

HISTORIC AND DESIGN REVIEW COMMISSION

May 02, 2018

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

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 output 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 (½) 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.

(l) 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 Laredo 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, stonastic 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 noted that all windows will comply with the UDC.
- l. 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.

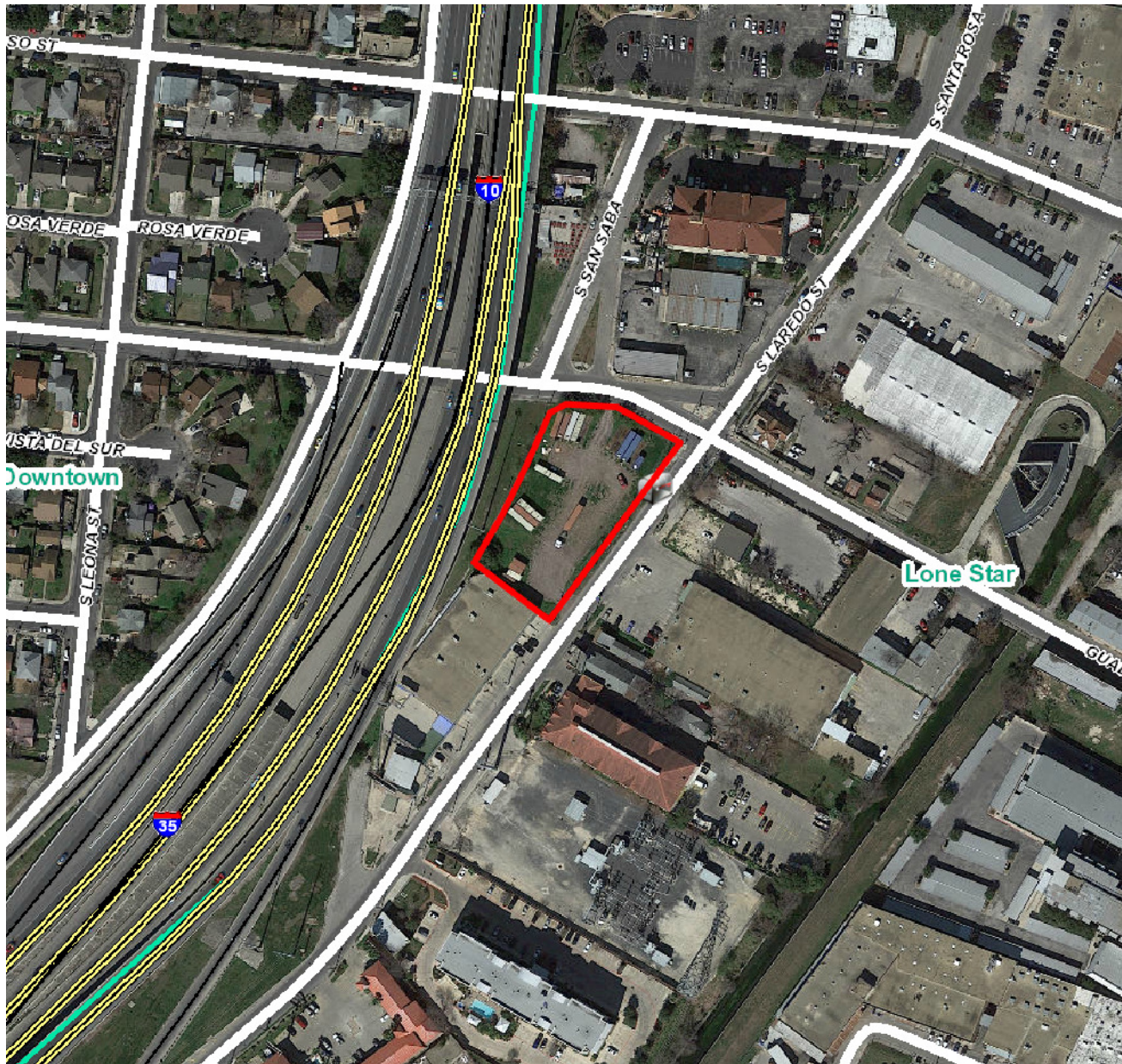
RECOMMENDATION:

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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LAREDO STREET MEDICAL OFFICE BUILDING

915 South Laredo, San Antonio, Texas

04/20/18

LKDG Prj. No: 17163



LAREDO STREET MEDICAL OFFICE BUILDING

915 South Laredo, San Antonio, Texas

04/18/18

LKDG Prj. No: 17163



LAREDO STREET MEDICAL OFFICE BUILDING

915 South Laredo, San Antonio, Texas

04/20/18

LKDG Prj. No: 17163



LAREDO STREET MEDICAL OFFICE BUILDING

915 South Laredo, San Antonio, Texas

04/20/18

LKDG Prj. No: 17163

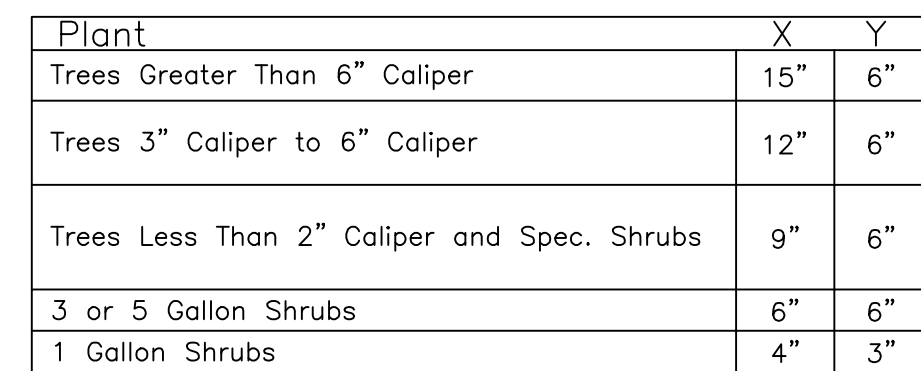


Diagram illustrating the cross-section of a planting pit. The layers shown are:

- SPECIFIED SHRUB
- 4" LAYER MULCH
- ADD 3" LAYER OF GARDENVILLE 4 WAY MIX AND ROTOTILL TO A DEPTH OF 6"
- PLANTING BED

Dimensions X and Y are indicated at the bottom of the diagram.

Plant	X	Y
3 or 5 Gallon Shrubs	6"	6"
1 Gallon Shrubs	4"	3"

TYPICAL SHRUB PLANTING
NOT TO SCALE

ZONE C-2

Proposed Building
Lot 1, Block 5 NCB 310
915 S. LAREDO STREET
ZONE C-2

Parking Lot

DUMPSTER

EDGER

ST. AUGUSTINE GRASS

LO/PS 75%

LO(2)/PS 35%
BH(12)
MF(2)
RIVER ROCK

CO/ST/PS 50%
BS(32)
BH(27)
MULCH
CO/ST/PS 50%

LO/ST/PS 50%
CO/ST/PS 50%

BS(11)
RY(11)
AG
EDGER
CE/ST
RY(8)
SN(7)
IRRIGATION METER
LO/ST
RY(9)
10' BIKE/SIDEWALK
SN(9)
CE/ST
BS(14)
RY(3)
EDGER
SN(11)
AG

SCULPTURE
ST. AUGUSTINE GRASS

RIVER ROCK

GRANITE

ELER PAIR

ST. AUGUSTINE GRASS

SN(11)
RY(7)
CO(4)/ST

S36° 03' 06" W - 275.33'

N32° 18' 13" E - 75.71'

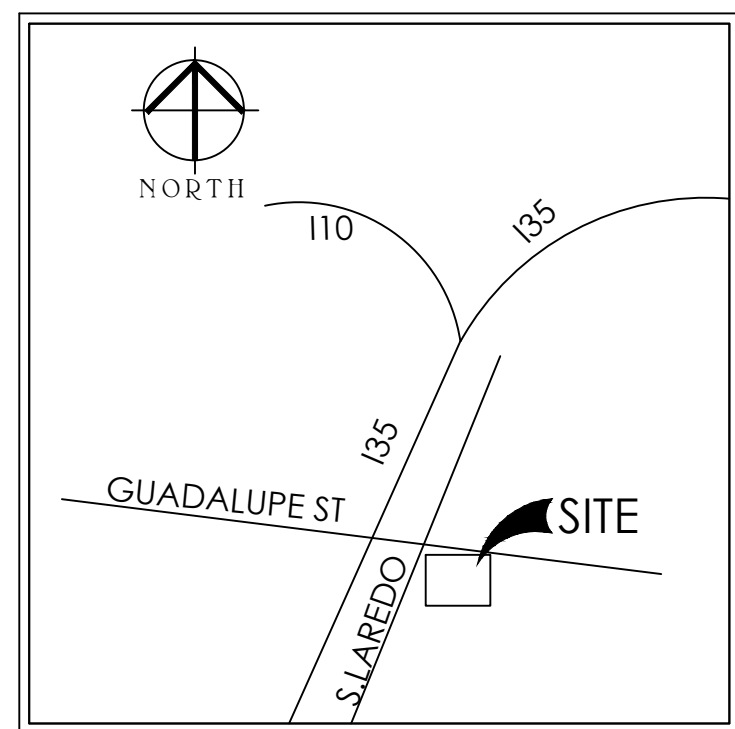
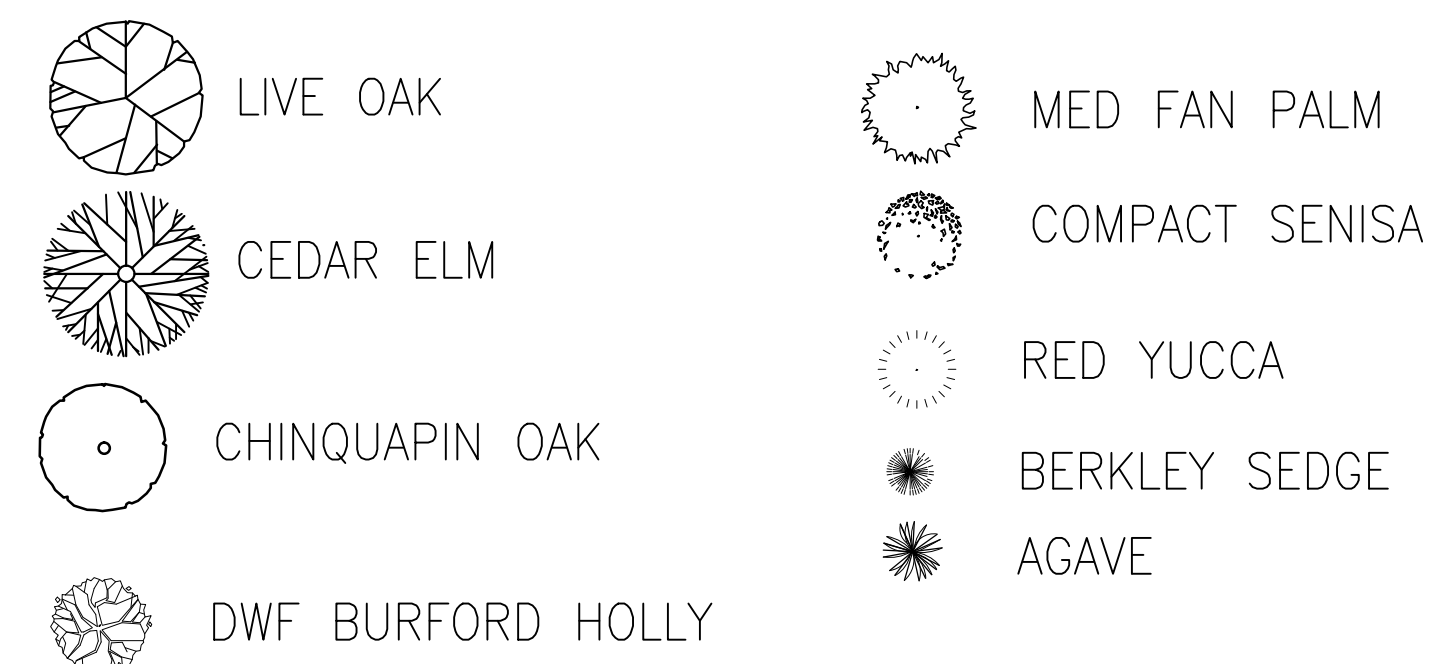
N22° 42' 40" E - 82.55'

N57° 56' 53" W - 110.08'

PSC

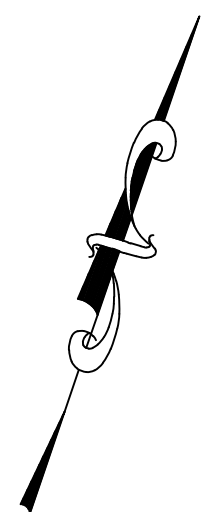
SOUTH LAREDO STREET

TOTAL CANOPY PROVIDED EQUALS 13,388 SQ.FT.
TOTAL CANOPY REQUIRED EQUALS 9,875 SQ.FT.

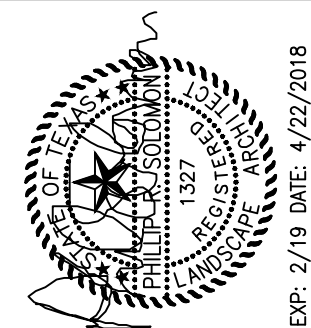


LOCATION MAP

TABULATION OF POINTS	
ELECTIVES	POINTS
STREET TREES	25
PARKING LOT SHADING	20
PARKING LOT SCREENING	25
TOTAL	70



SCALE 1" = 20'



SPECIFICATIONS

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 Contract for the Construction", Latest Edition, Articles 1 through 14. These paragraphs 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 these supplements, the unaltered provisions of that article, paragraph, subparagraph or 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 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 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

A. Contractor's Use of Premises: During construction, Contractor will have designated 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

A. On Owner's approval of a proposal from Contractor, Contractor will issue a Change Order on AIA Document G701, for all changes to the Contract Sum or the Contract Time.

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 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 with release of liens and supporting documentation. Include consent of surety to final payment and insurance certificates.

a. Submit final meter readings for utilities, a record of stored fuel, and similar data as of 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 Work.

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 (100- by 125-mm) space on the label or beside title block to record review and approval markings and action taken. Include the following information on the label:

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 comply with dates.

2. Revise the schedule after each meeting or activity where revisions have been made. 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 Shop Drawings and reproductions of the Contract Documents or standard printed data. 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 markup up PDF. Include the following:

1. Dimensions, profiles, methods of attachment, large scale details, and other information, as appropriate for the Work.
2. Identification of products and materials.
3. 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 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 working day of each week.

2. Coordinate each element with other activities. Show each activity in proper 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.

6. 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. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. 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 agency.

4. Retesting and Reinspecting: Contractor shall pay for additional testing and inspecting required as a result of tests and inspections indicating noncompliance with requirements.

B. Performance and Design Criteria: Where design services or certifications by a 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.

C. Submittals: Testing agency shall submit a certified written report of each inspection and test to Owner, Architect, Contractor, Structural Engineer, and to authorities having jurisdiction when authorities so direct. Reports of each inspection, test, or similar service shall include the following:

1. Name, address, and telephone number of testing agency.
2. 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 Architect in performing its duties and shall provide qualified personnel to perform inspections 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. Incident 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.
6. 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.

DIVISION 1 - CONTINUED

PART 2 - PRODUCTS (Not Applicable)

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.

B. Standards: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and NFPA 241.

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.

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

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 installed.

3.2 TEMPORARY FACILITIES

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

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 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.

C. Enclose construction areas with fences with lockable entrance gates, to prevent unauthorized access.

C. Provide temporary fire protection until permanent systems supply fire-protection needs. Comply with NFPA 241.

3.4 TERMINATION AND REMOVAL

A. Remove temporary facilities and controls before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

END OF SECTION 01500

SECTION 01600 - PRODUCT REQUIREMENTS

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 after award of the Contract.

1. Submit four (4) copies of each request for product substitution.

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. Include 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. Comparative Product Submittal:

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 subsequent submittals, if any, sufficiently in advance of when materials are required in the Work. Do not submit unapproved products on Shop Drawings or other submittals.
2. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
3. Architect will review the proposed product and notify Contractor of its acceptance or rejection.

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

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. Testing and inspecting services shall 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

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

3.6 FINAL CLEANING

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

1. Remove labels that are not permanent.
2. 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.

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.
3. Spare parts list.
4. Wiring diagram.
5. Copies of warranties.
6. 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.

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 approval 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. Show 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 & 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 are inspected and approved as required before they are covered.

C. Items requiring inspection coordination include, but are not limited to:

1. Roof insulation thickness and R-Value per unit thickness.
2. Wall insulation thickness and R-Value per unit thickness.
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 facade materials, construction and expansion joints, reglet type reveals, canopy connections, major penetrations, parapet assemblies and flashing materials. Testing and equipment that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

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 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 single calibrated spray nozzle.

AAMA 501.2, *Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems*, which should be used as a spot-check during construction of a curtain wall or storefront system;

AAMA 502, *Voluntary Specification for Field Testing of Newly Installed Fenestration Products*, which is the proper test method for verifying field air leakage and water penetration resistance of newly installed operable windows and doors.

AAMA 503, *Voluntary Specification for Field Testing of Newly Installed Storefronts, Curtain Walls, and Sloped Glazing Systems*, which is the proper test method for field testing of new storefronts, curtain walls and sloped glazing for air leakage resistance and water penetration resistance; and

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. 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.
4. Submit Record Drawings and Specifications, operation and maintenance manuals, property surveys and similar final record information.
5. Deliver tools, spare parts, extra materials, and similar items.
6. Changeover locks and transmit keys to Owner.
7. Complete startup testing of systems and instruction of operation and maintenance personnel.
8. Remove temporary facilities and controls.
9. Advise Owner of changeover information related to Owner's occupancy, operation, and maintenance.
10. Complete final cleaning requirements, including touchup painting.
11. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. On receipt of a request for inspection, Architect will proceed with inspection or 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 complete:

1. Submit a copy of Substantial Completion inspection list stating that each item has been completed or is being completed or is being completed for acceptance.
2. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- D. Architect will reinspect the Work on receipt of notice that the Work has been completed.

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.

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.
4. Submit Record Drawings and Specifications, operation and maintenance manuals, property surveys and similar final record information.
5. Deliver tools, spare parts, extra materials, and similar items.
6. Changeover locks and transmit keys to Owner.
7. Complete startup testing of systems and instruction of operation and maintenance personnel.
8. Remove temporary facilities and controls.
9. Advise Owner of changeover information related to Owner's occupancy, operation, and maintenance.
10. Complete final cleaning requirements, including touchup painting.
11. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. On receipt of a request for inspection, Architect will proceed with inspection or 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 complete:

1. Submit a copy of Substantial Completion inspection list stating that each item has been completed or is being completed or is being completed for acceptance.
2. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- D. Architect will reinspect the Work on receipt of notice that the Work has been completed.

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. 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 setting is occurring, reduce the water amount and recheck. Conditions during the installation, such as variations in water, powder, substrate, and ambient temperature, require that the water setting be monitored and adjusted carefully to avoid overwatering.

3.8 DEMONSTRATION AND TRAINING

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

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

3.9 DEMONSTRATION AND TRAINING

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

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

END OF SECTION 01701

DIVISION 2 - SITE CONSTRUCTION

SECTION 02361 - TERMITE CONTROL

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and product certificates signed by manufacturer certifying 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 solution.

PART 2 - PRODUCTS

2.1 TERMITICIDES

A. Provide an EPA-registered termiticide complying with requirements of authorities having jurisdiction, in a soluble 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 product's EPA-Registered Label.

PART 3 - EXECUTION

3.1 INSTALLATION

SPECIFICATIONS

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.

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 Spread. Use the ARDEX T-5 Smoother for featheredge and touch-up. Wear baseball or soccer shoes with non-metallic cleats to avoid leaving marks in the liquid ARDEX K 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. 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 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

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 indicated.

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 ASTM C90, 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.

1. No high pressure spray (power wash) cleaning methods shall be used.

END OF SECTION 04810

SECTION 04860 - STONE MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the following applications of stone masonry:

1. Anchored or adhered to concrete backup.

2. Anchored or adhered to unit masonry backup.

3. Anchored or adhered to wood framing and sheathing.

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 "Metal Fabrications."

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

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

A. Protection of Stone Masonry: During construction, cover tops of walls, projections, 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 cold-weather 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 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 masonry cement and mortar pigments, all complying with specified requirements, and 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 (1/8-mm) sieve.

2. White Aggregates: Natural white sand or ground white stone.

3. Colored Aggregates: Natural-colored sand or ground marble, granite, or other sound color; 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. 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 B-2.

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 rib-stiffened strap stamped into center to provide a slot between strap and plate for inserting wire tie.

DIVISION 4 - CONTINUED

4. Fabricate steel 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- (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. (3-kg/sq. m) weight or 0.0135 inch (0.34 mm) thick for fully concealed flashing; 16-oz./sq. ft. (5-kg/sq. m) weight or 0.0216 inch (0.55 mm) thick elsewhere.

B. Flexible Flashing: For flashing not exposed to the exterior, use one of the following unless otherwise indicated:

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 concealed in masonry.

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 Holes/Vents: 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.

1. Provide one of the following configurations:

a. Strips, full-depth of cavity and 10 inches (250 mm) wide, with dovetail shaped construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

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

A. General: Do not use admixtures unless otherwise indicated.

1. 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 together before adding water. Then mix again, adding only enough water to produce a 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.

B. Mortar for Stone Masonry: Comply with ASTM C 270, Proportion Specification.

1. Mortar for Setting Stone: Type S or Type 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 part or all of water, according to latex-additive manufacturer's written instructions.

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.

2.8 FABRICATION

A. Select and/or cut stone to produce pieces of thickness, size, and shape indicated, including details on Drawings. Dress joints (bed and vertical) straight and at right angle to face unless otherwise indicated.

B. Gage backs of stones for adhered veneer if more than 81 sq. in. (522 sq. cm) in area.

C. Shape stone for type of masonry (pattern) as follows:

1. Sawn-bed, random-range ashlar with random course heights and random lengths (interrupted courses).

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.

3.2 SETTING OF STONE MASONRY, GENERAL

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 relative 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 courses), and uniform joint widths.

D. Arrange stones with color and size variations uniformly dispersed for an evenly blended appearance.

E. Maintain uniform joint widths except for variations due to different stone sizes and where minor variations are required to maintain bond alignment if any. Lay walls with joints not less than 3/8 inch (10 mm) at narrowest points or more than 1/2 inch (13 mm) 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.

2. Sealing joints is specified in Division 7 Section "Joint Sealants."

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.

4. At sills, extend flashing not less than 4 inches (100 mm) at ends.

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

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 grade.

I. Place weep holes and vents in joints where moisture may accumulate, including at base of cavity walls, 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 dove-tailed ends into dove-tail 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 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 unit 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 (16-mm) 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 to provide not less 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.

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 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 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.

4. Wet wall surfaces with water before applying cleaner; remove cleaner promptly by rinsing thoroughly with clear water.

5. Clean stone masonry by bucket and brush hand-cleaning method described in BIA Technical Note No. 22 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 placed.

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.

2.2 GROUT

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

2.3 FABRICATION

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

B. Welding: Weld corners and seams continuously. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals. At exposed connections, finish welds and surfaces smooth with contour of welded surface matching those adjacent.

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

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 (200 mm).

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 thickness.

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

2.4 STEEL AND IRON FINISHES

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 requirements in FS TT-P-664.

PART 3 - EXECUTION

3.1 INSTALLATION

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 connectors 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 epoxy paint.

END OF SECTION 05500

DIVISION 6 - WOOD & PLASTICS

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

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

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

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 inspection agency.

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

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

1. Comply with "Code Plus" provisions in APA Form No. E30K.

2.2 TREATED MATERIALS

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, kiln-dry lumber and plywood to 19 and 15 percent moisture content, respectively. Treat indicated items and the following:

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

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.

B. Fire-Retardant-Treated Materials: Comply with performance requirements in AWPA C20 lumber and AWPA C27 plywood, labeled by a testing and inspecting agency acceptable to authorities having jurisdiction.

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, for plywood.

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

2.3 LUMBER

A. Dimension Lumber: The following grades are per inspection agency indicated:

1. Framing other than Non-Load-Bearing Partitions: Construction or No. 2, Douglas fir-larch: NLGA, WCLIB, or WWPA, or Southern pine: SPIB.

B. Concealed Boards: 19 percent maximum moisture content: Mixed southern pine: No. 2 per SPIB rules, or Western woods: Standard per WCLIB rules or No. 3 Common per WWPA rules.

C. Miscellaneous Lumber: Construction, Stud, or No. 3 grade of any species for nailers, blocking, and similar members.

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.

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, B04061.
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 grommets.
I. Refer to Drawings for manufacturer and finish.

END OF SECTION 06402

DIVISION 7 - THERMA & MOISTURE PRT

SECTION 07150- Fluid-Applied Membrane Air & Weather Barriers

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

- A. 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, 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.*
B. Functional Criteria:
1. General:
a. 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.
b. The configuration of the air & water-resistive barrier, drainage plane, flashing and cladding assembly materials must allow for the egress of incidental moisture.
2. Performance Requirements:
a. System to meet the performance and testing requirements of the International Code Council Acceptance Criteria AC 212 and ASTM E2570.

Parx 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 lbf/ft²): 0.3 in (3.0 mm) < 0.02 L/min/ft² (< 0.004 dm³/s)	Pass: < 0.0001 L/min/ft² at 75 Pa (1.57 lbf/ft²) at 75 Pa (1.57 mPa) at 75 Pa (1.57 mPa)
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	300%
Flexibility	ASTM D552	No Criteria	No cracking at 1/8" (3.2 mm)
Freeze-Thaw Resistance	ASTM E 2485	10 Cycles	Pass: No Delamination
Hydrostatic Pressure Test	AATCC 127 (Water Column)	Resist 21.6 in (55 cm) water for 3 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 285	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
Rolling	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 E2070	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 287	Minimum 15 psi (104 kPa)	Pass: All listed substrates and flashing materials
Water Resistance	ASTM D 2247	14 Days	Pass: No Delamination
Water Penetration	ASTM E331	2.86 psf (137 Pa) for 15 minutes	Pass 25.4 psf (1216 Pa) for 160 minutes
Water Penetration	ASTM E331	Treated after Structural Loading, Racking and Restraint 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 weathering, 21.6 in (549 mm) water column for 5.5 hours	Pass
Wind Driven Rain	F.S. TFC-0558	No Criteria	Pass
VOC	EPA Reference Test Method 24	US EPA, South Coast AQMD and GreenSeal Standard	10 g/L

1.1 SUBMITTALS

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

1.2 QUALITY ASSURANCE

- A. Qualifications:
1. All materials must be manufactured or sold by an active Manufacturer Member of ABAA and must be purchased from its authorized distributors.
2. Manufacturer: Must be an active member of ABAA.
3. Applicator:
a. Must have attended manufacturer's Educational Seminar.
b. Must possess a current manufacturer's certificate of education.
c. Must be experienced and competent in installation of plaster-like materials and liquid-applied weather-resistive membranes.

DIVISION 7- CONTINUED

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver air and water-resistive barrier materials in original packaging with manufacturer's identification.
B. 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 below 110°F (43°C) in accordance with manufacturer's instructions.
1.4 PROJECT / SITE CONDITIONS
A. Installation Ambient Air Temperature: Minimum of 40°F (4°C) and rising, and remain so for 24 hours thereafter.
B. Substrate Temperature: Do not apply air & water-resistive barrier materials to substrates whose temperature are below 40°F (4°C) or contain frost or ice.
C. Inclement Weather: Do not apply air & water-resistive barrier materials during inclement weather, unless appropriate protection is employed.
D. Air & water-resistive barrier materials must not be applied if ambient 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 weather.
E. 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.

1.5 WARRANTY

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer, Basis of Design: Parx USA, Inc., 4125 E. La Palma Ave., Suite 250, Anaheim, CA 92807 Contact: Architectural Sales (866.516.0061) or Technical Support (800.226.2424), or equal product compatible with finish system.
B. Components: Obtain components from authorized distributors.

2.2 MATERIALS

- A. Water-Resistive Membrane & Air Barrier Coating:
1. Parx USA Weatherseal Spray & Roll-on™: 100% acrylic, elastomeric waterproof membrane and air barrier that can be either roller, brush or spray applied.
2. Parx 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.
3. Parx USA 365 Flashing Membrane: Self sealing, polyester faced, rubberized asphalt membrane, 30 mils (0.76mm) thick.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify project site conditions
B. Compliance: Comply with manufacturer's instructions for installation.
C. Substrate Examination: Examine prior to water-resistive membrane and air barrier installation as follows:
1. 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.

2. Substrate must be examined for soundness, and other harmful conditions.
3. Substrate must be free of dust, dirt, lalance, efflorescence, and other harmful contaminants.
4. Substrate construction in accordance with substrate material manufacturer's specifications and applicable building codes.
5. 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 water-resistive membrane & air barrier coating material. Do not proceed with the work until unsatisfactory conditions are corrected.

3.2 PREPARATION

- A. Protection: Protect surrounding material surfaces and areas during installation of system.
B. Clean surfaces thoroughly prior to installation.
C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 MIXING

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

3.4 APPLICATION

- A. General: Installation shall conform to this specification and manufacturer's written instructions.
1. Flash all rough openings with water-resistive & air barrier coating material embedded with sheathing tape.
2. 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.
3. Embed 4 inch strips of Sheathing Joint tape by applying water-resistive 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.
4. Apply water-resistive membrane & air barrier coating to the entire surface of the substrate.
a. 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.
b. Spray Application: Spray apply the membrane at a rate of not more than 100 ft² per gallon (2.4 m² per liter).
5. 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.
6. Allow water-resistive membrane & air barrier coating to completely dry before proceeding with additional layers of the assembly.
7. Seal all new penetrations, electrical boxes and cuts made after installation of barrier.

3.5 CLEAN-UP

- A. Removal: Remove and legally dispose of water-resistive membrane & air barrier coating material from job site.
B. Clean surfaces and work area of foreign materials resulting from material installation.

3.6 PROTECTION

- A. Provide protection of installed materials from water infiltration into or behind them.
B. Provide protection of installed materials from dust, dirt, precipitation, freezing during installation, and continuous high humidity until fully cured and dry.
C. 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

SECTION 07190 - WATER REPELLENTS

PART 1 - GENERAL

1.1 SUBMITTALS

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

1.2 QUALITY ASSURANCE

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

2.2 PENETRATING WATER REPELLENTS

- A. Silane, Penetrating Water Repellent: Clear, monomeric compound containing 20 percent or more solids of alkyltrialkoxysilanes; with alcohol, mineral spirits, water, or 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, or other proprietary solvent carrier; and with 5 lb/gal. (600 g/L) or less of VOCs.
C. Silane, Penetrating Water Repellent: Pigmented, monomeric compound containing 20 percent or more solids of alkyltrialkoxysilanes; with alcohol, mineral spirits, water, or other proprietary solvent carrier; and with 5 lb/gal. (600 g/L) or less of VOCs.
D. Silane, Penetrating Water Repellent: Clear, oligomeric alkylalkoxysiloxanes containing 10 < percent or more solids; with alcohol, ethanol, mineral spirits, water, or other proprietary solvent carrier; and with 3.3 lb/gal. (400 g/L) or less of VOCs.
E. Siloxane, Penetrating Water Repellent: Clear, oligomeric alkylalkoxysiloxanes containing 10 < percent or more solids; with alcohol, ethanol, mineral spirits, water, or other proprietary solvent carrier; and with 3.3 lb/gal. (400 g/L) or less of VOCs.
F. Siloxane, Penetrating Water Repellent: Clear, oligomeric alkylalkoxysiloxanes containing 10 percent or more solids; with alcohol, ethanol, mineral spirits, water, or other proprietary solvent carrier; and with 3.3 lb/gal. (400 g/L) or less of VOCs.
G. Siloxane, Penetrating Water Repellent: Clear, oligomeric 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 less of VOCs.
B. 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 5 lb/gal. (600 g/L) or less of VOCs.
C. Proprietary-Blend, Film-Forming Water Repellent: Clear, consisting of 1 or several different resins, acrylics, polymers, stearates, or oils plus other compounds or products 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 different resins, acrylics, polymers, stearates, or oils plus other compounds or products of components; and with 5 lb/gal. (600 g/L) or less of VOCs.
E. Silicate, Film-Forming Water Repellent: Clear, with 3.3 lb/gal. (400 g/L) or less of VOCs.
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 VOCs.

PART 3 - EXECUTION

3.1 PREPARATION

- 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 "Clay Masonry Restoration 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 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 grass.
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.
1. Water-repellent work may precede sealant application only if sealant adhesion and 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

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect the substrate before application of water repellent and to instruct Applicator on 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.

END OF SECTION 07190

SECTION 07210 - BUILDING INSULATION

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.
B. Surface-Burning Characteristics: ASTM E 84, and as follows:
1. Flame-Spread Index: 25 or less.
2. Smoked-Developed Index: 450 or less.

PART 2 - PRODUCTS

2.1 INSULATION PRODUCTS

- A. Mineral-Fiber-Blanket Thermal Insulation: ASTM C 665, Type III, Class A, foil-scrim-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 all exterior walls shall not be less than 13.
B. Mineral-Fiber-Blanket Acoustical Insulation: ASTM E 119, light density flexible 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 R-values 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.

1.02 REFERENCES

- American Society for Testing and Materials (ASTM)
1. D412Standard Test Methods for Vulcanized Rubber and Elastomeric Tension
2. D461Standard Test Methods for Feit
3. D903Test Methods for Peel or Stripping Strength of Adhesive Bonds
4. D1970Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
5. D3767Standard Practice for Rubber - Measurement of Dimensions
6. E96Standard Test Methods for Water Vapor Transmission of Materials

1.03 SUBMITTALS

- A. Manufacturers product data sheet and product sample.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Self-adhesive membrane roofing underlayment shall be 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.

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

PART 2 - PRODUCTS

2.01 MANUFACTURERS AND PRODUCTS

- A. Acceptable Products and Manufacturers: Grace Ice & Water Shield manufactured by W.R. Grace & Co.-Conn., Grace Construction Products, Cambridge, MA.

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 polyethylene. Grace Ice & Water Shield is interwound with a disposable silicone-coated release sheet. Membrane shall conform to the following physical properties:

Property	Value	Test Method
Color	Gray-Black	
Thickness, Membrane	1.02 mm (40 mil)	ASTM D3767
Tensile Strength, Membrane	1720 kN/m ² (250 psi)	ASTM D412 (Die C Modified, 1/2 in./minute)
Elongation, Membrane	250%	ASTM D412 (Die C Modified, 1/2 in./minute)
Low Temperature Flexibility	Unaffected @ -29°C (-20°F)	ASTM D1970
Adhesion to Plywood	325 N/m (3.0 lbf/in. width)	ASTM D903
Permeance (Max)	2.9 ngm ² /s Pa (0.05 perms)	ASTM E96
Material Weigh Installed (Max)	1.3 kg/m ² ± (0.3 lbf/ft ²)	ASTM D461

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.
B. 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 dry.

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
Adhesion: Plywood 325 N/m (3.0 lbf/in. width)ASTM D903
Tensile Strength, Membrane1720 kN/m2(250 psi) ASTM D412 (Die C Modified, 1/2in./minute)
Elongation, Membrane250%ASTM D412 (Die C Modified, 1/2in./minute)
Low Temperature Flexibility Unaffected @ -29°C (-20°F)ASTM D1970
E. Completely fill void spaces of each penetration with firestopping material.
F. Provide forms and dams to permanently secure firestopping materials.
G. Install firestopping in floors to flush with top of slab, sleeve or housekeeping pad.
H. Apply firestopping directly to penetrating item. Do not anchor or bond firestopping to combustible or non fire-rated materials such as plastic or fiber coverings.
I. Where sleeves have been installed surrounding pipes or other penetrations, firestop annular space between sleeves and its contained pipe, cable, or duct with resilient firestopping sealant system to permit movement of pipe or duct without damage to firestopping sealant.

END OF SECTION 07262

SECTION 07270 - FIRESTOPPING

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provide firestopping in accordance with the details of the latest edition of the U.L. Handbook.
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 of substrates.
B. UL Classification: Provide firestopping materials that are currently classified with UL as Fill, Void, or Cavity Materials, and Through Penetration Firestop Systems.
Fire Tests: Provide firestopping materials that have been tested in accordance with ASTM E 814 Methods of Fire Tests of Through-Penetration Fire Stops and UL 1473 Fire Test of Through-Penetration Firestops.
D. All through-penetration firestops are to be as per the U.L. fire resistance handbook, latest edition, and are to carry U.L. system numbers and an appropriate F or T number.
E. The same type/manufacturer or firestopping should be agreed to and used by all sub-contractors on the project.

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

- A. Deliver firestopping materials to job site in original, new and unopened 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 degrees C), and as recommended by manufacturer. Store as per manufacturer's specified instructions.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Provide materials by one of the following manufacturers:
1. Dow Corning Corporation
2. Minnesota Mining and Manufacturing Company (3M)
3. Metalmex, Inc.
4. Tremco
5. Hevi-Duty Nelson
6. USG Fire Stop Systems
7. Hilti
8. General Electric
9. Specified Technologies, Inc.
10. CAFCO T.P.S.
11. USG - Acoustical caulk for non-rated sound wall terminations at floors and decks above as per drawings and specifications.

2.2 MATERIALS

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

SPECIFICATIONS

DIVISION 7 - CONTINUED

1.4 SUBMITTALS

- A. Comply with requirements of Division 01300 and this section.
- B. Product 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 representatives of the Owner, Architect, and Contractor for each of the projects.
- C. Samples:
1. Submit two 5" x 7" samples of the composite facing panel.
 2. Submit two samples of each color and finish, at least 3" x 5".
 - D. Shop Drawings: Submit shop drawings with elevations of all cladding areas at 1/4" scale with typical elevations at V/ scale, and details at 3" or greater scale to show dimensioning, member profiles, anchorage systems, interface with all applicable building construction elements, adhesive, sealants, and interface with glazing. Indicate the section moduli of wind-load-bearing members, and illustrate worst case deflection calculations for the required design loads.
- E. Product Data: Submit manufacturer's specifications for material and fabrication of cladding and support / attachment systems, including instructions and recommendations for installation and maintenance.
- F. Design Calculations: Submit design calculations with Engineer's stamp and signature to confirm compliance with structural criteria stated herein and / or required by applicable codes. Engineer must be registered in the state where the project is located.
- G. Mock Up: Provide mock up per the requirements of Section 01400.

1.5 QUALITY ASSURANCE

- A. For the purpose of establishing the level of quality, performance and appearance required, the plans, elevations, details and specifications are based on specific cladding system(s) utilizing aluminum composite panel material facing. In addition to conforming to the sizes and configurations shown on the drawings, cladding systems shall incorporate the following design characteristics:
1. Wet seal "caulked" joints of indicated widths. Dry joint, pressure equalized, rain screen system with joints of indicated widths.
 2. Continuous aluminum perimeter reinforcing extrusions.
 3. System design must provide sufficient support and stiffening to prevent oil-canning, dimpling, buckling, and other surface irregularities.
 4. Installations must not have visible fasteners or telegraphing of fastening. Mounting assemblies on the cladding faces or any other compromise of a neat, smooth, flat, faster free appearance will not be acceptable.
 5. No field fabrication of panel or panel attachment system or a combination of the panel and system shall be allowed. Jobsite folding of panel returns are not acceptable.
 - B. Substitutions: In accordance with Section 01630. Submissions of other systems must include the following:
 1. Panel material specifications and samples.
 2. Details of typical edge conditions, corners, joints, 4-way intersections, and abutments to similar materials.
 3. A 24" x 24" sample fabricated panel with perimeter extrusions and one stiffener.
 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 composite panel material facing.
 6. Documentation certifying that the panel material and finish meet or exceed the requirements of article 2.01. A of this specification.
 7. Independent laboratory test results certifying that the proposed system meets or exceeds the System Performance Requirements stated in article 1.05 of this specification.
 - C. Manufacturer's Qualifications: The manufacturers of the composite facing panel must have at least ten (10) years' experience in the manufacture of the specified composite panel. Manufacturers of the trim and other accessory products must have at least five-(5) years' experience in the manufacture of their respective products.
 - D. Distributor /Installer Qualifications: The Distributor /Installer must have at least ten (10) years' experience installing light gauge metal framing and erecting this type of cladding system, and have completed at least ten (10) projects utilizing the specified facing panel system.
 - E. Fabricator Qualifications: The fabricator must have at least ten (10) years' experience designing, engineering, and fabricating this type of cladding system, and have successfully completed at least ten (10) projects utilizing the specified facing panel system.
 - F. Field Measurements: Where possible, check actual field dimensions in construction work by accurate field measurement before fabrication, and show recorded measurements on final shop drawings. Where field measurement is not possible, either the General Contractor or Construction Manager will provide guaranteed dimensions including steel framing, openings, and other pertinent interfacing items, to allow fabrication to proceed.
 - G. Conflicts in Requirements: If conflicts exist on the drawings, in this specification, or between the drawing and specifications, the more stringent requirement shall apply.

- 1.6 WARRANTY
- A. General: Provide a written warranty, signed by the manufacturer and contractor/ installer, agreeing to repair or replace defective materials and workmanship of the engineered aluminum cladding system work during the one (1) year warranty period.
- B. Defective is defined to include the following:
1. Abnormal aging.
 2. Abnormal weathering.
 3. Deterioration or discoloration of finishes.
 4. Failure of the system to meet specified performance requirements.
- 1.7 DELIVERY, STORAGE AND HANDLING
- A. Protect finish and edges in accordance with panel manufacturer's recommendations. Protect panels with removable plastic film applied prior to fabrication, remaining on during fabrication, shipping and installation.
- B. Store material in accordance with panel manufacturer's recommendations.

DIVISION 7 - CONTINUED

PART 2 PRODUCTS

2.1 MATERIALS AND COMPONENTS

- A. Aluminum Cladding Facing Material:
1. Product: Aluminum composite material as manufactured by the following:
 - A. Alcoa Cladding Systems - Reynobond
 - B. Alcan Composites, Inc. - Alucobond
 - C. Mitsubishi Chemical America, Inc. - Alpollic
 2. Core: Thermoplastic material, which in the composite assembly, meets performance characteristics, specified and code requirements as set forth in the BOCA Basic National Building Code and U. L. for Class A construction.
 3. Face Sheets: 0.020" (minimum) aluminum 3003 alloy, coil coated with the specified high performance finish, and bonded in a continuous process to core material to meet performance requirements.
 4. Thickness: 4mm
 5. Bond Integrity: When tested in accordance with ASTM D1781-76 for bond integrity, simulating resistance to delamination:
 - a. Bond Strength: 220-psi minimum.
 - b. Peel Strength: 26 inch lbs. /inch minimum.
 - c. Shall have successfully passed six (6) each ASTM D1037 weather cycling tests.
 - d. Shall have had no change in bond performance after 8 hours of submersion in boiling water.
 6. Finishes
 - a. The exterior finish of the panels sheet shall be full-strength Kynar 500 with minimum 70% resin, meeting AAMA 2605.
 1. Color: TBD - Matte Finish
 2. Coating Thickness: 1.0 mil (+ / - 0.2 mil)
 3. Hardness: ASTM D3363; F min using Eagle Turquoise T2375.
 4. Impact: Test Method ASTM D2794 Gardner Variable Impact Tester with 5/8" mandrel.

1. Color: TBD - Matte Finish
2. Coating Thickness: 1.0 mil (+ / - 0.2 mil)
3. Hardness: ASTM D3363; F min using Eagle Turquoise T2375.
4. Impact: Test Method ASTM D2794 Gardner Variable Impact Tester with 5/8" mandrel.
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- d. Shall have had no change in bond performance after 8 hours of submersion in boiling water.
6. Finishes
- a. The exterior finish of the panels sheet shall be full-strength Kynar 500 with minimum 70% resin, meeting AAMA 2605.
1. Color: TBD - Matte Finish
2. Coating Thickness: 1.0 mil (+ / - 0.2 mil)
3. Hardness: ASTM D3363; F min using Eagle Turquoise T2375.
4. Impact: Test Method ASTM D2794 Gardner Variable Impact Tester with 5/8" mandrel.
5. Bond Integrity: When tested in accordance with ASTM D1781-76 for bond integrity, simulating resistance to delamination:
- a. Bond Strength: 220-psi minimum.
 - b. Peel Strength: 26 inch lbs. /inch minimum.
- c. Shall have successfully passed six (6) each ASTM D1037 weather cycling tests.
- d. Shall have had no change in bond performance after 8 hours of submersion in boiling water.
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6. Finishes
- a. The exterior finish of the panels sheet shall be full-strength Kynar 500 with minimum 70% resin, meeting AAMA 2605.

DIVISION 7 - CONTINUED

PART 3 EXECUTION

3.1 INSPECTION

- A. Examine supporting structure and conditions under which the work is to be erected and notify the General Contractor or Construction Manager in writing of conditions detrimental to the proper and timely completion of the work. Unless directed in writing, do not proceed with erection until unsatisfactory conditions have been corrected. Tolerance for substructure shall be +/- V".
- B. Surfaces to receive panels shall be even, smooth, sound, clean, dry and free from defects detrimental to this work.
- 3.2 INSTALLATION
- A. Erect panels plumb, level, and true to within a tolerance of 1/8" in 12' -0" and V" in 20' -0".
- B. Corrosion creepage from scribe line: 1/16" (1.6 mm) maximum.
- C. Anchor component parts of the systems securely in place in accordance with approved shop drawings, providing for necessary thermal and structural movement.
- C. Separate dissimilar metals per method shown on the approved shop drawings.
- D. Apply exposed sealants per manufacturer's instructions.
- E. Do not cut, trim, weld, or braze component parts during erection in a manner, which would damage the finish, decrease the strength, or result in a visual imperfection or a failure in performance.
- 3.3 ADJUSTING AND CLEANING
- A. Remove and replace panels damaged beyond repair.
- B. Repair panels with minor damage.
- C. Protective plastic coating shall be removed after erection and prior to caulking.
- D. Removal of the protective coating will provide a clean panel surface.
- 3.4 SCHEDULE
- A.

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- 3.4 SCHEDULE
- A.

- A.
- END OF SECTION 074100
- SECTION 07540 - THERMOPLASTIC MEMBRANE ROOFING
- PART 1 - GENERAL
- 1.1 SUMMARY
- A. This Section includes fully adhered or mechanically fastened membrane roofing systems.
- 1.2 SUBMITTALS
- A. Product Data: For each product indicated.
- B. Research/Evaluation reports.
- C. Maintenance data.
- 1.3 QUALITY ASSURANCE
- A. Installer Qualifications: A qualified installer, approved by manufacturer to install manufacturer's products.
- B. Source Limitations: Obtain components for membrane roofing system from or approved by roofing membrane manufacturer.
- C. File-Test-Response Characteristics: Provide membrane roofing materials with the premium grade products in accordance with the manufacturer's standards to meet performance requirements, and as approved by the Architect. Exposed Sealant to be Dow 795, Dow 756 or G. E. Silpruf silicone in standard color as selected by the Architect.
- E. Fasteners: Aluminum, non-magnetic stainless steel, or other materials warranted by manufacturer to be non-corrosive and compatible with aluminum framing members, trim anchors, and other components of the building assembly to receive fasteners. Do not expose fasteners except where unavoidable. When exposed fasteners are allowed, they shall be finished the same as the cladding.
- F. Anchors, Clips, and Accessories: Depending on strength and corrosion-inhibiting requirement, fabricate units of aluminum, non-magnetic stainless steel, or hot-dip zinc coated steel or iron.
- G. Adhesive: Shall be a premium quality structural silicone adhesive as recommended by the face panel manufacturer and approved by the Architect.

- A. Erect panels plumb, level, and true to within a tolerance of 1/8" in 12' -0" and V" in 20' -0".
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- 3.4 SCHEDULE
- A.

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 prefilled 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.

DIVISION 7 - CONTINUED

- 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.

2.4 SUBSTRATE BOARDS

- 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 density, square edged.
- B. Molded-Polystyrene Board Insulation: ASTM C 578 Type IX, 1.8-lb/cu. ft. minimum density.
- 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 corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.
- B. 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 walkways as shown on drawings, walkways to be manufactured by or compatible with roofing system manufacturer's products.

DIVISION 7 - CONTINUED

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 layer 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.
 - H. 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

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply solvent-based bonding adhesive to substrate and underside of sheet flashing 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.
- E. Weld side and end laps to ensure a watertight seam installation.
- F. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.6 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

DIVISION 7 - CONTINUED

SECTION 07600 - SHEET METAL SPECIFICATIONS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Installation of galvanized sheet metal accessories.

1.2 SUBMITTALS

- A. See Section 01100 - General Requirements, for submittal procedures.
- B. Shop Drawings:
1. Show weights, gauges, or thicknesses of sheet metal. Show location, arrangement, dimensions, materials, fastenings, connections, anchorage, and relation to adjacent work.
 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 a minimum of 12" long.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Sheet Metal:
1. Sheet Metal, Flashing, Counterflashing - Shall be 24 gauge (minimum) polymer-coated galvanized iron accessories furnished or approved by sheet membrane manufacturer.
 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 for installing sheet metal accessories.
 4. Fasteners:
 - a. Masonry/Concrete - Minimum 1/4" x 1" aluminum drive pins. Plastic or nylon disallowed.
 - b. Metal to Metal - 1/8" pop rivets or equal.
 5. Solder - Shall conform to ASTM designation B32, 50-50 percent block tin and pig lead.
 6. Curb Corner Closures - Shall be mill-finished of the same gauge and material type compatible with existing curb skirts.

2.2 FABRICATION

- 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 possible in shop.
- 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 recommendations of system supplier's latest printed instructions except where required otherwise in contract documents.
- D. Work shall be fabricated in maximum lengths to minimize joints; except where required specifically otherwise, and where consideration of control of expansion and contraction require otherwise.
- E. Work shall be formed to true lines and sharp corners. Work shall be straight, without bulges or waves.
- 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; or double-locked, and malletted flat.
- 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.

PART 3 - EXECUTION

3.1 EXAMINATION OF SUBSTRATE

- 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

- A. Work shall be installed by skilled mechanics.
- B. Work shall conform to approved shop drawings, approved samples, SMACNA Manual, and contract documents.
- C. Work shall allow for thermal movement, and with regard to relation to adjacent materials.

3.3 PITCH-PANS

- A. Install sheet metal pitch-pans on 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.

3.4 HEAT VENT STACKS

- A. Fabrication of coated metal to have a minimum clearance of 2" all around hot pipe, be at least 8" high with a 3" flange.
- 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 and shall overlap coated metal 2".
- D. Finished fabrication shall fit snugly and be secured using bolts, washers, and taps.

DIVISION 7 - CONTINUED

3.5 PERIMETER COPING/GRAVEL GUARDS/GUTTERS

- 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

SPECIFICATIONS

DIVISION 10 - SPECIALTIES

SECTION 10523 - FIRE EXTINGUISHERS, CABINETS AND ACCESSORIES

PART 1 - GENERAL

- 1.1 SECTION INCLUDES
- A. Fire Extinguishers
 - B. Fire Extinguisher Cabinets
 - C. Accessories

1.2 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry
- B. Section 09250 - Gypsum Drywall: Roughed-in wall openings.

1.3 REFERENCES

- 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

1.4 PERFORMANCE REQUIREMENTS

- A. Conform to NFPA 10.
- B. Provide extinguishers classified and labeled by Underwriters Laboratories Inc. for the purpose specified and indicated.

1.5 SUBMITTALS

- A. See Section 01100 - General Requirements, for submittal procedures.
- B. Shop Drawings: Indicate cabinet physical dimensions and rough-in measurements for recessed cabinets.

- 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 re-certification requirements.

PART 2 - PRODUCTS

2.1 FIRE EXTINGUISHERS

- A. Cosmic 5X Class ABC dry chemical fire extinguisher as manufactured by J.L. Industries, Inc. or equal.

2.2 FIRE EXTINGUISHER CABINETS

- A. Clear V4 semi-recessed fire extinguisher cabinet #1526F25 with Fire-FX 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.

2.3 ACCESSORIES

- A. Extinguisher Brackets: Formed steel, chrome-plated.
- B. Graphic Identification: Manufacturer's standard and as acceptable to code officials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify rough openings for cabinet are correctly sized and located.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install cabinets plumb and level in wall openings, 36 inches from finished floor to inside bottom of cabinet.
- C. Secure rigidly in place.
- D. Place extinguishers and accessories in cabinets.
- E. Position cabinet signage at location integral with cabinet.

END OF SECTION 10523

SECTION 10550 - POSTAL SPECIALTIES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Front-loading interior mailboxes.

1.2 RELATED SECTIONS

- A. Section 055000 - Metal Fabrications: Metal anchors.
- B. Section 092500 - Gypsum Board.

1.3 REFERENCES

- A. USPS-STD-4C - United States Postal Service Standard 4C, Pedestal-Mounted Centralized Mail Receptacles.
- B. ASTM A 591 - Specification for Steel Sheet, Electrolytic Zinc Coated, for Light Coating Mass Applications.
- C. ASTM A 653 - Specification For Steel Sheet, Zinc Coated (Galvanized), or Zinc-Iron Alloy Coated (Galvannealed) by the Hot Dip Process.
- D. ASTM A 666 - Specification for Austenitic Stainless Steel Sheet, Strip, Plate and Flat Bar.
- E. ASTM A 1008 - Specification for Steel, Sheet Cold-Rolled, Carbon, Structural High Strength Low-Alloy and High Strength Low-Alloy with Improved Formability.
- F. ASTM B 209 - Specification Aluminum and Aluminum Alloy Sheet and Plate.
- G. ASTM B 221 - Specification Aluminum and Aluminum Alloy Extruded Bar, Rods, Wire, Shapes, and Tubes.

1.4 SUBMITTALS

- A. Submit under provisions of Section 013000.
- B. Product Data: Provide manufacturer's standard catalog data for specified products.
- C. Shop Drawings: Prepared specifically for this project; show dimensions of mail boxes, wall cuts, and interface with other products.
- D. Other informational submittals: Final USPS local postmaster approval for installed postal specialties to be served by USPS.

1.5 REGULATORY REQUIREMENTS

- 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.

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.

DIVISION 10- CONTINUED

1.8 WARRANTY

- A. Manufacturer's standard warranty to repair or replace components of postal specialties that fail in materials or workmanship within five years from date of purchase.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Florence Manufacturing Company, 5935 Corporate Drive, Manhattan, KS 66503; ASD, Tel: (785)323-4400, Tel: (800)275-1747, Fax: (800)275-5081. Email: sales@auth-florence.com. Web: www.florencemailboxes.com.
- B. Substitutions: Must be submitted four days prior to bids being due for approval.

2.2 WALL-MOUNTED CENTRALIZED MAIL RECEPTACLES (MAILBOXES)

- A. USPS Approved Front-Loading Mail Boxes: Horizontal style complying with USPS STD 4C and the following:
 - 1. Model: Series 4C by Florence Manufacturing.
 - a. Module: 4C06D-5X-P.
 - b. Mounting: Pedestal mounted.
 - 3. Locks: USPS-1172 910A, 3 keys each lock.
 - 4. Box Identification: Top to bottom, left to right.
 - a. Numerical ID Tags
 - b. Engraved identifier
 - c. Engraved identifier with black fill.
 - d. Numerical order.
 - e. Alphabetical order.
 - 5. Material and Finish: Aluminum with powder coat finish.
 - a. Finish: Selected from manufacturer's standard powder coat colors.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that openings in wall are correctly located, aligned, and sized for mailboxes.
- B. Installer's Examination:
 - 1. Examine conditions under which construction activities of this section are to be performed; submit written notification if such conditions are unacceptable.
 - 2. Beginning installation indicates acceptance of conditions.

3.2 INSTALLATION

- A. Install mail boxes in accordance with shop drawings and manufacturer's printed installation instructions.
- B. Align, plumb, and level; anchor in accordance with manufacturer's requirements.

3.3 ADJUSTING

- A. Adjust doors and locks to operate correctly.

3.4 CLEANING

- A. Clean surfaces with mild dish detergent. Do not use harsh abrasive cleaners. Lubricate locks with graphite type lubricants only.

3.5 PROTECTION OF INSTALLED PRODUCTS

- A. Protect finishes from damage by construction activities.

END OF SECTION 10550

SECTION 10731 - PREFABRICATED ALUMINUM CANOPIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Design and installation of extruded aluminum walkway covers and canopies.

1.2 RELATED WORK

- A. Concrete
- B. Sealants

1.3 REFERENCES

- A. The Aluminum Association- Aluminum Design Manual 2010
- B. American Welding Society- AWS D1.2/D1.2M: 2008

1.4 SUBMITTALS

- A. Manufacturers brochures, manuals and literature.
- B. Shop drawings of the complete canopy layout, includes sections and details specific to project and bearing the seal of a registered structural engineer.
- C. Samples of canopy finishes.

1.5 QUALITY ASSURANCE

- A. Canopy shall be designed to comply with local building codes.
- B. Canopy manufacturer shall have a minimum of 10 years' experience in designing and installing the specified system.
- C. The installation of the canopy shall be performed by the manufacturer to assure single source responsibility.

PART 2 PRODUCTS

2.1 MANUFACTURER

- AVADEK Walkway Covers and Canopies
9201 Winkler Dr
Houston, TX 77017
Phone: (713)944-0988 Fax: (713) 944-5815
Website: www.avadek.com

2.2 MATERIALS

- A. All components shall be 6063; 6061 or 6005 alloy extruded aluminum.
- B. Components shall be sized to comply with live load and wind load requirements of the project and shall not be less than the dimensions shown on the plan.
- C. The thickness of the aluminum deck panels shall be at least .080" thick.
- D. All columns shall have radius corners.
- E. Beams are open at top to drain canopy system internally into columns.
- F. Flashing shall be .040" thick.
- G. All bolts and fasteners shall be stainless steel or finished to match adjacent components and sized by canopy engineer.

2.3 FINISHES

- A. The finish and color of all extruded aluminum canopy components shall be clear anodized.

PART 3 EXECUTION

3.1 FABRICATION

- A. All welding shall be in compliance with AWS 1.2. The certification of each welder shall be available to verify compliance.
- B. Canopy shall be designed to drain through beams to columns with water tight connections.

DIVISION 10- CONTINUED

3.2 INSTALLATION

- A. Install the canopy in strict accordance with the manufacturer's recommendations.
- B. Erect canopy after concrete and masonry work in vicinity is completed and washed down.
- C. Install columns and beams straight and true.
- D. Install rain caps over draining sections of the deck.
- E. The general contractor shall finish the concrete around the columns to assure a uniform quality of workmanship and appearance with the adjacent surrounding concrete work.
- F. Fill downspout columns with grout to the discharge level to prevent standing water.
- G. Install flashing as required.
- H. Care shall be taken to prevent damage or scratching during installation.
- I. Thoroughly clean canopy after installation.

END OF SECTION 10731

SECTION 10801 - TOILET ACCESSORIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.

PART 2 - PRODUCTS

- A. Refer to Toilet Accessory Schedule on Drawings, Sheet A4.3.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. 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.
 - 1. Install grab bars to withstand a downward load of at least 250 lbf (1112 N), when tested according to method is ASTM F 446.
- B. 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

- A. Electric traction passenger elevators.

1.2 RELATED SECTIONS

- A. Section 015000 – Temporary Facilities and Controls: Protection of floor openings and personnel barriers; temporary power and lighting.
- B. Section 033000 – Cast-in-Place Concrete: Elevator pits.
- C. Section 036000 – Grouts (Grouting): Grouting door frames and sills.
- D. Section 042000 – Masonry Units (Unit Masonry): Setting sleeves, inserts, and anchoring devices in masonry for guide-rail brackets.
- E. Section 051200 – Metal Stairs Structural Steel (Structural Steel Framing): Support steel, divider beams, and hoist beams.

- F. Section 055000 – Gypsum Metal Fabrications: Pit ladders, supports for entrances in drywall hoistways.
- G. Section 061053 – Miscellaneous Rough Carpentry: Temporary platform assembly.

- H. Section 071600 – Cementitious Waterproofing: Waterproofing of elevator pit.
- I. Section 092900 – Gypsum Board: Hoistway walls.

- J. Section 099000 – Paints and Coatings (Painting and Coating): Field painting of elevator entrances over primer.

- K. Section 283100 – Detection and Alarm (Fire Detection and Alarm): Heat, smoke, and products of combustion sensing devices, fire alarm signal lines to contacts in machine space.

- L. Section 230000 – Heating, Ventilating, and Air Conditioning Equipment (Heating, Ventilating, and Air-Conditioning (HVAC)): Heating, cooling, and ventilation of control and machinery space.

- M. Section 260500 – Wiring Methods (Common Work Results for Electrical): Light outlets, convenience outlets, light switches, and conduits.

- N. Section 262400 – Switchboards, Panelboards, and Control Centers (Switchboards and Panelboards): Disconnect switches.

- O. Section 265000 – Lighting: Light fixtures.

- P. Section 214290 – Sump Pumps: For sump pumps, sumps, and sump covers in elevator pits.

- Q. Section 271500 – Communications Horizontal Cabling: For Telephone service for elevators and for Internet connection to elevator controllers for remote monitoring.

- R. Section 273000 – Telephone and Intercommunication Equipment (Voice Communications): Telephone outlets and elevator telephones.

- S. Section 31000 – Earthwork: Excavation of elevator pit.

1.3 REFERENCES

- A. ANSI/ASME A17.1/CAN/CSA B44 – Safety Code for Elevators and Escalators.
- B. ADAAG – Americans with Disabilities Act Accessibility Guidelines.
- C. ANSI/NFPA 70 – National Electrical Code.
- D. ANSI/NFPA 80 – Fire Doors and Windows.
- E. ANSI/UL 10B – Fire Tests of Door Assemblies.
- F. CAN/CSA C22.1 – Canadian Electrical Code.
- G. Model and Local Building CodesH. ISO 9001: 2000 - Quality Management Systems - Requirements.

DIVISION 14 - CONTINUED

1.4 DESIGN REQUIREMENTS

- A. 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.

- B. Where permitted by code, provide all elevator equipment including controls, drives, transformers, and rescue features within the elevator hoistway.

1.5 SUBMITTALS

- A. Comply with Section 013300 (01 33 00) – Submittal Procedures.
- B. Product Data: Submit manufacturer/installer's product data, including, 1. Descriptive brochures or detail drawings of car and hall fixtures, cab ceilings, and product features.
- 2. Power Information: Horsepower, starting current, running current, machine and control heat release, and electrical requirements.
- C. 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, 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.
- E. Operation and Maintenance Manual: Submit manufacturer/installer's operation and maintenance manual; including operation, maintenance, adjustment, and cleaning instructions; trouble shooting guide; renewal parts catalogs; and electrical wiring diagrams.
- F. Warranty: Submit manufacturer/installer's standard warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer/Installer's Qualifications: Specialize in manufacturing and installing elevator equipment, with a minimum of 10 years successful experience.
- B. Regulatory Requirements:
 - 1. Elevator design, clearances, construction, workmanship, materials, and installation, unless specified otherwise, shall be in accordance with ANSI/ASME A17.1, handicap accessibility, Americans with Disabilities Act, and other codes having legal jurisdiction.
 - 2. ANSI/ASME A17.1 shall govern, except where codes having legal jurisdiction include more rigid requirements or conflict with ANSI/ASME A17.1.
 - 3. 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.
 - 4. 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.
- C. Pre-installation Meeting:
 - 1. Convene pre-installation meeting before start of installation of elevators.
 - 2. Require attendance of parties directly affecting work of this section, including Contractor, Architect, and elevator manufacturer/installer.
 - 3. Review examination, installation, field quality control, adjusting, cleaning, protection, and coordination with other work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer/installer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer/installer.
- B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer/installer's instructions.
- C. Handling: Protect materials during handling and installation to prevent damage.

1.8 PROJECT CONDITIONS

- A. Temporary Electrical Power:
 - 1. Owner will arrange for temporary 220 VAC, single-phase, 60 Hz., GFCI-protected electricity to be available for installation of elevator components.
 - 2. Comply with Section 015100 – Temporary Utilities.
- B. Installation of the Elevator:
 - 1. General Contractor will provide permanent three-phase power prior to installation start.
 - 2. General Contractor will provide clear, rollable access to a 20' x 10' secure and dry storage area prior to delivery.
 - 3. General Contractor will provide a clean, dry, and complete hoistway along with temporary installation platform and all required OSHA-compliant barricades prior to delivery.
- C. Temporary Use of Elevator:
 - 1. Owner will negotiate with manufacturer/installer for temporary use of elevator, if required.
 - 2. Temporary use of elevator shall be in accordance with terms and conditions of manufacturer/installer's temporary acceptance form.

1.9 SCHEDULING

- A. Coordinate elevator work with work of other trades, for proper time and sequence to avoid construction delays.

1.10 WARRANTY

- A. 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.

1.11 MAINTENANCE SERVICE

- A. Elevator maintenance service shall be performed by elevator manufacturer/installer.
- B. 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 operation, except parts that require replacement because of accidents, vandalism, misuse, or negligence by parties other than manufacturer/installer.
- D. Manufacturer/installer shall perform all Work, except emergency minor adjustment call-back service, during regular working hours. Manufacturer/installer shall provide emergency minor adjustment call-back service, during regular working hours.
- E. Should Owner request that examinations, cleaning, lubrication, adjustments, 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.
- F. Elevator Control System:
 - 1. 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.
 - 2. Remote Monitoring Device: Transmit information on current status of elevators, including malfunctions, system errors, and shutdown.

DIVISION 14 - CONTINUED

2.2 PRODUCTS

2.1 MANUFACTURER/INSTALLER

- A. Schindler Elevator Corporation, Website www.us.schindler.com.

- B. Elevator shall be installed by elevator manufacturer.

2.2 ELEVATOR SYSTEM AND COMPONENTS

- A. Electric Traction Passenger Elevators: Basis of design is the Schindler 3300 XL Gearless Traction Elevator.
- B. Elevator Equipment Summary:
 - 1. Application: Machine Room Less (MRL)
 - 2. Counterweight Location: Side
 - 3. Machine Location: Top of the hoistway mounted on car and counterweight guide rails
 - 4. Control Space Location: Top landing entrance frame or entrance frame at one floor below the top landing
 - 5. Service: Hospital/service Aia
 - 6. Quantity: 1 Unit
 - 7. Capacity: 5000 lbs
 - 8. Speed: 200 fpm
 - 9. Travel: 16' 0"
 - 10. Landings: 2
 - 11. Front Openings: 2
 - 12. Rear Openings: 0
 - 13. Rear Door Hand: N/A
 - 14. Operation: Microprocessor Single Car Automatic Operation
 - 15. Clear Inside Dimensions: 5' 8-7/8" Wide X 9' 1/4" Deep
 - 16. Cab Height: 8' 0"
 - 17. Guide Rails: Equivalent to 12 lb. per foot
 - 18. Entrance Type and Width: Two Speed Side Opening 4' 0" Wide X 7' 0" High doors
 - 19. Entrance Height: 7'-0"
 - 20. Power Supply: 208 Volts 3 Phase 60 Hz
- C. Performance:
 - 1. Car Speed: -10% to +5% of contract speed under any loading condition or direction of travel.
 - 2. Car Capacity: Safely lower, stop and hold up to 125% of rated load per code.
- D. Ride Quality:
 - 1. Vertical Vibration (maximum): 25 mg
 - 2. Horizontal Vibration (maximum): 15 mg
 - 3. Vertical Jerk (maximum): 2 ft/sec³
 - 4. Acceleration (maximum): 1.6 ft/sec²
 - 5. In Car Noise: 53-60 dBA
 - 6. Stopping Accuracy: ±5mm
 - 7. Starts per hour (maximum): 180
- E. Elevator Operation:
 - 1. Simplex Collective Operation: Using a microprocessor based controller, operation shall be automatic by means of the car and hall buttons. When all calls have been answered, the car shall park at the last landing served.
 - 2. Group Automatic Operation with Demand-Based Dispatching: Provide reprogrammable group automatic system that assigns cars to hall calls based on a dispatching algorithm designed to minimize passenger waiting time.

- F. Operating Features - Standard:
 - 1. Door Light Curtain Protection
 - 2. Static AC Drive
 - 3. Phase Monitor Relay
 - 4. Cab Overload with Indicator
 - 5. Load-weighing
 - 6. Central Alarm
 - 7. Remote Monitoring
 - 8. Firefighter's Operation
 - 9. Automatic Evacuation
 - a. When the main line power is lost for longer than 5 seconds the emergency battery power supply provides power automatically to the elevator controller. If the car is at a floor when the power fails, it remains at that floor, opens its doors, and shuts down. If the car is between floors, it is raised or lowered to the first available landing, opens its doors, and shuts down.
 - 10. Independent Service
 - G. Operating Features - Optional:

- F. Operating Features - Standard:
 - 1. Door Light Curtain Protection
 - 2. Static AC Drive
 - 3. Phase Monitor Relay
 - 4. Cab Overload with Indicator
 - 5. Load-weighing
 - 6. Central Alarm
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 - 10. Independent Service
 - G. Operating Features - Optional:

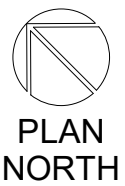
- F. Operating Features - Standard:
 - 1. Door Light Curtain Protection
 - 2. Static AC Drive
 - 3. Phase Monitor Relay
 - 4. Cab Overload with Indicator
 - 5. Load-weighing
 - 6. Central Alarm
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 - 10. Independent Service
 - G. Operating Features - Optional:

2.3 EQUIPMENT: CONTROL COMPONENTS AND CONTROL SPACE

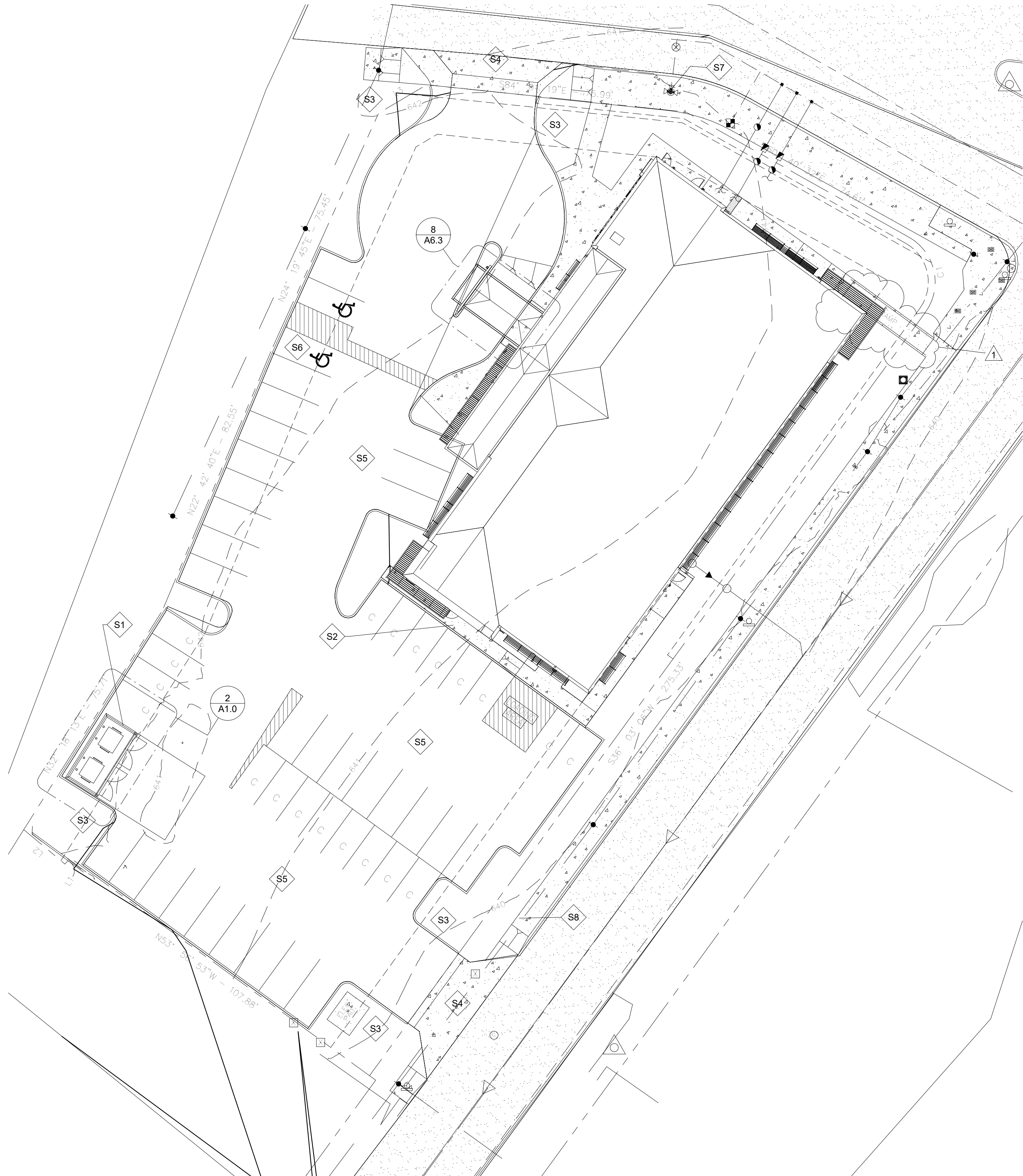
- A. Controller: Provide microprocessor based control system to perform all of the functions of safe elevator operation, as well as perform car and group operational control.
 - 1. All high voltage (110v or above) contact points inside the inspection and test panel shall be protected from accidental contact in a situation where the access panels are open.
 - 2. The controller shall be distributed throughout the elevator system located in the overhead, cab and inspection and test panel. The inverter will be mounted in the overhead adjacent to the hoist machine and an inspection and test panel will be located in the door jamb at the top floor or one floor below the top floor. No elevator equipment mechanical rooms or closets are required.
 - 3. Provide multi-bus control architecture to reduce cabling, material and waste.
- B. Drive: Provide a Variable Voltage Variable Frequency AC Closed Loop drive system. Provide stable start without high peak current, quickly reaching a low energy consumption level.
- C. Inspection and Test Panel: Integrated control equipment, main inspection and test panel in door frame at top level served or at one floor below the top level served.

2.4 EQUIPMENT: HOISTWAY COMPONENTS

- A. Machine:
 - 1. Gearless asynchronous AC motor with integral drive sheave, service and emergency brakes
 - 2. Design machine to enable direct power transfer, thereby avoiding loss of power.
 - 3. Design machine to be compact, lightweight and durable to optimize material usage and save space.
 - 4. Mount to structural support channels on top of guide rail system as applicable in hoistway overhead.
- B. Governor:
 - 1. Tension type over-speed governor with remote manual reset.
 - 2. Mount to structural support channels as applicable in hoistway overhead.
- C. Buffers, Car and Counterweight: Compression spring type buffers to meet code.
- D. Hoistway Operating Devices:
 - 1. Emergency Stop switch in the pit.
 - 2. Terminal stopping switches.
 - 3. Emergency stop switch on the machine.
- E. Positioning System: System consisting of proximity sensors and door zone vanes.
- F. Guide Rails and Attachments: Provide Tee-section steel rails with brackets and fasteners. Side counterweight arrangements shall have a dual purpose bracket that combines both counterweight guide rails, and one of



1 SITE PLAN
1" = 20'-0"

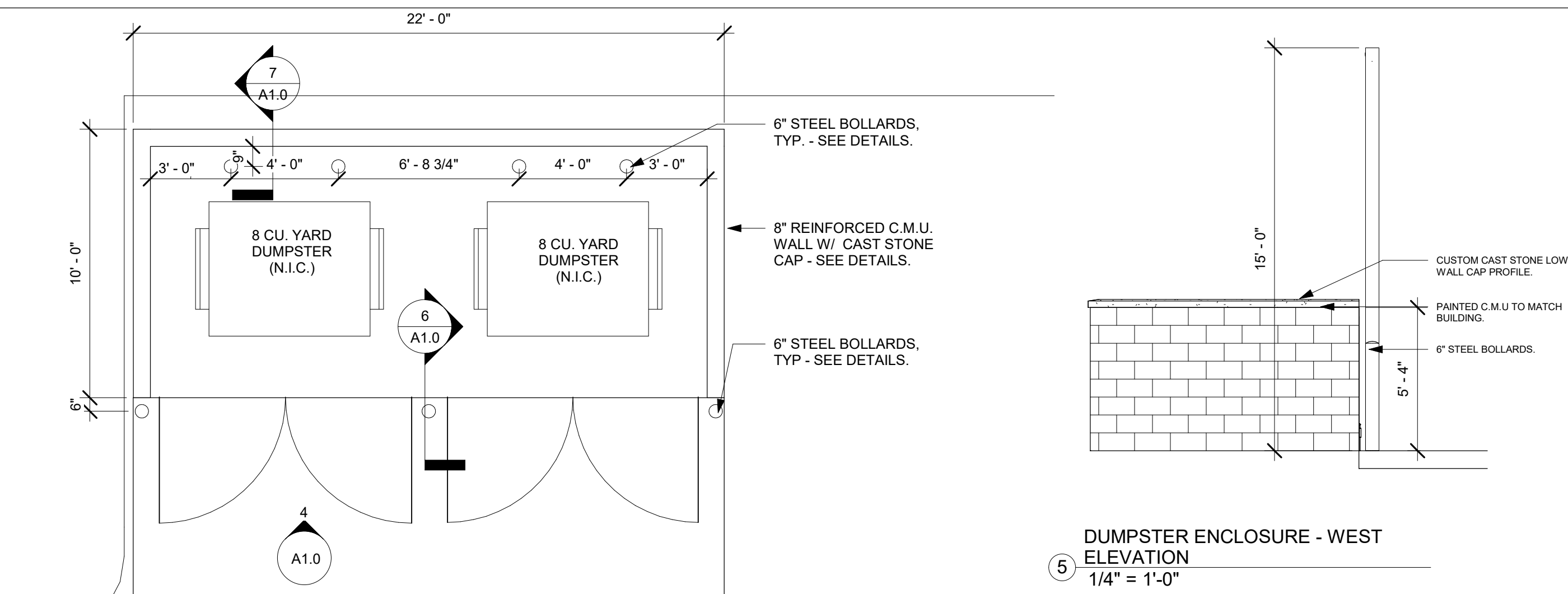


SITE PLAN KEYNOTES

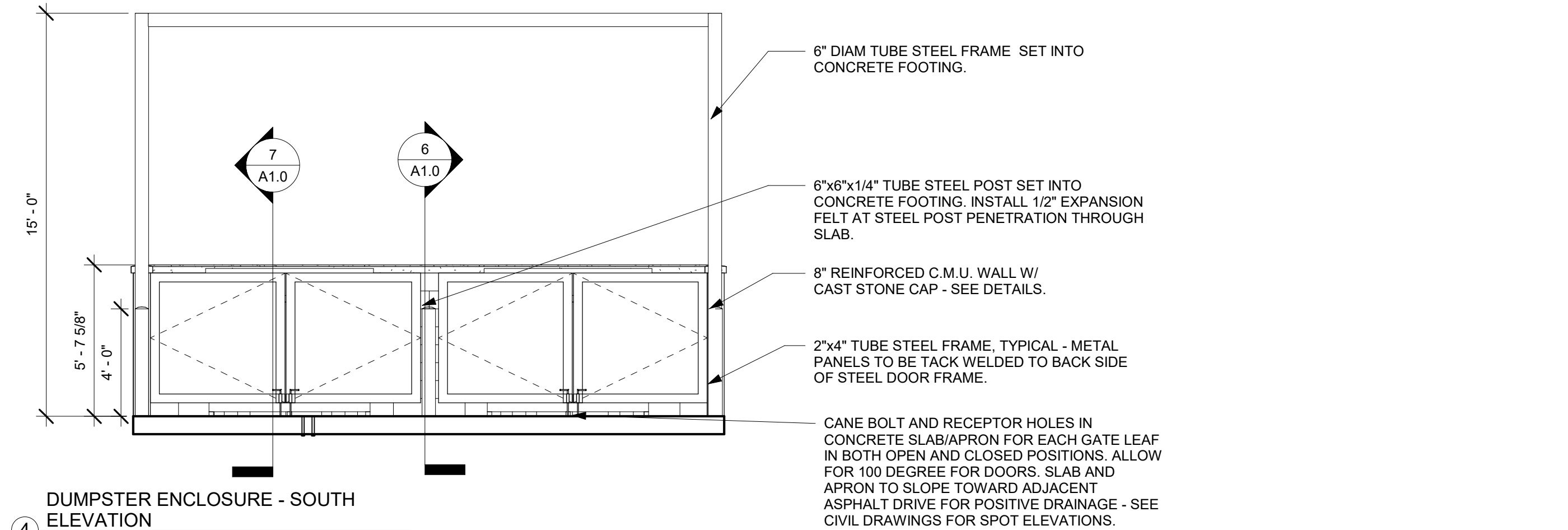
- S1 DUMPSTER ENCLOSURE. REFER TO A1.1 FOR ADDITIONAL INFORMATION.
- S2 CONCRETE SIDEWALK. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
- S3 REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING LOCATIONS.
- S4 NEW CURB CUT FOR NEW DRIVEWAY. REFER TO CIVIL DRAWINGS.
- S5 NEW ASPHALT PAVING AND PARKING STRIPING. REFER TO CIVIL DRAWINGS.
- S6 ADA PARKING W/ CONCRETE PARKING STOP AND ACCESSIBLE CLEARANCE STRIPING. REFER TO CIVIL DRAWINGS.
- S7 EXISTING FIRE HYDRANT. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
- S8 STORM WATER GRATE AND/OR DRAIN. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.

SITE PLAN GENERAL NOTES:

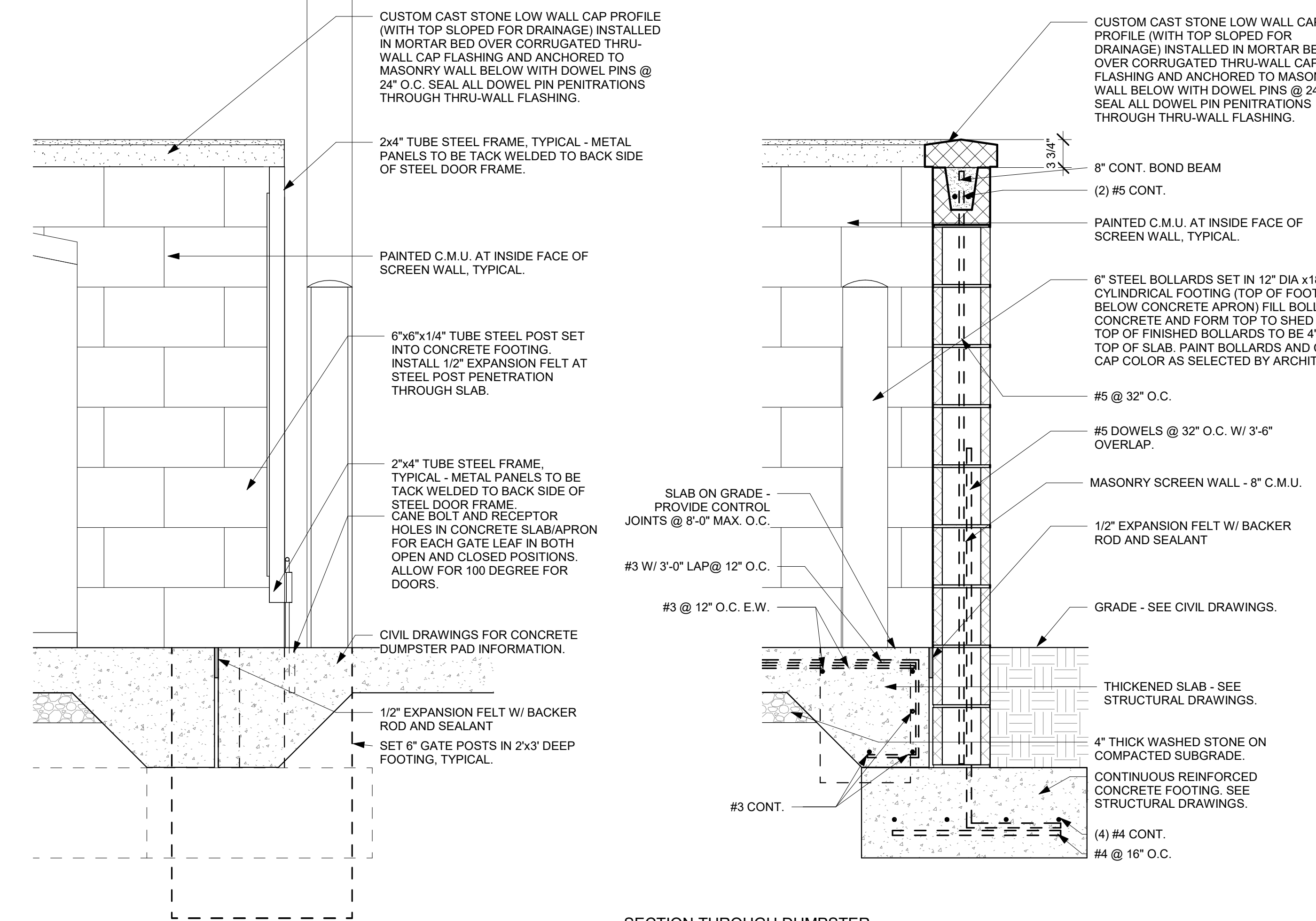
- A. ALL DEBRIS AND MATERIALS TO BE REMOVED ON A REGULAR BASIS
- B. PROTECT EXISTING LANDSCAPING AND ITEMS TO REMAIN AS REQUIRED DURING CONSTRUCTION.
- C. REFER TO GENERAL NOTES, SHEET A0.8, AND BALANCE OF DRAWINGS FOR ADDITIONAL INFORMATION.



2 ENLARGED PLAN - DUMPSTER ENCLOSURE
1/4" = 1'-0"



4 DUMPSTER ENCLOSURE - SOUTH ELEVATION
1/4" = 1'-0"



6 SECTION THROUGH DUMPSTER GATE
1" = 1'-0"

7 SECTION THROUGH DUMPSTER SCREEN WALL
1" = 1'-0"



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Laredo Medical Office
Building Shell

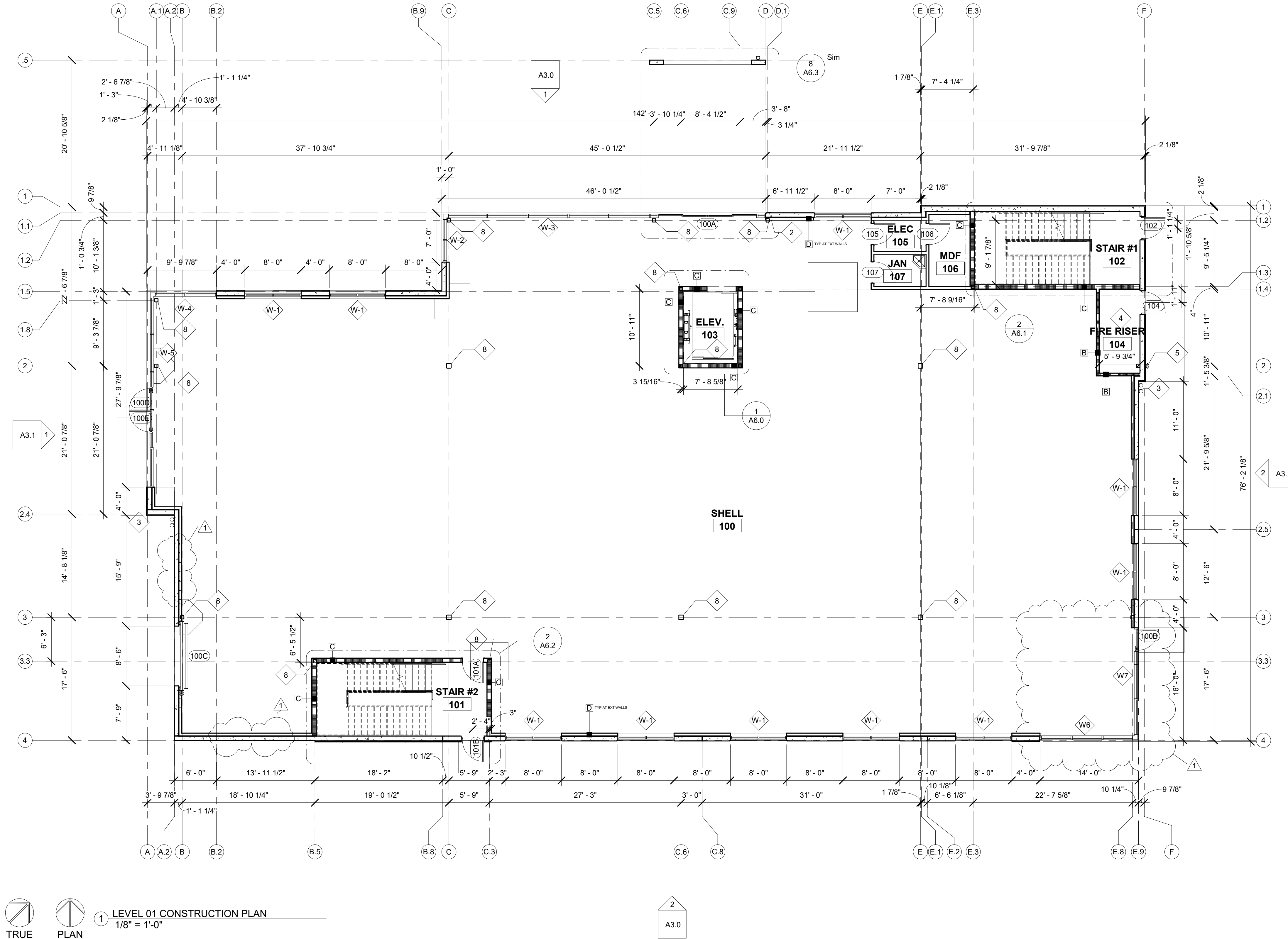
915 SOUTH LAREDO
SAN ANTONIO, TX 78204

No.	Description	Date
1	Revision 1	04/23/2018

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

SITE PLAN & DETAILS

A1.0



CONSTRUCTION PLAN GENERAL NOTES:

- A. WALL CONSTRUCTION:
- a. ALL WALLS TO BE WALL TYPE "A" UNLESS OTHERWISE NOTED. REFER TO 2 / A5.0 FOR TYPES.
- b. ALL DIMENSIONS TO FACE OF GYP. UNLESS OTHERWISE NOTED ON PLANS.
- B. CONTRACTOR TO PROVIDE FINISHED GWB AND INSULATION AT ALL PARTITIONS AS REQUIRED.
- C. CONTRACTOR TO PROVIDE SEMI RECESSED FIRE EXTINGUISHERS AS 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

1. EDGE OF CANOPY. REFER TO WALL SECTIONS FOR MORE INFORMATION.
2. PROVIDE CITY OF SAN ANTONIO APPROVED FIRE DEPARTMENT KNOX BOX AT FRONT ENTRY AND FIRE RISER ROOM.
3. LOCATIONS OF DOWNSPOUT AND/OR OVERFLOW, REFER TO EXTERIOR ELEVATIONS AND BUILDING SECTIONS FOR ADDITIONAL INFORMATION.
4. FIRE RISER EQUIPMENT. REFER TO MEP FOR ADDITIONAL INFORMATION.
5. FIRE DEPARTMENT CONNECTION. REFER TO PLUMBING AND CIVIL FOR ADDITIONAL INFORMATION.
8. STRUCTURAL COLUMN, TYP. REFER TO STRUCTURAL

CONSTRUCTION PLAN LEGEND

- NEW WALLS
- 1-HOUR FIRE RATED ASSEMBLY

LEVEL 1 ROOM FINISH SCHEDULE							
NO.	ROOM NAME	FLOOR	BASE	NORTH	SOUTH	EAST	WEST
100	SHELL	--	--	--	--	--	--
101	STAIR #2	SC-1	--	P-1	P-1	P-1	P-1
102	STAIR #1	SC-1	--	P-1	P-1	P-1	P-1
103	ELEV.	SC-1	--	--	--	--	--
104	FIRE RISER	SC-1	B-1	P-2	P-2	P-2	P-2
105	ELEC	SC-1	B-1	P-1	P-1	P-1	P-1
106	MDF	SC-1	B-1	P-1	P-1	P-1	P-1
107	JAN	SC-1	B-1	P-2	P-2	P-2	P-2

ROOM FINISH NOTES	
1.	TRANSITION OF DIFFERING FLOORING MATERIALS BETWEEN ROOMS TO OCCUR AT THE CENTER OF THE DOOR FRAME.
2.	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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4/28/19

Laredo Medical Office

Building Shell

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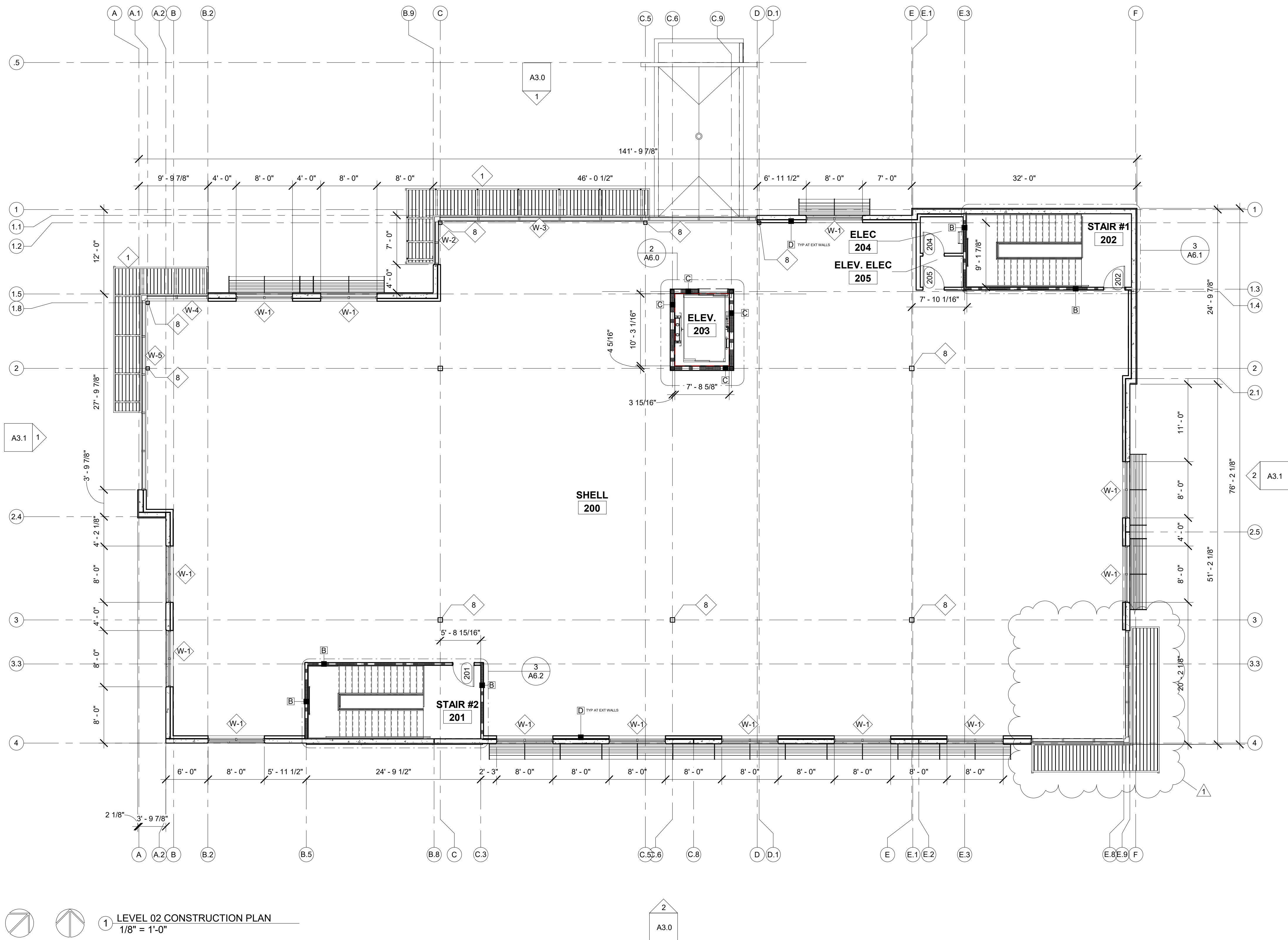
No.	Description	Date
1	Revision 1	04/23/2018

PROJECT NO.: 17163

PROJECT MGR: LP

ASSISTED BY: MR/NA

DATE: 04/23/2018



CONSTRUCTION PLAN GENERAL NOTES:

- WALL CONSTRUCTION:
 - ALL WALLS TO BE WALL TYPE "A" UNLESS OTHERWISE NOTED. REFER TO 2 / A5.0 FOR TYPES.
 - 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 REQUIRED BY LOCAL CODES. COORDINATE LOCATIONS WITH OWNER AND FIRE MARSHALL.
- INSTALL MOISTURE RESISTANT BACKING BOARD AS SPECIFIED AT ALL WET WALL LOCATIONS SUCH AS TOILETS, JANITOR'S CLOSETS, DRINKING FOUNTAINS, ETC.
- 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

LEVEL 2 ROOM FINISH SCHEDULE								
NO.	ROOM NAME	FLOOR	BASE	NORTH	SOUTH	EAST	WEST	NOTES
200	SHELL	--	--	--	--	--	--	
201	STAIR #2	SC-1	B-1	P-1	P-1	P-1	P-1	
202	STAIR #1	SC-1	B-1	P-1	P-1	P-1	P-1	
203	ELEV.	--	--	--	--	--	--	
204	ELEC	SC-1	B-1	P-1	P-1	P-1	P-1	
205	ELEV. ELEC		ROOM FINISH NOTES					
1. TRANSITION OF DIFFERING FLOORING MATERIALS BETWEEN ROOMS TO OCCUR AT THE CENTER OF THE DOOR FRAME.								
2. 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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SECOND FLOOR PLAN

A2.1



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. 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	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 STRUCTURES, RAILING	TBD
	CURTAIN WALL & STOREFRONT WINDOW SYSTEM	CLEAR ANODIZED ALUMINUM

ELASTOMERIC SEALANT COLORS

BETWEEN ADJACENT CLEAR ALUMINUM SURFACES	ALUMINUM
BETWEEN ALUMINUM AND ROCK	ROCK
BETWEEN TILT AND ROCK	TBD

EXTERIOR FINISH MATERIAL NOTES:

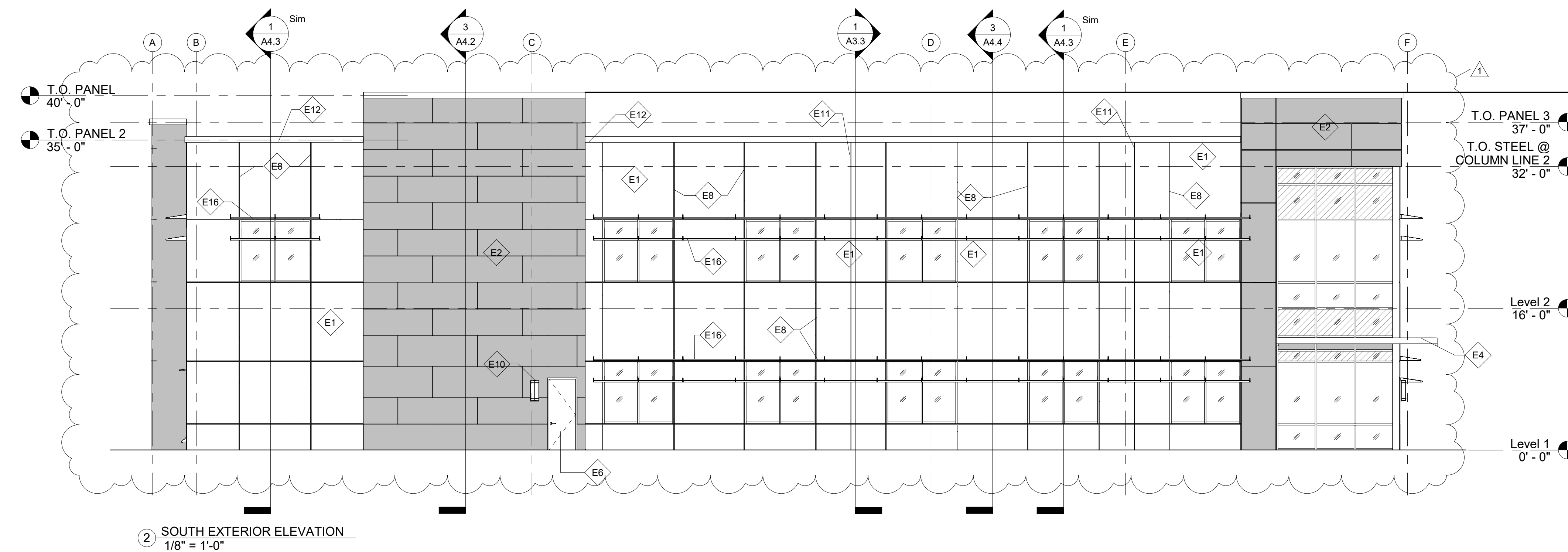
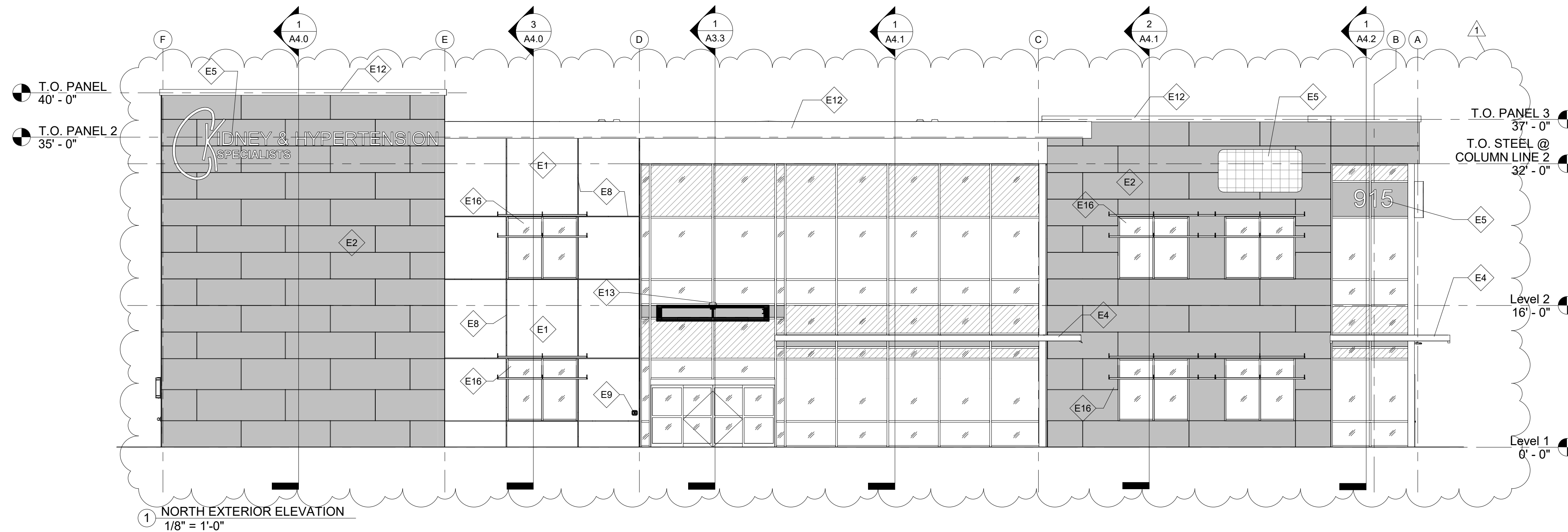
- A. CONTRACTOR TO PROVIDE MOCK-UP OF EXTERIOR FINISHES & PAINT COLORS FOR REVIEW AND APPROVAL BY OWNER & ARCHITECT. REFER TO SPECIFICATIONS FOR MOCKUP REQUIREMENTS.

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EXTERIOR ELEVATIONS

A3.0





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DATE:	04/23/2018

A3.1

- 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

- 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.
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- E13 OVERFLOW DRAIN OUTLET. RE:MEP.
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CODE	ITEM	DESCRIPTION
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EPT-2	PAINT - STEEL CANOPY STRUCTURES, RAILING	TBD
	CURTAIN WALL & STOREFRONT WINDOW SYSTEM	CLEAR ANODIZED ALUMINUM

BETWEEN ADJACENT CLEAR ALUMINUM SURFACES	ALUMINUM
BETWEEN ALUMINUM AND ROCK	ROCK
BETWEEN TILT AND ROCK	TBD

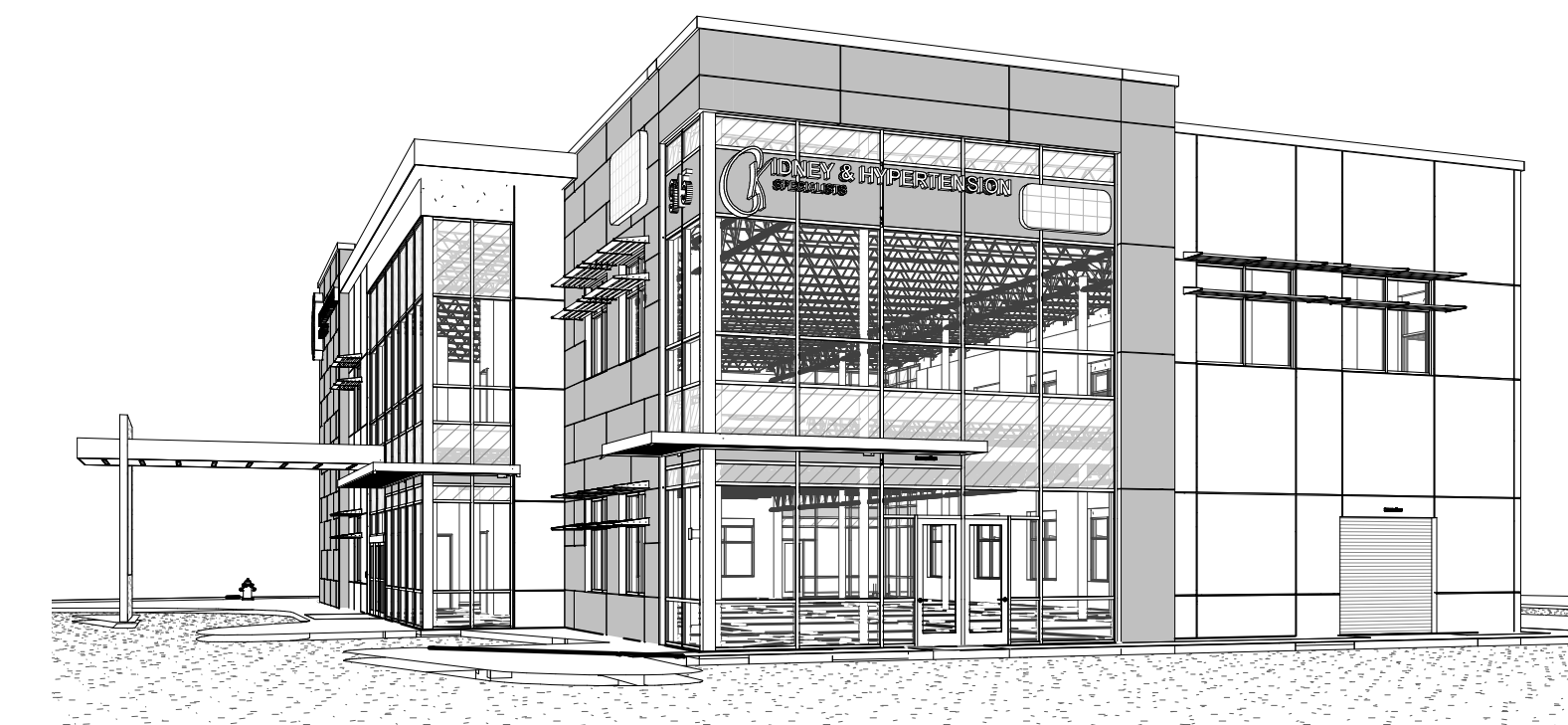
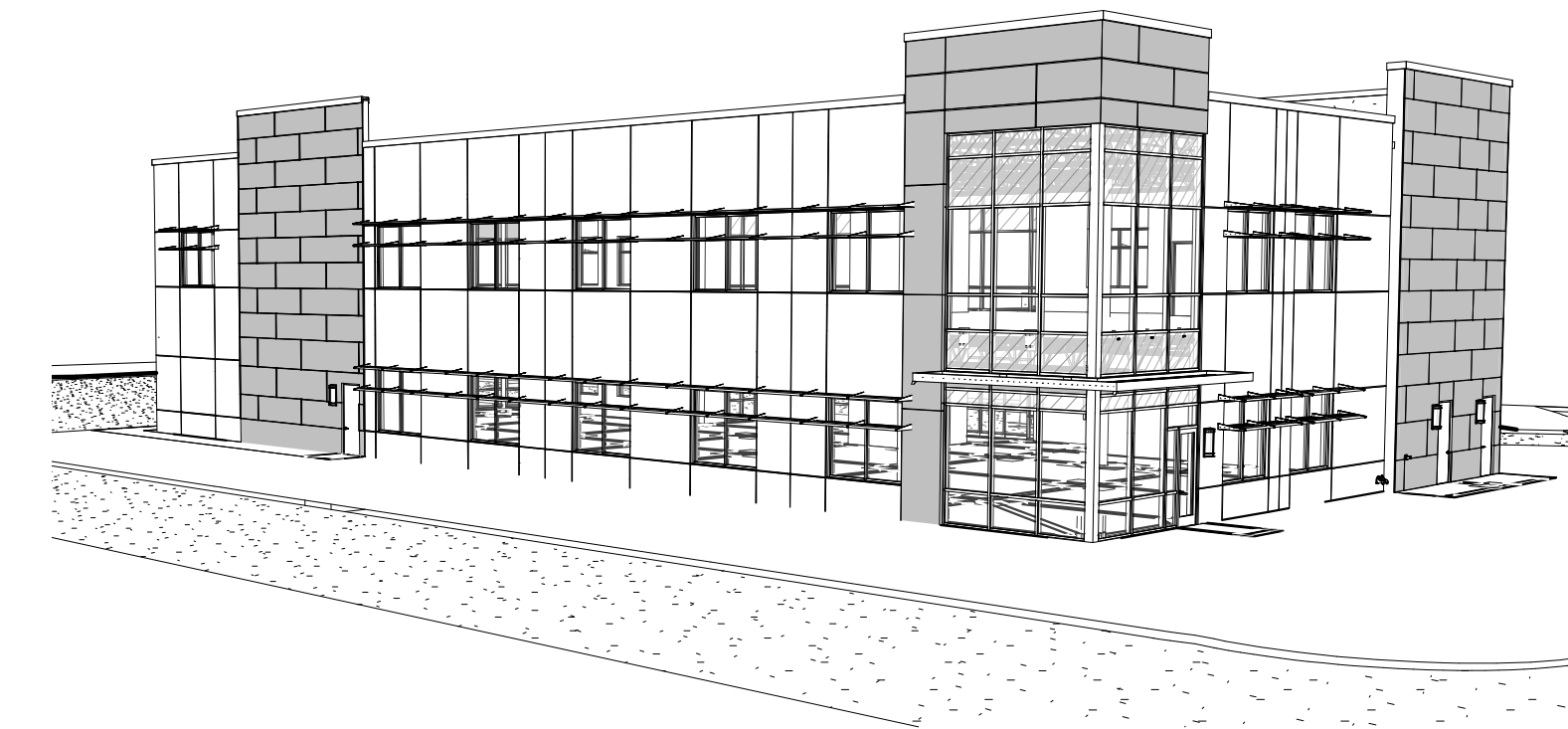
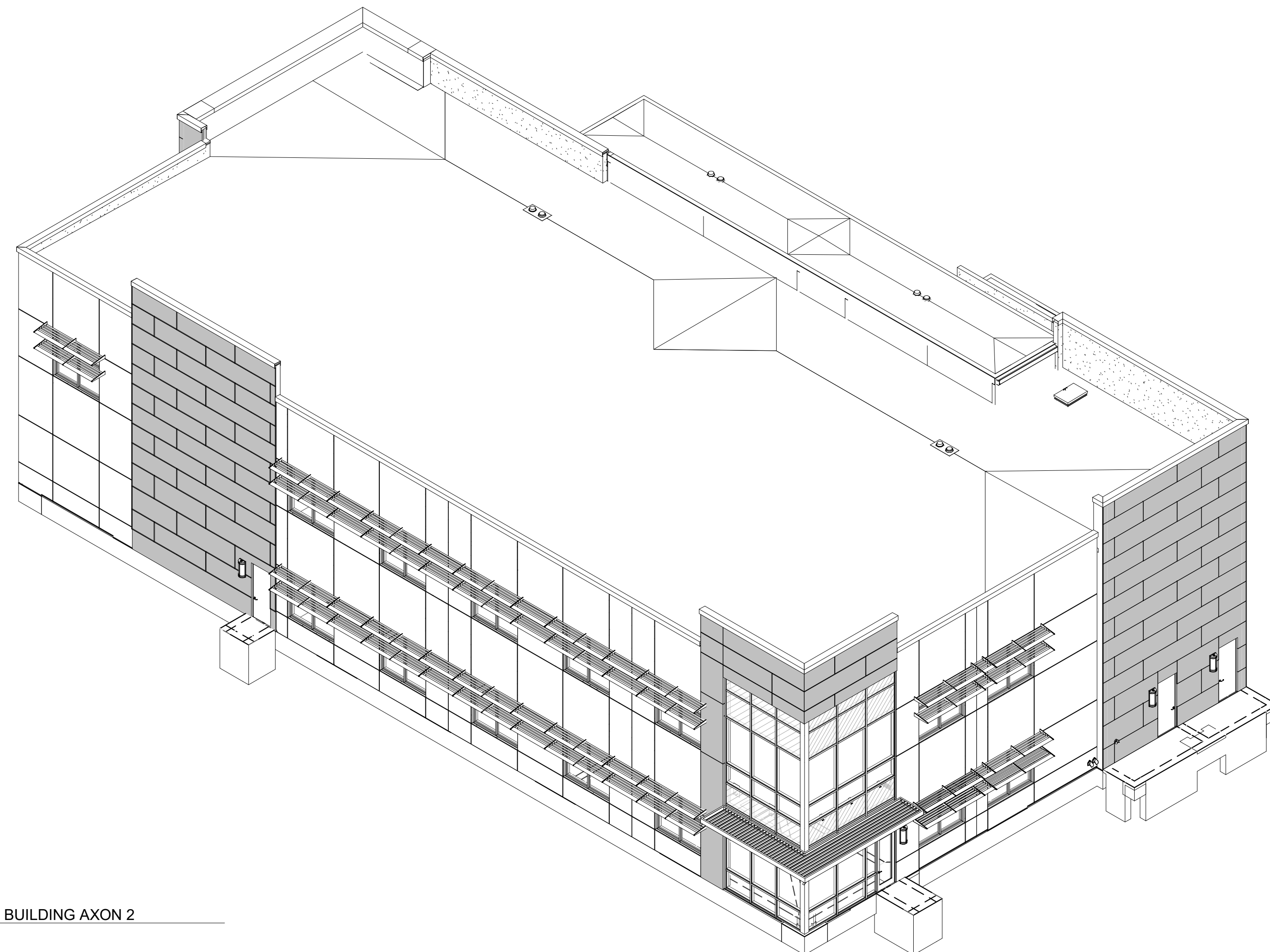
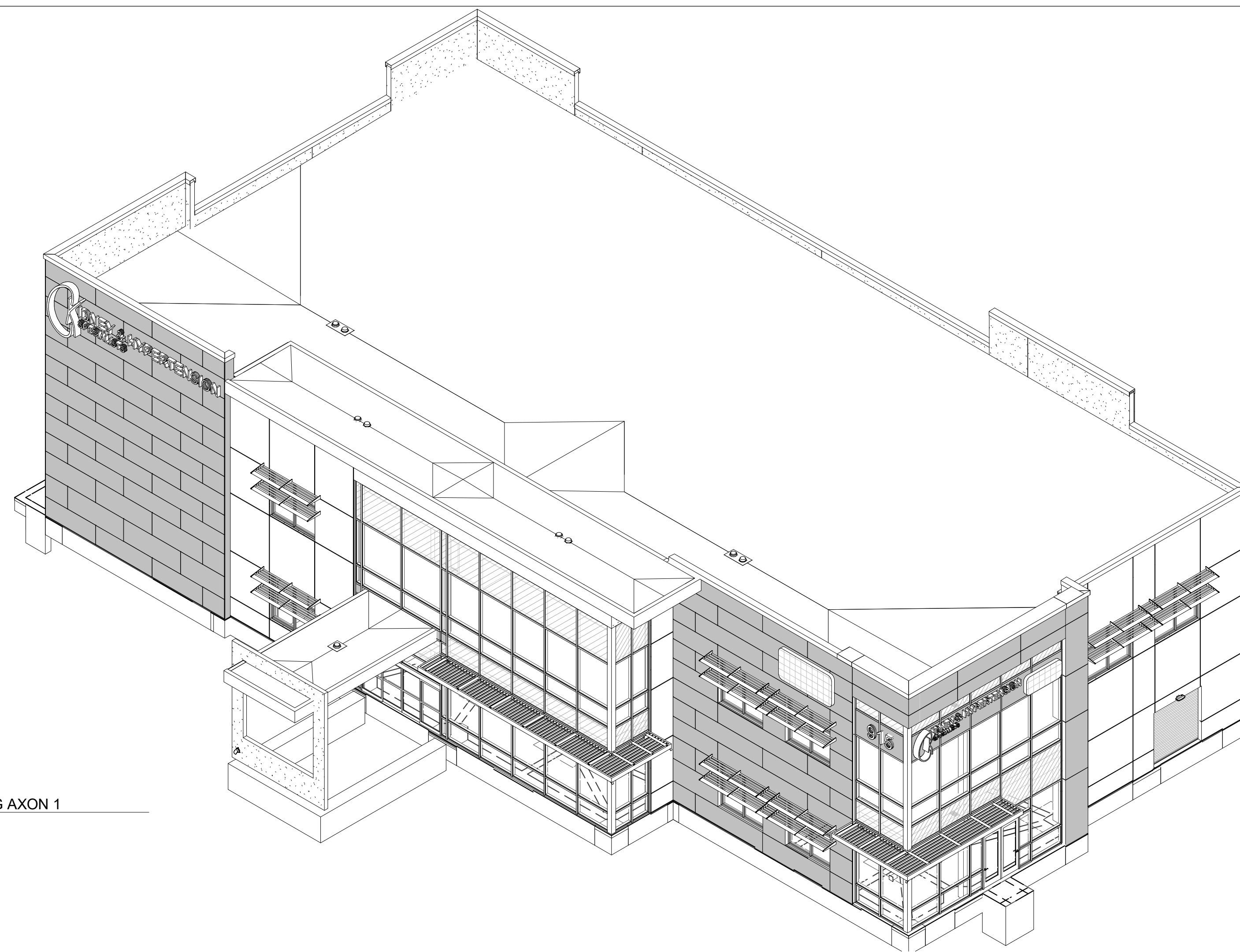
A. CONTRACTOR TO PROVIDE MOCK-UP OF EXTERIOR FINISHES & PAINT COLORS FOR REVIEW AND APPROVAL BY OWNER & ARCHITECT. REFER TO SPECIFICATIONS FOR MOCKUP REQUIREMENTS.

This architectural section drawing illustrates a building facade with various structural and material details. The drawing includes the following elements:

- Grid Lines:** Vertical grid lines are labeled 1, 2, 3, and 4. Horizontal grid lines are labeled 1 and 2.
- Structural Elements:**
 - T.O. PANEL 3:** 37' - 0"
 - T.O. PANEL 2:** 35' - 0"
 - T.O. STEEL @ COLUMN LINE 2:** 32' - 0"
 - Level 2:** 16' - 0"
 - Level 1:** 0' - 0"
- Window and Door Patterns:**
 - Window Patterns:** Indicated by diagonal hatching and labels E1, E2, E3, E4, E5, E6, E7, E8, E12, E13, E14, E15, E16.
 - Door Pattern:** Indicated by a cross-hatch pattern and label E1.
- Material and Construction Details:**
 - Concrete:** Shaded areas represent concrete walls and slabs.
 - Steel:** Indicated by a grid pattern, specifically at the top and bottom of the facade.
 - Insulation:** Indicated by a wavy pattern, primarily in the upper section.
 - Other Details:** Labels E1, E2, E3, E4, E5, E6, E7, E8, E12, E13, E14, E15, E16 are used to identify specific structural or material elements.

This architectural section drawing illustrates the structural and window layout of a building facade. The drawing is oriented with a north arrow pointing towards the top right. Key features include:

- Structural Elements:** The facade is divided into two main vertical sections. The left section features a grid of windows, with some areas shaded to indicate specific materials or construction. The right section is a solid wall with a horizontal band of windows. Structural columns are indicated by vertical lines, and various structural details are labeled with diamond-shaped callouts (E1 through E16).
- Window Placements:** Windows are shown as rectangular openings. Some windows are shaded, while others are left white. The drawing includes labels for window types and sizes, such as "1 A4.4", "2 A4.3", "2 A3.3", and "1 A4.0".
- Level Markers:** The drawing includes horizontal lines indicating different levels:
 - T.O. PANEL 2 35' - 0"**: Top of Panel 2 at 35 feet 0 inches.
 - T.O. STEEL @ COLUMN LINE 2 32' - 0"**: Top of Steel at Column Line 2 at 32 feet 0 inches.
 - Level 2 16' - 0"**: Level 2 at 16 feet 0 inches.
 - Level 1 0' - 0"**: Level 1 at 0 feet 0 inches.
- Callouts and Labels:** Various callouts are used throughout the drawing to identify specific elements:
 - E1 through E16**: Diamond-shaped callouts indicating structural details or window types.
 - Sim**: Labels indicating symmetrical sections.
 - 1 A4.4, 2 A4.3, 2 A3.3, 1 A4.0**: Labels for window types and sizes.



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BUILDING AXONS & 3D VIEWS

A3.2