

ADDENDUM THREE

Hillcrest Commons
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Commission No.: F23066

Addendum Date: 16 April 2024

Conditions: The following clarifications, amendments, additions, deletions, revisions and modifications are a part of the contract documents and change the original documents only in the manner and to the extent stated.

Copies of the Addendum shall be bound with all contract sets of drawings and specifications.

CLARIFICATIONS:

Tele-communication Systems:

Locations for telephone, data, and internet have been updated within the Electrical Drawings, specifically within all Units, Community Rm. 105, Exercise Rm. 202, and Theater Rm. 302.

Contractor Question#13:

Sheet A512; details 1 & 2 note that the storefront sill is to be packed with insulation? This will cause the system to fail and not perform as designed. It is also not recommended by the manufacturer.

Answer: (MR) Details 1&2/A512 have been updated to reflect the correct situation.

Contractor Question#14:

Sheet A512; detail 2 shows the storefront sill over a 2" airspace? There is no ability to properly anchor the system per the detail shown and is also not a recommended install due to possible performance issues which will allow air to infiltrate the system.

Answer: (MR) Detail 2/A512 has been updated to reflect the correct situation.

Contractor Question#15:

Our suppliers are giving us default lead times of **18 MONTHS** for any new padmount transformers. I wish I could give a better time estimate on procuring a padmount transformer, but it is out of my reach going forward. There's an overhead pole line just west of the building and I recommend going with an overhead transformer bank to supply service for this building as we can get those faster in our stockyards than padmounts. Would this be acceptable?

Answer: (MR) Sheet E501 has been updated to coordinate transformer install with utility provider. Pad mounts would be acceptable.

Contractor Question#16:

I found the Insurance requirements form, but is there a Bid submission form (I do not see one)?

Answer: (Model Group) No Bid Form, use your standard Proposal Form.

Contractor Question#17:

Does the Owner have a camera brand of VMS (Video Monitoring System) that they are comfortable with, or have used before? Or should I design what I determine is best fit?

Answer: (Model Group) Owner did not have a preference. Best-fit is recommended.

Contractor Question#18:

We usually see a few inside doors with Access Control as well, especially the MDF/ IT Closet. I will list two different Exterior Devices and Add a card reader to the MDF as examples. Will this be sufficient for now?

Answer: (Model Group) Bid per the drawings.

Contractor Question#19:

The arch wall types on Sheet A130 call for 2x4 partition walls to be 16" OC stud spacing. The structural spec says that int non bearing 2x4 walls are 24" OC. Can you please specify what they want to do here?

Answer: (MR) Sheet A130 has been modified to correctly coordinate with the Structural drawings (24" C/C).

Contractor Question#20:

Some of the partition call-outs on the plans and Sheet A130 are clearly wrong. For example, he has several corridor walls labeled as type P2 which is a 2x4 corridor wall per Sheet A130 but clearly per the Structural drawings many of these are called out as 2x6 @16" OC bearing walls. This also overlaps with some callouts for type P5 a staggered 2x4 stud wall as well.

Answer: (MR) Sheet A130 has been modified to correctly show the placement of all 2x6 stud walls within the corridor, as well as common-to-corridor and common-to-unit. See revised Sheets A101, A102, and A103 for details and updates.

Contractor Question#21:

Partition Type P4 says 2x4 wood studs but then section above says 2x6 @ 24" OC?

Answer: (MR) Partition Type P4 has been updated to 2x6 wood stud wall, exclusively. See updates on Sheet A130.

Contractor Question#22:

In other corridor areas walls that are not bearing are drawn on plans as 2x6 but labeled as 2x4 walls per call-outs on A130. Type P2 is a common one. It has RC channel and 5/8" gyp so maybe the architect is depicting that overall thickness? Not sure but this also happens with type P1.1 which is simply a 2x4 wall with gyp each side, but still drawn on plan as what appears to be a 2x6 wall. For example, the first floor Restroom Rm. 117 the front wall with the door is P3 which is a 2x6 wall per A130. But all the other walls are called out as P1.1. this wouldn't make sense to have 1 restroom (non-plumbing) wall be 2x6 and the rest 2x4.

Answer: (MR) Sheet A101 has been revised to coordinate with revised Sheet A130, showing the correct size of walls, and wall tags have been revised to the correct stud sizing and spacing.

CHANGES TO THE SPECIFICATIONS:

Specification Section *08 8000 Glazing*, **REMOVE** Paragraph P1-1.02-D.

Specification Section *08 8000 Glazing*, **REMOVE** Paragraph P1-1.02-F.

Specification Section *08 8000 Glazing*, **ADD** Paragraph P1-1.02-D.

Specification Section *08 8000 Glazing*, **ADD** TGP (Technical Glass Products) / SAFTIFIRST / O'Keeffe's, Inc., as acceptable manufacturer for fire-rated glazing.

CHANGES TO DRAWINGS:

Sheet **C300** - SEE ATTACHED SHEET for revisions:

- 1/C300:
 - **ADDED** a label indicating length, size, material, and slope of pipe.
 - **ADDED** a label to connect to existing 8" sanitary sewer pipe.

Sheet **C400** - SEE ATTACHED SHEET for revisions:

- 1/C400:
 - **REVISED** domestic water tap to be 6" water tap with a domestic branch.
 - **REVISED** location of PIV (Post-indicator Valve) to northeast of the dumpster enclosure.
 - Before the PIV, domestic branch has been **ADDED**.
 - **ADDED** a label for existing sewer structures located southwest and west of building.
 - **ADDED** a label to locate and cap existing sanitary sewer connection.

Sheet **D101** - SEE ATTACHED SHEET for revisions:

- GENERAL DEMOLITION NOTES:
 - **ADD** General Demolition Note #11, stating: “SEE CIVIL SHEET C101 FOR FULL EXTENT OF SITE DEMOLITION.”
 - **MODIFY** Demolition Note #1, to read: “DEMOLISH EXISTING STRUCTURE IN ENTIRETY. DISASSEMBLE BRICK FACADES WITH CARE AND SALVAGE 1000 SF OF EXISTING BRICK FOR USE IN NEW WORK AT PATIO.”
 - **MODIFY** Demolition Note #2, to read: “SALVAGE THE CAST STONE SIGNAGE, AS SHOWN IN THE PHOTOGRAPH-A ON THIS SHEET. REFER TO OWNER FOR STORAGE LOCATION.”
 - **ADD** Demolition Note #14, stating: “REMOVE PAVED/GRAVEL APPROACH. PREPARE SITE TO RECEIVE NEW WORK.”
- 1/D101:
 - Drawing has been **UPDATED**, in entirety.
 - Location of signage demolition has been identified (Demolition Note #2).
- PHOTOGRAPH A: **REPLACE**, in entirety, showing full extent of signage demolition.

Sheet **A001** - SEE ATTACHED SHEET for revisions:

- UNIT MATRIX: (2)-Units, Type B, **ADDED** to Unit Matrix.

Sheet **A101** - SEE ATTACHED SHEET for revisions:

- 1/A101:
 - (9) Wall tags have been **MODIFIED**.
 - Area between Mailroom, Restroom Rm. 117, and Laundry Rm. 118 has (6) wall **UPDATES**, including (5) Wall Tag modifications, and (3) dimension string **UPDATES**.

Sheet **A102** - SEE ATTACHED SHEET for revisions:

- 1/A102: (6) Wall tags have been **MODIFIED**.

Sheet **A103** - SEE ATTACHED SHEET for revisions:

- 1/A103:
 - (2) Wall tags have been **ADDED**.
 - (4) Wall tags have been **MODIFIED**.

Sheet **A120** - SEE ATTACHED SHEET for revisions:

- 14/A120: (3) Wall tags have been **REVISED**.

Sheet **A130** - SEE ATTACHED SHEET for revisions:

- PARTITION TYPES:
 - NON-RATED INTERIOR PARTITION
 - P1 (Portion of description) **REVISED** to state, “2x4 WOOD STUDS SPACED AT 24” C/C...”
 - SECTION: Stud call-out **REVISED** to state, “2x4 WOOD STUD @ 24” C/C”
 - 0.5-H INTERIOR PARTITION / 0.5-H CORRIDOR PARTITION
 - P2 (Portion of description) **REVISED** to state, “2x6 WOOD STUDS SPACED...”
 - SECTION: Portion of stud call-out **REVISED** to state, “2x6 WOOD STUD...”
 - SECTION: **REPLACE** drawing, in entirety.
 - PLAN: **REPLACE** drawing, in entirety.
 - 1-HR STAIRWELL
 - **ADD** verbiage to Title to read, “1-HR STAIRWELL / 1-HR COMMON TO UNIT”
 - 1-HR PLUMBING
 - P4 (Portion of description) **REVISED** to state, “2x6 WOOD STUDS...”
 - 1-HR SHAFT WALL
 - P8 (Description) **REVISED** to state, “8” CONCRETE MASONRY WITH TOOLED JOINTS - SEE STRUCTURAL FOR REINFORCING, 1” AIRSPACE WITH MINERAL WOOL FIREBLOCKING SPACED 10’-0” C/C MAX. HORIZONTAL, AND 2x4 WOOD STUDS SPACED 16” C/C WITH ACOUSTIC BATT INSULATION, AND 5/8” TYPE ‘X’ GYPSUM WALL BOARD.”
 - SECTION: **REPLACE** drawing, in entirety.
 - PLAN: **REPLACE** drawing, in entirety.
- FLOORING ASSEMBLIES
 - 1-HR FIRE RATED ASSEMBLY - A1
 - Description of assembly **REVISED** to read from the top of the assembly to the bottom stating,
 “3/4” LEVELROCK FLOOR UNDERLAYMENT (GYPCRETE)
 23/32” T&G WOOD SUBFLOOR
 3 1/2” GLASS FIBER INSULATION (BATTS)
 PARALLEL CHORD WOOD TRUSS 24” C/C
 RC-1 or EQUIVALENT
 5/8” SHEETROCK FIRECODE ‘C’ CORE GYPSUM PANEL”
 - 1-HR FIRE RATED ASSEMBLY - A2
 - Description of assembly **REVISED** to read from the top of the assembly to the bottom stating,
 “SRB SOUND MAT
 3/4” LEVELROCK FLOOR UNDERLAYMENT (GYPCRETE)
 25/32” T&G WOOD SUBFLOOR
 STEEL JOIST, 18 GAUGE, 24” C/C
 USG DGL DRYWALL SUSPENSION SYSTEM
 (2) LAYERS 1/2” SHEETROCK FIRECODE ‘C’ CORE GYPSUM PANEL”

Sheet **A201** - SEE ATTACHED SHEET for revisions:

- 2/A201: Hangers and steel angle **ADDED** for building signage.

Sheet **A502** - SEE ATTACHED SHEET for revisions:

- **4/A502: REPLACE** drawing, in entirety.

Sheet **A510** - SEE ATTACHED SHEET for revisions:

- **DOOR & FRAME SCHEDULE:**
 - Remarks **UPDATED** for Doors #H100, H101B, and H120.
- **REMARKS:**
 - **ADD** Remark #1, stating: “ACCESS CONTROL”

Sheet **A512** - SEE ATTACHED SHEET for revisions:

- **1/A512: REPLACE** drawing, in entirety.
- **2/A512: REPLACE** drawing, in entirety.
- **3/A512: REPLACE** drawing, in entirety.
- **4/A512:** Wall stud material has been **UPDATED**.
- **6/A512:** Wall stud material has been **UPDATED**.
- **7/A512: REPLACE** drawing, in entirety.

Sheet **A520** - SEE ATTACHED SHEET for revisions:

- **WINDOW ELEVATIONS:**
 - 1/Storefront A: Type of glazing for each panel has been **UPDATED**.
 - 2/Storefront B: Type of glazing for each panel has been **UPDATED**.
 - 4/Window Elevation E: Type of glazing for each panel has been **UPDATED**.
- **GLAZING TYPES:**
 - “L” Glazing Type has been **REPLACED** by “IG” Glazing Type

Sheet **E101** - SEE ATTACHED SHEET for revisions:

- **ELECTRICAL LEGEND:**
 - Telephone/Data Outlet Icon’s description **MODIFIED** to read: “TELEPHONE/DATA OUTLET +16”; SEE DETAIL 4/E501”
 - **ADD** Television Box Icon, with description stating, “TELEVISION BOX +60”AFF; SEE DETAIL 8/E501”
- **1/E101:**
 - (3) Locations for Telephone/Data have been **PLACED** within Community Rm. 125.

Sheet **E102** - SEE ATTACHED SHEET for revisions:

- 1/E102:
 - (3) Locations for Telephone/Data have been **PLACED** within Exercise Rm. 202.

Sheet **E103** - SEE ATTACHED SHEET for revisions:

- 1/E103:
 - (4) Locations for Telephone/Data have been **PLACED** within Theater Rm. 302.
 - (2) Locations for TV Recept have been **PLACED** within Theater Rm. 302.

Sheet **E401** - SEE ATTACHED SHEET for revisions:

- 1/E401:
 - (1) Location for Telephone/Data have been **PLACED** within Dwelling Unit A.
 - (2) Switching locations have been **MODIFIED** within Dwelling Unit A.
- 2/E401:
 - (1) Locations for Telephone/Data have been **PLACED** within Dwelling Unit B.

Sheet **E501** - SEE ATTACHED SHEET for revisions:

- 1/E501: **REVISED** Note to coordinate with Utility Provider for location of transformer.
- 8/E501: **ADDED** 8/E501 TV Wallbox Detail.

ATTACHMENTS:

088000 Glazing.pdf

C300.pdf

C400.pdf

D101.pdf

A001.pdf

A101.pdf

A102.pdf

A103.pdf

A120.pdf

A130.pdf

A201.pdf

A502.pdf

A510.pdf

A512.pdf

A520.pdf

E101.pdf

E102.pdf

E103.pdf

E401.pdf

E501.pdf

END OF ADDENDUM NUMBER THREE

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**SECTION 088000
GLAZING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Insulating glass units.
- B. Glazing units.
- C. Plastic films.
- D. Glazing compounds.

1.02 RELATED REQUIREMENTS

- A. Section 079200 - Joint Sealants: Sealants for other than glazing purposes.
- B. Section 081113 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.
- C. Section 081416 - Flush Wood Doors: Glazed lites in doors.
- D. Section 084313 - Aluminum-Framed Storefronts: Glazing provided as part of storefront assembly.
- E. Section 085413 - Fiberglass Windows: Glazing provided by window manufacturer.

1.03 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).
- C. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- D. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2019).
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- F. ASTM C1036 - Standard Specification for Flat Glass; 2021.
- G. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
- H. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass; 2019.
- I. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- J. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.
- K. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.
- L. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.
- M. GANA (GM) - GANA Glazing Manual; 2022.
- N. GANA (SM) - GANA Sealant Manual; 2008.
- O. GANA (LGRM) - Laminated Glazing Reference Manual; 2019.
- P. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- Q. IGMA TM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use; 1990 (2016).
- R. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.
- S. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.

- T. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2023.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data on Insulating Glass Unit and Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.
- D. Samples: Submit two samples 12 by 12 inch (___ by ___ mm) in size of glass units.
- E. Certificate: Certify that products of this section meet or exceed specified requirements.
- F. Manufacturer's qualification statement.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA (GM), GANA (SM), GANA (LGRM), and IGMA TM-3000 for glazing installation methods. Maintain one copy on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
 - 1. Provide certified glass products through ANSI accredited certifications that include plant audits and independent laboratory performance testing.
- C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.
 - 1. Provide company, field supervisors, and installers that hold active ANSI accredited certifications in appropriate categories for work specified.

1.06 FIELD CONDITIONS

- A. Do not install glazing when ambient temperature is less than 50 degrees F (10 degrees C).
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.07 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Float Glass Manufacturers:
 - 1. Guardian Glass, LLC: www.guardianglass.com/#sle.
 - 2. Pilkington North America Inc: www.pilkington.com/na/#sle.
 - 3. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com/#sle.
 - 4. Substitutions: See Section 016000 - Product Requirements.
- B. Fire-Rated Glass Manufacturers:
 - 1. Technical Glass Products (TGP): www.fireglass.com/#sle
 - a. Contact: Saira Seldo, SAFTIFIRST / O'Keeffe's, Inc.; 888.653.333 Ext. 788; SairaS@safti.com
 - 2. Substitutions: See Section 016000 - Product Requirements.

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2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
 - 1. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.

2. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
 3. Glass thicknesses listed are minimum.
- B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
1. In conjunction with weather barrier related materials described in other sections, as follows:
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
 3. Solar Optical Properties: Comply with NFRC 300 test method.

2.03 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
 2. Kind HS - Heat-Strengthened Type: Complies with ASTM C1048.
 3. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
 4. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.
 5. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load design.

2.04 SEALED INSULATING GLASS UNITS

- A. Manufacturers:
1. Glass: Any of the manufacturers specified for float glass.
 2. Substitutions: See Section 016000 - Product Requirements.
- B. Insulating Glass Units: Types as indicated.
1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV.
 3. Metal-Edge Spacers: Aluminum, bent and soldered corners.
 4. Spacer Color: Black.
 5. Edge Seal: Glass to elastomer with supplementary silicone sealant.
 - a. Color: Black.
 6. Purge interpane space with dry air, hermetically sealed.
- C. Type IG-1 - Insulating Glass Units: Vision glass, double glazed.
1. Applications: Exterior glazing unless otherwise indicated.
 2. Space between lites filled with air.
 3. Outboard Lite: Fully tempered float glass, 1/4 inch (6.4 mm) thick, minimum.
 - a. Tint: Clear.
 - b. Coating: Low-E (passive type), on #2 surface.
 4. Metal edge spacer.
 5. Inboard Lite: Fully tempered float glass, 1/4 inch (6.4 mm) thick, minimum.
 - a. Tint: Clear.
 6. Total Thickness: 1 inch (25.4 mm).
 7. Thermal Transmittance (U-Value), Summer - Center of Glass: 0.28, nominal.
 8. Thermal Transmittance (U-Value), Winter - Center of Glass: 0.29, nominal.
 9. Visible Light Transmittance (VLT): 68 percent, nominal.
 10. Shading Coefficient: 0.43, nominal.

11. Solar Heat Gain Coefficient (SHGC): 0.38, nominal.

2.05 GLAZING UNITS

- A. Type G-2 - Monolithic Interior Vision Glazing:
 1. Applications: Interior glazing unless otherwise indicated.
 2. Glass Type: Fully tempered float glass.
 3. Tint: Clear.
 4. Thickness: 1/4 inch (6.4 mm), nominal.

2.06 GLAZING COMPOUNDS

- A. Type GC-2 - Butyl Sealant: Single component; ASTM C920 Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.
- B. Type GC-5 - Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; nonbleeding, nonstaining; ASTM C920 Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25; Match frame color.
- C. Manufacturers:
 1. Bostik Inc: www.bostik-us.com/#sle.
 2. Dow Corning Corporation: www.dowcorning.com/construction/#sle. Dow Corning Corporation: www.dowcorning.com/construction/#sle.
 3. Momentive Performance Materials, Inc: www.momentive.com/#sle.
 4. Pecora Corporation: www.pecora.com/#sle.
 5. Substitutions: See Section 016000 - Product Requirements.

2.07 GLAZING ACCESSORIES

- A. Setting Blocks: Elastomeric material recommended by glass manufacturer, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot (25 mm for each square meter) of glazing or minimum 4 inch (100 mm) by width of glazing rabbet space minus 1/16 inch (1.5 mm) by height to suit glazing method and pane weight and area.
- B. Spacer Shims: Elastomeric material recommended by glass manufacturer, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Minimum 3 inch (75 mm) long by one half the height of the glazing stop by thickness to suit application, self adhesive on one face.
- C. Glazing Tape, Back Bedding Mastic Type: Preformed, butyl-based, 100 percent solids compound with integral resilient spacer rod applicable to application indicated; 5 to 30 cured Shore A durometer hardness; coiled on release paper; black color.
- D. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.
- E. Glazing Clips: Manufacturer's standard type.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

- A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

3.02 PREPARATION

- A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION, GENERAL

- A. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.
- B. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.

3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)

- A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inch (152 mm) from corners.
- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
- D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

3.05 INSTALLATION - WET GLAZING METHOD (SEALANT AND SEALANT)

- A. Application - Exterior Glazed: Set glazing infills from the exterior of the building.
- B. Place setting blocks at 1/4 points and install glazing pane or unit.
- C. Install removable stops with glazing centered in space by inserting spacer shims both sides at 24 inch (610 mm) intervals, 1/4 inch (6.4 mm) below sight line.
- D. Fill gaps between glazing and stops with butyl type sealant to depth of bite on glazing, but not more than 3/8 inch (9 mm) below sight line to ensure full contact with glazing and continue the air and vapor seal.
- E. Apply sealant to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.06 INSTALLATION - WET GLAZING METHOD (COMPOUND AND COMPOUND)

- A. Application - Interior Glazed: Set glazing infills from the interior of the building.
- B. Install glazing resting on setting blocks. Install applied stop and center pane by use of spacer shims at 24 inch (610 mm) centers, kept 1/4 inch (6 mm) below sight line.
- C. Locate and secure glazing pane using glazers' clips.
- D. Fill gaps between glazing and stops with glazing compound until flush with sight line. Tool surface to straight line.

3.07 INSTALLATION - WET/DRY GLAZING METHOD (PREFORMED TAPE AND SEALANT)

- A. Application - Exterior Glazed: Set glazing infills from the exterior of the building.
- B. Cut glazing tape to length and set against permanent stops, 3/16 inch (5 mm) below sight line. Seal corners by butting tape and dabbing with butyl sealant.
- C. Apply heel bead of butyl sealant along intersection of permanent stop with frame ensuring full perimeter seal between glass and frame to complete the continuity of the air and vapor seal.
- D. Place setting blocks at 1/4 points with edge block no more than 6 inch (152 mm) from corners.
- E. Rest glazing on setting blocks and push against tape and heel bead of sealant with sufficient pressure to attain full contact at perimeter of pane or glass unit.
- F. Install removable stops, with spacer strips inserted between glazing and applied stops 1/4 inch (6.4 mm) below sight lines.
 - 1. Place glazing tape on glazing pane of unit with tape flush with sight line.
- G. Fill gap between glazing and stop with butyl type sealant to depth equal to bite of frame on glazing, but not more than 3/8 inch (9 mm) below sight line.
- H. Apply cap bead of butyl type sealant along void between the stop and the glazing, to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.08 INSTALLATION - WET/DRY GLAZING METHOD (TAPE AND SEALANT)

- A. Application - Interior Glazed: Set glazing infills from the interior of the building.
- B. Cut glazing tape to length and install against permanent stops, projecting 1/16 inch (1.6 mm) above sight line.
- C. Place setting blocks at 1/4 points with edge block no more than 6 inch (152 mm) from corners.
- D. Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
- E. Install removable stops, spacer shims inserted between glazing and applied stops at 24 inch (610 mm) intervals, 1/4 inch (6 mm) below sight line.
- F. Fill gaps between pane and applied stop with butyl type sealant to depth equal to bite on glazing, to uniform and level line.
- G. Carefully trim protruding tape with knife.

3.09 INSTALLATION - BUTT JOINT GLAZING METHOD (SEALANT ONLY)

- A. Application - Exterior Glazed: Set glazing infills from exterior side of building.
- B. Temporarily brace glass in position for duration of glazing process; mask edges of glass at adjoining glass edges and between glass edges and framing members.
- C. Temporarily secure a small diameter nonadhering foamed rod on back side of joint.
- D. Apply sealant to open side of joint in continuous operation; thoroughly fill joint without displacing foam rod, and then tool sealant surface smooth to concave profile.
- E. Permit sealant to cure then remove foam backer rod, and then apply sealant to opposite side, tool smooth to concave profile.
- F. Remove masking tape.

3.10 CLEANING

- A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- B. Remove nonpermanent labels immediately after glazing installation is complete.
- C. Clean glass and adjacent surfaces after sealants are fully cured.
- D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.11 PROTECTION

- A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.
- B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION