1) After wall has been textured, apply priming and finish paint as specified in Section 09 9123.

END OF SECTION

SECTION 10 2233

ACCORDION FOLDING PARTITIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes But Is Not Limited To:
   1. Coordination, sequencing, and scheduling of Owner-Furnished accordion folding partition installation as described in Contract Documents.

B. Related Requirements:
   1. Section 01 1200: 'Multiple Contract Summary' for furnishing and installation of accordion folding partitions by Owner. This Section establishes quality of materials and installation for information of Contractor, Architect, and Owner's Representatives.
   2. Section 01 4301: 'Quality Assurance – Qualifications' for installer requirements.
   3. Section 06 1100: 'Wood Framing' for folding door header and framing required to receive accordion folding partitions.
   4. Section 06 4512: 'Architectural Woodwork Wood Trim' for folding partition hardwood jambs and trim.
   5. Section 09 9324: Interior Clear-Finished Hardwood' for finishing folding partition hardwood jambs and trim.

1.2 REFERENCES

A. Definitions:
   1. Noise Isolation Class (NIC): Method for rating a partition's ability to block airborne noise transfer.

B. Reference Standards:
   1. ASTM International:
      a. ASTM E90-09, ‘Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.’
      b. ASTM E336-14, ‘Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings.'
      c. ASTM E413-10, 'Classification for Rating Sound Insulation.'

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate efforts of various trades affected by the Work of this Section.
   2. Coordinate completion of folding partition headers.
      a. Assure accurate installation of folding partition header(s).
   3. Coordinate completion of accordion folding partition hardwood jambs and trim.

B. Sequencing:
   1. Install accordion folding partitions after following has been completed:
      a. Folding partition headers and adjacent walls and ceilings are finished and painted.
      b. Hardwood jambs and trim installed and finished.

C. Scheduling:
   1. Notify #1:
      a. Notify Manufacturer when folding partition headers are installed and ready for field measurement.

1) Receipt of Notification shall be eight (8) weeks minimum before start of installation of accordion folding partitions.

2. Notify #2:
   a. Notify Manufacturer two (2) weeks minimum before scheduled start of installation of accordion folding partitions.
3. Notify #3:
   a. If schedule has changed since Notify #2, notify Manufacture of new schedule for coordination of delivery and installation of accordion folding partitions.
4. Installation of accordion folding partitions should be completed within fourteen (14) days of commencement.

1.4 SUBMITTALS

A. Action Submittals:
   1. Product Data:
      a. Manufacturer's literature or cut sheet.
      b. Color and style selections.
   2. Shop Drawings:
      a. Show attachment to framing and accordion folding partition header and interface with adjacent Work.
      b. Show height from finished floor to bottom side of accordion folding partition header.
      c. Show accordion folding partition installation details and layout.

B. Informational Submittals:
   1. Manufacturer Instruction:
      a. Manufacturer’s accordion folding partition installation details.

C. Closeout Submittals:
   1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
      a. Operations and Maintenance Data:
         1) Manufacturer's maintenance instructions.
         2) Maintenance and repair box with spare parts.
      b. Warranty Documentation:
         1) Include copy of final, executed warranty / Certificate stating that installed materials comply with specification.
      c. Record Documentation:
         1) Manufacturers Documentation:
            a) Manufacturer's literature.
            b) Color selections.

D. Maintenance Material Submittals:
   1. Spare Parts:
      a. Furnish following item to be included with Closeout Submittal:
         1) One (1) maintenance and repair box with spare parts and instructions for small maintenance as required.
            a) Clearly identify maintenance and repair box.

1.5 QUALITY ASSURANCE

A. Regulatory Agency Sustainability Approvals:
   1. Sound rated partitions shall have laboratory sound rating indicated, when tested in accordance with requirements of ASTM E90.

B. Qualifications: Requirements of Section 01 4301 applies, but is not limited to the following:
   1. Installation shall be performed by Manufacturer trained or authorized personnel according to Manufacturer’s installation instructions.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Delivery And Acceptance Requirements: Requirements of Section 01 6600 applies, but not limited to the following:
   1. General:
      a. Delivery is preferred to coincide with accordion folding partition installation.
   2. Contractor's Responsibility:
      a. Supervise unloading and handling.
   3. Owner-Furnished Product Manufacturer's Responsibility:
      a. Deliver in Manufacturer's original, unopened package(s).
      b. Handling and unloading.
      c. Delivery shall be no more than fourteen (14) days before start of installation of accordion folding partitions.
      d. Replace damaged materials at no cost to Owner.

B. Storage And Handling Requirements:
   1. Contractor's Responsibility:
      a. Provide secure location protected from weather and other trades.
   2. Owner-Furnished Product Manufacturer's Responsibility:
      a. Store boxes flat no more than four (4) high.

1.7 WARRANTY

A. Special Warranty:
   1. Manufacturer's covering installation and complete accordion folding partition assembly.
      a. Warranty covers defects in manufacture and installation of accordion folding partitions, which will not allow them to function for their intended use, for period of five (5) years.
      b. Warranty covers attachment of internal acoustical barrier for period of five (5) years.
      c. Warranty covers partition chaining for period of five (5) years for new projects or period of five (5) years for installation of accordion folding partition chaining on existing projects. Warranty does not cover excessive abuse or misuse as determined by Owner and Manufacture.
      d. Warranty covers adjustment and operation of lead posts for period of five (5) years.
      e. Provide on-site warranty service within ten (10) days of receiving request and at no additional cost to Owner.

PART 2 - PRODUCTS

2.1 OWNER-FURNISHED PRODUCTS

A. Category One VMR Manufacturers. See Section 01 6200 for definitions of Categories:
   1. Cornell Iron Works Inc, Mountaintop, PA www.cornelliron.com.
      a. Acoustic Barrier Partition: TranZform Sound Model ESP20.

B. Description:
   1. Operation:
      a. All units shall be top supported without use of any floor tracks or single point lock sockets.
      b. Smooth glide manual push/pull operation is accomplished with ease and minimal force.
   2. Track:
      a. Heavy duty extruded aluminum overhead track capable of being recessed.
   3. Panels:
      a. Corrugated steel panels coated with scratch resistant, permanently bonded decorative vinyl finish.
      b. Modular construction.
   4. Hinges:
      a. Full height extruded vinyl hinges color matched to wall panels.

C. Performance:
1. Design Criteria:
a. General:
1) Total accordion folding partition assembly shall be repairable at installed location without removal to repair shop or factory.
b. Acoustic Accordion Folding Partition:
1) Completed acoustic accordion folding partition assembly shall have NIC rating of thirty (30) in Cultural Center when tested in accordance with ASTM E336 and calculated in accordance with ASTM E413 and when installed on header configuration and surrounding construction shown on Contract Documents.
c. Color And Pattern Quality Standards:
1) Partition color approved for project.
a) Match existing.
2) Safety Sweep Clip: Black.

D. Materials:
1. Acoustic Partitions:
a. Design Criteria:
1) Panels:
a) 24 ga (0.64 mm) steel.
b) Exposed surface: Vinyl-clad.
c) Interior surface: Corrosion protected or coil steel coated.
d) Panel assembly shall have inner surface continuously covered with acoustical barrier permanently attached to panels.
e) 2.6 panels per lineal foot (300 mm) minimum for all partitions.
f) Weight: 5 lbs per sq ft (2.442 g / sq cm) maximum of partition surface area.
2) Chaining:
a) Not required at partitions located inside Cultural Center or other non Cultural Hall areas including classrooms and platform/stage if included on Project.
b) Required at partitions located between Cultural Center and any other adjacent room to Cultural Center:
(1) Attached continuous to every other panel on Cultural Center side of partition only beginning at lead post and for first 15 feet (4.57 m) minimum and additional 3 feet (0.90 m) to feather panels to standard fold.
(2) Bi-Parting Partitions: Required for both partitions.
(3) Location of chaining required at following partition panel locations:
(a) Within 24 inches (600 mm) minimum from top of partition.
(b) 54 inches (1 375 mm) minimum from bottom of partition.
(c) 12 inches (300 mm) minimum from bottom of partition.
c) Material: Sash chain (no open link chain).
3) Handle:
a) Cast aluminum with steel interior for fastners.
b) Provide handle assembly so repair or replacement will be made without disassembling lead post or stabilizing bar.
c) Mount with countersink fasteners to prevent injury.
4) Hanger Pin:
a) Partitions less than 12 feet (3.6 m) high:
(1) Solid steel pins on all partitions.
b) Partitions 12 feet (3.6 m) high or greater:
(1) Solid steel pins on all partitions.
5) Soffit Trim at track:
a) Soffit trim to be attached with screws to header or track system.
6) Stabilizer Bar:
a) Provide stabilizer bar and horizontally adjustable lead posts for all partitions 12 feet (3.657 m) and higher.
b) Concealed, internally mounted diagonal support brace that is track supported and connected to the lead post for reinforced vertical alignment during latching and operation.
c) Requires 14 inch (355 mm) wide header.

d) Once stabilizer bar is adjusted to Manufacturer's recommendations, provide bolt through assembly to secure no movement.

7) Stacking Depth:
   a) Calculation for Stack Depth:
      (1) Total partition opening: 1-3/4 inches (45 mm) maximum per lineal foot (300 mm).
      (2) Lead post: Add 6 inches (150 mm).
      (3) Intermediate or center post (if required): Add 6 inches (150 mm).
      (4) Chaining (if required): Add 3 inches (75 mm).
      (5) Jamb thickness: Less 3/4 inches (19 mm).
   b) Bi-Parting Partitions: Use single partition for each half of opening for stack depth.
8) Tie backs: Attached to secure partition in open position. Install straps to attach on one side of center of partition so as not to scratch partitions.
9) Trolley System:
   a) Steel construction on all partitions 12 feet (3.657 m) and higher.
   b) Steel or aluminum construction on all partitions under 12 feet (3.657 m).
   c) Roller: 1-1/16 inch (27 mm) with double steel race open ball bearings and nylon tires.

E. Fabrication:
   1. Fabricate accordion folding partitions according to actual field measurements of fully prepared, finished openings.
      a. Owner-Furnished Product Manufacturer is responsible for field measurements and their accuracy.

2.2 ACCESSORIES

A. Accordion Folding Partition Manufacturer's Track System:
   1. Provide approved Manufacturer's track system.

B. Locks: Do not install locks as per church guidelines.

C. Safety Sweep Clip:
   1. Description:
      a. Partition safety clip for accordion folding partition panels and lead post.
   2. Design Criteria:
      a. As Approved by Owner.
      b. Provide injection molded composite material with special rivet.
      c. Provide complete coverage of bottom edge of each panel including hinge clips.
      d. Provide cover for bottom edge of lead post.
      e. Color: Black.
   3. Category Four Approved Product. See Section 01 6200 for definitions of Categories:
      a. Cornell: Part number 303610 to be attached with rivet part number 302322.

2.3 SOURCE QUALITY CONTROL

A. Tests:
   1. Sound Transmission Requirements:
      a. Accordion-type folding products tested for laboratory sound transmission loss performance according to ASTM E90, determined by ASTM E413 and rated for an STC as follows:
         1) Sound transmission class (STC) shall be STC 45 minimum.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Evaluation And Assessment:
   1. Owner-Furnished Product Manufacturer's Responsibility:
      a. Openings:
         1) Examine openings for adequacy in allowing successful accordion folding partition installation and operation.
         2) Verify openings are prepared to specified dimensions and plumb and level.
         3) Verify folding partition headers are level with required tolerances over entire length of opening.
         4) Verify conditions are in accordance with approved shop drawings.
      b. Notify Architect in writing of inadequate conditions.
         1) Do not install accordion folding partitions until conditions have been corrected.
      c. Commencement of Work by installer is considered acceptance of substrate.

3.2 PREPARATION

A. Surface Preparation:
   1. Contractor's Responsibility:
      a. Accordion Folding Partition Headers shall be leveled with finished floor to within +/- 1/4 inch (+/- 6 mm) tolerance over entire length of opening.
   2. Owner-Furnished Product Manufacturer's Responsibility:
      a. Field measurement of door openings.

3.3 INSTALLATION

A. Special Techniques:
   1. Install accordion folding partitions in accordance with Manufacturer's printed instruction.
      a. Install so track system is aligned, level, etc, to eliminate catching or binding of rollers.
      b. Install tie-backs at all accordion folding partitions. Adjust as necessary to keep accordion folding partition in stacked position.

3.4 FIELD QUALITY CONTROL

A. Non-Conforming Work: Non-conforming work as covered in General Conditions applies, but is not limited to following:
   1. Correct any work found defective or not complying with Contract Document requirements at no additional cost to Owner.

3.5 ADJUSTING

A. Owner-Furnished Product Manufacturer's Responsibility:
   1. Following completion of accordion folding partition installation, test and adjust accordion folding partitions for ease of operation.

3.6 CLEANING

A. General:
   1. Owner-Furnished Product Manufacturer's Responsibility:
      a. Clean any soiling of accordion folding partitions as recommended by Manufacturer or any surrounding areas caused by installation of accordion folding partitions.

B. Building Damage:
   1. Owner-Furnished Product Manufacturer's Responsibility:
      a. Installer responsible for repair of all damaged surfaces to their original condition from accordion folding partition installation.

C. Waste Management:
   1. Contractor's Responsibility:
      a. Provide Dumpster as required in Section 01 7400.
   2. Owner-Furnished Product Manufacturer's Responsibility:
      a. All work areas are to be kept clean, clear and free of debris at all times.
      b. Disposal of rubbish, debris, and packaging materials to Contractor provided Dumpster.

3.7 PROTECTION

A. General:
   1. Contractor's Responsibility:
      a. Upon completion of accordion folding partition installation, protect accordion folding partitions from damage and replace or repair subsequent damage at no cost to Owner.

END OF SECTION