Town of Springvale
Town Hall

Project Manual

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SECTION 00 00 02

PROJECT DIRECTORY

OWNER	Town of Springvale N6195 Raddatz Road Cambria, WI 53923
ARCHITECTURE	Jewell Associates Engineers, Inc. 20 Copeland Avenue La Crosse, WI 54603 Telephone: 608-459-6092
CIVIL	Jewell Associates Engineers, Inc. 560 Sunrise Drive Spring Green, WI 53588 Telephone: 608-588-7484
STRUCTURE	Jewell Associates Engineers, Inc. 560 Sunrise Drive Spring Green, WI 53588 Telephone: 608-588-7484

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INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

1.1 BID SUBMISSION

A. Bids signed, executed, and dated will be received by the Clerk located at W3616 Old B Road, Rio, WI 53960, until 2 PM local prevailing local time on September 11, 2025.

B. Amendments to submitted Bids will be permitted when received in writing prior to bid closing and when endorsed by the same party or parties who signed and sealed the Bid.

C. Bidders may withdraw their Bid by written request at any time before bid closing.

1.2 INTENT

A. The intent of this Bid request is to obtain an offer to perform work to complete Town of Springvale Town Hall for a Stipulated Sum contract, in accordance with Contract Documents.

1.3 CONTRACT TIME

A. Identify Contract Time in the Bid Form. The completion date in the Agreement shall be the Contract Time added to the commencement date.

B. The Owner requires the work of this contract be completed as quickly as possible. Consideration will be given to time of completion when reviewing submitted Bids.

1.4 DEFINITIONS

A. Bidding Documents: Contract Documents supplemented with Invitation to Bid, Instructions to Bidders, Bid Form and bid securities, identified.

B. Bid: Executed Bid Form and required attachments submitted in accordance with these Instructions to Bidders.

C. Bid Price: Monetary sum identified by the Bidder in the Bid Form.

1.5 CONTRACT DOCUMENTS IDENTIFICATION

A. The Contract Documents are identified as Project number SI6020 as prepared by Jewell Associates and identified in the Project Manual.

1.6 AVAILABILITY OF DOCUMENTS

A. Bidding Documents may be obtained as stated in Invitation to Bid.

B. Bidding Documents are made available only for the purpose of obtaining offers for this Project. Their use does not grant a license for other purposes.

1.7 EXAMINATION OF DOCUMENTS

A. Upon receipt of Bidding Documents verify documents are complete. Notify Architect if documents are incomplete.

B. Immediately notify Architect upon finding discrepancies or omissions in Bidding Documents.

1.8 INQUIRIES AND ADDENDA

A. Direct questions in writing to Peter Pichotta, at the office of the Architect; email: peter.pichotta@jewellassoc.com.

B. Verbal answers are not binding on any party.

C. Submit questions not less than 10 days before date set for receipt of Bids. Replies will be made by Addenda.

D. Addenda may be issued during bidding period. Addenda will be sent to known Bidders. Addenda become part of the Contract Documents. Include resultant costs in the Bid Sum.

1.9 PRODUCT SUBSTITUTIONS

A. Where Bidding Documents stipulate particular Products, substitution requests will be considered by Architect up to 10 days before receipt of Bids. Approved substitutions will be identified by Addenda. Bidders shall include in their Bid, changes required in the Work to accommodate such approved substitutions.

1.10 SITE EXAMINATION

A. Examine Project site before submitting a Bid.

1.11 BIDDER QUALIFICATIONS

A. To demonstrate qualification for performing the Work of this Contract, Bidders are requested to submit written evidence of previous experience, current commitments, licensed to perform work in the State of Wisconsin.

B. Submit examples of similar projects constructed within the last 5 years.

1.12 SUBMISSION PROCEDURE

A. Submit one copy of executed offer on Bid Forms provided, signed and sealed with required security deposit in a closed opaque envelope, clearly identified with Bidder’s name, Project name, and Owner's name on the outside.

1.13 PREVAILING WAGE RATE LAW AND SALES TAXES

A. The 2017-2019 Wisconsin State Budget (2017 Wisconsin Act 59) repealed Wisconsin’s prevailing wage laws. Effective September 23, 2017, state prevailing wage requirements on municipal building projects no longer apply. Prevailing Wage Rates do not apply to this project.

B. Any applicable taxes are included in the Bid Sum. The bidder should not include sales taxes which are exempt under state statute 77.54 as amended by 2015 Senate Bill 227.

1.14 BID INELIGIBILITY

A. Bids that contain irregularities of any kind, may be declared unacceptable at Owner's discretion.

1.15 SECURITY DEPOSIT

A. Bids shall be accompanied by security deposit as follows:
   1. Bid Bond in the amount of a sum no less than 5 percent of the Bid Sum.

1.16 PERFORMANCE ASSURANCE

A. Accepted Bidder: Prior to execution of the Contract, the Bidder shall furnish Bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder. The Bond shall be in the amount of the Contract Sum.

B. Provide a Performance and Payment bond on AIA A312 form within ten (10) calendar days from the date when the Notice of Award is delivered to the Bidder.

C. Include the cost of performance assurance bonds in the Bid Sum.

1.17 BID FORM SIGNATURE

A. Sign Bid Form, as follows:
   1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
   2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. Affix seal to each signature.
   3. Corporation: Signature of all duly authorized signing officers in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the Bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, submit a copy of the by-law resolution of their board of directors authorizing them to do so, with the Bid Form in the bid envelope.
   4. Joint Venture: Signature of each party of the joint venture under their respective seals in a manner appropriate to such party as described above, similar to requirements for Partnerships.

1.18 ADDITIONAL BID INFORMATION

A. Complete and submit the following Bid Form Appendices with Bid.
   1. Appendix A - List of Subcontractors: Include names of all major Subcontractors and portions of the Work each Subcontractor will perform.
   2. Appendix B - List of Alternates: Include cost variation to Bid Price.

1.19 OWNER REQUESTED POTENTIAL SUBCONTRACTORS

A. The Owner requests that the following be considered, contacted, and invited to bid as potential Subcontractors to the General Contractor.

B. Plumbing
1 Hoffmann Plumbing,
a. Dustan Hoffmann, (920) 291-5224, hoffmannplumbing5@gmail.com
2 Kohlwey's Inc,
a. Paul Kohlwey (920) 992-3515, kohlweysinc@centurytel.net
3 PHE Contractors Inc.
a. (920) 326-3213, info@phecontractors.com
4 Schepp Plumbing and Pump Inc
a. (608) 429-1519 or (608) 617-7285, brian@schepppplumbingandpump.com

C. HVAC/Mechanical
1 Bleich Heating and Air Conditioning LLC
a. (920) 992-4328, bleichheatingandac@gmail.com
2 Kohlwey's Inc
a. Paul Kohlwey (920) 992-3515, kohlweysinc@centurytel.net
3 PHE Contractors Inc.
a. (920) 326-3213, info@phecontractors.com
4 TAS Heating and Cooling
a. Nathan Faust, (920) 623-3586, office@tasheatcool.com

D. Electrical
1 Kohlwey's Inc
a. Paul Kohlwey (920) 992-3515, kohlweysinc@centurytel.net
2 Dauman Electric
a. Reggie Dauman, (920) 484-3852, reggie@daumanelectric.net
3 PHE Contractors Inc.
a. (920) 326-3213, info@phecontractors.com
4 Katze Electric LLC
a. Mitchell Katze, (920) 296-9722, mitchkatze@gmail.com

1.20 BID OPENING

A. Bids will be opened and announced publicly following the bid submission deadline at the office of the Clerk.

1.21 DURATION OF OFFER

A. Bids shall remain open to acceptance and shall be irrevocable for a period of 30 days after bid closing date.

1.22 ACCEPTANCE OF OFFER

A. The Owner reserves the right to accept or reject any or all bids.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF DOCUMENT

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BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

To: Town of Springvale

Project: Town of Springvale Town Hall

Date: .....

Submitted by: .....

(full name and address) .....

1.1 OFFER

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders, Bid Documents and Contract Documents prepared by Jewell Associates, Architect for the above mentioned project, we the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

$.....

.....dollars,
in lawful money of the United States of America.
We have included, the required security deposit Bid Bond as required by the Instructions to Bidders.

Any applicable taxes are included in the Bid Sum. **The bidder should not include sales taxes which are exempt under state statute 77.54 as amended by 2015 Senate Bill 227.**

All Contingency Allowances described in Section 01 00 00 are included in the Bid Sum.
The Owner reserves the right to accept or reject any or all submitted bids.

1.2 ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for thirty days from the bid closing date.
If this bid is accepted by the Owner within the time period stated above, we will:
- Execute the Agreement within seven days of receipt of Notice of Award.
- Furnish the required bonds within seven days of receipt of Notice of Award in the form described in Supplementary Conditions.

If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

1.3 CONTRACT TIME

If this bid is accepted, we will:
Complete the Work in..... (...) calendar weeks from Notice to Proceed.

1.4 OVERHEAD AND PROFIT

The amount of overhead and profit to be applied to the actual cost of any approved changes to the work after the owner-contractor agreement shall be:

…… percent for additions to the contract sum

…… percent for deducts to the contract sum

1.5 ADDENDA

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

Addendum # ..... Dated ..... Addendum # ..... Dated .....

Addendum # ..... Dated ..... Addendum # ..... Dated .....

1.6 APPENDICES

A List of Subcontractors is appended hereto and identified as Appendix A.
A List of Alternates is appended hereto and identified as Appendix B.

1.7 BID FORM SIGNATURES

The Corporate Seal of

.....
(Bidder - print the full name of your firm)

was hereunto affixed in the presence of:

.....
(Authorized signing officer Title)

If the bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

APPENDIX A - LIST OF SUBCONTRACTORS

The following is the list of Subcontractors referenced in the Bid Form submitted by:

(Bidder) .....

(Owner) Town of Springvale

Dated ..... and which is an integral part of the Bid Form.

The following work will be performed (or provided) by Subcontractors and coordinated by us:

WORK SUBJECT	NAME
Excavation/Grading	
Concrete - Floors	
Concrete - Footing/Foundation	
Rough Framing	
Plumbing	
HVAC	
Electrical	

APPENDIX B - LIST OF ALTERNATES

The following is the list of Alternates referenced in the Bid Form submitted by:

(Bidder).....

(Owner) Town of Springvale

Dated..... and which is an integral part of the Bid Form.

The following amounts shall be added to or deducted from the Bid Sum Price. Refer to Section 01 00 00.

Alternate # 1 LPSmart Side 38 Series Lap Siding, 8 inch Cedar Texture, ExpertFinish	**Add or Deduct**	$
Alternate # 2 MM Steel Premium Pro Rib Metal Siding 28 gauge, G100 coating	**Add or Deduct**	$

END OF SECTION

SECTION 01 00 00

GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 CONTRACT DESCRIPTION

A. Work of the Project includes the construction of the Town of Springvale Town Hall and Related site work.

B. Perform Work of Contract under a stipulated sum contract with Owner in accordance with Conditions of Contract.

1.2 WORK BY OWNER

A. Items noted as NIC (Not in Contract), moveable furnishings, and minor equipment, will be furnished and installed by Owner after Substantial Completion. General Contractor shall provide blocking with walls, mechanical, plumbing, and electrical rough-in connections to owner provided equipment. Coordinate with owner on delivery and installation of equipment.

B. Owner provided equipment includes:
   1. Telephone system, computer system, public address system.
   2. Moveable and built-in office furnishings
   3. Shelving

1.3 CONTRACTOR'S USE OF PREMISES

A. Limit use of premises to allow:
   1. Owner occupancy.
   2. Work by others and work by Owner.

1.4 CONTINGENCY ALLOWANCES

A. Include in the Contract, stipulated amount of $30,000 for use upon Owner's instruction.

B. Contractor's costs for Products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit are included in Change Orders authorizing expenditure of funds from this Contingency Allowance.

1.5 SCHEDULE OF VALUES

A. Submit schedule on contractor's standard form.

B. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.

1.6 APPLICATIONS FOR PAYMENT

A. Submit three copies of each application on contractor's standard form.

B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.

C. Payment Period: Monthly.

1.7 CHANGE PROCEDURES

A. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for Change Order as approved by Architect.

1.8 COORDINATION

A. Coordinate scheduling, submittals, and Work of various sections of specifications to ensure efficient and orderly sequence of installation of interdependent construction elements.

B. Verify utility requirement characteristics of operating equipment are compatible with building utilities.

C. Coordinate space requirements and installation of mechanical and electrical work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable.

D. In finished areas, conceal pipes, ducts, and wiring within construction.

1.9 FIELD ENGINEERING

A. Owner will provide Land Surveyor to locate reference datum and protect survey control and reference points.

B. Establish elevations, lines, and levels and certify elevations and locations of the Work conform with Contract Documents.

C. Verify field measurements are as indicated on shop drawings or as instructed by manufacturer.

1.10 PRECONSTRUCTION MEETINGS

A. Architect will schedule preconstruction meeting after Notice of Award for affected parties.

B. When required in individual specification section, convene pre-installation meeting at Project site prior to commencing work of section.

1.11 PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.

B. Preside at meetings, record minutes, and distribute copies within two days to those affected by decisions made.

1.12 SUBMITTAL PROCEDURES

A. Submittal form to identify Project, Contractor, subcontractor or supplier; and pertinent Contract Document references.

B. Apply Contractor's stamp, signed or initialed, certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.

C. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of completed Work.

D. Revise and resubmit submittals as required; identify changes made since previous submittal.

1.13 CONSTRUCTION PROGRESS SCHEDULES

A. Submit initial progress schedule in duplicate within 15 days after date of Owner-Contractor Agreement for Architect to review.

B. Submit revised schedules with each Application for Payment, identifying changes since previous version. Indicate estimated percentage of completion for each item of Work at each submission.

C. Submit horizontal bar chart with separate line for each major section of Work or operation identifying first work day of each week.

1.14 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Owner-Contractor Agreement submit list of major Products proposed for use, with name of manufacturer, trade name, and model number of each product.

1.15 PRODUCT DATA

A. Product Data:
   1. Submitted to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
   2. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents purposes as specified.

B. Submit in PDF format.

C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this project.

1.16 SHOP DRAWINGS

A. Shop Drawings:
   1. Submitted to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
   2. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents purposes as specified.

B. When required by individual specification sections, provide shop drawings signed and sealed by professional engineer responsible for designing components shown on shop drawings.
   1. Include signed and sealed calculations to support design.
   2. Submit drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
   3. Make revisions and provide additional information when required by authorities having jurisdiction.

C. Submit documents in PDF format.

1.17 SAMPLES

A. Submit samples to illustrate functional and aesthetic characteristics of Products for owner's review.

B. Submit samples of finishes as specified in architectural drawings.

1.18 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual specification sections, submit manufacturer printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.

1.19 MANUFACTURER'S CERTIFICATES

A. When specified in individual specification sections, submit certifications by manufacturer to Architect/Engineer, in quantities specified for Product Data.

B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

1.20 QUALITY CONTROL

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

B. Comply with manufacturer's instructions.

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

1.21 TOLERANCES

A. Monitor fabrication and installation tolerance control of installed Products over suppliers, manufacturers, Products, site conditions, and workmanship, to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply fully with manufacturer's tolerances.

1.22 REFERENCES

A. Conform to reference standards by date of issue current as of date of Contract Documents.

B. When specified reference standard conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

1.23 EXAMINATION

A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Verify utility services are available, of correct characteristics, and in correct location.

1.24 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

1.25 TEMPORARY ELECTRICITY

A. Owner will pay cost of electricity used. Owner will not be responsible for cost to operate on site generators if needed.

B. Provide temporary electricity and power outlets for construction operations, connections, branch wiring, distribution boxes, and flexible power cords as required. Do not disrupt Owner's need for continuous service.

1.26 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

A. Provide and maintain temporary lighting for construction operations.

B. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

C. Permanent building lighting may not be utilized during construction. Repair, clean, and replace lamps at end of construction.

1.27 TEMPORARY VENTILATION

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.28 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Existing and new facilities may not be used.

B. Maintain in clean and sanitary condition.

1.29 FIELD OFFICES AND SHEDS

A. Office: Weather tight, with lighting, electrical outlets, heating, equipment, and equipped with sturdy furniture.

B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.

1.30 PARKING

A. Arrange for temporary parking areas to accommodate construction personnel.

1.31 PROGRESS CLEANING AND WASTE REMOVAL

A. Collect and maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.

1.32 BARRIERS AND FENCING

A. Provide fencing to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage.

1.33 PROTECTION OF INSTALLED WORK

A. Protect installed Work and provide special protection where specified in individual specification sections.

B. Prohibit traffic or storage upon waterproofed or roofed surfaces.

1.34 SECURITY

A. Provide security and facilities to protect Work and existing facilities and Owner's operations from unauthorized entry, vandalism, or theft.

1.35 WATER CONTROL

A. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

B. Provide erosion control.

1.36 POLLUTION AND ENVIRONMENTAL CONTROL

A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

B. Provide dust control, erosion and sediment control, noise control, pest control and rodent control to allow for proper execution of the Work.

1.37 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion review.

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

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

1.38 PRODUCTS

A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.

1.39 DELIVERY, HANDLING, STORAGE, AND PROTECTION

A. Deliver, handle, store, and protect Products in accordance with manufacturer's instructions.

1.40 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit request for substitution for manufacturers not named.

1.41 SUBSTITUTIONS

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

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

1.42 CLOSEOUT PROCEDURES

A. Submit written certification Contract Documents have been reviewed, Work has been inspected, and Work is complete in accordance with Contract Documents and ready for Architect/Engineer's inspection.

B. Submit final Application for Payment identifying total adjusted Contract Sum/Price, previous payments, and amount remaining due.

1.43 FINAL CLEANING

A. Execute final cleaning prior to final inspection.

B. Clean interior and exterior surfaces exposed to view. Vacuum carpeted and soft surfaces.

C. Clean debris from site, roofs, gutters, downspouts, and drainage systems.

D. Replace filters of operating equipment.

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

1.44 STARTING OF SYSTEMS

A. Provide notification prior to start-up of each item.

B. Ensure each piece of equipment or system is ready for operation.

C. Execute start-up under supervision of responsible persons in accordance with manufacturer’s instructions.

D. Submit written report stating equipment or system has been properly installed and is functioning correctly.

1.45 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of Products to Owner's personnel two weeks prior to date of Substantial Completion.

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

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

1.46 PROTECTING INSTALLED CONSTRUCTION

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

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

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

1.47 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of Contract Documents to be utilized for record documents.

B. Record actual revisions to the Work. Record information concurrent with construction progress.

C. Specifications: Legibly mark and record at each Product section description of actual Products installed.

D. Record Documents and Shop Drawings: Legibly mark each item to record actual construction.

E. Submit documents to Architect/Engineer with claim for final Application for Payment.

1.48 OPERATION AND MAINTENANCE DATA

A. Submit two sets prior to final inspection, bound in 8-1/2 x 11 inch text pages, three D side ring binders with durable plastic covers.

B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS" and title of project.

C. Internally subdivide binder contents with permanent page dividers, logically organized, with tab titles legibly printed under reinforced laminated plastic tabs.

D. Contents:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system.
   3. Part 3: Project documents and certificates.

1.49 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide Products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.

B. Deliver to Owner; obtain receipt prior to final payment.

1.50 WARRANTIES

A. Provide duplicate notarized copies.

B. Execute and assemble transferable warranty documents from subcontractors, suppliers, and manufacturers.

C. Submit prior to final Application for Payment.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

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SECTION 07 21 00

THERMAL INSULATION

PART 1 GENERAL

1.1 SYSTEM DESCRIPTION

A. System performance to provide continuity of thermal barrier.

1.2 SUBMITTALS

B. Product Data: Submit manufacturer's product data including thermal performance of materials.

PART 2 PRODUCTS

2.1 BUILDING INSULATION

A. INSUL-1 (rigid insulation): Polyisocyanurate Insulation: ASTM C518, with the following characteristics:
1. Board Thickness: as shown on Plans.
2. Thermal Resistance: R of 6.5 per inch.
3. Board Edges: Square edges.
4. Manufacturers:
a. Amoco Foam Products Co.
b. Dow Chemical Company, Thermax and Thermax heavy duty.

B. INSUL-2: Extruded Polystyrene Insulation: ASTM C578 Type IV cellular type, with the following characteristics:
1. Board Density: 1.8 lb/cu ft .
2. Board Thickness: 2 inch thick.
3. Thermal Resistance: R of 10.
4. Water Absorption: In accordance with ASTM C272 0.05 percent by volume maximum.
5. Board Edges: Square edges.
6. Manufacturers:
a. Owens-Corning Foamular 150
b. Dow Chemical Company Styrofoam

C. INSUL-3: Faced Batt Insulation: ASTM C665, Type III, Class B and C, preformed glass fiber blanket with Kraft facers. Thickness: as indicated on the Drawings.
1. CertainTeed Corporation, Kraft faced Building Insulation
2. Schuller, Thermal-Shield Kraft faced Wall Insulation Blankets
3. Owens-Corning Fiberglass Corp., Kraft faced Glass Fiber Insulation

2.2 ACCESSORIES

A. Adhesive: Type recommended by insulation manufacturer for application.

B. Vapor Barrier: Flame-retardant polyethylene sheets, 8-mil minimum thickness. Overlap 6” and tape joints.

C. Air Barrier: Tyvek CommercialWrap, flash spunbonded olefin, non-woven, non-perforated secondary weather resistant barrier.

D. Tape: Polyethylene self-adhering type, flame retardant, 2” wide.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify substrate, adjacent materials, and insulation boards are dry and ready to receive insulation and adhesive.

3.2 INSTALLATION

A. Foundation Perimeter (at slab on grade) - Board Insulation:
   1. Install INSUL-2 at foundation perimeter under slab on grade as shown on Drawings.
   2. Apply adhesive and install boards on foundation perimeter. Stagger joints. Butt edges and ends tight to adjacent board and to protrusions.

B. Exterior Walls – Air Barrier:
   1. Furnish and install air barrier over all exterior frame wall sheathing.
   2. Install lower level barrier prior to upper layers to ensure proper shingling of layers. Overlap 12” at corners, 6” at vertical seams.
   3. Attach and seal air barrier as directed by manufacturer. Return air barrier at wall penetrations, attach and seal behind penetration frame as directed by manufacturer.

C. Exterior Walls - Board Insulation:
   1. Secure impale fasteners to substrate at frequency of 6 per insulation board.
   2. Adhere strip of polyethylene sheet over control joints with beads of adhesive.
   3. Apply same adhesive to full bed 1/8 inch thick on substrate. Daub adhesive tight to protrusions to ensure continuity of vapor retarder.
   4. Install boards horizontally between wall reinforcement. Place surface against adhesive.
   5. Butt edges and ends tight to adjacent board and to protrusions. Place impale fastener locking discs.

D. Exterior Walls - Batt Insulation:
   1. Install in exterior wall spaces without gaps or voids.
   2. Fit insulation tight in spaces. Leave no gaps or voids.
   3. Install friction fit insulation tight to framing members, completely filling prepared spaces.
   4. Place vapor retarder on warm side of building spaces. Staple to wood framing. Lap joints six (6) inches.
   5. Extend vapor retarder tight to full perimeter of adjacent window and door frames and other items interrupting plane of membrane. Tape seal in place.

E. Roof Insulation:
   1. Install INSUL-3 in exterior roof spaces without gaps or voids.
   2. Fit insulation tight in spaces. Leave no gaps or voids.
   3. Install with factory applied membrane facing warm side of building spaces. Attach flanges of facing to framing members.
   4. Place vapor retarder on warm side of insulation by securing in place. Extend vapor retarder tight to full perimeter of adjacent window and door frames and other items interrupting plane of membrane. Tape seal in place.

END OF SECTION

SECTION 07 41 13

METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Metal Roof Panels.

B. Metal Soffit Panels

C. Self-Adhered Roofing Underlayment.

D. Seamless Gutters and Downspouts

1.02 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Storage and handling requirements and recommendations.
   2. Installation methods.
   3. Specimen warranty.

B. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
   1. Show work to be field-fabricated or field-assembled.

C. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

1.03 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section and with at least three years of documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Metal Roof Panel Manufacturers:
   1. Basis of Design: MS Metal Sales, Image II.
      a. Concealed Fastener
      b. Integral Standing Rib with Minor Ribs
      c. Coverage: 16 inch
      d. Rib height: 1 inch
      e. 24 Gauge AZ50 Steel
      f. Standard Color
   2. Or equivalent as preapproved by Architect.

B. Metal Soffit Panels Manufacturers:
1. Basis of Design: MS Metal Sales, Lanced Flat Panel
a. Concealed Fastener
b. Vented Panel
c. Coverage: 12 inch
d. Panel depth: 1 inch
e. 24 Gauge AZ50 Steel
f. Standard Color
2. Or equivalent as preapproved by Architect.

C. Self-Adhered Roofing Underlayment Manufacturers
1. Basis of Design: Kirsch Building Products, SharkSkin Ultra SA
2. Or equivalent as preapproved by Architect.

2.02 PERFORMANCE REQUIREMENTS

A. Metal Roof Panels:
1. Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
a. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/180 of span length(L) when tested in accordance with ASTM E1592.
b. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
c. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F (56 degrees C).
d. Provide 5-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

B. Metal Soffit Panels:
1. With venting provided.
2. Obtained from the same manufacturer as Metal Roof Panels.
3. Provide 5-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

C. Self-Adhered Roofing Underlayment
1. Does not permit the passage of water and will withstand 12-month UV resistance to sun light.
2. Can be installed at 10 degrees F (-12.22 degrees C) and rising temperatures.
3. Has service temperatures between -50 degrees F and 280 degrees F (-45.55 – 137.77 degrees C).
4. Slip-resistant to work over even in wet conditions.
5. No selvage edge.
6. Does not require roof mastic at the vertical end laps, hip and ridge details and adheres to itself.
7. Does not required primer when installed.
8. Carries a 50-year limited warranty.

D. Seamless Gutters and Downspouts
1. Formed on site from 24 gauge metal stock roll
a. K profile
2. Comply with SMACNA (ASMM) for sizing components for rainfall intensity determined by a storm occurrence of 1 in 5 years
3. Provide 5-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.
4. Fasteners: Same material and finish as metal, with soft neoprene washers.
5. Gutter and Downspout Anchorage Devices: In accordance with SMACNA requirements.

6. Gutter Supports: Brackets.
7. Downspout Supports: Brackets.
8. Gutter Accessories: Profiled to suit gutters and downspouts.

2.03 ACCESSORIES

A. Miscellaneous Sheet Metal Items: Provide flashings, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels.

B. Sealants:
1. See section 07 90 00 Joint Protection

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation of preformed metal roof panels, underlayment, and accessories until substrates have been properly prepared.

3.02 PREPARATION

A. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to ensure that completed roof will be free of leaks.

3.03 INSTALLATION

A. Overall: Install roofing system in accordance with approved shop drawings and metal roof panel manufacturer's instructions and recommendations, as applicable to specific project conditions; securely anchor components of roofing system in place allowing for thermal and structural movement.
1. Minimize field cutting of panels. Where field cutting is required, use methods that will not distort panel profiles. Use of torches for field cutting is prohibited.

B. Accessories: Install necessary components that are required for complete roofing assembly, including underlayment, flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, ridge closures, and similar roof accessory items.

C. Roof Panels: Install metal roof panels in accordance with manufacturer's installation instructions, minimizing transverse joints except at junction with penetrations.

3.04 CLEANING

A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.05 PROTECTION

A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.

B. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

END OF SECTION

SECTION 07 46 19

STEEL SIDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Steel Wall Panels.

1.02 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Siding materials, underlayment, flashings, fasteners and accessories.
   3. Dimensions, physical properties, and typical details.
   4. Storage and handling requirements and recommendations.
   5. Installation methods.

B. Shop Drawings: Indicate layout, methods of attachment, provisions for movement, flashing, trim, edge and field conditions, interface with adjacent materials, locations of cutouts or special shapes, existing construction, _____, and details.

C. Samples: For each finish product specified, provide two complete sets of color chips representing manufacturer's full range of available colors and patterns, including the following:
   1. Siding: Two of each type; full panel width by 12 inches (305 mm) long.

1.03 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of documented experience.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing brand name and manufacturer's identification until ready for installation.

B. Verify quantities and condition immediately upon receipt; remove damaged materials from site, and coordinate with manufacturer to replace with new materials meeting specified requirements.

C. Store products off the ground, within manufacturer's temperature and environmental limits, away from moisture, protected from traffic and construction activities, and minimize on-site storage prior to installation.

1.05 WARRANTY

A. Manufacturer's Warranty: Provide manufacturer's standard lifetime, non-prorated, transferable warranty, including 50 year hail protection warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Steel Siding Panel Manufacturers:
   1. Basis of Design: MS Metal Sales, R Panel
      a. Exposed Fastener
      b. Ribbed Panel
      c. Coverage: 36”
      d. Rib Height: 1 1/4”
      e. 26 Gauge AZ50 Steel
      f. Standard Color
   2. Or equivalent as preapproved by Architect.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrate conditions before beginning installation.

B. Verify dimensions and acceptable substrate condition.

C. Do not proceed with installation until unacceptable conditions have been corrected.

3.02 PREPARATION

A. Surface Preparation: Prepare surfaces as recommended by manufacturer.

B. Protect surrounding areas and adjacent surfaces during execution of this work.

3.03 INSTALLATION

A. Install steel siding, soffit, trim, and accessories in accordance with manufacturer's written instructions.

B. Attach siding using manufacturers recommended fasteners, sealants, and adhesives, allowing for thermal expansion.

3.04 CLEANING

A. Remove grease and oil films, excess joint sealer, handling marks, and other installation debris from steel siding, leaving siding clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to material finishes.

END OF SECTION

SECTION 07 46 23

WOOD SIDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Engineered wood lap siding for walls, trim and fascia.

1.02 SUBMITTALS

A. Product Data: Provide manufacturer's data on materials, component profiles, fastening methods, jointing details, sizes, surface texture, finishes, and accessories; showing compliance with requirements, including:
   1. Storage and handling requirements and recommendations.
   2. Installation instructions and recommendations.

B. Samples: Submit two samples 12 by 12 inches (305 by 305 mm) in size illustrating surface texture.

C. Manufacturer's qualification statement.

1.03 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.04 FIELD CONDITIONS

A. Do not install siding when air temperature or relative humidity are outside manufacturer's limits.

1.05 WARRANTY

A. Extended Correction Period: Correct defective work within 2-year period commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Engineered Lap Wood Siding:
   1. Basis of Design: Louisiana Pacific Building Products; LP SmartSide
      a. 38 Series
      b. 0.354 inches thick
      c. 5.84 inches wide
      d. 16 feet long
      e. Color as selected by Architect from manufacturers prefinished standard.
      f. Cedar Texture
   2. Or equivalent as preapproved by Architect.

B. Engineered Wood Trim:
   1. Basis of Design: Louisiana Pacific Building Products; LP SmartSide
      a. 440 Series
      b. 0.578 inch thick
      c. 16 feet long
      d. Square Edges
      e. Color as selected by Architect from manufacturers prefinished standard.
      f. Cedar Texture
   2. Or equivalent as preapproved by Architect.

2.02 PERFORMANCE REQUIREMENTS

A. Comply with local wind load resistance requirements of ASCE 7.

2.03 ENGINEERED WOOD SIDING MATERIALS

A. Structural Performance: Comply with APA PRP-108 performance standards for engineered wood siding and requirements of local authorities having jurisdiction (AHJ).

B. Fire Resistance: Provide testing by qualified testing agency in accordance with ASTM E119, and identify products with markings of applicable testing agency acceptable to authorities having jurisdiction (AHJ).
   1. Surface Burning Characteristics: Flame spread index (FSI) of 200 or less, Class C, and smoke development index (SDI) of 450 or less in accordance with ASTM E84 and UL 723.

C. Thermal Movement: Allow space for thermal movement at ends of wall siding that butt against trim; seal joint between siding and trim.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrates are ready to receive work.

B. Do not begin until unacceptable conditions have been corrected.

3.02 PREPARATION

A. Protect surrounding areas and adjacent surfaces during execution of this work.

B. Apply dip- or brush-type preservative to site-sawn ends of pressure preservative treated materials, and allow preservative to cure prior to erecting materials.

3.03 INSTALLATION

A. Install siding and trim in accordance with manufacturer's instructions.

B. Fasten siding securely in place, level and plumb.

C. Install siding for natural shed of water.

D. Seal exposed wood substrates exposed to weather to prevent water accumulation and moisture intrusion.
   1. Seal penetrations.
   2. Seal exposed cuts of siding and trim.

E. Sand work smooth and set exposed nails and screws.

3.04 CLEANING

A. Clean exposed work upon completion of installation; remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to finish.

END OF SECTION

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SECTION 07 46 33

PLASTIC SIDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Plastic siding and trim.

1.02 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

B. Samples: Provide samples in colors specified, not less than 12 inches (305 mm) in length.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: Not less than three years of experience with products specified.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.05 WARRANTY

A. Extended Correction Period: Correct defective work within 2-year period commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Plastic Siding and Trim:
   1. Basis of Design: CertainTeed Corporation
      a. Monogram Series
      b. 4 inch double lap
      c. 3/4 inch projection
      d. .046 inch thickness
      e. Rough Cedar Texture
      f. Color as selected by Architect from manufacturers standard.
   2. Or equivalent as preapproved by Architect.

2.02 MATERIALS

A. General Requirements:
   1. Siding: Complying with ASTM D3679.
   2. Wind Resistance: Capable of withstanding minimum of 30 psf (1.4 kPa) negative pressure, when tested in accordance with ASTM D5206.

2.03 ACCESSORIES

A. Accessories: Provide coordinating accessories made of same material as required for complete and proper installation even when not specifically indicated on drawings.
   1. Color: Match adjacent siding.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrate conditions before beginning installation; verify dimensions and acceptability of substrate.

B. Do not proceed with installation until unacceptable conditions have been corrected.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

3.03 INSTALLATION

A. Install siding, soffit, and trim in accordance with manufacturer's printed installation instructions and VSI (INST).

B. Attach securely to sheathing, with horizontal components true to level and vertical components true to plumb, providing a weather resistant installation.

C. Clean dirt from surface of installed products, using mild soap and water.

3.04 CLEANING

A. Clean exposed work upon completion of installation; remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to finish.

END OF SECTION

SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.1 SYSTEM DESCRIPTION

A. Sheet Metal System: Conform to criteria of SMACNA "Architectural Sheet Metal Manual."

B. Gutters and Downspouts and Flashing: SMACNA.

1.2 SUBMITTALS

A. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, termination, and installation details.

PART 2 PRODUCTS

2.1 SHEET METAL FLASHING AND TRIM

A. Product Description: Flashing and sheet metal; unfinished or prefinished, including gutters, downspouts, splash pads, and accessories.

2.2 COMPONENTS

A. Pre-Finished Steel Sheet: ASTM A653, galvanized steel; 18 gauge; plain finish shop pre-coated with PVDF (polyvinylidene fluoride) coating; color as selected from manufacturer's standard color.

B. ACCESSORIES

1. Fasteners: Same material and finish as flashing metal, with soft neoprene washers.
2. Gutter and Downspout Anchorage Devices: In accordance with SMACNA requirements.
3. Gutter Supports: Brackets.
4. Downspout Supports: Brackets.
5. Underlayment: No. 15unperforated asphalt felt.
6. Protective Backing Paint: Bituminous.
7. Slip Sheet: Rosin sized building paper.
8. Sealant: Exterior metal lap joint butyl or polyisobutylene sealant as specified in Section 07 90 00.
9. Plastic Cement: ASTM D4586, Type I.
10. Primer and Solvent for Polyvinyl Chloride (PVC): As recommended by manufacturer.
11. Gutter Accessories: Profiled to suit gutters and downspouts.
12. Connectors: Furnish required connector pieces for PVC (Polyvinyl Chloride) components.
13. Splash Pads: Precast concrete type, of sizes and profiles indicated; minimum 3000 psi at 28 days, with minimum 5 percent air entrainment.
14. Downspout Boots and shoes: Steel.

C. FABRICATION

1. Form components to shape indicated on Drawings, accurate in size, square, and free from distortion or defects. Form pieces in longest practical lengths.
2. Fabricate cleats and starter strips of same material as sheet, to interlock with sheet.
3. Hem exposed edges on underside 1/2 inch; miter and seam corners. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.
4. Fabricate flashings to allow toe to extend 2 inches over roofing. Return and brake edges.

5. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
6. Fabricate corners in one piece, 18-inch-long legs; seam for rigidity, seal with sealant.
7. Form sheet metal pans with upstand, and flanges.

2.3 SHOP FINISHING

A. PVDF (Polyvinylidene Fluoride) Coating: High Performance Organic Finish, AAMA 605.2; multiple coat, thermally cured fluoropolymer finish system.

B. Primer Coat: Finish concealed side of metal sheets with primer compatible with finish system as recommended by finish system manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.

B. Verify membrane termination and base flashings are in place, sealed, and secure.

3.2 PREPARATION

A. Paint concealed metal surfaces and surfaces in contact with dissimilar metals with protective backing paint to minimum dry film thickness of 15 mil.

3.3 INSTALLATION

A. Install starter and edge strips, and cleats.

B. Install surface mounted reglets. Seal top of reglets with sealant. Insert flashings to form tight fit. Seal flashings into reglets with sealant.

C. Secure flashings, gutters and downspouts in place using [concealed] fasteners.

D. Apply plastic cement compound between metal work and felt flashings.

E. Fit components tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

F. Install sheet metal pans surrounding roof penetrations. Fill pans watertight with plastic cement.

G. Slope gutters 1/4 inch per foot minimum.

H. Connect downspouts to downspout boots, seal connection watertight.

I. Set splash pads under downspouts.

J. Seal joints watertight.

END OF SECTION

SECTION 07 90 00

JOINT PROTECTION

PART 1 GENERAL

1.1 SUBMITTALS

A. Product Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

1.2 ENVIRONMENTAL REQUIREMENTS

A. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

PART 2 PRODUCTS

2.1 JOINT SEALERS

A. Product Description:
   1. High Performance General Purpose Exterior Sealant Sealant: Polyurethane or Polysulfide; ASTM C920, Grade NS, Class 25, Uses M, G, and A; multi-component.
      a. Type: Dymeric manufactured by Tremco.
      b. Color: Standard colors matching finished surfaces.
      c. Applications: Use for:
         1) Control, expansion, and soft joints in masonry.
         2) Joints between concrete and other materials.
         3) Joints between metal frames and other materials.
         4) Other exterior nontraffic joints for which no other sealant is indicated.
   2. Masonry Joint Sealer: One component moisture curing polyurethane sealant; ASTM C920, Type S, Grade NS, Class 25, Uses NT, M, A, G, and O
      a. Type: Sonolastic NP-1 manufactured by Sonneborn
      b. Color: As selected by Architect from manufacturer's standard colors.
      c. Applications: Use for water repellent treated CMU wall control joints and flashing terminations in contact with integrally water repellent treated CMU.
   3. Exterior Expansion Joint Sealer: multi-component sealant, ASTM C920, Type M, Grade NS, Class 50, Uses NT, M, A, G, and O
      a. Type:
         1) Sonneborn, "Sonolastic NP-2"
         2) Tremco, "Spectrem 4-TS"
      b. Color: To be selected from manufacturer's standard range.
      c. Applications: Use for exterior joints between existing building and addition.
   4. Exterior Metal Lap Joint Sealant: Butyl or polyisobutylene, non-drying, non-skinning, non-curing.
      a. Type: Spectrem manufactured by Tremco.
      b. Applications: Use for concealed sealant bead in sheet metal work and concealed sealant bead in siding overlaps.
   5. General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, single component, paintable.
      a. Type:
         1) Sonneborn, "Sonolac"
         2) Tremco, "trmflex 834"
      b. Color: Colors as selected by Architect.

c. Applications: Use for interior wall and ceiling control joints, joints between door and window frames and wall surfaces, and other interior joints for which no other type of sealant is indicated.

B. ACCESSORIES

1. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
2. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
3. Joint Backing: Round foam rod compatible with sealant; oversized 30 to 50 percent larger than joint width.
4. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify substrate surfaces and joint openings are ready to receive work.

B. Verify joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

A. Remove loose materials and foreign matter impairing adhesion of sealant.

B. Clean and prime joints.

C. Perform preparation in accordance with ASTM C1193.

3.3 INSTALLATION

A. Perform installation in accordance with ASTM C1193.

B. Perform acoustical sealant application work in accordance with ASTM C919.

C. Install joint backing according to manufacturer's instructions in joints to receive sealant and as indicated on Drawings. Use proper size and shape pieces so installed joint backing is compressed approximately 30% and face of foam is at required depth. Do not twist or braid rod stock. Do not puncture skin or rod stock. Carefully roll rod stock into joint without stretching.

D. Install bond breaker where joint backing is not used.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

G. Tool joints concave.

3.4 CLEANING

A. Clean excess sealant, primer, or bond breaker with cleaning solution as recommended by primary sealant manufacturer. Do not use acidic cleaning materials.

END OF SECTION

SECTION 08 11 13

HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.1 SUBMITTALS

A. Shop Drawings: Indicate door and frame elevations, internal reinforcement, cut-outs for glazing, and finishes.

B. Product Data: Submit door and frame configurations, location of cut-outs for hardware reinforcement.

1.2 QUALITY ASSURANCE

A. Perform Work in accordance with the following:
   1. ANSI 250.8 - Recommended Specifications for Standard Steel Doors and Frames.
   2. DHI - Door Hardware Institute - The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.
   3. Fire Rated Doors and Frames:
      a. Product Construction: UL 10B.
      b. Product Installation: NFPA 80.

B. Surface Burning Characteristics:
   1. Foam Insulation: Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

C. Apply label from agency approved by authority having jurisdiction to identify each foam plastic insulation material.

PART 2 PRODUCTS

2.1 STEEL DOORS AND FRAMES

A. Product Description: Standard shop fabricated steel doors, and frames; fire rated and non-rated types; flush face.

2.2 COMPONENTS

A. Exterior Doors (Insulated): ANSI A250.8, 1-3/4 inch thick.
   1. Level 1 - Standard Duty, Model 1, full flush design.

B. Interior Doors (Non-Rated): ANSI A250.8, 1-3/4 inch thick.
   1. Level 1 - Standard Duty, Model 1, full flush design.

C. Exterior Frames:
   1. Level 1 for Door Model 1, nominal 18 gage/0.042 inch thick material, base metal thickness.

D. Interior Frames:
   1. Level 2 for Door Models 1, nominal 16 gage/0.053 inch thick material, base metal thickness.

E. Door Core: polyurethane or polystyrene foam.

F. End Closure: Channel, 0.04 inch thick, flush.

G. Thermal Insulated Door: Total insulation R-Value of 4 measured in accordance with ASTM C1363.

2.3 ACCESSORIES

A. Silencers: Resilient rubber fitted into drilled hole.

B. Removable Stops: Rolled steel channel shape.

C. Bituminous Coating: Fibered asphalt emulsion.

D. Primer: ANSI A250.10 rust inhibitive type.

E. Weatherstripping: Resilient rubber set in steel retainer.

2.4 FABRICATION

A. Fabricate doors and frames with hardware reinforcement welded in place. Protect frame hardware preparations with mortar guard boxes.

B. Fabricate frames as face welded units.

C. Fabricate frames to suit masonry wall coursing with 4 inches head member.

D. Reinforce frames wider than 48 inches with roll formed steel channels fitted tightly into frame head, flush with top.

E. Prepare interior frames for silencers and install.

F. Prepare frames for electronic access hardware as scheduled.

2.5 SHOP FINISHING

A. Primer: Baked.

B. Shop Finish: Baked enamel color as selected.

C. Coat inside of frame profile with bituminous coating.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify opening sizes and tolerances are acceptable.

3.2 INSTALLATION

A. Install doors and frames in accordance with ANSI A250.8.

B. Coordinate installation of doors and frames with installation of hardware specified in Section 08 71 00.

C. Coordinate door frames with masonry wall construction for frame anchor placement.

D. Install roll formed steel reinforcement channels between two abutting frames. Anchor to structure and floor.

E. Coordinate installation of glass and glazing.

F. Adjust door for smooth and balanced door movement.

G. Tolerances:
   1. Maximum Diagonal Distortion: 1/16 measured with straight edge, corner to corner.

END OF SECTION

SECTION 08 41 13

ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 GENERAL

1.1 SYSTEM DESCRIPTION

A. Aluminum-Framed Storefront System: Tubular aluminum sections, factory fabricated and finished, glass insulated, metal panel infill, related flashings, anchorage and attachment devices.

B. System Assembly: Site assembled..

C. System Design: Provide for expansion and contraction within system components caused by temperature cycling. Design and size members to withstand loads caused by pressure and suction of wind.

D. Air Infiltration: Limit air leakage through assembly to 0.06 cfm/min/sq ft of wall area, measured at reference differential pressure across assembly of 1.57 psf as measured in accordance with ASTM E283.

E. Water Leakage: None when measured in accordance with ASTM E331.

F. System Internal Drainage: Drain water entering framing system to exterior.

1.2 SUBMITTALS

A. Shop Drawings: Indicate system dimensions, framed openings and tolerances.

B. Product Data: Submit component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with AAMA MCWM-1 - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.

B. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

C. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

PART 2 PRODUCTS

2.1 ALUMINUM-FRAMED STOREFRONTS

A. Manufacturers:
   1. Basis of Design: Kawneer Co., Inc.
      a. 360 InsulClad Medium Stile Entrance System
   2. Or equivalent as preapproved by Architect.

B. Product Description: Aluminum-framed storefronts, extruded aluminum, with aluminum and glass doors , glazing, hardware, and infill panels.

2.2 COMPONENTS

A. Frames: Thermally broken extruded aluminum; flush glazing stops.

B. Doors: 1-3/4inches thick, nominal 4 inch wide top rail and vertical stiles, nominal 10 inch wide bottom rail; beveled glazing stops.

C. Glass and Glazing: Specified in Section 08 80 00.

D. Hardware: Manufacturer's standard hardware complying with following basic components.
1. Weather Stripping, Sill Sweep Strips, Thresholds, Hinges, Push/Pull Handles, , Closer.
2. Closer: Fully adjustable overhead closer.
3. Lock Cylinders: Specified in Section 08 71 00.

E. Flashings: Minimum 0.32 inch thick stainless steel, to match mullion sections where exposed.

F. Steel Sections: ASTM A36/A36M, Structural shapes to suit mullion sections; prime painted.

G. Primer: Zinc chromate for factory application and field touch-up.

H. Fasteners: Stainless steel.

I. Perimeter Sealant and Backing Materials: Specified in Section 07 90 00.

2.3 FABRICATION

A. Fabricate doors and frames allowing for minimum clearances and shim spacing around perimeter of assembly.

B. Accurately and rigidly fit and secure joints and corners, flush, hairline, and weatherproof.

C. Arrange fasteners, attachments, and jointing to ensure concealment from view.

D. Prepare components with internal reinforcement for door hardware and door operator hinge hardware.

2.4 SHOP FINISHING

A. Color Anodized Aluminum Surfaces: AA-M12C22A44, Architectural Class I 0.7 mils dark bronze anodized coating conforming to AAMA 611.

B. Concealed Steel Items: Galvanized to ASTM A123/A123M; minimum 2.0 oz/sq ft coating thickness; galvanize after fabrication.

C. Apply bituminous paint to concealed aluminum and steel surfaces in contact with cementitious or dissimilar metals.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify wall openings and adjoining air and vapor seal materials are ready to receive work of this section.

3.2 INSTALLATION

A. Install doors, frames, glazing, hardware and flashings in accordance with AAMA MCWM-1 - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.

B. Use anchorage devices to securely attach frame assembly to structure.

C. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.

D. Coordinate attachment and seal of air and vapor retarder materials. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

E. Coordinate installation of hardware with Section 08 71 00.

F. Coordinate installation of glass with Section 08 80 00 ; separate glass from metal surfaces.

G. Coordinate installation of perimeter sealants with Section 07 90 00.

H. Tolerances:
   1. Variation from Plane: 1/8 inch per foot maximum or 1/4 inch per 30 feet; whichever is less.

3.3 SCHEDULES

A. See sheet T1.1 for schedules.

END OF SECTION

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SECTION 08 51 00

METAL WINDOWS

PART 1 GENERAL

1.1 SYSTEM DESCRIPTION

A. Configuration: Conform with ANSI 101 Designations for windows required for Project; F-fixed non-operable, sash.

B. System Design: Design and size components to withstand dead loads and live loads caused by positive and negative wind loads acting normal to plane of wall as calculated in accordance with applicable code as tested in accordance with ASTM E330.

C. Air Infiltration: Limit air leakage through assembly to 0.3 cfm/sq ft of wall area, measured at reference differential pressure across assembly of 1.57 psf as measured in accordance with ASTM E283.

D. Water Leakage: None when measured in accordance with ASTM E331.

E. System Internal Drainage: Drain water entering framing system to exterior.

1.2 SUBMITTALS

A. Shop Drawings: Indicate opening dimensions, framed opening tolerances, affected related work; and installation requirements.

B. Product Data: Provide component dimensions, anchorage and fasteners, and glass.

1.3 QUALITY ASSURANCE

A. Manufacturer and Installer: Company specializing in manufacturing commercial window and sliding door units with minimum three years documented experience.

1.4 WARRANTY

A. Furnish five year manufacturer warranty for insulated glass units and factory finishes.

PART 2 PRODUCTS

2.1 METAL WINDOWS AND SLIDING DOORS

A. Manufacturers:
   1. Basis of Design: Kawneer Co., Inc.
      a. Trifab VersaGlaze 451T System
      b. 2 inch x 4 1/2 inch nominal.
   2. Or equivalent l as preapproved by Architect.

B. Product Description:
   1. Windows: Fixed, non-operable lights.
   2. Size varies, see Architectural Drawings.
   3. Frame: Thermally broken with interior portion of frame insulated from exterior portion, flush glass stops of screw fastened type.
   4. Glazing Location: Front glazed.

2.2 COMPONENTS

A. Extruded Aluminum: ASTM B221.

B. Glass and Glazing Materials: Specified in Section 08 80 00.

C. Sills: Extruded aluminum; sloped for positive wash, one piece full width of opening and jamb angles to terminate sill length.

D. Sills: aluminum; sloped for positive wash, one piece full width of opening and jamb angles to terminate sill length.

E. Anchor Devices: Non-corroding.

F. Sealant and Backing Materials: Specified in Section 07 90 00.

2.3 FABRICATION

A. Fabricate framing, mullions and sash members with reinforced corners and joints. Supplement frame with internal reinforcement where required for structural rigidity.

B. Permit internal drainage weep holes and channels to encourage moisture migration to exterior.

C. Form glass stops, exterior sills, closures, weather stops, and flashings of same material as window frame.

D. Apply asphaltic paint to concealed metal surfaces in contact with cementitious surfaces or dissimilar metals.

2.4 SHOP FINISHING

A. Color Anodized Aluminum Surfaces: AA-M12C22A44, Architectural Class I 0.7 mils dark bronze anodized coating conforming to AAMA 611.

B. Concealed Steel Items: Galvanize to 2.0 oz/sq ft.

C. Apply bituminous paint to concealed aluminum surfaces in contact with cementitious or dissimilar materials.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify rough openings are correctly sized and located.

3.2 PREPARATION

A. Prepare opening to permit correct installation of frame and achieve continuity of air and vapor retarder seal.

3.3 INSTALLATION

A. Use anchorage devices to securely attach frames to structure.

B. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.

C. Coordinate attachment and seal of air and vapor retarder materials. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

D. Coordinate installation of perimeter sealants and backing materials with Section 07 90 00.

END OF SECTION

SECTION 08 71 00

DOOR HARDWARE

PART 1 GENERAL

1.1 SYSTEM DESCRIPTION

A. Fire Rated Openings: Provide door hardware listed by UL or Warnock Hersey, or other testing laboratory approved by applicable authorities.
   1. Hardware: Tested in accordance with NFPA 252.

1.2 SUBMITTALS

A. Shop Drawings: Indicate locations and mounting heights of each type of hardware, electrical characteristics and connection requirements.

B. Samples: Submit complete hardware schedules.

1.3 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with the following requirements:
   1. ANSI A156 series.
   2. NFPA 80 - Fire Doors and Windows.
   3. NFPA 101 - Life Safety Code.

B. Coordination: Coordinate work of this section with other directly affected sections requiring integral reinforcement for door hardware.

C. Supplier: Company specializing in supplying commercial door hardware with minimum three years' experience.

D. Hardware Suppliers:
   1. Block Iron and Supply Company
   2. Kendell/Brickson-Shaw, Inc.
   3. LaForce Hardware & Manufacturing

1.5 MAINTENANCE SERVICE

A. Provide service and maintenance services of door closers for one year from Date of Substantial Completion.

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

PART 2 PRODUCTS

2.1 DOOR HARDWARE – See Sheet T1.1

2.2 COMPONENTS

A. General Hardware Requirements: Comply with applicable ANSI A156 standard for type of hardware required. Furnish each type of hardware with accessories as required for applications indicated and for complete, finished, operational doors.
   1. Templates: Furnish templates or physical hardware items to door and frame manufacturers sufficiently in advance to avoid delay in Work.
   2. Reinforcing Units: Furnished by door and frame manufacturers; coordinated by hardware supplier or hardware manufacturer.
   3. Fasteners: Furnish as recommended by hardware manufacturer and as required to secure hardware.
      a. Finish: Match hardware item being fastened.
   4. Electrical Devices: Make provisions and coordinate requirements for electrical devices and connections for hardware.

B. Hinges ANSI A156.1, full mortise type , complying with following general requirements unless otherwise scheduled.
   1. Widths: Sufficient to clear trim projection when door swings 180 degrees.
   2. Number: Furnish minimum three hinges to 90 inches high, four hinges to 120 inches high for each door leaf.
      a. Fire Rated Doors To 86 inches High: Minimum three hinges.

C. Locksets and Latchsets: Furnish locksets compatible with specified cylinders. Furnish standard strikes with extended lips to protect trim from being marred by latch bolt [verify type of cutouts provided in metal frames].
   1. Mortise Locksets and Latchsets: ANSI A156.13, Series 1000, Grade 1 unless otherwise indicated.
   2. Bored (Cylindrical) Locksets [and Latchsets]: ANSI A156.2, Series 4000, Grade 1 unless otherwise indicated.
   3. Interconnected Locksets: ANSI A156.12, Series 5000, Grade 1 unless otherwise indicated.
   4. Auxiliary Locksets: ANSI A156.5, Grade 1, mortise dead locks, rim locks.

D. Exit Devices: ANSI A156.3, Grade 1 concealed vertical rod type , with cross bar, unless otherwise indicated. Furnish standard strikes with extended lips to protect trim from being marred by latch bolt verify type of cutouts provided in metal frames, with dust-proof floor strikes.
   1. Types: Suitable for doors requiring exit devices.
   2. Coordinators: Furnish overhead type at pairs of doors.

E. Cylinders: ANSI A156.5, Grade 1, pin type Match existing building cylinders.
   1. Keying: Key to existing keying system.
   2. Supply keys in the following minimum quantities:
      a. 5 master keys.
      b. 2 change keys for each lock.

F. Closers: ANSI A156.4 modern type with cover, surface mounted overhead concealed closers; full rack and pinion type with steel spring and non-freezing hydraulic fluid; closers required for fire rated doors unless otherwise indicated.
   1. Adjustability: Furnish controls for regulating closing, latching, speeds, and back checking.
   2. Arms: Type to suit individual condition; parallel-arm closers at reverse bevel doors and where doors can swing full 180 degrees.

3. Location: Mount closers on inside of exterior doors, room side of interior doors typical; mount on pull side of other doors.
4. Operating Pressure: Maximum operating pressure as follows.
    a. Interior Doors: Maximum 5 pounds.
    b. Exterior Doors: Maximum [10] [8.5] pound.
    c. Fire Rated Doors: As required for fire rating, maximum 15 pounds.

G. Door Controls and Overhead Holders: Furnish with accessories as required for complete operational installation.
1. Manual Door Holders and Overhead Stops: ANSI A156.8, Grade 1 types as specified.
2. Electro-Magnetic Door Holder: ANSI A156.15 wall mounted type.
3. Power Assist Door Operators: ANSI A156.19 power mechanism reduces opening resistance of self-closing door.
4. Low Energy Power Door Operators: ANSI A156.19 power mechanism opens and closes door upon receipt of signal.
5. Low Energy Power Open Door Operators: ANSI A156.19 power mechanism opens self-closing door; closing of door independent of power operator.

H. Protection Plates, Gaskets, Thresholds, and Trim: Furnish as indicated in Schedule, with accessories as required for complete operational door installations.
1. Push/Pulls: ANSI A156.6; Furnish straight type pulls with bolts to secure from opposite door face.
2. Kickplates ANSI A156.6, metal; height indicated in Schedule by 1 inch less than door width; stainless steel.
3. Weatherstripping: Furnish continuous weatherstripping at top and sides of exterior doors.
4. Fire Rated Gaskets: Furnish continuous fire rated gaskets at top and sides of fire rated doors.
5. Thresholds: Maximum 1/2 inch height; requirements to ensure accessibility for persons with disabilities.
6. Wall Stops: ANSI A156.1, Grade 1, 2-1/2 inch wall stop with no visible screws.
7. Floor Stops: ANSI A156.1 Grade 1 standard floor type with no visible screws; furnish with accessories as required for applications indicated.

2.3 ACCESSORIES

A. Lock Trim: Furnish levers as indicated in schedule at end of section.

B. Through Bolts: Through bolts and grommet nuts are not permitted on door faces in occupied areas unless no alternative is possible.

C. Key Cabinet:
1. Cabinet Construction: Sheet steel construction, piano hinged door with cylinder type lock master keyed to building system.
2. Cabinet Size: Size for Project keys plus sufficient room to allow for 10 percent growth.
3. Horizontal metal strips for key hook labeling with clear plastic strip cover over labels.

2.4 FINISHING

A. Finishes: ANSI A156.18; with following finishes except where otherwise indicated in Schedule at end of section.
1. Hinges
    a. BHMA 630 and 626, satin finish.
2. Typical Exterior Exposed and High Use Interior Door Hardware:
    a. BHMA 630, satin finished stainless steel.
3. Typical Interior Door Hardware:
    a. BHMA 630, satin finished stainless steel.

4. Typical Interior Bathroom Door Hardware:
   a. BHMA 630, satin finished stainless steel.
5. Closers: Finish appearance to match door hardware on same face of door.
6. Thresholds: Finish appearance to match door hardware on exterior face of door.
   a. BHMA 630, satin finished stainless steel.
7. Other Items: Provide manufacturer's standard finishes to match similar hardware types on same door, and maintain acceptable finish considering anticipated use and BHMA category of finish.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify doors and frames are ready to receive work and dimensions are as instructed by manufacturer.

3.2 INSTALLATION

A. Coordinate mounting heights with door and frame manufacturers. Use templates provided by hardware item manufacturer.

B. Mounting Heights From Finished Floor to Center Line of Hardware Item: Comply with manufacturer recommendations and applicable codes.

END OF SECTION

SECTION 09 21 16

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SUBMITTALS

A. Product Data: Submit data on metal framing, gypsum board, and joint tape.

1.2 QUALITY ASSURANCE

A. Perform Work in accordance with ASTM C840, and GA-600 - Fire Resistance Design Manual.

B. Furnish framing materials in accordance with SSMA - Product Technical Information.

C. Fire Rated Wall Construction: Rating as indicated on Drawings.
1. Tested Rating: Determined in accordance with ASTM E119.
2. Prescriptive Rating: determined in accordance with applicable code.

1.3 GYPSUM BOARD ASSEMBLIES

A. Manufacturers:
1. Celotex Building Products
2. G-P Gypsum Corp.
3. United States Gypsum Co.

1.4 COMPONENTS

A. Studs and Tracks: ASTM C645.

B. Furring, Framing, and Accessories: ASTM C645.

C. Gypsum Board Materials: ASTM C1396/C1396M ; fire resistant where indicated on Drawings.
1. Standard Gypsum Board: 3/8 inch thick, maximum available length in place; ends square cut, tapered edges.
2. Moisture Resistant Gypsum Board: 5/8 inch thick, maximum available length in place; ends square cut, tapered edges.

D. Tile Backer Boards:
1. Tile Backer Board: ASTM C1178; 5/8 inch thick, maximum available length in place; ends square cut, tapered edges.

1.5 ACCESSORIES

A. Acoustic Insulation: ASTM C665, preformed glass fiber, friction fit type, unfaced, use thickness to fill cavity.

B. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.

C. Gypsum Board Accessories: ASTM C1047; metal and paper combination; corner beads, edge trim, and expansion joints.

D. Joint Materials: ASTM C475, reinforcing tape, joint compound, and water.

E. Fasteners: ASTM C1002; Type S; length to suit application.

F. Adhesive: ASTM C557.

G. Textured Finish Materials: containing fine aggregate.

H. Gypsum Board Screws: ASTM C954; length to suit application.
   1. Screws for Steel Framing: Type S.
   2. Screws for Wood Framing: Type W.

PART 2 EXECUTION

2.1 EXAMINATION

A. Verify site conditions are ready to receive work.

2.2 INSTALLATION

A. Metal Studs:
   1. Install studs in accordance with ASTM C754.
   2. Metal Stud Spacing: 16 inches oc.

B. Wall Furring:
   1. Erect free standing metal stud framing tight to concrete masonry walls; attached by adjustable furring brackets.
   2. Space furring channels maximum 24 inches oc, not more than 4 inches from abutting walls.
   3. Install insulation between furring channels attached to concrete masonry and concrete walls.

C. Acoustic Accessories:
   1. Install resilient channels at maximum 24 inches oc. Locate joints over framing members.
   2. Place acoustic insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
   3. Install acoustic sealant within partitions.

D. Ceiling Framing:
   1. Install in accordance with ASTM C754
   2. Coordinate location of hangers with other work. Install ceiling framing independent of walls, columns, and above ceiling work.
   3. Reinforce openings in ceiling suspension system interrupting main carrying channels or furring channels, with lateral channel bracing.
   4. Laterally brace entire suspension system.

E. Gypsum Board:
   1. Install gypsum board in accordance with GA-216 and GA-600
   2. Fasten gypsum board to furring or framing with screws.
   3. Place control joints consistent with lines of building spaces as indicated n Drawings.
   4. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.
   5. Seal cut edges and holes in moisture resistant gypsum board and exterior gypsum soffit board with sealant.
   6. Erect pre-decorated gypsum board vertically, with exposed batten fastening system.

F. Joint Treatment:
   1. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   2. Feather coats onto adjoining surfaces so camber is maximum 1/32inch.
   3. Taping, filling, and sanding is not required at surfaces behind adhesive applied ceramic tile.

END OF SECTION

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SECTION 09 30 00

TILING

PART 1 GENERAL

1.1 SUBMITTALS

A. Shop Drawings: Indicate patterned applications and thresholds.

B. Product Data: Submit instructions for using grouts and adhesives.

1.2 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit recommended cleaning methods, cleaning materials, stain removal methods, and polishes and waxes.

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with TCA Handbook and ANSI A108.1 Series/A118.1 Series.

B. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years' experience.

C. Installer: Company specializing in performing Work of this section with minimum three years' experience.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Do not install adhesives in unventilated environment.

B. Maintain ambient and substrate temperature of 50 degrees F during installation of mortar materials.

PART 2 PRODUCTS

2.1 TILE

A. Manufacturers:
   1. Dal Tile International.
   2. Or equivalent as preapproved by Architect.

2.2 COMPONENTS

A. PT-1: ANSI A137.1, conforming to the following:
   1. Model and Color: Daltile, Volume 1.0, VL74 Reverb Ash
   2. Size: 12 x 24 inch
   3. Installation: Staggered Brickwork
   4. Grout: Mapei 01 Alabaster
   5. Base: Size: 12 x 24 inch cut down to 4"x12"

B. PT-2: ANSI A137.1, conforming to the following:
   1. Model and Color: Daltile, Volume 1.0, VL75 Sonic White
   2. Size: 12 x 24 inch
   3. Installation: Staggered Brickwork
   4. Grout: Mapei 01 Alabaster
   5. Base: Size: 12 x 24 inch cut down to 4"x12"

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify surfaces are ready to receive work.

3.2 PREPARATION

A. Install cementitious backer board. Tape joints and corners, cover with skim coat of dry-set mortar to feather edge.

3.3 INSTALLATION

A. Install tile and grout in accordance with applicable requirements of ANSI A108.1 through A108.10, and TCA Handbook recommendations.

B. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor, base and wall joints.

C. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.

D. Grout tile joints. Use standard grout unless otherwise indicated.

E. Floors:

1. Over interior concrete substrates, install in accordance with TCA Handbook Method F113, dry-set or latex-portland cement bond coat, with standard grout.
    a. Where waterproofing membrane is indicated, install in accordance with TCA Handbook Method F122, with latex-portland cement grout.

END OF SECTION

SECTION 09 51 13

ACOUSTICAL PANEL CEILINGS

PART 1 GENERAL

1.1 SYSTEM DESCRIPTION

A. Provide system capable of supporting imposed loads with deflection limited to 1: 360.

1.2 SUBMITTALS

A. Product Data: Submit manufacturer's product data.

B. Samples: Submit ceiling tile and suspension system.

1.3 QUALITY ASSURANCE

A. Conform to CISCA requirements.

B. Surface Burning Characteristics: Comply with the following when tested in accordance with NFPA 286.
1. During 40 kW Exposure: No flame spread to ceiling.
2. During 160 kW Exposure: No flame spread to perimeter of tested sample and no flashover.
3. Total Smoke Release: Maximum 1,000 cu m.

C. ENVIRONMENTAL REQUIREMENTS
1. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity acoustic unit installation.

PART 2 PRODUCTS

2.1 SUSPENDED ACOUSTICAL CEILINGS

A. Manufacturers:
1. Basis of Design: Armstrong Ceilings.
2. Or equivalent as preapproved by Architect.

2.2 COMPONENTS

A. Grid: Prelude XL
1. Non-Fire Rated Grid: ASTM C635, intermediate, non-fire rated, exposed T configuration; components die cut and interlocking.

B. ACT-1: Fine Fissured High NRC 1756; ASTM E1264 conforming to the following:
1. Nominal Size: 24 x 24 inches.
2. Thickness: 7/8 inch.
3. Edge: Angled Tegular.
4. Color: White.
5. NRC: 0.75
6. CAC: 35

2.3 ACCESSORIES

A. Acoustic Sealant for Perimeter Moldings: Specified in Section 07 90 00.

B. Touch-up Paint: Type and color to match acoustic and grid units.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify layout of hangers does not interfere with other work.

3.2 INSTALLATION

A. Suspension System:
   1. Install system in accordance with ASTM C636.
   2. Coordinate location of hangers with other work. Where components prevent regular spacing of hangers, reinforce system to span extra distance.
   3. Hang system independent of walls, columns, ducts, pipes and conduit.
   4. Locate system on room axis according to reflected plan.
   5. Install edge molding at intersection of ceiling and vertical surfaces, using longest practical lengths.

B. Acoustic Units:
   1. Install acoustic units level, free from damage, twist, warp or dents.
   2. Lay directional patterned units one way with pattern parallel to longest room axis.
   3. Lay acoustic insulation above acoustic units for distance of 48 inshes on both sides of acoustic partitions.

C. Tolerances: Variation from Flat and Level Surface: 1/8 inch in 10 feet.

END OF SECTION

SECTION 09 68 00

CARPETING

PART 1 GENERAL

1.1 SUBMITTALS

A. Samples: Submit two samples 24 x 24 inch in size illustrating color and pattern for each carpet material specified.

1.2 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit maintenance and cleaning instructions.

1.3 QUALITY ASSURANCE

A. Surface Burning Characteristics:
   1. Floor Finishes: Comply with one of the following:
      a. Class II, minimum 0.22 watts/sq cm] when tested in accordance with NFPA 253.
      b. CPSC 16 CFR 1630.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Store materials in area of installation of 48 hours prior to installation.

B. Maintain minimum 70 degrees F ambient temperature 3 days prior to, during and 24 hours after installation.

C. Ventilate installation area during installation and for 3 days after installation.

1.5 WARRANTY

A. Furnish ten year manufacturer warranty for carpet integrity, wear, and colorfastness.

1.6 EXTRA MATERIALS

A. Furnish 10 percent extra stock of carpeting of each type, color, and pattern specified.

PART 2 PRODUCTS

2.1 CARPET

A. Manufacturers:
   1. Basis of Design: Mohawk Group
   2. Or equivalent as preapproved by Architect.

2.2 COMPONENTS

A. CPT-1: Carpet
   1. Collection: Pure Genius II
   2. Style: Doctor II BT381
   3. Tile Size: 24”x24”
   4. Installation: Quarter turn
   5. Color as selected by Architect from manufacturers standard.

B. Backing: GlasBac Tile.

2.3 ACCESSORIES

A. Sub-Floor Filler: Type recommended by flooring material manufacturer.

B. Moldings and Edge Strips: Embossed aluminum.

C. Seam Adhesive: Recommended by manufacturer.

D. Contact Adhesive: Recommended by carpet manufacturer.
   1. Interior Adhesives: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify floor surfaces are smooth and flat within tolerances specified and are ready to receive work.

B. Verify concrete floors for glue-down installation are ready for carpet installation by testing for moisture emission rate and alkalinity. Obtain instructions when test results are not within specified limits.

3.2 PREPARATION

A. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.

B. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

C. Vacuum clean substrate.

3.3 INSTALLATION

A. Install carpet and cushion in accordance with Carpet and Rug Institute CRI 104 - Standard for Installation of Commercial Carpet.

B. Verify carpet match before cutting to ensure minimal variation between dye lots.

C. Lay out carpet:
   1. Use a quarter-turn format and install according to manufacturer’s instructions.

D. Form seams straight, not overlapped or peaked, and free of gaps.

E. Install carpet by direct glue-down method.

F. Complete installation of edge strips, concealing exposed edges.

G. Cleaning:
   1. Remove excess adhesive from floor, base, and wall surfaces without damage.
   2. Clean and vacuum carpet surfaces.

END OF SECTION

SECTION 09 90 00

PAINTING AND COATING

PART 1 GENERAL

1.1 SUBMITTALS

A. Product Data: Submit data on finishing products.

B. Samples: Submit two paper chip samples, 8 x 8 inch in size illustrating range of colors available for each surface finishing product scheduled.

1.2 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit maintenance and cleaning instructions.

1.3 QUALITY ASSURANCE

A. Surface Burning Characteristics:
1. Fire Retardant Finishes: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Store and apply materials in environmental conditions required by manufacturer's instructions.

PART 2 PRODUCTS

2.1 PAINTS AND COATINGS

2.2 COMPONENTS

A. Coatings: Ready mixed except field catalyzed coatings of good flow and brushing properties, capable of drying or curing free of streaks or sags.

B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials required to achieve finishes specified.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify substrate conditions are ready to receive Work.

3.2 PREPARATION

A. Correct minor defects and clean surfaces affecting work of this section.

B. Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or applying finishes.

C. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.

D. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.

E. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: Remove foreign matter. Remove oil and grease with solution of tri-sodium phosphate, rinse well and allow to dry.

F. Uncoated Steel and Iron Surfaces: Remove scale by wire brushing, sandblasting, clean by washing with solvent. Apply treatment of phosphoric acid solution. Prime paint after repairs.

G. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Clean surfaces with solvent. Prime bare steel surfaces.

H. Interior Wood Items Scheduled to Receive Paint Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

I. Interior Wood Items Scheduled to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats.

3.3 APPLICATION

A. Sand surfaces lightly between coats to achieve required finish.

B. Where clear finishes are required, tint fillers to match wood.

C. Prime concealed surfaces of woodwork with primer paint.

D. Prime concealed surfaces of interior wood surfaces scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with thinner.

E. Finishing Mechanical and Electrical Equipment:
1. Refer to mechanical, plumbing, and electrical sections for schedule of color coding, identification banding of equipment, duct work piping, and conduit.
2. Color code items in accordance with requirements indicated. Color band and identify with flow arrows and names.
3. Paint shop primed equipment.
4. Remove unfinished louvers, grilles, covers, and access panels and paint separately. Paint dampers exposed behind louvers, grilles, convector and baseboard cabinets to match face panels.
5. Prime and paint insulated and exposed pipes, insulated and exposed ducts, hangers, brackets, collars and supports, except where items are prefinished.
6. Paint interior surfaces of air ducts and convector and baseboard heating cabinets visible through grilles and louvers with one coat of flat black paint to visible surfaces.
7. Paint exposed conduit and electrical equipment occurring in finished areas.
8. Paint both sides and edges of plywood backboards.
9. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

F. Cleaning: As work proceeds, promptly remove finishes where spilled, splashed, or spattered.

3.4 SCHEDULE - EXTERIOR SURFACES

A. Steel – Primed:
   1. 1st and 2nd Coat: 4 mils dry per coat
      a. Sherwin Williams DTM Alkyd Enamel, B55 Series
      b. Benjamin Moore Co., M24 Alkyd DTM Semi-gloss

B. Steel – Galvanized:
   1. 1st and 2nd Coat: 4 mils dry per coat
      a. Sherwin Williams Sher-Cryl HPA, B66-350 Series
      b. Benjamin Moore Co., M29 Alkyd DTM Semi-Gloss

C. Pavement Markings:
   1. Two coats of traffic marking paint; flat, water based, acrylic, and yellow
      a. Sherwin Williams, Setfast Vinyl Acrylic Waterborne Traffic Paint
      b. Benjamin Moore Co., M58 Safety & Zone Marking Latex

3.5 SCHEDULE - INTERIOR SURFACES

A. Wood Opaque finish, 4 mils wet, 1.6 mils dry per coat:
   1. 1st Coat:
      a. Sherwin Williams Preprite Classic Primer, B8W101
      b. Benjamin Moore Co., 231 Eco Spec Interior Latex Semi-Gloss
   2. 2nd Coat:
      a. Sherwin Williams Progreen 200 Semi-gloss, B31-650 Series
      b. Benjamin Moore Co., 224 Eco Spec Interior Latex Semi-Gloss

B. Masonry Walls:
   1. 1st Coat: 10 – 18 mils dft as required to fill voids and provide a continuous substrate.
      a. Sherwin Williams Heavy Duty Block Filler
      b. Benjamin More Co., M31/M32 Waterborne Epoxy Block Filler
   2. 2nd & 3rd Coats: 4 mils wet, 2.5 mils dry per coat
      a. Sherwin Williams Tile-Clad HS Epoxy, B62V500 Series
      b. Benjamin Moore Co., M36/M39 Polyamide Epoxy Hi-Build Gloss

C. Steel – Primed:
   1. 1st Coat: 6 mils wet, 4 mils dry
      a. Sherwin Williams Recoatable Epoxy Primer, B67 Series
      b. Benjamin More Co., M33M34 Polyamide Metal Primer
   2. 2nd & 3rd Coats: 7 mils wet, 4 mils dry per coat.
      a. Sherwin Williams Tile-Clad HS Epoxy, B62WZ Series
      b. Benjamin Moore Co., M36/M39 Polyamide Epoxy Hi-Build Gloss

D. Steel – Galvanized:
   1. 1st & 2nd Coats: 4 mils dry per coat
      a. Sherwin Williams Sher-Cryl HPA, B66-350 Series
      b. Benjamin Moore Co., M29 Alkyd DTM Semi-Gloss
   2.

E. Gypsum Board:
   1. 1st Coat: 4 mils wet, 1.1 mils dry
      a. Sherwin Williams Progreen 200 Primer, B28W300
      b. Benjamin Moore Co., 231 Eco Spec Interior Latex Primer Sealer
   2. 2nd & 3rd Coats: 4 mils wet, 1.5 mils dry per coat

a. Sherwin Williams Progreen 200 Semi-Gloss, B31-650 Series
b. Benjamin Moore Co., 224 Eco Spec Interior Latex Semi-Gloss

END OF SECTION

SECTION 10 28 00

TOILET ACCESSORIES

PART 1 GENERAL

1.1 SUBMITTALS

A. Product Data: Submit data on accessories describing size, finish, details of function, attachment methods.

PART 2 PRODUCTS

2.1 TOILET ACCESSORIES

A. Manufacturers:
1. Bradley Corp.
2. Bobrick
3. Gamco
4. Or equivalent as preapproved by Architect.

2.2 COMPONENTS

A. Furnish 2 keys for each accessory to Owner.

B. Fasteners, Screws, and Bolts: Hot dip galvanized, tamper-proof.

C. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify exact location of accessories for installation.

3.2 PREPARATION

A. Deliver inserts and rough-in frames to site. Provide templates and rough-in measurements.

B. See manufacturer's instructions for installation of blocking, reinforcing plates, and concealed anchors in walls.

3.3 INSTALLATION

A. Install plumb and level, securely and rigidly anchored to substrate.

B. Mounting Heights and Locations: As required by accessibility regulations and as indicated on Drawings.

3.4 SCHEDULES

A. Mirror with Stainless Steel Frame:
   1. Model Number: Bradley: 748-24” x 36”
   2. Description: 24 inches wide x 36 inches high. 20 gauge stainless steel, polished to No. 8 architectural bright finish. Stretcher leveled for uniformity. Very bright – excellent reflectivity, very slight polish

B. Grab Bars
   1. Description: 1-1/4-inch diameter, length as indicated, horizontal, 1-1/2-inch wall clearance. Type 304 min. 18 gage stainless steel. Concealed screw attached mounting and anchorage. No. 4 satin finish. Minimum 900# supporting capacity.
   2. Grab Bar - 42 Inch: Bradley: 832-42”
   3. Grab Bar - 36 Inch: Bradley: 832-36”
   4. Grab Bar - 18 Inch: Bradley: 832-18”

C. Liquid Soap Dispenser:
   1. Model Number: Bradley - 6563
   2. Description: liquid soap dispenser shall be fabricated of 20 gauge stainless steel with exposed surfaces in satin finish. Requires less than 5 lbs. force to dispense soap. Clear plastic refill indicator window. Maximum 40 ounce capacity.

D. Surface-Mounted Multi-Roll Tissue Dispenser:
   1. Model Number: Bradley: 5402
   2. Description: Minimum 22 gage Type 304 stainless steel cabinet. Minimum 22 gage drawn one-piece Type 304 stainless steel unit front with pivot hinge and tumbler lockset. No. 4 satin finish. Holds 2 standard core 5 inch diameter tissue rolls. Reserve roll drops in-place by automatic release. Theft-resistant spindles.

E. Paper Towel Dispenser:
   1. Model Number: Bradley: 1981
   2. Description: 4 inch depth. Minimum 22 gage Type 304 stainless steel. Drawn and beveled one-piece seamless flange. Full length stainless steel piano hinge and concealed tumbler lock at towel dispenser door. No. 4 satin finish. Capacity minimum 1100 C-fold or 800 multi-fold, 600 C-fold paper towels.

F. Baby Changing Station
   1. Model Number: Bobrick: KB200
   2. Description: Surface mounted baby changing station, Molded bacterial-resistant, high density polyethylene with full-length, steel hinge pin. Concealed gas shock assists opening and closing; eliminates pinch points. Integrated dual paper liner dispenser and molded-in purse/diaper bag hooks. Safety strap with 100% unbreakable buckle.

END OF SECTION

SECTION 12 48 13

ENTRANCE FLOOR MATS AND FRAMES

PART 1 GENERAL

1.1 SUMMARY

A. This section includes entrance flooring system.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM)

B. The Aluminum Association

C. The Carpet and Rug Institute (CRI)

D. The National Floor Safety Institute (NFSI)

E. International Organization for Standardization (ISO)

1.3 SUBMITTALS

A. Product data for each type of floor mat and frame specified including manufacturer's specifications and installation instructions.

B. Shop drawings in sufficient detail showing layout of mat and frame specified including details indicating construction relative to materials, direction of traffic, spline locations, profiles, anchors and accessories.

C. Samples for verification purposes: Submit an assembled section of floor mat and frame members with selected tread insert showing each type of color for exposed floor mat, frame and accessories required.

D. Maintenance data in the form of manufacturer's printed instructions for cleaning and maintaining floor mats.

1.4 QUALITY ASSURANCE

A. Flammability in accordance with ASTM E648, Class 1, Critical Radiant Flux, minimum 0.45 watts/m^2.

B. Slip resistance in accordance with ASTM D-2047-96, Coefficient of Friction, minimum 0.60 for accessible routes.

C. Standard rolling load performance is 350 lb./wheel with larger loading requirements as specified (load applied to a solid 5” x 2” wide polyurethane wheel, 1000 passes without damage).

D. Single Source Responsibility: Obtain floor mats and frames from one source of a single manufacturer.

E. Utilize superior structural aluminum alloy 6063-T6 for rail connectors.

F. Utilize a manufacturer that is ISO 9001 & 14001 certified.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the project site ready for use and fabricated in as large sections and assemblies as practical, in unopened original factory packaging clearly labeled to identify manufacturer.

1.6 PROJECT CONDITIONS

A. Field measurements: Check actual openings for mats by accurate field measurements before fabrication. Record actual measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Basis of Design: Construction Specialties, 3 Werner Way, Lebanon, NJ 08833

B. Or equivalent as preapproved by Architect.

2.2 MATERIALS

A. Aluminum - ASTM B 221, alloys 6063-T5, 6063-T6 for extrusions.

B. Regrind PETG/Polyurethane extrusion.

C. Flexible TPE extrusions.

D. Tread insert options - refer to section 2.05.

2.3 FLOOR MATS

A. Model and Description - M1 Pedimat Exposed hinge rail connectors shall be extruded 6063-T6 aluminum complete with perforations for drainage. Tread rails shall be manufactured from high-impact Regrind PET-G complete with co-extruded soft-durometer cushions. Overall depth without frame is 7/16” (11.1 mm). Supplied in mill (standard).

2.4 MAT FRAMES

A. TNG - Tapered Angle Frame shall be a 1/2"(12.7mm) deep recessed frame in 6063-T5 aluminum alloy. Frame color shall be supplied in standard mill.

2.5 TREAD INSERT

A. HD – MonoTuft HD™ Carpet shall meet CRI standard for good indoor air quality. Fibers shall include a minimum of 100, 12 mil monofilament fibers per square inch. Available in standard colors as offered by manufacturer. Each carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Anti-static carpet fibers shall contain antimicrobial additive and be treated with Scotchgard® to reduce soiling. Carpet weight shall be 33-oz./yd².

PART 3 EXECUTION

3.1 EXAMINATION

A. Verification of conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.

B. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Manufacturer shall offer assistance and guidance to provide a template of irregular shaped mat assemblies to ensure a proper installation.

3.3 INSTALLATION

A. Install the work of this section in strict accordance with the manufacturer's recommendations.

B. Set mat at height recommended by manufacturer for most effective cleaning action.

C. Coordinate top of mat surface with bottom of doors that swing across to provide ample clearance between door and mat.

3.4 PROTECTION

A. After completing required frame installation and concrete work, provide temporary filler of plywood or fiberboard in recess, and cover frames with plywood protective flooring. Maintain protection until construction traffic has ended and project is near time of substantial completion.

B. Defer installation of floor mats until time of substantial completion of project.

END OF SECTION

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SECTION 22 23 26

PLUMBING, MECHANICAL, ELECTRICAL (PME)
DESIGN-BUILD SCOPE NARRATIVE

PART 1 GENERAL

1.1 SCOPE DESCRIPTION

A. All proposed systems must exceed code minimum requirements. Design-Build subcontractors shall participate in design coordination meetings with the project team (Owner/Architect/Building General Contractor) to evaluate options.

B. The Design-Build subcontractor for each scope of work shall be responsible for designing a complete system that is fully coordinated with other building elements and systems.

C. Costs shall include:
   1. Design coordination meetings required for integration of complete system with other building elements and systems.
   2. Design services for entire scope of work.
   3. Plan review fees as applicable to the scope of work.
   4. All materials and installation costs for complete system.

D. The following systems will be provided by others under separate contract with the Owner. The contractor shall be responsible for coordinating the work of the building with the work of the Owner provided systems:
   1. Fuel Tank: The Owner will contract with a fuel supplier who will install and fill an above ground fuel tank.
      a. The Building General Contractor shall include in the bid all piping necessary to connect the building equipment to the exterior fuel tank.
   2. Septic Tank: The Owner will contract separately to have a septic system provided and installed on the site.
      a. The Building General Contractor shall include in the bid the sanitary waste system to 5 feet beyond the perimeter of the building.
   3. Potable Water Well: The Owner will contract separately to have a potable well and pumping system installed on the site.
      a. The Building General Contractor shall include in the bid the water supply system (including a pressure tank) in the building to 5 feet beyond the perimeter of the building.
   4. Computer Network Equipment: The Owner will contract separately to provide all data cabling, terminations, racks, punch down blocks, and terminations required for the computer network system.
      a. The Building General Contractor shall include installation of conduit and pull cords from each data port indicated on the drawings to the network data panel location indicated on the drawings.

PART 2 PRODUCTS

2.1 PLUMBING SYSTEMS
   A. Exterior/General
      1. Water and sewer service to be provided to building under separate agreement with the owner. MEP design team shall coordinate with the owner for service sizing requirements and location.

2. Provide complete plumbing system for distribution of water supply and conveyance of sanitary sewer waste to appropriate utility connections at 5' of the building perimeter.
3. Provide hot water for the building using water tank located in Mechanical Room (105).
4. Provide exterior hose bibbs at location indicated on the plans.

B. Interior:
1. Plumbing system and fixtures as noted on plans (water closet, lavatory, sink, utility sink, floor drains, etc.).
2. Drains for condensate as needed to provide for other MEP systems.

2.2 MECHANICALSYSTEM (HVAC)

A. All elements of the mechanical system shall be designed to be coordinated with each other. The following requirements represent minimum expectations set by the Owner. All proposed systems must be designed to exceed code minimum requirements.

B. Meeting Room, Office, Voting Storage
1. Conventional heating, ventilation and cooling provided with a single system controlled by a single thermostat mounted in the meeting room.

C. Toilet Rooms, Mechanical, Vestibule
1. Heating and ventilation to exceed code requirements for these spaces. Electric baseboard heat is acceptable for these spaces.

2.3 ELECTRICAL SYSTEMS

A. Exterior/General:
1. Single phase Electrical service to be provided to building under separate agreement with the owner. MEP design team shall coordinate with the owner for service sizing requirements and location.
2. Provide power and receptacles for code minimum requirements and for all equipment to be included in the building as indicated by the owner.
3. Provide wall mounted dark sky compliant LED lights on all exterior walls:
   a. Six (6) minimum: one above each door, two on west face of building, and one on south face of building.
   b. Control exterior lights with photocell on, timer off.

B. Interior:
1. Power
   a. Conventional power meeting code requirements at a minimum for proposed spaces. At a minimum, include power receptacles at locations noted on the plans. Verify location with the owner during construction.
   b. Power receptacles for standard convenience at 18" above finished floor unless noted otherwise on the plans.
   c. Power for other building systems as required.
   d. Power as required for code requirements and other MEP systems (heat, ventilation, water heating, etc.).
2. Lighting
   a. LED lighting fixtures in all spaces, controlled by multiple switches and motion sensor control as required by code.
   b. Voting Storage and Mechanical: Ceiling surface mounted fixtures with surface mounted conduit is acceptable.
   c. Toilet Rooms, Office, and Vestibule : 24" x 24" suspended ceiling mounted fixtures are acceptable.
   d. Meeting Room and Coffee Area : 24" x 24" suspended ceiling mounted fixtures are acceptable in areas with suspended ceiling.

e. Emergency egress lighting and signage as required by code.

3. Computer Data System
   a. Install receptacle box and conduit with pull cords from receptacles to 12” above the suspended ceilings at the locations noted on the plans.

PART 3 EXECUTION

Not Used.

END OF SECTION

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