HISTORIC AND DESIGN REVIEW COMMISSION May 02, 2018

HDRC CASE NO: 2018-155 **COMMON NAME:** 915 S LAREDO NCB 310 BLK 5 LOT I & E IRR 15.5 FT OF D LEGAL DESCRIPTION: **ZONING:** C-3NA, RIO-7 **CITY COUNCIL DIST.:** 1 Judith De Santiago/JD Commercial Realty **APPLICANT: OWNER:** RGS Holdings, LLC **TYPE OF WORK:** New construction of a two story, commercial structure **APPLICATION RECEIVED:** April 23, 2018 June 22, 2018 **60-DAY REVIEW:**

REQUEST:

The applicant is requesting a Certificate of Appropriateness to construct a two story commercial structure with surface parking at the corner of S Laredo Street and Guadalupe Street, in RIO-7.

APPLICABLE CITATIONS:

UDC Section 35-672. - Neighborhood Wide Design Standards

- (a) Pedestrian Circulation. Pedestrian access shall be provided among properties to integrate neighborhoods.
 - (1) Provide sidewalks that link with existing sidewalks on adjoining properties If no sidewalk currently exists on an adjoining property, the applicant will have discretion in the placement of the sidewalk provided the following criteria are met:

A. Provide a sidewalk connection from one (1) side of the applicant's property to the other, parallel to the public right-of way, on the street sides of the property in all river improvement overlay districts

B. Provide a connection from the street level sidewalk to the Riverwalk at cross streets and bridges and other designated access points. This requirement may be waived if there is already a public connection from the street level to the Riverwalk.

C. In order to preserve the rural character of "RIO-6," the HPO, in coordination with the development services department, may waive the requirement of sidewalks.

- In "RIO-3," the width of the pathway along the river shall match those widths established in the historic Hugman drawings. If there are no sidewalks in the Hugman drawings, the path will not exceed eight (8) feet in width.
- (2) Link the various functions and spaces on a site with sidewalks in a coordinated system.

Provide pedestrian sidewalks between buildings, parking areas and built features such as outdoor plazas and courtyards.

(3) Paving materials. Paving materials for pedestrian pathways shall use visually and texturally different materials than those used for parking spaces and automobile traffic.

A. Paving materials for pedestrian pathways shall be either:

i. Broom-finished, scored, sandblasted or dyed concrete;

- ii. Rough or honed finished stone;
- iii. Brick or concrete pavers; or

iv. Other materials that meet the performance standards of the above materials.

B. Asphalt is permitted for pedestrian pathways that also are designated as multi-use paths by the City of San Antonio. The public works department will maintain the designated multi-use path locations.

(4) Street Connections to River. Retain the interesting and unique situations where streets dead-end at the river, creating both visual and physical access to the river for the public.

(5) Pedestrian Access Along the Riverwalk Pathway Shall Not Be Blocked.

A. Queuing is prohibited on the Riverwalk pathway.

B. Hostess stations shall be located away from the Riverwalk pathway so as to not inhibit pedestrian flow on the Riverwalk pathway. That is, the hostess station shall not be located in such a manner to cause a patron who has stopped at the hostess stand to be standing on the Riverwalk pathway. Pedestrian flow shall be considered "inhibited" if a pedestrian walking along the pathway has to swerve, dodge, change direction or come to a

complete stop to avoid a patron engaged at the hostess stand.

C. Tables and chairs shall be located a sufficient distance from the Riverwalk pathway so that normal dining and service shall not inhibit the flow of pedestrian traffic. See inhibited definition in subsection B. above.

(b) Automobile Access and Parking. Automobile circulation should be efficient, and conflicts with pedestrians minimized. Entry points for automobiles should be clearly defined and connections to auto circulation on adjoining properties are encouraged to facilitate access and reduce traffic on abutting public streets.

(1) Curb Cuts.

A. Limit curb cuts to two (2) on parking areas or structures facing only one (1) street, and one (1) for each additional street face. The prohibition of additional curb cuts may be waived by the HDRC where the intent of the standards are clearly met and specific site circulation patterns require an additional curb cut, such as on long parcels or at nodes.

B. Curb cuts may be no larger than twenty-five (25) feet zero (0) inches. Continuous curb cuts are prohibited. C. Sharing curb cuts between adjacent properties, such as providing cross property access easements, is permitted.

(2) Location of Parking Areas. Automobile parking in new developments must be balanced with the requirements of active environments. Large expanses of surface parking lots have a negative impact on street activity and the pedestrian experience. New commercial and residential structures can accommodate parking needs and contribute to a pedestrian-friendly streetscape.

A. Locate parking areas, that is any off-street, ground level surface used to park cars or any parking structure, toward the interior of the site or to the side or rear of a building.

B. The extent of parking area that may be located along the street edge or riverside shall be limited to a percentage of the lot line as per Table 672-1 as measured in a lineal direction parallel to the lot line. All parking within a thirty-foot setback from the above mentioned lot line shall comply with the requirements of the table. Where parking is located on corner sites only one (1) lot line has to meet the requirements of the table. C. Parking lots should be avoided as a primary land use. Parking lots as a primary use are prohibited in RIO-3

and for all properties that fall within one hundred (100) feet of the river right-of-way in all RIO districts.

(3) Screen or Buffer Parking Areas From View of Public Streets, the River or Adjacent Residential Uses. (see Figure 672-2). Parking lots shall be screened with a landscape buffer as per the illustrations of bufferyards and Table 510-2 if the parking area meets one (1) of the following conditions:

A. Within a fifty-foot setback from the edge of the river ROW use, at a minimum, type E; or

B. Within a twenty-foot setback from a property line adjacent to a street use, at a minimum, type B; or

C. Within a twenty-foot setback of commercial or industrial property that abuts a residential property use, at a minimum, type C.

(4) Parking Structures Shall Be Compatible With Buildings in the Surrounding Area. Parking garages should have retail space on the ground floor of a parking structure provided the retail space has at least fifty (50) percent of its linear street frontage as display windows. Parking structures may be made visually appealing with a mural or public art component approved by the HDRC on the parking structure. A parking garage will be considered compatible if:

A. It does not vary in height by more than thirty (30) percent from another building on the same block face; and B. It uses materials that can be found on other buildings within the block face, or in the block face across the street.

(5) Parking Structures Shall Provide Clearly Defined Pedestrian Access. Pedestrian entrances and exits shall be accentuated with directional signage, lighting or architectural features so that pedestrians can readily discern the appropriate path of travel to avoid pedestrian/auto conflicts.

(6) Parking lots, structures, and hardscape shall not drain directly into the river without installation of appropriate water quality best management practices (WQ BMPs). Acequias shall not be used for any type of drainage.

(c) Views. The river's course (both natural and manmade), and San Antonio's street pattern, creates unique views of certain properties from the public ROW. These properties often occur at prominent curves in the river or where a street changes direction and a property appears to be a terminus at the end of a street.

(1) Architectural Focal Point. When a property is situated in such a manner as to appear to be the terminus at the end of the street or at a prominent curve in the river, the building shall incorporate into its design an architectural feature that will provide a focal point at the end of the view. (see Figure 672-3) An architectural feature will be considered to be a focal point through any of the following methods, but not limited to:

- A. Additional height.
- B. Creation of a tower.
- C. Variation in roof shape.
- D. Change of color or materials.

E. Addition of a design enhancement feature such as:

i. Embellished entrance areas.

ii. Articulated corners, especially when entrance is at corner, rounded or chamfered corners ease the transitions from one street facade to the adjoining facade.

iii. Recessed or projecting balconies and entrances.

Billboards, advertising and signage are expressly prohibited as appropriate focal points.

UDC Section 35-673. - Site Design Standards

(a) Solar Access. The intent of providing and maintaining solar access to the San Antonio River is to protect the river's specific ecoclimate. The river has a special microclimate of natural and planted vegetation that requires certain levels and balanced amounts of sunlight, space and water. Development must be designed to respect and protect those natural requirements, keeping them in balance and not crowding or altering them so that vegetation does not receive more or less space and water, but particularly sunlight, than is required for normal expected growth.

(1) Building Massing to Provide Solar Access to the River. Building massing shall be so designed as to provide direct sunlight to vegetation in the river channel as defined:

A. The area to be measured for solar access shall be a thirty-foot setback from the river's edge or from the river's edge to the building face, which ever is lesser, parallel to the river for the length of the property.

B. The solar calculations shall be measured exclusive to the applicant's property; that is, shades and shadows of other buildings shall not be included in the calculations. The solar calculations shall only measure the impact of new construction and additions. The shading impact of historic buildings on the site may be excluded from the calculations.

C. The defined area shall receive a minimum of 5.5 hours of direct sunlight, measured at the winter solstice, and 7.5 hours of direct sunlight, measured at the summer solstice.

D. Those properties located on the south side of the river (whose north face is adjacent to the river) shall only be required to measure the sunlight in the 30-foot setback on the opposite bank of the river.

E. Those properties within the river improvement overlay district not directly adjacent to the river are still subject to the provisions of this section. To determine the solar access effect of these buildings on the river the applicant must measure the nearest point to the river of an area defined by a thirty-foot setback from the river's edge, parallel to the river for the length of their property that would be affected by their building. For those buildings on the south side of the river, the 30-foot setback shall be measured only on the opposite bank.

F. However, in those cases where the above conditions cannot be met due to the natural configuration of the river, existing street patterns, or existing buildings, the HDRC may approve a buildings mass and height as allowed by table 674-2.

G. If there is a conflict with this section and another section of this chapter this section shall prevail.

(2) Prohibition of Structures, Buildings, Roofs or Skywalks Over the River Channel. No structure, building, roof or skywalk may be constructed over the river channel, or by-pass channel with the exception of structures for flood control purposes, open air pedestrian bridges at ground or river level, and street bridges. The river channel is the natural course of the river as modified for flood control purposes and the Pershing-Catalpa ditch.

(b) Building Orientation. Buildings should be sited to help define active spaces for area users, provide pedestrian connections between sites, help animate the street scene and define street edges. Consideration to both the street and riverside should be given. The placement of a building on a site should therefore be considered within the context of the block, as well as how the structure will support the broader design goals for the area.

(1) Two or More Buildings on a Site.

A. Cluster buildings to create active open spaces such as courtyards along the street and river edges. Site plazas and courtyards, if possible, so that they are shaded in the summer and are sunny in the winter.

(2) Primary and Secondary Entrances

A. Orient a building's primary entrance toward the street with subordinate entrances located on the riverside and/or the interior of the property. On a major thoroughfare street it is acceptable to provide the primary entrance through a common courtyard and then to a street.

B. The primary entrance shall be distinguished by architectural features such as, but not limited to: an entry portal; change in material or color; change in scale of other openings; addition of columns, lintels or canopies. C. Secondary entrances shall have architectural features that are subordinate to the primary entrance in scale and detail. For purposes of this division subordinate means that the entrance is smaller in height and width, and has fewer or simpler architectural elements.

(c) Topography and Drainage. The natural contours of occasional hillsides and riverbanks contribute to the distinct

character of the San Antonio River and shall be considered in site designs for new development. Site plans shall minimize the need for cut and fill. It should be considered as an opportunity for positive enhancements through the creative use of terraces and retaining walls.

(1) Visual Impacts of Cut and Fill. Divide a grade change of more than ten (10) vertical feet into a series of benches and terraces. Terrace steep slopes following site contours. When creating site benches, using sloped "transitional areas" as part of the required landscaping is appropriate.

(2) Minimize the Potential for Erosion at the Riverbank. Grade slopes at a stable angle not to exceed four to one (4:1) and provide plant material that will stabilize the soil such as vigorous ground covers, vines or turf planting that are native and noninvasive species as found on the permissible plant list maintained by the parks and recreation department. Use of stabilizing materials such as geo-web or geo-grid is permitted as long as plant material is used to conceal the grid.

Use of terraced walls is permitted when there is a slope of more than four to one (4:1).

(3) Retaining Walls. Limit the height of a retaining wall to less than six (6) feet. If the retaining wall must exceed six (6) feet, a series of six-foot terrace walls is acceptable. Walls at dams and locks are excluded from this requirement. If in the opinion of the historic preservation officer a higher wall is consistent with the adopted conceptual plan of the river, a higher wall (not to exceed twelve (12) feet) is allowed. Materials used for the walls may include limestone, stucco, brick, clay, tile, timber, or textured concrete. (see Figure 673-2)

(4) Enhance or Incorporate Acequias Into The Landscape Design and Drainage Scheme of the Site. Where archeological evidence indicates a site contains or has contained a Spanish colonial acequia, incorporate the original path of the acequia as a natural drainageway or a landscape feature of the site by including it as part of the open space plan, and a feature of the landscape design.

(5) Design of Stormwater Management Facilities to be a Landscape Amenity. Where above ground stormwater management facilities are required, such facilities shall be multi-purpose amenities. For example, water quality features can be included as part of the site landscaping and detention facilities can be included as part of a hardscape patio. Using an open concrete basin as a detention pond is prohibited.

(6) Walls and Fences at Detention Areas.

A. When the topography of the site exceeds a four to one (4:1) slope and it becomes necessary to use a masonry wall as part of the detention area, use a textured surface and incorporate plant materials, from the plant list maintained by the parks department, that will drape over the edge to soften the appearance of the structure. B. The use of solid board or chain link fence with or without slats is prohibited. A welded wire, tubular steel, wrought iron or garden loop is permitted.

(7) Roof Drainage into the River.

A. All roof drainage and other run-off drainage shall conform to public works department standards so that they \setminus drain into sewer and storm drains rather than the river. Drainage of this type shall not be piped into the river unless the outlet is below the normal waterline of the river at normal flow rates.

B. All downspouts or gutters draining water from roofs or parapets shall be extended underground under walks and patios to the San Antonio River's edge or stormwater detention facility so that such drainage will not erode or otherwise damage the Riverwalk, landscaping or river retaining walls.

C. All piping and air-conditioning wastewater systems shall be kept in good repair. Water to be drained purposely from these systems, after being tested and adjudged free from pollution, shall be drained in the same manner prescribed in subsection (7)A. above.

(d) Riverside Setbacks. Riverside setbacks for both buildings and accessory structures are established to reinforce the defined character of the specific river improvement overlay district and help to define an edge at the river pathway that is varied according to the relationship of the river and the street. In the more urban areas, buildings should align closer to the river edge, while in more rural areas the buildings should be set farther away.

(1)Minimum setback requirements are per the following Table 673-1.

Description	RIO-1	RIO-2	RIO-3	RIO-4	RIO-5	RIO-6
Riverside Setback	20 FT	15 FT	0 FT	20 FT	50 ft	100 FT

(2)Designation of a development node district provides for a minimum riverside setback of zero (0) feet.(e)Landscape Design. Lush and varied landscapes are part of the tradition of the San Antonio River. These design standards apply to landscaping within an individual site. Additional standards follow that provide more specific standards for the public pathway along the river and street edges.

(1)Provide Variety in Landscape Design. Provide variety in the landscape experience along the river by varying landscape designs between properties. No more than seventy-five (75) percent of the landscape materials, including

plants, shall be the same as those on adjacent properties. (see Figure 673-4).

(2) Planting Requirements in Open Space Abutting the River. On publicly-owned land leased by the adjoining property owner, if applicable, and/or within privately owned setbacks adjacent to the river, a minimum percentage of the open space, excluding building footprint, lease space under bridges and parking requirements, are required to be planted according to Table 673-2.

A. Planting requirements in RIO-4, RIO-5, and RIO-6 should continue the restoration landscape efforts along the river banks. Planting in these RIO districts is to be less formal so as to maintain the rural setting of the river. B. In "RIO-3," if existing conditions don't meet the standards as set out in Table 673-2, the owner or lessee will not have to remove paving to add landscaping in order to meet the standards until there is a substantial remodeling of the outdoor area. Substantial remodeling will include replacement of seventy-five (75) percent of the paving materials, or replacement of balcony and stair structures.

(f) Plant Materials. A number of soil conditions converge in the San Antonio area to create unique vegetation ecosystems. Along the route of the San Antonio River, the soil conditions vary greatly from the northern boundary near Hildebrand to the city limits near Mission San Francisco de la Espada (Mission Espada) and therefore native and indigenous plants will vary accordingly. Landscaping should reflect the unique soil characteristics of the specific site.

(1) Incorporate Existing Vegetation. Extend the use of landscape materials, including plants, shrubs and trees that are used in the public areas of the river onto adjacent private areas to form a cohesive design.

(2) Use indigenous and noninvasive species characteristic of the specific site as found on the permissible plant list maintained by the parks and recreation department or the Unified Development Code Plant List found in Appendix E. In "RIO-3," plantings of tropical and semi-tropical plants with perennial background is permitted.

(3) Install Trees to Provide Shade and to Separate Pedestrians From Automobile Traffic. Install street trees along the property line or in the ROW abutting all streets according to minimum requirement standards established in subsection 35-512(b), except where this conflicts with existing downtown Tri-Party improvements in "RIO-3." In

"RIO-3" the owner has the option of placing trees at the property line, or along the street edge. (g) Paving Materials. An important San Antonio landscape tradition is the use of decorative surfaces for paving and other landscape structures. Paving materials and patterns should be carefully chosen to preserve and enhance the pedestrian experience.

(1) Vary Walkway, Patio and Courtyard Paving to Add Visual Interest on the Riverside of Properties Abutting the River. Pervious paving is encouraged where feasible and appropriate to the site.

A. A maximum of six hundred (600) square feet is allowed for a single paving material before the paving material must be divided or separated with a paving material that is different in texture, pattern, color or material. A separation using a different material must be a minimum of twenty-four (24) inches wide, the full width of the pathway.

B. A maximum of one hundred (100) lineal feet is allowed in a walkway before the pattern must change in districts "RIO-2," "RIO-3," and "RIO-4." A maximum of five hundred twenty-eight (528) lineal feet is allowed before the pattern must change in districts "RIO-1," "RIO-5" and "RIO-6." The change of material at five hundred twenty-eight (528) lineal feet will define and delineate one-tenth-mile markers.

C. In "RIO-3," the Riverwalk pathway shall be delineated by using a separate material that is clearly distinguished from the adjacent patio paving materials. If the historic Hugman drawings indicate a sidewalk width and pattern on the site, that paving pattern and material shall be replicated.

(h) Site Walls and Fences. Site walls and fences are used to help divide spaces, screen unsightly objects and provide privacy. However, the character of the San Antonio River is such that walls shall not be erected in such a way as to block views of the river from public spaces.

(1) Use of Site Walls to Define Outdoor Spaces.

A. Use of low scale walls (twenty-four (24) inches to forty-eight (48) inches) to divide space, create a variety in landscaping and define edges is permitted.

B. Solid walls (up to seventy-two (72) inches) are permitted to: screen mechanical equipment, garbage receptacles and other unsightly areas; and provide privacy at the back of lots up to the front building face.

(2) Site Wall and Fence Materials.

A. On properties abutting the river, site walls and fence materials may be constructed of: stone, block, tile, stucco, wrought iron, tubular steel, welded wire or a combination of masonry and metal, cedar posts and welded wire or garden loop or other materials having similar characteristics. All other properties, not abutting the river may use the above listed materials plus wood fencing.

B. All chain link fences are prohibited for properties abutting the river. For properties that do not abut the river chain link is only allowed in the rear yard if not readily visible from the right-of-way. Barbed wire, razor wire, and concertina are prohibited in all RIO districts.

(i) Street Furnishings. Street furnishings are exterior amenities, including but not limited to, tables, chairs, umbrellas, landscape pots, wait stations, valet stations, bicycle racks, planters, benches, bus shelters, kiosks, waste receptacles and similar items that help to define pedestrian use areas. Handcrafted street furnishings are particularly important in San Antonio, and therefore this tradition of craftsmanship and of providing street furniture is encouraged.

(1) Prohibited Street Furnishings in Riverwalk Area. The following street furnishings are prohibited within the publicly owned portion of the Riverwalk area, whether or not the property is leased, and on the exterior of the riverside of buildings directly adjacent to the publicly owned portion of the river:

A. Vending machines.

B. Automatic teller machines.

C. Pay phones.

D. Photo booths.

E. Automated machines such as, but not limited to, penny crunching machines, blood pressure machines, fortune-telling machines, video games, animated characters and other machines that are internally illuminated, or have moving parts, or make noise, or have flashing lights.

F. Inanimate figures such as horses, kangaroos, bears, gorillas, mannequins or any such animal, cartoon or human figure. This section does not affect public art as defined in Appendix "A" of this chapter.

G. Monitors (i.e., television screens, computer screens).

H. Speakers.

(2) Street Furnishing Materials.

A. Street furnishings shall be made of wood, metal, stone, terra cotta, cast stone, hand-sculpted concrete, or solid surfacing material, such as Corian or Surell.

B. Inexpensive plastic resin furnishings are prohibited.

(3) Advertising on Street Furnishings.

A. No commercial logos, trademarks, decals, product names whether specific or generic, or names of businesses and organizations shall be allowed on street furnishings.

B. Product or business advertising is prohibited on all street furnishings.

C. Notwithstanding the restrictions above, applications may be approved for purposes of donor or non-profit recognition.

(4) Street furnishings, such as tables and chairs may not be stored (other than overnight storage) in such a way as to be visible from the river pathway.

(j) Lighting. Site lighting should be considered an integral element of the landscape design of a property. It should help define activity areas and provide interest at night. At the same time, lighting should facilitate safe and convenient circulation for pedestrians, bicyclists and motorists. Overspill of light and light pollution should be avoided.

(1) Site Lighting. Site lighting shall be shielded by permanent attachments to light fixtures so that the light sources are not visible from a public way and any offsite glare is prevented.

A. Site lighting shall include illumination of parking areas, buildings, pedestrian routes, dining areas, design features and public ways.

B. Outdoor spaces adjoining and visible from the river right-of-way shall have average ambient light levels of between one (1) and three (3) foot-candles with a minimum of 0.5-foot candles and a maximum of six (6) foot-candles at any point measured on the ground plane. Interior spaces visible from the river right-of-way on the river level and ground floor level shall use light sources with no more than the equivalent lumens of a one hundred-watt incandescent bulb. Exterior balconies, porches and canopies adjoining and visible from the river right-of-way shall use light sources with the equivalent lumens of a sixty-watt incandescent bulb with average ambient light levels no greater than the lumen out put of a one hundred-watt incandescent light bulb as long as average foot candle standards are not exceeded. Accent lighting of landscape or building features including specimen plants, gates, entries, water features, art work, stairs, and ramps may exceed these standards by a multiple of 2.5. Recreational fields and activity areas that require higher light levels shall be screened from the river hike and bike pathways with a landscape buffer.

C. Exterior light fixtures that use the equivalent of more than one hundred-watt incandescent bulbs shall not emit a significant amount of the fixture's total output above a vertical cut-off angle of ninety (90) degrees. Any structural part of the fixture providing this cut-off angle must be permanently affixed.

D. Lighting spillover to the publicly owned areas of the river or across property lines shall not exceed one-half $(\frac{1}{2})$ of one (1) foot-candle measured at any point ten (10) feet beyond the property line.

(2) Provide Lighting for Pedestrian Ways That is Low Scaled for Walking. The position of a lamp in a pedestrian-way light shall not exceed fifteen (15) feet in height above the ground.(3) Light Temperature and Color.

A. Light temperature and color shall be between 2500° K and 3500° K with a color rendition index (CRI) of eighty (80) or higher, respectively. This restriction is limited to all outdoor spaces adjoining and visible from the river right-of-way and from the interior spaces adjoining the river right-of-way on the river level and ground floor level. Levels shall be determined by product specifications.

(4) Minimize the Visual Impacts of Exterior Building Lighting.

A. All security lighting shall be shielded so that the light sources are not visible from a public way.

B. Lighting (uplighting and downlighting) that is positioned to highlight a building or outdoor artwork shall be aimed at the object to be illuminated, not pointed into the sky.

C. Fixtures shall not distract from, or obscure important architectural features of the building. Lighting fixtures shall be a subordinate feature on the building unless they are incorporated into the over-all design scheme of the building.

(5) Prohibited Lighting on the Riverside of Properties Abutting the River.

A. Flashing lights.

B. Rotating lights.

C. Chaser lights.

D. Exposed neon.

E. Seasonal decorating lights such as festoon, string or rope lights, except between November 20 and January 10.

F. Flood lamps.

(6) Minimize the visual impacts of lighting in parking areas in order to enhance the perception of the nighttime sky and to prevent glare onto adjacent properties. Parking lot light poles are limited to thirty (30) feet in height, shall have a 90° cutoff angle so as to not emit light above the horizontal plane.

(k) Curbs and Gutters.

(1) Construct Curb and Gutter Along the Street Edge of a Property.

A. Install curbs and gutter along the street edge at the time of improving a parcel.

B. In order to preserve the rural character of RIO-5 and RIO-6, the HPO in coordination with public works and the development services department may waive the requirement of curbs and gutters.

(1) Access to Public Pathway Along the River. These requirements are specifically for those properties adjacent to the river to provide a connection to the publicly owned pathway along the river. The connections are to stimulate and enhance urban activity, provide path connections in an urban context, enliven street activity, and protect the ambiance and character of the river area.

(1) A stair, ramp or elevator connecting the publicly owned pathway at the river to private property along the river is allowed by right at the following locations:

A. At all street and vehicular bridge crossings over the river.

B. Where publicly owned streets dead end into the river.

C. Where the pedestrian pathway in the Riverwalk area is located at the top of bank and there is a two-foot or less grade change between the private property and the pathway.

(2) If there is a grade change greater than two (2) feet between the private property and the publicly owned pathway at the river then the following conditions apply:

A. Access to the publicly owned pathway is limited to one (1) connection per property, with the exception that connections are always allowed at street and vehicular bridge crossings. For example if one (1) property extends the entire block face from street crossing to street crossing the owner would be allowed three (3) access points if the distance requirements were met.

B. The minimum distance between access points shall be ninety-five (95) feet. Only street and vehicular bridge connections are exempted. Mid-block access points must meet this requirement.

C. Reciprocal access agreements between property owners are permitted.

(3) Clearly define a key pedestrian gateway into the site from the publicly owned pathway at the river with distinctive architectural or landscape elements.

A. The primary gateway from a development to the publicly owned pathway at the river shall be defined by an architectural or landscape element made of stone, brick, tile, metal, rough hewn cedar or hand-formed concrete or through the use of distinctive plantings or planting beds.

(m) Buffering and Screening. The manner in which screening and buffering elements are designed on a site greatly affects the character of the river districts. In general, service areas shall be screened or buffered. "Buffers" are considered to be landscaped berms, planters or planting beds; whereas, more solid "screens" include fences and walls. When site development creates an unavoidable negative visual impact on abutting properties or to the public right-of-way, it shall be mitigated with a landscape design that will buffer or screen it.

(1) Landscape Buffers Shall be Used in the Following Circumstances: To buffer the edges of a parking lot from pedestrian ways and outdoor use areas, (such as patios, and courtyards), and as an option to screening in order to buffer service areas, garbage disposal areas, mechanical equipment, storage areas, maintenance yards, equipment storage areas and other similar activities that by their nature create unsightly views from pedestrian ways, streets, public ROWs and adjoining property.

(2) Screening Elements Shall be Used in the Following Circumstances: To screen service areas, storage areas, or garbage areas from pedestrian ways.

(3) Exceptions for Site Constraints. Due to site constraints, in all RIOs and specifically for "RIO-3" where there is less than ten (10) feet to provide for the minimum landscape berm, a screen may be used in conjunction with plantings to meet the intent of these standards. For example a low site wall may be combined with plant materials to create a buffer with a lesser cross sectional width.

(4) Applicable Bufferyard Types. Table 510-2 establishes minimum plant materials required for each bufferyard type. For purposes of this section, type C shall be the acceptable minimum type.

(5) Applicable Screening Fence and Wall Types. Screening fences and walls shall be subject to conditions of subsection 35-673(h), Walls and Fences.

(n) Service Areas and Mechanical Equipment. Service areas and mechanical equipment should be visually unobtrusive and should be integrated with the design of the site and building. Noise generated from mechanical equipment shall not exceed city noise regulations.

(1) Locate service entrances, waste disposal areas and other similar uses adjacent to service lanes and away from major streets and the river.

A. Position utility boxes so that they cannot be seen from the public Riverwalk path, or from major streets, by locating them on the sides of buildings and away from pedestrian and vehicular routes. Locating them within interior building corners, at building offsets or other similar locations where the building mass acts as a shield from public view is preferred.

B. Orient the door to a trash enclosure to face away from the street when feasible.

C. Air intake and exhaust systems, or other mechanical equipment that generates noise, smoke or odors, shall not be located at the pedestrian level.

(2) Screening of service entrance shall be compatible with the buildings on the block face.

A. When it would be visible from a public way, a service area shall be visually compatible with the buildings on the block face.

B. A wall will be considered compatible if it uses the same material as other buildings on the block, or is painted a neutral color such as beige, gray or dark green or if it is in keeping with the color scheme of the adjacent building.

(o) Bicycle Parking. On-site bicycle parking helps promote a long term sustainable strategy for development in RIO districts. Bicycle parking shall be placed in a well lit and accessible area. UDC bicycle parking requirements in UDC 35-526 can be met through indoor bicycle storage facilities in lieu of outdoor bike rack fixtures.

Sec. 35-674. Building Design Principles

(a) Architectural Character. A basic objective for architectural design in the river improvement overlay districts is to encourage the reuse of existing buildings and construction of new, innovative designs that enhance the area, and help to establish distinct identities for each of the zone districts. At the same time, these new buildings should reinforce established building traditions and respect the contexts of neighborhoods.

When a new building is constructed, it shall be designed in a manner that reinforces the basic character-defining features of the area. Such features include the way in which a building is located on its site, the manner in which it faces the street and its orientation to the river. When these design variables are arranged in a new building to be similar to those seen traditionally, visual compatibility results.

(b) Mass and Scale. A building shall appear to have a "human scale." In general, this scale can be accomplished by using familiar forms and elements interpreted in human dimensions. Exterior wall designs shall help pedestrians establish a sense of scale with relation to each building. Articulating the number of floors in a building can help to establish a building's scale, for example, and prevent larger buildings from dwarfing the pedestrian.

(1) Express facade components in ways that will help to establish building scale.

A. Treatment of architectural facades shall contain a discernible pattern of mass to void, or windows and doors to solid mass. Openings shall appear in a regular pattern, or be clustered to form a cohesive design. Architectural elements such as columns, lintels, sills, canopies, windows and doors should align with other architectural features on the adjacent facades.

(2) Align horizontal building elements with others in the blockface to establish building scale.

A. Align at least one (1) horizontal building element with another horizontal building element on the same block face. It will be considered to be within alignment if it is within three (3) feet, measured vertically, of the existing architectural element.

(3) Express the distinction between upper and lower floors.

A. Develop the first floor as primarily transparent. The building facade facing a major street shall have at least fifty (50) percent of the street level facade area devoted to display windows and/or windows affording some view into the interior areas. Multi-family residential buildings with no retail or office space are exempt from this requirement.

(4) Where a building facade faces the street or river and exceeds the maximum facade length allowed in Table 674-1 divide the facade of building into modules that express traditional dimensions.

A. The maximum length of an individual wall plane that faces a street or the river shall be as shown in Table 674-1.

Table 674-1

Description	RIO-1	RIO-2	RIO-3	RIO-4	RIO-5	RIO-6
Maximum Facade Length	50 ft.	50 ft.	30 ft.	75 ft.	75 ft.	50 ft.

- B. If a building wall plane facing the street or river and exceeds the length allowed in Table 674-1, employ at least two (2) of the following techniques to reduce the perceived mass:
 - Change materials with each building module to reduce its perceived mass; or
 - Change the height with each building module of a wall plane. The change in height shall be at least ten (10) percent of the vertical height; or
 - Change the roof form of each building module to help express the different modules of the building mass; or
 - Change the arrangement of windows and other facade articulation features, such as, columns, pilasters or strap work, which divides large planes into smaller components.
- (5) Organize the Mass of a Building to Provide Solar Access to the River.

A. One (1) method of doing so is to step the building down toward the river to meet the solar access requirements of subsection 35-673(a).

B. Another method is to set the building back from the river a distance sufficient to meet the solar access requirements of subsection 35-673(a).

(c) Height. Building heights vary along the river corridor, from one-story houses to high-rise hotels and apartments. This diversity of building heights is expected to continue. However, within each zone, a general similarity in building heights should be encouraged in order to help establish a sense of visual continuity. In addition, building heights shall be configured such that a comfortable human scale is established along the edges of properties and views to the river and other significant landmarks are provided while allowing the appropriate density for an area.

- (1) The maximum building height shall be as defined in Table 674-2.
 - A. Solar access standards subsection 35-673(a), and massing standards subsection 35-674(b) also will affect building heights.

Table 674-2						
Description	RIO-1	RIO-2	RIO-3	RIO-4	RIO-5	RIO-6
Maximum # of Stories	5	10	None	7	5	4
Maximum Height in Feet	60 ft.	120 ft.	None	84 ft.	60 ft.	50 ft.

(3)On the street-side, the building facade shall appear similar in height to those of other buildings found traditionally in the area.

If fifty (50) percent of the building facades within a block face are predominantly lower than the maximum height allowed, the new building facade on the street-side shall align with the average height of those lower buildings within

the block face, or with a particular building that falls within the fifty (50) percent range. However, the remainder of the building may obtain its maximum height by stepping back fifteen (15) feet from the building face.

(4) Designation of a development node provides for the ability to increase the building height by fifty (50) percent from the requirements set out in article VI.

(d) Materials and Finishes. Masonry materials are well established as primary features along the river corridor and their use should be continued. Stucco that is detailed to provide a texture and pattern, which conveys a human scale, is also part of the tradition. In general, materials and finishes that provide a sense of human scale, reduce the perceived mass of a building and appear to blend with the natural setting of the river shall be used, especially on major structures.

(1) Use indigenous materials and traditional building materials for primary wall surfaces. A minimum of seventy-five (75) percent of walls (excluding window fenestrations) shall be composed of the following:

A. Modular masonry materials including brick, stone, and rusticated masonry block, tile, terra-cotta, structural clay tile and cast stone. Concrete masonry units (CMU) are not allowed.

B. Other new materials that convey the texture, scale, and finish similar to traditional building materials.

C. Stucco and painted concrete when detailed to express visual interest and convey a sense of scale.

D. Painted or stained wood in a lap or shingle pattern.

(2) The following materials are not permitted as primary building materials and may be used as a secondary material only:

A. Large expanses of high gloss or shiny metal panels.

B. Mirror glass panels. Glass curtain wall buildings are allowed in RIO-3 as long as the river and street levels comply with 35-674(d)(1) above.

(3) Paint or Finish Colors.

A. Use natural colors of indigenous building materials for properties that abut the Riverwalk area.

B. Use matte finishes instead of high glossy finishes on wall surfaces. Wood trim and metal trim may be painted with gloss enamel.

C. Bright colors may highlight entrances or architectural features.

(e) Facade Composition. Traditionally, many commercial and multi-family buildings in the core of San Antonio have had facade designs that are organized into three (3) distinct segments: First, a "base" exists, which establishes a scale at the street level; second a "mid-section," or shaft is used, which may include several floors. Finally a "cap" finishes the composition. The cap may take the form of an ornamental roof form or decorative molding and may also include the top floors of the building. This organization helps to give a sense of scale to a building and its use should be encouraged. In order to maintain the sense of scale, buildings should have the same setback as surrounding buildings so as to maintain the street-wall pattern, if clearly established.

In contrast, the traditional treatment of facades along the riverside has been more modest. This treatment is largely a result of the fact that the riverside was a utilitarian edge and was not oriented to the public. Today, even though orienting buildings to the river is a high priority objective, it is appropriate that these river-oriented facades be simpler in character than those facing the street.

(1) Street Facade. Buildings that are taller than the street-wall (sixty (60) feet) shall be articulated at the stop of the street wall or stepped back in order to maintain the rhythm of the street wall. Buildings should be composed to include a base, a middle and a cap.

A. High rise buildings, more than one hundred (100) feet tall, shall terminate with a distinctive top or cap. This can be accomplished by:

i. Reducing the bulk of the top twenty (20) percent of the building by ten (10) percent.

ii. By stepping back the top twenty (20) percent of the building.

iii. Changing the material of the cap.

B. Roof forms shall be used to conceal all mechanical equipment and to add architectural interest to the structure.

C. Roof surfaces should include strategies to reduce heat island effects such as use of green roofs, photo voltaic panels, and/or the use of roof materials with high solar reflectivity.

(2) Fenestration. Windows help provide a human scale and so shall be proportioned accordingly.

D. Curtain wall systems shall be designed with modulating features such as projecting horizontal and/or vertical mullions.

- (3) Entrances. Entrances shall be easy to find, be a special feature of the building, and be appropriately scaled.
 - A. Entrances shall be the most prominent on the street side and less prominent on the river side.
 - B. Entrances shall be placed so as to be highly visible.

C. The scale of the entrance is determined by the prominence of the function and or the amount of use.

- D. Entrances shall have a change in material and/or wall plane.
- E. Entrances should not use excessive storefront systems.

(4) Riverside facade. The riverside facade of a building shall have simpler detailing and composition than the street facade.

A. Architectural details such as cornices, sills, lintels, door surrounds, water tables and other similar details should use simple curves and handcrafted detailing.

B. Stone detailing shall be rough hewn, and chiseled faced. Smooth faced stone is not permitted as the primary building material, but can be used as accent pieces.

C. Facades on the riverside shall be asymmetrical, pedestrian scale, and give the appearance of the back of a building. That is, in traditional building along the river, the backs of building were designed with simpler details, and appear less formal than the street facades.

(g) Awnings, Canopies and Arcades. (See Figure 674-2) The tradition of sheltering sidewalks with awnings, canopies and arcades on commercial and multi-family buildings is well established in San Antonio and is a practice that should be continued. They offer shade from the hot summer sun and shelter from rainstorms, thereby facilitating pedestrian activity. They also establish a sense of scale for a building, especially at the ground level. Awnings and canopies are appropriate locations for signage. Awnings with signage shall comply with any master signage plan on file with the historic preservation officer for the property. Awnings and canopies installed at street level within the public right-of-way require licensing with the city's capital improvements management services (CIMS) department. Canopies, balconies and awnings installed at river level within the public right-of-way require licensing with the city's downtown operations department.

(1) If awnings, arcades and canopies are to be used they should accentuate the character-defining features of a building.

A. The awning, arcade or canopy shall be located in relationship to the openings of a building. That is, if there are a series of awnings or canopies, they shall be located at the window or door openings. However awnings, canopies and arcades may extend the length of building to provide shade at the first floor for the pedestrian.

B. Awnings, arcades and canopies shall be mounted to highlight architectural features such as moldings that may be found above the storefront.

C. They should match the shape of the opening.

D. Simple shed shapes are appropriate for rectangular openings.

E. Odd shapes and bubble awnings are prohibited except where the shape of an opening requires a bubble awning, or historic precedent shows they have been previously used on the building.

F. Canopies, awnings and arcades shall not conflict with the building's proportions or with the shape of the openings that the awning or canopy covers.

G. Historic canopies shall be repaired or replaced with in-kind materials.

(2) Materials and Color.

A. Awnings and canopies may be constructed of metal, wood or fabric. Certain vinyl is allowed if it has the appearance of natural fiber as approved by the HDRC.

B. Awning color shall coordinate with the building. Natural and earth tone colors are encouraged. Fluorescent colors are not allowed. When used for signage it is appropriate to choose a dark color for the canopy and use light lettering for signage.

(3) Incorporating lighting into the design of a canopy is appropriate.

A. Lights that illuminate the pedestrian way beneath the awning are appropriate.

B. Lights that illuminate the storefront are appropriate.

C. Internally illuminated awnings that glow are prohibited.

FINDINGS:

- a. The applicant is requesting a Certificate of Appropriateness to construct a two story commercial structure with surface parking at the corner of S Lareda Street and Guadalupe Street, in RIO-7. The lot is currently vacant.
- b. CONCEPTUAL APPROVAL The applicant received conceptual approval at the April 18, 2018, Historic and Design Review Commission hearing with the following stipulations:
 - i. That automobile parking be buffered from the public right of way at the sidewalk along S Laredo. The applicant has submitted a landscaping plan noting the buffering of parking from the public right of way.
 - ii. That the proposed primary entrances be shifted to the S Laredo and Guadalupe facades or that entrances of appropriate design and hierarchy be introduced on these facades. The applicant has redesigned the exterior to include an entrance at the corner of S Laredo and Guadalupe.
 - iii. That the applicant develop landscaping and lighting plans prior to returning for final approval. The applicant has submitted a landscaping plan and updated construction documents.
 - iv. That all windows be recessed at least two (2) inches within solid walls and that curtain wall systems shall

be designed with modulating features such as projecting mullions. The applicant has noted that all windows will meet this stipulation.

- v. ARCHAEOLOGY- Archaeological investigations are required. The archaeological scope of work should be submitted to the OHP archaeologists for review and approval prior to beginning the archaeological investigation. The development project shall comply with all federal, state, and local laws, rules, and regulations regarding archaeology. **The applicant has coordinated with OHP archaeologists regarding investigations.**
- c. PEDESTRIAN CIRCULATION Per the UDC Section 35-672(a) in regards to pedestrian circulation, an applicant shall provide pedestrian access among properties to integrate neighborhoods. Per the application, the applicant has proposed pedestrian walkways adjacent to the public right of way at S Laredo and Guadalupe and around the proposed new construction. This is consistent with the UDC.
- d. AUTOMOBILE PARKING (CURB CUTS) The applicant has proposed two curb cuts, one on S Laredo Street to feature a total width of twenty-five (25) feet in width and one on Guadalupe to feature a separate entrance and exit with each drive featuring a width of approximately 12' 6" in width. Staff finds the proposed curb cuts appropriate and consistent with the UDC.
- e. AUTOMOBILE PARKING (LOT) The applicant has proposed a surface lot to feature approximately fifty (50) parking stalls. The location of parking, away from the public right of way at S Laredo and Guadalupe is consistent with the UDC. Per the UDC Section 35-672(b)(3), parking lots shall be screened with a landscape buffer is parking is located within a twenty-foot setback from a property line adjacent to a street use. Since conceptual review, the applicant has submitted a detailed landscaping plan noting the buffering of parking.
- f. SITE DESIGN According to the UDC Section 35-673, buildings should be sited to help define active spaces for area users, provide pedestrian connections between sites, help animate the street scene and define street edges. Primary entrances should be oriented toward the street and shall be distinguishable by an architectural feature. The applicant has proposed a primary entrance at the corner of Guadalupe and S Laredo, which also serves as an architectural focal point. This is consistent with the UDC.
- g. LANDSCAPING The applicant has submitted a detailed landscaping plan noting the locations of landscaping materials and buffering locations.
- h. MECHANICAL & SERVICE EQUIPMENT The UDC Section 35-673(n) addresses service areas and mechanical equipment and their impact on the public. Service areas and mechanical equipment should be visually unobtrusive and should be integrated with the design of the site and building. Noise generated from mechanical equipment shall not exceed city noise regulations. The applicant has submitted construction documents noting the screening of service equipment, dumpsters and mechanical equipment. This is consistent with the UDC.
- i. BUILDING SCALE According to the UDC Section 35-674(b) a building shall appear to have a "human scale". To comply with this, a building must (1) express façade components in ways that will help to establish building scale, (2) align horizontal building elements with others in the blockface to establish building scale, (3) express the distinction between upper and lower levels, (4) in this instance, divide the façade of the building into modules that express traditional and (5) organize the mass of a building to provide solar access to the river. The applicant has incorporated elements into the design to provide a human scale including pedestrian scaled windows and storefront systems and human scaled materials. Generally, this is consistent with the UDC.
- j. MATERIALS At this time, the applicant has proposed materials to include metal panels to replace the previously proposed stone veneer, metal canopies, glazing, metal doors, metal coping caps, stolastic finish systems and a glass curtain wall system. This is consistent with the UDC.
- k. WINDOWS Per the UDC Section 35-674(e)(2) notes that windows shall be recessed at least two (2) inches within solid walls, should relate in design and scale to the spaces behind them, shall be used in hierarchy and that curtain wall systems shall be designed with modulating features such as projecting mullions. The applicant has noting that all windows will comply with the UDC.
- 1. ENTRANCES As noted in finding f, the applicant has proposed a primary entrance at the corner of Guadalupe and S Laredo. This is consistent with the UDC.
- m. SIGNAGE The applicant has noted the location of two exterior identification signs and address signs. At this time, the applicant has only provided the proposed locations which staff finds to be appropriate. Specifics for lighting should be submitted to the Historic and Design Review Commission for review in a separate application.

RECOMMENDATION:

Staff recommends approval as submitted based on findings a through n.

Signage is not approved in this application and must be submitted in a separate application to be reviewed by the Historic and Design Review Commission.

CASE MANAGER:

Edward Hall





Flex Viewer

Powered by ArcGIS Server

Printed:Apr 11, 2018

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915 South Laredo, San Antonio, Texas

04/20/18 LKDG Prj. No: 17163





915 South Laredo, San Antonio, Texas

04/18/18 LKDG Prj. No: 17163







915 South Laredo, San Antonio, Texas















915 South Laredo, San Antonio, Texas

















SOUTH LAREDO STREET

n of	POINTS
	POINTS
	25
G	20
NG	25
	70



ANT SCHEDULE				
NAME	SCIENTIFIC NAME	SIZE		
١K	QUERCUS VIRGINIANA	2.5" CALIPER		
ĹΜ	ULMUS CRASSIFOLIA	2.5" CALIPER		
I OAK	QUERCUS MUHLENBERGII	2.5" CALIPER		
) HOLLY	ilex cornuta'nana'	5 GALLON		
PALM	CHAMAEREOPS HUMILIS	15 GALLON		
ENISA	LEUCOPHYLLUM FRUTESCENS'COMPACTA'	5 GALLON		
CA	HESPERALOE PARVIFLORA	5 GALLON		
EDGE	CAREX DIVULSA	1 GALLON		
	AGAVE	10 GALLON		

ى

TREES SHOULD NOT INTERFERE OR CAUSE ANY PRESENT OF FUTURE OBSTRUCTION

CEDAR ELM

CHINQUAPIN OAK

DWF BURFORD HOLLY

MED FAN PALM COMPACT SENISA RED YUCCA BERKLEY SEDGE AGAVE

SCALE 1'' = 20'

OF : 1



DIVISION 0 - CONTRACT DOCUMENTS

SECTION 00400 - GENERAL CONDITIONS

The General Conditions of this contract shall be the American Institute of Architects, (Hereinafter referred to as the A.I.A.), Document No. A201, "General Conditions of the (100- by 125-mm) space on the label or beside title block to record review and Contract for the Construction", Latest Edition, Articles 1 through 14. These paragraphs approval markings and action taken. Include the following information on the label: are intended as an alternative to the inclusion of AIA Document No. A201. Latest Edition and such document shall be made a part of the contract documents with the same force and effect as though set forth in full. The General Conditions and all supplements, amendments and modifications listed hereinafter shall apply to the general contract and all sub-contracts.

SECTION 00450 - SUPPLEMENTARY CONDITIONS

The following supplements modify, change, delete from or add to the General Conditions of the Contract for Construction, American Institute of Architects AIA Document A201, Latest edition (the "General Conditions"). Where any article, paragraph, subparagraph or clause of the General Conditions is modified or deleted by comply with dates. these supplements, the unaltered provisions of that article, paragraph, subparagraph or 2. Revise the schedule after each meeting or activity where revisions have been made. clause shall remain in effect.

ARTICLE 1 GENERAL PROVISIONS

1.1.1 Add the following to the end of subparagraph

The construction contract for this project shall include these specifications and drawings and shall also include all other conditions, directives, specifications, information, drawings and project manuals issued by Client and/or LK Design Group Inc. and intended for incorporation into the scope of work for this project.

1.1.3 Add the following to the end of the first sentence:

, including the transportation of materials and supplies to or from the site, competent supervision of the Work and the provision of insurance in accordance with the Contract Shop Drawings on reproductions of the Contract Documents or standard printed data. Documents."

1.2.4 Add the following new subparagraph:

It is the intent of these specifications and drawings to outline the general scope of work information, as appropriate for the Work. to be included in the construction contract, and not to show every single item of work required for the completion of this project. Likewise, the work indicated in these specifications and drawings is to be coordinated with items of work specified and/or detailed in documents provided by Client and intended for incorporation into the construction of this project.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 WORK RESTRICTIONS

use of site indicated. Contractor's use of premises is limited by Owner's right to perform work or employ other contractors on portions of Project.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01100

SECTION 01200 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 CONTRACT MODIFICATION PROCEDURES

Order on AIA Document G701, for all changes to the Contract Sum or the Contract

B. When Owner and Contractor disagree on the terms of a proposal, Architect may issue a Construction Change Directive on AIA Document G714, instructing Contractor to proceed with the change. Construction Change Directive will contain a description of the change and designate the method to be followed to determine changes to the Contract Sum or the Contract Time.

1.2 PAYMENT PROCEDURES

A. Submit a Schedule of Values at least 10 days before the first Application for Payment. In Schedule of Values, break down the Contract Sum into at least one line item for each Specification Section. Correlate the Schedule of Values with Contractor's B. Performance and Design Criteria: Where design services or certifications by a Construction Schedule.

B. Submit 3 copies of each application for payment on AIA Document G702/703, according to the schedule established in Owner/Contractor Agreement. 1. For the second Application for Payment through the Application for Payment submitted at Substantial Completion, submit partial releases of liens from each subcontractor or supplier for whom amounts were included in the previous Application for Payment.

2. Submit final Application for Payment after completion of Project closeout procedures C. Submittals: Testing agency shall submit a certified written report of each inspection after award of the Contract. with release of liens and supporting documentation. Include consent of surety to final and test to Owner, Architect, Contractor, Structural Engineer, and to authorities having 1. Submit four (4) copies of each request for product substitution. payment and insurance certificates

a. Submit final meter readings for utilities, a record of stored fuel, and similar data as of service shall include the following: the date of Substantial Completion.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01200

SECTION 01300 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT MANAGEMENT AND COORDINATION

A. Coordinate construction to ensure efficient and orderly installation of each part of the Contractor in performing its duties and shall provide qualified personnel to perform

B. Conduct progress meetings at Project site every two (2) weeks. Notify Owner and Architect of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved with planning or coordination

of future activities 1. Record minutes and distribute to parties involved, including Owner and Architect.

1.2 SUBMITTAL PROCEDURES

A. Coordinate each submittal with fabrication, purchasing, testing, delivery, other

submittals, and related activities that require sequential activity. 1. No extension of the Contract Time will be authorized because of failure to transmit

submittals enough in advance of the Work to permit processing. 2. Architect will not accept submittals from sources other than Contractor.

3. Identify deviations from the Contract Documents.

4. Submit PDF's of each submittal.

DIVISION 1 - CONTINUED

B. Place a label or title block on each submittal for identification. Provide a 4- by 5-inch PART 2 - PRODUCTS (Not Applicable) 1. Project name.

2. Date. 3. Name and address of Contractor.

4. Name and address of subcontractor or supplier.

5. Number and title of appropriate Specification Section. C. Architect will review each action submittal, mark as appropriate to indicate action taken, and return copies less those retained. Compliance with specified requirements remains Contractor's responsibility.

D. Construction Schedule Submittal Procedure:

1. Submit schedule within 14 days after date established for Commencement of the Work. Distribute copies to Owner, Architect, subcontractors, and parties required to

As Work progresses, mark each bar to indicate actual completion. Distribute revised copies to Owner, Architect, subcontractors, and parties required to comply with dates.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. Product Data: Mark each copy to show applicable choices and options. Include the following:

1. Data indicating compliance with specified standards and requirements.

2. Notation of coordination requirements.

3. For equipment data, include rated capacities, dimensions, weights, required clearances, and furnished specialties and accessories. B. Shop Drawings: Submit Project-specific information drawn to scale. Do not base Submit PDF's on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 42 inches (762 by 1067 mm). Architect will return a markep up PDF.

Include the following: 1. Dimensions, profiles, methods of attachment, large scale details, and other

2. Identification of products and materials.

Notation of coordination requirements.

4. Notation of dimensions established by field measurement. C. Samples: Submit Samples finished as specified and identical with the material proposed. Where variations are inherent in the material, submit sufficient units to show operation, and maintenance of fixtures and facilities. full range of the variations. Provide (3) three of each sample and include name of manufacturer and product name on label.

2.2 INFORMATION SUBMITTALS

A. Construction Schedule: Prepare a horizontal bar-chart Contractor's construction schedule. 1. Provide a separate time bar for each activity, using same breakdown of Work

indicated in the Schedule of Values, and a vertical line to identify the first workday of each week 2. Coordinate each element with other activities. Show each activity in proper

A. Contractor's Use of Premises: During construction, Contractor will have designated sequence. Indicate sequences necessary for completion of related Work. 3. Indicate Substantial Completion and allow time for Architect's procedures necessary for certifying Substantial Completion. B. Product Certificates: Prepare written statements on manufacturer's letterhead

certifying that product complies with requirements. PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01300

SECTION 01400 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. On Owner's approval of a proposal from Contractor, Contractor will issue a Change A. Testing and inspecting services are required to verify compliance with requirements C. Provide temporary fire protection until permanent systems supply fire-protection specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

> 1. Testing and inspecting services are specified in other Sections of these Specifications or are required by authorities having jurisdiction and shall be performed by independent testing agencies.

2. Owner will provide testing and inspecting services not specified to be provided by Contractor.

3. Contractor is responsible for scheduling inspections and tests and notifying testing 4. Retesting and Reinspecting: Contractor shall pay for additional testing and

inspecting required as a result of tests and inspections indicating noncompliance with SECTION 01600 - PRODUCT REQUIREMENTS requirements.

professional engineer are required by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated. 1. If criteria indicated are not sufficient to perform services or certification required,

submit a written request for additional information to Architect. 2. 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. jurisdiction when authorities so direct. Reports of each inspection, test, or similar

1. Name, address, and telephone number of testing agency. Project title and testing agency's project number.

3. Date of report and designation (number).

4. Dates and locations where samples were taken or inspections and field tests made. 5. Ambient conditions at the time of sample taking and inspecting or field testing. 6. Names of individuals taking the sample or making the inspection or test.

7. Product and test method. 8. Inspection or test data including interpretation of test results and comments or

professional opinion on whether inspected or tested Work complies with requirements. 9. Recommendations on retesting or reinspection. 10. Name and signature of laboratory inspector.

D. Testing Agency Qualifications: Agencies that specialize in the types of inspections and tests to be performed and are acceptable to authorities having jurisdiction.

E. Testing Agency Responsibilities: Testing agency shall cooperate with Architect and pections and tests. 1. Agency shall promptly notify Architect and Contractor of deficiencies in the Work

observed during performance of its services. 2. Agency shall not release, revoke, alter, or enlarge requirements of the Contract Documents nor approve or accept any portion of the Work.

3. Agency shall not perform duties of Contractor F. Auxiliary Services: Cooperate with testing agencies and provide auxiliary services

as requested, including the following: 1. Access to the Work.

- 2. Incidental labor and facilities to assist inspections and tests.
- 3. Adequate quantities of materials for testing, and assistance in taking samples.
- 4. Facilities for storing and curing test samples. 5. Security and protection for samples and test equipment.

G. Compliance with IECC reports provided to the AHJ. Contractor shall refer to envelope, mechanical and lighting compliance reports and ensure that construction materials, fixtures and equipment that are submitted and installed meet the requirements of the submitted IECC reports.

NFPA 241.

installed.

the Work

DIVISION 1 - CONTINUED

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01400

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Use Charges: Contractor shall pay use charges for temporary utilities.

1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70. C. Temporary Utilities: At earliest feasible time, when acceptable to Owner, change over from use of temporary service to use of permanent service.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. Heating Equipment: Unless Owner authorizes use of permanent heating system provide vented, self-contained heaters with thermostatic control. 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited

2. Heating Units: Listed and labeled, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use for type of fuel being consumed.

PART 3 - EXECUTION

3.1 TEMPORARY UTILITIES

A. General: Engage appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder

3. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location,

C. Heating and Cooling: Provide temporary heating and cooling required for curing materials or for protecting installed construction from adverse weather. Use equipment that will not have a harmful effect on completed installations or elements being

3.2 TEMPORARY FACILITIES

A. Provide field offices, storage trailers, and other support facilities as necessary for

B. Collect waste daily and, when containers are full, legally dispose of waste off-site. 1. Handle hazardous, dangerous, or unsanitary waste materials in separate closed waste containers. Dispose of material according to applicable laws and regulations. C. Provide temporary enclosures for protection of construction and workers from inclement weather and for containment of heat.

D. Install project identification and other signs in locations approved by Owner to inform 3. Spare parts list. the public and persons seeking entrance to Project. Do not permit installation of unauthorized signs.

3.3 TEMPORARY CONTROLS

A. Provide temporary environmental controls as required by authorities having jurisdiction including, but not limited to, erosion and sediment control, dust control, noise control, and pollution control.

B. Provide temporary barricades, warning signs, and lights to protect the public and construction personnel from construction hazards. 1. Enclose construction areas with fences with lockable entrance gates, to prevent

unauthorized access. needs. Comply with NFPA 241.

3.4 TERMINATION AND REMOVAL

remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

END OF SECTION 01500

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Provide products of same kind from a single source. The term "product" includes the terms "material," "equipment," "system," and similar terms. B. Product Substitutions: Substitutions include products and methods of construction

differing from that required by the Contract Documents and proposed by Contractor

2. Submit requests within 30 days after signing the Contract.

3. Submit requests in time to permit processing of request and subsequent submittals, if any, sufficiently in advance of when materials are required in the Work. Do not submit unapproved substitutions on Shop Drawings or other submittals. 4. Identify product to be replaced and provide complete documentation showing

compliance of proposed substitution with applicable requirements. Include a full comparison with the specified product, a list of changes to other Work required to accommodate the substitution, and any proposed changes in the Contract Sum or the

Contract Time should the substitution be accepted. 5. Architect will review the proposed substitution and notify Contractor of its

acceptance or rejection. C. Comparable Product Submittal

reiection.

instructions.

condensation

1. Submit four (4) copies of each request for approval of products as comparable to basis-of-design products. Submit requests in time to permit processing of request and 1. Roof insulation thickness and R-Value per unit thickness. subsequent submittals, if any, sufficiently in advance of when materials are required in 2. Wall insulation thickness and R-Value per unit thickness. the Work. Do not submit unapproved products on Shop Drawings or other submittals. 2. Identify product to be replaced and provide complete documentation showing compliance of proposed product with applicable requirements. Include a full comparison with the specified product.

D. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written

3. Architect will review the proposed product and notify Contractor of its acceptance or

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.

2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking,

protecting, and installing. 3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected. 4. Store materials in a manner that will not endanger Project structure.

5. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent

DIVISION 1 - CONTINUED PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

A. Provide products that comply with the Contract Documents, are undamaged, and are new at the time of installation.

1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect. B. Select products to comply with all of the following that are applicable: 1. Where only a single product or manufacturer is named, provide the item indicated.

No substitutions will be permitted. 2. Where two or more products or manufacturers are named, provide one of the items indicated. No substitutions will be permitted.

B. Standards: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and 3. Where products or manufacturers are specified by name, accompanied by the term 'available products" or "available manufacturers." provide one of the named items or comply with provisions for "comparable product" to obtain approval for use of an unnamed product or manufacturer

> 4. Where a single product is named as the "basis-of-design" together with the names of other manufacturers, provide the named product or comply with provisions for "comparable product submittal" to obtain approval for use of a product of one of the other named manufacturers. Select subparagraph above or first subparagraph below if "basis of design" products

are specified. 5. Where a single product is named as the "basis-of-design" and no other manufacturers are named, provide the named product or comply with provisions for

"comparable product submittal" to obtain approval for use of a product of another manufacturer 6. Where a product is described with required characteristics, provide a product that complies with those characteristics.

7. Where compliance with performance requirements is specified, provide products that comply and are recommended in writing by the manufacturer for the application. 8. Where compliance with codes, regulations, or standards, is specified, select a product that complies with the codes, regulations, or standards referenced. C. Unless otherwise indicated, Architect will select color, pattern, and texture of each product from manufacturer's full range of options that includes both standard and premium items.

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01600

SECTION 01701 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 CLOSEOUT SUBMITTALS (COMPLY WITH TDSHS REQUIREMENTS WHERE REQUIRED)

A. Record Drawings: Maintain a set of the Contract Drawings as Record Drawings. Mark to show installation that varies from the Work originally shown. B. Operation and Maintenance Data: Organize data into three-ring binders with identification on front and spine of each binder and pocket folders for folded sheet

information. Include the following: 1. Manufacturer's operation and maintenance brochures.

2. Emergency instructions.

4. Wiring diagrams.

5. Copies of warranties. Product MSDS documentation

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Examine substrates and conditions for compliance with manufacturer's written requirements including, but not limited to, surfaces that are sound, level, plumb. smooth, clean, and free of deleterious substances; substrates within installation tolerances; and application conditions within environmental limits. Proceed with installation only after unsatisfactory conditions have been corrected. B. Verify layout information shown on Drawings, in relation to property survey and existing benchmarks, before laying out the Work. A. Remove temporary facilities and controls before Substantial Completion. Personnel C. Prepare substrates and adjoining surfaces according to manufacturer's written instructions, including, but not limited to, filler and primer application. D. Take field measurements as required to fit the Work properly. Where fabricated products are to be fitted to other construction, verify dimensions by field measurement before fabricating and, when possible, allow for fitting and trimming during installation.

3.2 CUTTING AND PATCHING

A. Do not cut structural members or operational elements without prior written approva of Architect B. For patching, provide materials whose installed performance will equal or surpass

that of existing materials. For exposed surfaces, provide or finish materials to visually match existing adjacent surfaces to the fullest extent possible. 3.3 INSTALLATION

A. Comply with manufacturer's written instructions for installation. Anchor each product securely in place, accurately located and aligned. Clean exposed surfaces and protect from damage. If applicable, prepare surfaces for field finishing. B. Clean Project site and work areas daily, including common areas.

3.4 ENERGY CODE COMPLIANCE

A. Contractor to review envelope, interior lighting, exterior lighting and mechanical compliance certificates to determine minimum compliance requirements for materials & A. Submittals: Product Data and product certificates signed by manufacturer certifying equipment to be installed in the project.

B. Contractor to review energy code inspection checklists (COSA architect's & engineers letter of energy review) prepared by the architect & MEP engineers to ensure inspection requirements are met during the construction process and that items solution. are inspected and approved as required before they are covered. C. Items requiring inspection coordination include, but are not limited to:

3. Roof solar reflection and thermal emittance.

4. Air barrier/ weather resistant barrier provides a continuous non-broken membrane over all building substrates. Membrane to be patched/resealed at damaged areas and all penetrations made in AWRB after installation to be sealed. Provide air sealed electrical boxes or air vapor barrier boxes at device boxes penetrating AWRB.

3.5 AIR INFILTRATION AND WATER PENETRATION TESTING

A. Contractor to provide third party testing and reporting of building envelope for air infiltration and water penetration. Results of testing shall meet or exceed component manufacturers standards and industry association guidelines for assemblies. Testing and repairs are to be repeated until all test points meet or exceed requirements and a final report is to be provided to the Owner and Architect. Third party testing agency to have a minimum 3 years of experience performing testing required. B. Testing to be performed at exterior window, storefront and curtainwall systems. joints between dissimilar façade materials, construction and expansion joints, reglet type reveals, canopy connections, major penetrations, parapet assemblies and flashing 2. Under concrete floor slabs on grade. transitions. Testing to be performed at a minimum of three of each distinctive conditions or assemblies. Testing to be performed prior to installation of interior finish systems and assemblies. Industry suggested testing intervals of 5%,

DIVISION 1 - CONTINUED

50% and 90% completion of installation are recommended, but shall be left up to the contractor's risk assessment. Testing for air infiltration shall be completed first and adjustments made as required. Water penetration testing shall be completed after air 1.01 SUMMARY infiltration testing has met testing requirements for the test area. C. Testing Criteria

ASTM WK50601, Test Method for Field Determination of Water Penetration through Exterior Wall Assemblies and Fenestration Using Controlled Hose Spray, test method covers the diagnostic field evaluation of water penetration through installed building wall assemblies including exterior windows, curtain walls, skylights, doors, wall assemblies, and the joints with surrounding wall assemblies via water testing utilizing a A. Installation of ARDEX K 15 must be by an applicator using mixing equipment and single calibrated spray nozzle.

AAMA 501.2, Quality Assurance and Diagnostic Water Leakage Field Check B. Underlayment shall be able to be installed from 1/8" to 1" in one pour and up to 5" of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems, which should be with the addition of aggregate. It may also be feathered to match existing elevations. used as a spot-check during construction of a curtain wall or storefront system; C. Underlayment to be applied to a minimum thickness of 1/8" over highest point in the subfloor, with an average typical thickness of 1/4". AAMA 502, Voluntary Specification for Field Testing of Newly Installed *Fenestration Products*, which is the proper test method for verifying field air leakage D. Underlayment compressive strength shall be 4100 psi after 28 days per ASTM and water penetration resistance of newly installed operable windows and doors; C109/mod (air cure only). E. Underlayment shall be walkable after 2 hours and allow floor covering to be installed AAMA 503, Voluntary Specification for Field Testing of Newly Installed Storefronts, Curtain Walls, and Sloped Glazing Systems, which is the proper test after 16 hours at 70°F. F. Manufacturer's certification that the product is cement-based having an method for field testing of new storefronts, curtain walls and sloped glazing for air leakage resistance and water penetration resistance: and inorganic binder content which is 100% cement, to include Portland cement AAMA 511, Voluntary Guideline for Forensic Water Penetration Testing of

Fenestration Products, which is intended for performing a systematic forensic investigation of observed, known leaks.

3.6 FINAL CLEANING

A. Clean each surface or item as follows before requesting inspection for certification of Substantial Completion

 Remove labels that are not permanent. Clean transparent materials, including mirrors. Remove excess glazing compounds Replace chipped or broken glass

3. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Leave concrete floors broom clean. 4. Vacuum carpeted surfaces and wax resilient flooring. 5. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication.

Clean plumbing fixtures. Clean light fixtures and lamps. 6. Clean the site. Sweep paved areas, remove stains, spills, and foreign deposits. Rake grounds to a smooth, even-textured surface.

3.7 CLOSEOUT PROCEDURES

A. Substantial Completion: Before requesting Substantial Completion inspection, complete the following: 1. Advise Owner of pending insurance changeover requirements.

2. Submit specific warranties, maintenance agreements, and similar documents. 3. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases

property surveys and similar final record information. Deliver tools, spare parts, extra materials, and similar items. 6. Changeover locks and transmit keys to Owner.

personnel. 8. Remove temporary facilities and controls.

and maintenance. 10. Complete final cleaning requirements, including touchup painting.

11. Touch up and otherwise repair and restore marred exposed finishes to eliminate B. On receipt of a request for inspection, Architect will proceed with inspection or

complete:

completed

equipment, and systems

review of the following:

END OF SECTION 01701

PART 1 - GENERAL

PART 2 - PRODUCTS

2.1 TERMITICIDES

3.8 DEMONSTRATION AND TRAINING

SECTION 02361 - TERMITE CONTROL

1.1 SECTION REQUIREMENTS

product's EPA-Registered Label.

manufacturer's written instructions.

B. Apply termite control to the following:

C. Post warning signs in areas of application.

PART 3 - EXECUTION

3.1 INSTALLATION

1. At foundations.

END OF SECTION 02361

DIVISION 3 - CONCRETE

SECTION 03540 Self-Leveling Underlayment Concrete

4. Submit Record Drawings and Specifications, operation and maintenance manuals,

7. Complete startup testing of systems and instruction of operation and maintenance

9. Advise Owner of changeover information related to Owner's occupancy, operation,

advise Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or advise Contractor of items that must be completed or corrected before the certificate will be issued.

C. Request inspection for certification of Final Completion, once the following are 1. Submit a copy of Substantial Completion inspection list stating that each item has

been completed or otherwise resolved for acceptance. 2. Instruct Owner's personnel in operation, adjustment, and maintenance of products,

D. Architect will reinspect the Work on receipt of notice that the Work has been

1. On completion of reinspection, Architect will prepare a final Certificate for Payment. If the Work is incomplete, Architect will advise Contractor of the Work that is incomplete or obligations that have not yet been fulfilled.

A. Provide experienced instructors for each piece of equipment that requires operation 3.01 PREPARATION and maintenance to provide instruction to Owner's personnel. Include a detailed

1. Include instruction for system design and operational philosophy, review of documentation, operations, adjustments, troubleshooting, maintenance, and repair.

DIVISION 2 - SITE CONSTRUCTION

that products used comply with U.S. EPA regulations for termiticides. Include application instructions and EPA-Registered Label.

B. Engage a licensed professional pest control operator to apply termite control

A. Provide an EPA-registered termiticide complying with requirements of authorities having jurisdiction, in a soluable or emulsible, concentrated formulation that dilutes with water or foaming agent. Use only soil treatment solutions that are not harmful to plants. Provide quantity required for application at the label volume and rate for the maximum termiticide concentration allowed for each specific use, according to the

A. Prepare surfaces and apply treatment at rates and concentrations recommended in

At expansion and control joints and slab penetrations.

D. Reapply soil termiticide treatment solution to areas disturbed by subsequent excavation or other construction activities following application.

PART I - GENERAI

A. ARDEX K 15 Self-Leveling Underlayment Concrete for use over specified interior substrates

tools approved by the manufacturer.

other high-performance cements. G. Manufacturer's certification that the product is not gypsum-based, and contains no fly ash or pozzolans.

1.03 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in their unopened packages and protect from extreme temperatures and moisture. Protect liquids from freezing.

1.04 SITE CONDITIONS

A. ARDEX K 15 is a cementitious material. Observe the basic rules of concrete work. Do not install below 50°F surface temperature. Install guickly if floor is warm and follow hot weather precautions available from the ARDEX Technical Service Department. Never mix with cement or additives other than ARDEX-approved products.

PART 2 - PRODUCTS

2.01 MATERIALS

A. The cement-based self-leveling underlayment shall be ARDEX K 15 Self-Leveling Underlayment Concrete

B. Primer for standard absorbent concrete shall be ARDEX P-51 Primer. C. Primer for non-porous subfloors, cutback and other non-water soluable adhesive residues, metal, and wooden subfloors shall be ARDEX P-82 Ultra Prime. D. The additive to be mixed with ARDEX K 15 when used over cutback adhesive, other non-water soluable adhesives, metal, or wooden subfloors shall be ARDEX E-25 Resilient Emulsion

E. Aggregate shall be well graded, washed gravel (1/8" to 1/4" or larger) for use when underlayment is installed over 1 1/2" thick. F. Water shall be clean, potable, and sufficiently cool (not warmer than 70°F).

2.02 MIX DESIGNS

A. Standard mixing ratio: ARDEX K 15 is mixed in 2-bag batches at one time. Mix each bag of ARDEX K 15 (55 lb.) with 7 quarts of water. Product shall be mixed in an ARDEX T-10 Mixing Drum using an ARDEX T-1 Mixing Paddle and a 1/2" heavy-duty drill (min. 650 rpm). Mix thoroughly for approximately 2-3 minutes to obtain a lump-free mixture. Follow written instructions per the ARDEX K 15 bag label. B. Resilient mix for applications over cutback and non-water soluble adhesive residues, wood, and metal: Use 6 qt. of water and 2 qt. of ARDEX E-25 Resilient Emulsion for each bag of ARDEX K 15.

C. Aggregate mix: For areas to be installed over 1 1/2" thick, aggregate may be added to reduce material costs. Mix ARDEX K 15 with water first, then add from 1/3 up to 1 part by volume of aggregate (1/8" to 1/4" or larger). Do not use sand. D. For pump installations, ARDEX K 15 shall be mixed using an ARDEX Levelcraft Automatic Mixing Pump. Start the pump at 210 gallons of water per hour, and then adjust to the minimum water reading that still allows self-leveling properties. DO NOT OVERWATER! Check the consistency of the product on the floor to ensure a uniform distribution of the sand aggregate at both the top surface and bottom of the pour. If settling is occurring, reduce the water amount and recheck. Conditions during the installation, such as variations in water, powder, substrate, and ambient temperature.

overwatering.

PART 3 - EXECUTION

A. All subfloors must be sound, solid, clean, and primed:

1. All concrete subfloors must be of adequate strength, clean, and free of all oil, grease, dirt, curing compounds and any substance that might act as a bondbreaker before priming. Mechanically clean if necessary using shot blasting or other. Acid etching and the use of sweeping compounds and solvents are not acceptable. 2. Wooden subfloors must be clean and free of all foreign matter. Sand to bare wood then vacuum to remove all dust. Re-nail any loose boards exhibiting movement.

require that the water setting be monitored and adjusted carefully to avoid

3. Metal subfloors must be clean and free of all rust and foreign matter. Where required, a corrosive resistant coating should be applied and allowed to dry before

4. Cutback and other non-water soluble adhesive residues must be wet scraped to a thin, well-bonded layer. 5. Non-porous subfloors such as ceramic and quarry tile as well as terrazzo should be

clean and free of all waxes and sealers. If necessary, have the surface professionally cleaned. ARDEX K 15 is not intended for use over VCT tile. 6. All cracks in the subfloor shall be repaired to minimize telegraphing through the underlayment.

7. Substrates shall be inspected and corrected for moisture or any other conditions that could affect the performance of the underlayment or the finished floor covering. **B. JOINT PREPARATION**

1. Moving Joints - honor all expansion and isolation joints up through the underlayment. 2. Saw Cuts and Control Joints - fill all non-moving joints with ARDEX Feather Finish or ARDEX SD-P InstantPatch as required. C PRIMING

1. Primer for standard absorbent concrete subfloors: Mix ARDEX P-51 1:1 with water and apply evenly with a soft push broom. Do not leave any bare spots. Remove all puddles and excess primer. Allow to dry to a clear, thin film (min. 3 hours, max. 24 hours). Underlayment shall not be applied until the primer is dry. Primer coverage is approximately 400 to 600 sq. ft. per gallon

2. Primer for extremely absorbent concrete subfloors: Make an initial application of ARDEX P-51 mixed with 3 parts water using a soft push broom. Do not leave any bare spots. Remove all puddles and excess primer. Allow to dry thoroughly before proceeding with the standard application of primer as described above for standard absorbent concrete

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SPECIFICATIONS







as defined by ASTM C150: Standard Specification for Portland Cement, and

DIVISION 3 - CONTINUED

3. Primer for non-porous subfloors, wooden or metal subfloors, or cutback and other non-water soluble adhesive residues over concrete: Prime with ARDEX P-82 Ultra Prime. Mix Part A (red) with Part B (white) and apply with a short-nap or sponge paint roller, leaving a thin coat of primer no heavier than a thin coat of paint. Do not leave any bare spots. Remove all puddles and excess primer. Allow to dry to a clear, slightly tack film (minimum 3 hours, maximum 24 hours). Underlayment shall not be installed until primer is dry. Primer coverage is approximately 200 to 400 square feet per gallon. 1. No high pressure spray (power wash) cleaning methods shall be used. 4. Minimum drying time for ARDEX P-82 Ultra-Prime over cutback adhesive is 18 hours

3.02 APPLICATION OF UNDERLAYMENT

A. INSTALLATION

1. Wooden subfloors require the use of the mesh-reinforced ARDEX K 15 + E-25 Underlayment System. After priming, install 3.2 or 3.4 galvanized diamond metal lath by stapling to the wooden subfloor approximately every 6 inches on center. 2. Steel subfloors require that the substrate first be primed with an anti-corrosive paint. After thorough drying of the paint, prime this surface with ARDEX P-82 Ultra Prime. 3. Pour or pump the liquid ARDEX K 15 and spread in place with the ARDEX T-4 Spreader, Use the ARDEX T-5 Smoother for featheredge and touch-up. Wear baseball 2, Anchored or adhered to unit masonry backup or soccer shoes with non-metallic cleats to avoid leaving marks in the liquid ARDEX K 3. Anchored or adhered to wood framing and sheathing. 15. Underlayment can be walked on in 2-3 hours at 70° F.

3.03 PREPARATION FOR FLOORING INSTALLATION

A. Underlayment can accept finish floor covering materials after 16 hours at 70°F and 50% relative humidity.

B. Due to the wide range of adhesives that are used to install floor coverings, some adhesives may dry more quickly over Ardex underlayments than over other substrates. A. Product Data: For each type of product indicated If this condition occurs, priming the surface of the underlayment with ARDEX P-51 Primer diluted 1:3 with water will even out the drying of the adhesive. Allow the primer to dry 1-3 hours before proceeding with the adhesive installation.

3.04 FIELD QUALITY CONTROL

A. Where specified, field sampling of the Ardex underlayment is to be done by taking an entire unopened bag of the product being installed to an independent testing facility to perform compressive strength testing in accordance with ASTM C 109/modified: air- A. Protection of Stone Masonry: During construction, cover tops of walls, projections, cure only. There are no in situ test procedures for the evaluation of compressive strength.

3.05 PROTECTION

A. Prior to the installation of the finish flooring, the surface of the underlayment should be protected from abuse by other trades by the use of plywood, Masonite or other suitable protection course.

END OF SECTION 03540

DIVISION 4 - MASONRY

SECTION 04810 - CONCRETE MASONRY UNITS

1.01 Section Includes

A. Concrete unit masonry & integrated concrete masonry water repellent protection

1.03 References

A. ASTM C90 - Hollow Load Bearing Concrete Masonry Units

1.04 Submittals

indicated.

A. Full-size units matching existing colors as samples for verification. B. Material certificates for concrete units, signed by manufacturer, certifying that units comply with the requirements. C. Material test reports from a qualified independent testing agency, indicating and interpreting test results relative to compliance of concrete units with requirements

1.05 Quality Assurance

A. Manufacturer Qualifications: The concrete masonry manufacturer shall have a minimum of five years experience manufacturing CMU at their current facility. B. Single-Source Responsibility: Obtain concrete masonry units from one source and by a single manufacturer.

1.06 Delivery, Storage and Handling

A. Concrete masonry units shall be delivered to the jobsite banded on wood pallets with protective cardboard between layers of units.

B. Store concrete masonry units on elevated platforms, under waterproof cover, and in a dry location to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, and other causes. If units become wet, do not install until they are in an air-dried condition C. Handle concrete masonry units with extreme care to avoid chippage and breakage.

PART 2 - PRODUCTS

2.01 Concrete Masonry Units

A. Concrete masonry units shall be made from natural and manufactured aggregates, cement and color. All of these materials are derived from nature and will vary in uniformity of size, shape, texture and particle color. The manufacturer shall exercise extreme care in the manufacturing process to minimize these variations in size, shape, texture and particle color so that the completed product will match the "Basis of Design" approved samples and mockup. The manufacturer shall use the finest materials available, but some variation in color and texture will be acceptable to the extent the approved samples exhibit variation. Edge and corner chips will be acceptable to the extent ASTMC90, paragraph 7.3.1 allows chips and cracks. B. Basis of Design: Provide standard concrete Split Face Masonry Units 1. Provide special shapes for lintels, corners, jambs, sash, control joints, headers,

bonding, and other special conditions. 2. Provide square-edged units for outside corners.

- 3. Comply with ASTM C90 and as follows:
- a. Unit compressive strength: 1900 psi
- b. Weight classification: light/medium weight

c. Type: Type I, moisture-controlled units.

d. Size: Manufactured to the actual/nominal dimensions indicated on drawings within tolerances specified in ASTM C90.

PART 3 - EXECUTION

3.01 Laying Concrete Masonry Units

A. Lay units only when lighting is adequate.

- B. Cut all units with a motor-driven saw, using diamond or abrasive blades.
- C. Match existing color pattern to adjacent existing work. D. Align units level, plumb and true with over mortared joints to match specified.

DIVISION 4 - CONTINUED

E. All exterior units shall be laid using mortar with integral water repellent admixture "Dry-Block Admixture" at the rate recommended by W.R. Grace & Company. F. Flashing, Weep Holes and Control Joints: Install flashing, weep holes and control joints as specified herein and indicated on the drawings.

G. Cover walls each day after installation to keep open wall protected and dry. H. During installation, keep masonry units clean daily using brushes, burlap, etc.

END OF SECTION 04810

SECTION 04860 - STONE MASONRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes the following applications of stone masonry:
- Anchored or adhered to concrete backup.
- 4. Anchored or adhered to cold-formed metal framing and sheathing.
- B. Products installed, but not furnished, in this Section include:
- 1. Steel lintels and shelf angles for stone masonry specified in Division 5 Section

1. For stone varieties proposed for use on Project, include test data indicating compliance with physical properties required by ASTM standards. B. Samples:

- 1. For each stone type indicated. 2. For each color of mortar required.

1.3 PROJECT CONDITIONS

and sills with waterproof sheeting at end of each day's work. B. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602. 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and above and will remain so until masonry has dried. C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 LIMESTONE

A. Limestone: Comply with ASTM C 568.

1. Products: Subject to compliance with requirements

2.2 MORTAR MATERIALS

A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for coldweather construction. Provide natural color or white cement as required to produce mortar color indicated

1. Low-Alkali Cement: Not more than 0.60 percent total alkali when tested according to A. General: Do not use admixtures unless otherwise indicated. ASTM C 114. B. Hydrated Lime: ASTM C 207, Type S.

C. Masonry Cement: ASTM C 91.

D. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in stone masonry mortar.

1. Products: Subject to compliance with requirements. E. Colored Cement Product: Packaged blend made from portland cement and lime or

containing no other ingredients 1. Formulate blend as required to produce color indicated or, if not indicated, as

selected from manufacturer's standard colors.

2. Products: Subject to compliance with requirements. F. Aggregate: ASTM C 144 and as follows:

1. For pointing mortar, use aggregate graded with 100 percent passing No. 16 (1.18mm) sieve

2. White Aggregates: Natural white sand or ground white stone. 3. Colored Aggregates: Natural-colored sand or ground marble, granite, or other sound part or all of water, according to latex-additive manufacturer's written instructions. stone; of color necessary to produce required mortar color. G. Latex Additive: Manufacturer's standard acrylic-resin or styrene-butadiene-rubber

water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed portland cement mortar bed, and not containing a retarder.

1. Manufacturers: Subject to compliance with requirements

2.3 VENEER ANCHORS

A. Materials

- 1. Hot-Dip Galvanized-Steel Wire: ASTM A 82, with ASTM A 153/A 153M, Class B-2. 2.8 FABRICATION 2. Stainless-Steel Wire: ASTM A 580/A 580M, Type 304. 3. Hot-Dip Galvanized-Steel Sheet: ASTM A 1008/A 1008M, cold-rolled, carbon-steel
- sheet hot-dip galvanized after fabrication to comply with ASTM A 153/A 153M, Class
- 4. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304.
- B. Wire Veneer Anchors: Wire ties formed from W1.7 or 0.148-inch- (3.8-mm-) diameter, hot-dip galvanized-steel wire.
- C. Corrugated-Metal Veneer Anchors: Not less than 0.030-inch- (0.76-mm-) thick by 7/8-inch- (22-mm-) wide hot-dip galvanized-steel sheet with corrugations having a

wavelength of 0.3 to 0.5 inch (7.6 to 13 mm) and an amplitude of 0.06 to 0.10 inch (1.5 to 2.5 mm). D. Adjustable, Screw-Attached Veneer Anchors: Units consisting of a wire tie section

and a metal anchor section that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall 1. Products: Subject to compliance with requirements

2. Structural Performance Characteristics: Capable of withstanding a 100-lbf (445-N) load in both tension and compression without deforming or developing play in excess of 0.05 inch (1.3 mm).

3. Anchor Section: Sheet metal plate, with screw holes top and bottom and with raised 3.2 SETTING OF STONE MASONRY, GENERAL rib-stiffened strap stamped into center to provide a slot between strap and plate for inserting wire tie.

blended appearance.

unless otherwise indicated: concealed in masonry

- "Metal Fabrications."
- 1.2 SUBMITTALS

DIVISION 4 - CONTINUED

4. Fabricate sheet metal anchor sections and other sheet metal parts from 0.097-inch-(2.5-mm-) thick, steel sheet, galvanized after fabrication. 5. Wire Ties: Triangular-, rectangular-, or T-shaped wire ties fabricated from 0.25-inch- 2. Sealing joints is specified in Division 7 Section "Joint Sealants." (6.4-mm-) diameter, hot-dip galvanized-steel wire.

2.4 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing[, where flashing is exposed or partly exposed and where indicated, complying with SMACNA's "Architectural Sheet Metal Manual, Division 7 Section "Sheet Metal Flashing and Trim" and as follows:

1. Stainless Steel: ASTM A 240/A 240M, Type 304, 0.016 inch (0.4 mm) thick. 2. Copper: ASTM B 370. Temper H00 or H01, cold-rolled copper sheet, 10-oz./sq. ft. 4. At sills, extend flashing not less than 4 inches (100 mm) at ends. (3-kg/sq. m) weight or 0.0135 inch (0.34 mm) thick for fully concealed flashing; 16oz./sq. ft. (5-kg/sq. m) weight or 0.0216 inch (0.55 mm) thick elsewhere.

1. Copper-Laminated Flashing: 5-oz./sq. ft. (1.5-kg/sq. m) copper sheet bonded with asphalt between 2 layers of glass-fiber cloth. Use only where flashing is fully

2. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.030 inch (0.8 mm).

2.5 MISCELLANEOUS MASONRY ACCESSORIES

A. Cementitious Dampproofing: Cementitious formulations that are recommended by ILI and that are nonstaining to stone, compatible with joint sealants, and noncorrosive to veneer anchors and attachments

B. Asphalt Dampproofing: Cut-back asphalt complying with ASTM D 4479, Type I or asphalt emulsion complying with ASTM D 1227, Type III or IV. C. Weep Hole/Vent Products: Use one of the following unless otherwise indicated: 1. Wicking Material: Absorbent rope, made from cotton or UV-resistant synthetic fiber,

1/4 to 3/8 inch (6 to 10 mm) in diameter, in length required to produce 2-inch (50-mm) exposure on exterior and 18 inches (450 mm) in cavity behind stone masonry. Use only for weep holes 2. Round Plastic Tubing: Medium-density polyethylene, 3/8-inch (10-mm) OD by

thickness of stone masonry. D. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will

not degrade within the wall cavity. Provide one of the following configurations:

a. Strips, full-depth of cavity and 10 inches (250 mm) wide, with dovetail shaped notches 7 inches (175 mm) deep. b. Strips, not less than 1-1/2 inches (38 mm) thick and 10 inches (250 mm) wide, with

dimpled surface designed to catch mortar droppings. c. Sheets or strips full depth of cavity and installed to full height of cavity.

d. Sheets or strips not less than 1 inch (25 mm) thick and installed to full height of cavity with additional strips 4 inches (100 mm) high at weep holes and thick enough to fill entire depth of cavity.

2.6 MASONRY CLEANERS

A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar and grout stains, efflorescence, and other new construction stains from stone masonry surfaces without discoloring or damaging masonry surfaces; expressly approved for intended use by cleaner manufacturer and stone producer. 1. Manufacturers: Subject to compliance with requirements

2.7 MORTAR MIXES

 Do not use calcium chloride. 2. Limit cementitious materials in mortar to portland cement and lime.

3. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for one to two hours. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within 30 minutes of final mixing; do not retemper or use partially hardened material. masonry cement and mortar pigments, all complying with specified requirements, and B. Mortar for Stone Masonry: Comply with ASTM C 270, Proportion Specification.

1. Mortar for Setting Stone: Type S orType N. 2. Mortar for Pointing Stone: Type N or Type O.

C. Latex-Modified Portland Cement Setting Mortar: Proportion and mix portland cement, aggregate, and latex additive to comply with latex-additive manufacturer's written instructions.

D. Cement-Paste Bond Coat: Mix either neat cement and water or cement, sand, and water to a consistency similar to that of thick cream.

1. For latex-modified portland cement setting-bed mortar, substitute latex admixture for E. Mortar for Scratch Coat over Metal Lath: 1 part portland cement, 1/2 part lime, 5 parts loose damp sand, and enough water to produce a workable consistency. F. Mortar for Scratch Coat over Unit Masonry: 1 part portland cement, 1 part lime, 7 parts loose damp sand, and enough water to produce a workable consistency. G. Pigmented Mortar: Use colored cement product or select and proportion pigments with other ingredients to produce color required. Do not add pigments to colored

cement products. 1. Pigments shall not exceed 10 percent of portland cement by weight.

2. Pigments shall not exceed 5 percent of masonry cement by weight.

A. Select and/or cut stone to produce pieces of thickness, size, and shape indicated,

to face unless otherwise indicated. B. Gage backs of stones for adhered veneer if more than 81 sq. in. (522 sq. cm) in

C. Shape stone for type of masonry (pattern) as follows: 1. Sawed-bed, random-range ashlar with random course heights and random lengths

(interrupted coursed).

PART 3 - EXECUTION

3.1 PREPARATION

A. Accurately mark stud centerlines on face of weather-resistant sheathing paper before beginning stone installation. B. Coat concrete and unit masonry backup with asphalt dampproofing.

A. Perform necessary field cutting and trimming as stone is set. 1. Use power saws to cut stone that is fabricated with saw-cut surfaces. 2. Use hammer and chisel to split stone that is fabricated with split surfaces. B. Sort stone before it is placed in wall to remove stone that does not comply with

requirements relating to aesthetic effects, physical properties, or fabrication, or that is otherwise unsuitable for intended use. C. Arrange stones in three-course, random-range ashlar pattern with random course

heights, random lengths (interrupted coursed), and uniform joint widths. D. Arrange stones with color and size variations uniformly dispersed for an evenly

E. Maintain uniform joint widths except for variations due to different stone sizes and joints not less than 3/8 inch (10 mm) at narrowest points or more than 1/2 inch (13 mm) rinsing thoroughly with clear water. at widest points.

DIVISION 4 - CONTINUED

F. Provide sealant joints of widths and at locations indicated.

1. Keep sealant joints free of mortar and other rigid materials.

G. Install embedded flashing and weep holes at shelf angles, lintels, ledges, other

obstructions to downward flow of water in wall, and where indicated. 1. At stud-framed walls, extend flashing through stone masonry, up the face of sheathing at least 12 inches (300 mm), and behind weather-resistant sheathing paper. 2. At concrete backing, extend flashing through stone masonry, turned up a minimum of 8 inches (200 mm), and insert in reglet.

3. At lintels and shelf angles, extend flashing full length of angles but not less than 6 inches (150 mm) into masonry at each end.

5. At ends of head and sill flashing turn up not less than 2 inches (50 mm) to form end

B. Flexible Flashing: For flashing not exposed to the exterior, use one of the following 6. Extend sheet metal flashing 1/2 inch (13 mm) beyond face of masonry at exterior and turn flashing down to form a drip. 7. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop

flexible flashing 1/2 inch (13 mm) back from outside face of wall and adhere flexible flashing to top of metal drip edge 8. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch (13 mm) back from outside face of wall and adhere

flexible flashing to top of metal flashing termination. 9. Cut flexible flashing flush with face of wall after masonry wall construction is completed.

H. Coat limestone with cementitious dampproofing as follows: 1. Stone at Grade: Beds, joints, and back surfaces to at least 12 inches (300 mm)

above finish-grade elevations. 2. Stone Extending below Grade: Beds, joints, back surfaces, and face surfaces below

I. Place weep holes and vents in joints where moisture may accumulate, including at 2.2 GROUT base of cavity walls, above shelf angles, and at flashing.

1. Use wicking material or round plastic tubing to form weep holes.

2. Use wicking material to form weep holes above flashing in stone sills. Turn wicking down at lip of sill to be as inconspicuous as possible. 3. Space weep holes formed from plastic tubing or wicking material 16 inches (400

mm) o.c. 5. Trim wicking material used in weep holes flush with outside face of wall after mortar

has set. 6. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in "Miscellaneous Masonry Accessories" Article. J. Install vents in vertical head joints at the top of each continuous cavity at spacing indicated. Use round plastic tubing to form vents

3.3 CONSTRUCTION TOLERANCES

A. Variation from Plumb: For vertical lines and surfaces, do not exceed 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (10 mm in 6 m), or 1/2 inch in 40 feet (13 mm in 12 m) or more. For external corners, expansion joints, control joints, and other conspicuous lines, do not exceed 1/4 inch in 20 feet (6 mm in 6 m) or 1/2 inch in 40 feet (13 mm in 12 m) or more.

B. Variation from Level: For bed joints and lines of exposed lintels, sills, parapets, horizontal grooves, and other conspicuous lines, do not exceed 1/4 inch in 20 feet (6 mm in 6 m) or 1/2 inch in 40 feet (13 mm in 12 m) or more. C. Variation of Linear Building Line: For position shown in plan, do not exceed 1/2 inch in 20 feet (13 mm in 6 m) or 3/4 inch in 40 feet (19 mm in 12 m) or more.

3.4 INSTALLATION OF ANCHORED STONE MASONRY

A. Anchor stone masonry to concrete with corrugated-metal veneer anchors unless otherwise indicated. Secure anchors by inserting dovetailed ends into dovetail slots in concrete.

B .Anchor stone masonry to unit masonry with corrugated-metal or individual wire veneer anchors unless otherwise indicated. Embed anchors in unit masonry mortar together before adding water. Then mix again, adding only enough water to produce a joints or grouted cells for distance at least one-half of unit masonry thickness. C. Anchor stone masonry to unit masonry with wire anchors unless otherwise indicated. Connect anchors to masonry joint reinforcement by inserting pintles into eyes of masonry joint reinforcement projecting from unit masonry. D. Anchor stone masonry to unit masonry with wire anchors unless otherwise indicated. Connect anchors to masonry joint reinforcement with vertical rods inserted

through anchors and through eyes of masonry joint reinforcement projecting from unit masonry. E. Anchor stone masonry to stud framing with adjustable, screw-attached veneer

anchors unless otherwise indicated. Fasten anchors through sheathing to framing with two screws. F. Embed veneer anchors in mortar joints of stone masonry at least halfway, but not

less than 1-1/2 inches (38 mm), through stone masonry and with at least 5/8-inch (16mm) cover on outside face.

1. Install continuous wire reinforcement in horizontal joints and attach to seismic veneer anchors as stone is set. G. Space anchors to provide not less than 1 anchor per 2 sq. ft. (0.2 sq. m) of wall

area. Install additional anchors within 12 inches (300 mm) of openings, sealant joints, and perimeter at intervals not exceeding 12 inches (300 mm). H. Space anchors not more than 16 inches (400 mm) o.c. vertically and 24 inches (600 mm) o.c. horizontally. Install additional anchors within 12 inches (300 mm) of

openings, sealant joints, and perimeter at intervals not exceeding 12 inches (300 mm) I. Set stone in full bed of mortar with full head joints unless otherwise indicated. Build anchors into mortar joints as stone is set. J. Provide 2-inch (50-mm) cavity between stone masonry and backup construction

unless otherwise indicated. Keep cavity free of mortar droppings and debris. 1. Place mortar spots in cavity at veneer anchors to maintain spacing. 2. Slope beds toward cavity to minimize mortar protrusions into cavity.

including details on Drawings. Dress joints (bed and vertical) straight and at right angle K. Rake out joints for pointing with mortar to depth of not less than 1/2 inch (13 mm) Rake joints to uniform depths with square bottoms and clean sides.

3.5 POINTING

A. Prepare stone-joint surfaces for pointing with mortar by removing dust and mortar particles. Where setting mortar was removed to depths greater than surrounding areas, apply pointing mortar in layers not more than 3/8 inch (10 mm) deep until a uniform depth is formed.

B. Point stone joints by placing and compacting pointing mortar in layers not more than 1. Comply with "Code Plus" provisions in APA Form No. E30K. 3/8 inch (10 mm) deep. Compact each layer thoroughly and allow to become thumbprint hard before applying next layer. C. Tool joints, when pointing mortar is thumbprint hard, with a smooth jointing tool to

produce the following joint profile: 1. Joint Profile: Concave or smooth, flat face slightly below edges of stone.

3.6 ADJUSTING AND CLEANING

A. In-Progress Cleaning: Clean stone masonry as work progresses. Remove mortar fins and smears before tooling joints.

B. Final Cleaning: After mortar is thoroughly set and cured, clean stone masonry as follows

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape B. Fire-Retardant-Treated Materials: Comply with performance requirements in AWPA hoes or chisels 2. Test cleaning methods on mockup; leave one-half of panel uncleaned for

comparison purposes. 3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape

where minor variations are required to maintain bond alignment if any. Lay walls with 4. Wet wall surfaces with water before applying cleaner; remove cleaner promptly by 5. Clean stone masonry by bucket and brush hand-cleaning method described in BIA 2.3 LUMBER

Technical Note No. 20 Revised II. using job-mixed detergent solution. 6. Clean stone masonry with proprietary acidic cleaner applied according to manufacturer's written instructions. 7. Clean limestone masonry to comply with recommendations in ILI's "Indiana

Limestone Handbook.

DIVISION 4 - CONTINUED

3.8 EXCESS MATERIALS AND WASTE

A. Disposal as Fill Material: Dispose of clean masonry waste, including mortar and

excess or soil-contaminated sand, by crushing and mixing with fill material as fill is

1. Do not dispose of masonry waste as fill within 18 inches (450 mm) of finished grade. END OF SECTION 04860

DIVISION 5 - METALS

SECTION 05500 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Shop Drawings showing details of fabrication and installation.

PART 2 - PRODUCTS

2.1 METALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M. B. Steel Tubing: Cold-formed steel tubing complying with ASTM A 500. C. Steel Pipe: ASTM A 53, standard weight (Schedule 40), black finish.

A. Nonshrink, Nonmetallic Grout: ASTM C 1107; recommended by manufacturer for exterior applications.

2.3 FABRICATION

matching those adjacent.

rounding top surface.

2.4 STEEL AND IRON FINISHES

requirements in FS TT-P-664.

PART 3 - EXECUTION

END OF SECTION 05500

PART 1 - GENERAL

PART 2 - PRODUCTS

inspection agency

waterproofing.

for plywood.

per WWPA rules.

products.

1.1 SECTION REQUIREMENTS

2.1 WOOD PRODUCTS, GENERAL

with building code in effect for project

where plywood is indicated.

2.2 TREATED MATERIALS

indicated items and the following:

acceptable to authorities having jurisdiction.

nailers, blocking, and similar members.

SECTION 06100 - ROUGH CARPENTRY

3.1 INSTALLATION

epoxy paint.

construction

(200 mm)

thickness

A. General: Shear and punch metals cleanly and accurately. Remove burrs and ease PART 3 - EXECUTION exposed edges. Form bent-metal corners to smallest radius possible without impairing

DIVISION 6 - CONTINUED 2.4 ENGINEERED WOOD PRODUCTS A. Engineered wood products with allowable design stresses, as published by manufacturer. Manufacturer's published values shall be demonstrated by comprehensive testing. B. Laminated-Veneer Lumber: Manufactured with exterior-type adhesive complying with ASTM D 2559. Allowable design values determined according to ASTM D 5456. 2.5 PANEL PRODUCTS

A. Plywood Wall Sheathing: Exterior, Structural I sheathing. B. Glass-Mat Gypsum Wall Sheathing: ASTM C 1177/C 1177M to be 1/2" thick dens glass gold exterior guard by Georgia Pacific or approved equal. 1. Sheathing Tape: Provide type as recommended by sheathing manufacturer. Install over all joints in sheathing, and continuous at all joints around openings and penetrations in accordance with manufacturers written instructions. C. Telephone and Electrical Equipment Backing Panels: Plywood, Exposure 1, A-D Plugged, fire-retardant treated, not less than 1/2 inch (12.7 mm) thick.

A. Fasteners: Size and type indicated. Where rough carpentry is exposed to weather,

in ground contact, or in area of high relative humidity, provide fasteners with hot-dip

2. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568, Property

Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat

B. Metal Framing Anchors: Hot-dip galvanized steel of structural capacity, type, and

C. Building Paper: Asphalt-saturated organic felt complying with ASTM D 226, Type I

D. Sill-Sealer: Glass-fiber insulation, 1-inch (25-mm) thick, compressible to 1/32 inch

E. Adhesives for Field Gluing Panels to Framing: APA AFG-01.

2.6 MISCELLANEOUS PRODUCTS

(No. 15 asphalt felt), unperforated.

washers

(0.8 mm).

size indicated

3.1 INSTALLATION

zinc coating complying with ASTM A 153/A 153M.

1. Power-Driven Fasteners: CABO NER-272.

requirements for attaching other construction.

B. Welding: Weld corners and seams continuously. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals. At A. Set rough carpentry to required levels and lines, with members plumb, true to line, exposed connections, finish welds and surfaces smooth with contour of welded surface cut, and fitted. Locate nailers, blocking, and similar supports to comply with

C. Fabricate ladders for locations shown, complying with ANSI A14.3, welded steel

D. Fabricate loose lintels from steel angles and shapes. Size to provide bearing length at each side of openings equal to one-twelfth of clear span, but not less than 8 inches

E. Fabricate steel pipe columns with steel base and top plates drilled for anchor and connection bolts and welded to pipe with continuous fillet weld same size as pipe wall

F. Fabricate pipe bollards from Schedule 80 steel pipe and fill solidly with concrete,

A. Hot-dip galvanized steel fabrications at exterior locations.

B. Prepare uncoated ferrous metal surfaces to comply with SSPC-SP 3, "Power Tool Cleaning," and paint with a rust-inhibitive primer complying with performance

A. Perform cutting, drilling, and fitting required for installing miscellaneous metal

fabrications. Set metal fabrication accurately in location, alignment, and elevation, with edges and surfaces level, plumb, true, and free of rack. B. Fit exposed connections accurately together to form hairline joints.

C. Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous or

DIVISION 6 - WOOD & PLASTICS

A. Submittals: Model code evaluation reports for treated wood, and engineered wood

A. Lumber: Provide dressed lumber, S4S, 19 percent maximum moisture content for 2-inch nominal (38-mm actual) thickness or less, marked with grade stamp of

B. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance

C. Wood Structural Panels: DOC PS 2. Provide plywood complying with DOC PS 1,

A. Preservative-Treated Materials: AWPA C2 lumber and AWPA C9 plywood, labeled by an inspection agency approved by ALSC's Board of Review. After treatment, kilndry lumber and plywood to 19 and 15 percent moisture content, respectively. Treat

1. Wood members in connection with roofing, flashing, vapor barriers, and

2. Concealed members in contact with masonry or concrete. 3. Wood framing members less than 18 inches (460 mm) above grade.

4. Wood floor plates installed over concrete slabs directly in contact with earth.

C20 lumber and AWPA C27 plywood, labeled by a testing and inspecting agency 1. Use treatment for which chemical manufacturer publishes physical properties of

treated wood after exposure to elevated temperatures, when tested by a qualified independent testing agency according to ASTM D 5664, for lumber and ASTM D 5516,

2. Use Interior Type A High Temperature (HT), unless otherwise indicated.

A. Dimension Lumber: The following grades are per inspection agency indicated: 1. Framing other than Non-Load-Bearing Partitions: Construction or No. 2, Douglas firlarch: NLGA, WCLIB, or WWPA, or Southern pine: SPIB. No. 2 per SPIB rules, or Western woods: Standard per WCLIB rules or No. 3 Common damaged finish at cuts.

C. Miscellaneous Lumber: Construction, Stud, or No. 3 grade of any species for

 B. Securely attach rough carpentry to substrates, complying with the following: 1. CABO NER-272 for power-driven fasteners. 2. Published requirements of metal framing anchor manufacturer. 3. Table 2304.9.1 "Fastening Schedule" in the 2000 International Building code. C. Fastening Methods: Comply with recommendations in APA Form No. E30K and the following: 1. Sheathing: Screw to framing. 	;
END OF SECTION 06100	
SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK	
PART 1 - GENERAL	
1.1 SECTION REQUIREMENTS	
 A. Submittals: Product Data for Solid-Surfacing Materials, Shop Drawings, and Samples showing the full range of colors, textures, and patterns available for each type of finish. B. Quality Standard: Architectural Woodwork Institute's "Architectural Woodwork Quality Standards." C. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is completed, and HVAC system is operating. 	;
PART 2 - PRODUCTS	
2.1 MATERIALS	
 A. Hardboard: AHA A135.4. B. Medium-Density Fiberboard: ANSI A208.2, Grade MD - Exterior Glue C. Particleboard: ANSI A208.1, Grade M-2 - Exterior Glue D. Softwood Plywood: DOC PS 1, Medium density overlay. E. Hardwood Plywood and Face Veneers: HPVA HP-1. F. Thermoset Decorative Overlay: Comply with LMA SAT1. G. High-Pressure Decorative Laminate: NEMA LD 3. 1. Products: Refer to Drawings H. Solid-Surfacing Material: Homogeneous solid sheets of filled plastic resin complying with material and performance requirements of ANSI Z124.3, Type 5 or Type 6, without a precoated finish. 1. Products: Refer to Drawings 	J
2.2 CABINET HARDWARE AND ACCESSORY MATERIALS	
 A. Hardware Standards: Comply with BHMA A156 series standards. B. Exposed Hardware Finishes: Comply with BHMA A156.18 for BHMA code number indicated. 1. Finish: Satin Chrome: BHMA 626 or BHMA 652. C. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated Softwood or hardwood lumber kill dried to 15 percent moisture content. 	
2.3 INTERIOR WOODWORK	
 A. Complete fabrication before shipping to Project site to maximum extent possible. Disassemble only as needed for shipping and installing. Where necessary for fitting at Project site, provide for scribing and trimming. B. OIC as is (Plastic-Covered Casework): Custom grade. 1. AWI Type of Cabinet Construction: Flush overlay. 2. Laminate Cladding: Horizontal surfaces other than tops, HGS; postformed surfaces, HGP; vertical surfaces, HGS; Edges, HGS semiexposed surfaces, thermoset decorative overlay. 	,
 Brawer Sides and Backs: Thermoset decorative overlay. Drawer Bottoms: Thermoset decorative overlay. Plastic-Laminate Countertops: Custom grade. Laminate Grade: HGS for flat countertops, HGP for post-formed countertops. Grain Direction (if required): Parallel to cabinet fronts. Edge Treatment: Same as laminate cladding on horizontal surfaces. Solid-Surfacing Material Countertops: Custom grade. Fabricate tops in one piece with shop-applied backsplashes and edges. Solid-Surfacing Material Thickness: 3/4 inch (19 mm). 	
2.4 SHOP FINISHING OF INTERIOR ARCHITECTURAL WOODWORKA. Finishes: Same grades as items to be finished.B. Finish architectural woodwork at the fabrication shop, defer only final touch up until after installation.	
PART 3 - EXECUTION	
3.1 INSTALLATION	
 A. Condition woodwork to prevailing conditions before installing. B. Install woodwork to comply with AWI Section 1700 for grade specified. C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm) for level and plumb. 	

B. Concealed Boards: 19 percent maximum moisture content: Mixed southern pine: D. Scribe and cut woodwork to fit adjoining work, seal cut surfaces, and repair

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PROJECT NO.:		17163
PROJECT MGR:		LP
ASSISTED BY:		MR/NA
DATE:		04/23/2018

Description

SPECIFICATIONS





DIVISION 6 - CONTINUED

3.2 CABINET HARDWARE AND ACCESSORY SCHEDULE

A. Concealed (European-Type) Hinges: BHMA A156.9, B01602, 70 degrees of

opening, self-closing at 10 degrees.

B. Pulls: Back mounted Wire pulls, 4 inches long, 2 1/2 inches deep, 5/16 inches in diameter C. Adjustable Shelf Standards and supports: BHMA A156.9, B04071; with shelf rests,

B04081. D. Shelf Rests: BHMA A156.9, B04013.

E. Drawer Slides: Side-mounted, full extension zinc-plated steel drawer slides with steel ball bearings, complying with BHMA A156.9, B05091 and rated for the following

loads 1. Box Drawer Slides: 100 lbf (440 N).

2. File Drawer Slides: 200 lbf (890 N) 3. Pencil Drawer Slides: 45 lbf (200 N)

- F. Door Locks: BHMA A156.11, E07121
- G. Drawer Locks: BHMA A156.11, E07041.

H. Grommets for Cable Passage through Countertops: 2-inch-OD, molded-plastic

I. Refer to Drawings for manufacturer and finish.

END OF SECTION 06402

DIVISION 7 - THERMA & MOISTURE PRT

SECTION 07150- Fluid- Applied Membrane Air & Weather Barriors

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

100% acrylic based, spray and roll-on air and water-resistive barrier membrane. Designed for use as an air and water-resistive barrier behind EIFS and other claddings. This product is installed over glass mat gypsum sheathing, cement board sheathing, CDX plywood, OSB*, concrete or CMU. *The system is qualified for application to OSB (oriented strand board) sheathing only in areas shown in the manufacturer's Acceptable Substrates and Areas of use Technical Bulletin. Functional Criteria:

General:

Flashing: Flashing must be continuous and watertight. Flashing must be designed and installed to prevent water infiltration behind EIFS and other claddings.

Refer to Division 07 Flashing Section for specified flashing materials. The configuration of the air & water-resistive barrier, drainage plane, flashing

and cladding assembly materials must allow for the egress of incidental moisture. Performance Requirements:

System to meet the performance and testing requirements of the International Code Council Acceptance Criteria AC 212 and ASTM E2570.

Parex USA Weatherseal Spray & Roll-on	Method	ICC and ASTM E2570 Criteria	Results
Accelerated Weathering	AC 212	25 Cycles followed by Hydrostatic Pressure Test: No water penetration on the plane of the exterior facing side of the substrate.	Pass: No water penetration
Air Infiltration	ASTM E2178	Calculated flow Rate at 75 Pa (1.57 lb/ft², 0.3 in H ₂ O) = < 0.02 L/m²*s (< 0.004 cfm/ft²)	< .00001 L/m2*s (0.00001 cfm/ft2) at 75 Pa (1.57 lb/ft2, 0.3 in H2O)
Air Leakage of Air Barrier Assemblies	ASTM E2357	Pass < 0.2 L / s⋅m2 at 75 Pa) (< 0.04 cfm / ft2 at 1.57 psf)	Pass
Air Leakage	ASTM E283	No Criteria	< 0.004 cfm/ft2
Elongation	ASTM D412	No Criteria	360%
Flexibility	ASTM D522	No Criteria	No Cracking at 1/8" (3
Freeze-Thaw Resistance	ASTM E 2485	10 Cycles	Pass: No Deleterious Effects
Hydrostatic Pressure Test	AATCC 127 (Water Column)	Resist 21.6 in (55 cm) water for 5 hours before and after aging	No water penetration before and after aging
Nail Seal ability, Head of Water	ASTM D1970	Pass 5 inches of water	Pass
Evaluation of Fire Propagation	NFPA 285	In Accordance with IBC Chapter 26	Meets requirements for use on all Types of construction
Radiant heat exposure	NFPA 268	In Accordance with IBC Chapter 26	No ignition upon 20 minute radiant heat exposure at 1.25 w/cm2.
Pull off Strength	ASTM D 4541	No Water Penetration	Pass: No water penetration
Racking	ASTM E72	Deflection at 1/8 in (3.2 mm)	Pass -No cracking at field, joints or flashing connection
Structural Loading	ASTM E1233 Procedure A	10 Cycles @ 80% design load	Pass: No cracking at field, joints or flashing connection
Restrained Environmental	ICC ES AC 212 / ASTM E2570	5 Cycles of wetting and drying	Pass: No cracking at field, joints or flashing connection
Surface Burning Characteristics	ASTM E84	ICC and ASTM E2568 Flame Spread <25 Smoke Developed <450	Flame Spread =0 Smoke Developed =0
Tensile Bond Strength	ASTM E 2134/ ASTM C 297	Minimum 15 psi (104 kPa)	Pass: All listed substrates and flashing materials
Water Resistance	ASTM D 2247	14 Days	Pass: No Deleterious Effects
Water Penetration	ASTM E331	2.86 psf (137 Pa) for 15 minutes	Pass 25.4 psf (1216 Pa) for 165 minutes
Water Penetration	ASTM E331	Tested after Structural Loading, Racking and Restrained Environmental Cycling at 2.86 psf (137 Pa) for 15 minutes	No Water Penetration
Water Vapor Transmission	ASTM E96 Procedure B	Vapor Permeable	12.0 perms
Weathering	ICC ES AC 212 / ASTM E2570	210 hours of UV Exposure, 25 cycles of accelerated weatherin, 21.6 in (549 mm) water column for 5 hours	Pass
Wind Driven Rain	F.S. TT-C-555B	No Criteria	Pass
voc	EPA Reference Test Method 24	US EPA, South Coast AQMD and Greenseal Standard	10 g/L

SUBMITTALS 1.1

General: Submit Samples, Evaluation Reports and Certificates in accordance barrier, with Division 01 General Requirements Submittal Section.

1.2 QUALITY ASSURANCE

Qualifications: of ABAA and must be purchased from its authorized distributors. Manufacturer: Must be an active member of ABAA.

- Applicator Must have attended manufacturer's Educational Seminar.
- Must possess a current manufacturer's certificate of education.

Must be experienced and competent in installation of plaster-like materials and B. liquid-applied weather-resistive membranes.

DIVISION 7- CONTINUED

1.3 DELIVERY, STORAGE, AND HANDLING

Deliverv: Deliver air and water-resistive barrier materials in original packaging with manufacturer's identification. Storage: Store materials in a cool, dry location, out of sunlight, protected from weather and other harmful environment, and at a temperature above 40°F (4°C) and 1.1 SUBMITTALS below 110°F (43°C) in accordance with manufacturer's instructions.

PROJECT / SITE CONDITIONS 1.4

Installation Ambient Air Temperature: Minimum of 40°F (4°C) and rising, and remain so for 24 hours thereafter.

Substrate Temperature: Do not apply air & water-resistive barrier materials to В. substrates whose temperature are below 40°F (4°C) or contain frost or ice. Inclement Weather: Do not apply air & water-resistive barrier materials during

inclement weather, unless appropriate protection is employed. Air & water-resistive barrier materials must not be applied if ambient D. temperature exceeds 120°F (49°C) or falls below 40°F (4°C) within 24 hours of

application. Protect base coat from uneven and excessive evaporation during hot, dry 2.1 MANUFACTURERS weather Prior to installation, the wall must be inspected for surface contamination, or

other defects that may adversely affect the performance of the air & water-resistive barrier materials and must be free of residual moisture.

WARRANT 1.5

Warranty: Upon request, at completion of installation, provide manufacturer's Standard Limited Warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

250, Anaheim, CA 92807 Contact: Architectural Sales (866.516.0061) or Technical Support (800.226.2424)., or equal product compatible with finish system. Components: Obtain components from authorized distributors. В.

2.2 MATERIALS

Water-Resistive Membrane & Air Barrier Coating: Parex USA Weatherseal Spray & Roll-on™: 100% acrylic, elastomeric waterproof membrane and air barrier that can be either roller, brush or spray applied. Parex USA 396 Sheathing Tape: Non-woven synthetic fiber tape to reinforce the membrane at sheathing board joints, into rough openings and other terminations into dissimilar materials

Parex USA 365 Flashing Membrane: Self sealing, polyester faced, rubberized asphalt membrane, 30 mils (0.76mm) thick.

PART 3 - EXECUTION

- EXAMINATION 3.1
- Verify project site conditions Compliance: Comply with manufacturer's instructions for installation.

С Substrate Examination: Examine prior to water-resistive membrane and air

barrier installation as follows: Substrate must be of a type approved by water-resistive membrane and air barrier manufacturer. Plywood and OSB substrates must be gapped 1/8 in (3.2mm) at all edges. Plywood and OSB substrates cut edges (non-factory edges) must be sealed with a water-resistive coating.

Substrate must be examined for soundness, and other harmful conditions. Substrate must be free of dust, dirt, laitance, efflorescence, and other harmful

contaminants 4. Substrate construction in accordance with substrate material manufacturer's

specifications and applicable building codes Maximum deflection of the substrate must be determine by the requirements of the exterior cladding

B. Flashing: Flashing must be installed prior to the water-resistive membrane & air barrier coating material and integrated with the wall field membrane to create

positive drainage. Advise Contractor of discrepancies preventing proper installation of the waterresistive membrane & air barrier coating material. Do not proceed with the work until unsatisfactory conditions are corrected.

3.2 PREPARATION

Protection: Protect surrounding material surfaces and areas during installation of system

Clean surfaces thoroughly prior to installation. В. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3

MIXING Mix water-resistive membrane & air barrier materials in accordance with manufacturer's instructions.

3.4 APPLICATION

General: Installation shall conform to this specification and manufacturer's written instructions.

Flash all rough openings with water-resistive & air barrier coating material embedded with sheathing tape. Treat all sheathing joints, inside and outside corners and all exposed edges at

terminations with water-resistive membrane & air barrier coating material and embed sheathing tape. Embed 4 inch strips of Sheathing Joint tape by applying water-resistive 3.

membrane and air barrier coating. Apply per application instructions to approximately 6 inches of each side of the joint and completely embed reinforcing fabric with a trowel or taping knife so that the color of the fabric is not visible. Apply water-resistive membrane & air barrier coating to the entire surface of

the substrate. Roller Application: Use a 3/4 inch to 1-1/4 inch (19-32mm) or 1-3/8 inch (35mm) nap roller designed for applying latex paints

Spray Application: Spray apply the membrane at a rate of not more than 100 ft2 per gallon (2.4 m2 per liter). Ensure that the water-resistive membrane & air barrier coating laps onto all tracks and flashing to allow for any incidental moisture to be drained into the

track/flashing. Allow water-resistive membrane & air barrier coating to completely dry before proceeding with additional layers of the assembly. Seal all new penetrations, electrical boxes and cuts made after installation of

3.5 CLEAN-UP

Removal: Remove and legally dispose of water-resistive membrane & air barrier coating material from job site. All materials must be manufactured or sold by an active Manufacturer Member B. Clean surfaces and work area of foreign materials resulting from material installation

3.6

- PROTECTION Provide protection of installed materials from water infiltration into or behind
- Provide protection of installed materials from dust, dirt, precipitation, freezing

during installation, and continuous high humidity until fully cured and dry. Clean exposed surfaces using materials and methods recommended by the manufacturer of the material or product being cleaned. Remove and replace work that cannot be cleaned to the satisfaction of the Project Designer/Owner.

END OF SECTION 07150

DIVISION 7- CONTINUED

PART 1 - GENERAL

1.2 QUALITY ASSURANCE

manufacturer.

PART 2 - PRODUCTS

A. Available Products: Subject to compliance with requirements, products that may be END OF SECTION 07190 incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

1.1 SECTION REQUIREMENTS A. Silane, Penetrating Water Repellent: Clear, monomeric compound containing 20 percent or more solids of alkyltrialkoxysilanes; with alcohol, mineral spirits, water, or A. Submittals: Product Data. other proprietary solvent carrier; and with 3.3 lb/gal. (400 g/L) or less of VOCs. B. 20 percent or more solids of alkyltrialkoxysilanes; with alcohol, mineral spirits, water, B. Surface-Burning Characteristics: ASTM E 84, and as follows: or other proprietary solvent carrier; and with 5 lb/gal. (600 g/L) or less of VOCs. 1. Flame-Spread Index: 25 or less C. Silane, Penetrating Water Repellent: Pigmented, monomeric compound containing 2. Smoked-Developed Index: 450 or less. Manufacturer, Basis of Design: Parex USA, Inc., 4125 E. La Palma Ave., Suite 20 percent or more solids of alkyltrialkoxysilanes; with alcohol, mineral spirits, water, or PART 2 - PRODUCTS other proprietary solvent carrier; and with 5 lb/gal. (600 g/L) or less of VOCs. D. Silane, Penetrating Water Repellent: Clear, monomeric compound containing 20 percent or more solids of alkyltrialkoxysilanes; with alcohol, mineral spirits, water, or 2.1 INSULATION PRODUCTS other proprietary solvent carrier; and with more than 5 lb/gal. (600 g/L) of VOCs. A. Mineral-Fiber-Blanket Thermal Insulation: ASTM C 665, Type III, Class A, foil-scrim-E. Siloxane, Penetrating Water Repellent: Clear, oligomerous alkylalkoxysiloxanes containing 10 < percent or more solids; with alcohol, ethanol, mineral spirits, water, or kraft, foil-scrim, or foil-scrim-polyethylene vapor-retarder membrane on one face with fibers manufactured from glass, with flame-spread index of 25 or less. The R value at other proprietary solvent carrier; and with 3.3 lb/gal. (400 g/L) or less of VOCs. . Siloxane, Penetrating Water Repellent: Clear, oligomerous alkylalkoxysiloxanes all exterior walls shall not be less than 13. containing 10 percent or more solids; with alcohol, ethanol, mineral spirits, water, or B. Mineral-Fiber-Blanket Acoustical Insulation: ASTM E 119, light density flexible

less of VOCs

of VOCs.

C. Proprietary-Blend, Film-Forming Water Repellent: Clear, consisting of 1 or several 1. D412Standard Test Methods for Vulcanized Rubber and Elastomeric Tension different resins, acrylics, polymers, stearates, or oils plus other compounds or products 2. D461Standard Test Methods for Felt of components; and with 3.3 lb/gal. (400 g/L) or less of VOCs. D. Proprietary-Blend, Film-Forming Water Repellent: Clear, consisting of 1 or several 4. D1970Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet different resins, acrylics, polymers, stearates, or oils plus other compounds or products Materials Used as Steep Roofing Underlayment for Ice Dam Protection of components; and with 5 lb/gal. (600 g/L) or less of VOCs.

VOCs.

3.1 PREPARATION

SECTION 07190 - WATER REPELLENTS

A. Product Data: For each type of product indicated. B. Product test reports.

A. Installer Qualifications: An employer of workers trained and approved by

2.2 PENETRATING WATER REPELLENTS

other proprietary solvent carrier; and with 5 lb/gal. (600 g/L) or less of VOCs. G. Siloxane, Penetrating Water Repellent: Clear, oligomerous alkylalkoxysiloxanes containing 10 percent or more solids; with alcohol, ethanol, mineral spirits, water, or other proprietary solvent carrier; and with more than 5 lb/gal. (600 g/L) of VOCs. H. Silane/Siloxane-Blend, Penetrating Water Repellent: Clear, silane and siloxane blends with 3.3 lb/gal. (400 g/L) or less of VOCs.

I. Silane/Siloxane-Blend, Penetrating Water Repellent: Clear, silane and siloxane blends with 5 lb/gal. (600 g/L) or less of VOCs.

J. Proprietary-Blend, Penetrating Water Repellent: Clear, consisting of 1 or several different resins (silanes or siloxanes), polymers, stearates, or oils plus other compounds or products of components; and with 3.3 lb/gal. (400 g/L) or less of VOCs. K. Proprietary-Blend, Penetrating Water Repellent: Clear, consisting of 1 or several different resins (silanes or siloxanes), polymers, stearates, or oils plus other compounds or products of components; and with 5 lb/gal. (600 g/L) or less of VOCs.

2.3 FILM-FORMING WATER REPELLENTS

A. Silicone Sealer, Film-Forming Water Repellent: Clear, polymerized, silicone-resin water repellent for dense substrates; with a solvent- or water-based solution containing not less than 3 and up to 5 percent solids by weight; and with 3.3 lb/gal. (400 g/L) or

B. Silicone-Sealer, Film-Forming Water Repellent: Clear, polymerized, silicone-resin water repellent for dense substrates; with a solvent- or water-based solution containing 1.02 REFERENCES not less than 3 and up to 5 percent solids by weight; and with 5 lb/gal. (600 g/L) or less

. Siliconate, Film-Forming Water Repellent: Clear, with 3.3 lb/gal. (400 g/L) or less of 6. E96Standard Test Methods for Water Vapor Transmission of Materials

F. Acrylic, Film-Forming Water Repellent: Clear breathing coating of acrylic resins; with a water-based, solvent-based, or acrylic emulsion solution containing less than 15 percent solids by volume; and with 3.3 lb/gal. (400 g/L) or less of VOCs. G. Acrylic, Film-Forming Water Repellent: Pigmented, with 5 lb/gal. (600 g/L) or less of

PART 3 - EXECUTION

A. Clean substrate of substances that might interfere with penetration or performance of water repellents. Test for moisture content, according to water-repellent

manufacturer's written instructions, to ensure that surface is dry enough. 1. Cast-in-Place Concrete: Remove oil, curing compounds, laitance, and other

substances that could prevent adhesion or penetration of water repellents. 2. Clay Brick Masonry: Clean clay brick masonry per ASTM D 5703. Division 4 Section Deliver all

"Clay Masonry Restortation and Cleaning." B. Test for pH level, according to water-repellent manufacturer's written instructions, to ensure chemical bond to silicate minerals.

C. Protect adjoining work, including sealant bond surfaces, from spillage or blow-over PART 2 - PRODUCTS of water repellent. Cover adjoining and nearby surfaces of aluminum and glass if there is the possibility of water repellent being deposited on surfaces. Cover live plants and 2.01 MANUFACTURERS AND PRODUCTS

D. Coordination with Sealants: Do not apply water repellent until sealants for joints adjacent to surfaces receiving water-repellent treatment have been installed and cured. by 1. Water-repellent work may precede sealant application only if sealant adhesion and W.R. Grace & Co.-Conn., Grace Construction Products, Cambridge, MA. compatibility have been tested and verified using substrate, water repellent, and

sealant materials identical to those used in the work. E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLICATION

the product and application method to be used.

DIVISION 7 - CONTINUED

B. Apply a heavy-saturation spray coating of water repellent on surfaces indicated for treatment using low-pressure spray equipment. Comply with manufacturer's written instructions for using airless spraying procedure, unless otherwise indicated. 1. Precast Concrete: At Contractor's option, first application of water repellent on precast concrete units may be completed before installing units. Mask sealant-bond surfaces to prevent water repellent from migrating onto joint surfaces.

C. Apply a second saturation spray coating, repeating first application. Comply with manufacturer's written instructions for limitations on drying time between coats and after rainstorm wetting of surfaces between coats. Consult manufacturer's technical representative if written instructions are not applicable to Project conditions.

3.3 CLEANING

A. Immediately clean water repellent from adjoining surfaces and surfaces soiled or damaged by water-repellent application as work progresses. Repair damage caused by water-repellent application. Comply with manufacturer's written cleaning instructions

SECTION 07210 - BUILDING INSULATION

PART 1 - GENERAL

fiberglass unfaced insulation batts 3 1/2" thick, with flame-spread index of 25 or less. C. Extruded polystyrene foam insulation ASTM C 578 type X ICBO-ES ER 2257, BOCA-ES RR 21-02, NES NER 699, UL Certificate D369

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install insulation in areas and in thicknesses indicated or required to produce Rvalues indicated. Cut and fit tightly around obstructions and fill voids with insulation.

END OF SECTION 07210

SECTION 07262 - GRACE ICE & WATER SHIELD

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Grace Ice & Water Shield self-adhering membrane as a sloped roof underlayment

- A.American Societv for Testing and Materials (ASTM)
- 3. D903Test Methods for Peel or Stripping Strength of Adhesive Bonds
- 5. D3767Standard Practice for Rubber Measurement of Dimensions

1.03 SUBMITTALS

A.Manufacturers product data sheet and product sample.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Self-adhesive membrane roofing underlayment shall manufactured and marketed by W. R. Grace & Co.-Conn., Grace Construction Products, Cambridge, MA or a firm with a minimum of 25 years experience in the production and sales of self-adhered membrane roofing underlayments.

1.05 DELIVERY, STORAGE AND HANDLING

A. The membrane and accessory products must be handled properly. Read all product labels and Material Safety Data Sheets (MSDS's) for proper handling and disposal.

materials in manufacturer's unopened packages and store all materials under cover. Do not double stack palletized material.

A. Acceptable Products and Manufacturers: Grace Ice & Water Shield manufactured

2.02 MATERIALS

A. Grace Ice & Water Shield is a cold-applied, self-adhering membrane composed of a high density, cross laminated polyethylene film coated on one side with a layer of rubberized asphalt adhesive. An embossed, slip resistant surface is provided on the A. Manufacturer's Field Service: Engage a factory-authorized service representative to polyethylene. Grace Ice & Water Shield is interwound with a disposable silicone-coated nspect the substrate before application of water repellent and to instruct Applicator on release sheet. Membrane shall conform to the following physical properties:

			2.2 MATERIALS
Property	Value	Test Method	
Color	Gray-Black		A. Provide materials spe
Thickness, Membrane	1.02 mm (40 mil)	ASTM D3767	sealants, tapes, foams, c
		Procedure A (Section 9.1)	system.
Tensile Strength, Membrane	1720 kN/m ² (250 psi)	ASTM D412	
		(Die C Modified, ¹ / ₂ in./minute)	PART 3 - EXECUTION
Elongation, Membrane	250%	ASTM D412	
		(Die C Modified, ¹ / ₂ in./minute)	3.1 EXAMINATION
Low Temperature Flexibility	Unaffected @ -29°C (-20°F)	ASTM D1970	
Adhesion to Plywood	525 N/m (3.0 lb/in. width)	A\$TM D903	A. Verification of Condition
Permeance (Max)	2.9 ng/m ² s Pa (0.05 Perms)	ASTM E96	1 Do not proceed with w
Material Weight Installed (Max)	1.3 kg/m ² (0.3 lb/ft ²)	ASTM D461	2. Verify barrier penetrati

DIVISION 7 - CONTINUED

2.03 ACCESSORIES

A. Accessory Products: Perm-A-Barrier WB Primer.

PART 3 EXECUTION

3.01 PREPARATION

A. Install the membrane directly on a clean, dry, continuous structural deck. Some suitable deck materials include plywood, wood composition, wood plank, metal, concrete, or gypsum sheathing. Remove dust, dirt, loose nails, and old roofing materials. Protrusions from the deck area must be removed. Decks shall have no voids, damaged, or unsupported areas. Repair deck areas before installing the membrane. B. Prime concrete, masonry surfaces and Dens-Glass Gold with Perm-A-Barrier WB Primer at a rate of 6-8 m2/L (250-350 ft2/gal). Prime wood composition and gypsum sheathing with Perm-A-Barrier WB Primer if adhesion is found to be marginal. (Refer to Technical Letter 12.) Apply at same rate. C.Priming is not required for other suitable surfaces provided that they are clean and drv.

3.02 INSTALLATION

A. Install in strict accordance with manufacturer's printed application procedures, precautions, and limitations. Property Value Test Method

Color Gray-Black

Thickness, Membrane1.02 mm (40 mil) ASTM D3767 C. Firestop spaces in rated concrete or masonry wall openings with fire rated solid fill Procedure A (Section 9.1) only where both height and width exceed thickness of rated barrier. Install applicable Tensile Strength, Membrane1720 kN/m2(250 psi) ASTM D412 (Die C Modified, fire-stopping system around all penetrating items. 1/2in./minute) D. Firestop penetrations through full thickness of barriers. Where required thickness of Elongation, Membrane250%ASTM D412 (Die C Modified, 1/2in./minute) firestopping sealant system is less than thickness of barrier, use fiber fill, solid fill, or Low Temperature Flexibility Unaffected @ -29°C (-20°F)ASTM D1970 fiber packing to make up remainder of barrier thickness. Adhesion to Plywood 525 N/m (3.0 lb/in, width)ASTM D903 E. Completely fill void spaces of each penetration with firestopping material. Permeance (Max)2.9 ng/m2 F. Provide forms and dams to permanently secure firestopping materials. 1. Install firestopping in floors to flush with top of slab, sleeve or housekeeping pad. s Pa (0.05 Perms)ASTM E96 Material Weight Installed (Max)1.3 kg/m2(0.3 lb/ft2)ASTM D461 G. Apply firestopping directly to penetrating item. Do not anchor or bond firestopping to

END OF SECTION 07262

SECTION 07270 - FIRESTOPPING

PART 1 - GENERAL

1.1 WORK INCLUDED

Handbooks 1. Empty hole penetrations through fire rated floor slabs. 2. Openings between curtain walls and floor slabs. See Fibrous Insulation - Section

07213 3. Openings between tops of fire rated walls and floor or roof slabs are to be fire caulked

4. Through penetrations of fire rated walls.

1.2 QUALITY ASSURANCE

A. General: Provide firestopping materials that expand to fill cavities or provide adhesion to substrates, and that will maintain seal under normal expected movements A. The scope of work includes all aluminum composite cladding indicated on the

of substrates. drawings B. UL Classification: Provide firestopping materials that are currently classified with UL B. Provide all labor, materials, equipment, and services to perform all operations as Fill, Void, or Cavity Materials, and Through Penetration Firestop Systems. necessarv C. Fire Tests: Provide firestopping materials that have been tested in accordance with for a complete installation in accordance with the requirements and intent of this ASTM E 814 Methods of Fire Tests of Through-Penetration Fire Stops and UL 1/479 section Fire Test of Through-Penetration Firestops. C. The drawings are diagrammatic, and neither indicates the intricacies of the specified D. All through-penetration firestops are to be as per the U.L. fire resistance handbook, systems nor latest edition, and are to carry U.L. system numbers and an appropriate F or T number. identifies and/or solves problems of thermal or structural movement and deflection, E. The same type/manufacture or firestopping should be agreed to and used by al wind loads. subcontractors on the project. air and water infiltration, and moisture disposal.

1.3 SUBMITTALS

A. See Section 01100 - General Requirements, for submittal procedures. B. Product Data - Submit manufacturer's technical product data, including product description, technical data, and installation instructions. C. Identify the U.L. Design systems numbers for each product or assembly. Provide shop drawings of exact dimensioning, anchorage, substrate, proprietary system, etc., and identify typical locations for each.

1.4 DELIVERY, STORAGE AND HANDLING

2.1 ACCEPTABLE MANUFACTURERS

A. Deliver firestopping materials to job site in original, new and upopened packages and containers bearing manufacturer's name and a label identifying contents. B. Store firestopping materials out of weather, at temperatures below 90 degrees F (32 with the tests specified under this Article, provide certification by independent degrees C), and as recommended by manufacturer. Store as per manufacturers specified instructions.

PART 2 - PRODUCTS

3. Metalines, Inc.

5. Hevi-Duty Nelson

8. General Electric

10. CAFCO T.P.S.

of firestopping.

6. USG Fire Stop Systems

9. Specified Technologies, Inc.

above as per drawings and specifications.

4. Tremco

7 Hilti

1. Dow Corning Corporation

DIVISION 7 - CONTINUED

smoke barriers

penetration of barrier.

indicated in referenced standards.

rating equal to or greater than barrier rating.

A. Perform work using methods and materials specified in firestopping systems

standards for conditions not specifically illustrated in referenced standards.

1. Consult with Architect to establish acceptable modified versions of referenced

C. Install firestopping to close clearances around and within sleeves, and around

D. Patch penetrations caused by cutting or presence of unused or abandoned

3.3 TO EXTENT PRACTICABLE, CONSTRUCT FIRE-RATED WALLS AFTER

MATERIALS TIGHTLY TO OR DIRECTLY ON MATERIAL OF PENETRATION

E. In smoke barriers, firestopping shall resist the passage of smoke.

applicable firestopping sealant system around penetrating items.

cables, conduits, pipes, ducts, equipment enclosures, or other apparatus causing

B. Install firestopping, at least equal to barrier fire-rating, in and around penetrations of

floor structures, exterior walls and interior walls indicated as time-rated fire barriers or

openings or boxes, using materials compatible with barrier construction and with fire-

PLACEMENT OF PENETRATING MATERIALS, FITTING RATED CONSTRUCTION

A. Where large openings are created in barriers, to permit later installation of pipes and

ducts, close unused portions of opening with solid fill equal to barrier rating and with

B. Firestop spaces in structural floor openings with rated firestop concrete, or other

rated assembly only where both horizontal dimensions exceed thickness of rated

specified for slab. Install applicable firestopping system around all penetrating items.

H. Where sleeves have been installed surrounding pipes or other penetrations, firestop

annular space between sleeve and its contained pipe, cable, or duct with resilient

firestopping sealant system to permit movement of pipe or duct without damage to

barrier. Provide dowels and reinforcement, within such fill, equal to reinforcing

combustible or non fire-rated materials such as plastic or fiber coverings.

3.2 INSTALLATION

A. Provide firestopping in accordance with the details of the latest edition of the U.L.

A. Provide materials by one of the following manufacturers: 2. Minnesota Mining and Manufacturing Company (3M) . USG - Acoustical caulk for non-rated sound wall terminations at floors and decks

A. Provide materials specifically tested for the location proposed. Provide primers, sealants, tapes, foams, dams, etc. as required to provide a complete proprietary \rangle

A. Verification of Conditions: Examine areas and conditions under which work is to be performed, and identify conditions detrimental to proper and/or untimely completion. 1. Do not proceed with work until unsatisfactory conditions have been corrected. 2. Verify barrier penetrations are properly sized and in suitable condition for application

firestopping sealant. END OF SECTION 07270 SECTION 074100 COMPOSITE ALUMINUM PANELS

PART 1 GENERAL

1.1 RELATED SECTIONS

- A. Specification Sections include but are not limited to: 1. Section 07600 Flashing and Sheet Metal
- 2. Section 07900 Sealants
- 3. Section 08520 Aluminum Windows 4. Section 08800 Glass and Glazing

1.2 SYSTEM DESCRIPTION

D. The work of this section includes design, engineering, fabrication, and testing of the various aluminum cladding assemblies to certify compliance with all applicable quality and performance requirements. E. The primary components of the aluminum cladding systems are (1) aluminum faced

composite panels, and (2) panel support and mounting components which include but are not limited to aluminum extrusions, plates, angles, stiffeners, anchorages, shims, furring, fasteners, gaskets, adhesive and sealants, related flashing, receivers, adapters

and masking for complete installation.

1.3 SYSTEM PERFORMANCE REQUIREMENTS

A. Testing: Where the cladding systems and components have been tested in accordance

laboratory showing compliance with requirements. Otherwise, perform tests through an approved laboratory and provide certified test results showing compliance with requirements.

B. Deflections and Thermal Movements: Provide products and systems which are capable of withstanding building movements and weather exposures, including wind loading and

which are capable of performing within the following limitations:

1. Normal to the Plane of the Wall: The maximum deflection of panel perimeter and aluminur framing members shall be L/175. The maximum allowable deflection for the aluminum composite panel material shall be L/40. 2. Thermal Movements: Make allowances for free vertical and horizontal movement

due to the contraction and expansion for cladding component parts due to seasonal variations in temperature C. Leakage Resistance. Water and Air: Provide products and systems that have been

demonstrate permanent resistance to leakage as follows:

1. Air Infiltration: Tested in accordance with ASTM E-283, with a static air pressure differential of 1.56 psf, the air infiltration rate shall not exceed 0.1 cfm per square foot of fixed wall area. 2. Water Penetration: Water penetration in the specification is defined as the

appearance of uncontrolled water within the wall construction. Provision shall be made in the design to drain to the exterior face of the wall any leakage of water occurring at joints and /or

condensation taking place within the wall construction. Tested in accordance with ASTM E-331, no

infiltration at a static pressure differential of 10% of inward acting design load. D. Structural Performance: Shall be tested in accordance with ASTM E-330 at design

No permanent deformation or failures of structural members shall occur. 1. Design and fabricate the cladding systems for a windload of 25 lbs. per sq. ft. inward and 25

lbs. per sq. ft. outward with a safety factor of 1-1/2 times design loads. 2. The system shall not constrict expansion and contraction by means of devices or attachments

that when installed to panel edges, "lock down" panels and compensate for movement by allowing " crowning" or "pillowing" of panel face. E. Fire Performance Characteristics:

1. Panel Fire Performance

a. ASTM E-84, Flame Spread 0, Smoke Density 0.

2. System Fire Performance:

a. ASTM E-84 - 79A, Flame Spread Index: 15; Smoke Developed: 160. b. ASTM E-108 modified, no contribution to vertical or horizontal flame spread.

F. Panel Flatness Criteria: Maximum 1/32" in 2'-0" on panel in any direction for assembled units

(non- -accumulative).



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DIVISION 7 - CONTINUED	DIVISION 7 - CONTINUED	DIVISION 7 - CONTINUED
1.4 SUBMITTALS	PART 2 PRODUCTS	5. Provide required stiffeners seeme
A. Comply with requirements of Division 01300 and this section.	2.1 MATERIALS AND COMPONENTS	structural silicone and mechanically 6. Maximum allowable panel bow of
B. Project Listings: Submit listing of at least five (5) projects similar in type, size and complexity, complete in the past ten years. Include names and phone numbers for	A. Aluminum Cladding Facing Material:	dimension in width and length.
C. Samples:	 Product: Aluminum composite material as manufactured by the following: A. Alcoa Cladding Systems - Reynobond 	7. Panel lines, breaks, and angles s buckle,
 Submit two 5" x 7" samples of the composite facing panel. Submit two samples of each color and finish, at least 3" x 5". 	B. Alcan Composites, Inc Alucobond C. Mitsubishi Chemical America, Inc Alpolic	oil-canning and other defects. 8. System shall be McDougall Serie
D. Shop Drawings: Submit shop drawings with elevations of all cladding areas at 1/4" scale with	2. Core: Thermoplastic material, which in the composite assembly, meets performance characteristics, specified and code requirements as set forth in the BOCA Basic	9. Substitute panel fabricators must scheduled bid date.
typical elevations at VI' scale, and details at 3" or greater scale to show dimensioning, member	/National Building Code and U. L. for Class A construction.	PART 3 EXECUTION
elements, adhesive, sealants, and interface with glazing. Indicate the section moduli of	3. Face Sheets: 0.020" (minimum) aluminum 3003 alloy, coil coated with the specified high	3.1 INSPECTION
members, and illustrate worst case deflection calculations for the required design	performance finish, and bonded in a continuous process to core material to meet performance requirements.	A. Examine supporting structure and
E. Product Data: Submit manufacturer's specifications for material and fabrication of	 Inickness: 4mm Bond Integrity: When tested in accordance with ASTM D1781-76 for bond integrity, 	and notify the General Contractor or Construc
support / attachment systems, including instructions and recommendations for	a. Bond Strength: 220-psi minimum.	the proper and timely completion of the
maintenance.	 b. Peel Strength: 26 inch lbs. /inch minimum. c. Shall have successfully passed six (6) each ASTM D1037 weather cycling tests. 	with erection until unsatisfactory conditio
signature to confirm	d. Shall have had no change in bond performance after 8 hours of submersion in boiling	snall be = /- V".
Engineer	water. 6. Finishes	B. Surfaces to receive panels shall defects detrimental to this work.
G. Mock Up: Provide mock up per the requirements of Section 01400.	a. The exterior finish of the panels sheet shall be full-strength Kynar 500 with minimum 70% resin, meeting AAMA 2605.	3.2 INSTALLATION
1.5 QUALITY ASSURANCE	1. Color: TBD - Matte Finish 2. Coating Thickness: 1.0 mil (+ / - 0.2 mil)	A. Erect panels plumb, level, and tru
A. For the purpose of establishing the level of quality, performance and appearance	3. Hardness: ASTM D3363; F min using Eagle Turquoise T2375. 4. Impact: Test Method ASTM D2794 Gardner Variable Impact Tester with 5/8"	20 [°] -0 [″] , non-cumulative.
plans, elevations, details and specifications are based on specific cladding system(s)	mandrel. substrate thickness.	B. Anchor component parts of the s approved shop
aluminum composite panel material facing. In addition to conforming to the sizes and	B. Coating shall adhere tightly to metal when subjected to #600 Scotch Tape pickoff test. Slight micro-cracking permissible. No star cracking shall occur. No removal	drawings, providing for necessary the C. Separate dissimilar metals per m
configurations shown on the drawings, cladding systems shall incorporate the following design characteristics:	of film to substrate. 5. Adhesion: Test Method ASTM 3359 at room temperature, and at 32° F and taped	D. Apply exposed sealants per man E. Do not cut, trim, weld, or braze c
1. Wet seal "caulked" joints of indicated widths. Dry joint, pressure equalized, rain screen system with joints of indicated widths.	with #600 Scotch Tape. A. Coating shall not pick off a 1/16" crosshatched grid with reverse impact of	would damage the finish, decrease the structure of the st
 Continuous aluminum perimeter reinforcing extrusions. System design must provide sufficient support and stiffening to prevent oil-canning, 	 1.5 inch pounds per mil substrate thickness and taped with #600 Scotch tape. Humidity Resistance: Test Method ASTM D-2247. 	in performance.
dimpling, buckling, and other surface irregularities. 4. Installations must not have visible fasteners or telegraphing of fastening. Mounting	A. No formation of blisters when subjected to condensing water for at 100% relative humidity and 100°F for 3,000 hours.	3.3 ADJUSTING AND CLEANING
assemblies on the cladding faces or any other compromise of a neat, smooth, flat, fastener free appearance will not be acceptable.	 7. Salt Spray Resistance: A. Test Method: ASTM B117; Expose single coat system to 3,000 hours, using 	A. Remove and replace panels dam B. Repair panels with minor damage
5. No field fabrication of panel or panel attachment system or a combination of the panel and	5% NaCl solution B. Corrosion creepage from scribe line; 1/16" (1.6 mm) maximum.	C. Protective plastic coating shall be Removal to
B. Substitutions: In accordance with Section 01630. Submissions of other systems	8. Weathering: Outdoor with 5-year exposure to 45° angle facing South, Florida. A. No cracking, peeling, blistering, or adhesion loss after 2,000 hours.	the protective coating will provide a
must include the following:	B. No color change greater than 5 NBS units measured per ASTM D-2244. C. Shall not chalk in excess of 8 when rated per ASTM D-659.	3.4 SCHEDULE
 Panel material specifications and samples. Details of typical edge conditions, comers, joints, 4-way intersections, and 	D. Accelerated: 1. 141/A6152; 500 hours or ASTM D822; 5,000 hours in Atlas Type	Α.
abutments to similar materials. 3. A 24" x 24" sample fabricated panel with perimeter extrusions and one stiffener.	Weather meter; using cycle of 102 minutes light and 18 minutes diminished light and demineralized water.	END OF SECTION 074100
4. Two 12" long samples of all extrusions required for the system.5. BOCA Research Report for a typical route and return system using aluminum	No checking, crazing, adhesion loss, or objectionable color change or chalking.	SECTION 07540 - THERMOPLASI
composite panel material facing. 6. Documentation certifying that the panel material and finish meet or exceed the	 Chemical Resistance: Test Method ASTM D-1308 Procedure 5.2. A. No discoloration or blistering after 15 minutes spot test with 10% muriatic 	PART 1 - GENERAL
requirements of article 2.01. A of this specification.	acid. B. No discoloration or blistering after 15 minutes spot test with 10% sodium	1.1 SUMMARY
7. Independent laboratory test results certifying that the proposed system meets or exceeds the	hydroxide. 10. Abrasion Resistance: Test Method ASTM D-968 Falling Sand.	A. This Section includes fully adhere systems.
System Performance Requirements stated in article 1.05 of this specification. C. Manufacturer's Qualifications: The manufacturers of the composite facing panel	 A. Coating shall resist abrasion of not less than 40 liters of sand. 1. Anodized - clear coating AA-C22-A41 Class I; color coating, AA-C22- 	1.2 SUBMITTALS
must have at least ten (10) years' experience in the manufacture of the specified composite panel.	A44 light, medium, dark bronze or black, Class I. 2. Urethane coating - multicoat polyester urethane finish equal to	A. Product Data: For each product
Manufacturers of the trim and other accessory products must have at least five- (5) years' experience in	AWLGRIP by U. S. Paint in accordance with manufacturers requirements. (For small quantity custom color applicants).	B. Research/evaluation reports. C≺Maintenance data.
the manufacture of their respective products. D. Distributor /Installer Qualifications: The Distributor /Installer must have at least ten	B. Cladding Panel Mounting System: Provide all necessary members required to install cladding such as extrusion formed members, sheet, plate and angles,	1.3 QUALITY ASSURANCE
(10) years' experience installing light gauge metal framing and erecting this type of cladding	of the alloy, temper and thickness as engineered by the fabricator. C. Stiffeners: Extruded aluminum sections secured to edge trim bonded and	A. Installer Qualifications: A qualifie
system, and have completed at least ten (10) projects utilizing the specified facing panel system.	structurally fastened to rear face of composite panel with structural silicone adhesive, of sufficient number, size and strength to maintain flatness of the	manufacturer's products. B. Source Limitations: Obtain comp
E. Fabricator Qualifications: The fabricator must have at least ten (10) years' experience designing,	cladding within the specified tolerances. D. Sealant Systems: Concealed sealants and gaskets within the system shall be	approved by roofing membrane main C. Fire-Test-Response Characterist
engineering, and fabricating this type of cladding system, and have successfully completed at	premium grade products in accordance with the manufacturer's standards to meet performance requirements, and as approved by the Architect. Exposed	fire-test-response characteristics inc per test method below by UL, FMG,
F. Field Measurements: Where possible, check actual field dimensions in construction	Sealant to be Dow 795, Dow 756 or G. E. Silprut silicone in standard color as selected by the Architect.	acceptable to authorities having juri 1. Exterior Fire-Test Exposure: Cla
work by accurate field measurement before fabrication, and show recorded measurements on final shop	E. Fasteners: Aluminum, non-magnetic stainless steel, or other materials warranted by manufacturer to be non-corrosive and compatible with aluminum	
drawings. Where field measurement is not possible, either the General Contractor or Construction Manager will provide guaranteed dimensions including steel framing,	framing members, trim anchors, and other components of the building assembly to receive fasteners. Do not expose fasteners except where unavoidable. When exposed	1.4 WARRANTY
openings, and other pertinent interfacing items, to allow fabrication to proceed.	tasteners are allowed, they shall be finished the same as the cladding.	A. Special Warranty: Manufacturer which manufacturer agrees to repai
G. Conflicts in Requirements: If conflicts exist on the drawings, in this specification, or between	F. Anchors. Clips, and Accessories: Depending on strength and corrosion- inhibiting requirement, fabricate units of aluminum, non-magnetic stainless	Completion. Failure includes roof le
the drawing and specifications, the more stringent requirement shall apply.	G. Adhesive: Shall be a premium quality structural silicone adhesive as	PART 2 - PRODUCTS
	recommended by the face panel manufacturer and approved by the Architect.	2.1 MANUFACTURERS
A. General: Provide a written warranty, signed by the manufacturer and contractor/ installer,	2.2 PANEL FABRICATION	A. RVC Sheet: ASTM D 4434, Type
agreeing to repair or replace detective materials and workmanship of the engineered	A. General: 1. Fabricate cladding systems to the dimensions, sizes and profiles indicated on the	a. Duro-Last Roofing, Inc.
B. Defective is defined to include the following:	temperature	c. Flex Membrane International, Inc
Abnormal aging. Abnormal weathering. Abnormal weathering. Abnormal weathering.	Pange at time of raphcation and erection. 2. Coordinate fabrication schedule with construction progress as directed by the Construction	u. GAF Initiaterials Corporation. e. GenFlex Roofing Systems.
4. Failure of the system to meet specified performance requirements.	Contractor or Construction Manager to avoid delay of work.	g. Johns Manville International, Inc.
1.7 DELIVERY, STORAGE AND HANDLING	assemble, prefabricate components at the shop as required for proper and expeditious	2. Thickness: 45 mils minimum, 60
A. Protect finish and edges in accordance with panel manufacturer's	assembly. Mark components to correspond with those on the approved shop drawings.	
panels with removable plastic film applied prior to fabrication, remaining on during	Design, raundate, assemble, and erect systems, including sealed joints, to be free of water	A Eghria Dainforgad Thermania
shipping and installation.	condensation, which may accumulate in the various cladding systems.	from a thermoplastic polyolefin, inte
b. Store material in accordance with panel manufacturer's recommendations.	B. Composite Facing Panels and Mounting Systems- Series 150:	a) Carlisle SynTec Incorporated.
	panel facing material and continuous perimeter reinforcing extrusions in a rout and roturn	c. GAF Materials Corporation.
	edge configuration	 e. Johns Manville International, Inc. f) Samafil Inc.
	 Panels shall be mechanically fastened to all perimeter extrusions. Completed panels shall be properly designed and fabricated so that no restraints are 	g. Stevens Roofing Systems; Div. o
	placed on the panels, which might result in compressive skin stresses. 4. The installation methods shall be such that the cladding systems shall remain water	2. Thickness: 60 mils, nominal. 3. Exposed Face Color: White.

wind tight, remain within deflection limitations, and return to flat, regardless of

temperature changes and design wind loads.

quired stiffeners seemed to the rear face of the facing panels with cone and mechanically retained by the edge trim members. allowable panel bow of fabricated panels shall be 0.8% of panel

s, breaks, and angles shall be sharp and true, with surfaces free of warp,

nd other defects nall be McDougall Series 200 as fabricated by: panel fabricators must obtain approval from architect 10 days prior to

d date. ECUTION

supporting structure and conditions under which the work is to be erected

Contractor or Construction Manager in writing of conditions detrimental to

mely completion of the work. Unless directed in writing, do not proceed unsatisfactory conditions have been corrected. Tolerance for substructure ______2.4 SUBSTRATE BOARDS

to receive panels shall be even, smooth, sound, clean, dry and free from mental to this work.

ATION

els plumb, level, and true to within a tolerance of 1/8" in 12' -0" and V" in

mponent parts of the systems securely in place in accordance with

oviding for necessary thermal and structural movement. dissimilar metals per method shown on the approved shop drawings. osed sealants per manufacturer's instructions. t, trim, weld, or braze component parts during erection in a manner, which

finish, decrease the strength, or result in a visual imperfection or a failure

and replace panels damaged beyond repair.

nels with minor damage. plastic coating shall be removed after erection and prior to caulking.

e coating will provide a clean panel surface.

CTION 074100

540 - THERMOPLASTIC MEMBRANE ROOFING ENERAL

ion includes fully adhered or mechanically fastened membrane roofing

Data: For each product indicated. /evaluation reports.

ualifications: A qualified installer, approved by manufacturer to install er's products.

mitations: Obtain components for membrane roofing system from or roofing membrane manufacturer. Response Characteristics: Provide membrane roofing materials with the oonse characteristics indicated as determined by testing identical products hod below by UL, FMG, or another testing and inspecting agency

o authorities having jurisdiction ire-Test Exposure: Class A; ASTM E 108, for application and roof slopes

NTY

arranty: Manufacturer's standard form, without monetary limitation, in facturer agrees to repair or replace components of membrane roofing ail in materials or workmanship within 15 years from date of Substantial Failure includes roof leaks.

et: ASTM D 4434, Type III, fabric reinforced.

irers Roofing, Inc. Building Products Company.

45 mils minimum, 60 mils nominal.

OPLASTIC POLYOLEFIN ROOFING MEMBRANE

inforced Thermoplastic Polyolefin Sheet: Uniform, flexible sheet formed noplastic polyolefin, internally fabric or scrim reinforced, and as follows: irers

/nTec Incorporated Building Products Company. erials Corporation. Roofing Systems.

Roofing Systems; Div. of JPS Elastomerics.

DIVISION 7 - CONTINUED

2.3 AUXILIARY MATERIALS

A. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane. B. Sheet Flashing: Manufacturer's standard unreinforced thermoplastic polyolefin sheet flashing, 55 mils thick, minimum, of same color as sheet membrane. C. Bonding Adhesive: Manufacturer's standard solvent-based bonding adhesive for membrane, and solvent-based bonding adhesive for base flashings. ∠D. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors. E.) Metal Battens: Manufacturer's standard aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick, prepunched. F. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.

ØIVISION 7 - CONTINUED

\sim G. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips, slip sheet, and other accessories.

A.) Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/4 inch thick. B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting ∠corrosion-resistance provisions in FMG 4470, designed for fastening substrate panel to roof deck.

2.5 ROOF INSULATION

A. Extruded-Polystyrene Board Insulation: ASTM C 578, Type IV, 1.6-lb/cu. ft. minimum densitv. square edged

B/ Molded-Polystyrene Board Insulation: ASTM C 578 Type IX, 1.8-lb/cu. ft. minimum

C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slopes indicated

D) Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.6 INSULATION ACCESSORIES

A. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting ϕ orrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer. <₿. Cold Fluid-Applied Adhesive: Manufacturer's standard cold fluid-applied adhesive

formulated to adhere roof insulation to substrate. C/ Cover Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/4 inch thick.

2.7 WALKWAYS

A. Install wakways as shown on drawings, walkways to be manufacured by or compatable with roofing system manufacurer's products.

PART 3 - EXECUTION

3.1 SUBSTRATE BOARD INSTALLATION

A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards

together. 1. Fasten substrate board to top flanges of steel deck according to membrane roofing system manufacturer's written instructions.

3.2 INSULATION INSTALLATION

A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday. B. Comply with membrane roofing system manufacturer's written instructions for installing roof insulation.

C. Install tapered insulation under area of roofing to conform to slopes indicated. D. Install one or more layers of insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 1-1/2 inches or greater, install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction. E. Adhered Insulation: Install each layer of insulation and adhere to substrate as

follows

1. Set each layer of insulation in a cold fluid-applied adhesive. F. Mechanically Fastened Insulation: Install each laver of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.

1. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof. G. Mechanically Fastened and Adhered Insulation: Install each layer of insulation and secure first layer of insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type. 1. Fasten first layer of insulation to resist uplift pressure at corners, perimeter, and field of roof.

2. Install subsequent layers of insulation in a cold fluid-applied adhesive. H. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Loosely butt cover boards together and fasten to roof deck.

1. Fasten to resist uplift pressure at corners, perimeter, and field of roof.

3.3 ADHERED ROOFING MEMBRANE INSTALLATION

A. Install roofing membrane over area to receive roofing according to membrane roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing.

1. Install sheet according to ASTM D 5036. B. Bonding Adhesive: Apply solvent-based bonding adhesive to substrate and underside of roofing membrane at rate required by manufacturer and allow to partially dry before installing roofing membrane. Do not apply bonding adhesive to splice area

of roofing membrane. C. Bonding Adhesive: Apply water-based bonding adhesive to substrate at rate required by manufacturer and immediately install roofing membrane. Do not apply

bonding adhesive to splice area of roofing membrane. D. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.

1. Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.

3.4 MECHANICALLY FASTENED ROOFING MEMBRANE INSTALLATION

A. Install roofing membrane over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing

1. Install sheet according to ASTM D 5082.

B. Mechanically or adhesively fasten roofing membrane securely at terminations, penetrations, and perimeter of roofing. C. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and

end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation. 1. Repair tears, voids, and lapped seams in roofing membrane that does not meet

requirements. D. In-Splice Attachment: Secure one edge of roofing membrane using fastening plates

or metal battens centered within membrane splice and mechanically fasten roofing membrane to roof deck. Field-splice seam.

E. Through-Membrane Attachment: Secure roofing membrane using fastening plates or metal battens and mechanically fasten roofing membrane to roof deck. Cover battens and fasteners with a continuous cover strip.

DIVISION 7 - CONTINUED

3.5 BASE FLASHING INSTALLATION

according to membrane roofing system manufacturer's written instructions.

at required rate and allow to partially dry. Do not apply bonding adhesive to seam area

of flashing. C. Flash penetrations and field-formed inside and outside corners with sheet flashing. D. Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.

E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.6 WALKWAY INSTALLATION

manufacturer's written instructions.

END OF SECTION 07540

PART 1 - GENERAL

1.2 SUBMITTALS

B. Shop Drawings

a minimum of 12" long.

PART 2 - PRODUCTS

for installing sheet metal accessories.

compatible with existing curb skirts.

otherwise in contract documents.

or double-locked, and malleted flat.

3.1 EXAMINATION OF SUBSTRATE

Manual, and contract documents

materials.

3.3 PITCH-PANS

3.4 HEAT VENT STACKS

be at least 8" high with a 3" flange.

and shall overlap coated metal 2"

contraction require otherwise.

without bulges or waves.

PART 3 - EXECUTION

b. Metal to Metal - 1/8" pop rivets or equal.

2.1 MATERIALS

A. Sheet Metal:

manufacturer

Fasteners

2.2 FABRICATION

possible in shop.

disallower

lead.

1.1SECTION INCLUDES

.DIVISION 7 - CONTINUED

3.5 PERIMETER COPING/GRAVEL GUARDS/GUTTERS

A. Install sheet flashings and preformed flashing accessories and adhere to substrates B. Apply solvent-based bonding adhesive to substrate and underside of sheet flashing

A. Flexible Walkways: Install walkway products in locations indicated. Adhere walkway products to substrate with compatible adhesive according to roofing system

SECTION 07600 - SHEET METAL SPECIFICATIONS

A. Installation of galvanized sheet metal accessories.

A. See Section 01100 - General Requirements, for submittal procedures

1. Show weights, gauges, or thicknesses of sheet metal. Show location, arrangement, dimensions, materials, fastenings, connections, anchorage, and relation to adjacent

2. Show nailers and blocking required to be furnished for securing work of this section. 3. Show terminations, intersections, and splices in isometric details. C. Samples - Submit samples of termination bars, polymer-coated accessories, and

other shapes shown on detail drawings. Samples shall be of same material composition, thickness and dimensions as required for construction. Samples shall be

1. Sheet Metal, Flashing, Counterflashing - Shall be 24 gauge (minimum) polymercoated galvanized iron accessories furnished or approved by sheet membrane

2. Sealant - Shall be Tremco Spectrum 1, Ultra Low Modulus Silicone Joint Sealant. 3. Nails - Shall be hot dipped galvanized roofing nails, size as required by construction

a. Masonry/Concrete - Minimum 1/4" x 1" aluminum drive pins. Plastic or nylon

5. Solder - Shall conform to ASTM designation B32, 50-50 percent block tin and pig

6. Curb Corner Closures - Shall be mill-finished of the same gauge and material type

A. Work shall be fabricated in a shop equipped with machinery and tools for working sheet metal. Work shall be performed by skilled mechanics. Fabricate all work

B. Work shall be formed to profiles, sizes, and dimensions as shown on drawings and on approved shop drawings. Work shall conform to approved samples. C. Work shall conform to practices recommended in SMACNA Manual, except as required specifically otherwise in contract documents. Work shall conform to

D. Work shall be fabricated in maximum lengths to minimize joints; except where required specifically otherwise, and where consideration of control of expansion and

E. Work shall be formed to true lines and sharp corners. Work shall be straight,

F. Fabricate sheet metal flanges shorter than dressed nailer widths. Hem all exposed

edges. No exposed sheared or raw edges shall be permitted. G. Flat seams shall be not less than 1/2" wide; single-locked, and sweated with solder;

H. Thickness of metal shall be as specified on detail drawings, but minimum 24 gauge. I. Corner of copings and counterflashings shall be mitered, seamed, riveted, or soldered, and sealed. Legs shall be not less than 18" long.

A. Substrate shall be suitable to receive work of this section. Work shall not commence until unsuitable conditions of substrate have been corrected.

3.2 GENERAL REQUIREMENTS FOR INSTALLATION

recommendations of system supplier's latest printed instructions except where required

A. Work shall be installed by skilled mechanics. B. Work shall conform to approved shop drawings, approved samples, SMACNA

C. Work shall allow for thermal movement, and with regard to relation to adjacent

A. Install sheet metal pitch-pans onto roof membrane, at roof openings where required. Seal with pourable sealer specified in roofing section of this specification. B. Nailers shall be installed as required by respective system supplier.

A. Fabrication of coated metal to have a minimum clearance of 2" all around hot pipe, B. Pack cavity between hot pipe and new coated metal with fiberglass batt insulation. C. Rain hood shall be 22 gauge galvanized metal sweated to the hot pipe with solder

D. Finished fabrication shall fit snugly and be secured using bolts, washers, and taps.

A. Coated metal shall be used to complete the system for watertightness B. Wall copings shall have joints lapped and riveted; the top flat surface and 1-1/2" minimum down the outer and inner face soldered. There shall be a minimum of five (5) holding fasteners located on the outer face and five (5) holding fasteners on the inner face of each 10' section of coping. An expansion joint shall be located at a maximum spacing of 30' and shall consist of a 6" wide back up plate, the coping set with 1/2" open butt joint over caulking, and a 6" cover plate set in caulking only. The back up plate and the cover plate shall be fastened at this location. C. Flashing at roof scuttle shall be galvanized iron in lieu of prefab cant and build up base flashing. The roof flange of this flashing shall be fastened using #14 hex head sheet metal screws of sufficient length to penetrate and hold in the steel roof deck and shall be spaced at a maximum 8" o.c.

D. Pitch pans shall be as detailed with joint spot welded or riveted and all joints E. All pitch pans and any other sheet metal flashings without wood nailers shall be fastened with #14 hex head sheet metal screws of sufficient length to penetrate and

hold in the steel deck, using a minimum of eight (8) fasteners for each base.

3.6 CAULKING/TOOLING

A. Seal joints between sheet metal work and adjacent work as necessary to provide resilient, watertight condition. Work of this section shall be watertight. B. Sealants shall be tooled immediately following application. Hand-tooling using a soap lubricant is required during this work to achieve a slightly concave profile yet provide continuous, monolithic application.

C. Discrepant areas, as determined by Owner's Representative, shall be raked-out and reworked.

3.7 CLEANING

A. After completion of installation of work of this section, exposed work shall be cleaned thoroughly of all scraps, stains, flux, weld splatter, oil, and other materials, which would damage work or affect performance. B. Clean sheet metal with solvents or other compounds that are compatible with, and will not damage, adjacent materials.

END OF SECTION 07600

SECTION 07610 - SHEET METAL ROOFING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data, Shop Drawings, and color Samples. B. Comply with SMACNA's "Architectural Sheet Metal Manual," unless otherwise indicated

PART 2 - PRODUCTS

2.1 ROOFING SHEET METALS

A. Metallic-Coated Steel Sheet: Galvanized structural-steel sheet, ASTM A 653/A 653M, G90 (Z275), or aluminum-zinc alloy-coated structural-steel sheet, ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40 (Class AZM150 coating designation, Grade 275); min. 24 gauge.

1. Finish: Manufacturer's standard fluoropolymer 2-coat system with topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2604. Match existing roofing.

2.2 ACCESSORIES

A. Underlayment: Asphalt-saturated organic felt ASTM D 226, Type II (No. 30), nonperforated. B. Slip Sheet: Rosin-sized building paper, 5 lb/100 sq. ft. (2.4 kg/sq. m).

C. Metal Accessories: Matching sheet metal roofing in finish and material required for a complete weathertight roofing system, including clips, flashings, ridge closure strips, trim, copings, fasciae, gutters, and louvers.

D. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.3 FABRICATION

A. Fabricate sheet metal roofing to comply with details shown and recommendations of SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of installation indicated. . Standing-Seam Roofing: Form standing-seam pans with finished seam height of 1

A. Install underlayment on roof sheathing under sheet metal roofing, unless otherwise recommended by metal roofing manufacturer.

B. Anchor roofing securely in place, with provisions for thermal and structural movement. Install with concealed fasteners, unless otherwise indicated. C. Separate dissimilar metals with a bituminous coating or polymer-modified,

bituminous sheet underlayment. D. Install work with lines and corners of exposed units true and accurate. Form exposed faces flat and free of buckles, excessive waves, and avoidable tool marks, considering temper and reflectivity of metal. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant. Fold back sheet metal to form a hem on concealed side of exposed edges, unless otherwise indicated. 1. Install cleats to hold sheet metal panels in position. Attach each cleat with two fasteners to prevent rotation.

2. Nail cleats not more than 12 inches (300 mm) o.c. Bend tabs over nails. E. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pretin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm), except where pretinned surface would show in finished Work.

1. Do not solder metallic-coated steel. 2. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

F. Seal joints as shown and as required for leakproof construction. Provide low-slope transverse seams using cleats where backup of moisture may occur.

END OF SECTION 07610



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SPECIFICATIONS



inch (25 mm). PART 3 - EXECUTION

3.1 INSTALLATION

1. Apply slip sheet over underlayment before installing metal roofing, unless otherwise recommended by metal roofing manufacturer.

DIVISION 8 - DOORS & WINDOWS

SECTION 08110 - STEEL DOORS AND FRAMES PART 1 - GENERAL **1.1 SECTION REQUIREMENTS**

A. Submittals: Product Data and door schedule. B. Comply with ANSI A 250.8.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Hot-Rolled Steel Sheets: ASTM A 1011/A 1011M

B. Cold-Rolled Steel Sheets: ASTM A 1008/A 1008M or ASTM A 620/A 620M. C. Galvanized Steel Sheets: ASTM A 653/A 653M, A40 or G40 (ZF120 or Z120) coating.

2.2 STEEL DOORS AND FRAMES

A. Products - Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Amweld Building Products

2. Ceco Door Products 3. Republic Builders Products

4. Steelcraft, a division of Ingersol-Rand

B. Steel Doors: Complying with ANSI 250.8 for level and model and ANSI A250.4 for physical-endurance level indicated, 1-3/4-inch- (44-mm-) thick, unless otherwise lindicated

1. Interior Doors: Level 2 and Physical Performance Level B (Heavy Duty), Model 2 Seamless

2. Exterior Doors: Level 3 and Physical Performance Level A (Extra Heavy Duty), 2 (Seamless), galvanized steel sheet faces.

DIVISION 8 CONTINUED

C. Frames: ANSI A250.8; conceal fastenings, unless otherwise indicated.

1. Steel Sheet Thickness for Heavy-Duty Interior Doors: 0.053 inch (1.3 mm). 2. Steel Sheet Thickness for Extra-Heavy-Duty Exterior Doors: 0.067 inch (1.7 mm) 3. Fabricate with interior frames with mitered or coped corners knocked down for field assemblv

4. Fabricate with exterior frames from galvanized steel sheet, with mitered or coped and continuously welded corners.

D. Glazing Stops: Nonremovable stops on outside of exterior doors and on secure side of interior doors; screw-applied, removable, glazing stops on inside.

E. Door Silencers: Three on strike jambs of single-door frames and two on heads of double-door frames. Delete on doors scheduled to receive weatherstripping or special seal systems

F. Plaster Guards: Provide where mortar might obstruct hardware operation. G. Supports and Anchors: Not less than 0.042-inch- (1.0-mm-) thick galvanized steel sheet

H. Prepare doors and frames to receive mortised and concealed hardware according to ANSI A250.6 and ANSI A115 Series standards.

I. Reinforce doors and frames to receive surface-applied hardware. J. Prime Finish: Manufacturer's standard, factory-applied coat of rust-inhibiting primer complying with ANSI A250.10 for acceptance criteria.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Place steel frames to comply with SDI 105.

B. Install doors to comply with ANSI A250.8. Shim as necessary to comply with SDI 122 and ANSI/DHI A115.1G. C. After installation, remove protective wrappings from doors and frames and touch up prime coat with compatible air-drying primer.

END OF SECTION 08110

SECTION 08211 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Samples for plastic-laminate-faced doors.

B. Quality Standard: NWWDA I.S.1-A.

PART 2 - PRODUCTS

2.1 FLUSH WOOD DOORS

A. Interior Solid-Core Doors with Plastic-Laminate Faces: Three-ply, structural

composite lumber cores. B. Provide structural composite lumber cores for doors with closers, exit devices and

kick plates.

1. Composite blocking where required to eliminate through-bolting hardware. 2. Laminated-edge construction.

2.2 FABRICATION AND FINISHING

A. Factory fit doors to suit frame-opening sizes indicated and to comply with referenced quality standard.

B. Factory machine doors for hardware that is not surface applied.

C. Cut and trim openings to comply with referenced standards. 1. Trim light openings with moldings indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with WDMA's "How to Store, Handle, Finish, Install, and Maintain Wood

Doors B. Align and fit doors in frames with uniform clearances and bevels. Machine doors for hardware. Seal cut surfaces after fitting and machining.

END OF SECTION 08211

DIVISION 8- CONTINUED

SECTION 08410 - ALUMINUM ENTRANCES, STOREFRONTS AND WINDOWS PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Structural Performance: Provide systems, including anchorage, capable of withstanding loads indicated, and/or systems capable of withstanding wind load pressures calculated according to the requirements of authorities jurisdiction or the American Society of Civil Engineers' ASCE 7, "Minimum Design Loads for Buildings and other Structures", 6.4.2, "Analytical Procedure" whichever are more stringent. 1. Main-Framing-Member Deflection: Limited to 1/175 of clear span or 3/4 inch (19

mm), whichever is smaller 2. Structural Testing: Systems tested according to ASTM E 330 at 150 percent of inward and outward wind-load design pressures do not evidence material failures, structural distress, deflection failures, or permanent deformation of main framing members exceeding 0.2 percent of clear span.

when tested according to ASTM E 283 at a static-air-pressure difference of 6.24 lbf/sq.ft.

C. Water Penetration: Systems do not evidence water leakage when tested according to ASTM E 331 at minimum differential pressure of 20 percent of inward acting wind load design pressure but not less than 8.0 lbf/sg.ft.

D. Average U-Factor: Not more than 0.63 Btu/sq.ft.xhxdeg.F. per AAMA 1503.1. E. Submittals: Product Data, Shop Drawings, and Samples.

PART 2 - PRODUCTS

2.1 ALUMINUM-FRAMED STOREFRONTS AND WINDOWS

A. Products:

1. Product to match existing, or approved equal. B. Aluminum: ASTM B 209 (ASTM B 209M) sheet; ASTM B 221 (ASTM B 221M) extrusion

C. Glazing: Specified in Division 8 Section "Glazing." D. Sealants and Joint Fillers: For joints at perimeter of systems as specified in Division 3. Closers: Aluminum Enamel.

7 Section "Joint Sealants.' E. Doors and Frames: 1-3/4-inch- (44.5-mm-) thick glazed doors with minimum 0.125inch- (3.2-mm-) thick, extruded tubular rail and stile members, mechanically fastened corners with reinforcing brackets that are deep penetration and fillet welded or that incorporate concealed tie-rods, snap-on extruded-aluminum glazing stops (without

visible screws) and preformed gaskets. 1. Basic Sections:

a. Frames: Match existing

b. Doors: Stiles and top rail to match existing c. Vertical and horizontal mullion sections: To match existing.

2. Exterior Doors: Provide compression weather stripping at fixed stops. At other locations, provide sliding weather stripping retained in adjustable strip mortised into door edge.

3. Hardware: As specified in Division 8 Section "Door Hardware" and as indicated on the Door & Hardware Schedules on the Drawings. F. Fasteners and Accessories: Compatible with adjacent materials, corrosion-

resistant, nonstaining, and nonbleeding. Use concealed fasteners except for application of door hardware. Insert description of any required options.

G. Fabrication: Fabricate framing in profiles indicated for flush glazing (without projecting stops). Provide subframes and reinforcing of types indicated or, if not indicated, as required for a complete system. Factory assemble components to greatest extent possible. Disassemble components only as necessary for shipment and installation

1. Door Framing: Reinforce to support imposed loads. Factory assemble door and frame units and factory install hardware to greatest extent possible. Reinforce door and frame units for hardware indicated. Cut, drill, and tap for factory-installed hardware 2. SIGMA Publications: SIGMA TM-3000, "Vertical Glazing Guidelines." before finishing components.

H. Aluminum Finish: Comply with NAAMMs "Metal Finishes Manual for Architectural and Metal Products." Clear anodic, Architectural Class I: AA-M12C22A41, complying with AAMA 611.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Isolate metal surfaces in contact with incompatible metal or corrosive substrates, including wood, by painting contact surfaces with bituminous coating or primer, or by applying sealant or tape recommended by manufacturer.

B. Install components to provide a weatherproof system. C. Install framing components true in alignment with established lines and grades to the following tolerances:

1. Variation from Plane: Limit to 1/8 inch in 12 feet (3 mm in 3.7 m); 1/4 inch (6 mm) over total length. 2. Alignment: For surfaces abutting in line, limit offset to 1/16 inch (1.5 mm). For

surfaces meeting at corners, limit offset to 1/32 inch (0.8 mm). 3. Diagonal Measurements: Limit difference between diagonal measurements to 1/8 inch (3 mm).

D. Install doors without warp or rack. Adjust doors and hardware to provide tight fit at contact points and smooth operation.

END OF SECTION 08410

SECTION 08710 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Hardware Schedule.

B. Deliver keys to Owner

C. On exit devices provide UL or FMG label indicating "Fire Exit Hardware."

2.1 GLASS

indicated

A. Sealed Tempered Insulating Glass Units: Preassembled high performance, Low E glass insulated units, 1-inch overall thickness, complying with ASTM E-774 and ASTM PART 2 - PRODUCTS E-773 and be certified by IGCC CBA and ALI CBA ratings. Insulated glass units shall match existing.

E. Closers:

closers

B. Hinges:

B. Air Infiltration: Limited to 0.06 cfm/sq.ft. (0.3 L/s per sq. m) of system surface area

1. For entrance systems, include hardware schedule and locations.

DIVISION 8-CONTINUED

PART 2 - PRODUCTS

2.1 HARDWARE

A. Manufacturers:

1. See Hardware Schedule on Drawings.

1. Stainless-steel with stainless-steel pins for exterior. 2. Nonremovable hinge pins for exterior and public interior exposure.

3. Ball-bearing hinges for doors with closers and entry doors. 4. Three hinges for 1-3/4-inch- (45-mm-) thick doors 90 inches (2300 mm) or less in height; four hinges for doors more than 90 inches (2300 mm) in height.

5. Hinges to match building standard C. Locksets and Latchsets:

1. BHMA A156.2, Series 4000, Grade 1 for bored locks and latches.

2. BHMA A156.3, Grade 1 for exit devices. 3. BHMA A156.5, Grade 1 for auxiliary locks

4. BHMA A156.12, Series 5000, Grade 1 for interconnected locks and latches.

5. BHMA A156.13, Series 1000, Grade 1 for mortise locks and latches. 6. Lever handles on locksets and latchsets, per Hardware Schedule on Drawings.

7. Provide trim on exit devices matching locksets. D. Key locks to Owner's new master-key system.

1. Cylinders to match building standard.

2. Provide cylinders for storefront doors, and other locking doors per Hardware Schedule on Drawings Provide construction keying.

4. Provide key control system, including cabinet.

1. Mount closers on interior side (room side) of door opening. Provide regular-arm, parallel-arm, or top-iamb-mounted closers as necessary.

2. Adjustable delayed opening (accessible to people with disabilities) feature on F. Provide wall stops or floor stops for doors without closers, and as indicated on

Hardware Schedule on Drawings. G. Provide hardware finishes as follows:

1. Hinges: Matching finish of lockset/latchset. 2. Locksets, Latchsets, and Exit Devices: Satin Chrome Plated.

4. Other Hardware: Matching finish of lockset/latchset.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Mount hardware in locations recommended by the Door and Hardware Institute, unless otherwise indicated.

3.2 HARDWARE SCHEDULE

A. Refer to Drawings.

END OF SECTION 08710

SECTION 08800 - GLAZING PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and 12-inch- (300-mm-) square Samples. B. Safety Glass: Category II materials complying with testing requirements in 16 CFR 1201 and ANSI Z97.1. C. Glazing Publications: Comply with published recommendations of glass product

manufacturers and organizations below, unless more stringent requirements are 1. GANA Publications: "Glazing Manual."

D. Insulating-Glass Certification Program: Permanently marked with certification label A. Perform work in accordance with GANA glazing manual for glazing installation of Insulating Glass Certification Council, Associated Laboratories, Inc or National Accreditation and Management Institute.

PART 2 - PRODUCTS

A. Float Glass: ASTM C 1036, Type I, Class 1 (clear), transparent flat, and Quality q3. B. Heat-Treated Float Glass: ASTM C 1048, Condition A (uncoated), Type I, Class 1 (clear), FT (fully tempered) with horizontal tempering.

2.2 FABRICATED GLASS PRODUCTS

DIVISION 8-CONTINUED

Insulated Float Vision Glass shall consist of a 1/4-inch thick exterior light of PPG Pacifica glass w/ Vistacool coating on separated by a 1/2-inch thick sealed airspace with an interior light of 1/4-inch thick clear float glass w/ Solarban 70XL coating

Vistacool coating or approved equal installed on the #2 surface. a.

Solarban 70XL coating or approved equal installed on the #3 surface. Insulated Tempered Vision Glass shall consist of a 1/4-inch thick exterior light of tempered PPG Pacifica glass w/ Vistacool coating separated by 1/2-inch thick sealed air space with an interior light of 1/4-inch thick tempered clear glass w/ Solarban

70XL coating. Vistacool coating or approved equal installed on the #2 surface.

Solarban 70XL coating or approved equal installed on the #3 surface.

- The center-of-glass area shall meet the following performance criteria: Visible Light Transmittance of 24%.
- Visible Light Reflectance (outdoors) of 11%.
- Total Solar Energy Transmittance of 9%. Total Solar Energy Reflectance of 9%.
- Winter U-Value not to exceed .28.

Shading Coefficient not to exceed 0.19. 4. All insulated units shall carry a 10-year warranty to include replacement of sealed units exhibiting seal failure, interpane dusting or fogging...

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are contained in GANA's "Glazing Manual B. Set glass lites in each series with uniform pattern, draw, bow, and similar

characteristics.

END OF SECTION 08800

SECTION 08830 - MIRRORS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Glass Mirrors

1.2 REFERENCES

A. ASTM C 1193 - Standard Guide for Use of Joint Sealants B. GANA (GM) - GANA Glazing Manual; Glass Association of North America C. NAMM (TIPS) - Mirrors Handle with Extreme Care: Tips For the Professional on the

Care and Handling of Mirrors; National Association of Mirror Manufacturers D. Utilize current editions of all references.

1.3 PERFORMANCE REQUIREMENTS

A. Limit mirrored glass deflection to 1/200 or flexure limit of glass with full recovery of glazing materials, whichever is less.

1.4 SUBMITTALS

See Section 01100 - General Requirements, for submittal procedures. Product Data on Mirror Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

DIVISION 8 - CONTINUED

1.5 QUALITY ASSURANCE

methods.

B. Fabricate, store, transport, receive, install, and clean mirrors in accordance with NAMM recommendations.

1.6 ENVIRONMENTAL REQUIREMENTS

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

1.7 WARRANTY

Provide five-year manufacturer warranty for reflective coating on mirrors and

replacement of same.

2.1 MATERIALS

A. Mirror Glass: Clear float type with copper and silver coating, organic overcoating, arrised edges, 6 mm thick minimum.

1. Sizes indicated on Drawings. B. Mirror Edge Sealer: Clear product equivalent to product manufactured by PPG.

2.2 GLAZING ACCESSORIES

A. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness. B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness, self-adhesive on one face.

C. Mirror Attachment Accessories: Stainless steel J-profile channels. D. Mirror Edge Sealer and Adhesive: Chemically compatible with mirror coating and wall substrate.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that openings for mirrored glazing are correctly sized and within tolerance. B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive mirrors.

3.2 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Seal mirror edges with substrate compatible primer or sealer. Prime surfaces scheduled to receive sealant. C. Perform installation in accordance with ASTM C 1193 for solvent release sealants.

Install sealant in accordance with manufacturer's instructions.

3.3 INSTALLATION - GENERAL

A. Install mirrors in accordance with NAMM recommendations. B. Set mirrors plumb and level, free of optical distortion.

C. Set mirrors with edge clearance free of surrounding construction including countertops or backsplashes.

3.4 CLEANING

A. Remove wet glazing materials from finish surfaces.

B. Remove labels after work is complete. C. Clean mirrors and adjacent surfaces.

END OF SECTION 08830



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No.	Description	Date
PROJE	ECT NO.:	17163
PROJE	ECT MGR:	LP
ASSISTED BY:		MR/NA
DATE:		04/23/2018



SPECIFICATIONS

DIVISION 9 - FINISHES

SECTION 09197- CONCRETE AND MASONARY COATINGS

PART 1 - GENERAL

1.1 ASSEMBLY DESCRIPTION An exterior coating system consisting of WRB coat, Primer (Optional), and Finish Coat.

1.2 SUBMITTALS

General: Submit Samples, Evaluation Reports and manufacturer's product data sheets in accordance with Division 1 General Requirements Submittal Section. Β. Samples: Submit samples for approval. Samples shall be of materials specified and of suitable size as required to accurately represent each color and

texture used on project. Prepare each sample using same tools and techniques for actual project application. Maintain and make available, at job site, approved samples. Manufacturer's Warranty: Submit sample copies of Manufacturer's Warranty indicating Single Source Responsibility for stucco assembly materials.

DIVISION 9 - CONTINUED

1.3 QUALITY ASSURANCE

Qualifications Manufacturer: Shall have marketed stucco assemblies in United States for at by Architect. least ten years and shall have completed projects of same general scope and

complexity Applicator: Shall be experienced and competent in installation of stucco

materials, and shall provide evidence of a minimum of five years experience in work similar to that required by this section. Products manufactured under ISO 9001:2000 Quality System

- Architectural Coatings and Finishes for Masonry Functional Criteria: General:
- Inclined surfaces shall follow the guidelines listed below:
- Minimum slope: 6 in (152 mm) of vertical rise in 12 in (305 mm) of horizontal (1) For sloped surfaces, run of slope shall be a maximum of 12 in (305 mm). (2)
- Usage not meeting above criteria shall be approved by Parex USA prior to installation Flashing: Flashing shall be continuous and watertight. Flashing shall be

designed and installed to prevent water infiltration behind the Parex Architectural Coatings and Finishes for Masonry. Refer to Division 7 Flashing section for specified flashing materials.

Expansion joints: Continuous expansion joints shall be installed per contract documents Building code conformance: The construction shall be acceptable for use under the building code in force in the jurisdiction of the project.

Performance Requirements: Shall meet the testing requirements of the Product Performance Sheet.

1.4 DELIVERY, STORAGE, AND HANDLING Α

identification. Storage: Store assembly materials in a dry location, out of direct sunlight, off the ground, and protected from moisture.

1.5 **PROJECT / SITE CONDITIONS**

Substrate Temperature: Do not apply stucco assembly materials to substrates Coatings and Finishes work until unsatisfactory conditions are corrected. whose temperature are below 40°F (4°C) or contain frost or ice. Inclement Weather: Do not apply stucco assembly materials during inclement **3.2**

weather, unless appropriate protection is employed. Sunlight Exposure: Avoid, when possible, installation of the stucco assembly materials in direct sunlight. Application of finishes in direct sunlight in hot weather may B. adverselv affect aesthetics.

Do not apply stucco base coats or finishes if ambient temperature falls below 40°F (4°C) within 24 hours of application. Protect stucco materials from uneven and excessive evaporation during dry weather and strong blasts of dry air. Prior to installation, the substrate shall be inspected for surface contamination, A.

or other conditions that may adversely affect the performance of the stucco assembly materials, and shall be free of residual moisture.

1.6 WARRANTY

Warranty: Upon request, at completion of installation, provide manufacturer's Standard Limited Warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

250, Anaheim, CA 92807 Contact: Architectural Sales (866.516.0061) or Technical Support (800.226.2424)., or equal product compatible with WRB system. Components: Obtain components from authorized distributors.

DIVISION 9-CONTINUED

2.2 MATERIALS

Base Coats Α Parex USA Weather Tech WRB: Air barrier & weather resistant barrier.

Acrylic co-polymer base. 121 Base Coat: 100% acrylic polymer base, requiring the addition of portland [2.

cement. 121 Dry Base Coat: Copolymer based, factory blend of cement and proprietary 2. Flat Strap and Backing: 0.0179 inch (0.45 mm) minimum thick.

ingredients requiring addition of water 121 Optimum Base Coat: Copolymer based, factory blend of cement and

proprietary ingredients requiring addition of water. Reinforcing Mesh 355 Standard Mesh: Weight 4.5 oz. per sq. yd. (153 g/sq m); coated for

protection against alkali. Standard reinforcement of Parex EIFS, or for use with High Impact 358.14 Mesh, or Ultra High Impact 358.20 Mesh. Primers

Parex USA Primer: 100% acrylic based coating to prepare surfaces for Parex finishes D. Finish

Parex 427 flexsond elastomeric finish: Factory blended, 100% acrylic elastomeric based finish, integrally colored. Finish type, texture and color as selected

Water: Clean, potable water

Portland Cement: ASTM C150, Type I or Type I-II.

PART 3 - EXECUTION

C.

EXAMINATION 3.1

Verify project site conditions Compliance: Comply with manufacturer's instructions for installation of

Substrate Examination: Examine prior to Parex Base Coat installation as

follows Substrate shall be free of dust, dirt, laitance, efflorescence, and other harmful

contaminants Substrate construction in accordance with substrate material manufacturer's specifications and applicable building codes

Substrate shall be cured concrete (28 days minimum) Substrate shall have no irregularities greater than 1/4" (6.4 mm), and shall be sound and free of foreign substances, including paint, bond breakers, form oils,

laitance, scaling and flaking. Unsatisfactory conditions shall be corrected before the application of the

Painted surfaces shall have paint removed to achieve a substrate with 90% or 6. more of the surface free of paint. Sanding surfaces shall be eliminated mechanically, then washed with clear

water Remove efflorescence using mechanical removal and/or a diluted acid

Delivery: Deliver assembly materials in original packaging with manufacturer's solution followed by complete rinsing. Concrete surfaces shall be level and free of voids over 1/8" (3 mm) across. Glossy surfaces shall be dulled by chemical or mechanical means. Thoroughly remove requirements that apply to framing installation and with United States Gypsum's all residues.

> Advise Contractor of discrepancies preventing installation of the Parex Architectural Coatings and Finishes. Do not proceed with the Parex Architectural

PREPARATION

Protection: Protect surrounding material surfaces and areas during installation of system Clean surfaces thoroughly prior to installation.

Prepare surfaces using the methods recommended by the Manufacturer for C. achieving the best result for the substrate under the project conditions.

3.3 MIXING

Mix proprietary products in accordance with Manufacturer's instructions.

APPLICATION

General: Installation shall conform to this specification and Parex written instructions and drawing details. Base coat

If leveling is required, apply any Parex 121 Base Coat. Parex 121 Base Coat may be applied up to 3/8" (9.5 mm) and 121 Dry up to 1/2 in. (13 mm) thick in a single pass when used as a leveler.

Apply base coat and fully embed mesh if applicble in base coat. Bond supplemental EPS shapes as indicated on the drawings. Bond shapes Manufacturer, Basis of Design: Parex USA, Inc., 4125 E. La Palma Ave., Suite to EPS or to dry reinforced base coat using any Parex 121 Base Coat & Adhesive as an adhesive. Allow 24 hours to dry. Refer to Parex Standard System Specification for materials and installation of Base Coat and Mesh over EPS shapes.

Apply primer to base coat after drying. Primer may be omitted if it is not D. required by the Manufacturer's product data sheets for the specified finish coat or otherwise specified for the project.

Finish Coat: Apply finish coat to match specified finish type, texture, and color. Do not apply finish coat to surfaces to receive sealant. Keep finish out of sealant joint gaps.

3.5 CLEAN-UP

Removal: Remove and legally dispose of Parex Architectural Coatings and Finishes for Masonry component debris material from job site. Clean EIFS surfaces and work area of foreign materials resulting from EIFS operations.

3.6 PROTECTION

Provide protection of installed materials from water infiltration into or behind them Provide protection of installed stucco from dust, dirt, precipitation, and freezing

during installation. Provide protection of installed finish from dust, dirt, precipitation, freezing and continuous high humidity until fully cured and dry.

Clean exposed surfaces using materials and methods recommended by the D. manufacturer of the material or product being cleaned. Remove and replace work that cannot be cleaned to the satisfaction of the Architect/Owner.

END OF SECTION 09197

SECTION 09260 - GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 METAL FRAMING AND SUPPORTS

- A. Steel Framing Members, General: ASTM C 754.
- 1. Steel Sheet Components: ASTM C 645, with manufacturer's standard corrosion-
- resistant zinc coating. B. Suspended Ceiling and Soffit Framing:
- 1. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch
- (1.59-mm) diameter, or double strand of 0.0475-inch- (1.21-mm-) diameter wire. 2. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.162-inch
- (4.12-mm) diameter.
- 3. Carrying Channels: Cold-rolled steel, 0.0538 inch (1.37 mm) thick, 2 inches (50.8 mm) deep

configuration.

2.2 PANEL PRODUCTS A. Provide in maximum lengths available to minimize end-to-end butt joints. B. Gypsum Wallboard: ASTM C 36, in thickness indicated, with manufacturer's standard edges. Regular type, unless otherwise indicated and sag-resistant type for ceiling surfaces.

indicated. Regular type, unless otherwise indicated. 1. Product: "Dens-Shield Tile Backer" manufactured by Georgia-Pacific Corp. 2.3 ACCESSORIES

steel sheet, rolled zinc, or plastic C. Joint-Treatment Materials: ASTM C 475.

compounds for topping.

PART 3 - EXECUTION

3.1 INSTALLATION

DIVISION 9- CONTINUED

4. Furring Channels: 3/4-inch- (19.1-mm-) deep, cold-rolled channels, 0.0538 inch (1.37 mm) thick or as indicated on Drawings. Grid Suspension System for Interior Ceilings: Interlocking, direct-hung system.

C. Partition and Soffit Framing: 1. Studs and Runners: In depth indicated and minimum 0.0312 inch (0.79 mm) thick, unless otherwise indicated

B. Rigid Hat-Shaped Furring Channels: In depth indicated and minimum 0.0312 inch (0.79 mm) thick. 4. Resilient Furring Channels: 1/2 inch (12.7 mm) deep, with single- or double-leg

5. Cold-Rolled Furring Channels: 0.0538 inch (1.37 mm) thick, 3/4 inch (19.1 mm)

(22.2-mm) wall-attachment flange, and 0.0179 inch (0.45 mm) thick.

C. Glass-Mat, Water-Resistant Gypsum Backing Board: ASTM C 1178, of thickness

A. Trim Accessories: ASTM C 1047, formed from galvanized or aluminum-coated

1. Provide cornerbead at outside corners, unless otherwise indicated. 2. Provide LC-bead (J-bead) at exposed panel edges.

Provide control joints where indicated 3. Aluminum Accessories: Extruded-aluminum accessories indicated with

manufacturer's standard corrosion-resistant primer

I. Joint Tape: Paper, unless otherwise recommended by panel manufacturer. 2. Joint Compounds: Setting-type taping compound and drying-type, ready-mixed,

D. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining latex sealant complying with ASTM C 834.

E. Miscellaneous Materials: Auxiliary materials for gypsum board construction that comply with referenced standards.

A. Install steel framing to comply with ASTM C 754 and with ASTM C 840

"Gypsum Construction Handbook B. Isolate steel framing from building structure, except at floor, to prevent transfer of loading imposed by structural movement. 1. Where studs are installed directly against exterior walls, install asphalt-felt or foam-

pasket isolation strip between studs and wall. . Install and finish gypsum panels to comply with ASTM C 840 and GA-216. . Isolate gypsum board assemblies from abutting structural and masonry work.

Provide edge trim and acoustical sealant. 2. Single-Layer Fastening Methods: Fasten gypsum panels to supports with screws. PART 3 - EXECUTION 3. Multilayer Fastening Methods: Fasten base layers and face layer separately to supports with screws.

D. Finishing Gypsum Board Assemblies

first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges. 2. At concealed areas, unless a higher level of finish is required for fire-resistancerated assemblies, provide Level 1 finish: Embed tape at joints.

3. At substrates for tile, provide Level 2 finish: Embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges.

END OF SECTION 09260

SECTION 09310 - CERAMIC TILE

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and Samples. Delete below if tiles are preselected unless they are known to comply. B. Floor Tiles: Static coefficient of friction not less than 0.6 per ASTM C 1028.

PART 2 - PRODUCTS

2.1 CERAMIC TILE

Products

. Products

indicated

a. Products:

a. Products:

1. Products

 Ceramic tile that complies with standard grade requirements in ANSI A137.1, "Specifications for Ceramic Tile." B. Ceramic Mosaic Floor Tile: Unglazed, cushion-edged tile.

a. As indicated on Finish Schedule on Drawings.

2. Surface: Slip resistant, with abrasive admixture.

3. Module Size: As indicated. 4. Color: As selected.

5. Tiles mounted, by manufacturer's standard method, into sheets.

C. Glazed Wall Tile: Cushion-edged, flat tile.

a. As indicated on Finish Schedule on Drawings.

Module Size: As indicated. 3. Color: As selected.

4. Finish: Bright, clear. 5. Tiles mounted, by manufacturer's standard method, into sheets and grouted with

silicone rubber grout complying with ANSI A118.6.

D. Tile trim units that match characteristics of adjoining flat tile. E. Where indicated, protect exposed surfaces of tile against adherence of mortar and grout by factory precoating them with a hot-applied continuous film of petroleum paraffin wax. Do not coat unexposed tile surfaces.

2.2 INSTALLATION MATERIALS

A. Setting and Grouting Materials: Comply with material standards in ANSI's "Specifications for the Installation of Ceramic Tile" that apply to materials and methods 1. Thin-Set Mortar Type: Latex-portland cement, ANSI A118.4.

1) As recommended by ceramic tile manufacturer.

2. Grout Type: Water-cleanable epoxy, unless otherwise indicated.

 As recommended by ceramic tile manufacturer. 3. Grout Color: As selected.

B. Setting-Bed Accessories: ANSI A108.1A.

2. Waterproofing Membranes for Thin-Set Installations: ANSI A118.10, urethane waterproofing and adhesive and as follows:

a. As recommended by ceramic tile manufacturer.

DIVISION 9- CONTINUED PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with tile installation standards in ANSI's "Specifications for the Installation o Ceramic Tile" that apply to materials and methods indicated. B. Comply with TCA's "Handbook for Ceramic Tile Installation.

DIVISION 9- CONTINUED

1.4 WARRANTY

PART 2 - PRODUCTS

Refer to Drawings.

moisture control system

manufacturer

ioints

D. Wearing Surface: Embossed.

2.2 INSTALLATION ACCESSORIES

manufacturer for applications indicated.

1. Color: Match floor covering.

floor covering manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

shading at seams.

recommendations and instructions.

dry and free of curing compounds, sealers and hardeners.

Support on cove strip and butt against cap strip.

1. Install metal corners and end stops.

END OF SECTION 09652

1.1 SECTION REQUIREMENTS

C. Material: Rubber ASTM F 1861.

E. Style: Cove (with top-set toe).

G. Height: 4 inches (101.6 mm).

I. Outside Corners: Premolded.

J. Inside Corners: Premolded.

2.2 RESILIENT ACCESSORY

A. Submittals: Product Data and Samples.

A. Products: Refer to Finish Schedule on Drawings.

H. Lengths: Coils in manufacturer's standard lengths.

B. Color and Pattern: Refer to Finish Schedule.

D. Group (Manufacturing Method): I (solid).

F. Minimum Thickness: 1/8 inch (3.175mm).

Refer to Finish Schedule on Drawings.

B. Color: Refer to Finish Schedule.

2.3 INSTALLATION ACCESSORIES

manufacturer for applications indicated.

PART 1 - GENERAL

PART 2 - PRODUCTS

2.1 WALL BASE

A. Products:

D. Material: Rubber.

and substrate conditions.

PART 3 - EXECUTION

END OF SECTION 09653

SECTION 09680 - CARPET

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and Samples.

PART 1 - GENERAL

PART 2 - PRODUCTS

2.1 CARPET

3.1 INSTALLATION

least 6 inches (152 mm) away from parallel joints in substrates.

SECTION 09653 - RESILIENT WALL BASE AND ACCESSORIES

B. Prepare concrete substrates according to ASTM F 710. Verify that substrates are

C. Maintain uniformity of sheet vinyl floor covering direction, and match edges for color

D. Minimize number of seams, place seams in inconspicuous and low-traffic areas, at

E. Integral Flash Cove Base: Cove floor coverings 6 inches up vertical surfaces.

F. Install all materials in accordance with manufacturers written instructions.

floor covering and substrate conditions indicated.

E. Sheet Width: 6 feet (1.8m)

A. Products

A. Warranty: Limited 5 year commercial warranty

B. Color and Pattern: As indicated on the Drawings.

Select applicable methods in subparagraphs under first two paragraphs below; refer to TCA's Handbook for guidance.

C. Floor Tile Installation Methods: 1. Over Concrete Subfloors: TCA F115 (thin-set mortar bonded to concrete subfloor,

with epoxy grout). D. Wall Tile Installation Method

6. Z-Furring: In depth required by insulation, 1-1/4-inch (31.8-mm) face flange, 7/8-inch 1. Over Glass Mat Water-Resistant Gypsum Backer Board: TCA W244 latex-portland cement mortar bonded to gypsum backer board. E. Lay tile in grid pattern, unless otherwise indicated. Align joints where adjoining tiles

> on floor, base, walls, and trim are the same size. F. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or F. Seaming Method: Heat welded. covers overlap tile.

END OF SECTION 09310

SECTION 09512 - ACOUSTICAL TILE CEILINGS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and material Samples. Class A tiles have a flame-spread index of 25 or less; Class B, 75 or less. Most

products are Class A. B. Surface-Burning Characteristics of Panels: ASTM E 1264, Class A materials, tested per ASTM E 84.

PART 2 - PRODUCTS

2.1 ACOUSTICAL TILE

A. Products: 1. Refer to Drawings. B. Edge Detail: Per Drawings. C. Thickness: Per Drawings.

D. Size: Per Drawings.

2.2 SUSPENSION SYSTEM

A. Ceiling Suspension System: Direct Hung, ASTM C 635.

1. Products a. Refer to Drawing

B. Attachment Devices: Size for 5 times the design load indicated in ASTM C 635. Table 1, Direct Hung, unless otherwise indicated C. Wire Hangers, Braces, and Ties: Zinc-coated carbon-steel wire; ASTM A 641/ (A 641M), Class 1 zinc coating, soft temper. 1. Size: Provide yield strength at least 3 times the hanger design load (ASTM C 635 Table 1, Direct Hung), but not less than 0.135-inch- (3.5-mm-) diameter wire.

3.1 INSTALLATION

1. Unless otherwise indicated, provide Level 4 finish: Embed tape and apply separate A. Ceiling Suspension System Installation: Comply with ASTM C 636 and CISCA's "Ceiling Systems Handbook."

END OF SECTION 09512

SECTION 09651 - RESILIENT FLOOR TILE

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and Samples. B. Fire Test Response: Resilient tile has critical radiant flux classification of Class I not less than 0.45 W/sq. cm.

PART 2 - PRODUCTS

2.1 VINYL COMPOSITION FLOOR TILE

A. Products 1. Refer to Finish Schedule on Drawings.

B. Color and Pattern: Refer to Finish Schedule C. ASTM F 1066, Class 2 (through-pattern tile).

2.2 INSTALLATION ACCESSORIES

D. Wearing Surface: Smooth.

E. Thickness: 1/8 inch (3.2mm). F. Size: 12 by 12 inches (304.8 by 304.8 mm).

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement- or blended hydraulic cement-based formulation provided or approved by flooring manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated. C. Edge Strips: Rubber in maximum available lengths to minimize joints, color as selected

PART 3 - EXECUTION

3.1 INSTALLATION

A. Prepare concrete substrates according to ASTM F 710. Verify that substrates are dry and free of curing compounds, sealers, and hardeners. B. Lay out tiles so tile widths at opposite edges of room are equal and are at least onehalf of a tile.

C. Match tiles for color and pattern by selecting tiles from cartons in same sequence as manufactured and packaged. Lay tiles in basket-weave pattern with grain direction alternating in adjacent tiles, in patterns indicated. D. Clean and wax flooring per manufacturer's recommended installation instructions.

Turn over floor to owner with manufacture's suggesteted number of wax coats. END OF SECTION 09651

SECTION 09652 - HOMOGENEOUS SHEET VINYL FLOOR COVERINGS

B. Homogeneous resilient sheet vinyl flooring.

1.1 SECTION INCLUDES

A. Moisture Control System

1.2 SUBMITTALS

PART 1 - GENERAL

A. See Section 01100 - General Requirements, for submittal procedures.

B. Product Data and Samples: Provide data on specified products.

DIVISION 9- CONTINUED 1.3 REQUIREMENTS OF REGULATORY AGENCIES A. Products: 1. Refer to Finish Schedule on Drawings. A. Fire Test Response: Resilient sheet vinyl flooring shall have a critical radiant flux classification of Class I, not less that 0.45 W/sq.cm per ASTM E 648. PART 3 - EXECUTION Ο **3.1 INSTALLATION** A. Comply with CRI 104, Section 8, "Direct Glue-Down." B. Maintain uniformity of carpet direction and lay of pile. At doorways, center seams under door in closed position. Bind or seal cut edges as recommended by carpet manufacturer 2.1 HOMOGENEOUS SHEET VINYL FLOOR COVERING C. Install pattern parallel to walls and borders, or as approved by the Architect. END OF SECTION 09680 SECTION 09910 - PAINTING . Unbacked Sheet Vinyl Floor Covering: ASTM F 1913, 0.080 inch (2.0 mm) thick PART 1 - GENERAL **1.1 SECTION REQUIREMENTS** A. Summary: Paint exposed surfaces, unless otherwise indicated. Paint the back side of access panels A. Epoxy based moisture management system: (Provide if moisture test results are 2. Color-code mechanical piping in accessible ceiling spaces. above homogeneous sheet vinyl flooring manufacurer's minimum requirements - refer 3. Do not paint prefinished items, items with an integral finish, operating parts, and to Alternate 1) ARDEX, solvent-free, alkali resistant, low viscosity, two coat epoxy resin labels, unless otherwise indicated. Submittals: Product Data and Samples. B. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement or C. Mockups: Full-coat finish Sample of each type of coating, color, and substrate, blended hydraulic cement-based formulation provided or approved by flooring applied where directed. D. Obtain primers for each coating system from same manufacturer as finish coats. C. Adhesives: Water-resistant type recommended by manufacturer to suit sheet vinyl E. Extra Materials: Deliver to Owner 1 gal. (3.8 L) of each color and type of finish coat paint used on Project, in containers, properly labeled and sealed. D. Heat-Welding Bead: Solid-strand product of floor covering manufacturer. E. Integral-Flash-Cove-Base Accessories: 1 inch (25.4 mm) radius cove strip and PART 2 - PRODUCTS square metal, vinyl, or rubber cap, both provided or approved by floor covering 2.1 PAINT 1. Provide metal inside and outside corners and end stops provided or approved by A. Products: F. Metal Edge Strips: Extruded aluminum in maximum available lengths to minimize 1. Sherwin Williams, ICI or approved equal. 2. Colors: As scheduled. B. Material Compatibility: Provide materials that are compatible with one another and with substrates C. Material Quality: Manufacturer's best-quality paint material of coating types specified that are formulated and recommended by manufacturer for application indicated A. Install ARDEX moisture control system at all concrete surfaces scheduled to receive homogeneous sheet vinyl flooring. Install in strict accordance with manufacturer's PART 3 - EXECUTION

3.1 PREPARATION

A. Remove hardware lighting fixtures and similar items that are not to be painted. Mask items that cannot be removed. Reinstall items in each area after painting is complete B. Clean and prepare all surfaces in an area before beginning painting in that area. Schedule painting so cleaning operations will not damage newly painted surfaces.

3.2 APPLICATION

A. Apply coatings by brush, roller, spray or other applicators according to coating 1. Use brushes only for exterior painting and where the use of other applicators is not practical.

Use rollers for finish coat on interior walls and ceilings. Pigmented (Opaque) Finishes: Completely cover surfaces to provide a smooth, opaque surface of uniform appearance. Provide a finish free of cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. C. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth

surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections. **3.3 EXTERIOR PAINT APPLICATION SCHEDULE**

A Smooth Wood

A. Shlouli wood.
1. Clear Wood Finish: Two coats oil-based clear wood finish.
B. Ferrous Metal:
1. Semigloss, Acrylic Enamel: Two coats over rust-inhibitive primer.
C. Zinc-Coated Metal:
1. Semigloss, Acrylic Enamel: Two coats over galvanized metal primer
D. Aluminum:
1. Semigloss, Acrylic Enamel: Two coats over primer.
3.4 INTERIOR PAINT APPLICATION SCHEDULE
A. Gypsum Board:
1. Egg Shell Latex Enamel: Two coats over latex primer.
B. Ferrous Metal:
1. Semigloss, Alkyd Enamel: Two coats over ferrous metal primer.
C. Zinc-Coated Metal:

END OF SECTION 09910

C. Description: nosing for carpet, nosing for resilient floor covering, reducer strip for 1. Semigloss, Alkyd Enamel: Two coats over galvanized metal primer. resilient floor covering and joiner for tile and carpet.

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement- or blended hydraulic cement-based formulation provided or approved by flooring

B. Adhesives: Water-resistant type recommended by manufacturer to suit products

A. Prepare concrete substrates according to ASTM F 710. Verify that substrates are dry and free of curing compounds, sealers, and hardeners. B. Adhesively install resilient wall base and accessories.

C. Install wall base in maximum lengths possible. Apply to walls, columns, pilasters, casework, and other permanent fixtures in rooms or areas where base is required. D. Install reducer strips at edges of floor coverings that would otherwise be exposed.

B. Comply with CRI 104, Section 6.1, "Site Conditions, Temperature and Humidity."



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SPECIFICATIONS



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A.NPPA 10 - Sandard for Protocols Fine School Schoo	B. Section 09250 - Gypsum Drywall: Roughed-in wall openings.1.3 REFERENCES	Drive, Manhattan, KS 665 (800)275-5081. Email: sa B. Substitutions: M approval.
Content name Carterian	 A. NFPA 10 - Standard for Portable Fire Extinguishers; National Fire Protection Association; Current Edition B. UL (FPED) - Fire Protection Equipment Directory; Underwriters Laboratories Inc.; Current Edition 	2.2 WALL-MOUNTED CE
Control to HFA 10 Formice acquires in and induced by Underwriters Laboratories in a first Formice acquires and induced. Solution 100 - General Requirements, for submittal procedures. Solution 100 - General Requirements, for submittal procedures and core and first. Manufacture 10 Jul. Manufactures: Maintervance 10 Jul. Maintervance	1.4 PERFORMANCE REQUIREMENTS	USPS STD 4C and the fo 1. Model: Series 40
1.5 SUBMITTALS a. Proposition of the sector of 100 - Central Requirements, for submittal procedures, E. Bayo Drawing, Forder S. C. E. Product Duis: Provide collinguisher operational features and color and finish. Manufacturer's installation instructions: indicate special orders and wall processing a	 A. Conform to NFPA 10. B. Provide extinguishers classified and labeled by Underwriters Laboratories Inc. for the purpose specified and indicated. 	 a. Module: 4C06D- 2. Mounting: Pedes 3. Locks: USPS-11 4. Box Identification
A. See Scalan Of 100 - General Repurements, for submittal procedures. B. Shop Derwing: Indicate abbit physical dimensions are torogin-messurements. C. Product Data. PART 2 - PRODUCTS A. Coenic SX Class ABC dry chemical fire extinguisher operational features and color and frait. PART 2 - PRODUCTS A. Coenic SX Class ABC dry chemical fire extinguisher operational features and color and frait. PART 2 - PRODUCTS A. Coenic SX Class ABC dry chemical fire extinguisher operational features and color and frait. PART 2 - PRODUCTS A. Coenic SX Class ABC dry chemical fire extinguisher operational features and color and frait. PART 2 - PRODUCTS A. Coenic SX Class ABC dry chemical fire extinguisher operational features and color and frait. PART 3 - EXECUTION A. Coenic SX Class ABC dry chemical fire extinguisher cather d FS28/75 with Fire FX B. Furich 1-Fund SUB-HER CABINETS A. Coenic SX Class ABC dry chemical fire extinguisher cather d FS28/75 with Fire FX B. Furich 1-Fund SUB-HER CABINETS A. Coenic SX Class ABC dry chemical fire extinguisher cather d FS28/75 with Fire FX B. Furich 1-Fund SUB-HER CABINETS A. Coenic SX Class ABC dry chemical fire extinguisher cather d FS28/75 with Fire FX B. Furich 1-Fund SUB-HER CABINETS A. Coenic SX Class ABC dry chemical fire extinguisher cather d FS28/75 with Fire FX B. Furich 1-Fund SUB-HER CABINETS A. Coenic SX Class ABC dry chemical fire extinguisher cather d FS28/75 with Fire FX B. Furich 1-Fund Fire add abeled cabinets in theor rated patients B. Furich 1-Fund Fire add abeled cabinets in cabinet fire fire add abeled abel	1.5 SUBMITTALS	 a. Numerical ID Tag b. Engraved identifi c. Engraved identifi
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PART 2 - PRODUCTS A. Verify thick open in male conditions call what Exemptions and the Exemption and the Exemption and the Exemption and the Exemptions and the Exemptions and the Exemption and the Exempt	 C. Product Data: Provide extinguisher operational features and color and finish. D. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements. E. Maintenance Data: Include test, refill or recharge schedules and recertification requirements. 	PART 3 - EXECUTION 3.1 EXAMINATION
2.1 FIRE EXTINGUISHERS Beginning install A. Cosmic SX Class ARC dry chemical fire extinguisher as manufactured by JL. Beginning install 2.2 FIRE EXTINGUISHER CABINETS A. Claar VA sami-receased free axinguisher as binet fitS26F25 with Fire-FX extinguisher for each cabinet. In: corrected partitions. Distall material books of the product of th	PART 2 - PRODUCTS	A. Verify that openir mailboxes.
A. Coarnic CX Class ACE dry chemical fire extinguisher as manufactured by J.L. 2. Beginning initial 2.2 FIRE EXTINGUISHER CABINETS A. Initial mail boxe primed installation instrum and boxe primed instruments. 3.3 ADJUSTING 3.1 EXAMINATION 3.5 PROTECTION OF IN A. Install in accordance with manufacturer's instructions. B. B. Install in accordance with manufacturer's instructions. B. D. Place actinguishers and accessories in cabinet. B.DC DF SECTION 1052 A. Part 1 GENERAL B. D. Place actinguishers and accessories in cabinet. B. D. Place actinguisher and accessories in cabinet. B. D. Place actinguisher and accessories in cabinet. B. D. Place actinguisher and accessories in cabinet. B.	2.1 FIRE EXTINGUISHERS	 Installer's Examine 1. Examine condition be performed; submit writ
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2.3 ACCESSORIES A. Adjust doors and A dijust d	option as manufactured by J.L. Industries, Inc. or equal. Provide ABC dry chemical fire extinguisher for each cabinet.B. Furnish 1-hour fire-rated labeled cabinets in 1-hour rated partitions.	B. Align, plumb, and requirements.
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 A. Comply with USPS-STD-4C for pedestal-mounted centralized mailboxes. B. Comply with Texas Accessibility Standards (TAS) and Americans with Disabilities Act Accessibility Guidelines (ADAAG). 1.6 QUALITY ASSURANCE A. Manufacturer Qualifications: Manufacturer shall have a Quality System in place to ensure and be able to substantiate that manufactured units conform to requirements and match the approved design and must be ISO 9001:2008 certified. A. Inspect the materials upon delivery to assure that specified products have been received. B. Store materials protected from exposure to harmful weather conditions. C. Handle materials to prevent damage or marring of finish. D. All columns shall have a U. All columns shall have a to the product of the produ	D. Other informational submittals: Final USPS local postmaster approval for installed postal specialties to be served by USPS.	 B. Components shall be the project and shall not be C. The thickness of the a
 1.6 QUALITY ASSURANCE A. Manufacturer Qualifications: Manufacturer shall have a Quality System in place to ensure and be able to substantiate that manufactured units conform to requirements and match the approved design and must be ISO 9001:2008 certified. 1.7 DELIVERY, STORAGE, AND HANDLING A. Inspect the materials upon delivery to assure that specified products have been received. B. Store materials protected from exposure to harmful weather conditions. C. Handle materials to prevent damage or marring of finish. 2.3 FINISHES A. The finish and color or annodized. PART 3 EXECUTION 3.1 FABRICATION A. All welding shall welder shall be available. B. Canopy shall be connections. 	 A. Comply with USPS-STD-4C for pedestal-mounted centralized mailboxes. B. Comply with Texas Accessibility Standards (TAS) and Americans with Disabilities Act Accessibility Guidelines (ADAAG). 	 E. Beams are open at top F. Flashing shall be .040 G. All bolts and fasteners components and sized by
 A. Manufacturer Qualifications: Manufacturer shall have a Quality System in place to ensure and be able to substantiate that manufactured units conform to requirements and match the approved design and must be ISO 9001:2008 certified. 1.7 DELIVERY, STORAGE, AND HANDLING A. Inspect the materials upon delivery to assure that specified products have been received. B. Store materials protected from exposure to harmful weather conditions. C. Handle materials to prevent damage or marring of finish. A. The finish and color or annodized. PART 3 EXECUTION 3.1 FABRICATION A. All welding shall welder shall be available B. Canopy shall be connections. 	1.6 QUALITY ASSURANCE	2.3 FINISHES
 1.7 DELIVERY, STORAGE, AND HANDLING A. Inspect the materials upon delivery to assure that specified products have been received. B. Store materials protected from exposure to harmful weather conditions. C. Handle materials to prevent damage or marring of finish. PART 3 EXECUTION 3.1 FABRICATION A. All welding shall welder shall be available B. Canopy shall be connections.	A. Manufacturer Qualifications: Manufacturer shall have a Quality System in place to ensure and be able to substantiate that manufactured units conform to requirements and match the approved design and must be ISO 9001:2008 certified.	A. The finish and color of annodized.
 A. Inspect the materials upon delivery to assure that specified products have been received. B. Store materials protected from exposure to harmful weather conditions. C. Handle materials to prevent damage or marring of finish. 3.1 FABRICATION A. All welding shall welder shall be available B. Canopy shall be connections. 	1.7 DELIVERY, STORAGE, AND HANDLING	PART 3 EXECUTION
B.Store materials protected from exposure to harmful weather conditions.A.All welding shall welder shall be availableC.Handle materials to prevent damage or marring of finish.B.Canopy shall be connections.	A. Inspect the materials upon delivery to assure that specified products have	3.1 FABRICATION
	 B. Store materials protected from exposure to harmful weather conditions. C. Handle materials to prevent damage or marring of finish. 	A. All welding shall welder shall be available B. Canopy shall be connections.

ONTINUED

cturer's standard warranty to repair or replace components of postal ail in materials or workmanship within five years from date of

n, KS 66503; ASD. Tel: (785)323-4400, Tel: (800)275-1747. Fax: Email: sales@auth-florence.com. Web: www.florencemailboxes.com. itions: Must be submitted four days prior to bids being due for

NTED CENTRALIZED MAIL RECEPTACLES (MAILBOXES)

Approved Front-Loading Mail Boxes: Horizontal style complying with and the following:

- Series 4C by Florence Manufacturing. 4C06D-5X-P.
- g: Pedestal mounted. USPS-1172 910A, 3 keys each lock.
- ntification: Top to bottom, left to right.
- cal ID Tags
- ed identifier d identifier with black fill.
- cal order.
- etical order
- I and Finish: Aluminum with powder coat finish. Selected from manufacturer's standard powder coat colors.

nat openings in wall are correctly located, aligned, and sized for

's Examination: e conditions under which construction activities of this section are to ubmit written notification if such conditions are unacceptable. ng installation indicates acceptance of conditions.

nail boxes in accordance with shop drawings and manufacturer's on instructions. lumb, and level; anchor in accordance with manufacturer's

loors and locks to operate correctly.

urfaces with mild dish detergent. Do not use harsh abrasive cleaners. with graphite type lubricants only.

ON OF INSTALLED PRODUCTS

finishes from damage by construction activities.

ON 10550

PREFABRICATED ALUMINUM CANOPIES

- nstallation of extruded aluminum walkway covers and canopies.
- VORK

Association- Aluminum Design Manual 2010 elding Society- AWS D1.2/D1.2M: 2008

rs brochures, manuals and literature. gs of the complete canopy layout, includes sections and details specific

earing the seal of a registered structural engineer. canopy finishes.

Y ASSURANCE

l be designed to comply with local building codes. ufacturer shall have a minimum of 10 years' experience in designing

e specified system. on of the canopy shall be performed by the manufacturer to assure sponsibility.

ACTURER

		0.
AVAdek V 9201 Win Houston,	Valkway Covers and Canopies kler Dr. TX 77017	P. in ele
Phone: (7 Website:	13)944-0988 Fax: (713) 944-5815 www.avadek.com	Q. for el
2.2 MATERIALS		-
A. All components shall be 6063; 6	061 or 6005 alloy extruded aluminum.	R. Com
the project and shall not be less that C. The thickness of the aluminum of	n the dimensions shown on the plan. leck panels shall be at least 080" thick	S.
D. All columns shall have radius co	orners.	1.3
E. Beams are open at top to drain of	canopy system internally into columns.	
F. Flashing shall be .040" thick.		Α.

fasteners shall be stainless steel or finished to match adjacent sized by canopy engineer.

d color of all extruded aluminum canopy components shall be clear

ding shall be in compliance with AWS 1.2. The certification of each available to verify compliance. shall be designed to drain through beams to columns with water tight

3.2 INSTALLATION recommendations В. washed down. concrete work wate G.

SECTION 10801 - TOILET ACCESSORIES PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

Submittals: Product Data

PART 2 - PRODUCTS

3.1 INSTALLATION

Electric traction passenger elevators. RELATED SECTIONS 1.2 openings and personnel barriers; temporary power and lighting. Section 033000 – Cast-in-Place Concrete: Elevator pits. Section 036000 – Grouts (Grouting): Grouting door frames and sills. anchoring devices in masonry for guide-rail brackets. Support steel, divider beams, and hoist beams. entrances in drywall hoistways. G. assembly Η. Section 092900 - Gypsum Board: Hoistway walls. Section 099000 – Paints and Coatings (Painting and Coating): Field painting of elevator entrances over primer. smoke, and products of combustion sensing devices, fire alarm signal lines to contacts in machine space. (Heating, Ventilating, and Air-Conditioning (HVAC)): Heating, cooling, and ventilation of control and machinery space. Light outlets, convenience outlets, light switches, and conduits. Section 262400 – Switchboards, Panelboards, and Control Centers (Switchboards and Panelboards): Disconnect switches. Section 265000 – Lighting: Light fixtures. 0

۱	elevator	pits
	~	

- Escalators.

DIVISION 10- CONTINUED

Install the canopy in strict accordance with the manufacturer's

Erect canopy after concrete and masonry with in vicinity is completed and

Install columns and beans straight and true. Install rain caps over draining sections of the deck.

The general contractor shall finish the concrete around the columns to assure able Manufacturer: Florence Manufacturing Company, 5935 Corporate a uniform quality of workmanship and appearance with the adjacent surrounding Fill downspout columns with grout to the discharge level to prevent standing

> Install flashing as required. Care shall be taken to prevent damage or scratching during installation.

Thoroughly clean canopy after installation.

END OF SECTION 10731

A. Refer to Toilet Accessory Schedule on Drawings, Sheet A4.3.

PART 3 - EXECUTION

Install accessories using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

Install grab bars to withstand a downward load of at least 250 lbf (1112 N), when tested according to method is ASTM F 446.

Adjust accessories for unencumbered, smooth operation and verify that mechanisms function properly. Replace damaged or defective items. Remove temporary labels and protective coatings.

END OF SECTION 10801

DIVISION 14 - CONVEYING EQUIPMENT

SECTION 14240 - ELECTRIC TRACTION PASSENGER ELEVATORS PART 1 GENERAL

1.1 SECTION INCLUDES

Section 015000 – Temporary Facilities and Controls: Protection of floor

Section 042000 – Masonry Units (Unit Masonry): Setting sleeves, inserts, and

Section 051200 – Metal Stairs Structural Steel (Structural Steel Framing):

Section 055000 – Gypsum Metal Fabrications: Pit ladders, supports for

Section 061053 – Miscellaneous Rough Carpentry: Temporary platform

Section 071600 – Cementitious Waterproofing: Waterproofing of elevator pit.

K. Section 283100 – Detection and Alarm (Fire Detection and Alarm): Heat,

Section 23000 – Heating, Ventilating, and Air Conditioning Equipment

Section 260500 – Wiring Methods (Common Work Results for Electrical):

Section 221429 – Sump Pumps: For sump pumps, sumps, and sump covers

Section 271500 – Communications Horizontal Cabling: For Telephone service levators and for Internet connection to elevator controllers for remote monitoring.

Section 273000 – Telephone and Intercommunication Equipment (Voice imunications): Telephone outlets and elevator telephones.

Section 31000 - Earthwork: Excavation of elevator pit.

REFERENCES

ANSI/ASME A17.1/CAN/CSA B44 – Safety Code for Elevators and

ADAAG – Americans with Disabilities Act Accessibility Guidelines.

ANSI/NFPA 70 – National Electrical Code.

ANSI/NFPA 80 – Fire Doors and Windows.

ANSI/UL 10B - Fire Tests of Door Assemblies.

CAN/CSA C22.1 – Canadian Electrical Code.

Model and Local Building CodesH. ISO 9001: 2000 - Quality Management Systems - Requirements.

DIVISION 14 - CONTINUED

DESIGN REQUIREMENTS 1.4

Arrange elevator components in control closet or machinery space so equipment can be removed for repairs or replaced with minimal disturbance to other equipment and components.

Where permitted by code, provide all elevator equipment including controls, B drives, transformers, and rescue features within the elevator hoistway.

1.5 SUBMITTALS

Comply with Section 013300 (01 33 00) – Submittal Procedures.

Product Data: Submit manufacturer/installer's product data, including, Descriptive brochures or detail drawings of car and hall fixtures, cab ceilings, and product features.

and control heat release, and electrical requirements Shop Drawings: Submit manufacturer/installer's shop drawings, including plans, elevations, sections, and details, indicating location of equipment, loads, dimensions, tolerances, materials, components, fabrication, fasteners, hardware, finish,

Power Information: Horsepower, starting current, running current, machine

options, accessories, and other information to render totally functional elevators. D Samples: Submit manufacturer/installer's samples of standard colors and finishes of finish materials.

Operation and Maintenance Manual: Submit manufacturer/installer's operation 12. and maintenance manual; including operation, maintenance, adjustment, and cleaning 13. instructions; trouble shooting guide; renewal parts catalogs; and electrical wiring diagrams

F Warranty: Submit manufacturer/installer's standard warranty.

installing elevator equipment, with a minimum of 10 years successful experience.

1.6 QUALITY ASSURANCE

Manufacturer/Installer's Qualifications: Specialize in manufacturing and

Regulatory Requirements:

Elevator design, clearances, construction, workmanship, materials, and installation, unless specified otherwise, shall be in accordance with ANSI/ASME A17.1, 2. handicap accessibility, Americans with Disabilities Act, and other codes having legal iurisdiction.

ANSI/ASME A17.1 shall govern, except where codes having legal jurisdiction include more rigid requirements or conflict with ANSI/ASME A17.1. Elevator shall follow design and manufacturing procedures certified in accordance with ISO 9001-2000 to meet product and service requirements for quality assurance for new products

Where product is in variance to the published ANSI/ASME A17.1 model code, provide a 3rd party AECO certification demonstrating equivalent function, safety, and performance.

Pre-installation Meeting:

Convene pre-installation meeting before start of installation of elevators. Require attendance of parties directly affecting work of this section, including Contractor, Architect, and elevator manufacturer/installer Review examination, installation, field quality control, adjusting, cleaning,

protection, and coordination with other work.

1.7 DELIVERY, STORAGE, AND HANDLING

Delivery: Deliver materials to site in manufacturer/installer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer/installer.

Storage: Store materials in clean, dry area indoors in accordance with manufacturer/installer's instructions.

Handling: Protect materials during handling and installation to prevent damage.

PROJECT CONDITIONS 1.8

Temporary Electrical Power:

Owner will arrange for temporary 220 VAC, single-phase, 60 Hz., GFCIprotected electricity to be available for installation of elevator components. Comply with Section 015100 – Temporary Utilities.

Installation of the Elevator:

General Contractor will provide permanent three-phase power prior to

installation start. General Contractor will provide clear, rollable access to a 20' x 10' secure and control. dry storage area prior to delivery General Contractor will provide a clean, dry, and complete hoistway along with panel shall be protected from accidental contact temporary installation platform and all required OSHA-compliant barricades prior to delivery

Temporary Use of Elevator: Owner will negotiate with manufacturer/installer for temporary use of elevator, if required

Temporary use of elevator shall be in accordance with terms and conditions of 3. Provide multi-bus control architecture to manufacturer/installer's temporary acceptance form.

SCHEDULING 1.9

Coordinate elevator work with work of other trades, for proper time and sequence to avoid construction delays.

1.10 WARRANTY

Manufacturer/installer shall guarantee materials and workmanship of equipment installed under these specifications and make good, defects not due to ordinary wear or to improper use, which may develop within 1 year after completion of installation or acceptance thereof by beneficial use, whichever is earlier.

MAINTENANCE SERVICE

Elevator maintenance service shall be performed by elevator manufacturer/installer.

Elevators shall receive regular maintenance on each unit for period of 12 months after completion of work specified herein or acceptance thereof by beneficial use, whichever is earlier.

C. Trained employees shall make periodic examinations and perform work including necessary adjusting, greasing, oiling, and replacing parts to keep elevators in code. operation, except parts that require replacement because of accidents, vandalism, misuse, or negligence by parties other than manufacturer/installer.

Manufacturer/installer shall perform all Work, except emergency minor D. adjustment call-back service, during regular working hours. Manufacturer/installer shall 3. provide emergency minor adjustment call-back service, during regular working hours.

Should Owner request that examinations, cleaning, lubrication, adjustments, F repairs, replacements, or emergency minor adjustment call-back service, unless specified herein, be performed on other than manufacturer/installer's regular working hours of regular working days, manufacturer/installer shall absorb straight-time labor charges and Owner will compensate manufacturer/installer for overtime premium, travel time, and expense at normal billing rates.

Elevator Control System:

Include built-in remote diagnostic module to relay constant status of elevators and control system to a 24-hour, 7-days-a-week central-monitoring facility. Remote Monitoring Device: Transmit information on current status of elevators, including malfunctions, system errors, and shutdown.

DIVISION 14 - CONTINUED PART 2 PRODUCTS 2.1 MANUFACTURER/INSTALLER Schindler Elevator Corporation, Website Α. Elevator shall be installed by elevator m ELEVATOR SYSTEM AND COMPON 2.2 Electric Traction Passenger Elevators: XL Gearless Traction Elevator. Elevator Equipment Summary: Application: Machine Room Less (MRL Counterweight Location: Side Machine Location: Top of the hoistway quide rails Control Space Location: Top landing er floor below the top landing Service: Hospital/service Aia Quantity: 1 Unit Capacity: 5000 lbs Speed: 200 fpm Travel: 16' 0" Landings: 2 Front Openings: 2 Rear Openings: 0 Rear Door Hand: N/A Operation: Microprocessor Single Car A Clear Inside Dimensions: 5' 8-7/8" Wide Cab Height: 8' 0" 17 Guide Rails: Equivalent to 12 lb. per for Entrance Type and Width: Two Speed doors Entrance Height: 7'-0" 19 20. Power Supply: 208 Volts 3 Phase 60 Hz Performance: Car Speed: -10% to +5% of contract sp direction of travel. Car Capacity: Safely lower, stop and ho Ride Quality: Vertical Vibration (maximum): 25 mg Horizontal Vibration (maximum): 15 mg Vertical Jerk (maximum): 2 ft/sec^3 Acceleration (maximum): 1.6 ft/sec^2 In Car Noise: 53-60 dB(A) Stopping Accuracy: ±5mm Starts per hour (maximum): 180 Elevator Operation Simplex Collective Operation: Using a operation shall be automatic by means of the cal been answered, the car shall park at the last lan Group Automatic Operation with Dema reprogrammable group automatic system that as dispatching algorithm designed to minimize pass **Operating Features - Standard** Door Light Curtain Protection Static AC Drive Phase Monitor Relay Cab Overload with Indicator Load-weighing Central Alarm Remote Monitoring Firefighter's Operation Automatic Evacuation When the main line power is lost for lon battery power supply provides power automatica is at a floor when the power fails, it remains at th down. If the car is between floors, it is raised or opens it doors, and shuts down. 10. Independent Service Operating Features - Optional: 2.3 EQUIPMENT: CONTROL COMPONEI Controller: Provide microprocessor bas functions of safe elevator operation, as well as p All high voltage (110v or above) contact are open The controller shall be distributed through overhead, cab and inspection and test panel. T overhead adjacent to the hoist machine and an i in the door jamb at the top floor or one floor belo mechanical rooms or closets are required. B. Drive: Provide a Variable Voltage Varia system. Provide stable start without high peak ca consumption level. Inspection and Test Panel: Integrated of test panel in door frame at top level served or at 2.4 EQUIPMENT: HOISTWAY COMPONE Machine: Gearless asynchronous AC motor with emergency brakes. Design machine to enable direct power Design machine to be compact, lightwe usage and save space. 4. Mount to structural support channels or hoistway overhead. Governor: Tension type over-speed governor with Mount to structural support channels as

Governor rope: Steel wire rope with 6 mm diameter.

high tensile grade steel cords.

manufacturer's installer.

С.

vanes

DIVISIO	DN 14 - CONTINUED	DIVISI	ON 14 - CONTINUED		00000000000000000000000000000000000000	GTP GTP
PART 2	2 PRODUCTS	2.5	EQUIPMENT: HOISTWAY ENTRANCES		\mathbf{C}	<u>ה</u>
2.1	MANUFACTURER/INSTALLER	A.	Hoistway Doors and Frames:			<u>0</u>
A.	Schindler Elevator Corporation. Website www.us.schindler.com.	1. 2.	UL rated with required fire rating. Doors: Rigid flush panel construction with reinforcement ribs.	•		С О
B	Elevator shall be installed by elevator manufacturer	3. bolted	Frames: Securely fasten at corners to form unit frame. Frames shall be		C	lte
2.		B	Finish	2		
Z.Z	Electric Tractice Decourses Electrics: Decis of decign is the Schindler 2200	D. 1. 2	Exposed Areas of Corridor Frames: Painted Primer - All Floors	i	\square	•
A. XL Gea	rless Traction Elevator.	2. 3.	Sills: Aluminum - All Floors			0 C
В.	Elevator Equipment Summary:	C.	Entrance Markings and Jamb Plates: Provide standard entrance jamb tactile	(ļ
1. 2.	Counterweight Location: Side	markin				nr
3. guide ra	Machine Location: I op of the hoistway mounted on car and counterweight ails	2.6	EQUIPMENT: CAR COMPONENTS			<u>ש</u>
4. floor be	Control Space Location: Top landing entrance frame or entrance frame at one low the top landing	A. the pla	Car Frame and Safety: Provide car frame with adequate bracing to support tform and car enclosure. The safety shall be integral to the car frame and shall			Q
5. 6.	Service: Hospital/service Aia Quantity: 1 Unit	be flex	ible guide clamp type.		<i>JJ</i>	•
7. 8.	Capacity: 5000 lbs Speed: 200 fpm	B. alumin	Platform: Provide platform of steel construction with plywood subfloor and um threshold.		\mathbb{T}	Le
9. 10.	Travel: 16' 0" Landings: 2	C.	Car Guides: Provide sliding guide shoes mounted to top and bottom of both	7	$\overline{}$	ţu
11. 12.	Front Openings: 2 Rear Openings: 0	car and contac	d counterweight frame. Arrange each guide shoe assembly to maintain constant t on the rail surfaces. Provide retainers in areas with Seismic design			Ū.
13. 14.	Rear Door Hand: N/A Operation: Microprocessor Single Car Automatic Operation	require	ements.			te
15. 16.	Clear Inside Dimensions: 5' 8-7/8" Wide X 9' 1/4" Deep Cab Height: 8' 0"	D. consur	Provide central guiding system to reduce mechanical friction and energy nption.			μ
17. 18.	Guide Rails: Equivalent to 12 lb. per foot Entrance Type and Width: Two Speed Side Opening 4' 0" Wide X 7' 0" High	E.	Steel Cab:			Ő
doors	Entrance Height: 7'-0"	1. require	Fire rating: Provide Class B fire rating for cab, or Class A fire rating where			al
20.	Power Supply: 208 Volts 3 Phase 60 Hz	2.	Design cab to comply with LEED Indoor Environmental Quality requirements			
C.	Performance:	3.	Car wall finish: Painted Primer selected from manufacturer's standard			
directio	n of travel.	4.	Base and frieze: Aluminum.			
2.	Car Capacity: Safely lower, stop and hold up to 125% of rated load per code.	5. 6.	Car front finish: Brushed stainless steel. Car door finish: Brushed stainless steel.			
D. 1.	Ride Quality: Vertical Vibration (maximum): 25 mg	7. Lightin	Ceiling: Canopy ceiling, finished in #4 Stainless Steel With Down Lit Led g. Provide lighting consisting of four compact fluorescent energy saving lights			
2. 3.	Horizontal Vibration (maximum): 15 mg Vertical Jerk (maximum): 2 ft/sec^3	locateo Lexan	t in two semi-oval lateral cutouts located on the center-sides of the cab ceiling, lens cover.			
4. 5.	Acceleration (maximum): 1.6 ft/sec^2 In Car Noise: 53-60 dB(A)	8. 9.	Handrail: 1 3/8" Round And Curved Painted Aluminum. Locate on Rear Wall. Flooring: By others. Not to exceed 3/8" finished depth.			
6. 7.	Stopping Accuracy: ±5mm Starts per hour (maximum): 180	10. 11.	Ventilation: Provide one-speed fan in canopy. Emergency Car Lighting: Provide an emergency power unit employing a 12			
E.	Elevator Operation:	volt se provide	aled rechargeable battery and static circuits to illuminate the elevator car and e current to the alarm bell in the event of building power failure.			
1. operatio	Simplex Collective Operation: Using a microprocessor based controller, on shall be automatic by means of the car and hall buttons. When all calls have	12. when t	Emergency Siren: Provide siren mounted on top of the car that is activated he Alarm button in the car operating panel is engaged.	d))	
been ar	nswered, the car shall park at the last landing served. Group Automatic Operation with Demand-Based Dispatching: Provide	13. when t	Emergency Exit Switch: Provide an electrical contact to open the safety circuit	Ŭ)	
reprogr	ammable group automatic system that assigns cars to hall calls based on a bing algorithm designed to minimize passenger waiting time	switch	shall signal the control and the car will be unable to move.	ij	1 a	
F	Operating Features - Standard:	code.	Emergency Exit Guard: Provide emergency exit guard on top of car when	Ę	.	O č
1. 2	Door Light Curtain Protection	require	ed for hoistway wall to platform clearance exceeds 12" or for multiple cars in	\cup		
2. 3.	Phase Monitor Relay	97			ž	Ш,
4. 5.	Load-weighing	2.1				Δŕ
o. 7.	Remote Monitoring	A. with fre	equency controlled drive for fast and reliable operation to open and close the car	.0		
8. 9.	Automatic Evacuation	and no		δ		т -
a. battery	When the main line power is lost for longer than 5 seconds the emergency power supply provides power automatically to the elevator controller. If the car	B. openeo	In case of interruption or failure of electric power, the doors can be readily d by hand from within the car, in accordance with applicable code. Provide	Û		
down.	loor when the power fails, it remains at that floor, opens its doors, and shuts If the car is between floors, it is raised or lowered to the first available landing,	emerge code.	ency devices and keys for opening doors from the landing as required by local	5		$\sum_{i=1}^{n} C_{i}$
opens i 10.	t doors, and shuts down. Independent Service	C.	Doors shall open automatically when the car has arrived at or is leveling at the	~		
G.	Operating Features - Optional:	respec immed	tive landings. Doors shall close after a predetermined time interval or iately upon pressing of a car button. Provide door open button in the car	O		
2.3	EQUIPMENT: CONTROL COMPONENTS AND CONTROL SPACE	operati the tim	ing panel. Momentary pressing of this button shall reopen the doors and reset e interval.	7	[,] m	
A. functior	Controller: Provide microprocessor based control system to perform all of the ns of safe elevator operation, as well as perform car and group operational	D.	Provide door hangers and tracks for each car and hoistway door. Contour	Ŭ)	0
control. 1.	All high voltage (110v or above) contact points inside the inspection and test	tracks provisi	to match the hanger sheaves. Design hangers for power operation with ons for vertical and lateral adjustment. Hanger sheaves shall have polyurethane	L L	£	C
panel s are ope	hall be protected from accidental contact in a situation where the access panels en.	tires ar	nd pre-lubricated sealed for life bearings.		, 1	
2. overhea	The controller shall be distributed throughout the elevator system located in the ad, cab and inspection and test panel. The inverter will be mounted in the	E. and re	Electronic Door Safety Device: Equip car doors with concealed transmitter ceiver infrared beam devices to detect presence of object in process of passing		1	
overhea	ad adjacent to the hoist machine and an inspection and test panel will be located oor jamb at the top floor or one floor below the top floor. No elevator equipment	through 1	h hoistway entrance and car doorway (light curtain device).			
mechar	nical rooms or closets are required. Provide multipus control architecture to reduce cabling, material and waste	openin	g. Detector Device: Prevent doors from closing, or if they have already started			
B.	Drive: Provide a Variable Voltage Variable Frequency AC Closed Loop drive	closing	, cause doors to reopen and remain open while object is within detection zone.			
system	. Provide stable start without high peak current, quickly reaching a low energy	level to	a height of 6 feet.			
C	Inspection and Test Papel: Integrated control equipment, main inspection and	2.8	EQUIPMENT: SIGNAL DEVICES AND FIXTURES	No.	Descriptior	n D
test par	nel in door frame at top level served or at one floor below the top level served.	A.	Car Operating Panel: Provide a car operating panel with all push buttons, key			
2.4	EQUIPMENT: HOISTWAY COMPONENTS	1.	Full height car operating panel shall be surface-mounted on front return.			
A.	Machine:	∠. 3.	Push Buttons: Mechanical, illuminating using long-lasting LEDs for each floor			
1. emerge	ncy brakes.	served 4.	Emergency Buttons: Provide in accordance with code. Emergency alarm			
2. 3.	Design machine to enable direct power transfer, thereby avoiding loss of power. Design machine to be compact, lightweight and durable to optimize material	button,	door open and door close buttons.			
usage a 4.	and save space. Mount to structural support channels on top of guide rail system as applicable in	В. 1.	⊢eatures of the Car Operating Panel Shall Include: Audible chime to signal that the car is either stopping at or passing a floor			
hoistwa	ay overhead.	served 2.	by the elevator. Raised markings and Braille provided to the left hand side of each push button.			
В. 1.	Governor: Tension type over-speed governor with remote manual reset.	3. compl∖	Car Lantern: Provide LED illuminated car lantern with direction arrows to with local code when hall lanterns are not provided.			
2.	Mount to structural support channels as applicable in hoistway overhead.	4. 5.	Door open and close push buttons. Firefighter's hat and Phase 2 Key-switch			
C. code	Buffers, Car and Counterweight: Compression spring type buffers to meet	6. 7.	Inspection key-switch. Key-switch for optional Independent Service Operation	PROJE	CT NO.:	
D.	Hoistway Operating Devices:	8. 9.	Illuminated alarm button with raised marking. Elevator Data Plate marked with elevator capacity and car number	PROJE	CT MGR:	
1. 2	Emergency Stop switch in the pit. Terminal stopping switches	10. betwee	Help Button: Activation of help button will initiate two-way communication en car and a location inside the building switching over to alternate location if call	Δορίοτ		Ν
 3.	Emergency stop switch on the machine.	is unar	iswered, where personnel are available to take the appropriate action. Visual		וט טו.	ľ
E.	Positioning System: System consisting of proximity sensors and door zone	C	Hall Fightness. Provide hall fightness with personal puck buttons and key	DATE:		04/2
varies. F	Guide Rails and Attachmentor Drouide Tee costion start with her short	o. switch	es for elevator operation.			
fastene	rs. Side counterweight arrangements shall have a dual purpose bracket that	interme	ediate floors, single button at each terminal floor.		SPECIFIC	ATIONS
fastenir	es pour courrierweight guide rails, and one of the car guide rails to building ng. Suspension System: Non circular Electomoria costed currentier and is with	2. 3.	Illumination: Illuminating using long-lasting low power LEDs.			
G .	Suspension System. Non circular Elastomeric coated suspension media with					

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915 SOUTH L AN ANTONIO,

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MR/NA

04/23/2018

Hall Lanterns and Position Indicators. D. LED illuminated direction arrows with audible and visible call 1. ordance with the negotiated temporary use agreement between Owner and acknowledgement. Hoistway access switches: Provide key-switch at top and/or bottom floor in

entrance jamb as required by local code.



A. ALL DEBRIS AND MATERIALS TO BE REMOVED ON A B. PROTECT EXISITNG LANDSCAPING AND ITEMS TO REMAIN AS REQUIRED DURING CONSTRUCTION.

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REFER TO GENERAL NOTES, SHEET A0.8, AND BALANCE OF DRAWINGS FOR ADDITIONAL INFORMATION.

- CIVIL DRAWINGS FOR CONCRETE

DUMPSTER PAD INFORMATION.

— 1/2" EXPANSION FELT W/ BACKER

SET 6" GATE POSTS IN 2'x3' DEEP

ROD AND SEALANT

FOOTING, TYPICAL.

- 8" REINFORCED C.M.U. WALL W/ CAST STONE CAP - SEE DETAILS.

- 6" STEEL BOLLARDS, TYP - SEE DETAILS.

DUMPSTER ENCLOSURE - WEST 5 ELEVATION 1/4" = 1'-0"

6" DIAM TUBE STEEL FRAME SET INTO CONCRETE FOOTING.

6"x6"x1/4" TUBE STEEL POST SET INTO CONCRETE FOOTING. INSTALL 1/2" EXPANSION FELT AT STEEL POST PENETRATION THROUGH SLAB.

8" REINFORCED C.M.U. WALL W/ CAST STONE CAP - SEE DETAILS.

2"x4" TUBE STEEL FRAME, TYPICAL - METAL PANELS TO BE TACK WELDED TO BACK SIDE OF STEEL DOOR FRAME.

CANE BOLT AND RECEPTOR HOLES IN CONCRETE SLAB/APRON FOR EACH GATE LEAF IN BOTH OPEN AND CLOSED POSITIONS. ALLOW FOR 100 DEGREE FOR DOORS. SLAB AND APRON TO SLOPE TOWARD ADJACENT ASPHALT DRIVE FOR POSITIVE DRAINAGE - SEE CIVIL DRAWINGS FOR SPOT ELEVATIONS.

CUSTOM CAST STONE LOW WALL CAP PROFILE (WITH TOP SLOPED FOR DRAINAGE) INSTALLED IN MORTAR BED OVER CORRUGATED THRU-WALL CAP FLASHING AND ANCHORED TO MASONRY WALL BELOW WITH DOWEL PINS @ 24" O.C. SEAL ALL DOWEL PIN PENITRATIONS THROUGH THRU-WALL FLASHING.

∽ ★ 8" CONT. BOND BEAM - (2) #5 CONT.

> PAINTED C.M.U. AT INSIDE FACE OF SCREEN WALL, TYPICAL.

6" STEEL BOLLARDS SET IN 12" DIA x18" HIGH CYLINDRICAL FOOTING (TOP OF FOOTING JUST BELOW CONCRETE APRON) FILL BOLLARDS W/ CONCRETE AND FORM TOP TO SHED WATER. TOP OF FINISHED BOLLARDS TO BE 4'-0" ABOVE TOP OF SLAB. PAINT BOLLARDS AND CONCRETE CAP COLOR AS SELECTED BY ARCHITECT.

SECTION THROUGH DUMPSTER

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INO.	Description	Date
1	Revision 1	04/23/2018
PROJE	ECT NO.:	17163
PROJE	ECT MGR:	LP
ASSIS	TED BY:	MR/NA
DATE:		04/23/2018

SITE PLAN & DETAILS

CONSTRUCTION PLAN GENERAL NOTES:

A. WALL CONSTRUCTION:

- a. ALL WALLS TO BE WALL TYPE "A" UNLESS OTHERWISE NOTED. REFER TO 2 / A5.0FOR TYPES.
- b. ALL DIMENSIONS TO FACE OF GYP. UNLESS OTHERWISE NOTED ON PLANS. CONTRACTOR TO PROVIDE FINISHED GWB AND INSULATION AT ALL
- Β. PARTITIONS AS REQUIRED. CONTRACTOR TO PROVIDE SEMI RECESSED FIRE EXTINGUISHERS AS C.
- REQUIRED BY LOCAL CODES. COORDINATE LOCATIONS WITH OWNER AND FIRE MARSHALL. INSTALL MOISTURE RESISTANT BACKING BOARD AS SPECIFIED AT ALL D.
- WET WALL LOCATIONS SUCH AS TOILETS, JANITOR'S CLOSETS, DRINKING FOUNTAINS, ETC. E. CONCRETE SLAB TO BE MOISTURE TEST PRIOR TO INSTALLATION OF
- NEW FLOOR FINISH. RE: FINISH SCHEDULE. INSTALL TOPICALLY APPLIED COATING SYSTEM TO SEAL THE SLAB SURFACE TO COMPLY WITH SPECIFIED FINISH MATERIALS MAXIMUM MOISTURE LEVELS. CONTRACTOR SHALL BID THE MOST STRINGENT / EXPENSIVE CASE ON A CONFLICT IN SPECS & DRAWINGS OR CONTACT THE ARCHITECT FOR CLARIFICATION.

CONSTRUCTION PLAN KEYNOTES

- EDGE OF CANOPY. REFER TO WALL SECTIONS FOR MORE INFORMATION.
- PROVIDE CITY OF SAN ANTONIO APPROVED FIRE DEPARTMENT KNOX BOX AT FRONT ENTRY AND FIRE RISER ROOM.
- LOCATIONS OF DOWNSPOUT AND/OR OVERFLOW, REFER TO EXTERIOR ELEVATIONS AND BUILDING SECTIONS FOR ADDITIONAL INFORMATION.
- FIRE RISER EQUIPMENT. REFER TO MEP FOR ADDITIONAL INFORMATION.
- FIRE DEPARTMENT CONNECTION. REFER TO PLUMBING AND CIVIL FOR ADDITIONAL INFORMATION.
- STRUCTURAL COLUMN, TYP. REFER TO STRUCTURAL

CONSTRUCTION PLAN LEGEND

NEW WALLS

1-HOUR FIRE RATED ASSEMBLY

		LEV	EL 1 RO	OM FINIS	SH SCHEI	DULE		
NO.	ROOM NAME	FLOOR	BASE	NORTH	SOUTH	EAST	WEST	NOTES
00	SHELL							
01	STAIR #2	SC-1		P-1	P-1	P-1	P-1	
02	STAIR #1	SC-1		P-1	P-1	P-1	P-1	
03	ELEV.	SC-1						
04	FIRE RISER	SC-1	B-1	P-2	P-2	P-2	P-2	
05	ELEC	SC-1	B-1	P-1	P-1	P-1	P-1	
06	MDF	SC-1	B-1	P-1	P-1	P-1	P-1	
07	JAN	SC-1	B-1	P-2	P-2	P-2	P-2	

ROOM FINISH NOTES

TRANSITION OF DIFFERING FLOORING MATERIALS BETWEEN ROOMS TO OCCUR AT THE CENTER OF THE DOOR FRAME. REFER TO TYPICAL DOOR THRESHOLD DETAILS FOR REQUIRED THRESHOLD AND TRANSITION DETAILS.

MATERIAL LEGEND

CODE	ITEM	DESCRIPTION
SC-1	SEALED CONCRETE	CLEAR CONCRETE SEALER
B-1	RUBBER BASE	JOHNSONITE 4" COVE BASE, COLOR TBD
P-1	FIELD PAINT	SHERWIN WILLIAMS, EGGSHELL FINISH, COLOR: TBD
P-2	EPOXY PAINT	CATALYZED WATER BASED EPOXY PAINT, COLOR: MATCH P-1 FIELD PAINT
LAM-1	PLASTIC LAMINATE (DOORS)	WILSONART, PREMIUM LAMINATE, COLOR: TBD.

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FIRST FLOOR PLAN

CONSTRUCTION PLAN GENERAL NOTES:

A. WALL CONSTRUCTION:

B.

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- a. ALL WALLS TO BE WALL TYPE "A" UNLESS OTHERWISE NOTED. REFER TO 2 / A5.0FOR TYPES.
- b. ALL DIMENSIONS TO FACE OF GYP. UNLESS OTHERWISE NOTED ON PLANS.
- CONTRACTOR TO PROVIDE FINISHED GWB AND INSULATION AT ALL PARTITIONS AS REQUIRED.
- CONTRACTOR TO PROVIDE SEMI RECESSED FIRE EXTINGUISHERS AS C. REQUIRED BY LOCAL CODES. COORDINATE LOCATIONS WITH OWNER AND FIRE MARSHALL.
- D. INSTALL MOISTURE RESISTANT BACKING BOARD AS SPECIFIED AT ALL WET WALL LOCATIONS SUCH AS TOILETS, JANITOR'S CLOSETS, DRINKING FOUNTAINS, ETC.
- E. CONCRETE SLAB TO BE MOISTURE TEST PRIOR TO INSTALLATION OF NEW FLOOR FINISH. RE: FINISH SCHEDULE. INSTALL TOPICALLY APPLIED COATING SYSTEM TO SEAL THE SLAB SURFACE TO COMPLY WITH SPECIFIED FINISH MATERIALS MAXIMUM MOISTURE LEVELS. F. CONTRACTOR SHALL BID THE MOST STRINGENT / EXPENSIVE CASE ON A
- CONFLICT IN SPECS & DRAWINGS OR CONTACT THE ARCHITECT FOR CLARIFICATION.

CONSTRUCTION PLAN KEYNOTES

- EDGE OF CANOPY. REFER TO WALL SECTIONS FOR MORE INFORMATION.
- PROVIDE CITY OF SAN ANTONIO APPROVED FIRE DEPARTMENT KNOX BOX AT FRONT ENTRY AND FIRE RISER ROOM. LOCATIONS OF DOWNSPOUT AND/OR OVERFLOW, REFER TO EXTERIOR ELEVATIONS AND BUILDING SECTIONS FOR
- ADDITIONAL INFORMATION. FIRE RISER EQUIPMENT. REFER TO MEP FOR ADDITIONAL INFORMATION.
- FIRE DEPARTMENT CONNECTION. REFER TO PLUMBING AND CIVIL FOR ADDITIONAL INFORMATION.
- STRUCTURAL COLUMN, TYP. REFER TO STRUCTURAL

CONSTRUCTION PLAN LEGEND

NEW WALLS

1-HOUR FIRE RATED ASSEMBLY

LEVEL 2 ROOM FINISH SCHEDULE

NO.	ROOM NAME	FLOOR	BASE	NORTH	SOUTH	EAST	WEST	NOTES
00	SHELL							
01	STAIR #2	SC-1	B-1	P-1	P-1	P-1	P-1	
02	STAIR #1	SC-1	B-1	P-1	P-1	P-1	P-1	
03	ELEV.							
04	ELEC	SC-1	B-1	P-1	P-1	P-1	P-1	
05	ELEV.							
	ELEC		ROON	I FINISH	NOTES			

TRANSITION OF DIFFERING FLOORING MATERIALS BETWEEN ROOMS TO OCCUR AT THE CENTER OF THE DOOR FRAME REFER TO TYPICAL DOOR THRESHOLD DETAILS FOR REQUIRED THRESHOLD AND TRANSITION DETAILS.

MATERIAL LEGEND

CODE	ITEM	DESCRIPTION
SC-1	SEALED CONCRETE	CLEAR CONCRETE SEALER
B-1	RUBBER BASE	JOHNSONITE 4" COVE BASE, COLOR TBD
P-1	FIELD PAINT	SHERWIN WILLIAMS, EGGSHELL FINISH, COLOR: TBD
P-2	EPOXY PAINT	CATALYZED WATER BASED EPOXY PAINT, COLOR: MATCH P-1 FIELD PAINT
PLAM-1	PLASTIC LAMINATE (DOORS)	WILSONART, PREMIUM LAMINATE, COLOR: TBD.

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No.	Description	Date
1	Revision 1	04/23/2018
PROJE	ECT NO.:	17163
PROJE	ECT MGR:	LP
ASSIS	TED BY:	MR/NA
DATE:		04/23/2018

SECOND FLOOR PLAN

BETV

ELEVATION GENERAL NOTES:

- A. REFER TO FLOOR PLAN FOR OVERALL DIMENSIONS AND WINDOW
- TYPES.
 B. THE GENERAL CONTRACTOR SHALL CONFIRM AND COORDINATE ALL CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS.
- C. ROOF SLOPE, CRICKET SLOPE, TAPERED INSULATION SLOPE EFFECTIVELY 1/4" PER FT. MIN. UNO

ELEVATION KEYNOTES

- E1 STOLASTIC COAST TYPICAL.
- E2 METAL PANEL CLADDING. REFER TO TYPICAL WALL SECTION AS INDICATED.
- E3 ENTRY CANOPY. REFER TO WALL SECTIONS AND STRUCTURAL FOR ADDITIONAL INFORMATION. E4 PREFABRICATION/PREFINISHED CANOPY. AVADECK OR EQUAL.
- E4 PREFABRICATION/PREFINISHED CANOPY. AVADECK OR EQUAL SEE WALL SECTIONS AND DETAILS FOR ADDITIONAL INFORMATION.
- E5 FUTURE LOCATION FOR BUILDING SIGNAGE. RE:MEP.
 E6 PAINTED HOLLOW METAL DOOR & FRAME. RE:DOOR & FRAME TYPES FOR ADDITIONAL INFORMATION.
- E7 FIRE DEPARTMENT CONNECTION. RE:MEP FOR ADDITIONAL INFORMATION.
- E8 1" WIDE X 3/4" DEEP CAST REVEALS, TYP.
 E9 CITY OF SAN ANTONIO APPROVED KNOX BOX RAPID ENTRY SYSTEM LOCATION. CONFIRM LOCATION WITH AHJ.
- E10 EXTERIOR WALL SCONE. RE:MEP FOR ADDITIONAL INFORMATION.
- E11 CONSTRUCTION JOINTS. SEE DETAILS FOR ADDITIONAL
- INFORMATION.
- E12 PAINTED METAL COPING CAP.
- E13 OVERFLOW DRAIN OUTLET. RE:MEP.
- E14 DOWNSPOUT AND/OR OVERFLOW DRAIN.
- E15 EXTERIOR LED WALL PACK. RE:MEP FOR ADDITIONAL INFORMATION.
- E16 PREFABRICATION/PREFINISHED SUN SHADE. AVADECK OR EQUAL. SEE WALL SECTIONS AND DETAILS FOR ADDITIONAL INFORMATION. RE:MEP FOR ADDITIONAL INFORMATION.

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	EXTERIOR MATERIA	L LEGEND
CODE	ITEM	DESCRIPTION
MTL	METAL PANEL CLADDING	TBD
STF-1	STO. FINISH SYSTEM BUILDING FACADE	TBD
STF-2	STO. FINISH SYSTEM - TRIM & ACCENTS	TBD
EPT-1	PAINT - HOLLOW METAL DOORS & FRAMES	MATCH BUILDING STUCCO SYSTEM
EPT-2	PAINT - STEEL CANOPY	TBD

ELASTOMERIC SEALANT COLORS

WINDOW SYSTEM

STRUCTURES, RAILING

CURTAIN WALL & STOREFRONT

BETWEEN ADJACENT CLEAR ALUMINUM SURFACES

- BETWEEN ALUMINUM AND ROCK
- BETWEEN TILT AND ROCK

EXTERIOR FINISH MATERIAL NOTES:

CONTRACTOR TO PROVIDE MOCK-UP OF EXTERIOR FINISHES & PAINT COLORS FOR REVIEW AND APPROVAL BY OWNER & ARCHITECT. REFER TO SPECIFICATIONS FOR MOCKUP REQUIREMENTS.

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No.	Description	Date
1	Revision 1	04/23/2018
PROJE	ECT NO.:	17163
PROJE	ECT MGR:	LP
ASSIS	TED BY:	MR/NA
DATE:		04/23/2018

EXTERIOR ELEVATIONS

ALUMINUM ROCK TBD

CLEAR ANODIZED ALUMINUM

1 WEST EXTERIOR ELEVATION 1/8" = 1'-0"

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EXTERIOR FINISH MATERIAL NOTES:

ELEVATION GENERAL NOTES:

- REFER TO FLOOR PLAN FOR OVERALL DIMENSIONS AND WINDOW Α. TYPES. B. THE GENERAL CONTRACTOR SHALL CONFIRM AND COORDINATE ALL
- CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS.
- ROOF SLOPE, CRICKET SLOPE, TAPERED INSULATION SLOPE C. EFFECTIVELY 1/4" PER FT. MIN. UNO

ELEVATION KEYNOTES

- E1 STOLASTIC COAST TYPICAL.
- E2 METAL PANEL CLADDING. REFER TO TYPICAL WALL SECTION AS , INDICATED. E3 ENTRY CANOPY. REFER TO WALL SECTIONS AND STRUCTURAL FOR ADDITIONAL INFORMATION.
- E4 PREFABRICATION/PREFINISHED CANOPY. AVADECK OR EQUAL. SEE WALL SECTIONS AND DETAILS FOR ADDITIONAL INFORMATION.
- E5 FUTURE LOCATION FOR BUILDING SIGNAGE. RE:MEP.
- E6 PAINTED HOLLOW METAL DOOR & FRAME. RE:DOOR & FRAME TYPES FOR ADDITIONAL INFORMATION.
- E7 FIRE DEPARTMENT CONNECTION. RE:MEP FOR ADDITIONAL INFORMATION.
- E8 1" WIDE X 3/4" DEEP CAST REVEALS, TYP.
- E9 CITY OF SAN ANTONIO APPROVED KNOX BOX RAPID ENTRY SYSTEM LOCATION. CONFIRM LOCATION WITH AHJ.
- E10 EXTERIOR WALL SCONE. RE:MEP FOR ADDITIONAL INFORMATION. E11 CONSTRUCTION JOINTS. SEE DETAILS FOR ADDITIONAL
- INFORMATION.
- E12 PAINTED METAL COPING CAP.
- E13 OVERFLOW DRAIN OUTLET. RE:MEP.
- E14 DOWNSPOUT AND/OR OVERFLOW DRAIN.
- E15 EXTERIOR LED WALL PACK. RE:MEP FOR ADDITIONAL INFORMATION.
- E16 PREFABRICATION/PREFINISHED SUN SHADE. AVADECK OR EQUAL. SEE WALL SECTIONS AND DETAILS FOR ADDITIONAL INFORMATION. RE:MEP FOR ADDITIONAL INFORMATION.

EXTERIOR MATERIAL LEGEND

CODE	ITEM	DESCRIPTION			
MTL	METAL PANEL CLADDING	TBD			
STF-1	STO. FINISH SYSTEM - BUILDING FACADE	ТВО	٦		
STF-2	STO. FINISH SYSTEM - TRIM & ACCENTS	TBD			
EPT-1	PAINT - HOLLOW METAL DOORS & FRAMES	MATCH BUILDING STUCCO SYSTEM			
EPT-2	PAINT - STEEL CANOPY STRUCTURES, RAILING	TBD			
	CURTAIN WALL & STOREFRONT WINDOW SYSTEM	CLEAR ANODIZED ALUMINUM			
ELASTOMERIC SEALANT COLORS					
BETWEEN ADJACENT CLEAR ALUMINUM SURFACES ALUMINUM					
BETWE	BETWEEN ALUMINUM AND ROCK ROCK				

TBD

BETWEEN TILT AND ROCK

CONTRACTOR TO PROVIDE MOCK-UP OF EXTERIOR FINISHES & PAINT COLORS FOR REVIEW AND APPROVAL BY OWNER & ARCHITECT. REFER TO SPECIFICATIONS FOR MOCKUP REQUIREMENTS.

No.	Description	Date
1	Revision 1	04/23/2018
PROJE	ECT NO.:	17163
PROJECT MGR:		LP
ASSISTED BY:		MR/NA
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EXTERIOR ELEVATIONS

3 3D View 1

4 3D View 2

5 3D View 3

6<u>3D View 4</u>

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No.	Description	Date
PROJECT NO .:		17163
PROJECT MGR:		LP
ASSISTED BY:		MR/NA
DATE:		04/23/2018

BUILDING AXONS & 3D VIEWS

