

WRNSSTUDIO

ADDENDUM

Addendum No.: 1
Date: 01/23/2019
Contract No.: 54015
Project: Atherton Civic Center
Location: 80 Fair Oaks Lane
Application No.: TBD
WRNS Project No: 15007.00
WRNS File No: 9.2

This Addendum will become part of the Contract Documents. In case of difference with previous addenda or communications, this addendum takes precedence. It is the responsibility of the Contractor to notify all sub-contractors from whom he accepts bids for all changes in the drawings and specifications covering this project. Receipt shall be acknowledged by inserting the Addendum number and its date in the bid form.

REVISIONS/CLARIFICATIONS TO THE PROJECT MANUAL

1. GENERAL:
 - a. Reissued Specification Sections: The following specifications are modified as herein described. Specifications being re-issued with changes incorporated are indicated as (attached).
2. SECTION 01 1000 – SUMMARY
 - a. Delete section 01 1000 and replace with attached Section 01 1000 SUMMARY
3. SECTION 01 2500 – SUBSTITUTION PROCEDURES
 - a. Sub-paragraph 1.7 A.1.b. Delete “LEED prerequisites and credits.” and replace with “sustainable design requirements.”
 - b. Sub-paragraph 1.7 B.1.d. Delete “LEED prerequisites and credits.” and replace with “sustainable design requirements.”
4. SECTION 01 3300 SUBMITTAL PROCEDURES
 - a. Delete Sub-paragraph 2.1 L. “LEED Submittals: Comply ... and Major Renovations.”
5. SECTION 03 3730 STABILIZED RAMMED EARTH
 - a. Delete Sub-paragraph 1.1 B.5. “Section 03 35 00, Concrete Finishes.”
6. SECTION 06 4023 – INTERIOR ARCHITECTURAL WOODWORK
 - a. Sub-paragraph 2.11 C.1. Replace “Salvaged oak.” with “1. Oak: Provide reclaimed or salvaged product where available.”
7. SECTION 07 4213 – METAL WALL PANELS
 - a. Add attached section
8. SECTION 08 0671 – DOOR HARDWARE SETS
 - a. Delete section 08 0671 and replace with attached Section 08 0671, Note: Hardware sets 28 and 41 have been deleted.
9. SECTION 08 1113 – HOLLOW METAL DOORS AND FRAMES
 - a. Delete section 08 113 and replace with attached Section 08 113.
10. SECTION 11 1900 – POLICE EQUIPMENT

11. a. Delete sub-paragraphs 1.2 A.10. Storage Safe and 11. Currency Safe.
SECTION 26 3100 – PHOTOVOLTAIC SYSTEM and
SECTION 26 3100.10 PHOTVOLTAIC ENERGY POWER OPTIMIZER
SYSTEM
 - a. Clarification: The PV Equipment, including the PV Modules, PV Inverters, DC Optimizers, and PV Monitoring system, listed in the 26 3100 - PHOTOVOLTAIC SYSTEM and the 26 3100.10 - PHOTOVOLTAIC ENERGY POWER OPTIMIZER SYSTEM specifications are Not In The Contract (N.I.C.) and provide for reference only for a future PV Installer or PPA provider.
The PV racking systems listed in the 26 3100 - PHOTOVOLTAIC SYSTEM are also Not In The Contract (N.I.C.), except for the stanchions for the racking systems for the Library, Civic Center, and Ancillary Buildings. The stanchions for these racking system shall be installed as part of the base project. Contractor shall provide and install all parts and pieces necessary to install the stanchions so fully functional racking systems may be installed at a future date.
12. SECTION 31 1000 – SITE CLEARING
 - a. Sub-paragraph 1.1 B.1 Replace “31 1311 “Tree Protection.” With “01 1569 “Tree Protection and Trimming.”
 - b. Sub-paragraph 1.1 B.3 Replace “Section 02 4113” with “Section 02 4119”
13. SECTION 31 2000 – EARTH MOVING
 - a. Delete sub-section 1.1 B.2 “Section 31 2317 Trenching: Trenching and backfilling for utilities.”

REVISIONS/CLARIFICATIONS TO THE DRAWINGS

1. GENERAL

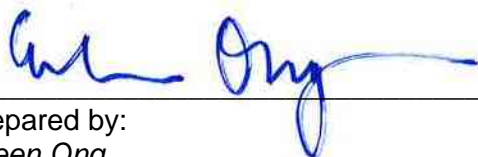
- a. Reissued Drawings: The following drawings are modified as herein described. Drawings are indicated as (attached) or (not attached). Drawings not included at this time will be reissued at full scale in conformance set prior to beginning of construction.
 1. Sheet C-301 Utility Plan
 - a. Plan: Add notation for connection of Ancillary Building downspouts.
 2. Sheets C-302 and C-305 Utility Plan
 - a. Add notation for connection of Town Hall downspouts
 3. Sheet L-402 Landscape Grading Plan
 - a. Revised grading at west side of Library.
 4. Sheet L-403 Landscape Grading Enlargement Plan
 - a. Plan 2: Added plan with revised grading.
 5. Sheet S-113 Library Finish Floor – Structural Framing Plan
 - a. Revise plan per attached drawing.
 6. Sheet S-211 Library – Structural Building Sections
 - a. Revise section 4 per attached drawing.
 7. Sheet S-413 Ancillary – Structural Concrete Details
 - a. Revise details per attached drawing.
 8. Sheet S-422 Library – Structural Concrete Details

- a. Revise details per attached drawing.
- 9. Sheet S-425 Library – Structural Concrete Details
 - a. Add detail 8, per attach drawing.
- 10. Sheet S-525 Library – Structural Steel Details
 - a. Add attached sheet.
- 11. Sheet AD-111 Town Hall Demolition Plan
 - a. Add Sheet Note 15.
 - b. Revise Plan 1: Added downspout locations and revised notes.
- 12. Sheet A-111 Library/Town Hall Floor Plan
 - a. Entry Ramp shown at Library
 - b. Downspouts shown at Town Hall
- 13. Sheet A-311 Library/Town Hall Exterior Elevations
 - a. Downspouts shown at Town Hall
 - b. Revised Finish Schedule Reference for Metal Wall Panels at Library to MC-1a.
- 14. Sheet A-410 Town Hall – Enlarged Plan and Interior Elevations
 - a. See sheet for revisions.
- 15. Sheet A-722 Library Interior Window Schedule & Details
 - a. Window Schedule: Revise Window L6
 - b. Revise Details as indicated on drawing.
- 16. Sheet A-828 Library Roof Details
 - a. Revise Details as indicated on drawing.
- 17. Sheet A-831 City Hall Typical Exterior Details
 - a. Revise Details as indicated on drawing.
- 18. Sheet A-832 City Hall Exterior Details
 - a. Revise Details as indicated on drawing.
- 19. Sheet A-835 Library/Town Hall Typ. Ext. Details
 - a. Revise Details as indicated on drawing
- 20. Sheet M-002 City Hall – Schedules – Mechanical
 - a. Schedules revised per attached drawing.
- 21. Sheet M-211 Library/Town Hall – Level 1 Floor Plan – Mechanical
 - a. Plan revised per attached drawing.
- 22. Sheet P-210 Library/Town Hall – Underground Floor Plan – Plumbing
 - a. Plan revised per attached drawing.
- 23. Sheet P-211 Library/Town Hall – Level 1 Floor Plan – Plumbing
 - a. Plan revised per attached drawing.
- 24. Sheet P-501 Details – Plumbing
 - a. Add detail 9 Downspout Connection with CO Tee
 - b. Add detail 10 Overflow Drain Termination
- 25. Sheet E-002 Luminaire Schedule
 - a. Revise Fixture S3 and S3A per attached drawing.
- 26. Sheet E-003 Luminaire Schedule
 - a. Add Fixture Z14 per attached drawing
- 27. Sheet E-103 Site Plan – Library - Lighting
 - a. Revise plan per attached drawing.
- 28. Sheet E-203 Ancillary – Level 1 – Lighting
 - a. Revise Plan 2 per attached drawing.
- 29. Sheet E-211 Library/Town Hall – Floor Plan – High Ceiling – Lighting
 - a. Revise drawing per attached drawing.

2. Sheet C-020 Utility Demolition Plan
 - a. Remove (e) generator and associated note “(e)Generator to be removed, SEP”
3. Sheet C-300 Utility Plan
 - a. Revise Bid Alternative #8 Notes to Bid Alternative #1 Notes and Note 1, Bid Alt #8, to Bid Alt. #1.
4. Sheet L0.00 Cover Sheet Key Map Index
 - a. Plan 1: Remove underground tank note Bid Alt. #5.
5. Sheet L0.01 Notes
 - a. Demolition Note 11: Add to beginning of note “All trees to be removed by Owner.”
6. Sheet L0.02 Schedules and Legends
 - a. Layout Legend W-3: Remove Garapa and replace with Cedar
 - b. Layout Legend F-1 and F-2: Add to remarks “Note: To be Furnished by Owner”
7. Sheet L1.00 Tree Inventory
 - a. Tree #55: Remove from schedule
 - b. Tree #107: Tree to be removed in lieu of transplanted.
8. Sheet L1.02 Landscape Demolition Plan
 - a. Tree #55: Remove from drawing.
 - b. Tree #107: Tree to be removed in lieu of transplanted.
9. Sheet L1.04 Tree Protection Plan
 - a. Trees #55 and #107 removed from drawing.
10. Sheet L3.01 and L-302 Materials Plan
 - a. Legend W-3: Remove Garapa and replace with Cedar
11. Sheet S-103 City Hall Level 2 – Structural Framing Plan
 - a. Plan: Delete note “Bid Alt. #8 Scope Line”.
12. Sheet S-116 Library – Enlarged Framing Plan
 - a. Plan 3: Revise note “1x Decking, S.A.D.” to read “2x Decking, S.A.D.”
13. Sheet S-526 Library – Structural Steel Details
 - a. Delete sheet from Bid Documents.
14. Sheet AS-102 Enlarged Site Plans and Elevations
 - a. Revise detail 8 per attached sketch ASK-001
15. Sheet AS-104 Enlarged Site Plans and Elevations – Library
 - a. Add Sheet Note 1: See sheet L-403 for finish grades at ramps and decks.
16. Sheet AD-100 Site Plan Demolition
 - a. Phasing Note 2: Delete note and replace with “Refer to specification section 01 1000 Summary for site access requirements.”
 - b. Suggested Phasing: Move “Demolish existing Community Development Trailer” from Phase 3 to Phase 1.
17. Sheet A-151 City Hall – Slab Plan Level 1
 - a. Detail 3: Add note “Note: Coordinate opening locations and size with Floor Plan sheet AS-103, door schedule and CMU coursing.”
18. Sheet A-112 Library/Town Hall Roof Plan
 - a. Delete note at Town Hall “Reinstall Roof Tile ...” replace with the following note “Clay Roof Tile (CT-1) over Waterproof Membrane and Sheathing, S.S.D.”
19. Sheet A-300 Exterior Finish Schedule and Mock-Up Information
 - a. Exterior Finishes MC-1A: Revise Description to read “Painted Metal Panels, Coping and Trim Factory Finish”

- b. Detail 2D: Revise note "Painted Metal Wall Panel (MC-1)" to read "Painted Metal Wall Panel (MC-1a)".
 - c. Detail 2D: Revise note "Painted Metal Soffit/Eave (MC-1)" to read "Painted Metal Wall Panel (MC-1a)"
 - d. Detail 2A: Revise note "Painted Metal Coping (MC-1)" to read "Painted Metal Coping (MC-1a)"
20. Sheet A-411 Library – Enlarged Floor Plans
- a. Plan 1: Delete detail call outs 2/AF-650
21. Sheet A-502 City Hall – Administration – Interior Elevations
- a. Elevation 1B: Delete elevation and replace with attached sketch ASK-002
 - b. Elevation 8B: Add detail section 11/A-671 for Linoleum wall protection
22. Sheet A-505 City Hall – Police Department – Interior Elevations
- a. Elevation 5B: Add to note "Plywood Wainscoting, See 17/A-671.
23. Sheet A-605 Library Interior Details
- a. Revise detail 2 per attached sketch ASK-003
24. Sheet A-672 City Hall – Interior Details
- a. Detail 19 and 20: Add "1/4" min." dimension from face of plywood panel to face of trim.
25. Sheet A-701 Door Schedule, Frames & Types
- a. Doors L.8, L.23: Add note to Comments "1/2" Undercut"
 - b. Doors B.08B, C23, C24A, C24B, C25, D.10, F.03, F.04A: Add note to Comments "3/4" Undercut"
 - c. Door C.14: Delete sill detail 16/A-702, add note to Comments "3/4" Undercut"
 - d. Door F.02: Change hardware set from 28.0 to 13.0
 - e. Door U.01: Change hardware set from 41.0 to 3.0
 - f. Door CS.51: Change hardware set from 16.0 to 24.0
 - g. Door CS.55D: Change hardware set from 17.0 to 36.0
26. Sheet A-705 Library Door Details
- a. Revise detail 9 per attached sketch ASK-004
27. Sheet A-822 Clay Tile Roof Details
- a. All plywood sheathing to be Fire Retardant: Revise notes on details.
 - b. All wood nailers and blocking to be Fire Retardant: Revise notes on details.
28. Sheet A-823 City Hall – Composite Shingle Roof Details
- a. All plywood sheathing to be Fire Retardant: Revise notes on details.
 - b. All wood nailers and blocking to be Fire Retardant: Revise notes on details.
29. Sheet A-843 City Hall Exterior Door/Window Details
- a. Detail 14: Revise per attached sketch ASK-005
30. Sheet A-847 Library and Town Hall Exterior Window Details
- a. Detail 8: Revise title of detail to "Interface of Exterior and Interior Window System"
31. Sheet AI-101 City Hall Level 1 Finish Plan
- a. Revise finish at Reception/Mail CA.4, per attached sketch ASK-006
32. Sheet M-201 City Hall – Level 1 Floor Plan – Mechanical
- a. Revise note 14: Replace "Alternate 8" with "Alternate 1"
33. Sheet M-202 City Hall – Level 2 Floor Plan – Mechanical
- a. Revise note 8: Replace "Alternate 8" with Alternate 1"
 - b. Revise notes 14, 15 & 16: Add at end of note "(Alternate No. 1)"

34. Sheet M-401 City Hall – Enlarged Plans and Sections – Mechanical
 - a. Revise Sheet Keynote 2: Replace “Alternate No. 8” with “Alternate No. 1”
35. Sheet M-503 City Hall – Piping Diagrams – Mechanical
 - a. Revise note where “Bid Alternate 8” to “Bid Alternate 1”
36. Sheet M-605 Details – Mechanical
 - a. Detail 3: Revise detail title to read “AHU-3 City Hall Alternate No. 1”
37. Sheet P-001 Symbols Lists and General Notes
 - a. Delete Bid Alternates 1 thru 10, replace with “Alternate No. 1: Construct new Council Chamber as indicated on drawings.”
38. Sheets P-200
 - a. Plan revise note “Bid Alternate #8” to “Bid Alternate #1”
39. Sheets P-201 City Hall – Level 1 Floor Plan - Plumbing
 - a. Plan revise note “Bid Alternate #8” to “Bid Alternate #1”
 - b. Add note at 4”SD (3,200 SF) outlet: “Refer to Detail 10/P-501”
40. Sheet E-001 General Notes and Abbreviations – Electrical
 - a. Microgrid is not included in this Contract: Delete Police Station/Civic Center Micro-Grid Bidding General Note
41. Sheet E-305 Ancillary – Level 1 - Power
 - a. Sheet Note 11: Delete note “Bid as Add Alternate #4” and replace with “Not Used”
 - b. Plan 2: Delete Sheet Note 11.
42. Sheet E-401 Enlarged Plans – Electrical
 - a. Sheet Note 6: Delete note “Bid as Add Alternate #4” and replace with “Not Used”
 - b. Plan 6: Delete Sheet Note 6.



Prepared by:
Eileen Ong

WRNS STUDIO
January 23, 2019

SPECIFICATIONS

SECTION 01 1000

SUMMARY

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:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Work by Owner (Town of Atherton).
 - 4. Phased construction.
 - 5. Owner-furnished products.
 - 6. Access to site.
 - 7. Coordination with occupants.
 - 8. Work restrictions.
 - 9. Specification and Drawing conventions.
 - 10. Miscellaneous provisions.
- B. Related Requirements:
 - 1. Section 01 5000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

- A. Project Identification: Atherton Town Center Project.
 - 1. Project Location: Atherton, California.
- B. Owner: Town of Atherton, California.
 - 1. Owner's Representative: George Rodericks, City Manager
 - 2. Owners Project Manager: Marty Hanneman, P.E.
- C. Architect: WRNS Studio.
- D. Construction Manager: Mack 5.
 - 1. Construction Manager has been engaged for this Project to serve as an advisor to Owner and to provide assistance in administering the Contract for construction between Owner and Contractor, according to a separate contract between Owner and Construction Manager.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
1. The Town of Atherton intends to build a New Town Center located at 80 Fair Oaks Lane, Atherton CA, 94027, generally bordered on the west by Fair Oaks Lane, on the north by Caltrain railroad tracks, on the east by Maple Avenue and on the south by private properties.

The entire site will be remade to maximize use and provide an efficient functioning Town government. The proposed project will contain a New City Hall Building that may contain Council Chambers, Administration offices, Post Office, Police Department and Community Development offices. There will also be a new Library built and renovated Historic Town Hall Chambers building. The existing Corporation Yard maintenance shed building will be renovated by the Town as a separate project.

- B. Type of Construction Contract:
1. The Project will be constructed under a single prime General Contractor contract.

1.5 PHASED CONSTRUCTION

- A. **The Contractor will be responsible for securing the entire limits for the project site as required per these specifications and plans. Owner has the right to require changes to the site access for future travel around or through the project site that does not jeopardize public or worker safety, Town will discuss and negotiate with contractor. A contract change order (CCO) will be issued as needed. The Work shall be conducted in phases to allow the Police Department, in its current location and Library in the temporary trailers at Dinkelspiel Station Lane and Maple Street to be fully functional during construction. Each phase shall include special provisions to allow public access to Caltrain public parking areas. Contractor shall install all appropriate signage, temporary construction screened fencing to completely separate the public from construction activities. Each phase must make special provisions for protecting and working around existing utilities such as the existing SFPUC water main, ATT vault on Station Lane and all trees.**

Project Phasing for Construction:

Phase 1 – Estimated 3 months

- Construct portion of relocated Ashfield Road
- Construct portion of new Relocated Station Lane
- Demolish (e)Administrative building
- **Demolish (e) Permit Center modular buildings – Community Development**
- Demolish (e)PD Garage and Secure Lot (Fitness, Evidence Lab & Motorcycle Parking)
- Demolish Historic Town Hall Site Work
- Construct temporary Police Department secure parking & access

Phase 2 – Estimated 18 months

- Construct new Library

- Renovate Historic Town Hall
- Construct new City Hall & PD Secure parking
- Construct Fair Oaks Court
- Move Library to new Library
- Move City Hall (Admin Staff) to new City Hall
- Move CD to new City Hall
- Move Heritage staff to renovated Historic Town Hall
- Move PD to new City Hall
- Bid Alternate: Move City Council to new Council Chambers (optional after phase 3)

Phase 3 – Estimated 3 months

- Remove pad and utilities at temporary structures
- Demolish existing Police Department building
- Remove storage building at existing Police Department
- Partial demo & renovate communications building at existing radio tower
- Complete new Ashfield Road
- Complete new Station Lane
- Remove and replace all fencing per plans
- Complete Civic Court & Site Work

B. It is the Contractor's option to submit revised phasing plan for Owner's review and approval.

C. Before commencing Work of each phase, submit an updated copy of Contractor's construction schedule showing the sequence, commencement and completion dates, and move-out and -in dates of Owner's personnel for all phases of the Work.

1.6 WORK BY OWNER

A. General: Cooperate fully with Owner so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

1.7 OWNER-FURNISHED PRODUCTS

A. Owner will furnish products indicated. The Work includes receiving, unloading, handling, storing, protecting, and installing Owner-furnished products and making building services connections.

B. Owner-Furnished Products:

1. As indicated on FF&E schedule and plans.

1.8 ACCESS TO SITE

A. General:

1. **The Contractor shall have use of the entire Project site for construction operations as indicated on Drawings by the Contract limits, as per phasing requirements, and as indicated by requirements of this Section.**

2. Parking in and around the New Town Center is very limited. No Parking violations on city streets will be strictly enforced.
 3. Construction Staging area is very limited on site. Construction truck staging and parking on city streets will not be allowed during construction for construction workers or delivery of construction materials.
 4. Pick-ups and drop-offs to/from an offsite material staging/parking site may be required on a regular basis throughout construction.
 5. In general, Construction Truck Haul Routes to the site will be limited to using El Camino Real (SR 84) and Fair Oaks Lane when coming from the West and limited to using Marsh Lane and Fair Oaks Lane when coming from the east.
- B. Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
1. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.
- D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.
- 1.9 COORDINATION WITH OCCUPANTS
- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- 1.10 WORK RESTRICTIONS
- A. Work Restrictions, General: Comply with restrictions on construction operations. 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction. Parking Restrictions and Allowable Work Hours and Days will be strictly enforced.

- Contractor must maintain frequent communications between Town, Contractor and residents concerning all on and off site construction related issues.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 8:00a.m. to 5:00p.m., Monday through Friday, and as approved by Authorities Having Jurisdiction.
1. Weekend Hours: as approved by Owner.
 2. Early Morning Hours: as approved by Owner.
 3. Hours for Utility Shutdowns: see existing utility interruption information below.
 4. Hours for Core Drilling and noisy activity: 8:00am-5:00pm Monday-Friday only.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
1. Notify Owner's Rep not less than 48 hours (two days) in advance of proposed utility interruptions.
 2. Obtain Owner's Rep written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Construction dust and noise must be minimized throughout construction. Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
1. Notify Owner's Rep not less than two days in advance of proposed disruptive operations.
 2. Obtain Owner's Rep written permission before proceeding with disruptive operations.
- E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.
- F. Portable rest rooms and garbage debris sites must be located as far away as possible from residential homes surrounding the construction site.
- G. All Construction fencing must be screened from public streets and private property so that work can't be seen.
- H. The Town Center project requires demolishing the existing Administration/Police Department buildings. Four trailer configurations, shown on the drawings as Temporary Library Building have been installed to ensure the continuance of the Town of Atherton's Library services during the construction phase of the project. The project schedule shall include the removal of this temporary site, as shown in Section 1.5 Phased Construction. In general, portable trailers for the Temporary Library Building, are in place and operational, prior to construction notice to proceed and remain until Phase 3, when they will need to be removed to complete the project. Mobile Modular will be removing the portable trailers when they are called for by the Owner in coordination with the Contractor. Mobile Modular will require access to maintain the sewer holding tanks during construction. It shall be the contractor's responsibility to coordinate with the owner the removal of the portable trailers from Site in Phase 3.

1.11 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

****END OF SECTION****

SECTION 07 4213

METAL WALL PANELS

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 metal plate wall panels.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 1. Meet with Owner, Architect, Owner's insurer if applicable, metal panel Installer, metal panel manufacturer's representative, structural-support Installer, and installers whose work interfaces with or affects metal panels, including installers of doors, windows, and louvers.
 2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 3. Review methods and procedures related to metal panel installation, including manufacturer's written instructions.
 4. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
 5. Review flashings, special siding details, wall penetrations, openings, and condition of other construction that affect metal panels.
 6. Review governing regulations and requirements for insurance, certificates, and tests and inspections if applicable.
 7. Review temporary protection requirements for metal panel assembly during and after installation.
 8. Review procedures for repair of metal panels damaged after installation.
 9. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
- B. Sustainable Design Submittals:
 1. [Product Data](#): For recycled content, indicating postconsumer and preconsumer recycled content and cost.
 2. [Product Certificates](#): For regional materials, indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include distance to Project and cost for each regional material.
 3. [Building Product Disclosure Requirements](#): To encourage the use of building products that are working to minimize their environmental and health impacts, preference will be given to products with publicly available information:
 - a. Environmental product Declarations:

- b. Material Ingredients –Documentation demonstrating the chemical inventory of the product to at least 0.1% (1000ppm).
 - C. Shop Drawings:
 - 1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment assembly, trim, flashings, closures, and accessories; and special details.
 - 2. Accessories: Include details of the flashing, trim, and anchorage, at a scale of not less than 1-1/2 inches per 12 inches.
 - D. Samples for Initial Selection: For each type of metal panel indicated with factory-applied color finishes.
 - 1. Include similar Samples of trim and accessories involving color selection.
 - E. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
 - 1. Metal Panels: 12 inches long by actual panel width. Include fasteners, closures, and other metal panel accessories.
- 1.5 INFORMATIONAL SUBMITTALS
 - A. Qualification Data: For Installer.
 - B. Product Test Reports: For each product, tests performed by a qualified testing agency.
 - C. Field quality-control reports.
 - D. Sample Warranties: For special warranties.
- 1.6 CLOSEOUT SUBMITTALS
 - A. Maintenance Data: For metal panels to include in maintenance manuals.
- 1.7 QUALITY ASSURANCE
 - A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
 - B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 - 1. Build mockup of typical wall panel system.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- 1.8 DELIVERY, STORAGE, AND HANDLING
 - A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
 - B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on metal panels during installation.

1.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.10 COORDINATION

- A. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.11 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including rupturing, cracking, or puncturing.
 - b. Deterioration of metals and other materials beyond normal weathering.
 - 2. Warranty Period: Two years from date of Substantial Completion.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 330:
 - 1. Wind Loads: As indicated on Drawings.
 - 2. Other Design Loads: As indicated on Drawings.
 - 3. Deflection Limits: For wind loads, no greater than 1/180 of the span.
- B. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E 283 at the following test-pressure difference:
 - 1. Test-Pressure Difference: 6.24 lbf/sq. ft..
- C. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 331 at the following test-pressure difference:
 - 1. Test-Pressure Difference: 6.24 lbf/sq. ft..

- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.
- E. Sustainability Requirements:
 - 1. Provide products with the maximum amount possible of post-consumer and pre-consumer recycled content.
 - 2. Provide products manufactured and extracted within 100 miles of the project site whenever possible.
- F. Building Product Disclosure Requirements: Provide Building Product Disclosure documentation for products used in this section when available.
 - 1. Environmental product Declarations:
 - 2. Material Ingredients –Documentation demonstrating the chemical inventory of the product to at least 0.1% (1000ppm).

2.2 CONCEALED-FASTENER, LAP-SEAM METAL WALL PANELS

- A. General: Provide factory-formed metal panels designed to be field assembled by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. Include accessories required for weathertight installation.
- B. Flush-Reveal Profile, Concealed-Fastener Metal Wall Panels: Formed with vertical panel edges and a flat pan between panel edges; with flush joint between panels.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. [AEP Span; a BlueScope Steel company.](#)
 - b. [ATAS International, Inc.](#)
 - c. [CENTRIA Architectural Systems.](#)
 - d. [MBCI; a division of NCI Building Systems, L.P.](#)
 - e. [Metal-Fab Manufacturing, LLC](#)
 - f. [Morin; a Kingspan Group company.](#)
 - g. [Petersen Aluminum Corporation.](#)
 - 2. Aluminum Sheet: Coil-coated sheet, ASTM B 209 ([ASTM B 209M](#)), alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.
 - a. Thickness: 0.040 inch ([1.02 mm](#)).
 - b. Surface: Smooth, flat finish.
 - c. Exterior Finish: Three-coat fluoropolymer.
 - d. Color: match adjacent window finish.
 - 3. Panel Coverage: as indicated.
 - 4. Panel Height: 1.0 inch ([25 mm](#)).

2.3 METAL SOFFIT PANELS

- A. General: Provide metal soffit panels designed to be installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.
- B. Metal Soffit Panels: Curved corrugated panel.
 - 1. Sealant: Factory applied within interlocking joint.

2. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
 - a. Nominal Thickness: 0.040 inch.
 - b. Exterior Finish: Three-coat fluoropolymer.
 - c. Color and Gloss: as indicated on Exterior Finish Schedule on drawings.
 - d. Coverage and height: as indicated on drawings.

2.4 MISCELLANEOUS MATERIALS

- A. Miscellaneous Metal Subframing and Furring: ASTM C 645, cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 coating designation or ASTM A 792/A 792M, Class AZ50 aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.
- B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
 1. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal panels.
 2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
- C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
- D. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.
- E. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.
 1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
 2. Joint Sealant: ASTM C 920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
 3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.5 FABRICATION

- A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

- C. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
 - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
 - 2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
 - 3. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
 - 4. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
 - 5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
 - 6. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
 - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

2.6 FINISHES

- A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Steel Panels and Accessories:
 - 1. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.
- D. Aluminum Panels and Accessories:
 - 1. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.
 - 1. Examine wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal wall panel manufacturer.
 - 2. Examine wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.
 - a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.3 INSTALLATION

- A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
 - 1. Shim or otherwise plumb substrates receiving metal panels.
 - 2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
 - 3. Install screw fasteners in predrilled holes.
 - 4. Locate and space fastenings in uniform vertical and horizontal alignment.
 - 5. Install flashing and trim as metal panel work proceeds.
 - 6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
 - 7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
 - 8. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.
- B. Fasteners:
 - 1. Aluminum Panels: Use aluminum or stainless-steel fasteners for surfaces exposed to the exterior; use aluminum or galvanized-steel fasteners for surfaces exposed to the interior.
- C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.
- D. Zee Clips: Provide Zee clips of size indicated or, if not indicated, as required to act as standoff from subgirts for thickness of insulation indicated. Attach to subgirts with fasteners.

- E. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.
- F. Attachment Assembly, General: Install attachment assembly required to support metal plate wall and soffit panels and to provide a complete weathertight wall system, including subgirts, perimeter extrusions, tracks, drainage channels, panel clips, and anchor channels.
 - 1. Include attachment to supports, panel-to-panel joinery, panel-to-dissimilar-material joinery, and panel-system joint seals.
- G. Installation: Attach metal plate wall panels to supports at locations, spacings, and with fasteners recommended by manufacturer to achieve performance requirements specified.
 - 1. Wet Seal Systems: Seal horizontal and vertical joints between adjacent metal plate wall panels with sealant backing and sealant. Install sealant backing and sealant according to requirements specified in Section 07 9200 "Joint Sealants."
- H. Flange-Attachment Installation: Attach metal plate wall panels, formed with extended perimeter flanges, to supports at locations, spacings, and with fasteners recommended by manufacturer.
 - 1. Seal horizontal and vertical joints between adjacent panels with sealant backing and sealant. Install sealant backing and sealant according to requirements specified in Section 07 9200 "Joint Sealants."
 - 2. Seal horizontal and vertical joints between adjacent panels with manufacturer's standard gaskets.
- I. Watertight Installation:
 - 1. Apply a continuous ribbon of sealant or tape to seal lapped joints of metal panels, using sealant or tape as recommend by manufacturer on side laps of nesting-type panels and elsewhere as needed to make panels watertight.
 - 2. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
 - 3. At panel splices, nest panels with minimum 6-inch end lap, sealed with sealant and fastened together by interlocking clamping plates.
- J. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weathertight performance of metal wall panel assemblies. Provide types of gaskets, fillers, and sealants indicated by metal panel manufacturer; or, if not indicated, provide types recommended by metal wall panel manufacturer.
 - 1. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- K. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal panel manufacturer; or, if not indicated, provide types recommended in writing by metal panel manufacturer.
- L. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.
 - 1. Install exposed flashing and trim that is without buckling and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof performance.

2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

3.4 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align metal plate wall panel units within installed tolerance of 1/4 inch in 20 feet, non-accumulative, on level, plumb, and location lines as indicated, and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified independent testing agency to perform field tests and inspections.
- B. Water-Spray Test: After installation, test area of assembly as directed by Architect for water penetration according to AAMA 501.2.
- C. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect completed metal wall panel installation, including accessories.
- D. Remove and replace metal wall panels where tests and inspections indicate that they do not comply with specified requirements.
- E. Additional tests and inspections, at Contractor's expense, are performed to determine compliance of replaced or additional work with specified requirements.
- F. Prepare test and inspection reports.

3.6 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
- B. After metal panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.
- C. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

SECTION 08 1113

HOLLOW METAL DOORS AND FRAMES

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. Interior standard steel doors and frames.
 - 2. Exterior standard steel doors and frames.
 - 3. Sound Retardant Metal Fixed Window Systems.
 - ~~3.4.~~ Metal sound control door assemblies

- B. Related Requirements:
 - 1. Section 08 7100 "Door Hardware" for door hardware for hollow-metal doors.

1.3 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.4 COORDINATION

- A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.
- B. Coordinate requirements for installation of door hardware, electrified door hardware, and access control and security systems.

1.5 PREINSTALLATION MEETINGS

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

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, core descriptions, fire-resistance ratings, temperature-rise ratings, and finishes.
- B. Sustainable Design Submittals:
 - 1. For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
 - 2. For products and materials required to comply with requirements for regional materials indicating location and distance from Project of material manufacturer and point of

- extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
3. Building Product Disclosure Requirements: To encourage the use of building products that are working to minimize their environmental and health impacts, preference will be given to products with publicly available information:
 - a. Environmental product Declarations:
 - b. Material Ingredients –Documentation demonstrating the chemical inventory of the product to at least 0.1% (1000ppm).
- C. Shop Drawings: Include the following:
1. Elevations of each door type.
 2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 4. Locations of reinforcement and preparations for hardware.
 5. Details of each different wall opening condition.
 6. Details of electrical raceway and preparation for electrified hardware, access control systems, and security systems.
 7. Details of anchorages, joints, field splices, and connections.
 8. Details of accessories.
 9. Details of moldings, removable stops, and glazing.
 - 9-10. Details of sound control seals, door bottoms, and thresholds
- D. Samples for Initial Selection: For hollow-metal doors and frames with factory-applied color finishes.
- E. Samples for Verification:
1. For each type of exposed finish required, prepared on Samples of not less than 3 by 5 inches.
 2. Fabrication: Prepare Samples approximately 12 by 12 inches to demonstrate compliance with requirements for quality of materials and construction:
 - a. Doors: Show vertical-edge, top, and bottom construction; core construction; and hinge and other applied hardware reinforcement. Include separate section showing glazing if applicable.
 - b. Frames: Show profile, corner joint, floor and wall anchors, and silencers. Include separate section showing fixed hollow-metal panels and glazing if applicable.
- F. Schedule: Provide a schedule of hollow-metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final Door Hardware Schedule.

1.7 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency.
- B. Product Certificates: For each type of sound control door assembly.
- C. Product Test Reports: For each sound control door assembly, for tests performed by manufacturer and witnessed by a qualified testing agency.
- A.D. Sound retardant window Certification: Provide certification that the fixed window construction utilized has been tested at an independent laboratory in accordance with ASTM E90, and that the STC rating determined in accordance with ASTM E413. The laboratory referenced in the certification must be qualified under the National Voluntary Accreditation Program (NVLAP) of

the U.S. Bureau of Standards. Certification must reference laboratory name, test report number, and date of test.

1.8 CLOSEOUT SUBMITTALS

A. Maintenance Data: For sound control door assemblies to include in maintenance manuals.

1.8.1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow-metal work palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.
 - 1. Provide additional protection to prevent damage to factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow-metal work vertically under cover at Project site with head up. Place on minimum 4-inch-high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: Subject to compliance with requirements, provide products by Ceco Door; ASSA ABLOY or a comparable product by one of the following:
 - 1. Curries Company; ASSA ABLOY.
 - 2. Fleming Door Products Ltd.; Assa Abloy Group Company.
 - 3. Steelcraft; an Ingersoll-Rand company.
 - 4. Stiles Custom Metal Inc.
- B. Basis of Design – Sound retardant windows: Overly Door Company.
- C. Source Limitations: Obtain hollow-metal work from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and temperature-rise limits indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
 - 1. Smoke- and Draft-Control Assemblies: Provide an assembly with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
- B. Fire-Rated, Borrowed-Light Assemblies: Complying with NFPA 80 and listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9.

- C. Sound Rating: Provide sound control door assemblies identical to those of assemblies tested as sound-retardant units by an acoustical testing agency, and have the following minimum rating:
 - 1. STC Rating: 42 as calculated by ASTM E 413 when tested in an operable condition according to ASTM E 90.

~~C.D.~~ Thermally Rated Door Assemblies: Provide door assemblies with U-factor of not more than 0.40 deg Btu/F x h x sq. ft. when tested according to ASTM C 518.

~~D.E.~~ Building Product Disclosure Requirements: Provide Building Product Disclosure documentation for products used in this section when available.

1. Environmental product Declarations:
2. Material Ingredients –Documentation demonstrating the chemical inventory of the product to at least 0.1% (1000ppm).

2.3 INTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified
- B. Extra-Heavy-Duty Doors and Frames: SDI A250.8, Level 3.
 1. Physical Performance: Level A according to SDI A250.4.
 2. Doors:
 - a. Type: As indicated in the Door and Frame Schedule.
 - b. Thickness: 1-3/4 inches.
 - c. Face: Uncoated, cold-rolled steel sheet, minimum thickness of 0.053 inch.
 - d. Edge Construction: Model 2, Seamless.
 - e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
 - f. Core: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, mineral-board, or vertical steel-stiffener core at manufacturer's discretion.
 - g. Fire-Rated Core: Manufacturer's standard vertical steel stiffener core for fire-rated and temperature-rise-rated doors.
 3. Frames:
 - a. Materials: Uncoated, steel sheet, minimum thickness of 0.053 inch.
 - b. Sidelite and Transom Frames: Fabricated from same thickness material as adjacent door frame.
 - c. Construction: Face welded unless otherwise indicated.
 - 1) Slip on drywall at in place gypsum board partitions.
 4. Exposed Finish: Prime.

2.4 SECURITY INTERIOR STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Maximum-Duty Doors and Frames: SDI A250.8, Level 4.
 1. Physical Performance: Level A according to SDI A250.4.
 2. Doors:
 - a. Type: As indicated in the Door and Frame Schedule.
 - b. Thickness: 1-3/4 inches
 - c. Face: Uncoated, cold-rolled steel sheet, minimum thickness of 0.053 inch.
 - d. Edge Construction: Model 2, Seamless.
 - e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
 - f. Core: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, mineral-board, or vertical steel-stiffener core at manufacturer's discretion.
 3. Frames:
 - a. Materials: Uncoated, steel sheet, minimum thickness of 0.053 inch.
 - b. Construction: Face welded.

4. Exposed Finish: Prime.

2.5 STEEL SOUND CONTROL DOORS AND FRAMES

- A. Basis of Design: Subject to compliance with requirements, provide doors by IAC Acoustics or a comparable product by one of the following:
 1. Manufacturers not listed but who do offer products that comply with the requirements of this Section will be considered as substitute manufacturers, subject to the conditions specified in Division 1 Section Product Substitution Procedures.
- B. Source Limitations: Obtain steel sound control door assemblies, including doors, frames, sound control seals, hinges, thresholds, and other items essential for sound control, from single source from single manufacturer.
- C. Doors: Flush-design sound control doors, thickness as required to provide STC rating, of seamless construction; with manufacturer's standard sound-retardant core as required to provide STC and fire rating indicated. Construct doors with smooth, flush surfaces without visible joints or seams on exposed faces or stile edges. Fabricate according to NAAMM-HMMA 865.
 1. Interior Doors: Fabricate from cold-rolled steel sheet unless otherwise indicated, 0.048-inch (1.21-mm) nominal thickness or thicker as required to achieve STC rating indicated.
 2. Core: Manufacturer's standard sound control core.
 3. Loose Stops for Glazed Lites in Doors: Same material as face sheets.
 4. Top and Bottom Channels: Closed with continuous channels of same material as face sheets, spot welded to face sheets not more than 6 inches (152 mm) o.c.
 5. Hardware Reinforcement: Same material as face sheets.
- D. Frames: Fabricate sound control door frames with corners mitered, reinforced, and continuously welded the full depth and width of frame. Fabricate according to NAAMM-HMMA 865.
 1. Weld frames according to NAAMM-HMMA 820.
 2. Interior Frames: Fabricate from cold-rolled steel sheet unless otherwise indicated, 0.075-inch (1.90-mm) nominal thickness or thicker as required to provide STC rating indicated.
 3. Hardware Reinforcement: Fabricate according to NAAMM-HMMA 865 of same material as face sheets.
 4. Ceiling Struts: Minimum 3/8-inch-thick by 2-inch- (9.5-mm-thick by 51-mm-) wide uncoated steel unless otherwise indicated.

2.52.6 EXTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Maximum-Duty Doors and Frames: SDI A250.8, Level 4.
 1. Physical Performance: Level A according to SDI A250.4.
 2. Doors:
 - a. Type: As indicated in the Door and Frame Schedule.
 - b. Thickness: 1-3/4 inches
 - c. Face: Metallic-coated steel sheet, minimum thickness of 0.067 inch, with minimum A40 coating.
 - d. Edge Construction: Model 2, Seamless.
 - e. Edge Bevel: Provide manufacturer's standard beveled or square edges.

- f. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
 - g. Bottom Edges: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
 - h. Core: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, mineral-board, or vertical steel-stiffener core at manufacturer's discretion.
 - 1) Thermal-Rated Doors: Provide doors fabricated with thermal-resistance value (R-value) of not less than 2.1 deg F x h x sq. ft./Btu when tested according to ASTM C 1363.
 - i. Fire-Rated Core: Manufacturer's standard vertical steel stiffener with insulation core for fire-rated doors.
3. Frames:
 - a. Materials: Metallic-coated steel sheet, minimum thickness of 0.067 inch, with minimum A40 coating.
 - b. Construction: Face welded.
 4. Exposed Finish: Prime.

2-62.7 BORROWED LITES

- A. Fabricate of uncoated steel sheet, minimum thickness of 0.053 inch.
- B. Construction: Full profile welded.
- C. Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as metal as frames.
- D. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.

2-72.8 HOLLOW-METAL PANELS

- A. Provide hollow-metal panels of same materials, construction, and finish as adjacent door assemblies.

2-82.9 FRAME ANCHORS

- A. Jamb Anchors:
 1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
 2. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.
 3. Compression Type for Drywall Slip-on Frames: Adjustable compression anchors.
 4. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet.
 5. Postinstalled Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch-diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.

- B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.
- C. Material: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.
 - 1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M; hot-dip galvanized according to ASTM A 153/A 153M, Class B.

2.92.10 SOUND RETARDANT WINDOWS

- A. Performance: Sound Retardant Metal Fixed Window System to be Overly Model No. 5392274 or equal with STC rating of 53 when tested as a system in accordance with ASTM E90 and ASTM E413.
- B. Components: Assemblies to be complete with metal frame, glass, and glazing. Glass, and glazing shipped loose to be field installed.
- C. Materials: Sound Retardant Metal Fixed Window Frames to be constructed from formed sheet steel or structural shapes and bars. Sheet steel shall be commercial quality, level, cold rolled steel conforming to ASTM A1008 or hot rolled, pickled and oiled steel conforming to ASTM A1011. Steel shapes shall comply with ASTM A36 and steel bars with ASTM A108, Grade 1018.
- D. Frame Design: Sound Retardant Metal Fixed Window Frames shall be 14 gauge minimum welded units with integral trim and shipped with temporary spreader. After installation, field splices required because of shipping limitations must be field welded by certified welders per manufacturer's instructions and in accordance with AWS D1.1/D1.3.
- E. Anchors: Provide suitable anchors to properly install frames in partition types shown on Architects drawings.
- F. Painting and Cleaning: After fabrication of frames, all tool marks and surface imperfections shall be removed and exposed faces of all welded joints dressed smooth. Chemically treat all surfaces to insure maximum paint adhesion and coat with manufacturer's standard water-based rust-inhibitive primer.

2.102.11 MATERIALS

- A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 50 percent.
- B. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- C. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- D. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.
- E. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.
 - 1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

- F. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- G. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.
- H. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.
- I. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
- J. Glazing: Comply with requirements in Section 08 8000 "Glazing", and as required by sound control door assembly manufacturer to comply with sound control.
- K. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.112.12 FABRICATION

- A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Hollow-Metal Doors:
 - ~~1. Steel Stiffened Door Cores: Provide minimum thickness 0.026 inch, steel vertical stiffeners of same material as face sheets extending full door height, with vertical webs spaced not more than 6 inches apart. Spot weld to face sheets no more than 5 inches o.c. Fill spaces between stiffeners with glass or mineral fiber insulation.~~
 - 2.1. Fire Door Cores: As required to provide fire-protection and temperature-rise ratings indicated.
 - 3.2. Vertical Edges for Single-Acting Doors: Provide square edges.
 - 4.3. Top Edge Closures: Close top edges of doors with inverted closures, except provide flush closures at exterior doors of same material as face sheets.
 - 5.4. Bottom Edge Closures: Close bottom edges of doors with end closures or channels of same material as face sheets.
 - 6.5. Exterior Doors: Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.
 - 7.6. Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.
- C. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 1. Sidelight and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.

2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 3. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
 4. Floor Anchors: Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk holes at bottoms of jambs.
 5. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Masonry Type: Locate anchors not more than 16 inches from top and bottom of frame. Space anchors not more than 32 inches o.c., to match coursing, and as follows:
 - 1) Two anchors per jamb up to 60 inches high.
 - 2) Three anchors per jamb from 60 to 90 inches high.
 - 3) Four anchors per jamb from 90 to 120 inches high.
 - 4) Four anchors per jamb plus one additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
 - b. Stud-Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - 1) Three anchors per jamb up to 60 inches high.
 - 2) Four anchors per jamb from 60 to 90 inches high.
 - 3) Five anchors per jamb from 90 to 96 inches high.
 - 4) Five anchors per jamb plus one additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
 - c. Compression Type: Not less than two anchors in each frame.
 - d. Postinstalled Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c.
 6. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.
 - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
 - b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.
 - ~~7. Terminated Stops: Terminate stops 6 inches above finish floor with a 45-degree angle cut, and close open end of stop with steel sheet closure. Cover opening in extension of frame with welded steel filler plate, with welds ground smooth and flush with frame.~~
- D. Fabricate concealed stiffeners and edge channels from either cold- or hot-rolled steel sheet.
- E. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
 1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
 2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.
- F. Glazed Lites: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints.
 1. Provide stops and moldings flush with face of door, and with beveled stops unless otherwise indicated.
 2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
 3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames. Provide loose stops and moldings on inside of hollow-metal doors and frames.

4. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.
5. Provide stops for installation with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches o.c. and not more than 2 inches o.c. from each corner.

2.122.13 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
 1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

2.132.14 ACCESSORIES

- A. Provide louvers for doors, where indicated, which comply with SDI 111, with blades or baffles formed of 0.020-inch-thick, cold-rolled steel sheet set into 0.032-inch-thick steel frame.
 1. Sightproof Louver: Stationary louvers constructed with inverted-V or inverted-Y blades.
- B. Form corners of moldings with hairline joints. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
- C. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.
- D. Grout Guards: Formed from same material as frames, not less than 0.016 inch thick.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.
- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

- A. General: Install hollow-metal work plumb, rigid, properly aligned, and securely fastened in place. Comply with Drawings and manufacturer's written instructions.

- B. Hollow-Metal Frames: Install hollow-metal frames of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.
1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
 - a. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
 - b. Install frames with removable stops located on secure side of opening.
 - c. Install door silencers in frames before grouting.
 - d. Remove temporary braces necessary for installation only after frames have been properly set and secured.
 - e. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
 - f. Field apply bituminous coating to backs of frames that will be filled with grout containing antifreezing agents.
 2. Fire-Rated Openings: Install frames according to NFPA 80.
 3. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 4. Metal-Stud Partitions: Solidly pack mineral-fiber insulation inside frames.
 5. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
 6. Concrete Walls: Solidly fill space between frames and concrete with mineral-fiber insulation.
 7. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
 8. Ceiling Struts: Extend struts vertically from top of frame at each jamb to supporting construction above unless frame is anchored to masonry or to other structural support at each jamb. Bend top of struts to provide flush contact for securing to supporting construction above. Provide adjustable wedged or bolted anchorage to frame jamb members.
 - 8-9. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.
- C. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames, within clearances specified below. Shim as necessary.
1. Non-Fire-Rated Steel Doors: Comply with SDI A250.8.
 - a. Between Door and Frame Jambs and Head: 1/8 inch plus or minus 1/32 inch.
 - b. Between Edges of Pairs of Doors: 1/8 inch to 1/4 inch plus or minus 1/32 inch.
 - c. At Bottom of Door with no Threshold: 5/8 inch plus or minus 1/32 inch (0.8 mm).
 - d. At Bottom of Door with Threshold: 3/4 inch plus or minus 1/32 inch.
 - e. Between Door Face and Stop: 1/16 inch to 1/8 inch plus or minus 1/32 inch.
 2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
 3. Smoke-Control Doors: Install doors and gaskets according to NFPA 105.

- D. Glazing: Comply with installation requirements in Section 08 8000 "Glazing" and with hollow-metal manufacturer's written instructions.
 - 1. Secure stops with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches o.c. and not more than 2 inches o.c. from each corner.

3.4 FIELD QUALITY CONTROL

- A. Sound retardant window testing: Secure the services of a qualified Independent Testing agency to test door window and frame installations in accordance with ASTM E336. Installed product field results calculated according to ASTM E413 shall be no less than five (5) NIC rating points below the specified laboratory STC rating.

3.5 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow-metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- D. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- E. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION

SECTION 080671

DOOR HARDWARE SETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section references specification sections relating to commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Sliding Doors.
 - 3. Other doors to the extent indicated.
- B. Commercial door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Electromechanical and access control door hardware.
 - 3. Electromechanical and access control door hardware power supplies, back-ups and surge protection.
 - 4. Automatic operators.
 - 5. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Division 08 Section "Door Hardware".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - 2. ICC/IBC - International Building Code.
 - 3. NFPA 70 - National Electrical Code.
 - 4. NFPA 80 - Fire Doors and Windows.
 - 5. NFPA 101 - Life Safety Code.
 - 6. NFPA 105 - Installation of Smoke Door Assemblies.
 - 7. State Building Codes, Local Amendments.
- E. Standards: Reference Related Sections for requirements regarding compliance with applicable industry standards.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 - 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Keying Schedule: Prepared under the supervision of the Owner, separate schedule detailing final keying instructions for locksets and cylinders in writing. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner to approve submitted keying schedule prior to the ordering of permanent cylinders.
- D. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals. The manual to include the name, address, and

contact information of the manufacturers providing the hardware and their nearest service representatives. The final copies delivered after completion of the installation test to include "as built" modifications made during installation, checkout, and acceptance.

- F. Warranties and Maintenance: Special warranties and maintenance agreements specified in the Related Sections.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum [5] years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: Installers, trained by the primary product manufacturers, with a minimum [3] years documented experience installing both standard and electrified builders hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum [5] years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor in good standing by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Source Limitations: Obtain each type and variety of Door Hardware specified in the Related Sections from a single source, qualified supplier unless otherwise indicated.
- E. Regulatory Requirements: Comply with NFPA 70, NFPA 80, NFPA 101 and ANSI A117.1 requirements and guidelines as directed in the applicable model building code.
- F. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Division 08 Sections (Steel, Aluminum and Wood) doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. Refer to "PART 3 – EXECUTION" for required specification sections.

PART 3 - EXECUTION

3.1 DOOR HARDWARE SETS

- A. The door hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a

hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

- B. The supplier is responsible for handing and sizing all products and providing the correct option for the appropriate door type and material where more than one is presented in the hardware sets. Quantities listed are for each pair of doors, or for each single door.
- C. Products listed in the Door Hardware Sets must meet the requirements described in the specification sections noted.
 - 1. Section 08 41 26 – All Glass Entrances.
 - 2. Section 08 71 00 – Door Hardware.
 - 3. Section 08 74 00 – Access Control Hardware.
 - 4. Section 08 74 13 – Card Key Access Control Hardware.
 - 5. Section 28 13 00 – Access Control.
 - 6. Section 28 13 10 – Multi-Family Access Control.
- D. Manufacturer’s Abbreviations:
 - 1. MK - McKinney
 - 2. PE - Pemko
 - 3. RF - Rixson
 - 4. RO - Rockwood
 - 5. AD - Adams Rite
 - 6. SA - Sargent
 - 7. MC - Medeco
 - 8. NO - Norton
 - 9. BM - Besam
 - 10. SU - Securitron

Hardware Sets

Set: 1.0

Doors: A.01, A.02, A.03, C.01, C.02, C.03, C.04, CA.1, CA.2, CA.3, CC.6, CD.1, CD.8, CF.1, CS.3, CS.4, D.03, L.15, L.15A

3 Hinge	TA2714	US10BE MK 087100
1 Office Lock	LC 8205 LNNJ	US10BE SA 087100
1 Cylinder	320200BT Z20	24 MC 087100
1 Wall Stop	409	US10BE RO 087100
1 Gasketing	S88D	PE 087100

Set: 2.0

Doors: A.07A

1 Hinge (heavy weight) DPS	T4A3386 QC12 MM 4-1/2" x 4-1/2"	US10BE MK 087100
1 Hinge (heavy weight)	T4A3386 QC12 4-1/2" x 4-1/2"	US10BE MK 087100
4 Hinge (heavy weight)	T4A3386 NRP	US10BE MK 087100
1 SELP10 Conc Vert Rod RX DPS	19 M1-MD8674-24V-BIPS 106 x ETNJ LC	US10BE SA 087400
1 Concealed Vert Rod Exit	19 55 MD8610 ETNJ	US10BE SA 087100
1 Cylinder	320200BT Z20	24 MC 087100
2 Door Closer	PR7500	690 NO 087100
2 Door Stop	463	US32D RO 087100
1 Gasketing	S88D	PE 087100
1 Astragal	S772D	PE 087100
2 Frame Harness	QC-C1500 (as required)	MK 087100
2 Door Harness	QC-C__P (as required)	MK 087100

Notes: Presenting a valid card to reader unlocks door.
 Both doors have RX and position switch.

Set: 3.0

Doors: A.07B, A.20, A.21, CS.15, **U.01**

1 Hinge (heavy weight)	T4A3386 QC12 4-1/2" x 4-1/2"	US10BE MK 087100
2 Hinge (heavy weight)	T4A3386 NRP	US10BE MK 087100
1 Access Control Rim Exit RX DPS	19 M1-8876-24V-BIPS ETMJ LC	US10BE SA 087400
1 Cylinder	320200BT Z20	24 MC 087100
1 Door Closer	PR7500	690 NO 087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE RO 087100
1 Door Stop	463	US32D RO 087100
1 Threshold	___D FHSL14 as detailed	PE 087100
1 Gasketing	S88D	PE 087100
1 Frame Harness	QC-C1500 (as required)	MK 087100
1 Door Harness	QC-C__P (as required)	MK 087100

Notes: Presenting a valid card to reader unlocks door.
 Panic has position switch and RX.

Set: 4.0

Doors: A.07C, B.01B, B.08B, B.09A, B.09B, C.11, C.13, C.20, CA.4A, CA.4B

3 Hinge (heavy weight)	T4A3786	US10BE MK 087100
1 Classroom Lock	LC 8237 LNNJ	US10BE SA 087100
1 Cylinder	320200BT Z20	24 MC 087100
1 Door Closer	PR7500	690 NO 087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE RO 087100
1 Wall Stop	409	US10BE RO 087100
1 Gasketing	S88D	PE 087100

Set: 5.0

Doors: A.08

1 Hinge (heavy weight)	T4A3786 QC12 4-1/2" x 4-1/2"	US10BE MK 087100
2 Hinge (heavy weight)	T4A3786	US10BE MK 087100
1 Access Control Rim Exit <i>RX DPS</i>	19 M1-8876-24V-BIPS ETMJ LC	US10BE SA 087400
1 Cylinder	320200BT Z20	24 MC 087100
1 Door Closer	PR7500	690 NO 087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE RO 087100
1 Wall Stop	409	US10BE RO 087100
1 Gasketing	S88D	PE 087100
1 Frame Harness	QC-C1500 (as required)	MK 087100
1 Door Harness	QC-C__P (as required)	MK 087100

Set: 6.0

Doors: A.08A

3 Hinge (heavy weight)	T4A3386 NRP	US10BE MK 087100
1 Storeroom Lock	LC 8204 LNNJ	US10BE SA 087100
1 Cylinder	320200BT Z20	24 MC 087100
1 Door Closer	CPS7500	690 NO 087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE RO 087100
1 Threshold	___D FHSL14 as detailed	PE 087100
1 Gasketing	S88D	PE 087100
1 Sweep	315DN	PE 087100

Set: 7.0

Doors: A.09, C.23

3 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	US10BE MK 087100
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1 Storeroom Lock	LC 8204 LNNJ	US10BE SA	087100
1 Cylinder	320200BT Z20	24 MC	087100
1 Surface OH Stop	10-336	613 RF	087100

Set: 8.0

Doors: B.01A

1 Hinge (heavy weight) DPS	T4A3386 QC12 MM 4-1/2" x 4-1/2"	US10BE MK	087100
3 Hinge (heavy weight)	T4A3386 NRP	US10BE MK	087100
1 Access Control Mort Lock RX DPS	M1-82271-24V-BIPS LNNJ LC	US10BE SA	087400
1 Cylinder	320200BT Z20	24 MC	087100
1 Door Closer	PR7500	690 NO	087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE RO	087100
1 Door Stop	463	US32D RO	087100
1 Threshold	___D FHSL14 as detailed	PE	087100
1 Gasketing	S88D	PE	087100
1 Sweep	315DN	PE	087100
1 Frame Harness	QC-C1500 (as required)	MK	087100
1 Door Harness	QC-C__P (as required)	MK	087100

Notes: Presenting a valid card to reader unlocks door.
 Lock has RX hinge has position switch.

Set: 9.0

Doors: B.05

6 Hinge (heavy weight)	T4A3786	US10BE MK	087100
1 Flush Bolt	2805	US10BE RO	087100
1 Classroom Lock	LC 8237 LNNJ	US10BE SA	087100
1 Cylinder	320200BT Z20	24 MC	087100
2 Surface OH Stop	10-336	613 RF	087100
2 Kick Plate	K1050 10" 4BE CSK	US10BE RO	087100
1 Astragal	355DV	PE	087100

Set: 10.0

Doors: B.08A, CC.4B, D.09, D.09A, D.10, D.11, D.12, E.03A, E.03B, F.04

1 Hinge (heavy weight)	T4A3786 QC12 4-1/2" x 4-1/2"	US10BE MK	087100
2 Hinge (heavy weight)	T4A3786	US10BE MK	087100
1 Access Control Mort Lock RX DPS	M1-82271-24V-BIPS LNNJ LC	US10BE SA	087400

1 Cylinder	320200BT Z20	24	MC	087100
1 Concealed OH Stop	1-X36	613E	RF	087100
1 Door Closer	7500	690	NO	087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE	RO	087100
1 Gasketing	S88D		PE	087100
1 Frame Harness	QC-C1500 (as required)		MK	087100
1 Door Harness	QC-C__P (as required)		MK	087100

Notes: Presenting a valid card to reader unlocks door.
 Lock has RX and position switch.

Set: 11.0

Doors: C.14, C.24A, C.24B, D.14, D.15, L.7A-A, L.7A-B, L.7A-C, L.7B-A, L.7B-B, L.7B-C, L.8

4 Hinge	TA2714	US10BE	MK	087100
1 Privacy Lock w/Occupancy Indicator	LC 50 8267 LNNJ	US10BE	SA	087100
1 Cylinder	320200BT Z20	24	MC	087100
1 Door Closer	7500	690	NO	087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE	RO	087100
1 Wall Stop	409	US10BE	RO	087100
1 Gasketing	S88D		PE	087100

Set: 12.0

Doors: C.15, C.17, C.25, CS.10, CS.14, CS.9, D.06, L.10, L.19, L.23

3 Hinge	TA2714	US10BE	MK	087100
1 Storeroom Lock	LC 8204 LNNJ	US10BE	SA	087100
1 Cylinder	320200BT Z20	24	MC	087100
1 Wall Stop	409	US10BE	RO	087100

Set: 13.0

Doors: C.16, *F.02*

1 Hinge (heavy weight)	T4A3786 QC12 4-1/2" x 4-1/2"	US10BE	MK	087100
2 Hinge (heavy weight)	T4A3786	US10BE	MK	087100
1 Access Control Mort Lock <i>RX DPS</i>	M1-82271-24V-BIPS LNNJ LC	US10BE	SA	087400
1 Cylinder	320200BT Z20	24	MC	087100
<i>1 Door Closer</i>	<i>7500</i>	<i>690</i>	<i>NO</i>	<i>087100</i>
1 Kick Plate	K1050 10" 4BE CSK	US10BE	RO	087100
1 Wall Stop	409	US10BE	RO	087100

1 Gasketing	S88D	PE	087100
1 Frame Harness	QC-C1500 (as required)	MK	087100
1 Door Harness	QC-C__P (as required)	MK	087100

Notes: Presenting a valid card to reader unlocks door.
 Lock has RX and position switch.

Set: 14.0

Doors: C.21

1 Hinge (heavy weight) DPS	T4A3386 QC12 MM 4-1/2" x 4-1/2"	US10BE	MK	087100
5 Hinge (heavy weight)	T4A3386 NRP	US10BE	MK	087100
1 Self-Latching Flush Bolt Set	2845	US10BE	RO	087100
1 Access Control Mort Lock RX DPS	M1-82271-24V-BIPS LNNJ LC	US10BE	SA	087400
1 Cylinder	320200BT Z20	24	MC	087100
1 Coordinator	2600	Black	RO	087100
2 Mounting Bracket	2601AB	US28	RO	087100
2 Door Closer	PR7500	690	NO	087100
2 Kick Plate	K1050 10" 4BE CSK	US10BE	RO	087100
2 Door Stop	463	US32D	RO	087100
1 Threshold	___D FHSL14 as detailed		PE	087100
1 Gasketing	S88D		PE	087100
2 Sweep	315DN		PE	087100
1 Astragal	S772D		PE	087100
1 Astragal	357D		PE	087100
1 Frame Harness	QC-C1500 (as required)		MK	087100
1 Door Harness	QC-C__P (as required)		MK	087100

Notes: Lock has RX hinge has position switch.

Set: 15.0

Doors: CA.6A, CA.6B, CC.2

1 Floor Closer	SC 27N 105 LFP 8.5#	613E	RF	087100
2 Intermediate Pivot	M19	613E	RF	087100
1 Top Pivot	180	613E	RF	087100
1 Exit Device (nightlatch)	LC 19 MD8410 106 x 862	US10BE	SA	087100
1 Exit Device (exit only)	19 MD8410	US10BE	SA	087100
1 Cylinder	320200BT Z20	24	MC	087100
2 Door Pull	RM3311-72 Mtg-Type 12XHD	US10BE	RO	087100

1	Single Door Operator (inground single)	provided by 087113 w/actuators	689	BM	087113
1	Threshold	___B FHSL14 as detailed		PE	087100
1	Gasketing	S88D		PE	087100
2	Sweep	315DN		PE	087100

Notes: Auto door operator and controls provided by and installed by section 087113

Set: 16.0

Doors: CC.2A, CC.2B, CC.2C, CS.52, CS.55-A, CS.55-B

8	Hinge (heavy weight)	T4A3386 NRP		US10BE	MK	087100
2	Exit Device (exit only)	19 WD8610		US10BE	SA	087100
2	Door Pull	RM3311-72 Mtg-Type 12XHD		US10BE	RO	087100
2	Door Closer	CPS7500T	690	NO	087100	
1	Threshold	___B FHSL14 as detailed		PE	087100	
1	Gasketing	S88D		PE	087100	
2	Sweep	315DN		PE	087100	
1	Astragal	S772D		PE	087100	

Set: 17.0

Doors: CC.2D

1	Sliding Door Hdwe	PF28200A7284		PE	087100	
1	Dust Proof Strike	570		US10BE	RO	087100
1	Cylinder	100400HT GGMK	24	MC	087100	
1	Locking Pull	LP3301DBD LC		US10BE	RO	087100

Set: 18.0

Doors: CC.2E

1	Hinge (heavy weight)	T4A3386 QC12 4-1/2" x 4-1/2"		US10BE	MK	087100
2	Hinge (heavy weight)	T4A3386 NRP		US10BE	MK	087100
1	Access Control Mort Lock <i>RX DPS</i>	M1-82271-24V-BIPS LNNJ LC		US10BE	SA	087400
1	Door Closer	PR7500	690	NO	087100	
1	Kick Plate	K1050 10" 4BE CSK		US10BE	RO	087100
1	Door Stop	463		US32D	RO	087100
1	Threshold	___B FHSL14 as detailed		PE	087100	
1	Gasketing	S88D		PE	087100	
1	Sweep	315DN		PE	087100	

1 Frame Harness	QC-C1500 (as required)	MK 087100
1 Door Harness	QC-C__P (as required)	MK 087100

Notes: Presenting a valid card to reader unlocks door.
Lock has RX and position switch.

Set: 19.0

Doors: CC.3A, CC.3B, CS.53B

3 Hinge (heavy weight)	T4A3386 NRP	US10BE MK 087100
1 Privacy Lock w/Occupancy Indicator	LC 50 8267 LNNJ	US10BE SA 087100
1 Cylinder	320200BT Z20	24 MC 087100
1 Door Closer	7500	690 NO 087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE RO 087100
1 Wall Stop	409	US10BE RO 087100
1 Threshold	__B FHSL14 as detailed	PE 087100
1 Gasketing	S88D	PE 087100
1 Door Bottom	217DV	PE 087100

Set: 20.0

Doors: CC.4A, CC.5, CC.7, CS.57, L.6B

6 Hinge (heavy weight)	T4A3786	US10BE MK 087100
1 Flush Bolt	2805	US10BE RO 087100
1 Classroom Lock	LC 8237 LNNJ	US10BE SA 087100
1 Cylinder	320200BT Z20	24 MC 087100
2 Concealed OH Stop	1-X36	613E RF 087100
1 Astragal	355DS	PE 087100

Set: 21.0

Doors: A.22, A.23, CS.91, CS.93, G.03A, G.04A, L.12B-B, L.12C, L.6, L.77

1 Hardware	by door mfg.
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Set: 22.0

Doors: CD.23

3 Hinge (heavy weight)	T4A3786	US10BE MK 087100
1 Exit Device (passage)	AL LC 19 8815 ETNJ	US10BE SA 087100
1 Cylinder	320200BT Z20	24 MC 087100

1 Door Closer	7500	690	NO	087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE	RO	087100
1 Wall Stop	409	US10BE	RO	087100
1 Gasketing	S88D		PE	087100

Notes: Panic has Alarm feature.

Set: 23.0

Doors: CS.15A, CS.25A, D.02, D.07A, D.07B, D.08A, D.08B, E.01, L.12, L.12A-A, L.12B-A

3 Hinge (heavy weight)	T4A3786	US10BE	MK	087100
1 Classroom Lock	LC 8237 LNNJ	US10BE	SA	087100
1 Cylinder	320200BT Z20	24	MC	087100
1 Door Closer	7500	690	NO	087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE	RO	087100
1 Wall Stop	409	US10BE	RO	087100
1 Gasketing	S88D		PE	087100

Set: 24.0

Doors: CS.51, CS.54

3 Hinge (heavy weight)	T4A3386 NRP	US10BE	MK	087100
1 Office Lock	LC 8205 LNNJ	US10BE	SA	087100
1 Cylinder	320200BT Z20	24	MC	087100
1 Door Closer	PR7500	690	NO	087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE	RO	087100
1 Door Stop	463	US32D	RO	087100
1 Gasketing	S88D		PE	087100
1 Sweep	315DN		PE	087100

Set: 25.0

Doors: CS.56, CS.71

4 Hinge (heavy weight)	T4A3786	US10BE	MK	087100
1 Classroom Lock	LC 8237 LNNJ	US10BE	SA	087100
1 Cylinder	320200BT Z20	24	MC	087100
1 Door Closer	PR7500	690	NO	087100
1 Kick Plate	K1050 10" 4BE CSK	US10BE	RO	087100
1 Wall Stop	409	US10BE	RO	087100

1 Gasketing S88D PE 087100

Set: 26.0

Doors: CS.23A, CS.23B, CS.8A, CS.8B, D.04, D.04A, D.04B, D.04C, D.05, D.05A, D.05B, D.05C,
L.7A-D, L.7B-D

3 Hinge (heavy weight) T4A3786 US10BE MK 087100
1 Pull Plate 126x70C US10BE RO 087100
1 Push Plate 70C-RKW US10BE RO 087100
1 Door Closer 7500 690 NO 087100
1 Kick Plate K1050 10" 4BE CSK US10BE RO 087100
1 Wall Stop 409 US10BE RO 087100
1 Gasketing S88D PE 087100

Set: 27.0

Doors: F.01, G.08, G.09

1 Hinge (heavy weight) T4A3786 QC12 4-1/2" x 4-1/2" US10BE MK 087100
2 Hinge (heavy weight) T4A3786 US10BE MK 087100
1 Access Control Mort Lock RX DPS M1-82271-24V-BIPS LNNJ LC US10BE SA 087400
1 Cylinder 320200BT Z20 24 MC 087100
1 Concealed OH Stop 1-X36 613E RF 087100
1 Door Closer 7500 690 NO 087100
1 Armor Plate K1050 36" 4BE CSK US10BE RO 087100
1 Gasketing S88D PE 087100
1 Frame Harness QC-C1500 (as required) MK 087100
1 Door Harness QC-C__P (as required) MK 087100

Notes: Presenting a valid card to reader unlocks door.
Lock has RX and position switch.

Set: 29.0

Doors: F.03

3 Hinge TA2714 US10BE MK 087100
1 Privacy Lock w/Occupancy Indicator LC 50 8267 LNNJ US10BE SA 087100
1 Cylinder 320200BT Z20 24 MC 087100
1 Door Closer 7500 690 NO 087100
1 Armor Plate K1050 36" 4BE CSK US10BE RO 087100
1 Wall Stop 409 US10BE RO 087100

1 Gasketing S88D PE 087100

Set: 30.0

Doors: F.04A

3 Hinge TA2714 US10BE MK 087100
1 Storeroom Lock LC 8204 LNNJ US10BE SA 087100
1 Cylinder 320200BT Z20 24 MC 087100
1 Kick Plate K1050 10" 4BE CSK US10BE RO 087100
1 Wall Stop 409 US10BE RO 087100

Set: 31.0

Doors: G.01, G.02, G.05, G.07

1 Hinge (heavy weight) T4A3386 QC12 4-1/2" x 4-1/2" US10BE MK 087100
1 Hinge (heavy weight) **DPS** T4A3386 MM NRP 4-1/2" x 4-1/2" US10BE MK 087100
4 Hinge (heavy weight) T4A3386 NRP US10BE MK 087100
1 Self-Latching Flush Bolt Set 2845 US10BE RO 087100
1 Access Control Mort Lock **RX DPS** M1-82271-24V-BIPS LNNJ LC US10BE SA 087400
1 Cylinder 320200BT Z20 24 MC 087100
1 Coordinator 2600 Black RO 087100
2 Mounting Bracket 2601AB US28 RO 087100
2 Door Closer PR7500 690 NO 087100
2 Armor Plate K1050 36" 4BE CSK US10BE RO 087100
2 Door Stop 463 US32D RO 087100
1 Threshold ___D FHSL14 as detailed PE 087100
1 Gasketing S88D PE 087100
2 Sweep 315DN PE 087100
1 Astragal 357D PE 087100
2 Frame Harness QC-C1500 (as required) MK 087100
2 Door Harness QC-C__P (as required) MK 087100

Notes: Presenting a valid card to reader unlocks door.
Lock has RX and position switch.
Inactive door has position switch.

Set: 32.0

Doors: G.03

1 Hinge (heavy weight) T4A3386 QC12 4-1/2" x 4-1/2" US10BE MK 087100

2 Hinge (heavy weight)	T4A3386 NRP	US10BE MK 087100
1 Access Control Mort Lock RX DPS	M1-82271-24V-BIPS LNNJ LC	US10BE SA 087400
1 Cylinder	320200BT Z20	24 MC 087100
1 Concealed OH Stop	1-X36	613E RF 087100
1 Door Closer	7500	690 NO 087100
1 Armor Plate	K1050 36" 4BE CSK	US10BE RO 087100
1 Threshold	___D FHSL14 as detailed	PE 087100
1 Gasketing	S88D	PE 087100
1 Door Bottom	217DV	PE 087100
1 Frame Harness	QC-C1500 (as required)	MK 087100
1 Door Harness	QC-C__P (as required)	MK 087100

Notes: Presenting a valid card to reader unlocks door.
 Lock has RX and position switch.

Set: 33.0

Doors: G.04, G.06

1 Hinge (heavy weight) DPS	T4A3386 QC12 MM 4-1/2" x 4-1/2"	US10BE MK 087100
2 Hinge (heavy weight)	T4A3386 NRP	US10BE MK 087100
1 Access Control Mort Lock RX DPS	M1-82271-24V-BIPS LNNJ LC	US10BE SA 087400
1 Cylinder	100400HT GGMK	24 MC 087100
1 Door Closer	PR7500	690 NO 087100
1 Armor Plate	K1050 36" 4BE CSK	US10BE RO 087100
1 Door Stop	463	US32D RO 087100
1 Threshold	___D FHSL14 as detailed	PE 087100
1 Gasketing	S88D	PE 087100
1 Sweep	315DN	PE 087100
1 Frame Harness	QC-C1500 (as required)	MK 087100
1 Door Harness	QC-C__P (as required)	MK 087100

Notes: Presenting a valid card to reader unlocks door.
 Lock has RX and position switch.

Set: 34.0

Doors: L.88

8 Hinge (heavy weight)	T4A3786	US10BE MK 087100
4 Door Pull	RM3311-72 Mtg-Type 11XHD	US10BE RO 087100
2 Concealed OH Stop	1-X36	613E RF 087100

1 Door Closer	PR7500	690	NO	087100
1 Single Door Operator	provided by 087113 w/actuators	689	BM	087113
2 Kick Plate	K1050 10" 4BE CSK	US10BE	RO	087100
1 Threshold	___B FHSL14 as detailed		PE	087100
1 Gasketing	S88D		PE	087100
2 Door Bottom	217DV		PE	087100
1 Astragal	S772D		PE	087100

Set: 35.0

Doors: L.1B

1 Floor Closer	PH SC 328N LFP	613E	RF	087100
1 Cylinder	320200BT Z20	24	MC	087100
2 Door Pull	RM3311-72 Mtg-Type 11XHD	US10BE	RO	087100
1 Balance of Hardware	by door mfg.			

Set: 36.0

Doors: CS.55-D

<i>3 Hinge (heavy weight)</i>	<i>T4A3786</i>	<i>US10BE</i>	<i>MK</i>	<i>087100</i>
<i>1 Office Lock</i>	<i>LC 8205 LNNJ</i>	<i>US10BE</i>	<i>SA</i>	<i>087100</i>
<i>1 Cylinder</i>	<i>320200BT Z20</i>	<i>24</i>	<i>MC</i>	<i>087100</i>
<i>1 Door Closer</i>	<i>CPS7500</i>	<i>690</i>	<i>NO</i>	<i>087100</i>
<i>1 Kick Plate</i>	<i>K1050 10" 4BE CSK</i>	<i>US10BE</i>	<i>RO</i>	<i>087100</i>
<i>1 Gasketing</i>	<i>S88D</i>		<i>PE</i>	<i>087100</i>

Set: 37.0

Doors: L.11, L.6E, L.6F, L.6G, L.86, L.9

4 Hinge (heavy weight)	T4A3786	US10BE	MK	087100
1 Classroom Lock	LC 8237 LNNJ	US10BE	SA	087100
1 Cylinder	320200BT Z20	24	MC	087100
1 Door Closer	CPS7500	690	NO	087100
1 Gasketing	S88D		PE	087100

Set: 38.0

Doors: L.20

4 Hinge (heavy weight)	T4A3386 NRP	US10BE	MK	087100
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1 Storeroom Lock	LC 8204 LNNJ	US10BE SA	087100
1 Cylinder	320200BT Z20	24 MC	087100
1 Door Closer	PR7500	690 NO	087100
1 Door Stop	463	US32D RO	087100
1 Threshold	___D FHSL14 as detailed	PE	087100
1 Gasketing	S88D	PE	087100
1 Sweep	315DN	PE	087100

Set: 39.0

Doors: L.22

8 Hinge (heavy weight)	T4A3386 NRP	US10BE MK	087100
1 Self-Latching Flush Bolt Set	2845	US10BE RO	087100
1 Storeroom Lock	LC 8204 LNNJ	US10BE SA	087100
1 Cylinder	320200BT Z20	24 MC	087100
2 Door Closer	PR7500	690 NO	087100
2 Door Stop	463	US32D RO	087100
1 Threshold	___D FHSL14 as detailed	PE	087100
1 Gasketing	S88D	PE	087100
2 Sweep	315DN	PE	087100
1 Astragal	357D	PE	087100

Set: 40.0

Doors: L.80, L.81, L.82, L.85, U.07

4 Hinge	TA2314 NRP	US10BE MK	087100
1 Storeroom Lock	LC 8204 LNNJ	US10BE SA	087100
1 Cylinder	320200BT Z20	24 MC	087100
1 Door Stop	463	US32D RO	087100
1 Threshold	___D FHSL14 as detailed	PE	087100
1 Gasketing	S88D	PE	087100
1 Sweep	315DN	PE	087100

Set: 42.0

Doors: U.02, U.03

1 Hinge (heavy weight)	T4A3386 QC12 4-1/2" x 4-1/2"	US10BE MK	087100
5 Hinge (heavy weight)	T4A3386 NRP	US10BE MK	087100
1 Self-Latching Flush Bolt Set	2845	US10BE RO	087100

1 Access Control Mort Lock RX DPS	MI-82271-24V-BIPS LNNJ LC	US10BE SA 087400
1 Cylinder	320200BT Z20	24 MC 087100
2 Door Closer	PR7500	690 NO 087100
2 Door Stop	463	US32D RO 087100
1 Threshold	___D FHSL14 as detailed	PE 087100
1 Gasketing	S88D	PE 087100
2 Sweep	315DN	PE 087100
1 Astragal	357D	PE 087100
1 Frame Harness	QC-C1500 (as required)	MK 087100
1 Door Harness	QC-C__P (as required)	MK 087100

Notes: Presenting a valid card to reader unlocks door.
 Lock has RX and position switch.

Set: 43.0

Doors: U.05

2 Hinge	TA2314 NRP	US10BE MK 087100
1 Electric Hinge	TA2314-QC12 4-1/2" x 4-1/2"	US10BE MK 087100
1 Access Control Mort Lock RX DPS	MI-82271-24V-BIPS LNNJ LC	US10BE SA 087400
1 Cylinder	320200BT Z20	24 MC 087100
1 Door Stop	463	US32D RO 087100
1 Threshold	___D FHSL14 as detailed	PE 087100
1 Gasketing	S88D	PE 087100
1 Sweep	315DN	PE 087100
1 Frame Harness	QC-C1500 (as required)	MK 087100
1 Door Harness	QC-C__P (as required)	MK 087100

Notes: Presenting a valid card to reader unlocks door.
 Lock has RX and position switch.

Set: 44.0

Doors: U.06

3 Hinge (heavy weight)	T4A3386 NRP	US10BE MK 087100
1 Storeroom Lock	LC 8204 LNNJ	US10BE SA 087100
1 Cylinder	320200BT Z20	24 MC 087100
1 Wall Stop	409	US10BE RO 087100
1 Threshold	___D FHSL14 as detailed	PE 087100
1 Gasketing	S88D	PE 087100

1 Door Bottom 217DV PE 087100

Set: 45.0

Doors: U.08

3 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	US10BE MK 087100
1 Storeroom Lock	LC 8204 LNNJ	US10BE SA 087100
1 Cylinder	320200BT Z20	24 MC 087100
1 Door Closer	PR7500	690 NO 087100
1 Wall Stop	409	US10BE RO 087100
1 Gasketing	S88D	PE 087100

Set: 46.0

Doors: CC.22

5 Hinge (heavy weight)	T4A3786 5" x 4-1/2"	US10BE MK 087100
1 Hinge (heavy weight)	T4A3786 QC12 5" x 4-1/2"	US10BE MK 087100
1 Auto Flush Bolt Set	2962	US10BE RO 087100
1 Access Control Mort Lock RX DPS	M1-82271-24V-BIPS LNNJ LC	US10BE SA 087400
1 Coordinator	2600	Black RO 087100
1 Coordinator	1700	Black RO 087100
2 Door Closer	CPS7500T	690 NO 087100
1 Gasketing	S88D	PE 087100
1 Astragal	355DV	PE 087100
1 Frame Harness	QC-C1500 (as required)	MK 087100
1 Door Harness	QC-C__P (as required)	MK 087100

Notes: Presenting a valid card to reader unlocks door.
 Both doors have RX and position switch.

Set: 47.0

Doors: L.68, L.75

8 Hinge (heavy weight)	T4A3386 NRP 6" x 5"	US10BE MK 087100
2 Multi-Point Lock	LC AD701315 ERNJ	US10BE SA 087100
2 Cylinder	320200BT Z20	24 MC 087100
2 Door Closer	CPS7500T	690 NO 087100
1 Threshold	___D FHSL14 as detailed	PE 087100
1 Gasketing	by door mfg.	

Set: 49.0

Doors: L.66, L.87

8 Hinge (heavy weight)	T4A3386 NRP	US10BE MK	087100
1 Exit Device (exit only)	19 WD8610	US10BE SA	087100
1 Exit Device (nightlatch)	LC 19 WD8610 106 x 864	US10BE SA	087100
1 Cylinder	100400HT GGMK	24 MC	087100
2 Door Pull	RM3311-72 Mtg-Type 12XHD	US10BE RO	087100
2 Concealed OH Stop	1-X36	613E RF	087100
1 Door Closer	PR7500	690 NO	087100
1 Single Door Operator	provided by 087113 w/actuators	689 BM	087113
1 Threshold	___B FHSL14 as detailed	PE	087100
1 Gasketing	S88D	PE	087100
2 Sweep	315DN	PE	087100
1 Astragal	S772D	PE	087100

Notes: Auto door operator and controls provided by and installed by section 087113

Set: 50.0

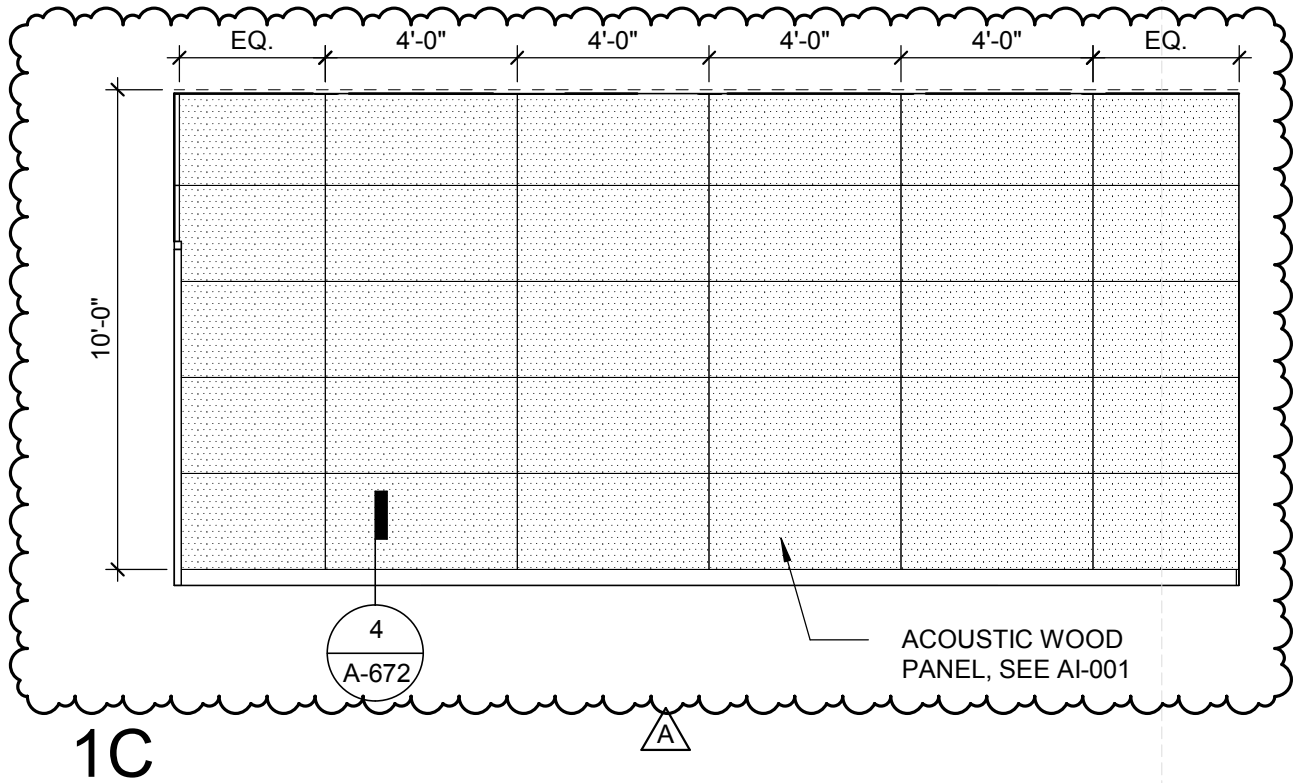
Doors: D.13

6 Hinge	TA2714	US10BE MK	087100
1 Self-Latching Flush Bolt Set	2845	US10BE RO	087100
1 Dust Proof Strike	570	US10BE RO	087100
1 Classroom Lock	LC 8237 LNNJ	US10BE SA	087100
1 Cylinder	320200BT Z20	24 MC	087100
1 Door Closer	7500	690 NO	087100
2 Door Stop	441	US10BE RO	087100
1 Gasketing	S88D	PE	087100
1 Astragal	355DV	PE	087100

END OF SECTION 080671

SKETCHES

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WWW.WRNSSTUDIO.COM

PROJECT: ATHERTON CIVIC CENTER

PROJECT NO: TofA 54015

WRNS 15007.00

TITLE:

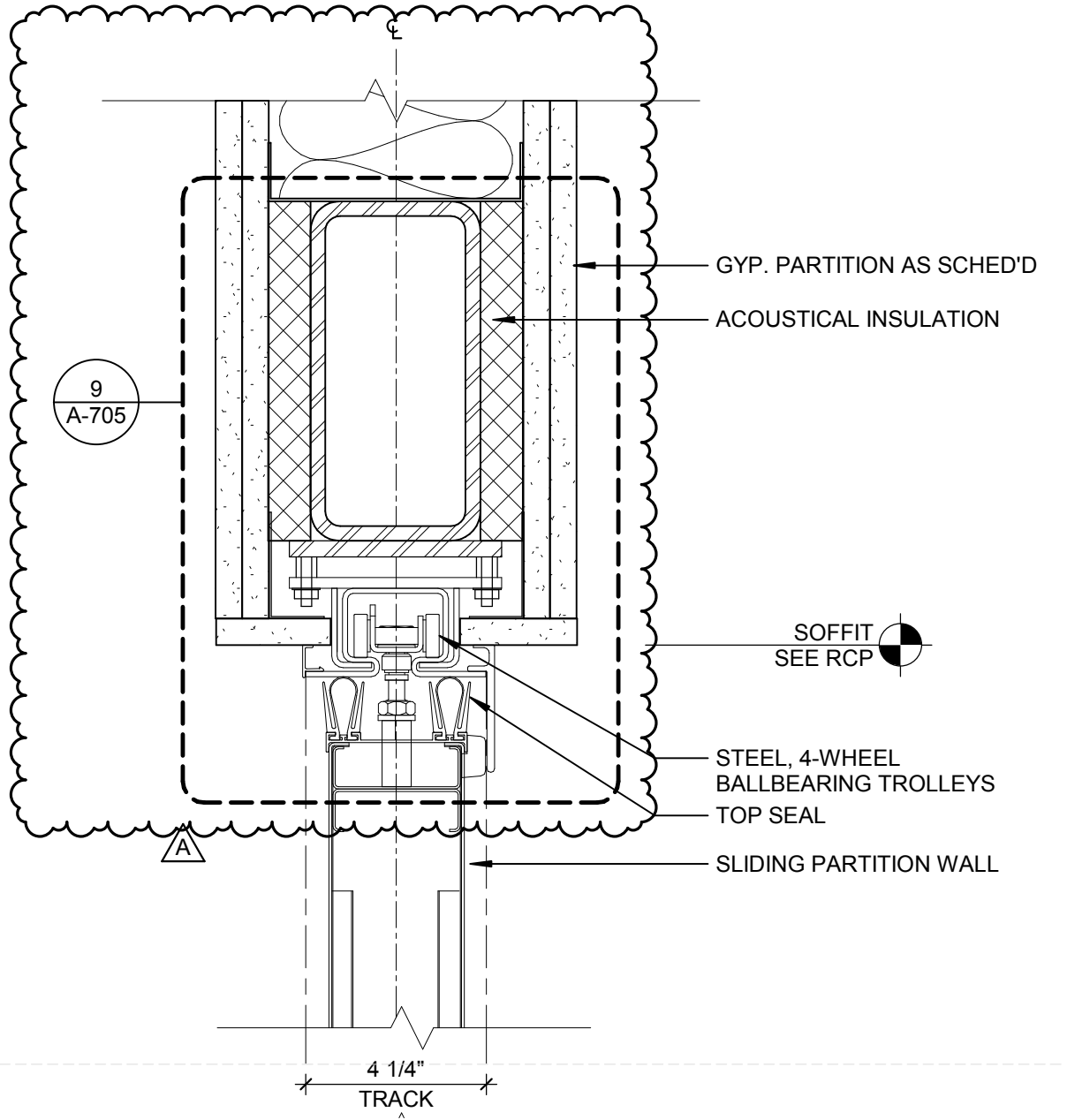
SCALE:

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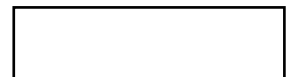
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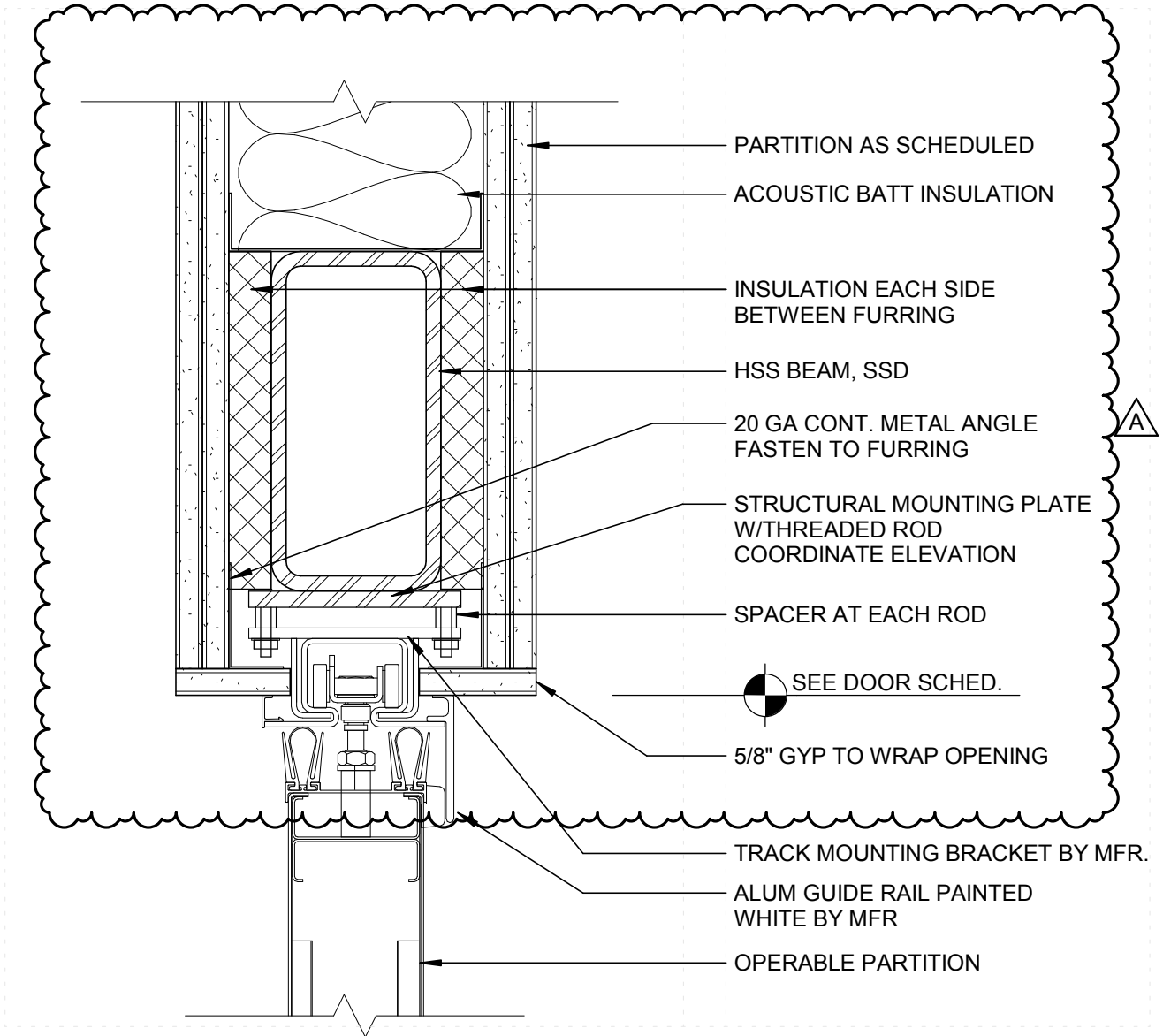
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9

FOLDING PARTITION HEAD

3" = 1'-0"

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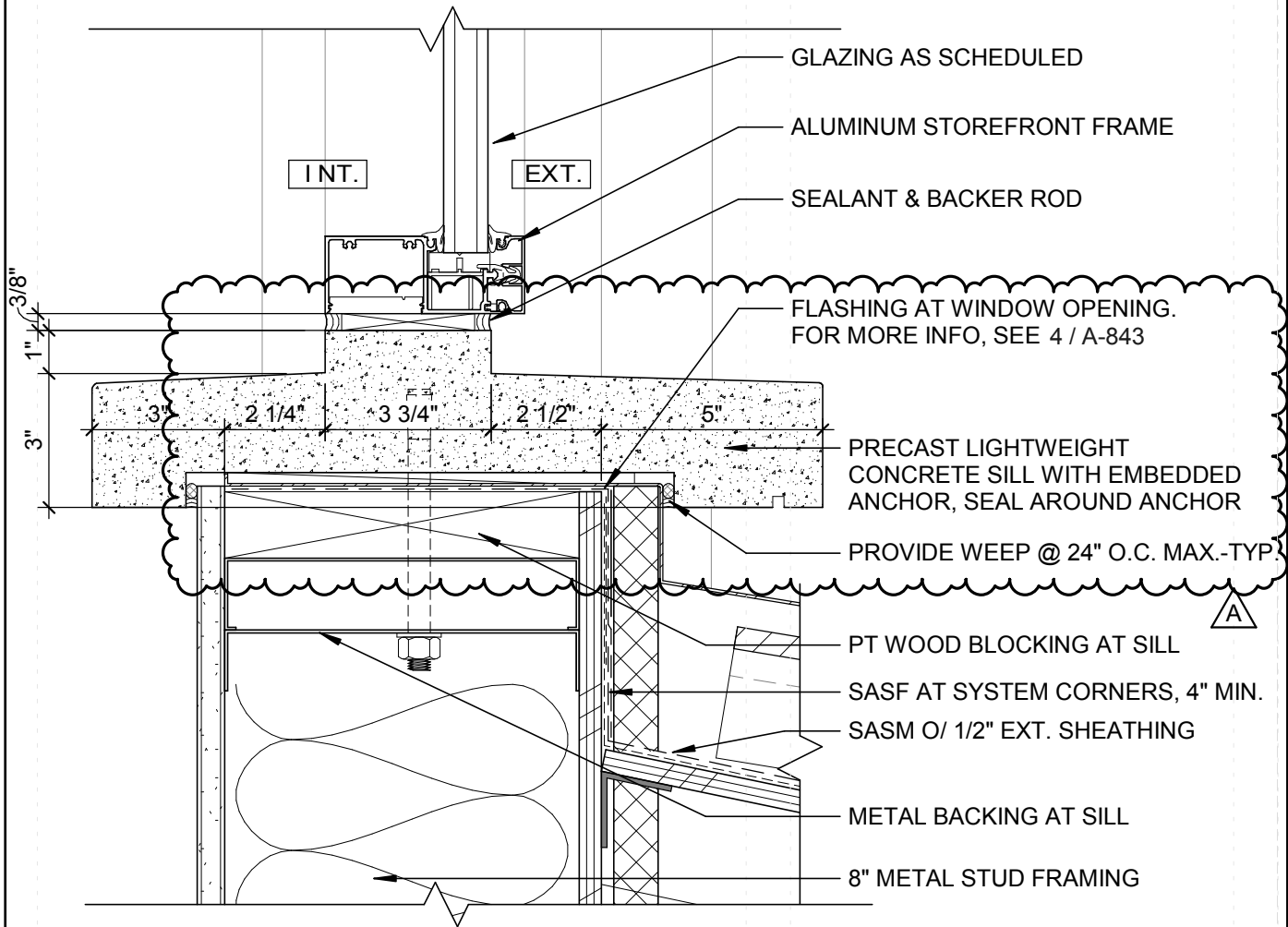
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14 SF WDW ON PRCST SILL
 3" = 1'-0"

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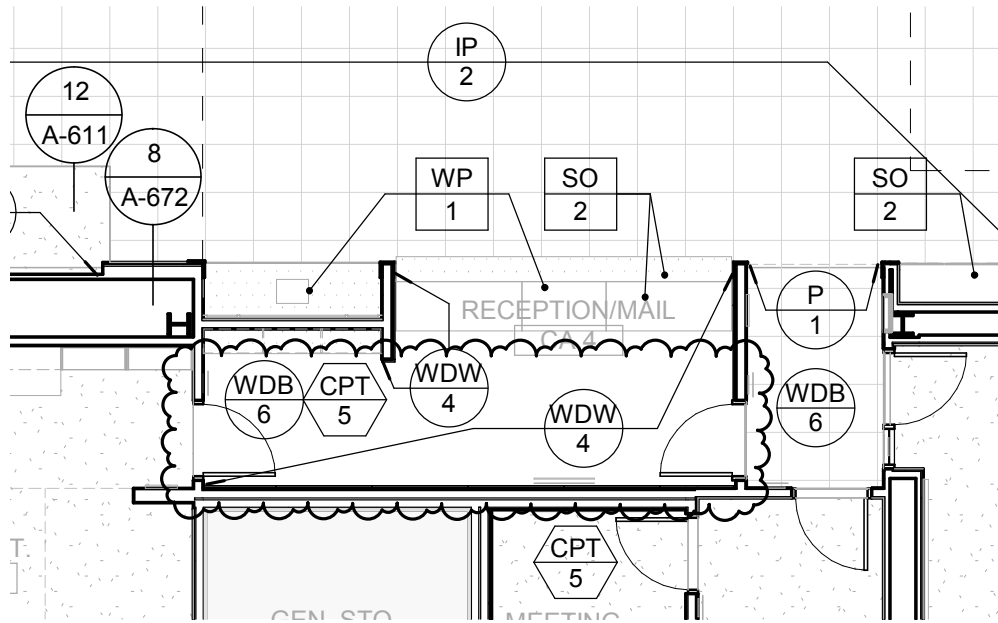
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