THE APPROVED CONSTRUCTION PLANS AND ALL DOCUMENTS MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.



PROJECT MANUAL

Store Number: 2403 310 31st Avenue Southeast Puyallup, Washington 98374

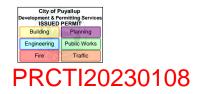
Project Number: 2022.0729

February 1, 2023

For WAL-MART STORES, INC. STORE PLANNING Sam Walton Development Complex 2001 S.E. 10th Street Bentonville, Arkansas 72716-0550

ARCHITECT

pb2 architecture + engineering 2809 Ajax Avenue, Suite 100 Rogers, Arkansas 72758





DOCUMENT 00007 - SEALS PAGE

ARCHITECT OF RECORD

pb2 architecture + engineering William Douglas Hurley 2809 Ajax Avenue, Suite 100 Rogers, Arkansas 72758

Architect of Record

Date





SEALS PAGE

ELECTRICAL ENGINEER OF RECORD

pb2 architecture + engineering Keith Allen Williams 2809 Ajax Avenue, Suite 100 Rogers, Arkansas 72758

Engineer of Record

Date





SECTION 00010 - TABLE OF CONTENTS

INTRODUCTORY INFORMATION

00001Project Title Page00007Seals Page00010Table of Contents

BIDDING REQUIREMENTS

Bidding Requirements (including Invitation to Bids, Instructions to Bidders, and Bid Forms) may be obtained through the online Wal-Mart Bidding System and are not included in the Project Manual.

CONTRACTING REQUIREMENTS

Contracting Requirements (including Construction Contract Between Wal-Mart and Contractor, Bond, and Certificate Forms) are issued by the Owner (Wal-Mart) under separate cover and are not included in the Project Manual.

DIVISION 1 - GENERAL REQUIREMENTS

- 01100 Summary
- 01131 Alterations Project Procedures
- 01230 Alternates
- 01255 Request For Information
- 01310 Construction Management and Coordination
- 01312 Progress Meetings
- 01320 Construction Progress Documentation
- 01330 Submittal Procedures
- 01351 Regulatory Compliance
- 01452 Contractor's Quality Control
- 01500 Temporary Facilities and Controls
- 01550 Tension Pole Dust Barrier Systems
- 01600 Product Requirements
- 01731 Cutting and Patching
- 01740 Cleaning
- 01770 Contract Closeout

DIVISION 2 - SITE CONSTRUCTION

02023 Selective Site Demolition

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

- 07210 Building Insulation
- 07900 Joint Sealers

DIVISION 9 - FINISHES

- 09250 Gypsum Board
- 09511 Acoustical Panel Ceilings
- 09655 Resilient Base and Accessories
- 09900 Paints and Coatings

DIVISION 16 - ELECTRICAL (By M.E.P. Engineer of Record)

The Sections within this Division are the responsibility of the Electrical Engineer.

- 16050 Basic Electrical Materials and Methods
- 16100 Wiring Methods
- 16700 Communications



OWNER FURNISHED REFERENCES

Appendix A Products and Work by Owner or Separate Contractor

END OF TABLE OF CONTENTS



SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Definitions.
- 2. Work covered by Contract Documents.
- 3. Work by Walmart or Separate Contractors.
- 4. Contractor use of site and premises.
- 5. Coordination with occupants.
- 6. Partial occupancy.

1.2 REFERENCES AND STANDARDS

- A. Applicability: The publications listed in the REFERENCES paragraph of an individual section shall apply only to the extent referenced within the text of that section. Unless the Contract Documents include more stringent requirements, applicable construction industry standards form a part of these specification and have the same force and effect as if bound or copied directly into the Contract Documents. Publications are referenced within the text by the basic designation only.
- B. Publication Dates: Standards and publications referenced in the Specifications shall mean the latest edition as of the date of commencement of the Work as stated in Paragraph 3.1.4 of the Construction Contract between Walmart and Contractor unless otherwise specifically dated.
- C. Copies of Standards: Owner or the Architect will not provide copies of references cited within the specifications. Copies may be obtained directly from publication source.

1.3 DEFINITIONS

- A. Furnish: Purchase and deliver to project site, ready for installation.
- B. Install: Unpack, assemble, set in final position, fasten in place, make final connections, clean, adjust, and leave ready for use.
- C. Provide: Furnish and install.
- D. Receive: Accepting a delivery. (Entity responsible for accepting a delivery.)
- E. Final Connections: Complete plumbing, mechanical, and electrical connections as required and recommended by manufacturer for optimum operation of equipment.

1.4 WORK BY WALMART OR SEPARATE CONTRACTORS

- A. Walmart has its own forces who will perform certain Work on the project, items noted 'NIC' (Not In Contract) which will commence as indicated on the Construction Schedule.
- B. Walmart may award separate contracts for work at the Site, which will be executed concurrent with work of this Contract. Consult and cooperate with Separate Contractors to the full extent provided for in the Construction Contract between Walmart and Contractor. Work by separate contractors is specified in Appendix A.
- C. During setup of equipment by the Owner or separate contractors, make crane service available to hoist equipment directly from trucks to final position. Coordinate schedule with the Walmart Construction Manager.



1.5 CONTRACTOR USE OF SITE AND PREMISES

- A. Limit use of site to allow for:
 - 1. Walmart occupancy.
 - 2. Work by separate contractors and by Walmart.
 - 3. Use of site and premises by the public.
- B. Confine operations at site to areas permitted by Law, Ordinances, Permits and to Limits of Contract as shown on Contract Documents. Verify with Walmart Construction Manager acceptable locations where operations may occur so as not to disturb Owner operations or customer traffic.
- C. Do not unreasonably encumber site with materials or equipment.
- D. Do not load structure with weight that will endanger structure. DO NOT STORE ROOFING MATERIALS ON THE EXISTING ROOF.
- E. Assume full responsibility for protection and safekeeping of all products stored on premises whether purchased by Contractor or Owner. Move stored products, which interfere with operations of Owner or customer traffic.
- F. Carefully coordinate sequence of construction activity and operations with Walmart Construction Manager.
- G. Maintain the following conditions at all times during the construction period until possession by Walmart.
 - 1. Maintain building weathertight and secure.
 - 2. Maintain building security and fire alarm systems in operation. (In the event both systems should fail, the Fire Alarm System shall have priority over the Security System.)
 - a. Contract with local alarm company to maintain service, and repair existing systems as required due to work relating to this Contract.
 - b. Alarm Company:
 - 1) Visit site and be familiar with existing conditions.
 - 2) Respond to service calls within 24 hours.
 - c. Provide on-site guard services in the event the existing system is disabled for 8 hours or more.
 - d. Coordinate security alarm with Section 01500 Temporary Facilities and Controls.
 - e. Contact Walmart Alarm Central Control at (479) 273-4600 for additional information and coordination relating to work associated with existing alarm systems.
 - 3. Maintain access and egress from the building.

1.6 COORDINATION WITH OCCUPANTS

- A. Owner will occupy premises during entire period of construction for the conduct of Owner's normal, daily operations. Cooperate with Walmart Construction Manager in construction operations to minimize delays, inconvenience, or conflict to Owner's daily business operations and customer traffic. The Contractor shall obtain permission from the Owner for interruptions of utility services to the building. Accidental interruptions shall be restored immediately.
 - 1. Any Contractor work operations that may disrupt or interfere with Wal-Mart or building operation or function shall be reviewed and approved by Walmart Construction Manager.
 - 2. Submit written request for approval to Walmart Construction Manager 14 calendar days in advance of date Contractor work operations are required to begin.

1.7 PARTIAL OCCUPANCY

2.

PRCTI20230108

ing Public Works 2403 Radyat up, WA 2022.0729

City of Puyallup ment & Permitting Servi ISSUED PERMIT

Building

- A. Walmart will occupy any completed or partially completed portions of the Work.
- B. Cooperate with Walmart to minimize conflict, and schedule the Work to facilitate Walmart operations.
- C. Prior to Walmart occupancy in areas of new work, the following provisions shall be in place:
 - 1. Illuminated exit signs are operational.
 - Exit doors, including required panic hardware, are operational.

- 3. Lighted, enclosed walkways and other temporary safety measures are in place if required by authorities having jurisdiction.
- 4. Fire sprinkler system is operational.
- 5. Doors required for Walmart security purposes are operational.
- D. After Walmart occupancy:
 - 1. Keep exit routes and exit doors free from obstructions.
 - 2. Maintain exit signs and fire sprinkler system in operational condition.
 - 3. Provide security for Walmart products, equipment, and operations.
 - 4. Do not permit smoking in the building.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used





UniSpec II - Store Planning

SECTION 01131 - ALTERATIONS PROJECT PROCEDURES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Summary: The procedures and administrative requirements of this Section apply to all of the following Sections of the Specification, which are involved in alterations to the existing building.

1.2 RELATED REQUIREMENTS

- A. Section 01351 Regulatory Compliance.
- B. Section 01500 Temporary Facilities and Controls
- C. Section 01731 Cutting and Patching
- D. Section 02023 Selective Site Demolition
- E. Section 02251 Shoring

1.3 SCHEDULING, ACCESS AND SECURITY

A. Work Sequence:

- 1. The existing premises will be occupied during the construction process. Coordinate sequence of work with Wal-Mart Construction Manager and Store Manager on site in order that Wal-Mart's operations may continue.
- 2. The Wal-Mart Construction Manager will require a job start meeting prior to any Work activity.
- 3. The Construction Schedule is limited to a time frame established by Wal-Mart. Contact Wal-Mart Construction Manager immediately if, at any time, construction schedule is not being met or if delays are foreseen.
- 4. The Contractor shall develop a schedule of Work, which will be reviewed and approved by the Wal-Mart Construction Manager, describing the starting and completion dates of the different phases of this Project. Wal-Mart reserves the right to revise this schedule to best meet the needs for the Store's operations. Revisions to the Construction Schedule shall be made by the Contractor at no additional cost to Wal-Mart. As the construction progresses, the Contractor shall give an update of the construction schedule to the Store Manager and Wal-Mart Construction Manager on a weekly basis.
- B. Security is specified in Section 01500.
- C. Maintenance of Access and Operations:
 - 1. During period of construction, Wal-Mart will continue to perform normal activities in existing building. Maintain proper and safe Customer and Associates access to operational areas at all times.
 - 2. Schedule demolition and remodeling operations with Wal-Mart Construction Manager and/or Store Manager in such a manner as to allow Wal-Mart operations to continue with approved interruptions.
 - 3. During period of construction, do not obstruct in any manner existing exitways unless additional exitways are provided. Prior to removal of existing exitways (stairs, corridors, doors) as part of new Work, provide and maintain new exitways so as to maintain same number of exitways. Maintain existing fire doors in a operable condition. Obtain approval from Authorities Having Jurisdiction (AHJ) for all temporary modifications to the existing system.
- D. Maintenance of Existing Services
 - 1. Maintain environmental control in existing building, especially temperature, humidity and dust control.
 - Provide temporary power, services and connections as required to maintain existing mechanical and electrical services in building.



2.

- 3. Notify Wal-Mart Store Manager and Construction Manager a minimum of three (3) days prior to each required interruption of mechanical or electrical services in building. Such interruptions shall be only at such times and for lengths of time as approved by the Wal-Mart Construction Manager and/or Store Manager. In no event shall interruption occur without prior approval of the Wal-Mart Construction Manager and/or Store Manager.
- E. Building Access/Construction Personnel Control.
 - 1. Access to construction areas within building shall be as directed by Wal-Mart Construction Manager.
 - 2. Restrict construction traffic to areas specifically designated by Wal-Mart Construction Manager.
 - 3. Refer to Section 01351 for Contractor Badge System and access control requirements.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used



UniSpec II - Store Planning

SECTION 01230 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:1. Alternate submission requirements of work included in Alternates.
- B. Related Sections:
 - 1. Construction Contract Between Wal-Mart and Contractor: Acceptance of Alternates in award of a Contract.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated and defined on the Bid Form for certain work that may be added to or deducted from the base bid amount if Wal-Mart decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates will be a part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- B. Execute accepted alternates under the same conditions as other work of the Contract.
- 1.4 SUBMISSION REQUIREMENTS
 - A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at the Owner's option. Accepted alternates will be identified in the Construction Contract between Wal-Mart and Contractor.
- 1.5 SCHEDULE OF ALTERNATES AND DESCRIPTION OF WORK INCLUDED IN ALTERNATES.
 - A. Schedule of Alternates, when applicable, and descriptions thereof are shown on the Bid Form.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.





UniSpec II - Store Planning

SECTION 01255 - REQUEST FOR INFORMATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:1. Requests for Information (RFI) procedures.

1.2 DEFINITION

- A. Requests for Information: A formal online process used during the construction phase to facilitate communication between the Contractor, the Wal-Mart Construction Manager, and the Professional of Record with regard to requests for additional information and clarification of the intent of the Contract Documents (Drawings and Specifications).
- B. Professional of Record: The Architect of Record (AOR) or the Civil Engineering Consultant (CEC).
- C. Architect of Record (AOR): The prime consultant in charge of overall design and coordination of the project. The AOR will be the administrator for all construction RFIs classified as "BLDG".

1.3 REQUEST FOR INFORMATION SUBMITTAL

- A. Submit requests for information for conditions requiring clarification of the Contract Documents on Wal-Mart Construction RFI website as designated by Wal-Mart. (<u>www.bldgportal.com</u>, enter username and password, select Construction RFI). Professional of Record will not respond to requests for information unless this format is utilized and all appropriate information is provided. Faxed or e-mailed RFIs will not be reviewed.
- B. Do not use Request for Information process during bidding phase. For questions during bidding phase, refer to Invitation to Bid issued by Wal-Mart Contract Administrator.
- C. Submit in accordance with procedure as follows: (See Process Flow Chart at the end of this Section)
 - 1. Subcontractors, manufacturers, and suppliers shall submit request for additional information and clarification to Contractor.
 - 2. Contractor shall contact Wal-Mart Construction Manager with requests for additional information or clarification. Wal-Mart Construction Manager will not accept requests for information or clarification submitted directly from subcontractors, manufacturers, or suppliers.
 - 3. Wal-Mart Construction Manager will provide response to Contractor or will direct Contractor to submit a formal Request for Information.
 - a. Submit a formal RFI only if authorized by the Wal-Mart Construction Manager. Submittal to Construction RFI website signifies authorization has been given.
 - b. Generate Requests for Information by one source per project.
 - c. Submit one request for information per website entry.
 - 4. Professional of Record will review formal requests from Contractor and provide response within 2 working days.
 - 5. Professional of Record's response shall not be considered as a Change Order or Change Directive, nor does it authorize changes in the Contract Sum or Contract Time.
- D. Scheduling, Costing, and Owner Provided Equipment Coordination: Direct to the Owner's Construction Manager.

1.4 PENALTY FOR FAILURE TO FOLLOW PROCEDURE

A. A \$250 administrative cost will be assessed to the Contractor for each Request for Information submitted which does not follow the procedure specified above.



1.5 REIMBURSEMENT FOR ARCHITECTURAL AND ENGINEERING FEES

A. The Contractor shall be charged administrative costs and professional fees incurred by Wal-Mart for additional Architectural and Engineering services associated with the correction of completed Work which is not in accordance with the Contract Documents. Refer to Paragraph 8.7 of the Construction Contract between Wal-Mart and Contractor for provisions relating to correction of Work.

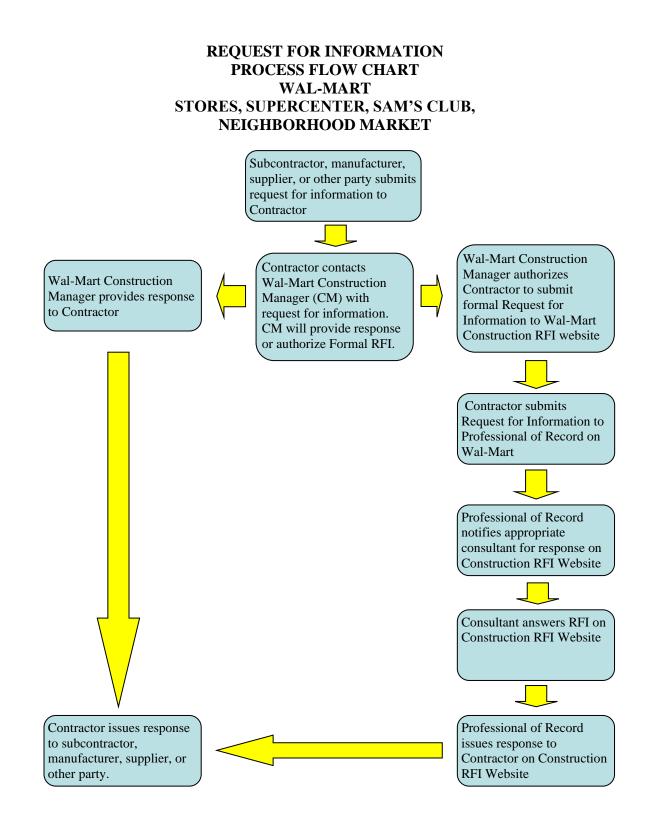
PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.









SECTION 01310 - CONSTRUCTION MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

1.

A. Section Includes:

- Project Management and Coordination:
 - a. Definitions
- b. Construction Manager
- c. Project Coordination
- B. Related Requirements: Construction Contract between Walmart and Contractor: Owner's Construction Manager's rights and scope of authority.

1.2 DEFINITIONS

- A. Separate Contractor: A contractor (subcontractor, specialty contractor or vendor) hired separately by Walmart and outside of General Contractor's Construction Contract.
- B. Walmart Construction Manager: The Walmart (Owner's) representative in all matters relating to the Work of the Project. The person responsible for all approvals with the General Contractor. This person also coordinates with the Separate Contractors.

1.3 WALMART CONSTRUCTION MANAGER

- A. Walmart will assign this project to a Walmart Construction Manager.
- B. Cooperate with the Walmart Construction Manager in all matters relating to the Work on this project.
- C. During construction, coordinate use of site and facilities through the Walmart Construction Manager.
- D. Comply with Walmart Construction Manager's procedures for project communications, reports and records, and coordination with drawings, and comply with recommendations and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Walmart Construction Manager for use of temporary utilities and construction facilities.
- F. Coordinate use of site during Walmart fixture setup work under instructions of the Walmart Construction Manager.

1.4 RESPONSIBILITIES OF GENERAL CONTRACTOR AND SEPARATE CONTRACTORS

- A. The General Contractor shall provide necessary forces and subcontractors to complete the Work of the Project as described in the Contract Document (Drawings, Specifications, Addenda, and other modifications to the Contract). He is responsible for the supervision, quality control and costs for his employees and subcontractors.
- B. The General Contractor and Separate Contractors will provide a Construction Schedule to the Walmart Construction Manager for review and approval. The Contractors shall immediately contact the Walmart Construction Manager if the Work does not progress as scheduled. It is imperative that the Contractors keep close communication with the Walmart Construction Manager regarding the progress of the Project.
- C. At the commencement of construction, the Walmart Construction Manager, Walmart Store Manager, General Contractor, Separate Contractors and the Store Planning Field Project Manager will review the Construction Schedule. The Construction Schedule is set up on a weekly basis and must be followed unless deviations are authorized by the Walmart Construction Manager. (Refer to Section 01500 for posting of schedule.)



- D. The General Contractor and Separate Contractors shall communicate at all times with the Store Manager, other Subcontractors and the Store Planning Field Project Manager to facilitate the construction and ensure it is completed within the approved time schedule.
- E. Upon completion of a portion of the Work (Item, Trade, etc.), that portion of the Work must be 100% complete prior to proceeding to the next phase or portion of Work.
- F. The General Contractor shall be responsible for the coordination of the Remodel work of all Separate Contractors with the Walmart Construction Manager and the Walmart Store Manager.
- G. The Construction Manager will determine what work shall be done during normal operating hours (store hours) and during "closing" hours.
- H. The General Contractor will coordinate with the Store Planning Field Project Manager the delivery of Walmartfurnished items.
- I. The General Contractor shall also be responsible for coordinating the location of storage trailers/containers for Contractor-supplied materials and equipment. (Refer to Section 01500). The General Contractor shall be responsible for permits required for temporary storage facilities (trailers/containers).
- J. Walmart will not be responsible for the loss of any tools or equipment. Walmart will also not be responsible for the cost of any rental tools. This is each Contractor's responsibility and should be included in his price proposal.
- K. Contractors shall not open any type of charge account within the Store and store markdowns will not be allowed. All items purchased in the Store shall be paid for at the time of purchase. Contractors should not receive any discounts for any items purchased within the Store. The use of Walmart 's name will not be allowed on any accounts.
- L. Contractors shall comply with Walmart policy regarding gratuities. No Contractor may receive any gratuities from any company providing services or materials for any Walmart Projects. Contractors are not entitled to receive any employee benefits from Walmart.
- M. The General Contractor shall be responsible for timely removal of the construction trailer as directed by the Walmart Construction Manager.
- N. Walmart may provide Store Associates as required to assist the General Contractor and Separate Contractors in the remodeling. The Walmart Store Planning Field Project Manager will determine the number of Store Associates that will be provided on a job basis. Walmart Store Associates shall not be allowed to operate power equipment, be used as carpenters, or perform work from scaffolds, ladders or hoists.
- O. The General Contractor and Separate Contractors are responsible for obtaining a final inspection from the appropriate Building Official or Authority Having Jurisdiction (AHJ). If a Certificate of Occupancy is required, obtain it from the proper authorities. A copy of all final inspection documentation or Certificates of Occupancy shall be included in the final Closeout Documents (Maintenance Book/Closeout Book).

1.5 PROJECT COORDINATION

- A. Coordinate scheduling, submittals, and work of the various Sections of specifications to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed at a later date and under separate contracts.
- B. Obtain necessary drawings, manufacturer's product data, and other necessary data to provide a complete and proper installation.
 - 1. Check field dimensions prior to installing equipment and furnishings. Verify necessary clearances and means of access from equipment storage to final position.
 - 2. Make shop drawings and manufacturer's rough-in requirements available to trades involved.



01310 - 2

- C. Verify that utility requirements of operating equipment are compatible with building utilities. Coordinate work of various specification Sections for installation and final connection of equipment.
 - 1. Verify that mechanical, plumbing, and electrical rough-ins have been properly located.
- D. Coordinate space requirements and installation of mechanical and electrical Work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduits as closely as practicable. Make runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas, conceal pipes, ducts, and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean up of work of separate Sections in preparation for Substantial Completion and for portions of Work designated for Owners partial occupancy after possession.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.





SECTION 01312 - PROGRESS MEETINGS

PART 1 - GENERAL

1.1 PRE-CONSTRUCTION MEETING

- A. A pre-construction meeting will be held at the project site prior to beginning work at a time designated by the Owner.
- B. The Wal-Mart Construction Manager, Contractor's Project Manager, Contractor's Superintendent, and major subcontractors shall be present.
- C. The following shall serve as a minimum agenda:
 - 1. Construction schedule.
 - 2. Critical work sequencing.
 - 3. Designation of responsible personnel.
 - 4. Processing of field decisions and changes to the Work.
 - 5. Walk-through inspection and field determination of scope of work and verification of Construction Documents.

1.2 PROGRESS MEETINGS

- A. Scheduled progress meetings at the job site are required.
- B. The Wal-Mart Construction Manager, Contractor's Superintendent and major subcontractors (as appropriate to the agenda) shall be present.
- C. The purpose of these progress meetings is to review the schedule of the Project for the next 2 weeks. The following shall serve as a minimum agenda:
 - 1. Field observations, problems and conflicts.
 - 2. Problems that may impede construction schedule.
 - 3. Review of delivery schedules.
 - 4. Coordination of schedules of different trades and delivery of Owner-furnished products and materials. Coordination with Wal-Mart separate contractors and their scope of work.
 - 5. Walk-through inspection and determination of additional scope of work and repairs to the Project.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.





PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:1. Progress Schedules and Reports
- B. Related Requirements:
 - 1. Construction Contract Between Walmart and Contractor. Requirements for construction schedules and reports. Ref Articles 1.1.15 and 3.8.

1.2 CONSTRUCTION SCHEDULE

- A. Using the Milestone Completion Dates identified in Exhibit 1.1.16 of the Construction Contract; the Contractor shall develop the detailed CPM Construction Schedule with activity time duration in calendar days further describing his method for performing the Work. The Contractor shall review the Contractor's schedule with the Owner's Construction Manager within 3 weeks from award of Contract, or at the Pre-Construction Meeting, whichever is first. Failure of the Contractor to have a construction schedule approved by the Owner's Construction Manager will be considered cause to withhold progress payments.
 - 1. The Milestone Completion Dates identified in Exhibit 1.1.16 of the Construction Contract shall not be construed as an indication by the Owner as to means, methods, or techniques of construction to be employed by the Contractor.
 - 2. Critical path activities shall be indicated on the Contractor's detailed construction schedule.

1.3 CONSTRUCTION PROGRESS CHART

- A. Progress of the Project will be monitored using charts produced from the CPM Schedule. Requirements herein provide for planning and execution of the Work and are to assist the Wal-Mart Construction Manager in evaluating progress of the Work economically and chronologically.
- B. The Contractor shall be familiar, in detail, with the Milestone Completion Dates identified in Exhibit 1.1.16 of the Construction Contract. By submitting his bid, the Contractor acknowledges that the Construction milestones are feasible, reasonable, and are a workable schedule for the Work.
- C. Delivery conditions and lead times for Wal-Mart Furnished Items are specified in the Delivery Schedules in Section 01600. Coordinate delivery of these items with progress of the Work.
- D. Prior to construction, the Contractor may request reasonable changes to the Construction Progress Schedule Chart, provided delivery dates specified in Section 01600 and the contract completion date are not changed. The Wal-Mart Construction Manager will review requested changes. Upon approval by Wal-Mart, Progress Schedule Chart shall become the "Approved Construction Progress Chart" by which the Contractor shall plan, organize, direct, coordinate, and execute the Work, and the basis of evaluating progress of the Work.
- E. If, in the opinion of the Wal-Mart Construction Manager, any of the dates specified in Section 01600 are not completed by the Contractor on or before the stated time period and after 48 hours written notice to the Contractor, Wal-Mart may proceed to carry out the work in accordance with Article 2.4 of the Construction Contract.
- F. The Contractor shall perform work directed by the Wal-Mart Construction Manager to meet the Wal-Mart contract completion date and shall maintain the original management and supervision team to continue their office and job site duties on a full-time basis through final completion and/or any other time the Contractor has any work being performed on the project regardless of the date or condition of project completion.



1.4 SCHEDULE UPDATES

- A. The Contractor shall provide to the Wal-Mart Construction Manager regular updated reports on the Construction Schedule as determined by the Wal-Mart Construction Manager. The Contractor shall maintain a current weekly updated detailed construction schedule in the site construction field office.
 - 1. Construction Schedule Updating: Progress information to be included in schedule updates includes actual start and finish dates, percentage complete, remaining duration or projected finish dates for all activities in progress during reporting period. Schedule updates may also include approved added activity descriptions.

1.5 RECOVERY PLAN

- A. Should the updated approved Construction Schedule show the Contractor to be behind schedule, the Contractor shall immediately devise a plan for recovery of lost time within one week and submit it to the Wal-Mart Construction Manager for approval. Once approved by the Wal-Mart Construction Manager, the Contractor shall immediately put the recovery plan into action.
- B. During the period covered by the recovery plan, the Contractor's progress will continue to be monitored against the Approved Construction Progress Chart. If the Contractor does not recover from delay as detailed in the recovery plan, Wal-Mart may exercise the option to carry out the work as specified above.
- C. The Contractor shall bear all costs and expenses related to recovery from the Contractor's delays, including costs, expenses, and lost sales incurred by Wal-Mart.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.



SECTION 01330 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Submittal procedures prior to and during construction.
- B. Related Sections:
 - 1. Section 01600 Product Requirements: Requirements for product selection and product options.
 - 2. Section 01770 Contract Closeout: Closeout submittals.

1.2 PROCESS AND RESPONSIBILITIES

- A. Contractor Responsibilities:
 - 1. Submit required submittals to Architect unless otherwise specified.
 - 2. Submit required submittals in hard copy or electronically by email. Electronic documents shall be in PDF format. Hard copy documents submitted to the Contractor by suppliers and subcontractors shall be scanned by the Contractor to PDF prior to electronic submittal.
 - 3. Comply with submittal requirements defined within individual Sections. Submittals procedures described herein shall apply unless otherwise stated in individual Sections.
 - 4. Package each submittal appropriately for transmittal and handling.
 - 5. Identify Project, Contractor, subcontractor or supplier, pertinent Drawing sheet and detail numbers, and Specification Section number, as applicable.
 - 6. Assemble, coordinate, and review submittals of subcontractors, suppliers, and manufacturers.
 - 7. Review submittal for verification of products required, field dimensions, adjacent construction, and coordination of information.
 - 8. Apply Contractor's Submittal Review stamp, signed or initialed and dated, certifying compliance with Contract Documents.
 - 9. Identify email transmittal of submittals in the subject line as follows:
 - a. Walmart Store #, City, State, Project type RM, OGP, etc.), submittal name (e.g. concrete mix design, sieve analysis, etc., including Section number).
 - 10. Forward executed copy of Submittal Review Form to supplier within 5 days after receipt of submittal with copies to Architect and Wal-Mart's Construction Manager.
 - 11. Schedule submittals to expedite the Work. Coordinate submission of related items into single submittal, unless otherwise specified.
 - 12. Submit submittals items required within an individual Specification Section into a single submittal.
 - 13. Identify variations from Contract Documents and limitations of product and system which may be detrimental to successful performance of the completed Work.
 - 14. Provide space on submittal for Contractor, Architect, and Architect's Consultant review stamps.
 - 15. Allow 10 working days for review.
 - 16. Revise and resubmit submittals when required. Identify changes made since previous submittal.
 - 17. Notify Vendor or Subcontractor of approval by Authority Having Jurisdiction of Deferred Submittal package.
 - 18. Distribute copies of reviewed submittals to concerned parties and to Record Documents file. Instruct parties to promptly report inability to comply with provisions.
- B. Supplier Responsibilities Wal-Mart (Owner) Furnished Products:
 - 1. Subcontractors, vendors, and suppliers (including suppliers of Wal-Mart (Owner) furnished products) shall forward copies of submittals to the Contractor.
 - 2. Prepare submittals in accordance with requirements in individual Specification Sections and Contractor responsibilities specified herein.



- C. Architect Responsibilities: Review submittals and take appropriate action as follows.
 - 1. Shop Drawings and Product Data: Architect will mark submittals to indicate appropriate action.
 - 2. Return Architect reviewed Submittals to Contractor by email or mail carrier service providing delivery tracking.
 - 3. Submittals for Information: Architect will not return submittals sent for information only.
 - 4. Forward submittals to proper sub-consultant for review as necessary.
- D. Unrequested Submittals: Submittals transmitted to Architect or Architect's Consultants that are not indicated or requested will not be reviewed. Architect will dispose of unrequested submittal items.

1.3 TRANSMITTAL

- A. Transmit each submittal using a transmittal form. Submit to Architect.
 - Transmit submittals to be reviewed by Architect to: Architect of Record pb2 architecture + engineering 2809 Ajax Avenue, Suite 100 Rogers, Arkansas 72758 <u>submittals@pb2ae.com</u>
- B. In addition to recipients stated above, transmit submittals to those parties as may be required in the individual specification section.

1.4 SUBMITTAL REQUIREMENTS

- A. Shop Drawings
 - 1. Submit Drawings with graphic information at accurate scale. Show dimensions and note which dimensions are based on field measurement. Identify materials and products in Work shown. Indicate compliance with specified standards and special coordination requirements. Do not use reproductions of Contract Drawings as Shop Drawings.
 - 2. Include on each Shop Drawing the drawing title, number, original issue date, and revision numbers and dates, in addition to other required identifying information.
 - 3. Identify details by reference to sheet, detail, schedule, or room names shown on the Contract Drawings.
 - 4. Identify numerical values in English units.
 - 5. Size: Not less than 8-1/2 by 11 inches nor more than 30 by 42 inches.
 - a. For Shop Drawings submitted on sheets larger than 8-1/2 x 11 inches, submit reproducible transparency and blueline or blackline reproduction.
 - b. For Shop Drawings submitted on sheets 8-1/2 x 11 inches, conform to requirements for Product Data and submit as a bound volume for submittal required.
 - 6. Number of Copies Required: Submit one reproducible transparency and one blueline or blackline reproduction. Submit additional copies to AHJ for approval if required. Comply with requirements of AHJ with regard to signing and sealing of submittals by Registered Professional licensed in the State in which project is located.
 - a. One copy will be returned to the Contractor.
- B. Product Data
 - 1. Manufacturer's standard schematic drawings and diagrams:
 - a. Clearly mark to identify pertinent products.
 - b. Show performance characteristics and capacities.
 - c. Show dimensions and clearances required.
 - d. Show wiring or piping diagrams and controls.
 - e. Modify drawings and diagrams to delete information not applicable to this work.
 - f. Supplement standard drawings and diagrams to provide complete information applicable to this work.



- 2. Mark each copy to identify applicable products, models, options, and other data. Supplement Product Data with material prepared for the Work to satisfy submittal requirements for which Product Data does not exist. Note that the material is developed specifically for this Contract.
- 3. Submit Product Data for each Section in one complete submittal. Include table of contents listing page and catalog item numbers for Product Data.
- 4. Indicate, by prominent contrasting color notation on each product being submitted, the Specifications Section and paragraph numbers to which it pertains.
- 5. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate information applicable to Work and clearly cross out other information not applicable to Work. Include the following information:
 - a. Manufacturer's printed recommendations or instructions.
 - b. Compliance with referenced standards.
 - c. Application of testing agency labels and seals.
 - d. Notation of dimensions verified by field measurement.
 - e. Notation of coordination requirements.
- 6. Product Data For Information: Written information not requiring action by Wal-Mart Construction Manager or Architect; for verification of compliance with requirement. Submittal not complying with requirements will be rejected.
- 7. Number of Copies Required: Four.
- C. Engineering Calculations
 - 1. Submit calculations signed and sealed by a Registered Professional Engineer licensed in the State where project is located. Comply with requirements of Authority Having Jurisdiction with regard to signing and sealing of submittals.
- D. Certifications
 - 1. Certify manufacturer or installer's qualifications, compliance with tests or specified criteria, or other factors as required in individual Specification Sections.
 - 2. Submit supporting reference data, affidavits, and certifications as required.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used





UniSpec

SECTION 01351 – REGULATORY COMPLIANCE

PART 1 - GENERAL

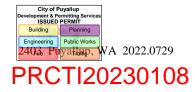
1.1 SUMMARY

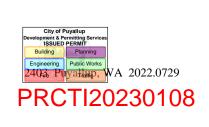
A. Section Includes:

- 1. Contractor's regulatory compliance requirements and responsibilities.
- 2. Owner's compliance performance standards and expectations.
- B. Related Requirements and Sections:
 - 1. Construction Contract Between Owner and Contractor (Contract) Exhibit 3.6.
 - 2. Owner's Compliance Performance Standards for Construction (CPS) as specified in the contract addendum.
 - 3. Section 01500 Temporary Facilities and Controls.
 - 4. Section 01550 Tension Pole Dust Barrier Systems.
 - 5. Section 01740 Cleaning and Trash Disposal.
 - 6. Section 02023 Selective Site Demolition.
 - 7. Section 02370 Erosion and Sedimentation Control (Including SWPPP).
 - 8. Section 13300 Vertical Barrier Net System.

1.2 PROCESSES, PROCEDURES AND RESPONSIBILITIES

- A. Comply with all compliance obligations, federal, state, and local laws described in the Contract Documents including: Contract, Specifications, Drawings, and applicable Owner's Compliance Performance Standards (CPS).
- B. Do not use Owner's CPS in place of or as a substitute for developing and implementing the Contractor's own compliance programs.
- C. Create and maintain a hard-copy site-specific "Compliance Binder," including all associated documents in accordance with the requirements in the Owner's CPS manual.
- D. Do not create conditions that would cause harm to Owner's associates or members or prevent Owner's compliance with applicable laws.
- E. Follow and uphold the applicable Owner's compliance standards including responsibilities, processes and procedures, compliance acknowledgements, training, documentation, forms, tracking and reporting.
- F. Comply with all requirements set within the Contract Documents, including but not limited to: references and definitions, document management, safety requirements and safety plans, hazard safeguards, dust walls and barricades, hazardous materials and safety data sheets, respirable crystalline silica, hot work, fire watch, electrical work and supervision, lockout tagout, fuel storage, crane operations, confined spaces, edge protection netting, emergency exits, toxic and hazardous substances, asbestos, mold, site security and protection, labor work verification programs, badging and access control, waste management and disposal, hazardous waste management, waste container access restrictions, spills, construction stormwater permitting, sanitary waste water and sewage management.





UniSpec II-Store Planning

SECTION 01452 - CONTRACTOR'S QUALITY CONTROL

PART 1 GENERAL

A.

1.1 SUMMARY

- Section Includes: 1. Administrative and procedural requirements for Contractor quality assurance and quality control.
- B. Related Requirements:
 - 1. Construction Contract between Wal-Mart and Contractor: Inspections, testing, and approvals required by public authorities.
 - 2. Section 01770 Contract Closeout: Project Record Documents.
 - 3. Appendix B Testing, Inspection, and Observation by Owner (if specified).
- C. Contractor testing and inspection are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Contractor testing and inspection includes testing or inspection to be performed by and under the responsibility of the General Contractor as well as that required by the manufacturer, manufacturer's representative, product supplier, or other party under the responsibility of the Contractor.
 - 2. Requirements in this section are independent of testing and inspection specified for the Owner's Construction Testing Laboratory (CTL) specified in Appendix B. Testing and inspection by the CTL will be paid for by the Owner at no cost to the Contractor.
 - 3. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 4. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner's CTL, Wal-Mart Construction Manager, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITIONS

- A. Testing: Evaluation of systems, primarily requiring physical manipulation and analysis of materials, in accordance with approved standards.
- B. Inspection: Evaluation of systems primarily requiring observation and engineering judgement.
- C. Quality Assurance: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will substantially comply with construction documents.
- D. Quality Control: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction substantially comply with construction documents.
- E. Quality assurance and quality control may be performed by either the Contractor or the Construction Testing Laboratory employed by the Owner.
- F. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify or demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.
- G. Architect of Record (AOR): The prime consultant in charge of overall design and coordination of the building.



- H. Engineer of Record (EOR): The Registered Engineer in responsible charge of engineering design for the project.
- I. Structural Engineer of Record (SER): The Registered Engineer in responsible charge of the structural design for the project.
- J. Architect Engineer (A/E): A collective term to include the AOR, SER, and the Mechanical, Electrical, and Fire Protection EOR.
- K. Construction Testing Laboratory (CTL): The independent testing and inspection agency employed by the Owner.
- L. Test and Balance Agent (TBA): The HVAC testing and balancing agency employed by the Owner.
- M. Special Inspector (SI): The Special Inspector under the direct supervision of a registered civil/structural engineer (unless otherwise specified) regularly engaged in inspection, and experienced with the type of work requiring related testing and inspection. The categories of special inspector are specified in Appendix B:
- N. Building Official: The Officer or his duly authorized representative charged with the administration and enforcement of the local building code.
- O. Deviation: A deviation is any item or component of work that does not substantially conform to the requirements of the construction documents and which has not been corrected by the end of business on the day it is identified.

1.3 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect/Engineer for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. Refer uncertainties to Architect/Engineer for a decision before proceeding.

1.4 SUBMITTALS

- A. Submit Test and Inspection Reports within three working days of T&I occurrence.
- B. Submit required reports and other items to the following:
 - 1. AOR: (Construction Administration Leader).
 - a. One copy (Site work T&I).
 - b. Three copies (Bldg T&I). AOR will transmit one copy of Bldg T&I to SER.
 - c. Report of non-conforming work.
 - 2. Contractor: Three copies.
 - 3. Building Official: Quantities as required.

1.5 REPORTS

City of Puyallup ment & Permitting Ser ISSUED PERMIT

- A. Submit reports as required herein and conduct and interpret tests and inspections.
- B. Testing and Inspection Report: Submit test and inspection reports including the following information:
 - 1. Date issued.

ng Public Works 2003 Protection WA 2022.0729

PRCTI20230108

- 2. Project title and number.
- 3. Store number.
- 4. Firm name and address.
- Name and signature of tester or inspector.
 Name and seal of registered engineer in re
 - Name and seal of registered engineer in responsible charge (as applicable).



- 7. Date and time of sampling.
- 8. Date of test or inspection.
- 9. Identification of product and specification section.
- 10. Location in project, including elevations, grid location and detail.
- 11. Type of test or inspections.
- 12. Results of tests or inspections and interpretation of same.
- 13. Observations regarding compliance with Contract Documents or deviations therefrom.
- C. Submit a separate final signed report stating whether the work requiring inspection is, to the best of the inspector's knowledge, in conformance with the approved plans, specifications, and the applicable workmanship provisions of the building code.
- D. Reports shall be made on 8-1/2 by 11 white paper, suitable for photocopying and binding in booklet form. Sheets shall have the CTL letterhead (including phone number and address). Larger sheets shall be folded and bound into the booklet.
- E. Tests and inspections reports indicating non-conformance (deviations) to the Contract Documents shall be brought to the attention of the A/E within 24 hours upon discovery.
- F. Contractor shall send an RFI to the A/E on the same day of non-conformance (deviation) notification.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 QUALITY CONTROL

- A. Quality control shall be the responsibility of the Contractor.
- B. The Owner will perform testing and inspection (T & I) but only as a means of verification to the Owner of Contractor quality control performance. Owner T & I shall not be considered Quality Control or Quality Assurance as defined herein. Owner T & I and Contractor obligations with respect to Quality Control shall be pursuant to related provisions of Articles 2.3.3, 2.3.4, 2.4.1, 2.5.2, 2.6.2, and 3.2.2 of the Construction Contract between Walmart and Contractor.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- C. T & I by the Owner will be conducted by the Owner's Construction Testing Laboratory at no cost to the Contractor in accordance with Appendix B, except that costs for failing tests will be deducted from the sum due to the Contractor.
- D. Owner T & I results and reports will be available as information to Contractor.
- E. Owner's T & I shall not be relied on by the Contractor as an indication of conformance or nonconformance of work nor shall the Contractor be dependent on the Owner's CTL test results for verification of satisfactory work in place.
- F. Work found by the Owner's CTL to be defective or in non-compliance with Contract Documents shall be corrected based on the CTL T&I results except when proven otherwise by subsequent CTL or Contractor conducted tests.
- G. In-place work will be subject to testing and inspection by the Owner's CTL at any time during the progress of the work.



- H. Test reports conducted by and at the discretion of the Contractor shall be provided to the Owner upon request when reason exists to suspect non-compliance or when used for comparison to CTL conducted tests.
- I. Any testing agency, if employed by the Contractor for purposes of Contractor Quality Control, shall not be the same entity engaged by the Owner.
- J. Contractor shall pay for:
 - 1. Tests and inspections at the source or prior to incorporation into the Work of materials, products, or equipment to certify compliance with Contract Documents.
 - 2. Tests, samples, inspection, or engineering services the Contractor determines appropriate for performance of Work or for Contractor's convenience.
 - 3. Tests and inspections when initial tests or inspections indicate Work does not comply with Contract Documents.
 - 4. Tests and inspections required or conducted by public authorities as part of permits or inspection fees.
 - 5. Other tests and inspections indicated to be "by Contractor."
- K. Provide incidental labor and facilities to provide access to Work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, and to provide storage and curing of test samples. Provide lift equipment as required for inspection personnel of the Owner or the Owner's representatives.
- L. Provide 14 days written notice to A/E prior to expected time for operations requiring observation, inspecting, and testing. If work to be observed is covered prior to notification, uncover work as required.
- M. Notify in writing the Wal-Mart Construction Manager three working days prior to expected time for operations requiring inspecting and testing services.
- N. Repair and protect the work regardless of assignment of responsibility for inspection, testing, or similar services.
 - 1. Protect work exposed by or for quality assurance and quality control service activities.
 - 2. Upon completion of inspection, testing, sample-taking, and similar services, restore constructed areas to conform to Contract Documents.
- O. Costs, including without limitation additional professional fees and expenses, of any required redesign or reengineering required by non-conforming tests and inspections will be deducted from the sum due the Contractor.
- P. Provide a Letter of Conformance at the completion of the Project to the Wal-Mart Construction Manager, with copy to the AOR, stipulating that the Project has been built per the Contract Documents. An example is attached at the end of this Section.
- Q. Maintain a copy of Contract Drawings and Specifications with all Addenda and Change Orders. Use the Contract Documents supplemented by the approved shop drawings and applicable material and workmanship provisions of the Code for testing and inspection of the work.
- R. Provide qualified personnel at site to comply with schedule and submit reports for each test and inspection as defined in Part 3 of this Section.
- S. Perform specified inspection, sampling, and testing of products in accordance with specified standards.
- T. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- U. Perform testing and inspection in a timely manner to avoid delay of work.
- V. Notify Wal-Mart Construction Manager and AOR, as applicable of observed non-conformance of Work or Products. If observed deviations from the Contract Drawings, Specifications, or building code will be probable cause of subsequent rejection of work or material, notify the Wal-Mart Construction Manager and AOR sufficiently in advance for determination to continue operations or take corrective measures before continuing.



- W. Deviations from the Contract Documents will be entered into the on-line Wal-Mart Observation Log by other parties performing Quality Control construction observation. The Contractor shall track deviations, as defined above, and resolutions and remedial repairs to deviations and subsequent conformance to the Contract Documents on the Observation Log. (www.bldgportal.com, enter username and password, select Observation Log. Follow instructions on the Observation Log website.}
- X. The Wal-Mart Construction Manager in conjunction with the CTL and/or SI will determine when to involve the AOR or EOR for remedial action.
- Y. If additional A/E site or FPT visits are required beyond those described in Section 01454 as determined by Wal-Mart to determine correction to non-conforming work, the Contractor shall reimburse the Owner the sum of \$4000 for each additional visit to cover A/E expenses. Additional A/E site observations or FPTs will be performed as required until all deviations have been corrected by the Contractor and closed by the A/E consultant.
- Z. Cooperate with CTL/SI personnel, and provide access to the Work and to Contractor's facilities.
- AA. Submit test and inspection reports to the A/E consultant and other designated persons as specified in individual sections. Submit test and inspection reports to the Building Official as required.
- BB. Testing and inspection by the Building Official does not preclude the normal field involvement and site observations by the A/E consultant, nor shall it relieve the Contractor of any responsibility to complete the work in accordance with the approved drawings and specifications.
- CC. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect fieldassembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

3.2 PRODUCTION TESTING

- A. General Requirements:
 - 1. Testing shall be conducted as specified in the individual specification sections.
 - 2. If inspection of fabricators work is required, the Owner's representative may require testing and inspection of the work at the plant, before shipment. Owner, Architect, and Structural Engineer of Record (SER) reserve the right to reject material not complying with the Contract Documents.
 - 3. Testing and inspection shall be performed in accordance with the industry standard used as the reference for the specific material or procedure unless other criteria are specified. In the absence of a referenced standard, tests shall be accomplished in accordance with generally accepted industry standards.
 - 4. Work shall be checked as it progresses, but failure to detect any defective work or materials shall in no way prevent later rejection if defective work or materials are discovered, nor shall it obligate Owner to accept such work.



[Example Conformance Letter from Contractor. Text in parentheses are to be edited for each individual project]

[Date]

[Mr. Construction Manager] Wal-Mart Construction 2608 SE J ST Bentonville, Arkansas 72716

[Re: Supercenter (Store #xxx) – City, State]

[Dear Construction Manager:]

The purpose of this letter is to state to Wal-Mart Stores, Inc. that, to the best of our knowledge, the construction on the above referenced project has been completed in substantial conformance with the approved Contract Documents.

We performed construction testing, observation, and testing as required by the Contract Document. To our knowledge, no outstanding items exist except as may be otherwise entered and shown on the Wal-Mart Observation Log.

Sincerely,

[GENERAL CONTRACTOR] [Include signature and date of signature]

cc: File [ARCHITECT OF RECORD] [ENGINEER OF RECORD]



SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Temporary Utilities: Electricity, lighting, heat, ventilation, telephone service, water, and sanitary facilities.
 - 2. Temporary Controls: Barriers, enclosures and fencing, signage protection of the Work, and water control.
 - 3. Construction Facilities: Parking, progress cleaning, temporary buildings, and staging areas.
- B. Related Requirements: The following list is intended to aid in locating work related to or dependent on the scope of Work in this Section. The list is included for information only and is not intended to be inclusive of all project requirements.
 - 1. Section 01351 Regulatory Compliance:
 - 2. Section 01550 Tension Pole Dust Barrier Systems: Temporary retractable-pole and sheeting dust barrier systems for enclosing interior dust-emitting work.

1.2 REFERENCES

A. Occupational Safety and Health Administration (OSHA)
 1. OSHA 1926.1153 Respirable Crystalline Silica.

1.3 ENVIRONMENTAL REQUIREMENTS

- A. Provide protective fencing, and safety signage.
- B. Provide enclosures for dust emitting interior work as specified herein and in Section 01550.
- C. Protect properties and water resources from contaminant damage until construction activities are complete.
- D. Do not use methods that would cause flooding, ponding, or other damage to Owner's property or property of others.

1.4 TEMPORARY ELECTRICITY

- A. Connect to existing power service. Owner will pay cost of electricity used. Power consumption shall not disrupt Owner's need for continuous service. Exercise measures to conserve energy.
- B. Coordinate location and method of connection to existing electrical service with Owner's Construction Manager. Do not connect to electrical panels serving rack houses.
- C. Provide adequate distribution equipment, wiring, and outlets to provide single-phase branch circuits for power and lighting. Provide temporary feeders to limit voltage loss to 5% overall from local utility power lines to provide electric requirements for project during construction.

1.5 TEMPORARY LIGHTING

- A. Provide and maintain lighting for construction operations. Provide minimum of 20 footcandles illumination for work areas.
- B. Permanent building lighting may be utilized during construction.

1.6 TEMPORARY HEAT

ring Public Works 2405 Franky all up, WA 2022.0729

PRCTI20230108

ment & Permitting Servic

Building

_Provide and pay for heat devices and heat as required to maintain specified conditions for construction operations.

01500 - 1

- B. Prior to operation of permanent equipment for temporary heating purposes, verify that installation is approved for operation, equipment is lubricated and filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts.
- C. Maintain minimum ambient temperature of 50 degrees F in areas where construction is in progress, unless indicated otherwise in specifications.

1.7 TEMPORARY VENTILATION

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

1.8 TELEPHONE SERVICE

A. Provide, maintain and pay for telephone service to field office.

1.9 TEMPORARY WATER SERVICE

A. Connect to existing water source. Owner will pay cost of water used. Exercise measures to conserve water.

1.10 TEMPORARY STORAGE CONTAINERS

- A. General Requirements:
 - 1. If required by Authority Having Jurisdiction, obtain all permits necessary for usage and placement of temporary storage container.
 - 2. Coordinate with Store Manager to locate temporary storage container as approved by Authority Having Jurisdiction, when applicable.

1.11 BARRIERS AND CONSTRUCTION TRAFFIC SAFETY

- A. Protect non-owned vehicular traffic, stored materials, site and structures from damage.
- B. Provide barriers to prevent unauthorized entry to construction areas to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations.
- C. Provide barricades and covered walkways required by governing authorities for public rights-of-way, to allow for Owner's use of site, and for public access to existing building.
 - 1. Erect barricades using 1/2" plywood on 2x4 framing. Supports shall be as required to uphold barricade. Verify requirements with Owner's Construction Manager.
 - 2. Construct 8'-0" high unless otherwise directed by owner.
 - 3. Shopping carts shall not be used as barricades.
- D. When operating any motorized construction equipment in areas where customers or Walmart Associates are present, provide a spotter (or signal person) whose sole job responsibility shall be to ensure safe operation, including directing traffic and keeping area of traffic clear of people.

1.12 TEMPORARY FENCING FOR CONSTRUCTION/DEMOLITION WASTE CONTAINERS

A. General:

- 1. Provide commercial grade temporary chain link fencing around general non-hazardous waste storage and sorting areas as specified in Section 01351 Supplement Par. 3.6.2 ENVIRONMENTAL COMPLIANCE.
- 2. Fencing shall be 8 feet high.
- 3. Coordinate required linear feet of fencing with Owner's Construction Manager.
- 4. Maintain access to fire hydrants and hose connections, emergency vehicles, and other site specific conditions as required by Authority Having Jurisdiction.
- 5. Obtain permits required by AHJ for usage and placement of temporary chain link fencing.



- B. Materials:
 - 1. Posts: Galvanized steel pipe. Posts shall be suitable for setting in concrete footings or driving into ground as required by local conditions.
 - 2. Fabric: Commercial-grade 2"-mesh chain-link fencing with full fence screening. Screening must be woven plastic cloth or plastic screening slats. No substitutions are allowed for fencing or screening material.
 - 3. Gates: Provide personnel and vehicle gates of the quantity and size required for functional access to waste container storage area.
 - a. Fabricate gates and screening of same material as used for fencing.
 - b. Equip with locks.
- C. Installation: Comply with manufacturer's recommendations.
 - 1. Post and Fabric: Set posts in concrete footings, drive posts in ground, or set in holes and backfill to accommodate local conditions. Stretch fabric taut and attach to posts.
 - 2. Gates: Install gates with required hardware.
- D. Removal: After use of fenced areas and waste/recycling containers by Walmart as specified in Section 01351, remove fencing and patch paving. Refer to Section 01731 for general patching requirements.

1.13 TEMPORARY CONSTRUCTION FENCING

- A. Provide fence around construction area and staging area. Maintain and relocate during the sequencing of the Work. Coordinate installation and any relocation of fencing with all trades, Owner's Construction Manager and Store Manager. Comply with all regulations of Authorities Having Jurisdiction and OSHA requirements.
- B. Temporary construction fencing shall be 6'-0" high commercial-grade chain-link fencing with full fence screening. Screening must be woven plastic cloth or plastic screening slats. No substitutions are allowed for temporary construction fencing or screening material.
- C. Coordinate installation of temporary fencing with any and all existing underground utilities.
- D. Core drill paving as required and set line posts and end posts in sand. Gate posts may be set in concrete. Alternate methods of post installation are not allowed. Maintain posts plumb to within 1-inch in 6 feet at all times.
- E. Equip vehicular and pedestrian gates with locks.
- F. Remove fencing at completion of construction or phase and repair paving to match existing.
- 1.14 WATER CONTROL
 - A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
 - B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
 - C. The Contractor shall at all times protect all activities of his construction, excavations, fill areas, embankments, trenches structures or building from damage from rainwater, spring water, ground water, backing up of drains, sewers and all other water encountered during his operations. He shall provide all pumps, equipment and enclosures necessary to provide adequate protection.

1.15 EXTERIOR ENCLOSURES

- A. Provide temporary weather-tight closure of exterior openings to provide acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification Sections, and to prevent entry of unauthorized persons.
- B. Provide access doors with locks.



1.16 INTERIOR ENCLOSURES

- A. As shown on Drawings, provide sealed temporary partitions as specified herein and in Section 01550 to separate construction work areas from Owner occupied areas, to prevent penetration of dust and moisture into Owner occupied areas, and to prevent damage to existing materials and equipment.
- B. Temporary Stud Framed Barrier / Dust Partitions: Installation and removal of temporary dust partitions shall be scheduled with a minimum of 3 days prior notification to Owner's Construction Manager and/or Store Manager. Maintain temporary dust partitions to seal openings to Owner -occupied areas with closed joints and sealed edges at intersections with existing surfaces. These shall be scheduled, installed, and removed as required and directed by Owner's Construction Manager and may not be indicated on the Drawings. Install partitions prior to demolition of existing walls and maintain in dust tight condition until the completion of the new construction. It is the Contractor's responsibility to prohibit dust and debris from entering the Sales area or any Owner -occupied areas and to obtain approval from AHJ for materials/construction configuration and phasing of temporary enclosures.
 - 1. Dust Wall Partitions:
 - a. Framing: (same as Type A below).
 - b. Covering: 6 mil. clear poly sheeting (if allowed by the Authority Having Jurisdiction); otherwise use Griffolyn type 55 ASFR, anti-static, fire retardant sheeting. Overlap sheeting at joints a minimum 2'-0" and continuously tape joints. Attach sheeting from ceiling to finish floor for dustproof condition. If attachment to ceiling is impossible, light framing shall be installed with sheeting attached all around to prohibit dust penetration.
 - c. Plywood (where required): Install 1/2" C-D plywood over 6 mil poly. Install 4'x8' sheets horizontally from finish floor to bottom of roof deck. Ensure that blocking is provided behind each joint.
 - 2. Type A Partition / Dust Drape (no ceiling present):
 - a. Framing: Light gauge metal framing (refer Section 05400) or framing material approved by Authorities Having Jurisdiction (AHJ). Provide continuous 2x4 top and bottom plates and continuous bridging and bracing. Continue top plate to bottom side of roof deck.
 - 1) Walls up to 14'-0" may use 3-5/8" 22 gauge metal studs at 24" o.c. or 2x4's at 16" o.c.
 - 2) Walls higher than 14'-0" may use 6" 20 gauge metal studs at 24" o.c. or 2x6's at 16" o.c.
 - b. Covering: Install continuous 6 mil clear poly sheets (if allowed by the Authority Having Jurisdiction); otherwise use Griffolyn type 55 ASFR, anti-static, fire retardant sheeting. Install from finish floor to roof deck. Tape all joints. Install 1/2" C-D plywood over 6 mil poly. Install 4'x8' sheets horizontally from finish floor to bottom of roof deck. Ensure that blocking is provided behind each joint.
 - 3. Type B Partition / Dust Drape (ceiling grid to remain in place):
 - a. Framing: (same as Type A above).
 - b. Covering: Install continuous 6 mil clear poly sheets (if allowed by the Authority Having Jurisdiction); otherwise use Griffolyn type 55 ASFR, anti-static, fire retardant sheeting. Install from finish floor to roof deck. Tape all joints. Install 1/2" C-D plywood over 6 mil poly. Install 4'x8' sheets horizontally to bottom of finish ceiling. Extend 6 mil poly to bottom of roof deck. Ensure that blocking is provided behind each joint.
 - 4. Type D Security Partitions (exterior):
 - a. Framing: (same as Type A above).
 - b. Covering: At interior face of partition, install continuous 6 mil clear poly sheets (if allowed by the Authority Having Jurisdiction); otherwise use Griffolyn type 55 ASFR, anti-static, fire retardant sheeting. Install from finish floor to roof deck. Tape all joints. Install 1/2" C-D plywood over 6 mil poly. Install 4'x8' sheets horizontally to bottom of roof deck. Ensure that blocking is provided behind each joint. At exterior face of partition, install 30 gauge, 24" wide corrugated metal panels as shown on the Drawings. Fill wall cavities with R-13 batt insulation.
 - 5. Doors:
 - a. Single acting doors, opening out, with sturdy closer, closing against gasketed stops on frame to reduce passage of dust.
 - 6. Sealing:
 - a. Seal perimeter of partitions and doors to prevent passage of dust. At Type A and B partitions, tape fastener depressions, joints between panels and joints between panels and floors, ceiling and columns with 2 in. wide pressure sensitive tape.
 - 7. Mats: a.
 - Provide mats at doors to reduce tracking of dust. Replace or clean daily.



- C. Contractor's Option: Tension Pole Dust Barrier System: Temporary retractable-pole and polyethylene sheeting dust barrier system as specified in Section 01550.
 - 1. General use: In lieu of Stud framed Dust Wall Partitions that are not adjacent to Food Areas, where a barrier to security or safety is not required.
 - 2. Emergency use (48 hours or less): Continuously attended construction area, where approved by Walmart Construction Manager.
 - 3. Access doors, walk-off mats, and system accessories as specified in Section 01550.

1.17 FIELD OFFICES AND SHEDS

- A. Contractor's Office: (Not required for projects with a duration of less than 4 weeks, or as stated otherwise in Bid documents.)
 - 1. Size as required for Contractor's use and to provide space for project meetings.
 - 2. Adequate electrical power, lighting, heating, and cooling to maintain human comfort.
 - 3. Office space with desk and chair, layout table, plan rack, and facilities for storage of Project Record Documents.
 - 4. Furnishings in meeting area:
 - a. Conference table and chairs for at least eight persons.
 - b. Racks and files for Project Record Documents in, or adjacent to, the meeting area.
 - c. Other furnishings: Contractor's option.
 - 5. Contractor's office and sheds not to be used as living accommodations.
- B. Storage Sheds: Structurally sound, weathertight, on proper foundations, with floors raised above ground.
- C. Locate office and sheds minimum 30 feet from structures.

1.18 CONSTRUCTION AIDS

- A. Provide construction aids required to facilitate execution of Work, including stairs, ladders, ramps, staging, platforms, railings, cranes, scaffolds, hoists, chutes, runways, and other required facilities and equipment.
- B. Such apparatus, equipment and construction shall meet requirements of applicable OSHA (Federal), State and Local Safety and Labor Laws.
- C. Store employees shall not be allowed access to scaffolds, ladders, and hoists.
- D. Coordinate crane service required for erection of structural steel, installation of HVAC Rooftop Units, and other crane services as required to accommodate Owner's needs.

1.19 PROTECTION OF EXISTING WORK

- A. The existing building shall be protected from moisture, dust and debris. Install dust partitions or drapes as shown or as required to keep dust and moisture from the building premises.
- B. Provide suitable temporary watertight coverings over openings as required to protect interior work from inclement weather and related/adjacent construction areas.
- C. Maintain benchmarks, monuments and other reference point. If disturbed or destroyed, replace as directed.
- D. Protect existing adjacent streets, sidewalks, curbs, buildings and property, including trees, lawns and plants.

1.20 PROTECTION OF INSTALLED WORK

ment & Permitting Servic

Building

ring Public Works 2403 Franky allup, WA 2022.0729

PRCTI20230108

- A. Protect installed Work; provide special protection where specified in individual specification Sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.

- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Minimize traffic and storage on roofed surfaces. If traffic or storage is necessary, obtain recommendations for protection from roofing material manufacturer.
- F. Do not operate cranes or other heavy equipment on concrete floor slabs if damage could result from such operations.
- G. Prohibit traffic from landscaped areas.

1.21 SECURITY

- A. Maintain the integrity of the existing building security and security systems at all times. Provide security and facilities to protect Work and Owner's operations from unauthorized entry, vandalism, and theft.
- B. Obtain permission and coordinate with Owner's security program through Owner's Construction Manager at least 12 hours prior to the modification of any existing security system.
- C. Building Security: Certified and bonded uniformed guard service licensed in the State in which project is located to provide security guard(s) for security and facilities to protect Store facilities from unauthorized entry, vandalism and theft during performance of all work operations during Store non-operational hours.
- D. Provide continuous security at openings cut into existing exterior walls and roofs.

1.22 PARKING

- A. Provide and maintain access to fire hydrants, free of obstructions.
- B. Provide temporary parking areas to accommodate construction personnel.

1.23 NOISE CONTROL

- A. Demolition and other Work that disturbs surrounding Store areas shall only be allowed in the following categories and time restrictions:
 - 1. Low Level Noise: Assembling trades such as electricians, ceiling installers, painters, tapers, etc.. Excludes all hammering and impact drilling. Low-level noise operations are allowed during Walmart Store operational hours.
 - 2. Moderate Level Noise: Trades include gypsum board installers, stud partition installers, duct installers, etc. Includes occasional and intermittent hammering, screw drilling, etc.. Excludes impact drilling and concrete sawing. Moderate level noise operations may be allowed during Store operational hours upon approval of Owner's Construction Manager or Store Manager.
 - 3. High Level Noise: Constant loud and high pitched noise produced by impact drilling, concrete saw cutting, hammering of ductwork, and all demolition work. High-level noise operations shall be restricted to Walmart Store non-operational hours.
- 1.24 PROGRESS CLEANING
 - A. Refer to requirements specified in Section 01740.

1.25 SIGNAGE

A. Temporary Construction Signage: Provide temporary signage for identification as required due to obscurity caused by construction. Provide signage for traffic control and safety information. Provide temporary pavement striping for traffic control and pedestrian safety. Provide temporary handicap parking spaces if existing spaces are at a non-accessible location to the building entrance.



1.26 INFORMATION/SAFETY BOARD

- A. Provide 4'x8'x3/4" C/D exterior glue plywood to be attached on the existing exterior wall at a location designated by the Owner's Construction Manager.
- B. Information/Safety Board shall be used to communicate safety, state & federal, hiring, OSHA and EPA requirements, bulletins and other information required for the construction of this Project.
- C. The board shall contain but not be limited to the following:
 - 1. OSHA Safety Requirements
 - 2. Federal and State Hiring Regulations
 - 3. Pertinent State, Local, and Federal Employment Regulations
 - 4. Building Permits
 - 5. Emergency telephone numbers
 - 6. Job Site Safety Meeting notifications
 - 7. EPA Permits or Notification regarding Asbestos or other Toxic or Hazardous Materials
 - 8. Other information required to comply with applicable OSHA, EPA and Federal safety laws
- D. Protect posted information with either plastic sleeves stapled to the board or 6 mil clear plastic sheathing over entire board providing access for posting of additional information.

1.27 POSTED CONSTRUCTION SCHEDULE

A. Post construction schedule and Phasing Plans (Floor Tile, Paint) in back office area for clear viewing by all trades and workmen. Provide names/telephone numbers of Owner's Construction Manager, General Contractor Project Manager, Superintendent and Phase I Supervisor. Maintain most recent and updated version of schedule.

1.28 STORAGE OF CONSTRUCTION MATERIALS AND EQUIPMENT

- A. The Work area may be used to store materials and equipment as approved by the Owner's Construction Manager. Provide storage trailers as required for storage of other materials. The Contractor shall not use Owner's trailers or storage warehouses for materials/equipment storage.
- B. Storage of flammable/volatile liquid and paint materials within building is prohibited. Remove flammable materials, volatile liquids and paint daily from store.
- C. The Contractor may not store materials on site except for what is in use for the current work.
- D. Cover and protect material in transit.
- E. Stored materials shall be available for inspection by Owner at all times.
- F. Walmart is NOT responsible for the loss of any construction materials or the Contractors' loss of equipment or tools.

1.29 TEMPORARY FIRE PROTECTION

- A. Contractors and sub-contractors and their agents and employees shall comply with local fire protection codes and OSHA Regulations.
 - 1. Provide a minimum of one U.L. listed 2A:20BC dry chemical fire extinguisher, or one standard U.L. listed 2-1/2 ga. Water (E-10) and one U.L. listed 10BC carbon dioxide fire extinguisher mounted together, in each of the following areas:
 - a. Each 3000 sq. ft. of work area or fraction thereof with minimum of two extinguishers.
 - 2. Contractor's superintendent, or other assistant superintendents, shall be appointed as project fire warden for entire construction period.
 - 3. Train workmen in proper use of each type fire extinguisher.
 - 4. Post telephone number of fire department, specific information on location of on-site fire fighting equipment and procedure to be followed in event of fire.



- 5. Maintain free access at all times to fire extinguisher equipment, street fire hydrants, and outside connections for standpipe hose systems.
- B. Maintain exit facilities and access thereto free of material and other obstructions. If any exits are rendered inoperative during remodeling, provide the same number of temporary exits and maintain a sufficient number of required exits and exit width as required by the adopted building code and AHJ.

1.30 NON-SMOKING POLICY

A. Smoking will not be allowed within the building or customer/associate traffic areas at any time.

1.31 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Final Walk-Thru inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.
- D. At completion of construction, remove fencing, guardrails, barricades, temporary signage and temporary coverings.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.



UniSpec II - Store Planning

SECTION 01550 (11 44 16) – TENSION POLE DUST BARRIER SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Temporary retractable-pole and sheeting dust barrier systems and related containment accessories for enclosing interior dust-emitting construction work. Barriers may be relocated and reused as permitted in this section.
- B. Related Requirements:
 - 1. Section 01351 Regulatory Compliance:
 - a. Disposal and removal of construction and universal waste.
 - b. Work practice control methods for airborne suppressing respirable dust.
 - 2. Section 01500 Temporary Facilities and Controls: Locations for use.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. ASTM International (ASTM):
 - 1. ASTM D 7948 Test Method for Measurement of Respirable Crystalline Silica in Workplace Air by Infrared Spectrometry.
- C. Occupational Safety and Health Administration (OSHA):
 - 1. OSHA 29 CFR Standard 1926.1153 Respirable Crystalline Silica: Table 1 construction control methods for suppressing airborne respirable dust and permissible exposure limit (PEL).

1.3 QUALITY ASSURANCE

A. Use barrier system components and accessories recommended by the manufacturer to maintain dust emissions below the OSHA permissible level when tested in accordance with ASTM D 7948.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Remove personal protective equipment, protective outerwear, shoe covers, and respiratory devices used inside dust containment areas before entering clean rooms.
- B. Wet clean barrier system components and accessories frequently during use and between jobs to avoid dust transmission.
- C. Dispose of plastic sheeting and other construction waste in accordance with the requirements of Section 01351 Regulatory Compliance Supplement.

1.5 DELIVERY, STORAGE AND HANDLING

A. Transport, handle, store, and protect barrier system assembly as specified in Section 01600.



PART 2 - PRODUCTS

2.1 SUPPLIERS

- A. Provide products by one of the following or equivalent products subject to the requirements specified herein by another supplier:
 - 1. <u>Surface Shields</u>, Orland Park, IL, (708) 226-9817. Contact Tom Fergus, <u>tfergus@surfaceshields.com</u>.
 - 2. <u>ZipWall</u>, Arlington, MA, (800) 718-2255.
 - 3. <u>FastCap</u>, Ferndale, WA, (888) 443-3748.
 - 4. <u>ToolLabl</u>, Winchester, OH, (800) 424-8251, <u>sales@toollab.com</u>
 - 5. <u>Pro Tect Associates, Inc.</u>, Northbrook, IL, (877) 991-1352, <u>contact@pro-tect.com</u>.

2.2 SYSTEM DESCRIPTION

- A. Adjustable Height Poles: Heavy duty spring loaded, adjustable height locking metal poles with locking header parts and non-slip rubber floor base foot, length as required.
 - 1. <u>Dust Shield Pro Extendable Containment Poles</u> by Surface Shields.
 - 2. <u>Spring-Loaded Poles</u> by ZipWall.
 - 3. <u>3rd Hand Dust Barrier System</u> by FastCap.
 - 4. <u>Speedy Wall Poles</u> or <u>Curtain-Wall</u> Modular System by ToolLab.
 - 5. <u>EZ Prop Dust Poles</u> by Pro Tect Associates.
 - B. Polyethylene Sheet Screening Material: Clear or white translucent polyethylene sheeting, tested in accordance with the requirements of NFPA for flame retardancy, 6 mil thickness. Provide sheet from suppliers specified herein or equivalent.
 - 1. Contractor's Option: In lieu of polyethylene sheeting, the following reusable fabric panels may be used as barrier screening material:
 - a. <u>Zip-Fast Reusable Barrier Panels</u> by ZipWall.
 - C. Sealing Access Door: Provide one of the following continuous sealing access panel components:
 - 1. Adhesive Zipper Door: Single-use zipper strip of heavy duty polyester or HDPE fabric with pressuresensitive adhesive backing for application to polyethylene sheet material, 7 ft long. Provide one of the following:
 - a. Zip n Close Zippers by Surface Shields.
 - b. <u>ZipWall Self-Adhesive Zippers</u> by ZipWall.
 - c. <u>Zip-Up</u> or <u>Curtain-Door</u> by ToolLab.
 - d. Pro Tect Zip-Up by Pro Tect.
 - 2. Self-Closing Magnetic Door: Reusable suspended header partition with vertical magnetic strips at access opening, 79 in long. Provide the following:
 - a. <u>3rd Hand Magnetic Dust Barrier Door</u> by FastCap.

2.3 DUST CONTAINMENT ACCESSORIES

- A. Vent, Duct, and Surface Protection Film: Self-adhering, clean removal polyethylene protective film. Provide the following or equivalent:
 - 1. <u>Duct Cover Shield</u> by Surface Shields.
 - 2. <u>Vent Mask</u> by Surface Shields.
 - 3. <u>Multi Use Red Surface Protection Film</u> by Pro Tect.
- B. Clean Room Walk-Off Mat: Disposable tacky floor mats for collecting foot traffic debris, roll or premeasured sheets, with adhesive or non-skid backing.
- C. Adhesive Tape: Pressure-sensitive, medium tack, UV resistant, rated for clean release after 14 days. Minimum 5 mil thickness, 2 inch wide.



PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify dimensions on site prior to installing barrier system.
- B. Inspect supporting substrates prior to barrier system installation. Do not attach or abut dust barrier components to mobile or unsecured substrates.
- C. Coordinate barrier system installation to ensure that simultaneous work outside dust containment areas will not disturb or compromise enclosure.
- D. Cover and seal vents, ducts, and surfaces inside the containment area.

3.2 INSTALLATION

- A. Install dust barrier systems prior demolition, disposal, cutting, patching, or cleaning work as described in Division 1 specifications. Install dust barrier systems prior to cutting, patching, sawing, drilling, and coring as described in Divisions 3, 4, and 5 specifications.
- B. Provide the number of components and accessories as required to create a continuous seal between the dust containment area and the clean room.
- C. Install dust barrier system components in accordance with manufacturer's published instructions. Attach extension poles from ceiling to finish floor. Where attachment to ceiling is impractical, install light framing with sheeting secured on top and all sides. Draw plastic sheeting taut without gaping, wrinkling, or puddling at floor.
- D. Do not allow joints in plastic sheeting between poles.
- E. Do not reuse plastic sheeting for subsequent work sites.
- F. Use adhesive tape at corners, sheeting joints, and as necessary to reinforce the seal in areas of the enclosure receiving heavy traffic or tension. Do not use tape as a substitute for extension poles or zipper access doors to seal the barrier enclosure.
- G. Locate walk-off mats at foot traffic transitions between dust containment area and clean rooms.



BLANK PAGE



SECTION 01600 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Basic Product Requirements.
- 2. Product Options.
- 3. Product Substitution Requirements.
- 4. Direct Purchase Products.
- 5. Product Delivery Requirements.
- 6. Product Storage and Handling Requirements.
- 7. Product Lead Time Schedules.
- B. Related Requirements: The following list is intended to aid in locating products and work related to or dependent on the scope in this Section. The list is included for information only and is not intended to be inclusive of all project requirements.
 - 1. Products and Work by Owner or Separate Contractor: Manufacturers, suppliers, product information, installation (if applicable), and general procedures related to Owner furnished products.

1.2 DEFINITIONS

A. Products: Defined as new material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.

1.3 BASIC PRODUCT REQUIREMENTS

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents.
- C. Obtain copies of standards when required by Contract Documents.
- D. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- E. The contractual relationship, duties, and responsibilities of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.4 PRODUCT OPTIONS

- A. Products Specified by Naming a Single Manufacturer and/or Model Number: Provide specified product only unless otherwise specifically permitted in the specifications.
- B. Products Specified by Naming Two or More Manufacturers: Provide specified products of manufacturers and models named only, meeting specifications and specified requirements unless otherwise specifically permitted in the specifications.
- C. Products Specified by Reference Standards or by Description Only: Provide any product meeting specified reference standard or description.



1.5 PRODUCT SUBSTITUTION REQUIREMENTS

A. No substitutions permitted. Provide specified products only unless otherwise specified.

1.6 DIRECT PURCHASE PRODUCTS

A. Direct purchase products shall be purchased directly by the General Contractor from the Manufacturer or the Pre-Negotiated Supplier as specified in the individual Specifications Sections. Direct purchased products shall not be purchased by any subcontractor regardless of the discipline or subcontract involved in the installation.

1.7 SCHEDULING AND COORDINATION - GENERAL

A. Lead times and negotiated suppliers for higher volume items are provided in the Product Lead Time Schedule included in Part 3 of this Section.

1.8 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions. Deliver materials and equipment at such stages of work in order to expedite the Work and minimize storage requirements.
- B. Schedule delivery for Owner furnished and installed equipment such that upon delivery of equipment to the site, sufficient equipment provisions are in place ready for installation and hook-up.
- C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
- D. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, and damage. Do not use damaged materials and equipment.

1.9 OWNER FURNISHED PRODUCT DELIVERY REQUIREMENTS

- A. Product Delivery and Receiving:
 - 1. Unless noted otherwise herein, Owner's supplier will deliver products and equipment to jobsite for Contractor to receive on delivery date established by Contractor.
 - 2. Terms of Contractor's delivery and receiving, as well as significant order lead times required for some products, are specified in the Delivery Schedules included herein.
 - 3. The Schedules provide summary information only and do not preclude or supersede requirements contained in the corresponding individual sections or in Appendix A or the Drawings.
- B. Coordination:
 - 1. Contractor shall contact <u>wm-potracksupport@lumatrak.com</u> immediately after Award of Contract to initiate registration in the GC Communicator (GCC) program for Owner supplier scheduling and coordination.
 - 2. Owner's Supplier and Contractor shall establish product delivery and installation dates, quantities of materials, and a coordination procedure through the GCC program.
 - 3. Exceptions to Contractor scheduling are specified in the Delivery Schedules included herein.
- C. Refer to the applicable drawings or Appendix A for specific details regarding Owner furnished products or equipment.
- D. Receive and unload products at the Site unless otherwise specified in the Owner Products Delivery Exceptions Schedules included herein.
- E. Review supplier furnished shop drawings, product data, and samples under provisions of Specifications Section 01330. Submit to supplier with notification to Architect, Owner, and Owner's Construction Department of any discrepancies or problems anticipated in the use the products.



- F. Verify quantity of products furnished with shop drawings, Final Field Use Drawings, or Bills of Lading as applicable.
- G. Promptly inspect products upon receipt for shortages, damaged, or defective items; report to Owner and Owner's Construction Department. Upon notification, Owner will arrange for delivery of replacement products.
- H. Report suspected product manufacturing defects to Owner's Construction Manager and Product Supplier. Upon notification, Owner will arrange for repair of product manufacturing defects.

1.10 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Provide safe storage of products.
- B. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
- C. For exterior storage of fabricated products, place on sloped supports, above ground.
- D. Provide off-site storage and protection when site does not permit on-site storage or protection.
- E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation.
- F. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Provide interchangeable components of the same manufacturer, for components being replaced.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.

PART 3 - EXECUTION

3.1 INSTALLATION OF OWNER FURNISHED PRODUCTS

- A. Owner Furnished Equipment Installed by the Contractor. All Owner Furnished equipment shall be installed by the Contractor unless otherwise noted in the individual sections of the Specifications, on the Drawings, or in Appendix A to be installed by the Owner.
- B. Provide for installation and hook-up at time of delivery of Owner installed equipment if Owner is to install as specified in the Products Installed by Owner Schedules included herein.
- C. Install in accordance with manufacturer's instructions.
- D. Coordinate installation of Owner installed products and equipment.
- E. Work in harmony with all subcontractors, suppliers and manufacturers.
- F. Unpack and set in place, plumb, level, and secure.



- G. Connect to mechanical, plumbing, and electrical systems as required.
- H. Remove packaging and clean products.
- I. Test and adjust as required.
- J. Replace items damaged during installation.
- K. Protect installed products from damage by subsequent construction operations.

3.2 PRODUCT LEAD TIME REQUIREMENTS AND SCHEDULE

- A. The Product Lead Time Schedule is included to assist the Contractor in scheduling timely delivery of higher volume items in the current program. The Schedule is not an inclusive list of scope and does not replace requirements in other contract documents.
- B. Allow a minimum duration between order and expected shipment date of products and equipment as provided in the Schedule. Ordering immediately after award of bid or at any time ahead of the minimum duration provided herein is encouraged.
- C. Additional costs for expedited transport, substituted equipment, or scheduling delays which result from failure to submit timely orders shall be at Contractor's expense with no cost to the Owner.
- D. Equipment for atypical applications may require a longer duration.
 - 1. Immediately after award of contract, identify project conditions requiring equipment that varies from prototypical size, composition, or nature of use. Submit order for atypical equipment as soon as conditions are suspected.

| PRODUCT ORDER DURATION SCHEDULE – OWNER FURNISHED ITEMS | | | | | |
|---|---|------|-----------------------|--|--|
| Section - Title | Duration from Coordination to Ship (In Weeks) | Item | Supply Responsibility | | |
| 09655 Resilient Base | 2 weeks prior to Week 0 | All | НЈС | | |

END OF SCHEDULES



SECTION 01731 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Requirements and limitations for cutting and patching Work.
- 2. Products for patching and extending Work.
- 3. Transitions and adjustments.
- 4. Repair of damaged surfaces, finishes, and cleaning.

B. Related Requirements:

- 1. Construction Contract Between Walmart and Contractor (Par 3.12): Additional requirements for cutting and patching.
- 2. Section 01351 Regulatory Compliance:
 - a. Disposal and removal of hazardous construction and universal waste.
 - b. Work practice control methods for airborne respirable dust.
- 3. Section 01500 Temporary Facilities and Controls: Temporary barriers.
- 4. Section 02023 Selective Site Demolition: Procedures for removing existing materials and equipment.

1.2 REFERENCES

A. Occupational Safety and Health Administration (OSHA):
1. OSHA 01926.1153 Respirable Crystalline Silica

1.3 ENVIRONMENTAL REQUIREMENTS

A. Minimize dust emissions or provide equipment that suppresses dust.

1.4 PERFORMANCE REQUIREMENTS

- A. Cutting and patching shall be performed as required for cutting into existing construction to provide for installation or performance of other work and subsequent fitting and patching required for restoration of surfaces to their original condition.
- B. Cut into or partially remove portions of the existing building as required for new construction. Include such work as:
 - 1. Cutting, moving or removal of items shown to be cut, moved or removed.
 - 2. Cutting, moving or removal of items not shown to be cut, moved, or removed, but which must be cut, moved, or removed to allow for new construction. Work or items which are to remain in the finished work shall be patched or reinstalled after cutting, moving, or removal, and joints and finishes shall match adjacent or similar work.
 - 3. Removal of existing surface finishes as needed to install new work and finishes.
 - 4. Removal of abandoned items and removal of items rendered no longer required resulting from alterations such as abandoned piping and electrical conduits to nearest J-boxes.
 - 5. Repair or removal of dangerous or unsanitary conditions resulting from alterations work.
- C. Structural Work:
 - 1. Do not cut and patch structural work in manner resulting in reduction of load-carrying capacity or load and deflection ratio.
- D. Operational Limitations:
 - 1. Do not cut and patch in manner resulting in decreased performance, shortened useful life, or increased maintenance.



- E. Quality Limitations: Do not cut and patch work exposed to view (exterior and interior) in manner resulting in noticeable reduction of aesthetic qualities and similar qualities, as determined by the Walmart Construction Manager.
- F. Limitation on Acceptance: Walmart Construction Manager's acceptance to proceed with cutting and patching shall not waive right to later require removal or replacement of work found to be cut and patched in unsatisfactory manner as determined by Walmart Construction Manager.
- G. Obtain all required inspections and approvals from authorities having jurisdiction for Temporary Certificate of Occupancy for Offices and Stockroom at least seven calendar days prior to Walmart scheduled move into new Office and Stockroom areas.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use materials for cutting and patching that are identical to existing materials. If identical materials are not available or cannot be used, use materials that match existing adjacent surfaces to fullest extent possible with regard to visual effect. Use materials for cutting and patching that will result in equal or better performance characteristics.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which work is to be performed before cutting. Take corrective action before proceeding with work if unsafe or otherwise unsatisfactory conditions are encountered.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of work to be cut to prevent failure.
- B. Protection:
 - 1. Protect other work during cutting and patching to prevent damage.
 - 2. Provide protection from adverse weather conditions for that part of project that may be exposed during cutting and patching operations.
 - 3. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
 - 4. Take precautions not to cut existing pipe, conduit, or duct serving building but scheduled to be relocated until provisions have been made to bypass them.

3.3 CUTTING AND PATCHING

- A. Remove, cut and patch work in a manner to minimize damage and to provide means of restoring products, materials, and finishes to match original condition.
- B. Cutting and removal work shall be performed so as not to cut or remove more than is necessary and that are least likely to damage work to be retained or adjoining work.
- C. Conduct work in such a manner as to minimize noise and to minimize accumulation and spread of dirt and dust.
- D. Use hand tools or small power tools designed for sawing or grinding. Avoid hammering and chopping.
- E. Where cutting cured concrete or masonry is required, use saws equipped with integrated water delivery systems that continuously feed water to the blade, or a HEPA-rated filter dust collection vacuum system recommended by the manufacturer to maintain dust emissions below the permissible level.



- F. Where core drilling or grinding concrete is required, use power tools equipped with HEPA-rated filter dust collection vacuum system recommended by the manufacturer to maintain dust emissions below the permissible level.
- G. To avoid marring existing finished surfaces, cut and drill from exposed or finished side into concealed surfaces. Temporarily cover openings when not in use.
- H. Cut holes and slots neatly to size required with minimum disturbance of adjacent work. Use HEPA-rated filter vacuums to clean holes and slots.
- I. Dispose of construction waste in accordance with the requirements of Section 01351.
- J. Patch with seams that are durable and as invisible as possible. Comply with specified tolerances for work.
- K. If the surrounding surface cannot be matched, repaint or recoat the entire surface to nearest corner or transition point.

3.4 TRANSITIONS

- A. Where new work abuts or aligns with existing work, provide a smooth and even transition. Patched work shall match existing adjacent work in texture and appearance.
- B. Where finished surfaces are cut in such a way that a smooth transition with new work is not possible, terminate the existing surface along a straight line at a natural line of division.
- C. Where two or more spaces are indicated to become one space, reconstruct ceilings to provide horizontal planes without breaks, steps or bulkheads.
- D. In cases of extreme change of ceiling or floor, obtain instructions from Walmart Construction Manager as to method of making an acceptable transition.

3.5 REPAIR OF DAMAGED SURFACES

- A. Patch or replace portions of existing surfaces which are damaged, discolored, or showing imperfections. Repair substrate prior to patching finish.
- B. Restore existing work that is damaged during construction to a condition equal to its condition at the time of the start of the Work.
- C. At locations in existing areas where partitions are removed, patch the floors, walls and ceilings with finish materials to match new finishes.
- D. Where plumbing is removed and capped below finish floor, core drill concrete floor as required using proper dust control methods as specified herein. Cap a minimum of 8" below floor. Patch hole with new concrete to match existing floor.

3.6 REMOVAL AND REPLACEMENT OF EXISTING WORK

- A. Remove existing items, services, finishes or surfaces as required for installation of new construction.
- B. Repair, re-route, and extend services, piping and conduit of existing items and equipment as required during construction operations for installation and operation of new items and equipment. When existing equipment to remain is removed or relocated, re-install as required for proper operation.



BLANK PAGE



SECTION 01740 - CLEANING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 1. Cleaning of building and site premises included in the scope of contractual construction work.
- B. Related Requirements:
 - 1. Section 01351 Regulatory Compliance: References to Contract Provisions for waste management and work practice control methods.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. Occupational Safety and Health Administration (OSHA):
 1. OSHA 01926.1153 Respirable Crystalline Silica.

1.3 QUALITY ASSURANCE

A. Professional Commercial Cleaning Qualifications: Commercial cleaning for building improvement as specified in Part 3 herein shall be performed by a firm regularly engaged in commercial cleaning for a continuous period of not less than 2 years. Firm shall be experienced in work of the nature and scale similar to this project.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Dispose of construction and universal waste in accordance with requirements of Section 01351 and local, state, and Federal regulatory codes and regulations.
 - 1. Store volatile waste in covered metal containers and remove from premises daily. Prevent accumulation of wastes which create hazardous conditions.
 - 2. Do not burn or bury rubbish and waste materials on the project site.
 - 3. Adhere to volatile fluid waste disposal and wastewater regulations.
- B. Minimize dust emissions or provide equipment that suppresses dust.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Transport, handle, store, and protect products in compliance with the requirements of Section 01600.
- B. Do not store flammable materials or liquids in any part of the existing or new building premises.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS

- A. Verify that selected cleaning products are manufactured according to local, state, and Federal regulations and that manufacturers are regularly engaged in the production of such products.
- B. Verify that materials are clearly labeled.

- C. Use solutions and products specifically formulated and recommended for cleaning the surfaces without damage to either the primary or adjacent surfaces.
 - 1. Use only cleaning materials recommended by the manufacturer of the surface to be cleaned.
 - 2. Use cleaning products only on surfaces recommended by cleaning product material manufacturer.
- D. Use products that are not toxic or caustic to metal or acoustic surfaces.

PART 3 - EXECUTION

3.1 GENERAL

- A. Coordination and Scheduling:
 - 1. Perform cleaning during periods when store is closed or during low traffic periods, typically between 10:00 pm and 6:00 am.
 - 2. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly-painted surfaces.
 - 3. Coordinate cleaning schedule with store manager. Coordinate with and submit to Store Manager cleaning schedule at least 7 days prior to commencement of cleaning operations.
- B. Periodically inspect equipment to ensure equipment is operating optimally and safely.
 - 1. Verify equipment is adequately diapered, hose connections are tight, and fasteners are secure. Repair leaks and provide maintenance where required.
- C. Each day, clear work and access areas. Maintain premises free from accumulations of waste, debris, and rubbish caused by construction operations.
- D. Segregate and sort waste materials by type and class as directed by local, state, and Federal regulations.
- E. Do not leave cleaning materials unattended while in use.
- F. Clean each project phase when completed.
- G. Interior General:
 - 1. Vacuum clean interior building areas on an as-needed basis and prior to areas receiving finish painting.
 - 2. Use vacuum with HEPA-rated filter to clean concrete, masonry, gypsum board, stone and tile surfaces.
- H. Exterior General:
 - 1. Clean exterior premises daily. Keep streets and access to site free of rubbish and debris.
 - 2. Do not allow exterior debris to enter customer areas.
 - 3. Sprinkle dusty debris with fine water mist to control accumulation of dust. Avoid puddling.

3.2 FINAL CLEANING OF CONSTRUCTION AREAS

- A. Execute final cleaning prior to final inspection in areas which are included in the scope of construction and disrupted in the course of completion of the work as follows.
 - 1. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.
 - 2. On exterior hard surfaces, do not use products or methods which may disturb natural weathering.
 - 3. Clear construction waste from grounds and landscaped areas.
 - 4. Clean construction waste from paved areas. If waste is silt or sand, use equipment fitted with a HEPA-rated filter.
 - 5. Remove tools, construction equipment, and machinery.
 - 6. Remove construction waste from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, and attics.
 - 7. Clean debris from roofs, gutters, downspouts, and drainage systems.
 - 8. Vacuum construction dust and debris with HEPA-rated filter equipment. Remove debris and excess nap from carpets; shampoo if visible soil or stains remain.



- 9. Thoroughly clean any new flooring.
- 10. Remove glazing compounds and other vision-obscuring materials from mirrors and reflective surfaces. Replace chipped or broken glass.
- 11. Remove labels that are not permanent.
- 12. Touch up exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored.
- 13. Remove excess lubrication, paint, and mortar droppings, and other foreign substances from mechanical and electrical equipment.
- 14. Clean stains from plumbing fixtures if exposed to water during construction.
- 15. Repair or replace damaged light fixture lenses and fluorescent lamps and ballasts.
 - a. Replacement fluorescent lamps and ballasts shall be furnished by Owner. All other light fixture parts shall be contractor provided.
- B. Leave premises ready for occupancy.
- 3.3 FIELD QUALITY CONTROL
 - A. Prior to Owner possession, conduct an inspection of entire premises with Construction Manager to verify conformance with the requirements herein.



BLANK PAGE



SECTION 01770 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes

- 1. Closeout Procedures.
- 2. Final Closeout Submittals.
- 3. Closeout Document Submission.
- 4. Record Letters of Conformance.
- 5. Letters of Certification.
- 6. Project Record Documents.
- 7. Operations and Maintenance Data.
- 8. Warranties and Bonds.

B. Related Sections:

1. Section 01740 – Cleaning. Requirements for final cleaning.

1.2 CLOSEOUT PROCEDURES

- A. Comply with closeout submittal requirements defined within individual Sections. Submittals procedures described herein shall apply unless otherwise described in individual Sections.
- B. When Contractor considers Work to be Substantially Complete, submit written certification to Walmart's Construction Manager as follows.
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected.
 - 3. Work is complete in accordance with Contract Documents.
 - 4. Work is ready for inspection.

1.3 FINAL CLOSEOUT SUBMITTALS

- A. Definition: Closeout submittals are submittals specified in the individual sections as "Closeout" and shall not be otherwise considered a closeout document regardless of the type of submittal. Submittals not classified as a closeout submittal shall be considered a regular submittal under the provisions of Section 01330. For example: Maintenance Data may, or may not, be classified as a closeout unless specifically identified as a closeout in the individual section Part 1 SUBMITTAL paragraph.
- B. Unless otherwise specified in the individual sections, submit closeout submittals to the Owner within 90 days after Substantial Completion of the Work.
- C. All closeout documents specified in the individual sections shall be submitted. Specific documents listed below shall be included separately in an Electronic Closeout Document Submission as specified hereinafter.
- D. Final closeout submittals shall be received and approved by Owner before final application for payment will be approved.

1.4 CLOSEOUT DOCUMENTS FOR OWNER FURNISHED EQUIPMENT

A. Closeout documents for Owner furnished equipment as required and specified in Appendix A shall be obtained directly from the Owner's vendor, supplier, or manufacturer. When, or if, documents are unavailable directly from the vendor, Contact Realty Procurement Services for assistance in obtaining the required documents.



1.5 ELECTRONIC CLOSEOUT DOCUMENT SUBMISSION

- A. Submit closeout documents electronically through Owner's online system. Documents included in Electronic Closeout Document Submission shall consist only of the items in the following numbered list. Note that all closeout documents are not necessarily included in the Electronic Closeout Document Submission. If any item is not applicable, include a "Not Applicable" sheet within the uploaded section of the Electronic Closeout Document Submission. The Electronic Contract Document Submission shall not be compiled based only on the brief description of each item in the following list. It is compulsory that the individual sections and references be examined to comprehend the full description of the specific item to be included. Include the following:
 - 1. Contractor's Statement of Warranty. (Reference Article 3.4 of the Construction Contract) (Reference form included at end of this section.)
 - 2. Copy of Certificate of Occupancy: Submit as Electronic Closeout Document by uploading an electronic file of the C of O to the <u>Walmart Quickbase Certificate of Occupancy Tracking Application</u>.
 - 3. Subcontractor Assignment: Submit a final list of Subcontractors used (Reference Article 3.5 of the Construction Contract.). Include the following information for each Subcontractor:
 - a. Daytime and after-hours telephone numbers.
 - b. Address.
 - c. Quarterly expenditure detail.
 - 4. Signed and notarized lien waivers from Contractor and all Subcontractors on the Walmart form (Reference Article 5.3 and associated Exhibits of the Construction Contractl). The waivers shall have no modifications or changes made thereon.
 - 5. Copies of Performance and Payment Bond. (Reference Article 7.5 of the Construction Contract)
 - 6. Consent of Surety to Final Payment: From Bonding Company. (Reference Article 5.3 of the Construction Contract.)
 - 7. Substantial Completion Punchlist: Building, Civil, and HVAC/refrigeration punch lists showing items completed and approved by Owner. (Reference Article 5.2 of the Construction Contract.)
 - 8. Asset Tag Data Collection Application: HVAC/Refrigeration equipment tag QR codes and data input into the application and confirmed by Walmart in accordance with Sections 15050, 15600 and 15700, as well as the deletion from the application of any demolished or removed equipment.
 - 9. Verification of transmittal to Store Manager of all Project Record Documents specified hereinafter and Operations and Maintenance Manuals. This shall be in the form of a Letter of Transmittal with a statement signed by the Store Manager verifying that the O&M manuals have been placed in the Electrical Distribution Center (EDC) by the Contractor and the placement witnessed by the Store Manager.
 - 10. Record Letters of Conformance: Include separate letter for each item listed below.
 - a. Contractor Quality Control (Section 01452).
- B. If Contractor fails to provide a fully completed Electronic Closeout Document Submission within 90 days after Substantial Completion of the Work, then Contractor agrees to pay Owner the sum of \$250.00 per day, as liquidated damages and not as a penalty, until the fully completed Electronic Closeout Document Submission is received and approved by Owner Contract Administration.

1.6 RECORD LETTERS OF CONFORMANCE

- A. Submit Record Letters of Conformance as a Closeout Submittal. By submitting Record Letter of Conformance, the Contractor declares that the product identified by manufacturer's name and model number is the product specified and is suitable for the intended use as defined within the Contract Documents and has been provided and placed in operational condition in accordance with the manufacturer's published instructions and the Contract Documents.
 - 1. Submit completed Record Letter of Conformance for each product selected as indicated within each Section.
 - 2. Fill-in required information on form and sign in ink by person authorized to sign on behalf of the Contractor.
 - 3. No modifications shall be made to the form.
 - 4. Record Letters of Conformance, when required, are located at the end of the respective Section.

1.7 LETTERS OF CERTIFICATIONS

A. Certify manufacturer's or installer's qualifications, conformance with tests or specified criteria, or other factors as required in individual specification sections.



- B. Submit supporting reference data, affidavits, and certifications as required.
- C. Number of Copies Required: Two.

1.8 PROJECT RECORD DOCUMENTS:

- A. Maintain on site, one set of the following record documents. Record actual revisions to the Work.
 - 1. Contract Drawings. (Building and Civil)
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other Modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
- B. Maintain Record Documents separate from documents used for construction.
- C. As-built Record Documents and Shop Drawings: Record as-builts shall be maintained and submitted for the primary purpose of recording the locations for concealed interior and exterior underground utilities as specified in the individual specifications. Legibly record actual measured horizontal and vertical locations of interior and exterior underground utilities and appurtenances, referenced to permanent surface improvements.
- D. Record required as-built information concurrent with construction progress. Do not permanently conceal work until required information has been recorded.
- E. At Project completion, the Contractor shall place the Record Documents (including Building and Civil Record Drawings, Specifications, Addenda, and Change Orders) enclosed in a plastic pipe tube (fixed cap at one end and a threaded-cap on the other end) for storage in the Electrical Room unless otherwise specified to be located in another location in the individual Sections. Placement shall be in the presence of and witnessed by the Store Manager.

1.9 OPERATION AND MAINTENANCE DATA

A. Operation and Maintenance data shall include a suitably bound set of descriptive literature, maintenance and operation data, and parts lists for each item of equipment provided under this Contract that will require maintenance or special operation procedures, including drawings, instructions, or manuals supplied with equipment furnished by others and installed under this Contract. Submittal of O&M data shall be in the form of placement by the Contractor of the bound set of O&M data in the Electrical Distribution Center (EDC) within the building. Do not include O&M data in the Closeout Document Book or submit to Walmart Contract Administration. Placement of documents shall be witnessed by the Store Manager and shall be at least 14 days prior to final inspection.

1.10 WARRANTIES AND BONDS

- A. Prior to Final Application for Payment, submit required warranties and bonds in Closeout Document Submission.
 - 1. Assemble documents from Subcontractors, suppliers, and manufacturers.
 - 2. For equipment put into use with Owner's acceptance during construction, submit within ten days after first operation, listing date of acceptance as start of warranty period.
 - 3. For items of Work delayed materially beyond Date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.



WALMART AFFIDAVIT OF TOTAL RELEASE AND CERTIFICATION OF ALL BILLS PAID

Replaced by Construction Contract Par 5.3.2 and Exhibits.



[CONTRACTOR'S LETTERHEAD]

CONTRACTOR'S STATEMENT OF WARRANTY

DATE:

PROJECT:

LOCATION:

OWNER: Walmart Stores, Inc. 702 SW 8th Street Bentonville, AR 72712

CONTRACT: Construction Agreement Between Walmart and Contractor, dated 20_____.

General Contractor hereby: (1) warrants that the Work for Project complies with Article 3.4 of the Construction Contract; (2) acknowledges that its warranty obligations under such Article 3.4 extends one year beyond the actual date of Substantial Completion of the Project; and (3) affirms, and acknowledges the enforceability of, all other warranties made by Contractor in the Contract.

Terms used but not defined herein shall have the meanings given to them in the above referenced Contract.

The undersigned Contractor hereby makes the certifications set forth herein to Walmart as of the _____day of , 20 .

| Witness: | | | | |
|-----------------------|--------------------|-------------|---|--|
| | | Contractor: | | |
| | | By: | | |
| Print Name: | | Name: | | |
| | | Title: | | |
| STATE OF COUNTY OF | | | | |
| | | | , 20 | |
| | sfactory evidence) | | aid, personally appeared, to me t (s)he had executed the forego | |

Notary Public My commission expires:



BLANK PAGE



SECTION 02023 - SELECTIVE SITE DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Procedures for demolition and removal of existing building elements.
- 2. Protection of existing construction.
- 3. Salvaged material and items.
- 4. Schedule of building demolition.
- 5. Disposal of demolished materials (non-hazardous and hazardous).
- B. Related Sections: The following list is intended to aid in locating work related to or dependent on the scope of Work in this Section. The list is included for information only and is not intended to be inclusive of all project requirements.
 - 1. Section 01100 Summary: Restrictions for Work within and adjacent to existing building areas.
 - 2. Section 01351 Regulatory Compliance.
 - 3. Section 01500 Temporary Facilities and Controls: Temporary protection and barriers. Removal and disposal of demolished materials.
 - 4. Section 01700 Execution Requirements.
 - 5. Section 01731 Cutting and Patching: Requirements and limitations for cutting and patching Work.
 - 6. Responsibility Matrix Contractor responsibility as shown on the Drawings for coordinating removal and salvage (where salvage is required) of Pickup equipment.

1.2 REFERENCES

- A. Occupational Safety and Health Administration (OSHA):
 - 1. OSHA 01926.1153 Respirable Crystalline Silica.

1.3 SYSTEM DESCRIPTION

- A. Selective Demolition Requirements:
 - 1. Perform demolition in construction sequence phases as required by the scope of Work and as agreed upon with the Owner's Construction Manager.
 - 2. Work necessary and required to facilitate the new construction indicated.
 - 3. Demolish so that construction, new and existing, can be performed and completed in accordance with construction documents.
 - 4. Visit the project site and become familiar with the existing conditions and project requirements.
 - 5. Clarify the scope of the Work under this Section including salvage material. The Owner will be responsible for removing materials and equipment which the Owner wishes to salvage prior to the beginning of this Work.
 - 6. Retain existing fire protection sprinkler system in place and active.
 - 7. Contractor is responsible for damage to existing structure and replacement or repair of damage.
 - 8. Repair, replace, or rebuild existing construction as required or as directed which has been removed, altered, or disrupted to allow for new construction. Correct existing construction to match adjacent construction, new or existing as specified in Section 01731.
- B. Regulatory Requirements:
 - 1. Conform to applicable code for demolition of structures, safety of adjacent structures, runoff control, and disposal.
 - 2. Comply with applicable local and state dust control regulations.
 - 3. Obtain required permits from authorities having jurisdiction and submit to Owner.
 - 4. Notify affected utility companies before starting work and comply with their requirements. Submit Certificates for severance of utility services and submit confirmation documentation of all utility company contacts to Owner.



- 5. Do not close or obstruct roadways, sidewalks, or hydrants without permits from authorities having jurisdiction and Owner's Construction Manager.
- 6. Conform to applicable regulatory procedures when discovering hazardous, contaminated, and universal waste materials.
- 7. Test soils around buried tanks for contamination (where buried tanks occur).

1.4 PROJECT CONDITIONS

- A. Owner will continuously occupy areas of building immediately adjacent to areas of selective demolition. Work within and adjacent to existing building areas will be restricted to areas and hours specified in Section 01700.
- B. Conditions of Structure:
 - 1. Owner assumes no responsibility for actual condition of items or structures to be demolished.
 - 2. Conditions existing at time of inspection for bidding purposes will be maintained by Owner insofar as practical.
 - 3. Variations within structure may occur by Owner's removal and salvage operations prior to start of selective demolition work.
- C. Traffic: Conduct selective demolition and debris removal in manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Provide traffic controls as specified in Section 01500.

1.5 QUALITY ASSURANCE

- A. Qualifications: Engage only personnel who can demonstrate not less that five (5) years successful experience in Work of similar character.
- B. Performance Criteria:
 - 1. Requirements of Structural Work: Do not cut structural work in a manner resulting in a reduction of loadcarrying capacity of load/deflection ratio.
 - 2. Operational and Safety Limitations: Do not cut operational elements and safety-related components in a manner resulting in a reduction of capacities to perform in a manner intended or resulting in a decreased operational life, increased maintenance, or decreased safety.
 - 3. Visual Requirements: Do not cut work which is exposed on the exterior or exposed in occupied spaces of the building in a manner resulting in a reduction of visual qualities or resulting in substantial evidence of the demolition work judged by the Architect to be cut and patched in a visually unsatisfactory manner.
 - 4. Loading: Do not superimpose loads at any point upon existing structure beyond design capacity including loads attributable to materials, construction equipment, demolition operations, and shoring and bracing.
 - 5. Vibration: Do not use means, methods, techniques, or procedures which would induce vibration into any element of the structure.
 - 6. Fire: Do not use means, methods, techniques, or procedures which would produce any fire hazard.
 - 7. Water: Do not use means, methods, techniques, or procedures which would produce water run-off, and water pollution. Refer to Section 01500 for related requirements.
 - 8. Air Pollution: Do not use means, methods, techniques or procedures which would produce uncontrolled dust, fumes, or other damaging air pollution.

1.6 UTILITY SERVICES

- A. Maintain existing utilities. Keep in service and protect against damage during demolition operations.
- B. Do not interrupt existing utilities serving occupied or used facilities except when authorized in writing by authorities having jurisdiction and approval by Owner's Construction Manager.
- C. Provide temporary services during interruptions to existing utilities as acceptable to governing authorities.
- D. Locate, identify, stub off, and disconnect utility services not to remain.



- E. Provide by-pass connections as necessary to maintain continuity of service to occupied areas of building.
- F. Provide advance notice to Owner if shut-down of service is necessary during change-over.

1.7 PROJECT SITE

- A. Indicated "Existing Construction" was obtained from existing drawings. Verify existing conditions and notify the Owner's Construction Manager of discrepancies before proceeding with the Work.
- B. Perform removal, cutting, drilling, etc., of existing work with extreme care, and use small tools in order not to jeopardize the structural integrity of the building.
- C. Occupancy: Contractor will have limited use of the facility during construction as specified in Section 01700.
- D. Condition of Structure: The Owner assumes no responsibility for the actual condition of portions of the structure to be demolished.
- E. Protection: Ensure that the safe passage of persons around the area of demolition is provided. Conduct operations to prevent damage to adjacent buildings, structures, and other facilities, and injury to persons.

1.8 SEQUENCING AND SCHEDULING

- A. Comply with Owner's approved schedule for sequence of operations for selective demolition work.
- B. Prior to beginning new Pickup installation, contact Owner's salvage firm to schedule existing equipment removal and/or retrieval. Owner's salvage firm points of contact are included in the Drawings.
- C. Include coordination for shut-off, capping, and continuation of utility services as required, together with details for dust and noise control.
- D. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.
- E. Conduct selective demolition work in manner to minimize disruption of Owner's normal operations.
- F. Provide Owner advance notice of demolition activities impacting Owner's normal operations as specified in Section 01700.

1.9 SHORING AND BRACING

A. Provide temporary shoring, bracing and supports for building structure as required for support of structure during demolition of existing structural elements and to prevent movement, settlement of existing building and adjacent buildings and facilities to remain.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Designated materials and equipment for re-installation: Carefully remove, store, and protect.
- B. Owner Salvage: Clean, store, and transfer designated materials and equipment to Owner, and obtain receipt. Wal-Mart salvage items include but are not limited to:
 - 1. Store fixtures.
 - 2. Storage racks.
 - 3. Store equipment.
 - 4. Salvage items as indicated on Drawings.



- C. Contractor's Salvage:
 - 1. Contractor shall verify with and obtain approval from Owner Construction Manager for all Contractor salvage items prior to their removal from site.
 - 2. Transport salvaged items from site as items are removed.
 - 3. Storage or sale of removed items on site not permitted.
- D. Replace materials scheduled for reuse which are damaged to the extent that they cannot be reused. Replace with equal quality material at no additional cost to the Owner as specified in Section 01700.
- E. Coordinate with the Owner on disposition of salvage items not scheduled for reuse, demolished materials, and equipment. Deliver salvaged materials, not reused, as directed, by or to the Owner.
- F. Prior to performing any demolition, coordinate with EMS contractor for EMS controls/equipment required to be reused or salvaged.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces and adjacent areas of Work under this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.
- B. Starting Work constitutes acceptance of existing conditions.

3.2 PREPARATION

- A. Ensure safe passage of persons around area of demolition.
- B. Erect temporary covered passageways as specified in Section 01500.
- C. Protect existing finish work to remain in place.
- D. Protect floors with suitable coverage.
- E. Construct temporary insulated solid dustproof partitions where noise or extensive dirt or dust operations are performed. Equip partitions with dustproof doors and security locks if required as specified in Section 01500.
- F. Provide temporary weather protection between demolition and removal of existing construction on exterior surfaces and installation of new construction to ensure no water leakage or damage occurs to structure or interior areas of existing building as specified in Section 01500.
- G. Cease operations and notify Owner's Construction Manager immediately if safety of structure appears to be endangered.
- H. Take precautions to support structure until determination is made for continuing operations.
- I. Cover and protect furniture, equipment, and fixtures to remain from soiling or damage when demolition work is performed in rooms or areas from which such items have not been removed.

3.3 DEMOLITION

- A. Demolition work within existing building shall be scheduled with the Owner's Construction Manager for approved times of day.
 - 1. Submit written request for approval to the Owner's Construction Manager 14 calendar days in advance of the date Contractor demolition work is required to begin in the existing building.



B. The Owner will remove or, under separate contract, have materials and equipment which the Owner requires removed, prior to commencement of Work under this Section with the exception of Pickup equipment to be salvaged within the scope of this Section. Coordinate scheduling of removal of Owner materials and equipment with Owner's Construction Manager and Store Manager.

C. Demolition:

- 1. Perform demolition work in systematic manner.
- 2. Demolish concrete and masonry in small sections.
- 3. Perform cutting or existing concrete and masonry construction with saws and core drills using proper dust control methods as specified herein. Do not use jack-hammers, except as specified herein. Do not use explosives.
 - a. Cut concrete and masonry at junctures with construction to remain, using masonry saws or hand tools, and make cuts straight and square with building.
- 4. Do not use powder-driven impact tools.
- 5. Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting walls, floor, or framing.
- 6. Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work.
- 7. Where selective demolition terminates at a "surface" or construction "to remain," completely remove all traces of material selectively demolished, including mortar beds. Provide smooth, even substrate transition as specified in Section 01731.
- 8. Demolition shall be carried out in a safe manner and in strict accordance with OSHA regulations.
- 9. The Contractor shall field verify the extent of demolition. The Work includes, but is not limited to, the demolition and removal of walls, doors, fixtures, plumbing, mechanical and electrical items including conduits and ductwork as shown on Drawing or as required for the installation of the new Work for a complete job.
- 10. When utilities are removed, cap and seal a minimum of 8" below finish floor or a minimum of 6" above finish ceiling.
- 11. When removing existing structural items, provide adequate shoring, bracing and support systems to keep the existing structure intact and in a safe condition.
- D. Environmental Controls:
 - 1. Use water sprinkling, temporary enclosures, and other proper control methods to maintain airborne dust and dirt below permissible levels.
 - 2. Comply with governing regulations pertaining to environmental protection.
 - 3. Do not use water when it may create hazardous or objectionable conditions, such as ice, flooding, or pollution.
 - 4. For work scheduled in this section including cutting and breaking of masonry, concrete slab below or on grade, walls, foundation work, or footings, use tools equipped with integrated water delivery systems that continuously feed water to the blade or a HEPA-rated filter dust collection vacuum system recommended by the manufacturer to maintain dust emissions below the permissible level.
- E. If unanticipated mechanical, electrical, or structural elements conflicting with intended function or design are encountered, submit written report of nature and extent of conflict to Architect and Owner's Construction Manager. Rearrange demolition schedule to continue job progress without delay.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

- A. Dispose of non-hazardous and universal waste demolished materials as specified in Regulatory Compliance Section 01351.
- B. Deposit waste materials, rubbish, and debris in waste containers.
- C. Do not allow waste materials, rubbish, and debris to accumulate and become an unsightly or hazardous condition.
- D. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution. Notify Owner's Construction Manager, in writing, of hazardous materials encountered.



E. Comply with the requirements of Par 3.6.2 of the Supplement for hazardous construction and demolition waste management and disposal.

3.5 POLLUTION CONTROLS

- A. Use temporary enclosures and other proper control methods to maintain airborne dust and dirt below permissible levels.
- B. Comply with governing authorities pertaining to environmental protection.
- C. Clean adjacent portion of the structure and improvement of dust, dirt and debris caused by demolition operations, as directed by the Owner Construction Manager and governing authorities. Return adjacent areas to conditions existing prior to the start of the work.
- D. Burning of trash, debris, or removed materials not permitted on site.

3.6 SCHEDULE OF SELECTIVE DEMOLITION

- A. Remove and dispose of existing building items and adjacent sitework items as required for Work and as indicated on Drawings.
- B. Sitework Adjacent to Building:
 - 1. Fencing, gates and concrete post footings.
 - 2. Asphalt concrete paving.
 - 3. Metal handrails and railings.
- C. Interior Walls and Partitions:
 - 1. Remove interior walls and partitions as indicated.
 - 2. Remove all top and bottom framing tracks and overhead braces of partitions being removed.
- D. Electrical Service:
 - 1. Remove abandoned electrical fixtures, conduit, boxes, and wiring as indicated.
 - 2. Remove electrical circuits including conduit as indicated.
- E. Lighting:
 - 1. Remove existing light fixtures as indicated or as required for new construction.

END OF SECTION



SECTION 07210 - BUILDING INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:1. Thermal Batt Insulation.
- B. Related Requirements: The following list is intended to aid in locating work related to or dependent on the scope of Work in this Section. The list is included for information only and is not intended to be inclusive of all project requirements.
 - 1. Section 09250 Gypsum Board: Metal furring.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. ASTM International (ASTM):
 - 1. ASTM E 84 Test Method for Surface Burning Characteristics of Building Materials.
 - 2. ASTM C 665 Specification for Mineral-Fiber Blanket Thermal Insulation (Duct Wrap or Equipment Insulation).
 - 3. ASTM C 991 Specification for Flexible Glass Fiber Insulation.
 - 4. ASTM C 1289 Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
 - 5. ASTM E 136 Behavior of Materials in a Vertical Tube Furnace at 750° C.

1.3 DEFINITIONS

- A. Concealed Insulation: Insulation concealed within framing system, both faces protected by finish material.
- B. Exposed Insulation: Insulation exposed within framing system, one or both faces unprotected.

1.4 DELIVERY, STORAGE AND HANDLING

A. Transport, handle, store, and protect products in compliance with the requirements of Section 01600 and manufacturer's recommendations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Provide products from one of the following manufacturers as specified in the Materials paragraph below:
 - 1. Atlas Roofing Corporation, Atlanta, GA (800) 933-1476.
 - 2. CertainTeed Corporation, Valley Forge, PA, (800) 233-8990.
 - 3. Dupont Performance Building Solutions, Wilmington, DE, (833) 338-7668.
 - 4. Firestone Building Products Company, Carmel, IN, (800) 428-4442.
 - 5. Johns Manville Commercial Building Insulations, Denver, CO, (800) 654-3103.
 - 6. Kingspan Insulation (a Division of Kingspan Group/Kingspan USA), Atlanta, GA, (800) 241-4402.
 - 7. Knauf Insulation (Knauf North America) (including Guardian Insulation products), Shelbyville, IN (317) 398-4434.
 - 8. Owens-Corning, Toledo, OH, (800) 438-7465.



2.2 REGULATORY REQUIREMENTS

A. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per ASTM E 84 for surface-burning characteristics and other methods specified. Identify materials with appropriate markings of applicable testing and inspecting agency.

2.3 MATERIALS

- A. Batt Insulation: ASTM C 665 mineral fiber blanket insulation.
 - 1. Unfaced Glass Fiber: Type I (blankets without membrane facing); with maximum flame-spread and smokedeveloped indexes of 25 and 50, respectively passing ASTM E 136 for combustion characteristics.
 - 2. Faced, Glass-Fiber: Type III (blankets with reflective membrane facing), Class A (membrane-faced surface with a flame-spread index of 25 or less); Category 1 (membrane is a vapor barrier), faced with vapor-retarder membrane on 1 face.
 - 3. Provide batt insulation by one of the following manufacturers:
 - a. CertainTeed Corporation.
 - b. Johns Manville.
 - c. Knauf/Guardian Insulation.
 - d. Owens Corning.

2.4 ACCESSORIES

- A. Tape: Polyethylene or polyester self-adhering type; two inches wide.
- B. Adhesive: Waterproof type, acceptable to manufacturer of insulation board. Adhesive VOC shall be within the limits of not greater than 70 g/L in accordance with the California's South Coast Air Quality Management District (SCAQMD) Rule No. 1168.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Batt Insulation:
 - 1. Verify adjacent materials are dry and ready to receive installation.
 - 2. Verify mechanical and electrical services within walls have been installed and tested.
- B. Board Insulation:
 - 1. Verify substrate and adjacent materials and insulation boards are dry and ready to receive insulation and adhesive.
 - 2. Verify insulation boards are unbroken, free of damage.

3.2 INSTALLATION - BATT INSULATION

- A. Install batt insulation in accordance with manufacturer's instructions, without gaps or voids.
- B. Trim insulation neatly to fit spaces. Use batts free of damage. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within the plane of insulation.
- C. Install insulation with factory applied membrane facing warm side of building spaces. Lap ends and side flanges of membrane. Attach insulation in place to framing; tape seal butt ends and lapped side flanges. Tape seal tears or cuts in membrane.

3.3 SCHEDULES

A. Provide insulation types as scheduled below and as indicated on Drawings.



| CONDITION | TYPE OF INSULATION | THICKNESS |
|---------------------------|-------------------------------------|--|
| Exterior Wall, Soffits, & | Faced Batt Insulation | 3-1/2 inches (R=11) or 6 inches (R=19) |
| Ceiling | | as shown; or as required to fill cavity. |
| Interior Partitions | Unfaced Mineral or Glass Fiber Batt | 3-1/2 inches or 6 inches as Shown. |

END OF SECTION



BLANK PAGE



SECTION 07900 - JOINT SEALERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Joint sealants for interior vertical surfaces and horizontal nontraffic surfaces, except as otherwise specified.
- B. Related Requirements: The following list is intended to aid in locating work related to or dependent on the scope of Work in this Section. The list is included for information only and is not intended to be inclusive of all project requirements.
 - 1. Section 01351 Regulatory Compliance.
 - 2. Division 2: Joint fillers and sealants for joints in sidewalk and pavement not adjacent to building.
 - 3. Section 09900 Paints and Coatings: Protection of wall joints from painting prior to sealing.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. ASTM International (ASTM):
 - 1. ASTM C920 Specification for Elastomeric Joint Sealants.
 - 2. ASTM C1330 Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.
 - 3. ASTM D 1056 Flexible Cellular Materials-Sponge or Expanded Rubber.
 - 4. ASTM E84 Test Method for Surface Burning Characteristics of Building Materials
- C. Occupational Safety and Health Administration (OSHA):
 1. OSHA 01926.1153 Respirable Crystalline Silica.

1.3 ENVIRONMENTAL REQUIREMENTS

- A. Minimize dust emissions and provide equipment that suppresses dust.
- 1.4 DELIVERY, STORAGE, AND HANDLING
 - A. Transport, handle, store and protect products in compliance with the requirements of Section 01600.

1.5 PROJECT CONDITIONS

- A. Do not install solvent curing sealants in enclosed building spaces.
- B. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.
- C. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 - PRODUCTS

2.1 ELASTOMERIC SEALANTS - GENERAL

A. Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.



2.2 ELASTOMERIC SEALANTS (APPLICATIONS OTHER THAN EXTERIOR WALL)

- A. Suitability for Contact with Food: Where sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600. Sealants identified as (Non-USDA) shall not be used in food preparation areas.
- B. Manufacturers:

1.

2.

- 1. <u>Sonneborn Products</u> by BASF Building Systems. (800) 433-9517 or (952) 496-6000.
- 2. Dap Products, Inc., (800) 325-6180.
- 3. <u>Dow Corning Corporation.</u> Mary Altenburg, (989) 496-7767.
- 4. Euclid Chemical Co., (877) 438-3826.
- 5. <u>GE Silicones</u> & GE Sealants and Adhesives. (Momentive Performance Materials) (877) 943-7325.
- 6. <u>HI-TECH Systems</u> (800) 454-5530.
- 7. <u>Metzger/McGuire</u>, (800) 223-6680.
- 8. <u>Master Builders Solutions, LLC</u>. Contact: Zach Duggan, (612) 590-3719, <u>zachary.duggan@mbcc-group.com</u> or Chris Lebo, (216) 318-2529, <u>chris.lebo@mbcc-group.com</u>.
- 9. Pecora Corporation. (215) 796-1401, Keith Waters.
- 10. <u>Tremco Sealant</u>/Weatherproofing Division. (800) 841-3778.
- 11. <u>VersaFlex Inc.</u>, (913) 321-1416.
- 12. <u>W. R. Meadows, Inc.</u>, (847) 214-2100.
- C. Polyurethane and Hybrid Sealants (USDA Certified, unless otherwise noted):
 - Hybrid Sealant #1 (P1): ASTM C920, Type S, Grade NS, Class 50, single component.
 - a. MasterSeal NP 100, by Master Builders Solutions.
 - b. Vulkem 116 or Dymonic FC by Tremco.
 - c. Dynatrol I-XL or Dynatrol I-XL Hybrid, by Pecora.
 - Polyurethane Sealant #2 (P2): ASTM C920, Type S, Grade P, Class 25, single component.
 - a. MasterSeal SL 1, by Master Builders Solutions.
 - b. Vulkem 45 (Non-USDA), by Tremco.
 - c. Urexpan NR-201, by Pecora.
 - 3. Polyurethane Sealant #3 (P3): ASTM C920, Type M, Grade NS, Class 50, multi-component.
 - a. MasterSeal NP2, by Master Builders Solutions.
 - b. Dymeric 240FC, by Tremco.
 - c. Dynatrol II (Non-USDA) by Pecora.
- D. Silicone Sealants: USDA compliant, unless otherwise noted.
 - 1. Silicone Sealant #1 (S1): ASTM C 920, Type S, Grade NS, Class 25.
 - a. Spectrem 1, Spectrem 2 or Spectrem 3 by Tremco.
 - b. 791 Silicone Perimeter Sealant (Non-USDA) by Dow.
 - c. 864 or 890 by Pecora.
 - d. MasterSeal NP 150 by BASF Sonneborn.
 - e. SilPruf SCS2000 (Non-USDA) by GE.
 - f. Titebond 100% Silicone Sealant by Franklin International.
 - 2. Silicone Sealant #2 (S2): ASTM C 920, Type S, Grade NS, Class 25, mildew resistant.
 - a. Tremsil 200, by Tremco.
 - b. 898 by Pecora.
 - c. 786 Silicone Sealant (Non-USDA) by Dow.
 - d. Sanitary SCS1700 (Non-USDA) by GE.
- E. Sealant Color:
 - 1. In interior and exterior exposed areas, match color of adjacent paint color finish or other adjacent finish color if proprietary color is not otherwise specified herein.
 - 2. In joints where plumbing fixtures meet adjacent floor and wall finishes, match color of plumbing fixture.
 - 3. Use clear, colorless sealant where applied to stainless steel surfaces.



2.3 POLYURETHANE EXPANDING FOAM SEALANTS

- A. Polyurethane Expanding Foam Sealant #1 (EF1): Closed-cell foam and non-flammable propellant; urea formaldehyde-free, CFC-free; UL Class 1 Foam with flame spread of 20 and smoke developed of 25 as tested in accordance with ASTM E84.
 - a. Touch'n Seal Quick Cure, by Dap Products.
 - b. Space Invader by GE Sealants & Adhesives, (877) 943-7325.

2.4 JOINT FILLER (INTERIOR AND EXTERIOR CMU WALL)

A. Preformed Control Joint Filler:

1.

- Regular Joint: 2-5/8 inches by 1-1/2 inches; rubber.
 - a. RS-STANDARD Control Joint by Hohmann & Barnard, Inc., Hauppauge, NY (800) 645-0616.
 - b. Masonry Control Joint No. 571 by Greenstreak, St. Louis, MO (800) 325-9504.
- 2. Tee Joint: 2-5/8 inches by 1 inch; rubber.
 - a. RS-TEE Control Joint by Hohmann & Barnard.
 - b. Masonry Control Joint No. 572 by Greenstreak.
- B. Expansion Joint Filler (Compression Seal):
 - 1. <u>Backerseal</u> (Grayflex) expanding precompressed foam by Emseal Joint Systems, Ltd., Westborough, MA (800) 526-8365.
 - 2. Willseal 600 polyurethyene foam joint sealing tape by Willseal USA, Pelham, NH (800) 438-0684.

2.5 JOINT-SEALANT BACKING (INTERIOR AND EXTERIOR CMU WALL)

- A. Sealant Backing (Backer Rod): Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
 - 1. Cylindrical Sealant Backings: Closed or bi-cellular backer rod conforming to ASTM C 1330, Type B or Type C, as approved by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance. The use of ASTM C Type O open cell backer rod is prohibited.
 - a. Backer Rod for Exterior Masonry: Closed cell foam, oversized 50 percent; self-expanding.
 - 2. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056,
- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.6 INTERIOR SLAB ON GRADE JOINT SEALANT MATERIALS

- A. Preformed Expansion (Isolation) Joint Filler Strips (PMEJ): Flexible closed-cell synthetic foam expansion joint strips, non-extruding, for full depth of concrete.
 - 1. Ceramar Flexibe Foam Expansion Joint, by W.R. Meadows.
 - 2. Deck-O-Foam Expansion Joint Filler, by W.R. Meadows
- B. Elastomeric Joint Materials:
 - 1. Sealant:
 - a. Polyurethane Sealant: No. 2 (P2) as specified above.
 - b. Color: Match color of adjacent exposed surface of concrete slab.
 - c. Sealant shall be compatible with construction material placed against it.
 - 2. Joint Back-Up Material:
 - a. Polyethylene Foam, 100% closed cell.
 - b. Material shall be compatible with construction material to be placed against it such as tile adhesive.
- C. Polyurea Joint Filler (PY1): Rapid setting, two-component polyurea polymer liquid of 100% solids content, Shore A Hardness 85 to 92, compatible with construction material placed against it. (USDA compliant, unless otherwise noted.)
 - 1. <u>MasterSeal CR 100</u>, by Master Builders Solutions.



2.7 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

2.8 SUBSTITUTIONS

A. Comply with the requirements of Section 01600.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces and joint openings are ready to receive work and field measurements are as indicated on Drawings.
- B. Beginning of installation means installer accepts existing substrates.

3.2 INTERIOR SLAB ON GRADE JOINT SEALING AND FILLING

- A. General:
 - 1. Seal/fill contraction, isolation and construction joints in floor slabs and pavements, unless otherwise indicated on Drawings or specified herein.
 - 2. Unless noted otherwise, use polyurea joint filler in floor slab contraction and construction joints.
 - 3. Use elastomeric joint sealant in isolation joints and textured concrete joints.
 - 4. Use pavement sealant in pavement's contraction, construction, and isolation joints.
 - 5. Do not seal joints with materials specified herein when below relatively impervious floor finish material, such as PVC flooring, sheet rubber, wood, epoxy topping; refer to floor finish specification for joint sealing requirements.
 - 6. Do not place polyurea joint filler under resilient flooring or carpet. Reference Section 09650 or 09680 for joint subfloor filler materials and placement under floor covering.

B. Cleaning:

- 1. Immediately prior to sealing/filling, clean joints to full depth of sealant/filler in accordance with manufacturer's recommendation.
- 2. Use vacuum with HEPA-rated filter to remove loose dirt, debris, saw laitance, and other foreign material from joint.
- 3. Clean inner joint walls mechanically using one of the following HEPA-rated filter tools as recommended by the manufacturer for maintaining dust emissions below the permissible level
 - a. Humpback Dustless Joint Saw by Joe Due Blades & Equipment, <u>www.joedue.com.</u>
 - b. Dust Buggy by U.S. Saws, Santa Ana, CA (866) 987-7297.
 - c. <u>Gorilla Concrete Tools</u> GCT-10 or GCT-9 Silverback by OBHC, Inc., Columbia Station, OH, (440) 236-5112.
- 4. Clean joint walls to the full depth of saw cuts and 2 inch minimum depth in construction joints that may not have been saw cut to create a support shelf.
- 5. Remove form release agent, curing compound, or other components.
- C. General Installation:
 - 1. Commence placing floor joint sealant / filler no sooner than 30 days after first placement of concrete.
 - 2. If joint is wet or damp, allow joint to dry for 72 hours prior to filling.
 - 3. Delay floor joint sealing / filling operations until facility's environmental systems have been placed in operation for 14 days.
 - 4. Mix and install sealant and filler in accordance with manufacturer's recommendations. Use primer if recommended for specific application.
 - 5. Choke off shrinkage crack if necessary at bottom of contraction joint or void below construction joints by the following methods.



- a. Saw Cut Contraction Joints:
 - 1) Place 1/8 inch to 1/4 inch (maximum) layer of dry-bagged silica sand in joint to be epoxy filled. Do not use compressible backer rod. Use methods in handling sand to maintain dust emissions below the permissible level.
- b. Construction Joints Through Slab: Fill by inserting compressible backer rod to a minimum depth of 2 inches below slab surface.
- 6. Do not allow sealant / filler to extend over joint edges in finished condition.
- D. Elastomeric Joint Sealant Installation:
 - 1. Use joint back-up material.
 - 2. Tool surface to provide smooth, attractive appearance and geometry recommended by sealant manufacturer.
- E. Joint Filler Installation
 - 1. Cleaning: Immediately prior to filling, clean and prepare joint bottom and sidewalls as specified herein for general cleaning.
 - 2. Do not use joint back-up material (i.e. backer rod, sand, etc.) except below bottom of saw cut in construction joints. Provide a minimum joint filler depth of 2 inches.
 - 3. Install test sample of the polyurea joint filler to determine if filler will leave a stain, shadow, or film on slab surface.
 - 4. If test sample reveals stain, shadow, or film, use joint filler stain preventing film at joints to receive polyurea joint filler.
 - 5. Fill joint using single pass method. Fill joint full depth from bottom to top, leave slight crown at slab surface.
 - 6. Add extra filler prior to filler set if needed to prevent depressed areas. If concave filler is already set, abrade with wire wheel or similar tool to minimum depth of 1/4" below surface prior to refilling.
 - 7. Razor off crowned filler flush with floor surface after filler has sufficiently set.
 - 8. Remove stain preventing film (if used). Film shall be removed by joint filler installer immediately after shaving joint filler.
 - 9. One week prior to Grand Opening, refill joints if:
 - a. Joint filler sidewall separation or splitting exceeds 1/32 in.
 - b. Joint filler surface profile is concave, crowned, or chattered or if voids occur.
 - 10. Follow manufacturer's requirements for joint preparation for proper adhesion.
- F. Isolation Joints: Form isolation joints of preformed joint-filler strips (PMEJ) where indicated.
 - 1. Extend joint fillers full width and depth of joint.
 - 2. Terminate joint filler or otherwise provide joint sealant cavity of not less than 1/2 inch or more than 1 inch below finished surface if joint sealant is indicated.
 - 3. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
 - 4. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 - 5. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

3.3 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.4 SEALANT LOCATION SCHEDULE

A. Provide sealants in accordance with the following schedule. Joint sealing required by the drawings or required for a complete and proper installation but not listed in the following schedule shall be sealed as necessary regardless of whether shown or scheduled. Such joints not shown or scheduled shall be sealed with sealants consistent with specified materials or as recommended by the manufacturer for the specific application.



| | MATERIAL TO | MATERIAL | JOINT | SEALANT TYPE | |
|-------|--|--------------------------------------|----------|--------------------|--|
| | | | WIDTH | | |
| FLOOR | Concrete Floor | Concrete Floor | | | |
| | Contraction and Construction Joint | | 1/4" | See Materials Par. | |
| | Expansion Joint | | 3/4" | Same | |
| | Isolation Joint | | See | Same | |
| | | | Dwgs | | |
| | Concrete Curb In Grocery | Concrete Floor | | Same | |
| | | | | | |
| | Ceramic Tile Expansion Joints | Ceramic Tile | Ref Mfr. | P1 or P3 | |
| | Quarry Tile Expansion Joints | Quarry Tile | Ref Mfr. | P1 or P3 | |
| | Floor Joints Beneath Floor Finish | | | See Section 09650 | |
| | Materials (VCT or PVC Flooring) | | | | |
| | Transition Strip (Korlyte) | Concrete Slab | T | PY1 | |
| | | | | | |
| | Mop Sink | Floor | - | P1 or P3 | |
| | Sanitary Cove Base (SCB) | Floor | | See Section 09655 | |
| | Wood Base | Concrete Floor | | P1 or P3 | |
| | Structural Steel Column | VCT/PVC | | P1 | |
| | | | | 1 | |
| VALLS | CMU Wall Control Joint, 3/8" | CMU Wall | 3/8" | P1 | |
| | CMU Wall Expansion Joint, 1" | CMU Wall | 1" | P1 | |
| | Rated Gypsum Board Wall Control Joint | Rated Gypsum Board Wall | | | |
| | Rated Gypsum Board Wall | Metal Roof Deck or Rated | | See Section 07840 | |
| | Rated Gypsulli Board wall | CMU Wall | | Firestopping | |
| | Gypsum Board | CMU Walls | 3/8" | P1 (Use edge trim, | |
| | Gypsulli Board | Civio walls | 5/8 | ref. Section 09250 | |
| | Ceramic Tile | Wood or Galvanized Steel | | P1 or P3 | |
| | | Base Trim | | 110115 | |
| | Ceramic Tile | Stainless Steel | | S1 or S2 | |
| | Ceramic Tile | Ceramic Tile | | P1 or P3 | |
| | | | | | |
| | Fiber Reinforced Wall Panel (FRP) | Galvanized Steel Base | | See Section 06610 | |
| | | Trim | | | |
| | Fiber Reinforced Wall Panel (FRP) | Ceramic Tile | | See Section 06610 | |
| | | | | | |
| | Stainless Steel Corner Guards | Ceramic Tile | | S1 or S2 | |
| | Stainless Steel Corner Guards | Wall | | S1 or S2 | |
| | Plastic Base | Grocery Equipment Wall | | P1 or P3 | |
| | Plastic Base | Ceramic Tile or Gypsum Board Wall | | P1 or P3 | |
| | Plastic Base | Concrete or Quarry Tile | | P1 or P3 | |
| | | Floor | | | |
| | Sanitary Cove Base (SCB) | Wall | | See Section 09655 | |
| | Wood Base | Plywood Wainscot | | P1 | |
| | Toints shown on the day from (a) | | | EE1 | |
| | Joints shown on the drawings to be | | | EF1 | |
| | sealed with Expanding Foam Sealant | | | | |
| | Scalalit | | I | | |



| INTERIOR JOI | NTS | | | |
|---------------------------|--|--|----------------|-------------------|
| | MATERIAL TO | MATERIAL | JOINT WIDTH | SEALANT TYPE |
| WALL PENETRA- TIONS | Aluminum Storefront Frame | Alum Storefront Frame, CMU, or Gypsum Board | 1/4" | P1 |
| | Aluminum Storefront Sill | Gypsum Board Wall or Cast Concrete Shapes | 1/4" | P1 |
| | | | | |
| | Hollow Metal Door Frame | CMU or Gypsum Board | 1/4" | P1 |
| | | | | |
| | Steel Corner Angle Frame | CMU Wall | 1/4" | P1 |
| | Steel Ding on Conduit Through | CMU Wall | 1/2" | D1 |
| | Steel Pipe or Conduit Through Steel Pipe or Conduit Through | Gypsum Board | 1/2" 1/4" | P1 P1 |
| | Steel Tipe of Conduit Through | Oypsull Doald | 1/4 | 11 |
| | PVC or Copper Pipe Through | CMU or Gypsum Board | 1/2" | P1 |
| | Steel, PVC, or Copper Pipe Through | Rated CMU or Gypsum Board Wall | | See Section 07840 |
| | Steel Conduit Through | Rated CMU or Gypsum Board Wall | | See Section 07840 |
| | | | | |
| COUNTER | Plastic Laminate Counter Tops | Gypsum Board or Plastic Laminate Walls | | S2 |

END OF SECTION



BLANK PAGE



SECTION 09250 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Interior non load-bearing steel stud partition framing 20 (30 mil) gage and lighter (designed for 5 pounds per square foot uniform load perpendicular to partition).
 - 2. Suspension system for interior gypsum ceilings
 - 3. Gypsum board.
 - 4. Gypsum sheathing.
 - 5. Backer materials: Backer panels for wall tile and plastic wall panels.
- B. Related Sections: The following list is intended to aid in locating work related to or dependent on the scope of Work in this Section. The list is included for information only and is not intended to be inclusive of all project requirements.
 - 1. Section 01351 Regulatory Compliance.
 - 2. Section 05400 Cold Formed Metal Framing: Load-bearing steel stud exterior and interior wall framing 20 gage and heavier and ceiling joists. Cold formed deep leg track for interior nonload-bearing steel stud partitions. Metal stud header wall framing and bracing supported from roof structure.
 - 3. Section 07210 Building Insulation: Thermal and acoustical insulation.
 - 4. Section 09900 Paints and Coatings: Paint finish applied to gypsum board.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the test by these basic designations only.
- B. American Iron and Steel Institute (AISI): AISI S 220: Cold-Formed Steel Framing Nonstructural Members.
- C. ASTM International (ASTM):
 - 1. ASTM A 653 Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
 - 2. ASTM C 475 Joint Compound and Joint Tape for Finishing Gypsum Board.
 - 3. ASTM C 557 Adhesives for Fastening Gypsum Wallboard to Wood Framing.
 - 4. ASTM C 645 Nonstructural Steel Framing Members.
 - 5. ASTM C 754 Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
 - 6. ASTM C 840 Application And Finishing Of Gypsum Board.
 - 7. ASTM C 954 Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases to Steel Studs From 0.033 inches to 0.112 inches in Thickness.
 - 8. ASTM C 1002 Steel Self-Piercing Tapping Screws For The Application Of Gypsum Panel Products Or Metal Plaster Bases To Wood Studs Or Steel Studs.
 - 9. ASTM C 1177 Glass Mat Gypsum Substrate for Use as Sheathing.
 - 10. ASTM C 1178 Coated Glass Mat Water-Resistant Gypsum Backing Panel.
 - 11. ASTM C 1278 Fiber-Reinforced Gypsum Panel (Backer).
 - 12. ASTM C 1288 Fiber-Cement Interior Substrate Sheets (Backer).
 - 13. ASTM C 1396 Gypsum Board.
 - 14. ASTM C 1629 Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels.
 - 15. ASTM C 1658 Glass Mat Gypsum Panels.
 - 16. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surfaces of Interior Coatings in an Environmental Chamber.
 - 17. ASTM D 3274 Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation.



- D. Gypsum Association (GA):
 - GA-214 Levels of Gypsum Board Finish. 1.
 - 2. GA-216 - Application and Finishing of Gypsum Board.
 - 3. GA-234 - Control Joints For Fire-Resistance Rated Systems.
 - GA-600 Fire Resistance and Sound Control Design Manual. 4.
- E. Occupational Safety and Health Administration (OSHA): OSHA 01926.1153 Respirable Crystalline Silica.
- F. Steel Stud Manufacturer's Association (SSMA): Member listing
- G. Steel Framing Industry Association (SFIA): Member listing
- 1.3 ENVIRONMENTAL REQUIREMENTS
 - A. Minimize dust emissions and provide equipment that suppresses dust.
 - B. Dispose of construction waste in accordance with the requirements of Section 01351 Regulatory Compliance.
- 1.4 QUALITY ASSURANCE
 - Installer Qualifications: Company specializing in the installation of light gage metal framing components and A. gypsum wallboard with minimum 5 years documented experience.
- 1.5 DELIVERY, STORAGE, AND HANDLING
 - A. Section 01600 - Product Requirements: Transport, handle, store, and protect products.
 - B. Protect metal framing from corrosion, deformation, and other damage during delivery, storage, and handling.
 - C. Store and protect metal framing with weatherproof covering, and ventilate to avoid condensation.
 - D. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.
 - E. Stack gypsum board flat to prevent sagging.
- 1.6 PROJECT CONDITIONS OR SITE CONDITIONS
 - Environmental Requirements: Establish and maintain environmental conditions for applying and finishing gypsum A. board in conformance with GA-216.

PART 2 - PRODUCTS

2.1 **GENERAL**

City of Puyallu ment & Permitting S ISSUED PERMIT

Planning Public Wo

PRCTI20230108

Building

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency. Products used in the assembly shall carry a classification label from a testing laboratory acceptable to Authority Having Jurisdiction.
- 2.2 FRAMING MATERIALS
 - A. Manufacturer: Subject to compliance with requirements, provide products of one of the following:
 - ClarkDietrich, West Chester, OH (513) 870-1100. 1.
 - 2. The Steel Network, Raleigh, NC (888) 474-4876.
 - 3. Cemco Steel, Ft. Worth, TX (817) 568-1525.
 - Telling Industries, LLC Willoughby, OH (866) 372-6384. 4.



- 5. Marino/WARE, South Plainfield, NJ (800) 627-4661.
- 6. Other manufacturers listed as a member of SSMA or SFIA.
- B. Recycled Content of Steel Products: Provide steel framing products with an average recycled content of steel products such that the postconsumer recycled content plus 1/2 of preconsumer recycled content is not less than 25 percent.
- C. Interior Nonload-Bearing Partition Framing: AISI S 220, ASTM C 645 and C 754; galvanized sheet steel, channel shaped, 1 ¼-inch flange width, punched for utility access, depth and gages as indicated below unless otherwise indicated on Drawings.

| Stud Depth | Partition Height/Unsupported Length* | Minimum Gage (mil) | Max Stud Spacing (Center-to-Center) |
|--|--|--------------------|--|
| 3-5/8 inches | Up to 8'-0" | 25 gage (18 mil) | 24-inches |
| 3-5/8 inches | Up to 13'-4" | 20 gage (30 mil) | 24-inches |
| 3-5/8 inches | 13'-4" to 16'-3" | 20 gage (30 mil) | 16-inches |
| 6-inches | Up to 18'-9" | 20 gage (30 mil) | 24-inches |
| 6-inches | 18'-9" to 22'-11" | 20 gage (30 mil) | 16-inches |
| *Heights/Lengths outside these limits will require additional bracing. Reference Drawings for details. | | | |

- D. Contractor's Option: In lieu of traditional framing members, Contractor may use modified framing members of equivalent thickness for 20 and 25 gage metal such as ProSTUD Drywall Framing System by ClarkDietrich or comparable framing members by other manufacturers listed as members of SSMA, or SFIA.
- E. Partition Floor Tracks and Runners: AISI S 220 and ASTM C 645; galvanized sheet steel, channel shaped, same depth and gage as studs, tight fit; solid web.
- F. Deflection (Capture) Track: Deep leg track at roof deck or structure to provide vertical travel as indicated.
 - 1. Contractor's Option: Manufacturer's standard double or single deflection track as follows:
 - a. VertiClip or VertiTrack by The Steel Network. If this option is used, track may be 20 gage (30 mil) for all stud sizes.
 - b. FastTop Clip by ClarkDietrich.
 - c. MaxTrak or BlazeFrame by ClarkDietrich
 - d. SLP-TRK by Brady Innovations as distributed by CEMCO.
 - e. Comparable modified deflection tracks by other manufacturers listed as members of SSMA, or SFIA.
- G. Furring and Bracing: AISI S 220; galvanized sheet steel.
 - 1. Studs: ST25 2-1/2 inch deep, 25 gage (18 mil).
 - 2. Studs: ST25 3-5/8 inch deep, 25 gage (18 mil).
 - 3. Resilient Furring Channels: 1/2 inch deep x 2-1/2 inch wide, 25 gage (18 mil)
 - 4. Hat-Shaped Channels: 7/8 inch deep x 1-1/2 inch wide, 25 gage (18 mil).
 - 5. Cold-Formed Channels: 3/4 x 1/2 inch and 1-1/2 x 17/32 inch, 16 gage (54 mil).
 - 6. Z Furring Channel: 1-1/2 inch deep, 25 gage (18 mil).
 - 7. Clip Angles: 2 inches x 2 inches x 16 gage (54 mil) x 1/4 inch less than stud width.
 - 8. Contractor's Option: In lieu of cold-formed channels and clip angles for horizontal wall bridging, Contractor may provide one of the following:
 - a. Bridge Bar by the Steel Network.
 - b. TradeReady Spazzer 9200 Bridging and Bracing Bar by ClarkDietrich.
 - c. Comparable products by other manufacturers listed as members of SSMA, or SFIA.
- H. Ceiling Joists, Tracks, Headers at Partition Openings, Framing Attachment Angles, and Fasteners: Specified in Section 05400.
- I. Partition Framing Fasteners: Corrosion-resistant self-drilling self-tapping steel screws.
 - 1. 22 (27 mil) Gage Framing: ASTM C 1002; 3/8 inch Type S pan head.
 - 2. 20 (30 mil) Gage and Heavier Framing: ASTM C 954; 5/8 inch Type S-12 low-profile head.



- J. Bracing to Framing Attachment Angle Fasteners: #12 diameter pan head corrosion-resistant self-drilling screws.
- K. Partition Floor Track Anchorage Device: Low velocity powder-actuated drive pins; minimum 0.138 inch shank diameter x 1-1/2 inch shank length with 7/8 inch diameter washer.
 - 1. Hilti PAT System using X-C 37 P8S36 Pins, by Hilti, Tulsa, OK, (800) 879-8000.
 - 2. Ramset/Red Head System using 1500SD Pins, by ITW Ramset/Redhead, Wood Dale, IL, (630) 350-0370.
- L. Wall Furring to Concrete or Masonry Wall Fasteners: Hex head sleeve anchors; minimum 1/4 inch diameter x minimum 1-1/8 inch embedment.
 - 1. Slv Anch HLC-HX 5/16 x 2-5/8, by Hilti, Tulsa, OK, (800) 879-8000.
 - 2. Dynabolt HN-1413, by ITW Ramset/Redhead, Wood Dale, IL, (708) 350-1558.
- M. Furring Channel to Masonry or Concrete Surface Fasteners: Low velocity powder-actuated drive pins of size to suit application.
- N. Flat Straps and Backing Plates: ASTM A 653; galvanized sheet steel, gage, shape, and configuration as indicated on Drawings.
 - 1. Contractor's Option: In lieu of 2-inch continuous metal strap, Contractor may provide one of the following:
 - a. Bridge Bar by The Steel Network.
 - b. TradeReady Spazzer 9200 Bridging and Bracing Bar by ClarkDietrich.
 - c. Comparable products by other manufacturers listed as members of SSMA, or SFIA.
- O. Suspension System:
 - 1. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, double strand of 16 ga wire.
 - 2. Wire Hangers: ASTM A 641/A, Class 1 zinc coating, soft temper, 8 ga.
 - 3. Carrying Channels: AISI S 220; galvanized sheet steel, 1-1/2 x 17/32 inch, 16 gage (54 mil).
 - 4. Furring Channels: AISI S 220; galvanized, hat-shaped, rigid furring channels, 7/8 inch deep.
 - 5. Furring Channel Clips: AISI S 220; galvanized sheet steel, 1-1/2 inch.

2.3 GYPSUM BOARD MATERIALS

- A. Manufacturer: Subject to specified requirements, provide gypsum board and accessories by the following manufacturers:
 - 1. <u>American Gypsum Company</u>, Dallas, TX (800) 545-6302.
 - 2. <u>CertainTeed Corp</u>, Tampa, FL. (800) 233-8990.
 - 3. Georgia-Pacific, Atlanta, GA. (800) 284-5347.
 - 4. James Hardie Building Products Inc., Chicago, IL (888) 542-7343.
 - 5. <u>National Gypsum Company</u>, Gold Bond Building Products, Charlotte, NC. (800) 628-4662.
 - 6. <u>USG Corporation</u>, Chicago, IL. (800) 850-3839.
 - 7. <u>The Steel Network</u>, Raleigh, NC (888) 474-4876. (Accessories only)
 - 8. <u>ClarkDietrich</u>, West Chester, OH (513) 870-1100. (Accessories only).
 - 9. Fry Reglet, (800) 237-9773. (Accessories only)
 - 10. Other manufacturers listed as members of SSMA, or SFIA.
- B. Standard Gypsum Board: Sheetrock, ASTM C 1396
 - 1. Thickness: $\frac{1}{2}$ inch and $\frac{5}{8}$ inch thick
 - 2. Length, Long Edges, Cut: Maximum permissible length, edges tapered, ends square cut square.
 - 3. Provide one of the following:
 - a. Gypsum Wallboard by American Gypsum.
 - b. CertainTeed Regular Gypsum Board by Certainteed.
 - c. ToughRock Gypsum Board by Georia-Pacific.
 - d. Gold Bond Gypsum Board by National Gypsum.
 - e. Sheetrock Gypsum Panel by USG.
- C. Water Resistant Gypsum Board: ASTM C 1396.
 - Thickness: ¹/₂ inch thick
 Length, Long Edges, Cut
 - Length, Long Edges, Cut: Maximum permissible lengths, edges tapered, ends square cut square.



- 3. Core: Moisture or mold resistant core.
- 4. Mold Resistance: Score of 10 when tested in accordance with ASTM D 3273/3274.
- 5. Provide one of the following:
 - a. M-Bloc Mold and Moisture Resistant by American Gypsum.
 - b. M2Tech Gypsum Board by Certainteed.
 - c. DensArmor Plus by Georgia-Pacific.
 - d. Gold Bond Brand XP Gypsum Board by National Gypsum.
 - e. Sheetrock Brand Mold Tough Gypsum Panel by USG.
- D. Fire Resistant Gypsum Board: ASTM C 1396, Type X
 - 1. Thickness: 5/8 inch
 - 2. Length, Long Edges, Cut: Maximum permissible lengths, edges tapered, ends square cut.
 - 3. Provide one of the following products:
 - a. FireBloc Type X by American Gypsum.
 - b. CertainTeed Type X Gypsum Board by Certainteed.
 - c. ToughRock Fireguard X by Georgia-Pacific.
 - d. Gold Bond Fire Shield by National Gypsum.
 - e. Sheetrock Firecode X Gypsum Panel by USG.
- E. Water and Fire Resistant Gypsum Board: ASTM C 1396, Type X
 - 1. Thickness: 5/8 inch.
 - 2. Length, Long Edges, Cut: Maximum permissible lengths, edges tapered, ends square cut.
 - 3. Core: Non-combustible fire-resistant and mold resistant core.
 - 4. Mold Resistance: Score of 10 in accordance with ASTM D3273/3274.
 - 5. Provide one of the following:
 - a. M-Bloc Mold Resistant Type C by American Gypsum.
 - b. Gold Bond Brand XP Fire-Shield C Gypsum Board, by National Gypsum.
 - c. Sheetrock Mold Tough Firecode Type X Gypsum Panel, by USG.
 - d. ToughRock Fireguard X Mold-Guard Gypsum Board by Georgia Pacific.
 - e. M2Tech Type X Gypsum Board or Diamondback Glasroc Tile Backer Type X by CertainTeed.
- F. Abuse Resistant Gypsum Board: ASTM C 1396, Type X.
 - 1. Thickness: As shown on drawings.
 - 2. Length, Long Edges, Cut: Maximum permissible length, edges tapered, ends cut square.
 - 3. Core: Enhanced and mold resistant gypsum core.
 - 4. Mold Resistance: Score of 10 in accordance with ASTM 3273/3274.
 - 5. Surface Abrasion: Meets or exceeds ASTM C 1629, Classification Level 1.
 - 6. Surface Indentation: Meets or exceeds ASTM C 1629, Classification Level 1.
 - 7. Soft-Body Impact: Meets or exceeds ASTM C 1629, Classification Level 1.
 - 8. Provide one of the following products:
 - a. M-Bloc AR Type X by American Gypsum.
 - b. SHEETROCK Brand Abuse Resistant Firecode X Gypsum Panel by USG.
 - c. Gold Bond Brand Hi-Abuse XP Fire-Shield by National Gypsum.
 - d. AirRenew Extreme Abuse Type X Gypsum Board by CertainTeed.
 - e. ToughRock Fireguard X Abuse Resistant Gypsum Board by Georgia-Pacific.
- G. Abuse and Water Resistant Gypsum Board: ASTM C 1396, Type X.
 - 1. Thickness: As shown on drawings.
 - 2. Length, Long Edges, Cut: Maximum permissible length, edges tapered, ends cut square.
 - 3. Core: Enhanced and mold resistant gypsum core.
 - 4. Mold Resistance: Score of 10 in accordance with ASTM 3273/3274.
 - 5. Surface Abrasion: Meets or exceeds ASTM C 1629, Classification Level 1.
 - 6. Surfact Indentation: Meets or exceeds ASTM C 1629, Classification Level 1.
 - 7. Soft-Body Impact: Meets or exceeds ASTM C 1629, Classification Level 1.
 - 8. Provide one of the following products:
 - a. M-Bloc AR Type X by American Gypsum.
 - b. ToughRock Fireguard X Abuse Resistant Gypsum Board by Georgia-Pacific.



- c. Gold Bond Brand Hi-Abuse XP Fire-Shield by National Gypsum.
- d. AirRenew Extreme Abuse Type X Gypsum Board by CertainTeed.
- e. SHEETROCK Brand Mold Tough® AR Firecode® X Panels by USG.
- H. Exterior Gypsum Soffit Board: ASTM C 1396, Type X, 5/8" thick, gypsum wallboard manufactured to produce extra resistance to moisture and sagging.
 - 1. ProRoc Brand Exterior Soffit Board by CertainTeed.
 - 2. DensArmor Plus by Georgia-Pacific.
 - 3. Gold Bond Brand Exterior Soffit Board by National Gypsum.
 - 4. Type X Soffit Board by Temple Inland.
 - 5. Sheetrock Brand Exterior Gypsum Ceiling Board by USG.
- I. Gypsum Board Fasteners:
 - 1. Metal Framing: ASTM C 954 and C 1002, Type S-12 bugle head, corrosion-resistant self-drilling self-tapping steel screws.
 - a. One Layer $\frac{1}{2}$ Inch: 1 inch.
 - b. One Layer 5/8 Inch: 1-1/8 inch.
 - c. Two Layers: 5/8 Inch: 1-7/8 inch.
 - 2. Wood Furring: ASTM C 1002, 1-1/4 inch, Type W bugle head, corrosion-resistant self-drilling steel screws.
- J. Gypsum Board Accessories:
 - 1. Corner Beads: Sheetrock Brand No. 104 Dur-A-Bead galvanized steel corner bead by USG.
 - 2. Edge Trim: Galvanized steel casing.
 - a. No. 200-B, L shape by USG for tight abutment at edges.
 - b. No. 200-A, J shape by USG at other locations.
 - 3. Control Joint Accessory Piece:
 - a. No. 093 roll-formed zinc by ClarkDietrich.
 - 4. Vertical Movement Joint Trim:
 - a. No DRMZ-625-200 aluminum Z shape trim by Fry Reglet.
 - 5. Adhesive:
 - a. Commercial Adhesive complying with ASTM C 557.
 - 6. Acoustical Insulation:
 - a. Unfaced fiberglass batts specified in Section 07210.
 - 7. Firestopping:
 - a. Specified in Section 07840 for penetrations of fire-resistive rated gypsum board.

2.4 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475.
- B. Joint Tape:
 - 1. Interior Gypsum Wallboard: Paper tape.
 - 2. Gypsum Sheathing Board: 10/10 grid glass mesh tape.
 - 3. Backer Panels:
 - a. Glass-Mat Backer Material: 10/10 grid glass mesh tape.

C. Joint Compound

- 1. Interior Gypsum Wallboard:
 - a. Sheetrock Brand Ready-Mixed Lightweight All-Purpose Joint Compound with Dust Control, by USG.
 - b. ProForm Lite Ready Mix Joint Compound with Dust-Tech by National Gypsum.
- 2. Backer Panels:
 - a. Glass-Mat Backer Materials: Use setting-type taping compound as recommended by backer panel manufacturer and that is rated 10 when tested in accordance with ASTM D 3273 and evaluated in accordance with ASTM D 3274.



2.5 GYPSUM SHEATHING BOARD

- A. ASTM C 1396 and ASTM C 1177; water resistant gypsum core surfaced on face and back with inorganic glass fiber mats; thickness shown on the Drawings, maximum permissible lengths; ends square cut. Provide one of the following products:
 - 1. GlasRoc Brand Sheathing as manufactured by CertainTeed.
 - 2. Dens-Glass Gold gypsum sheathing as manufactured by Georgia-Pacific.
 - 3. eXP Sheathing by National Gypsum.
 - 4. GreenGlass sheathing by Temple-Inland.
 - 5. SecureRock by USG.
- B. Sheathing Board Fasteners: ASTM C 954 and ASTM C 1002, 1 inch length for ½ inch sheathing board and 1-1/4 inch length for 5/8inch thick sheathing board, Type S-12 bugle head, corrosion-resistant self-drilling steel screws.

2.6 BACKER MATERIALS

- A. Fiber Cement Backing Board: ASTM C 1278/1288, bonded, moisture and mold-resistant cementitious backing panels as follows where indicated to receive cement board, cement backer board, or cementitious backer board.
 - 1. Hardie Backer by James Hardie.
 - 2. Fiberock by USG.
 - 3. Thickness: ¹/₂-inch, ¹/₄-inch, or other as shown on Drawings.
- B. Glass-Mat Backer Materials: Provide glass-mat moisture resistant gypsum core backer materials complying with ASTM C 1178. Glass-Mat Backer Material shall score a rating of 10 when tested according to ASTM D 3273. Thickness as shown on the Drawings. Provide Type X where required as shown on Drawings. Provide one of the following products:
 - 1. GlasRoc Tilebacker by Certainteed.
 - 2. DensShield Tile Backer by Georgia Pacific.
 - 3. GreenGlass Tile Backer by Temple-Inland.
 - 4. Gold Bond e^2 XP Tile Backer by National Gypsum.
- C. Provide fiberglass matt faced high density polyiso board as follows as option to where indicated to receive glassmat backer material behind tile.
 - 1. Waterproof Tile Backer Board: GoBoard by Johns Manville, Denver, CO (303) 978-2000.
 - 2. Thickness as indicated on drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine existing conditions and adjacent areas where products will be installed and verify that conditions conform to product manufacturer's requirements. Verify that building framing components are ready to receive Work. Verify that rough-in utilities are in-place and located where required. Do not proceed until unsatisfactory conditions have been corrected.
- B. Examine panels to assure they are dry and free of moisture and mold damage as evidenced by discoloration, sagging, irregular shape, fuzzy or splotchy surface contamination, and discoloration.
- C. Beginning of erection and installation indicates acceptance of existing conditions.

3.2 INTERFACE WITH OTHER WORK

- A. Coordinate erection of studs with hollow metal door and window frames, sliding window, and overhead coiling door frames.
- B. Coordinate installation of anchors, supports, and blocking for mechanical, electrical, and building accessory items installed within framing.



3.3 INSTALLATION - STEEL FRAMING, GENERAL

- A. Installation Standards: Comply with ASTM C 754, and ASTM C 840 requirements that apply to framing installation and with further details and instruction by gypsum board manufacturer's written construction guidelines.
- B. Install supplementary framing, blocking, and bracing at terminations in gypsum board assemblies to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction. Comply, if none available, with USG's "Gypsum Construction Handbook."

3.4 INSTALLATION - PARTITION FRAMING

- A. Install studs and fasteners in accordance with manufacturer's published instructions, ASTM C 754, GA-216, and GA-600.
- B. Install bracing at terminations in assemblies.
- C. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.
- D. Install studs so flanges within framing system point in same direction.
- E. Metal Stud Spacing: Unless otherwise noted on Drawings, provide interior framing at maximum spacing specified herein at 2.2C. Provide spacing of 16 inches on center maximum for walls to receive ceramic tile.
- F. Align stud web openings horizontally.
- G. Splice studs with minimum 8 inch nested lap, fasten each stud flange with minimum two screws.
- H. Construct corners using minimum three studs.
- I. Place studs as indicated on Drawings, minimum 2 inches from abutting walls.
- J. Install headers and jambs at partition openings using load-bearing C-shaped studs as noted on Drawings and as specified in Section 05400.
- K. Install framing between studs for attachment of mechanical and electrical items.
- L. Install intermediate studs above and below openings to match wall stud spacing.
- M. Install tracks (runners) at floors and overhead supports. Refer to Drawings for indication of partitions extending to finished ceiling only and for partitions extending through ceiling to building structure above.
- N. Maintain clearance under structural members to avoid deflection transfer to studs.
 - 1. Where indicated, construct partition to accommodate vertical deflection.
 - Install optional products specified in Part 2 above in accordance with manufacturer's printed instruction.
 - a. Install clip with step bushing in center of slotted hole.
 - b. Use a minimum of two fasteners per clip leg to connect clip to structure and partition framing.
 - c. Attach clip to each stud by screwing through the center of each step bushing.
- O. Fasten studs adjacent to door and window frames, partition intersections, and corners to top and bottom runner flanges in double-stud fashion with metal lock fastener tools.
 - 1. Securely fasten studs to jamb and head anchor clips of door and borrowed-light frames.
 - 2. Place horizontally a cut-to-length section of runner with web-flange bend at each end, fasten with minimum one screw per flange.
 - 3. Position a cut-to-length stud (extending to top runner) at vertical panel joints over door frame header.
- P. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.



2.

- Q. Lateral Bracing for Metal Studs:
 - 1. In metal stud partitions and bulkheads where length of metal studs is over 8 feet, install lateral bracing using one of the following methods:
 - a. Install 1-1/2 inch cold-formed channel through stud web holes and screw attach in place with clip angles. Lap channels by nesting one inside the other to a depth of at least 8 inches and wire tie together.
 - b. Install optional products specified in Part 2 above in accordance with the manufacturers printed instructions.
 - c. Install field-cut runner for solid bridging at each end of wall, adjacent to wall openings, and 10 feet on center maximum. Install 1-1/2 inch wide, 20 (30 mil) gage strap bracing on both sides of stud. Fasten strap bracing to each solid bridging runner section with four screws.
 - 2. Gypsum Board Partitions: Space lateral bracing at the following intervals:
 - a. Partitions sheathed with gypsum board full height, each side: Provide bracing at mid-height.
 - b. Partitions sheathed with gypsum board partial height (one or both sides): Provide bracing at 48-inches on center for unsheathed height of partition.
 - 3. Wire Mesh Partitions: Space lateral bracing at the following intervals:
 - a. Stud Length Greater Than 8 Feet: Provide bracing at 60-inches on center.
- R. Install braced framing of steel stud framing as indicated on Drawings. Use only screw attachments.
- S. Blocking: Screw attach wood blocking between studs. Install blocking for support of plumbing fixtures, toilet partitions, wall cabinets, toilet accessories and hardware.
- T. Framing Fastening: Fasten framing in accordance with manufacturer's published instructions and schedule below, unless indicated otherwise on Drawings.

| Connection | Fastener |
|--|---|
| Floor Track to Concrete | 1 - Pin at 32 inches on center |
| Partition Stud to Floor Track | 1 - Screw each side at each flange |
| Stud Brace Web to Stud Web | 2 - Screws |
| Plates and Straps to Studs | 2 - Screws |
| Stud Web to Stud Web | 2 - Screws |
| Stud Brace Web to Attachment Angle | 2 - Screws |
| Lateral Bracing to Partition Stud Using Clip | 2 - Screws to stud and 2 - Screws to cold |
| Angles | rolled channel |
| Runner to Header | 1 - Screw at 16 inches on center, |
| | maximum 6 inches from each end |

3.5 INSTALLATION - SUSPENDED CEILING

- A. Unless otherwise shown, install suspended ceilings in accordance with the following requirements.
- B. Suspend ceiling hangers from building structure as follows:
 - 1. Install carrying channels 4 feet on center with hanger wire spaced a max of 4 feet on center along carrying channels. Attach furring channels spaced 16 inches on center perpendicular to carrying channels with double strand of saddle tied tie wire or furring channel clips. Apply 1/2 inch gypsum board with its long dimension at right angles to the furring channels. Attach gypsum board with 1 inch self drilling drywall screws 12 inches on center in the field of the board 8 or 12 inches on center at butt joints, located not more than 1/2 inches from edges.
 - 2. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 - 3. Where width of ducts and other construction within ceiling plenum produces hanger spacing that interferes with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.



- 4. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail.
- 5. Do not attach hangers to steel deck tabs.
- 6. Do not attach hangers to steel roof deck. Attach hangers to structural members.
- 7. Do not connect or suspend steel framing from ducts, pipes, or conduit.
- C. Installation Tolerances: Install steel framing components for suspended ceilings so members for panel attachment are level to within 1/8 inch in 12 feet measured lengthwise on each member and transversely between parallel members.
- D. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.

3.6 INSTALLATION - FURRING

- A. Furring Channels:
 - 1. Attach vertically spaced at maximum 16 inches on center, to masonry and concrete surfaces with hammer set or powder driven fasteners staggered 24 inches on center on opposite flanges.
 - 2. Nest channels 8 inches at splices and anchor with 2 fasteners in each wing.
- B. Wall Furring:
 - 1. Secure top and bottom runners to structure.
 - 2. Space metal studs at maximum 16 inches on center.
 - 3. Furring for Fire Rating: Install metal furring as required for fire resistance ratings indicated on Drawings, and to GA-600 requirements.

3.7 INSTALLATION - ACOUSTICAL INSULATION

A. Place acoustical insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions as specified in Section 07210 where shown on Drawings.

3.8 INSTALLATION - GYPSUM BOARD

- A. Install gypsum board in accordance with manufacturer's published instructions, ASTM C 840, GA-216, and GA-600.
 - 1. Use water resistant gypsum board at wet areas including walls and ceiling in toilet rooms, janitor closets, and food prep areas as applicable and where shown.
 - 2. Use fire resistant gypsum board at locations of fire-resistive rated assemblies indicated on Drawings.
 - 3. Use water and fire resistant gypsum board at locations of fire-resistive rated assemblies where water resistant gypsum board is specified.
 - 4. Use standard gypsum board at locations not indicated to be fire resistant or water resistant type.
- B. Use proper dust control tools and methods when scoring, breaking, and otherwise handling gypsum board.
- C. Where applicable, install ceiling panels before the installation of wall panels.
- D. Erect single layer gypsum board in most economical direction in accordance with ASTM C 840, with attachment to firm bearing surfaces over framing members. Do not align panel joints with edges of openings.
- E. Double Layer Applications: Secure second layer to first with screws; apply second layer with screws, staggering joints with those of first layer. Use adhesive only to hold second layer until screwed in place. Use fire rated gypsum backing board for fire rated partitions.
- F. Treat cut edges, holes, fastener heads, and joints, including those at angle intersections, in water resistant gypsum board and exterior gypsum soffit board with specified joint compound. Treat prior to installation.



- G. Place gypsum panels over supporting framing members with panel ends aligning and parallel with framing members. Leave bottom edge spacing above floor in accordance with GA-216.
- H. Install fasteners spaced and located in accordance with GA-216 or ASTM C840.

3.9 INSTALLATION - GYPSUM SHEATHING

- A. Install gypsum board sheathing in accordance with manufacturer's published instructions, GA-216 and GA-600.
- B. Erect single layer gypsum board horizontally with attachment to firm bearing.
- C. Place edge trim where gypsum board abuts dissimilar materials. Use longest practical length.
- D. Using screws, attach panels in place at maximum 12 inches on center, perimeter and field, to supporting framing.
- E. Protect exposed gypsum core at perimeter edges and penetrations by covering core with metal trim.

3.10 INSTALLATION - BACKER MATERIALS

A. Install glass-mat backer materials where indicated to receive glass-mat backer material. Install in accordance with manufacturer's instructions.

3.11 INSTALLATION - JOINT TREATMENT

- A. Install joint treatment in accordance with GA-216.
- B. Install corner bead, trim, and casing in accordance with GA-216.
- C. Install control joints full height of partition with 1/2 inch gap between board edges and between studs. Control joints shall be installed in accordance with the gypsum manufacturer's recommended guidelines for control joints or the Gypsum Association GA-234 for control joint in fire rated systems. Apply sealant at base of joint and control joint accessory piece at face. Install control joints at the following locations:
 - 1. Where a wall or partition runs in an uninterrupted straight plane exceeding 30 linear feet.
 - 2. At pairs of doors, install vertical control joint at each jamb. At single doors, install control joint at latch side of jamb.

3.12 FINISH

1.

City of Puyallup ment & Permitting Service ISSUED PERMIT

Building

- A. Apply gypsum board finish in accordance with manufacturer's published instructions and GA-214 Finish Levels.
- B. Provide gypsum board finish levels at locations as follows:
 - Level 0 (GA-214): No taping, finishing, or accessories necessary.
 - a. Projects including exposed surfaces above 12 ft high.
 - 2. Level 1 (GA-214): Joints and interior angles have tape embedment set in joint compound. Surface free of excess joint compound. Tool Marks and ridges are acceptable.
 - a. Areas above ceilings where required by drawings.
 - b. Concealed areas.
 - c. Interior exposed gypsum surfaces not indicated to be painted.
 - 3. Level 3 (GA-214): Joints and interior angles have tape embedded in joint compound and one additional coat of joint compound is applied over all joints and interior angles and two additional coats of joint compound are applied over fastener heads and accessories. Surface smooth and free of tool marks and ridges.
 - a. Interior gypsum surfaces indicated to be painted.
 - b. Exterior exposed gypsum surfaces.

3.13 FIELD QUALITY CONTROL

ering Public Works 240<mark>3 Franz al</mark>lup, WA 2022.0729

PRCTI20230108

Inspect metal framing erection, placement, spacing, fasteners, and connections to building.

- B. Inspect gypsum board installation, fastener type, spacing, and finish level.
- C. Inspect installation of firestopping penetrations of fire-restive rated partitions and at voids between top of partition and building structure.
- D. Correct deficiencies in Work which inspection indicates are not in compliance with Contract Documents.

3.14 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces.
- B. Protect installed interior non load-bearing steel stud partition framing, gypsum board, backer materials, and gypsum sheathing from damage until Substantial Completion.

END OF SECTION



SECTION 09511 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Suspended metal grid ceiling system.
- 2. Acoustical panels.
- 3. Perimeter trim.
- 4. Column trim.
- 5. Fire rated assembly.
- B. Related Requirements:
 - 1. Section 01351 Regulatory Compliance: References to Contract Provisions for removal and recycling of acoustical ceiling tile.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are reference within the text by these basic designations only.
- B. ASTM International (ASTM):
 - 1. ASTM C 635 Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
 - 2. ASTM C 636 Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
 - 3. ASTM C 1858 Direct Hung Suspended T-bar Type Ceiling Systems Intended to Receive Gypsum Panel Products in Areas Subject to Earthquake Ground Motions.
 - 4. ASTM E 84 Test Method for Surface Burning Characteristics of Building Materials.
 - 5. ASTM E 580 Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions.
 - 6. ASTM E 1264 Acoustical Ceiling Products.
- C. American Society of Civil Engineers (ASCE):
 - 1. ASCE 7 Minimum Design Loads for Buildings and Other Structures.

1.3 SUBMITTALS

- A. Comply with the requirements of Section 01330.
- B. Product Data. Provide manufacturer's product data for suspension systems, showing all components.
- C. Shop Drawings: Show the following:
 - 1. Layout of grid components and hanger spacing, including perimeter support wires.
 - 2. Locations and methods of attachment of grid to walls. Clearance where grid is not attached to walls.
 - 3. Connection of ends of main beams and cross tees.
 - 4. Locations and details of compression struts and horizontal restraint wires or rigid bracing.
 - 5. Locations and details of seismic separation joints.
 - 6. Bracing for changes in ceiling plane.
 - 7. Locations and support details for light fixtures, diffusers, and other items within the ceiling system.
- D. Evaluation Report: ICC-ES report verifying code compliance for systems with alternative materials, design or methods of construction not specifically prescribed by the building code.



1.4 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. Rigidly secure acoustical ceiling system including integral mechanical and electrical components with maximum deflection of 1/360.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Section 01600 Product Requirements: Transport, handle, store, and protect products.
- B. Deliver acoustical units in manufacturer's original unopened containers with brand name and type clearly marked.
- C. Store under cover in dry, watertight conditions.
- D. Prior to installation, store acoustical units for 24 hours minimum at same temperature and relative humidity as space where Work will be installed.

1.6 PROJECT CONDITIONS

A. Environmental Requirements: Maintain uniform temperature range of 60-85 degrees F, and humidity of no more than 70 percent relative humidity prior to, during, and after installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Provide products by the following manufacturers as specified:
 - 1. Armstrong World Industries Incorporated, Lancaster, PA (800) 448-1405.
 - 2. CertainTeed Ceilings, Valley Forge, PA (800) 233-8990.
 - 3. Rockfon, LLC (Formerly Chicago Metallic Corporation), Chicago, IL (800) 323-7164.
 - 4. Gold Bond Building Products, National Gypsum Company, Charlotte, NC (704) 365-7300.
 - 5. USG Interiors, Chicago, IL (800) 950-3839.

2.2 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics in Accordance with ASTM E 84 for Class A finish:
 - 1. Flame Spread: Less than 25.
 - 2. Smoke Density: Less than 50.
- B. Seismic Performance: Acoustical ceiling shall withstand the effects of earthquake motions determined according to ASCE 7.
- C. Food Serving and Preparation Areas where Scheduled:
 1. United States Department of Agriculture (USDA): Approved for incidental food contact.
- 2.3 SUSPENSION SYSTEM
 - A. Provide suspension system specified herein for the corresponding ACT system as applicable as shown on the drawings. Provide suspension system compatible with acoustical panels selected.
 - B. Grid: ASTM C635, heavy duty, steel exposed T; nominal 1 inch width; stab-in connections.
 - C. Accessories: Stabilizer bars (Cat D, E, and F only), clips, and splices.
 - D. Grid Finish:
 - 1. White, unless noted otherwise.



- E. Support System: Hot or cold rolled steel channels; galvanized hanger wire, minimum 12 gage.
- F. Edge Moldings: Metal channel with exposed flange to match suspension system.1. Minimum 2 inch wide horizontal leg.
- G. Hold-Down Clips:
 - 1. Standard Duty Clip: Manufacturer's standard retention clips to suit conditions specified.
- H. Compression Struts: Telescoping compression strut designed to attach to main tees at each splayed wire location, preventing upward movement of ceiling grid system. Provide either of the following:
 - 1. Donn Compression Post, by USG.
 - 2. Field fabricated compression struts as detailed on drawings.
- I. ACT-1; Non Fire-Rated Suspension System: Provide one of the following:
 - 1. Prelude 15/16 inch, XL #7300 Exposed Tee System, by Armstrong.
 - 2. Classic Stab System, 15/16 inch, #C12-12-15, by CertainTeed.
 - 3. 1200 System, by Rockfon.
 - 4. Donn DX System, by USG.
- J. Substitutions: Not Permitted.
- 2.4 ACOUSTICAL LAY-IN PANELS:
 - A. Provide acoustical panels specified herein for the corresponding ACT system as applicable as shown on the drawings.
 - B. ACT-1: Non Fire-Rated Panels, square edge, nonperforated, abuse-resistant vinyl film facing, size as shown. Provide one of the following:
 - 1. Vinyl Faced Fiberglass Ceiling Panels, Random Fissured; Item #2911 by Armstrong.
 - a. Temporary Substitution: If Supplier indicates Armstrong's Item #2911 is unavailable, provide Georgian Square Lay-In Panels (Item #763) by Armstrong as an approved temporary substitution.
 - 2. Premier Hi-Lite ClimaPlus Kapok Panels, unperforated, Item #7057G, by USG.
 - 3. Versatone Unperforated Vintage Item #1530-VIN-1, by CertainTeed.
 - 4. Coral Soft Touch Series, Item #7010-01F, by Rockfon.
 - C. Substitutions: Comply with the requirements of Section 01600.

2.5 ACCESSORIES

A. Flexible curved angle trim for Sales Area Columns.

PART 3 - EXECUTION

3.1 PREPARATION/DEMOLITION

- A. Examine surfaces and adjacent areas where products will be installed and verify that surfaces conform to product manufacturer's requirements for substrate conditions. Do not proceed until unsatisfactory conditions have been corrected.
- B. Coordinate extension of existing grid ceiling system if existing system is to remain.
- C. Clean or paint existing grid as shown on Drawings prior to removal of "old" panels. Refer to Section 09900.
- D. Remove existing ceiling panels as shown on Drawings. Store removed panels for recycling as referenced in Section 01351.
 - 1. If ceiling batt insulation is present, remove, retain and re-install batts above new ceiling panels.



- E. In new ceiling grid installation, verify that layout of hangers will not interfere with other Work.
- F. Beginning of installation indicates acceptance of existing conditions.
- 3.2 INSTALLATION GENERAL
 - A. Interface with Other Work:
 - 1. Do not install acoustical ceilings until building is enclosed, heating is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
 - 2. Schedule installation of acoustic units after interior wet work is completed.
 - 3. Install after major above ceiling work is complete.
 - 4. Coordinate location of hangers with other Work.

B. Site Tolerances:

- 1. Variation from Flat and Level Surface: 1/8 inch in 12 feet.
- 3.3 INSTALLATION SUSPENSION SYSTEM
 - A. Install System in accordance with ASTM C 636, ASTM E 580, ASCE 7 and manufacturer's published instructions.
 - B. Rigidly secure acoustical ceiling system including integral mechanical and electrical components with maximum deflection of 1/360.
 - C. If metal deck is not supplied with hanger tabs, coordinate installation of hanger clips during steel deck erection. Provide additional hangers and inserts as required.
 - D. Hang system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members. Where ducts or other equipment prevent regular spacing of hangers, reinforce nearest affected hangers and related carrying channels to span extra distance.
 - E. Locate system on room axis to a balanced grid design with edge units no less than 50 percent of acoustical panel size where Reflected Ceiling Plan not shown on Drawings. Match direction of existing ceiling grid unless directed otherwise by the Drawings.
 - F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability. Do not eccentrically load system, or produce rotation of runners.
 - G. Install edge molding at intersection of ceiling and vertical surfaces using longest practical lengths. Miter corners. Provide edge moldings at junctions with other interruptions. Secure at 16 inches on center.
 - H. Install compression struts and secure system with tie wires.
 - 1. Unless otherwise indicated on Drawings, provide four 12 gage wires secured to main runner within 2 inches of cross runner intersection and splayed 90 degrees from each other at angle not exceeding 45 degrees from plane of ceiling.
 - 2. Fasten strut to main runner, extend to and fasten to structural member supporting roof.
 - 3. Locate compression strut and splayed hanger wires at a maximum of 12-feet on center in both directions with first point within 6-feet from each partition.
 - 4. Fasten runner ends to perimeter enclosure on two adjacent walls.
 - 5. Do not fasten runners on two opposite ends and provide ³/₄" clearance to vertical leg of perimeter enclosure.
 - 6. Prevent all terminal ends of runners not directly attached to perimeter enclosure from spreading.

3.4 INSTALLATION - ACOUSTICAL PANELS

A. Fit acoustic units in place free from damaged edges or other defects. Install acoustic units level, in uniform plane, and free from twist, warp, and dents.



- B. Within any enclosed room, do not mix panels of different brands.
- C. Install manufacturer's standard duty hold-down clips to retain panels tight to grid system where ACT 4 is scheduled.

3.5 FIELD QUALITY CONTROL

A. Field quality control shall be the responsibility of the Contractor in accordance with Section 01452. Except as specified as mandatory, field quality control testing and inspection shall be at the discretion of the Contractor as necessary to assure compliance with Contract requirements. Owner T&I specified in Appendix B (if specified) shall not preclude Contractor's responsibility to perform similar routine, necessary, and customary testing and inspection of the methods and frequency suitable for the type of work involved.

3.6 CLEANING

A. Clean exposed surfaces of acoustical ceilings including trim, edge moldings, and suspension system members

END OF SECTION



BLANK PAGE



UniSpec - Store Planning

SECTION 09655 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Owner furnished resilient base and accessories, including the following, for installation by Contractor:
 - 1. 3/8 in. or 5/8 in. Plastic Base (DB).
- B. Related Requirements: The following list is intended to aid in locating products and work related to or dependent on the scope of this Section. The list is included for information only and is not intended to be inclusive of all project requirements.
 - 1. Section 07900 Joint Sealers: Sealant between bases and floor or wall surfaces.
 - 2. Appendix A Products and Work by Owner or Separate Contractor: Manufacturers, suppliers, product information, installation (if applicable), and general procedures related to Owner furnished products.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. ASTM International (ASTM):
 - 1. ASTM E 84 Surface Burning Characteristics of Building Materials.
 - 2. ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
 - 3. ASTM F 1861 Resilient Wall Base.

1.3 DELIVERY, STORAGE AND HANDLING

- A. Receive Owner Furnished products in accordance with the requirements of Section 01600.
 - 1. Product Delivery: Owner's Supplier will deliver Owner furnished products to site to be received by Contractor. Contact Owner's Suppliers to coordinate delivery of Owner furnished products and materials.
- B. Transport, handle, store, and protect products in compliance with the requirements of Section 01600.

PART 2 - PRODUCTS

2.1 OWNER FURNISHED PRODUCTS

A. Owner's Supplier will furnish products in the scope of this Section as specified in Appendix A (Section 09655) for installation by Contractor.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Plastic Base:
 - 1. Fit joints tight and vertical. Maintain minimum measurement of 18 inches between joints
 - 2. Install base on solid backing. Bond tight to wall and floor surfaces.
 - 3. Scribe to fit door frames and other interruptions.
 - 4. Miter and adhesively bond plastic base joints together.
 - 5. Pre-drill plastic base and trim for attachment screws. Unless otherwise shown, attach plastic base at 24 inches on center into metal stud wall framing.



B. Building Tape: Install at base of wall or at joints as shown on the drawings. Install in accordance with manufacturer's instructions.

3.2 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

END OF SECTION



SECTION 09900 - PAINTS AND COATINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Field applied paints and finishes for interior surfaces.
- 2. Repair and surface preparation of existing surfaces.

B. Related Requirements:

- 1. Section 01351 Regulatory Compliance.
- 2. Section 07900 Joint Sealers: Filler and sealant for crack repair.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. ASTM International (ASTM):
 - 1. ASTM C 90 Loadbearing Concrete Masonry Units.
 - 2. ASTM C 1324 Standard Test Method for Examination and Analysis of Hardened Masonry Mortar.
 - 3. ASTM D 1653 Standard Test Methods for Water Vapor Transmission of Organic Coating Films (Wet Cup Method).
 - 4. ASTM D 2244 Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.
 - 5. ASTM D 2370 Standard Test Method for Tensile Properties of Organic Coatings.
 - 6. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings.
 - 7. ASTM D 3359 Measuring Adhesion by Tape Test.
 - 8. ASTM D 4214 Evaluating the Degree of Chalking of Exterior Paint Films per Method A Cloth Tape Method
 - 9. ASTM D 4262 Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces.
 - 10. ASTM D 4263 Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.
 - 11. ASTM D 6677 Test Method for Evaluating Adhesion by Knife.
 - 12. ASTM D 6904 Resistance to Wind-Driven Rain.
 - 13. ASTM E 514 Water Leakage of Masonry.
- C. Occupational Safety and Health Administration (OSHA): OSHA 01926.1153 Respirable Crystalline Silica.
- D. The Society for Protective Coatings (SSPC):
 - 1. SSPC-SP1 Solvent Cleaning.
 - 2. SSPC-SP3 Power Tool Cleaning.
 - 3. SSPC-SP15 Commercial Grade Power Tool Cleaning.

1.3 ENVIRONMENTAL REQUIREMENTS

- A. Minimize dust emissions and provide equipment that suppresses dust.
- B. Apply paint to masonry surfaces only when moisture content is within manufacturer's acceptable range as described in Part 3 herein for type of specified coating.
- C. Maintain minimum surface temperatures or ambient air temperature as follows for the specified coatings unless otherwise recommended by the manufacturer or specified in the Paint Schedule herein:
 - 1. Alkyd, epoxy, polyurethane, and interior and exterior acrylic and latex finishes: 50 degrees F.
 - 2. Varnish and transparent finishes: 65 degrees F.
 - All coatings: Surface temperature at least 5 degrees F above the dew point.



- D. Maintain maximum surface temperatures or ambient air temperatures and relative humidity as recommended by the manufacturer.
- E. If ambient temperatures are unacceptable, provide continuous ventilation and heating facilities to maintain temperatures above the minimum surface and air temperature specified above for 24 hours prior to, during, and 48 hours after application of finishes.
- F. If work area is enclosed, use fire retardant enclosure materials and indirect-fired heating equipment ventilated outside of the enclosure.
- G. Do not apply paint in areas where dust is being generated. Do not apply coatings in conditions that could result in overspray on vehicles or other property.
- H. Perform painting under lighting conditions of not less than 80 foot candles measured mid-height of the painter at substrate surface. Where artificial lighting is required, provide explosion-proof artificial lighting.
- I. Waste Management:
 - 1. Store, transport, and dispose of waste in accordance with local, state and federal regulations and the requirements of Section 01351 Supplement.
 - 2. Do not dispose of paint, containment materials, or project waste in Owner's dumpsters.
 - 3. Do not allow dry materials to enter storm drain inlets.
 - 4. Clear debris and waste from the site daily.
 - 5. Use HEPA-rated filter vacuum to clean surfaces of dirt, dust and debris.
 - 6. Obtain paint in containers of the largest size practical for each color, sheen, and type.
 - 7. Furnish disposal containers.
 - 8. Return reusable containers and totes to manufacturer.
 - 9. Clean and recycle containers that cannot be returned to manufacturer.
- J. Wastewater Management:
 - 1. Collect wash wastewater and store, transport, manifest and dispose of according to local, state and federal regulations. Consult local wastewater treatment operator for direction.
 - 2. Do not allow wash wastewater to flow from the surface cleaning processes to a storm water drain or catch basin, street, roadway, sidewalk, gutter, landscape area, or any type of storm water structure.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Scheduling and Coordination:
 - 1. Schedule a conference call with the Store Manager a minimum of two weeks in advance of commencement of work. Communicate daily the sequence of work with Store Management.
 - 2. Scheduling requirements for Owner's independent and Manufacturer's Representative inspections is specified in Part 3 herein.
- B. Schedule operations to avoid interference with store operations and during times agreeable to store management.

1.5 SUBMITTALS

- A. Closeout Documents:
 - 1. Submit closeout documents in accordance with Section 01770.
 - 2. Submit Manufacturer Inspection Report of post-installation site visit specified hereinafter.
 - 3. Photographic documentation: Upon Completion, submit a completion report including at least 10 wide-angle photos taken at work stages including but not limited to the following:
 - a. Before start of project.
 - b. During removal and replacement of sealants as specified in Part 3 herein.
 - c. Masonry repairs such as random cracks, mortar joints, holes, and divots.
 - d. During surface preparation of concrete and metal as specified in Part 3 herein.
 - e. During application of each coat, including spray and back roll application, as specified in Part 3 herein.
 - f. After completion of project.
 - g. Provide photos taken of each elevation from the same location in each work stage.



4. Submit Manufacturer's Extended Material Performance Warranty and Contractor's Labor and Workmanship Warranty.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. VOC Content: Provide paint and coating materials that conform to Federal, State, and Local restrictions for Volatile Organic Compounds (VOC) content.
 - 2. Toxicity/EQ: Comply with federal, state, and local toxicity and environmental quality regulations and with federal requirements on content of lead, mercury, and other heavy metals. Do not use solvents in paint products that contribute to air pollution.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, store, and protect products in compliance with the requirements of Section 01600.
- B. Verify manufacturers' national accounts purchase order procedure in order to ensure timeliness of delivery and accuracy of products.
- C. Paint orders shall identify the store number, location, batch number and address of project.
- D. Delivery of paint materials shall be in sealed original labeled containers, bearing manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and/or reducing. Notify Supplier when delivered products are nonconforming.
- E. Store coating materials in a location conforming to the manufacturers specified ambient conditions for storage and away from direct sunlight. Unless otherwise required by the manufacturer, maintain storage at temperature between 45 and 95 F.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Coatings for the project shall be the products of one or more of the following manufacturers as scheduled in Part 3:
 1. Interior Coatings:
 - a. <u>Sherwin Williams Company</u>. Contact: Kevin Behm, (216) 566-1558, <u>kevin.c.behm@sherwin.com</u>.
 - b. <u>Benjamin Moore</u>, Contact: Andrew Theokas, (201) 747-1586, <u>andrew.theokas@benjaminmoore.com</u>.
 - c. <u>PPG Paints</u>, Contact: Rick Garlin, (317) 318-5800, <u>garlin@ppg.com</u>.
- B. Method of Coatings Purchase: Manufacturers may require products to be purchased and distributed from national distribution centers as a warranty condition. Verify conditions of purchase with the manufacturer selected for project. Comply with manufacturer's national accounts purchase order procedure in order to ensure integrity of product and observance of warranty.
- C. Manufacturer's Approved Color Formulations: Provide only those coatings produced in accordance with the manufacturer's approved color formulations, including the following:
 - 1. Exterior Brand and Urethane-Like Colors: Brand or bold color coatings with a urethane-like performance shall be mixed and tinted only in the manufacturer's authorized factory facility. Do not order or permit urethane-like coatings to be mixed and tinted either in the field or at a retail store.
 - 2. Exterior Neutral Colors: Some manufacturers permit gray or natural tan color scheme coatings to be mixed and tinted in the retail store. Verify with manufacturer's authorized representative that neutral scheme coatings mixed and tinted in the retail store will receive the Manufacturer's Material Performance Warranty as described in Part 1 herein.
- D. Products Schedule: Owner's preselected coating products are listed in the Product Schedules in Part 3 herein.



2.2 ACCESSORY MATERIALS

- A. Accessory materials not specified herein but recommended by the manufacturer or required to meet the requirements herein.
 - 1. Paint Thinners: Type recommended by paint or coating manufacturer for paint or coating system, VOC compliant, first line commercial quality.
 - 2. Patching Materials: As specified under Part 3 Execution.
 - 3. Masking.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces and adjacent areas where products will be applied and verify that surfaces conform to product manufacturer's requirements for substrate conditions. Do not proceed until unsatisfactory conditions have been corrected.
- B. Beginning of application indicates acceptance of substrate conditions.

3.2 GENERAL PREPARATION

- A. Contain fugitive dust and debris from contaminating surrounding property. Protect customers and associates from airborne dust and abrasive media. Establish dust containment and safety zones with caution tape or barricades prior to beginning to isolate work in areas of store operations.
- B. Do not schedule surface preparation and other dust generating work near areas which have wet, newly coated surfaces.
- C. Verify that all coats in the proposed system are produced by the same manufacturer.
- D. Coordinate moving of merchandise and fixtures with Store Manager prior to painting in Sales areas.
- E. Protect other surfaces from paint and damage with protective coverings, shields, masking, etc. Maintain protective coverings throughout cleaning and painting operations.
 - 1. Adjacent work to be protected includes but is not limited to merchandise displays, merchandise inventory, shopping carts, customer vehicles, and vegetation.
 - 2. Remove or mask hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be painted. Reinstall removed items after completion of paint work.
- F. Protect the following items from water damage during pressure washing and overspray during application:
 - 1. Automatic door sensors.
 - 2. Exterior light sensors.
 - 3. Store mounted electronic devises, switches, receptacles and security components.
 - 4. Fire Protection sprinklers.
- G. For any work specified herein requiring chemical strippers, use plastic, tape, or other means to protect areas that are not to be stripped. This includes prefinished metal such as gutters and downspouts, aluminum trim and storefront and glass.
- H. If plants, moss, mildew, or other biological growth is present, thoroughly saturate the area with a mixture consisting of 1 quart bleach/3 quarts water, and 1 cup powdered detergent. Allow the mixture to remain on the surface until the biological growth is removed. Scrub the surface and repeat as necessary to assure complete removal. Thoroughly rinse with fresh water.
- I. If the manufacturer's written recommendations conflict with or do not address the unique project conditions, comply with the requirements of this specification unless otherwise directed.



- J. Verify product are within shelf life. Schedule application of multi-component materials prior to expiration of the pot life.
- K. Perform preparation and cleaning procedures as specified in this section and in accordance with paint manufacturer's and Owner's authorized representative's direction as necessary for unique project conditions. Work directed and performed in addition to that specified herein but deemed necessary by the Manufacturer's or Owner's Representatives to achieve a satisfactory substrate shall be by change order to the Contract.
- 3.3 SURFACE PREPARATION GENERAL
 - A. Do not begin surface preparation of exterior CMU walls until the sample wall panel specified in Part 1 has been completed and approved.
 - B. Moisture damage identified in Drawings manifests as runoff stains, rust, or etching of surface materials along vertical walls or under drain fixtures.
 - C. Loose paint identified in Drawings manifests as chipping, blistering, peeling, or flaking.
 - D. Where scraping, chiseling, sanding, or grinding of concrete or masonry surfaces is required, use proper dust control tools and methods to maintain dust emissions below the permissible level.
 - E. Protect joints to be sealed by inserting caulking backer rods at face of wall.

3.4 SURFACE PREPARATION – BY SUBSTRATE

- A. Interior Metal:
 - 1. Interior Steel:
 - a. Remove dirt, dust, grease, oil, and other surface interference material by washing and scrubbing.
 - b. Remove rust and loose paint with power tools in accordance with SSPC-SP3.
 - c. Degloss surface with a scouring pad such as <u>Heavy Duty Scour Pad</u>, <u>Non-Scratch Scour Pad</u>, or equivalent by Scotch-Brite.
 - d. Feather the existing coating at transitions between the existing coating and the bare steel.
 - 2. Interior Galvanized Steel:
 - a. Remove dirt, dust, grease, oil, and other surface interference material by washing and scrubbing.
 - b. Remove deteriorated galvanized steel, rust, and loose paint with power tools in accordance with SSPC-SP3.
 - c. Degloss surface with a scouring pad such as <u>Heavy Duty Scour Pad</u>, <u>Non-Scratch Scour Pad</u>, or equivalent by Scotch-Brite.
 - d. On bare galvanizing, apply a solution of phosphoric acid and detergents designed to remove grease and oil residue to provide a clean, lightly etched surface suitable for adhesion of subsequently applied coats in accordance with the manufacturer's instructions.
 - e. Feather the existing coating at transitions between the existing coating and the bare galvanizing.
 - 3. Interior Painted Hollow Metal Doors (to Receive Stripping and Recoating):
 - a. If overcoating hollow metal doors and frames results in sticking, incomplete closure or latching, or surface to surface abrading of new coatings, perform total coatings removal in areas of doors and frames as necessary using the chemical strippers and deglossing pads as specified in this Section.
 - b. Prepare existing coated surfaces and fully stripped surfaces as specified above for Interior Steel.
 - c. After overcoating with specified coating system, allow coatings to cure completely. Test door through multiple cycles to ensure proper closing and latching.
 - 4. Interior Prefinished Metal Suspended Acoustic Ceiling Grid:
 - a. Remove ceiling tiles before preparing metal grid for repainting. Protect existing to remain light diffusers and any tiles that cannot be removed.
 - b. Remove dirt, dust, grease, oil, and other surface interference material from metal grid with mild, nonresidue cleaning solution and water. Lightly degloss metal grid with the fine grit abrasive pads described in this Interior Metal Surface Preparation paragraph.



- B. Interior Masonry.
 - 1. Interior Unpainted Masonry:
 - a. Remove efflorescence by washing and scrubbing with <u>Sure Klean Light Duty Concrete Cleaner</u> (formerly <u>Sure Klean Concrete Brick Cleaner</u>) by <u>Prosoco, Inc.</u> or an equivalent removal solution recommended by the coating manufacturer.
 - b. If the efflorescence cannot be removed, contact Owner's Construction Manager before proceeding.
 - c. If the surface is to be painted, measure surface pH in accordance with ASTM 4262 once for each 30 linear feet of wall surface. Wash and scrub the surface as necessary to bring the pH level within the range of 6 and 13.
 - 2. Interior Painted Masonry (to Receive Overcoat):
 - a. Remove dirt, dust, grease, oil, and other surface interference material by washing and scrubbing.
 - b. Sand high-gloss surfaces.
 - c. Feather the existing coating at transitions between the existing coating and the bare steel.
 - d. Spot apply primer to areas prepared to bare substrate.
- C. Interior Other Substrate:
 - 1. Interior Gypsum Board:
 - a. New Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
 - b. Previously Painted Gypsum Board: Remove surface dust, debris, and loose paint. Feather the edges of removal areas to create a smooth transition.
 - 2. Interior Concrete Floors (to Receive Striping and Markings):
 - a. Mask floor surfaces that will not receive coating.
 - b. Remove visible grease and oil deposits by detergent or solvent cleaning.
 - c. Remove curing compound and sealers with solvents, commercial paint strippers, power tool cleaning, or abrasive blast cleaning using dust control methods specified herein for Full Coating Removal.
 - d. Chemically or mechanically abrade surface to a texture of 50-70 grit sandpaper.
 - e. If applying acid etching compound, thoroughly flush surface with clean water. Verify removal of acid with pH paper and allow the floor to thoroughly dry prior to painting.
 - f. Protect painted floor surface from traffic for 12 hours after painting.

D. Wood:

- 1. Remove surface contamination by washing with a cleaning solution, scraping, sanding, and scrubbing to remove dirt, pollutants, mildew, deteriorated wood, and surface interference material.
- 2. Allow to dry and apply patching material recommended by the coating manufacturer to fill cracks, nail holes, and other imperfections. Sand the patched areas smooth after drying.
- 3. Scrape and clean small, dry, seasoned knots and apply a thin coat of knot sealer recommended by the coating manufacturer before applying prime coat.
- 4. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dry.
- 5. Prime, stain, or seal wood required to be field painted immediately upon delivery to site. Prime edges, ends faces, undersides, and backsides of such wood, including cabinets and counters.
- 6. Seal tops, bottoms, and cut-outs with a heavy coat of sealer recommended by the coating manufacturer immediately upon delivery to the site.
- 7. Allow the surface to dry before applying new coatings. Prior to painting, verify dryness by testing in accordance with the manufacturer's instructions and the meter and plastic sheet methods as specified in Part 3 herein.

3.5 APPLICATION - GENERAL

- A. After cleaning and prior to painting, determine surface and subsurface moisture of non-metal substrates in compliance with the manufacturer's instructions and the following methods:
 - 1. Radio frequency and conductivity moisture meter testing with results in the green range for conductivity and the yellow range or below for radio frequency.
 - 2. Plastic sheet testing in accordance with ASTM D 4263 to determine the presence of capillary moisture. Levels are acceptable when dry on the plastic and the block.



- B. Mixing and Thinning:
 - 1. Mix coatings in clean containers in accordance with the manufacturer's published instructions.
 - 2. Remove skins on acrylic coatings prior to mixing. If mixed into the coating, remove skin residue by straining prior to use.
 - 3. Stir paint materials as necessary during use to maintain the consistency.
- C. Do not substitute or interchange products or coatings systems presented at the Pre-Installation Conference unless otherwise authorized by Owner's authorized representative.
- D. Apply paint to surfaces free of dirt, rust, scale, grease, moisture, scuffed surfaces, and conditions otherwise detrimental to formation of a durable paint film.
- E. Do not paint silicone sealants designated by an S1 or S2 assignment as described in Section 07900.
- F. Touch up shop-applied prime coats where damaged or bare. Use the same primer applied in the shop.
- G. If application procedures are not specified herein, use application procedures designated by the manufacturer's published instructions for the particular application and substrate.
- H. Dry Film Thickness (DFT) shown in the Product Schedules in Part 3 herein represent the minimum Dry Film Thickness in mils per coat. Apply each coat to uniform coverage. Avoid excessive thickness that results in runs, sags, and solvent voids in the film.
- I. Measure or allow to be measured the Wet Film Thickness (WFT) of exterior coatings on CMU if manufacturer's representative or Owner's authorized representative requires.
- J. Allow drying time between coats as recommended by the manufacturer.
- K. When coating irregular surfaces including edges, corners, crevices, welds, and exposed fasteners, apply a minimum dry film thickness equivalent to that of flat surfaces.
- L. Prime Coats, General: Before application of finish coats, apply a prime coat of material as scheduled. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.
 - 1. Additional prime coat requirements for Exterior CMU and masonry are provided in the articles following herein.
- M. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Apply additional coats if shadow through of underlying coats or substrate is visible. Cloudiness, spotting, laps, brush marks, runs, sags or other surface imperfections will not be acceptable.

3.6 MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Replace identification markings on mechanical or electrical equipment when painted over or spattered.
- B. Where exposed piping, conduit, and electrical equipment are to be painted, paint color and texture shall match adjacent surfaces.
- C. Paint both sides and edges of plywood backboards for electrical equipment prior to installation.

3.7 INTERIOR FIELD QUALITY CONTROL

A. Interior Coatings and Exterior Coatings on Surfaces Other than Exterior Wall: Inspect painting and coating application for scheduled material, color, sheen, specified thickness (WFT where indicated and DFT), and coverage.



3.8 MAINTENANCE OF WORK AREA

- A. As work proceeds and upon completion, remove paint where spilled, splashed, or spattered.
- B. During progress of work keep premises free from unnecessary accumulation of tools, equipment, surplus materials and debris. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint material from the site.
- C. Collect waste, cloths, and material which may constitute a fire hazard, place in closed metal containers, and remove daily from site.
- D. Upon completion of work, leave premises neat and clean. Remove protective coverings and paint from doorknobs, floors, counter tops and other areas not requiring paint.

3.9 **PROTECTION**

- A. Repair damage as a result of inadequate or unsuitable protection during preparation or installation.
- B. Do not leave plastic or other landscape protection covers in place so long that damage to plants results.

3.10 PAINT COLOR SCHEDULES

A. Interior Building Colors: The following are interior colors shown on drawings. Provide matches by any approved manufacturer.



| Mark | Color Number/Name by Sherwin |
|---------|---------------------------------------|
| IVIAI K | Williams unless otherwise shown. |
| P2 | SW# 7664 Steely Gray |
| P3 | SW# 6510 Loyal Blue |
| P5 | OSHA Standard Safety |
| | Yellow |
| P6 | SW# 6811 Honorable Blue |
| P7 | Pittsburgh Paints #2537 Blossom |
| | White |
| P8 | SW# 7005 Pure White (Walmart) |
| P9 | SW# 7042 Shoji White. Apply over |
| | textured coating specified in Section |
| | 09250 |
| P10 | SW# 6061 Tan Bark |
| P11 | SW# 6115 Totally Tan |
| P12 | SW# 6112 Biscuit |
| P13 | SW# 6454 Shamrock |
| P14 | SW# 6677 Goldenrod |
| P15 | SW# 7669 Summit Gray |
| P16 | SW# 7074 Software |
| P18 | SW# 7507 Stone Lion |
| P19 | SW# 6094 Sensational Sand |
| P20 | SW# 7036 Accessible Beige |
| P21 | SW# 4081 Safety Red |
| P22 | Pantone Color System 286 C. |
| P23 | SW# 7005 Pure White (Sam's Club) |
| P24 | SW# 2819 Downing Slate |
| P25 | SW# 0045 Antiquarian Brown |
| P26 | SW# 6080 Utterly Beige |
| P27 | SW# 6103 Tea Chest |
| P28 | SW# 6124 Cardboard |
| P29 | SW# 6420 Queen Anne's Lace |
| P30 | SW# 2018 Pink Beige |
| P31 | SW# 2016 Canberra |
| P32 | SW# 6387 Compatible Cream |
| P33 | SW# 6385 Dover White |
| P34 | SW# 6519 Hinting Blue |
| P35 | SW# 7071 Gray Screen |
| P36 | SW# 6989 Domino |
| P37 | SW# 0046 White Hyacinth |
| P38 | SW# 6102 Portabello |
| P39 | SW# 6122 Camelback |
| P40 | SW# 6665 Gardenia |
| P41 | SW# 6100 Practical Beige |
| P42 | SW# 6372 Inviting Ivory |
| P43 | SW# 6667 Afterglow |
| P44 | SW# 6666 Enjoyable Yellow |
| P45 | SW# 0044 Hubbard Squash |
| P46 | SW# 7006 Extra White |
| P47 | SW# 0051 Classic Ivory |
| P48 | SW# 7722 Travertine |
| P49 | SW# 7019 Gauntlet Grey |
| P50 | SW# 6382 Ceremonial Gold |
| P51 | SW# 6662 Summer Day |
| | |

| Williams unless otherwise shown.P52SW# 6334 Flower PotP53SW# 6432 Garden SpotP54SW# 6432 Garden SpotP55SW# 6025 Grape HarvestP56SW# 6000 Open SeasP57SW# 2848 Roycroft PewterP58SW# 0006 Black BeanP59SW# 0077 Classic French GrayP60SW# 6053 Reddened EarthP61SW# 6079 Diverse BeigeP62SW# 6172 Hardware.P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6085 Simplify BeigeP66SW# 6085 Simplify BeigeP67SW# 6113 Interactive CreamP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 6659 Captivating CreamP73SW# 6659 Captivating CreamP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6060 Moroccan BrownP81SW# 6052 Cobble BrownP84SW# 7679 Golden GateP83SW# 6062 Cubged BrownP84SW# 7517 China DollP85SW# 2807 Rookwood Medium BrownP86SW# 7513 SanderlingP92SW# 7513 Gaitersweet StemP93SW# 7513 Gaitersweet StemP94SW# 7513 Gaitersweet StemP95SW# 7718 Obak CreekP100SW# 7510 Bro | Mark | Color Number/Name by Sherwin |
|---|------|-----------------------------------|
| P53SW# 6810 LupineP54SW# 6432 Garden SpotP55SW# 6432 Garden SpotP56SW# 6050 Open SeasP57SW# 6000 Black BeanP58SW# 6007 Classic French GrayP60SW# 6073 Reddened EarthP61SW# 6079 Diverse BeigeP62SW# 6172 Hardware.P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6113 Interactive CreamP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6534 OBaked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6059 Noracean BrownP81SW# 6060 Moroccan BrownP84SW# 7611 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6062 Cobple BrownP87SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2823 Rookwood ClayP88SW# 7517 China DollP89SW# 7502 Dry DockP91SW# 7502 Dry DockP91SW# 7502 Dry DockP91SW# 7502 Dry DockP91SW# 7502 Dry DockP93SW# 7718 Oak Creek< | | Williams unless otherwise shown. |
| P54SW# 6432 Garden SpotP55SW# 6285 Grape HarvestP56SW# 6000 Den SeasP57SW# 2848 Roycroft PewterP58SW# 0006 Black BeanP59SW# 0007 Classic French GrayP60SW# 6079 Diverse BeigeP61SW# 6079 Diverse BeigeP62SW# 6172 Hardware.P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6378 Crisp LinenP66SW# 6114 BagelP67SW# 6113 Interactive CreamP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 659 Captivating CreamP72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6258 Tricorn BlackP82SW# 7610 Golden GateP83SW# 6082 Cobble BrownP84SW# 7617 Golden GateP83SW# 6082 Cobble BrownP84SW# 7611 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7502 Dry DockP91SW# 7502 Dry DockP91SW# 7503 Entersweet StemP | | |
| P55SW# 6285 Grape HarvestP56SW# 6500 Open SeasP57SW# 2848 Roycroft PewterP58SW# 6006 Black BeanP59SW# 0077 Classic French GrayP60SW# 6053 Reddened EarthP61SW# 6079 Diverse BeigeP62SW# 6172 Hardware.P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 66340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6659 Captivating CreamP73SW# 6659 Captivating CreamP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6060 Moroccan BrownP81SW# 6062 Cobble BrownP84SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7517 China DollP85SW# 2803 Rookwood ClayP86SW# 6052 Rugged BrownP88SW# 7513 SanderlingP90SW# 7502 Dry DockP91SW# 7502 Dry DockP91SW# 7513 SanderlingP92SW# 7513 CanderlingP93SW# 7710 Brandy WineP94SW# 7710 Brandy WineP95SW# 7705 Wheat PennyP96 | - | |
| P56SW# 6500 Open SeasP57SW# 2848 Roycroft PewterP58SW# 6006 Black BeanP59SW# 0077 Classic French GrayP60SW# 6053 Reddened EarthP61SW# 6079 Diverse BeigeP62SW# 6172 Hardware.P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76APantone Color System 285CP77SW# 6060 Moroccan BrownBlueSW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7518 Gaitersweet StemP90SW# 7518 Gaitersweet StemP93SW# 7718 Oak CreekP100SW# 7718 Oak CreekP100SW# 7718 Oak CreekP100SW# 6251 Notable HueP101SW# 6094 Gusto Gold | | |
| P57SW# 2848 Roycroft PewterP58SW# 6006 Black BeanP59SW# 0077 Classic French GrayP60SW# 6053 Reddened EarthP61SW# 6079 Diverse BeigeP62SW# 6172 Hardware.P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6659 Captivating CreamP73SW# 6659 Captivating CreamP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6060 Moroccan BrownP81SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2807 Rookwood Medium BrownP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7513 SanderlingP90SW# 7536 Bittersweet StemP93SW# 7710 Brandy WineP94SW# 7710 Brandy WineP95SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | | |
| P58SW# 6006 Black BeanP59SW# 0077 Classic French GrayP60SW# 6053 Reddened EarthP61SW# 6053 Reddened EarthP61SW# 6079 Diverse BeigeP62SW# 6172 Hardware.P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6062 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6062 Rugged BrownP87SW# 2807 Rookwood Medium BrownP88SW# 7513 SanderlingP90SW# 7536 Bittersweet StemP91SW# 7502 Dry DockP91SW# 7710 Brandy WineP94SW# 7710 Brandy WineP95SW# 7710 Brandy WineP96SW# 7710 Brandy WineP97SW# 7718 Oak Creek <tr< th=""><th></th><th></th></tr<> | | |
| P59 SW# 0077 Classic French Gray P60 SW# 6053 Reddened Earth P61 SW# 6079 Diverse Beige P62 SW# 6079 Diverse Beige P63 SW# 2340 Buff P64 SW# 6332 Coral Island P65 SW# 6378 Crisp Linen P66 SW# 6378 Crisp Linen P66 SW# 6114 Bagel P67 SW# 6113 Interactive Cream P69 SW# 6113 Interactive Cream P69 SW# 61051 Analytical Gray. P70 SW# 2838 Polished Mahogany P71 SW# 7051 Analytical Gray. P72 SW# 6659 Captivating Cream P73 SW# 6659 Captivating Cream P74 SW# 2804 Renwick Rose Beige P76 Custom Match # 076 Walmart Medium Blue P76 SW# 2804 Renwick Rose Beige P76 SW# 6359 Sociable P80 SW# 6060 Moroccan Brown P81 SW# 6052 Sociable P82 SW# 7679 Golden Gate P83 SW# 6052 Cobble Brown P84 SW# 7612 Collonade Gray | P57 | SW# 2848 Roycroft Pewter |
| P60SW# 6053 Redened EarthP61SW# 6079 Diverse BeigeP62SW# 6079 Diverse BeigeP63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6659 Captivating CreamP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6082 Cobble BrownP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2807 Rookwood Medium BrownP86SW# 6062 Rugged BrownP87SW# 2807 Rookwood Medium BrownP88SW# 7513 SanderlingP90SW# 7538 TamarindP94SW# 7538 TamarindP95SW# 7710 Brandy WineP96SW# 7710 Brandy WineP97SW# 7710 Brandy WineP98SW# 7710 Brandy WineP94SW# 7710 Brandy WineP95SW# 7710 Brandy WineP96SW# 7710 Brandy WineP97SW# 6521 Notable Hue< | P58 | SW# 6006 Black Bean |
| P61SW# 6079 Diverse BeigeP62SW# 6172 Hardware.P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6258 Tricorn BlackP80SW# 6060 Moroccan BrownP81SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7502 Dry DockP91SW# 7538 TamarindP92SW# 7538 TamarindP94SW# 7710 Spiced CiderP96SW# 7710 Brandy VineP97SW# 7710 Brandy WineP98SW# 7710 Brandy WineP94SW# 7710 Brandy WineP95SW# 7710 Brandy WineP96SW# 7710 Brandy WineP97SW# 6904 Gusto Gold | P59 | |
| P62SW# 6172 Hardware.P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6359 SociableP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7513 SanderlingP90SW# 7536 Bittersweet StemP91SW# 7538 TamarindP94SW# 7052 Dry DockP91SW# 7710 Brandy WineP96SW# 7718 Oak CreekP100SW# 7718 Oak CreekP100SW# 6021 Notable HueP101SW# 6094 Gusto Gold | P60 | SW# 6053 Reddened Earth |
| P63SW# 2340 BuffP64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP774SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6082 Cobble BrownP84SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7513 SanderlingP92SW# 7536 Bittersweet StemP93SW# 7536 Bittersweet StemP94SW# 7052 Dry DockP91SW# 7538 TamarindP94SW# 7051 Sheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6094 Gusto Gold | P61 | SW# 6079 Diverse Beige |
| P64SW# 6332 Coral IslandP65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP774SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6060 Moroccan BrownP81SW# 6023 Cobble BrownP84SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6062 Rugged BrownP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7536 Bittersweet StemP90SW# 7536 Bittersweet StemP91SW# 7538 TamarindP94SW# 7052 Wheat PennyP97SW# 710 Brandy WineP98SW# 7110 Brandy WineP98SW# 7110 Brandy WineP90SW# 7110 Brandy WineP91SW# 6042 Gusto Gold | P62 | SW# 6172 Hardware. |
| P65SW# 6378 Crisp LinenP66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP774SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6060 Moroccan BrownP81SW# 6052 Coble BrownP84SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2807 Rookwood ClayP86SW# 6062 Rugged BrownP87SW# 2807 Rookwood Medium BrownP88SW# 7513 SanderlingP90SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7052 Dry DockP91SW# 7052 Meat PennyP93SW# 7538 TamarindP94SW# 7050 Wheat PennyP95SW# 7710 Brandy WineP96SW# 7710 Brandy WineP97SW# 7718 Oak CreekP100SW# 6094 Gusto Gold | P63 | SW# 2340 Buff |
| P66SW# 6085 Simplify BeigeP67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 602 Cobble BrownP84SW# 7679 Golden GateP83SW# 6356 Copper MountainP84SW# 7641 Collonade GrayP85SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7513 SanderlingP90SW# 7538 TamarindP91SW# 7538 TamarindP94SW# 7059 Wheat PennyP97SW# 7050 Wheat PennyP97SW# 7110 Brandy WineP98SW# 7710 Brandy WineP98SW# 7710 Brandy WineP98SW# 7710 Brandy WineP98SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6094 Gusto Gold | P64 | SW# 6332 Coral Island |
| P67SW# 6114 BagelP68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6659 Captivating CreamP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP80SW# 7502 Dry DockP91SW# 7538 TamarindP92SW# 7694 Dromedary CamelP93SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7710 Brandy WineP98SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | P65 | SW# 6378 Crisp Linen |
| P68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6658 Welcome White.P73SW# 6659 Captivating CreamP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2807 Rookwood ClayP86SW# 2807 Rookwood Medium BrownP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7502 Dry DockP91SW# 7538 TamarindP93SW# 7694 Dromedary CamelP94SW# 7702 Spiced CiderP96SW# 7710 Brandy WineP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6021 Notable HueP101SW# 6094 Gusto Gold | P66 | SW# 6085 Simplify Beige |
| P68SW# 6113 Interactive CreamP69SW# 6340 Baked Clay.P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6658 Welcome White.P73SW# 6659 Captivating CreamP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2807 Rookwood ClayP86SW# 2807 Rookwood Medium BrownP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7502 Dry DockP91SW# 7538 TamarindP93SW# 7694 Dromedary CamelP94SW# 7702 Spiced CiderP96SW# 7710 Brandy WineP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6021 Notable HueP101SW# 6094 Gusto Gold | P67 | SW# 6114 Bagel |
| P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6658 Welcome White.P73SW# 6659 Captivating CreamP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6060 Moroccan BrownP81SW# 6058 Tricorn BlackP82SW# 6082 Cobble BrownP84SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6062 Rugged BrownP87SW# 2807 Rookwood Medium BrownP88SW# 7512 Dry DockP91SW# 7503 Bittersweet StemP93SW# 7504 Dromedary CamelP94SW# 7694 Dromedary CamelP95SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | P68 | |
| P70SW# 2838 Polished MahoganyP71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6658 Welcome White.P73SW# 6659 Captivating CreamP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6060 Moroccan BrownP81SW# 6058 Tricorn BlackP82SW# 6082 Cobble BrownP84SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6062 Rugged BrownP87SW# 2807 Rookwood Medium BrownP88SW# 7512 Dry DockP91SW# 7503 Bittersweet StemP93SW# 7504 Dromedary CamelP94SW# 7694 Dromedary CamelP95SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | P69 | SW# 6340 Baked Clay. |
| P71SW# 7051 Analytical Gray.P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76Pantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7502 Dry DockP91SW# 7536 Bittersweet StemP93SW# 7694 Dromedary CamelP94SW# 7694 Dromedary CamelP95SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | P70 | |
| P72SW# 6658 Welcome White.P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7502 Dry DockP91SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7702 Spiced CiderP95SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | P71 | |
| P73SW# 6214 UnderseasP74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76Pantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7702 Spiced CiderP95SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | P72 | ž ž |
| P74SW# 6659 Captivating CreamP75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7502 Dry DockP91SW# 7503 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | P73 | |
| P75SW# 2804 Renwick Rose BeigeP76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | P74 | |
| P76Custom Match # 076 Walmart Medium BlueP76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | P75 | |
| P76APantone Color System 285CP77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 7502 Dry DockP91SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7702 Spiced CiderP96SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | - | Custom Match # 076 Walmart Medium |
| P77SW# 6087 Trusty TanP78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 6082 Cobble BrownP84SW# 7679 Golden GateP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7513 SanderlingP92SW# 7536 Bittersweet StemP93SW# 7694 Dromedary CamelP95SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | | |
| P78SW# 2445 Creamy WhiteP79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 6258 Tricorn BlackP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 2823 Rookwood ClayP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7513 SanderlingP92SW# 7536 Bittersweet StemP93SW# 7694 Dromedary CamelP95SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | | |
| P79SW# 6359 SociableP80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | | |
| P80SW# 6060 Moroccan BrownP81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7702 Spiced CiderP96SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | | |
| P81SW# 6258 Tricorn BlackP82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 7841 Collonade GrayP86SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7513 SanderlingP92SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7702 Spiced CiderP95SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | | |
| P82SW# 7679 Golden GateP83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7702 Spiced CiderP96SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6904 Gusto Gold | | |
| P83SW# 6082 Cobble BrownP84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7513 SanderlingP92SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7702 Spiced CiderP96SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | | |
| P84SW# 7641 Collonade GrayP85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7513 SanderlingP92SW# 7536 Bittersweet StemP93SW# 7694 Dromedary CamelP94SW# 7702 Spiced CiderP96SW# 7710 Brandy WineP97SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | | |
| P85SW# 2823 Rookwood ClayP86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7513 SanderlingP92SW# 7536 Bittersweet StemP93SW# 7694 Dromedary CamelP95SW# 7702 Spiced CiderP96SW# 7710 Brandy WineP97SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | P83 | SW# 6082 Cobble Brown |
| P86SW# 6356 Copper MountainP87SW# 2807 Rookwood Medium BrownP88SW# 7517 China DollP89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7503 SanderlingP92SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7702 Spiced CiderP96SW# 7710 Brandy WineP97SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | P84 | SW# 7641 Collonade Gray |
| P87 SW# 2807 Rookwood Medium Brown P88 SW# 7517 China Doll P89 SW# 6062 Rugged Brown P90 SW# 7502 Dry Dock P91 SW# 7513 Sanderling P92 SW# 7536 Bittersweet Stem P93 SW# 7538 Tamarind P94 SW# 7694 Dromedary Camel P95 SW# 7702 Spiced Cider P96 SW# 7710 Brandy Wine P97 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P85 | |
| P88 SW# 7517 China Doll P89 SW# 6062 Rugged Brown P90 SW# 7502 Dry Dock P91 SW# 7513 Sanderling P92 SW# 7536 Bittersweet Stem P93 SW# 7538 Tamarind P94 SW# 7694 Dromedary Camel P95 SW# 7702 Spiced Cider P96 SW# 7710 Brandy Wine P97 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P86 | |
| P89SW# 6062 Rugged BrownP90SW# 7502 Dry DockP91SW# 7513 SanderlingP92SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7702 Spiced CiderP96SW# 7710 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | P87 | SW# 2807 Rookwood Medium Brown |
| P90 SW# 7502 Dry Dock P91 SW# 7513 Sanderling P92 SW# 7536 Bittersweet Stem P93 SW# 7538 Tamarind P94 SW# 7694 Dromedary Camel P95 SW# 7702 Spiced Cider P96 SW# 7710 Brandy Wine P97 SW# 7710 Brandy Wine P98 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P88 | SW# 7517 China Doll |
| P91 SW# 7513 Sanderling P92 SW# 7536 Bittersweet Stem P93 SW# 7538 Tamarind P94 SW# 7694 Dromedary Camel P95 SW# 7702 Spiced Cider P96 SW# 7705 Wheat Penny P97 SW# 7710 Brandy Wine P98 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P89 | SW# 6062 Rugged Brown |
| P92SW# 7536 Bittersweet StemP93SW# 7538 TamarindP94SW# 7694 Dromedary CamelP95SW# 7702 Spiced CiderP96SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | P90 | SW# 7502 Dry Dock |
| P93 SW# 7538 Tamarind P94 SW# 7694 Dromedary Camel P95 SW# 7702 Spiced Cider P96 SW# 7705 Wheat Penny P97 SW# 7710 Brandy Wine P98 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P91 | SW# 7513 Sanderling |
| P93 SW# 7538 Tamarind P94 SW# 7694 Dromedary Camel P95 SW# 7702 Spiced Cider P96 SW# 7705 Wheat Penny P97 SW# 7710 Brandy Wine P98 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P92 | |
| P94SW# 7694 Dromedary CamelP95SW# 7702 Spiced CiderP96SW# 7705 Wheat PennyP97SW# 7710 Brandy WineP98SW# 7718 Oak CreekP100SW# 6521 Notable HueP101SW# 6904 Gusto Gold | P93 | |
| P95 SW# 7702 Spiced Cider P96 SW# 7705 Wheat Penny P97 SW# 7710 Brandy Wine P98 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P94 | |
| P96 SW# 7705 Wheat Penny P97 SW# 7710 Brandy Wine P98 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P95 | |
| P97 SW# 7710 Brandy Wine P98 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P96 | |
| P98 SW# 7718 Oak Creek P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P97 | |
| P100 SW# 6521 Notable Hue P101 SW# 6904 Gusto Gold | P98 | |
| P101 SW# 6904 Gusto Gold | | |
| | | |
| F102 Sw# / S18 Beach House | P102 | SW# 7518 Beach House |



| Maula | Color Number/Name by Sherwin | | | |
|-------|----------------------------------|--|--|--|
| Mark | Williams unless otherwise shown. | | | |
| P103 | SW# 6095 Toasty | | | |
| P104 | SW# 6867 Fireworks | | | |
| P105 | SW# 6526 Icelandic | | | |
| P106 | SW# 6675 Afternoon | | | |
| P107 | SW# 7698 Straw Harvest | | | |
| P108 | SW# 6991 Black Magic | | | |
| P109 | SW# 7506 Loggia | | | |
| P110 | SW# 7043 Worldly Gray | | | |
| P111 | SW# 7531 Canvas Tan | | | |
| P112 | SW# 6676 Butterfield | | | |
| P113 | SW# 6674 Jonquil | | | |
| P114 | SW# 7720 Deer Valley | | | |
| P115 | SW# 6076 Turkish Coffee | | | |
| P116 | Custom Match #116 Walmart | | | |
| | Neighborhood Market Green | | | |
| P116A | Pantone Color System 368 C | | | |
| P117 | SW# 6429 Baize Green | | | |
| P118 | SW# 6720 Paradise | | | |
| P119 | SW# 6895 Laughing Orange | | | |
| P120 | SW# 6887 Navel | | | |
| P121 | SW# 6905 Goldfinch | | | |
| P122 | SW# 6413 Restoration Ivory | | | |
| P123 | SW# 6380 Humble Gold | | | |
| P124 | SW# 7522 Meadowlark | | | |
| P125 | SW# 6923 Festival Green | | | |
| P126 | SW# 6885 Knockout Orange | | | |
| P127 | SW# 7719 Fresco Cream | | | |
| P128 | SW# 7510 Chateau Brown | | | |
| P129 | SW# 6683 Bee | | | |
| P130 | SW# 6922 Outrageous Green | | | |
| P131 | SW# 7102 White Flour | | | |
| P133 | Pantone Color System 287 C | | | |
| P134 | SW #7015 Repose Gray | | | |

| Mark | Color Number/Name by Sherwin | | | | |
|------|----------------------------------|--|--|--|--|
| Mark | Williams unless otherwise shown. | | | | |
| P135 | SW #7017 Dorian Gray | | | | |
| P139 | SW #6710 Melange Green | | | | |
| P140 | SW #7004 Snowbound | | | | |
| P150 | SW #7072 Online | | | | |
| P159 | SW# 7571 Casa Blanca | | | | |
| P161 | SW #7609 "Georgian Revival Blue" | | | | |
| P162 | SW# 7674 Peppercorn | | | | |
| P163 | SW# 6939 Turquish | | | | |
| P164 | SW# 6002 Essential Gray | | | | |
| P165 | SW# 6105 Divine White | | | | |
| P166 | SW# 6766 "Mariner" | | | | |
| P167 | SW #6868 Real Red | | | | |
| | SW Custom Walmart Color | | | | |
| | "Duranodic Bronze" Order #7248- | | | | |
| P200 | 0044642 | | | | |
| P201 | SW #7668 March Wind | | | | |
| P202 | SW #7670 Gray Shingle | | | | |
| P203 | SW #7048 Urbane Bronze | | | | |
| P204 | SW #0019 Festoon Aqua | | | | |
| P205 | Pantone Color System 282 | | | | |
| P206 | SW #7000 Ibis White | | | | |
| | HGSW #1465 Contemporary Grey | | | | |
| | (Custom) One-Gallon Formula: | | | | |
| | Extra White Base | | | | |
| | CCE*Colorant 02 32 64 128 | | | | |
| D207 | B1-Black 2 2 1 1 | | | | |
| P207 | Y3-Deep Gold - 5 | | | | |
| P208 | SW #6953 Candid Blue | | | | |
| P209 | SW #7064 Passive | | | | |
| P210 | SW #6959 Blue Chip | | | | |
| P211 | SW #6249 Storm Cloud | | | | |
| P212 | Sam's Club Teal (custom color) | | | | |

3.11 PAINT SHEEN SCHEDULE

- A. Semi-gloss:
 - 1. Interior hollow metal doors and frames.
 - 2. Interior hollow metal window frames.
 - 3. Wood trim or simulated wood trim scheduled to be painted.
 - 4. Toilet gypsum board ceilings.
 - 5. Interior columns surfaces to receive epoxy finish.
- B. Eggshell:
 - 1. All surfaces to be painted where sheen is not otherwise specified.
- C. Do not paint the following Items:
 - 1. Aluminum, brass, bronze, stainless steel, and chrome plated steel, unless otherwise shown or specified.
 - 2. UL, FM, and other code-required labels.
 - 3. Equipment identification, performance rating, and name plates.
 - 4. Finish hardware.
 - 5. Fire Suppression sprinklers.
 - 6. Low voltage cabling not in conduit, such as fire alarm, voice, data, EMS, audio, or security.



7. Generally, pre-finished items and equipment such as toilet compartments, mechanical and electrical equipment, and factory finished metal panels and trim, unless otherwise shown or specified. Where pre-finished items are to receive paint, see Interior Metal Surface Preparation above herein.

3.12 PRODUCT AND SYSTEM SCHEDULES - INTERIOR

A. Select products and systems by one of the following manufacturers among those scheduled below. Refer to the following Product Schedules to verify manufacturer's recommended DFT.

| B. System Schedules for each manufacturer | follow the Product Schedule. |
|---|------------------------------|
|---|------------------------------|

| Interior Products by Sherwin Williams | | |
|--|------------|-----------|
| Product Name | DFT (mils) | VOC (g/l) |
| Interior Metal | | |
| ProCryl Universal Primer B66-310 | 2.0 | 100 |
| Pro Mar 200 Interior Latex Gloss Enamel, B21W200 | 1.5 | 143 |
| ProMar 200 Zero VOC Interior Latex Semi-Gloss Enamel, B31- 2600 Series | 1.6 | 0 |
| ProMar 200 Zero VOC Interior Latex Eggshell Enamel, B20-2600 Series | 1.7 | 0 |
| Waterborne Acrylic Dryfall, B42 Series | 2.0 | 39 |
| Epolon II Rust Inhibitive Epoxy Primer B67W400, B67A400, B67A400 | 4.0 | 300 |
| Macropoxy 646- 100, B58W620, B58V620 | 5.0-10.0 | 100 |
| WB Acrolon 100 Water Based Urethane B65-720, B65V720 | 2.0-4.0 | <100 |
| DTM Acrylic Coating B66-100 Series | 2.5-4.0 | <250 |
| Interior CMU | | |
| Pro Mar 200 Interior Latex Gloss Enamel, B21W200 | 1.5 | 143 |
| ProMar 200 Zero VOC Interior Latex Eggshell, B202-2600 Series | 1.7 | 0 |
| Loxon Concrete and Masonry Primer, A24W08300 | 3.0 | 45 |
| ProMar 200 Zero VOC Latex Primer, B28W02600 | 1.5 | 0 |
| Interior Gypsum Board | | |
| ProMar 200 Zero VOC Latex Primer, B28W02600 | 1.5 | 0 |
| Pro Mar 200 Interior Latex Gloss Enamel, B21W200 | 1.5 | 143 |
| ProMar 200 Zero VOC Interior Latex Semi-Gloss Enamel, B31-2600 Series | 1.6 | 0 |
| ProMar 200 Zero VOC Interior Latex Eggshell, B202-2600 Series | 1.7 | 0 |
| Interior Wood | | |
| ProMar 200 Zero VOC Latex Primer, B28W02600 | 1.5 | 0 |
| PrepRite ProBlock Interior/Exterior Latex Primer Sealer B51 Series | 1.4 | 97 |
| ProMar 200 Zero VOC Interior Latex Semi-Gloss Enamel, B31-2600 Series | 1.6 | 0 |
| Wood Classics Varnish Sanding Sealer, B26V43 | 1.2 | 522 |
| Interior Concrete Floors | | |
| Macropoxy 646-100, B58W620, B58V620 | 5.0-10.0 | <100 |
| Armorseal Tread-Plex, B90 Series | 1.5-2.0 | <100 |

| Interi | Interior Systems by Sherwin Williams | | | |
|------------------------|--|----------------------------------|---|--|
| | | Prime Coat | Finish Coat(s) | |
| Interior Ferrous Metal | | | | |
| INT 1 | General Use – Gloss (unless specified otherwise) | ProCryl Universal Primer B66-310 | 2 coats: Pro Mar 200 Interior Latex Gloss Enamel, B21W200* | |
| INT 2 | General Use – Semi-Gloss (unless specified otherwise) | ProCryl Universal Primer B66-310 | 2 coats: ProMar 200 Zero VOC Interior Latex Semi-Gloss Enamel, B31- 2600 Series | |



| INT | | $\mathbf{P} = \mathbf{C} + \mathbf{I} \mathbf{U}$ | 2 D M 200 7 MOCLA |
|------------------|--|---|--|
| INT 3 | General Use – Eggshell (unless specified otherwise) | ProCryl Universal Primer B66-310 | 2 coats: ProMar 200 Zero VOC Interior Latex Eggshell Enamel, B20-2600 Series Exception: Interior columns shall receive only one finish coat. |
| INT 4 | Dryfall system over shop primed steel –overhead structure - Flat | To touch up prime welds, bare spots, blemishes, and scratches: ProCryl Universal Primer B66-310 | 1 coat: SW-eWaterborne Acrylic Dryfall, B42 Series |
| INT 5 | Dryfall system over unprimed steel - overhead structure – Flat | ProCryl Universal Primer B66-310 | 1 coat: Waterborne Acrylic Dryfall, B42 Series |
| INT 6 | Columns and Hollow Metal Door Frames as shown on Drawings to receive epoxy – Semi-Gloss | Epolon II Rust Inhibitive Epoxy Primer B67W400, B67A400, B67A400 | 1 coat: WB Acrolon 100 Water Based Urethane B65-720, B65V720 |
| INT 6 (CA) | Columns and Hollow Metal Door Frames as shown on Drawings to receive epoxy - Semi-Gloss | Macropoxy 646- 100, B58W620, B58V620 | 1 coat: WB Acrolon 100 Water Based Urethane B65-720, B65V720 |
| Interi | or Galvanized Metal | | |
| INT 7 | Latex for exposed ductwork, hangers, and supports – Semi-Gloss | ProCryl Universal Primer B66- 310** | 2 coats: ProMar 200 Zero VOC Interior Latex Semi-Gloss Enamel, B31- 2600 Series |
| INT 8 | Dryfall System for exposed ductwork, hangers and supports - Flat | ProCryl Universal Primer B66- 310** | 1 coat: Waterborne Acrylic Dryfall, B42 Series |
| INT 9 | Cooler/Freezer Panels (Existing) - shown to be re- painted - Gloss | DTM Acrylic Coating B66-100 Series | 1 coat: DTM Acrylic Coating B66-100 Series |
| Interi | or CMU – New Construction | | |
| INT 10 | Latex System - Gloss | Loxon Concrete and Masonry Primer, A24W08300 | 2 coats: Pro Mar 200 Interior Latex Gloss Enamel, B21W200* |
| INT 11 | Latex System - Eggshell | Loxon Concrete and Masonry Primer, A24W08300 | 2 coats: ProMar 200 Zero VOC Interior Latex Eggshell Enamel, B20-2600 Series |
| Interi | or CMU – Previously Painted | · | |
| INT 12 | Latex System - Gloss | ProMar 200 Zero VOC Latex Primer, B28W02600 | 2 coats: Pro Mar 200 Interior Latex Gloss Enamel, B21W200* |
| INT 13 | Latex System - Eggshell | ProMar 200 Zero VOC Latex Primer, B28W02600 | 2 coats: ProMar 200 Zero VOC Interior Latex Eggshell Enamel, B20-2600 Series |
| Interi | or Gypsum Board | | |
| INT 14 | Latex System - Gloss | ProMar 200 Zero VOC Latex Primer, B28W02600 | 2 coats: Pro Mar 200 Interior Latex Gloss Enamel, B21W200* |
| INT 15 | Latex System – Semi- Gloss | ProMar 200 Zero VOC Latex Primer, B28W02600 | 2 coats: ProMar 200 Zero VOC Interior Latex Semi-Gloss Enamel, B31- 2600 Series |
| INT 16 | Latex System - Eggshell | ProMar 200 Zero VOC Latex Primer, B28W02600 | 2 coats: ProMar 200 Zero VOC Interior Latex Eggshell Enamel, B20-2600 Series |



| Interi | or Wood | | |
|--------|------------------------------|----------------------------------|-------------------------------------|
| INT | General Use – Latex – | ProMar 200 Zero VOC Latex | 2 coats: |
| 17 | Semi-Gloss | Primer, B28W02600 | ProMar 200 Zero VOC Interior Latex |
| | | | Semi-Gloss Enamel, B31- 2600 Series |
| INT | Exposed laminated wood | PrepRite ProBlock | 2 coats: |
| 18 | roof structure – Latex – | Interior/Exterior Latex Primer | ProMar 200 Zero VOC Interior Latex |
| | Semi-Gloss | Sealer B51 Series | Semi-Gloss Enamel, B31- 2600 Series |
| INT | Transparent sealer | Wood Classics Varnish Sanding | |
| 19 | | Sealer, B26V43 | |
| Interi | or Concrete Floors | | |
| INT | Floor, and floor striping, | Macropoxy 646- 100, B58W620, | 2 coats: |
| 20 | graphics and markings - | B58V620 | Macropoxy 646- 100, |
| | Semi-Gloss | | B58W620, B58V620 |
| INT | Existing Painted Floor Slabs | Armorseal Tread-Plex, B90 Series | 2 coats: |
| 21 | _ | | Armorseal Tread-Plex, B90 Series |
| | Semi-Gloss | | |

* Use for all states except CA. For CA projects, consult Manufacturer's Representative for compliant coating.

** Apply primer after light etching is accomplished in accordance with Galvanized Steel – Interior Surface Prep requirements in Part 3 above.

| Interior Products by PPG Paints | | |
|--|------------|-----------|
| Product Name | DFT (mils) | VOC (g/l) |
| Interior Metal | | |
| PPG Pitt-Tech Plus 4020 PF Acrylic DTM Primer | 2.2 | 91 |
| PPG Advantage 919-10 Gloss Acrylic Enamel | 1.5 | 50 |
| PPG Speed Hide 0 VOC Semi-Gloss Acrylic Enamel 6-4510XI Series | 1.3 | 0 |
| PPG Speed Hide 0 VOC Eggshell Acrylic Enamel 6-4310XI Series | 1.5 | 0 |
| PPG Super Tech Acrylic Flat Dryfall 6-725XI Series | 2.2 | 30 |
| PPG Rapid Coat DTR Epoxy Mastic 95-245 Series | 4.0 -7.0 | 263 |
| PPG Amerlock 400 VOC Semi-Gloss Epoxy | 4.8-8.0 | 99 |
| PPG Aquapon WB-E Ultra Low VOC Epoxy 98-E1 Series | 2.0-3.0 | 26 |
| PPG Pitt-Tech Gloss DTM Acrylic Enamel 90-0374 Series | 2.0 - 3.0 | 192 |
| Interior CMU | | |
| PPG Pitt-Tech Plus 4020 PF Acrylic DTM Primer | 1.5 | 0 |
| PPG Speed Hide 0 VOC Eggshell Acrylic Enamel 6-4310XI Series | 1.7 | 0 |
| PPG Speed Hide Block Filler 6-15XI Series | 8.0 | 50 |
| PPG Speed Hide 0 VOC Primer 6-4900XL | 1.4 | 0 |
| PPG Seal Grip Acrylic Primer 17-921XI Series | 1.6 | 50 |
| Interior Gypsum Board | | |
| PPG Speed Hide 0 VOC Primer 6-4900XL | 1.4 | 0 |
| PPG Advantage 919-10 Gloss Acrylic Enamel | 1.5 | 50 |
| PPG Speed Hide 0 VOC Semi-Gloss Acrylic Enamel 6-4510XI Series | 1.3 | 0 |
| PPG Speed Hide 0 VOC Eggshell Acrylic Enamel 6-4310XI Series | 1.5 | 0 |
| Interior Wood | | |
| PPG Speed Hide 0 VOC Primer 6-4900XL | 1.4 | 0 |
| PPG Seal Grip Acrylic Primer 17-921XI Series | 1.6 | 50 |
| PPG Speed Hide 0 VOC Semi-Gloss Acrylic Enamel 6-4510XI Series | 1.6 | 0 |
| PPG Deft Sanding Sealer DFT015 Clear | 1.0 | 590 |
| Interior Concrete Floors | | |
| PPG Amerlock 400 VOC Semi-Gloss Epoxy | 4.8-8.0 | 99 |
| PPG Breakthrough V70 Series Gloss Acrylic | 1.5-2.0 | 211 |



| Interi | or Systems by PPG Paints | | |
|------------------|--|--|---|
| | | Prime Coat | Finish Coat(s) |
| Interi | or Ferrous Metal | | |
| INT 1 | General Use – Gloss (unless specified otherwise) | Pitt-Tech Plus 4020PF Acrylic DTM Primer | 2 coats: Advantage 919-10 Series Gloss Acrylic Enamel |
| INT 2 | General Use – Semi-Gloss (unless specified otherwise) | Pitt-Tech Plus 4020PF Acrylic DTM Primer | 2 coats: Speed Hide 0 VOC Semi-Gloss Enamel 6-4510XI Series |
| INT 3 | General Use – Eggshell (unless specified otherwise) - | Pitt-Tech Plus 4020PF Acrylic DTM Primer | 2 coats: Speed Hide 0 VOC Eggshell Enamel 6-4310XI Series Exception: Interior columns shall receive only one finish coat. |
| INT 4 | Dryfall system over shop primed steel –overhead structure - Flat | To touch up prime welds, bare spots, blemishes, and scratches: | 1 coat: Speed Hide Super Tech Flat Acrylic Dry fall 6-725XI |
| INT 5 | Dryfall system over unprimed steel - overhead structure – Flat | Pitt-Tech Plus 4020PF Acrylic DTM Primer | 1 coat: Speed Hide Super Tech Flat Acrylic Dry fall 6-725XI |
| INT 6 | Columns and Hollow Metal Door Frames as shown on Drawings to receive epoxy – Semi-Gloss | PPG Amerlock 400 VOC Semi-Gloss Epoxy | 1 coat: PPG Aquapon WB-E Ultra Low VOC Epoxy 98-E1 Series |
| INT 6 (CA) | Columns and Hollow Metal Door Frames as shown on Drawings to receive epoxy - Semi-Gloss | PPG Amerlock 400 VOC Semi-Gloss Epoxy | 1 coat: PPG Aquapon WB-E Ultra Low VOC Epoxy 98-E1 Series |
| Interi | or Galvanized Metal | | • |
| INT 7 | Latex for exposed ductwork, hangers, and supports – Semi-Gloss | Pitt-Tech Plus 4020PF Acrylic DTM Primer | 2 coats: Speed Hide 0 VOC Semi-Gloss Enamel 6-4510XI Series |
| INT 8 | Dryfall System for exposed ductwork, hangers and supports - Flat | Pitt-Tech Plus 4020PF Acrylic DTM Primer | 1 coat: Speed Hide Super Tech Flat Acrylic Dryfall 6-725XI |
| INT 9 | Cooler/Freezer Panels (Existing) - shown to be re- painted - Gloss | Pitt-Tech DTM Gloss Acrylic 90-374 Series | 1 coat: Pitt-Tech DTM Gloss Acrylic 90-374 Series |
| Interi | or CMU – New Construction | | |
| INT 10 | Latex System - Gloss | Speed Hide Acrylic Block Filler 6- 15XI | 2 coats: Advantage 919-10 Series Gloss Acrylic Enamel |
| INT 11 | Latex System - Eggshell | Speed Hide Acrylic Block Filler 6- 15XI | 2 coats: Speed Hide 0 VOC Eggshell Enamel 6-4310XI Series |
| Interi | or CMU – Previously Painted | | l |
| INT 12 | Latex System - Gloss | Seal Grip Acrylic Primer 17-921XI Series (spot prime) | 2 coats: Advantage 919-10 Series Gloss Acrylic Enamel |
| INT 13 | Latex System - Eggshell | Seal Grip Acrylic Primer 17-921XI Series (Spot Prime) | 2 coats: Speed Hide 0 VOC Eggshell Enamel 6-4310XI Series |



| Interi | ior Gypsum Board | | | |
|--|--|--|---|-------------------------------|
| INT | Latex System - Gloss | Speed Hide 0 VOC Primer Sealer | 2 coats: | |
| 14 | - - | 6-4900XI | Advantage 919-1 Enamel | 0 Series Gloss Acryl |
| INT 15 | Latex System – Semi- Gloss | Speed Hide 0 VOC Primer Sealer 6-4900XI | 2 coats: Speed Hide 0 VC 6-4510XI Series | C Semi-Gloss Enam |
| INT 16 | Latex System - Eggshell | Speed Hide 0 VOC Primer Sealer 6-4900XI | 2 coats: | OC Eggshell Enamel |
| Interi | ior Wood | | 0 1010111 501105 | |
| INT 17 | General Use – Latex – Semi-Gloss | Speed Hide 0 VOC Primer Sealer 6-4900XI | 2 coats: Speed Hide 0 VC 6-4510XI Series | C Semi-Gloss Enam |
| INT | Exposed laminated wood | Seal Grip Acrylic Primer 17-921XI | 2 coats: | |
| 18 | roof structure – Latex – Semi-Gloss | Series | Speed Hide 0 VOC Semi-Gloss Enamel 6-4510XI Series | |
| INT 19 | Transparent sealer | PPG –Deft Sanding Sealer DFT015 | | |
| | ior Concrete Floors | | · | |
| INT | Floor, and floor striping, | PPG Amerlock 400 | 2 coats: | |
| 20 | graphics and markings - Semi-Gloss | VOC Semi-Gloss Epoxy | PPG Amerlock 4 VOC Semi-Gloss | |
| INT | Existing Painted Floor Slabs | PPG Breakthrough V70 Series | 2 coats: | |
| 21 | – Semi-Gloss | - | PPG Breakthroug | gh V70 Series |
| Inter | ior Products by Benjamin Moo | ore | | |
| Prod | uct | | DFT (mils) | VOC (g/l) |
| | ior Metal | | | |
| | Spec [®] HP Acrylic Metal Primer | | 2.0 | 48 |
| | Spec [®] HP D.T.M. Acrylic Gloss | | 2.3 | 142 |
| | r Hide [®] Zero VOC Interior Latex | | 1.2 | 0 |
| | r Hide [®] Zero VOC Interior Latex | Eggshell 357 | 1.3 | 0 |
| | Dry Fall Flat 395 | | 1.9 | 46 |
| | tech Polyamide Epoxy Primer V1 | | 4.0 | 332 |
| | tech Epoxy Mastic Coating V160 | | 4.6-7.2 | 184 |
| | tech Waterborne Amine Epoxy V | | 1.5-1.9 | 206 |
| | tech Acrylic Epoxy V450 Semi-g | | | 190 |
| | Spec [®] HP D.T.M. Acrylic Gloss ior CMU | Enamel HP28 | 2.3 | 142 |
| | Spec [®] HP D.T.M. Acrylic Gloss | Enamel HP28 | 2.3 | 142 |
| | r Hide [®] Zero VOC Interior Latex | | 1.3 | 0 |
| | | | 7.9-10.5 | 37 |
| ('orot | nado Super Kote 5000® Latev Bl | | 1.7 10.5 | 51 |
| | nado Super Kote 5000 [®] Latex Blo r Hide [®] Zero VOC Interior Latex | Primer 354 | 1.4 | 0 |
| Super | r Hide [®] Zero VOC Interior Latex | Primer 354 | 1.4 | 0 |
| Super Inter | r Hide [®] Zero VOC Interior Latex ior Gypsum Board | | | 0 |
| Super Inter Super | r Hide [®] Zero VOC Interior Latex <mark>ior Gypsum Board</mark> r Hide [®] Zero VOC Interior Latex | Primer 354 | 1.4 1.3 2.3 | |
| Super Inter Super Ultra | r Hide [®] Zero VOC Interior Latex ior Gypsum Board | Primer 354 Enamel HP28 | 1.3 | 0 |
| Super Inter Super Ultra Super | r Hide [®] Zero VOC Interior Latex ior Gypsum Board r Hide [®] Zero VOC Interior Latex Spec [®] HP D.T.M. Acrylic Gloss | Primer 354 Enamel HP28 Semi-Gloss 358 | 1.3 2.3 | 0 142 |
| Super Inter Super Ultra Super Super | r Hide [®] Zero VOC Interior Latex ior Gypsum Board r Hide [®] Zero VOC Interior Latex Spec [®] HP D.T.M. Acrylic Gloss r Hide [®] Zero VOC Interior Latex | Primer 354 Enamel HP28 Semi-Gloss 358 | 1.3 2.3 1.2 | 0 142 0 |
| Super Inter Super Ultra Super Super Inter | r Hide [®] Zero VOC Interior Latex ior Gypsum Board r Hide [®] Zero VOC Interior Latex Spec [®] HP D.T.M. Acrylic Gloss r Hide [®] Zero VOC Interior Latex r Hide [®] Zero VOC Interior Latex | Primer 354 Enamel HP28 Semi-Gloss 358 Eggshell 357 | 1.3 2.3 1.2 | 0 142 0 |
| Super Super Ultra Super Super Inter Ultra | r Hide [®] Zero VOC Interior Latex ior Gypsum Board r Hide [®] Zero VOC Interior Latex Spec [®] HP D.T.M. Acrylic Gloss r Hide [®] Zero VOC Interior Latex r Hide [®] Zero VOC Interior Latex ior Wood | Primer 354 Enamel HP28 Semi-Gloss 358 Eggshell 357 N534 | 1.3 2.3 1.2 1.3 | 0 142 0 0 |
| Super Inter Super Ultra Super Super Inter Ultra Insl-x Super | r Hide [®] Zero VOC Interior Latex ior Gypsum Board r Hide [®] Zero VOC Interior Latex Spec [®] HP D.T.M. Acrylic Gloss r Hide [®] Zero VOC Interior Latex r Hide [®] Zero VOC Interior Latex ior Wood Spec [®] 500 Interior Latex Primer ([®] Prime All [™] Multi-Surface Latex r Hide [®] Zero VOC Interior Latex | Primer 354 Enamel HP28 Semi-Gloss 358 Eggshell 357 N534 tex Primer Sealer AP-1000 | 1.3 2.3 1.2 1.3 1.4 | 0 142 0 0 0 |
| Super Inter Super Ultra Super Super Inter Ultra Insl-x Super | r Hide [®] Zero VOC Interior Latex ior Gypsum Board r Hide [®] Zero VOC Interior Latex Spec [®] HP D.T.M. Acrylic Gloss r Hide [®] Zero VOC Interior Latex r Hide [®] Zero VOC Interior Latex ior Wood Spec [®] 500 Interior Latex Primer x [®] Prime All [™] Multi-Surface Latex | Primer 354 Enamel HP28 Semi-Gloss 358 Eggshell 357 N534 tex Primer Sealer AP-1000 | 1.3 2.3 1.2 1.3 1.4 1.3 | 0 142 0 0 0 29 |
| Super Inter Super Ultra Super Super Ultra Insl-x Super Inter Corot | r Hide [®] Zero VOC Interior Latex ior Gypsum Board r Hide [®] Zero VOC Interior Latex Spec [®] HP D.T.M. Acrylic Gloss r Hide [®] Zero VOC Interior Latex r Hide [®] Zero VOC Interior Latex ior Wood Spec [®] 500 Interior Latex Primer ([®] Prime All [™] Multi-Surface Latex r Hide [®] Zero VOC Interior Latex | Primer 354 Enamel HP28 Semi-Gloss 358 Eggshell 357 N534 tex Primer Sealer AP-1000 Semi-Gloss 358 | 1.3 2.3 1.2 1.3 1.4 1.3 | 0 142 0 0 0 29 |



| Interi | or Systems by Benjamin Moore | | |
|------------------|---|---|---|
| | | Prime Coat | Finish Coat(s) |
| Interi | or Ferrous Metal | | |
| INT 1 | General Use – Gloss (unless specified otherwise) | Ultra Spec [®] HP Acrylic Metal Primer HP04 | 2 coats: Ultra Spec [®] HP D.T.M. Acrylic Gloss Enamel HP28 |
| INT 2 | General Use – Semi-Gloss (unless specified otherwise) | Ultra Spec [®] HP Acrylic Metal Primer HP04 | 2 coats: Super Hide [®] Zero VOC Interior Latex Semi-Gloss 358 |
| INT 3 | General Use – Eggshell (unless specified otherwise) | Ultra Spec [®] HP Acrylic Metal Primer HP04 | 2 coats: Super Hide [®] Zero VOC Interior Latex Eggshell 357 |
| INT 4 | Dryfall system over shop primed steel –overhead structure – Flat | | 1 coat: Latex Dry Fall Flat 395 |
| INT 5 | Dryfall system over unprimed steel - overhead structure – Flat | Ultra Spec [®] HP Acrylic Metal Primer HP04 | 1 coat: Latex Dry Fall Flat 395 |
| INT 6 | Columns and Hollow Metal Door Frames as shown on Drawings to receive epoxy – Semi-Gloss | Corotech Polyamide Epoxy Primer V150 | 1 coat: Corotech Waterborne Amine Epoxy V440 |
| INT 6 (CA) | Columns and Hollow Metal Door Frames as shown on Drawings to receive epoxy - Semi-Gloss | Corotech Polyamide Epoxy Primer V150 | 1 coat: Corotech Acrylic Epoxy V450 Semi-gloss |
| Interi | or Galvanized Metal | | |
| INT 7 | Latex for exposed ductwork, hangers, and supports – Semi-Gloss | Ultra Spec [®] HP Acrylic Metal Primer HP04 | 2 coats: Super Hide [®] Zero VOC Interior Latex Semi-Gloss 358 |
| INT 8 | Dryfall System for exposed ductwork, hangers and supports - Flat | Ultra Spec [®] HP Acrylic Metal Primer HP04 | 1 coat: Latex Dry Fall Flat 395 |
| INT 9 | Cooler/Freezer Panels (Existing) - shown to be re-painted - Gloss | | 1 coat: Ultra Spec [®] HP D.T.M. Acrylic Gloss Enamel HP28 |
| Interi | or CMU – New Construction | | · |
| INT 10 | Latex System - Gloss | Coronado Super Kote 5000 [®] Latex Block Filler 958 | 2 coats: Ultra Spec [®] HP D.T.M. Acrylic Gloss Enamel HP28 |
| INT 11 | Latex System - Eggshell | Coronado Super Kote 5000 [®] Latex Block Filler 958 | 2 coats: Super Hide [®] Zero VOC Interior Latex Eggshell 357 |
| Interi | or CMU – Previously Painted | | |
| INT 12 | Latex System - Gloss | Insl-x [®] Prime All [™] Multi-Surface Latex Primer Sealer AP-1000 | 2 coats: Ultra Spec [®] HP D.T.M. Acrylic Gloss Enamel HP28 |
| INT 13 | Latex System - Eggshell | | 2 coats: Super Hide [®] Zero VOC Interior Latex Eggshell 357 |
| Interi | or Gypsum Board | | |
| INT 14 | Latex System - Gloss | Super Hide [®] Zero VOC Interior Latex Primer 354 | 2 coats: Ultra Spec [®] HP D.T.M. Acrylic Gloss Enamel HP28 |
| INT 15 | Latex System – Semi- Gloss | Super Hide [®] Zero VOC Interior Latex Primer 354 | 2 coats: Super Hide [®] Zero VOC Interior Latex Semi-Gloss 358 |



| INT | Latex System - Eggshell | Super Hide [®] Zero VOC Interior | 2 coats: |
|--------|---|--|---|
| 16 | | Latex Primer 354 | Super Hide [®] Zero VOC Interior |
| | | | Latex Eggshell 357 |
| Interi | or Wood | | |
| INT | General Use – Latex – | Ultra Spec [®] 500 Interior Latex | 2 coats: |
| 17 | Semi-Gloss | Primer N534 | Super Hide [®] Zero VOC Interior |
| | | | Latex Semi-Gloss 358 |
| INT | Exposed laminated wood roof | Insl-x [®] Prime All [™] Multi-Surface | 2 coats: |
| 18 | structure – Latex – | Latex Primer Sealer AP-1000 | Super Hide [®] Zero VOC Interior |
| | Semi-Gloss | | Latex Semi-Gloss 358 |
| Interi | or Concrete Floors | • | |
| INT | Floor, and floor striping, graphics and | | 2 coats: |
| 10 | markings - | | Corotech Epoxy Mastic Coating |
| | Semi-Gloss | | V160 |
| INT | Existing Painted Floor Slabs – | | 2 coats: |
| 21 | Semi-Gloss | | Tough Shield [®] Acrylic Floor and |
| | | | Patio Coating Satin Finish TS- |
| | | | 3xxx |

END OF COATING SYSTEMS SCHEDULES - INTERIOR

END OF SECTION





BLANK PAGE

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Electrical Identification
- 2. Hangers and Supports
- 3. Conduit Sleeves
- 4. Grounding and Bonding

B. Related Sections

- 1. Section 09900 Paints and Coatings: Field painting of hangers and supports.
- 2. Section 16100 Wiring Methods
- 3. Section 16700 Communication

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. National Fire Protection Association (NFPA): NFPA 70E Standard for Electrical Safety in the Workplace.

PART 2 - PRODUCTS

2.1 ELECTRICAL IDENTIFICATION

A. Nameplates: Provide laminated plastic nameplates with 3/4 inch minimum contrasting-color engraved letters.

2.2 HANGERS AND SUPPORTS

- A. Manufacturers:
 - 1. <u>Unistrut Metal Framing</u>, Unistrut Corporation, Wayne, MI, (800) 521-7730.
 - 2. Erico/Caddy/Eriflex (divisions of Pentair Electrical and Fastening Solutions) (800) 753-9221.
 - 3. <u>Minerallac Fastening Systems</u>, Hampshire, IL, (800) 927-3293.
- B. Conduit and Equipment Supports: Hangers shall be Series P3000 or P3300 channels by Unistrut depending on load and span involved. Use Pipe Hangers by Minerallac, or Caddy Clips by Erico only where impractical to install Unistrut Hangers.
- C. Attach hangers and supports to structure overhead by methods approved at job site. Do not use fasteners which penetrate the roof deck.

2.3 CONDUIT SLEEVES

1119 Public Works 2403 Pathyallup, WA 2022.0729

PRCTI20230108

A. Sleeves:

B. City of Puyallup oment & Permitting Servi ISSUED PERMIT

Building

- 1. Below Grade: Galvanized, black steel or schedule 40 PVC pipe.
- 2. Above Grade: Electrical Metallic Tubing (EMT).

2.4 GROUNDING AND BONDING

A. Insulated Grounding Bushing: Steel with feed-thru lugs.

Insulated Equipment Ground Wire: Copper.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install specified materials in accordance with manufacturer's recommendations and as indicated on Drawings.
- B. Cutting and Patching: Where cutting is required through walls, floors, or ceilings, make openings no larger than required and repair affected surfaces to match adjacent surfaces.
- C. Nameplates: Bolt or pop-rivet nameplates to equipment. Clearly identify equipment or equipment served, such as "BALER", "COMPACTOR," etc. Install nameplates for each safety switch, contactor, time switch, pushbutton and other similar equipment.
- D. Electrical Equipment Supports: Support electrical equipment with hangers and supports specified above or in another approved manner where details are not indicated.
- E. Sleeves:
 - 1. Below Grade: Install where conduits pass through concrete floors as shown on drawings.
 - 2. Above Grade: Install where conduits pass through outside walls as shown on drawings. Caulk sleeves with sealant as specified in Section 07900.
- F. Fastening and Anchoring: Fasten conduit straps, disconnect switches, panelboards, and other equipment secured to walls and slabs with cadmium plated screws or bolts and lead cinch anchors or expansion bolts and install in holes drilled with proper size masonry drill. Properly size anchors in accordance with manufacturer's recommendations for load to be supported.
- G. Torque all conductor connection terminations to manufacturer's recommended values. Inspect panelboards for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers, fusible switches, and fuses.

3.2 GROUNDING

- A. General: Ground all metallic conduits, supports, cabinets, equipment, system neutrals, metal building structures, and other items required to be grounded in accordance with the NEC and other applicable codes and as indicated on drawings.
- B. Equipment Grounding:
 - 1. Make conduits electrically continuous using proper fittings, connections, grounding bushings, etc.
 - 2. Install insulating grounding bushings on all conduit connections 1 1/4 inch and larger and where indicated on Drawings.
 - 3. Install insulated equipment ground wires in all raceways.
- C. Concrete Encased Electrodes: Where indicated on the Drawings, furnish and install electrodes, jumpers, and approved fittings in accordance with Grounding Electrode Detail .
- D. Ground Rods: If ground rods are required, install two 5/8 inch minimum diameter Copperweld rods driven vertically not less than 12 feet apart and each with 8 feet of length in contact with the soil.

3.3 TESTING

- A. Upon completion of installation, perform continuity tests on power and equipment branch circuit conductors. Inspect wire and cable for physical damage. Verify proper phasing connections.
- B. Test receptacles with circuit tester to ensure proper polarity, grounding, and continuity of circuits.
- C. Load test GFCI receptacles.

END OF SECTION



16050 - 2

SECTION 16100 - WIRING METHODS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Wire and Cable.
 - 2. Conduit
 - 3. Outlet boxes and Conduit Fittings.
 - 4. Wiring Devices.
 - 5. Wire Connectors.
 - 6. Fire Alarm/Security Alarm System Rough-In
- B. Related Requirements:
 - 7. Section 16050 Basic Electrical Materials and Methods: Hangers and Supports
 - 8. Section 16700 Communication
 - 9. Appendix A Products and Work by Owner or Separate Contractor.
 - a. General procedures related to Owner furnished products and transport, handle, store and protect products.
 - b. Manufacturers, suppliers, and vendor contacts and product names and numbers related to Owner furnished products.

1.2 REFERENCES

- A. National Fire Protection Association (NFPA):
 1. NFPA 70 National Electrical Code (NEC).
- B. American Society for Testing Material (ASTM)
 - 1. ASTM D698 Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft
 - 2. ASTM D1557 Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-bf/ft3)
- C. National Electrical Manufacturers Association (NEMA):
 1. NEMA VE 1 Metal Cable Tray Systems
- D. Underwriters Laboratories (UL)1. UL 1569 Metal Clad Cables

1.3 QUALITY ASSURANCE

- A. Final Power Plan Review Meeting:
 - 1. A Final Power Plan Review Meeting shall be held on-site to review the Final Power Plan and scheduling requirements. The mandatory attendees shall be the Construction Manager, General Contractor, Electrical Contractor, Security Services Representative, CCTV Representative, and Store Planning Field Manager. The meeting shall be scheduled by the General Contractor approximately 14 days after receipt of Final Power Plan Drawings. At least ten days advance notification shall be given to all attendees.
 - 2. The purpose of the meeting will be to review the Final Power Plan requirements and to schedule completion dates for various critical components of the Final Power Plan.
 - 3. The Construction Manager will review the PCOB and EWA process at this meeting, as it applies to the Final Power Plan requirements.

1.4 DELIVERY, STORAGE AND HANDLING

A. Receive, store and handle products in accordance with the requirements of Appendix A – Products and Work by Owner or Separate Contractor.



- B. Arrange with Owner for delivery of Owner furnished materials at such stage of construction as will expedite the work. Products will be supplied to the job site complete and ready for installation. Allow minimum of four weeks for delivery.
- C. Provide proper facilities for handling and storage of Owner furnished materials to prevent damage. Keep materials dry and fully protected from weather.
- D. Upon receipt of shipment of Owner furnished materials, check contents of shipment against bill of material furnished by vendor. Report any shortages or damage to the vendor immediately so that replacements can be ordered and/or freight claims can be filed. Note damage on Bill of Lading in order to substantiate freight claims.
- E. All deliveries shall be staged and scheduled to correspond to construction schedule and to minimize on-site storage.
- F. Provide proper facilities for handling and storage of all materials to prevent damage. Keep materials dry and fully protected from weather

PART 2 - PRODUCTS

- 2.1 OWNER FURNISHED PRODUCTS
 - A. Owner will furnish and install fire and security alarm system as specified in Appendix A Section 16100.
 1. Contractor shall provide rough-in as specified herein.
- 2.2 WIRE AND CABLE
 - A. Electrical Components and Devices: Listed and labeled as defined in NFPA 70, Article 100, by a nationally recognized testing agency and marked for use.
 - B. Wire and cable shall bear UL label and shall conform to standards established for such materials by nationally recognized agencies.
 - C. Provide code gauge, soft annealed copper wire, not less than 98 percent conductivity and of 600 volt class.
 - D. Conductors:
 - 1. Insulation type shall be one of the following:
 - a. THHN
 - b. THWN
 - c. XHHW
 - d. XHHW-2
 - 2. Type:
 - a. #10 and smaller stranded or solid.
 - b. #8 and larger stranded
 - E. Interlocked Armor Metal Clad (MC) Cable: Contractor's option as allowed by authorities having jurisdiction. MC cable shall have the following characteristics:
 - 1. Aluminum MC-Lite or Standard MC.
 - 2. Minimum size conductor, #12 AWG copper, including green insulated equipment ground, sized in accordance with the NEC.
 - 3. Overall moisture resistant tape.
 - 4. Galvanized steel or aluminum interlocked cladding.
 - 5. Manufactured in accordance with UL 1569.
 - F. Wire smaller than #12 AWG not permitted unless otherwise noted. #14 AWG, type MTW or TFF permitted for signal and pilot control circuits unless otherwise noted.



G. Color code:

| SYSTEM VOLTAGE | NEUTRAL COLOR | PHASE | GROUND | ISOLATED GROUND |
|-------------------|---|---------------------------------|--------|------------------------|
| | | | | |
| 208/120V | white | A-black B-red C-blue | green | green W/ yellow tracer |
| | | | | |
| 240/120V | white | A-black B-red | green | green W/ yellow tracer |
| | | | | |
| 480/277V | It. gray or white with colored stripe other than yellow | A-brown B-orange C-yellow | green | green W/ yellow tracer |

- H. Color code #6 AWG and smaller phase and neutral conductors by continuous outer covering. Conductors #4 AWG and larger may be color coded by tape. Tape shall have minimum of two complete wraps around conductor at 6 inches from terminations, splices, and junction points.
- I. Identify circuit numbers with synthetic cloth or plastic labels at splice and junction points.

2.3 CONDUIT

- A. Conduit types shall be as follows and shall bear UL or ETL label:
 - 1. Galvanized Rigid Metal Conduit (GRC): Hot-dip galvanized.
 - 2. Intermediate Metal Conduit (IMC): Hot-dip galvanized.
 - 3. Electrical Metallic Tubing (EMT): Hot-dip galvanized.
 - 4. Schedule 40 heavy-wall PVC for all underground conduit runs.
 - 5. Flexible Metal Conduit: Zinc-coated steel or Aluminum.
 - 6. Liquid Tight Flexible Steel Conduit with PVC jacket.
 - 7. MC Cable: Steel or Aluminum Cladding.
- B. Conduit Sizes: Size conduit in accordance with NEC unless noted otherwise on Drawings, but not less than the following:
 - 1. Alarm and Data Systems: 3/4 inch.
 - 2. Flexible Metal Conduit: For connection of recessed light fixtures in suspended ceilings, 3/8 inch. For connection of other equipment subject to vibration: 1/2 inch.
 - 3. Underground Conduit in Parking Lot: 1 inch.
 - 4. Other Uses: 1/2 inch.
- C. Contact Information:
 - 1. Prime Conduit MWE Inc. 816-842-9283 or 800-678-3075
 - 2. Vikimatic 800-345-8454
 - 3. Innerduct 800-332-8114

2.4 OUTLET BOXES AND CONDUIT FITTINGS

- A. Outlet boxes and conduit fittings shall bear the label of a nationally recognized testing laboratory and be rated for environmental conditions where installed.
- B. Boxes: Comply with NEC in regard to maximum allowable number of conductors .
 - 1. Interior Boxes: Hot-dip galvanized, 4 inches minimum octagon or square, unless otherwise noted. Provide single or multiple gang outlet boxes as required for flush installation in drywall construction. Provide masonry boxes for outlets installed flush in concrete unit masonry. Provide single surface-mounted outlet boxes for utility type boxes.



- 2. Exterior Wall Boxes: Provide masonry boxes for outlets installed flush in concrete unit masonry
- 3. Exterior In-Grade Pull Boxes:
 - a. PVC with UV-stabilized PVC cover, sealed and gasketed watertight.
 - b. Cast iron with cast iron cover, sealed and gasketed watertight, in vehicular traffic areas. Provide box and cover UL listed for use in vehicular traffic areas.
 - c. Install buried boxes with box covers flush with grade unless indicated otherwise.
- 4. Outlet Boxes: Suitable for supporting lighting fixtures if intended for that purpose.
- 5. Ceiling Fan Boxes: Rated and listed for mounting ceiling fans.
- C. Conduit Fittings:
 - 1. EMT Fittings for Dry Locations: Diecast or steel set screw type.
 - 2. EMT Fittings For Wet or Damp Locations: Steel Compression type.
 - 3. GRC, IMC, or EMT Box Connectors For Wet or Damp Locations: Weather-tight hubs.
 - 4. Threadless GRC or IMC Fittings: Not permitted.
 - 5. GRC or IMC connectors for dry locations.
 - 6. PVC Fittings: Solvent weld type for PVC conduit.

2.5 WIRING DEVICES

A. See subsection L for device and cover plate finishes.

| В. | Branch Circuit Switches: | Specification grade rated 20A 120/277V AC as follows: | |
|----|--------------------------|---|--|
|----|--------------------------|---|--|

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton | Kason |
|-----------------------|------------------|--------------------|------------------|---------------|-------------|
| Single Pole | HBL1221 | PS20AC1 | 2221 | 1221-2 | |
| 3-Way | HBL1223 | PS20AC3 | 2223 | 1223-2 | |
| 4-Way | HBL1224 | PS20AC4 | 2224 | 1224-2 | |
| Dimmers | Acuity Sensor Sy | witch: SPODMRD H | EZ WH | | |
| Dimmer | | ith 0-10V Dimming | | 10 | |
| Occupancy Sensor | | on Switch: PJ2-3BR | | | |
| | Lutron Compani | on Ceiling Occupan | cy Sensor: LRF2- | OCR2B-P | |
| Ceiling | Not Available | Not Available | Not Available | OSFHU-ITW | |
| Occupancy Sensor | | | | | |
| Single Pole Occupancy | AD1277-1 | Sensor Switch: | Not Available | OSSMT-MD-G | |
| Sensor | | WSX PDT | | | |
| (Dual Technology) | | | | | |
| Double Pole Occupancy | AD1277-2 | Sensor Switch: | Not Available | Not Available | |
| Sensor | | WSX-PDT-2P | | | |
| (Dual Technology) | | | | | |
| Weatherproof, Low | Not Available | Not | Not Available | Not Available | 11901A00005 |
| Temperature (Walk-In | | Available | | | |
| Coolers & Freezers) | | | | | |
| Weatherproof, Double | Not Available | Sensor Switch | Not Available | Not Available | |
| Pole, Low Temperature | | WSX-2P- LT | | | |
| (Refrigerated Prep | | | | | |
| Areas) | | | | | |

C. Receptacles - Straight Blade Nylon Grounding - Type Outlet Devices: Specification grade as follows:

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|---|---------|----------------|----------|---------|
| Single Receptacle 20A 125V (5-20R) | HBL5361 | 5361 | 5361 | 5361 |
| Duplex Receptacle 20A 125V (5-20R) | HBL5362 | 5362 | 5362 | 5362 |
| Duplex Receptacle 20A 125V Isolated Ground (5-20R) | IG5362 | IG5362 | IG5362RN | 5362-IG |
| GFCI Duplex Receptacle 20A 125V (5-20R) | GF20LA | 2095 | VGF20 | 7899 |

City of Puyallup Development & Permitting Services ISSUED PERMIT Building Planning

reering Public Works ire2403 Pratia allup, WA 2022.0729

PRCTI20230108

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|---|---------------|----------------|---------------|---------------|
| GFCI Weather Resistant Duplex Receptacle 20A 125V (5-20R) | GFTR20 | 2095TRWR | WRVGF20 | W7899 |
| Duplex Receptacle Tamper Resistant 20A 125V (5-20R) | Not Available | Not Available | Not Available | TBR20 |
| Single Receptacle 15A 250V 2 pole 3 Wire Grounded (6-15R) | HBL5661I | 5671-I | 5661V | 5661-I |
| Single Receptacle 20A 250V 2 pole 3 Wire Grounded (6-20R) | HBL5461I | 5871I | 5461 | 5461 |
| Single Receptacle 30A 250V 2 pole 3 Wire Grounded (6-30R) | HBL9330 | 3801 | 5700N | 5372 |
| Single Receptacle 20A 125/250V 3 pole 4 Wire Grounded (14-20R) | HBL8410 | 3820 | 5759 | Not Available |
| Single Receptacle 30A 125/250V 3 pole 4 Wire Grounded (14-30R) | HBL9430A | 3864 | 5744N | 278 |
| Single Receptacle 20A 3 Phase 250V 3 pole 4 Wire Grounded (15-20R) | HBL8420 | Not Available | Not Available | Not Available |
| Single Receptacle 30A 3 Phase 250V 3 pole 4 Wire Grounded (15-30R) | HBL8430A | 5740 | 8430N | 8430 |
| Single Receptacle 50A 3 Phase 250V 3 pole 4 Wire Grounded (15-50R) | HBL8450A | 5750 | 8450N | 8450 |

D. Receptacles - Locking Nylon Grounding - Type Outlet Devices: Specification grade as follows:

| | <u> </u> | | Ŭ | |
|--|----------|----------------|----------|---------|
| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
| Single Locking Receptacle 15A 125V (L5-15R) | HBL4710 | 4710 | CWL515R | 4710 |
| Single Locking Receptacle 15A 125V Isolated Ground (L5-15R) | IG4710 | IG4710 | IGL515R | 4710-IG |
| Duplex Locking Receptacle 15A 125V (L5-15R) | HBL4700I | 4700 | 4700 | 4700 |
| Duplex Locking Receptacle 15A 125V Isolated Ground (L5-15R) | IG4700A | IG4700 | IG4700 | 4700-IG |
| Single Locking Receptacle 20A 125V (L5-20R) | HBL2310 | L520-R | CWL520R | 2310 |
| Single Locking Receptacle 20A 125V Isolated Ground (L5-20R) | IG2310 | IGL520-R | IGL520R | 2310-IG |
| Single Locking Receptacle 30A 125V (L5-30R) | HBL2610 | L530-R | CWL530R | 2610 |
| Single Locking Receptacle 30A 125V Isolated Ground (L5-30R) | IG2610 | IGL530-R | IGL530R | 2610-IG |
| Single Locking Receptacle 20A 250V 2 Pole 3 Wire Grounded (L6-20R) | HBL2320 | L620-R | CWL620R | 2320 |
| Single Locking Receptacle 30A 250V 2 Pole 3 Wire Grounded (L6-30R) | HBL2620 | L630-R | CWL630R | 2620 |
| Single Locking Receptacle 30A 250V 2 Pole 3 Wire Isolated Ground (L6-30R) | IG2620 | IGL630-R | IGL630R | 2620-IG |
| Single Locking Receptacle 20A 125/250V 3 pole 4 Wire Grounded (L14- 20R) | HBL2410 | L1420-R | CWL1420R | 2410 |
| Single Locking Receptacle 30A 125/250V 3 pole 4 Wire Grounded (L14- 30R) | HBL2710 | L1430-R | CWL1430R | 2710 |



| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|--|---------|----------------|--------|---------|
| Single Locking Receptacle 50A 600V 2 pole 3 Wire Grounded (Non-Nema) | HBL3771 | 3771 | 3771 | 3771 |
| Single Locking Receptacle 50A 125/250V 3 pole 4 Wire Grounded (Non-Nema) | CS6369 | CS6369 | CS6369 | CS63-69 |

E. Connectors - Cord mounted Locking Nylon Grounding - Type to match Plugs as follows:

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|--------------------------------------|----------|----------------|----------|---------|
| Locking Connector 15A 125V (L5-15R) | HBL4729C | PSL515-C | 4731N | 4729-C |
| Locking Connector 20A 125V (L5-20R) | HBL2313 | L520-C | CWL520C | 2313 |
| Locking Connector 20A 3 Phase 250V 3 | HBL2423 | L1520-C | CWL1520C | 2423 |
| Pole 4 Wire Grounded (L15-20R) | | | | |

F. Connectors - Cord mounted Corrosion Resistant Locking Nylon Grounding - Type to match Plugs as follows:

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|---|-----------|----------------|------------------|---------------|
| Corrosion Resistant Locking Connector 20A 125V (L5-20R) | HBL23CM13 | CRL520-C | CRL520C | 23CM-13 |
| Corrosion Resistant Locking Connector 20A 125/250V 3 Pole 4 Wire Grounded (L14-20R) | HBL24CM13 | CRL1420-C | CRL1420C | Not Available |
| Corrosion Resistant Locking Connector 20A 3 Phase 250V 3 Pole 4 Wire Grounded (L15-20R) | HBL24CM23 | Not Available | CRL1520C | Not Available |
| Corrosion Resistant Locking Connector 30A 3 Phase 120/208V 4 Pole 5 Wire Grounded (L21-30R) | HBL28CM13 | Not Available | Not Available | Not Available |

G. Plugs - Cord mounted Nylon Grounding - Type to match Outlet Devices as follows:

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|--|-----------|----------------|------------------|---------------|
| Plug 20A 125V 2 Pole 3 Wire Grounded (5-20P) | HBL5366CA | PS5366SSAN | 5366AN | 5366-CA |
| Plug 20A 250V 2 Pole 3 Wire Grounded (6-20P | HBL5466CA | PS5466SSAN | 5466AN | 5466-CA |
| Plug 20A 3 Phase 250V 3 Pole 4 Wire Grounded (15-20P) | HBL8421C | Not Available | Not Available | Not Available |
| Plug 30A 3 Phase 250V 3 Pole 4 Wire Grounded (15-30P) | HBL8432C | 5741-AN | 8432AN | 8432-P |
| Plug 50A 3 Phase 250V 3 Pole 4 Wire Grounded (15-50P) | HBL8452C | 5751-AN | 8452AN | 8452-P |

H. Plugs - Cord mounted Locking Nylon Grounding - Type to match Outlet Devices as follows:

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|--|----------|----------------|---------|---------|
| Locking Plug 15A 125V 2 Pole 3 Wire Grounded (L5-15P) | HBL4720C | PSL515-P | 4721N | 4720-С |
| Locking Plug 20A 250V 2 Pole 3 Wire Grounded (L6-20P) | HBL2321 | L620-P | CWL620P | 2321 |



| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|---|---------|----------------|----------|---------|
| Locking Plug 30A 250V 2 Pole 3 Wire Grounded (L6-30P) | HBL2621 | L630-P | CWL630P | 2621 |
| Locking Plug 20A 3 Phase 250V 3 Pole 4 Wire Grounded (L15-20P) | HBL2421 | L1520-P | CWL1520P | 2421 |

Plugs - Cord mounted Corrosion Resistant Locking Nylon Grounding - Type to match Outlet Devices as follows:

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|--|-----------|----------------|------------------|---------------|
| Corrosion Resistant Locking Plug 20A 125V 2 Pole 3 Wire Grounded (L5-20P) | HBL23CM11 | CRL520-P | CRL520P | 23CM-11 |
| Corrosion Resistant Locking Plug 20A 125/250V 3 Pole 4 Wire Grounded (L14- 20P) | HBL24CM11 | CRL1420-P | CRL1420P | Not Available |
| Corrosion Resistant Locking Plug 20A 3 Phase 250V 3 Pole 4 Wire Grounded (L15-20P) | HBL24CM21 | Not Available | CRL1520P | Not Available |
| Corrosion Resistant Locking Plug 30A 3 Phase 120/208V 4 Pole 5 Wire Grounded (L21-30P) | HBL28CM11 | Not Available | Not Available | Not Available |

J. Pin & Sleeve - Insulated Water Tight - Type Outlet Devices: Specification grade as follows:

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|--|-----------|----------------|----------|---------|
| Water Tight Receptacle 30A 250V 2 Pole 3 Wire Grounded (Non-Nema) | HBL330R6W | PS330R6W | CD330R6W | 330R6W |
| Water Tight Receptacle 60A 250V 2 Pole 3 Wire Grounded (Non-Nema) | HBL360R6W | PS360R6W | CD360R6W | 360R6W |

K. Boots: Weatherproof Boots for Locking Plug and Connector Bodies - Type to match Devices as follows:

| Туре | Hubbell | Pass & Seymour | Cooper | Leviton |
|---------------------------------------|-----------|----------------|-----------|-----------------|
| Corrosion Resistant Boots for Locking | HBL60CM31 | CRL2030-RBP | BM1 & | 6031-Y & 6032-Y |
| Plug and Connector 20/30A 125V (L5- | & | & CRL2030- | BM2 | |
| 20) | HBL60CM32 | RBC | | |
| Corrosion Resistant Boots for Locking | HBL60CM35 | CRL2030-RBP | BL1 & BL2 | 6033-Y & 6034-Y |
| Plug and Connector 20/30A 125/250V 3 | & | & CRL2030- | | |
| Pole 4 Wire Grounded (L14-20) | HBL60CM36 | RBC | | |
| Corrosion Resistant Boots for Locking | HBL60CM35 | CRL2030-RBP | BL1 & BL2 | 6033-Y & 6034-Y |
| Plug and Connector 20/30A 3 Phase | & | & CRL2030- | | |
| 250V 3 Pole 4 Wire Grounded (L15-20) | HBL60CM36 | RBC | | |
| Corrosion Resistant Boots for Locking | HBL60CM35 | CRL2030-RBP | BL1 & BL2 | 6033-Y & 6034-Y |
| Plug and Connector 30A 3 Phase | & | & CRL2030- | | |
| 120/208V 4 Pole 5 Wire Grounded (L21- | HBL60CM36 | RBC | | |
| 30) | | | | |

L. Cover Plates:

I.

- 1. Nylon cover plates for flush mounted devices.
- 2. Galvanized steel plates where devices are installed on exposed fittings or boxes.
- 3. 302 stainless steel cover plates for recessed outlet boxes in masonry walls.
- 4. Blank cover plate on all boxes without device.



| Туре | Thomas & Betts | Hubbell | Intermatic | Pass & Seymour |
|---|--------------------|------------------|----------------|-------------------|
| Single gang GFCI duplex receptacle, weatherproof, while-in-use, lockable vertical metallic cover plate | Red Dot CKMUV | WP26M | WP1010M XD | WIUCAST 1 |
| Single gang GFCI duplex receptacle, weatherproof, while-in-use, lockable horizontal metallic cover plate | Red Dot CKMU | WP26MH | WP1010M XD | WIUCAST 1 |
| Single gang deep box twistlock receptacle, weatherproof, while-in-use, lockable vertical metallic cover plate | Red Dot CKLSVLU | WP7D | WP1250M VXD | Not Available |
| Double gang two GFCI duplex receptacles, weatherproof, while-in-use, lockable vertical metallic cover plate | Red Dot 2CKU | Not Available | WP1030M XD | Not Available |

- 5. Unless otherwise noted, wiring devices and cover plates shall be white nylon.
- 6. Blank Cover Plates: On boxes without devices or fixtures, provide same type and color as those installed on devices in the same room or area.
- 7. Isolated ground receptacles: Orange nylon cover plates with circuit number printed in 3/16 inch black lettering on clear adhesive label (Brady label or equal) adhered to plate.
- 8. Cover plates for wiring devices mounted in FRP or NRP panels shall match the color of FRP or NRP panels.

2.6 WIRE CONNECTORS

A. Splices:

- 1. #8 AWG and Smaller: <u>Ideal Wingnut</u>, <u>3M Scotchlok</u>, or equal connectors of proper size. <u>3M No. 567 in-</u> line self-stripping connectors will be permitted only at ballast lead connections in fluorescent light rows.
- 2. #6 AWG and Larger: Solderless lugs and connectors.

PART 3 - EXECUTION

- 3.1 INSTALLATION GENERAL
 - A. Install specified materials in accordance with manufacturer's recommendations.
 - B. Where switches are ganged, provide permanently installed steel barriers between switches. Where or provide separate boxes and separate coverplates for each circuit.
 - C. Access to Equipment: Coordinate access doors to allow for easy access of equipment for repair and maintenance.

3.2 HANGERS AND SUPPORTS

- A. Hangers and Supports are specified in Section 16050.
- 3.3 WIRE
 - A. Tie wrap groups of conductors in switchboards and panel boards.

3.4 CONDUIT

A. Installation:

- 1. Install conduit concealed, except in unfinished areas and where indicated on Drawings.
- 2. Support conduit by means of specified hangers.
- 3. Clean PVC conduit per manufacturer's recommendations before application of solvent cement.
- 4. Coordinate flashings where conduit penetrates roof membrane.
- 5. Paint metallic conduit under concrete slab or where installed in contact with earth. Apply two 6 mil coats of PVC or Asphalt paint continuously along entire length of conduit prior to installation below grade. Do not run conduit in concrete slab.



- 6. Install flexible metal conduit or liquid tight flexible metal conduit for final connections to dry-type transformers, baler, air compressors, HVAC equipment, motors and other vibrating equipment.
- 7. Coordinate installation of conduit in masonry work.
- 8. Do not install conduit under slab unless indicated on Drawings. Conduit installed below slab shall be galvanized rigid metal (GRC), intermediate metal conduit (IMC), or Schedule 40 PVC. Provide exterior coated GRC bends and elbows for all underground conduit.
- 9. Route above grade conduit parallel or perpendicular to building lines.
- 10. Maintain minimum of 6 inches clearance at flues and heat sources.
- 11. Install GRC conduit when penetrating from below grade outdoors or penetrating concrete slabs, Including elbow.
- 12. Install GRC elbow on all conduit runs below grade that have 45° bends or greater.
- 13. Install double locknut and bushings when terminating GRC or IMC conduit, except where conduit terminates in threaded hub.
- 14. Install insulated throat bushings on all PVC conduit runs.

B. Location:

- 1. Galvanized Rigid Metal Conduit (GRC): Permitted for general exposed or concealed work above or below grade.
- 2. Intermediate Metal Conduit (IMC): Permitted for general exposed or concealed work above or below grade.
- 3. Electrical Metallic Tubing (EMT): Permitted for general exposed or concealed work above grade.
- 4. Polyvinyl Chloride rigid Nonmetallic Conduit (PVC) unless noted otherwise on drawings: Permitted for below-grade use when permitted by local governing codes..
- 5. Flexible Metal Conduit: Permitted in attic spaces and exposed in lengths of 6 feet or less for connections to equipment in dry areas. Not permitted for general exposed or concealed work. For connection of recessed light fixtures in suspended ceilings and connection of other equipment subject to vibration.
- 6. Liquid tight Flexible Metal Conduit: Permitted exposed in lengths of 6 feet or less for connections to food service equipment, refrigeration equipment and other vibrating equipment in damp locations where rigid connections are not suitable.
- 7. MC Cable: Permitted only where concealed inside partitions and above finished ceilings. Cable exposed on walls or in open bar joist areas will not be permitted. Cut cable with manufacturer's recommended armor stripping tool. Provide manufacturers approved connectors.

3.5 WIRING DEVICES

- A. Replace outlets or devices improperly located or installed. Set outlets and devices plumb or horizontal and extend to, but not project above, finished surface.
- B. Unless otherwise noted, receptacles, switches, and other wiring devices shall not be mounted back-to-back.
- C. Install receptacles so that the ground prong is in the down position.

3.6 WIRE CONNECTIONS

A. Make final connection of motors, starters, disconnects, and other items furnished under other Sections.

3.7 FIRE AND SECURITY ALARM SYSTEM ROUGH-IN

A. Install fire alarm/security alarm conduit system, raceways, 120 volt supply connections, and fire alarm grounding conductor.

3.8 PROTECTION

A. Protect installed products from damage until completion of construction operations.

END OF SECTION



BLANK PAGE



SECTION 16700 - COMMUNICATIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:1. Owner Furnished and Installed Voice/Data System.
- B. Related Requirements:
 - 1. Section 16100 Wiring Methods: Outlet boxes and conduit fittings.
 - 2. Appendix A Products and Work by Owner or Separate Contractor.
 - a. General procedures related to Owner furnished products and transport, handle, store and protect products.
 - b. Manufacturers, suppliers, and vendor contacts and product names and numbers related to Owner furnished products.

PART 2 - PRODUCTS

2.1 OWNER FURNISHED PRODUCTS

A. The following products will be Owner furnished and installed as specified in Appendix A (Section 16700).
 1. Voice/Data cable equipment.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install Voice/Data conduit system, Voice/Data grounding conductor, and signal systems as indicated on Drawings.
- B. Voice/Data System Grounding Conductors: Install #6 AWG, copper grounding conductor from Voice/Data service equipment to electrical service grounding electrode system or dry type transformer grounding electrode system.
- C. Voice/Data Conduit System: Install conduit system as indicated on Drawings, including:
 - 1. Voice/Data service conduit.
 - 2. Other conduits as indicated on Drawings. Install #14 AWG soft iron pull wire or heavy nylon cord in each conduit for pulling the Voice/Data cable to each termination point.
 - 3. Install outlet boxes conforming to requirements of Section 16100. Include cover plates.

END OF SECTION



BLANK PAGE



APPENDIX A - PRODUCTS AND WORK BY OWNER OR SEPARATE CONTRACTOR

PART 1 - GENERAL

1.1 SUMMARY

- A. Appendix Includes:
 - 1. Work provided by Owner including Owner furnished products and installation as associated with and as specified in the individual specification sections and the Drawings.
 - 2. Appendix replaces deleted Specifications Section 01640: General procedures related to Owner furnished products.
 - 3. Owner furnished equipment schedules and tables formerly included in individual specifications sections.
 - 4. Information contained herein under the separate headings corresponds to the individual section numbers included in Division 2 thru 16 or Drawing numbers. Information under each heading identifies product information associated with the referenced specification or drawing.
 - 5. Owner's Preferred Flooring Contractor Specifications: Division 3 scopes of work that include the Preferred Flooring Contractor program, including allocation of responsibility between Contractor and PFC, are located in the individual Specifications Section and not in this Appendix A.
- B. Index of Sections (Quick Links): All sections listed may not be applicable to all projects.
 - 1. <u>Section 09655 Resilient Base and Accessories</u>
 - 2. <u>Section 16100 Wiring Methods</u>
 - 3. <u>Section 16700 Communications</u>
 - 4. <u>Owner Furnished Equipment Shown on Drawings</u>
 - 5. References
- C. Related Requirements: The following list is intended to aid in locating products and work related to or dependent on the scope in this Appendix. The list is included for information only and is not intended to be inclusive of all project requirements.
 - 1. Contract Drawings: Owner furnished product information not included in this Appendix A.

1.2 GENERAL

- A. Owner's supplier and associated products will be as specified hereinafter as applicable. Application of information herein shall be only to the extent as stated and referenced in corresponding specifications sections or as shown on the drawings.
- B. Unless otherwise specified, provisions specified herein are included as requirements for Owner's Suppliers, vendor, or separate contractors and shall be considered information only to Contractor.

1.3 DEFINITIONS

A. Owner: Defined in Construction Agreement. Owner may also be referred to as "Wal-Mart".

1.4 RESPONSIBILITIES FOR OWNER FURNISHED PRODUCTS

- A. Product Installation: Equipment and products will be furnished by the Owner for installation by the Contractor unless otherwise specified herein.
- B. Product Delivery: Unless otherwise specified hereinafter, Owner's supplier will deliver products to jobsite for Contractor to receive on delivery date established by Contractor. If significant order lead times are required for a specific product, lead time shall be as specified by the product supplier.



C. Coordination:

- 1. Walmart Realty Execution Team Products and Equipment: Contractor shall contact <u>wmpotracksupport@lumatrak.com</u> immediately after Award of Contract to initiate registration in the GC Communicator (GCC) online program for Owner supplier scheduling and coordination.
- 2. Coordination of order and delivery for Owner furnished products and equipment not facilitated by Walmart realty execution team are specified in Section 01600.
- D. Owner Responsibilities:
 - 1. Arrange for delivery of supplier furnished shop drawings, product data, samples, and installation instructions to Contractor.
 - 2. Arrange for delivery of replacement products upon notification from Owner's Construction Department of shortages, damage, or defects in products.
 - 3. Arrange for repair of product manufacturing defects upon notification from Owner's Construction Department.
 - 4. Arrange and pay for product delivery to site, in accordance with agreed upon construction management plan in Specifications Section 01320.
 - 5. Deliver supplier's shipment list of materials to Contractor.
 - 6. Submit claims for transportation damage.
 - 7. Arrange for replacement of damaged, defective, or missing items.
 - 8. Arrange for manufacturers' warranties, bonds, services, and inspections, as required.
- E. Contractor Responsibilities as specified in Specifications Section 01600:
 - 1. Submit notice of any discrepancies or problems anticipated in the use the products to supplier and to Architect, Owner, and Owner's Construction Department.
 - 2. Receive and unload products at the Site when specified.
 - 3. Inspect products upon receipt for shortages, damaged, or defective items and report to Owner and Owner's Construction Department.
 - 4. Handle products at site, including uncrating, storage, and protection unless otherwise specified.
 - 5. Install products when specified.
 - 6. Provide for installation and hook-up at time of delivery of Owner installed equipment.
 - 7. Protect installed products from damage.
 - 8. Replace items damaged by Contractor.
 - 9. Remove trash, debris, and rubbish.
 - 10. Report suspected product manufacturing defects to Owner's Construction Manager and Product Supplier.

1.5 CONTACTS

A. Contact information for vendors of Owner Furnished Equipment is identified in the applicable specifications sections or on the drawings or will be made available to the Contractor at the Pre-Construction Conference or upon request by the Contractor to the Construction Manager.

PART 2 - PRODUCTS AND EXECUTION

SECTION 09655 - RESILIENT BASE AND ACCESSORIES

- 2.1 SUPPLIER
 - A. Owner's Supplier of products in the scope of this Section is Haines, Jones & Cadbury, Inc., (800) 459-7099, WMT@hjcinc.com.
 - B. Owner's Supplier will furnish the following for installation by Contractor:
 1. 3/8 in. or 5/8 in. Plastic Base (DB).

2.2 MANUFACTURERS

- A. Plastic Base: 1. Parkla
 - Parkland Plastics, Inc., Middlebury, IN, (800) 835-4110.



Appendix A - 2

- B. Transition Strips:
 - 1. National Guard Products, Memphis, TN, (800) 647-7874.
 - 2. Ceramic Tool Company, Pewaukee, WI, (800) 236-5230.
 - 3. (Fasteners only) Hilti, (800) 879-8000.

C. Adhesives:

- 1. Seal Bond, Spring Lake, MI, (800) 252-4144.
- 2. Franklin International, Columbus, OH, (800) 877-4583.

2.3 PLASTIC BASE

- A. DuroBase by Parkland Plastics, Inc.
 - Model: Provide models specified below corresponding to mark number of base as shown on Drawings:
 a. DB5: 3/8 in. x 5 in. x 144 in., Model No. PTX3135.
 - 2. Color: Black.
 - 3. Fasteners: Black flathead countersunk screws, length sufficient to penetrate substrate and metal stud wall framing.

SECTION 16100 - WIRING METHODS (OWNER FURNISHED ONLY AS NOTED BELOW, CONTRACTOR INSTALLED)

2.1 Furnish and install fire and security alarm system. Contractor shall provide rough-in as specified in Specifications Section 16100 and as indicated on drawings.

SECTION 16700 - COMMUNICATIONS (OWNER FURNISHED AND INSTALLED ONLY AS NOTED BELOW)

- 2.1 VOICE/DATA SYSTEM
 - A. Furnish and install voice/data cable equipment.

OWNER FURNISHED EQUIPMENT SHOWN ON DRAWINGS

| Specification Section | Description | Furnished By | Received By | Installed By |
|--------------------------|--------------|-----------------|-------------|--------------|
| Drawings | Alarm System | Owner | Owner | Owner |

END OF SCHEDULE



REFERENCES

- A. American Institute of Steel Construction (AISC):
 - 1. AISC 303 Code of Standard Practice for Steel Buildings and Bridges.
 - 2. AISC 360 Structural Steel Buildings.
 - 3. Specification for the Design of Cold-Formed Steel Structural Members.
- B. American National Standards Institute (ANSI):
 - 1. ANSI A 14.3 Ladders, Fixed, Safety Requirements.
 - 2. ANSI A 108, A 118, A 136 American National Standards for the Installation of Ceramic Tile (Includes ANSI A108.01, A108.02, A108.1A-C, 108.4 .13, A118.1-.12, and ANSI A136.1)
 - 3. ANSI A 108.02 Materials, Environmental, and Workmanship, General Requirements.
 - 4. ANSI A 108.5 Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex Portland Cement Mortar.
 - 5. ANSI A117.1 Guidelines For Accessible And Usable Buildings And Facilities.
 - 6. ANSI A 118.4 Latex-Portland Cement Mortar.
 - 7. ANSI A 137.1 Specifications for Ceramic Tile.
 - 8. ANSI A 156.2 Bored and Preassembled Locks and Latches.
 - 9. ANSI A 156.6 Architectural Door Trim.
 - 10. ANSI/BHMA A 156.9 Cabinet Hardware.
 - 11. ANSI (BHMA) A156.10 Power Operated Pedestrian Doors.
 - 12. ANSI/BHMA A 156.11 Cabinet Locks.
 - 13. ANSI A 156.13 Mortise Locks and Latches.
 - 14. ANSI A 156.15 Release Devices Closer Holder, Electromagnetic and Electromechanical.
 - 15. ANSI/BHMA A 156.18 Materials & Finishes.
 - 16. ANSI A208.1 Particleboard.
 - 17. ANSI A208.2 Medium Density Fiberboard For Interior Use.
 - 18. ANSI A250.6 Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
 - 19. ANSI A250.8 (Formerly SDI-100) Recommended Specifications for Standard Steel Doors and Frames.
 - 20. ANSI A250.10 Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
 - 21. ANSI A250.11 (Formerly SDI-105) Recommended Erection Instructions for Steel Frames.
 - 22. ANSI B16.3 Malleable Iron Threaded Fittings.
 - 23. ANSI B16.18 Cast Copper Alloy Solder Joint Pressure Fittings.
 - ANSI B16.22 Wrought Copper & Copper Alloy Solder-Joint Pressure.a. ANSI/ASME B1.20.1 Pipe Threads, General Purpose (Inch).
 - 25. ANSI B93.4 Hydraulic Line Welded Tubing.
 - ANSI C 12.1 Electric Meters Code for Electricity Metering.
 a. ANSI/ASME B31.9 Building Services Piping
 - 27. ANSI C 12.20 Standard for Electricity Meter 0.2 and 0.5 Accuracy Classes.
 - 28. ANSI Z97.1 For Safety Glazing Materials Used In Buildings Safety Performance Specifications and Methods Of Test.
 - 29. ANSI Z97.1 Safety Glazing Material Used in Buildings.
 - 30. ANSI MH16.1 Specifications for the Design, Testing and Utilization of Industrial Steel Storage Racks.
- C. ASTM International (ASTM):
 - 1. ASTM A 36 Carbon Structural Steel.
 - 2. ASTM A 47 Ferritic Malleable Iron Castings.
 - 3. ASTM A 53 Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
 - 4. ASTM A74 Hub and Spigot Cast Iron Soil Pipe and Fittings.
 - 5. ASTM A 108 Steel Bar, Carbon and Alloy, Cold-Finished.
 - 6. ASTM A 123 Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 7. ASTM A 153 Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - 8. ASTM A 234 Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service.



- 9. ASTM A 240 Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
- 10. ASTM A 249/A Welded Austenitic Steel Boiler, Superheater, Heat-Exchanger, and Condenser Tubes.
- 11. ASTM A 269 Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
- 12. ASTM A 307 Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
- 13. ASTM A 325 Structural Bolts, Heat Treated, 120/105 ksi Minimum Tensile Strength.
- 14. ASTM A 463 Steel Sheet, Aluminum Coated by the Hot-Dip Process.
- 15. ASTM A 490 Structural Bolts, Alloy Steel, Heat Treated, 150 ksi Minimum Tensile Strength.
- 16. ASTM A 500 Cold-formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- 17. ASTM A 501 Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
- 18. ASTM A 536 Ductile Iron Castings.
- 19. ASTM A 653 Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- 20. ASTM A 666 Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- 21. ASTM A 591 Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications.
- 22. ASTM A 792 Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
- 23. ASTM A 795 Black And Hot-Dipped Zinc-Coated (Galvanized) Welded And Seamless Steel Pipe For Fire Protection Use.
- 24. ASTM A861 High-Silicon Iron Pipe and Fittings.
- 25. ASTM A 865 Threaded Couplings, Steel, Black Or Zinc-Coated (Galvanized) Welded Or Seamless, For Use In Steel Pipe joints.
- 26. ASTM A888 Hubless Cast Iron Soil Pipe and Fittings.
- 27. ASTM A 992 Structural Steel Shapes.
- 28. ASTM A 1008 Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, Baked Hardenable.
- 29. ASTM A 1011 Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
- 30. ASTM B75 Seamless Copper Tube.
- 31. ASTM B88 Seamless Copper Water Tube.
- 32. ASTM B135 Seamless Brass Tube.
- 33. ASTM B 221 Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- 34. ASTM B 280 Seamless Copper Tube for Air Conditioning and Refrigeration Field Service.
- 35. ASTM B306 Copper Drainage Tube (DWV).
- 36. ASTM B584 Copper Alloy Sand Castings for General Applications.
- 37. ASTM B306 Copper Drainage Tube (DWV).
- 38. ASTM B584 Copper Alloy Sand Castings for General Applications.
- 39. ASTM B 221 Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- 40. ASTM B 813 Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube.
- 41. ASTM C 553 Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications
- 42. ASTM C564 Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
- 43. ASTM C 578 Rigid, Cellular Polystyrene Thermal Insulation.
- 44. ASTM C 921 Determining the Properties of Jacketing Materials for Thermal Insulation.
- 45. ASTM C 1107 Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
- 46. ASTM C 1048 Heat-Treated Flat Glass Kind HS, Kind FT Coated and Uncoated Glass.
- 47. ASTM C 1071 Thermal and Acoustical Insulation (Mineral Fiber, Dust Lining Material.
- 48. ASTM C 1136 Flexible, Low Permeance Vapor Retarders for Thermal Insulation
- 49. ASTM C1277 Shielded Couplings Joining Hubless Castiron Soil Pipe and Fittings.
- 50. ASTM C1540 Heavy Duty Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings.
- 51. ASTM C 1290 Flexible Fibrous Glass Blanket Insulation Used to Externally Insulate HVAC Ducts
- 52. ASTM C 1710 Installation of Flexible Closed Cell Preformed Insulation in Tube and Sheet Form.
- 53. ASTM D570 Standard Test Method For Water Absorption Of Plastics
- 54. ASTM D648 Standard Test Method For Deflection Temperature Of Plastics Under Flexural Load In The Edgewise Position
- 55. ASTM D695 Standard Test Method For Compressive Properties Of Rigid Plastics
- 56. ASTM D732 Standard Test Method For Shear Strength Of Plastics By Punch Tool



- 57. ASTM D 1187 Asphalt-Base Emulsions for Use as Protective Coatings for Metal.
- 58. ASTM D 1785 Poly vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120.
- 59. ASTM D2000 Standard Classification System for Rubber Products in Automotive Applications.
- 60. ASTM D2240 Standard Test Method For Rubber Property Durometer Hardness
- 61. ASTM D 2466 Polyvinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 40.
- 62. ASTM D2467- Polyvinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 80.
- 63. ASTM D 2564 Solvent Cements for Polyvinyl Chloride (PVC) Plastic Pipe and Fittings.
- 64. ASTM D 2665 Polyvinyl Chloride (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
- 65. ASTM D2609 Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.
- 66. ASTM D 2855 Making Solvent-Cemented Joints with Polyvinyl Chloride (PVC) Pipe and Fittings.
- 67. ASTM D3311 Drain, Waste, and Vent (DWV) Plastic Fittings Patterns
- 68. ASTM D 4985 Low Silicate Ethylene Glycol Base Engine Coolant for Heavy Duty Engines Requiring a Pre-Charge of Supplemental Coolant Additive (SCA).
- 69. ASTM D5420 Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact)
- 70. ASTM E 84 Test Method for Surface Burning Characteristics of Building Materials.
- 71. ASTM E96 Water Vapor Transmission Materials.
- 72. ASTM E 119 Fire Tests Of Building Construction And Materials.
- 73. ASTM E152 Methods of Fire Tests of Door Assemblies.
- 74. ASTM E 330 Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- 75. ASTM E 648 Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
- 76. ASTM E 662 Specific Optical Density of Smoke Generated by Solid Materials.
- 77. ASTM E 709 Standard Guide for Magnetic Particle Testing
- 78. ASTM E 1886 Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
- 79. ASTM E 1996 Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.
- 80. ASTM E 2129 Standard Practice for Data Collection for Sustainability Assessment of Building Products.
- 81. ASTM F439 Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80.
- 82. ASTM F441 Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 And 80.
- 83. ASTM F493 Solvent Cements for CPVC Pipe and Fittings.
- 84. ASTM F656 Primers For Use in Solvents Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings.
- 85. ASTM F 710 Preparing Concrete Floors to Receive Resilient Flooring.
- 86. ASTM F876 Crosslinked Polyethylene (PEX) Tubing.
- 87. ASTM F877 Crosslinked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems.
- 88. ASTM F 1066 Vinyl Composition Floor Tile.
- 89. ASTM F 1700 Solid Vinyl Floor Tile.
- 90. ASTM F1807 Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) tubing.
- 91. ASTM F1861 Resilient Wall Base
- 92. ASTM F 1869 Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- 93. ASTM F 2389 Pressure-rated Polypropylene (PP) Piping Systems.
- 94. ASTM F1807 Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) tubing.
- 95. ASTM F1960 Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing.
- 96. ASTM F2014 Non-Reinforced Extruded Tee Connections for Piping Applications.
- 97. ASTM F2023 Standard Test Method for Evaluating the Oxidative Resistance of Plastic Piping to Hot Chlorinated Water.
- 98. ASTM F2098 Stainless Steel Clamps for Securing SDR9 Cross-linked Polyethylene (PEX) Tubing to Metal Insert Fittings.
- 99. ASTM-F2389 Pressure-rated Polypropylene (PP) Piping Systems.



- D. Air Movement and Control Association (AMCA):
 - 1. AMCA 500-D Laboratory Methods for Testing Dampers for Rating.
 - 2. AMCA 500-L Laboratory Methods for Testing Louvers for Rating.
- E. Aluminum Association (AA):1. Specifications for Aluminum Structures.
- F. American Association of Automatic Door Manufacturers (AAADM):
 1. AAADM Inspector Certification Program.
- G. American Petroleum Institute (API):
 1. API 1615 Installation of Underground Petroleum Storage Systems.
- H. American Plywood Association (APA): APA Grades & Specifications.
- I. American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI)
 1. ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures.
- J. American Society of Mechanical Engineers (ASME):
 - 1. ASME A13.1 Scheme for the Identification of Piping Systems.
 - 2. ASME B 1.1 Unified Inch Screw Threads (UN and UNR Thread Form).
 - 3. ASME B 16.1 Cast Iron Pipe Flanges And Flanged Fittings.
 - 4. ASME B 16.3 Malleable Iron Threaded Fittings.
 - 5. ASME B 16.4 Gray Iron Threaded Fittings.
 - 6. ASME B 16.5 Pipe Flanges And Flanged Fittings NPS 1/2 Through NPS 24 Metric/Inch Standard.
 - 7. ASME B 16.9 Factory-Made Wrought Buttwelding Fittings.
 - 8. ASME B 16.11 Forged Fittings, Socket-Welding And Threaded.
 - 9. ASME B 31.5 Refrigeration Piping Standard
 - 10. ASME /ANSI A112.18.1 Plumbing Fixture Fittings.
- K. American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE):
 - 1. ASHRAE Standard 90.1-Energy Standard for Buildings Except Low-Rise Residential Buildings.
 - 2. ANSI/ASHRAE Standard 15 Safety Standard for Refrigeration Systems.
- L. Americans with Disabilities Act (ADA):
 - 1. 28 CFR Part 36 ADA Standards for Accessible Design.
- M. American Water Works Association (AWWA):
 - 1. AWWA C104 Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
 - 2. AWWA C115 Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges.
 - 3. AWWA C151 Ductile-Iron Pipe, Centrifugally Cast.
 - 4. AWWA C651 Disinfecting Water Mains.
- N. American Welding Society (AWS):
 - 1. AWS D1.1 Structural Welding Code.
 - 2. AWS D1.3 Structural Welding Code Sheet Steel.
- O. Architectural Woodwork Institute (AWI) / Architectural Woodwork Manufacturers Association of Canada (AWMAC) / Woodwork Institute (WI) Joint Publication:
 - 1. AWI/AWMAC/WI Architectural Woodwork Standards.
- P. British Standards Institution (BSI):
 - 1. BS 302 Stranded Steel Wire Ropes.



- Q. Carpet and Rug Institute (CRI):
 1. CRI 104 Standard for Installation of Commercial Carpet.
- R. Consumer Product Safety Commission (CPSC):
 - 1. CPSC 16 CPR Part 1201.
- S. Door and Access Systems Manufacturer's Association International (DASMA)
 - 1. DASMA 102 Sectional Overhead-Type Doors
 - 2. DASMA 108 Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference.
- T. Factory Mutual System (FM):
 - 1. FM Approval Guide, Chapter 18 Building Materials.
 - 2. FM Standard 4430 Test Criteria for Heat and Smoke Vents.
 - 3. Approval Guide, Latest edition.
 - 4. FM Data Sheet 8-3, Current Edition Rubber Tire Storage.
- U. Hydraulic Institute (HI):
 - 1. HI M103 (ANSI/HI 1.4) Centrifugal Operations.
- V. International Association of Plumbing and Mechanical Officials (IAPMO):
 - 1. IAPMO/ANSI Z1001- Prefabricated Gravity Grease Interceptors.
- W. National Association of Architectural Metal Manufacturers (NAAMM):
 - 1. Metal Finishes Manual for Architectural and Metal Products.
- X. National Electrical Manufacturer's Association (NEMA):
 - 1. NEMA AB1 Molded Case Circuit Breakers and Molded Case Switches.
 - 2. NEMA LD3 High-Pressure Decorative Laminates.
- Y. National Fenestration Rating Council (NFRC):
 - 1. NFRC 100 Procedure for Determining Fenestration Product U-Factors.
 - 2. NFRC 200 Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance of Normal Incidence.
- Z. National Fire Protection Association (NFPA):
 - 1. NFPA 13 Installation of Sprinkler Systems.
 - 2. NFPA 20 Installation of Stationary Pumps for Fire Protection.
 - 3. NFPA 24 Standard for the Installation of Private Fire Service Mains and their Appurtenances.
 - 4. NFPA 30 Flammable and Combustible Liquids Code.
 - 5. NFPA 30A Automotive and Marine Service Station Code.
 - 6. NFPA 54 National Fuel Gas Code.
 - 7. NFPA 70 National Electric Code.
 - 8. NFPA 80 Fire Doors and Windows.
 - 9. NFPA 90A Installation of Air Conditioning and Ventilating Systems.
 - 10. NFPA 90B Installation of Warm Air Heating and Air-Conditioning Systems
 - 11. NFPA 96 Ventilation Control And Fire Protection Of Commercial Cooking Operations
 - 12. NFPA 101 Code for Safety to Life from Fire in Buildings and Structures.
 - 13. NFPA 252 Fire Tests for Door Assemblies.
 - 14. NFPA 701 Fire Tests for Flame Propagation of Textiles and Films.
- AA. North American Fenestration Standard (NAFS):
 - 1. AAMA\WDMA\CSA\101\I.S.2\A440 The Voluntary Performance Specification for Windows, Doors, and Skylights.



- BB. North American Insulation Manufacturer's Association (NAIMA)
 - 1. AH 124 Fibrous Glass Duct Liner Standard
- CC. NSF International (NSF):
 - 1. NSF 14- Plastic Piping System Components and Related Materials.
 - 2. NSF 51 Food Equipment Materials
 - 3. NSF 61 Drinking Water System Components-Health Effects.
 - 4. NSF 61 Annex G Weighted Average Lead Content Evaluation Procedure to a 0.24 Percent Lead Requirement.
- DD. Occupational Safety and Health Administration (OSHA):
 - 1. OSHA 1910.23 Walking Working Surfaces.
 - 2. OSHA 1926.502 Fall Protection.
 - 3. OSHA 1926.1153 Respirable Crystalline Silica.
- EE. Plumbing and Drainage Institute (PDI):1. PDI WH 201- Water Hammer Arrestors.
- FF. Research Council on Structural Connections (RCSC):
 1. RCSC Specification for Structural Joints Using ASTM A 325 or A 490 Bolts.
- GG. Sheet Metal Air Conditioning Contractors National Association (SMACNA):
 1. SMACNA HVAC Duct Construction Standards Metal and Flexible
- HH. Society of Automotive Engineers (SAE):
 1. SAE J525 Welded and Cold Drawn Low Carbon Steel Tubing Annealed for Bending and Flaring.
- II. Steel Deck Institute (SDI):
 - 1. ANSI/SDI-RD Standard for Steel Roof Deck (SDI Standard).
 - 2. ANSI/SDI-NC Standard for Non-Composite Steel Floor Deck (SDI Standard).
 - 3. ANSI/SDI-C Standard for Composite Steel Floor Deck (SDI Standard).
- JJ. Steel Structures Painting Council (SSPC):
 - 1. SSPC-SP 2 Hand Tool Cleaning.
 - 2. SSPC SP-3 Power Tool Cleaning.
 - 3. SSPC-Paint 20 Zinc-Rich Coating Type I Inorganic And Type II Organic.
 - 4. SSPC-Paint 25 Red Iron Oxide, Zinc Oxide, Raw Linseed Oil, and Alkyd Primer.
 - 5. SSPC-Paint 20 Zinc-Rich Coating Type I Inorganic and Type II Organic.
 - 6. SSPC-Paint 25 Zinc Oxide, Alkyd, Linseed Oil Primer for Use Over Hand Cleaned Steel Type I And Type II.
 - 7. SSPC-PA 1 Shop, Field, and Maintenance Painting of Steel.
- KK. Tile Council of North America, Inc. (TCNA):
 - 1. TCNA Handbook for Ceramic Tile Installation.
- LL. Underwriters Laboratories (UL):
 - 1. UL 10B Fire Tests of Door Assemblies.
 - 2. UL 305 Panic Hardware.
 - 3. UL 508 Standard of Safety for Industrial Control Equipment.
 - 4. UL Fire Protection Directory Latest Edition.
 - 5. UL 778 Motor-Operated Water Pumps.
 - 6. UL 857 Busways.
 - 7. UL Fire Protection Directory Latest Edition

END OF REFERENCES



BLANK PAGE

