

QA/QC Coordination Sign-off

- Architectural _____
- Structural _____
- Mechanical _____
- Electrical _____
- Plumbing _____
- Refrigeration _____
- Developer _____

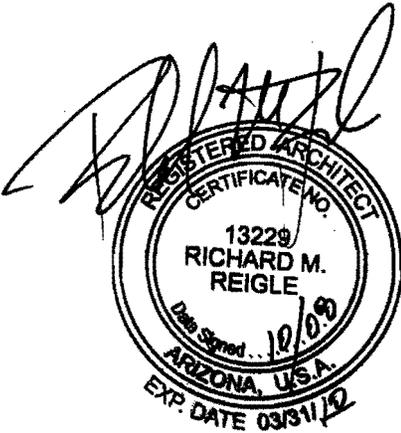
PROJECT MANUAL

project:
FRESH & EASY NEIGHBORHOOD MARKET INC.
9960 WEST LOWER BUCKEYE ROAD,
PHOENIX, AZ.



Neighborhood Market

prepared by:
Reigle & Associates
 12424 NORTH 32ND STREET, SUITE 200
 PHOENIX, AZ
 602 493 3001 T
 602 493 1760 F



Store # | 1326
 Site ID | PH02-0367-NW02

F&E at NWC 99th Ave & Lower Buckeye Rd
 Date | 10/29/08

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

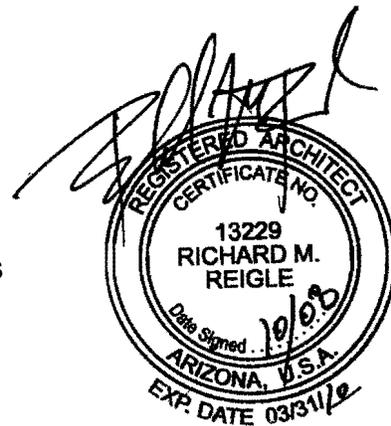
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DIVISION 05 - METALS

- 05120 STRUCTURAL STEEL
- 05310 STEEL DECK
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- 07190 WATER REPELLENTS
- 07200 MISCELLANEOUS BUILDING INSULATION
- 07210 BUILDING INSULATION (WOOD DECK)
- 07560 TPO MECHANICALLY FASTENED ROOFING SYSTEM (WOOD DECK)
- 07620 SHEET METAL FLASHING AND TRIM
- 07720 ROOF HATCHES
- 07920 CAULKING, SEALANTS AND JOINT CLOSURES

DIVISION 08 - OPENINGS

- 08111 HOLLOW METAL DOORS AND FRAMES (DIRECT BUY)
- 08310 IMPACT DOORS AND FRAMES (DIRECT BUY)
- 08331 OVERHEAD SECTIONAL DOORS (NATIONAL ACCOUNT)
- 08411 ALUMINUM DOORS, FRAMES AND WINDOWS
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- 08620 DIRECTIONAL UNIT SKYLIGHTS (DIRECT BUY)
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- 09250 GYPSUM WALLBOARD ASSEMBLIES
- 09260 GYPSUM DRYWAL
- 09652 RESILIENT FLOORING - SHEET VINYL
- 09670 ELASTOMERIC RESINOUS FLOORING
- 09720 PREFINISHED FRP PANELS
- 09911 PAINTING

DIVISION 10 - SPECIALTIES

- 10265 PROTECTIVE BUMPER SYSTEM AND WALL-CORNER GUARDS
- 10801 TOILET ACCESSORIES

DIVISION 11 - EQUIPMENT

- 11160 DOCK FACILITIES



DIVISION 12 - FURNISHINGS

NOT USED

DIVISION 13 - SPECIAL CONSTRUCTION

NOT USED

DIVISION 14 - CONVEYING EQUIPMENT

NOT USED

DIVISION 15 - MECHANICAL

REFER TO SEPARATE INDEX

DIVISION 16 - ELECTRICAL

REFER TO SEPARATE INDEX

APPENDIXES

APPENDIX A SOILS REPORT

END OF SECTION

INVITATION TO BID

THE GENERAL CONTRACTOR (INVITED BIDDER):

(CONTRACTOR NAME AND ADDRESS)

ATTN:

SEALED PROPOSALS ARE INVITED FOR THE CONSTRUCTION OF THE RETAIL BUILDING(S) TO BE LOCATED AT

SITE ID #

99TH AVENUE & LOWER BUCKEYE ROAD

STORE # PH02-0367-NW02

THE PROJECT WORK CONSISTS OF:

SITE DEVELOPMENT WORK OF THE PROJECT IS LIMITED PER CONSTRUCTION DRAWINGS. ALL OFF-SITE WORK IS EXCLUDED UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DRAWINGS.

ALL PROPOSALS MUST BE SUBMITTED ON A TOTAL LUMP SUM BASIS TO INCLUDE ALL MATERIAL, LABOR, TAXES, BONDS, ETC. SEGREGATED PROPOSALS ONLY WILL NOT BE ACCEPTED. **PROPOSAL WILL BE PRESENTED WITH BREAKOUT FOR BUILDING AND SITE CONSTRUCTION PER THE INCLUDED BREAKOUT OF BID SCHEDULE OF VALUES (SV).**

PROPOSALS SHALL BE ELECTRONICALLY TRANSMITTED BY BID DUE DATE TIME AND DELIVERED, WITHIN 24 HOURS, TO THE OFFICE OF CONSTRUCTION MANAGER:

ON **(DATE) AT (TIME) P.M.** (LOCAL TIME) PROPOSALS RECEIVED AFTER THIS SPECIFIED TIME AND DATE WILL NOT BE ACCEPTED. ANNOUNCEMENT OF AWARD OF CONTRACT SHALL BE MADE TO ALL BIDDERS.

BID DOCUMENTS CONSISTING OF DRAWINGS AND SPECIFICATION MANUAL MAY BE EXAMINED BY THE INVITED BIDDERS AT THE OFFICE OF THE ARCHITECT AND AT A DESIGNATED PLAN SERVICE (IF USED).

INVITED BIDDERS MAY OBTAIN 1 COPY OF THE DRAWINGS AND 1 COPY OF THE SPECIFICATION MANUAL (BID DOCUMENTS) FROM THE ARCHITECT'S OFFICE. BIDDERS SHALL RETURN PLANS AND ONE (1) COPY OF SPECIFICATION MANUAL TO THE ARCHITECT'S OFFICE WITHIN 30 DAYS OF BID DATE. ADDITIONAL COPIES FOR THE GENERAL CONTRACTOR, SUBCONTRACTORS OR OTHERS WILL BE AVAILABLE THROUGH THE ARCHITECT'S OFFICE FOR A COST OF \$80.00 PER SET OF PLANS AND \$50.00 FOR SPECIFICATION MANUAL OF BID DOCUMENTS (1 COPY OF PLANS AND 1 COPY OF THE SPECIFICATION MANUAL (\$130.00) - NO PARTIAL COPIES WILL BE ISSUED), SHIPPING COSTS SHALL BE PROVIDED BY THE RECEIVER USING THEIR SHIPPING ACCOUNT NUMBER.

BID SECURITY MAY BE REQUIRED IN THE AMOUNT OF 5% OF THE BASE BID. THIS ITEM SHALL BE IDENTIFIED AS A SEPARATE ITEM IN THE BASE BID.

THE OWNER RESERVES THE RIGHT TO REJECT ANY AND ALL PROPOSALS AND TO WAIVE FORMALITIES AND IRREGULARITIES.

NO TELEPHONE QUESTIONS BY THE GENERAL CONTRACTOR OR THE SUBCONTRACTORS SHALL BE ACCEPTED BY THE OWNER OR THE ARCHITECT.

ALL QUESTIONS REGARDING BUILDING CONSTRUCTION DOCUMENTS SHALL BE SUBMITTED ON THE WEB PAGE AND TRANSMITTED TO THE OWNER, CONSTRUCTION MANAGER AND THE ARCHITECT, FROM THE GENERAL CONTRACTORS INVITED TO BID.

AIA DOCUMENT A701, INSTRUCTION TO BIDDERS, 1997 EDITION, IS TO BE CONSIDERED A PART OF THE BIDDING PROCEDURE, YET NOT CONTAINED WITHIN THESE SPECIFICATIONS.

ORIGINAL COPIES ARE AVAILABLE FROM LOCAL AIA OFFICE.

END OF SECTION

SUPPLEMENTARY INSTRUCTIONS TO BIDDERSSUPPLEMENTARY INSTRUCTIONS TO INVITED BIDDERS

THIS SECTION IS SUPPLEMENTARY TO THE INSTRUCTIONS TO INVITED BIDDERS AIA DOCUMENT A-701-1997. **AIA DOCUMENT A-701, 1997, IS NOT CONTAINED WITHIN THESE SPECIFICATIONS, BUT IS TO BE CONSIDERED A PART OF THE BIDDING INSTRUCTIONS.**

EXAMINATION

BEFORE SUBMITTING A PROPOSAL, THE INVITED BIDDER SHALL CAREFULLY EXAMINE THE DRAWINGS AND SPECIFICATION MANUAL (BID DOCUMENTS), VISIT THE SITE OF THE WORK AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS AND SHALL INCLUDE IN THE PROPOSAL, THE COST OF ALL ITEMS NECESSARY IN THE CONSTRUCTION OF THE PROJECT. THE INVITED BIDDER SHALL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING, CONCERNING THAT WHICH THE INVITED BIDDER MIGHT HAVE FULLY INFORMED HIMSELF PRIOR TO THE BIDDING.

INTERPRETATIONS, ADDENDA

SHOULD AN INVITED BIDDER FIND ANY AMBIGUITY, INCONSISTENCY OR ERROR IN THE DRAWINGS AND SPECIFICATION MANUAL OR BE IN DOUBT AS TO THEIR MEANING, THE INVITED BIDDER SHALL SUBMIT IT TO THE WEB PAGE, AND TRANSMIT IT TO THE OWNER, CONSTRUCTION MANAGER, AND THE ARCHITECT, WHO WILL ISSUE A WRITTEN ADDENDUM RESPONSE TO ALL INVITED BIDDERS.

ANY ADDENDA ISSUED BY THE ARCHITECT DURING THE TIME OF BIDDING ARE TO BE INCLUDED IN THE PROPOSAL FROM THE INVITED BIDDER AND SHALL BECOME A PART OF THE BID DOCUMENTS. THE INVITED BIDDER SHALL ACKNOWLEDGE RECEIPT OF ADDENDA ON THE PROPOSAL FORM IN THE SPACE PROVIDED.

ADDENDA WILL BE MAILED OR DELIVERED TO EACH INVITED BIDDER, PERSON OR FIRM RECORDED BY THE ARCHITECT AS HAVING RECEIVED THE CONSTRUCTION DOCUMENTS FOR BIDDING AND AT A DESIGNATED PLAN SERVICE (IF USED).

SUBSTITUTION OF MATERIALS

GENERALLY NO SUBSTITUTIONS FROM THE MATERIALS AND PRODUCTS SPECIFIED BY THIS PROJECT MANUAL ARE ALLOWED. ALL SUBSTITUTION REQUESTS MUST BE SUBMITTED IN WRITING, PRIOR TO BIDDING, TO THE ARCHITECT PER THE REQUIREMENTS OF SECTION 01600 OF THIS PROJECT MANUAL. APPROVED SUBSTITUTION REQUESTS WILL BE DISTRIBUTED AS ADDENDA TO ALL INVITED BIDDERS IN WRITING BY THE ARCHITECT.

PROPOSALS

PROPOSAL, BY THE INVITED BIDDERS TO BE SUBMITTED FOR CONSIDERATION, MUST BE MADE UPON THE "PROPOSAL FORM" (PF), PROVIDED HERewith, ALL BLANK SPACES MUST BE FILLED, THE SIGNATURE SHALL BE IN LONGHAND AND THE COMPLETED FORM SHALL BE WITHOUT ALTERATIONS OR ERASURES. THE INCLUDED BID SCHEDULE OF VALUES MUST BE FULLY EXECUTED AND SUBMITTED SIMULTANEOUSLY WITH THE PROPOSAL FORM.

THE PROPOSAL FORM SHALL BEAR THE NAME OF THE INVITED BIDDER. WHERE AN INVITED BIDDER IS A CORPORATION, A CORPORATE PROPOSAL MUST BE SIGNED IN THE LEGAL NAME(S) OF THE CORPORATION FOLLOWED BY THE NAME OF STATE OF INCORPORATION AND THE LEGAL SIGNATURE OF A CORPORATE OFFICER AUTHORIZED TO BIND THE CORPORATION TO A CONTRACT.

PROPOSALS SHALL BE ADDRESSED TO THE OWNER AND DELIVERED IN AN ENCLOSED SEALED ENVELOPE IN ADDITION TO ELECTRONICALLY SUBMITTED COPIES.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

TIME IS OF THE ESSENCE AND CONSIDERATION OF SUCH SHALL BE MADE IN THE AWARENESS OF THIS ON THE BID PROPOSAL FORM. THE PROJECT SHALL BE COMPLETED TO THE POINT OF "**SUBSTANTIAL COMPLETION**" AS DEFINED IN "**THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION**" AND THE CERTIFICATE OF OCCUPANCY SHALL BE ISSUED WITHIN 110 CALENDAR DAYS (INCLUDING WEEK DAYS AND WEEKEND DAYS) FROM 5 DAYS FOLLOWING THE NOTICE OF AUTHORIZATION TO PROCEED. IN THE EVENT THAT CONTRACTOR DOES NOT ACHIEVE SUBSTANTIAL COMPLETION WITHIN THE SPECIFIED PERIOD, THEN, IN ADDITION TO ANY OTHER RIGHTS OR REMEDIES OF OWNER, CONTRACTOR SHALL BE LIABLE FOR DAMAGES OF \$ 500.00_ PER CALENDAR DAY AS AND FOR LIQUIDATED DAMAGES AND NOT AS A PENALTY. EACH OWNER AND CONTRACTOR ACKNOWLEDGES THAT TIME IS OF THE ESSENCE AND SUCH DELAY WILL RESULT IN LOST INCOME AND PROFITS TO OWNER, THE EXACT AMOUNT OF WHICH WILL BE DIFFICULT TO ASCERTAIN, BUT THAT THE FOREGOING REPRESENTS A REASONABLE AND GOOD FAITH ESTIMATE OF THE AMOUNT THEREOF.

ALL BIDS SHALL REMAIN FIRM FOR A PERIOD OF 60 CALENDAR DAYS AFTER THE DATE OF BID OPENING AND THE INVITED BIDDER SHALL BE PREPARED TO ENTER INTO A CONTRACT FOR CONSTRUCTION AND BEGIN CONSTRUCTION WITHIN 14 CALENDAR DAYS AFTER DATE OF NOTICE OF AUTHORIZATION TO PROCEED.

PROPOSALS MAY NOT BE MODIFIED AFTER SUBMITTAL. INVITED BIDDERS MAY WITHDRAW PROPOSALS ANY TIME PRIOR TO BID OPENING, BUT MAY NOT RESUBMIT THEM. NO PROPOSAL MAY BE MODIFIED OR WITHDRAWN AFTER THE BID OPENING EXCEPT WHERE THE AWARD OF THE CONTRACT FOR CONSTRUCTION HAS BEEN DELAYED FOR MORE THAN 60 DAYS.

THE BUILDING PERMIT(S) COST OR DEVELOPMENT FEES ACCESSED BY ALL GOVERNMENTAL AUTHORITIES SHALL BE EXCLUDED FROM THE BASE BID. THESE ADDITIONAL COSTS MAY BE ADDED TO THE CONTRACT SUM BY CHANGE ORDER. NO PROFIT OR OVERHEAD SHALL BE ADDED BY THE GENERAL CONTRACTOR TO THIS CHANGE ORDER. ANY TAXES ASSESSED BY THE ISSUER WILL BE INCLUDED IN THE PERMIT COST. THE GENERAL CONTRACTOR SHALL PROVIDE THE OWNER WITH 2 COPIES OF THE PERMIT(S). GENERAL CONTRACTOR SHALL PERFORM ALL WORK TO COMPLY WITH APPLICABLE BUILDING CODES AND REGULATIONS. SEE SECTION 01210 FOR ALLOWANCES.

ALTERNATES:

Alternate: An amount proposed by bidders and stated as an attachment to the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner 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.

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.

MAKE CERTAIN THE BID FORM CLEARLY STATES THAT COSTS LISTED FOR EACH ALTERNATE INCLUDE COSTS OF RELATED COORDINATION, MODIFICATION, OR ADJUSTMENT. .

Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

Execute accepted alternates under the same conditions as other work of the Contract.

Alternate Specifications are included in Appendix B of this specification. These Sections contain requirements for materials necessary to achieve the work described under each alternate.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERSBID SECURITY

BID SECURITY MAY BE REQUIRED AND SHALL BE IN THE AMOUNT OF 5 % OF THE BASE BID. THIS ITEM SHALL BE IDENTIFIED AS A SEPARATE LINE ITEM IN THE BASE BID.

INVITED BIDDERS / GENERAL CONTRACTORS

ONLY THOSE GENERAL CONTRACTORS SELECTED AND INVITED TO BID BY THE OWNER SHALL BE PERMITTED TO SUBMIT PROPOSALS.

GENERAL CONTRACTOR PROPOSED SUBCONTRACTORS

THE INVITED BIDDER (GENERAL CONTRACTOR) SHALL SUBMIT TO OWNER, AT THE TIME OF BID OPENING, PER THE ENCLOSED SUBCONTRACTOR LIST, LISTING SINGLE NAME ONLY FOR EACH BRANCH OF THE WORK.

THE OWNER RESERVES THE RIGHT TO REJECT ANY PROPOSED SUBCONTRACTOR(S). SUBCONTRACTORS PROPOSED BY THE BIDDER MUST BE USED ON THE WORK FOR WHICH THEY ARE PROPOSED AND SHALL NOT BE CHANGED WITHOUT THE WRITTEN APPROVAL BY THE OWNER. REJECTION OF PROPOSED SUBCONTRACTORS SHALL BE PRE-EMPTORY AND THE OWNER WILL NOT BE EXPECTED OR REQUIRED TO STATE CAUSE.

BID SCHEDULE OF VALUES

AT THE TIME OF BID PROPOSAL SUBMITTAL, THE INVITED BIDDER SHALL SUBMIT A COMPLETE BID SCHEDULE OF VALUES. THIS SCHEDULE IS INCLUDED HEREWITH AND ITS FORMAT MUST BE ADHERED TO STRICTLY.

COPIES FURNISHED

THE SUCCESSFUL INVITED BIDDER (GENERAL CONTRACTOR) WILL BE FURNISHED WITH 1 SET OF BOND PAPER PLANS AND 1 SET OF MASTER SPECIFICATION MANUAL ORIGINALS (CONSTRUCTION DOCUMENTS) FREE OF CHARGE. THESE DRAWINGS AND SPECIFICATION MANUALS WILL BE LABELED "CONSTRUCTION SETS"; THE CONSTRUCTION VELLUMS WILL INCLUDE ALL PRE-BID ADDENDA. NO OTHER PREVIOUSLY ISSUED DRAWINGS OR SPECIFICATION MANUALS SHALL BE ALLOWED FOR USE IN CONSTRUCTION OF THE PROJECT. THE GENERAL CONTRACTOR WILL PRINT "BLACKLINE" CONSTRUCTION DRAWINGS (CONSTRUCTION SETS IN GREEN) AND PROVIDE "GREEN" COVERS FOR BOUND SPECIFICATIONS.

CONTRACTOR'S LICENSE LAW

THE GENERAL CONTRACTOR SHALL COMPLY WITH AND REQUIRE ALL SUBCONTRACTORS TO COMPLY WITH ALL FEDERAL, STATE AND CITY CONTRACTOR LICENSE LAWS AND BE DULY REGISTERED AND LICENSED THEREUNDER AS REQUIRED.

PERFORMANCE BOND – MAY BE REQUIRED AND BIDDER SHALL IDENTIFY THIS AS A SEPARATE LINE ITEM IN THE BASE BID

THE GENERAL CONTRACTOR MAY BE REQUIRED TO PROVIDE AND PAY FOR A PERFORMANCE AND PAYMENT BOND. THIS BOND SHALL COVER THE FAITHFUL PERFORMANCE (100%) OF THE CONTRACT FOR CONSTRUCTION AND THE PAYMENT OF ALL OBLIGATIONS (100%) ARISING THEREUNDER, IN SUCH FORM AS THE OWNER MAY PRESCRIBE AND WITH SUCH SURETIES AS THEY MAY APPROVE. THE GENERAL CONTRACTOR SHALL DELIVER THE REQUIRED BONDS TO THE OWNER NOT LATER THAN THE DATE OF EXECUTION OF THE CONTRACT FOR CONSTRUCTION. THE GENERAL CONTRACTOR SHALL REQUIRE THE ATTORNEY IN FACT WHO EXECUTES THE REQUIRED BONDS ON BEHALF OF THE SURETY TO AFFIX THERETO A CERTIFIED AND CURRENT COPY OF HIS POWER OF ATTORNEY INDICATING THE MONETARY LIMIT OF SUCH POWER.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

THE GENERAL CONTRACTOR SHALL FURNISH THE NAME, ADDRESS AND RATING OF THE BONDING COMPANY ON THE PROPOSAL FORM. OWNER RESERVES THE RIGHT TO REJECT ANY PROPOSED BONDING COMPANY WITHOUT STATING CAUSE. IN THIS EVENT THE GENERAL CONTRACTOR SHALL PROVIDE AN ALTERNATE BONDING COMPANY SELECTION ACCEPTABLE TO THE OWNER.

BONDS SHALL CONFORM WITH STATE STATUTES REGARDING PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND WITH AMOUNT SHOWN ON EACH PART EQUAL TO 100% OF THE TOTAL AMOUNT PAYABLE BY TERMS OF THE CONTRACT FOR CONSTRUCTION. THE SURETY COMPANY SHALL BE LICENSED TO DO BUSINESS IN STATE IN WHICH CONSTRUCTION PROJECT IS LOCATED AND SHALL BE ACCEPTABLE TO OWNER. BOND AMOUNT SHALL BE INCREASED TO INCLUDE ANY CHANGE ORDER(S) ADDED TO THE CONTRACT TO 100% TOTAL VALUE AMOUNT OF EACH CHANGE ORDER. BONDS WILL BE RECORDED ALONG WITH A COPY OF THE CONSTRUCTION CONTRACT IN THE COUNTY RECORDER RECORDS BY THE GENERAL CONTRACTOR, WITH WRITTEN PROOF SUBMITTED TO THE OWNER.

SUMMARY OF WORK

SEE SECTION 01100, SUMMARY OF WORK, FOR DESCRIPTION OF THE WORK.

NOTE CERTIFICATION PLAN OF BUILDING SQUARE FOOTAGE BY SURVEYOR PROVIDING THE BUILDING OUTSIDE OF WALL DIMENSIONS FOR EACH WALL OUTSIDE CORNER TO OUTSIDE CORNER OR IF A COMMON WALL, TO CENTERLINE OF THE COMMON WALL. SEE SECTION 01100.

SOCIAL SECURITY ACT

THE GENERAL CONTRACTOR AGREES TO COMPLY WITH AND TO REQUIRE ALL OF HIS SUBCONTRACTORS TO COMPLY WITH ALL THE PROVISIONS OF THE ACT OF CONGRESS APPROVED AUGUST 14, 1935, KNOWN AND CITED AS THE "SOCIAL SECURITY ACT" AND ALSO THE PROVISIONS OF THE ACT OF THE STATE LEGISLATURE APPROVED, AND KNOWN AS THE STATE UNEMPLOYMENT COMPENSATION LAW AND ALL OTHER LAWS AND REGULATIONS PERTAINING TO LABOR AND WORKMEN AND ALL AMENDMENTS TO SUCH DATA, AND THE CONTRACTOR FURTHER AGREES TO INDEMNIFY AND SAVE HARMLESS THE OWNER OF AND FROM ANY AND ALL CLAIMS AND DEMANDS MADE AGAINST IT BY VIRTUE OF THE FAILURE OF THE CONTRACTOR OR ANY SUBCONTRACTORS TO COMPLY WITH THE PROVISIONS OF ANY OR ALL OF SAID ACTS AND AMENDMENTS.

SALES AND USE TAX

THE GENERAL CONTRACTOR AGREES TO COMPLY WITH AND TO REQUIRE ALL OF HIS SUBCONTRACTORS TO COMPLY WITH ALL THE PROVISIONS OF APPLICABLE STATE SALES EXCISE TAX LAW AND COMPENSATION USE TAX LAW AND ALL AMENDMENTS TO SAME. THE CONTRACTOR FURTHER AGREES TO INDEMNIFY AND SAVE HARMLESS THE OWNER, OF AND FROM ANY AND ALL CLAIMS AND DEMAND MADE AGAINST IT BY VIRTUE OF THE FAILURE OF THE GENERAL CONTRACTOR OR ANY SUBCONTRACTOR TO COMPLY WITH THE PROVISIONS OF ANY OR ALL SAID LAWS AND AMENDMENTS.

WAIVER OF LIENS

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE PAYMENT OF ALL BILLS FOR LABOR AND MATERIALS FURNISHED BY THE SUBCONTRACTORS, THE SUPPLIERS, AND THE GENERAL CONTRACTOR ON THIS PROJECT. THE GENERAL CONTRACTOR SHALL DELIVER TO THE OWNER, AS OUTLINED IN THE SUPPLEMENTARY GENERAL CONDITIONS, UNCONDITIONAL LIEN WAIVERS AND/OR RELEASES FROM HIMSELF AND FROM EACH OF HIS SUBCONTRACTORS AND SUPPLIERS, AND AT SUCH TIME HE SHALL CERTIFY THAT HE IS SUBMITTING SUCH LIEN WAIVERS FOR ALL SUBCONTRACTOR AND SUPPLIERS INVOLVED.

IF ANY LIENS ARE FILED AGAINST THE OWNER'S PROPERTY, THE OWNER MAY, AT HIS OPTION, DEMAND THE GENERAL CONTRACTOR IMMEDIATELY PROVIDE A BOND IN ACCORDANCE WITH STATE STATUTES.

AT THE POINT WHEN "SUBSTANTIAL COMPLETION" IS POTENTIALLY ACHIEVED THE OWNER (AND THE ARCHITECT) SHALL REVIEW THE WORK WITH THE GENERAL CONTRACTOR TO DETERMINE WHETHER OR NOT "SUBSTANTIAL COMPLETION" STATUS HAS INDEED BEEN ACHIEVED:

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

WHERE "SUBSTANTIAL COMPLETION" IS ACHIEVED FINAL PAYMENT REQUESTS WILL BE CONSIDERED FOR APPROVAL (NOT INCLUDING RETENTION FUNDS) AND THE ARCHITECT SHALL PREPARE A "PUNCH LIST". (PUNCH LIST DOES NOT AUTOMATICALLY INDICATE "SUBSTANTIAL COMPLETION" IS ACHIEVED). THE GENERAL CONTRACTOR SHALL COMPLETE ALL ITEMS NOTED ON THE "PUNCH LIST" TO THE SATISFACTION OF THE OWNER WITHIN 7 CALENDAR DAYS.

UPON THE SATISFACTORY COMPLETION OF THE "PUNCH LIST", WITH "SUBSTANTIAL COMPLETION" ACHIEVED, A "CERTIFICATE OF OCCUPANCY" ISSUED AND ALL "CLOSE-OUT PACKAGE" ITEMS COMPLETED TO THE SATISFACTION OF THE OWNER, CONSTRUCTION RETENTION FUNDS SHALL BE APPROVED FOR PAYMENT.

END OF SECTION

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PROPOSAL FORM

TO: FRESH & EASY NEIGHBORHOOD MARKET, INC.
attn: Region Construction Manager (**JAMES E. SMITH III**)
2120 PARK PLACE
SUITE 200
EL SEGUNDO CALIFORNIA 90245:

SUBMITTED BY:

(NWC 99TH AVENUE & LOWER BUCKEYE ROAD)

I / WE, THE UNDERSIGNED, PROPOSE TO DO ALL THE WORK, AND FURNISH ALL THE LABOR, PHYSICAL PLANT AND MATERIALS NECESSARY FOR THE CONSTRUCTION OF SUBJECT PROJECT AS SET FORTH IN THE DRAWINGS AND SPECIFICATION MANUAL (BID DOCUMENTS) TITLED:

New construction for 99th Ave & Lower Buckeye Rd.

AS PREPARED BY THE ARCHITECT OF RECORD (**REIGLE & ASSOCIATES ARCHITECTURE & PLANNING LTD**)

WE FURTHER DECLARE THAT WE HAVE CAREFULLY READ AND EXAMINED THE BID DOCUMENTS INCLUDING THE SPECIFICATION MANUAL, THE BIDDING REQUIREMENTS, CONTRACT FORMS, GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, ALL OTHER SECTIONS, ALL SHEETS OF THE DRAWINGS, THAT WE HAVE MADE A PERSONAL EXAMINATION OF THE SITE AND THAT WE UNDERSTAND THE EXACT SCOPE OF THE PROJECT WITHOUT QUESTION.

WE ACKNOWLEDGE RECEIPT OF THE FOLLOWING ADDENDA AND HAVE INCLUDED THEIR PROVISIONS IN THIS PROPOSAL:

ADDENDUM NO. _____ DATED _____

IN SUBMITTING THIS PROPOSAL, I / WE AGREE:

1. To hold the Proposal open until 60 days after date for receipt of bids.
2. Within 5 calendar days after the Notice of Authorization to Proceed to enter into and execute a contract for construction awarded on the basis of this proposal and start construction and to furnish guaranty bonds and insurance certificates in accordance with the Bid Documents.
3. To accomplish the work in accordance with the Bid Documents.
4. To provide substantial completion of the project, within 110 Calendar days from date of 5 calendar days following the Notice of Authorization to proceed and understand that failure to complete within this time will result in deduction of liquidated damages as specified in the Instructions to Bidders.
5. To provide all materials, products, etc. as specified in the Bid Documents without any deviation whatsoever.
6. To provide all necessary 'small tool' costs under the base bid of project with a fixed charge, which will not be increased due to changes in scope of work without prior approval. Backup with explanation is required.

THE UNDERSIGNED AGREES THAT THE SITE WORK BID PORTION AS DEFINED BY THE BID DOCUMENTS; INCLUDING ALL BUILDING PAD CONSTRUCTION EXCAVATION/FILL AND COMPACTION, ALL RELATED CONCRETE WORK (NOT PART OF THE BUILDING), ASPHALT PAVING, STRIPING, EXTRUDED CURBS, SITE LIGHTING, LANDSCAPE, IRRIGATION AND RELOCATION OF OR EXTENSION OF UTILITIES TO WITHIN 5' OF THE BUILDING WALL WILL BE STATED AS A SEPARATE LUMP SUM PRICE OF:

Dollars (\$) _____).

THE UNDERSIGNED AGREES THAT THE BUILDING BID PORTION AS DEFINED BY THE BID DOCUMENTS INCLUDING: THE BUILDING, ALL INTERIORS, PALLET STORAGE, THE TRUCKWELL AND WALL(S), THE TRASH ENCLOSURE, THE REAR CONCRETE SERVICE SLAB(S), CONCRETE UTILITY PAD(S), STOREFRONT SIDEWALK(S) AND RAMPS(S), FENCING, CONCRETE STOOPS AT THE EXIT(S), PIPE GUARDS, EXCAVATION AND RECOMPACTION AT THE TRUCK WELL, UTILITIES FROM WITHIN 5' OUTSIDE THE BUILDING AND THEIR CONNECTION WILL BE STATED AS A SEPARATE LUMP-SUM PRICE OF:

Dollars (\$) _____).

THE UNDERSIGNED AGREES TO CONSTRUCT THIS PROJECT FOR A TOTAL LUMP SUM PRICE OF:

Dollars (\$) _____).

THE SAID AMOUNT CONSTITUTING THE BASE BID (SHALL INCLUDE ALL WORK, AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS, ALL LABOR AND ALL MATERIAL TAXES, BONDS, ETC.)

THE BASE BID MAY BE INCREASED OR DECREASED IN ACCORDANCE WITH THE FOLLOWING ALTERNATE BIDS AS MAY BE SELECTED BY THE OWNER FOR THE ADDED OR DEDUCTED COSTS LISTED.

THE MAXIMUM AMOUNT FOR PROFIT AND OVERHEAD (EXCLUDING SALES TAX) TO BE CHARGED THE OWNER ON CHANGE ORDERS SHALL BE AS FOLLOWS:

FOR THE GENERAL CONTRACTOR; FOR ANY WORK PERFORMED BY HIS OWN FORCES,

8% OF THE COST OF LABOR AND MATERIALS.

FOR THE GENERAL CONTRACTOR; FOR ANY WORK PERFORMED BY HIS SUBCONTRACTOR,

8% OF THE AMOUNT DUE THE CONTRACTOR.

FOR EACH SUBCONTRACTOR INVOLVED; FOR ANY WORK PERFORMED BY THAT SUBCONTRACTOR'S OWN FORCES,

8% OF THE COST OF LABOR AND MATERIALS.

THE ALLOWED MARK UP PERCENTAGE SHALL BE FIGURED ON ONE LINE, ONE TIME.

THE BONDING COMPANY PROPOSED FOR USE ON THIS CONSTRUCTION PROJECT IS:

NAME:

ADDRESS:

RATING:

I / WE WILL SUBMIT SUBCONTRACTOR LISTING WITHIN 48 (2 WORKING DAYS) HOURS OF BID OPENING.

THE ABOVE NOTED PRICING AND TERMS ARE HEREBY AGREED TO FOR THE CONSTRUCTION OF THIS PROJECT AS DEFINED BY THE BID DOCUMENTS.

DATE: _____

CONTRACTOR: _____

BY: _____

TITLE: _____

(SEAL, IF CORPORATION)

ADDRESS: _____

TELEPHONE NO.: _____

LICENSE NO.: _____

SURETY: _____

OWNER:

SITE VERIFICATION FORM

NOTICE: BIDDERS SHALL INDICATE ALL ITEMS OF COST IN THE BID PROPOSAL FORM AND SCHEDULE OF VALUES OR THE PROPOSAL WILL BE SUBJECT TO DISQUALIFICATION.

NAME OF CONTRACTOR:

TO:

GENTLEMEN:

HAVING CAREFULLY EXAMINED THE INVITATION TO BID, THE INSTRUCTIONS TO BIDDERS, THE CONTRACT, THE GEOTECHNICAL REPORT PREPARED BY CONSTRUCTION INSPECTION & TESTING CO., DATED MAY 2006 AND REVISED JUNE 2006, THE PLANS AND SPECIFICATION MANUAL PREPARED BY THE ARCHITECT OF RECORD, ANY SPECIAL PROVISIONS, THE BID PROPOSAL FORM AND ANY ADDENDA ISSUED PRIOR TO SUBMITTAL OF THE PROPOSAL FOR THE CONSTRUCTION OF THE ABOVE REFERENCED PROJECT AND HAVING ASCERTAINED ALL OF THE CONDITIONS AFFECTING THE PROPOSED WORK, AND HAVING INSPECTED THE SITE, WE DO HEREBY PROPOSE TO FURNISH ALL SUPERVISION, LABOR AND MATERIALS, TRANSPORTATION, SERVICES AND EQUIPMENT NECESSARY FOR AND/OR REASONABLY INCIDENTAL TO THE CONSTRUCTION AND PROPER COMPLETION OF THE ENTIRE SCOPE OF WORK CALLED FOR BY THE ABOVE-NAMED DOCUMENTS HEREINAFTER REFERRED TO AS THE BASE BID.

NAME OF PERSON WHO INSPECTED THE SITE

DATE OF INSPECTION

BASE BID

Dollars (\$))

(ATTACH BIDS FOR ALTERNATES, ALLOWANCES AND PREMIUM COST OF BOND).

SUBCONTRACTORS LIST

SUBCONTRACTOR LIST FORM: THIS ATTACHMENT TO THE PROPOSAL FORM SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER. EACH ENVELOPE SHALL BEAR THE NAME OF THE GENERAL CONTRACTOR MAKING THE SUBMITTAL, WITH IDENTIFICATION OF THE CONTENTS CONTAINED THEREIN. THE GENERAL CONTRACTOR MUST INDICATE ON THE LIST BELOW THE NAMES OF ALL QUALIFIED SUBCONTRACTORS OR SUPPLIERS HE WILL EMPLOY FOR THE VARIOUS PORTIONS OF THE WORK INDICATED. FAILURE ON THE PART OF THE GENERAL CONTRACTOR TO COMPLETE OR PROPERLY COMPLETE THIS LIST WILL CONSTITUTE SUFFICIENT GROUNDS TO REJECT HIS BID. THE GENERAL CONTRACTOR MAY LIST ITS OWN FORCES TO PERFORM ONE OR MORE OF THE LISTED CATEGORIES OF WORK FOR WHICH THE GENERAL CONTRACTOR HAS ANY REQUISITE STATE LICENSES WHEN REQUIRED. IN THIS CASE, ALL PERSONNEL PERFORMING SUCH WORK AT THE SITE SHALL BE CARRIED ON HIS, THE GENERAL CONTRACTOR'S, PAYROLL, EXCEPT AT THE GENERAL CONTRACTOR'S OPTION THOSE PORTIONS OF THE WORK WHICH ARE TRADITIONALLY AND COMMONLY SUBLET BY THE REPRESENTATIVE SUBCONTRACTOR IN THE COMMUNITY. IF EQUIPMENT IS LEASED WITH OPERATORS, THE OPERATORS NEED NOT BE CARRIED ON THE GENERAL CONTRACTOR'S PAYROLL.

LIST ONLY A SINGLE NAME AND PHONE NUMBER FOR EACH ITEM. LIST NAMES ONLY FOR BASE BID AS PER YOUR PROPOSAL. LISTS SUBMITTED BY UNSUCCESSFUL BIDDERS WILL BE RETURNED UNOPENED.

- SITE WORK (WARRANTY 2 YR.)
- SITE UTILITIES – WET (WARRANTY 2 YR.)
- SITE UTILITIES – DRY (WARRANTY 2 YR.)
- TERMITE CONTROL (WARRANTY 5 YR.)
- FENCING (WARRANTY 2 YR.)
- ASPHALT PAVING (WARRANTY 2 YR.)
- SITE FURNISHINGS (WARRANTY 2 YR.)
- CONCRETE WORK (WARRANTY 2 YR.)
- MASONRY (WARRANTY 2 YR.)
- STRUCTURAL METAL (WARRANTY 2 YR.)
- MISCELLANEOUS METALS (WARRANTY 2 YR.)
- ROUGH CARPENTRY (WARRANTY 2 YR.)
- ALL WOOD TRUSSES AND GLUE –LAM (WARRANTY 2 YR.)
- FINISH CARPENTRY (WARRANTY 2 YR.)
- BUILDING AND ROOFING INSULATION (WARRANTY 2 YR.)
- TPO ROOFING SYSTEM (WARRANTY 20 YR NDL)
- SHEET METAL WORK (WARRANTY 2 YR.)
- ROOF HATCHES (WARRANTY 2 YR.)
- CAULKING AND SEALANTS (WARRANTY 5 YR.)
- HOLLOW METAL DOORS AND FRAMES (WARRANTY 2 YR.)

- IMPACT DOORS (WARRANTY 2 YR.)
- OVERHEAD SECTIONAL DOORS (WARRANTY 2 YR.)
- ALUMINUM DOORS AND FRAMES (WARRANTY 2 YR.)
- SLIDING AUTOMATIC ENTRANCE DOORS (WARRANTY 2YR)
- SKYLIGHTS (WARRANTY 5 YR)
- SKYLIGHT CURBS (WARRANTY 5 YEARS)
- FINISH HARDWARE (WARRANTY 2 YR.)
- GLASS AND GLAZING (WARRANTY 10YRS 1" INSULATED, 2 YR ¼")
- GYPSUM WALLBOARD AND FRAMING (WARRANTY 2 YR.)
- WESTERN ONE-KOTE SYNTHETIC STUCCO (WARRANTY 5 YR)
- RESILIENT FLOORING AND COVERED BASE (WARRANTY 2 YR.)
- PAINTING (WARRANTY 2 YR.)
- DOCK EQUIPMENT (WARRANTY 2 YR)
- TOILET ACCESSORIES (WARRANTY 2 YR.)
- HVAC SYSTEM (GENERAL SYSTEM WARRANTY 2 YR., 5 YR. COMPRESSOR)
- MECHANICAL/PLUMBING (GENERAL WARRANTY 2 YR, 5 YR WATER HEATER.)
- ELECTRICAL (WARRANTY 2 YR.)
- FIRE PROTECTION(WARRANTY 2 YR.)
- LANDSCAPE (WARRANTY 2 YR)

SIGNED _____ (CONTRACTOR)

DATE: _____

END OF SECTION

BID SCHEDULE OF VALUES

The following Schedule of Values must be fully completed in this format.

General Requirements			
1	1001	Supervision	WKS -
	1002	Project Management	WKS -
	1003	Surveying	DAY -
	1004	Dust Control	WKS -
	1005	Temporary Labor	DAY -
	1006	Daily Clean	DAY -
	1007	Temp Facilities	LS -
	1008	Transportation	LS -
	1009	As Built & O&M	LS -
	1010	Communications	WKS -
	1011	Toilets	WKS -
	1012	Dumpsters (30 yard)	EA -
	1013	Rental and Small Tools	DAY -
	1014	Final Clean	Ea -
	1015	Insurance	LS -
	1016	GC Overhead	0% -
	1017	GC Profit	0% -
Site Work Detail			
2	Grading		
	2001	Erosion Control	WKS -
	2002	Site Clearing & Grubb	SF -
	2003	Building Demolition	SF -
	2004	Grading & Earthwork	LS -
	2005	Import Fill	CY -
	2006	Export	CY -
	2007	Topsoil	CY -
Utilities			
	2010	Fire Lines & Hydrants	LF -
	2011	Water Service	LF -
	2012	Sanitary Sewer Laterals	LF -
	2013	18" PVC Storm Drain	LF -
	2014	24" PVC Storm Drain	LF -
	2015	24" RCP Storm Drain	LF -
	2016	Storm Manholes & Collection Boxes	EA -
	2017	3 Phase Service (Primary)	LF -
	2018	3 Phase Service (Secondary)	LF -
	2019	Telephone Conduit	LF -
	2020	Gas Service	LF -
Site Improvements			
	2021	Asphalt Paving	SF -
	2022	Concrete Curb & Gutter	LF -
	2023	Concrete Sidewalks	SF -
	2024	Concrete Flatwork	SF -
	2025	Pole Bases	EA -
	2026	Retaining Walls & Fencing	SF -
	2027	Landscaping Irrigation	LF -
	2028	Site Lighting	EA -

2100	Off-site/R.O.W. Improvements	LS	-
2101	Soil Correction	CY	-
2102	Underground Tank/Hazmat Removal	LS	-
2103	Transportation Improvements	LS	-
2104	Adjacent Parcel Improvements	LS	-
2105	Other Sitework Abnormals	LS	-
Building			
2106	Architectural Upgrades	LS	-
2107	Interior Building Demolition	SF	-

Building Cost Detail			
3	Building Concrete		
3001	Sawcut	LF	-
3002	New Floor Slab	SF	-
3003	Foundations	LF	-
4	Masonry		
4001	Brick	SF	-
4002	Stone		-
4003	CMU	SF	-
4004	Precast Concrete	SF	-
5	Metals		
5001	Structural Steel	LS	-
5002	Exterior Metal Panels (Install Only)	SF	-
5003	Steel Decking	SF	-
5004	Exterior Railing/ Fence	LF	-
5005	Metal Canopies	LS	-
6	Wood & Plastics		
6001	Rough Framing	SF	-
6002	Finish Carpentry	LS	-
6002	1 1/4" bull nose trim		-
6003	Blocking/ Backing	SF	-
6003	Misc. Materials	LS	-
7	Therm & Moisture Protection		
7001	Roof System	SF	-
7002	Caulking/ Sealants	SF	-
7003	Fireproofing/ Firestopping	SF	-
7004	EIFS/ Stucco System	SF	-
7005	Rigid Insulation (R-30)	SF	-
7006	Batt Insulation (R-30)	SF	-
7007	Batt Insulation (R-19)		-
7008	Scrim	SF	-
7009	Access Panels	EA	-
8	Doors & Windows		
8001	Doors & Frames (Install Only)	EA	-
8002	Overhead Doors (Install Only)	EA	-
8003	Skylites (Install Only)	EA	-
8004	Door Hardware (Install Only)	EA	-
8005	Aluminum Storefront	SF	-
8006	Automatic Doors	EA	-
9	Finishes		
9001	Light Gauge Framing	SF	-
9002	Drywall	SF	-
9003	Dry wall finish	SF	-
9004	Ceramic Floor Tile	SF	-
9005	Ceramic Wall Tile	SF	-
9006	Suspended Ceiling System	SF	-

	9007	Epoxy/ Sealed Flooring	SF	-
	9008	Concrete Floor Finish	SF	-
	9009	Concrete Acid Stain	SF	-
	9010	Carpet	SF	-
	9011	FRP	SF	-
	9012	Interior Painting	SF	-
	9013	Exterior Painting	SF	-
	9014	Wallcovering	SF	-
	9015	Sheet Vinyl	SF	-
	9016	Vinyl Cove Base	LF	-
	9017	Corner Guards	EA	-
10	Specialties			
	10001	Toilet Accessories	EA	-
	10002	Misc Specialties	LS	-
	10003	Signage- Exterior	LS	-
	10004	Signage- Interior	LS	-
11	Equipment			
	11001	Assemble Walk-In Cooler	LS	-
	11002	Loading Dock (Supply & Install)	LS	-
	11003	Sound System (Cable Supply & Install)	LS	-
	11004	Telephone/ AV (CAT 5E Supply & Install)	LS	-
12	Furnishings			
	12001	Millwork (Supply & Install)	LS	-
	12002	Window Treatments (Tinting)		-
	12003	Window Treatments (Mini Blinds)	LS	-
13	Transportation			
	13001	Elevator/ Conveying System	LS	-
14	Special Construction			
	14001	Special Construction	LS	-
15	Mechanical & Plumbing			
	15001	Fire Sprinkler System	SF	-
	15002	Fire Extinguishers	Ea	-
	15003	Air Handling Units	Ea	-
	15004	HVAC Ductwork	SF	-
	15005	HVAC Misc. Materials	LS	-
	15006	HVAC Controls	LS	-
	15007	Plumbing General	SF	-
	15008	Plumbing Fixtures	LS	-
	15009	Grease Trap	EA	-
16	Electrical			
	16001	Electrical General	LS	-
	16002	Conduit 1/2"	LF	-
	16003	Conduit 3/4"	LF	-
	16004	Lighting Fixtures	LS	-
	16005	Electrical Outlet Devices (Duplex)	EA	-
	16006	Electrical Outlet Devices (Quad)	EA	-
	16007	Data outlets	EA	-
	16008	General Fixtures	LS	-
	16009	Special Devices	LS	-
	16010	Power Poles	EA	-
	16011	Service to Panels	LS	-
	16012	Fire Alarm	SF	-
	16013	Security System	LS	-
	16014	Phone & Data	LS	-
17	Contingency - Bldg Permit Fees			
	17001	Contingency - Bldg Permit Fees		-
	18001	Sales & Use Taxes / Freight		-

GENERAL CONDITIONS

THE GENERAL CONDITIONS FOR THIS PROJECT SHALL BE BASED ON AIA DOCUMENTS A101 CMA AND A201 CMA - 1992 EDITION.

GENERAL CONDITIONS AND DIVISION 1 HAVE NOT BEEN MODIFIED TO REFLECT SPECIFIC PROJECT CONDITIONS.

ORIGINAL COPIES OF AIA DOCUMENTS A101 CMA AND A201-CMA - 1992 EDITION ARE AVAILABLE AT LOCAL AIA OFFICES.

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes but is not limited to the following:
1. Work covered by the Contract Documents.
 2. Related documents
 3. Work by others.
 4. Use of premises.
 5. Owner's occupancy requirements.
 6. Building Square Footage Plan
- B. Project description
1. Project Identification: FRESH AND EASY neighborhood MARKET, SITE # PH02-0367-NW02 and CROSS STREET.
 2. Project Site: The Project Site for Owner consists of the area indicated on the Plot Plan located at: **NWC 99th Avenue & Lower Buckeye Road, Phoenix, Arizona.**
 3. See plans for Scope of Work.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work described in the Contract Documents includes the furnishing of all labor, materials or equipment specified or indicated on the drawings and contained in Specifications and Contract Documents or reasonably inferred therefrom for the construction of a complete and usable facility.
- B. Project will be constructed under a general construction contract.
- C. The contractor is responsible for familiarizing himself with the contract documents.
- D. The contractor shall verify all grades, levels, conditions and dimensions and shall make all necessary measurements at the job site. No extra charge will be allowed because of differences between actual measurements and the dimensions indicated on the drawings. Any difference noted shall be reported to the Owner for consideration before proceeding with the Work. The work under the Base Bid of the Contract/Proposal shall include all work indicated or specified within the Contract limit lines unless the work is specifically indicated as "Not In Contract", "By Owner", "By Others".
- E. The contractor is responsible for all work which may be necessary to provide and connect all water, fire line, gas, sewer, telephone, and electrical service to the building and site, including replacement of paving to meet the requirements of governmental authorities. All utilities are to be extended to a minimum 5 feet outside of building and connected to site utilities unless noted otherwise on the drawings.
- F. Immediately upon signing the Contract for Construction, the General Contractor shall sign (2) two complete sets of Drawings and Specification Manuals (for Specification Manual, signature to be applied on Table of Contents sheets thereof) as additional evidence of his understanding of the work called for with such Alternatives and Amendments as specifically mentioned in the Agreement. These shall become Contract Drawings and Contract Specification Manual. File one set with the Owner and keep one set at the job site at all times during the progress of the work as the General Contractor's copy.
- G. In case of a discrepancy between Contract Documents, the Architect is to be notified so a written clarification may be issued. If Architect is not notified prior to bid date, refer to General Conditions, Article 1, Subparagraph 1.2.3.
- H. The work under the Base Bid of the Contract/Proposal shall include all work indicated or specified within the Contract limit lines unless the work is specifically indicated as "Not In Contract", "By Owner", or "By Others". Work "By Owner", "By Others" "By National Account/Direct Buy Vendors" shall be supervised, scheduled, and coordinated by general contractor (see division 01630 Work described in the Contract Documents includes the furnishing of all labor, materials, equipment, and services specified or indicated on the drawings and related documents, or reasonably inferred therefrom, for the construction of a complete and usable facility.
- I. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this contract with work performed under separate contracts. The General Contractor is responsible for coordination of the project with work by others where Owner building abuts adjacent property(s) or buildings, but not limited to, finish grades, asphalt, utility connections, landscape, site lighting, parking, paint striping.

1.03 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 0, and other Division 1 Specification Sections, apply to this Section.
- B. The Contract Documents consist of the Owner-Contractor Agreement, the General Conditions of the Contract, the Drawings, the Specifications, and all addenda issued prior to and all modifications issued after execution of the Contract. A modification is either a written amendment to the Contract signed by both parties, a change order, a written interpretation issued by the Architect (RFI, ASI) or other authorized representative of the Owner, or a written order for a minor (no cost) change to the work issued by the Owner's representative and copied to the Architect (refer to AIA-101Cma and AIA-201 Cma).
- C. Drawings may consist of Civil, Landscape (where applicable), Architectural, Structural, Mechanical, Plumbing, Electrical, Refrigeration and EMS (including fire protection) as listed in the Index of Drawings, in the Project Manual and any addendum.
- D. The Drawings show the materials to be used and the form, fabrication and assembly. In all cases, measured dimensions taken at the project site shall take precedence over scaled dimensions.

1.04 WORK BY OTHERS

- A. Certain items of equipment and/or elements of the construction may be excluded from the Contract for Construction, and if so, are indicated on the Drawings and identified herein. Installation thereof may be performed while the General Contractor's work progresses. The General Contractor shall cooperate with the Owner to facilitate the expeditious installation of such items.
- B. Other construction activities, under direct, or indirect supervision by the Owner, are contemplated in the same area of work during the construction period established for this Agreement. All Contractors on the work which may begin progress during the same period of time shall have equal rights to use the roads, grounds, areas, etc., and shall coordinate activities which come into conflict so as to determine the affect of his work of the additional activity, which is not part of this Agreement; and shall adequately adjust his price accordingly. No request for additional compensation for any reason, in this connection, will be considered.
- C. General Contractor to coordinate, schedule and supervise work by others.

1.05 GENERAL REQUIREMENTS

- A. The General Contractor shall send proper notices, make all necessary arrangements, and perform all services required in the care and maintenance of all public utilities. The General Contractor shall, during the construction period and until final acceptance of the work as a whole by the Owner, assume all responsibility concerning the same for which the Owner may be liable.
- B. Prior to beginning work of the Contract, the General Contractor shall meet with the Owner and/or the Construction Manager and the Architect to determine procedures regarding access to and use of the site, exterior staging and storage areas, special site conditions, and all other restrictions regarding the use of the site areas surrounding the construction.
- C. The General Contractor shall repair all public and private streets, drives, curbs, walks, and other improvements where disturbed by work of, or related to, building operations, leaving them in as good condition after completion of the work as before operations started, in accordance with rules, regulations, and specifications of the public agencies having jurisdiction.
- D. Access roads and fire department access roads shall be installed per authorities of jurisdiction.
- E. Access roads and fire-lanes on and about the site shall be kept open and free at all times, except moving traffic, for passage of emergency vehicles.

1.06 USE OF PREMISES

- A. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project or as indicated on Drawings by the Contract limits.
 - 1. Driveways and Entrances: Keep driveways, loading areas, walkways, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries of Owner provided equipment or materials so that the Contractor can unload and store the

- materials in a weather tight and secure area on site.
- b. Prior to beginning work of the Contract, the General Contractor shall meet with the Construction Manager and the Architect to determine procedures regarding access to and use of the site, exterior staging and storage areas, special site conditions, and any other restrictions regarding the use of the site areas surrounding the construction.
2. The General Contractor shall endeavor at all times to maintain as low a level of construction noise and dust as possible in order not to create a disturbance in the neighborhood.
 3. Confine operations at site to areas and times permitted by Law, Ordinances, Permits and Construction Documents.
 4. Do not unreasonably encumber site with materials or equipment.
 5. Schedule work to minimize disruption of the Owner and adjoining tenants use of adjacent facilities.
 6. Assume full responsibility for protection and safekeeping of products stored on premises and persons on premises.
 7. Move any stored products, which interfere with existing operations of the Owner and/or adjacent tenants.
 8. Obtain and pay for use of additional storage or work areas needed for operations.
 9. Do not load structure with weight that will endanger structure.
 10. Clean up all work daily and keep all work and trash confined so as not to encumber existing tenants.

1.07 OWNER'S OCCUPANCY REQUIREMENTS

- A. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
 1. Obtain a Certificate of Occupancy or a Certificate of Completion from authorities having jurisdiction before Owner occupancy.
 2. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building.

1.08 PARTIAL OCCUPANCY

- A. General Contractor shall establish priority scheduling without appreciably affecting the completion time for the entire project. Coordinate completion times with the Owner and / or Landlord.
- B. Schedule early completion of designated areas for Owner's usage prior to substantial completion of entire project in accordance with schedule or as designated during construction.
- C. Owner will occupy designated areas (determined at later date for purpose of moving material and fixtures and preparing for the installation).
- D. General Contractor provides access for Owner personnel.

1.09 DISPOSITION OF UTILITIES

- A. Observe rules and regulations governing the respective utilities in executing all work under this heading.
- B. Adequately protect active utilities from damage, and remove or relocate only as indicated or specified.
- C. Remove, plug or cap inactive and abandoned utilities encountered during the work. If there are no specific requirements, plug or cap such utility lines at least 5 feet outside of new building walls or as required by local regulations, and indicate such on record drawings.

1.10 ARCHITECTURAL AND ENGINEERING SERVICES

- A. It is understood that normal architectural and engineering liaison for the purpose of interpretation of the Construction Documents is provided for by the Owner. Should any services of the Architect be required to assist in the corrections of errors or omissions in construction by the General Contractor, or services of the Architect be required because of changes in structure or equipment where the General Contractor has requested approval of substitute methods or materials, these services will be provided by the Architect at his standard hourly rates, and shall be paid for by the General Contractor.

1.11 SPECIFICATIONS

- A. In the preparation of the Project Manual an effort has been made to segregate the various branches of the work under headings, by trades. This is done only for convenience and shall not relieve the General Contractor of the responsibility of furnishing every item indicated or specified whether properly segregated or not.

- B. No responsibility will be assumed by the Construction Manager or the Architect for omissions or duplications by the General Contractor in the completion of the Contract due to any alleged error in the arrangement of the material in the Specification Manual nor shall any such segregation of work and materials operate to make the Architect an arbiter in defining limits to the Agreements between the General Contractor and his Subcontractors or Suppliers.
- C. The misplacement, addition or omission of any letter, word or punctuation, or lack of capitalization of a word, shall in no way damage the true spirit, intent, or meaning of these Specifications.
- D. The word "shown", "indicated", "noted", "scheduled", or words of like effect shall be understood to mean that reference is made to the Drawings accompanying these Specifications.
- E. Where reference herein is made to colors or finishes "as selected" the reference is to the Architect.
- F. Reference to known standards within the Specification Manual shall mean and intend the latest edition or amendment published prior to the date of this Specification Manual, unless specifically specified otherwise, and to such portions of it that relate and apply directly to the material or installation called for on the Project.

1.12 SAFETY REQUIREMENTS

- A. These Construction Documents, and the joint and several phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of the federal laws, including but not limited to, the latest amendments of the following:
- B. Williams-Steiger Occupational Safety & Health Act of 1970, Public Law, 91-596.
- C. Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations.
- D. Part 1518 - Safety and Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations.

1.13 QUALITY ASSURANCE

- A. Contractor's License Law General Contractor shall comply with, and require all Subcontractors to comply with, State and Municipal Contractor's license laws and be duly registered and licensed there under.
- B. Approved applicators -Where specific instructions in these specifications require that a particular product and/or material(s) be installed and/or applied by an approved applicator of the manufacturer, it shall be the General Contractor's responsibility to ensure that any Subcontractors used for such work be approved applicators.
- C. Watertight/Weather tight-Anything in the Construction Documents notwithstanding, the General Contractor accepts the responsibility of constructing a watertight, weather tight project. Include all flashing and sealant joints required whether or not shown in the construction drawings.
- D. Contractor shall follow general guidelines and procedures for compliance with certain USGBC LEED program prerequisites, to achieve LEED credits as required. Provide required submittals, products, measurements, installation methods and verification.

1.14 EXTRA WORK

- A. In accordance with the General Conditions and when authorized in writing by the Owner Representative or Construction Manager, extra work may be ordered. Claims for additional compensation, on account of extra work done, will not be recognized unless such extra work has been authorized in advance and writing by the Owner Representative.
- B. The Contractor shall perform such extra work and charge the Owner at actual cost of labor and materials. The General Contractor shall have the right to add not more than the amounts indicated on the Proposal Form.
- C. For work omitted from Contract: If Contract Agreement has been previously increased by Change Order for additional work, then overhead and profit will be deducted for omitted work; if revised Contract Sum will be less than original Contract amount, then overhead expenses and profit will not be deducted as part of the deductive Change Order for work omitted.
- D. Where extra work involves both added and omitted work, the overhead and profit figures specified above shall be added only to the increased amount over the original Contract sum.

1.15 OWNER'S FURNISHINGS AND EQUIPMENT DELIVERY SCHEDULE

- A. Within 5 working days after award of contract, the General Contractor shall submit to Owner a schedule of all delivery dates for Owner's equipment as indicated on the equipment coordination schedule. Owner or Construction Manager will coordinate their equipment and cabinetry deliveries with the General Contractor's schedule dates. Should, during the course of construction, the General Contractor need to revise the scheduled delivery dates of any Owner furnished equipment, Owner will try to accommodate the General Contractor's wishes. If Owner is unable to revise their delivery dates, the General Contractor will be held responsible for all additional costs related to storage, extra shipping, re-advertising, additional insurance (coverage up to \$10,000,00 [TEN THOUSAND] dollars), protection from theft and/or damage, etc., that may be necessary. The request for Owner to modify the delivery dates must be in writing. Owner will determine who handles the equipment and where it is to be stored with General Contractor concurrence.

1.16 BUILDING SQUARE FOOTAGE PLAN

- A. **General Contractor to have surveyor provide square footage certification plan measuring the building footprint of all exterior walls (outside face of wall outside corner to outside corner; unless walls are common walls, then to centerline of common wall) at time of stem wall completion prior to start of walls above floor slab elevation. Provide plan to architect with all walls dimensioned and total footprint square footage listed. This plan does not include exterior canopies or roof overhangs.**

1.17 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

- A. Contractor shall comply with all applicable water quality laws, statutes, ordinances, guidelines, manuals, and standards, enforced by National, State, and Local jurisdictions, including all applicable amendments and modifications.
- B. Contractor shall immediately notify Construction Manager/Owner of any violations of these requirements, and immediately correct such violations.
- C. All Work performed by Contractor that is not in conformance with applicable requirements, shall be redone until it is in compliance with applicable requirements at Contractors sole expense, and with no impact on the construction schedule.
- D. The SWPPP (if required) is to be included as part of the Contract Documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01100

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PART 1 - GENERAL

1.01 SUMMARY

This Section includes administrative and procedural requirements for substitutions.

1.02 DEFINITIONS

Substitution: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner 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.

The cost or credit for each substitution 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.

Related Sections:

1. 01330, "Submittal Procedures".
2. 01600, "Product Requirements".

1.03 PROCEDURES

Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the substitution into Project.

1. Include a part of each substitution, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of substitution.

Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each substitution. Indicate if substitutions have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to substitutions.

Execute accepted substitutions under the same conditions as other work of the Contract.

1.04 SUBSTITUTION OF MATERIALS

Substitutions typically are not permitted unless approved during bid process by addendum. If a substitution is required (Contractor to provide justification statement), it must be of equal or greater quality than the product it replaces. At no time will Owner pay additional costs associated with the aforementioned substitution.

When a specific manufacturer, trade name or material is specified, or indicated, it is to establish a standard of quality and shall not be construed as limiting competition. If the General Contractor desires to use a manufacturer, trade name or material other than that specified, he shall request approval of such substitution, in writing to the Architect. Completed requests for substitutions shall be received by the Architect no later than 7 days prior to the stated date of bidding as identified in the Contract Documents. Architect shall determine whether substitution is acceptable. Items found acceptable for bidding will be approved by a duly authorized Addendum issued by the Architect. Substitutions will only be considered if they are prepared on a copy of the "Substitution Request Form" attached.

Submittals for approval of substitute manufacturer, trade name or materials shall contain sufficient information, descriptive brochures, drawings, samples or other data for a specific item or product, as is necessary to provide direct comparison to the specified products. Each submittal shall be well marked and identified as to the type and kind of items being submitted for approval. It is the sole responsibility for the Bidder to submit complete descriptive and technical information so that the Architect can make proper appraisal. Lack of proper information will be sufficient cause for rejection. References to catalogs that the Architect may or may not have, will not be accepted.

Interferences: Substitutions shall not be offered unless a thorough check is made of all related items and

interferences, revised arrangements and other changes that may result. Prepare drawings of revised equipment and piping arrangements caused by substitutions. Such drawings shall be equal in quality to Contract Drawings. The cost of supplying drawings shall be included by the General Contractor in his estimate of proposed substituted materials.

Responsibility: A General Contractor offering a substitution shall accept responsibility for its effect on the work of all trades, including any possible delays in completion time of Project. All costs of changes in the work of other trades and Drawings, etc., affected by inclusion of General Contractor requested substitutions shall be paid by the General Contractor requesting approval of such substitution.

If alternate manufacturers, trade names or materials are not approved prior to the Base Bid, the General Contractor may, at his option, offer alternate manufacturers, trade names or materials at the time of bidding. This offer shall be on the General Contractor's letterhead and shall include the same information required for substitutions outlined above. The base bid shall include pricing for the originally specified item, with the alternate identified as a separate line item described in detail, together with net addition to or deduction from the Base Bid.

Award of the Contract in accordance with Contract Documents requires that the specified manufacturers, trade names or materials and equipment shall be furnished and installed.

Unless specifically submitted and approved in accordance with above, substitutions will not be allowed.

Documentation: Show compliance with requirements for substitutions and the following, as applicable:

1. Statement indicating why specified material or product cannot be provided.
2. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
3. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
4. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
5. Samples, where applicable or requested.
6. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
7. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
8. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
9. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
10. Cost information, including a proposal of change, if any, in the Contract Sum.
11. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
12. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with other work, and adjacent materials and products previously selected, even if previously selected products were also options.

1.05 CONDITIONS FOR SUBSTITUTIONS AFTER AWARD OF CONTRACT

Conditions: Architect will consider Contractor's request for substitution only when the following conditions are satisfied. If the following conditions are not satisfied, Architect will advise Regional Construction manager for ultimate disposition

1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or

other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.

- 2. Requested substitution does not require extensive revisions to the Contract Documents.
- 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- 4. Substitution request is fully documented and properly submitted.
- 5. Requested substitution will not adversely affect Contractor's Construction Schedule.
- 6. Requested substitution has received necessary approvals of authorities having jurisdiction.
- 7. Requested substitution is compatible with other portions of the Work.
- 8. Requested substitution has been coordinated with other portions of the Work.
- 9. Requested substitution provides specified warranty.

1.06 MATERIAL REFERENCE STANDARDS

Where material is specified solely by reference to Standard Specifications the General Contractor shall, if requested by the Architect, submit to the Architect, for his approval, data on all such material proposed to be incorporated into the work of the Contract listing the name and address of vendor, the manufacturer or producer, and the trade or brand names of such materials.

PART 2 - PRODUCTS

2.01 REQUIREMENTS FOR THE SELECTION OF PRODUCTS FOR USE IN THE PROJECT AND ASSOCIATED WARRANTY REQUIREMENTS ARE IDENTIFIED IN SECTION 01600, PRODUCT REQUIREMENTS.

PART 3 - EXECUTION

3.01 SCHEDULE OF SUBSTITUTIONS

Substitution No.	Description of Substitution
_____	_____
_____	_____
_____	_____

SUBSTITUTION REQUEST FORM

TO: _____ FROM _____

CROSS STREETS: _____ SITE ID # _____

STORE # _____

WE HEREBY SUBMIT FOR YOUR CONSIDERATION FOR THE ABOVE PROJECT THE FOLLOWING PRODUCT
INSTEAD OF THE SPECIFIED ITEM DESCRIBED AS:

_____ :

THE EXPLANATION FOR THIS SUBSTITUTION IS BECAUSE:

REFER TO SECTION _____ SECTION TITLE _____ PARAGRAPH _____
PAGE _____

PROPOSED SUBSTITUTION:

ATTACH COMPLETE PRODUCT DESCRIPTION, DRAWINGS, PHOTOGRAPHS, PERFORMANCE AND TEST
DATA, AND OTHER INFORMATION NECESSARY FOR EVALUATION. IDENTIFY SPECIFIC MODEL NUMBERS,
FINISHES, OPTIONS, ETC. NOTE: FOR SUBSTITUTIONS OF ITEMS IN DIVISIONS 1 THROUGH 14, SEND
ADDITIONAL COPY OF REQUEST WITH ATTACHMENTS TO THE ARCHITECT:

AMOUNT OF CREDIT DUE OWNER FOR DEVIATION FROM PROJECT SPECIFICATION: _\$ _____

AMOUNT OF TIME SAVED FROM CURRENT PROJECT SCHEDULE BY DEVIATING FROM PROJECT
SPECIFICATIONS: _____ DAYS

CURRENT WALK AROUND DATE:

PROPOSED WALK AROUND DATE:

WILL CHANGES BE REQUIRED TO BUILDING DESIGN IN ORDER TO PROPERLY INSTALL PROPOSED
SUBSTITUTION?

YES NO

IF YES, EXPLAIN:

WILL THE UNDERSIGNED PAY FOR CHANGES TO THE BUILDING DESIGN, INCLUDING ENGINEERING AND
DRAWING COSTS, CAUSED BY REQUESTED SUBSTITUTION?

YES NO

LIST DIFFERENCES BETWEEN PROPOSED SUBSTITUTION AND SPECIFIED ITEM.

SPECIFIED ITEM:

PROPOSED SUBSTITUTION:

DOES SUBSTITUTION AFFECT DRAWING DIMENSION? YES NO

IF YES, EXPLAIN:

WHAT AFFECT DOES SUBSTITUTION HAVE ON OTHER TRADES?

DOES MANUFACTURER'S WARRANT OF PROPOSED SUBSTITUTION DIFFER FROM THAT SPECIFIED?

YES NO

IF YES, EXPLAIN:

WILL SUBSTITUTION AFFECT PROGRESS SCHEDULE? YES NO

IF YES, EXPLAIN:

WILL SUBSTITUTION REQUIRE MORE LICENSE FEES OR ROYALTIES THAN SPECIFIED PRODUCT?

YES NO IF YES, EXPLAIN:

WILL MAINTENANCE AND SERVICE PARTS BE LOCALLY AVAILABLE FOR SUBSTITUTION?

YES NO IF YES, EXPLAIN:

DOES THE SUBSTITUTION CONTAIN ASBESTOS IN ANY FORM? YES NO

SUBMITTED BY:

(SIGNATURE)

FIRM:

ADDRESS:

DATE:

TELEPHONE:

FOR ARCHITECT'S USE ONLY:

ACCEPTED:

ACCEPTED AS NOTED:

NOT ACCEPTED:

RECEIVED TOO LATE:

REVIEWED BY:

DATE:

REMARKS:

END OF SECTION 01230

PART 1 - GENERAL**1.01 RELATED DOCUMENTS**

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

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.03 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner 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. 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.

1.04 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. 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.
- C. Execute accepted alternates under the same conditions as other work of the Contract.

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Project meetings.
 - 2. Coordination Drawings.
- B. Included herein is criteria for Project meetings to be held both before and during construction. This section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General Conditions or Supplementary General Conditions.

1.02 COORDINATION

- A. Coordination: Coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's Construction Schedule.
 - 2. Preparation of the Schedule of Values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Pre-installation conferences.
 - 7. Startup and adjustment of systems.
 - 8. Project closeout activities.

1.03 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at project site, unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Contractor to record significant discussion action items and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within five days of the meeting.
- B. Coordinate SWPPP Pre-Construction meeting to discuss significant items relevant to the implementation of the SWPPP program for the site.
- C. Pre-construction Conference: Schedule a pre-construction conference before starting construction, at a time convenient to Owner and Architect, but no later than two weeks prior to start of construction. Hold the conference at a location designated by the Owner. Post the meeting agenda on the webpage at least 7 (seven) days prior to the meeting date. The purpose of this conference is to discuss the Project in detail,

PROJECT MEETINGS AND COORDINATION

including scheduling of work, outstanding permits, and to answer any questions that may arise. Unless followed up in writing, verbal authorizations or acknowledgement by any one present shall not be binding. The meeting will also review responsibilities and personnel assignments.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; General Contractor and its superintendent; representatives of major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Status of permits.
 - d. Mock up requirements and locations.
 - e. Critical work sequencing and long-lead items.
 - f. Designation of key personnel and their duties.
 - g. Procedures for processing field decisions and Change Orders.
 - h. Procedures for requests for information (RFIs).
 - i. Procedures for testing and inspecting.
 - j. Procedures for processing Applications for Payment.
 - k. Distribution of the Contract Documents.
 - l. Submittal procedures.
 - m. Preparation of Record Documents.
 - n. Use of the premises.
 - o. Owner's occupancy requirements.
 - p. Responsibility for temporary facilities and controls.
 - q. Construction waste management.
 - r. Parking availability.
 - s. Office, work, and storage areas.
 - t. Equipment deliveries and priorities.
 - u. First aid.
 - v. Security.
 - w. Progress cleaning.
 - x. Working hours.
 3. Minutes: Contractor to record discussions and agreements achieved. Distribute meeting minutes to everyone concerned, including Owner and Architect with-in 5 days of the meeting.
- D. Pre-installation Conferences: Conduct a pre-installation conference at project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. The Contract Documents.
 - b. Options.
 - c. Attendees
 - d. Related requests for information (RFIs).
 - e. Related Change Orders.
 - f. Purchases.
 - g. Deliveries.
 - h. Submittals.
 - i. Review of mockups.
 - j. Possible conflicts.
 - k. Compatibility problems.
 - l. Time schedules.
 - m. Weather limitations.
 - n. Manufacturer's written recommendations.
 - o. Warranty requirements.
 - p. Compatibility of materials.
 - q. Acceptability of substrates.
 - r. Temporary facilities and controls.
 - s. Space and access limitations.

PROJECT MEETINGS AND COORDINATION

- t. Regulations of authorities having jurisdiction.
 - u. Testing and inspecting requirements.
 - v. Installation procedures.
 - w. Coordination with other work.
 - x. Required performance results.
 - y. Protection of adjacent work.
 - z. Protection of construction and personnel.
3. Contractor to record and distribute minutes of significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- E. Progress Meetings: Conduct progress meetings at regular intervals. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Attendees
 - 3) Sequence of operations.
 - 4) Status of submittals.
 - 5) Deliveries.
 - 6) Off-site fabrication.
 - 7) Access.
 - 8) Site utilization.
 - 9) Temporary facilities and controls.
 - 10) Work hours.
 - 11) Hazards and risks.
 - 12) Progress cleaning.
 - 13) Quality and work standards.
 - 14) Status of correction of deficient items.
 - 15) Field observations.
 - 16) Requests for information (RFIs).
 - 17) Status of proposal requests.
 - 18) Status of Change Orders.
 - 19) Documentation of information for payment requests.
 3. Minutes: Contractor to record and distribute the meeting minutes to Owner, Architect, and all other attendees of the meeting.
 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01310

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Neighborhood Market

Weekly Construction Meeting Agenda

<p>[Date] [Time]</p>	<p>Project Cross Street: Meeting Facilitator:</p>	<p>"Cross Streets" "Name of meeting facilitator"</p>
<p>Invitees:</p>	<p>"Attendee Name" "Attendee Name" "Attendee Name"</p>	<p>"Attendee Name" "Attendee Name" "Attendee Name"</p>

- I. Introductions & Sign In
- II. Expectations
- III. Meeting Objectives
- IV. Old Business
- V. Project Schedule
 - a) *Substantial Completion*
 - b) *Walk Around*
 - c) *Handover*
- VI. Project Administration
 - a) *Web Site*
 - b) *RFI's & ASI's*
 - c) *Submittals & Substitutions*
 - d) *Pay Applications*
 - e) *Change Order Requests*
- VII. Trade Coordination
- VIII. Construction Quality
- IX. Safety
- X. Any Other Business
- XI. Benefits & Concerns

Pre-Construction Meeting Minutes

MINUTES

[MEETING DATE]

[MEETING TIME]

[MEETING LOCATION]

FACILITATOR	
NOTE TAKER	
ATTENDEES	

Agenda topics

[TIME ALLOTTED]

INTRODUCTIONS & SIGN IN

[PRESENTER]

DISCUSSION			
CONCLUSIONS			
NEXT STEPS	PERSON RESPONSIBLE	DEADLINE	

[TIME ALLOTTED]

EXPECTATIONS

[PRESENTER]

DISCUSSION			
CONCLUSIONS			
NEXT STEPS	PERSON RESPONSIBLE	DEADLINE	

[TIME ALLOTTED]

MEETING OBJECTIVES

[PRESENTER]

DISCUSSION	
------------	--

PRE-CONSTRUCTION MEETING MINUTES

CONCLUSIONS		
NEXT STEPS	PERSON RESPONSIBLE	DEADLINE

[TIME ALLOTTED] **ROLES & RESPONSIBILITIES** **[PRESENTER]**

DISCUSSION		
CONCLUSIONS		
NEXT STEPS	PERSON RESPONSIBLE	DEADLINE

[TIME ALLOTTED] **SAFETY** **[PRESENTER]**

DISCUSSION		
CONCLUSIONS		
NEXT STEPS	PERSON RESPONSIBLE	DEADLINE

[TIME ALLOTTED] **CONSTRUCTION RESTRICTIONS** **[PRESENTER]**

DISCUSSION		

PRE-CONSTRUCTION MEETING MINUTES

NOTES		

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.
 - 2. Submittals Schedule.
 - 3. Daily construction reports.
 - 4. Field condition reports.
- B. See Division 1 for preparing Contractor's Construction Schedule.
- C. See Division 0 for submitting the Schedule of Values.

1.02 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- C. Major Area: A separate building, or a similar significant construction element.
- D. Request for Information: A tool to transfer information and resolve questions or conflicts

1.03 SUBMITTALS

- A. Submittal Schedule: Submit three copies of schedule to the Owner 14 calendar days following the contract award, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, Direct Buy/National Accounts, and Contractor's Construction Schedule.
 - 2. Submit concurrently with the first complete submittal of Contractor's Construction Schedule.
- B. Time Frame: Extend schedule from date established for commencement of the Work to date of Final Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 - 1. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
- D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis to demonstrate the effect of the proposed change on the overall project schedule.
- F. Arrange the following information in a tabular format:

CONSTRUCTION PROGRESS DOCUMENTATION

1. Scheduled date for first submittal.
 2. Specification Section number and title.
 3. Submittal category (action or informational).
 4. Name of subcontractor.
 5. Description of the Work covered.
 6. Scheduled date for Architect's final release or approval.
- G. The contractor shall submit to the Owner within seven (7) days following the contract award a graphic representation of the proposed construction schedule. This chart shall be as detailed as is practical and shall show:
- a. the project name,
 - b. the contractor's name,
 - c. the date of submittal,
 - d. each major term of work,
 - e. the proposed start date, duration, and completion date of each item of work,
 - f. the actual start date, duration and completion date of each item of work.
 - g. Application for Payment will not be processed until proposed construction schedule is submitted to the Owner.
 - h. This chart shall be updated monthly and three (3) copies submitted along with the Contractor's Application for Payment. Any automated schedule system currently used and containing the above information, shall be acceptable.
- H. Daily Construction Reports: Submit two copies at weekly intervals.
- I. Field Condition Reports: Submit two copies at time of discovery of differing conditions.
- J. Request for Information Forms (RFI's)
1. Contractor shall submit standard RFI form to Architect for review and resolution of a question or conflict.
 2. RFI's shall be submitted in a timely manner to allow (7 working days) for review and distribution.
 3. RFI form shall include:
 - a. Project name, Site ID #, address, and Owner's phone number
 - b. Architect's name, address, and phone number
 - c. Construction Manager's name, address, and phone number.
 - d. General Contractor's name, address, and phone number
 - i. RFI initiator's name, and phone number
 - e. RFI sequence number, date initiated, and response requested date
 - i. Issue RFI's sequentially starting with the number 001
 - f. Building or pad number (if applicable)
 - g. Subject of information requested
 - h. Drawing references
 - i. Copies to
 - j. Information requested (detailed description of problem)
 - k. Proposed resolution (brief description by initiator)
 - l. Response (area for answer from Architect)
 - m. Area for signature of respondent and date
 4. Attachments:
 - a. Drawings, sketches, or other documentation should be clear and legible.
 - b. Identify each attachment with the respective RFI sequence number, date, page, and location (identifying characteristics such as columns or building) as is applicable.
 - c. Attach subcontractor's RFI when applicable.
 5. RFI's submitted directly from subcontractor will not be accepted or reviewed.

1.04 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.

CONSTRUCTION PROGRESS DOCUMENTATION

1. Secure time commitments for performing critical elements of the Work from parties involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS**2.01 GENERAL REPORTS**

- A. Daily Construction Reports: Prepare a daily construction report recording events at Project site, including the following:
 - a. Contractors name.
 - b. Project location, Site ID #
 - c. Describe the work in progress for the day.
 - d. List of subcontractors.
 - e. Number of workmen (by trade) employed on the project that day.
 - f. High and low temperatures and general weather conditions (include morning and mid-day temperatures, cloud cover, wind conditions and precipitation).
 - g. Accidents.
 - h. Stoppages, delays, shortages, and losses.
 - i. Meter readings and similar recordings.
 - j. Orders and requests of authorities having jurisdiction.
 - k. Services connected and disconnected.
 - l. Equipment or system tests and startups.
- B. The contractor shall submit to the Owner at the end of each week Daily Progress Reports for each day of that week. A report shall be submitted for each day of the contract duration even if no work is performed. Copies of reports shall be maintained on the site by the Project Superintendent.
- C. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare a detailed report. Submit with a request for information (to the Architect). Include a detailed description of the differing conditions, together with recommendations for resolving the conflict.

2.02 STORMWATER POLLUTION PREVENTION PROGRAM REPORTS

- A. Prepare records required to document all inspection, maintenance, and construction activities related to the SWPPP.

PART 3 - EXECUTION**3.01 CONTRACTOR'S CONSTRUCTION SCHEDULE UPDATES**

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities, and issue pay application/requisition. Issue schedule and pay application together, one week before each regularly scheduled progress meeting.
 1. Revise schedule immediately after each meeting, or other activity, where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work, and are no longer involved in performance of construction activities.

END OF SECTION 01320

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Preconstruction digital photographs.
 - 2. Periodic digital construction photographs.
- B. Construction photographs are required in addition to all other written documentation and drawings, and in no way replace standard written documentation on this project.
- C. See Division 1 Section "Closeout Procedures" for submitting digital media (CD-ROM) as Project Record Documents at Project closeout.

1.02 SUBMITTALS

- A. Construction Photographs: Photographs are to be taken weekly and downloaded to an Owner provided website the same day they are taken.
 - 1. Identification: Provide a file name/label of each image with the following information:
 - a. Name of Project.
 - b. Date photograph was taken if not date stamped by camera.
 - c. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
 - d. Unique sequential identifier.
 - 2. Digital Images: Submit a complete set of digital high resolution image electronic files as a Project Record Document on CD-ROM at project closeout. Identify electronic media with date and locations that photographs were taken. Submit images that have same aspect ratio as the sensor, uncropped.
 - 3. Images shall be taken from the same vantage point (ie: North, South, East, or West)

1.03 QUALITY ASSURANCE

- A. Photographer Qualifications: An individual who has been regularly engaged as a photographer of construction projects for not less than three years.

1.04 COORDINATION

- A. Auxiliary Services: Cooperate with photographer and provide auxiliary services requested, including access to Project site and use of temporary facilities, including temporary lighting required to produce clear, well-lit photographs without obscuring shadows.

1.05 USAGE RIGHTS

- A. All photographs become the property of the Owner when downloaded onto the website. Photographs shall not be used by Others without Owner's prior written permission, (such as in a brochure) whether or not they are published.

PART 2 - PRODUCTS

2.01 PHOTOGRAPHIC MEDIA

- A. Digital Images: Provide images in uncompressed TIFF format, produced by a digital camera with minimum sensor size of 6.0 megapixels, and at an image resolution of not less than 6 megapixels.

PART 3 - EXECUTION

3.01 CONSTRUCTION PHOTOGRAPHS

- A. Key Plan: Submit for Architect's approval, a key plan of Project site and buildings with notation of vantage

PHOTOGRAPHIC DOCUMENTATION

points marked for location and direction of each photograph. Indicate elevation or story of construction. Include same label information as corresponding set of photographs.

- B. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with dark, blurry, or out-of-focus areas will not be accepted, and are to be retaken as soon as possible.
- C. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
 - 1. Date and Time: Include date and time in filename for each image.
 - 2. Field Office Images: Maintain one set of images on CD-ROM in the field office at Project site, available at all times for reference. Identify images same as for those submitted to Architect.
- D. Preconstruction Photographs: Before commencement of excavation, demolition, construction, take color, digital photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect.
 - 1. Take photographs to show existing conditions adjacent to property before starting the Work.
 - 2. Take photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
- E. Periodic Construction Photographs: Take weekly digital photographs per the key plan and as directed by Architect or Owner
- F. Additional Photographs: Architect may issue requests for additional photographs, in addition to periodic photographs specified. Additional photographs will be provided at no cost to the Owner.
 - 1. Circumstances that could require additional photographs include, but are not limited to, the following:
 - a. Special events planned at Project site.
 - b. Immediate follow-up when on-site events result in construction damage or losses.
 - c. Photographs to be taken at fabrication locations away from Project site.
 - d. Substantial Completion of a major phase or component of the Work.
 - e. Extra record photographs at time of final acceptance.
 - f. Owner's request for special publicity photographs.

END OF SECTION 01322

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section outlines, in general, as a convenience to the General Contractor, submittals required before commencing construction or during the course of construction of the Project. This Section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General Conditions or Supplementary General Conditions.
- B. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- C. See Division 1 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
- D. See Division 1 Section "Quality Requirements" and individual specification sections for submitting test and inspection reports and for mockup requirements.
- E. See Division 1 Section "Closeout Procedures" for submitting warranties.
- F. See Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
- G. See Sections 01600 for provisions concerning submittals of Product Data.
- H. The contractor shall execute and submit to the Architect with such promptness to cause no delay in his own work or in the work of others, shop drawings or setting drawings or Conformance Submittals required for the Work. The Architect shall review the shop drawings or setting drawings with reasonable promptness. The contractor shall make any corrections required and if necessary, resubmit shop drawings or setting drawings for the Architects approval. Shop drawings, settings drawings or other action submittals required for this work are delineated in the specifications.

1.02 CONSTRUCTION SCHEDULE AND COST BREAKDOWN

- A. Within 7 working days of execution and delivery of the Notice to Proceed and before the first partial payment is made, the General Contractor shall deliver to the Architect and Construction Manager, a Construction Progress Schedule in a bar chart form satisfactory to the Architect and Construction Manager, showing the proposed dates of commencement and completion of each of the various subdivisions of the work required under the Construction Documents. If available, the General Contractor shall utilize the fresh & easy web site, following the processes and procedures contained therein.
- B. Submit an itemized breakdown of the costs of the various subdivisions of the work on AIA Document G-702 and G-703 for the purpose of evaluating the work completed for each monthly payment. Each monthly Payment Request shall be submitted in the same form with all data required by the form completed. If available, the General Contractor shall utilize the fresh & easy web site, following the processes and procedures contained therein
- C. Submit all documents/data required by this Specification Manual within thirty (30) calendar days after signing contract for construction or issuance of a work order. If available, the General Contractor shall utilize the fresh & easy web site, following the processes and procedures contained therein.

1.03 PROGRESS REPORT:

- A. Submit monthly an updated Progress Report indicating work completed during the preceding month and indicate any revisions to the Construction Progress Schedule. Submit 3 copies with the Request for Payment. If available, the General Contractor shall utilize the fresh & easy web site, following the processes and procedures contained therein

1.04 PROGRESS CHARTS:

- A. Each month the General Contractor shall submit 3 copies of a graphic progress chart. Adjust the progress chart each month to graphically exhibit the status of each phase of the work, corrected to show any differentials in starting and completion dates included in the original chart. Submit 3 copies with the request for payment. If available, the General Contractor shall utilize the fresh & easy web site, following the processes and procedures contained therein.

1.05 SHOP DRAWING LOG:

- A. Each month the General Contractor shall submit 2 copies of the shop drawing log to the Owner and Architect for review. If available, the General Contractor shall utilize the fresh & easy web site, following the processes and procedures contained therein.
- B. The example contained within is to be used as a record shop drawing and sample log which is to be routed as directed and be kept current and available on site (such as in the job trailer).

1.06 DAILY REPORTS:

- A. The General Contractor shall maintain a written daily log at the job site, with copies provided to the Owner, submitted weekly. Report to include but not necessarily limited to the following: If available, the General Contractor shall utilize the fresh & easy web site, following the processes and procedures contained therein.
 - 1. Classification and number of workmen.
 - 2. Governmental Authorities at the site.
 - 3. Notification 48 hours prior to concrete pours.
 - 4. Description of work accomplished.
 - 5. Climatic conditions.

1.07 SHOP DRAWING, SAMPLES, REQUEST FOR INFORMATION LOGS:

- A. The attached Shop Drawing/Sample/RFI Logs are to be edited by the PM to reflect Site specific requirements. Logs are to be maintained to reflect the documents status and routed as required.

1.08 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.09 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Submittals are to be posted on the webpage. Required samples sent to the Architect with a transmittal letter.
 - 3. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time

for review shall commence on Architect's receipt of submittal.

1. Initial Review: Allow 5 working days (unless otherwise noted) for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - a. If intermediate submittal is necessary, process it in same manner as initial submittal.
 2. Resubmittal Review: Allow 5 working days for review of each resubmittal.
 3. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
- D. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a blank area approximately 6 inches by 6 inches on label or beside the title block, to allow adequate space for action stamps to record Contractor's review and approval markings, and action taken by Architect.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name, Project #, Site ID #, Date.
 - b. Name and address of Architect.
 - c. Name and address of Construction Manager.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Other necessary identification.
- E. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- F. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
1. Additional copies submitted for maintenance manuals will be marked with action taken and will be returned.
- G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals without review or discard submittals received from sources other than Contractor.
1. Include Contractor's certification stating that he has reviewed and approved the information being submitted and that it complies with requirements of the construction drawings and specifications.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Use only final submittals with mark indicating action taken by Architect or Engineer of Record.

PART 2 - PRODUCTS

2.01 ACTION SUBMITTALS

- A. General: Prepare and submit to the webpage, Action Submittals required by individual Specification Sections.
- B. Number of Copies: Submit six copies of Product Data, unless otherwise indicated. Architect will return four copies to the Contractor. Mark up and retain the remaining returned copies as a Project Record Document. If available, the General Contractor shall utilize the fresh & easy web site, following the processes and procedures contained therein.

- C. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Manufacturer's catalog cuts.
 - e. Wiring diagrams showing factory-installed wiring.
 - f. Printed performance curves.
 - g. Operational range diagrams.
 - h. Compliance with specified referenced standards.
 - i. Compliance with recognized testing agency standards.
- D. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Include the following information, as applicable:
 2. Dimensions:
 - a. Identification of products.
 - b. Fabrication and installation drawings.
 - c. Roughing-in and setting diagrams.
 - d. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - e. Shopwork manufacturing instructions.
 - f. Templates and patterns.
 - g. Schedules.
 - h. Notation of coordination requirements.
 - i. Notation of dimensions established by field measurement.
 3. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 4. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
- E. Samples: Submit physical samples of materials for review of kind, color, pattern, and texture of the actual component to be delivered and installed.
1. Comply with requirements in Division 1, Section "Quality Requirements" for mockups.
 2. Transmit Samples that contain multiple, related components such as accessories, manufacturers color charts, etc., together in one submittal package.
 3. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 4. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain one Sample set; remainder will be returned.
 5. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
- F. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location.
- G. Submittals Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."

SUBMITTAL PROCEDURES

- H. Application for Payment: Comply with requirements specified in Division 0.
- I. Schedule of Values: Comply with requirements specified in Division 0."
- J. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.
- K. LEED Submittals: Submit three (3) copies of LEED submittals, unless otherwise indicated. Comply with requirements specified in Section "01100, Summary of Work", and Divisions 2 through 16 herein.

2.02 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Number of Copies: Submit six copies of each submittal, unless otherwise indicated.
 - 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - 3. Test and Inspection Reports: Comply with requirements specified in Division 1 Section "Quality Requirements."
- B. Contractor's Construction Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."
- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- G. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- J. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- K. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- L. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's

- standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- M. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- N. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment.
- O. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- P. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- Q. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
1. Statement on condition of substrates and their acceptability for installation of product.
 2. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
- R. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- S. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect.
1. Architect will not review submittals that include MSDSs and will return them for resubmittal.
 2. MSDSs to be kept available on site (copy).
- T. Certification Reports: Prepare written reports for systems that are to be certified.

PART 3 - EXECUTION

3.01 CONTRACTOR'S REVIEW

- A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect or Engineer.
- B. By approving and submitting shop drawings, product data and samples, the contractor represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the work and the contract documents.
- C. The contractor shall not be relieved of responsibility for any deviation from the requirements of the contract documents by the Architect or Engineer's approval of shop drawings, product data or samples unless the contractor has specifically informed the Architect or Engineer in writing of such deviation at the time of submission and the Architect or Engineer has given written approval to the specific deviation. The contractor shall not be relieved from responsibility from errors or omissions in the shop drawings, product data or samples by the Architect's or Engineer's approval thereof.
- D. The contractor shall direct specific attention, in writing or on resubmitted shop drawings, product data or samples, to revisions other than those requested by the Architect or Engineer on previous submittals.

- E. No portion of the work requiring submission of a shop drawing, product data or sample shall be commenced until the submittal has been approved by the Architect or Engineer. All such portions of the work shall be in accordance with approved submittals.
- F. **Approval Stamp:** Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.02 ARCHITECT'S OR ENGINEER'S ACTION

- A. **General:** Architect or Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. **Action Submittals:** Architect or Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect or Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. Approved
 - 2. Rejected
 - 3. Submit Specific Item
 - 4. Furnish As Corrected
 - 5. Revise and Submit
- C. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

3.03 DOCUMENTS AND SAMPLES AT THE SITE

- A. The contractor shall maintain, for the Architect or Owner, at the construction site one record copy of all drawings, specifications, addenda, change orders and other modifications, in good order and marked currently to record all changes during construction. This set will also include shop drawings, product data and samples. This set shall be available to the Architect, Engineer or Owner during the course of the work and shall be delivered to the Owner by the contractor upon completion of the work.

END OF SECTION 01330

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services 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. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and control procedures that facilitate compliance with the Contract Document requirements.
 - 2. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. See Divisions 2 through 16 Sections for specific test and inspection requirements.

1.02 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Site Mockups: Full-size, physical assemblies that are constructed on-site, with a minimum panel size of 8'X8' unless otherwise noted in the individual specification section.
 - 1. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples.
 - 2. Approved mockups establish the standard by which the Work will be judged.
 - 3. Mockups are required for work including but not limited to the following, and as identified in specific specification sections herein, unless indicated otherwise by the Architect in writing:
 - a. Precast Stone
 - b. Stucco – all types
 - c. Aluminum windows
 - d. Concrete Masonry Units
 - e. Brick – all types
 - f. Cornices
 - g. Paints and Stains
 - h. Tile
 - i. All other finish materials
- D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.
- E. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- F. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

QUALITY CONTROL REQUIREMENTS

- H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- J. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- K. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.03 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 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. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.04 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspect.
- C. Mockups: For a typical wall panel assembly. See section 1.5 herein.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

QUALITY CONTROL REQUIREMENTS

1.05 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Site Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build full size mockups in location and of size indicated (minimum 8' X 8' if not indicated), or as directed by Architect.
 - 2. Panel shall show a typical full size wall panel assembly, consisting of all exterior finishing materials required for this particular project, including appropriate colors, fasteners, sealant joints, surface textures and showing material compatibility per Architect's approval.
 - 3. Notify Architect no less than seven days in advance of dates and times when mockups will be constructed.
 - 4. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 5. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - 6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - 7. Demolish and remove mockups when directed, unless otherwise indicated.
- J. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Sections in Divisions 2 through 16.

1.06 QUALITY CONTROL

QUALITY CONTROL REQUIREMENTS

- A. **Owner Responsibilities:** Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
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 reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. **Tests and inspections not explicitly assigned to Owner are Contractor's responsibility.** Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."
- D. **Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. **Testing Agency Responsibilities:** Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- F. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

QUALITY CONTROL REQUIREMENTS

1.07 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Conducted by a qualified testing agency or special inspector as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:
 - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 - 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 - 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 - 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - 6. Retesting and reinspecting corrected work.
- B. Special Inspections shall be performed as required by local government authorities, and as identified below, including but not limited to:
 - 1. Soils – Foundation excavations
 - 2. Concrete construction
 - 3. Masonry construction
 - 4. Steel construction and welding
 - 5. High strength bolting
 - 6. Bolts installed in concrete or masonry
 - 7. Engineering consulting, review and reporting
- C. Special construction material testing shall be performed as required by local government authorities, and as identified below, including but not limited to:
 - 1. Soils and base course/earthwork
 - 2. Concrete
 - 3. Masonry Units, Prisms, Masonry Mortar and Grout
 - 4. Asphalt
 - 5. Engineering Consulting, Review and reporting

1.08 TESTING LABORATORY SERVICES

- A. The respective Sections of these Specifications contain detailed requirements for materials testing and inspections to be performed by an approved testing laboratory. Where job site testing occurs, the Architect shall be informed immediately of deviations from specified criteria.
- B. An independent testing laboratory services will be selected by the Owner to inspect and test the materials and methods of construction for compliance with the Construction Contract.
- C. The Tenant and / or Owner does not guarantee test results, but agrees to use the results of these tests for determining Contract compliance.
- D. When the results show that the work does not meet the full requirements of the Contract Documents, the General Contractor shall pay for retesting corrected materials or workmanship until satisfactory test results are obtained without increasing the Contract Sum.

1.09 PAYMENT FOR SERVICES

- A. Payment for services will be by the Owner, directly to the Testing Laboratory and/or inspection agency.
Note: Additional requirements and clarifications may occur within the representative sections.

1.10 LAB QUALIFICATIONS

- A. Testing Laboratory: Shall be independent and meet the basic requirements of ASTM E 329 - Standard of Recommended Practice for Inspections and Testing Agencies for Concrete and Steel as used in

QUALITY CONTROL REQUIREMENTS

Construction", approved by the Architect, and shall submit to the Architect a copy of the report of inspection of their facilities made by the Materials Reference Laboratory of the NBS during the most recent tour of such inspections, and also shall submit a memorandum stating steps taken to remedy any deficiencies reported by this inspection.

- B. Testing Machines: Shall be calibrated at intervals not exceeding 12 months by devices of accuracy traceable to the NBS.

1.11 AUTHORITIES AND DUTIES OF THE LABORATORY

- A. The laboratory will not be authorized to revoke, alter, relax, enlarge, or release any requirement of the specifications, nor to approve or accept any portion of the work. When it appears that the material furnished or work performed by the General Contractor fails to fulfill specification requirements, the laboratory will promptly notify all parties of such deficiencies.
- B. Copies of all laboratory test and inspection reports will be issued directly to the General Contractor, the Architect, the Structural Engineer and Owner's construction manager.
- C. Report test results in writing to the Architect, Engineer and the General Contractor on the same day that tests are made. Reports of compressive strength test shall contain the proper identification name and number, date of concrete placement, name of contractor, name of concrete supplier and truck number, name of concrete testing service, concrete type and class, location of concrete batch in the structure, design compressive strength at 28 days, concrete mix proportions and materials. Compressive breaking strength and type of break for both 7 day tests and 28 day tests.
- D. Additional Tests: The testing service will make additional test of in-place concrete when test results indicate the specific concrete strengths and other characteristics have not been attained in the structure, as directed by the Architect. The testing service shall conduct test to determine adequacy of concrete by cored cylinders and complying with ASTM C 42 or by other methods as directed.
- E. The Owner reserves the right to perform tests in addition to the ones mentioned herein.

1.12 STRUCTURAL CONCRETE

- A. Aggregate Tests: Check the proposed aggregate in accordance with ASTM C 33. (Perform only if new or suspect).
- B. Mix Design: Check the proposed mixes for proportions, water-cement ration and slump in accordance with ACI 613 and 318 and with P.D.A. T 12. (Omit if established design is used). Minimum number of tests should be one for each 5,000 cubic yards of material.
- C. Slump Tests: Take at the beginning of each day's pouring operations and whenever water adjustments or noticeable change of slump occurs, ASTM C 143.
- D. Sampling: Make 4 standard test cylinders at the beginning of each pour and 4 additional cylinders for each additional 50 cubic yards or fraction thereof. Take extra samples at any noticeable change in the makeup of the concrete. Perform all sampling in compliance with ASTM C 172.
- E. Testing: Cure cylinders in accordance with ASTM C 31. Test one cylinder at 7 days for compression to ASTM C 39 and two at 28 days and one for hold.
- F. Soils testing (where not previously tested within one year or surface or subsurface change has occurred).
- G. Civil staking and PAD certification.

1.13 FOUNDATIONS

- A. Check excavations for correct depth into bearing strata as per boring test results and Soils Report.

1.14 REQUIRED SPECIAL INSTRUCTIONS

- A. As required by local governmental authorities.

1.15 ROOF TESTING

- A. Inspection to occur immediately prior to installation, twice during installation and upon completion.
- B. Observe roofing application and related flashings to insure roofing is performed within manufacturer's acceptable practices.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Refer to Section 02221, "Demolition and Repair" for general requirements.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.
- D. This Section outlines requirements covering testing laboratory services and inspection required during the course of construction of the Project. This Section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General Conditions or Supplementary General Conditions.

END OF SECTION 01400

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PART 1 - GENERAL

1.01 DEFINITIONS

- A. **General:** Basic Contract definitions are included in the Conditions of the Contract.
- B. **"Approved":** When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. **"Directed":** A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. **"Indicated":** Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. **"Regulations":** Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. **"Furnish":** Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. **"Install":** Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. **"Provide":** Furnish and install, complete and ready for the intended use.
- I. **"Project Site":** Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.
- J. **"Limits of Construction":** Identifies the area of work within the project site, as indicated on the Drawings.

1.02 INDUSTRY STANDARDS

- A. **Applicability of Standards:** Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. **Publication Dates:** Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. **Copies of Standards:** Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
- D. **Abbreviations and Acronyms for Standards and Regulations:** Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list.

ADAAG	AMERICANS WITH DISABILITIES ACT (ADA)
CFR	CODE OF FEDERAL REGULATIONS
CRD	HANDBOOK FOR CONCRETE AND CEMENT
FED-STD	FEDERAL STANDARD (SEE FS)
FS	FEDERAL SPECIFICATION
FTMS	FEDERAL TEST METHOD STANDARD (SEE FS)
UFAS	UNIFORM FEDERAL ACCESSIBILITY STANDARDS

1.03 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

AA	ALUMINUM ASSOCIATION, INC. (THE)
AAADM	AMERICAN ASSOCIATION OF AUTOMATIC DOOR MANUFACTURERS
AABC	ASSOCIATED AIR BALANCE COUNCIL
AAMA	AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABMA	AMERICAN BEARING MANUFACTURERS ASSOCIATION
ABPA	ACOUSTICAL AND BOARD PRODUCTS ASSOCIATION
ACI	ACI INTERNATIONAL (AMERICAN CONCRETE INSTITUTE)
ACPA	AMERICAN CONCRETE PIPE ASSOCIATION
AFPA	AMERICAN FOREST & PAPER ASSOCIATION (SEE AF&PA)
AF&PA	AMERICAN FOREST & PAPER ASSOCIATION
AGA	AMERICAN GAS ASSOCIATION
AGC	ASSOCIATED GENERAL CONTRACTORS OF AMERICA (THE)
AHA	AMERICAN HARDBOARD ASSOCIATION (NOW PART OF CPA)
AHC	ARCHITECTURAL HARDWARE CONSULTANT
AI	ASPHALT INSTITUTE

AIA	AMERICAN INSTITUTE OF ARCHITECTS (THE)
AIA	AMERICAN INSURANCE ASSOCIATION
AIEE	AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALCA	ASSOCIATED LANDSCAPE CONTRACTORS OF AMERICA
ALSC	AMERICAN LUMBER STANDARD COMMITTEE, INCORPORATED
AMCA	AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APA	APA - THE ENGINEERED WOOD ASSOCIATION
APA	ARCHITECTURAL PRECAST ASSOCIATION
API	AMERICAN PETROLEUM INSTITUTE
ARI	AIR-CONDITIONING & REFRIGERATION INSTITUTE
ARMA	ASPHALT ROOFING MANUFACTURERS ASSOCIATION
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND
ASME	ASME INTERNATIONAL (THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS INTERNATIONAL)
ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERING
ASTM	ASTM INTERNATIONAL (AMERICAN SOCIETY FOR TESTING AND MATERIALS INTERNATIONAL)
AWCI	AWCI INTERNATIONAL (ASSOCIATION OF THE WALL AND CEILING INDUSTRIES INTERNATIONAL)
AWI	ARCHITECTURAL WOODWORK INSTITUTE
AWPA	AMERICAN WOOD-PRESERVERS' ASSOCIATION
AWS	AMERICAN WELDING SOCIETY
AWSC	AMERICAN WELDING SOCIETY CODE

AWWA	AMERICAN WATER WORKS ASSOCIATION
BHMA	BUILDERS HARDWARE MANUFACTURERS ASSOCIATION
BIA	BRICK INDUSTRY ASSOCIATION (THE)
BIA	BRICK INSTITUTE OF AMERICA
BICSI	BICSI
CCFSS	CENTER FOR COLD-FORMED STEEL STRUCTURES
CDA	COPPER DEVELOPMENT ASSOCIATION INC.
CGA	COMPRESSED GAS ASSOCIATION
CIMA	CELLULOSE INSULATION MANUFACTURERS ASSOCIATION
CISCA	CEILINGS & INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION
CISPI	CAST IRON SOIL PIPE INSTITUTE
CLFMI	CHAIN LINK FENCE MANUFACTURERS INSTITUTE
CPA	COMPOSITE PANEL ASSOCIATION
CPPA	CORRUGATED POLYETHYLENE PIPE ASSOCIATION
CRA	CALIFORNIA REDWOOD ASSOCIATION
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CS	COMMERCIAL STANDARDS
CSA	CSA INTERNATIONAL (FORMERLY: IAS - INTERNATIONAL APPROVAL SERVICES)
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE (THE)
CTI	COOLING TECHNOLOGY INSTITUTE (FORMERLY: COOLING TOWER INSTITUTE)
DHI	DOOR AND HARDWARE INSTITUTE
EIA	ELECTRONIC INDUSTRIES ALLIANCE
EIMA	EIFS INDUSTRY MEMBERS ASSOCIATION
EJCDC	ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE
EJMA	EXPANSION JOINT MANUFACTURERS ASSOCIATION, INC.
ESD	ESD ASSOCIATION

FCI	FLUID CONTROLS INSTITUTE
FGMA	FLAT GLASS MARKETING INSTITUTE
FIA	FACTORY INSURANCE ASSOCIATION
FM	FACTORY MUTUAL SYSTEM (SEE FMG)
FMG	FM GLOBAL (FORMERLY: FM - FACTORY MUTUAL SYSTEM)
FS	FEDERAL SPECIFICATIONS
FSA	FLUID SEALING ASSOCIATION
FSC	FOREST STEWARDSHIP COUNCIL
FTI	FACING TILE INSTITUTE
GA	GYPSUM ASSOCIATION
GANA	GLASS ASSOCIATION OF NORTH AMERICA
GRI	GEOSYNTHETIC RESEARCH INSTITUTE (SEE GSI)
GS	GREEN SEAL
GSI	GEOSYNTHETIC INSTITUTE
HI	HYDRAULIC INSTITUTE
HI	HYDRONICS INSTITUTE
HMMA	HOLLOW METAL MANUFACTURERS ASSOCIATION (SEE NAAMM)
HPVA	HARDWOOD PLYWOOD & VENEER ASSOCIATION
HPW	H. P. WHITE LABORATORY, INC.
IAS	INTERNATIONAL APPROVAL SERVICES (SEE CSA)
IBC	INTERNATIONAL BUILDING CODE
ICEA	INSULATED CABLE ENGINEERS ASSOCIATION, INC.
ICRI	INTERNATIONAL CONCRETE REPAIR INSTITUTE, INC.
IEC	INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC. (THE)
IESNA	ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA
IGCC	INSULATING GLASS CERTIFICATION COUNCIL

IGMA	INSULATING GLASS MANUFACTURERS ALLIANCE (THE)
ILI	INDIANA LIMESTONE INSTITUTE OF AMERICA, INC.
ISO	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ISSFA	INTERNATIONAL SOLID SURFACE FABRICATORS ASSOCIATION
KCMA	KITCHEN CABINET MANUFACTURERS ASSOCIATION
LIA	LEAD INDUSTRIES ASSOCIATION
LMA	LAMINATING MATERIALS ASSOCIATION
LPI	LIGHTNING PROTECTION INSTITUTE
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
MBMA	METAL BUILDING MANUFACTURERS ASSOCIATION
MFMA	METAL FRAMING MANUFACTURERS ASSOCIATION
MHIA	MATERIAL HANDLING INDUSTRY OF AMERICA (MH)
MIA	MARBLE INSTITUTE OF AMERICA
MIA	MASONRY INSTITUTE OF AMERICA
MLMA	METAL LATH MANUFACTURERS ASSOCIATION
MPI	MASTER PAINTERS INSTITUTE
NAAMM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
NADCA	NATIONAL AIR DUCT CLEANERS ASSOCIATION
NAIMA	NORTH AMERICAN INSULATION MANUFACTURERS ASSOCIATION (THE)
NBC	NATIONAL BUILDING CODE
NBFU	NATIONAL BOARD OF FIRE UNDERWRITERS
NBGQA	NATIONAL BUILDING GRANITE QUARRIES ASSOCIATION, INC.
NBHA	NATIONAL BUILDERS HARDWARE ASSOCIATION
NBS	NATIONAL BUREAU OF STANDARDS
NCMA	NATIONAL CONCRETE MASONRY ASSOCIATION
NCPI	NATIONAL CLAY PIPE INSTITUTE
NCTA	NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU

NEC	NATIONAL ELECTRICAL CODE
NECA	NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION
NELMA	NORTHEASTERN LUMBER MANUFACTURERS' ASSOCIATION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NETA	INTERNATIONAL ELECTRICAL TESTING ASSOCIATION
NFPA	NATIONAL FIRE PROTECTIONS ASSOCIATION
NFPA	NATIONAL FOREST PRODUCTS ASSOCIATION
NGA	NATIONAL GLASS ASSOCIATION
NHLA	NATIONAL HARDWOOD LUMBER ASSOCIATION
NKCA	NATIONAL KITCHEN CABINET ASSOCIATION
NLGA	NATIONAL LUMBER GRADES AUTHORITY
NMWIA	NATIONAL MINERAL WOOL INSULATION ASSOCIATION
NRCA	NATIONAL ROOFING CONTRACTORS ASSOCIATION
NRMCA	NATIONAL READY MIXED CONCRETE ASSOCIATION
NSSGA	NATIONAL STONE, SAND & GRAVEL ASSOCIATION
NTMA	NATIONAL TERRAZZO & MOSAIC ASSOCIATION, INC.
NTRMA	NATIONAL TILE ROOFING MANUFACTURERS ASSOCIATION (SEE RTI)
NWMA	NATIONAL WOODWORK MANUFACTURERS ASSOCIATION
NWWDA	NATIONAL WOOD WINDOW AND DOOR ASSOCIATION (SEE WDMA)
PCA	PORTLAND CEMENT ASSOCIATION
PCI	PRECAST/PRESTRESSED CONCRETE INSTITUTE
PDCA	PAINTING & DECORATING CONTRACTORS OF AMERICA
PDI	PLUMBING & DRAINAGE INSTITUTE
PEI	PORCELAIN ENAMEL INSTITUTE
PGI	PVC GEOMEMBRANE INSTITUTE
PS	PRODUCT STANDARDS
PTI	POST-TENSIONING INSTITUTE
RCSC	RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS

RFCI	RESILIENT FLOOR COVERING INSTITUTE
RTI	ROOF TILE INSTITUTE (FORMERLY: NTRMA - NATIONAL TILE ROOFING MANUFACTURERS ASSOCIATION)
SAE	SAE INTERNATIONAL
SDI	STEEL DECK INSTITUTE
SDI	STEEL DOOR INSTITUTE
SGCC	SAFETY GLAZING CERTIFICATION COUNCIL
SIGMA	SEALED INSULATING GLASS MANUFACTURERS ASSOCIATION (SEE IGMA)
SJI	STEEL JOIST INSTITUTE
SMA	SCREEN MANUFACTURERS ASSOCIATION
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION
SMPTE	SOCIETY OF MOTION PICTURE AND TELEVISION ENGINEERS
SPFA	SPRAY POLYURETHANE FOAM ALLIANCE (FORMERLY: SPI/SPFD - THE SOCIETY OF THE PLASTICS INDUSTRY, INC.; SPRAY POLYURETHANE FOAM DIVISION)
SPIB	SOUTHERN PINE INSPECTION BUREAU (THE)
SPI/SPFD	SOCIETY OF THE PLASTICS INDUSTRY, INC. (THE) SPRAY POLYURETHANE FOAM DIVISION (SEE SPFA)
SPRI	SPRI (SINGLE PLY ROOFING INSTITUTE)
SSBC	SOUTHERN STANDARD BUILDING CODE
SSINA	SPECIALTY STEEL INDUSTRY OF NORTH AMERICA
SSPC	THE SOCIETY FOR PROTECTIVE COATINGS
SSPC	STEEL STRUCTURES PAINTING COUNCIL
STI	STEEL TANK INSTITUTE

SWI	STEEL WINDOW INSTITUTE
SWRI	SEALANT, WATERPROOFING, & RESTORATION INSTITUTE
TCA	TILE COUNCIL OF AMERICA, INC.
TIA/EIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION/ELECTRONIC INDUSTRIES ALLIANCE
TIMA	THERMAL INSULATION MANUFACTURERS ASSOCIATION
TMS	THE MASONRY SOCIETY
TPI	TRUSS PLATE INSTITUTE, INC.
UBC	UNIFORM BUILDING CODE
UL	UNDERWRITERS LABORATORIES INC.
UNI	UNI-BELL PVC PIPE ASSOCIATION
USDA	UNITED STATES DEPARTMENT OF AGRICULTURE
USGBC	U.S. GREEN BUILDING COUNCIL
USITT	UNITED STATES INSTITUTE FOR THEATRE TECHNOLOGY, INC.
USPS	UNITED STATES POSTAL SERVICE
VI	VERMICULITE INSTITUTE
WASTEC	WASTE EQUIPMENT TECHNOLOGY ASSOCIATION
WCLA	WEST COAST LUMBERMANS ASSOCIATION
WCLIB	WEST COAST LUMBER INSPECTION BUREAU
WDMA	WINDOW & DOOR MANUFACTURERS ASSOCIATION (FORMERLY: NWWDA - NATIONAL WOOD WINDOW AND DOOR ASSOCIATION)
WI	WOODWORK INSTITUTE (FORMERLY WIC - WOODWORK INSTITUTE OF CALIFORNIA)
WIA	WOODWORK INSTITUTE OF ARIZONA
WIC	WOODWORK INSTITUTE OF CALIFORNIA (SEE WI)
WMMPA	WOOD MOULDING & MILLWORK PRODUCERS ASSOCIATION

WPOA	WESTERN PLUMBING OFFICIALS ASSOCIATION
WSRCA	WESTERN STATES ROOFING CONTRACTORS ASSOCIATION
WWPA	WESTERN WOOD PRODUCTS ASSOCIATION
BOCA	BOCA INTERNATIONAL, INC. (SEE ICC)
CABO	COUNCIL OF AMERICAN BUILDING OFFICIALS (SEE ICC)
IAPMO	INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (SEE ICC)
ICBO ES	ICBO EVALUATION SERVICE, INC. (SEE ICC-ES)
ICC	INTERNATIONAL CODE COUNCIL (FORMERLY: CABO - COUNCIL OF AMERICAN BUILDING OFFICIALS)
ICC-ES	ICC EVALUATION SERVICE, INC.
SBCCI	SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL, INC. (SEE ICC)

- B. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

CE	ARMY CORPS OF ENGINEERS
CPSC	CONSUMER PRODUCT SAFETY COMMISSION
DOC	DEPARTMENT OF COMMERCE
DOE	DEPARTMENT OF ENERGY
EPA	ENVIRONMENTAL PROTECTION AGENCY
FAA	FEDERAL AVIATION ADMINISTRATION
FDA	FOOD AND DRUG ADMINISTRATION
GSA	GENERAL SERVICES ADMINISTRATION
HUD	DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
LBL	LAWRENCE BERKELEY LABORATORY
NCHRP	NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (SEE TRB)
NIST	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION

PBS	PUBLIC BUILDING SERVICE (SEE GSA)
PHS	OFFICE OF PUBLIC HEALTH AND SCIENCE
RUS	RURAL UTILITIES SERVICE (SEE USDA)
SD	STATE DEPARTMENT
TRB	TRANSPORTATION RESEARCH BOARD
USDA	DEPARTMENT OF AGRICULTURE
USPS	POSTAL SERVICE

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01420

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CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. All labor, materials, equipment and services necessary to furnish, erect and maintain construction facilities and temporary controls and perform temporary work required in the performance of the Contract for Construction, including those indicated and specified. This Section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General Conditions or Supplementary General Conditions.
- B. The General Contractor shall verify with the Owner/Construction Manager the storage areas allocated to the General Contractor for the work, and he shall limit his storage and office operations to the defined areas.

1.02 MAINTENANCE AND REMOVAL

- A. Maintain construction facilities and temporary controls in a proper, safe & secure operating and sanitary condition for the duration of the Contract for Construction. Upon completion of the Construction Contract work, the General Contractor shall remove all construction facilities and temporary controls from the premises.

1.03 UTILITIES

- A. Provide temporary adequate light and power supply for construction, making all necessary arrangements with serving utility and paying all expenses in connection therewith. Temporary lighting illumination level shall be adequate to permit workmen to properly perform their work.
- B. Temporary electric shall, at a minimum, be adequate to run refrigeration and IT equipment, making all necessary arrangements with serving utility and paying all expenses in conjunction therewith.
- C. Provide temporary adequate water supply for construction, making all necessary arrangements with serving utility and paying all expenses in conjunction therewith.
- D. All utilities, temporary and permanent, shall be paid for by the General Contractor until 10 days prior to store opening or upon receipt of Certificate of Substantial Completion (or equivalent), whichever occurs first. Receipted bills setting forth that charges have been paid in full shall accompany Application for Final Payment.
- E. Supply adequate cool, pure drinking water with individual drinking cups or sanitary bubbler fountain for the use of employees on the project. The quality of the drinking water shall meet the standards for public water supplies of the County Health Department.

1.04 TELEPHONE/DATA

- A. The General Contractor shall provide and pay for installation of one job telephone and one fax line paying all local services charges involved, for the duration of the Contract. The telephone must have speaker and conference call capabilities. A pay telephone is not acceptable.
- B. The site superintendent must have a computer with internet connectivity. General Contractor is required to provide internet accessibility on site, during the course of construction. If available, the general contractor shall utilize the web based construction management web based platform for all submittals, correspondence, submissions, bids, reports, findings, conclusions contained through out the entire specification manual

1.05 TOILET FACILITIES

- A. Provide proper sanitary and adequate toilet facilities for the use of all workmen employed on the Project, located where directed, and enforce their use by all personnel on the project. Enclose and weatherproof toilets and keep in a sanitary condition at all times.

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1.06 HEATING

- A. Should it become necessary to do any work in the building, such as plastering, cement work, painting, etc., at times when the temperature is below 40° F. (painting 60° F.), the General Contractor shall provide temporary heat (non-storage type) for such length of time as deemed necessary by the Architect for the protection of the work. Pay all expenses for temporary apparatus, its installation, proper maintenance and operation and for fuel. Damage or deterioration caused by insufficient heat or ventilation shall be repaired or replaced by the General Contractor.
- B. Should temporary heat be required after permanent heating system is installed and operating, this unit may be used; however, the General Contractor shall pay all fuel costs and be responsible for proper operation of unit.

1.07 FIRE PROTECTION

- A. Access roads and on-site water for fire department equipment shall be installed and identified per requirements of authorities of jurisdiction.
- B. Provide adequate fire extinguishers on the premises during the course of construction, of the type and sizes recommended by the NFPA to control fires resulting from the particular work being performed. Instruct employees in their use. Place extinguishers in the immediate vicinity of the work being performed, ready for instant use. In the use of especially hazardous type of equipment, such as acetylene torches, welding equipment, tar pots, kettles, etc., no work shall be commenced or equipment used unless fire extinguishers of an approved type and capacity are placed in the working area and available for immediate use by the workmen using the above-mentioned equipment.
- C. Fire extinguishers shall be maintained throughout all accessible areas. Provide one approved 2-1/2 gallon foam type extinguisher in the construction shed and also in the space where paint or oil, etc., is stored. Other special features of hazard shall be provided with special extinguisher protection as may be warranted.

1.08 TEMPORARY ENCLOSURES, BARRIERS, FENCES AND ACCESS ROADS

- A. Provide and maintain all governmental required access roads and fire roads per local jurisdiction requirements.
- B. Provide and maintain all fences, barricades, lights, shoring and other protective structures or devices necessary for the safety of workmen, equipment, the public and property as required by state or municipal laws and regulations, and local ordinances, laws and other requirements of the county, state, and other authorities having jurisdiction with regard to safety precautions, operation and fire hazards.
- C. Provide and maintain pumping facilities including power for keeping the site, excavations and structure free from accumulations of water at all times, whether from underground seepage, rainfall, drainage or broken lines.
- D. Maintain provisions for closing and locking the building at such time as possible to do so.
- E. Protect all door openings when so required with temporary batten doors, and cover windows and openings with suitable materials when weather or job conditions require.
- F. Protect all elements of construction from any danger of damage from wind, rain, dust, frost, freezing temperatures, or other infiltration of weather.
- G. Protect all openings from debris (drains, pipes, etc.).
- H. Provide and maintain as required all temporary access roads to and on site. Remove such roads, if not incorporated into finished construction, prior to finish surfacing or landscaping.

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

- I. All sites are required to have safety fences install at the far edge of construction operations throughout the course of construction

1.09 SCAFFOLD, STAGING, ETC.

- A. The work under each Section of these specifications shall include providing, installing, and maintaining all scaffold, staging, trestles, and planking necessary for the work under each Section in strict conformity with applicable laws and ordinances, and maintenance of same so as not to interfere with or obstruct the work of other trades. Additionally, the work under each Section of these Specifications shall include providing all forms of protection necessary to preserve the work of other trades free from damage. These provisions shall be considered as though repeated under each separate Section of these Specifications.

1.10 TREE AND PLANT PROTECTION

- A. Existing or newly planted vegetation, shrubs, trees, sidewalks, paving, etc., on the site, shall, unless directly affected by the work of this Contract, be protected against damage of any kind. No diesel or gasoline engine shall be allowed to pass over the feeder root system within the drip line unless approved by the Owner. Work, storage and traffic areas shall be restricted to those areas immediately adjacent to the building.
- B. Damage of any kind caused by the work of this contract shall be made good before final acceptance of the Project. The General Contractor shall provide water and protection barricades as required to maintain all trees, plants, shrubs, existing site improvements, etc., designated to remain.

1.11 SECURITY

- A. Provide such watchmen's service as necessary to protect Owner's interest during the progress of construction of the building.
- B. The Architect and the Owner do not assume any responsibility, at any time, for the protection of the building and premises or for loss of materials, from the time that the Contract operations have commenced until the final acceptance of the work by the Architect and Owner. If watchman service is deemed necessary by the General Contractor, such protection shall be provided and paid for by the General Contractor.

1.12 NOISE AND DUST CONTROL

- A. Exercise all possible care to control excessive noise and dust during the construction to keep these problems to a minimum. Traffic or construction areas shall be sprinkled with water or chemicals as required and in accordance with applicable governmental requirements.

1.13 FIELD OFFICE, STORAGE ENCLOSURES

- A. Provide and maintain a weather-tight office for the use of the Architect, Owner Representative and General Contractor. This office shall be provided with windows which operate, doors with locks, tables, desks, chairs, benches, racks for Drawings, electric lights, telephone, and shall be air conditioned and heated.
- B. General Contractor shall provide all storage enclosures required for his operations.

1.14 PARKING

- A. Limit parking by construction personnel to the area designated by the Owner.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01500

CONSTRUCTION FACILITES AND TEMPORARY CONTROLS

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CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for the following
 1. Salvaging non-hazardous construction waste.
 2. Recycling non-hazardous construction waste.
 3. Disposing of non-hazardous construction waste.
- B. See Division 2 Section "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.

1.02 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Disposal: Removal off-site of construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- C. Recycle: Recovery of construction waste for subsequent processing in preparation for reuse.
- D. Salvage: Recovery of construction waste and subsequent sale or reuse in another facility.
- E. Salvage and Reuse: Recovery of construction waste and subsequent incorporation into the Work.

1.03 SUBMITTALS

- A. Waste Management Plan: Submit 3 copies of plan within 14 days of date established for the Notice to Proceed.
- B. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them.
- C. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them.
- D. LEED Submittal: LEED letter template for Credit MR 2.1 and or 2.2 if required by Owner/Construction Manager, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met.

1.04 QUALITY ASSURANCE

- A. Waste Management Conference: Conduct conference at Project site

1.05 WASTE MANAGEMENT PLAN

- A. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 2. Recycled Materials: Include list of local receivers and processors.
 3. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 4. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where

materials separation will be located.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by Architect. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - 1. Distribute waste management plan to everyone concerned within seven days of submittal return.
 - 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 - 2. Comply with Division 1 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.02 RECYCLING CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and aluminum beverage containers used by on-site workers.
- B. Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
 - 1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 - 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 - 4. Store components off the ground and protect from the weather.
 - 5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.03 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees at landfill facility.
- C. Wood Materials:
 - 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.

CONSTRUCTION WASTE MANAGEMENT

- 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

3.04 DISPOSAL OF WASTE

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

END OF SECTION 01524

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. All requirements and procedures covering material and equipment to be utilized in the Project work. This Section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General Conditions or Supplementary General Conditions.
- C. See Division 1 Section "Closeout Procedures" for submitting warranties for Contract closeout.
- D. See Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.
- E. All deliveries and work shall be coordinated with other sections.
- F. Related sections:
 - 1. 01230, "Substitutions".
 - 2. 01330, "Submittal Procedures"

1.02 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.03 FACILITY AND EQUIPMENT

- A. The General Contractor shall provide, install, maintain and operate a complete and adequate facility for the handling, execution, disposal and distribution of all material and equipment required for the proper and timely performance of all work, including direct buy/national account connected with the Contract for Construction.

1.04 DELIVERY AND STORAGE OF MATERIALS

- A. Deliver all manufactured materials in the original packages, containers or bundles (with the seals unbroken)

bearing the name or identification mark of the manufacturer.

- B. Deliver fabrications in as large assemblies as practicable, and where specified to be shop primed or shop finished, they shall be packaged or crated as required to preserve such priming or finish intact and free from abrasion.
- C. Store all materials in such manner as necessary to properly protect same from damage. Materials or equipment damaged by handling, weather, dirt or from any other cause will not be acceptable.
- D. Store material so as to cause no obstructions, stored off sidewalks, roadways and underground services. The General Contractor shall be responsible for protecting all material and equipment furnished under the Contract.
- E. When any room in the project is used as a shop or store room, the General Contractor shall be responsible for any repairs, patching or cleaning necessary due to such use. Location of such storage space shall be subject to approval of the Architect.

1.05 WORKMANSHIP

- A. Where not more specifically described in any of the various Sections of these Specifications, workmanship shall conform to all of the methods and operations of best standards and accepted practices of the trade or trades involved, and shall include all items of fabrication, construction or installation regularly furnished or required for completion (including any finish, and for successful operation as intended).
- B. All work shall be executed by mechanics skilled in their respective lines of work.
- C. When completed, all parts shall have been durably and substantially built and shall present a neat, workmanlike appearance.

1.06 SUBSTITUTION OF MATERIALS

- A. Substitutions typically are not permitted unless approved during bid process by addendum. If a substitution is required (Contractor to provide justification statement), it must be of equal or greater quality than the product it replaces. At no time will Owner pay additional costs associated with the aforementioned substitution.
- B. See section 01230 for material substitution requirements and Substitution Request Form.

1.07 MATERIAL REFERENCE STANDARDS

- A. Where material is specified solely by reference to Standard Specifications, the General Contractor shall, if requested by the Architect, submit to the Architect, for his approval, data on all such material proposed to be incorporated into the work of the Contract listing the name and address of vendor, the manufacturer or producer, and the trade or brand names of such materials.

1.08 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Warranty period is a minimum 2 years on everything unless stated as a longer warranty (such as 5, 10, 15 or 20) on certain items. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

PRODUCT REQUIREMENTS

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
3. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

C. See Warranty schedule in Part 2 of this section.

1.09 SUBMITTAL TIME

A. Submittal Time: Comply with requirements in Division I Sections "Submittals", and "Closeout Procedures."

PART 2 - PRODUCTS**2.01 PRODUCT SELECTION PROCEDURES**

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
 3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that comply with requirements.
 4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Section 01230 "Substitutions" for consideration of an unnamed product or system.
 8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
 9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 10. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Section 01230, "Substitutions" for proposal of product.
 11. Visual Selection Specification: Where Specifications include the phrase "as selected from

PRODUCT REQUIREMENTS

manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.

- a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
- b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.02 COMPARABLE PRODUCTS

- A. Conditions: Architect will consider Contractor's request for comparable product when the conditions of Section 01230, Substitutions, and the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 1. Evidence that the proposed product does not require extensive revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01600

PART 1 - GENERAL

1.01 SUMMARY

- A. Work Specified Herein includes all requirements and procedures covering National Account and Direct Buy materials to be utilized in the Project work.
- B. This Section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General Conditions or Supplementary General Conditions.
- C. Materials identified in this specification are to be provided by the National Account Vendor, purchased by Owner or General Contractor, received, stored by General Contractor, and installed by General Contractor or by Others.
- D. See Sections 01230 and 01600 in this Specification manual for provisions covering substitutions of materials OTHER than those identified herein as "National Account" materials.
- E. There shall be no substitutions for the products identified herein as "National Account" materials.

1.02 DESCRIPTION

- A. Owner has negotiated favorable purchase agreements with various national manufacturers for the exclusive use of their products in their new facilities.
- B. The Owner will purchase some of the items from the various manufacturers and coordinate delivery dates with the General Contractor. Some items are to be purchased by the General Contractor from these suppliers.
- C. The General Contractor and his subcontractors for trades applicable, as a condition on the award of the Contract for Construction, are obligated to use the materials from these national product manufacturers under this contract.

1.03 COORDINATION OF NATIONAL ACCOUNT MATERIALS

- A. The General Contractor shall install, maintain and operate a complete and adequate facility for the receipt of, handling, execution, disposal and distribution of all "National Account" materials required for the proper and timely performance and coordination of all work connected with the Contract for Construction.
- B. See Vendor Contact List herein.

1.04 DELIVERY AND STORAGE OF MATERIALS

- A. Provisions as specified under Section 01600 are applicable to the work under this Section.
- B. Contractor shall accept and store and protect the Owner furnished materials in accordance with the manufacturer's recommendations.
- C. The General Contractor is responsible for storage, handling, security, coordination, supervision and scheduling of materials along with the quality assurance of ALL items within the confines of the Direct Buy/National Account agreement.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section outlines requirements for cleaning of the project work. This section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General conditions or Supplementary General Conditions, or additional requirements within this specification.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Safety and Insurance Standards: Maintain project in accordance with the following safety and insurance standards:
 - 1. State Industrial Commission
 - 2. OSHA
 - 3. Fire Protection: Store volatile waste in covered metal containers and remove from premises daily.
 - 4. Pollution Control: Conduct cleanup and disposal operations to comply with local ordinances and anti-pollution laws. Burning or burying of rubbish and waste material on the project site is not permitted. Disposal of volatile fluid waste (such as mineral spirits, oil, or paint thinner) in storm or sanitary sewer systems or in streams or waterways is not permitted.

PART 2 - PRODUCTS

2.01 CLEANING MATERIAL

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

- A. During the construction period, the material to be used in the work shall be kept in an orderly manner, neatly stacked or piled.
- B. Clean up frequently (at least daily) all refuse, rubbish, scrap materials, and debris caused by operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance. Sprinkle dusty debris with water.
- C. Provide for the disposal of all waste products, trash, debris, etc., and make necessary arrangements for legal disposal of same off the site. Never throw rubbish from windows or other parts of building. Lower waste materials in a controlled manner with as few handlings as possible.
- D. Remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from operations, and put the site in a neat, orderly condition.
- E. Vacuum clean interior building areas when ready to receive finish painting and continue vacuum cleaning on an as-needed basis until building is ready for acceptance.
- F. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.
- G. General Contractor shall provide trash gondolas or containers for use by all trades and vendors.
- H. General Contractor may bill trades proportionately for trash gondola use at no additional cost to the Owner or his vendors.

- I. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- J. Site: Maintain Project site free of waste materials and debris.
- K. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- L. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- M. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- N. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- O. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- P. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- Q. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- R. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.02 FINAL CLEANING

- A. Use experienced workmen or professional cleaners for final cleaning.
- B. The final cleaning standards for fresh & easy Neighborhood Market is extremely high, failure to meet those standards may require repeated cleanings and additional work at no additional cost to the owner.
- C. Besides general broom cleaning, do following special cleaning for all trades at completion of work:
 - 1. Remove putty stains from glass and mirrors; wash, polish same, inside and outside. Exercise care not to scratch glass.
 - 2. Remove marks, stains, fingerprints, other soil, dirt from painted, decorated, or stained work.
 - 3. Clean, polish and wax woodwork.
 - 4. Clean and polish hardware for removal of stains, dust, dirt, paint and the like.
 - 5. Remove spots, soil, paint from tile and similar work; wash same.
 - 6. Clean fixtures, equipment,; remove stains, paint, dirt, dust.
 - 7. Remove temporary floor protections.
 - 8. Clean and damp mop and wax all tile and sheet vinyl floors.
 - 9. Remove all temporary protections at the site.

10. Remove packing materials from all fixtures and equipment
 11. Remove labels which are not required as permanent labels.
 12. Clean exposed exterior and interior hard-surfaced finishes, to a dirt-free condition, free of dust, stains, films and similar noticeable distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition. Curing agents shall not leave marks or discoloration.
 13. Wipe surfaces of mechanical and electrical equipment clean, including Air Handlers, evaporative condenser racks, duct work, power walls, lighting fixtures, equipment and similar equipment: remove excess lubrication and other substances.
 14. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.
 15. Tops of walk in coolers & freezers shall be free of garbage & debris
 16. Tops of refrigerated cases shall be free of garbage & debris. Tops shall be dust free
 17. Sales floor should be clean, streak free, and buffed to a high shine
- D. All existing improvements, inside or outside the property, which are disturbed, damaged or destroyed by the work under the Contract, shall be restored to the condition in which they originally were or to the satisfaction of the Architect.
- E. Clean project site yard and grounds, including landscape development areas, of litter and foreign substances. Sweep paved areas to a broom-clean condition; remove stains, tire marks, petrochemical spills and other foreign deposits.
- F. Rake grounds which are neither planted nor paved, to a smooth, even-textured surface.
- G. Pest Control: The General Contractor shall engage an experienced exterminator to make a final inspection of project, and to rid project of rodents, insects and other pests and to pay all costs for same.
- H. Removal of Protection: Except as otherwise indicated or requested by Architect, remove temporary protection devices and facilities which were installed during course of the work to protect previously completed work during remainder of construction period.
- I. Where extra materials of value as determined by Owner remain after completion of associated work, they shall become the property of Owner.
- J. Between substantial completion and final acceptance General Contractor to maintain the store in a state of cleanliness.

3.03 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.04 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01700

PART 1 - GENERAL

1.01 SUMMARY

- A. This section outlines requirements for cleaning of the project work. This section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General conditions or Supplementary General Conditions, or additional requirements within this specification.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Safety and Insurance Standards: Maintain project in accordance with the following safety and insurance standards:
 - 1. State Industrial Commission
 - 2. OSHA
 - 3. Fire Protection: Store volatile waste in covered metal containers and remove from premises daily.
 - 4. Pollution Control: Conduct cleanup and disposal operations to comply with local ordinances and anti-pollution laws. Burning or burying of rubbish and waste material on the project site is not permitted. Disposal of volatile fluid waste (such as mineral spirits, oil, or paint thinner) in storm or sanitary sewer systems or in streams or waterways is not permitted.

PART 2 - PRODUCTS

2.01 CLEANING MATERIAL

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

- A. During the construction period, the material to be used in the work shall be kept in an orderly manner, neatly stacked or piled.
- B. Clean up frequently (at least daily) all refuse, rubbish, scrap materials, and debris caused by operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance. Sprinkle dusty debris with water.
- C. Provide for the disposal of all waste products, trash, debris, etc., and make necessary arrangements for legal disposal of same off the site. Never throw rubbish from windows or other parts of building. Lower waste materials in a controlled manner with as few handlings as possible.
- D. Remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from operations, and put the site in a neat, orderly condition.
- E. Vacuum clean interior building areas when ready to receive finish painting and continue vacuum cleaning on an as-needed basis until building is ready for acceptance.
- F. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.
- G. General Contractor shall provide trash gondolas or containers for use by all trades and vendors.
- H. General Contractor may bill trades proportionately for trash gondola use at no additional cost to the Owner or his vendors.

- I. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- J. Site: Maintain Project site free of waste materials and debris.
- K. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- L. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- M. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- N. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- O. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- P. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- Q. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- R. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.02 FINAL CLEANING

- A. Use experienced workmen or professional cleaners for final cleaning.
- B. The final cleaning standards for fresh & easy Neighborhood Market is extremely high, failure to meet those standards may require repeated cleanings and additional work at no additional cost to the owner.
- C. Besides general broom cleaning, do following special cleaning for all trades at completion of work:
 - 1. Remove putty stains from glass and mirrors; wash, polish same, inside and outside. Exercise care not to scratch glass.
 - 2. Remove marks, stains, fingerprints, other soil, dirt from painted, decorated, or stained work.
 - 3. Clean, polish and wax woodwork.
 - 4. Clean and polish hardware for removal of stains, dust, dirt, paint and the like.
 - 5. Remove spots, soil, paint from tile and similar work; wash same.
 - 6. Clean fixtures, equipment,; remove stains, paint, dirt, dust.
 - 7. Remove temporary floor protections.
 - 8. Clean and damp mop and wax all tile and sheet vinyl floors.
 - 9. Remove all temporary protections at the site.

10. Remove packing materials from all fixtures and equipment
 11. Remove labels which are not required as permanent labels.
 12. Clean exposed exterior and interior hard-surfaced finishes, to a dirt-free condition, free of dust, stains, films and similar noticeable distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition. Curing agents shall not leave marks or discoloration.
 13. Wipe surfaces of mechanical and electrical equipment clean, including Air Handlers, evaporative condenser racks, duct work, power walls, lighting fixtures, equipment and similar equipment: remove excess lubrication and other substances.
 14. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.
 15. Tops of walk in coolers & freezers shall be free of garbage & debris
 16. Tops of refrigerated cases shall be free of garbage & debris. Tops shall be dust free
 17. Sales floor should be clean, streak free, and buffed to a high shine
- D. All existing improvements, inside or outside the property, which are disturbed, damaged or destroyed by the work under the Contract, shall be restored to the condition in which they originally were or to the satisfaction of the Architect.
- E. Clean project site yard and grounds, including landscape development areas, of litter and foreign substances. Sweep paved areas to a broom-clean condition; remove stains, tire marks, petrochemical spills and other foreign deposits.
- F. Rake grounds which are neither planted nor paved, to a smooth, even-textured surface.
- G. Pest Control: The General Contractor shall engage an experienced exterminator to make a final inspection of project, and to rid project of rodents, insects and other pests and to pay all costs for same.
- H. Removal of Protection: Except as otherwise indicated or requested by Architect, remove temporary protection devices and facilities which were installed during course of the work to protect previously completed work during remainder of construction period.
- I. Where extra materials of value as determined by Owner remain after completion of associated work, they shall become the property of Owner.
- J. Between substantial completion and final acceptance General Contractor to maintain the store in a state of cleanliness.
- 3.03 PROTECTION OF INSTALLED CONSTRUCTION
- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.
- 3.04 CORRECTION OF THE WORK
- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01700

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes all administrative and procedural requirements for submittal of pertinent data relating to closing out the Project upon completion of the project work. Detailed instructions elsewhere in these Specifications may require that certain items listed herein be submitted prior to Substantial Completion of the Project.
- B. This Section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General Conditions or Supplementary General Conditions.

1.02 FINAL PAYMENT

- A. Receipt/review and acceptance of all items specified in this Section is a prerequisite for final payment.

1.03 RECORD DRAWINGS

- A. General Contractor shall provide reproducible Record Drawings at his cost (original Construction drawings may be purchased from the Architect for Five Hundred Dollars (\$500.00) or reproduced from the construction set by the Contractor at his discretion) which shall clearly show all differences between the Contract for Construction as drawn and as installed for all work, as well as work added to the Contract for Construction which is not shown on the Drawings.
- B. General Contractor shall maintain a set of Record Drawings at the job site and shall, within thirty (15) days after substantial completion of the project provide the Architect with record drawings. These shall be kept legible and current and shall be available for inspection at all times by the Architect. Show all changes in the Contract work, or work added, on these Record Drawings in a contrasting color, including work changed by Addendum or Bulletin.
- C. In showing changes in the work, or added work, use the same legends as were used on the Drawings. Indicate exact locations by dimensions and exact elevations given in job datum, by depth. Give dimensions from a permanent point. Give elevations to sewer and storm drainage lines to the invert elevation. Incorporate all accepted architectural A.S.I. and P.R. information as well as all other field changes into the record drawings.
- D. Mechanical and electrical Record Drawings shall indicate exact routing of all piping, duct work, power and control wiring, etc., location and function of all controls and whether manual or automatic and normal amperage readings for all motors taken at the equipment under normal load conditions.
- E. Record Drawings shall contain the names, addresses and phone number of the Subcontractors and shall be signed by the General Contractor on the front cover.
- F. Architect shall review the Record Drawings and he shall be the sole judge of the acceptability of these drawings.
- G. Upon substantial completion of the work, transfer the information from the Record Drawings to reproducible sheets, which the General Contractor shall purchase from the Architect.
- H. Upon Substantial Completion of the Project work, **submit one set of Record Drawings to the construction manager for review.**
- I. Upon receipt of notice of review and approval of the Record Drawings by the construction manager, the general contractor shall cause one clean set of said drawings be delivered to the Owner at:

fresh & easy Neighborhood Market, Inc.

Attn: JLL "As-Built" Drawing Manager

2120 Park Place

Suite 200

El Segundo California 90245

The General Contractor shall upon receipt of notice of review and approval of the Record Drawings by the construction manager, cause one clean set of said drawings be delivered to the Owner at:

INSERT STORE ADDRESS & NUMBER

The general contractor should provide a capped PVC pipe at the evaporative condenser room for the storage of said drawings as part of their scope of work

1.04 CLOSEOUT MANUAL

- A. Upon completion of the Project, the General Contractor shall submit to the construction manager one (1) complete sets of 8-1/2" x 11" copies (in ring bound Binders with Green plastic Covers to match the As-Built Drawings), of the approved closeout manual. **Submit 1 copy of manual construction manager initially for review only.** Upon approval by construction manager, submit the final quantity of the manuals. The closeout manuals shall each include all information in accordance with the following outline:
1. TABLE OF CONTENTS- : Neatly typed, in orderly sequence, provide the following information:
 - a. LIST OF SUBCONTRACTORS/SUPPLIERS
 - i. Provide the Trade, Name, Address, Phone #, and Contact person for each subcontractor and/or supplier for the project.
 - b. PUNCHLIST – Copy of Owner's signed list
 - c. CERTIFICATE OF OCCUPANCY - Document issued by local governmental authority certifying that the building complies with the provisions of applicable statutes and regulations, and permitting occupancy for the designated use.
 - d. CERTIFICATE OF SUBSTANTIAL COMPLETION-signed by Owner, General Contractor, and Architect.
 - e. GENERAL CONTRACTOR WARRANTY - The General Contractor shall warranty all work to the Owner for a period of two years from date of Certificate of Substantial Completion unless specified for a longer period. In the case of work performed by a Subcontractor, the General Contractor shall warranty the work to and in favor of the Owner.
 - i. General Contractor shall submit written guarantee to the Owner stating that all work has been performed in accordance with the drawings and specifications (and authorized change orders, if any). General Contractor shall also guarantee all work against defects due to faulty workmanship or materials and shall agree that during the guarantee period he shall make all repairs necessitated by reason of faulty workmanship or materials promptly and at no cost to the Owner.
 - f. GENERAL CONTRACTOR CERTIFICATE OF INSURANCE
 - g. SUBCONTRACTOR/SUPPLIER WARRANTIES
 - i. In addition, each subcontractor shall warranty their work for a period of 2 years unless otherwise noted, after date of Certificate of Substantial Completion and repair work that proves to be defective in workmanship and/or materials due to above work without expense whatsoever to the Owner. Included, but are not necessarily limited to the following:
 - ii. Provide warranties for all subcontractors/manufacturers including but not limited to the following:
 - a). Termite Control – 5 years
 - b). Precast Concrete Detectable Warning Panels – 2 years
 - c). Cast-in-place Concrete-2 years
 - d). Unit Masonry-2 years
 - e). Metal Fabrications-2 years
 - f). Building Insulation-2 years

- g). Roofing - 20 years (Full NDL Warranty)
 - h). Standing Seam Roof – 20 years
 - i). Flashing and Sheet Metal – 2 years
 - j). Sealants - 5 years
 - k). Metal Doors and Frames-2 years
 - l). Special Doors-2 years
 - m). Aluminum Entrances and Storefronts-2 years
 - n). Hardware-2 years
 - o). Glazing, Lathing, Plastering, Stucco-2 years
 - p). Skylights and curbs – 5 yrs
 - q). Gypsum Wallboard-2 years
 - r). Painting-2 years
 - s). Resilient Flooring-2 years
 - t). Toilet Accessories-2 years
 - u). Loading Dock Equipment-2 years
 - v). Plumbing System-2 years
 - w). Mechanical System (5-yr. warranty on HVAC motor compressors)
 - x). Energy Management (2-years)
 - y). Fire Protection Sprinkler System (2 years)
 - z). Electrical System and Controls (2 years)
- h. MAINTENANCE MATERIAL LIST (Spare Parts)
- i. See section 1.8 .
- i. SYSTEMS SECTIONS:
- i. FIRE SPRINKLER SYSTEMS SECTION - Equipment list including the following items for every piece of material and equipment supplied by the fire sprinkler systems subcontractor.
 - a). Subcontractor Name, Address, Phone #, After Hours Phone # and contact
 - b). Name, model and manufacturer.
 - c). Complete parts drawings and list.
 - d). Local supply for parts or replacement with address, and telephone numbers.
 - e). Local service organizations for equipment with address and 24 hour telephone numbers.
 - f). All tags, inspection slips, etc., removed from equipment as shipped from the factory.
 - g). All approved shop drawings and/or submittals.
 - h). Maintenance instructions with schedule of frequency of lubrication, cleaning, adjusting, replacing etc.
 - ii. MECHANICAL SYSTEMS SECTION - Equipment list including the following items for every piece of material and equipment supplied by the Mechanical Subcontractor.
 - a). Subcontractor Name, Address, Phone #, After Hours Phone # and contact
 - b). Name, model and manufacturer.
 - c). Complete parts drawings and list.
 - d). Local supply for parts or replacement with address, and telephone numbers.
 - e). Local service organizations for equipment with address and 24 hour telephone numbers.
 - f). All approved shop drawings and/or submittals.
 - g). Maintenance instructions with schedule of frequency of lubrication, cleaning, adjusting, replacing, etc.
 - h). Motor compressor warranty.
 - i). EMS closeout documents.
 - iii. PLUMBING SYSTEMS SECTION - Equipment including the following items for every piece of material and equipment supplied by the Plumbing Systems Subcontractor.
 - a). Subcontractor Name, Address, Phone #, After Hours Phone # and contact
 - b). Name, model and manufacturer.
 - c). Complete parts drawings and list.
 - d). Local supply for parts or replacement with address, and telephone numbers.
 - e). Local service organizations for equipment with address and 24 hour telephone numbers.
 - f). All approved shop drawings and/or submittals.
 - g). Maintenance instructions with schedule of frequency of lubrication, cleaning, adjusting, replacing, etc.
 - iv. ELECTRICAL SYSTEMS SECTION - Equipment list including the following items for every piece of material and equipment supplied by the Electrical Systems Subcontractor.
 - a). Subcontractor Name, Address, Phone #, After Hours Phone # and contact
 - b). Name, model and manufacturer.

- c). Complete parts drawings and list.
 - d). Local supply for parts or replacement with address, and telephone numbers.
 - e). Local service organizations for equipment with address and 24 hour telephone numbers.
 - f). All approved shop drawings and/or submittals.
 - g). Maintenance instructions with schedule of frequency of lubrication, cleaning, adjusting, replacing, etc.
- B. Submittal requirements
1. Assemble warranties, bonds, service, and maintenance contracts, executed by each of the respective manufacturers, suppliers and subcontractors.
 2. Number of original signed copies required: 1 each.
 - a. General Contractor, name of responsible principal, address and telephone number.
 - i. SEMI-FINAL AND FINAL INSPECTIONS
- C. Closeout is hereby defined to include general requirements near end of contract time, in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specific throughout this specification. Time of closeout is directly related to "Substantial Completion".
- D. When General Contractor is of the opinion that the Project is Substantially Complete, he shall send to the construction manager a written statement that the Project is substantially complete (naming a date) and shall request a semi-final inspection by the construction manager to determine the status of completion. Such notice shall be given at least 3 days before the requested inspection date.
- E. Upon receipt of notice of review and approval of the close-out manual by the construction manager, the general contractor shall cause one clean set of said documents be delivered to the Owner at:

fresh & easy Neighborhood Market, Inc.

Attn: JLL "As-Built" Drawing Manager

2120 Park Place

Suite 200

El Segundo California 90245

1.05 PRE-REQUISITES FOR SUBSTANTIAL COMPLETION

- A. Prior to requesting Architect's inspection for Certification of Substantial Completion, complete the following and list known exceptions in request.
- B. In progress payment request, coincident with or first following date claimed, show either 100% completion for portion of work claimed as "substantially complete", or list incomplete items, value of incompleteness, and reasons for being incomplete.
- C. Include supporting documentation for completion as indicated in these contract documents.
- D. Submit statement showing accounting of changes to the Contract Sum.
- E. Advise Tenant of pending insurance changeover requirements.
- F. Submit specific warranties, workmanship/maintenance agreements, final certifications one copy for review of each required manual, and similar documents.
- G. Obtain and submit releases enabling Owner/Tenant's full and unrestricted use of the work and access to services and utilities, including (where required) occupancy permits, operating certificates, and similar

releases.

- H. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner.
- I. Make final changeover of locks and transmit keys to Owner/Tenant, and advise Owner/Tenant's personnel of changeover in security provisions.
- J. Complete start-up testing of systems, and instructions of Owner/Tenant's operating/maintenance personnel. Discontinue (or change-over) and remove from project site temporary facilities and services, along with construction tools and facilities, mock-ups, and similar events.
- K. Complete final cleaning up requirements, including touch-up painting of marred surfaces.
- L. Touch-up and otherwise repair and restore marred exposed finishes.
- M. If the Architect finds that the Project is substantially complete, he will prepare a Certificate of Substantial Completion, AIA Document G-704, for the approval and acceptance of the General Contractor and the Owner, attaching thereto a list or "Punch List" of items to be completed or corrected.
- N. If the Architect does not concur in the General Contractor's claim of Substantial Completion, he will so notify the General Contractor, and thereafter the General Contractor shall initiate a new request for (semi-final) inspection.
- O. As the General Contractor completes the "Punch List" of uncompleted or uncorrected items, he shall submit to the Architect and Owner for their review:
- P. Record Drawings / Closeout Manuals to be submitted by General Contractor - completed and initialed.

1.06 PRE-REQUISITES FOR FINAL ACCEPTANCE

- A. Prior to requesting Architect's final inspection for certification of final acceptance and final payment, as required by General Conditions, complete the following and list known exceptions (if any) in request:
 - 1. Submit final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 - 2. Submit updated final statement, accounting for additional (final) changes to Contract Sum.
 - 3. Submit certified copy of Architect's/Engineer's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by Architect/Engineer and/or Owner's representative.
 - 4. Submit final meter readings for utilities, measured record of stored fuel, and similar data as of time of substantial completion or when Tenant took possession of and responsibility for corresponding elements of the work (where applicable).
 - 5. Revise and submit evidence of final, continuing insurance coverage complying with insurance requirements, as well as final warranties, guarantees, and maintenance agreements.
 - 6. Comply with Section 01700, Cleaning.
 - 7. Submit completed maintenance stock sign-off sheet.
 - 8. Final Health Department Approval (where applicable)
- B. General Contractor shall call for final inspection after all construction has been completed, electric and/or gas is on, all equipment is operational and establishment has been thoroughly cleaned. Receive Health Department approval prior to store opening, where required.
- C. Provide CD-ROM to Owner and Architect containing a complete set of progress photographs at project closeout
- D. Walk Around

Walk Around:

It is the Construction Manager's responsibility to ensure that the construction drawings, and what has been constructed conforms to what is indicated on the latest PAM approved drawings. Any deviations shall be brought to the attention of the fresh & easy Regional Construction Manager

All refrigeration equipment is down to temperature
All IT equipment is operational
All Security equipment is operational
All exit devices are operational
Window tint is installed (Where applicable)
City approved drawings are on site
Specification manual is on site
Latest revisions of CD's are on site

Fresh & Easy Construction Department's sign-off process for handing over a new store to Retail involves a Walk around where the Construction Department and construction manager agree that the store has been constructed and fitted out to the required standards and can be handed over to Retail 7 days later with all Punch list items 100% complete. Retail will then merchandise the store before store opening

The aim of the meeting is as follows :-

1. To review all aspects of the project to ensure it complies with the PAM approved drawings and design standards
2. To review all operational aspects of the store, highlight any concerns and resolve any issues that can be addressed within acceptable time and cost constraints
3. To identify any learning's for future projects
4. The Walk Around is not to carry out a punch list inspection, this is the responsibility of the Construction Manager and General Contractor.

The day is designed to be one where little work is progressing on site, so that the group may review all aspects, and all areas, of the project. It is the intent that every operational area of the site is reviewed.

The Developer's Construction Project Manager should take a note of Next Steps, which should be produced by the General Contractor within one business day.

Expectations

At the time of Walk around, the following should be in place:

1. Shell construction fully complete
2. Parking lot and unloading bay complete
3. All MEPR services installed
4. Shelving, refrigeration and check-stands installed
5. Signage complete internally and externally
6. White striping on parking lot complete
7. Office areas complete with furniture installed
8. IT installation substantially complete
9. Cleaning well underway
10. All scissor lifts out of the warehouse
11. Minimal rubbish on site

The following is acceptable as being outstanding, but in progress :

1. Completion of punch list
2. Completion of IT installation (Programming left only)
3. Commissioning of MEPR services
4. Completion of cleaning
5. Completion of landscaping

E. Handover (Acceptance by Retail)

At handover, the building is to be complete, with the possible exception of ongoing mechanical and/or refrigerated systems (minor balancing works only). Expectations of what the Store Manager and his team will find on the first day of occupation are:

1. Issues from walk round have been resolved
2. Punch list complete
3. Offices are complete and all systems work
4. Communications systems (phones, music system, pagers etc) all work
5. Site is clear of contractor's equipment
6. Staff facilities operational (rest room and staff area)
7. Training is delivered in line with Handover Document
8. Security systems commissioned
9. All general equipment installed
10. All signage installed
11. JL&L is communicating with verisai and able to remotely access the systems
12. C of O or Temporary C of O issued, and store is authorized to trade on the day of handover
13. Building and site conform to the latest PAM approved drawings (RED, please insure that John York is on board prior to the handover, and if he is not in attendance, that you have his express written approval that the building and site are in conformance)
14. Insure that the latest PAM approved drawings are on site

1.07 RE-INSPECTION PROCEDURE

- A. Upon receipt of General Contractor's request for final inspection and that the work has been completed, including punch-list items resulting from earlier inspections, and excepting incomplete items delayed because of acceptable circumstances, (subject to Owner and Architect approval), construction Manager and/or Owner will re-inspect work.
- B. If the Project is complete and all "Punch List" items are completed and corrected, the Architect will issue a final "Certificate of Payment".
- C. After completion of the procedures outlined above the General Contractor shall submit his final application for payment in accordance with the Agreement, the General Conditions and Supplementary General Conditions.
- D. If, because of acts or omissions of the General Contractor, the Architect is required to conduct more than one final inspection of the Project to review the "Punch List", he will charge the Owner for the additional services required and such costs will be deducted from the money still due the General Contractor.

1.08 FINAL CHECKOUT OF STRUCTURE AND EQUIPMENT WITH OWNER

- A. Arrange for each installer of work requiring continuing maintenance or operation, to meet with Owner personnel, at the project site, to provide basic instructions by manufacturer's representatives where installers are not expert in the required procedures. Review maintenance manuals, record documentation, tools, spare parts, and materials, lubricants, fuels, identification system, control sequences, hazards, cleaning and similar procedures and facilities. For operational equipment, demonstrate start-up, shutdown, emergency operations, noise and vibration adjustments, safety, economy/efficiency adjustments, energy effectiveness, and similar operations. Review maintenance and operations in relations with applicable warranties, agreements to maintain, bonds, and similar continuing commitments.
- B. Retention funds will not be paid until project closeout is complete.

SPARE PARTS, EXTRA STOCK AND MAINTENANCE MATERIALS

C. The General Contractor shall deliver to Owner the spare parts, extra stock and maintenance materials as listed below or identified in other sections of the specification. General Contractor shall complete the sign-off check list and provide to Owner Representative. Materials shall be neatly packaged and identified.

<u>D. Section</u>	<u>Item</u>	<u>Received</u>
09911/9963 -	Paint/Stain/Varnish: 1 full gallon of each color and sheen: Paint Color _____ Paint Color _____ Paint Color _____ Paint Color _____	_____ _____ _____ _____
Division 15 -	Plumbing: 2 PLUMBING VALVE CHARTS (HIGHLIGHT All Water Valves on Sheets P-1 and P1-1) _____ Air Distribution: 1 complete change of all filter media _____	_____ _____ _____
DIVISION 13 -	Fire Protection: 1 head wrench _____ 1 cabinet (large enough hold all heads) 2 each type head: A. Recessed (interior) _____ B. Recessed (exterior) _____ C. Upward Pendant (interior) _____ D. Upward Pendant (exterior) _____ E. Other as indicated _____	_____ _____ _____ _____ _____ _____

E. General Contractor has delivered all spare parts, extra stock, and maintenance materials as defined above in a satisfactory condition and has reviewed the maintenance procedures with the Construction Manager and Owner's Representative.

This document is to be included in the closeout package and be fully executed.

TENANT CONSTRUCTION MANAGER DATE

OWNER REPRESENTATIVE DATE

END OF SECTION 01770

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. See Divisions 2 through 16 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.02 SUBMITTALS

- A. All requirements and procedures for submittal of shop drawings, product data and samples required for all work on the Project. This Section is complementary to the General Conditions and Supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General Conditions or Supplementary General Conditions.

1.03 GENERAL

- A. Provide shop drawings, product data and samples specified herein in accordance with the following requirements.
 - 1. All required shop drawings shall be submitted to the Architect of Record within the first twenty-one (21) working days from notice to proceed.
 - 2. Submit shop drawings, material lists, manufacturer's literature, samples and other required information in sufficient time to permit proper consideration and action on same before any materials or items, which such shop drawings, information and samples represent, are ordered. Allow sufficient time so that no delay occurs due to required lead time in ordering or delivery to the job site.
- B. The General Contractor will be held responsible for any delay in progress of the work due to his failure to observe these requirements. Time for completion of the Contract for Construction will not be extended on account of his failure to promptly submit shop drawings, product data and samples.

1.04 SHOP DRAWINGS, PRODUCT DATA

- A. Furnish to the Architect, for review, 6 prints of each sheet of shop (or setting) drawings and schedules for parts of the work as specified or required. Allow ample time for Architect's comments, review and shipping. The Architect will correct, annotate, clarify or amplify said shop drawings or at his option, require the General Contractor to do so. After Architect has reviewed the submission, he will obtain such prints, as he requires for his use and transmit remaining prints to the General Contractor. General Contractor shall obtain, at his cost, whatever prints he required for his purposes and distribute same.
- B. Each shop drawing submittal shall be accompanied by a copy of the General Contractor's "Transmittal Form", signed by General Contractor and copied to Owner's project manager.
- C. Do not execute work required by shop drawings until confirmation of review is obtained.
- D. Submit shop drawings and details sufficiently in advance of the work, which they cover and in accordance with a prearranged schedule, to afford ample time for checking, correcting, rechecking and shipping if necessary, for such drawings and details.
- E. Before submitting shop drawings for review, General Contractor shall check shop drawings of Subcontractors for accuracy, ascertain that all work contiguous with and having bearing on other work shown on shop drawings is accurately drawn, and that work shown is in conformity with Contract Documents.

- F. All such drawings and details, when submitted, must bear the stamp of approval of General Contractor, bearing checked data, as evidence that such drawings and details have been checked by him. Said "stamp" shall clearly state that the General Contractor has checked the drawings and, by his signature, he so certifies. Any drawings submitted without such executed stamp of approval, or whenever it is evident (despite the stamp) that the drawings have not been checked, they will be returned to the General Contractor for resubmission and will not be considered. In such event, it will be deemed that General Contractor has not complied with this provision and the General Contractor shall bear risk of all delays to the same extent as if no drawings or details at all had been submitted.
- G. The General Contractor shall prepare composite drawings and installation layouts, when required to solve tight field conditions. Such drawings shall consist of dimensioned plans and elevations, and must give complete information particularly as to size and location of sleeves, inserts, attachments, openings, conduits, ducts, boxes, structural interferences, etc. These composite drawings and installation layouts shall be coordinated in the field by the General Contractor and his Subcontractors for proper relationship to the work of other trades, based on field conditions and shall be checked and approved by them before submission to the Architect for his final review. The General Contractor shall have competent technical personnel readily available for such coordinating and checking, as well as for supervision of field installation of work as per the drawings and installation layouts, which have been previously determined by him to be correct and carry the Architect's review stamp.
- H. Submission of shop drawings (in either original submission or when resubmitted with corrections) constitute evidence that the General Contractor has checked all information thereon, and that he accepts and is willing to perform the work as shown in a workmanlike manner and in accordance with best standard practice. No claim for an addition to the Contract Sum shall be based on work shown on shop drawings, unless such claim is noted in General Contractor's Transmittal Form accompanying the shop drawings.
- I. Cost of any changes in construction due to improper checking and coordination by the General Contractor shall be paid for by him, and the General Contractor shall be responsible for all additional costs, including coordination.
- J. Shop drawings must clearly delineate the following information:
1. Architects name and project number, Project name and address.
 2. Drawing title, number, date and scale.
 3. Names of General Contractor, Subcontractor and fabricator.
 4. Working and erection dimensions.
 5. Arrangements and sectional views.
 6. Necessary details, including complete information for making connections with other work.
 7. Kinds of materials and finishes.
 8. Applicable specification reference number.
 9. 5" x 3" space for General Contractor's and Architect's stamps.
- K. If shop drawings show variations from Contract Documents because of standard shop practice or other reasons, make specific mention of such variations in Transmittal Form, with copy of prior approved substitution form.
- L. Shop drawing review by Architect will be general. It shall not relieve the General Contractor of responsibility for accuracy of such shop drawings, nor proper fitting, construction of work, furnishing of materials or work required by Contract Documents and not indicated on shop drawings. Shop drawing approval shall not be construed as approving departures from Contract Documents.
- M. Review of shop drawings and schedules shall not relieve the General Contractor from responsibility for any violation indicated on such drawings or schedules of local, county, state or federal laws, rules, ordinances or rules and regulations of commissions, boards or other authorities or utilities having jurisdiction.
- N. When product data, consisting of manufacturer's printed literature is required to be submitted to Architect, it shall be submitted in original form. Any fading type of reproduction will not be accepted. A minimum of 6 each is required.

1.05 EQUIPMENT LISTS:

- A. Submit 6 copies of a complete list of all major items of mechanical, plumbing and electrical equipment and materials within 30 days after award of Contract. Submit all items at one time in a neat and orderly manner. Partial lists will not be acceptable.
- B. Submittals shall include the manufacturer's specifications, physical dimensions and ratings of all equipment. Furnish performance curves for all pumps and fans. Where submittal sheet describes items in addition to that item being submitted, the submitted item shall be clearly marked on the sheet and superfluous information shall be crossed out.
- C. Equipment submittals shall be complete including space requirements, weight, electrical and mechanical requirements, performance data and supplemental information requested by the Architect.

1.06 SAMPLES

- A. Deliver no material to the building site prior to receipt of Architect's written approval. Furnish materials equal in every respect to approved samples and execute work in conformity therewith.
- B. The approval or acceptance of samples will not preclude the rejection of any material upon the discovery of defects in same prior to the final acceptance of the completed work.
- C. After a material has been approved, no change in brand or make will be permitted unless satisfactory written evidence is presented to, and approved by the Architect that the manufacturer cannot make scheduled delivery of approved material, or that material delivered has been rejected and substitution of suitable material is an urgent necessity or that other conditions are apparent which indicate approval of such substitute materials to be in best interest of Owner.
- D. All samples of materials requiring laboratory tests shall be submitted to laboratory for testing not less than 90 days before such materials are required to be used in the work. Submit all other samples for approval within 30 days after signing of the Contract Documents.
- E. Submit samples, in duplicate, except where greater or lesser number is specifically required by these Specifications. Submittal shall be made only by the General Contractor, unless he has authorized his Subcontractor to submit them and has notified the Architect to this effect. Ship all samples prepaid.
- F. The transmittal shall contain list of samples, Project, General Contractor, manufacturer, brand, quarry, quality, etc.; also job number, specifications reference, ASTM or FS number (if any) and material being furnished. Enclose copies of transmittal with samples. Any deviation from Contract for Construction requirements shall be so stated in the transmittal.
- G. Label each sample to indicate Project, General Contractor, manufacturer, brand, quality, etc.; also job number, ASTM or FS number (if any).
- H. Samples, which are rejected by the Architect, must be resubmitted as soon as possible after notification of rejection, and shall be marked "Resubmitted Sample" in addition to other information required.
- I. The right is reserved to require submission of samples of any material or any material lists whether or not specifically specified in the Specifications.

PART 2 - PRODUCTS

2.01 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

- 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.02 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

2.03 RECORD DRAWINGS

- A. Refer to Section 01770 for Record Drawing Information.

PART 3 - EXECUTION

3.01 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION 01781

HOLLOW METAL DOORS AND FRAMES (NATIONAL ACCOUNT)

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies the construction of all hollow metal doors, fire rated doors, and metal frame assemblies including installation, clips, shims, hinges, reinforcement, hardware, paint, and finishing.
- B. Contractor shall provide all labor, materials, equipment, and services necessary to design, furnish, deliver, and install all hollow metal frame and door work, as indicated on the Drawings, in accordance with local codes and standards, or as specified herein. This work shall include but not be limited to design and fabrication of door frames and associated welding, anchoring, aligning, inspecting, reinforcing, cutting, fitting, cleaning and painting.
- C. Hollow metal doors and frames identified herein are National Account items purchased by Owner, received, stored and installed by General Contractor. Refer to Section 01630 for vendor contact information.
- D. Coordinate delivery with other work to avoid delay. All work shall be coordinated with other sections.
 - 1. Section 08710, Finish Hardware
 - 2. Section 08820, "Glass and Glazing"

1.02 SUBMITTALS

- A. Submittals shall be provided in accordance with sections 01330, and 01600.
- B. Product Data: For each type of material and product indicated. Include construction details, material descriptions, core descriptions, label compliance, fire-resistance rating, and finishes for each type of steel door and frame specified.
- C. Shop Drawings: Clearly show layout, designation, number, type, location and materials required.
- D. Samples for review in accordance with Sections 01330 and 01600.
- E. Material certificates for each type of product indicated. Include statements of material properties indicating compliance with requirements, standards, and type designations within standards. Include material and mill test reports, substantiating compliance with requirements.
- F. Welding Certificates
- G. Field quality control test and inspection reports
- H. No Substitutions on National Account items.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Experience in performing work of this section, specializing in installation of work similar to that required for this project, employing workers who are skilled in this area of work, and whose projects have a record of successful in-service performance.
- B. Manufacture and install fire rated doors in accordance with NFPA 80.
- C. Manufacturers shall meet the industry standards and codes for the materials identified on the Drawings and in the Specifications herein. All doors and frames shall meet specified requirements and SDI-100 for unit welded frames and doors, and the NAAMM "Hollow Metal Technical and Design Manual".
- D. Certification: Product certificates signed by manufacturer, certifying materials comply with specified performance characteristics, criteria, and physical requirements.

HOLLOW METAL DOORS AND FRAMES (NATIONAL ACCOUNT)

- E. Manufacturer's instructions for installation shall be delivered and stored with the materials.
- F. Testing: As required by the latest industry codes and standards.
- G. Tolerances shall conform to industry codes and standards, except as otherwise noted.
- H. Warranty:
 - 1. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
 - 2. Warranty Period: two (2) years commencing on Date of Certificate of Occupancy.
 - 3. Additional requirements for product warranties are included in Section 01600.
- I. Fire-Rated Door Sidelight and Transom Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated.
 - 1. Test Pressure: Test at atmospheric (neutral) pressure according to NFPA 252 or UL 10B.
- J. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9. Label each individual glazed lite.
- K. Smoke-Control Door Assemblies: Comply with NFPA 105 or UL 1784.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, and store, doors and frames in accordance with manufacturer's written instructions. Store materials in a vertical position – covered on 4" wood sills in a manner to prevent rust, moisture damage, and damage from ongoing construction activities.
- B. Provide wood slats between doors to avoid any metal-to-metal contact. Leave doors in stored position until ready to hang.
- C. Identify each door and frame per shop drawings.
- D. Locate materials away from heavy and unnecessary traffic. Dumping on the ground is not permitted.
- E. Furnish temporary protection for all exposed corners and edges.
- F. Store all packaged materials in original, unopened, undamaged containers, with identification labels intact, and bearing the name of the manufacturer and brand.
- G. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- H. Store and protect materials from exposure to harmful weather conditions, and at temperature and humidity conditions recommended by manufacturer. Some materials may need to be stored in protected enclosures, and handled by methods which avoid exposure to moisture. Additional requirements for product delivery, storage and handling are in Section 01600.

PART 2 - PRODUCTS**2.01 HOLLOW METAL FRAMES**

- A. Contractor shall install Owner furnished doors and frames including all finish hardware and appurtenances per National Account vendor and as identified herein. Refer to Section 01630 for vendor contact information.

HOLLOW METAL DOORS AND FRAMES (NATIONAL ACCOUNT)

- B. Frames shall be pressed steel to profile indicated on the Drawings, 16-gauge (unless otherwise noted) cold rolled, pickled, annealed steel, unit type welded construction, with angles, mitered returns and miters neatly welded and weld beads ground smooth.
- C. Prepare frames to receive mortised type hardware.
 - 1. Spot-weld reinforcing plates to inner surface of jambs at hinge, lock, latch, and other hardware locations. Hinge reinforcements shall be 10-gauge steel for lightweight core doors, 7-gauge steel for others.
 - 2. All other hardware reinforcements shall conform to SDI-100.
 - 3. Spot-weld 24-gauge galvanized steel plaster guards over hardware from templates furnished to frame manufacturer by hardware supplier.
 - 4. Provide suitable reinforcements for surface applied hardware.
 - 5. Punch door stops to receive rubber silencers as required.
- D. Provide frames with fixed insert anchors welded to face and flange returns 12" down from top, then 24" on center.
 - 1. Provide frames with minimum 14-gauge floor clips welded to each jamb, face and flanges punched for anchoring to floor.
 - 2. All anchors to be suitable for wall conditions.
 - 3. At door openings wider than 42" and at multiple openings, reinforce head members full length with 12-gauge steel channel.
 - 4. Brace door frames with temporary wood or metal spreaders to insure maintaining square and true shapes in shipping.
 - 5. Frames or doors damaged in any way shall not be installed.
- E. Provide frames with UL labels as required or as indicated on the Drawings.
- F. Provide frames with loose glazing beads with screws for flush countersunk installation to receive glass per SDI-100.

2.02 PRIMING FOR FRAMES

- A. Frames to receive one shop coat of rust inhibitive primer.
- B. Primer shall be smooth surface, ready to receive finish coats at time of delivery and when installed.
 - 1. No runs, overspray, dust or other defects will be allowed.
 - 2. Primer shall be bonded to metal sufficiently that upon aging it will not chip or flake when scraped through.

2.03 HOLLOW METAL DOORS

- A. Construct hollow metal doors, flush type, 1-3/4" thick, of 2 sheets of finest grade 18-gauge cold rolled steel.
 - 1. Vertical stiffeners shall be 22 gauge steel "U" forms, spot welded to each inside face of the door full height and not more than 6" apart.
 - 2. Reinforce top and bottom of doors horizontally by steel channels, full width spot welded to each face at least 4" on center. Joints at the edges of doors shall be continuously welded automatically by the gas shielded method arc process.
 - 3. Arc welding, and filling seams is not acceptable.
- B. Doors shall have inorganic sound deadening material non-combustible batt-type applied to the interior surface of panels. Sound deadening shall eliminate all metallic reverberations incidental to normal door operation.
- C. Provide double doors with one-piece astragals of 12-gauge steel.
- D. Provide solid drip cap at top of all exterior out-swinging doors.
- E. Accurately mortise doors for locks and hinges. Provide adequate reinforcement in accordance with Table

HOLLOW METAL DOORS AND FRAMES (NATIONAL ACCOUNT)

IV SDI-100 and NAAMM CHM-1.

- F. Provide louver doors as scheduled.
 - 1. Provide sight proof louvers either pierced into the panels of the doors or inserted into the panels.
 - 2. Form louver frames of minimum 20-gauge steel.
 - 3. Weld or tenon minimum 24-gauge blades to frame and fasten the entire assembly to the door with moldings.
 - 4. The moldings, when used, shall be an integral part of the louver.
- G. Provide for glazing in doors as scheduled:
 - 1. Non-removable minimum 20-gauge glazing stops shall occur on the outside of exterior doors and on the reverse side of interior doors.
 - 2. Glazing beads on the inside of glass panels shall be removable.
- H. Provide doors with UL labels as required or indicated.
- I. Knob mounting height 38" A.F.F. (see Section 08710 for exterior handles or knobs).

2.04 PRIMING FOR DOORS

- A. Doors to be thoroughly cleaned, bonderized and primed with shop coat of light gray zinc chromate rust inhibitive primer, baked on.
- B. Primer shall be smooth surface, ready to receive finish coats at time of delivery and when installed. No runs, overspray, dust or other defects will be allowed. Primer shall be bonded to the metal sufficiently that upon aging it will not chip or flake when scraped through.

2.05 STANDARD STEEL DOORS

- A. General: Provide doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces. Comply with ANSI A250.8.
 - 1. Core Construction: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, mineral-board, or vertical steel-stiffener core that produces doors complying with ANSI A250.8.
 - 2. Vertical Edges for Single-Acting Doors: Square edge unless beveled edge is indicated.
 - a. Beveled Edge: 1/8 inch in 2 inches.
 - 3. Top and Bottom Edges: Closed with flush or inverted 0.042-inch-thick end closures or channels of same material as face sheets.

2.06 STANDARD STEEL FRAMES

- A. General: Comply with ANSI A250.8 and with details indicated for type and profile.
- B. Supports and Anchors: Fabricated from electrolytic zinc-coated or metallic-coated steel sheet.
- C. Jamb Anchors: Masonry, stud-wall, compression, or postinstalled expansion type; not less than 0.042 inch thick.
- D. Floor Anchors: Formed from same material as frames, not less than 0.042 inch thick.
- E. Plaster Guards: Formed from same material as frames, not less than 0.016-inch thick.

2.07 STOPS AND MOLDINGS

- A. Moldings for Glazed Lites in Doors: Minimum 0.032 inch thick, fabricated from same material as door face sheet in which they are installed.
- B. Fixed Frame Moldings: Formed integral with standard steel frames, minimum 5/8 inch high, unless otherwise indicated.

HOLLOW METAL DOORS AND FRAMES (NATIONAL ACCOUNT)

- C. Loose Stops for Glazed Lites in Frames: Minimum 0.032 inch thick, fabricated from same material as frames in which they are installed.

PART 3 - EXECUTION**3.01 GENERAL**

- A. Contractor shall install steel doors, frames, finish hardware and appurtenances provided by the Owner plumb, rigid, properly aligned, securely fastened in place, and as indicated on the Drawings, as specified herein, and in accordance with manufacturer's written instructions.
- B. At fire-protection-rated openings, install doors and frames according to NFPA 80.
- C. Install smoke control doors in accordance with NFPA 105.
- D. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with mortar as specified in Division 4 Section "Concrete Masonry Unit Assemblies."
- E. Concrete Walls: Solidly fill space between frames and concrete with grout. Install grout in lifts and take precautions, including bracing frames, to ensure that frames are not deformed or damaged by grout forces.

3.02 FRAME INSTALLATION

- A. In concrete walls, provide adjustable T-strap type anchors, of not less than 16-gauge steel or 0.156" diameter steel wire.
 - 1. Provide a minimum of four anchors per jamb for frames up to 8'-0" in height.
 - 2. Provide minimum of five anchors per jamb for frames up to 10 feet in height.
 - 3. For frames over 8'-0", provide one additional anchor for each 2'-0" or fraction thereof in height.
- B. Frames in drywall partitions shall be equipped with anchors for both attachments through studs.
 - 1. Provide a minimum of 4 anchors at each jamb up to 9' height fabricated from 18-gauge steel.
 - 2. Anchors shall be welded in the frame.
- C. At each jamb of frames in masonry walls, provide at least 3 "T" type loose masonry anchors fabricated from 18-gauge steel up to 8'-0" high.
- D. Floor anchor clips shall be fabricated from 14-gauge steel and shall be welded between the door frame flanges.
 - 1. Anchor clips to floor with at least two power driven anchors or equivalent per clip to prevent twist.

3.03 FRAME INSPECTION

- A. Installer must examine substrates and conditions under which metal door and frames are to be installed and must notify Contractor in writing of any conditions detrimental to proper and timely completion of work.
- B. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to installer.

3.04 PLACING FRAMES:

- A. Install metal doors, frames, and accessories in accordance with approved shop drawings, manufacturer's data, and as specified herein.
- B. Except for frames located at in-place concrete or masonry and at drywall installations, place frames prior to construction of enclosing walls and ceilings.
- C. Set frames accurately in position, plumb, aligned, and braced securely until permanent anchors are set.

HOLLOW METAL DOORS AND FRAMES (NATIONAL ACCOUNT)

- D. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.

3.05 DOOR INSTALLATION

- A. Fit hollow metal doors accurately in frames with clearances as follows:
 - 1. Between door and frame at head and jamb: 1/8"
 - 2. At door sill without threshold: 3/8" max.
 - 3. At door sill with threshold: 1/4" max.
 - 4. Between meet edges of pairs of doors: 1/8"
- B. Place fire-rated doors with clearance as specified in NFPA 80.
- C. Install doors completely and accurately, complete with all finish hardware. Install finish hardware in a neat workmanlike manner in accordance with the hardware schedule using only mechanics skilled in this type of work.
 - 1. Do not install hardware until painting is completed.
 - 2. Keep all hardware free from scratches, dents or other defacements.
- D. Adjust and Clean:
 - 1. Prime Coat Touch-Up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.
 - 2. Final Adjustments: Check and re-adjust operating finish hardware items, leaving metal doors and frames undamaged and in complete and proper operating condition. Remove and replace defective work, including standard steel doors or frames that are warped, bowed, or otherwise unacceptable.
- E. Glazing: Comply with installation requirements in Division 8 Section "Glazing" and with standard steel door and frame manufacturer's written instructions.

END OF SECTION 08111

GENERAL

1.01 SUMMARY

- A. This Section specifies the construction of all impact doors and related items including installation, hardware, and paint.
- B. Contractor shall provide all labor, materials, equipment, and services necessary to design, furnish, deliver, and install all impact doors and related work, as indicated on the Drawings, in accordance with local codes and standards, or as specified herein. This work shall include but not be limited to fabrication and installation of impact doors, and associated cutting, fitting, aligning, fastening, cleaning and painting.
- C. Impact Doors identified herein are National Account items purchased by Owner, received, and stored by the General Contractor, and installed by Others. Refer to Section 01630 for vendor contact information.
- D. Coordinate delivery with other work to avoid delay. All work shall be coordinated with other sections.
 - 1. Section 05500 Miscellaneous Metal Fabrications

1.02 SUBMITTALS

- A. Submittals shall be provided in accordance with sections 01330 and 01600.
- B. Product Data: For each type of material and product indicated.
- C. Shop Drawings:
 - 1. Submit complete detailed shop drawings prior to fabrication.
 - 2. Show, at large scale, the arrangement of pattern thickness, size or parts, size and location of cutouts in doors, full size molding profiles, face veneers, core construction and door manufacturer's name.
 - 3. Clearly show layout, designation, number, type, location and materials required.
 - 4. Schedule: Door and frame schedule, including types, general locations, sizes, construction details, and other data pertinent to installation.
- D. No Substitutions on National Account items.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Experience in performing work of this section, specializing in installation of work similar to that required for this project, employing workers who are skilled in this area of work, and whose projects have a record of successful in-service performance.
- B. Manufacturers shall meet the industry standards and codes for the materials identified on the Drawings and in the Specifications herein.
 - 1. Specification is based on impact doors as manufactured by Rubbair Door, 100 Groton Shirley Road, Ayer, MA. 01432-1050.
 - 2. The latest AWI Quality Standards, as modified below, and ANSI A-208.1, govern all work hereunder.
- C. Certification: Product certificates signed by manufacturer, certifying materials comply with specified performance characteristics, criteria, and physical requirements.
- D. Manufacturer's instructions for installation shall be delivered and stored with the materials.
- E. Tolerances shall conform to industry codes and standards, except as otherwise noted.
- F. Guarantee:
 - 1. Furnish manufacturer's standard "Life of the Installation" guarantee for all interior doors.
 - 2. Repair or replacement shall include reasonable cost for re-hanging and refinishing.
 - 3. Obtain detailed instructions on the limitations imposed on this guarantee by the door manufacturer's

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recommendations with respect to storage, installation, and maintenance, and shall notify all subcontractors of these requirements before any doors are delivered.

4. Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official.
5. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents, commencing on date of Certificate of Occupancy.
6. Additional requirements for product warranties are included in Section 01600.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Do not deliver impact doors to the job site until a suitable storage room is provided to protect the doors from elements.
 1. Examine doors for damage upon delivery. Verify proper shipping techniques were used.
 2. Store doors according to manufacturer's instructions prior to hanging.
 3. Do not install doors until plaster and wallboard operations are completed and buildings are protected from excessive temperature changes.
- B. Transport and handle all materials in such a manner as to prevent damage. Dumping on the ground is not permitted.
- C. Locate storage piles, stacks, or bins to avoid or protect material from heavy and unnecessary traffic.
- D. Furnish temporary protection for all exposed corners and edges.
- E. Deliver all packaged materials in original, unopened, undamaged containers, with identification labels intact, and bearing the name of the manufacturer and brand.
- F. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- G. Store and protect materials from exposure to harmful weather conditions, and at temperature and humidity conditions recommended by manufacturer. Some materials may need to be stored in protected enclosures, and handled by methods which avoid exposure to moisture. Store moisture-sensitive materials off the ground, under cover, and in a dry location. Additional requirements for product delivery, storage and handling are in Section 01600.

PRODUCTS**1.05 MANUFACTURER**

- A. Impact doors are National Account items, purchased by Owner, received, stored and installed by General Contractor. Refer to Section 01630 for vendor contact information.
 1. Chase Industries, Inc. (DBA Chase Doors), Durus Products, 2809 SW 13th Street, Redmond, OR 97756. Phone: 1-800-543-4455,

1.06 MATERIALS

- A. Chase Industries impact doors :
 1. Model Durulite Retailer
 2. Monolithically (one piece) formed, insulated, impact door system, polyethylene black spring bumpers, windows, hardware, and accessories
- B. Color to be selected from manufacturer's standard colors by Architect.
- C. Frame is to be furnished by others in section 05500 herein, and as indicated on the drawings.

EXECUTION**1.07 INSTALLATION**

IMPACT DOORS AND FRAMES (NATIONAL ACCOUNT)

- A. Place frames prior to construction of enclosed walls and ceilings.
- B. Set frames according to manufacturer's written instructions, accurately in position, plumb, aligned, and braced securely until permanent anchors are set.
- C. After wall construction is complete, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
- D. Doors shall be accurately fit with proper clearances, and left in perfect working order.
- E. All re-fitting necessary due to swelling, shrinking, faulty assembly or installation shall be done by the contractor, without cost to the Owner, for a period of two-years after completion and acceptance of the building.
- F. When dressing or cutting has been done, these surfaces shall be repainted or revarnished.
- G. Provide standard pre-fit clearances of 1/8" at top, 1/8" each side, and minimum 3/8" at bottom; increase bottom clearances over carpet and saddles.

1.08 ADJUST AND CLEAN

- A. Final Adjustments: Check and re-adjust operating finish hardware items for proper operation.
- B. Lubricate operating parts.
- C. Check seals for proper fit.
- D. Work just prior to final inspection.
- E. Leave work in complete and proper operating condition.
- F. Remove and replace defective work, including doors or frames which are warped, bowed or otherwise damaged.

1.09 TOUCH UP:

- A. Immediately after erection, sand smooth any rough or damaged or damaged areas and apply touch-up so that there is visual evidence of touch up.

END OF SECTION 08310

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OVERHEAD SECTIONAL DOORS (NATIONAL ACCOUNT)

GENERAL

1.01 SUMMARY

- A. This Section specifies the construction of all overhead sectional door assemblies and related items including installation of doors, tracks, mounting hardware, operators, hinges, rollers, locks, testing, and finishing.
- B. Contractor shall provide all labor, materials, equipment, and services necessary to design, furnish, deliver, and install all overhead door assemblies and related work, as indicated on the Drawings, in accordance with local codes and standards, or as specified herein. This work shall include but not be limited to design and fabrication of overhead doors, and associated welding, insulating, reinforcing, cutting, fitting, cleaning and finishing.
- C. Some materials identified herein are National Account items purchased by Owner, received and stored by General Contractor, and installed by Others. Refer to Section 01630 for vendor contact information.
- D. Coordinate delivery with other work to avoid delay. All work shall be coordinated with other sections.
 - 1. Related Section: 08710, "Finish Hardware".

1.02 SUBMITTALS

- A. Submittals shall be provided in accordance with sections 01330 and 01600.
- B. Product Data: For each type of door, and accessory indicated.
- C. Shop Drawings:
 - 1. Clearly show layout, designation, number, type, location and materials required.
 - 2. Include plans, elevations, sections, details, wiring diagrams, and attachments to other work
 - 3. Contractor shall verify openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.
- B. Fire-Test-Response Characteristics: Provide assemblies complying with NFPA 80 that are identical to door and frame assemblies tested for fire-test-response characteristics per UL 10b and NFPA 252, and that are listed and labeled for fire ratings indicated by UL, FMG, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70.
- D. Manufacturers shall meet the industry standards and codes for the materials identified on the Drawings and in the Specifications herein.
 - 1. Specification is based on products as manufactured by Wayne Dalton/Crawford Corp., Mt. Hope OH.
 - 2. Products that meet or exceed specification requirements as manufactured by Roway, Raynor, Overhead or Windsor are acceptable for bidding.
- E. Certification: Product certificates signed by manufacturer, certifying materials comply with specified performance characteristics, criteria, and physical requirements.
- F. Testing: As required by the latest industry codes and standards.
- G. Tolerances shall conform to industry codes and standards except as otherwise noted.
- H. Warranty:

OVERHEAD SECTIONAL DOORS (NATIONAL ACCOUNT)

1. **Manufacturer's Warranty:** Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
2. **Warranty Period:** two (2) years commencing on Date of Certificate of Occupancy.
3. Additional requirements for product warranties are included in Section 01600.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Transport and handle all materials in such a manner as to prevent damage. Dumping on the ground is not permitted.
- B. Locate storage piles, stacks, or bins to avoid or protect material from heavy and unnecessary traffic.
- C. Furnish temporary protection for all exposed corners and edges.
- D. Deliver all packaged materials in original, unopened, undamaged containers, with identification labels intact, and bearing the name of the manufacturer and brand.
- E. Manufacturer's instructions for installation shall be delivered and stored with the materials.
- F. **Ordering:** Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- G. Store and protect materials from exposure to harmful weather conditions, and at temperature and humidity conditions recommended by manufacturer. Some materials may need to be stored in protected enclosures, and handled by methods which avoid exposure to moisture. Store moisture-sensitive materials off the ground, under cover, and in a dry location. Additional requirements for product delivery, storage and handling are in Section 01600.

1.05 PERFORMANCE REQUIREMENTS

- A. **Structural Performance:** Provide overhead door assemblies capable of withstanding the effects of gravity loads and the following loads and stresses without evidencing permanent deformation of door components:
 1. **Wind Load:** as identified on the drawings.
 2. **Impact Test for Flying Debris:** Comply with ASTM E 1996, tested according to ASTM E 1886.
- B. **Operation-Cycle Requirements:**
 1. Provide overhead door components and operators capable of operating for not less than 50,000 cycles for motorized doors, and 10,000 cycles for manual doors.

PRODUCTS**1.06 SECTIONAL OVERHEAD DOORS:**

- A. Steel sectional, upward-acting doors shall be Wayne-Dalton, Thermospan 150, vertical-lift installation, or equal.
- B. Steel door sections shall be fabricated from hot-dipped galvanized structural steel/polyurethane/steel sandwich type construction to include a thermal break and have a calculated R-value of 14.16, in accordance with industry guidelines.
 1. **Steel Sheet Thickness:** 24 gauge.
 2. **Exterior Section Face:** stucco
- C. **Door Panels:** Fabricated from a single sheet with sections not more than 24 inches high and nominally 2 inches deep. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
- D. **Door Sections:** Enclose open section with not less than 18 gauge galvanized steel channel end stiles. Fabricate with not less than 18 gauge galvanized intermediate stiles, cut to door section profile, spaced at

OVERHEAD SECTIONAL DOORS (NATIONAL ACCOUNT)

not more than 48 inches o.c.

1. Reinforce bottom section with a continuous channel or angle complying with bottom section profile and allowing installation of astragal.
2. Reinforce sections with continuous horizontal and diagonal reinforcement of galvanized steel bars, struts, trusses or strip steel, formed to depth and bolted or welded in place to meet wind load requirements.
3. Reinforce for hardware attachment.
4. Insulation: Insulate inner core of steel sections with rigid cellular polystyrene foam to have fire retardant additive to meet ULR-8194A.
 - a. The Manual Sectional Door with Polybonded laminate back cover.
 - b. The Motorized Sectional Door with 26 ga. minimum back cover prefinished white.
5. Fabricate sections so finished door assembly is rigid and aligned, with tight hairline joints, and free of warp, twist, and deformation.
6. Finish: Manufacturer's standard factory applied baked on polyester.
7. Color: White unless otherwise indicated on the Drawings.
8. Motorized Sectional Door: The third section from bottom will be a full vision section with 1/8" insulated DSB glass.

E. Tracks, supports, and accessories

1. Tracks: Galvanized steel track system complying with ASTM A 653, G60 zinc coating, sized for door size and weight, designed for lift type indicated.
 - a. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size.
 - b. Slope tracks at proper angle from vertical or otherwise design to ensure tight closure at jambs when door unit is closed.
 - c. Weld or bolt to track supports.
 - d. Provide maximum high lift as clearance allows.
2. Track Reinforcement and Supports: Galvanized steel and support members, complying with ASTM A 36 and ASTM A 123. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors.
3. Support and attach tracks to opening jambs with continuous angle welded to tracks and attached to wall. Support horizontal (ceiling) tracks with continuous angle welded to track and supported by laterally braced attachments to overhead structural members at curve and end of tracks.
4. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and at top of overhead door.
 - a. Motor-Operated Doors: With combination bottom weatherseal and sensor edge.
 - b. Jamb Seals: Continuous flexible seals at door jambs for weathertight installation.

F. Hardware

1. General: Heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.
2. Hinges: Heavy-duty galvanized steel hinges, of not less than 14 gauge thick uncoated steel, at each end stile and at each intermediate stile, per manufacturer's written recommendations for door size.
 - a. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is not possible.
 - b. Use double-end hinges, where required, for doors exceeding 16 feet in width, unless otherwise recommended by door manufacturer.
3. Rollers: Heavy-duty long stem rollers, with minimum 10 steel ball bearings in case-hardened steel races, mounted with varying projections to suit slope of track.
 - a. Double Hinges: Extend roller shaft through both hinges.
 - b. Roller Tires: 3-inch diameter roller tires for 3-inch track.
 - i. Tire Material: Case-hardened steel.
4. Slide Bolt: Fabricate with side locking bolts to engage through slots in tracks for locking by padlock, located on single-jamb side, operable from inside only.
5. Power-Operated Doors: With safety interlock switch to disengage power supply when door is locked.

G. Counterbalancing Mechanism

1. Torsion Spring: Operation by counterbalance mechanism with adjustable-tension torsion springs, fabricated from oil-tempered-steel wire complying with ASTM A 229, Class II, mounted on cross-header

OVERHEAD SECTIONAL DOORS (NATIONAL ACCOUNT)

tube or steel shaft. Connect to door with galvanized aircraft-type lift cables with cable safety factor of at least 5 to 1. Calibrate springs for 50,000 cycles minimum for Motorized doors and 10,000 cycles for Manual doors.

2. Cable Drums: Cast-aluminum or gray-iron castings grooved to receive cable. Mount counterbalance mechanism with ball-bearing brackets at each end of shaft.
 - a. Include at least one additional midpoint bracket for shafts up to 16 feet long, unless closer spacing is recommended by door manufacturer.
 - b. Include at least two additional brackets at 1/3 points to support shafts more than 16 feet long, unless closer spacing is recommended by door manufacturer.
3. Bracket: Anchor support bracket, as required to connect stationary end of spring to the wall, to level shaft and prevent sag.
4. Leaf Spring Bumper on Manual doors: Include at each horizontal track to cushion door at end of opening operation.

H. Miscellaneous

1. Lock is to be a slide bolt welded to each side with padlock eye for locking to each track - no handle is to be projected to the outside.
2. Drill opening to accommodate padlocks.
3. Doors shall be equipped with factory-installed joint seals between sections, jamb seals on the ends of the exterior surface, a top seal on the top section to seal against the header, and a thermal plastic rubber astragal on the bottom section.
4. Provide foot push bar and hand pull at base with rope extension.
5. Provide rope pull for operation.
6. Provide with a factory installed door viewer with 180° view if called for on door schedule.

1.07 FINISHES

- A. Galvanized-Steel Finish: Manufacturer's standard thermoset finish, light gray finish coat.

EXECUTION**1.08 EXAMINATION**

- A. Verification of Conditions: Examine the areas and conditions under which the work in this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

1.09 INSTALLATION

- A. General: Install the work of this Section in accordance with Wayne-Dalton's written instructions and recommendations, anchoring components firmly into position for long life under hard use.
- B. Installation will be authorized by a Wayne-Dalton representative.
- C. Install doors in prepared openings. Set in their correct locations, level, plumb, square, at the proper elevation, in alignment with all work. Installation shall be performed under the supervision of an accredited or franchised representative of the manufacturer.
- D. Install door and operating equipment complete with necessary hardware, jamb and head mold strips, anchors, inserts, hangers, and equipment supports.
- E. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section. Coordinate schedules for installation and orderly progress of the total construction sequence.
- F. Deviation of site conditions contrary to approved shop drawings shall be called to the attention of the Architect.
- G. Lubricate bearings and sliding parts; adjust doors to operate easily, free from warp, twist, or distortion and

OVERHEAD SECTIONAL DOORS (NATIONAL ACCOUNT)

fitting weathertight for entire perimeter.

- H. Brackets shall be attached to continuous wall angle with 5/16 inch bolts.

1.10 ADJUSTING

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain doors.
- B. Upon completion of the installation, put each operating components through at least 10 operating cycles. Adjust to achieve optimum operation.

1.11 CLEANING

- A. Upon completion of this portion of the work, promptly clean exposed portions and remove traces of dirt, grease and foreign materials.

1.12 PROTECTION

- A. Upon completion of the installation, visually check exposed surfaces of the work of this Section, and touch up scratches and abrasives to be completely invisible to the unaided eye from a distance of 5 feet.

END OF SECTION 08331

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies the construction of all aluminum doors, frame assemblies, hardware and other related materials including installation, clips, shims, hinges, reinforcement, hardware, and finishing.
- B. Contractor shall provide all labor, materials, equipment, and services necessary to design, furnish, deliver, and install all hollow metal frame and door work, as indicated on the Drawings, in accordance with local codes and standards, or as specified herein. This work shall include but not be limited to design and fabrication of door frames and associated welding, anchoring, aligning, inspecting, reinforcing, cutting, fitting, and cleaning.
- C. Coordinate delivery with other work to avoid delay. All work shall be coordinated with other sections.
 - 1. Section 08820, Glass and Glazing
 - 2. Section 07920, Caulking, Sealants and Joint Closures
 - 3. Section 08710, Finish Hardware
- D. Coordination of Fabrication: Check the actual openings in the construction work by accurate field measurement before fabrication, and show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress as directed and avoid delays of the work.

1.02 SUBMITTALS

- A. Submittals shall be provided in accordance with sections 01330, and 01600.
- B. Product Data: For each type of material and product indicated.
- C. Manufacturer's Data: Submit copies of manufacturers written guarantee specifications, recommendations and standard details for aluminum doors and frames and components of the work.
 - 1. Include all wall elevations at 1/2" scale, and full-size detailed sections of every typical composite member.
 - 2. Show anchors, joint system, expansion provisions, and other components not included in manufacturer's standard data. Include glazing details.
 - 3. Submit 2 copies of written guarantee signed by the manufacturer, installer and contractor, agreeing to replace aluminum window wall units which fail in materials or workmanship within 2 years of the date of acceptance.
 - a. Failure of materials or workmanship shall include (but not be limited to) excessive leakage or air infiltration, excessive deflections, and deterioration of finish or metal in excess of normal weathering and defects in accessories, weather stripping, and other components of the work.
- D. Include construction details, material descriptions, core descriptions, label compliance, fire-resistance rating, and finishes for each type of door and frame specified.
- E. Shop drawings shall clearly show layout, designation, number, type, location and materials required.
 - 1. Include plans, elevations, sections, details, and attachments to other work.
 - a. Include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - b. For entrances, include hardware schedule and indicate operating hardware types, functions, quantities, and locations.
- F. Samples for review in accordance with Sections 01330 and 01600.
 - 1. In addition to the requirements of section 01600, submit 3 samples of each required aluminum finish on 12" long extrusions or 6" square sheets of the alloys to be used for the work.
 - 2. Architect reserves the right to require samples of typical fabricated sections, showing joints, exposed fastening (if any), quality of workmanship, hardware, and accessory items before fabrication of the work proceeds.
 - 3. Samples will be reviewed by Architect for color and texture only.

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- G. Product test reports.
- H. Substitutions shall be requested in accordance with Sections 01230 and 01600.

1.03 QUALITY ASSURANCE

- A. Standards: Except as otherwise indicated, the requirements for aluminum doors and frames, and the terminology used in this Section, are those of NAAMM, AAMA and AA and in particular, those of the "Entrance Manual" by NAAMM.
- B. Installer Qualifications: Experience in performing work of this section, specializing in installation of work similar to that required for this project, employing workers who are skilled in this area of work, and whose projects have a record of successful in-service performance.
- C. Manufacturers shall meet the industry standards and codes for the materials identified on the Drawings and in the Specifications herein.
 - 1. Specifications are based on products as manufactured by Kawneer Co., Tri-Fab 451 series frames.
 - 2. Manufacture and install fire rated doors in accordance with NFPA 80.
- D. Certification: Product certificates signed by manufacturer, certifying materials comply with specified performance characteristics, criteria, and physical requirements.
- E. Manufacturer's instructions for installation shall be delivered and stored with the materials.
- F. Testing: As required by the latest industry codes and standards.
- G. Tolerances shall conform to industry codes and standards, except as otherwise noted.
- H. Warranty:
 - 1. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
 - 2. Warranty Period: two (2) years commencing on Date of Certificate of Occupancy.
 - 3. Additional requirements for product warranties are included in Section 01600.
- I. Smoke-Control Door Assemblies: Comply with NFPA 105 or UL 1784.
- J. Testing Agency Qualifications: An independent agency qualified according to ASTM E 699 for testing indicated.
- K. Structural-Sealant Glazing: Comply with recommendations in ASTM C 1401, "Guide for Structural Sealant Glazing."

1.04 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, and deliver to the job, doors and frames in manufacturer prepared packaging in a vertical position, covered on 4" wood sills in a manner to prevent rust, moisture damage, and damage from ongoing construction activities.
- B. Provide wood slats between doors to avoid any metal-to-metal contact. Leave doors in stored position until ready to hang.
- C. Identify each door and frame per shop drawings.
- D. Locate materials away from heavy and unnecessary traffic.
- E. Furnish temporary protection for all exposed corners and edges.

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- F. Deliver all packaged materials in original, unopened, undamaged containers, with identification labels intact, and bearing the name of the manufacturer and brand.
- G. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- H. Store and protect materials from exposure to harmful weather conditions, and at temperature and humidity conditions recommended by manufacturer. Additional requirements for product delivery, storage and handling are in Section 01600.

1.05 PERFORMANCE REQUIREMENTS:

- A. System Performance: Provide manufacturer's stock system, adapted to application indicated, which has been tested in accordance with ASTM E 330, to withstand at least the following loading:
 - 1. Minimum uniform pressure of 20 psf inward and 20 psf outward, or as required by local Municipal Building Code (whichever is greater).
 - 2. Maximum deflection of framing members normal to wall plane shall be whichever has the least deflection of the following:
 - a. Limited to L/175 of clear span for spans up to 13 feet 6 inches
 - b. Limited to L/240 of clear span plus ¼ inch for spans greater than 13 feet 6 inches
 - c. Or an amount that restricts edge deflection of individual glazing lites to ¾"
- B. Manufacturer entrances and storefronts shall be designed in accordance with the following leakage requirements:
 - 1. ASTM E 283 not to leak air more than .06 cm per sq. ft. wall area
 - 2. ASTM E 331 for water leakage.
- C. Thermal movements.
- D. Structural Loads:
 - 1. Wind Loads: As indicated on Drawings.
 - 2. Seismic Loads: As indicated on Drawings.

PART 2 - PRODUCTS**2.01 MATERIALS AND ACCESSORIES:**

- A. Manufacturer and type: Kawneer Company, Inc. Trifab 451 system with Series 350 doors or approved equal.
- B. Main storefront system: Furnish new anodized frame members to receive flush glazing to be 1" thick, insulated, low E, clear or tinted glass, as indicated on the Drawings, and per Section 08820. Storefront and glazing system design shall be provided by the manufacturer for site conditions prior to ordering. (Refer to part 1.2.E herein)
 - 1. Frames – extruded 6063-T6 Aluminum alloy, with steel reinforcing if required.
 - 2. Aluminum Members: allow and temper recommended by manufacturer for strength, corrosion resistance, and application of required finish; ASTM B 221 for extrusions, ASTM B209 for sheet/plate.
 - 3. Finish for aluminum: Clear anodized finish, unless noted otherwise - See building elevations.
 - 4. Fasteners: Aluminum, non-magnetic stainless steel, or other materials warranted by manufacturer to be non-corrosive and compatible with aluminum components.
 - 5. Do not use exposed fasteners except where unavoidable for application of hardware. Match finish of adjoining metal.
 - 6. Provide Phillips flat-head machine screws for exposed fasteners.
 - 7. Concealed Flashing: Dead-soft stainless steel, 26 gauge minimum, type selected by manufacturer for compatibility.
 - 8. Brackets and Reinforcements: Manufacturer's high-strength aluminum units where feasible; otherwise, non-magnetic stainless steel or hot-dip galvanized steel complying with ASTM A 123.
- C. Concrete/Masonry Inserts: Cast iron, malleable iron, or hot-dip galvanized steel complying with ASTM A

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- D. Bituminous Coatings: Cold-applied asphalt mastic complying with SSPC-PS 12, compounded for 30-mil thickness per coat.
- E. Clear Protective Coatings: AAMA 602.2, compounded specifically for protection of aluminum finish during construction.
- F. Slip Header Track: Provide at all Storefront heads, at Frame Walls - color to match storefront.
- G. Glass and glazing materials: Provide glass and glazing materials which comply with the requirements of Specification Section 08820, "Glass and Glazing", as indicated on the drawings, and in accordance with local codes and standards.

2.02 FABRICATION

- A. General Sizes and Profiles:
 - 1. Required sizes for door and frame units, including profile requirements, are as indicated on the drawings.
 - 2. Any variable dimensions are indicated together with maximum and minimum dimensions required to achieve design requirements and coordination with other work.
- B. Prefabrication: To the greatest extent possible, complete fabrication, assembly, finishing hardware application, and other work before shipment to project site. Disassemble components only as necessary for shipment and installation.
- C. Do not drill and tap for surface-mounted hardware items until time of installation at project site.
- D. Sequence: Complete cutting, fitting, forming, drilling and grinding of metal work prior to cleaning, finishing, surface treatment, and application of finishes. Remove arises from cut edges and ease edges and corners to radius of approximately 1/64".
- E. Welding: Comply with AWS recommendations to avoid discoloration; grind exposed welds smooth and restore mechanical finish.
- F. Reinforcing: Install reinforcing as necessary for performance requirements; separate dissimilar metals with bituminous paint or other separator which will prevent corrosion.
- G. Continuity: Maintain accurate relation of planes and angles, with hairline fit of contacting members.
- H. Fasteners: Concealed wherever possible.

2.03 STILE AND RAIL TYPE ALUMINUM DOORS

- A. Acceptable manufacturers:
 - 1. Kawneer #350
 - 2. Or equal in:
 - 3. PPG Silhouette Doors
 - 4. U.S. Aluminum Doors
- B. Frame: Provide tubular frame members, fabricated with mechanical joint using heavy inserted reinforcing plates and concealed tie-rods or j-bolts, or fabricate with structurally welded joints, at manufacturer's option.
- C. Style: Except as otherwise shown or scheduled, provide doors of medium stile, as described in AAMA publications:
 - 1. 1/4" thick safety glass, tinted to match building glass, See Building Elevations.
- D. Glazing: Fabricate doors to facilitate replacement of glass or panels, without disassembly of door stiles and

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rails.

- E. Provide snap-on extruded aluminum glazing stops, with exterior stops anchored for non-removal.

2.04 FINISHES: CLEAR ANODIZED FINISH: AA M21C22A32 (MIN. THICKNESS 0.4 MIL.) UNLESS NOTED OTHERWISE (SEE EXTERIOR ELEVATIONS).

2.05 MATERIALS AND ACCESSORIES

- A. If Exit Device is not required, use:

1. Pair of Doors:
 - 2 sets ea. Pivot Hinges: Kawneer top and bottom offset pivots – single acting
 - 2 ea. Concealed Closers: Kawneer SAM II, single acting
 - 1 ea. Lockset: Adams-Rite, #MS-1850S deadlock with 4085 header bolt
 - and
 - 2 ea. 4015 threshold bolt with dust cover floor receiver
 - 1 set Push / Pull: Kawneer "V" push bar
 - 2 ea. Weather stripping: Mfg. supplied/installed
 - 1 Sweep: Mfg. Supplied/installed / recessed type
 - Threshold: 1/2" x 4" aluminum threshold (full width) –ADA Compliant
2. Single Door:
 - 1 set Pivot Hinges: Kawneer top and bottom offset pivots – single acting
 - 1 ea. Concealed Closer Kawneer SAM II, single acting
 - 1 ea. Lockset: Adams-Rite, #MS-1850S
 - 1 ea. Push / Pull: Kawneer "V" push bar
 - 1 set Weather stripping: Mfg. Supplied / installed
 - 1 set Sweep: Mfg. Supplied / installed / recessed type
 - 1 Threshold: 1/2" x 4" aluminum threshold (full width) –ADA Compliant

PART 3 - EXECUTION

3.01 INSPECTION

- A. The storefront contractor must examine the supporting structure for the conditions under which the work is to be erected, and notify the contractor in writing of conditions detrimental to proper and timely completion of the work.
- B. Do not proceed with erection until unsatisfactory conditions have been corrected in a manner acceptable to the storefront contractor.

3.02 INSTALLATION

- A. Do not install component parts that are observed to be defective in any way, including warped, bowed, dented, abraded and broken members and including glass with glass damage.
- B. Remove and replace members that have been damaged during installation or thereafter before the time of final acceptance.
- C. Do not cut, trim, weld or braze component parts during erection, in any manner which would damage the finish, decrease the strength, or result in a visual imperfection or a failure in performance of the storefront.
- D. Return component parts that require alteration to the shop for re-fabrication, if possible, or for replacement by new parts.
- E. Install component parts level, plumb, true to line and with uniform joints and reveals.
 1. Secure to structure with non-staining and non-corrosive shims, anchors, fasteners, spacers and fillers.
 2. Use erection equipment that will not mar or stain finished surfaces and will not damage the component

ALUMINUM DOORS, FRAMES AND WINDOWS

parts in any way.

F. Frame installation

1. General:
 - a. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration.
 - b. Seal joints watertight, unless otherwise indicated.
 2. Metal Protection:
 - a. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape, or installing nonconductive spacers as recommended by manufacturer for this purpose.
 - b. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
 3. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within the system to exterior.
 4. Set continuous sill members and flashing in full sealant bed as specified in Section 07920, "Joint Sealants" and to produce weathertight installation.
 5. Entrances: Install to produce smooth operation and tight fit at contact points.
 - a. Exterior Entrances: Install to produce tight fit at weather stripping and weathertight closure.
 - b. Field-Installed Hardware: Install surface-mounted hardware according to hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.
- G. Install doors completely and accurately, complete with all finish hardware.
- a. Install finish hardware in a neat workmanlike manner in accordance with the hardware schedule using only mechanics skilled in this type of work.
 - b. Do not install hardware until painting is completed.
 - c. Keep all hardware free from scratches, dents or other defacements.

3.03 CLEANING AND PROTECTION

- A. The storefront or contractor shall advise the contractor of proper and adequate means for protecting portions of the work that are exposed to likely sources of damage during the remainder of the construction period, including the probable areas of glass breakage or deterioration.
- B. Immediately before the time of final acceptance, the storefront contractor shall clean the storefront thoroughly, inside and out.
 1. Demonstrate proper cleaning methods to the Owner's maintenance personnel during this final cleaning.
 2. Prepare a "Cleaning and Maintenance Manual" listing the types of cleaning compounds, cleaning methods, and types of sealants and glazing materials to be used for cleaning, repair and maintenance of the work.

END OF SECTION 08411

SLIDING AUTOMATIC ENTRANCE DOORS (NATIONAL ACCOUNT)

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies the construction of all automatic sliding entrance door packages and control assemblies including installation, sliding door operator, breakaway sidelights, headers, operators, sensors, controls, testing, and finishing.
- B. Contractor shall provide all labor, materials, equipment, and services necessary to design, furnish, deliver, and install automatic sliding entrance door packages, including but not limited to adjacent items, and control assemblies as indicated on the Drawings, in accordance with local codes and standards, or as specified herein. This work shall include but not be limited to aligning, anchoring, cutting, fitting, sealing, testing, cleaning and finishing.
- C. Sliding Automatic Entrance Doors identified herein are National Account items purchased by Owner, received and stored by the General Contractor, and installed by Others. Refer to section 01630 for vendor contact information.
- D. Coordinate delivery with other work to avoid delay. All work shall be coordinated with other sections.
- E. Coordination and Tests:
 - 1. Coordinate accurately and fully with other trades affected by this work.
 - 2. Thoroughly test and check all items and equipment.
 - 3. Make corrections and adjustments to produce a completely satisfactory and operative installation.
 - 4. Templates: Obtain and distribute, to the parties involved, templates for doors, frames, and other work specified to be factory prepared for installing automatic entrance doors.
- F. References:
 - 1. Section 07920, "Caulking, Sealants and Joint Closures"
 - 2. Section 08710, "Finish Hardware"
 - 3. Section 08820, "Glass and Glazing"
 - 4. Division 16 Electrical wiring

1.02 SUBMITTALS

- A. Submittals shall be provided in accordance with sections 01330, and 01600.
- B. Product Data: For each type of material and product indicated.
- C. Shop Drawings:
 - 1. Clearly show layout, designation, number, type, and location required.
 - 2. Include plans, dimensions, elevations, sections, materials, details, profiles, joining methods, location of components, anchor details, sidelites, operators, motion/presence sensors, hardware, finish, hardware mounting heights, adjacent construction interfaces, options, accessories, and attachments to other work.
 - a. Include wiring diagrams and electrical requirements.
 - b. Include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - c. Qualification Data: For manufacturer.
 - d. Maintenance Data: For door operators and control systems.
- D. No substitutions on National Account items.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Experience in performing work of this section, specializing in installation of work similar to that required for this project, employing workers who are skilled in this area of work, and whose projects have a record of successful in-service performance.

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1. Comply with all OSHA Guidelines applicable to this work.
- B. Manufacturers shall meet the industry standards and codes for the materials identified on the Drawings and in the Specifications herein.
 1. Specification is based on products manufactured by an ISO 9001 registered manufacturing facility.
 2. All equipment shall comply with BHMA/ ANSI A156.10, UL 325, NFPA, and AAADM.
- C. Air infiltration requirements shall be in accordance with ASTM E283, and structural performance requirements shall be in accordance with ASTM E330.
- D. Certification: Product certificates signed by manufacturer, certifying materials comply with specified performance characteristics, criteria, and physical requirements.
- E. Manufacturer's instructions for installation shall be delivered and stored with the materials.
- F. Testing: As required by the latest industry codes and standards.
- G. Tolerances shall conform to industry codes and standards, except as otherwise noted.
- H. Warranty: The manufacturer shall warrant all equipment, including operators, controls, all appurtenances, and the installation of the equipment for a period of two (2) full years from date of acceptance. The manufacturer and/or the manufacturer's distributor shall replace all defective equipment at no cost to the Owner or Tenant during this two (2) year warranty period. The manufacturer shall have available on a local area level any parts and services required throughout the life of this equipment.
 1. Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
 2. Additional requirements for product warranties are included in Section 01600.
- I. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation and maintenance of units required for this Project.
- J. Welding: Qualify procedures and personnel according to AWS D1.2, "Structural Welding Code-Aluminum."
- K. Power-Operated Door Standard: BHMA A156.10.
- L. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- M. Emergency-Exit Door Requirements: Comply with requirements of authorities having jurisdiction for automatic entrance doors serving as a required means of egress.
- N. Coordination and tests: Coordinate accurately and fully with other trades affected by this work. Coordinate size and location of recesses in concrete floors if required for automatic entrance door components.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Transport and handle all materials in such a manner as to prevent damage. Dumping on the ground is not permitted.
- B. Locate materials away from heavy and unnecessary traffic.
- C. Furnish temporary protection for all exposed corners and edges.
- D. Deliver all packaged materials in original, unopened, undamaged containers, with identification labels intact, and bearing the name of the manufacturer and brand. Furnish temporary protection for all exposed corners and edges.
- E. Manufacturer's instructions for installation shall be delivered and stored with the materials.

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- F. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- G. Store and protect materials from exposure to harmful weather conditions, and at temperature and humidity conditions recommended by manufacturer. Some materials may need to be stored in protected enclosures, and handled by methods which avoid exposure to moisture. Store moisture-sensitive materials off the ground, under cover, and in a dry location. Additional requirements for product delivery, storage and handling are in Section 01600.

1.05 PERFORMANCE REQUIREMENTS

- A. General: Provide automatic entrance door assemblies capable of withstanding structural loads based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Structural Loads:
 - 1. Wind Loads: As indicated on Drawings.
 - 2. Seismic Loads: As indicated on Drawings.
- C. Operating Range: Minus 30 deg F to +130 deg F.
- D. Opening-Force Requirements:
 - 1. Egress Doors: Not more than 50 lbf required to manually set door in motion if power fails, and not more than 15 lbf required to open door to minimum required width.
 - 2. Accessible Interior Doors: Not more than 5 lbf.
- E. Closing-Force Requirements: Not more than 30 lbf required to prevent door from closing.

PART 2 - PRODUCTS**2.01 MATERIALS**

- A. Automatic sliding door system shall be Stanley Dura-Glide 2000 OR Stanley Dura-Glide 3000, as purchased by Owner, received, stored and installed by Stanley Door vendor. Refer to the Door Schedule for which model number pending store lay-out. (This is a National Account item. Refer to Section 01630 for vendor contact information.)
 - 1. System shall include sliding aluminum doors, sidelights, concealed headers, operators, controls, and door position switch.
 - 2. Door operation shall be Bi-Part, two sliding doors, with bi-directional operation and movement detection in compliance with NFPA 101.
 - 3. Sliding doors shall have breakout capability to the full open position in any point of travel. When in a "breakout" mode shall disconnect automatic operation to allow for safe egress.
 - a. doors shall have an integral sweep on operational sections.
 - 4. Weatherstripping shall be "finned pile" type on active doors.
 - 5. Threshold shall be continuous through the entire opening.
 - 6. Finish shall be clear anodized.
 - 7. Door manufacturer shall provide 2 point lock system including door cylinder as indicated in Section 8710, Finish Hardware
- B. All decals shall conform to BHMA/ ANSI A156.10.
- C. Provide alarm contacts for monitoring of door position from a remote location.
- D. Glass and glazing: Glass shall be either ¼" thick or 1" thick, as required by Section 08820 herein, and as indicated on the drawings.
 - 1. ¼" thick glass, with low E film on interior of glass, tempered, clear unless otherwise noted on drawings.
 - 2. Exterior glazing shall be nonremovable security type to prevent unauthorized entry.
 - 3. All glazing of doors to be of security type.
 - 4. Glass stops to be removable on interior only

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5. Doors and sidelites shall be provided to accommodate glass thickness required.
- E. Door operator and controller shall be Stanley Dura glide system driven by and electro-mechanical operator and a regulated electronic controller.
- F. Threshold sensor shall be Stanley Stan Guard Threshold Sensor.
- G. Motion sensor: The motion sensor shall be Stanley SU-100 type.
- H. Safety Search Circuitry; recycles the doors when an object is encountered during the closing cycle.
- I. Accessories: as provided by Owner/National Account.

PART 3 - EXECUTION**3.01 INSTALLATION**

- A. Stanley Doors (vendor) shall install all items and all appurtenances furnished by Owner required to provide a complete and fully functional automatic sliding door assembly.
- B. Verify that other trades are complete prior to beginning installation of the automatic sliding door system.
- C. Install only new, undamaged components.
- D. Comply with manufacturer's specifications and recommendations for the installation of automatic sliding entrance door assemblies including doors, frames, and operators, using only factory trained personnel.
 1. Fit frame joints to produce hairline joints free of burrs and distortion.
 2. Rigidly secure nonmovement joints.
 3. Seal joints watertight.
- E. FTI (Field Test Instrument) must be used by installer during initial phase of the installation.
- F. Set units plumb, level, square, and true in line, without warp or rack of frames or doors.
 1. Anchor securely in place.
 2. Install automatic doors and side lites to be weathertight in the closed position, and to drain water passing joints, condensation, and moisture occurring or migrating within the system to the exterior.
 3. Set sill members and other members in a bed of compound, or with joint fillers or gaskets to provide weathertight construction.
 - a. See Section 07920 for compounds, fillers and gaskets to be installed integrally with door and frames.
 4. Separate aluminum and other corrodible metal surfaces from sources of corrosion or electrolytic action at points of contact with other materials, with a bituminous coating of approx. 30-mil dry film thickness or other prior approved suitable permanent separator.
- G. Coordinate installation with the glass and glazing, and electrical work.
- H. Install door operator system including control wiring. See Division 16 for connection to electrical power source.
- I. Remove and replace damaged components that cannot be successfully repaired as determined by Architect.
- J. The automatic door installer must examine the areas and conditions under which the automatic entrances are to be installed and notify the General Contractor in writing of conditions detrimental to the proper functioning of the entrance and the timely completion of the work.
 1. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.
- K. The installer shall work with the General Contractor to coordinate all details pertinent to the door assembly

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installation.

1. Complete manufacturer's drawings and details shall be furnished for the installation of the equipment.
 2. Final connections and adjustments shall be made by the installer, and the automatic entrances shall be left in satisfactory operating condition.
 3. Manufacturer's representatives shall be available when required by one of the associated trades.
- L. See Section 08820 for installation of glass shown to be glazed into doors and frames, and not factory-assembled by manufacturer's special glazing system.
- M. Clean aluminum surfaces promptly after installation of frames and doors, exercising care to avoid damage of the protective coating.
1. Remove excess glazing and sealant compounds, dirt, and other substances.
- N. Where protective coating has been damaged, remove coating completely as soon as the completion of construction activities no longer requires protection.
- O. The installer/distributor will work with the General Contractor to coordinate all of those details necessary pertinent to the installation of the mechanical and electrical phases as outlined by the details of the manufacturer.
1. Complete manufacturing drawings and details shall be furnished to the Owner for the installation of the equipment.
 2. Final connections shall be made by the distributor/installer who will tune-in the equipment and leave it in satisfactory operating condition.
 3. The manufacturer shall have a factory trained engineer available for job orientation when required by any of the trades.

3.02 FIELD QUALITY CONTROL

- A. Testing Services: Test and inspect each automatic entrance door to determine compliance of installed systems with applicable BHMA standards.
- B. Repair or remove work where inspections indicate that it does not comply with specified requirements.
- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.03 ADJUSTING AND CLEANING

- A. Adjust door operators, controls, and hardware for smooth and safe operation, for weathertight closure, and compliance with code requirements.
- B. Lubricate operating hardware and other moving parts.
- C. Readjust door operators and controls after repeated operation of completed installation equivalent to 3 days' use by normal traffic (100 to 300 cycles).
- D. Clean all metal surfaces promptly after installation.
- E. Explain and review the Daily Safety Check Procedure.

END OF SECTION 08461

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies the furnishing and installation of all hardware assemblies including fasteners, templates, locks, latchsets, keys, strikes, push plates, pull plates, kick plates, signs, closers, stops, weatherstripping, thresholds, paint, and testing.
- B. Contractor shall provide all labor, materials, equipment, and services necessary to furnish, transport, and install all hardware assemblies, as indicated on the Drawings, in accordance with local codes and standards, or as specified herein. This work shall include but not be limited to procurement and installation of hardware and associated cutting, fitting, fastening, cleaning and painting.
- C. Finish Hardware identified in this Section are National Account items, purchased by Owner, received, stored, and installed by General Contractor. Refer to Section 01630 for vendor Contact information.
- D. Installation shall be in compliance with Federal A.D.A. Guidelines. Installation of all hardware (except that noted by storefront supplier) is to be by General Contractor.
- E. Coordinate delivery with other work to avoid delay. All work shall be coordinated with other sections.

1.02 SUBMITTALS

- A. Submittals shall be provided in accordance with sections 01330, and 01600.
- B. Product Data: For each type of material and product indicated.
- C. Shop Drawings:
 - 1. Clearly show layout, designation, number, type, location and materials required.
- D. The finish hardware supplier shall, prior to delivery, prepare and submit to Architect within 10 days after award of the finish hardware contract, 6 copies of a complete hardware schedule for review.
 - 1. The schedule shall follow requirements and shall indicate door number and location, quantity, manufacturer's number, size and finish along with all pertinent information for manufacturing and proper installation.
 - 2. Each item on the schedule shall have an item number.
 - 3. The schedule shall include complete keying instructions and symbols.
- E. Samples for review in accordance with Sections 01330 and 01600.
 - 1. Samples for each exposed finish provided.
- F. Material certificates for each type of product indicated. Include statements of material properties indicating compliance with requirements, standards, and type designations within standards. Include material test reports substantiating compliance with requirements.
- G. Field quality control test and inspection reports
- H. Substitutions shall be requested in accordance with Sections 01230 and 01600.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Experience in performing work of this section, specializing in installation of work similar to that required for this project, employing workers who are skilled in this area of work, and whose projects have a record of successful in-service performance.
- B. Manufacturers shall meet the industry standards and codes for the materials identified on the Drawings and in the Specifications herein.

- C. Certification: Product certificates signed by manufacturer, certifying materials comply with specified performance characteristics, criteria, and physical requirements.
- D. Manufacturer's instructions for installation shall be delivered and stored with the materials.
 - 1. Testing: As required by the latest industry codes and standards.
- E. Tolerances shall conform to industry codes and standards, except as otherwise noted.
- F. Warranty:
 - 1. Contractor shall provide a warranty for all hardware for a period of 2 years from date of acceptance of work. Defects in materials and/or workmanship occurring during the warranty period shall be corrected at no expense to the Owner.
 - 2. Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
 - 3. Additional requirements for product warranties are included in Section 01600.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Each item of hardware shall be packaged and delivered in original, individual containers, complete with all necessary fastenings, keys, instructions, and templates for spotting mortising tools.
 - 1. Deliver all packaged materials with identification labels intact, bearing the name of the manufacturer and brand.
 - 2. Each container shall be marked with an item number corresponding to the item number on the finish hardware schedule.
 - 3. Containers holding keyed locks and cylinders shall show the following: heading number, door number, hand of door (when required) and keying symbol; all corresponding to that shown on the finish hardware schedule.
- B. Transport and handle all materials in such a manner as to prevent damage. Dumping on the ground is not permitted.
- C. Locate materials away from heavy and unnecessary traffic.
- D. Furnish temporary protection for all exposed corners and edges.
- E. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- F. Store and protect materials from exposure to harmful weather conditions, and at temperature and humidity conditions recommended by manufacturer. Some materials may need to be stored in protected enclosures, and handled by methods which avoid exposure to moisture. Store moisture-sensitive materials off the ground, under cover, and in a dry location. Additional requirements for product delivery, storage and handling are in Section 01600.

1.05 PROJECT CONDITIONS:

- A. General Requirements:
 - 1. Contractor shall be responsible for arranging all work and issuing all purchase orders to facilitate securing delivery of all hardware and appurtenances, so all work shall progress without delay or interruption.
 - 2. Upon delivery of the finish hardware to the job site, check in and sign for all material delivered, and thereafter be responsible for same.
 - 3. Provide a room with sufficient space and shelving in which to lock and arrange the finish hardware. This room shall be locked with a lock furnished for this project. Protect hardware from damage at all times, both prior to and after installation.
 - 4. Tab and turn all keys over to the Owner upon completion of the work.
- B. Specific Requirements:

1. While the following hardware schedule (list) is intended to cover all doors and establish a type and standard of quality, where the size and shape of members to be equipped with hardware prevents or makes unsuitable the use of exact types specified, furnish suitable types having as nearly as practicable the same operation, function, style, and quality as that specified.
2. Sizes shall in all instances be adequate for the service to which the individual items of hardware will be subjected in the course of normal usage.
3. It shall be the specific duty and responsibility of the finish hardware supplier to examine the Specifications, Drawings, and details, and furnish the proper hardware for all openings, whether listed or not.
4. If there are any omissions in the hardware groups in regard to regular doors, they shall be called to the attention of the Architect for instructions, prior to bid opening; otherwise, the list will be considered complete. No extras will be allowed.

C. Templates

1. The finish hardware supplier, upon receipt of reviewed finish hardware schedule, shall send an approved schedule along with a complete template list for all items requiring template information to the hollow metal manufacturer, aluminum door and frame supplier, or any other supplier requiring this information.
2. When hardware must be installed at the factory, the hardware supplier shall send all such needed items to the respective supplier for their use in installation. The cost of this shipping requirement shall be borne by the hardware supplier.

D. Template Hardware

1. All hardware supplied to metal doors or jambs shall be made to template and secured by machine screws.
2. Where cylindrical locks are used in hollow metal doors, the door manufacturer shall furnish lock reinforcing in the door at the time of manufacture.
3. Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

E. Fasteners

1. Furnish finish hardware with all necessary screws, bolts, or other fastenings of suitable size and type to anchor the hardware in position for heavy use and long life, and to harmonize with the hardware as to material and finish.
2. Furnish fastenings where necessary with expansion shields, hex bolts, toggle bolts, and other approved anchors according to the material to which it is applied, and as recommended by the manufacturer.
3. Furnish hardware fastened to concrete with machine screws and tap-ins.
4. Fasteners for closers on wood or mineral core doors shall be hex bolts.

1.06 WORK SPECIFIED ELSEWHERE

A. Hardware for the following items will be furnished under other Sections of these Specifications.

1. Casework.
2. Thresholds not listed in the hardware list.
3. Hardware for aluminum doors, except as listed in the hardware list.
4. Toilet compartments.

PART 2 - PRODUCTS –NATIONAL ACCOUNT ITEMS.

2.01 BUTTS

- A. All exterior out-swinging doors shall have butts with non-removable pins when the door is closed. Doors with closers shall have ball bearing butts.
- B. Doors 1-3/4" thick and up to 40" wide to have 4-1/2" butts.
- C. Doors 1-3/4" thick; 41" to 48" wide to have 5" butts.

- D. All butts shall be sized in width to clear all trim.
- E. Manufacturer: Hager

2.02 LOCKS AND LATCHES

- A. All locksets are to be provided by one manufacturer, Schlage, except as follows:
 - 1. Break Room door push button lock shall be manufactured by Simplex (SI) as identified in part 2.17 herein.
- B. All locks shall have 7-pin removable core cylinders.
- C. All lock and latch sets to have 2-3/4" backset unless otherwise noted.
- D. Strikes shall be extended lips where required to protect trim from being marred by latch bolt.
- E. Wrought boxes shall be furnished with all strikes.
- F. Padlocks shall be as manufactured by Schlage.

2.03 KEYS, KEYING AND CORES

- A. All cylinders for this project shall be set to a new master key system.
- B. All cylinders to be constructed master keyed prior to delivery to job site.
- C. Master key sets and individual keying of locks will be determined by Owner.
- D. KEYING AND NUMBER OF KEYS FOR EACH TYPE:
 - 1. Furnish :

<u>Quantity</u>	<u>Description</u>
a). 4ea	Construction master keys to be delivered with locksets to contractor.
- E. All grand master, master and change keys shall be properly tagged for easy identification and delivered to the General Contractor for installation (1) one day prior to punch list walk-thru.

2.04 PUSH PLATES

- A. All push plates shall be type and size as listed: Hager

2.05 PULL PLATES

- A. All pull plates shall be type and size as listed: Hager

2.06 KICK PLATES

- A. All kick plates shall be type and size as listed: Hager

2.07 SIGNS

- A. All signs shall conform to Federal ADA Requirements. Mount all signs on wall adjacent to door servicing room. Base manufacturer: BBW(B), Quality(Q), Baldwin (B1). No metal - plastic only. ("Employees Only" and "Emergency Exit Only" signs shall be mounted on doors at 60" A.F.F. centerline.) Characters and symbols shall contrast with their background, either light characters on a dark background or dark characters on a light background.

2.08 EXIT DEVICES

- A. All bolts shall be type as listed. Trim shall be as listed.
- B. Manufacturer: Von Duprin.

2.09 CLOSERS

- A. Overhead; surface applied. (All closers are to be mounted as to be concealed from Sales Area.)
- B. Closers shall be as manufactured by: LCN
- C. Finish: Sprayed to match adjacent hardware.

2.10 STOPS

- A. All stops (other than overhead type) shall be wall types, all as manufactured by Hager
- B. Overhead stops manufacturer: Glyn Johnson

2.11 THRESHOLD

- A. Furnish all thresholds as indicated in the hardware groups.
- B. Threshold shall be as manufactured by: Hager
- C. Type as specified on the drawings and as shown in hardware groups, sized to fit openings. Include thresholds on drawings but not listed in the hardware list.

2.12 DOOR BOTTOMS

- A. Exterior doors to have style as indicated in hardware groups.
- B. Manufacturer: Hager

2.13 WEATHERSTRIPPING

- A. Manufacturer: Hager
- B. Exterior doors to have at frame head and jamb type, as indicated.

2.14 SILENCERS

- A. Manufacturer: Hager
- B. Metal frames to have: Single doors to have 3, each jamb. Double doors to have 2, each head.

2.15 FLUSHBOLTS

- A. As manufactured by: Hager

2.16 ASTRAGALS

- A. As manufactured by Hager.

2.17 DOOR SCHEDULE

- A. Refer to drawings

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Contractor shall install each door hardware item as indicated on the drawings, as Specified herein, and in accordance with the manufacturers written instructions.

3.02 INSPECTION

- A. The General Contractor shall visually inspect the installation of all hardware at completion of all such installations. All discrepancies or errors in installation and operation shall be noted and referred to the architect. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- B. Upon completion and before final inspection, the General Contractor shall certify to the architect that all hardware is properly installed according to the manufacturer's printed instructions, and is working properly.
- C. Forward letter of certification in duplicate to the Architect as soon as possible after installation of all hardware.
- D. Mounting Heights: Mount door hardware units at heights indicated on Drawings or required to comply with governing regulations.
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
- E. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- F. Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 - 1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
 - 2. Door Closers: Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

END OF SECTION 08710

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies the requirements for furnishing and installing all regular glass, insulating glass units, glazing, and related items including spacers, gaskets, and sealants.
- B. Contractor shall provide all labor, materials, equipment, and services necessary to furnish, transport, and install all glass and glazing work, as indicated on the Drawings, in accordance with local codes and standards, or as specified herein. This work shall include but not be limited to procurement and installation of glass, glazing, and associated cleaning, cutting, fitting, sealing and painting.
- C. Coordinate delivery with other work to avoid delay.
- D. All work shall be coordinated with other sections, including storefront and automatic doors to ensure compatibility.

1.02 SUBMITTALS

- A. Submittals shall be provided in accordance with sections 01330, and 01600.
- B. Product Data: For each type of material and product indicated.
- C. Shop Drawings:
 - 1. Clearly show layout, designation, number, type, location and materials required.
 - 2. Submit manufacturer's specifications, recommendations and installation instructions for all materials identified herein or on the drawings.
 - 3. Include published data, letters of certification, or certified test laboratory reports, that all materials comply with the requirements and are intended for the applications shown.
 - 4. Submit manufacturer's product data sheet and glazing instructions.
 - 5. Glazing contractor shall obtain compatibility and adhesion test reports from sealant manufacturer, indicating that glazing materials were tested for compatibility and adhesion with glazing sealant, as well as other glazing materials including insulating units.
 - 6. Glazing Contractor shall provide test reports showing that the glass meets the requirements of any security test reports specified on drawings.
- D. Samples for review as follows:
 - 1. Submit 12-inch square samples of each type of glass indicated.
 - 2. Submit 12-inch long samples of each color required for each type of sealant or gasket exposed to view
 - 3. In accordance with Sections 01330 and 01600.
- E. Material certificates for each type of product indicated. Include statements of material properties indicating compliance with requirements, standards, and type designations within standards. Include material test reports substantiating compliance with requirements.
- F. Field quality control test and inspection reports.
- G. Substitutions shall be requested in accordance with Sections 01230 and 01600.

1.03 QUALITY ASSURANCE

- A. All work under this section shall conform to these Specifications, Contract Drawings, manufacturer's requirements, and local code requirements. In case of conflict, the more stringent requirements shall apply.
- B. Specification is based on products as manufactured by PPG Industries, Pittsburgh, PA. Glass products by other manufacturers may be submitted for approval by the Architect subject to their meeting specification performance requirements.

- C. Comply with published recommendations of glass product manufacturers and organizations below, except where more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this section or referenced standards.
1. GANA Publications
 2. AAMA Publications
 3. IGMA/IGMAC Publications
- D. Safety glass products in the US are to comply with CPSC 16 CFR Part 1201 for Category II materials.
- E. Insulating Glass products are to be permanently marked either on spacers or at least one insulating unit component with appropriate certification label of inspecting and testing agency indicated below:
1. US - Insulating Glass Certification Council (IGCC)
- F. Single-source fabrication responsibility: All glass fabricated for each type shall be processed and supplied by a single fabricator.
- G. References:
1. ANSI Z97.1 - American National Standard for Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.
 2. ASTM C162 - Standard Terminology of Glass and Glass Products.
 3. ASTM C1036 - Standard Specification for Flat Glass.
 4. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass -- Kind HS, Kind FT Coated and Uncoated Glass.
 5. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Glass.
 6. ASTM E773 - Standard Test Method for Seal Durability of Sealed Insulating Glass Units.
 7. ASTM E774 - Standard Specification for Sealed Insulating Glass Units.
 8. ASTM E1300 - Standard Practice for Determining the Minimum Thickness and Type of Glass Required to Resist a Specified Load.
 9. ASTM E2188 - Standard Test Method for Insulating Glass Unit Performance.
 10. ASTM E2189 - Standard Test Method for Testing Resistance to Fogging in Insulating Glass Units.
 11. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.
 12. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
 13. Insulating Glass Manufacturers Alliance (IGMA)-Glazing Guidelines.
 14. GANA Glazing Manual; Glass Association of North America.
 15. GANA Sealant Manual; Glass Association of North America.
- H. Installer Qualifications: Experience in performing work of this section, specializing in installation of work similar to that required for this project, employing workers who are skilled in this area of work, and whose projects have a record of successful in-service performance.
- I. Manufacturers shall meet the industry standards and codes for the materials identified on the Drawings and in the Specifications herein.
- J. Certification: Product certificates signed by manufacturer, certifying materials comply with specified performance characteristics, criteria, and physical requirements.
- K. Testing: As required by the latest industry codes and standards.
- L. Tolerances shall conform to industry codes and standards, except as otherwise noted.
- M. Warranty:
1. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
 2. Warranty Period: commencing on Date of Certificate of Occupancy.
 - a. Provide a written 10-year limited warranty from date of manufacture for insulating glass. Warranty covers deterioration due to normal conditions of use and not to handling, installing, protecting and maintaining practices contrary to glass manufacturer's published instructions.
 - b. Provide a two (2) year warranty for other glass products unless otherwise required.

3. Additional requirements for product warranties are included in Section 01600.
- N. Provide glass products in the thicknesses and strengths (annealed or heat-treated) required to meet or exceed the following criteria based on project loads and in-service conditions per ASTM E1300.
 1. Minimum thickness of annealed or heat-treated glass products is selected, so the worst-case probability of failure does not exceed the following:
 - a. 8 breaks per 1000 for glass installed vertically or not over 15 degrees from the vertical plane and under wind action.
 - b. 1 break per 1000 for glass installed 15 degrees or more from the vertical plane and under action of wind and/or snow.
- O. Glazing for Fire-Rated Door and Window Assemblies: Glazing for assemblies that comply with NFPA 80 and that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 257.
- P. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201 and, for wired glass, ANSI Z97.1.
- Q. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 1. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."

1.04 DELIVERY, STORAGE AND HANDLING

- A. Transport and handle all materials in such a manner as to prevent damage. Dumping on the ground is not permitted.
- B. Where insulating glass units will be exposed to substantial altitude changes, comply with insulating glass fabricator's recommendations for venting and sealing.
- C. Manufacturer's instructions for installation shall be delivered and stored with the materials.
- D. Locate storage piles, stacks, or bins to avoid or protect material from heavy and unnecessary traffic.
- E. Furnish temporary protection for all exposed corners and edges.
- F. Deliver all packaged materials in original, unopened, undamaged containers, with identification labels intact, and bearing the name of the manufacturer and brand.
- G. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- H. Store and protect materials from exposure to harmful weather conditions, and at temperature and humidity conditions recommended by manufacturer. Some materials may need to be stored in protected enclosures, and handled by methods which avoid exposure to moisture. Store moisture-sensitive materials off the ground, under cover, and in a dry location. Additional requirements for product delivery, storage and handling are in Section 01600.

1.05 PERFORMANCE REQUIREMENTS

- A. Water tight and airtight installation of each piece of glass is required. Each installation must withstand normal thermal movements, wind loading, and impact loading (for operating doors) without failure of any kind. Failure includes loss or breakage of glass, failure of sealants or gaskets to remain watertight and airtight, deterioration of glazing materials, and other defects in the manufacture, fabrication, or installation of the work.
- B. Protect glass from edge damage at all times during handling, installation and operation of the building.

Glass breakage during the guarantee period will be considered a form of faulty material or workmanship (resulting from edge damage) unless known to result from vandalism or other causes not related to materials and workmanship.

- C. Glazing channel dimensions as indicated on the drawings are intended to provide for necessary minimum bite on the glass, minimum edge clearance and adequate sealant thicknesses, with reasonable tolerance. The glazier is responsible for correct glass size for each opening, within the tolerances and necessary dimensions established.
- D. Examine the framing or glazing channel surfaces, backing, removable stop design, and the conditions under which the glazing is to be performed.
- E. Notify the Contractor in writing of any conditions detrimental to the proper and timely completion of the work. Do not proceed with glazing until unsatisfactory conditions have been corrected in a manner acceptable to the Architect.
- F. Glass and glazing shall meet the requirements of the International Energy Conservation Code (IECC) as required by the local jurisdiction for the applicable zone, including but not limited to:
 - 1. Winter and Summer U-Values
 - 2. Solar Heat Gain Coefficient (SHGC)
 - 3. Shading Coefficient
 - 4. Outdoor Visible Light Reflectance

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Installation of glass products at ambient temperature below 40 degrees F is prohibited.
- B. Field measurements: Field verify measurements with drawing dimensions prior to fabrication of glass products.

PART 2 - PRODUCTS

2.01 MATERIALS - REGULAR GLASS (IF INDICATED ON THE DRAWINGS)

- A. 1/4" thick, as manufactured by P.P.G. Industries, complying with ASTM C1036, Type I, Class I, Quality Q-8, plate or float. Clear or tinted as indicated on the drawings – See elevations.
- B. Tempered Glass, 1/4" thick P.P.G. glass, fully tempered glass complying with ASTM C-1048.
- C. Permanently etch each light with manufacturer's name and his compliance with ANSI Z-97.1. Clear or as indicated.
- D. Interior Glazing Compound: Polymerized Butyl Rubber and inert Fillers (pigments), solvent based with minimum 75% solids, non-sag consistency, tack-free time of 24 hours or less, paintable non-staining.
- E. Setting Blocks: Neoprene, EPDM, or other resilient blocks of 85 shore A durometer hardness, minimum length 4".
- F. Exterior glazing compound: Conforming to ASTM C920, Type S, Grade NS, Use G.
- G. Butt Glazing Sealant: GE 1200 Series Silicone (where occurs).

2.02 INSULATING GLASS UNITS

- A. Insulating glass units shall be 1" thick clear, sealed, insulating type, Low E, as manufactured by PPG Industries, or Architect approved equal.,
 - 1. Insulating glass units shall be as certified through the Insulating Glass Certification Council (IGCC) to either ASTM E774 or ASTM E2190, or both.

2. Annealed float glass shall comply with ASTM C1036, type I, Class I, Quality Q-3.
 3. Heat strengthened float glass shall comply with ASTM C1048, Type I Class I Quality Q3, Kind HS
 4. Tempered float glass shall comply with ASTM C1048, type I, Class I, Quality Q3, Kind FT.
- B. Glass type, tint, gas fill, and strength shall be as indicated on the Drawings.
 - C. Performance characteristics as provided by Architect.
 - D. Glass shall be annealed, heat-strengthened or tempered as required by codes, or as required to meet thermal stress and wind loads.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Verify that site conditions are acceptable for installation of the glass.
- B. Verify openings for glazing are correctly sized and within tolerance.
- C. Verify that a functioning weep system is present if required.
- D. Verify that the minimum required face and edge clearances are being followed.
- E. Do not proceed with glazing until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protection
 1. Handle and store product according to manufacturers' recommendations.
- B. Surface Preparation
 1. Clean and prepare glazing channels and other framing members to receive glass.
 2. Remove coatings and other harmful materials that will prevent glass and glazing installation required to comply with performance criteria specified.

3.03 INSTALLATION

- A. Comply with combined recommendations of glass manufacturer and manufacturer of sealants and other materials used in glazing, except where more stringent requirements are shown or specified, or where manufacturer's technical representatives direct otherwise.
- B. Clean the glazing, channel, or other framing members to receive glass, immediately before glazing. Remove coatings that are not firmly bonded to the substrate.
- C. Do not attempt to cut, seam, nip or abrade glass that is tempered or heat strengthened.
- D. Comply with code requirements and "Glazing Manual" by FGMA, except as shown, and specified otherwise by the manufacturers of the glass and glazing material.
- E. Inspect each piece of glass immediately before installation, and eliminate any that have observable edge damage or face imperfections.
- F. Install setting blocks of proper size at quarter points of sill rabbet. Set blocks in this course of the heel-head compound, if any.
- G. Provide spacers inside and out, and of proper size and spacing, for all glaze sizes larger than 50 united inches. Provide 1/8" minimum bite of spacers on glass, and use thickness equal to sealant width.

- H. At butt glazing; ground edges, provide 1/8" minimum space and fill with silicone sealant.
- I. Unify appearance of each series of lights by setting each piece to match others as nearly as possible. Inspect each piece and set with pattern, draw and bow oriented in the same direction as other piece.
- J. Miter cut and bond ends together at corners where gaskets are used for channel glazing, so that gaskets will not pull away from corners and result in voids or leaks in the glazing system.
- K. Protect exterior glass from breakage immediately upon installation, by attachment of crossed streamers to framing held away from glass.
- L. Do not apply markers of any type to surfaces of glass.
- M. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in any other way during the construction period, including natural causes, accidents and vandalism.
- N. Final installation must be completely weather tight and clean both inside and out.

3.04 INSULATING GLASS UNIT INSTALLATION

- A. Install products using the recommendations of manufacturers of glass, sealants, gaskets and other glazing materials, except where more stringent requirements are indicated, including those in the "GANA Glazing Manual".
- B. Verify that Insulating Glass (IG) Unit secondary seal is compatible with glazing sealants.
- C. Install glass in prepared glazing channels and other framing members.
- D. Install setting blocks in rabbets as recommended by referenced glazing standards in GANA Glazing Manual and IGMA Glazing Guidelines.
- E. Provide bite on glass, minimum edge and face clearances and glazing material tolerances recommended by GANA Glazing Manual.
- F. Provide weep system as recommended by GANA Glazing Manual.
- G. Set glass lites in each series with uniform pattern, draw, bow and similar characteristics.
- H. Distribute the weight of the glass unit along the edge rather than at the corner.
- I. Comply with manufacturers and referenced industry recommendations on expansion joints and anchors, accommodating thermal movement, glass openings, use of setting blocks, edge, face and bite clearances, use of glass spacers, edge blocks and installation of weep systems.
- J. Protect glass from edge damage during handling and installation.
- K. Prevent glass from contact with contaminating substances that result from construction operations, such as weld spatter, fireproofing or plaster.
- L. Remove and replace glass that is broken, chipped, cracked or damaged in any way.

3.05 CLEANING

- A. Clean excess sealant or compound from glass and framing members immediately after application, using solvents or cleaners recommended by manufacturers.
- B. Glass to be cleaned according to:

1. GANA Glass Informational Bulletin GANA 01-0300 - Proper Procedures for Cleaning Architectural Glass Products.
 2. GANA Glass Information Bulletin GANA TD-02-0402 – Heat-Treated Glass Surfaces Are Different.
- C. Do not use scrapers or other metal tools to clean glass.

END OF SECTION 08820

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies the work necessary to complete all surface preparation, tinted primer, painting, and finishing required for interior and exterior surfaces including paint, varnish, stain, primers, sealants, tint, drop cloths, rags, fillers cleaners, applicators, and finishing materials.
- B. Contractor shall be responsible for the finish of all buildings and site components, and provide all labor, materials, equipment, and services necessary to furnish, transport, and install all painting and finishing work, as indicated on the Drawings, in accordance with local codes and standards, or as specified herein. This work shall include but not be limited to painting, finishing, and associated inspecting, cleaning, sanding, varnishing, priming, filling, and testing. "Décor" finish is provided by Others.
- C. Coordinate delivery with other work to avoid delay. All work shall be coordinated with other sections.
- D. Referenced Sections:
 - 1. See Section 07190 "Water Repellents"
 - 2. See Section 01600 "Product Requirements"
 - 3. See Section 09963 "Special Coatings – Elastomeric"

1.02 SUBMITTALS

- A. Submittals shall be provided in accordance with sections 01330, and 01600.
- B. Product Data: For each type of material and product indicated. Furnish manufacturer's Technical Data Sheets and MSDS.
- C. Field quality control test and inspection reports.
- D. LEED Submittals: For Credit EQ 4.2, manufacturers' product data for paints, including printed statement of VOC content and chemical components.
- E. **NO SUBSTITUTIONS FOR BENJAMIN MOORE INTERIOR PAINT.** Substitutions for exterior paint shall be requested in accordance with Sections 01230 and 01600.
- F. Furnish one extra gallon of each paint color (in each sheen) and one extra gallon of each type of finish material from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner unopened.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Experience in performing work of this section, specializing in installation of work similar to that required for this project, employing workers who are skilled in this area of work, and whose projects have a record of successful in-service performance.
 - 1. Provide materials from a single manufacturer, and formulated for the manufacturer's prototype system proposed for use.
 - 2. Manufacturer's instructions for installation shall be delivered and stored with the materials.
- B. Contractor is to ensure that all products used are completely compatible. Low VOC products shall be used where available or required by local jurisdictions.
- C. Manufacturers shall meet the industry standards and codes for the materials identified on the Drawings and in the Specifications herein. Low VOC products shall be used as specified herein.
- D. Certification: Product certificates identifying products as Low VOC, signed by manufacturer, certifying materials comply with specified performance characteristics, criteria, and physical requirements.

- E. The contractor shall be responsible for the finish of this work, and shall not start any part of it until all surfaces are in proper condition.
- F. All knots or spots shall be given one coat of shellac before painting. Puttying of holes, cracks and blemishes shall be done after priming coat is dry, and before the second coat is applied. All greasy or oily metal surfaces shall be cleaned with solvent before applying any coatings. All scale and rust shall be removed by scraping or wire brushing prior to finishing.
- G. Any unprimed steel, galvanized steel, or Galvalume steel shall be prepared by solvent methods in accordance with paint manufacturer's recommendations.
- H. Testing: As required by the latest industry codes and standards.
- I. Warranty:
 - 1. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
 - 2. Warranty Period: two (2) years minimum, commencing on Date of Certificate of Occupancy.
 - 3. Additional requirements for product warranties are included in Section 01600.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver all packaged materials to the site in manufacturer's original, sealed, undamaged containers, with identification labels intact. Labels shall give manufacturer's name, brand, type, batch number, color of paint, VOC (g/L), and instructions for reducing. Thin only in accordance with written recommendations of manufacturer.
- B. Store all material used on the job in a single designated space, and in accordance with OSHA requirements. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F.
 - 1. Storage locations shall be kept clean and free of foreign materials and residue.
 - 2. Correct all damage to surroundings in a timely manner.
 - 3. Remove all oily rags, waste, etc., from the building every night, and take every precaution to avoid all danger of fire.
 - 4. In no case shall amount of materials stored exceed that permitted by local ordinances, state laws, or fire underwriter regulations.
 - 5. All products must comply with local and state E.P.A. restrictions.
- C. Store and protect materials from exposure to harmful weather conditions, and at temperature and humidity conditions recommended by manufacturer. Some materials may need to be stored in protected enclosures, and handled by methods which avoid exposure to moisture. Store moisture-sensitive materials off the ground, under cover, and in a dry location. Additional requirements for product delivery, storage and handling are in Section 01600.
- D. Transport and handle all materials in such a manner as to prevent damage. Dumping on the ground is not permitted.
- E. Locate materials away from unnecessary traffic.
- F. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

1.05 PROJECT CONDITIONS

- A. Do not apply exterior paint or finishing materials in damp, rainy weather, or until the surface has dried thoroughly from the effects of such weather.
- B. Do not apply varnish or paint when temperature is below 50° F.

- C. Avoid painting surfaces when exposed to hot sunlight.
- D. Do not apply paint when relative humidity exceeds 85 percent at temperatures less than 5 deg F above the dew point.

1.06 PROTECTION

- A. Before painting, remove hardware, accessories, plates, lighting fixtures and similar items, or provide ample protection of such items.
 - 1. On completion of each space, replace above items.
 - 2. Protect adjacent surfaces as required or directed.
 - 3. Damaged areas and items shall be repaired by the painting/finish contractor at his expense.
 - 4. A sufficient supply of clean drop cloths and other protective covering shall be properly distributed and maintained.
- B. Finishing of the following listed items and materials will not be required and shall be protected:
 - 1. Stainless steel, brass, bronze, copper, monel, chromium, anodized aluminum; specially finished articles such as porcelain enamel, plastic coated fabrics, and baked enamel.
 - 2. Finished products such as ceramic tile, windows, glass, brick, resilient flooring, acoustical tiles, board and metal tees; other architectural features, such as "finish" hardware, furnished in aluminum, bronze or plated ferrous metal, prefinished panels, or other items that are installed prefinished.
 - 3. All paint spots shall be removed from the above surfaces.

1.07 COLOR SCHEDULE

- A. Colors will be provided by Architect or as indicated on the Drawings.
 - 1. **Interior paint and colors shall be Benjamin Moore paint only. No exceptions.**
 - 2. Exterior paint colors shall match Benjamin Moore colors, if paint is selected from another manufacturer's standards. Architect shall have final approval on all paint colors.
 - 3. The paint/finish manufacturer supplying this project shall match these colors.
 - 4. Well in advance of commencing work, the painting/finish Contractor shall obtain the schedule from the Architect, and proceed to prepare a duplicate set of samples of treatments for all major surfaces.
- B. Final confirmation of all colors is required from Architect and Owner's representative **prior** to installation or application.
 - 1. Two 6" x 6" draw-down samples shall be on-site for each color, with Architects approval prior to starting work.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Specification is based on Benjamin Moore "Aura" Low VOC line of finishes.
 - 1. Eggshell finish for the interior. (Benjamin Moore only)
 - 2. Flat finish for the exterior.
- B. For exterior paint, equal low VOC products by Dunn-Edwards (Ecoshield), ICI (including Glidden and Sinclair), Sherwin Williams (Harmony), and Frazee are acceptable. Refer to Part 4 of this specification for equivalency chart. Brands of paint, varnish, and stains are specified herein.
- C. General Contractor is responsible for painting primer and finish coats of Base color for interior walls, ceiling components, other components and appurtenances as indicated by Construction Manager, Architect or Owner, all paint required for exterior applications, and as indicated on the Drawings and specified herein..
 - 1. Interior Décor pattern will be furnished by others
- D. Contractor shall provide Anti-Graffiti coating if indicated on the Drawings. Coating shall be Graffiti Solution System as manufactured by American Polymer Corporation. (801) 255-9505. No Substitutions.
- E. Unless noted otherwise, all building and site components are to receive Low VOC finishes as noted below.

- F. Basic painting materials such as linseed oil, shellac, turpentine, thinners, driers, etc., shall be highest quality, made by reputable manufacturers as specified, having identifying labels on containers and shall be approved by Architect.
- G. All paint materials shall be factory fresh.
- H. As part of the list of proposed subcontractors, the painting/finish subcontractor shall indicate the name of the manufacturer whose materials he proposes to use.

2.02 SCHEDULE OF FINISHES: (BENJAMIN MOORE)

EXTERIOR PAINT:

- A. Exterior Ferrous Metal (Painted) 1 coat Alkyd Metal Primer M04
2 coats Acrylic Gloss Enamel M28
- B. Exterior Galvanized Metal (Painted) 1 coat Acrylic Metal Primer M04
2 coats Acrylic Gloss Enamel M28
- C. Exterior Stucco (Painted) 1 coat: Concrete Masonry Primer #066 (W066 in CA only)
2 coats: Moorecraft Superspec 100% Acrylic Exterior Flat #171
- D. Exterior Top of Stucco Walls and Top and Back of Masonry Parapets (Elastomeric) 1 coat Sherwin-Williams ConFlex XL High Build Coating elastomeric sealant (wall to be dry before application). See Section 09963.
NO SUBSTITUTIONS.
- E. Exterior Masonry (Sealed or Stained where Scheduled) Refer to Section 07190 (Sealed or Stained)
- F. Exterior Masonry With Block Filler (Painted) 1 coat Moorecraft Supercraft Latex Block Filler (smooth) #285
2 coats: Moorecraft Superspec 100% Acrylic Exterior Flat #171
Note: On occasion, more than one coat of block filler is required to fill all pits and voids.
- G. Exterior Concrete (Painted) 1 coat Concrete Masonry Sealer Acrylic Primer #066 (W066 in CA only)
2 coats Moorecraft Superspec 100% Acrylic Exterior Flat #171
- H. Exterior Wood Stain (Semi-Transparent Stain) 1 coat Moorewood Semi-Transparent Stain #328
- I. Anti Graffiti Coating As recommended by Graffiti Solutions System, Refer to Part 2.1.E of this Section .

INTERIOR PAINT SHALL BE BENJAMIN MOORE BRAND ONLY:

- J. Interior Gypsum Wallboard Unless otherwise noted 1 coat Aura Color Foundation # 520
2 coats Aura Eggshell # 524
Or
1 coat Moorecraft Superspec Latex Enamel Primer #253
2 coats Acrylic Enamel eggshell #N319
- K. Gypsum Board at Suspended Soffits (Painted) 1 coat Moorecraft Superspec Latex Enamel Primer #169
2 coats Superspec 100% Acrylic Semi Gloss #170 (W170 CA only)
- L. Interior Wood (Stained w/ clear Satin finish) 1 coat Benwood Penetrating Stain #234
2 coats Stay Clear 100% Acrylic Satin Finish #423

- E. Finish edges, tops and bottoms of all doors the same as door faces. Both sides and all edges of doors to be finished simultaneously.
- F. For interior gypsum wall board walls receiving pattern:
1. Apply one (1) coat of Moorecraft Superspec Latex Enamel Primer #253 or Architect approved equal.
 2. Primer to be tinted to match base wall color.
 3. Apply two (2) coats of base wall color with eggshell finish.
 4. Walls must cure for a minimum of 24 hours in a conditioned space prior to pattern application. If the space is not conditioned, then curing time is minimum 48 hours.
- G. Wood:
1. Use sandpaper to smooth and even each surface, and then dust off.
 2. After primer or stain coat has been applied, thoroughly fill all nail holes and other surface imperfections with putty tinted with primer or stain to match wood color.
 3. Sand all woodwork between coats to provide a smooth surface.
 4. Cover knots and sap streaks with a thin coat of shellac.
- H. Steel and Iron:
1. Remove grease, rust, and rust scale, and touch-up all chipped or abraded places on items that have been shop coated.
 2. Where steel or iron have a heavy coating of scale, remove descaling, or wire brush as necessary, to produce a satisfactory surface for painting.
 3. When area will be exposed to view, use sandpaper over the entire treated area to provide a smooth surface.
 4. Feather the edges of surrounding undamaged prime coat, and spot prime in a manner to eliminate evidence of repair.
- I. Galvanized Metal:
1. Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and other contaminants prior to finishing. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
 2. Thoroughly clean by wiping surfaces with surface conditioner, and prime with galvanized iron primer, and finish coats as recommended by paint manufacturer.
- J. Concrete and Concrete Masonry:
1. Prepare surfaces to be painted, stained or texture finished as recommended by the finish product manufacturer, and by removing all dirt, dust, oil, grease, efflorescence, and other contaminants.
 2. Test surface for pH level, and record and report results to manufacturer's representative.
 3. Repair all cracks per manufacturer's recommendations.
 4. The method of surface preparation shall be left to the discretion of the painter, unless required by the finish coat manufacturer, provided the results are satisfactory to the Architect.
 5. Interior CMU walls shall be primed with two (2) coats of Latex Block Filler primer and back rolled in such a manner to fill all voids. Primer and paint shall be as identified in the paint schedule.
 6. Before first paint coat or stain coat is applied, spot prime all nails and other exposed metal occurring in the surfaces with an oil-base masonry primer, as recommended by paint manufacturer.
- K. Stucco Surfaces:
1. Fill cracks, holes or imperfections in plaster with patching plaster, and smooth off to match adjoining surfaces.
 2. Before painting any plaster, surfaces shall be first tested for dryness with moisture testing device.
 3. Do not apply paint or sealer on plaster when the moisture content exceeds 12% as determined by the testing device.
 - a. Test sufficient areas in each space and as often as necessary to determine the proper moisture content for painting.
 - b. If the moisture content is between 8% and 12%, prime with alkali resistance primer.
 - c. If moisture content is 8% or less, prime with specified primer.
 4. Remove the dry sand deposit from all plaster surfaces by brushing with stiff brush before painting.
 5. Test pH of stucco surfaces prior to painting.
 - a. If pH level is not in compliance with paint manufacturer's requirement, the entire surface is to be primed with alkali resistance primer prior to specified paint installation.

3.02 WORKMANSHIP

- A. Perform all work using only experienced, competent painters/finishers, and in accordance with the best standards of practice in the trade.
 - 1. Hand brush or roll work except where otherwise permitted or directed.
 - 2. When completed, the painting shall represent a first-class workmanlike appearance.
 - 3. Apply all paint materials under adequate illumination and with adequate ventilation.
- B. Prime coats specified herein will not be required on items delivered with prime or shop coats already applied, unless otherwise specified.
- C. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces.
 - 1. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
- D. Paint/finish back sides of access panels and removable or hinged covers to match exposed surfaces.
- E. If, after treatment, the completed finish (or any portion thereof) blisters, checks, peels, or otherwise shows indication of dampness or other irregular condition of surface, the painting/finish contractor shall, at his own expense, remove the applied treatment and refinish the part affected to the satisfaction of the Architect/Owner.
- F. All exposed water, gas, waste piping, exposed conduits, lighting panels, telephone terminal boxes, and galvanized or insulated ducts and all other items as required by the Construction Manager or Architect, shall be painted/finished in all sales areas and other areas openly visible by sales floor, unless otherwise scheduled.
- G. Grilles and registers shall be spray painted with enamel or lacquer to match walls and ceilings.
 - 1. Paint materials shall not sag, run, or bind movable parts of grilles or registers.
- H. Duct throats behind all grilles, registers, louvers, baffles, etc., shall be given one coat of flat black oil paint, wherever visibility of the interior of the ducts is allowed.
- I. Carefully examine the Contract documents including all Drawings and Specifications, to determine the amount of exposed work to be painted/finished. Verify all areas in questions with Architect prior to commencing work.
- J. Interior wall surfaces must be approved and accepted by Décor Company prior to décor installation.

3.03 APPLICATION

- A. Install all paint/finishes in accordance with manufacturer's published instructions, as Specified herein, and per approved Construction Drawings.
- B. Exposed surfaces - Contractor shall prime and paint or finish all exposed surfaces on all interior and exterior buildings, and site components unless otherwise noted or directed by the Architect/Owner.
- C. All interior and exterior exposed metal shall be painted or have a manufactured final surface finish.
- D. Provide uniform paint shades of the same color by mixing paint 1/3 from one bucket, 1/3 from second bucket, and 1/3 from the third bucket (typ) into a separate 5 gallon bucket.
- E. Apply first coat to surfaces that have been cleaned, pretreated, or prepared for painting, as soon as practical after preparation and before surface deterioration is allowed to take place.
- F. Stain or paint only when surfaces are clean, dry, smooth and adequately protected from dampness..
- G. Each coat of paint shall be well brushed on, or sprayed and back rolled, worked out evenly, and allowed to

dry at least 24 hours before the subsequent coat is applied.

- H. Finished work shall be uniform, of approved color, smooth and free from runs, sags, clogging or excessive flooding.
- I. Make edges of paint/finishes adjoining other materials or colors sharp and clean, without overlapping.
- J. Where high gloss enamel is used, lightly sand undercoats to obtain a smooth finish coat.
- K. Each coat of material applied must be inspected and approved by the Architect before the application of the succeeding specified coat; otherwise no credit for the concealed coat will be given, and the contractor shall assume the responsibility to recoat the work in question.
 - 1. Painting Contractor shall notify the Architect when each coat is completed.
- L. At completion, touch-up and restore finish where damaged and leave finish surfaces in good condition.
- M. Minimum Coating Thickness:
 - 1. Apply each material no thinner than the manufacturers recommended spreading rate.
 - 2. Provide total dry film thickness of the entire system as recommended by manufacturer.
- N. Prime Coats:
 - 1. Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others.
 - 2. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- O. Pigmented (Opaque) Finishes:
 - 1. Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage.
 - 2. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- P. Transparent (Clear) Finishes:
 - 1. Use multiple coats to produce a glass-smooth surface film of even luster.
 - 2. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
- Q. Unacceptable finishes will be corrected at the expense of the Contractor.

3.04 CLEANING AND PROTECTING

- A. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
- B. Protect work of other trades, whether being painted or not, against damage from painting.
- C. Correct damage by cleaning, repairing or replacing, and recoating, as approved by Architect.
- D. Leave in an undamaged condition.
- E. Provide "Wet Paint" signs to protect newly painted finishes.
- F. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

3.05 COMPARATIVE PAINT PRODUCTS (FOR EXTERIOR FINISHES ONLY)

3.06 FRAZEE (PROVIDE LOW VOC WHERE AVAILABLE)

Exterior Ferrous Metal (Painted)	1 coat 664 Rust Stop Alkyd Metal Primer 2 coats 648 Aro-Plate II Gloss
Exterior Galvanized Metal (Painted)	1 coat 661 Metal Primer and 2 coats 203 Duratec II Gloss
Exterior Masonry (Painted)	1 coat 262 Acrylic Block Filler and 2 coats 203 Duratec II Flat
Exterior Stucco (Painted)	1 coat Eff-stop masonry primer and 2 coats 203 Duratec II Flat
Exterior Wood (Stain)	2 coats 385 Oil Stain – Madera (semi-transparent)

3.07 GLIDDEN (PROVIDE LOW VOC WHERE AVAILABLE)

Exterior Ferrous Metal (Painted)	1 coat Glid-Guard Metal Primer #5207 and 2 coats Glid Guard Industrial Enamel #4550
Exterior Galvanized Metal (Painted)	1 coat All-Purpose Metal Primer #5207 and 2 coats Spred Ultra #6500
Exterior Masonry (Painted)	1 coat Ultrahide Block Filler #5317 and 2 coats Spred Ultra #6500
Exterior Stucco (Painted)	2 coats Spred Ultra #6500
Interior Gypsum Board At Suspended Soffits	1 coat Ultrahide PVA Sealer #5019 and 2 coats Spred Ultra #4000
Interior Gypsum Wallboard At all other areas unless Otherwise noted (Painted)	1 coat ultrahide PVA Sealer #5019 and 2 coats Ultrahide #6300 (Semi-Gloss)
Enamel Interior wood (Painted)	1 coat Spred Undercoater #ULT 400 and 2 coats Spred-Enamel #6300 (Semi-gloss)

3.08 SINCLAIR (PROVIDE LOW VOC WHERE AVAILABLE)

Exterior Ferrous Metal (Painted)	1 coat 15 Red Oxide Primer and 1 coat 248 Sash and Trim Primer and 1 coat GE2 Sash and Trim Enamel
Exterior Galvanized Metal (Painted)	1 coat Pretreat 7113 Vinyl Wash Primer 14 Corroprime and 2 coats #1300 Stuc-O-Life
Exterior Masonry (Painted)	1 coat 1010 Vinyl Block Primer and 2 coats #1300 Stuc- O- Life
Exterior Stucco (Painted)	1 coat 18 EPOPRIME and 2 coats #1300 Stuc-O-Life

3.09 SHERWIN WILLIAMS (PROVIDE LOW VOC WHERE AVAILABLE)

Exterior Ferrous Metal (Painted)	1 coat DTM Acrylic Primer/Finish B66W1 2 coats DTM Acrylic Coating, B66 Series
Exterior Galvanized Metal	1 coat DTM Acrylic Semi-Gloss coating, B66-200

(Painted)	2 coats DTM Acrylic Semi-gloss, B66-200
Exterior Masonry (Painted)	1 coat B24W46 Heavy Duty Block Filler 2 coats A100 Latex Flat, A6 Series
Exterior Stucco (Painted)	If pH level is over 8, prime with Loxon Primer A24W300 first 2 coats Exterior Flat, A100-A6 Series
Exterior Wood Stain (semi-transparent)	2 coats Exterior Deckscapes, A15775
Gypsum Board At Suspended Soffits	1 coat ProMar 200 Latex Primer ,B28W200 2 coats ProMar 200 Latex Flat, B30W200 Series
Exterior Concrete (Painted)	1 coat A24W300 Loxon Primer 2 coats A100 Latex Flat Paint A6 Series

3.10 ICI (PROVIDE LOW VOC WHERE AVAILABLE)

Exterior Ferrous Metal (Painted)	1 coat 4120 Devguard Metal Primer 2 coats 4328 Devshield Gloss Enamel
Exterior Galvanized Metal (Painted)	1 coat 4160 Devguard Metal Primer 2 coats 2210 Ultrahide Durus Latex Gloss
Exterior Masonry (Painted)	1 coat 3010 Ultrahide Block Filler 2 coats 2210 Ultrahide Durus Latex Flat
Exterior Stucco (Painted)	1 coat 3030 Masonry Primer 2 coats 2210 Ultrahide Durus Latex Flat
Exterior Wood Stain (semi-transparent)	2 coats Exterior Alkyd Semi Transparent wood stain

3.11 DUNN-EDWARDS (PROVIDE LOW VOC WHERE AVAILABLE)

3.12 PAINT AND STAIN SCHEDULE:

A. Exterior Ferrous Metal (Painted)	1 coat GALV-ALUM (43-7) 2 coats: SYN-LUSTRO ALKYD GLOSS (10 Series) Or 2 coats: SYN-LUSTRO ALKYD SEMI-GLOSS (9 Series) Note: For an acrylic topcoat use the following system: 1 Coat: GALV-ALUM (43-7) 2 Coats: PERMAGLOSS W/B GLOSS (W960) Or 2 Coats: PERMASHEEN W/B SEMI-GLOSS (W901)
B. Exterior Galvanized Metal (Painted)	1 coat GALV-ALUM (43-7) 2 coats: SYN-LUSTRO ALKYD GLOSS (10 Series) Or 2 coats: SYN-LUSTRO ALKYD SEMI-GLOSS (9 Series) Note: For an acrylic topcoat use the following system: 1 Coat: GALV-ALUM (43-7) 2 Coats: PERMAGLOSS W/B GLOSS (W960) Or 2 Coats: PERMASHEEN W/B SEMI-GLOSS (W901)
C. Exterior Stucco (Painted)	1 coat: ACRI-LOC (W6232) 2 coats: ACRI-FLAT (W704)
D. Exterior Top of Stucco Walls	1 coat Sherwin-Williams ConFlex XL High Build Coating elastomeric sealant (wall to be dry before application).See Section 09963.

and Top and Back
of Masonry Parapets
(Elastomeric)

NO SUBSTITUTIONS.

- E. Exterior Masonry (Sealed or Stained) Refer to Section 07190 (Sealed or Stained Where Scheduled)
- F. Exterior Masonry With Block Filler (Painted)
 - 1 Filler Coat(s): BLOCK FILLER SMOOTH (W315)
 - 2 coats: ACRI-FLAT (W704)
 - Note:** On occasion, more than one coat of block filler is required to fill all pits and voids.
- G. Exterior Masonry Without Block Filler (Painted)
 - 1 coat Acrylic Masonry Primer/Sealer (W6232) and
 - 2 coats ACRI-FLAT (W704)
- H. Exterior Concrete (Painted)
 - 1 coat ACRI-LOC (W6232)
 - 2 coats ACRI-FLAT (W704)
 - Note: For Tilt-Up Concrete use:
 - 1 coat TILT-PRIME (W6300)
 - 2 coats TILT-KOTE (W6305)
- I. Exterior Wood Stain (Semi-Transparent Stain) PENOFIN (Penetrating Oil Finish)

3.13

3.14 REFER TO SPECIFICATION SECTION 09963 FOR ELASTOMERIC COATINGS.

END OF SECTION 09911

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