

BID CATEGORY #01 – SITE WORK & SITE UTILITIES

1. SCOPE OF WORK:

- a. Except for the items specifically noted below to be excluded, the work of this Bid Category shall include all labor, materials, equipment to complete work as identified below and per Contract and Division 1 General Requirements as listed in Construction Documents. Should any conflict exist between this written Scope of Work and the scope of work inferred by the Division 1 General Requirements or the Specification Sections listed below, the work required by this Bid Category description shall govern. Work of this Bid Category shall include the following Specification Sections:

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 - GENERAL REQUIREMENTS

31 10 00 Site Clearing
31 20 00 Earth Moving
31 23 00 Foundation Excavating and Backfilling
31 25 00 Erosion Control
32 11 23 Aggregate Base Courses
32 13 13 Concrete Paving
32 17 23 Pavement Markings
33 31 00 Sanitary Sewer Systems
33 41 00 Storm Utility Drainage Piping
Asphalt Patching
Underpinning (As applicable to this bid category)

2. GENERAL REQUIREMENTS INCLUDED BUT NOT LIMITED TO:

- a. Provide project manager and qualified onsite supervisor (changes to personnel will require CM approval)
- b. Daily coordination with other trades whose work is interfaced with the work of this Bid Category and as required for the completion of the work of all Bid Categories.
- c. Any and all layout, grades, elevations, dimensioning and engineering required to complete the work of this Bid Category and as further described in Division 1 requirements.
- d. Verify all existing elevations and dimensions relative to work of this Bid Category prior to start of the work.
- e. All labor, materials, equipment, tools, incidental hardware required to receive, unload, store, protect and install all the work of this Bid Category as well as installation of materials supplied by other Bid Categories that are required to be installed by this Bid Category. If unloading of equipment/materials is required to be done by the construction manager with their rough terrain forklift this will be billed to the bid category subcontractor at \$150 per hour with a one-hour minimum charge (this cost includes the operator).
- f. Bid category contractor will be provided pdf file of the construction documents, it is the responsibility of the subcontractor to print their own copies for use.
- g. Bid Category Contractor is responsible to verify that any previous work completed that has a direct effect on the work of this category is complete and acceptable prior to commencing with work. Contractor will notify the Construction Manager of any discrepancies immediately for correction by responsible Contractor.
- h. Bid category contractor work will require multiple mobilizations, no additional mobilization cost will be accepted.
- i. Provide daily clean up and trash removal of all debris as a result of this Bid Categories work. All work areas are to be maintained in a safe and accessible manner at all times.
- j. Bid Category Contractor is aware of delivery requirements of the Project Schedule included in the Construction Documents and assumes responsibility to complete all work of this Bid Category to meet the Project Schedule requirements. This contractor will, within seven (7) days of Notice of Award, submit a preliminary schedule detailing work of this Bid Category to comply with the time requirements of Project Schedule.
- k. Bid category contractor to include all fees and permit costs that pertain to their scope of work.
- l. Bid category contractor is required to sign the construction managers subcontract agreement included in the project manual (no modifications to the contract permitted).

- m. At completion of work, restore any site areas disturbed by construction activity of this Bid Category to originally graded condition as was provided to this contractor at the start of work.
- n. Submit to Construction Manager written requests for clarification or interpretation of the meaning and/or intent of the Construction Documents at either time of bidding or during construction.
- o. Provide a project specific Safety Program to Construction Manager.
- p. By submitting a bid for this Bid Category, the Bidding Contractor has implied that he/she has visited the site, is familiar with the project's local conditions and has factored these conditions into the bid submitted. Furthermore, Bidding Contractor warrants that the work can be completed per the Construction Documents based on the site visit observations and has taken into consideration the existing physical conditions that may affect the work of this Bid Category and that all such costs to complete the work of this Bid Category due to existing project site conditions are included in the bid submitted.
- q. If weather conditions are a factor in completion of this Bid Categories work, Contractor is to provide documentation substantiating normal weather conditions anticipated and included in submitted bid.
- r. Background checks are required for all workers onsite. County will perform background checks at no cost. There is also a zero-tolerance agreement required to be signed for all employees working in the law enforcement center.

3. SPECIFIC ITEMS TO INCLUDE:

- a. All requirements of Specification Sections as noted in Scope of Work above
- b. Excavation, backfill and compaction required to complete work of this Bid Category
- c. Coordination with local utilities
- d. Permits and fees for this work
- e. Provide and remove temporary gravel access drive
- f. Haul and dispose of all excess materials offsite
- g. Associated layout/surveying for this work (Maas Brothers will provide only site boundaries, building corners, and a benchmark elevation)
- h. Removal of existing trees and shrubs, vegetation, paving, foundations, rubble to be disposed of off site
- i. Protection of adjacent work, and salvage of material for reuse as directed by the owner/architect.
- j. Sawcutting and removal of exterior stairwell in Area B.
- k. Tree protection
- l. Street cleaning and traffic control measures for this work
- m. Removal of topsoil for reuse during final grading, store topsoil onsite and provide temporary erosion control and seeding as required
- n. Grade site to final subgrade elevations indicated on the plans
- o. Import or export of material as needed
- p. Placing, maintaining and removal of erosion control measures per plan. Maintenance to be performed throughout the duration of the project
- q. Removal of spoils related to the earth retention system/push piles at the west addition
- r. Conduct DNR Erosion Control site inspections and fill out all necessary reports as required. Supply copies of reports to Maas Brothers within 24 hours of a rain event
- s. Periodic removal of silt from basins as required during construction
- t. Footing/foundation excavation and backfill. Maintain grades around excavation to prevent surface water from entering excavations. Excavations to follow any and all OSHA Regulations.
- u. Crushed aggregate base course for asphalt paving, concrete paving, sidewalks, curbs, concrete site pads, and building slabs on grade to within one tenth of a foot (this contractor will also provide all crushed aggregate for fine grading)
- v. Sawcut & Removal of Asphalt as indicated
- w. Asphalt patching as identified on the plans (sawcut asphalt edge again prior to patching so a clean line is present)
- x. Removal/disposal of existing MIS Building at 402 S. Center Avenue including all local permits and fees for abandonment of all existing utilities (asbestos abatement by owner). Foundation removal and backfill with suitable compactable fill is required
- y. Topsoil placement and final grading ready for seeding and landscaping by others

- z. Hand work required to complete this work
- aa. Provide and remove concrete wash out area for concrete trucks
- bb. All sanitary sewers, storm sewers (Including storm sewers related to downspouts), and associated structures
- cc. Site demolition as shown including saw cutting of asphalt/concrete and removal
- dd. Assist in the excavation for the indicated underpinning of existing foundations (machine work for removal of soils)
- ee. Pumping water from utility trenches
- ff. Concrete curb
- gg. Performance and payment bond
- hh. Include all road and curb patching (concrete and asphalt) as required for new utility installation.

4. EXCLUDED ITEMS:

- a. Concrete work
- b. Sidewalk, fencing, landscape repairs and restoration work

BID CATEGORY #07 – GENERAL CONSTRUCTION

1. SCOPE OF WORK:

- a. Except for the items specifically noted below to be excluded, the work of this Bid Category shall include all labor, materials, equipment to complete work as identified below and per Contract and Division 1 General Requirements as listed in Construction Documents. Should any conflict exist between this written Scope of Work and the scope of work inferred by the Division 1 General Requirements or the Specification Sections listed below, the work required by this Bid Category description shall govern. Work of this Bid Category shall include the following Specification Sections:

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 - GENERAL REQUIREMENTS

02 41 19 Selective Demolition
05 05 53 Security Metal Fastenings (As applicable to this bid category)
05 73 00 Decorative Metal Railings
06 10 00 Rough Carpentry
06 16 00 Sheathing (subflooring as applicable to this bid category)
06 20 23 Interior Finish Carpentry
06 40 00 Architectural Woodwork
06 42 16 Flush Wood Paneling
07 24 19 Water-Drainage Exterior Insulation and Finish System
07 81 00 Applied Fireproofing
07 81 23 Intumescent Fireproofing
07 84 13 Penetration Firestopping (As applicable to this bid category)
07 84 43 Joint Firestopping (As applicable to this bid category)
07 92 00 Joint Sealants (As applicable to this bid category)
08 11 13 Hollow Metal Doors and Frames
08 12 16 Aluminum Frames
08 14 16 Flush Wood Doors
08 63 00 Metal-Framed Skylights
08 71 00 Door Hardware (As applicable to this bid category)
10 00 10 Miscellaneous Specialties
10 11 00 Visual Display Surfaces
10 14 00 Signage
10 21 13.13 Metal Toilet Compartments
10 22 13 Wire Mesh Partitions
10 22 39 Folding Panel Partitions
10 28 00 Toilet, Bath, and Laundry Accessories
10 51 13 Metal Lockers
10 51 29 Phenolic Lockers
12 67 23 Benches
14 42 00 Wheelchair Lifts
Micro Piles (Earth Retention System)

2. GENERAL REQUIREMENTS INCLUDED BUT NOT LIMITED TO:

- a. Provide project manager and qualified onsite supervisor (changes to personnel will require CM approval)
- b. Daily coordination with other trades whose work is interfaced with the work of this Bid Category and as required for the completion of the work of all Bid Categories.
- c. Any and all layout, grades, elevations, dimensioning and engineering required to complete the work of this Bid Category and as further described in Division 1 requirements.
- d. Verify all existing elevations and dimensions relative to work of this Bid Category prior to start of the work.
- e. All labor, materials, equipment, tools, incidental hardware required to receive, unload, store, protect and install all the work of this Bid Category as well as installation of materials supplied by other Bid Categories that are required to be installed by this Bid Category. If unloading of equipment/materials is required to be done by the

construction manager with their rough terrain forklift this will be billed to the bid category subcontractor at \$150 per hour with a one-hour minimum charge (this cost includes the operator).

- f. Bid category contractor will be provided pdf file of the construction documents, it is the responsibility of the subcontractor to print their own copies for use.
- g. Bid Category Contractor is responsible to verify that any previous work completed that has a direct effect on the work of this category is complete and acceptable prior to commencing with work. Contractor will notify the Construction Manager of any discrepancies immediately for correction by responsible Contractor.
- h. Bid category contractor work will require multiple mobilizations, no additional mobilization cost will be accepted.
- i. Provide daily clean up and trash removal of all debris as a result of this Bid Categories work. All work areas are to be maintained in a safe and accessible manner at all times.
- j. Bid Category Contractor is aware of delivery requirements of the Project Schedule included in the Construction Documents and assumes responsibility to complete all work of this Bid Category to meet the Project Schedule requirements. This contractor will, within seven (7) days of Notice of Award, submit a preliminary schedule detailing work of this Bid Category to comply with the time requirements of Project Schedule.
- k. Bid category contractor to include all fees and permit costs that pertain to their scope of work.
- l. Bid category contractor is required to sign the construction managers subcontract agreement included in the project manual (no modifications to the contract permitted).
- m. At completion of work, restore any site areas disturbed by construction activity of this Bid Category to originally graded condition as was provided to this contractor at the start of work.
- n. Submit to Construction Manager written requests for clarification or interpretation of the meaning and/or intent of the Construction Documents at either time of bidding or during construction.
- o. Provide a project specific Safety Program to Construction Manager.
- p. By submitting a bid for this Bid Category, the Bidding Contractor has implied that he/she has visited the site, is familiar with the project's local conditions and has factored these conditions into the bid submitted. Furthermore, Bidding Contractor warrants that the work can be completed per the Construction Documents based on the site visit observations and has taken into consideration the existing physical conditions that may affect the work of this Bid Category and that all such costs to complete the work of this Bid Category due to existing project site conditions are included in the bid submitted.
- q. If weather conditions are a factor in completion of this Bid Categories work, Contractor is to provide documentation substantiating normal weather conditions anticipated and included in submitted bid.
- r. Background checks are required for all workers onsite. County will perform background checks at no cost. There is also a zero-tolerance agreement required to be signed for all employees working in the law enforcement center.

3. SPECIFIC ITEMS TO INCLUDE:

- a. All requirements of Specification Sections as noted in Scope of Work above.
- b. Safety barricades for this work
- c. Associated layout for this work (Maas Brothers will only provide site boundaries, building corners, and a benchmark elevation one time)
- d. Street cleaning and traffic control measures for this work
- e. Provide project manager and qualified **full time onsite supervisor** (changes to personnel will require CM approval)
- f. Include micro piles/earth retention at area indicated on west addition (design, engineering and installation) on the structural plans, including excavation and footing removal as required (hauling and removal/disposal of spoils by bid package #1)
- g. Demolition of new openings in existing masonry to include any required shoring/needling. Demo in a workmanlike manner to accommodate toothing by masonry contractor
- h. Remove and salvage existing wire mesh partitions as noted on the demolition plan
- i. Remove and reinstall existing fire extinguisher cabinets and provide new as indicated on plan
- j. Removal and reinstallation of existing booking casework as noted at the Jail
- k. Removal and reinstallation of existing courtroom gallery seating including modifications to existing (refinishing by BP 13)

- l. Removal and reinstallation of existing jury chairs including new jury chairs identified
- m. Remove/modify/reinstall existing shelves as indicated at the Judges Chambers
- n. New courtroom gallery seating as shown on the plan
- o. Furnish and Install all rough carpentry and wood blocking required
- p. Metal supports for countertops
- q. Removal, relocation and reinstallation of existing granite panels as noted
- r. Any engineering work required by the specification
- s. Safety barricades for this work
- t. Furnish all necessary fasteners, shims, etc. for a complete installation of all items associated with the work of this bid category
- u. Coordinate with other trades as necessary
- v. Furnish and install all hollow metal doors and frames, wood doors, and door hardware. Coordination of shop drawings/approvals, field measuring, receiving materials on-site, verification of correct material deliveries, coordination of any returns, storage onsite for installation and installation warranty
- w. Furnish and install all caulking needed for this bid category
- x. Furnish and install firestopping/caulking at rated wall and ceiling junctures. Firestopping/caulking of penetrations installed after wall or ceiling installation will be by the trade making the penetration
- y. Furnish and install door hardware/wood doors that are installed in aluminum frames (coordinate with AL contractor)
- z. All selective demolition work other than mechanical, electrical and plumbing
- aa. Remove and salvage existing high density file storage as noted
- bb. Remove and salvage existing court reporter stations
- cc. Remove and reinstall court reporter wall tablets
- dd. Include \$35,000 allowance for EIFS work
- ee. Demolition of existing terrazzo cove base at new openings in main corridors in a workmanlike manner
- ff. Supply all dumpsters for demolition including dumpsters for fire protection, plumbing, HVAC and electrical
- gg. Performance and payment bond

4. EXCLUDED ITEMS:

- a. Construction Manager will provide temporary heating equipment, gas and electric usage required for winter construction per the base bid construction schedule.
- b. Detention Doors and hardware

1. SCOPE OF WORK:

- a. Except for the items specifically noted below to be excluded, the work of this Bid Category shall include all labor, materials, equipment to complete work as identified below and per Contract and Division 1 General Requirements as listed in Construction Documents. Should any conflict exist between this written Scope of Work and the scope of work inferred by the Division 1 General Requirements or the Specification Sections listed below, the work required by this Bid Category description shall govern. Work of this Bid Category shall include the following Specification Sections:

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 - GENERAL REQUIREMENTS

05 05 53 Security Metal Fastenings (As applicable to this bid category)

05 40 00 Cold-Formed Steel Framing

06 16 00 Sheathing (Glass Mat Gypsum Sheathing as applicable to this bid category)

07 21 00 Thermal Insulation (As applicable to this bid category)

07 21 19 Foamed-In-Place Insulation

07 27 26 Fluid Applied Membrane Air Barriers

07 84 13 Penetration Firestopping (As applicable to this bid category)

07 84 43 Joint Firestopping (As applicable to this bid category)

07 92 00 Joint Sealants (As applicable to this bid category)

07 95 13.13 Interior Expansion Joint Cover Assemblies (As applicable to this bid category)

09 21 16.23 Gypsum Board Shaft Wall Assemblies

09 22 16 Non-Structural Metal Framing

09 24 00 Portland Cement Plastering

09 29 00 Gypsum Board

2. GENERAL REQUIREMENTS INCLUDED BUT NOT LIMITED TO:

- a. Provide project manager and qualified onsite supervisor (changes to personnel will require CM approval)
- b. Daily coordination with other trades whose work is interfaced with the work of this Bid Category and as required for the completion of the work of all Bid Categories.
- c. Any and all layout, grades, elevations, dimensioning and engineering required to complete the work of this Bid Category and as further described in Division 1 requirements.
- d. Verify all existing elevations and dimensions relative to work of this Bid Category prior to start of the work.
- e. All labor, materials, equipment, tools, incidental hardware required to receive, unload, store, protect and install all the work of this Bid Category as well as installation of materials supplied by other Bid Categories that are required to be installed by this Bid Category. If unloading of equipment/materials is required to be done by the construction manager with their rough terrain forklift this will be billed to the bid category subcontractor at \$150 per hour with a one-hour minimum charge (this cost includes the operator).
- f. Bid category contractor will be provided pdf file of the construction documents, it is the responsibility of the subcontractor to print their own copies for use.
- g. Bid Category Contractor is responsible to verify that any previous work completed that has a direct effect on the work of this category is complete and acceptable prior to commencing with work. Contractor will notify the Construction Manager of any discrepancies immediately for correction by responsible Contractor.
- h. Bid category contractor work will require multiple mobilizations, no additional mobilization cost will be accepted.
- i. Provide daily clean up and trash removal of all debris as a result of this Bid Categories work. All work areas are to be maintained in a safe and accessible manner at all times.
- j. Bid Category Contractor is aware of delivery requirements of the Project Schedule included in the Construction Documents and assumes responsibility to complete all work of this Bid Category to meet the Project Schedule requirements. This contractor will, within seven (7) days of Notice of Award, submit a preliminary schedule detailing work of this Bid Category to comply with the time requirements of Project Schedule.
- k. Bid category contractor to include all fees and permit costs that pertain to their scope of work.

- l. Bid category contractor is required to sign the construction managers subcontract agreement included in the project manual (no modifications to the contract permitted).
- m. At completion of work, restore any site areas disturbed by construction activity of this Bid Category to originally graded condition as was provided to this contractor at the start of work.
- n. Submit to Construction Manager written requests for clarification or interpretation of the meaning and/or intent of the Construction Documents at either time of bidding or during construction.
- o. Provide a project specific Safety Program to Construction Manager.
- p. By submitting a bid for this Bid Category, the Bidding Contractor has implied that he/she has visited the site, is familiar with the project's local conditions and has factored these conditions into the bid submitted. Furthermore, Bidding Contractor warrants that the work can be completed per the Construction Documents based on the site visit observations and has taken into consideration the existing physical conditions that may affect the work of this Bid Category and that all such costs to complete the work of this Bid Category due to existing project site conditions are included in the bid submitted.
- q. If weather conditions are a factor in completion of this Bid Categories work, Contractor is to provide documentation substantiating normal weather conditions anticipated and included in submitted bid.
- r. Background checks are required for all workers onsite. County will perform background checks at no cost. There is also a zero-tolerance agreement required to be signed for all employees working in the law enforcement center.

3. SPECIFIC ITEMS TO INCLUDE:

- a. All requirements of Specification Sections as noted in Scope of Work above.
- b. Safety barricades for this work
- c. Layout as it pertains to this work
- d. Associated layout for this work (Maas Brothers will only provide site boundaries, building corners, and a benchmark elevation one time)
- e. Supply and install insulation within stud cavities
- f. Street cleaning and traffic control measures for this work
- g. Provide project manager and qualified onsite supervisor (changes to personnel will require CM approval)
- h. Building insulation
- i. Supply and installation of fire caulking as required for this scope of work
- j. Any engineering work required by the specification
- k. Safety barricades for this work
- l. Supply and install all drywall to drywall expansion joints
- m. Furnish all necessary fasteners, shims, etc. for a complete installation of all items associated with the work of this bid category
- n. Coordinate with other trades as necessary
- o. Furnish and install all cold formed metal framing including design drawings stamped by Engineer registered in the State of Wisconsin
- p. Furnish and install firestopping/caulking at rated wall and ceiling junctures. Firestopping/caulking of penetrations installed after wall or ceiling installation will be by the trade making the penetration
- q. Include \$75,000 allowance for detention plaster patching not identified on the plan
- r. Performance and payment bond

4. EXCLUDED ITEMS:

- a. Construction Manager will provide temporary heating equipment, gas and electric usage required for winter construction per the base bid construction schedule.

BID CATEGORY #16 – HEATING, VENTILATION AND AIR CONDITIONING

1. SCOPE OF WORK:

- a. Except for the items specifically noted below to be excluded, the work of this Bid Category shall include all labor, materials, equipment to complete work as identified below and per Contract and Division 1 General Requirements as listed in Construction Documents. Should any conflict exist between this written Scope of Work and the scope of work inferred by the Division 1 General Requirements or the Specification Sections listed below, the work required by this Bid Category description shall govern. Work of this Bid Category shall include the following Specification Sections:

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 - GENERAL REQUIREMENTS

02 41 19 Selective Demolition
05 05 53 Security Metal Fastenings (As applicable to this bid category)
07 84 13 Penetration Firestopping (As applicable to this bid category)
07 84 43 Joint Firestopping (As applicable to this bid category)
07 92 00 Joint Sealants (As applicable to this bid category)
08 31 13 Access Doors and Frames (As applicable to this bid category)
08 31 13.53 Security Access Doors and Frames (As applicable to this bid category)
08 91 19 Fixed Louvers
23 00 10 HVAC General Provisions
23 05 00 Common Work Results for HVAC
23 05 13 Common Motor Requirements for HVAC Equipment
23 05 16 Expansion Fittings and Loops for HVAC Piping
23 05 19 Meters and Gauges for HVAC Piping
23 05 23 General Duty Valves for HVAC Piping
23 05 29 Hangers and Supports for HVAC Piping and Equipment
23 05 48 Vibration Controls for HVAC Piping and Equipment
23 05 53 Identification for HVAC Piping, Ductwork and Equipment
23 05 93 Testing, Adjusting and Balancing for HVAC
23 07 00 HVAC Insulation
23 09 00 Building Automation System
23 21 13 Hydronic Piping
23 21 23 Hydronic Pumps
23 23 00 Refrigerant Piping
23 31 13 Metal Ducts
23 33 00 Air Duct Accessories
23 34 00 Fuel-Fired Domestic Water Heaters
23 34 16 HVAC Fans
23 36 00 Air Terminal Units
23 37 13 Diffusers, Registers and Grilles
23 51 00 Breeching, Chimneys, and Stacks
23 52 16 Condensing Boilers
23 62 00 Packaged Compressor and Condenser Units
23 64 16 Centrifugal Water Chillers
23 65 00 Cooling Towers
23 73 13 Modular Indoor Central Station Air Handling Units
23 74 13 Packaged Outdoor Central Station Air Handling Units
23 81 28 Ductless Split System Air Conditioners
23 82 16 Air Coils
23 82 19 Fan Coil Units
23 82 33 Convectors and Radiant Heaters
23 82 39 Unit Heaters

2. GENERAL REQUIREMENTS INCLUDED BUT NOT LIMITED TO:

- a. Provide project manager and qualified onsite supervisor (changes to personnel will require CM approval)
- b. Daily coordination with other trades whose work is interfaced with the work of this Bid Category and as required for the completion of the work of all Bid Categories.

- c. Any and all layout, grades, elevations, dimensioning and engineering required to complete the work of this Bid Category and as further described in Division 1 requirements.
- d. Verify all existing elevations and dimensions relative to work of this Bid Category prior to start of the work.
- e. All labor, materials, equipment, tools, incidental hardware required to receive, unload, store, protect and install all the work of this Bid Category as well as installation of materials supplied by other Bid Categories that are required to be installed by this Bid Category. If unloading of equipment/materials is required to be done by the construction manager with their rough terrain forklift this will be billed to the bid category subcontractor at \$150 per hour with a one-hour minimum charge (this cost includes the operator).
- f. Bid category contractor will be provided pdf file of the construction documents, it is the responsibility of the subcontractor to print their own copies for use.
- g. Bid Category Contractor is responsible to verify that any previous work completed that has a direct effect on the work of this category is complete and acceptable prior to commencing with work. Contractor will notify the Construction Manager of any discrepancies immediately for correction by responsible Contractor.
- h. Bid category contractor work will require multiple mobilizations, no additional mobilization cost will be accepted.
- i. Provide daily clean up and trash removal of all debris as a result of this Bid Categories work. All work areas are to be maintained in a safe and accessible manner at all times.
- j. Bid Category Contractor is aware of delivery requirements of the Project Schedule included in the Construction Documents and assumes responsibility to complete all work of this Bid Category to meet the Project Schedule requirements. This contractor will, within seven (7) days of Notice of Award, submit a preliminary schedule detailing work of this Bid Category to comply with the time requirements of Project Schedule.
- k. Bid category contractor to include all fees and permit costs that pertain to their scope of work.
- l. Bid category contractor is required to sign the construction managers subcontract agreement included in the project manual (no modifications to the contract permitted).
- m. At completion of work, restore any site areas disturbed by construction activity of this Bid Category to originally graded condition as was provided to this contractor at the start of work.
- n. Submit to Construction Manager written requests for clarification or interpretation of the meaning and/or intent of the Construction Documents at either time of bidding or during construction.
- o. Provide a project specific Safety Program to Construction Manager.
- p. By submitting a bid for this Bid Category, the Bidding Contractor has implied that he/she has visited the site, is familiar with the project's local conditions and has factored these conditions into the bid submitted. Furthermore, Bidding Contractor warrants that the work can be completed per the Construction Documents based on the site visit observations and has taken into consideration the existing physical conditions that may affect the work of this Bid Category and that all such costs to complete the work of this Bid Category due to existing project site conditions are included in the bid submitted.
- q. If weather conditions are a factor in completion of this Bid Categories work, Contractor is to provide documentation substantiating normal weather conditions anticipated and included in submitted bid.
- r. Background checks are required for all workers onsite. County will perform background checks at no cost. There is also a zero-tolerance agreement required to be signed for all employees working in the law enforcement center.

3. SPECIFIC ITEMS TO INCLUDE:

- a. All requirements of Specification Sections as noted in Scope of Work above.
- b. Include the cost of maintaining and changing filters and servicing equipment used during construction.
- c. Provide new filters on equipment after construction is complete
- d. Supply and install louvers and louvered equipment enclosures
- e. Street cleaning and traffic control measures for this work
- f. Coordination with other trades
- g. Caulking/Firestopping penetrations thru floors, walls and ceilings
- h. Patch any openings associated with demolition of existing work to match adjacent surface
- i. All existing HVAC equipment must remain active to serve occupied spaces throughout the various phases of construction work
- j. Cutting and patching

- k. Removal and proper disposal of all existing thermostats
- l. Provide temporary chiller as identified on the bid documents
- m. Include 300-man hours to be used as directed by the construction manager
- n. Performance and payment bond

4. EXCLUDED ITEMS:

- a. Construction Manager will provide temporary heating equipment, gas and electric usage required for winter construction per the base bid construction schedule other than items indicated on the plans
- b. HVAC related concrete equipment pads by Bid Category #05 – Cast-In-Place Concrete
- c. Gas service fees and usage

BID FORM

PROJECT: JEFFERSON COUNTY COURTHOUSE AND SHERIFF BUILDING
RENOVATIONS AND ADDITIONS
311 S. CENTER AVENUE
JEFFERSON, WISCONSIN 53549

TO: JEFFERSON COUNTY
311 S CENTER AVENUE, ROOM 111
JEFFERSON, WISCONSIN 53549

I (We) _____
(A Corporation) (A Partnership) (An Individual)
Strike out those that do not apply

Of _____
Street City State Zip

Telephone Number E-mail Address

a Bona Fide Prime Bidder, have received the Procurement Documents which include the Project Manual and Drawings (as indexed on Drawing CD01), prepared by Potter Lawson, Inc., dated July 22, 2022 for the above referenced project. I (We) have also received Addenda Nos. _____, and have included their provisions in this Bid.

I (We) have examined the Procurement Documents noted above including all referenced AIA Documents, and agree to enter into and execute a Contract, if awarded, on the basis of this Bid, and to furnish guarantee bonds in accord with Article 11 of the General Conditions of the Contract for Construction.

BASE BID for a MULTIPLE BID CATEGORY CONTRACT

I (We) will perform all the Work of **(Combined) (Individual) Bid Category** _____ except for Work described as additive in Alternatives, for the stipulated sum of

Dollars (\$ _____).

ALTERNATIVE BIDS

Alternative Bids are more fully described in Section 01 23 00 of the Specifications. All Prime Bidders must indicate the stipulated sum to be added to or deducted from their Base Bid or indicate "no change". A "no bid" entry, or failure to enter a sum will be considered a "no change" to the Base Bid.

PERFORMANCE AND PAYMENT BOND

If the Owner elects not to require that I (We) provide a Performance/Labor and Materials Bond, deduct from my (our) Base Bid the stipulated lump sum of _____

Dollars (\$ _____).

ALTERNATIVE BID NO. 1 – Green Roof and Roof Pavers

If the Owner elects to accept this alternative, add to my (our) Base Bid the stipulated sum of

_____ Dollars (\$ _____).

ALTERNATIVE BID NO. 2 - Skylights

If the Owner elects to accept this alternative, add to my (our) Base Bid the stipulated sum of

_____ Dollars (\$ _____).

ALLOWANCES (Refer to Section 01 21 00 of the Specifications)

I (We) have included all allowances as stated in the Contract Documents.

UNIT PRICES

Bidders shall provide the following unit prices. These unit prices will be used to adjust the Contract Sum if more or less is required than that shown on the Contract Documents.

No. 1: Unsatisfactory Soil Replacement with Fill	\$ _____ /cy
No. 2: Unsatisfactory Soile Replacement with Lean Mix Concrete	\$ _____ /cy
No. 3: Cutting and Patching Slab-on-Grade	\$ _____ /sf
No. 4: EIFS Repair and Infill	\$ _____ /sf
No. 5: Plaster Patching	\$ _____ /sf
No. 6: Chase Enclosure System	\$ _____ /lf
No. 7: Additional time, Temporary Chiller	\$ _____ /Month
No. 8: Additional mobilizations, Temporary Chiller	\$ _____ /ea

SUBCONTRACTOR LIST

I (We) understand that after Bid opening, to be considered for contract Award, I (we) must submit a list of Major Subcontractors in accordance with the Instructions to Bidders.

SUBSTANTIAL COMPLETION

The date of Substantial Completion is indicated in the Instructions to Bidders, and if awarded the Contract within 45 days after receipt of the Bid I (We) will substantially complete the Work of Base Bid and accepted Alternative Bids on or before

_____.
(Insert Date)

WISCONSIN SALES/USE TAXES

Except for sales and use tax exempted by law, I (We) have included all Wisconsin Sales/Use Taxes applicable to this Project in accordance with current Wisconsin Statutes and regulations of the Wisconsin Department of Revenue.

BID SECURITY

I (We) have attached the required Bid Security to this Bid.

SIGNATURE

Firm Name

WI Registered Building Contractor Number

By (Signature)

Printed Name and Title

Attested

(Authorized Corporate Officer)

Dated _____, 2022

(Affix Corporate Seal Here)

End of Bid Form

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SECTION 01 21 00 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
- C. Related Requirements:
 - 1. Section 01 22 00 "Unit Prices" for procedures for using unit prices, including adjustment of quantity allowances when applicable.
 - 2. Section 01 26 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

- A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.5 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include freight and delivery to Project site.

- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
 - C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.
- 1.8 ADJUSTMENT OF ALLOWANCES
- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
 - 3. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
 - B. Submit claims for increased costs due to a change in the scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
 - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
 - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Lump-Sum Allowance: Include the sum of \$35,000.00 for Section 07 24 19 EIFS installation, repairs, and infill.
 - 1. This allowance includes material, receiving, handling, and installation costs, and Contractor overhead and profit.

- B. Allowance No. 2: Lump Sum Allowance: Include the sum of \$75,000.00 for Section 09 24 00 "Cement Plaster" for repairs and infill of plaster ceilings within the jail. This allowance is for unidentified repairs and infill within the jail perimeter only and does not include areas of new cement plaster ceiling as indicated in Reflected Ceiling Plans
1. This allowance includes material, receiving, handling, and installation costs, and Contractor overhead and profit.
- C. Allowance No. 3: Quantity Allowance: Include 40 lineal feet of soffit enclosure system as specified in Section 05 59 63 "Detention Enclosures" in addition to areas identified on Drawings.
1. This allowance includes material, receiving, handling, and installation costs, and Contractor overhead and profit.
- D. Allowance No. 4: Quantity Allowance: Include 6 months, including 2 separate mobilizations, for temporary chillers.
1. This allowance includes material, receiving, handling, installation, and removal costs, and Contractor overhead and profit.
- E. Allowance No. 5: Quantity Allowance: Include supply piping insulation in roof chase.
1. Provide in the following quantities:
 - a. 3 inch domestic cold water piping: 200 lineal feet.
 - b. 2 ½ inch domestic hot water supply piping: 200 lineal feet.
 - c. 1 ¼ inch domestic hot water return piping: 200 lineal feet.
 2. This allowance includes removal of existing material, supply of new material, receiving, handling, installation, and removal costs, and Contractor overhead and profit.
- F. Allowance No. 6: Lump Sum allowance: Include \$125,000.00 in bid category #7 for shoring of openings 6 feet wide or greater.
1. This allowance includes engineering, material, receiving, handling, installation, and removal costs, and Contractor overhead and profit.

END OF SECTION

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SECTION 01 22 00 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
 - 1. Section 01 26 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - 2. Section 01 40 00 "Quality Requirements" for field testing by an independent testing agency.

1.3 DEFINITIONS

- A. Unit price is an amount incorporated into the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the Part 3 "Schedule of Unit Prices" Article contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. Unit Price No. 1: Removal of unsatisfactory soil and replacement with satisfactory soil material.
 - 1. Description: Unsatisfactory soil excavation and disposal off-site, including all excavation, removal from the site, transportation and tipping costs and all other costs required for complete removal and disposal, and replacement with satisfactory fill material or engineered fill from off-site, as required, in accordance with Section 31 20 00 "Earth Moving."
 - 2. Unit of Measurement: Cubic yard of soil excavated, based on in-place surveys of volume before and after removal.
- B. Unit Price No. 2: Removal of unsatisfactory soil and replacement with **lean mix concrete**.

1. Description: Unsatisfactory soil excavation and disposal off-site, including all excavation, removal from the site, transportation and tipping costs and all other costs required for complete removal and disposal, and replacement with lean mix concrete, as required, in accordance with Section 31 20 00 "Earth Moving."
 2. Unit of Measurement: Cubic yard (cubic meter) of soil excavated, based on in-place surveys of volume before and after removal.
- C. Unit Price No. 3: Cutting and patching of concrete slabs-on-grade.
1. Description: Cutting of new or existing concrete slabs-on-grade up to 6 inches thick, removal, disposal, and excavation as required, and subsequent backfill, compaction, and patching of concrete in accordance with Section 01 73 00 "Execution" not otherwise indicated in the Contract Documents.
 2. Unit of Measurement: square feet of concrete removed.
- D. Unit Price No. 4 - EIFS Repair and Infill:
1. Description: Repair, patching and infill of EIFS in accordance with Section 07 24 19 "Water-Drainage Exterior Insulation and Finish System (EIFS)."
 2. Unit of Measurement: Square foot.
 3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 01 21 00 "Allowances."
- E. Unit Price No. 5 - Plaster Patching:
1. Description: Incidental patching of plaster wall and ceiling in accordance with Section 09 24 00 "Cement Plastering."
 2. Unit of Measurement: Square Foot.
 3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 01 21 00 "Allowances."
- F. Unit Price No. 6: Provide 8x8 Chase Enclosure System.
1. Description: Provide cost to supply and install additional 8-inch by 8-inch Chase Enclosure System per Section 05 58 16.
 2. Unit of Measurement: Cost per lineal foot, installed.
 3. See Requirements under Section 01 21 00 "Allowances."
- G. Unit Price No. 7: Provide additional months of temporary chiller.
1. Description: Provide cost to maintain temporary chillers in place beyond the amount included in allowance No. 4.
 2. Unit of Measurement: Cost per month.
 3. See Requirements under Section 01 21 00 "Allowances."
- H. Unit Price No. 8: Provide additional mobilizations of temporary chiller.
1. Description: Provide cost to supply, install and remove from the site, temporary chiller in addition to the included mobilizations in allowance No. 4.
 2. Unit of Measurement: Cost per mobilization and removal.
 3. See Requirements under Section 01 21 00 "Allowances."
- I. Unit Price No. 9: Provide additional piping insulation replacement in Roof Chase
1. Provide insulation pricing for piping sizes as follows:
 - a. Unit price 9A: 3 inch domestic cold water piping
 - b. Unit Price 9B: 2 ½ inch domestic hot water supply piping.
 - c. Unit Price 9C: 1 ¼ inch domestic hot water return piping.
 2. Description: Provide piping insulation in accordance with Section 22 07 00 "Plumbing Insulation."
 3. Unit of Measurement: Lineal Foot.
 4. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

END OF SECTION

SECTION 04 20 00 - UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Concrete masonry units.
 - 2. Steel embed block.
 - 3. ~~Pre-faced~~ Ground Face concrete masonry units.
 - 4. Clay face brick.
 - 5. Mortar and grout.
 - 6. Steel reinforcing bars.
 - 7. Masonry-joint reinforcement.
 - 8. Ties and anchors.
 - 9. Embedded flashing.
 - 10. Miscellaneous masonry accessories.
- B. Products Installed but not Furnished under This Section:
 - 1. Cast-stone trim in unit masonry.
 - 2. Steel and precast lintels in unit masonry.
 - 3. Steel shelf angles for supporting unit masonry.
 - 4. Cavity wall insulation.
- C. Related Requirements:
 - 1. Section 01 35 13.16 "Special Project Procedures for Detention Facilities" for coordination with Detention Equipment Contractor of steel embed block locations.
 - 2. Section 04 72 00 "Cast Stone Masonry" for cast stone trim and cladding.
 - 3. Section 07 21 00 "Thermal Insulation" for cavity wall insulation.
 - 4. Section 07 62 00 "Sheet Metal Flashing and Trim" for sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.

1.3 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For the following:
 - 1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
 - 2. Stone Trim Units: Show sizes, profiles, and locations of each stone trim unit required.
 - 3. Reinforcing Steel: Detail bending, lap lengths, and placement of unit masonry reinforcing bars. Comply with ACI 315. Show elevations of reinforced walls.
 - 4. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.

- C. Samples for Initial Selection:
 - 1. ~~Pre-faced~~ Ground-face CMUs.
 - 2. Colored mortar.
 - 3. Weep holes/cavity vents.
 - D. Samples for Verification: For each type and color of the following:
 - 1. Clay face brick, in the form of straps of five or more bricks.
 - 2. Pigmented mortar. Make Samples using same sand and mortar ingredients to be used on Project.
 - 3. Weep holes.
- 1.6 INFORMATIONAL SUBMITTALS
- A. Qualification Data: For testing agency.
 - B. Material Certificates: For each type and size of the following:
 - 1. Masonry units.
 - a. Include material test reports substantiating compliance with requirements.
 - b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
 - c. For exposed brick, include test report for efflorescence according to ASTM C67.
 - d. For masonry units used in structural masonry, include data and calculations establishing average net-area compressive strength of units.
 - 2. Integral water repellent used in CMUs.
 - 3. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
 - 4. Grout mixes. Include description of type and proportions of ingredients.
 - C. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.
 - 1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C109/C109M for compressive strength, ASTM C1506 for water retention, and ASTM C91/C91M for air content.
 - 2. Include test reports, according to ASTM C1019, for grout mixes required to comply with compressive strength requirement.
 - D. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to TMS 602/ACI 530.1/ASCE 6.
 - E. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.
- 1.7 QUALITY ASSURANCE
- A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Build mockup as shown on Drawings.
 - 2. Clean exposed faces of mockups.
 - 3. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
 - a. Approval of mockups is also for other material and construction qualities specifically approved by Architect in writing.

- b. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
- C. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.9 FIELD CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 - 1. Extend cover a minimum of 24 inches down both sides of walls, and hold cover securely in place.
 - 2. Where one wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches down face next to unconstructed wythe, and hold cover in place.
- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 - 2. Protect sills, ledges, and projections from mortar droppings.
 - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

2.2 PERFORMANCE REQUIREMENTS

- A. Provide unit masonry that develops indicated net-area compressive strengths at 28 days.
 - 1. Determine net-area compressive strength of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) according to TMS 602/ACI 530.1/ASCE 6.
 - 2. Determine net-area compressive strength of masonry by testing masonry prisms according to ASTM C1314.

2.3 UNIT MASONRY, GENERAL

- A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.
- B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work and will be within 20 feet vertically and horizontally of a walking surface.
- C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.
 - 1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

2.4 CONCRETE MASONRY UNITS

- A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
 - 1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
 - 2. Provide bullnose units for outside corners unless otherwise indicated.
- B. CMUs: ASTM C90.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength as indicated in the Construction Documents.
 - 2. Density Classification: Normal weight.
 - 3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.
 - 4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.
- C. ~~Ground~~-faced CMUs: Lightweight hollow concrete units complying with ASTM C90, with smooth-ground face. ~~manufacturer's standard smooth resinous facing complying with ASTM C744.~~
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2150 psi.

2. Size: Manufactured to dimensions specified in "CMUs" Paragraph ~~but with pre-faced surfaces having 1/16 inch wide returns of facing to create 1/4 inch wide mortar joints with modular coursing.~~
3. Sealer: Provide block with integral sealer, or sealer applied by manufacturer.
4. Colors and Patterns: As selected by Architect from manufacturer's full range.

2.5 STEEL EMBED BLOCK

- A. Proprietary Built-in Masonry Anchors: Fabricated from 0.134-inch (3.42-mm) nominal-thickness steel sheet into 8-inch- (203-mm-) deep blocks matching size of concrete masonry units.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. M/BED Block Systems, LLC.
 - b. Peterson Detention Inc. (PDI).
- B. Finish: Factory primed for field painting for anchors with field-welded attachments.

2.6 CONCRETE AND MASONRY LINTELS

- A. General: Provide one of the following:
- B. Concrete Lintels: ASTM C1623, matching CMUs in color, texture, and density classification; and with reinforcing bars indicated. Provide lintels with net-area compressive strength not less than that of CMUs.
- C. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs matching adjacent CMUs in color, texture, and density classification, with reinforcing bars placed as indicated and filled with coarse grout. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.

2.7 BRICK

- A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:
 1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
 2. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
 3. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
- B. Clay Face Brick: Facing brick complying with ASTM C216 or hollow brick complying with ASTM C652, Class H40V (void areas between 25 and 40 percent of gross cross-sectional area).
 1. Brick Type 1: Cloud Ceramics; Brown Tweed Stadowtex or pre-approved equivalent.
 2. Grade: SW.
 3. Type: FBX.
 4. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested according to ASTM C67.
 5. Efflorescence: Provide brick that has been tested according to ASTM C67 and is rated "not effloresced."
 6. Size (Actual Dimensions): Norman, 3-5/8 inches wide by 2-1/4 inches high by 11-5/8 inches long.
 7. Application: Use where brick is exposed unless otherwise indicated.
 8. Proposed substitutions: Provide face brick matching color range, texture, and size of existing adjacent brickwork.

2.8 MORTAR AND GROUT MATERIALS

A. Masonry Cement: ASTM C91/C91M.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Cemex S.A.B. de C.V.
 - b. Essroc.
 - c. Holcim (US) Inc.
 - d. Lafarge North America Inc.
 - e. Lehigh Hanson; HeidelbergCement Group.

B. Colored Cement Products: Packaged blend made from masonry cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.

1. Colored Masonry Cement:
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Cemex S.A.B. de C.V.
 - 2) Essroc.
 - 3) Holcim (US) Inc.
 - 4) Lafarge North America Inc.
 - 5) Lehigh Hanson; HeidelbergCement Group.
2. Formulate blend as required to produce color as selected from manufacturer's standard colors.
3. Pigments shall not exceed 5 percent of masonry cement by weight.

C. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C494/C494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

D. Water: Potable.

2.9 REINFORCEMENT

A. Uncoated-Steel Reinforcing Bars: ASTM A615/A615M or ASTM A996/A996M, Grade 60.

B. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and to hold reinforcing bars in center of cells. Units are formed from 0.148-inch steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.

C. Masonry-Joint Reinforcement, General: ASTM A951/A951M.

1. Interior Walls: Mill- galvanized carbon steel.
2. Exterior Walls: Stainless steel.
3. Wire Size for Side Rods: 0.148-inch diameter.
4. Wire Size for Cross Rods: 0.148-inch diameter.
5. Wire Size for Veneer Ties: 0.148-inch diameter.
6. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches o.c.
7. Provide in lengths of not less than 10 feet, with prefabricated corner and tee units.

D. Masonry-Joint Reinforcement for Single-Wythe Masonry: Ladder or truss type with single pair of side rods.

2.10 TIES AND ANCHORS

A. General: Ties and anchors shall extend at least 1-1/2 inches into veneer but with at least a 5/8-inch cover on outside face.

- B. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:
 - 1. Stainless Steel Wire: ASTM A580/A580M, Type 304.
 - 2. Stainless Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304.
 - 3. Steel Plates, Shapes, and Bars: ASTM A36/A36M.
- C. Individual Wire Ties: Rectangular units with closed ends and not less than 4 inches wide.
 - 1. Z-shaped ties with ends bent 90 degrees to provide hooks not less than 2 inches long may be used for masonry constructed from solid units.
 - 2. Where wythes are of different materials, use adjustable ties with pintle-and-eye connections having a maximum adjustment of 1-1/4 inches.
 - 3. Wire: Fabricate from 3/16-inch- diameter, stainless steel wire.
- D. Partition Top Anchors: 0.105-inch- thick metal plate with a 3/8-inch- diameter metal rod 6 inches long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube. Fabricate from stainless steel.
- E. Adjustable Masonry-Veneer Anchors:
 - 1. General: Provide anchors that allow vertical adjustment but resist a 100-lbf load in both tension and compression perpendicular to plane of wall without deforming or developing play in excess of 1/16 inch.
 - 2. Fabricate sheet metal anchor sections and other sheet metal parts from 0.078-inch- thick, stainless steel sheet.
 - 3. Fabricate wire ties from 0.187-inch- diameter, stainless steel wire unless otherwise indicated.
 - 4. Screw-Attached, Masonry-Veneer Anchors: Wire tie and a gasketed sheet metal anchor section, 1-1/4 inches wide by 6 inches long, with screw holes top and bottom; top and bottom ends bent to form pronged legs of length to match thickness of insulation or sheathing; and raised rib-stiffened strap, 5/8 inch wide by 6 inches long, stamped into center to provide a slot between strap and base for inserting wire tie. Self-adhering, modified bituminous gasket fits behind anchor plate and extends beyond pronged legs.
 - 5. Polymer-Coated, Steel Drill Screws for Steel Studs: ASTM C954 except manufactured with hex washer head and neoprene or EPDM washer, No. 10 diameter by length required to penetrate steel stud flange with not less than three exposed threads, and with organic polymer coating with salt-spray resistance to red rust of more than 800 hours according to ASTM B117.

2.11 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:
 - 1. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304, 0.016 inch thick.
 - 2. Fabricate continuous flashings in sections 96 inches long minimum, but not exceeding 12 feet. Provide splice plates at joints of formed, smooth metal flashing.
 - 3. Fabricate through-wall flashing with drip edge where indicated. Fabricate by extending flashing 1/2 inch out from wall, with outer edge bent down 30 degrees and hemmed.
 - 4. Fabricate through-wall flashing with sealant stop unless otherwise indicated. Fabricate by bending metal back on itself 3/4 inch at exterior face of wall and down into joint 1/4 inch to form a stop for retaining sealant backer rod.
 - 5. Fabricate metal drip edges from stainless steel. Extend at least 3 inches into wall and 1/2 inch out from wall, with outer edge bent down 30 degrees and hemmed.
- B. Flexible Flashing: Comply with requirements in Section 07 65 00 for flexible stainless steel flashing.
- C. Application: Unless otherwise indicated, use the following:
 - 1. Where flashing is indicated to receive counterflashing, use metal flashing.

2. Where flashing is indicated to be turned down at or beyond the wall face, use metal flashing.
 3. Where flashing is partly exposed and is indicated to terminate at the wall face, use metal flashing or flexible flashing with a metal drip edge.
 4. Where flashing is fully concealed, use flexible flashing.
- D. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.
- E. Termination Bars for Flexible Flashing: Stainless steel bars 0.075 inch by 1 inch.
- 2.12 MISCELLANEOUS MASONRY ACCESSORIES**
- A. Compressible Filler: Premolded filler strips complying with ASTM D1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neopreneurethane or PVC.
- B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D2000, Designation M2AA-805 or PVC, complying with ASTM D2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
- C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D226/D226M, Type I (No. 15 asphalt felt).
- D. Weep/Cavity Vent Products: Use the following unless otherwise indicated:
1. Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, full height and width of head joint and depth 1/8 inch less than depth of outer wythe; in color selected from manufacturer's standard.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Advanced Building Products Inc.
 - 2) CavClear/Archovations, Inc.
 - 3) Mortar Net Solutions.
- E. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Advanced Building Products Inc.
 - b. CavClear/Archovations, Inc.
 - c. Mortar Net Solutions.
 2. Configuration: Provide one of the following:
 - a. Strips, full depth of cavity and 10 inches high, with dovetail-shaped notches 7 inches deep that prevent clogging with mortar droppings.
- 2.13 MASONRY CLEANERS**
- A. Products: Provide products and methods approved by brick and mortar manufacturers and having no deleterious effect on appearance and performance of brick and mortar.

2.14 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.
 - 2. Use masonry cement mortar unless otherwise indicated.
 - 3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Comply with ASTM C270, Property Specification. Provide the following types of mortar for applications stated unless another type is indicated.
 - 1. For masonry below grade or in contact with earth, use Type M.
 - 2. For reinforced masonry, use Type S.
 - 3. For exterior, above-grade, load-bearing and nonload-bearing walls and parapet walls; for interior load-bearing walls; for interior nonload-bearing partitions; and for other applications where another type is not indicated, use Type S.
 - 4. For interior nonload-bearing partitions, Type O may be used instead of Type N.
- D. Pigmented Mortar: Use colored cement product.
 - 1. Pigments shall not exceed 5 percent of masonry cement by weight.
 - 2. Mix to match Architect's sample.
 - 3. Application: Use pigmented mortar for exposed mortar joints with the following units:
 - a. Pre-faced CMUs.
 - b. Clay face brick.
 - c. Cast-stone trim units.
- E. Grout for Unit Masonry: Comply with ASTM C476.
 - 1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with TMS 602/ACI 530.1/ASCE 6 for dimensions of grout spaces and pour height.
 - 2. Proportion grout in accordance with ASTM C476, Table 1 or paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 2000 psi.
 - 3. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C143/C143M.
- F. Bentonite Grout: Bentonite/polymer waterproofing grout.
 - 1. Manufacturers: subject to compliance with requirements, provide AVM Industries, Inc.; AVM Aussie Grout 907 or equivalent product by:
 - a. Mineral Technologies/Cetco
 - 2. Permeability: 1×10^{-7} to 1×10^{-9} cm/sec per ASTM D5084.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 - 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
 - 2. Verify that foundations are within tolerances specified.
 - 3. Verify that reinforcing dowels are properly placed.

4. Verify that substrates are free of substances that impair mortar bond.
 - B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.
 - C. Proceed with installation only after unsatisfactory conditions have been corrected.
- 3.2 INSTALLATION, GENERAL
- A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
 - B. Build chases and recesses to accommodate items specified in this and other Sections.
 - C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match construction immediately adjacent to opening.
 - D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
 - E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
 - F. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.
 - G. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested according to ASTM C67. Allow units to absorb water so they are damp but not wet at time of laying.
- 3.3 TOLERANCES
- A. Dimensions and Locations of Elements:
 1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch.
 2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch.
 3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.
 - B. Lines and Levels:
 1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 feet, or 1/2-inch maximum.
 2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.
 3. For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.
 4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.
 5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.
 6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet or 1/2-inch maximum.
 - C. Joints:
 1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.

2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch. Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.
5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.

3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4 inches. Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.
- C. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- D. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- E. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.
- F. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.
- G. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.
- H. Build nonload-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.
 1. Install compressible filler in joint between top of partition and underside of structure above.
 2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide 1/2-inch clearance between end of anchor rod and end of tube. Space anchors 48 inches o.c. unless otherwise indicated.
 3. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Section 07 84 43 "Joint Firestopping."

3.5 MORTAR BEDDING AND JOINTING

- A. Lay CMUs as follows:
 1. Bed face shells in mortar and make head joints of depth equal to bed joints.
 2. Bed webs in mortar in all courses of piers, columns, and pilasters.
 3. Bed webs in mortar in grouted masonry, including starting course on footings.
 4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.
 5. Fully bed units and fill cells with mortar at anchors and ties as needed to fully embed anchors and ties in mortar.

- B. Lay solid masonry units and hollow brick with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Set cast-stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.
 - 1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
 - 2. Allow cleaned surfaces to dry before setting.
 - 3. Wet joint surfaces thoroughly before applying mortar.
 - 4. Rake out mortar joints for pointing with sealant.
- D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.
- E. Cut joints flush where indicated to receive air barriers unless otherwise indicated.

3.6 CAVITY WALLS

- A. Bond wythes of cavity walls together as follows:
 - 1. Masonry-Joint Reinforcement: Installed in horizontal mortar joints.
 - a. Where one wythe is of clay masonry and the other of concrete masonry, use adjustable-type (two-piece-type) reinforcement to allow for differential movement regardless of whether bed joints align.
- B. Keep cavities clean of mortar droppings and other materials during construction. Bevel beds away from cavity, to minimize mortar protrusions into cavity. Do not attempt to trowel or remove mortar fins protruding into cavity.
- C. Installing Cavity Wall Insulation: Place small dabs of adhesive, spaced approximately 12 inches o.c. both ways, on inside face of insulation boards, or attach with plastic fasteners designed for this purpose. Fit courses of insulation between wall ties and other confining obstructions in cavity, with edges butted tightly both ways. Press units firmly against inside wythe of masonry or other construction as shown.
 - 1. Fill cracks and open gaps in insulation with crack sealer compatible with insulation and masonry.

3.7 ANCHORED MASONRY VENEERS

- A. Anchor masonry veneers to wall framing with masonry-veneer anchors to comply with the following requirements:
 - 1. Fasten screw-attached anchors through sheathing to wall framing with metal fasteners of type indicated. Use two fasteners unless anchor design only uses one fastener.
 - 2. Embed tie sections in masonry joints.
 - 3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.
 - 4. Space anchors as indicated, but not more than 18 inches o.c. vertically and 24 inches o.c. horizontally, with not less than one anchor for each 2 sq. ft. of wall area. Install additional anchors within 12 inches of openings and at intervals, not exceeding 8 inches, around perimeter.
- B. Provide not less than 2 inches of airspace between back of masonry veneer and face of insulation.
 - 1. Keep airspace clean of mortar droppings and other materials during construction. Bevel beds away from airspace, to minimize mortar protrusions into airspace. Do not attempt to trowel or remove mortar fins protruding into airspace.

3.8 MASONRY-JOINT REINFORCEMENT

- A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.
 - 1. Space reinforcement not more than 16 inches o.c.
 - 2. Provide reinforcement in first and second horizontal joints above and below wall openings and extending 12 inches beyond openings in addition to continuous reinforcement.
- B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.
- C. Provide continuity at wall intersections by using prefabricated T-shaped units.
- D. Provide continuity at corners by using prefabricated L-shaped units.

3.9 CONTROL AND EXPANSION (MOVEMENT) JOINTS

- A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.
- B. Fully-grouted and reinforced masonry walls shall not require movement joints. In all other instances, install joints as shown on drawings and:
 - 1. Horizontal separation of vertical movement joints shall not exceed 24 feet.
 - 2. Joints shall be spaced so that the combined distance of joints to either side of outside corners shall not exceed 24 feet.
 - 3. Height to width aspect ratio of masonry (area contained by edges, movement joints and bond breakers) shall not exceed 1:1.5.
 - 4. Form control joints at all masonry facade inside corners unless directed otherwise.
- C. Form control joints in concrete masonry as follows:
 - 1. Install preformed control-joint gaskets designed to fit standard sash block.
- D. Form expansion joints in brick as follows:
 - 1. Form open joint full depth of brick wythe and of width indicated, but not less than 1/2 inch for installation of sealant and backer rod specified in Section 07 92 00 "Joint Sealants."
 - 2. Form joints wider than 1/2 inch where indicated on drawings.
- E. Provide horizontal, pressure-relieving joints by inserting a compressible filler of width required for installing sealant and backer rod specified in Section 07 84 43 or Section 07 92 00 "Joint Sealants" as appropriate to the location, but not less than 1/2 inch.
 - 1. Locate horizontal, pressure-relieving joints where non-bearing construction meets floor and roof.

3.10 LINTELS

- A. Install steel lintels where indicated.
- B. Provide concrete or masonry lintels where shown and where openings of more than 12 inches for brick-size units and 24 inches for block-size units are shown without structural steel or other supporting lintels.
 - 1. Use specially shaped lintel units at hollow masonry unit walls, with reinforcing bars as shown and filled with concrete grout.
 - 2. Place and consolidate concrete without disturbing the reinforcing.
 - 3. Allow lintels to reach 100 percent of their design strength before removing temporary supports.

4. Do not place vertical control joints through bond beams. Place the vertical control joints at each end of the bond beam lintel.
- C. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.
- 3.11 FLASHING, WEEP HOLES, AND CAVITY VENTS
- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install cavity vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.
 - B. Install flashing as follows unless otherwise indicated:
 1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape.
 2. At masonry-veneer walls, extend flashing through veneer, across airspace behind veneer, and up face of sheathing at least 8 inches; with upper edge tucked under air barrier, lapping at least 4 inches. Fasten upper edge of flexible flashing to sheathing through termination bar.
 3. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.
 4. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall, and adhere flexible flashing to top of metal flashing termination.
 - C. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.
 - D. Install weep holes in exterior wythes and veneers in head joints of first course of masonry immediately above embedded flashing.
 1. Use specified weep/cavity vent products to form weep holes.
 2. Space weep holes 24 inches o.c. unless otherwise indicated.
 - E. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in "Miscellaneous Masonry Accessories" Article.
 - F. Install cavity vents in head joints in exterior wythes at spacing indicated. Use specified weep/cavity vent products to form cavity vents.
- 3.12 REINFORCED UNIT MASONRY
- A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.
 1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
 2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and that of other loads that may be placed on them during construction.
 - B. Placing Reinforcement: Comply with requirements in TMS 602/ACI 530.1/ASCE 6.
 - C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in TMS 602/ACI 530.1/ASCE 6 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than 60 inches.

3.13 BENTONITE GROUT WATERPROOFING

- A. Install bentonite grout in lifts as recommended by manufacturer.
- B. Ensure a minimum thickness of 1/2 inch of bentonite grout throughout the installation. Install bentonite grout continuous from top of assembly to footing.
- C. Detail transitions to adjacent construction as recommended by manufacturer to maintain continuity of waterproofing.

3.14 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
 3. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
 4. Clean concrete masonry by applicable cleaning methods indicated in NCMA TEK 8-4A.
 5. Clean cast stone trim to comply with stone supplier's written instructions.

END OF SECTION

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SECTION 10 00 10 - MISCELLANEOUS SPECIALTIES

PART 1 - PART ONE - GENERAL

1.1 DESCRIPTION

A. Section Includes:

1. Fire extinguisher cabinets
2. Curtain track and break-a-way curtain
3. Fiberglass Planters
4. Coat hooks

1.2 RELATED WORK AND REQUIREMENTS

- A. Applicable provisions of Division 01 shall govern Work of this Section.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Deliver items to job site at appropriate times to be incorporated in the Work.
- B. Store items subject to damage in appropriately protected areas.

PART 2 - PRODUCTS

2.1 FIRE EXTINGUISHER CABINETS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
1. JL Industries, Inc.
 2. Larsen's Manufacturing Company
 3. Modern Metal Products
 4. Nystrom, Inc.
 5. Potter Roemer
- B. FEC-1: Equivalent to Larsen's Architectural Series Model 2409-6R, vertical duo door style glazed with fully-tempered glass, semi-recessed, inside box dimensions 9-1/2 inches W x 6 inches D x 24 inches H, factory primed and field painted to match adjacent surfaces.
- C. FEC-2: Equivalent to Larsen's Architectural Series Model 2409-SM, vertical duo door style glazed with fully-tempered glass, surface mounted, inside box dimensions 13 inches W x 6 inches D x 27-1/2 inches H, factory primed and field painted to match adjacent surfaces.

2.2 CURTAIN TRACK AND BREAK-A-WAY CURTAIN

- A. Imperial Fastener Company specified to establish type and standard of quality. Equivalent products manufactured by General Cubicle Company and Pryor Products also acceptable.
- B. Break-A-Way Track: Imperial IFC-69 surface ceiling mounted aluminum cubicle track with 3/4-inch wide x 4-inch long Safety Tabs (3 per foot of curtain), and other track accessories as required for secure and operational installation. Track Finish: Clear satin anodized.
- C. Break-A-Way Shower Curtain: Provide Sure-Chek nylon reinforced vinyl with top 20 inches of curtain of #50 open nylon mesh and 20 inches clear vinyl bottom panel. Fabricate curtain width equal to track length plus 6-inches added fullness and length equal to floor-to-track height minus 2-inches. Fabricate top hem 1-1/2 inches wide, double lock stitched, and 1-1/2 inch wide loop tape double lock stitched to top hem.
- D. Vinyl and Mesh Colors: As selected by A/E from manufacturer's full range.

2.3 FIBERGLASS PLANTERS

- A. Fiberglass Planters: Glass fiber reinforced polyester resin constructed of hand or spray layup fiberglass mat, minimum 3 ounce density, Tournesol Siteworks, LLC; Wilshire Collection or equivalent.
 - 1. Size: As indicated on Drawings.
 - 2. Color: To be chosen by Architect from Manufacturer's full range.

2.4 COAT HOOKS

- A. Coat Hooks: Surface-mounted stainless steel hook, Bobrick; B-6717 or equivalent.
 - 1. Size: 2 inch projection.
 - 2. Finish: Satin-finish stainless steel.

2.5 MATERIALS

- A. Provide rough and miscellaneous hardware such as expansion bolts, strap anchors and hardware required in connection with work of this Section.
- B. Finish all ferrous metal with approved shop prime coat.

2.6 FABRICATION

- A. Schedule items for fabrication so as to avoid delay in delivery to site at appropriate time to incorporate into the Work.
- B. Do necessary cutting, drilling and fitting, and make proper allowance for incorporating items into or against other work.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Field Measurements and Verification: Verify all dimensions at the building and examine all adjoining work to ensure surfaces are ready to accept items.

3.2 COORDINATION

- A. Cooperate with and coordinate work with other trades whose work interfaces with or comes in contact with items specified herein.

3.3 INSTALLATION/APPLICATION/ERECTION

- A. Install, apply, and erect all items in accordance with manufacturer's recommendations for specific condition involved.
- B. Install plumb, square, level, in proper alignment, and secure with appropriate devices, suitable for the specific condition involved.
- C. Furnish items to be built into other work to appropriate trades.
- D. Do not install scratched, marred or otherwise damaged items. Replace damaged items at no cost to Owner.

End of Section

SECTION 10 22 13 - WIRE MESH PARTITIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Standard-duty wire mesh partitions.
- B. Related Requirements:
 - 1. Section 05 05 53 "Security Metal Fastenings" for fasteners associated with heavy-duty wire mesh partitions ~~and mini mesh chain link fabric ceilings.~~

1.2 DEFINITIONS

- A. Intermediate Crimp: Wires pass over one and under the next adjacent wire in both directions, with wires crimped before weaving and with extra crimps between the intersections.

1.3 ACTION SUBMITTALS

- A. Product Data:
 - 1. Wire mesh partitions.
- B. Shop Drawings:
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Indicate clearances required for operation of doors.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For wire mesh partition hardware.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver wire mesh items palletized to provide protection during transit and Project-site storage. Use vented plastic.

1.6 FIELD CONDITIONS

- A. Field Measurements: Verify actual dimensions of construction contiguous with wire mesh units by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

- A. For wire mesh products, obtain each color, grade, finish, type, and variety from single source with resources to provide products of consistent quality in appearance and physical properties.

2.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Wire mesh units to withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated.
 - 1. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft. at any location on a panel.
 - 2. Total load of 200 lbf applied uniformly over each panel.
 - 3. Concentrated load and total load need not be assumed to act concurrently.

- B. Regulatory Requirements: Comply with applicable provisions in ICC A117.1 for doors and gates designated as accessible.

2.3 STANDARD-DUTY WIRE MESH PARTITIONS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Acorn Wire & Iron Works.
 - 2. American Woven Wire Corporation.
 - 3. Central Wire and Iron.
 - 4. Indiana Wire Products, Inc.
 - 5. Standard Wire & Steel Works.
 - 6. WireCrafters, LLC.
- B. Mesh: 0.135-inch- diameter, intermediate-crimp steel wire woven into 1-1/2-inch diamond mesh.
- C. Horizontal Panel Framing: 1-by-1/2-by-1/8-inch cold-rolled steel channels.
- D. Horizontal Panel Stiffeners: Two cold-rolled steel channels, 3/4 by 3/8 by 1/8 inch, bolted or riveted toe to toe through mesh; or one 1-by-1/2-by-1/8-inch cold-rolled steel channel with wire mesh woven through channel.
- E. Posts for 90-Degree Corners: 1-1/4-by-1-1/4-by-1/8-inch steel angles or square tubes with holes for 1/4-inch- diameter bolts aligning with bolt holes in vertical framing; with floor anchor clips.
- F. Line Posts: 3-inch-by-4.1-lb or 3-1/2-by-1-1/4-by-0.127-inch steel channels; with 1/4-inch steel base plates.
- G. Three-Way Intersection Posts: 1-1/4-by-1-1/4-by-1/8-inch steel tubes or channels, with holes for 1/4-inch- diameter bolts aligned for bolting to adjacent panels.
- H. Floor Shoes: Metal, not less than 2 inches high; sized to suit vertical framing, drilled for attachment to floor, and with setscrews for leveling adjustment.
- I. Swinging Doors: Fabricated from same mesh as partitions, with framing fabricated from 1-1/4-by-1/2-by-1/8-inch steel channels or 1-1/4-by-5/8-by-0.080-inch cold-rolled, C-shaped steel channels, banded with 1-1/4-by-1/8-inch flat steel bar cover plates on three sides, and with 1/8-inch- thick angle strike bar and cover on strike jamb.
 - 1. Hinges: Full-surface type, 3-by-3-inch steel, three per door; bolted, riveted, or welded to door and jamb framing.
 - 2. Cylinder Lock: Mortise type with cylinder specified in Section 08 71 00 "Door Hardware"; operated by key outside and lever inside.
- J. Accessories:
 - 1. Adjustable Filler Panels: 0.060-inch- thick, steel sheet; capable of filling openings from 2 to 12 inches.
 - 2. Wall Clips: Manufacturer's standard, steel sheet; allowing up to 1 inch of adjustment.
 - 3. Aluminum-Coated Steel Chain Link Fence Fabric complying with ASTM A491.

2.4 MATERIALS

- A. Steel Wire: ASTM A510/A510M.
- B. Steel Plates, Channels, Angles, and Bars: ASTM A36/A36M.
- C. Steel Sheet: Cold-rolled steel sheet, ASTM A1008/A1008M, Commercial Steel (CS), Type B.
- D. Steel Pipe: ASTM A53/A53M, Schedule 40, unless another weight is indicated or required by structural loads.

- E. Steel Tubing: ASTM A500/A500M, cold-formed structural-steel tubing or ASTM A513/A513M, Type 5, mandrel-drawn mechanical tubing.
- F. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B; with G60 zinc (galvanized) or A60 zinc-iron-alloy (galvannealed) coating designation.
- G. Panel-to-Panel Fasteners: Manufacturer's standard steel bolts, nuts, and washers.
- H. Post-Installed Anchors: Capable of sustaining, without failure, a load equal to 6 times the load imposed when installed in unit masonry and 4 times the load imposed when installed in concrete, as determined by testing in accordance with ASTM E488/E488M, conducted by a qualified independent testing agency.
 - 1. Material for Interior Locations: Carbon-steel components are zinc plated to comply with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, unless otherwise indicated.
- I. Power-Driven Fasteners: ICC-ES AC70.
- J. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20.

2.5 FABRICATION

- A. General: Fabricate wire mesh items from components of sizes not less than those indicated. Use larger-sized components as recommended by wire mesh item manufacturer. Furnish bolts, hardware, and accessories required for complete installation with manufacturer's standard finishes.
 - 1. Fabricate wire mesh items to be readily disassembled.
- B. Standard- Duty Wire Mesh Partitions: Fabricate wire mesh partitions with cutouts for pipes, ducts, beams, and other items indicated. Finish edges of cutouts to provide a neat, protective edge.
 - 1. Mesh: Securely clinch mesh to framing.
 - 2. Framing: Fabricate framing with mortise-and-tenon corner construction.
 - a. Provide horizontal stiffeners as indicated or, if not indicated, as required by panel height and as recommended by wire mesh partition manufacturer. Weld horizontal stiffeners to vertical framing.
 - b. Fabricate three- and four-way intersections using manufacturer's standard connecting clips and fasteners.
 - c. Fabricate partition and door framing with slotted holes for connecting adjacent panels.
 - 3. Fabricate wire mesh partitions with 3 to 4 inches of clear space between finished floor and bottom horizontal framing.
 - 4. Fabricate wire mesh partitions with bottom horizontal framing flush with finished floor.
 - 5. Doors: Align bottom of door with bottom of adjacent panels.
 - a. For doors that do not extend full height of partition, provide transom over door, fabricated from same mesh and framing as partition panels.
 - 6. Hardware Preparation: Mortise, reinforce, drill, and tap doors and framing as required to install hardware.
- ~~C. Wire Mesh Ceilings: Fabricate wire mesh partitions with cutouts for pipes, ducts, beams, and other items indicated. Finish edges of cutouts to provide a neat, protective edge.~~
 - ~~1. Mesh: Securely clinch mesh to framing.~~
 - ~~2. Framing: Fabricate framing with mortise and tenon corner construction.~~
 - ~~a. Provide stiffeners as indicated or, if not indicated, as required by panel span and as recommended by wire mesh ceiling manufacturer. Weld stiffeners to framing.~~

2.6 STEEL AND IRON FINISHES

- A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A153/A153M for steel and iron hardware and with ASTM A123/A123M for other steel and iron products.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine floors for suitable conditions where wire mesh items will be installed.
- C. Examine walls to which wire mesh items will be attached for properly located blocking, grounds, and other solid backing for attachment of support fasteners.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF WIRE MESH PARTITIONS

- A. Anchor wire mesh partitions to floor with 3/8-inch- diameter, postinstalled expansion anchors at 12 inches o.c. through anchor clips located at each post and corner. Shim anchor clips as required to achieve level and plumb installation.
 - 1. Anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if indicated on Shop Drawings.
- B. Anchor wire mesh partitions to walls at 12 inches o.c. through back corner panel framing and as follows:
 - 1. For concrete and solid masonry anchorage, use expansion anchors.
 - 2. For hollow masonry anchorage, use toggle bolts.
 - 3. For steel-framed gypsum board assemblies, fasten brackets directly to steel framing or concealed reinforcements using self-tapping screws of size and type required to support structural loads.
- C. Where standard-width wire mesh partition panels do not fill entire length of run, provide adjustable filler panels to fill openings.
- D. Install doors complete with door hardware.
- E. Bolt accessories to wire mesh partition framing.

3.3 REPAIR

- A. Repair of Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A780/A780M.

3.4 ADJUSTING

- A. Adjust doors to operate smoothly and easily, without binding or warping. Adjust hardware to function smoothly. Verify that latches and locks engage accurately and securely without forcing or binding.

3.5 PROTECTION

- A. Remove and replace defective work, including doors and framing that are warped, bowed, or otherwise unacceptable.

END OF SECTION