



VIEW DOWN RIO ROAD EAST AT INTERSECTION



VIEW DOWN RIO ROAD EAST TOWARD INTERSECTION

# RIO POINT APARTMENTS

## ARB FINAL REVIEW

FEBRUARY 5, 2024

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

# PRESENTATION OVERVIEW:

- MASTER PLAN
- PERSPECTIVE RENDERINGS
- SITE PLAN
- CLUBHOUSE
- APARTMENTS

# MASTER PLAN

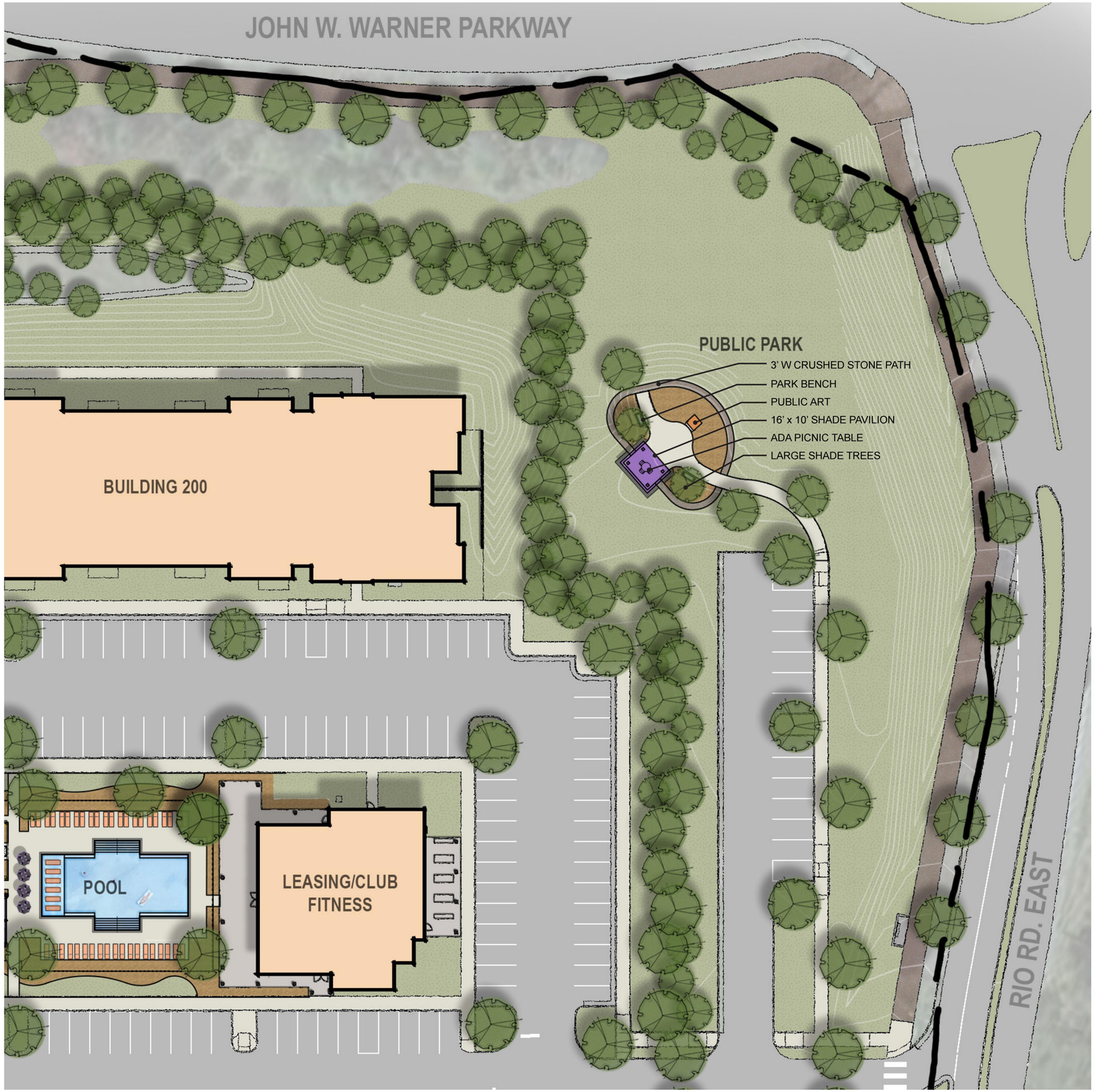
TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

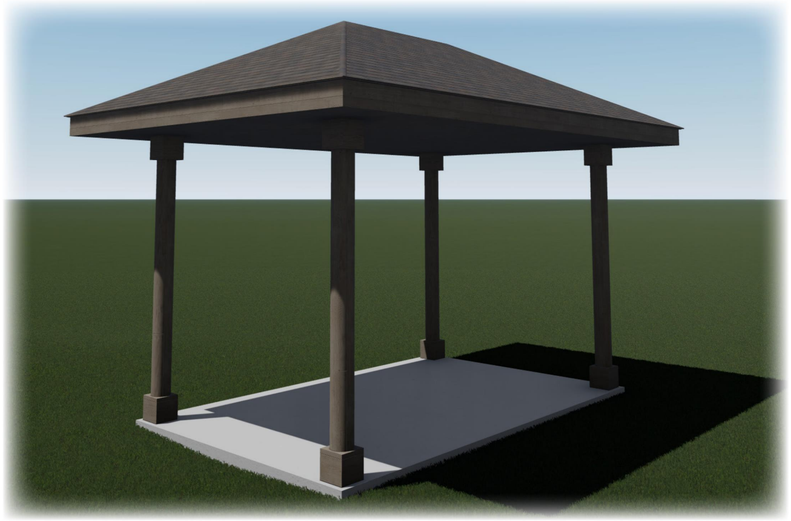


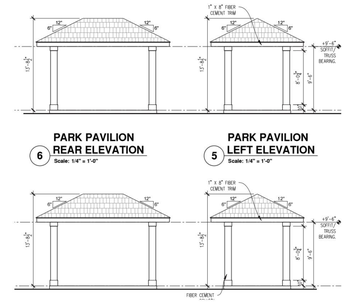

# RIO POINT

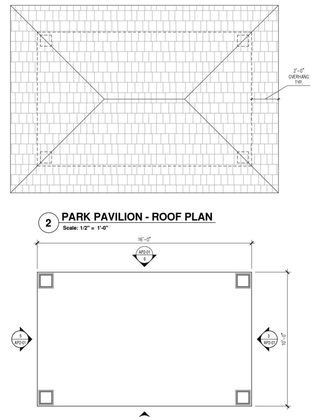
MASTER PLAN

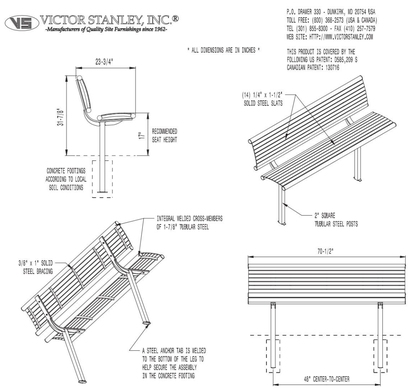
TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.



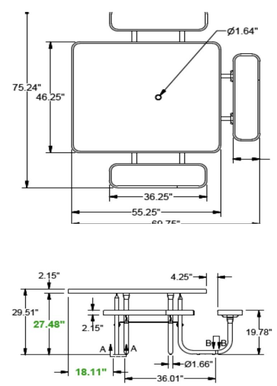






BENCH SEATING
VICTOR STANLEY FBF-50




ADA PICNIC TABLE
ANOVA 3-SEAT TABLE, D1308

# RIO POINT

## TRAILHEAD ENLARGEMENT PLAN

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

# PERSPECTIVE RENDERINGS

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.



# RIO POINT

TRAILHEAD PERSPECTIVE RENDERING

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.




# RIO POINT

PERSPECTIVE RENDERING - NORTH BOUND RIO RD E.

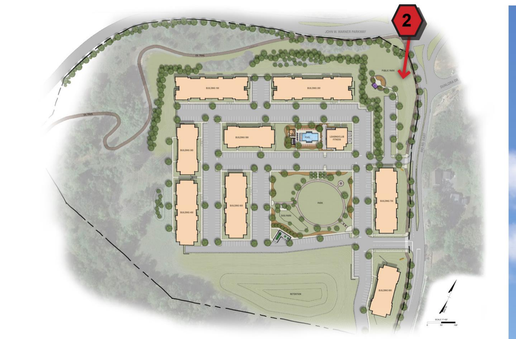
TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.




# RIO POINT

PERSPECTIVE RENDERING - NORTH BOUND RIO RD E. - NO LANDSCAPING

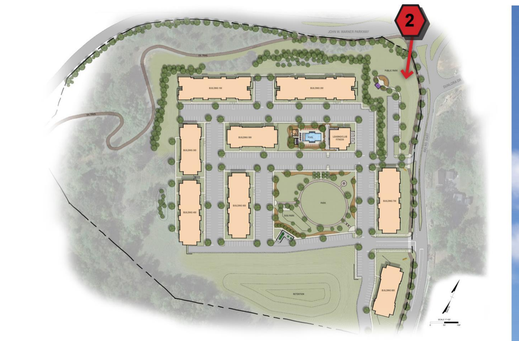
TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.




# RIO POINT

PERSPECTIVE RENDERING - SOUTH BOUND RIO RD E.

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.




# RIO POINT

PERSPECTIVE RENDERING - SOUTH BOUND RIO RD E. - NO LANDSCAPING

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.




# RIO POINT

PERSPECTIVE RENDERING - NORTH BOUND JOHN W. WARNER PARKWAY

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.




# RIO POINT

PERSPECTIVE RENDERING - NORTH BOUND JOHN W. WARNER PARKWAY - NO LANDSCAPING

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.




# RIO POINT

PERSPECTIVE RENDERING - SOUTH BOUND JOHN W. WARNER PARKWAY

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.




# RIO POINT

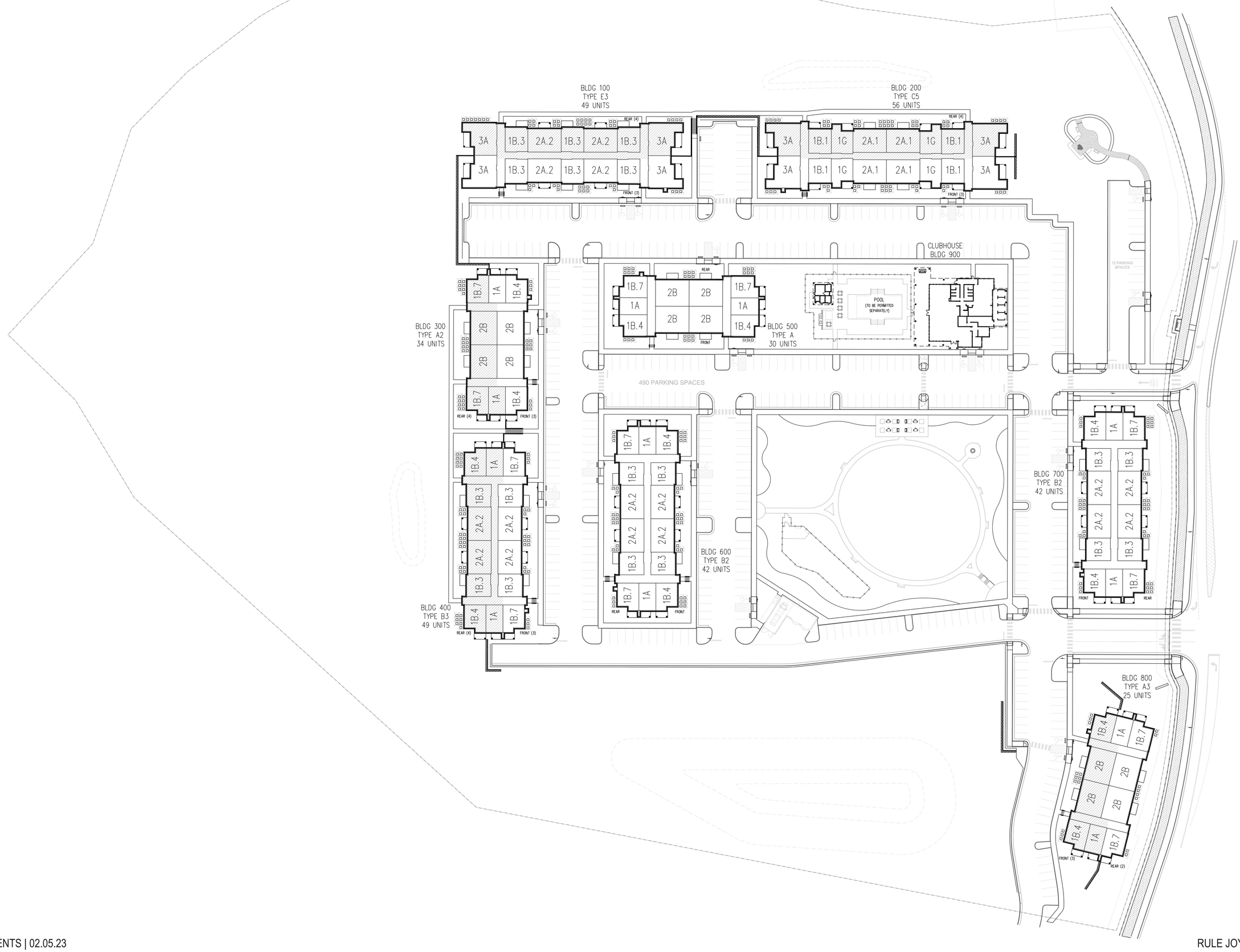
PERSPECTIVE RENDERING - SOUTH BOUND JOHN W. WARNER PARKWAY - NO LANDSCAPING

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

# SITE PLAN

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

# SITE PLAN


BLDG 100
TYPE E3
49 UNITS
BLDG 200
TYPE C5
56 UNITS
CLUBHOUSE
BLDG 900
POOL
(TO BE PERMITTED SEPARATELY)
12 PARKING SPACES
BLDG 300
TYPE A2
34 UNITS
BLDG 500
TYPE A
30 UNITS
490 PARKING SPACES
BLDG 700
TYPE B2
42 UNITS
BLDG 600
TYPE B2
42 UNITS
BLDG 400
TYPE B3
49 UNITS
BLDG 800
TYPE A3
25 UNITS

# CLUBHOUSE

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

# CLUBHOUSE

CORNER VIEW



# CLUBHOUSE

# ELEVATIONS

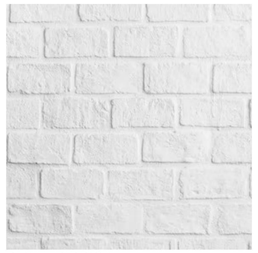
## MATERIALS PALETTE



STANDING SEAM METAL ROOF
ALUMAKLAD
DARK BRONZE



FIBER CEMENT PANEL W/ REVEALS
SITE WHITE
SW7070
PEWTER CAST
SW7673



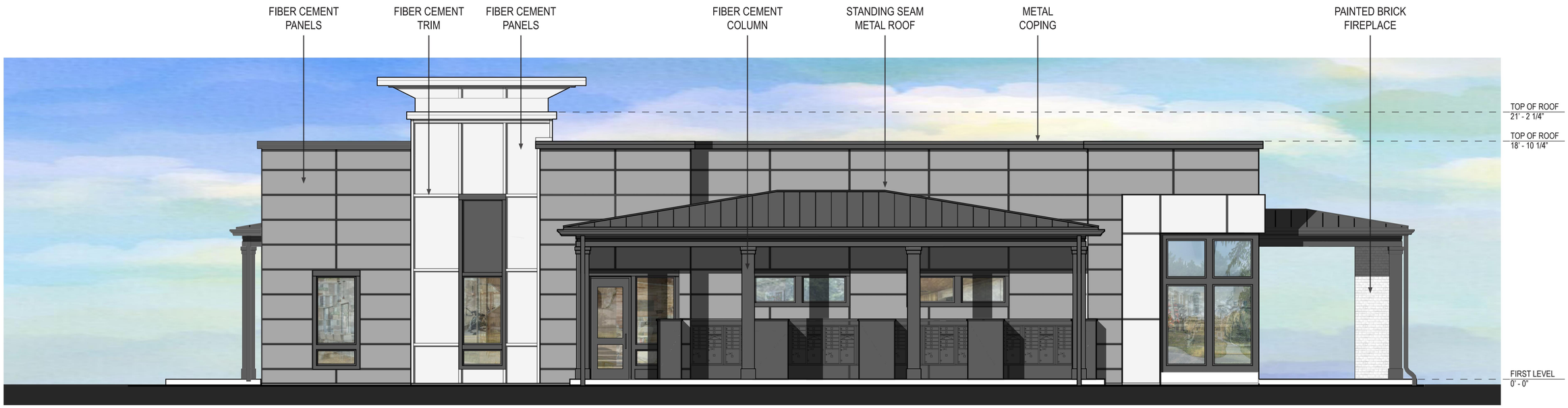
PAINTED BRICK
SITE WHITE
SW7070



FIBER CEMENT PANEL
SITE WHITE
SW7070
IRON ORE
SW7069




WEST ELEVATION




SOUTH ELEVATION

# CLUBHOUSE

# ELEVATIONS

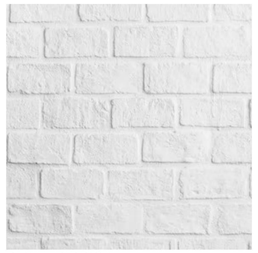
## MATERIALS PALETTE



STANDING SEAM METAL ROOF
ALUMAKLAD
DARK BRONZE



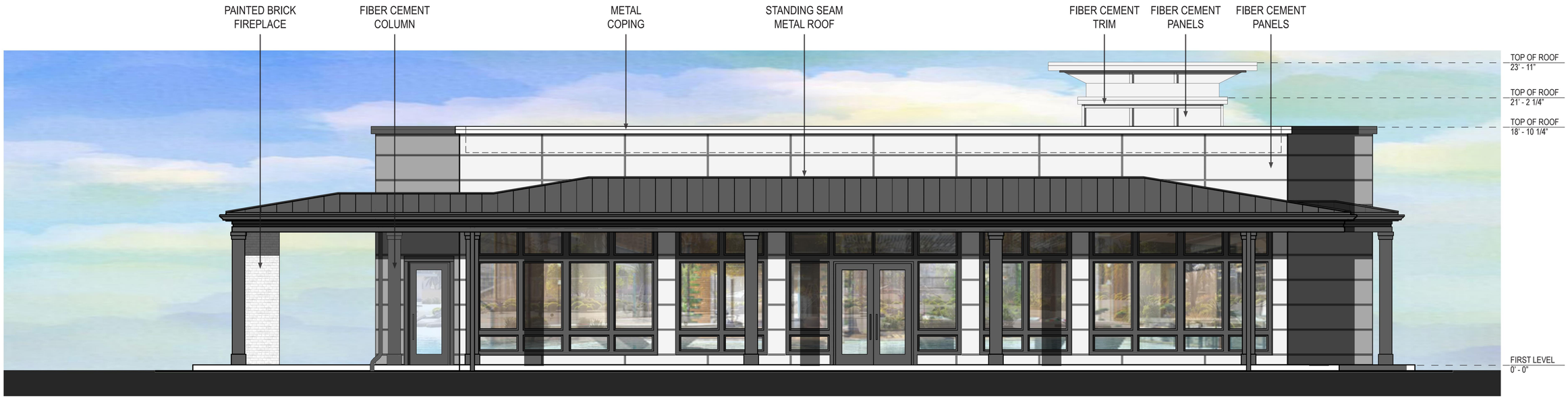
FIBER CEMENT PANEL W/ REVEALS
SITE WHITE
SW7070
PEWTER CAST
SW7673



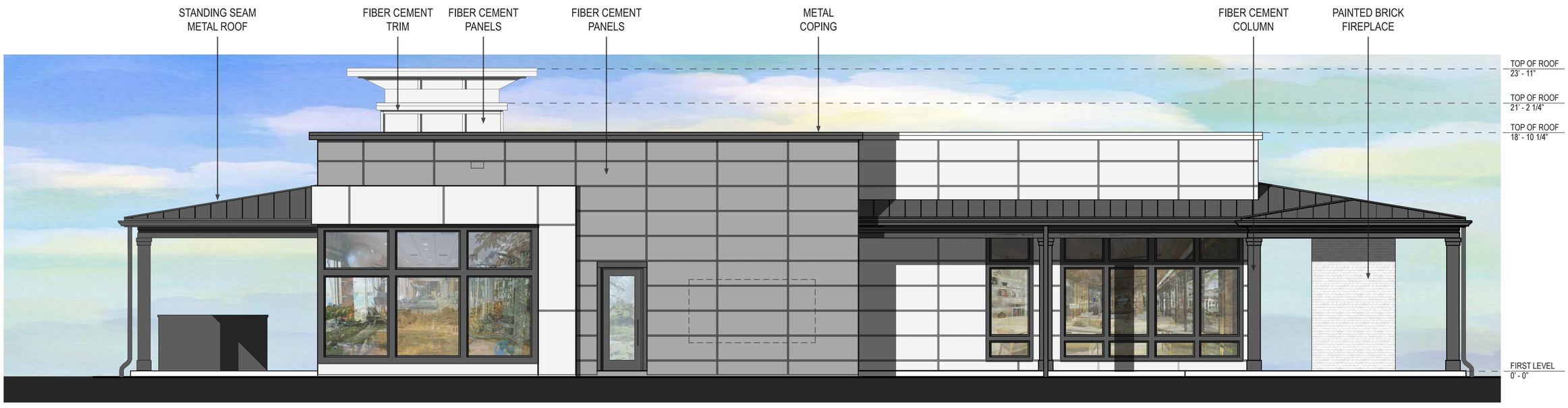
PAINTED BRICK
SITE WHITE
SW7070



FIBER CEMENT PANEL
SITE WHITE
SW7070
IRON ORE
SW7069




NORTH ELEVATION




EAST ELEVATION

# APARTMENTS

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

# BUILDING B2

PERSPECTIVE



# BUILDING B2

AXO



# BUILDING E3

# ELEVATIONS

WINDOW GLASS NOTE: VISIBLE LIGHT TRANSMITTANCE SHALL NOT DROP BELOW 40%. VISIBLE LIGHT REFLECTANCE SHALL NOT EXCEED 30%.

## MATERIALS PALETTE



ASPHALT SHINGLE
TIMBERLINE NATURAL SHADOW
WEATHERED WOOD



VERTICAL BOARD & BATTEN
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757



HORIZONTAL LAP SIDING
FIBER CEMENT
BIG CHILL
SW7648
MARCH WIND
SW7668



SHAKE STYLE LAP SIDING
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757



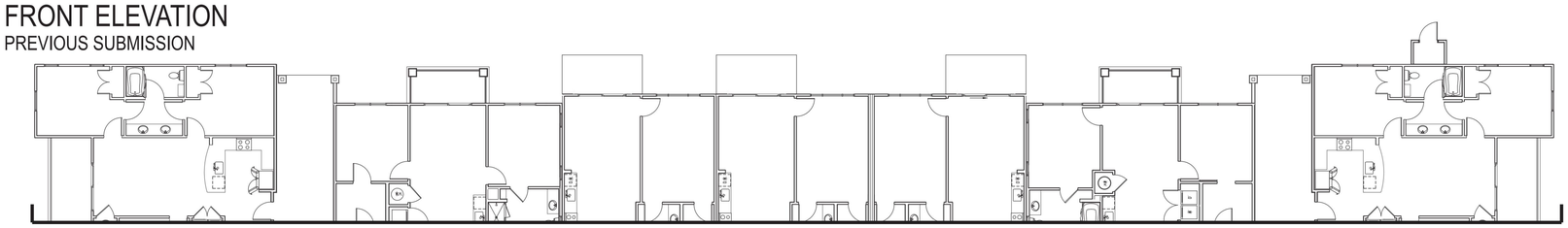

FRONT ELEVATION




RIGHT ELEVATION




FRONT ELEVATION
PREVIOUS SUBMISSION



# BUILDING E3

# ELEVATIONS

WINDOW GLASS NOTE: VISIBLE LIGHT TRANSMITTANCE SHALL NOT DROP BELOW 40%. VISIBLE LIGHT REFLECTANCE SHALL NOT EXCEED 30%.

## MATERIALS PALETTE



ASPHALT SHINGLE
TIMBERLINE NATURAL SHADOW
WEATHERED WOOD



VERTICAL BOARD & BATTEN
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757



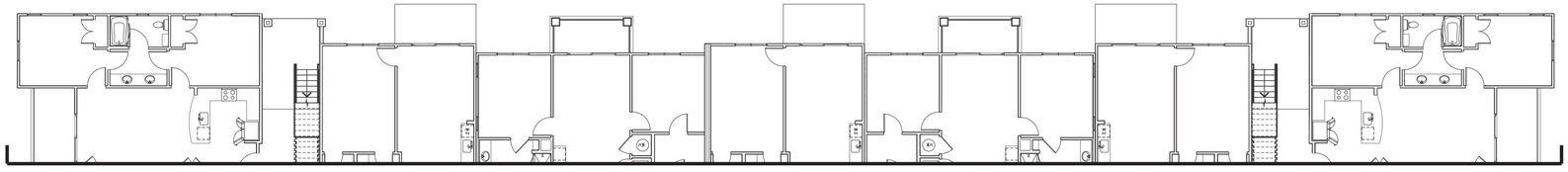
HORIZONTAL LAP SIDING
FIBER CEMENT
BIG CHILL
SW7648
MARCH WIND
SW7668



SHAKE STYLE LAP SIDING
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757




REAR ELEVATION

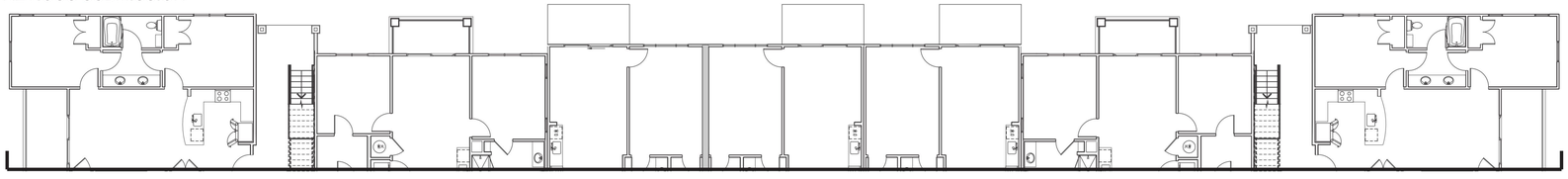





LEFT ELEVATION




REAR ELEVATION
PREVIOUS SUBMISSION



# BUILDING C5

WINDOW GLASS NOTE: VISIBLE LIGHT TRANSMITTANCE SHALL NOT DROP BELOW 40%. VISIBLE LIGHT REFLECTANCE SHALL NOT EXCEED 30%.

# ELEVATIONS

## MATERIALS PALETTE



ASPHALT SHINGLE
TIMBERLINE NATURAL SHADOW
WEATHERED WOOD



VERTICAL BOARD & BATTEN
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757



HORIZONTAL LAP SIDING
FIBER CEMENT
BIG CHILL
SW7648
MARCH WIND
SW7668



SHAKE STYLE LAP SIDING
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757




FRONT ELEVATION




RIGHT ELEVATION




FRONT ELEVATION
PREVIOUS SUBMISSION

# BUILDING C5

# ELEVATIONS

WINDOW GLASS NOTE: VISIBLE LIGHT TRANSMITTANCE SHALL NOT DROP BELOW 40%. VISIBLE LIGHT REFLECTANCE SHALL NOT EXCEED 30%.

## MATERIALS PALETTE



ASPHALT SHINGLE
TIMBERLINE NATURAL SHADOW
WEATHERED WOOD



VERTICAL BOARD & BATTEN
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757



HORIZONTAL LAP SIDING
FIBER CEMENT
BIG CHILL
SW7648
MARCH WIND
SW7668



SHAKE STYLE LAP SIDING
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757




REAR ELEVATION




LEFT ELEVATION




REAR ELEVATION
PREVIOUS SUBMISSION

# BUILDING A2



WINDOW GLASS NOTE: VISIBLE LIGHT TRANSMITTANCE SHALL NOT DROP BELOW 40%. VISIBLE LIGHT REFLECTANCE SHALL NOT EXCEED 30%.

## MATERIALS PALETTE



ASPHALT SHINGLE
TIMBERLINE NATURAL SHADOW
WEATHERED WOOD



VERTICAL BOARD & BATTEN
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757



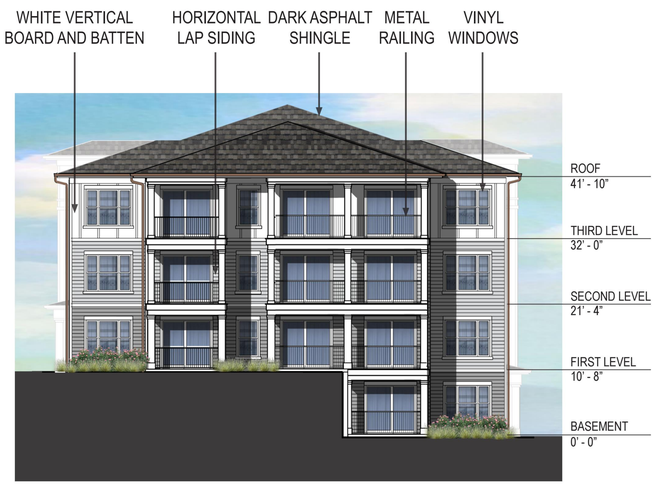
HORIZONTAL LAP SIDING
FIBER CEMENT
BIG CHILL
SW7648
MARCH WIND
SW7668



SHAKE STYLE LAP SIDING
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757




FRONT ELEVATION




RIGHT ELEVATION




REAR ELEVATION




LEFT ELEVATION

# BUILDING B3

WINDOW GLASS NOTE: VISIBLE LIGHT TRANSMITTANCE SHALL NOT DROP BELOW 40%. VISIBLE LIGHT REFLECTANCE SHALL NOT EXCEED 30%.

# ELEVATIONS

## MATERIALS PALETTE



ASPHALT SHINGLE

TIMBERLINE NATURAL SHADOW
WEATHERED WOOD



VERTICAL BOARD & BATTEN

FIBER CEMENT

HIGH REFLECTIVE WHITE
SW7757



HORIZONTAL LAP SIDING

FIBER CEMENT

BIG CHILL
SW7648
MARCH WIND
SW7668



SHAKE STYLE LAP SIDING

FIBER CEMENT

HIGH REFLECTIVE WHITE
SW7757




FRONT ELEVATION




RIGHT ELEVATION




REAR ELEVATION




LEFT ELEVATION

# BUILDING A



WINDOW GLASS NOTE: VISIBLE LIGHT TRANSMITTANCE SHALL NOT DROP BELOW 40%. VISIBLE LIGHT REFLECTANCE SHALL NOT EXCEED 30%.

## MATERIALS PALETTE



ASPHALT SHINGLE
TIMBERLINE NATURAL SHADOW
WEATHERED WOOD



VERTICAL BOARD & BATTEN
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757



HORIZONTAL LAP SIDING
FIBER CEMENT
BIG CHILL
SW7648
MARCH WIND
SW7668



SHAKE STYLE LAP SIDING
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757




FRONT ELEVATION




RIGHT ELEVATION




REAR ELEVATION




LEFT ELEVATION

# BUILDING B2

WINDOW GLASS NOTE: VISIBLE LIGHT TRANSMITTANCE SHALL NOT DROP BELOW 40%. VISIBLE LIGHT REFLECTANCE SHALL NOT EXCEED 30%.

# ELEVATIONS

## MATERIALS PALETTE



ASPHALT SHINGLE

TIMBERLINE NATURAL SHADOW
WEATHERED WOOD



VERTICAL BOARD & BATTEN
FIBER CEMENT

HIGH REFLECTIVE WHITE
SW7757



HORIZONTAL LAP SIDING
FIBER CEMENT

BIG CHILL
SW7648
MARCH WIND
SW7668



SHAKE STYLE LAP SIDING
FIBER CEMENT

HIGH REFLECTIVE WHITE
SW7757



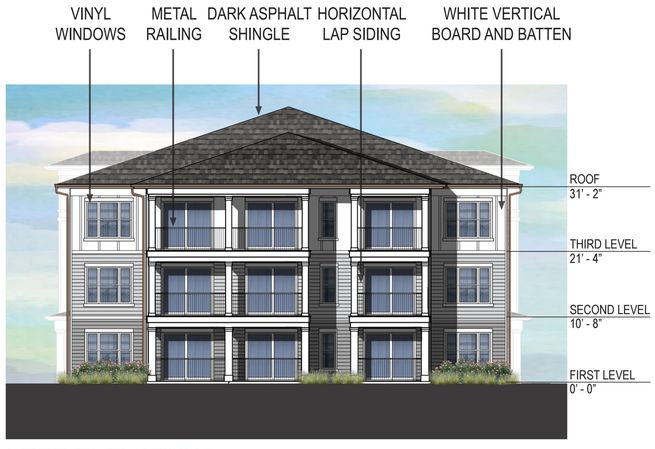

FRONT ELEVATION




RIGHT ELEVATION




REAR ELEVATION



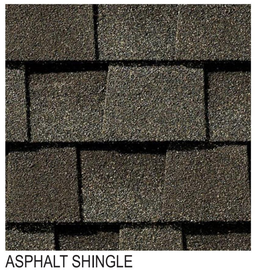

LEFT ELEVATION

# BUILDING A3

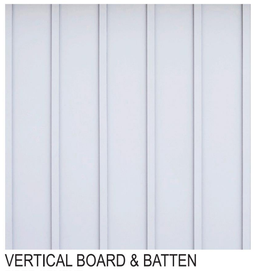


WINDOW GLASS NOTE: VISIBLE LIGHT TRANSMITTANCE SHALL NOT DROP BELOW 40%. VISIBLE LIGHT REFLECTANCE SHALL NOT EXCEED 30%.

## MATERIALS PALETTE



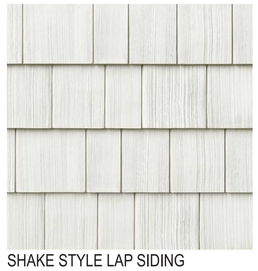
ASPHALT SHINGLE
TIMBERLINE NATURAL SHADOW
WEATHERED WOOD



VERTICAL BOARD & BATTEN
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757



HORIZONTAL LAP SIDING
FIBER CEMENT
BIG CHILL
SW7648
MARCH WIND
SW7668



SHAKE STYLE LAP SIDING
FIBER CEMENT
HIGH REFLECTIVE WHITE
SW7757




FRONT ELEVATION




RIGHT ELEVATION




REAR ELEVATION




LEFT ELEVATION

# THANK YOU

# SECTION 088000 - GLAZING

## PART 1 - GENERAL

### 1.1 SUMMARY

A. This Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:

1. Windows.
2. Doors.
3. Glazed entrances.
4. Interior borrowed lites.
5. Storefront framing.

B. Related Sections include the following:

1. Division 01 Sustainable Design Section for sustainable design requirements.
2. Division 08 Section "Hollow Metal Doors and Frames" for requirements for glass panels in doors.
3. Division 08 Sections for windows and doors for requirements for window and door glazing.
4. Division 08 Section “Mirrors.”

### 1.2 DEFINITIONS

A. Manufacturers of Glass Products: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.

B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.

C. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.

D. Deterioration of Coated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in metallic coating.

E. Deterioration of Insulating Glass: Failure of hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

1.3 PERFORMANCE REQUIREMENTS

A. General: Provide glazing systems capable of withstanding normal thermal movement and wind loads without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:

1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:

a. Specified Design Wind Loads: As indicated, but not less than wind loads applicable to Project as required by ASCE 7 "Minimum Design Loads for Buildings and Other Structures": Section 6.0 "Wind Loads."

1) Basic Wind Speed: As indicated on the Drawings.

b. Maximum Lateral Deflection: For the following types of glass supported on all 4 edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch, whichever is less.

1) For monolithic-glass lites heat treated to resist wind loads.
2) For insulating glass.

C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

D. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacturer's published test data, as determined according to procedures indicated below:

1. For monolithic-glass lites, properties are based on units with lites 6.0 mm thick.
2. For insulating-glass units, properties are based on units with lites 3 mm thick and a nominal 1/2-inch interspace, unless otherwise noted.
3. Center-of-Glass U-Values: Based on NFRC 100 technology using LBL-44789 WINDOW 4.1 computer program, expressed as Btu/ sq. ft. x h x deg F.R.

1.4 ACTION SUBMITTALS

A. Product Data: For each glass product and glazing material indicated.

B. Samples: For the following products, in the form of 12 inch-square Samples for glass.

1. Fire-resistive glazing products.
2. Insulating glass for each designation indicated.

C. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.

1.5 INFORMATIONAL SUBMITTALS

A. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.

B. Qualification Data: For installers.

C. Warranties: Special warranties specified in this Section.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glass installations with a record of successful in-service performance; and who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program.

B. Source Limitations for Glass: Obtain the following through one source from a single manufacturer for each glass type: clear float glass coated float glass and insulating glass.

C. Source Limitations for Glass Sputter-Coated with Solar-Control Low-E Coatings: Where solar-control low-e coatings of a primary glass manufacturer that has established a certified fabricator program is specified, obtain sputter-coated solar-control low-e-coated glass in fabricated units from a manufacturer that is certified by coated-glass manufacturer.

D. Source Limitations for Glazing Accessories: Obtain glazing accessories through one source from a single manufacturer for each product and installation method indicated.

E. Glass Product Testing: Obtain glass test results for product test reports in "Submittals" Article from a qualified testing agency based on testing glass products.

1. Glass Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

F. Glazing for Fire-Rated Door 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-protection ratings indicated, based on testing according to NFPA 252.

G. Glazing for Fire-Rated 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.

H. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201 and, for wired glass, ANSI Z97.1.

1. Where glazing units, including Kind FT glass, are specified in Part 2 articles for glazing lites more than 9 sq. ft. in exposed surface area of one side, provide glazing products that comply with Category II materials, for lites 9 sq. ft. or less in exposed surface area of one side, provide glazing products that comply with Category I or II materials, except for hazardous locations where Category II materials are required by 16 CFR 1201 and regulations of authorities having jurisdiction.

I. 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. GANA Publications: GANA Laminated Division's "Laminated Glass Design Guide" and GANA's "Glazing Manual."
2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."

J. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the following testing and inspecting agency:

1. Insulating Glass Certification Council.
2. Associated Laboratories, Inc.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver all glass materials with manufacturer’s label intact showing thickness, quality and type. Do not remove labels until authorized by Architect.

B. Deliver glazing compounds and sealants in manufacturer’s unopened, labeled containers.

C. Protect glazing materials according to manufacturer's written instructions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes. Store glass in dry, well-ventilated location at constant temperature maintained above dew point. Keep glass free from contamination by materials capable of staining glass.

D. Minimize glass handling. Do not move cases of glass which have been partially unpacked. Unpack glazing materials in compliance with manufacturer’s product data for type of material being handled. Stack individual lites as recommended by manufacturer’s product data.

E. Utilize rolling blocks to rotate glazing materials. Handle insulating units without rotating, warping or “cartwheeling” units. Prevent damage to glazing material and edge seal.

F. For insulating-glass units that will be exposed to substantial altitude changes, comply with insulating-glass manufacturer's written recommendations for venting and sealing to avoid hermetic seal ruptures.

1.8 PROJECT CONDITIONS

A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.

1. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 deg F.

1.9 WARRANTY

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

B. Manufacturer's Special Warranty on Insulating Glass: Manufacturer's standard form, made out to Owner and signed by insulating-glass manufacturer agreeing to replace insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Products: Subject to compliance with requirements, provide one of the products specified.
2. Product: Subject to compliance with requirements, provide product specified.
3. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.
4. Basis-of-Design Product: The design for each glazing product is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

2.2 GLASS PRODUCTS

A. Annealed Float Glass: ASTM C 1036, Type I (transparent flat glass), Quality-Q3; of class indicated.

B. Heat-Treated Float Glass: ASTM C 1048; Type I (transparent flat glass); Quality-Q3; of class, kind, and condition indicated.

1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated.
2. Provide Kind HS (heat-strengthened) float glass in place of annealed float glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements" Article.
3. For uncoated glass, comply with requirements for Condition A.
4. For coated vision glass, comply with requirements for Condition C (other uncoated glass).
5. Provide Kind FT (fully tempered) float glass in place of annealed or Kind HS (heat-strengthened) float glass where safety glass is indicated.

C. Sputter-Coated Float Glass: ASTM C 1376, float glass with metallic-oxide or -nitride coating deposited by vacuum deposition process after manufacture and heat treatment (if any), and complying with other requirements specified.

D. Laminated Glass: ASTM C 1172, and complying with other requirements specified and with the following:

1. Interlayer: Polyvinyl butyral of thickness indicated with a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after laminating glass lites and installation.

    a. For polyvinyl butyral interlayers, laminate lites in autoclave with heat plus pressure.

2. Laminating Process: Fabricate laminated glass to produce glass free of foreign substances and air or glass pockets.

E. Insulating-Glass Units, General: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, and complying with ASTM E 774 for Class CBA units and with requirements specified in this Article and in Part 2 "Insulating-Glass Units" Article.

1. Provide Kind HS (heat-strengthened) float glass in place of annealed glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements" Article.
2. Provide Kind FT (fully tempered) glass lites where safety glass is indicated.
3. Provide laminated glass lites where required for windborne debris impact resistance.
4. Overall Unit Thickness and Thickness of Each Lite: Dimensions indicated for insulating-glass units are nominal and the overall thicknesses of units are measured perpendicularly from outer surfaces of glass lites at unit's edge.
5. Sealing System: Dual seal, with primary and secondary sealants as follows:

a. Manufacturer's standard sealants.

6. Spacer Specifications: Manufacturer's standard spacer material and construction.

## 2.3 GLAZING GASKETS

A. Dense Compression Gaskets (Exterior): Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:

1. Neoprene, ASTM C 864.
2. EPDM, ASTM C 864.
3. Silicone, ASTM C 1115.
4. Thermoplastic polyolefin rubber, ASTM C 1115.
5. Any material indicated above.

B. Soft Compression Gaskets (Interior): Extruded or molded, closed-cell, integral-skinned gaskets of material indicated below; complying with ASTM C 509, Type II, black; and of profile and hardness required to maintain watertight seal:

1. Neoprene.
2. EPDM.
3. Silicone.
4. Thermoplastic polyolefin rubber.
5. Any material indicated above.

## 2.4 GLAZING SEALANTS

A. General: Provide products of type indicated, complying with the following requirements:

1. Compatibility: Select glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

## 2.5 MISCELLANEOUS GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.

B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.

C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.

D. Spacers: Elastomeric blocks or continuous extrusions with a Shore, Type A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

G. Perimeter Insulation for Fire-Resistive Glazing: Identical to product used in test assembly to obtain fire-resistance rating.

2.6 FABRICATION OF GLAZING UNITS

A. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites in a manner that produces square edges with slight kerfs at junctions with outdoor and indoor faces.

C. Grind smooth and polish exposed glass edges and corners.

2.7 MONOLITHIC FLOAT-GLASS UNITS

A. Uncoated Clear Float-Glass Units MG-1: Class 1 (clear) Kind FT (fully tempered) float glass.

1. Minimum thickness: 6.0 mm.

2.8 INSULATING-GLASS UNIT SCHEDULE

A. As Designated on Drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine framing glazing, with Installer present, for compliance with the following:

1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
2. Presence and functioning of weep system.

3. Minimum required face or edge clearances.
4. Effective sealing between joints of glass-framing members.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 PREPARATION

A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

## 3.3 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.

C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.

E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass lites where length plus width is larger than 50 inches as follows:

1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

3.4 GASKET GLAZING (DRY)

A. Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.

B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.

C. Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.

D. Install gaskets so they protrude past face of glazing stops.

3.5 CLEANING AND PROTECTION

A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended by glass manufacturer.

C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.

D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

E. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

END OF SECTION 088000