STRUCTURAL ENGINEERING	M.E.P. ENGINEERING		CIVIL ENGINEERING
ASE ENGINEERING SERVICES, INC. STRUCTURAL DESIGN GROUP 10244 East Colonial Drive, Suite 202 Orlando, Florida 32817 – 407-677-5565 Fax 407-730-2999 Certificate of Authorization No. 25873 Misheng Xie P.E. Florida No. 51161	STOFFER & ASSOCIATES INC. CONSULTING ENGINEERS 10381 Hart Branch Circle Orlando, Florida 32832– (407) 381-4555 FAX (407) 249-1520 CA #26069 Randall D. Stoffer, P.E. # 37367	# KADMAR PLAZA ORLANDO , FLORIDA	FLORIDA ENGINEERING GROUP INC. CONSULTING ENGINEERS 5127 S.Orange Avenue, Suite 200 Orlando, Florida 32809– (407) 895-8324 FAX (407) 895-0325 CERTIFICATE #EB-0006595 Sam J. Sabaali, P.E. # 42075

GENERAL NOTES:

TENANT IS REQUIRED TO MAKE A FIELD SURVEY OF THE EXISTING ELECTRICAL SERVICE AND IS RESPONSIBLE FOR MAKING ANY AND/OR ALL MODIFICATIONS REQUIRED TO ENSURE THAT THE TOTAL CONNECTION LOAD DOES NOT EXCEED THE ELECTRICAL SERVICE.

APPROVAL OF TENANT'S CONSTRUCTION DOCUMENTS AND SPECIFICATIONS BY THE LANDLORD DOES NOT RELEASE THE TENANT OR THE TENANT'S CONTRACTOR FROM COMPLYING WITH THE LEASE AGREEMENT AND ALL APPLICABLE BUILDING CODES AND GOVERNING REGULATIONS.

NOTHING IS PERMITTED TO BE ATTACHED TO, SUSPENDED FROM, OR PENETRATE THE ROOF DECK ABOVE. YOU ARE REQUIRED TO FRAME, BRACE, AND/OR SUSPEND, AS NEEDED, TO/FROM THE TOP CHORD OF JOISTS OR STRUCTURAL STEEL WHICH EXISTS ABOVE YOU RESPECTIVE TENANT SPACE.

THE TENANT SHALL BE RESPONSIBLE FOR VERIFYING THAT THESE REMODEL/CONSTRUCTION DOCUMENTS MEET ALL A.D.A. STANDARDS OR REQUIREMENTS.

PLEASE NOTE: ANY ITEM SCHEDULED TO BE REUSED MUST BE REFURBISHED AND MAINTAINED TO A "LIKE NEW" CONDITION. NO EXCEPTIONS

1. ALL WORK SHALL CONFORM TO THE FOLLOWING:
   FLORIDA BUILDING CODE SIXTH EDITION (2017), BUILDING
   FLORIDA BUILDING CODE SIXTH EDITION (2017), FUEL GAS
   FLORIDA BUILDING CODE SIXTH EDITION (2017), MECHANICAL
   FLORIDA BUILDING CODE SIXTH EDITION (2017), PLUMBING
   2017 FLORIDA FIRE PREVENTION CODE
   2014 NATIONAL ELECTRIC CODE
   FLORIDA BUILDING CODE SIXTH EDITION (2017), ACCESSIBILITY CODE.
   FLORIDA BUILDING CODE SIXTH EDITION (2017), ENERGY CONSERVATION
2. SUBCONTRACTORS SHALL VERIFY ALL CONDITIONS, DETAILS AND DIMENSIONS BEFORE PROCEEDING WITH THE WORK AND SHALL BE NOTIFIED OF ANY DISCREPANCIES.
3. DO NOT SCALE DRAWINGS.
4. ALL WORK IN QUESTION INCLUDING MATERIALS, FINISHES AND COLORS SHALL BE COORDINATED WITH THE PROJECT MANAGER.
5. SPRINKLER CONTRACTOR SHALL VERIFY EXISTING LAYOUT AND SUBMIT PROPOSAL OF WORK REQUIRED TO MEET CODE.
6. MECHANICAL AND ELECTRICAL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR SUBMITTING DRAWINGS AND OBTAINING THEIR RESPECTIVE PERMITS.
7. TENANT TO CERTIFY THAT NO ASBESTOS CONTAINING MATERIAL HAS BEEN USED FOR CONSTRUCTION OF THIS PREMISES.
8. ALL INTERIOR WALL AND CEILING FINISHES SHALL COMPLY WITH NFPA 101, SECTION 10.2.3 AND TABLE 803.5 OF FBC 2010.

SHELL PERMIT ONLY - INTERIOR BUILDOUT WILL BE PERMITTED SEPARATELY AT A LATER DATE

OCCUPANCY - M (MERCANTILE), SHELL ONLY
CONSTRUCTION TYPE - II-B, FULLY SPRINKLERED
MIN. INT. FINISH CLASS - "B"

FBC SIXTH EDITION (2017) - TABLE 601 - FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS

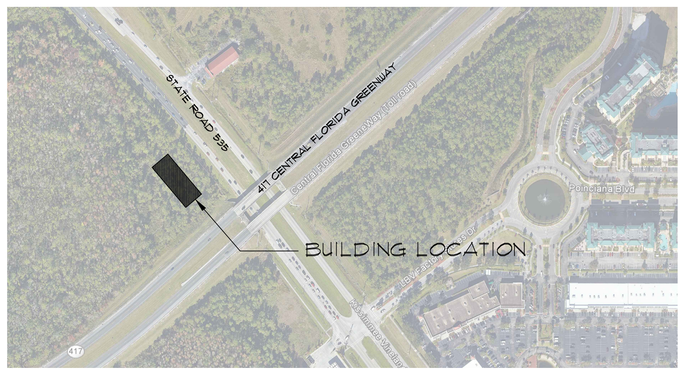
CONSTRUCTION TYPE II-B	
PRIMARY STRUCTURAL FRAME	0HR
BEARING WALLS	
EXTERIOR	0HR
INTERIOR	0HR
NONBEARING WALLS AND PARTITONS	0HR
FLOOR CONSTRUCTION	0HR
ROOF CONSTRUCTION	0HR

NOTE:
NEW DOORS AND WINDOWS HAVE BEEN DESIGNED TO MEET OR EXCEED THE REQUIREMENTS OF SEC. 1609 OF THE FLORIDA BUILDING CODE SIXTH EDITION (2017).

1. RISK CATEGORY = II
2. NOMINAL DESIGN WIND SPEED = 124
3. ULTIMATE DESIGN WIND SPEED = 160
4. WIND IMPORTANCE FACTOR = 1.0
5. WIND EXPOSURE = CATEGORY 'C'

TABULAR INFORMATION

CONDITIONED AREA	14,948 SQ FT
COVERED ENTRANCE	1,926 SQ FT
SPRINKLER ROOM	24 SQ FT
TOTAL AREA UNDER ROOF	16,898 SQ FT



LOCATION PLAN

NORTH

INDEX OF DRAWINGS

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	GN02	GENERAL NOTES		
	GN03	GENERAL NOTES		
	GN04	GENERAL NOTES		
	GN05	GENERAL NOTES		
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	A100	SITE PLAN		
	A101	FLOOR PLAN		
	A102	REFLECTED CEILING PLAN		
	A103	ROOF PLAN		
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	A301	SECTIONS		
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	P-3	DETAILS & NOTES		

REVISIONS: 1 2 3 4 5 6 7 8

PROJECT NO. 1736180B-01

DATE 07/09/2019

COVER SHEET

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO , FLORIDA

AA26002490
RABITS & ROMANO ARCHITECTURE PLANNING AND DESIGN
5127 SOUTH ORANGE AVE.
SUITE 110 ORLANDO , FL. 32809
TEL - 407-490-0350
FAX - 407-232-6090
info@rabits-architect.com
www.rabits-architect.com

SIGN/SEAL

DATE

SHEET
CS
OF
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Table of Contents

SECTION 02361 - TERMITE CONTROL

PART I - GENERAL

1.1 SUMMARY
A. This Section includes soil treatment for termite control.

1.2 SUBMITTALS
A. Product Data: For each product indicated, including EPA-Registered Label.
B. Product certificates.

1.3 QUALITY ASSURANCE
A. Applicator Qualifications: A pest control operator who is licensed according to regulations of authorities having jurisdiction to apply termite control treatment in jurisdiction where Project is located.
B. Regulatory Requirements: Formulate and apply termiticides, and label with a Federal registration number, to comply with EPA regulations and authorities having jurisdiction.

1.4 WARRANTY
A. Soil Termiticide Special Warranty: Manufacturer's standard form, signed by applicator and Contractor, certifying that applied soil termiticide treatment will prevent infestation of subterranean termites. If subterranean termite activity or damage is discovered within 5 years from date of Substantial Completion, retreat the soil and repair or replace damage caused by termite infestation.

PART 2 -PRODUCTS

2.1 TERMITE CONTROL
A. Soil Treatment: 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.
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
a. AgrEvo Environmental Health, Inc.; a company of Hoechst and Schering, Berlin.
b. Bayer Corp.; Garden & Professional Care.
c. DowElanco.

PART 3 - EXECUTION

3.1 SOIL TREATMENT APPLICATION
A. Apply soil treatment at the label volume and rate for the maximum termiticide concentration allowed for each specific use, according to the product's EPA-Registered Label.
1. Mix termiticide solution to a uniform consistency.
2. Apply to produce a continuous horizontal and vertical termiticidal barrier or treated zone around and under building constructions. Distribute the treatment evenly.
3. Slabs-on-Grade and Basement Slabs: Under ground-supported slab construction, including footings, building slabs, and attached slabs as an overall treatment. Treat soil materials before concrete footings and slabs are placed.
4. Foundations: Adjacent soil including soil along entire inside perimeter of foundation walls, along both sides of interior partition walls, around pipes and electric conduit penetrating slab, and around interior column footers, piers, and chimney bases; and along entire outside perimeter, from grade to bottom of footing. Avoid soil washout around footings.
5. Crawlspaces: Soil under and adjacent to foundations. Treat adjacent areas including around entrance platform, porches, and equipment bases. Apply overall treatment only where attached concrete platform and porches are on fill or ground.
6. Masonry: Treat voids.
7. Penetrations: At expansion joints, control joints, and areas where slabs will be penetrated.
B. Avoid disturbance of treated soil after application. Keep off treated areas until completely dry.
C. Protect termiticide solution, dispersed in treated soils and fills, from being diluted until ground-supported slabs are installed. Use waterproof barrier according to EPA-Registered Label instructions.
D. Post warning signs in areas of application.
E. Reapply soil treatment solution to areas disturbed by subsequent excavation, grading, landscaping, or other construction activities following application.

END OF SECTION 02361

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY
A. This Section includes cast-in-place concrete, including reinforcement, concrete materials, mix design, placement procedures, and finishes.

1.2 SUBMITTALS
A. Product Data: For each manufactured material and product indicated.
B. Design Mixes: For each concrete mix indicated.
C. Shop Drawings: Include details of steel reinforcement placement including material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports.
D. Material test reports.

1.3 QUALITY ASSURANCE
A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.
B. Comply with ACI 301, "Specification for Structural Concrete," including the following, unless modified by the requirements of the Contract Documents.
1. General requirements, including submittals, quality assurance, acceptance of structure, and protection of in-place concrete.
2. Formwork and form accessories.
3. Steel reinforcement and supports.
4. Concrete mixtures.
5. Handling, placing, and constructing concrete.

PART 2 - PRODUCTS

2.1 MATERIALS
A. Formwork: Furnish formwork and form accessories according to ACI 301.
B. Steel Reinforcement:
1. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
2. Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
C. Concrete Materials:
1. Portland Cement: ASTM C 150, Type I.
2. Normal-Weight Aggregate: ASTM C 33, uniformly graded, not exceeding 1/4-inch nominal size.
3. Lightweight Aggregate: ASTM C 330.
4. Water: Complying with ASTM C 94.
D. Admixtures:
1. Air-Entraining Admixture: ASTM C 260.
2. Water-Reducing Admixture: ASTM C 494, Types A, D, F or G. If "F", see 2.2A.
E. Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils thick.
FPreformed Joint-Filler: ASTM D 1751, asphalt-saturated cellulosic fiber.
G. Curing Materials:
1. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
2. Moisture-Retaining Cover: ASTM C 171, polyethylene film.
3. Water: Potable.
4. Clear, Solvent-Borne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.

2.2 CONCRETE MIXES
A. Comply with ACI 301 requirements for concrete mixtures.
B. Prepare design mixes, proportioned according to ACI 301, for normal-weight concrete determined by either laboratory trial mix or field test data bases, as follows:
1. Compressive Strength (28 Days).
2. Slump: 4 inches.

PART 3 -EXECUTION

3.1 INSTALLATION, GENERAL
A. Formwork: Design, construct, erect, shore, brace, and maintain formwork according to ACI 301.
B. Vapor Retarder: Install, protect, and repair vapor-retarder sheets according to ASTM E 1643; place sheets in position with longest dimension parallel with direction of pour.
1. Lap joints 6 inches and seal with manufacturer's recommended tape.
C. Steel Reinforcement: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
D. Joints: Construct joints true to line with faces perpendicular to surface plane of concrete.
1. Construction Joints: Locate and install so as not to impair strength or appearance of concrete, at locations indicated or as approved by Architect.
2. Isolation Joints: Install preformed joint filler at junctions with slabs-on-grade and vertical surfaces, Such as column pedestals, foundation walls, grade beams, and other locations, to full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
3. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
a. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
E. Tolerances: Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials.

3.2 CONCRETE PLACEMENT
A. Comply with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete. Consolidate concrete with mechanical vibrating equipment.

3.3 FINISHING FORMED SURFACES
A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and Defective areas repaired and patched, and fins and other projections exceeding 1/4 inch in height rubbed Down or chipped off.
1. Apply to concrete surfaces not exposed to public view.
B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Completely remove fins and other projections.
1. Apply to concrete surfaces exposed to public view or to be covered with a coating or covering material applied directly to concrete, such as waterproofing, damp proofing, veneer plaster, or painting.
2. Apply grout-cleaned finish, defined in ACI 301, to smooth-formed finished concrete.
A. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.4 FINISHING UNFORMED SURFACES
A. General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on the surface.
C. Scratch Finish: Apply scratch finish to surfaces to receive concrete floor topping or mortar setting beds for ceramic or quarry tile, portland cement terrazzo, and other bonded cementitious floor finish, unless otherwise indicated.
D. Float Finish: Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.
E. Trowel Finish: Apply a hard trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin film-finish coating system.
F. Nonslip Broom Finish: Apply a nonslip broom finish to surfaces indicated and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

3.5 CONCRETE PROTECTION AND CURING
A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection, and follow recommendations in ACI 305R for hot-weather protection during curing.
B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions occur before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
C. Begin curing after finishing concrete, but not before free water has disappeared from concrete surface.
D. Cure formed and unformed concrete for at least seven days as follows:
1. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.6 FIELD QUALITY CONTROL
A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement. Tests will be performed according to ACI 301.
1. Testing Frequency: One composite sample for each day's pour of each concrete mix exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.

END OF SECTION 03300

SECTION 04810 - UNIT MASONRY ASSEMBLIES

PART - 1 GENERAL

1.1 SUMMARY
A. This Section includes unit masonry assemblies consisting of the following:
1. Integral color split-face concrete masonry units with integral water repellant.

1.2 SUBMITTALS
A. Product Data: For each masonry unit, accessory, and other manufactured product indicated.
B. Samples: Showing the full range of a,1urs and textures available for exposed masonry units and colored mortars.
C. Material Test Reports: For each type of masonry unit, mortar, and grout required.

1.3 PROJECT CONDITIONS
A. Cold-Weather Requirements: Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements in ACI 530.1.
B. Hot-Weather Requirements: When ambient temperature exceeds 100 deg F, or 90 deg F with a wind velocity greater than 8 mph, do not spread mortar beds more than 48 inches ahead of masonry. Set masonry units within one minute of spreading mortar.

PART 2 - PRODUCTS

2.1 COLORS AND TEXTURES
A. Exposed Masonry Units: As selected from manufacturer's full range.

2.2 MASONRY UNITS
A. Concrete Masonry Units: ASTM C 90.
1. Unit Compressive Strength: 1900-psi minimum, average net-area compressive strength.
2. Weight Classification: Normal weight.
3. Type: II, nonmoisture-controlled units.
4. Exposed Faces of Decorative Units: Normal-weight aggregate, split-face finish
5. Special Shapes: Provide for lintels, corners, jambs, sash, control joints, headers, bonding, and other special conditions.
6. Water Repellant Admixture: In addition to other constituants previously established as suitable for use in concrete masonry conforming to ASTM standards, all units shall be manufactured with an integral water repellant admixture. The integral water repellant admixture shall be certified, by the admixture manufacturer, with the wall showing no visible water when tested in accordance with ASTM E514-90.
7. Manufacturers: Subject to compliance with requirements, provide concrete masonry units from the following:
a. Demaco.

2.3 MORTAR AND GROUT MATERIALS
A. Portland Cement: ASTM C 150. Type I. except Type III may be used for cold-weather construction.
B. Hydrated Lime. ASTMC 207,type S
C. Mortar Cement ASTMC 1329
1. Products:
a. Blue Circle Cement; Magnolia Superbond Mortar Cement.
b. Lafarge Corporation; Lafarge Mortar Cement.
D. Masonry Cement: ASTM C 91.
E. Pigmented Mortar: Colored cement or cement-lime formulation as required to produce the color indicated.
1. Colored Masonry Cement:
a. Products:
1) Blue Circle Cement; Magnolia Masonry Cement.
2) Essroc Materials, Inc.; Brixment-in-Color.
3) Holnam, Inc.; Rainbow Mortamix Custom Color Masonry Cement.
F. Aggregate for Mortar: ASTM C 144; except for joints less than 1/4 inch thick, use aggregate graded with100 percent passing the No. 16 sieve.
G. Aggregate for Grout: ASTM C 404.
H. Water: Potable.

2.4 REINFORCING
A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M; ASTM A 616/A 616M, including Supplement 1; or ASTM A 617/A 617M, Grade 60.
B. Masonry Joint Reinforcement: ASTM A 951; mill galvanized, carbon-steel wire for interior walls and hot-dip galvanized, carbon-steel wire for exterior walls.
1. Single-Wythe Masonry: Use either ladder or truss type with single pair of side rods and cross rods spaced not more than 16 inches o.c.
C. Adjustable Anchors for Connecting to Steel Frame: Two-piece assemblies that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to wall.
1. Anchor section Crimped 1/4-inch diameter, galvanized steel wire anchor section for welding steel.
2. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch of masonry face, made from 0.1875-inch-diameter, galvanized steel wire.
D. Anchors for Connecting to Concrete: Provide two-piece assemblies that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to wall.
1. Anchor Section: Dovetail anchor section formed from 0.0528-inch- thick, galvanized steel sheet
2. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch of masonry face, made from 0. 1875-inch-diameter, galvanized steel wire.

2.5 MISCELLANEOUS MASONRY ACCESSORIES
A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible to 35 percent; formulated from neoprene.
B. Preformed Control-Joint Gaskets: Designed to fit standard sash block and to maintain lateral stability masonry wall. Made from styrene-butadiene-rubber compound complying with ASTM D 2000, Designation M2AA-805.
C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type (No. 15 asphalt felt).

2.6 MASONRY CLEANERS
A. Job-Mixed Detergent Solution: Solution of 1/2-cup dry measure tetrasodium polyphosphate and 1/2-c dry measure laundry detergent dissolved in I gal. of water.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL
A. Cut masonry units with motor-driven saws. Allow units cut with water-cooled saws to dry before placing, unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
B. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
C. Comply with tolerances in ACI 530.1/ASCE 6/TMS 602 and the following:
1. For conspicuous vertical and horizontal lines, such as external corners, door jambs, reveals, a expansion and control joints, do not vary from plumb by more than 1/4 inch in 20 feet, nor 1/2 in maximum.

3.2 LAYING MASONRY WALLS
A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses a for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half size units, particularly at corners, jambs, and, where possible, at other locations.
B. Bond Pattern for Exposed Masonry: Lay exposed masonry in bond pattern indicated; do not use units with less than nominal 4-inch horizontal face dimensions' at corners or jambs
C. Fill cores in hollow concrete masonry units with grout 24 inches under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

3.3 MORTAR BEDDING AND JOINTING
A. Lay hollow masonry units as follows:
1. With full mortar coverage on horizontal and vertical face shells.
2. Bed webs in mortar in starting course on footings and in all courses of piers, columns, and pilasters, and where adjacent to cells or cavities td be filled with grout.
3. For starting course on footings where dells are not grouted, spread out full mortar bed, including areas under cells.
B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than the joint thickness, unless otherwise indicated.

3.4 MASONRY JOINT REINFORCEMENT
A. Provide continuous masonry joint reinforcement as indicated. Install with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.
B. Provide continuity at corners and wall intersections by using prefabricated "L" and "T" sections.

3.5 ANCHORING MASONRY
A. Anchor masonry to structural members where masonry abuts or faces structural members to comply with the following:
1. Provide an open space not less than 1 inch in width between masonry and structural member, unless otherwise indicated.
2. Anchor masonry to structural members with flexible anchors embedded in masonry joints and attached to structure.

3.6 LINTELS
A. Provide masonry lintels where shown. Provide precast lintels made from concrete matching concrete masonry units in color, texture, and compressive strength and with reinforcing bars indicated or required to support loads indicated.

3.7 FIELD QUALITY CONTROL
A. Owner will engage a qualified independent testing agency to perform field quality-control testing indicated below
1. Testing Frequency- Tests and Evaluations listed in these subparagraphs will be performed during construction for each 5000 sq. ft. of wall area or portion thereof.
2. Mortar: Properties will be tested per ASTM C 780.
3. Grout: Sampled and tested for compressive strength per ASTM C 1019.

3.8 PARGING
A. Parge predampened masonry walls, where indicated, with Type S or Type N mortar applied in 2 uniform coats to a total thickness of 3/4 inch with a steel-trowel finish. Form a wash at top of parging and a cove at bottom. Damp-cure parging for at least 24 hours.

3.9 CLEANING
A. Clean unit masonry by brushing to remove mortar and smears before tooling joints , as work progresses.

END OF SECTION 04810

SECTION 06100 - ROUGH CARPENTRY

PART 1 -GENERAL

1.1 SUMMARY
A. This Section includes the following:
1. Wood blocking.
2. Wood nailers.
3. Wood sheathing.
4. Plywood backing panels.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL
A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive stained or natural finish, mark grade stamp on end or back of each piece.
3. Provide dressed lumber, S4S, unless otherwise indicated.
4. Provide dry lumber with 15 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.
B. Wood Structural Panels:
1. Plywood: DOC PS I.
2. Oriented Strand Board: DOC PS 2.

REVISIONS
1 2 3 4 5 6 7 8

PROJECT NO.
T3C51803-01

DATE
07/09/2019

GENERAL NOTES
SPECIFICATIONS

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO , FLORIDA

AA26002490

RABITS & ROMANO ARCHITECTURE
PLANNING AND DESIGN
5127 SOUTH ORANGE AVE.
SUITE 110 ORLANDO , FL. 32809
TEL - 407-690-0350
FAX - 407-232-6000
info@rabits-architect.com
www.rabits-architect.com

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2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preser□ati□e Treatment b□ Press□re Process: AWPA C2 □□mber□ and AWPA C9 □□□wood□, e□ce□t that □mber that is not in contact with The □ro□nd and is contin□o□s□□rotected from i□id water ma□be treated accordin□to AWPA C31 with inor□anic boron "S□X□.

□. A□□lication: Treat items indicated on Drawin□s, and the fo□owin□:

1. Wood cants, nai□ers, c□rbs, e□□i□ment s□□ort bases, b□c□in□, stri□□in□, and simi□r members in connection with roofin□, f□min□, □□or barriers, and water□roofin□

2. Wood si□s, s□e□ers, b□c□in□, f□rin□, stri□□in□, and simi□r concea□ed members in contact with masonr□or concrete.

3. Wood framin□members □ess than 18 inches abo□e □rade.

4. Wood f□or □□ates that are insta□ed o□er concrete s□bs direct□in contact with earth.

2.3 FIRE-RETARDANT TREATED MATERIALS

A. Genera□ Where fire-retardant-treated materia□s are indicated, □ro□ide materia□s that com□□□with □erformance re□□irements in AWPA C20 □□mber□and AWPA C27 □□□wood□.Identif□ fire-retardant-treated wood with a□ro□riate c□assification mar□in□ of UL, U.S. Testin□, Timber Prod□cts Ins□ection, or another testin□and ins□ectin□a□enc□□acce□tab□e to a□thorities ha□in□ □risdiction.

1. Use treatment for which chemica□man□fact□rer □b□ishes h□sica□ro□erties of treated wood after e□□os□re to e□e□ated tem□erat□res, when tested b□a □□a□ified inde□endent testin□a□enc□accordin□to ASTM D 5664, for item n□mber and ASTM D 5516, for □□wood.

2. Use treatment that does not □romote corrosion of meta□fasteners.

3. Use E□terior t□□e for e□terior □ocations and where indicated.

4. Use Interior T□□e A Hi□h Tem□erat□re □HT□, □n□ess otherwise indicated.

2.4 DIMENSION LUM□ER

A. Genera□ Of □rades indicated accordin□to the American L□mber Standards Committee Nationa□Gradin□R□□e □ro□isions of the □radin□a□enc□indicated.

□. Non-Load-□earin□Interior Partitions: Constr□ction, St□d, or No. 2 □rade and an□of the fo□owin□s□ecies:

1. Mi□ed so□thern □ine□SPI□

2. Eastern softwoods□NELMA

C. E□□osed Framin□: Hand se□ect materia□for □niformit□of a□□earance and freedom from characteristics that wo□d im□air finish a□□earance.

1. S□ecies and Grade: As indicated abo□e for □oad-bearin□constr□ction of same t□□e.

2. S□ecies and Grade: Hem-er or Hem-fir □north□, Se□ect Str□ct□ra□ □rade□NLGA, WCLI□, or WWPA.

3. S□ecies and Grade: So□thern □ine, Se□ect Str□ct□ra□No. 1 □rade□SPI□.

4. S□ecies and Grade: S□r□ce-□ine-fir or S□r□ce-□ine-fir □so□th□, Se□ect Str□ct□ra□No. 1 □rade□NELMA, NLGA, WCLI□, or WWPA

2.5 SHEATHING

A. P□□wood Wa□Sheathin□ E□terior, Str□ct□ra□I sheathin□

□. Pa□er-S□rfaced G□□s□m Wa□Sheathin□: ASTM C 79/C 79M, with water-resistant materia□incor□orated into core and with water-re□e□ent □er bonded to core's face, bac□, and □n□ed□es.

1. Man□fact□rers:

a. American G□□s□m Co.

b. G-P G□□s□m Cor□oration.

c. Nationa□G□□s□m Com□an□

d. United States G□□s□m Co.

2. T□□e and Thic□ness: Re□□ar, 1/2 inch and T□□e X, 5/8 inch thic□as indicated on drawin□s.

C. G□ass-Mat G□□s□m Wa□Sheathin□: ASTM C 1177/C 1177M.

1. Prod□ct: S□b ect to com□liance with re□□irements, □ro□ide "Dens-G□ass Go□d" b□ G-P G□□s□m Cor□

2. T□□e and Thic□ness: Re□□ar, 1/2 inch and T□□e X, 5/8 inch thic□as indicated on drawin□s.

D. E□tr□ded-Po□st□rene-Foam Wa□Sheathin□: ASTM C 578, T□□e IV, in man□fact□rer's standard □engths and widths with ton□□e-and-□roo□e or shi□a□□on□ed□es as standard with man□fact□rer.

1. Man□fact□rers

c. Di□ersiFoam Prod□cts.

d. Dow Chemica□Com□an□The□

e. Owens Cornin□

f. Tenneco □□i din□Prod□cts.

E. P□□wood Roof Sheathin□ E□terior sheathin□

F. Oriented-Strand-□oard Roof Sheathin□: E□□os□re 1 sheathin□

2.6 PL□WOOD □ACKING PANELS

A. Te□e□hone and E□ectrica□E□□i□ment □ac□in□Pane□s: DOC PS 1, E□□os□re 1, C-D P□□□□ed, fire-retardant treated, in thic□ness indicated or, if not indicated, not □ess than 1/2 inch thic□

2.7 MISCELLANEOUS MATERIALS

A. Fasteners:

1. Where ro□h car□entr□is e□□osed to weather, in □ro□nd contact, or in area of hi□h re□ati□e h□midit□, □ro□ide fasteners with hot-di□□inc coatin□com□□in□with ASTM A 153/A 153/M.

2. Power-Dri□en Fasteners: CA□O NER-272.

3. □o□ts: Stee□bo□ts com□□in□with ASTM A 307, Grade A□with ASTM A 563 he□n□ts and, where indicated, f□t washers. Meta□Framin□Anchors: Made from hot-di□, □inc-coated stee□sheet com□□in□with ASTM A 653/A 653M, G60 coatin□ desi□nation.

C. □□i din□Pa□er: As□ha□t-sat□rated or□anic fe□t com□□in□with ASTM D 226, T□□e I □No. 15 as□ha□t fe□t□, □n□erforated.

PART 3 -EXECUTION

3.1 INSTALLATION

A. Set ro□h car□entr□to re□□fred □e□e□s and □ines, with members □□mb, tr□e to □ine, c□t, and fitted. Fit ro□h car□entr□to other constr□ction;scribe and co□e as needed for acc□rate fit. Locate □f□rin□, nai□ers, b□c□in□, and simi□r s□□orts to com□□with re□□irements for attachin□other constr□ction.

□. A□□□fie□d treatment com□□in□with AWPA M4 to c□t s□rfaces of □reser□ati□e-treated □mber and □□wood.

C. Sec□re□attach ro□h car□entr□wor□to s□bstrate b□anchorin□and fasteni□as indicated, com□□in□with the fo□owin□

1. CA□O NER-272 for □ower-dri□en fasteners.

2. P□b□shed re□□irements of meta□framin□anchor man□fact□rer.

D. A□□□b□i din□□a□er hori□onta□□with 2-inch o□er a□□and 6-inch end a□□fasten to sheathin□with □a□ani□ed sta□□es or roofin□ nai□s. Co□er □□standin□Fashin□with 4-inch o□er a□□.

E. A□□□sheathin□ta□e to □oints between sheathin□□ane□s and at items □enetratin□sheathin□. A□□□at □□standin□Fashin□to o□er a□both f□shin□and sheathin□

END OF SECTION 06100

SECTION 06200

PRE-ENGINEERED WOOD TRUSSES:

Genera□ Pro□ide Pre-en□ineered wood tr□sses where shown. Com□□□with a□□icab□e re□□irements of NLMA's "Nationa□Desi□n S□ecifications for Stress Graded L□mber and Its Fastenin□s" and Tr□ss P□ate Instit□te's "Li□ht Meta□Connected Wood Tr□sses". See notes re□□irin□s□ecia□□is□a□□rade □mber for architect□ra□□□e□□osed areas.

Pro□ide □re-en□ineered and sho□-assembled tr□sses b□a recco□ni□ed man□fact□rer of wood tr□sses. Desi□n for the s□an, □oadin□, tr□ss sha□e and s□acin□shown. If □oads are not shown desi□n as □er □o□ernin□□□i din□Code. Fabricate in □□ant of man□fact□rer or his □icensed fabricator.

Connector P□ate Man□fact□rer's □□a□ifications: Pro□ide tr□ss connector □□ates man□fact□red b□a firm which is a member of TPI and which com□□ies with TPI □□a□it□contro□ □roced□res for man□fact□re of connector □□ates □□b□ished in TPI "□□a□it□Standard for Meta□P□ate Connected Wood Tr□sses", and has a minim□m of fi□e □ears e□□erience of simi□ar □ro□ects.

Fabricator's □□a□ifications: Pro□ide tr□sses b□a firm which has a record of s□ccessf□□□fabricatin□ tr□sses simi□ar to t□□e indicated and which com□□ies with the fo□owin□re□□irements for □□a□it□ contro□

Fabricator □ractices a □□a□it□contro□ro□ram which com□□ies with, or is com□arab□e to, one □□b□ished in TPI "□□a□it□Standard for Meta□P□ate Connected Wood Tr□sses" and which in□□es ins□ection b□an inde□endent ins□ection and testin□a□enc□acce□tab□e to Architect and a□thorities ha□in□□□risdiction.

Sin□□e So□rce Res□onsibi□it□for Connector P□ates: Pro□ide meta□connector □□ates from a sin□□e man□fact□rer.

□□a□it□Contro□S□bmit Certification Fabricated Tr□sses ha□e been ins□ected in accordance with TPI □□a□it□Contro□roced□res or b□an inde□endent testin□□aboratory.

Store, hand□e, and erect tr□sses in accordance with man□fact□rer's □rinted instr□ctions. Pro□ide tem□orar□s□□orts and bracin□as re□□ired. Note: The tr□ss erector sha□desi□n and □ro□ide an□ tem□orar□brid□in□and bracin□as re□□ired d□rin□erection of the roof tr□sses, tem□orar□brid□in□ and bracin□sha□remain in □ace □nti□the com□□ete s□ stem has been insta□ed and com□□eted.

□rid□in□: Un□ess otherwise shown, insta□contin□o□s 2□4 hori□onta□brid□in□at to□and bottom chord, at each end and at 8 feet on centers. Nai□to each tr□ss.

S□bmitta□s:

Man□fact□rer's s□ecifications and insta□ation instr□ctions for a□□re-en□ineered wood tr□sses.

Sho□Drawin□s: S□bmit sho□drawin□s for a□□re-en□ineered wood tr□sses. Pro□ide erection □ans, indicate s□ecies and stress □rade of □mber to be □sed and detai□s of meta□connectors to be □sed at □oints. Show □itch, s□an, and □ocation of tr□sses, and a□□rmanent hori□onta□or dia□ona□ brid□in□re□□ired. Pro□ide □ar□e sca□e detai□s of t□□ica□connections and anchora□es.

S□bmit Tr□ss Man□fact□rer's desi□n and en□ineerin□data for a□□re-en□ineered wood tr□sses inc□□din□stress dia□rams and name and sea□of a □icensed □rofessiona□str□ct□ra□en□ineer re□istered in F□orida.

S□bmit tr□ss man□fact□rer's □□a□ifications and □□a□it□contro□ro□ram □roced□res.

Performance Criteria and Desi□n Re□□irements for Wood Tr□sses:

Wood tr□sses sha□□be desi□ned in accordance with The □□i din□Code s□ecified and as indicated on the drawin□s. Wind □oads sha□□be desi□ned in accordance with the s□ecified desi□n re□□irements and The □□i din□Code indicated. Wood tr□ss s□bmitta□s wi□not be re□ieved or a□□ro□ed □nti□a□□of the desi□n re□□irements ha□e been com□□eted and a□□s□bmitta□s ha□e been rece□ed. Chan□es or re□isions to the desi□n criteria or intent of the drawin□s wi□not be a□□ro□ed □n□ess a□□ro□ed in writin□b□the en□ineer □ror to the sho□drawin□and tr□ss en□ineerin□s□bmitta□.

The Desi□n □□i din□Code sha□□be The F□orida □□i din□Code, 2001 Edition, □n□ess otherwise indicated. Wind desi□n sha□□be based on ASCE 7-98. See drawin□s for additiona□wind desi□n criteria.

A□□wood tr□ss members sha□□be No. 2 So□thern Pine or better minim□m □mber □rade for a□□to□ and bottom chords and a□□web members. Pro□ide members of s□fficient si□e and □ocated □ro□er□□ to a□ow insta□ation of the s□□ort connectors shown on the drawin□s.

END OF SECTION 06200

SECTION 07210 - □UILDING INSULATION

PART 1 - GENERAL

1.1 SUMMAR□

A. This Section inc□□des the fo□owin□:

1. Concea□ed b□□din□ins□□ation

2. Loose-fi□□b□i din□ins□□ation.

3. Va□or retarders.

1.2 □UALIT□ ASSURANCE

A. Fire-Test-Res□onse Characteristics Pro□ide ins□□ation and re□ated materia□s with the fire-test-res□onse characteristics indicated, as determined b□testin□identica□□rod□cts □er ASTM E 84 for s□rface-b□rnin□characteristics, b□UL or another testin□and ins□ectin□a□enc□acce□tab□e to a□thorities ha□in□□risdiction. Identif□materia□s with a□□ro□riate mar□in□s of a□□□icab□e testin□and ins□ectin□a□enc□.

PART 2 - PRODUCTS

2.1 INSULATING MATERIALS

A. Genera□ Pro□ide ins□□atin□materia□s that com□□□with re□□irements and with referenced standards.

□. Mo□ded-Po□st□rene Ins□□ation: ASTM C 578, T□□e I, 0.90 □b/□□ ft, with ma□im□m f□ame-s□read and smo□e-de□e□o□ed indices of 75 and 450, res□ect□□e□□. For □se in nonrated masonr□wa□s.

C. Minera□fiber b□an□et ins□□ation consistin□of fibers man□fact□red from □ass:

1. Faced Minera□Fiber □an□et Ins□□ation: ASTM C 665, T□□e III, C□ass A□Cate□or□1, faced with foi□scrim-□raft, foi□scrim, or foi□-scrim-□o□eth□ene □a□or-retarder membrane on one face.

D. Per□ite Loose-Fi□□Ins□□ation: ASTM C 549, T□□e II or T□□e IV, with a therma□resistance for 4.1- to 7.4- □b/□□ ft.ins□□ation of 3.3 to 2.8 de□F □h□s/□ ft□□t□at 75 de□F for 1-inch thic□ness. For □se in rated masonr□wa□s

1. Man□fact□rers: S□b ect to com□□iance with re□□irements, □ro□ide □rod□cts b□one of the Prod□cer Members of Per□ite Insti□te Inc.

2.2 VAPOR RETARDERS

A. Po□eth□ene Va□or Retarder: ASTM D 4397, 8 mi□s thic□, with ma□im□m □ermeance ratin□of 0.13 □erm.

□. Va□or-Retarder Ta□e Press□re-sensiti□e ta□e of t□□e recommended b□□a□or-retarder man□fact□rer for sea□in□□oints and □enetrations in □a□or retarder.

2.3 AUXILIAR□ INSULATING MATERIALS

A. Adhesi□e for □ondin□Ins□□ation Prod□ct with demonstrated ca□abi□it□to bond ins□□ation sec□re□□to s□bstrates indicated witho□t dama□in□ins□□ation and s□bstrates.

PART 3 -EXECUTION

A. Genera□Insta□ins□□ation to com□□□with ins□□ation man□fact□rer's written instr□ctions a□□□icab□e to □rod□cts and a□□ication indicated. E□tend ins□□ation in thic□ness indicated to en□e□o□entire area to be ins□□ated. C□t and fit ti□ht□□aro□nd obstr□ctions and fi□□oids with ins□□ation. Remo□e □ro□ections that interfere with □□acement.

□. Po□r □ran□ar ins□□ation into ca□ities indicated to rece□e ins□□ation, ta□in□care to fi□□oids com□ete□. Maintain ins□ection □orts to show □resence of ins□□ation at e□tremities of each □o□r area. C□se □orts after confirmin□com□ete co□era□e. Limit fa□ of ins□□ation to one stor□in hei□ht, b□t not e□ceedin□20 feet.

C. Insta□ation of Genera□□□i din□Ins□□ation: A□□□ins□□ation □nits to s□bstrates b□method indicated, com□□in□with man□fact□rer's written instr□ctions. If no s□ecific method is indicated, bond □nits to s□bstrate with adhesi□e or □se mechanica□ anchora□e to □ro□ide f□rmanent □acement and s□□ort of □nits.

3.1 INSTALLATION

1. Sea□oints between c□osed-ce□□nonbreathin□□ins□□ation □nits b□a□□□in□adhesi□e, mastic, or sea□ant to ed□es of each □nit to form a ti□ht sea□as □nits are sho□ed into □□ace. Fi□□oids in com□□eted insta□ation with adhesi□e, mastic, or sea□ant.

2. Insta□minera□-fiber b□an□ets in ca□ities formed b□framin□members accordin□to the fo□owin□re□□irements:

a. Use b□an□et widths and □en□ths that fi□the ca□ities formed b□framin□members. If more than one □en□th is re□□ired to fi□□ca□it□, □ro□ide □en□ths that wi□□rod□ce a sn□□fit between ends.

b. P□ace b□an□ets in ca□ities formed b□framin□members to □rod□ce a friction fit between ed□es of ins□□ation and ad□oinin□framin□members.

3. For meta□-framed wa□□ca□ities where ca□it□hei□hts e□ceed 96 inches s□□ort □nfaced b□an□ets mechanica□□□and s□□ort faced b□an□ets b□ta□in□sta□in□Fan□es to Fan□es of meta□st□ds.

4. Retain ins□□ation in □□ace b□meta□□□s and stra□s or inter□a□oc□ets within window frames, s□aced at inter□a□s recommended in writin□b□ins□□ation man□fact□rer to ho□d ins□□ation sec□re□□in □□ace witho□t to□chin□s□andre□□ass. Maintain ca□it□width of dimension indicated between ins□□ation and □□ass.

5. Insta□ins□□ation where it contacts □erimeter fire-containment s□stem to □re□ent ins□□ation from bowin□□nder □ress□re from □erimeter fire-containment s□stem.

6. P□ace □oose-fi□ins□□ation into s□aces and onto s□rfaces as shown, either b□□o□rin□or b□machine b□owin□to com□□with ASTM C 1015. Le□e□hori□onta□a□□ications to □niform thic□ness as indicated, fi□ht□□sett□d to □niform densit□, b□t do not com□act e□cessi□e□□.

7. St□ff □ass-fiber ins□□ation into misce□□aneo□s □oids and ca□it□s□aces where shown. Com□act to a□□ro□imate□40 □ercent of normal ma□im□m □o□me e□□a□in□a densit□of a□□ro□imate□2.5 □b/□□ ft.

D. Insta□ation of Va□or Retarders: E□tend □a□or retarder to e□tremities of areas to be □rotected from □a□or transmission. Sec□re in □□ace with adhesi□es or other anchora□e s□stem as indicated. E□tend □a□or retarder to co□er misce□□aneo□s □oids in ins□□ated s□bstrates, inc□din□those fi□led with □ose-fiber ins□□ation.

1. Sea□ertica□oints in □a□or retarders o□er framin□b□□a□in□not □ess than two wa□st□ds. Fasten □a□or retarders to framin□at to□, end, and bottom ed□es at □erimeter of wa□o□enin□s and at □□oints. S□ace fasteners 16 inches o.c.

2. Sea□o□er□a□in□oints in □a□or retarders with adhesi□es or □a□or-retarder ta□e accordin□to □a□or retarder man□fact□rer's instr□ctions. Sea□b□tt oints and fastener □enetrations with □a□or-retarder ta□e. Locate a□□oints o□er framin□members or other so□id s□bstrates.

3. Firm□attach □a□or retarders to s□bstrates with mechanica□fasteners or adhesi□es as recommended b□□a□or-retarder man□fact□rer.

4. Sea□oints ca□sed b□□i□es, cond□its, e□ectrica□bo□es, and simi□ar items □enetratin□□a□or retarders with □a□or-retarder ta□e to create an airti□ht sea□between □enetratin□ob□ects and □a□or retarder.

5. Re□air an□tears or □ncti□es in □a□or retarders immediate□before concea□ment b□other wor□. Co□er with □a□or-retarder ta□e or another □a□er of □a□or retarder.

END OF SECTION 07210

SECTION 07410 - STANDING SEAM METAL ROOFING

PART I - GENERAL

1.1 DESCRIPTION

A. Work includes Arkema "Kynar 500" fluoropolymer coating system standing seam metal roofing materials and flashings and work incidental thereto required to complete and provide a watertight roofing system over all roof surfaces shown on the drawings.

B. Related work specified elsewhere:
1. Section 07210: Building Insulations
2. Section 07710: Sheet Metal Flashing and Trim

1.2 QUALITY ASSURANCE

A. Have all work done by applicators approved by the manufacturer of the materials and installed in strict accordance with the manufacturer's direction, and all applicable requirements of Factory Mutual Engineering Corporation Standards, Class A, Type I.

B. Comply with requirements of Factory Mutual Loss Prevention Data 1-29 edition for resistance to wind blow-off in correlation with requirements in applicable building codes.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product information and installation instruction for each item used in roofing installation.

1.4 JOB CONDITIONS

A. Weather: Conduct no roofing operations when water in any form is present on the deck, or when materials are damp, wet or likely to become damp or wet by the elements.

1.5 WARRANTY AND CERTIFICATION

A. 30 year unconditional guarantee. The General Contractor shall furnish the Owner with a certified, written statement that roof deck and flashing attachments and all other conditions have been met as required to produce a bondable or guaranteed roofing and flashing application, and that it is in compliance with FM or UL classification requirements, all as have been included in these Specification and/or indicted on the drawings, or both.

B. Provide the Owner with the manufacturers written 30-year No Dollar Limit Roof System Guarantee. Contractor shall provide a 20-year workmanship guarantee, on the installation of the above roofing and components.

PART 2 - PRODUCTS

2.1 ROOFING SYSTEM

A. Kynar 500 fluoropolymer coating system standing seam metal roofing panels with the appropriate base flashing and metal counter flashing or wall covering, as specified manufacturers specifications. Roof shall be installed by a roofing Contractor authorized to install the specified Roof System.

B 16" Wide 26 GA Pre-finished Integral Metal valleys and 2-1/2" 26GA. Integral Metal drip edge.

C. Finish to meet performance criteria of AAMA 2605 Specification.

PART 3 - EXECUTION

3.1 PREPARATION

A. Make all sub-surfaces free from material projections, dust, loose and foreign materials and any other obstruction, presenting a smooth plane, ready for installation.

B. No roofing shall be applied until all vents, pipes, or roof mounted or protruding items have been installed in their final position and the general condition and acceptability of the deck surface to be covered has been determined by examination.

C. Commencing of roofing application shall constitute acceptance of the deck surface by roofing applicator.

3.2 INSTALLATION

A. Standing seam metal roof system shall be installed on 30 lb felt paper approved by the roofing manufacturer, and installed in strict accordance with manufacturer's written specification..

3.4 FIELD QUALITY CONTROL

A. When work is stopped at the end of the day, or when work is stopped because of the probability of precipitation, exercise care to ensure that water does not flow beneath completed sections of roof by sealing loose edge of roofing system in accordance with the roofing manufacturer's printed instruction.

3.5 CLEAN-UP

A. Clean entire roof surface.

B. Promptly remove foreign matter, debris, equipment and surplus materials from job site.

-END OF SECTION-

REVISIONS
1 2 3 4 5 6 7 8

PROJECT NO.
T3C51803-01

DATE
07/05/2019

GENERAL NOTES
SPECIFICATIONS

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO , FLORIDA

AA26002490

RABITS & ROMANO
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SIGN/SEAL

DATE

SHEET
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OF
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CONSTRUCTION STANDARD SPECIFICATION

SECTION 07500
SINGLE PLY ROOFING SYSTEM
THERMAL PROPYLENE OLEFIN (TPO)

CONSTRUCTION STANDARD SPECIFICATION

SECTION 07533

SINGLE PLY ROOFING SYSTEM - THERMAL PROPYLENE OLEFIN (TPO)

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections.

B. Related Sections include the following:

1. Section 07600 Flashing and Sheet Metal

2. Section 13100 Lightning Protection

3. Section 15401 Plumbing, for roof drains

1.02 DESCRIPTION OF WORK

A. This section includes all material, labor, equipment, temporary protection and tools for the proper installation and completion of the work as required in this specification.

B. The following items are specified in this section:

1. Roof Insulation

2. Fasteners

3. Roof membrane

4. Roof membrane flashings

5. Treated Wood

6. Sealants

7. Adhesives

1.03 REFERENCES

A. American Society of Testing and Materials (ASTM)

A653 Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Commercial Quality

D413 Test Methods for Rubber Property-Adhesion of Flexible Substrate

D573 Test Method for Rubber-Deterioration in an Air Oven

D751 Test Methods for Coated Fabrics

D1149 Test Method for Rubber Deterioration-Surface Ozone Cracking in a Chamber

D1203 Test Methods for Volatile Loss from Plastics Using Activated Carbon Methods

D1204 Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature

D2136 Test Method for Coated Fabrics-Low Temperature Bend Test

D2240 Test Method for Rubber Property-Durometer Hardness

E84 Test Method for Surface Burning Characteristics of Building Materials

E408 Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques

E838 Practice for Performing Accelerated Outdoor Weathering Using Concentrated Natural Sunlight

E903 Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres

B. California South Coast Air Quality Management District (AQMD)
Rule 1168 Adhesive and Sealant Applications

C. California Bay Area Air Quality Management District (AQMD)
Regulation 8 Rule 51, Organic Compounds Adhesive and Sealant Products

D. Factory Mutual (FM)
Approval Guide

Approval Standard No. 4470 Class 1 Roof Covers

E. Federal Specification (FS)
HH-I-19722 Class 1 Insulation Board, Thermal Polyurethane or Polyisocyanurate, Faced with Asphalt/Glass Fiber Felt on Both Sides of the Foam

F. Federal Test Method (FTM)
FTM 101B Method 2031 Puncture Resistance

G. National Roofing Contractors Association (NRCA)
Roofing and Waterproofing Manual

H. Underwriter's Laboratories, Inc. (UL)
Roofing Materials and Systems Directory

1.04 SUBMITTALS

A. Product Data: Submit manufacturer's technical product data, installation instructions and recommendations for each type of roofing product required. Include data substantiating that materials comply with the specified requirements.

B. Submit copy of the membrane manufacturer's warranty covering materials.

C. Submit copy of the Roofing Contractor's warranty covering workmanship.

D. Submit dimensioned shop drawings, which shall include:

1. An outline of the roof and roof size.

2. Proposed installation method for insulation and membrane for each different section of roof. Include insulation type (e.g. flat, tapered) and fastener patterns if applicable. Show Contractor's proposed method of achieving specified roof slopes.

3. Proposed profile details of flashing methods for penetrations and terminations if not indicated in the Contract Documents.

4. Proposed location of manufacturer approved walkpads. Corners are to be rounded and installed in accordance with manufacturer's written instructions. All side and end joints shall be hot-air welded a minimum of 2"-inch (51mm). No adhesive shall be present within the lap areas.

E. Submit report from an independent testing laboratory certifying that manufacturer's membrane has met a minimum of 2,000,000 langleys concentrated natural sunlight, according to ASTM E838.

F. Submit written documentation from the manufacturer that the proposed roofing system including insulation and fasteners are compatible and meet the applicable requirements and code approvals as referenced in this specification and that the roofing system meets the requirements for the manufacturers standard warranty covering material.

G. Submit certification that membrane installer is a manufacturer-approved applicator.

H. Submit manufacturer's documentation of Energy Star labeled roofing materials.

I. Submit Material Safety Data Sheets (MSDS) and manufacturer's documentation of Volatile Organic Compound (VOC) content for each adhesive and sealant product.

J. Submit manufacturer's documentation of recycled content for Polyisocyanurate insulation.

1.05 QUALITY ASSURANCE

A. Roofing system shall be applied only by an approved Contractor authorized prior to bid by the roof membrane manufacturer. Prior to bid, the Roofing Contractor must have completed a minimum of 500 roofing squares of Thermal Propylene Olefin (TPO) membrane in the Southwest.

B. There shall be no deviation from this specification or the approved shop drawings without prior written approval by the manufacturer and the Sandia Delegated Representative (SDR).

C. Code Requirements: The proposed roofing system shall meet the requirements of the following recognized code approval or testing agencies. These requirements are the minimum standards and no roofing work shall commence without written documentation of the system's compliance, as in Article 1.03 "Submittals".

1. Underwriters Laboratories (UL) Class A membrane.

2. Factory Mutual (FM) I-90 uplift rating, per FM Approval Standard No. 4470.

D. Energy Star Roof Compliance: The proposed roofing system shall be Energy Star Roof-compliant and roofing materials shall be Energy Star labeled.

E. For new installations, ponding shall not occur in accordance with NRCA Roofing and Waterproofing manual good roof design practice, which dictates that there be no ponding of water 48 hours after rainfall.

F. There shall be no more than 20 patches per 10,000sf on new construction.

1.06 DELIVERY, STORAGE, AND HANDLING

A. All products delivered to the job site shall be in the original unopened container or wrappings.

B. Membrane rolls and insulation shall be stored fully protected from moisture and wind damage. Remove plastic from insulation and cover with tarpaulins on a raised surface.

C. Bonding adhesives shall be stored at temperatures recommended by manufacturer.

D. Handle all materials to prevent damage. Any materials which are determined damaged, according to the SDR, are to be removed from the job site and replaced at no cost to Sandia National Laboratories (SNL).

1.07 PROJECT CONDITIONS

A. Construction may not be fully represented on the drawings, and some modifications to details may be required to accomplish the intent of the documents.

1. Contractor shall ascertain to his satisfaction, coordinate with General Contractor and other sub-contractors prior to bidding, that the specifications and drawings are workable and that they are not in conflict with the manufacturer's requirements for a material warranty.

B. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building and its contents shall be protected against all risks, and any damages shall be repaired or replaced at no cost to SNL. All exterior lighting, equipment, landscaping and paving shall be protected from damage.

C. Contractor shall test drains per SDR's direction prior to and upon completion of roofing work to insure that no blockage exists or has occurred.

D. Only as much of the new roofing as can be made weather tight each day including all flashing work, shall be installed. Plug all roof drains before starting work each day and unplug all drains at the end of each workday.

E. All surfaces to receive insulation, membrane or flashing shall be thoroughly clean and dry. Should surface moisture occur, the Contractor shall provide the necessary equipment and labor to dry the surface prior to application.

F. All construction, including equipment and accessories, shall be secured against wind blow-off damage.

G. Temporary waterstops shall be installed at the end of each day's work and shall be removed before proceeding with the next day's work. Waterstops shall be compatible with all materials, shall not emit dangerous or incompatible fumes, and shall be installed per manufacturer's recommendations.

H. Contractor shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. Plywood protection shall be provided for all new and existing roof areas which receive traffic during construction.

I. Contaminants, such as grease, fats, oils and solvents shall not be allowed to come into direct contact with the roofing membrane. Any exposures shall be presented to the membrane manufacturer for assessment of impact on the roof system performance.

J. Contractor shall take care during application and storage that overloading of deck and structure does not occur.

K. Precautions shall be taken when using adhesives at or near rooftop vents or air intakes. Coordinate closing or shut-offs of vents and air intakes during roofing and flashing operations.

1.08 WARRANTY

A. Upon completion of construction, the manufacturer's ten (10) year warranty covering materials shall be issued to SNL.

B. Roofing Contractor shall supply SNL with a minimum two (2) year workmanship warranty. In the event any work related to roofing, flashings, or metal work is found to be defective or otherwise not in accordance with the Contract Documents within two (2) years of final acceptance, the roofing Contractor shall remove and replace the defects at no cost to SNL.

PART 2 - PRODUCTS

2.01 GENERAL

A. Provide an insulated roofing system that is comprised of fully compatible components for use in the proposed application. All proposed materials shall be compatible with substrate.

2.02 MEMBRANE

A. TPO: Polyester scrim reinforced Thermal Proplylene Olefin (TPO) sheet conforming to the following minimum physical properties:

Property	ASTM Test Method	Specification	Color	White
Weight	D751	0.18 lbs/sq ft (0.88 kg/m2)	Nominal Thickness (min.)	D751	0.060"-inch (1.52 mm)	Breaking Strength (min.)	D751 (Grab Method)	225 lbf (1.0 kN)	Tear Strength (min.)	D751 (Tongue Tear)	55 lbf (245 N)	Low Temperature Bend	D2136	Pass	Shore A Hardness	D2240	80 +5	Heat Aging	D573	Maintains original strength	Volatility, Max. Loss	D1203, Method A	0.5 %	Hydrostatic Resistance (min.)	D751, Method A	300 psi (2.1 Mpa)	Ozone Resistance	D1149	No Effect	Emmaqua Concentrated Natural Sunlight, 2 million langleys	E838	No visible surface cracking or stiffening	Dimensional Stability (max.)	D1204	0.5 %	Puncture Resistance (min.)	FTM 101B, Method 2031	250 lbf (1.1 kN)	180 degrees Peel Strength (min.)	D413	35 lbf (156 N/Change in Weight After Immersion in Water (max.)	D570	+3.0% Initial solar Reflectance (min.)	E903	0.65 3-year aged Solar Reflectance (min.)	E903	0.50 Emissivity (min.)	E408	0.90 2.03 FLASHING MEMBRANE

A. Flashing membrane shall be as supplied by the roofing membrane manufacturer. Flashing membranes are generally the same material as the roofing membrane unless otherwise specified in the Contract Documents. Unreinforced 0.053"-inch (1.4 mm) thick ethylene propylene + base membrane shall be supplied for vent stacks, pipes, drains and corners.

2.04 INSULATION

A. General: Provide insulating materials to comply with referenced standards and requirements indicated for materials; provide manufacturer's standard thickness, in size to fit applications.

1. Fully Adhered Systems: Provide no greater than 4'-feet x 4'-feet (1.2m x 1.2m) boards.

2. Mechanically Fastened Systems: Provide 4'-feet x 8'-feet (1.2m x 2.4m) boards.

B. Polyisocyanurate Board Roof Insulation: Furnish and install rigid, cellular thermal insulation with Polyisocyanurate closed-cell foam core and manufacturer's standard facing laminated to both sides to comply with FS HH-I-19722 Class 1. Provide in two (2) layers for a total thickness to meet an average R-value of 30.0, unless indicated elsewhere on the Contract Documents.

1. Surface Burning Characteristics: Comply with ASTM E84 with a maximum flame spread and smoke developed values of 25 and 145, respectively.

2. Recycled Content: Minimum 9 percent.

C. Insulation, fasteners and adhesive shall be supplied or approved by the roof membrane manufacturer for compatibility with the system and the required FM and UL requirements. Adhesives shall comply with VOC limits of California South Coast (AQMD) Rule #1168.

D. Recovery Board: Provide one half-inch (1/2"-inch, 13mm) Dens Deck, or approved equal, over all insulation and tapered insulation.

2.05 ACCESSORY PRODUCTS

A. Flashing Adhesive: As specified by the membrane manufacturer to comply with VOC limits of California South Coast (AQMD) Rule #1168. Any adhesives containing carcinogens shall be limited to vertical surfaces and flashings.

B. Walkway Membrane: Membrane manufacturer's walkway material.

C. Wood Nailers: Wood shall be #2 or better pressure preservative treated lumber using CCA preservatives. Height of nailers shall match that of the insulation thickness or as indicated on the drawings.

D. Sealants: As recommended by the membrane manufacturer to comply with VOC limits of California Bay Area (AQMD) Regulation 8, Rule 51.

E. Miscellaneous Fasteners and Anchors: In general, all fasteners, anchors, nails and straps shall be of zinc-coated steel, galvanized, or stainless steel and cadmium-free. All fasteners and anchors shall have a minimum embedment of 1-1/2"-inch (38 mm) and shall be approved for such use by the fastener manufacturer and the membrane manufacturer.

F. Sheet Metal Accessory Materials: ASTM A653, with 0.20 percent copper, G90 hot-dipped galvanized, 24-gauge (0.61 mm) or heavier.

G. Expansion Joint Covers: Shall be the manufacturer's prefabricated units of the same material as the roof membrane.

H. Perimeter Edge Metal: Shall be supplied by the membrane manufacturer and coated with the same material as the roofing membrane and shall be compatible with the roofing membrane for hot-air welding.

I. Slip Sheet: Provide only when needed between incompatible materials. Use membrane manufacturers standard slip-sheet material.

J. Base Sheet: Provide membrane manufacturers recommended vented base sheet on all types of concrete decks or when required or recommended by membrane manufacturer for the intended application.

K. B-Line Rooftop Supports or approved equal. To be placed at a minimum of 10'- feet (3m) on center for proper support. Refer to SNL Standard Detail Drawing for rooftop supports, AE5035 and AE5036.

PART 3 - EXECUTION

3.01 INSPECTION

A. Prior to all work of this section, Contractor shall carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

B. Verify that work of other trades that penetrate the roof deck has been completed.

C. Verify that roofing system may be installed in strict accordance with all pertinent codes and regulations, the original design and the manufacturer's recommendations.

D. In the event of discrepancy, immediately notify the SDR.

E. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

F. Upon starting the installation of a new roof, the SDR and the General Contractor and their sub-contractor, if applicable, will designate a portion of the installation to be used as a mock up. This area will be the model of how the roof installation shall be installed. The mock up should include the insulation, a curb, flashing, parapet and an inside and outside corner along with a termination and lap seam.

G. Throughout the project and at completion, the SDR shall be allowed to inspect the roof, including probing as necessary to ensure proper installation.

3.02 PREPARATION OF SUBSTRATE

A. General: Comply with the insulation and membrane manufacturer's instructions for preparation of the substrate to receive the roofing system.

B. Clean substrate of dust, debris, and other substances detrimental to the system work. Remove sharp projections.

C. Notify the SDR to inspect the substrate. Contractor shall not proceed with installation until the SDR has approved the substrate.

3.03 INSTALLATION OF INSULATION

A. Insulation shall be installed according to the insulation manufacturer's instructions and shall be approved by the SDR and membrane manufacturer. Stagger joints between layers.

B. Insulation shall be neatly cut to fit around all penetrations and projections.

C. Install tapered insulation where applicable in accordance with insulation manufacturer's approved shop drawings in order to achieve the specified slope.

D. Install tapered insulation around drains creating a drain sump.

E. Do not install more insulation board than can be covered with membrane by the end of the day, or onset of inclement weather.

F. Attachment

1. Insulation shall be mechanically fastened to the deck with approved fasteners and plates at a rate and pattern acceptable to Factory Mutual's and membrane manufacturer's requirements for fastening rates and patterns.

2. Fasteners are to be installed in accordance with the fastener manufacturer's recommendations. Fasteners are to have a minimum penetration into the structural deck as recommended by the fastener manufacturer and membrane manufacturer. Fasten only in top of ribs of metal deck, not flutes.

3. Perform pull out tests for the SDR to verify deck conditions and actual pull out values prior to installation of the membrane.

4. Use fastener tools with a depth locator as recommended or supplied by the fastener manufacturer to ensure proper installation.

3.04 INSTALLATION OF MEMBRANE

A. Install materials in accordance with manufacturers instructions for the intended application.

B. Surface of the insulation shall be inspected prior to installation of the roof membrane. The insulation surface shall be clean and smooth with no excessive surface roughness, contaminated surfaces, or unsound surfaces such as broken or delaminated insulation boards.

C. Membrane shall be installed per the membrane manufacturer's written installation procedures for an approved mechanically fastened system.

D. No bonding adhesive shall be applied to lap areas that are to be welded to flashing or adjacent sheets. All sheets shall be applied in the same manner, lapping all sheets as required by welding techniques. No peel and stick products allowed.

E. Any repairs or patches shall be hot-air welded. No peel and stick products allowed.

F. Adjacent sheets shall be welded in accordance with the manufacturer's written instructions.

G. Hand and machine welding shall be carried out per the manufacturer's written instructions. All mechanics intending to use the welding equipment shall have successfully completed a course of instruction provided by a manufacturer's representative prior to welding. All welding equipment must be approved by the manufacturer prior to use.

H. All completed seams shall be checked by the Contractor after cooling for continuity using a screwdriver or suitable blunt instrument. In addition, on-site evaluation of welded seams shall be made by Contractor at locations as directed by the SDR or membrane manufacturer's representative. Contractor shall provide 2"-inch (51 mm) wide cross-sectional samples taken through completed seams. Approximately two samples will be taken per 100 roofing squares. Correctly welded seams display failure from shearing of the membrane prior to separation of the weld. Each test cut shall be patched by the Contractor at no additional charge to SNL.

I. Exposed or cured membrane shall be hot-air welded per manufacturer's instructions.

J. During the course of the work, the entire roof area shall be kept clear of loose or spilled fasteners and metal scraps to guard against accidental puncture of the membrane.

3.05 MEMBRANE FLASHINGS

A. All flashing shall be installed concurrently with the roof membrane as the job progresses. No temporary membrane flashings shall be allowed without the prior written approval of the SDR. Approval shall only be for specific locations on specific dates.

B. All flashing membranes shall be fully adhered to substrates. All interior and exterior corners and miters shall be cut and hot-air welded in place, or prefabricated corners and miters may be used.

1. Bituminous elements shall not be in contact with non-compatible membrane. Manufacturers recommended isolator shall be used to isolate non-compatible membrane flashing from bituminous coated elements such as vent stacks and pipes penetrating the roof.

C. All flashings shall be hot-air welded at their joints and at their connections with the roof membrane. No peel and stick products allowed.

D. Pipe penetrations shall be flashed a minimum of 8"-inches (203 mm) above the roofing membrane, and terminate with a stainless steel hose clamp with sealant applied along the top edge. Pipe should be isolated by membrane. Factory fabricated pipe seals and roof membrane shall be welded as outlined. A buffer layer of membrane shall be installed between hose clamp and flashing sheet to avoid damage.

E. All curb flashing membranes shall be mechanically fastened along the top using nails with 1"-inch (25 mm) diameter heads spaced a maximum of 6"-inches (152 mm) on center, or predrilled metal strips. All roof edge flashings shall be hot-air welded to the membrane manufacturer's coated metal. Predrilled metal strips shall be caulked along the top edge with a sealant. Expansion pins with nylon sheaths set in predrilled holes shall be used to secure flashings to masonry and concrete surfaces. Reglets shall be used on walls as shown on the Contract Documents.

F. Edge metal shall be supplied by the membrane manufacturer and shall be coated with the same material as the roofing membrane. The edge metal and membrane strips joining each piece of edge metal shall closely match the color of the building perimeter, unless specified elsewhere on the Contract Documents or by the SDR.

3.06 TEMPORARY CUT-OFF

A. Flashings shall be installed concurrently with the roof membrane in order to maintain a watertight condition as the work progresses. When a break in the day's work occurs in the central area of the roof, a temporary waterstop shall be constructed to provide a watertight seal.

1. Waterstop shall be installed per the manufacturer's recommendations and per details shown on the Contract Documents.

2. When work on the new system is suspended, the stagger of the insulation joints shall be maintained by installing partial fillers. New membrane shall be carried into the waterstop.

3. When work resumes, the contaminated membrane, insulation fillers, etc., shall be removed from the work area and disposed off-site. Do not reuse these materials in new work.

B. If inclement weather occurs while a temporary waterstop is in place, the Contractor shall provide the labor necessary to monitor the situation to maintain a watertight condition.

3.07 WALKWAY INSTALLATION

Walkways: Install walkway pads at location shown on Construction Documents. Hot-air weld along edges a minimum of 2"-inches (51mm) to substrate, and fully adhere walkway pads between welds to substrate with compatible adhesive according to roofing system manufacturer's written instruction. Corners of walkway are to be rounded and hot-air welded in accordance with manufacturer's written instruction.

3.08 COMPLETION

A. At the completion of construction and prior to Contractor's request for final inspection by SDR, membrane manufacturer's technical consultant shall provide on-site inspection of installed roofing system.

1. Membrane manufacturer shall provide Contractor and SDR with itemized list of defects or non-compliance with manufacturer's recommendations.

2. Contractor shall immediately correct identified items. Complete corrections before request for final inspection from SDR.

B. Prior to demobilization from site, work shall be reviewed by SDR and Contractor.

1. Itemize defects or non-compliance with these specifications or membrane manufacturer's recommendations in punch list.

2. Contractor shall immediately correct identified items prior to demobilization, to satisfaction of SDR and membrane manufacturer.

C. Upon completion of construction, the Contractor shall install a metal sign (minimum size of 8" x10", or 203mm x 254mm) at each roof entryway providing the following information:

1. Contractor Company Name

2. Membrane Manufacturer

3. SNL Inspector Name

4. Date of Installation

END OF SECTION

REVISIONS
1 2 3 4 5 6 7 8

PROJECT NO.
1136803-01

DATE
07/29/2019

GENERAL NOTES
SPECIFICATIONS

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO , FLORIDA

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SIGN/SEAL

DATE

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SECTION 07620 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. This Section inc□des the fo□owin□

1. Man□fact□red re□ets.
2. Formed roof draina□e s□stem.
3. Formed □ow-s□o□e roof f□shin□and trim.
4. Formed stee□-s□o□e roof f□shin□and trim.
5. Formed wa□□fashin□and trim.

1.2 SU□MITTALS

A. Prod□ct Data: For each □rod□ct indicated.

□. Sho□Drawin□s: Show □a□o□ts, □rofi□es, sha□es, seams, dimensions, and detai□s for fastenin□, □inin□, s□□ortin□, and anchorin□ sheet meta□f□shin□and trim.

C. Sam□les: For each t□□e of sheet meta□f□shin□and trim □□on re□□est of the Architect.

1.3 □UALIT□ ASSURANCE

A. Sheet Meta□F□shin□and Trim Standard: Com□□with SMACNA's "Architect□ra□Sheet Meta□Man□a□." Conform to dimensions and □rofi□es shown □n□ess more strin□ent re□□irements are indicated.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 artic□es where tit□es be□ow introd□ce □ists, the fo□owin□re□□irements a□□□to □rod□ct se□ection:

1. A□ai□ab□e Man□fact□rers: S□b□ect to com□□iance with re□□irements, man□fact□rers offerin□□rod□cts that ma□be incor□orated into the Wor□inc□de, b□t are not □imited to, man□fact□rers s□ecified.

2.2 SHEET METALS

A. Co□□er Sheet: ASTM □ 370, Tem□er H00 or HO I, co□d-ro□□ed co□□er sheet.

□. Lead-Coated Co□□er Sheet: ASTM □ 101, Tem□er H00 and HO1, co□d-ro□□ed co□□er sheet, of wei□ht indicated be□ow, coated both sides with □ead wei□ht□not □ess than 12 □b/100 s□. ft. nor more than 15 □b/00 s□. ft. of co□□er sheet □tota□wei□ht of □ead a□□□ed c□a□□to both sides□

C. A□min□m Sheet: ASTM □ 209, A□□□3003, 3004, 3105, or 5005, Tem□er s□tab□e for formin□and str□□t□ra□□erformance re□□ired, b□t not □ess than H14, finished as fo□ows:

1. Mi□Finish: Standard one-side bri□ht.
2. Factor□Prime Coatin□ Factor□a□□ied, ba□ed-on e□o□□rimer coat.
3. Hi□h-Performance Or□anic Finish: Two-coat, thermoc□red s□stem containin□not □ess than 70 □ercent □o□□in□idene f□oride resin b□wei□ht com□□in□with AA □A 2604.
   a. Co□or: Match Architect□s sam□es
4. C□ear Anodic Finish: C□ass II, AA-M12C22A31, com□□in□with AAMA 611.
5. Co□or Anodic Finish: C□ass II, AA-M12C22A34, com□□in□with AAMA 611.
   a. Co□or: Dar□bron□e.

D. Stain□ess-Stee□Sheet: ASTM A 240□A 240M, T□□e 304, No. 2D finish.

E. Zinc-Coated (Ga□ani□ed□Stee□Sheet: ASTM A 653/A 653M, G90□Z275□coatin□desi□nation□str□ct□ra□□a□t□, mi□ □hos□hati□ed for fie□d □aintin□.

F. A□min□m-Zinc A□□-Coated Stee□Sheet □Ga□a□me P□□: ASTM A 792/A 792M, C□ass AZ50 coatin□desi□nation, Grade 40 □C□ass AZM150 coatin□desi□nation, Grade 275□str□ct□ra□□a□t□with man□fact□rer's standard c□ear acr□□ic coatin□both sides.

G. Pre□ainted, Meta□ic-Coated Stee□Sheet: Stee□sheet meta□ic coated b□the hot-di□□rocess and □re□ainted b□the coi□-coatin□ □rocess to com□□with ASTM A 755/A 755M.

1. A□min□m-Zinc A□□-Coated Stee□Sheet: ASTM A 792/A 792M, C□ass AZ50 coatin□desi□nation, Grade 40 □C□ass AZM150 coatin□desi□nation, Grade 275□str□ct□ra□□a□t□.
2. E□□osed Finishes: A□□□the fo□owin□coi□coatin□:
   a. Factor□Prime Coatin□ Factor□a□□ied, ba□ed-on e□o□□rimer coat.
   b. Hi□h-Performance Or□anic Finish: Two-coat thermoc□red s□stem containin□not □ess than 70 □ercent □o□□in□idene f□oride resin b□wei□ht com□□in□with □h□sica□□o□erties and coatin□□erformance re□□irements of AAMA 2604, e□ce□t as modified for be□ow:
      1□ H□midit□and Sa□t S□ra□□Resistance: 1000 ho□rs.
      2□ Co□or: Match Architect□s sam□es

H. Lead Sheet: ASTM □ 749, T□□e L51121, co□□er-bearin□□ead sheet.

2.3 MISCELLANEOUS MATERIALS

A. Genera□Pro□ide materia□s and t□□es of fasteners, so□der, we□din□rods, □rotecti□e coatin□s, se□arators, sea□ants, and other misce□□aneo□s items as re□□ired for com□□ete sheet meta□f□shin□and trim insta□□ation.

□. Fe□t/Under□a□ment: ASTM D 226, T□□e I (□No. 30□,as□ha□t-sat□rated or□anic fe□t, non□erforated.

C. Fasteners: Wood screws, ann□□ar threaded nai□s, se□f-ta□□in□screws, se□f-oc□in□ri□ets and bo□ts, and other s□itab□e fasteners desi□ned to withstand desi□n□oads.

1. Nai□s for Co□□er Sheet: Co□□er or hardware bron□e, 0.109 inch □2.8 mm□minim□m and not □ess than 7/8 inch □22 mm□□on□, barbed with □ar□e head.
2. E□□osed Fasteners: Heads matchin□co□or of sheet meta□b□ means of □□astic ca□s or factor□a□□ied coatin□
3. Fasteners for F□shin□and Trim: □□ind fasteners or se□f-dri□in□screws, □as□eted, with he□□washer head.
4. □ind Fasteners: Hi□h-stren□th a□min□m or stain□ess-stee□ri□ets.

D. Sea□in□Ta□e: Press□re-sensiti□e, 100 □ercent so□ids, □o□isob□t□ene com□o□nd sea□in□ta□e with re□ease-□a□er bac□in□. Pro□ide □ermanent□□e□astic, nonsa□, nonto□□e, nonstainin□ta□e.

E. E□astomeric Sea□ant: ASTM C 920, e□astomeric □o□□rethane □o□mer sea□ant, of t□□e, □rade, c□ass, and □se c□assifications re□□ired to sea□joints in sheet meta□f□shin□and trim and remain waterti□ht.

F. □o□□Sea□ant: ASTM C 1311, sin□□e-com□onent, so□□ent-re ease b□t□□rbber sea□ant, □o□isob□t□ene □□astici□ed, hea□□bodied for hoo□ed-t□□e □□ansion joints with □imited mo□ement.

G. E□o□□Seam Sea□er: Two-□art, noncorrosi□e, a□min□m seam-cementin□com□o□nd.

H. □it□mino□s Coatin□: Co□d-a□□lied as□ha□t□mastic, SSPC-Paint 12, com□o□nded for 15-mi□dr□fi□m thic□ness □er coat.

2.4 REGLETS

A. Re□lets: Units of t□□e, materia□, and □rofi□e indicated, formed to □ro□ide sec□re inter□oc□in□of se□arate re□□et and co□nterf□shin□□iece□, and com□atib□e with f□shin□indicated with factor□- mitered and we□ded corners and □nctions.

1. Man□fact□rers:
   a. Chene□F□shin□Com□an□, Inc.
   b. Fr□Re□□et Cor□oration.
   c. Hec□mann □□idin□Prod□cts Inc.
2. Materia□A□min□m, 0.024 inch thic□.

2.5 FA□RICATION, GENERAL

A. Genera□C□stom fabricate sheet meta□f□shin□and trim to com□□with recommendations in SMACNA's "Architect□ra□Sheet Meta□Man□a□" that a□□□to desi□n, dimensions, meta□, and other characteristics of item indicated. Sho□fabricate items where □racticab□e. Obtain fie□d meas□rements for acc□rate fit before sho□fabrication.

□. Fabricate sheet meta□f□shin□and trim witho□t e□cessi□e oi□cannin□, b□c□in□, and too□mar□s and tr□e to □ine and □e□e□s indicated, with e□□osed ed□es fo□ded bac□to form hems.

1. Seams for A□min□m: Fabricate nonmo□in□seams with f□at-oc□seams. Form seams and sea□with e□o□□seam sea□er. Ri□et □oints for additional□stren□th.
2. Seams for Other Than A□min□m: Fabricate nonmo□in□seams in accessories with f□at-oc□seams. Tin ed□es to be seamed, form seams, and so□der.

C Sea□ed □oints: Form none□□ansion b□t mo□ab□e □oints in meta□to accommodate e□astomeric sea□ant to com□□with SMACNA recommendations.

D. E□□ansion Pro□isions: Where □a□□ed or ba□onet-t□□e e□□ansion □ro□isions in the Wor□cannot be □ked, form e□□ansion □oints of intermeshin□hoo□ed f□an□es, not □ess than 1 inch dee□, fi□ed with e□astomeric sea□ant conce□ed within □oints.

E. Conce□fasteners and e□□ansion □ro□isions where □ossib□e on e□□osed-to-□iew sheet meta□f□shin□and trim, □n□ess otherwise indicated.

F. Fabricate c□eats and attachment de□ices from same materia□as accessor□bein□anchored or from com□atib□e, noncorrosi□e meta□, and in thic□ness not □ess than that of meta□bein□sec□red.

2.6 ROOF DRAINAGE SHEET METAL FA□RICATIONS

A. Han□in□G□tters: Fabricate to cross section indicated, com□□ete with end □ieces, o□t□et t□bes, and other accessories as re□□ired. Fabricate in minim□m 96-inch- □n□ sections. F□nish f□at-stoc□□tter s□acers and □□tter brac□ets fabricated from same meta□as □□tters, of si□e recommended b□SMACNA b□t not □ess than twice the □□tter thic□ness. Fabricate e□□ansion □oints, e□□ansion □oint co□ers, □□tter bead reinforcin□bars, and □□tter accessories from same meta□as □□tters.

1. Fabricate from the fo□owin□materia□:
   a. A□min□m: 0.040 inch thic□.

□. Downs□o□ts: Fabricate rectan□□ar downs□o□s com□□ete with mitered e□bows. F□nish with meta□han□ers, from same materia□ as downs□o□ts, and anchors.

1. Fabricate downs□o□ts from the fo□owin□materia□:
   a. A□min□m: 0.024 thic□.

C. Para□et Sc□□ers: Fabricate sc□□ers of dimensions re□□ired with c□os□re f□an□e trim to e□terior, 4-inchwide wa□f□an□es to interior, and base e□tendin□4 inches be□end cant or ta□ered stri□into fie□d of roof. Fasten □ra□e□□ard an□□es to base of sc□□er.

1. Fabricate □ara□et sc□□ers from the fo□owin□materia□:
   a. A□min□m: 0.0320 inch thic□.

D. Cond□ctor Heads: Fabricate cond□ctor heads with f□an□ed bac□and stiffened to□ed□e and of dimensions and sha□e indicated com□□ete with o□t□et t□bes and b□t□s-in o□erf□ws.

1. Fabricate cond□ctor heads from the fo□owin□materia□:
   a. A□min□m:0.0320 inch thic□.

2.7 LOW-SLOPE ROOF SHEET METAL FA□RICATIONS

A Roof Ed□e F□ashin□□Gra□e Sto□□and Fascia Ca□s: Fabricate in minim□m 96-inch □on□, b□t not e□ceedin□10-foot- □3-m-□on□ sections. F□nish with 6-inch- wide □oint co□er □ates.

1. Fabricate from the fo□owin□materia□:
   a. A□min□m: 0.050 inch thic□.

E. Co□in□s: Fabricate in minim□m 96-inch- □2400-mm-□on□, b□t not e□ceedin□10-foot- □3-m-□on□ sections. Fabricate □oint □ates of same thic□ness as co□in□s. F□nish with contin□o□s c□eats to s□□ort ed□e of e□terna□e□and□dri□e□on□ated ho□es for fasteners on□interior □e□. Miter corners, sea□and so□der or we□d waterti□ht.

1. Fabricate co□in□s from the fo□owin□materia□:
   a. A□min□m: 0.050 inch thic□.

C. □ase F□shin□: Fabricate from the fo□owin□materia□:

1. A□min□m: 0.040 inch thic□.

D. Co□nterf□shin□: Fabricate from the fo□owin□materia□:

1. A□min□m: 0.0320 inch thic□.

E. Roof-Penetration F□shin□: Fabricate from the fo□owin□materia□as indicated on drawin□s:

1 Lead: 4.0 □b□s□ ft., hard tem□ered.

F. Roof-Drain F□shin□: Fabricate from the fo□owin□materia□

1. Lead: 4.0 □b□si□ ft., hard tem□ered.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Genera□Anchor sheet meta□f□shin□and trim and other com□onents of the Wor□sec□re□in □ace, with □ro□isions for therma□ and str□ct□ra□mo□ement. Use fasteners, so□der, we□din□rods, □rotecti□e coatin□s, se□arators, sea□ants, and other misce□□aneo□s items as re□□ired to com□□ete sheet meta□f□shin□and trim s□stem.

1 Torch c□tin□of sheet meta□f□shin□and trim is not □ermitted.

□. Meta□Protection: Where dissimi□ar meta□s wi□□contact each other or corrosi□e s□bstrates, □rotect a□ainst □a□anic action b□ □aintin□contact s□rfaces with bit□mino□s coatin□or b□□other □ermanent se□aration as recommended b□fabricator or man□fact□rers of dissimi□ar meta□s.

C. Insta□□□osed sheet meta□f□shin□and trim witho□t e□cessi□e oi□cannin□, b□c□in□, and too□mar□s and tr□e to □ine and □e□e□s indicated, with e□□osed ed□es fo□ded bac□to form hems.

D. Insta□sheet meta□f□shin□and trim□e□to □ine and □e□e□s indicated. Pro□ide □nform, neat seams with minim□m e□□os□re of so□der, we□ds, and e□astomeric sea□ant.

E. Insta□sheet meta□f□shin□and trim to fit s□bstrates and to res□□t in waterti□ht □erformance. Verif□sha□es and dimensions of s□rfaces to be co□ered before fabrication□sheet meta□.

1. S□ace c□eats not more than 12 inches a□art. Anchor each c□eat with two fasteners. □end tabs o□er fasteners.

F. E□□ansion Pro□isions: Pro□ide for therma□e□□ansion of e□□osed f□shin□and trim. S□ace mo□ement □oints at a ma□imum of 10 feet with no □oints a□owed within 24 inches of corner or intersection. Where a□□ed or ba□onet-t□□e e□□ansion □ro□isions cannot be □sed or wo□d not be s□fficient□waterti□ht, form e□□ansion □oints of intermeshin□hoo□ed f□an□es, not □ess than 1 inch dee□, fi□ed with e□astomeric sea□ant conce□ed within □oints.

G. Fasteners: Use fasteners of si□e that wi□□enetrate s□bstrate not □ess than 1-1/4 inches for nai□s and not □ess than 3/4 inch for wood screws.

1. Ga□ani□ed or Pre□ainted, Meta□ic-Coated Stee□Use stain□ess-stee□fasteners.
2. A□min□m: Use a□min□m or stain□ess-stee□fasteners.
3. Co□□er: Use co□□er or stain□ess-stee□fasteners.
4. Stain□ess Stee□Use stain□ess-stee□fasteners.

H. Sea□joints with e□astomeric sea□ant as re□□ired for waterti□ht constr□ction.

I. So□dered □oints: C□ean s□rfaces to be so□dered, remo□in□oi□s and forei□n matter. Pretin ed□es of sheets to be so□dered to a width of 1-1/2 inches e□ce□t where □etinned s□rface wo□□d show in finished Wor□.

1. Do not so□der a□min□m sheet.

3.2 ROOF DRAINAGE S□STEM INSTALLATION

A. Genera□Insta□sheet meta□roof draina□e items to □rod□ce com□□ete roof draina□e s□stem accordin□to SMACNA recommendations and as indicated. Coordinate insta□□ation of roof □erimeter f□shin□with insta□□ation of roof draina□e s□stem.

□. Han□in□G□tters: □oin sections with ri□eted and so□dered □oints or with a□□ed □oints sea□ed with e□astomeric sea□ant. Pro□ide for therma□e□□ansion. Attach □tters at ea□e or fascia to firm□□anchored □□tter brac□ets s□aced not more than 36 inches a□art. Pro□ide end c□os□es and sea□waterti□ht with sea□ant. S□□e to downs□o□ts.

1. Insta□□□tter with e□□ansion □oints at □ocations indicated b□t not e□ceedin□50 feet a□art. Insta□e□□ansion □oint ca□s.
2. Insta□contin□o□s □□tter screens on □□tters with noncorrosi□e fasteners, remo□ab□e for c□eanin□□□tters.

□. Downs□o□ts: □oin sections with 1-1/2-inch te□esco□in□□oints. Pro□ide fasteners desi□ned to ho□d downs□o□ts sec□re□□ inch awa□from wa□□ocate fasteners at to□and bottom and at a□□ro□imate□60 inches o.c. in between.

C. Para□et Sc□□ers: Insta□sc□□ers where indicated thro□h □ara□et. Contin□o□s□s□□ort sc□□er, set to correct e□e□ation, and sea□f□an□es to interior wa□face, o□er cants or ta□ered ed□e stri□s, and □nder roofin□membrane.

D. Cond□ctor Heads: Anchor sec□re□to wa□with e□e□ation of cond□ctor head rim 1 inch □25 mm□be□ow sc□□er dischar□e

3.3 ROOF FLASHING INSTALLATION

A. Genera□Insta□sheet meta□roof f□shin□and trim to com□□with □erformance re□□irements and SMACNA's "Architect□ra□ Sheet Meta□Man□a□." Pro□ide concea□ed fasteners where □ossib□e, set □nits tr□e to □ine, and □e□e□s indicated. Insta□wor□with □i□s, □oints, and seams that wi□be □ermanent□waterti□ht.

□. Roof Ed□e F□shin□and Co□in□s: Anchor to resist □□ift and o□tward forces accordin□to recommendations in FMG Loss Pre□ention Data Sheet 1-49 and the a□thorit□ha□in□□risdiction.

C. Co□nterf□shin□: Coordinate insta□□ation of co□nterf□shin□with insta□□ation of base f□shin□. Insert co□nterf□shin□in re□□ets or rece□ers and fit t□ht□to base f□shin□. Sea□re in a waterti□roof manner. E□tend co□nterf□shin□4 inches o□er base f□shin□. La□ co□nterf□shin□joints a minim□m of 4 inches □100 mm□and bed with e□astomeric sea□ant.

D. Roof-Penetration F□shin□: Coordinate insta□□ation of roof-□enetration f□shin□with insta□□ation of roofin□and other items □enetratin□roof. Insta□f□shin□as fo□ows:

1. T□n □ead f□shin□down inside □ent□i□in□, bein□caref□□not to b□oc□□ent□i□in□with f□shin□.
2. Sea□with e□astomeric sea□ant and c□am□f□shin□to □ie□enetratin□roof e□ce□t for □ead f□shin□on □ent□i□in□.

END OF SECTION 07620

SECTION 07720 - ROOF ACCESSORIES

PART I- GENERAL

1.1 SUMMARY□

A. This Section inc□des the fo□owin□

1. Roof c□rbs.
2. Roof hatches.

1.2 SU□MITTALS

A. Prod□ct Data: For each □rod□ct indicated.

□. Sho□Drawin□s: Inc□de □ans, e□ations, sections, detai□s, and attachments to other Wor□

C. Sam□les: For each e□osed finish □on re□□est of architect.

1.3 □UALIT□ ASSURANCE

A. Standards: Com□□with the fo□owin□:

1. SMACNA's "Architect□ra□Sheet Meta□Man□a□" detai□s for fabrication of □nits, inc□din□f□an□es and ca□f□shin□to coordinate with t□□e of roofin□indicated.
2. NRCA's "Roofin□and Water□roofin□Man□a□" detai□s for insta□in□□nits.

PART 2 - PRODUCTS

2.1 MATERIALS

A. A□min□m-Zinc A□□-Coated Stee□Sheet: ASTM A 792/A 792M with C□ass AZ-50 coatin□, str□ct□ra□□a□t□, Grade 40 □Grade 275□,or as re□□ired for stren□th.

□. Ins□lation: Man□fact□rer's standard ri□id or semi ri□id □lass-fiber board of thic□ness indicated.

C. Wood Nai□ers: Softwood □mber, □ress□re treated with waterborne □reser□ati□es for abo□e□ro□nd □se, com□□in□with AWPA C2□not □ess than 1-1/2 inches thic□.

D. Fasteners: Same meta□as meta□s bein□fastened, or nonma□netic stain□ess stee□or other noncorrosi□e meta□as recommended b□ man□fact□rer. Match finish of e□□osed fasteners with finish of materia□bein□fastened.

1. Pro□ide non remo□ab□e fastener heads.

E. Gas□ets: Man□fact□rer's standard t□b□□ar or fin□ered desi□n of neo□rene, EPDM, or PVC□or f□at desi□n of foam r□bber, s□on□e neo□rene, or cor□.

F. □it□mino□s Coatin□: SSPC-Paint 12, so□ent-t□□e bit□mino□s mastic, nomina□□ free of s□□f□rand □containin□no asbestos fibers, com□o□nded for 15-mi□dr□fi□m thic□ness □er coatin□.

G. Mastic Sea□ant: Po□isob□t□ene□nonhardenin□, nons□innin□, nondr□in□, nonmi□ratin□sea□ant.

H. E□astomeric Sea□ant: Recommended b□□it man□fact□rer that is com□atib□e with □oint s□rfaces□ASTM C 920, T□□e S, Grade NS, C□ass 25.

I. Roofin□Cement: ASTM D 4586, nonasbestos, fibrated as□ha□t cement desi□ned for trowe□a□□ication or other adhesi□e com□atib□e with roofin□s□stem.

2.2 ROOF CUR□S AND E□UIPMENT SUPPORTS

A. A□ai□ab□e Man□fact□rers: S□b□ect to com□□iance with re□□irements, man□fact□rers offerin□□rod□cts that ma□be incor□orated into the Wor□inc□de, b□t are not □imited to, the fo□owin□:

□. Man□fact□rers: S□b□ect to com□□iance with re□□irements, □ro□ide □rod□cts b□one of the fo□owin□:

1. C□stom C□rb, Inc.
2. Meta□ic Prod□cts Cor□oration.
3. Vent Prod□cts Co., Inc.

C. Genera□Units ca□ab□e of s□□ortin□s□erim□osed □e and dead □oads, inc□din□e□□ipment □oads and other constr□ction to be s□□orted. Coordinate dimensions with e□□ipment to be s□□orted.

I. Pro□ide □reser□ati□e-treated wood nai□ers at to□s of □nits and formed f□an□e at □erimeter bottom for mo□nting to roof.

2. On ribbed or f□ted meta□roofs, form f□an□e at □erimeter bottom to conform to roof □rofi□e.
3. Fabricate □nits to minim□m hei□ht of 8 inches, □n□ess otherwise indicated.
4. Where s□□e of roof dec□e□eeds 1/4 inch □er foot, fabricate s□□ort □nits with hei□ht ta□ered to match s□□e to □e□e□to□s of □nits.

D. Roof C□rbs:

1. Fabrication: Un□ess otherwise indicated or re□□ired for stren□th, fabricate □nits from minim□m 0.0747-inch-thic□, str□ct□ra□□a□t□; hot-di□□a□ani□ed or a□min□m-□inc a□□o□-coated stee□sheet□factor□rimed and □re□ared for □aintin□ with we□ded or sea□ed mechanica□corner □oints.
2. Fabrication: Un□ess otherwise indicated or re□□ired for stren□th, fabricate □nits from minim□m 0.063-inch-thic□, sheet a□min□m with we□ded corner □oints.
3. Ins□lation: Man□fact□rer's standard ri□id or semi-ri□id ins□lation where indicated.
4. Cants: Formed cants and base □rofi□e coordinated with roof ins□lation thic□ness

PART 3 EXECUTION

3.1 INSTALLATION

A. Genera□Coordinate insta□□ation of roof accessories with insta□□ation of roof dec□, roof ins□lation, f□ashin□, roofin□membranes, □enetrations, e□□ipment, and other constr□ction to ens□re that combined e□ements are water□roof and weatherti□ht. Anchor roof accessories sec□re□to s□□ortin□str□ct□ra□s□bstrates so the□are ca□ab□e of withstanding□□atera□and therma□stresses, and inward and o□tward □oadin□□ress□res.

□. Insta□roof accessor□items accordin□to constr□ction detai□s in NRCA's "Roofin□and Water□roofin□Man□a□," □n□ess otherwise indicated,

C. Se□aration: Se□arate meta□from incom□atib□e meta□or corrosi□e s□bstrates, inc□din□wood, b□coatin□conceal ed s□rfaces, at □ocations of contact, with bit□mino□s coatin□or □ro□idin□other □ermanent se□aration.

D. F□an□e Sea□s: Un□ess otherwise indicated, set f□an□es of accessor□□nits in a thic□bed of roofin□cement to form sea□

E. Ca□F□shin□: Where re□□ired as com□onent of accessor□, insta□ca□f□shin□to □ro□ide water□roof o□er a□ with roofin□or roof f□shin□as co□nterf□shin□□Sea□o□er a□ with thic□bead of mastic sea□ant.

F. C□ean e□posed s□rfaces accordin□to man□fact□rer's written inst□ctions. To□ch □□and dama□ed meta□coatin□s

END OF SECTION 07720

SECTION 07920 - □OINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawin□s and □enera□□ro□isions of the Contract, inc□din□Genera□and S□□□ementar□Conditions and Di□ision I S□ecification Sections, a□□□to this Section.

1.2 SUMMAR□

A. This Section inc□des sea□ants for the fo□owin□

1. E□terior □oints in □ertica□s□rfaces and non-traffic hori□onta□s□rfaces.
2. E□terior □oints in hori□onta□traffic s□rfaces.
3. Interior □oints in □ertica□s□rfaces and hori□onta□non-traffic s□rfaces.
4. Interior □oints in hori□onta□traffic s□rfaces.
5. Fire sto□s□stem thro□h fire resistance - rated wa□s.
6. E□terior □oints in sheet meta□f□shin□and trim.

1.3 SU□MITTALS

A. Fire sto□S□stem S□bmitta□s: For each thro□h-□enetration fire sto□s□stem, show each □ind of constr□ction condition □enetrated, re□ationshi□s to ad□oinin□constr□ction and □ind of □enetrati□n□item. Inc□de firesto□desi□n desi□nation of testin□and ins□ection a□enc□acce□tab□e to a□thorities ha□in□□risdiction that e□idence com□iance with re□□irements for each condition.

1.4 □UALI□ ASSURANCE

A. Sea□ant Com□atibi□it□and Adhesion Testin□: Use sea□ant man□fact□rers standard test methods to determine whether □rimin□and other s□ecific □oint □re□aration techni□es are re□□ired to obtain ra□id, o□tim□m adhesion of □oint sea□ants to □oint s□bstrates.

□. Preconstr□ction Fie□d-Adhesion Testin□: □efore insta□in□e□sentative sea□ants, fie□d test their adhesion to □oint s□bstrates □sin□ test method indicated in Part 3 "Fie□d □□a□t□Contro□" Artic□e.

C. Fire-resisti□e □oint sea□ant s□stems are identica□to those tested □er ASTM E 119 □nder conditions where □ositi□e f□maces □res□res of at □east 0.01 inch of water is maintained at a distance of 0.78 inch be□ow the fi□materia□s s□ro□ndin□the □enetration □items in the test assemb□□. Pro□ide rated s□stems com□□in□with the fo□owin□re□□irements:

1. Fire-Resisti□e Ratin□of □oint Sea□ants: As indicated b□reference to desi□n desi□nations □isted b□UL in their "Fire Resistance Director□" or b□another testin□ins□ection a□enc□.

D. Moc□□s: □efore insta□in□□oint sea□ants, a□□□e□astomeric sea□ants to demonstrate aesthetic effects and □□a□ities of materia□s and e□ec□tion.

1. A□ro□ed moc□□s ma□become □art of the com□eted Wor□if □ndist□rbed at time of S□bstantia□Com□letion.

1.5 WARRANT□

A. S□ecia□Insta□□er's Warrant□: Written warrant□in which Insta□□er a□rees to re□air or re□□ace e□astomeric □oint sea□ants that do not meet re□□irements s□ecified in this Section or fai□in adhesion within s□ecified warrant□□eriod two □ears from date of Fina□ Acce□tance.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 artic□es where s□b□ara□□h tit□es be□ow introd□ce □ists, the fo□owin□re□□irements a□□□for □rod□ct se□ection:

1. Prod□cts: S□b□ect to com□□iance with re□□irements, □ro□ide one of the □rod□cts s□ecified.

2.2 MATERIALS, GENERAL

A. Com□atibi□it□: Pro□ide □oint sea□ants, bac□in□s, and other re□ated materia□s that are com□atib□e with one another and with □oint s□bstrates □nder conditions of ser□ice and a□□lication, as demonstrated b□sea□ant man□fact□rer based on testin□and fie□d e□□erience.

□. Co□ors of E□□osed □oint Sea□ants: As se□ected from man□fact□rer's f□□ran□e.

2.03 ELASTOMERIC □OINT SEALANTS

A. Si□icone Sea□ant: G□ters □ Co□in□Sea□ant□

1. Prod□cts:
   a. Dow Cornin □795.
   b. GE Si□icone, Si Pr□f.
   c. Tremco S□ectrem 2

□. Sin□□e-Com□onent Nonsa□□Urethane Sea□ant:

1. For □ertica□masonr□contro□oints, □ro□ide the fo□owin□:
   a. Prod□cts:
      1□ Sonneborn □□idin□Prod□cts Di□, ChemRe□Inc.□NP 1.
      2□ Tremco□V□□em 1 16.
      3□ Si□a Cor□oration□Si□afie□- 1 a.
   b. T□□e and Grade: S□sin□□e com□onent□and NS□nonsa□□
   c. C□ass: 25.
2. E□□os□re: Use T□raffic□and NT□non-traffic□
3. S□bstrates: Uses M, G, A, and, as a□□icab□e to □oint s□bstrates indicated, O.

C. Urethane Sea□ant:

1. Concrete □a□in□oints, hori□onta□traffic s□rfaces.
   a. Prod□cts:
      1□ □osti□, "Chem-Ca□□950".
      2□ Sonneborn, "SL-1".
      3□ Tremco, V□□em 45
   b. T□□e and Grade S□sin□e com□onent□and NS□nonsa□□
   c. C□ass 25
   d. E□□os□re: T□raffic□
   e. S□bstrate:0

2.03 ELASTOMERIC □OINT SEALANTS

A. Si□icone Sea□ant: G□ters □ Co□in□Sea□ant□

1. Prod□cts:
   a. Dow Cornin □795.
   b. GE Si□icone, Si Pr□f.
   c. Tremco S□ectrem 2

□. Sin□□e-Com□onent Nonsa□□Urethane Sea□ant:

1. For □ertica□masonr□contro□oints, □ro□ide the fo□owin□:
   a. Prod□cts:
      1□ Sonneborn □□idin□Prod□cts Di□, ChemRe□Inc.□NP 1.
      2□ Tremco□V□□em 1 16.
      3□ Si□a Cor□oration□Si□afie□- 1 a.
   b. T□□e and Grade: S□sin□□e com□onent□and NS□nonsa□□
   c. C□ass: 25.
2. E□□os□re: Use T□raffic□and NT□non-traffic□
3. S□bstrates: Uses M, G, A, and, as a□□icab□e to □oint s□bstrates indicated, O.

C. Urethane Sea□ant:

1. Concrete □a□in□oints, hori□onta□traffic s□rfaces.
   a. Prod□cts:
      1□ □osti□, "Chem-Ca□□950".
      2□ Sonneborn, "SL-1".
      3□ Tremco, V□□em 45
   b. T□□e and Grade S□sin□e com□onent□and NS□nonsa□□
   c. C□ass 25
   d. E□□os□re: T□raffic□
   e. S□bstrate:0

REVISIONS
1 2 3 4 5 6 7 8

PROJECT NO.
1135803-01

DATE
07/09/2019

GENERAL NOTES
SPECIFICATIONS

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO, FLORIDA

RABITS & ROMANO
ARCHITECTURE
PLANNING AND DESIGN
5127 SOUTH ORANGE AVE.
SUITE 110 ORLANDO, FL. 32809
TEL - 407-490-0350
FAX - 407-232-6090
info@rabits-architect.com
www.rabits-architect.com
AA26002490

SIGN/SEAL

DATE

SHEET
GN04
OF
33

2.3 FIRESTOPPING, GENERAL

A. Com□atibi□it□ Pro□ide thro□h-□enetration firesto□s□stems that are com□atib□e with one another with the s□bstrates formin□c□enin□s, and with the items, if an□, □enetrati□thro□h-□enetration firesto□s□stem □nder conditions of ser□ice and a□□lication, as demonstrated b□ thro□h-□enetration firesto□s□stem man□facti□rers based on testin□and fie□d e□□erience.

□. Accessories: Pro□ide com□onents for each thro□h-□enetration firesto□s□stem that are needed to insta□fi□materia□s and com□□ with "Performance Re□□irements" artic□e. Use on□com□onents s□ecified thro□h □enetration firesto□s□stem man□facti□rer and a□to□ed b□the □a□ified testin□and ins□ectin□a□enc□for firesto□s□stems indicated. Accessories inc□de, b□t are not □imited to, the fo□owin□items:

1. Permanent formin□dammin□bac□in□materia□s, inc□de the fo□owin□:
   a. S□at-/oc□-wood-fiber ins□□ation.
   b. Sea□ants in combination with other formin□dammin□bac□in□materia□s to □re□ent □ea□a□e of f□□materia□s in □□id state.
   c. Fire-rated form board.
   d. Fi□ers for sea□ants.
2. Tem□orar□formin□materia□s.
3. S□bstrate □rimers.
4. Co□ars.
5. Stee□s□e□es.
6. Prod□cts:
   a. 3M Fire Pre□ention Prod□cts.
   b. Hi□i Firesto□S□stems
   c. International Protecti□e Coatin□s Cor□oration IPC, a Di□ision of W.R. Grace□
   d. Tremco Inc.

2.4 □OINT SEALANT □ACKING

A. Genera□Pro□ide sea□ant bac□in□s of materia□and t□e that are nonstainin□□are com□atib□e with □oint s□bstrates, sea□ants, □rimers, and other □oint fi□ers□and are a□□ro□ed for a□□□ications indicated b□sea□ant man□facti□rer based on fie□d e□□erience and □aborator□testin□.

□. C□□indirca□Sea□ant □ac□in□s: ASTM C 1330, of si□e and densit□to contro□sea□ant de□th and otherwise contrib□te to □rod□cin□o□ti□m□m sea□ant □erformance:

1. T□□e C □e□osed-□e□materia□with a s□rface s□in□

C. □ond-□rea□er Ta□e: Po□□eth□ene ta□e or other □astic ta□e recommended b□sea□ant man□facti□rer for □re□entin□sea□ant from adherin□to ri□id, inf□e□ib□e □oint-fi□er materia□s or □oint s□rfaces at bac□of □oint where s□ch adhesion wo□□d res□□t in sea□ant fai□□re. Pro□ide se□f-adhesi□e ta□e where a □□icab□e.

2.5 MISCELLANEOUS MATERIALS

A. Primer: Materia□recommended b□ □oint sea□ant man□facti□rer where re□□ired for adhesion of sea□ant to □oint s□bstrates indicated, as determined from □ecomstr□ction □oint-sea□ant-s□bstrate tests and fie□d tests.

□. C□eaners for Non-/oro□s S□rfaces: Chemica□c□eaners acce□tab□e to man□facti□rers of sea□ants and sea□ant bac□in□materia□s, free of oi□□resid□es or other s□bstances ca□ab□e of stainin□or harmin□□oint s□bstrates and ad□acent non-/oro□s s□rfaces in an□wa□, and form□ated to □romote o□ti□m adhesion of sea□ants with □oint s□bstrates.

C. Mas□in□Ta□e: Nonstainin□, nonabsorbent materia□com□atib□e with □oint sea□ants and s□rfaces ad□acent to □oints.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Contractor □erformin□wor□m□st be one the Sea□ant Man□fact□rer's A□□ro□ed A□□licators.

□. S□rface C□eanin□of □oints: C□ean o□t □oints immediate□□before insta□in□□oint sea□ants.

1. Remo□e forei□n materia□from □oint s□bstrates that co□□d interfere with adhesion of □oint sea□ant.
2. C□ean □oro□s □oint s□bstrate s□rfaces b□ br□shin□, □rindin□, b□ast c□eanin□, mechanica□abradin□, or a combination of these methods to □rod□ce a c□ean, so□nd s□bstrate ca□ab□e of de□e□o□in□o□tim□m bond with □oint sea□ants. Remo□e □oose□artic□es remainin□from abo□e c□eanin□o□erations b□ □ac□□min□oer b□own□o□t □oints with oi□-free com□ressed air.
3. Remo□e □aitance and form-re□ease a□ents from concrete.
4. C□ean non□oro□s s□rfaces with chemica□c□eaners or other means that do not stain, harm s□bstrates, or □ea□e resid□es co□□d interfere with adhesion of □oint sea□ants.
5. A□□s□rfaces to be ca□□ed sha□□be c□ean and dr□.

C. □oint Primin□: Prime □oint s□bstrates where recommended in writin□b□□oint sea□ant man□fact□rer, based on □ecomstr□ction □oint-sea□ant-s□bstrate tests or □ror e□□erience. Confine □rimers to areas of □oint-sea□ant bond□do not a□ow s□□a□e or mi□ration onto ad□oinin□s□rfaces.

D. Mas□in□Ta□e: Use mas□in□ta□e where re□□ired to □re□ent contact of sea□ant with ad□oinin□s□rfaces that otherwise wo□□d be □ermanent□stained or dama□ed b□s□ch contact or b□□c□eanin□methods re□□ired to remo□e sea□ant smears. Remo□e ta□e immediate□□after too□in□with□t dist□rbin□□oint sea□.

E. Sea□ant Insta□□ation: Com□□with recommendations in ASTM C 1193 for □se of □oint sea□ants as a□□icab□e to materia□s, a□□ications, and conditions indicated.

F. Insta□sea□ant bac□in□s to s□□ort sea□ants d□rin□a□□ication and at □osition re□□ired to □rod□ce o□tim□m sea□ant mo□ement ca□abi□it□:

1. Do not □ea□e □a□s between ends of sea□ant bac□in□s.
2. Do not stretch, twist, □nct□re, or tear sea□ant bac□in□s.
3. Remo□e absorbent sea□ant bac□in□s that ha□e become wet before sea□ant a□□lication and re□□ace them with dr□ materia□s.

G. Insta□bond-brea□er ta□e behind sea□ants where sea□ant bac□in□s are not □sed between sea□ants and bac□of □oints.

H. P□ace sea□ants so the□ direct□contact and f□□□wet □oint s□bstrates.

1. Com□ete□fi□recesses □ro□ided for each □oint confi□□ration.
2. Prod□ce □niform, cross-sectiona□sha□es and de□ths that a□ow o□tim□m sea□ant mo□ement ca□abi□it□.
3. A□dec□orac□s sho□d be fi□ed to within 1.2 inch of the s□rface with an a□□ro□riate bac□□□materia□and ca□□□with a ca□□in□□n. Ca□□in□beads sha□be smooth and strai□ht.
4. Ca□□aro□nd a□door and storefront o□enin□s and where noted on the drawin□s. Masonr□contro□joints sha□be ca□□ed with a hi□h-□a□it□aintab□e rethane ca□□. Contro□de□th of ca□□at 3/8 inch to 1 2 inch with a contin□o□s c□osed-ce□rod.

□ Too□in□of Nonsa□Sea□ants: Immediate□□after sea□ant a□□lication and before s□rfa□in□or c□rin□be□ins, too□sea□ants to form smooth, □niform beads, to e□minate air □oc□ets, and to ens□re contact and adhesion of sea□ant with sides of □oint.

1. Remo□e e□cess sea□ants from s□rfaces ad□acent to □oint.
2. Use too□in□a□ents that are a□ro□ed b□sea□ant man□fact□rer and that do not disco□or sea□ants or ad□acent s□rfaces.
3. □oint Confi□□ration: Conca□e □oint confi□□ration □er Fi□re 5A in ASTM C 1193, □n□ess otherwise indicated.

K. C□ean e□cess sea□ants or sea□ant smears ad□acent to □oints as insta□□ation □ro□resses b□methods and with c□eanin□materia□s a□ro□ed in writin□b□man□fact□rers of □oint sea□ants and of □rod□cts in which □oints occ□r.

L. Thro□h-Penetration Firesto□Insta□□ation:

1. Genera□Insta□□ation thro□h-□enetration s□stems to com□□with "Performance Re□□irements" of the firesto□s□stem man□fact□rer's written insta□□ation inst□ctions and □b□ished drawin□s for the a□□ications indicated.

END OF SECTION 07920

SECTION 08110 - STEEL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMAR□

A. This Section inc□des stee□doors and frames.

1.2 SU□MITTALS

A. Prod□ct Data: For each □rod□ct indicated. Inc□de door desi□nation, t□□e, □e□ and mode□materia□descri□tion, □abe□ com□□iance, fire-resistance ratin□s, and finishes. Door Sched□e. Use same reference desi□nations indicated on Drawin□s.

1.3 □UALIT□ ASSURANCE

A. Stee□Door and Frame Standard: Com□□with ANSI A 250.8, □n□ess more strin□ent re□□irements are indicated.

□. Fire-Rated Door Assemb□ies: Assemb□ies com□□in□with NFPA 80 that are □isted and □abe□ed b□a testin□and ins□ectin□a□enc□acce□tab□e to a□thorities ha□in□□risdiction, for fire-/rotection ratin□s indicated, based on testin□accordin□to NFPA 252.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. A□ai□ab□e Man□fact□rers: S□b□ect to com□□iance with re□□irements, man□fact□rers offerin□□rod□cts that ma□be incor□orated into the Wor□inc□de, b□t are not □imited to, the fo□owin□:

1. Amwe□d □□din□Prod□cts, Inc.
2. Ceco Door Prod□cts□a United Dominion Com□an□.
3. Stee□craft□a di□ision of In□erso□Rand.

2.2 MATERIALS

A. Hot-Ro□□ed Stee□Sheets: ASTM A 569/A 569M, Commercia□Stee□□CS□, T□□e □□free of sca□e, □ittin□, or s□rface defects□ □ic□ed and oi□ed.

□. Co□d-Ro□□ed Stee□Sheets: ASTM A 366/A 366M, Commercia□Stee□□CS□, or ASTM A 620/A 620M, Drawin□Stee□□DS□, T□□e □□stretcher-□e□e□ed standard of f□tness.

C. Meta□□c-Coated Stee□Sheets: ASTM A 653/A 653M, Commercia□Stee□□CS□, T□□e □, with an A40 □inc-iron-a□o□□a□annea□ed□coatin□or G60 mi□□hos□hati□ed □inc coatin□stretcher-□e□e□ed standard of f□tness.

D. E□ectro□□tic Zinc-Coated Stee□Sheet: ASTM A 591/A 591 M, Commercia□Stee□□CS□, Class □ coatin□mi□□hos□hati□ed □s□tab□e for □ne□osed a□□ications□stretcher-□e□e□ed standard of f□tness where □eed for face sheets.

2.3 DOORS

A. Interior Doors: Com□□in□with ANSI 250.8 for □e□e and mode□and ANSI A250.4 for □h□sica□end□rance □e□e□indicated.

1. Le□e□1 and Ph□sica□Performance Le□e□C, Mode□ 1 □F□□F□sh□

□. E□terior Doors: Com□□in□with ANSI A250.8 for □e□e and mode□and ANSI A250.4 for □h□sica□end□rance □e□e□ indicated.

1. Le□e□1 and Ph□sica□Performance Le□e□C, Mode□1 □F□□F□sh□

2.4 FRAMES

A. Genera□ANSI A250.8□concea□fastenin□s, □n□ess otherwise indicated.

□. Frame Stee□Sheet Thic□ness:

1. 0.042-inch-for □e□e□1 stee□doors
2. 0.053-inch- □1.3-mm-□for o□enin□s wider than 48 inches.

C. Door Si□encers: Three si□encers on sin□le-door frames and two si□encers on do□b□e-door frames.

D. P□aster G□ards: 0.016-inch-thic□, stee□sheet □aster □ards or mortar bo□es to c□se off interior of o□enin□s.

E. S□□orts and Anchors: Not □ess than 0.042-inch- thic□□inc-coated stee□sheet.

1. Masonr□Wa□Anchors:0.177-inch diameter, stee□wire com□□in□with ASTM A 510/ASTM A 5□OM□ma□be □sed in □ace of stee□sheet.

F. Inserts, □o□ts, and Fasteners: Man□fact□rer's standard □nits. Zinc-coat items that are to be b□□t into e□terior wa□s accordin□to ASTM A 153/A 153M, Class C or D as a□□icab□e.

2.5 FA□RICATION

A. Genera□Fabricate stee□door and frame □nits to com□□with ANSI A250.8 free from defects inc□din□war□and b□e□e. Where □ractica□, fit and assemb□e □nits in man□fact□rer's □ant.

□. E□terior Doors: Fabricate doors, □ane□s, and frames from meta□□c-coated stee□sheet. C□se to □and bottom ed□es of doors f□sh as an inte□ra□part of door constr□ction or b□addition of 0.053-inch- □1.3-mm-□thic□, meta□□c-coated stee□channe□s with channe□webs □aced□e□ en with to□and bottom ed□es.

C. Interior Door Faces: Fabricate e□□osed faces of doors and □ane□s, inc□din□sti□es and rai□s of nonf□sh□nits, from co□d-ro□□ed stee□sheet.

D. Core Constr□ction: Man□fact□rer's standard core constr□ction that □rod□ces a door com□□in□with SDI standards.

E. C□earances for Non-Fire-Rated Doors: Not more than 1/8 inch at □ambs and heads, e□ce□t not more than 1 /4 inch between □airs of doors. Not more than 3/4 inch at bottom.

F. C□earances for Fire-Rated Doors: As re□□ired b□NFPA 80.

G. Door-Ed□e Profi□e: □e□e□ed ed□e.

H. To□erances: Com□□with SDI 117.

1. Pre□are doors and frames to recei□e mortised and concea□ed hardware accordin□to fina□door hardware sched□□e and tem□□ates □ro□ided b□hardware s□□□ier. Com□□with a□□icab□e re□□irements in ANSI A250.6 and ANSI A 115 Series s□ecifications for door and frame □re□aration for hardware.

□ Frame Constr□ction:

1. Fabricate frames with mitered or co□ed and contin□o□s □we□ded corners and seam□ess face □oints. Pro□ide tem□orar□ s□reader bars.
2. Fabricate □noc□-down frames with mitered or co□ed corners, for fie□d assemb□□
3. Fabricate □noc□-down, dr□wa□s□□-on frames for in-□ace □□s□m board □artitions.
4. Pro□ide terminated sto□s where indicated.

K. Reinforce doors and frames to recei□e s□rface-a□□ied hardware. Dri□in□and ta□in□for s□rface-a□□ied hardware ma□be done at Pro□ect site.

L. Locate hardware as indicated or, if not indicated, accordin□to ANSI A250.8 M. G□a□in□Sto□s: Man□fact□rer's standard, formed from 0.032-inch-thic□stee□sheet.

1. Pro□ide nonremo□a□e sto□s on o□tside of e□terior doors and on sec□re side of interior doors for □ass, o□ers, and other □ane□s in doors.
2. Pro□ide screw-a□□ied, remo□a□e, □a□in□sto□s on inside of □ass, o□ers, and other □ane□s in doors.

M. Astra□a□s: As re□□ired b□NFPA 80 to □ro□ide fire ratin□s indicated.

2.6 FINISHES

A. Prime Finish: Man□fact□rer's standard, factor□-a□□ied coat of r□st-inhibitin□□rimer com□□in□with ANSI A250. 10 for acce□tance criteria.

PART 3 -EXECUTION

3.1 INSTALLATION

A. P□acin□Frames: Com□□with □ro□isions in SDI 105, □n□ess otherwise indicated. Set frames acc□rate□□in □osition, □□mbed, a□□ned, and braced sec□re□□nti□□ermanent anchors are set. After wa□constr□ction is com□□eted, remo□e tem□orar□braces and s□readers, □a□in□s□rfaces smooth and □ndama□ed.

1. Wa□Anchors: Pro□ide at □east three anchors □er □amb. For o□enin□s 90 inches or more in hei□ht, insta□□an additiona□ anchor at hin□e and stri□e □ambs.
2. G□s□m □oard Partitions: For in-□ace □artitions, insta□□noc□-down, dr□wa□s□□-on frames.
3. Fire-Rated Frames: Insta□□accordin□to NFPA 80.

□. Door Insta□□ation: Com□□with ANSI A250.8. Shim as necessar□to com□□with SDI 122 and ANSI/DHI A 115.1 G.

1. Fire-Rated Doors: Insta□□within c□earances s□ecified in NFPA 80.
2. Smo□e Contro□Doors: Insta□□to com□□with NFPA 105.

C. After insta□□ation, remo□e □rotecti□e wra□□in□s from doors and frames and to□ch □□□rime coat with com□atib□e air-dr□in□ □rimer.

END OF SECTION 08110

SECTION 08211 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMAR□

A. This Section inc□des so□id and ho□ow core doors as fo□ows:

1. Doors with wood-□eneer faces.

□. Prod□ct Data: For each t□□e of door

C. Sho□Drawin□s: Indicate □ocation, si□e, and hand of each door□e□e□ation of each □ind of door□constr□ction detai□s□ocation and e□tent of hardware b□oc□in□fire ratin□s and other □ertinent data.

D. Sam□□es: For each face materia□and finish □on re□□est of the Architect.

1.3 □UALIT□ ASSURANCE

A. □□a□it□ Standard: Com□□with NWWDA I.S.1-A, "Architect□ra□Wood F□sh Doors." De□ete "ara□ra□h and s□b□ara□ra□h be□ow if no fire-rated doors.

□. Fire-Rated Wood Doors: Doors that are □isted and □abe□ed b□a testin□and ins□ectin□a□enc□acce□tab□e to a□thorities ha□in□□risdiction, for fire ratin□s indicated.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. A□ai□ab□e Man□fact□rers: S□b□ect to com□□iance with re□□irements, man□fact□rers offerin□□rod□cts that ma□be incor□orated into the Wor□inc□de, b□t are not □imited to, the fo□owin□:

1. Am□eo Prod□cts, Inc.
2. Mar□te.
3. Mohaw□F□sh Doors, Inc.
4. We□erhae□ser Com□an□.

2.2 DOOR CONSTRUCTION

A. Doors for O□a□e Finish:

1. Grade: C□stom.
2. Faces for E□terior Doors: Medi□m-densit□o□er□a□.
3. Faces for Interior Doors: An□e□osed-□rain hardwood of mi□o□tion.

□. Ho□ow-Core Doors:

1. Core: Instit□tiona□ho□ow core.
2. Finish: Prefinished factor□
3. Frame: Preh□n□

C. □oc□in□: For ho□ow-core doors, □o□ide b□oc□in□as needed to e□minate thro□h-bo□tin□hardware.

D. Pro□ide doors with □□ed-b□oc□

2.3 FA□RICATION

A. Fabricate doors in si□es indicated for Pro□ect-site fittin□.

□. Factor□fit doors to s□it frame-o□enin□si□es indicated. Com□□with c□earance re□□irements of referenced □□a□it□standard for fittin□.

C. Factor□machine doors for hardware that is not s□rface a□□lied.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Insta□□doors to com□□with man□fact□rer's written inst□ctions, referenced □a□it□standard, and as indicated.

□. Factor□-Fitted Doors: A□□n in frames for □niform c□earance at each ed□e.

C. Factor□-Finished Doors: Restore finish before insta□□ation if fittin□or machinin□is re□□ired at Pro□ect site.

END OF SECTION 08211

SECTION 08311 - ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMAR□

A. This Section inc□des the fo□owin□:

1. Access doors and frames.

1.2 SU□MITTALS

A. Prod□ct Data: For each t□□e of access door indicated.

□. Sam□□es: For each e□□osed finish □on re□□est of Architect.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stee□□ates, sha□es, and □ars: ASTMA 36/A 36M

1. Hot-Di□Ga□ani□ed Stee□Coat to com□□with ASTM A 123/A 123M for stee□and iron □rod□cts and ASTM A 153/A 153M for stee□and iron hardware.

□. Stee□Sheet:

1. Meta□□c Coated: ASTM A 653/A 653M, Commercia□Stee□□CS□, T□□e □, with A60 □inc-iron-a□o□□a□annea□ed□ coatin□or G60 mi□□hos□hati□ed □inc coatin□stretcher-□e□e□ed standard of f□tness.

C. Dr□wa□□eads: Ed□e trim formed from 0.0299-inch □inc-coated stee□sheet formed to rece□e □oint com□o□nd and in si□e to s□it thic□ness of □□s□m □ane□s indicated.

D. P□aster □ead: Casin□bead formed from 0.0299-inch □inc-coated stee□sheet with f□n□e formed o□t of e□tended meta□□ath and in si□e to s□it thic□ness of □aster.

E. Paint:

1. Sho□Primer for Ferro□s Meta□-Fast-c□rin□, □ead- and chromate-free, □ni□ersa□modified-a□□d □rimer com□□in□ with □erformance re□□irements in FS TT-P-664□se□ected for □ood resistance to norma□atmos□heric corrosion, com□atib□e with finish □aint s□stems indicated, and ca□abi□□to □ro□ide so□nd fo□ndation for fie□d-a□□ied to□coats des□te □o□n□ed e□□os□re.
2. Sho□Primer for Meta□□c-Coated Stee□Or□anic □inc-rich □rimer com□□in□with SSPC-Paint 20 and com□atib□e with to□coat.

2.2 ACCESS DOORS AND FRAMES

A. A□ai□ab□e Man□fact□rers: S□b□ect to com□□iance with re□□irements, man□fact□rers offerin□□rod□cts that ma□be incor□orated into the Wor□inc□de, b□t are not □imited to, the fo□owin□:

1. Cesco Prod□cts.
2. E□mdor/Stoneman□Di□ of Acorn En□ineerin□Co.
3. MIFA□Man□fact□rin□, Inc.
4. Mi□oor Limited Partnershi□

□. F□sh Access Doors and Frames with E□□osed Trim:

1. Materia□Prime-□ainted stee□sheet.
2. S□rface T□□e: Masonr□, Finish on □□s□m s□bstrate, or as indicated on Drawin□s.
3. Locations: Cei□n□s or as indicated on Drawin□s
4. Door: Minim□m 0.060-inch- thic□sheet meta□, set f□sh with e□□osed face f□an□e of frame.
5. Frame: Minim□m 0.060-inch-thic□sheet meta□with 1-inch-wide, s□rface-mo□nted trim.
6. Hin□es: S□rin□-loaded concea□ed □in t□□e.
7. Latch: Screwdri□er.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Ad□ust insta□□ers of other wor□abo□t s□ecific re□□irements re□ating□to access door and f□oor door insta□□ation inc□din□ si□es of o□enin□s to recei□e access door and frame, as we□as □ocations of s□□orts, inserts, and anchorin□de□ices.

□. Set frames acc□rate□□in □osition and attach sec□re□□to s□□orts with □ane of face □ane□s a□□ned with ad□acent finish s□rfaces.

C. Ad□st doors and hardware after insta□ation for □ro□er o□eration.

END OF SECTION 08311

SECTION 08410 - ALUMINUM ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 SUMMAR□

A. This Section inc□des the fo□owin□:

1. E□terior entrance s□stems.
2. E□terior storefront s□stems.

1.2 PERFORMANCE RE□UIREMENTS

A. Pro□ide s□stems, inc□din□anchora□e, ca□ab□e of withstandin□□oads and therma□and str□ct□ra□mo□ements indicated witho□t fai□re when s□□ortin□f□□dead □oads and witho□t framin□members transferrin□stresses to □a□in□.

□. Str□ct□ra□Si□icone-Sea□ant □oints: Less than 20-□si tensi□e and shear stress in □oints.

C. Str□ct□ra□Loads:

1. Wind Load: As indicated on Drawin□s or re□□ired b□a□thorit□ha□in□□risdiction.
2. Seismic Load: As indicated on Drawin□s or re□□ired b□a□thorit□ha□in□□risdiction.

D. Str□ct□ra□Performance: Pro□ide s□stems, inc□din□anchora□e, ca□ab□e of withstandin□□oads indicated.

1. Def□ection Norma□to G□a□in□P□ane: Limited to 1/175 of c□ear s□an or 3/4 inch, whiche□er is sma□er.
2. Def□ection Para□□e□to G□a□ita□P□ane: When carr□in□f□□dead □oad, not to e□ceed amo□nt that red□ces □a□in□bite be□ow 75 □ercent of desi□n dimension and that which red□ces ed□e c□earance between framin□members and □a□in□ or other fi□ed com□onents to □ess than 1/8 inch.

E. Str□ct□ra□Testin□: ASTM E 330 at 150 □ercent of inward and o□tward wind-□oad desi□n □ress□res for d□ration re□□ired b□desi□n wind □e□oci□witho□t s□stem e□ldencin□materia□fai□□res, str□ct□ra□distress, def□ection fai□□res, or □ermanent deformation of main framin□members e□ceedin□0.2 □ercent of c□ear s□an.

F. Air Infi□tration: Limited to 0.06 cfr□s□ ft. of s□stem s□rface area when tested accordin□to ASTM E 283 at a stati-sat-□ress□re difference of 1.57 □s□ ft..

G. Water Penetration: No water □ea□a□e when tested accordin□to ASTM E 331 at minim□m differentia□□ress□re of 20 □ercent of inward actin□wind-□oad desi□n □ress□re b□t not □ess than 6.24 □s□ ft..

H. Tem□erat□re Chan□e □Ran□e□: Accommodate 120 de□F ambient and 180 de□F materia□s□rfaces.

I. Condensation Resistance Factor □CRF□: Not □ess than 45 □er AAMA 1503.1.

□ A□era□e Therma□Cond□ctance □U-Va□e□: Not more than 0.63 □t□s□ ft. □h □de□F □er AAMA 1503.1.

1.3 SU□MITTALS

A. Prod□ct Data: For each s□stem indicated.

□. Sho□Drawin□s: Inc□de □ans, e□e□ations, sections, detai□s of insta□ation and attachments to other Wor□.

1. Pre□are data based on testin□and en□ineerin□ana□sis of man□fact□rer's standard □nits in s□stems simi□ar to those indicated for this Pro□ect.
2. For entrance s□stems, inc□de hardware sched□□e and □ocations.

C. Sam□□es: For each e□□osed finish and for each co□or re□□ired □on re□□est of Architect.

D. Prod□ct test re□orts indicatin□com□□iance with a□□icab□e wind □oad □ro□isions re□□ired b□the a□thorit□ha□in□ □risdiction.

1.4 WARRANT□

A. S□ecia□Warrant□: Man□fact□rer's standard form in which man□fact□rer a□rees to re□air or re□□ace s□stems that fai□in materia□s and wor□manshi□within two □ears from date of S□bstantia□Com□□etion. Fai□re inc□des, b□t is not □imited to t fo□owin□:

1. Str□ct□ra□fai□□res inc□din□, b□t not □imited to, e□cessi□e def□ection.
2. Adhesi□e or cohesi□e sea□ant fai□□res.
3. Deterioration of meta□s, meta□finishes, and other materia□s be□ond norma□weatherin□.
4. Fai□□re of o□eratin□com□onents to f□nction norma□□.
5. Water □ea□a□e thro□h fi□ed □a□in□and frame areas.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. □asis-of-Desi□n Prod□ct: The desi□ for s□stems is based on Kawneer Tri-Fab 450. S□b□ect to com□□iance with re□□irements, □ro□ide the named □rod□ct or a com□arab□e □rod□ct b□one of the fo□owin□:

1. EFCO Cor□oration.
2. Arch A□min□m and G□ass Co.
3. □KK AP America Inc.

2.2 MATERIALS

A. A□min□m: ASTM □ 209 sheet□ASTM □ 221 e□tr□sions.

□. Finish: C□ear Anodic Finish. C□ass 1, AAMA 607.1.

C. G□a□in□: S□ecified in Di□ision 8 Section "G□a□in□."

D. G□a□in□Gas□ets: Press□re-□a□in□s□stem of b□ac□resi□ient □a□in□□as□ets with sea□ed corners, settin□b□oc□s, and shims or s□acers.

E. Str□ct□ra□Sea□ant-G□a□in□S□stem:

1. S□acers, Settin□□oc□s, Gas□ets, and □ond □rea□ers: Permanent, nonmi□ratin□t□□es in hardness recommended in writin□b□man□fact□rer, and com□atib□e with sea□ant.
2. Str□ct□ra□Si□icone Sea□ant: ASTM C 1184, recommended in writin□b□sea□ant and s□stem man□fact□rers for a□□ication indicated, and com□atib□e with s□stem com□onents with which it comes in contact.
   a. Co□or: As se□ected from man□fact□rer's f□□ran□e.
   b. Tensi□e Stren□th:100 □si minim□m.
   c. Mod□□s of E□asticit□: A□□ows ma□im□m mo□ement of 25 □ercent of □oint width, □n□ess □ess mo□ement is re□□ired b□s□stem desi□n.
3. Secondar□Sea□ant □Weathers,a□□ ASTM C 920, com□atib□e with str□ct□ra□si□icone sea□ant and s□stem com□onents width which it comes in contact, and accommodates 50 □ercent increase or decrease in □oint width at the time of a□□ication when tested accordin□to ASTM C 719.
   a. Co□or: As se□ected from man□fact□rer's f□□ran□e.

F. Gas□ets, Sea□ants, and □oint Fi□ers:

1. For □oints within framin□s□stem, as recommended in writin□b□man□fact□rer for □oint t□□e indicated.
2. For □oints at □erimeter of s□stems as s□ecified in Di□ision 7 Section "□oint Sea□ants."

G. □it□mino□s Paint: SSPC-Paint 12, e□ce□t containin□no asbestos, co□d-a□□ied as□ha□tmastic □aint form□ated for 30-mi□ thic□ness □er coat.

2.3 COMPONENTS

A. Doors: 1-3/4-inch-thic□□□a□ed doors with minim□m 0.125-inch-thic□, e□tr□ded t□b□ar rai□and sti□e members, mechanica□□fastened corners with reinforcin□brac□ets that are dee□□enetration and fi□t we□ded or that incor□orate concea□ed tie-rods, and with sna□on e□tr□ded-a□min□m □a□in□sto□s and □reformed □as□ets.

1. E□terior Doors: Pro□ide com□ression weather stri□in□at fi□ed sto□s. At other □ocations, □ro□ide s□idin□weather stri□in□retained in ad□stab□e stri□mortised into door ed□e.
   a. Sti□e Desi□n: Narrow Sti□e
2. Hardware: As s□ecified in Di□ision 8 door hardware Section.

□. Fasteners, F□ashin□s, and Accessories: Com□atib□e with ad□acent materia□s, corrosion-resistant, nonstainin□, and nonb□eedin□. Use concea□ed fasteners e□ce□t for a □□ication of door hardware.

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REVISIONS

1	2	3	4	5	6	7	8

PROJECT NO. 1135/1803-01

DATE 07/09/2019

GENERAL NOTES SPECIFICATIONS

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO , FLORIDA

SIGN/SEAL

DATE

SHEET GN05 OF 33

2.4 FABRICATION

A. Fabricate framing in profiles indicated for flush glazing (without projecting stops). Provide subframes and reinforcing of types indicated or if not indicated, as required for a complete system.

B. Fabricate components to drain water passing joints and condensation and moisture occurring or migrating within the system to the exterior.

C. Doors and Door Framing: Reinforce lo support imposed loads and for hardware indicated. Cut, drill, and tap for factory-installed hardware before finishing components.

D. Factory assemble framing and components to greatest extent possible. Disassemble components only as necessary for shipment and installation.

PART 3 - EXECUTION

3.1 INSTALLATION

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

B. Install components to drain water passing joints and condensation and moisture occurring or migrating within the system to the exterior.

C. Install glazing to comply with requirements of Division 8 Section "Glazing."

1. Mechanically fasten glazing in place until structural sealant is cured.
2. Install secondary sealant (weatherseal) to produce weatherproof joints.
3. Remove excess sealant before sealant has cured.

D. Install sealants at system perimeter to comply with requirements of Division 7 Section "Joint Sealants."

E. Install framing components true in alignment with established lines and grades to the following tolerances:

1. Variation from Plane: Limit to 1 /8 inch in 12 feet; 1 /4 inch over total length.
2. Alignment: For surfaces abutting in line, limit offset to 1/16 inch For surfaces meeting at corners, limit offset to 1/32 inch.
3. Diagonal Measurements: Limit difference between diagonal measurements to 1/8 inch.

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

END OF SECTION 08410

SECTION 08800 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes glazing for the following products and applications:

1. Doors.
2. Glazed entrances.
3. Storefront framing.

B. See Division 8 "Aluminum Entrances and Storefronts".

1.2 PERFORMANCE REQUIREMENTS

A. Work under this specification includes the furnishing of all labor, material and services necessary and reasonably incidental to the providing and installing of all glazing in sash and doors shown on the drawings.

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

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

1. Glass Thickness: Select minimum glass thickness to comply with ASTM E 1300, according to the following requirements:
   a. Specified Design Wind Loads: As indicated.
   b. Specified Design Snow Loads: As indicated.
   c. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set vertically or not more than 15 degrees off vertical and under wind action.1) Load Duration:60 seconds or less.
   d. Minimum Glass Thickness for Exterior Lites: Not less than 1/4 inch tempered.
   e. Thickness of Tinted and Heat-Absorbing Glass: Trifab 450 "Insulated",1/4 inch tempered inside and outside with 1/2 inch airspace.

D. Thermal Movements: Provide glazing that allows for thermal movements resulting from a maximum change (range) of 120 deg F (67 deg C), in ambient and surface temperatures, respectively, acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

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

1. For monolithic-glass lites, properties are based on units with lites'/4 inch thick.
2. Center-of-Glass U-Values: National Fenestration Rating Council (NFRC) 100 methodology using LBL-35298 WINDOW 4.1 computer program, expressed as Btu/ sq. ft. x h x deg F (W/sq. m x K).
3. Center-of-Glass Solar Heat Gain Coefficient: NFRC 200 methodology using LBL-35298 WINDOW 4.1 computer program.
4. Solar Optical Properties: NFRC 300.

1.3 SUBMITTALS

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

B. Samples: 12-inch- (300-mm-) square, for tinted glass product indicated upon request of architect.

C. Glazing Schedule: Use same designations indicated on Drawings.

D. Sealant compatibility and adhesion test reports.

1.4 QUALITY ASSURANCE

A. Sealant Compatibility and Adhesion Testing: Use sealant manufacturer's standard test methods to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other articles including schedules where subparagraph titles below introduce lists, the following requirements apply for product selection:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
   a. ASA Industries, Inc.
   b. Libby-Owens Ford-Glass Company
   c. Mississippi Glass Company
   d. Pittsburg Plate Glass Company
2. Trade names herein denote grade, type and quality of material required.

2.2 GLASS MATERIALS

A. Annealed Float Glass: ASTM C 1036, Type I (transparent glass, flat), Quality q3 (glazing select); thickness: '/S inch.

B. Heat-Treated Float Glass: ASTM C 1048; Type I (transparent glass, flat); Quality q3 (glazing select); thickness: '/4 inch.

1. Fabrication Process: At manufacturer's option.

2.3 GLAZING SEALANTS

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

1. Compatibility: Select glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Colors of Exposed Sealants: As indicated.

B. Elastomeric Glazing Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied, chemically curing sealant in the Glazing Sealant Schedule at the end of Part 3, including those referencing ASTM C 920 classifications for type, grade, class and uses.

1. Additional Movement Capability: Where additional movement capability is specified in the Glazing Sealant Schedule, provide products with the capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand the specified percentage change in the joint width existing at time of installation and remain in compliance with other requirements in ASMT C 920 for uses indicated.

C. Cylindrical Backing: ASTM C 1330, Type 0 (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

2.4 GLAZING TAPES

A. Back-Bedding Mastic Glazing Tape: Preformed, butyl-based elastomeric tape with a solids content of 100 percent with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated and complying with ASTM C 1281 and AAMA 800 for products indicated below:

1. AAMA 804.3 tape, where indicated.
2. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
3. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

B. Expanded Cellular Glazing Tape: Closed-cell, PVC foam tape; factory coated with adhesive on both surfaces; packaged on rolls with release liner protecting adhesive; and complying with AAMA 800 for the following types:

1. Type 1, for glazing applications in which tape acts as the primary sealant. Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.5 GLAZING GASKETS

A. Compression Gaskets: Molded or extruded gaskets of type and material indicated below and of profile and hardness required to maintain watertight seal:

1. Neoprene or EPDM dense compression gaskets complying with ASTM C 846.
2. Silicone dense compression gaskets complying with ASTM C 1115.
3. Neoprene, EPDM or Silicone soft compression gaskets complying with ASTM C 509, Type II, black.

2.6 MISCELLANEOUS GLAZING MATERIALS

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

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

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

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

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

F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type 0 (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

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

2.7 FABRICATION OF GLASS AND OTHER GLAZING PRODUCTS

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

PART 3 - EXECUTION

3.1 GLAZING, GENERAL

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

1. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.
2. Protect glass edges from damage during handling and installation. Remove glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance from Project site and legally dispose of off Project site.
3. Apply primers to joint surfaces where required for adhesion of sealants, as determined by sealant compatibility and adhesion testing.
4. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
5. Provide spacers for glass lites where the length plus width is larger than 50 inches (1270 mm) unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances

B PROTECTION

1. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface.
2. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter.

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

C. At completion this contractor shall wash and polish all glazing and clean adjacent surfaces soiled by his work.

END OF SECTION 08800

SECTION 09220 - PORTLAND CEMENT PLASTER

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Portland Cement Plaster Finishes: Stucco.
2. Non-load-bearing steel framing and furring.
3. Metal lath and metal accessories.

B. See Division 5 Section "Cold-Formed Metal Framing" for load-bearing steel framing.

1.2 SUBMITTALS

A. Product Data: For each product indicated.

B. Samples: For each exposed finish and for each color and texture required upon request of the Architect.

1.3 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: Where indicated, provide assemblies identical to those tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.

1.4 PROJECT CONDITIONS

A. Environmental Requirements, General: Comply with requirements of referenced plaster application standards and recommendations of plaster manufacturer for environmental conditions before, during, and after plaster application.

PART 2 - PRODUCTS

2.1 NON-LOAD-BEARING STEEL FRAMING

A. Steel Sheet Components, General: Metal complying with ASTM C 645 requirements.

1. Protective Coating:
   a. Interior Applications: ASTM A 653/A 653M, G60, hot-dip galvanized zinc coating.
   b. Exterior Applications: ASTM A 653/A 653M, G60, hot-dip galvanized zinc coating.

B. Suspended Ceiling and Soffit Framing: Size metal ceiling supports to comply with ASTM C 1063, unless otherwise indicated.

1. Hanger Attachments to Concrete: Anchors fabricated from corrosion-resistant materials with holes or loops for attaching hanger wires and capable of sustaining, without failure, a load equal to 5 times that imposed by construction as determined by testing according to ASTM E 488 by a qualified independent testing agency.
   a. Type: Post installed, expansion anchor.
2. Wire for Hangers and Ties: ASTM A 64 1/A 641 M, Class I zinc coating, soft temper.
3. Carrying Channels: Cold-rolled, commercial-steel sheet with a base metal thickness of 0.0538 inch, a minimum 1'2-inch-wide flange, and in depth indicated.
4. Furring Channels (Furring Members):
   a. Cold-Rolled Channels: 0.0538-inch bare steel thickness, with minimum 1/2-inch-wide flange, 3/4 inch deep.
C. Partition and Soffit Framing:
   1. Steel Studs and Runners: ASTM C 645, in depth indicated.
   2. Cold-Rolled Channels:0.0538-inch bare steel thickness, with minimum 1'2-inch wide flange, and in depth indicated.
   3. Hat-Shaped, Rigid Furring Channels: ASTM C 645, in depth indicated.

2.2 LATH

A. Expanded-Metal Lath: ASTM C 847.
   1. Material: Zinc-coated (galvanized) steel sheet, structural quality, with coating complying with ASTM A 653/A 653M, G60 (Z 180) coating designation.
   2. Diamond-Mesh Lath: Self-furring.
      a. Weight: 2.5 lb/sq. yd..
B. Paper Backing: Factory bonded to back of lath, complying with FS UU-B-790, Type I.
   1. Vapor-Permeable Paper: Grade D, Style 2.

2.3 ACCESSORIES

A. General: ASTM C 1063. Coordinate depth of accessories with thicknesses and number of plaster coats required.

B. Metal Corner Reinforcement: Expanded, large-mesh, diamond-metal lath fabricated from zinc-alloy or welded-wire mesh fabricated from 0.0475-inch diameter, zinc-coated (galvanized) wire and specially formed to reinforce external corners of portland cement plaster on exterior exposures while allowing full plaster encasement.
   1. Zinc Alloy: Minimum 0.0207 inch thick.
   2. Aluminum: Minimum 0.050 inch thick.
C. Corner beads: Small nose corner beads with expanded flanges of large-mesh diamond-metal lath allowing full plaster encasement.
   1. Material: Zinc alloy or aluminum.
D. Casing Beads: Square-edged style, with expanded flanges.
   1. Material: Zinc alloy or aluminum.
E. Curved Casing Beads: Square-edged style, fabricated from aluminum coated with clear plastic, preformed into curve of radius indicated.
F. Control Joints: Prefabricated with removable protective tape on plaster face of control joints.
   1. Material: Zinc alloy or aluminum.
   2. Type: 2-piece, casing beads with back flanges formed to produce slip joint action, adjustable for joint widths from 1/8 to 5/8 inch.
G. Corner Reinforcement: Special Stucco type woven wire corner reinforcing strips.
H. Lath Attachment Devices: Material and type required by ASTM C 1063 for installations indicated.

2.4 PLASTER MATERIALS

A. Base-Coat Cements: Portland cement, ASTM C 150, Type I.
B. Job-Mixed Finish-Coat Cement: Portland cement, ASTM C 150, Type I.
   1. Cement Color: White.
C. Stucco Finish Coat: Manufacturer's standard factory-packaged stucco, including portland cement, aggregate, coloring agent, and other proprietary ingredients.
   1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Florida Stucco Corp.
      b. Highland Stucco.
      c. IPA Systems, Inc.
      d. United States Gypsum Co.
D. Lime: Special hydrated lime for finishing purposes, ASTM C 206, Type S; or special hydrated lime for masonry purposes, ASTM C 207, Type S.
E. Sand Aggregate for Base Coats: ASTM C R97
F Aggregate for finish coats: ASTM C 897 system, manufactured or natural sand, white

2.5 MISCELLANEOUS MATERIALS

A. Water for Mixing and Finishing Plaster: Potable.
B. Bonding Agent: ASTM C 932.
C. Acid-Etching Solution: Muriatic acid (10 percent solution of commercial hydrochloric acid) mixed 1 part to not less than 6 nor more than 10 parts water.
D. Dash-Coat Material: 2 parts portland cement to 3 parts fine sand, mixed with water to a mushy-paste consistency.
E. Steel Drill Screws:
   1. ASTM C 1002 for fastening metal lath to wood or steel members less than 0.033 inch thick.
   2. Steel drill screws complying with ASTM C 954 for fastening metal lath to steel members 0.033 to 0. 112 inch thick.
   3. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, ...c following:
      a. ChemRex, Inc., Contech Brands; PL Acoustical Sealant.
      b. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
      c. United States Gypsum Co.; SHEETROCK Acoustical Sealant.
F. Three-Coat Work over Metal Lath:
   1. Scratch and Brown Coat Mixes: Scratch, 1 part portland cement, 0 to 3/4 parts lime, 2-1/2 to 4 parts aggregate; brown, 1 part portland cement, 0 to 3/4 parts lime, 3 to 5 parts aggregate.
G. Two-Coat Work over Concrete Unit Masonry:
   1. Base Coat Mix: I part portland cement, 3/4 to 1-1/2 parts lime, 3 to 4 parts aggregate.
H. Job-Mixed Finish Coats:
   1. Mixes with Sand Aggregates: 1 part portland cement, 3/4 to 1-1/2 parts lime, 3 parts sand.

PART 3 - EXECUTION

3.1 LATH AND FURRING INSTALLATION, GENERAL

A. Standards: Comply with ML/SFA 920, "Guide Specifications for Metal Lathing and Furring," and ASTM C 1063.

B. Install supplementary framing, blocking, and bracing at terminations in work and for support of fixtures, equipment services, heavy trim, grab bars, handrails, furnishings, and similar work to comply with details indicated or, if not otherwise indicated, to comply with applicable written instructions of lath and furring manufacturer.

C. Isolation: Where lathing and metal support system abut building structure horizontally and where partition or wall abuts overhead structure, isolate from structural movement to prevent transfer of loading from building structure.
   1. Frame both sides of control joints independently and do not bridge joints with furring and lathing or accessories.

D. Install additional framing, furring, runners, lath, and beads, as required to form openings and frames for other work as indicated. Coordinate support system for proper support of framed work that is not indicated to be supported independently of metal furring and lathing system.

3.2 NON-LOAD-BEARING FRAMING INSTALLATION

A. Ceiling Suspension Systems:
   1. Preparation and Coordination: Coordinate installation of ceiling suspension system with installation of overhead structural systems to ensure inserts and other structural anchorage provisions have been installed to receive ceiling hangers in a manner that will develop their full strength and at spacings required to support ceiling.
   2. Hanger Installation: Comply with ML/SFA 920, "Guide Specifications for Metal Lathing and Furring," and with referenced standards.
      a. Do not attach hangers to metal deck tabs. Install ceiling suspension system components of sizes and spacings indicated, but not in smaller sizes or greater spacings than those required by referenced lathing and furring installation standards.
B. Partition Framing and Furring: Comply with ASTM C 754 and ML/SFA 920, "Guide Specifications for Metal Lathing and Furring."
   1. Steel Stud Systems to Receive Metal Lath:
      a. Extend and attach partition support systems to structure above suspended ceilings, unless otherwise indicated.
      b. Extend partition support systems to finish ceilings and attach to ceiling suspension members, unless otherwise indicated.

3.3 LATHING

A. Install where plaster base coats are required. Provide appropriate type, configuration, and weight of metal lath selected from materials indicated that comply with referenced ML'SFA specifications and ASTM lathing installation standards.
   1. Suspended and Furred Ceilings: Use flat, diamond-mesh lath.
   2. Vertical Metal Framing and Furring: Use flat, diamond-mesh lath and cold-rolled channel stud' framing.
   3. Exterior Sheathed Wall Surfaces: Use paper-faced, self-furring, diamond-mesh lath
   4. Monolithic Surfaces: Use [[self-furring, diamond-mesh lath or vertical metal framing and furring as required for plaster thickness.

3.4 PREPARATIONS FOR PLASTERING

A. Protect contiguous Work from damage and deterioration caused by plastering with temporary covering and other provisions necessary.

B. Clean plaster bases and substrates for direct application of plaster, removing loose material and substances that may impair the Work.

C. Etch concrete and concrete unit masonry surfaces indicated for direct plaster application. Scrub with acid-etching solution on previously wetted surface and rinse thoroughly with clean water. Repeat application, if necessary, to obtain adequate suction and mechanical bond of plaster (where dash coat, bonding agent, or additive is not used).

D. Apply bonding agent on concrete and concrete unit masonry surfaces indicated for direct plaster application.

E. Apply dash coat on concrete surfaces indicated for direct plaster application. Moist-cure dash coat for at least 24 hours after application and before plastering.

F. Install temporary grounds and screeds to ensure accurate rodding of plaster to true surfaces; coordinate with scratch-coat work.

G. Refer to Division 6 Sections for installing permanent wood grounds.

H. Refer to Division 7 Sections for installing flashing.

I. Surface Conditioning: Immediately before plastering, dampen concrete and concrete unit masonry substrates, except where a bonding agent has been applied, to produce optimum suction for plastering.

3.5 PLASTERING ACCESSORIES INSTALLATION

A. General: Comply with referenced lathing and furring installation standards for provision and location of plaster accessories. Miter or cope accessories at corners; install with tight joints and in alignment. Attach accessories securely to plaster bases to hold accessories in place and in alignment during plastering.
   1. External Corners: Install corner reinforcement at external corners.
   2. Terminations of Plaster: Install casing beads, unless otherwise indicated.
   3. Control Joints: Install at locations indicated or, if not indicated, at locations complying with the following criteria and approved by Architect:
      a. Where an expansion or contraction joint occurs in surface of construction directly behind plaster membrane.
      b. Distance between Control Joints: Not to exceed 18 feet in either direction or a length-to-width ratio of 2-1/2 to 1.
      c. Wall Areas: Not more than 144 sq. ft.
      d. Horizontal Surfaces: Not more than 100 sq. ft. in area.
      e. Where plaster panel sizes or dimensions change, extend joints full width or height of plaster membrane.

B. Where sound-rated plaster work is indicated by STC ratings or other notation, seal work at perimeters, control joints, openings, and penetrations with a continuous bead of acoustical sealant. Comply with ASTM C 919 and plaster manufacturer's written instructions for location of sealant beads.

C. Install sound attenuation blankets within stud cavities where indicated.

3.6 PLASTER APPLICATION

A. Plaster Application Standard: Comply with ASTM C 926.
   1. Mixing: Mechanically mix cementitious and aggregate materials for plasters to comply with applicable referenced application standard and with recommendations of plaster manufacturer.
   2. Do not use materials that are frozen, caked, lumpy, dirty, or contaminated by foreign materials.
   3. Do not use excessive water in mixing and applying plaster materials.Flat Surface Tolerances: Do not deviate more than plus or minus 1/8 inch in 10 feet from a true plane in finished plaster surfaces, as measure=d by a 10-foot straightedge placed at any location on surface.

B. Grout hollow-metal frames, bases, and similar work occurring in plastered areas, with base-coat plaster material, and before lathing where necessary. Except where full grouting is indicated or required for fire resistance rating, grout at least 6 inches at each jamb anchor.

C. Sequence plaster application with installation and protection of other work so that neither will be damaged by installation of other.

D. Plaster flush with metal frames and other built-in metal items or accessories that act as a plaster ground, unless otherwise indicated. Where interior plaster is not terminated at metal frame by casing beads, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.

F. Corners: Make internal corners and angles square; finish external corners flush with corner beads on interior work, square and true with plaster faces on exterior work.

G. Number of Coats:
   1. Metal Lath: Three coats.
   2. Concrete Unit Masonry: Two coats.
   3. Concrete, Cast-in-Place or Precast: Two coats when surface condition complies with ASTM C 926 for plaster bonded to solid base.

H. Finish Coats:
   1. Float Finish: Apply finish coat to a minimum thickness of 1 /8 inch to completely cover base coat, uniformly floated to a true even plane with fine-textured finish matching sample.
   2. Trowel-Textured Finish: Apply finish coat with hand-troweled-textured finish matching sample.
   3. Moist-cure plaster base and finish coats to comply with ASTM C 926, including written instructions for time between coats and curing in "Annex A2 Design Considerations."

3.7 CUTTING, PATCHING, AND CLEANING

A. Cut, patch, replace, repair, and point up plaster as necessary to accommodate other work. Repair cracks and indented surfaces. Point-up finish plaster surfaces around items that are built into or penetrate plaster surfaces. Repair or replace work to eliminate blisters, buckles, check cracking, dry outs, efflorescence, excessive pinholes, and similar defects. Repair or replace work as necessary to comply with required visual effects.

B. Remove temporary covering and other provisions made to minimize spattering of plaster on other work. Promptly remove plaster from door frames, windows, and other surfaces not to be plastered. Repair surfaces stained, marred or otherwise damaged during plastering work.

END OF SECTION 09220

SECTION 09260 - GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Interior gypsum wallboard.
2. Exterior gypsum board panels for ceilings and soffits.
3. Non-load-bearing steel framing.

1.2 SUBMITTALS

A. Product Data: For each product indicated.

B. Samples: For each textured finish indicated and on same backing indicated for Work upon request of Architect.

1.3 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics For gypsum board assemblies with fire-resistance ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E'119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

B. Sound Transmission Characteristics: For gypsum board assemblies with STC ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by a qualified independent testing agency.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.

REVISIONS
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PROJECT NO.
T3C51803-01

DATE
07/09/2019

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO , FLORIDA

GENERAL NOTES
SPECIFICATIONS

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2.5 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475.

B. Joint Tape:

1. Interior Gypsum Wallboard: Paper.
2. Exterior Gypsum Soffit Board: Paper.
3. Glass-Mat Gypsum Sheathing Board:10-by-10 glass mesh

C. Joint compound for interior gypsum wallboard: for each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints and damaged surface areas, use setting type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, flanges of trim accessories, and fasteners, use setting-type taping compound.
3. Fill Coat: For second coat, use setting-type, sandable topping compound.
4. Finish Coat: For third coat, use setting -type, sandable topping compound.
5. Skim Coat: For final coat of Level 5 finish, use setting-type, sandable topping compound.

D. Joint Compound for Exterior Applications:

1. Exterior Gypsum Soffit Board: Use setting-type taping and setting-type, sandable topping compounds.
2. Glass-Mat Gypsum Sheathing Board: As recommended by manufacturer.

E. Joint Compound for Tile Backing Panels:

1. Water-Resistant Gypsum Backing Board: Use setting-type taping and setting -type, sandable topping compounds.
2. Glass-Mat, Water-Resistant Backing Panel: As recommended by manufacturer.
3. Cementitious Backer Units: As recommended by manufacturer.

2.6 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

PART 3 - EXECUTION

3.1 NON-LOAD-BEARING STEEL FRAMING INSTALLATION

A. General: Comply with ASTM C 754, and ASTM C 840 requirements that apply to framing installation.

B. Suspended Ceiling and Soffit Framing:

1. Suspend ceiling hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
3. Attach hangers to structural members. Do not support ceilings from or attach hangers to permanent metal forms, steel deck tabs, steel roof decks, ducts, pipes, or conduit.
4. Screw furring to wood framing.
5. Wire-tie furring channels to supports, as required to comply with requirements for assemblies indicated.
6. Grid Suspension System: Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically join main beam and cross-furring members to each other and buttcut to fit into wall track.

C. Partition and Soffit Framing:

1. Where studs are installed directly against exterior walls, install isolation strip between studs and wall.
2. Extend partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for gypsum board.
3. Frame door openings to comply with GA-600 and with gypsum board manufacturer's applicable written recommendations, unless otherwise indicated. Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
   a. Install two studs at each jamb, unless otherwise indicated.
   b. Extend jamb studs through suspended ceilings and attach to underside of floor or roof structure above.
4. Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

3.2 PANEL PRODUCT INSTALLATION

A. Gypsum Board: Comply with ASTM C 840 and GA-216.

1. Space screws a maximum of 12 inches o.c. for vertical applications.
2. On ceilings, apply gypsum panels before wall partition board application to the greatest extent possible and at right angles to framing, unless otherwise indicated.
3. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
   a. Stagger abutting end joints not less than one framing member in alternate courses of board.
   b. At stairwells and other high walls, install panels horizontally, unless otherwise indicated or required by fire-resistance-rated assembly.
4. Single-Layer Fastening Methods: Apply gypsum panels to supports with steel drill screws.
5. Laminating to Substrate: Comply with gypsum board manufacturer's written recommendations and temporarily brace or fasten gypsum panels until fastening adhesive has set.

B. Exterior Ceilings and Soffits: Apply exterior gypsum panels perpendicular to supports, with end joints staggered and located over supports.

1. Fasten with corrosion-resistant screws.

3.3 FINISHING

A. Installing Trim Accessories: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Finishing Gypsum board panels: treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration.

1. Prefill open joints and damaged surface areas.
2. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
3. Glass-Mat Gypsum Sheathing Board: Finish according to manufacturer's written instructions for use as exposed soffit board.
4. Glass-Mat, Water-Resistant Backing Panels: Finish according to manufacturer's written instructions.

C. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:

1. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges at panel surfaces that will be exposed to view, unless otherwise indicated.

END OF SECTION 09260

SECTION 09512 - ACOUSTICAL TILE CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

A This Section includes acoustical tiles and concealed suspension systems for ceilings.

1.2 SUBMITTALS

A. Product Data: For each product indicated.

B. Samples: For each acoustical tile, for each concealed suspension system member and for each color and texture required.

C. Product test reports.

1.3 QUALITY ASSURANCE

A. Acoustical Testing Agency Qualifications: An independent testing laboratory or an NVLAP-accredited laboratory.

B. Fire-Test-Response Characteristics:

1. Fire-Resistance Ratings: Where indicated, provide acoustical tile ceilings identical to those of assemblies tested for fire resistance per ASTM E 119 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Ratings are indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another testing and inspecting agency.
   a. Identify materials with appropriate markings of applicable testing and inspecting agency.
2. Surface-Burning Characteristics: Acoustical tiles complying with ASTM E 1264 for Class A materials, when tested per ASTM E 84.
   a. Smoke-Developed Index: 450 or less.

C Seismic standard: Comply the following

1. ASTM E 580.
2. CISCA's "Recommendations for Direct-Hung Acoustical Tile and Lay-in Panel Ceilings--Seismic Zones 0-2."
3. Mockups: Build mockups to verify selections made under sample Submittals and to

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.

2.2 GENERAL

A. Acoustical Tile Standard: Comply with ASTM E 1264.

B. Metal Suspension System Standard: Comply with ASTM C 635.

C. Attachment Devices: Size for five times the design load indicated in ASTM C 635, Table 1, "Direct Hung," unless otherwise indicated.

1. Anchors in Concrete: Expansion anchors fabricated from corrosion-resistant materials, with holes or loops for attaching hangers of type indicated and with capability to sustain, without failure, a load equal to five times that imposed by ceiling construction, as determined by testing per ASTM E 488 or ASTM E 1512 as applicable, conducted by a qualified testing and inspecting agency.
2. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hangers of type indicated, and with capability to sustain, without failure, a load equal to 10 times that imposed by ceiling construction, as determined by testing per ASTM E 1190, conducted by a qualified testing and inspecting agency.

D. Wire Hangers, Braces, and Ties: Zinc-coated carbon-steel wire; ASTM A 641,'A 641M, Class 1 zinc coating, soft temper.

1. Size: Select wire diameter so its stress at three times hanger design load (ASTM C 635, Table 1, "Direct Hung") will be less than yield stress of wire, but provide not less than 0.106-inch- diameter wire.

E. Seismic struts and seismic clips.

F. Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that fit acoustical tile edge details and suspension systems indicated; formed from sheet metal of same material and finish as that used for exposed flanges of suspension system runners.

2.3 ACOUSTICAL TILES

A. General: Acoustical tiles shall be 24" x 48" x 5/8" matte finish mineral fiber ceiling boards and shall conform to Federal Specification SS-S-1 18a, Class 25. Light reflectance shall be no less than 75% and have NRC minimum range of.50 -.60.

B. Products:

1. Armstrong "Cortega".
2. Celotex "Baroque"
3. U.S.G. "Omni Fissured"

2.4 METAL SUSPENSION SYSTEM

A. General: The ceiling suspension system shall be an exposed grid system with exposed flanges having a factory applied white enamel finish with roll formed capped edges.

1. Main Runner: DX-24
2. Cross Tees: DX-424
3. Wall Angle: M6S

B Products:

1. Donn Products, Inc., Westlake, OH.
2. Acoustical Tile Supplier Standard Grid System.

B. Ceiling Suspension System: Direct hung; ASTM C 635, intermediate-duty structural classification.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install acoustical tile ceilings to comply with AS T M C 636 and seismic requirements indicated, per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."

B. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders.

C. Suspend ceiling hangers from building's structural members, plumb and free from contact with insulation or other objects within ceiling plenum. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers, use trapezes or equivalent devices.

1. Do not support ceilings directly from permanent metal forms or floor deck; anchor into concrete slabs.
2. Do not attach hangers to steel deck tabs or to steel roof deck.

D. Install edge moldings and trim at perimeter of acoustical tile ceiling area and where necessary to conceal edges of acoustical units. Screw attach moldings to substrate with concealed fasteners at intervals not more than 16 inches o.c. and not more than 3 inches from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet. Miter corners accurately and connect securely.

E. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented,bent,or kinked members

F. Install acoustical tiles in coordination with suspension system and exposed moldings and trim. Place splines or suspension system flanges into curved edges so tile-to-tile joints are closed by double lap of material. Fit adjoining tile to form flush, tight joints. Scribe and cut tile for accurate fit at borders and around penetrations through tile. Hold tile field in compression by inserting leaf-type, spring-steel spacers between tile and moldings, spaced 12 inches o.c.

END OF SECTION 09512

SECTION 10200 - LOUVERS AND VENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes fixed, extruded-aluminum louvers.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide louvers capable of withstanding the effects of gravity loads and wind loads based on a uniform pressure of 20 lb/sq. ft., acting inward or outward, without permanent deformation of louver components, noise or metal fatigue caused by louver blade rattle or flutter, or permanent damage to fasteners and anchors.

B. Thermal Movements: Provide louvers that allow for thermal movements resulting from a temperature change (range) of 120 deg F , ambient; 180 deg F, material surfaces, by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

C. Air-Performance, Water-Penetration, and Wind-Driven Rain Ratings: As demonstrated by testing manufacturer's stock units according to AMCA 500-L.

1.3 SUBMITTALS

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

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other Work.

1. Verify louver openings by field measurements before fabrication and indicate measurements on Shop Drawings.

C. Samples: For each type of finish upon request of Architect.

D. Product test reports verifying compliance with applicable wind loads by testing methods approved by the authority having jurisdiction..

PRODUCTS

2.1 MANUFACTURERS

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

1. Louvers:
   a. Airline Products Co.
   b. Cesco Products.
   c. Greenheck.
   d. Vent Products Company, Inc.

2.2 MATERIALS

A. Aluminum Extrusions: ASTM B 221, alloy 6063-T5 or T-52.

B. Aluminum Sheet: ASTM B 209, alloy 3003 or 5005.

C. Fasteners: Of same basic metal and alloy as fastened metal or 300 Series stainless steel.

2.3 FABRICATION, GENERAL

A. Fabricate frames to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances, adjoining material tolerances, and perimeter sealant joints. 1

B. Join frame members to each other and to louver blades with fillet welds concealed from view.

C. Join frame members to each other and to louver blades with fillet welds, threaded fasteners, or both, as standard with louver manufacturer, concealed from view.

2.4 FIXED, EXTRUDED-ALUMI-NIUM LOUVERS

A. Horizontal, Nondrainable-Blade Louver:

1. Basis-of-Design Product: Greenheck ESU or a comparable product of one of the following:
   a. Airline Products Co.
   b. Cesco Products.
   c. Vent Products Company, Inc.
2. Blade Profile: Plain blade without center baffle.
3. Frame and Blade Nominal Thickness: Not less than 0.080 inch.
4. Performance Requirements:
   a. Free Area: Not less than 7.5 sq. ft. for 48-inch- wide by 48-inch- high louver.
   b. Point of Beginning Water Penetration: Not less than 700 fpm.
   c. Air Performance: Not more than 0.10-inch wg static pressure drop at free-area velocity.

2.5 LOUVER SCREENS

A. General: Provide screen at interior face of each exterior louver.

B. Louver Screen Frames: Same kind and form of metal as indicated for louver to which screens are attached.

C. Louver Screening:

1. Bird Screening: Aluminum, 1/2-inch- square mesh, 0.063-inch wire.

2.6 FINISHES

D. Aluminum, High-Performance Organic Finish: Two-coat thermocured system with fluoropolymer coats containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.

1. Color and Gloss: As selected from manufacturer's full range.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Locate and place louvers and vents level, plumb, and at indicated alignment with adjacent work.

B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weather tight connection.

C. Provide perimeter reveals and openings of uniform width for sealants and joint fillers, as indicated.

D. Repair damaged finishes so no evidence remains of corrective work. Return items that cannot be refinished in the field to the factory, make required alterations, and refinish entire unit or provide new units.

E. Protect galvanized and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of bituminous paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.

END OF SECTION 10200

SECTION 10801 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Toilet and bath accessories.
2. Underlavatory guards.

1.2 QUALITY ASSURANCE

A. Inserts and Anchorage: Furnish inserts and anchoring devices and coordinate delivery with other work to avoid delay

B. Provide products of the same manufacturer for each type of accessory unit and for units exposed in the same areas.

C. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace mirrors that develop visible silver spoilage defects within 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:1. Toilet and Bath Accessories:

   a. American Specialties, the.
   b. Bobrick Washroom Equipment, Inc.
   c. Bradley Corporation.

2. Underlavatory Guards:
   a. Truebro, Inc.
   b. Plumberex Specialty Products, Inc.

2.2 SCHEDULE OF TOILET ACCESSORIES

Mark	Product	Bobrick #	Bradley #	Notes
AI	Paper Towel Dispenser	B-261	250-150000	SS Surface Mounted
B I	Toilet Tissue Dispenser	B-264	5054	SS Surface Mad - Single Roll
F 1	36" Grab Bar	B3803-36	8120-001360	SS Satin Finished
F2	42" Grab Bar	B3803-42	8120-001420	SS Satin Finished
K1	Mirror Unit	B-294	740 16" x 30" Tilt,	SS Frame
UI	Undersink Pipe Protection	N/A	N/A	Truebro "Lav Guard" or Plumberex "Handy-Shield"

Note: Contractor to comply with manufacturer's recommendations for anchorage of accessories to substrate.

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. Provide blocking where required to meet force requirements indicted below. Ensure blocking is Fire retardant in walls that are rated or are otherwise required to be non-combustible

1. Install grab bars to withstand a downward load of at least 250 lbf, when tested according to method in ASTM F 446.
2. Install undersink protection around trap and angle valve assemblies. Secure covers with manufacture's standard fasteners.

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

REVISIONS
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PROJECT NO.
1305803-01

DATE
07/09/2019

GENERAL NOTES
SPECIFICATIONS

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO , FLORIDA

AA26002490

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GENERAL NOTES

1. IT IS THE INSTALLING SUBCONTRACTORS SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS MAY BE NECESSARY.

2. DESIGN LIVE LOADS

   ROOF 20 PSF

3. DESIGN WIND LOAD SHALL BE BASED ON THE FLORIDA BUILDING/RESIDENTIAL CODE 2017
   a) BASIC WIND SPEED = 140 MPH (LRFD)
   b) BUILDING CATAGORY II
   c) EXPOSURE "C"
   d) INTERNAL PRESSURE COEFFICIENT ;0.18 FULLY ENCLOSED STRUCTURE
   e) COMPONENTS & CLADDING PRESSURES (ASD): +21.06 & -27.50 PSF

FOUNDATIONS

1. FOUNDATION DESIGN IS BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSF. WHICH SHALL BE VERIFIED BY A FLORIDA REGISTERED GEOTECHNICAL ENGINEER PRIOR TO THE START OF WORK.
2. PLACE FOOTINGS/SLAB ON COMPACTED SOIL. FOLLOW RECOMMENDATIONS OF SOILS REPORT.

CAST IN PLACE CONCRETE

1. ALL CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 .DAYS:
   SLAB ON GRADE, FOOTINGS 3000 PSI
   REMAINING CONCRETE 4000 PSI
2. ALL CONCRETE SHALL HAVE A SLUMP OF 4" PLUS OR MINUS 1", AND HAVE 2 TO 4% .AIR ENTRAINMENT, AND A MAXIMUM WATER/CEMENT RATIO OF 0.58.
3. CONCRETE MIX DESIGN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301 CHAPTER 3, METHOD 1 OR METHOD 2. SUBMIT BACKUP DATA AS REQUIRED BY CHAPTER 5 SECTION 5.3. OF THE LATEST EDITION OF ACI 318.
4. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-615 GRADE 60.
5. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. WWF SHALL BE LAPPED AT LEAST 8" AND CONTAIN AT LEAST ONE CROSS WIRE WITHIN THE 8".
6. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318 LATEST EDITION, AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS," ACI 301.
7. ALL REINFORCING DETAILS SHALL CONFORM TO "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" ACI 315 LATEST EDITION, UNLESS DETAILED OTHERWISE ON THE STRUCTURAL DRAWINGS.
8. CONCRETE CONTRACTOR SHALL REVIEW ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF EMBEDDED ITEMS, SLEEVES, SLAB DEPRESSIONS, SLOPES, ETC. REQUIRED BY OTHER TRADES. THESE ITEMS SHALL BE FURNISHED AND INSTALLED PRIOR TO PLACEMENT OF CONCRETE.
9. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, SLEEVES, ANCHOR BOLTS, INSERTS, ETC., AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED.
10. WHERE BAR LENGTHS ARE GIVEN ON THE DRAWINGS, THE LENGTH OF ANY HOOK, IF REQUIRED, IS NOT INCLUDED. HOOKS SHALL BE PROVIDED AT DISCONTINUOUS ENDS OF ALL TOP BARS OF BEAMS AND AT SLABS EDGES.
11. CONCRETE CONTRACTOR SHALL PROVIDE SPACERS, CHAIRS, BOLSTERS, ETC. NECESSARY TO SUPPORT REINFORCING STEEL. SUPPORT ITEMS WHICH BEAR ON EXPOSED CONCRETE SURFACES SHALL HAVE ENDS WHICH ARE PLASTIC TIPPED OR STAINLESS STEEL.
12. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:
    3" CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.
    2" CONCRETE EXPOSED TO EARTH OR WEATHER, #6 THROUGH #18 BARS.
    1 1/2" CONCRETE EXPOSED TO EARTH OR WEATHER, #5 BAR AND SMALLER.
    1 1/2" CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH FOR THE PRIMARY REINFORCEMENT, TIES, STIRRUPS, AND SPIRALS IN BEAMS AND COLUMNS:
    3/4" CONCRETE NOT EXPOSED TO WEATHER NOR IN CONTACT WITH EARTH FOR SLABS, WALLS, AND JOISTS, #11 BAR AND SMALLER.
13. HORIZONTAL WALL AND FOOTING BARS SHALL BE BENT 1'-0" AROUND CORNERS OR CORNER BARS WITH 2'-0" LAP SHALL BE PROVIDED.
14. HORIZONTAL KEYWAYS IN CONSTRUCTION JOINTS SHALL BE PROVIDED IN BEAMS, SUPPORTED SLABS, AND WALL FOOTINGS WITH A DEPTH OF 1-1/2" AND HEIGHT EQUAL TO ONE-THIRD OF THE MEMBER'S DEPTH. REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS OTHERWISE NOTED ON THE DRAWINGS. CONSTRUCTION JOINTS MAY BE USED ONLY AT LOCATIONS SHOWN ON THE DRAWINGS OR AT OTHER LOCATIONS APPROVED BY THE ARCHITECT.
15. MINIMUM LAP SPLICES ON ALL REINFORCING BAR SPLICES SHALL BE 48 BAR DIAMETERS TYP. EXCEPT WHERE OTHERWISE NOTED ON THE DRAWINGS. FOR BEAMS AND ELEVATED SLABS, LAP BOTTOM STEEL AT THE SUPPORT AND TOP STEEL OVER THE MIDSPAN, UNLESS OTHERWISE NOTED.
16. TESTING LABORATORY SHALL SUBMIT ONE COPY OF ALL CONCRETE TEST REPORTS DIRECTLY TO THE ENGINEER.

MASONRY WALL CONSTRUCTION

1. HOLLOW LOAD BEARING UNITS SHALL BE NORMAL WEIGHT, GRADE N, TYPE 2, CONFORMING TO ASTM C90, WITH A MINIMUM NET COMPRESSIVE STRENGTH OF 2000 PSI (f'm = 1500 PSI).
2. MORTAR SHALL BE TYPE M OR S, CONFORMING TO ASTM C270.
3. COURSE GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" AND A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.
4. VERTICAL REINFORCEMENT SHALL BE AS NOTED ON THE DRAWINGS WITH CELLS FILLED WITH COARSE GROUT.
5. VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT THE TOP AND BOTTOM AND AT A MAXIMUM SPACING OF 8'-0". REINFORCEMENT SHALL BE PLACED IN THE CENTER OF THE MASONRY CELL TYPICAL UNLESS OTHERWISE NOTED. SEE TYPICAL GROUTING DETAILS FOR ADDITIONAL INFORMATION.
6. REINFORCING STEEL SHALL BE LAPPED MINIMUM 30 BAR DIAMETERS WHERE SPLICED AT FOUNDATIONS OR FLOORS, OTHERWISE MINIMUM LAP IS 48 DIAMETERS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
7. HORIZONTAL WALL REINFORCEMENT SHALL BE STANDARD TRUSS TYPE DUR-O-WAL AT 16" O.C., UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
8. SPLICED WIRE REINFORCEMENT SHALL BE LAPPED AT LEAST 6" AND CONTAIN AT LEAST ONE CROSS WIRE OF EACH PIECE OF REINFORCEMENT WITHIN THE 6". LAP WITH STANDARD 'T' AND 'L' SHAPED PIECES AT INTERSECTIONS AND CORNERS.
9. WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL CORE, IT SHALL NOT BE SLOPED MORE THAN ONE HORIZONTAL IN SIX VERTICALS. DOWELS SHALL BE GROUTED INTO A CORE IN VERTICAL ALIGNMENT, EVEN THOUGH IT IS IN AN ADJACENT CELL TO THE VERTICAL WALL REINFORCEMENT.
10. PROVIDE PRECAST CONCRETE LINTELS OVER ALL OPENINGS UNLESS NOTED OTHERWISE ON DRAWINGS. LINTELS SHALL BE OF SUFFICIENT SIZE AND REINFORCEMENT FOR THE GIVEN SPANS AND LOADING CONDITIONS. SUBMIT SHOP DRAWINGS WITH RATED LOAD CAPACITIES TO THE ARCHITECT FOR REVIEW.
11. PROVIDE A KNOCK OUT BLOCK OR U-BLOCK REINFORCED WITH 1 #5 CONTINUOUS AT THE SILL OF ALL WINDOW OPENINGS. EXTEND 16" BEYOND EACH SIDE OF THE OPENING TYPICALLY.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC "SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.
2. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISED CODE OF THE AMERICAN WELDING SOCIETY, AWS D1.1.
3. BOLTS AND BOLTED CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS" AS APPROVED BY THE COUNCIL ON RIVETED AND BOLTED JOINTS. USE BEARING TYPE BOLTS WITH THREADS ALLOWED ACROSS THE SHEAR PLANE. ANCHOR BOLTS SHALL CONFORM TO ASTM A-36.
4. ALL BEAM CONNECTIONS SHALL BE STANDARD DOUBLE ANGLE TYPE UNLESS DETAILED OTHERWISE. FOR DESIGN OF STANDARD CONNECTIONS THE LARGER OF EITHER SHEAR SHOWN ON DRAWING OR 55% OF THE TOTAL LOAD CAPACITY, DERIVED FROM THE UNIFORM LOAD CONSTANT TABLES, PART 2, EIGHTH EDITION OF THE AISC CODE WHICHEVER IS GREATER. IN NO CASE SHALL THE ANGLE SIZE AND MINIMUM NUMBER OF ROWS OF BOLTS FOR THE GIVEN BEAM SIZE BE LESS THAN THAT SHOWN IN TABLE 1, PART 4 OF THE SEVENTH EDITION OF THE AISC CODE.
5. STRUCTURAL STEEL SHAPES, PLATES, ETC. SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-36, UNLESS NOTED OTHERWISE. STEEL TUBES SHALL BE 46 KSI STEEL CONFORMING TO ASTM A-500.
6. IN GENERAL, IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT ALL SHOP CONNECTIONS BE WELDED OR BOLTED AND ALL FIELD CONNECTIONS BE BOLTED EXCEPT WHERE NOTED OTHERWISE.
7. VERIFY THE EXACT LOCATION AND SIZE OF ALL ROOF AND FLOOR OPENINGS FOR MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR PRIOR TO FABRICATION OF MATERIALS. SEE TYPICAL DETAIL FOR FRAMING AROUND OPENINGS.
8. ALL STEEL BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER (WITHIN THE MILL TOLERANCE) LOCATED ABOVE THE HORIZONTAL CENTERLINE BETWEEN THE END CONNECTIONS.
9. STEEL SHAPES, PLATES, ETC. WHICH ARE EXPOSED TO PERIMETER SHALL BE GALVANIZED.
10. PROVIDE ONE COAT OF STANDARD SHOP PAINT ON ALL UNGALVANIZED PIECES EXCEPT AT AREAS TO BE FIELD WELDED.
11. TOUCH UP FIELD WELDS AND ANY DAMAGED AREAS OF PAINT IN FIELD AFTER WELDING. (USE GALVANIZING PAINT FOR TOUCH UP OF GALVANIZED STEEL).
12. HEADED STUDS SHALL BE NELSON TYPE OR EQUAL. WELD HEADED STUDS TO EMBEDDED PLATES TO DEVELOP THE FULL TENSION CAPACITY OF THE STUD.
13. ALL WELDS SHALL BE VISUALLY INSPECTED BY AN APPROVED LICENSED TESTING COMPANY. SEE SPECIFICATIONS FOR ADDITIONAL TESTING REQUIREMENTS.
14. ALL STEEL TO STEEL CONNECTIONS NOT SHOWN BOLTED SHALL BE WELDED TO DEVELOP FULL SHEAR CAPACITY OF CONNECTING MEMBERSAS PER AISC SPECIFICATIONS. MINIMUM SIZE OF FILLET WELD (UNLESS NOTED OTHERWISE ON DRAWINGS):

MATERIAL THICKNESS OF THICKER PART JOINED	MINIMUM SIZE OF OF FILLET WELD
TO 1/4" INCLUSIVE	1/8" ALL AROUND
TO 1/4" TO 1/2"	3/16" ALL AROUND
OVER 1/2" TO 3/4"	1/4" ALL AROUND
OVER 3/4" TO 1 1/2"	5/16" ALL AROUND

OWNER/G.C. SHALL PROVIDED COPIES OF INSPECTION REPORT AND AFFIDAVIT FROM ARCHITECT, ENGINEER OR INDEPENDENT TESTING COMPANY FOR STRUCTURAL ELEMENTS NOT INSPECTED TO CONFORM TO PLANS. PROVIDE A SIGNOFF FROM THE SPECIAL INSPECTOR VERIFYING THAT THE STRUCTURAL STEEL ERECTING TO INCLUDE WELDING AND BOLTING COMPLIES WITH AWS AND AISC STANDARDS-FBC 2010, SECTIONS 2204.1 AND 2204.2. THIS IS REQUIRED PRIOR TO PROJECT COMPLETION.

OPEN WEB STEEL JOISTS

1. ALL STEEL JOISTS SHALL CONFORM TO THE STANDARDS OF THE STEEL JOIST INSTITUTE.
2. THE JOIST MANUFACTURER SHALL REVIEW THE DRAWINGS AND PROVIDE JOISTS CAPABLE OF CARRYING THE FOLLOWING LOADS:
   1) ROOF DEAD LOAD.....20 PSF
   2) SUPERIMPOSED DEAD LOAD.....5 PSF
   3) LIVE LOAD.....20 PSF
      NET WIND UPLIFT:
   4) INTERIOR ZONE.....-42.9 PSF (U.N.O.)
   5) CORNERS ZONES.....-92.2 PSF
   6) EDGE ZONES.....-66.1 PSF
      CORNERS AND EDGE ZONES ARE MEASURED 11 FEET FROM ALL ROOF EDGES.
3. THE JOISTS SHOWN ON THE PLANS ARE THE MINIMUM SIZE REQUIRED. DEPTHS SHOWN MAY NOT BE EXCEEDED.
4. JOISTS SHOULD BE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARD CAMBERS.
5. JOISTS SHALL BE WELDED TO ALL SUPPORTING BEAMS WITH A MINIMUM OF TWO 3/16 INCH BY 2 INCH LONG FILLET WELDS, OR FOR THE UPLIFT FORCE WHICHEVER IS GREATER.
6. PROVIDE A MINIMUM END BEARING ON STEEL SUPPORTS AS REQUIRED BY SJI. STAGGER THE ENDS OF JOISTS IF NECESSARY.
7. PROVIDE HORIZONTAL OR DIAGONAL TYPE BRIDGING FOR ALL JOISTS AS REQUIRED BY SJI SPECIFICATION. THE ENDS OF ALL BRIDGING LINES TERMINATING AT WALLS OR BEAMS SHALL BE ANCHORED THERETO AT TOP AND BOTTOM CHORDS. PROVIDE ALL REQUIRED BRIDGING ANCHORS.
8. PROVIDE ALL JOISTS AND ACCESSORIES WITH ONE SHOPCOAT OF PAINT AS SPECIFIED IN SJI STANDARDS.

STEEL ROOF DECK

1. ROOF DECK SHALL BE AS FOLLOWS:
   1). ALL METAL ROOF DECK EXCEPT WHERE SHOWN ON PLAN SHALL BE 1 1/2" DEEP 20 GAGE WIDE RIB, MIN PROPERTIES: Sp=0.234 IN3, Sn=0.247 IN3 , I=0.212 IN4., GALVANIZED G90.
   2). METAL ROOF DECK WHERE SHOWN ON PLAN IS 1" DEEP 22 GAGE WIDE RIB, MIN PROPERTIES: Sp=0.130 IN3, Sn=.134 IN3 , I=0.073 IN4., GALVANIZED G90.
2. ROOF DECK SHALL BE PLACED IN AT LEAST TWO SPAN SEGMENTS. NO SINGLE SPAN CONDITIONS SHALL BE USED.
3. STEEL DECK SHALL CONFORM TO ASTM A446 GRADES A, B, C, D, E OR F FOR GALVANIZED DECK, MINIMUM YIELD STRENGTH OF 33,000 PSI.
4. STEEL DECK SHALL BE GALVANIZED WITH A PROTECTIVE ZINC COATING CONFORMING TO ASTM A525 G90 CLASS.

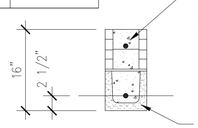
5. ATTACHMENT:
   1) WELDING:
      a) ROOF DECK UNITS SHALL BE WELDED TO EACH STRUCTURAL SUPPORT MEMBER USING 5/8" DIAMETER PUDDLE WELDS AT ALL RIBS (36/7 FASTENER LAYOUT). WELD METAL SHALL PENETRATE ALL LAYERS OF DECK MATERIAL AT END LAPS AND SIDE JOINTS AND SHALL BE COMPLETELY FUSED TO THE SUPPORTING MEMBERS.
      b) SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BY WELDING (ON 18 GAUGE OR HEAVIER DECK ONLY) OR SHEET METAL SCREWS, SO THAT SPACING BETWEEN FASTENERS AND BETWEEN THE FIRST FASTENER AND SUPPORT DOES NOT EXCEED 18 INCHES.
      c) AT ALL ROOF OPENINGS AND PERIMETER ROOF EDGE CONDITIONS, ROOF DECK UNITS SHALL BE WELDED TO EDGE STEEL USING 5/8"DIAMETER PUDDLE WELDS AT 6" O.C.
   2) PROVIDE A MINIMUM END BEARING OF 2" OVER SUPPORTS.
   3) END LAPS OF SHEETS SHALL BE A MINIMUM OF TWO INCHES AND SHALL OCCUR OVER SUPPORTS. ROOFS SHALL BE ERECTED BEGINNING AT THE LOW SIDE TO INSURE THAT END LAPS ARE SHINGLE FASHION.
   4) ATTACH DECK TO EDGE SUPPORT WITH 5/8" DIA PUDDLE WELD @ 6" O.C.

MASONRY LINTEL SCHEDULE
(CAST-CRETE LINTEL)

MARK	LENGTH (L)	CAST-CRETE MARK	REMARK
MB-1	2' -10" < L≤ 14'-0"	8F16-1B/1T PRECAST	

1. PROVIDE MASONRY LINTEL OVER ALL OPENINGS. IF NO LINTEL IS SPECIFIED, PROVIDE MB-1.
2. PROVIDE MINIMUM END BEARING OF 8". CUT OUT BOTTOM OF LINTEL AT END TO ALLOW CONTINUATION OF FILLED CELL REINFORCING.
3. MASONRY LINTEL SUBSTITUTIONS MUST BE APPROVED BY "ASE ENGINEER SERIVCE" PRIOR TO INSTALLATION.

NOTE: SHORE PRECAST "U" LINTELS PER MANUFACTURER'S RECOMMENDATIONS.



MB-1

MASONRY LINTEL SCHEDULE

SHOP DRAWING SUBMITTALS

1. ALL SHOP DRAWINGS MUST BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.
2. THE SHOP DRAWINGS SUBMITTED SHALL BE SIGNED AND SEALED BY FLORIDA REGISTERED ARCHITECT/ENGINEER,
3. THE GENERAL CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:
   1) STRUCTURAL STEEL (*)
   2) OPEN WEB STEEL JOISTS (*)
   3) REINFORCING STEEL
   4) ROOF METAL DECK
   5) CONCRETE MIX DESIGNS
   6) LIGHT GAUGE METAL STUD AND CONNECTION WITH CALCULATIONS (*).

   ITEMS MARKED (*) SHALL HAVE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. ITEMS MARKED (#) SHALL BE SUBMITTED FOR ENGINEERS RECORD ONLY.
4. MANUFACTURER'S LITERATURE: SUBMIT TWO COPIES OF MANUFACTURER'S LITERATURE FOR ALL MATERIALS AND PRODUCTS USED IN CONSTRUCTION ON THE PROJECT.
5. DESIGN CALCULATIONS: THE GENERAL CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW TWO SET OF DESIGN CALCULATIONS SEALED BY A FOLLOWING ITEM:

   1) STRUCTURAL STEEL CONNECTIONS.

PRE-ENGINEERED LIGHT GAGE METAL STUD

1. THE FABRICATOR SHALL FURNISH A STRUCTURAL SUBMITTAL BEARING THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. THIS SUBMITTAL SHALL BE CHECKED BY THE CONTRACTOR FOR COMPLETENESS AND CONTENT PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW. THE SUBMITTAL SHALL INCLUDE COMPONENT DETAILS AND SYSTEM LAYOUT DRAWINGS, IT SHALL IDENTIFY THE PROJECT LIST LOADING AND OTHER CRITERIA. THE DRAWINGS SHALL IDENTIFY AND LOCATE COMPONENTS AND SHALL SPECIFY MEMBER SIZES, BRACING, ANCHORAGE, CONNECTIONS (SUCH AS STUDS TO CONC SLAB, TO CMU WALL, TO STL MEMBER, ETC.) & ALL OTHER NECESSARY FABRICATION AND ERECTION INFORMATION. THE SUBMITTAL SHALL INCLUDE CALCULATIONS VERIFYING ITS ADEQUACY TO RESIST THE LOADS INDICATED ON THE CONSTRUCTION DOCUMENTS. FABRICATION SHALL NOT COMMENCE UNTIL THIS REVIEW IS COMPLETED.
2. DESIGN OF LIGHTGAUGE METAL FRAMING SHALL CONFORM TO THE LATEST EDITION OF "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STRUCTURAL STEEL MEMBERS(AISI).
3. MATERIALS: STUDS, RUNNERS AND ANGLES SHALL MEET THE REQUIREMENTS OF ASTM 1446 WITH MINIMUM YIELD STRENGTH AS FOLLOWS:

   16, 14, AND 12 GAGE STUDS 50 KSI
   22, 20, AND 18 GAGE STUDS 33 KSI
   RUNNERS 33 KSI

4. METAL STUDS SHALL BE "C" SHAPED STUDS
5. PROVIDE MANUFACTURER'S STANDARD STEEL RUNNERS, BLOCKING, LINTELS, CLIP ANGLES, BRACING, REINFORCEMENTS, FASTENERS AND ACCESSORIES AS RECOMMENDED BY MANUFACTURER AND/OR SHOWN ON DRAWINGS FOR APPLICATIONS INDICATED, AS NEEDED TO PROVIDE A COMPLETE STEEL FRAMING SYSTEM.
6. GALVANIZED FINISH SHALL COMPLY WITH ASTM A525 WITH A G90 COATING. ALL WELDS SHALL BE TOUCHED UP WITH A ZINC-RICH PROTECTIVE PAINT FOR CORROSION RESISTANCE.
7. ALL STUDS SHALL BE FULL LENGTH. NO SPLICING PERMITTED UNLESS SPECIFICALLY DETAILED.
8. ALL METAL TO METAL CONNECTIONS TO BE WELD OR SCREW ATTACHMENTS AS SHOWN ON DRAWINGS OR AS REQUIRED BY MANUFACTURER.
9. ALL METAL STUD SIZES SHOWN ON THE DRAWINGS ARE FOR REFERENCE ONLY. METAL STUD FABRICATOR SHALL HIRE A METAL STUD SPECIALTY ENGINEER TO DESIGN ALL METAL STUD FRAMING.

DESIGN WIND VELOCITY=140 MPH, BUILDING CATAGORY II
EXPOSURE "C",
MEAN BUILDING HEIGHT: 36'-0"
COMPONENT AND CLADDING PRESSURE (ASD) FOR OPENINGS IN WALLS

	AREA OF OPENINGS (SQ.FT)	COEFFICIENT	DESIGN PRESSURE
INTERIOR ZONE	UP TO 10	1.45	+30.71, -33.23 PSF
	10 TO 20	1.45	+29.32, -31.39 PSF
	20 TO 50	1.45	+27.49, -30.10 PSF
	50 TO 100	1.45	+26.10, -28.71 PSF
	100 TO 500	1.45	+22.88, -25.49 PSF
EDGE STRIP	UP TO 10	1.45	+30.71, -41.06 PSF
	10 TO 20	1.45	+29.32, -38.28 PSF
	20 TO 50	1.45	+27.49, -34.63 PSF
	50 TO 100	1.45	+26.10, -31.93 PSF
	100 TO 500	1.45	+22.88, -25.49 PSF

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Certificate of Authorization No. 25873
Minsheng Xie P.E.
Florida No. 51161

07-03-19

REVISIONS: 1 2 3 4 5 6 7 8

PROJECT NO. 17GCS1803-01

DATE 03/26/2018

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO , FLORIDA

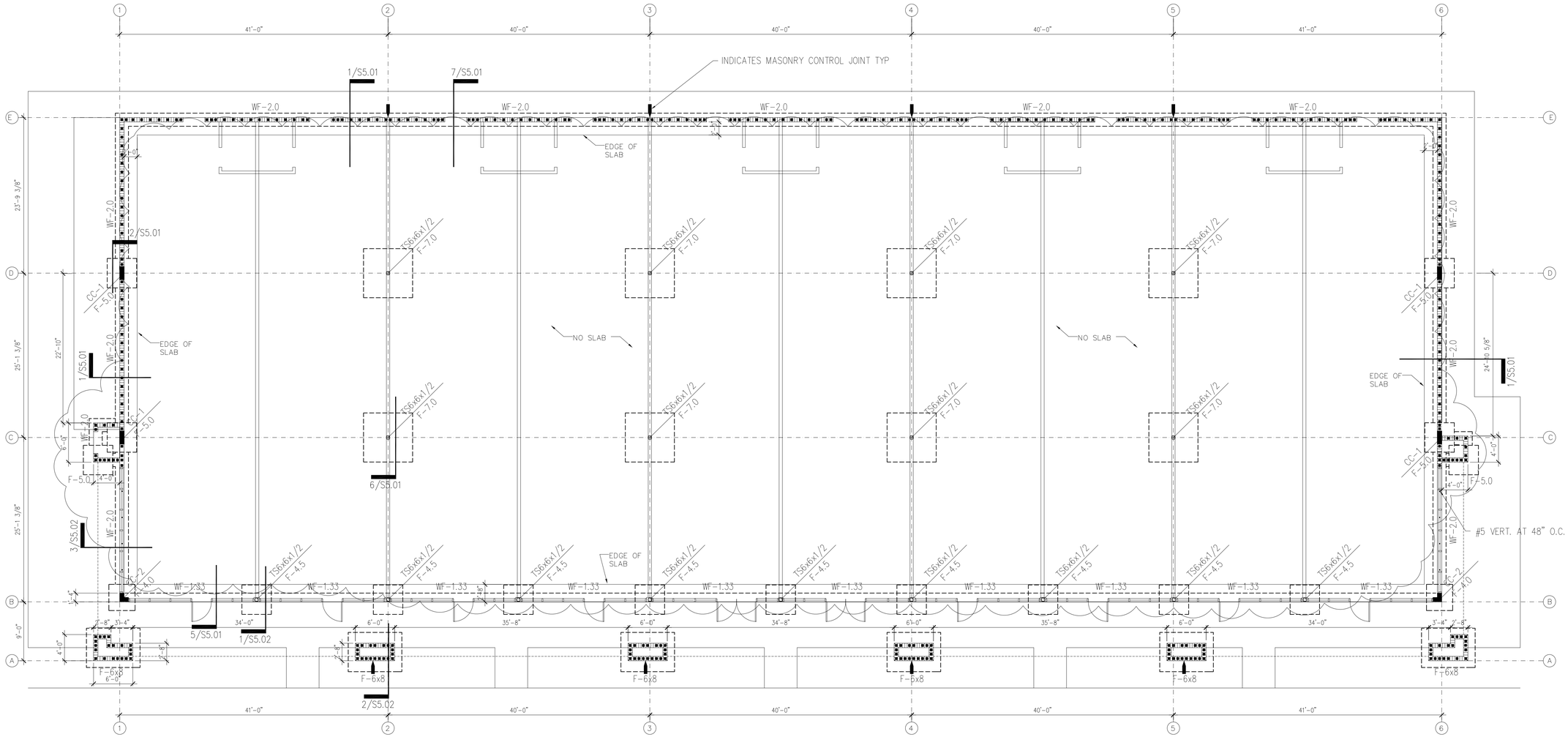
RABITS & ROMANO ARCHITECTURE
PLANNING AND DESIGN
AA26002490
245 SOUTH HIGHLAND ST. SUITE 9 MOUNT DORA, FL. 32757
TEL - 352-385-1030 FAX - 352-385-1035
info@rabits-architect.com www.rabits-architect.com

SIGN/SEAL

DATE

SHEET S-1.01

OF



FOOTING SCHEDULE

MARK	SIZE WIDTH x LENGTH x DEPTH	REINFORCEMENT BOTTOM	REINFORCEMENT TOP
WF-1.33	1'-4"x CONT.x1'-4"	(2)-#5's CONT.	
WF-2.0	2'-0"x CONT.x1'-0"	#5 @ 48" O.C. TRANSV. (3)-#5's CONT.	
F-4.0	4'-0"x4'-0"x1'-0"	(4)-#5 EA. WAY	(4)-#5 EA. WAY
F-4.5	4'-6"x4'-6"x1'-4"	(4)-#5 EA. WAY	(4)-#5 EA. WAY
F-5.0	5'-0"x5'-0"x1'-0"	(5)-#5 EA. WAY	
F-7.0	7'-0"x7'-0"x1'-6"	(6)-#6 EA. WAY	(6)-#6 EA. WAY
F-6x8	6'-0"x8'-0"x1'-0"	(7)-#5 EA. WAY	

PLAN NOTES:

1. SEE GENERAL NOTES ON SHEET S1.01.
2. DO NOT SCALE DRAWINGS. SEE ARCH'L. DRAWINGS FOR ADDITIONAL DIMENSIONS NOT SHOWN, VERIFY ALL DIMENSIONS WITH ARCH'L. DRAWINGS PRIOR TO START OF CONSTRUCTION. IF DISCREPANCIES SHOULD OCCUR – CONTACT THE ARCHITECT IN WRITING FOR CLARIFICATION BEFORE PROCEEDING.
3. 4" (TOTAL) CONCRETE SLAB REINFORCED WITH 6x6-W2.1xW2.1 W.W.F. OVER 6 MIL VAPOR BARRIER ON COMPACTED SUBGRADE. COORDINATE ALL SLAB SLOPES, DEPRESSIONS AND LIMITS THERE OF WITH ARCH'L. DRAWINGS (FOR ACTUAL TOP OF SLAB ELEVATIONS, SEE ARCH'L. AND / OR CIVIL DRAWINGS)
4. INDICATES 8" MASONRY BEARING WALLS REINFORCED WITH (1)-#5 BAR (VERT.) AND MATCHING DOWEL AT FOOTING AT 16" O.C. MAX. GROUT SOLID CONC. ALL THE FILLED CELLS. PROVIDE ADDITIONAL BARS AS SHOWN ON PLAN AT ALL CORNERS, INTERSECTIONS, ADJACENT MASONRY OPENINGS AND ENDS OF WALLS. EXTEND VERTICAL REINFORCING BARS THRU ALL LEVELS (SPLICE / LAP AS REQ'D.) TO UPPER MOST CONC. TIE BEAM OR KNOCK-OUT BLK. BEAM AND TERMINATE BARS W/ 90° 9" HOOK.
5. THE MAX. SPACING OF CONTROL JOINT FOR ENCLOSURE SPACE SHALL BE 20'-0" O.C., AND FOR OPEN SPACE SHALL BE 8'-0" O.C. SEE DETAIL SHEET.
6. SEE ARCH'L. DRAWINGS FOR LOCATIONS / LIMITS AND CONSTRUCTION INFORMATION OF INTERIOR NON-BEARING PARTITION WALLS NOT SHOWN ON PLAN. SEE GENERAL NOTES.
7. COORDINATE ALL SLAB (TOPPING) SLOPES AND DEPRESSIONS WITH ARCH'L. DRAWINGS. (FOR ACTUAL TOP OF SLAB ELEVATIONS, SEE ARCH'L. DRAWINGS)
8. CC-# INDICATES CONCRETE SEE DETAIL FOR DIMENSIONS AND REINFORCING.
9. INDICATES MASONRY CONTROL JOINT. SEE DETAIL 8/S5.03.
10. SECTION CUTS SHOWN ON THE DESIGN DRAWINGS INDICATE THE TYPICAL SECTIONS WHICH APPLY TO ALL SIMILAR BUILDING CONDITIONS.

FOUNDATION PLAN

SCALE: 1/8"=1'-0"

NORTH

-1'-4" MIN. (REF.) T/FOOTINGS AND ADJUST T/FOOTINGS TO BE 12" MIN BELOW FINISHED GRADE WHICH EVER IS LOWER U.N.O.

07-16-19

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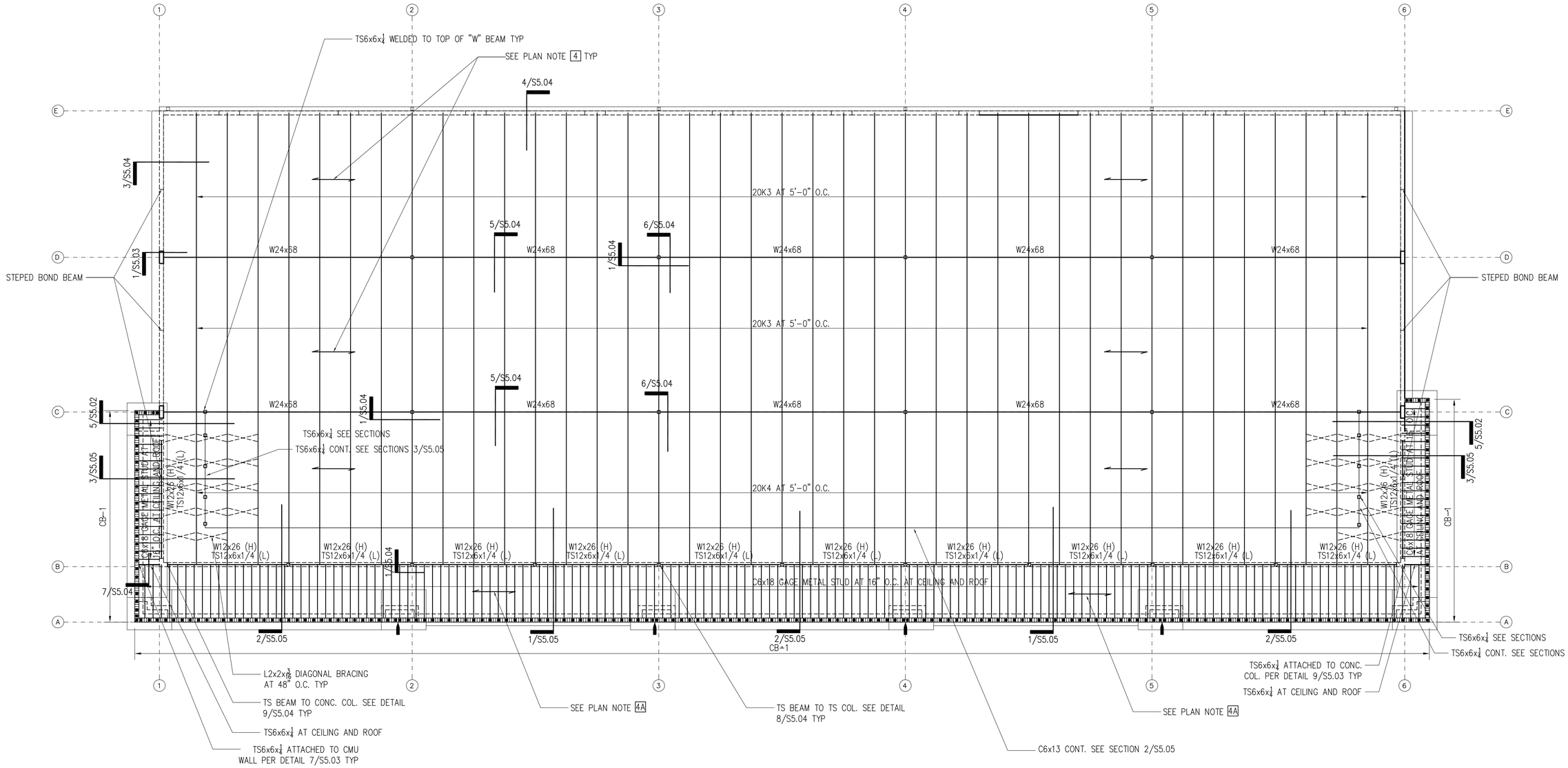
AA26002490

SIGN/SEAL

DATE

SHEET S-2.01

OF — —



PLAN NOTES:

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3. PROVIDE MASONRY LINTEL OVER ALL OPENINGS IN MASONRY WALL (COORD. EXACT SIZE, LOCATION AND ELEVATIONS WITH ARCH'L. DRAWINGS) IF NO LINTEL TYPE HAS BEEN CALL-OUT ON PLAN, PROVIDE MASONRY LINTEL TYPE: 8F16-1B/1T, SEE "LINTEL SCHEDULE" (ON S-1.01 SHEET) FOR LINTEL TYPE SIZES AND REINFORCING. PROVIDE TEMPORARY SHORING DURING CONSTRUCTION IF LINTEL SPAN IS GREATER THAN 6 (SIX) FEET.
4. ROOF CONSTRUCTION: ROOFING (COORDINATE WITH ARCH'L. DRAWINGS) OVER 1 1/2" (DEEP), 20 GAGE (GALV.) "WIDE RIB" METAL DECK (SEE GENERAL NOTES ON SHEET S1.01 FOR ADDITIONAL INFORMATION)

4A. ROOF CONSTRUCTION: ROOFING (COORDINATE WITH ARCH'L. DRAWINGS) OVER 1" (DEEP), 22 GAGE (GALV.) "WIDE RIB" METAL DECK (SEE GENERAL NOTES ON SHEET S1.00 FOR ADDITIONAL INFORMATION)

5. ——→ INDICATES METAL ROOF DECK SPAN.
6. SEE MECHANICAL DRAWINGS FOR LOCATION (ON JOIST) OF MECHANICAL UNITS. JOIST MANUFACTURER / SUPPLIER TO DESIGN FOR UNIT WEIGHT AND ADDITIONAL MISCELLANEOUS ROOF FRAMING (UNIT SUPPORT AND AROUND ROOF OPENINGS, ETC.) AS REQUIRED VERIFY WEIGHTS WITH MECHANICAL DRAWINGS.
7. PROVIDE DOUBLE KNOCK OUT BOND BEAM WITH (1) #5 CONT. GROUT SOLID AT ROOF LEVEL, U.N.O.
8. CB-1: 16"x32" W/ (3) #8 CONT. AT TOP. (3) #8 CONT. AT BOTTOM (2) #6 CONT. AT MIDDLE AND #4 TIES AT 12" O.C. PLUS #3 TIES AT 16" O.C.
9. ◄—— INDICATES MASONRY CONTROL JOINT. SEE DETAIL 8/S5.03.

ROOF FRAMING FRAMING PLAN

SCALE: 1/8"=1'-0"

07-03-19

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PROJECT NO. 17GCS1803-01

DATE 03/26/2018

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO , FLORIDA

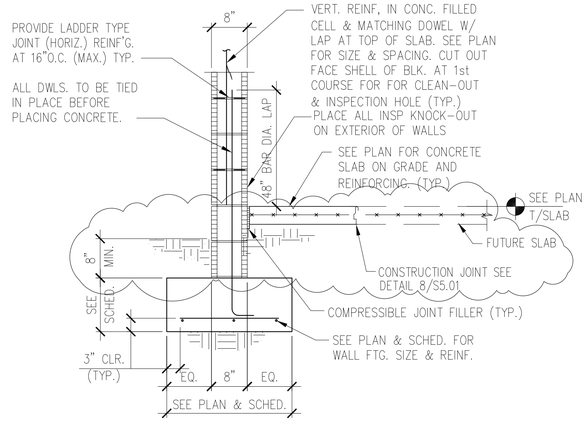
RABITS & ROMANO ARCHITECTURE
PLANNING AND DESIGN
AA26002490
245 SOUTH HIGHLAND ST. SUITE 9 MOUNT DORA , FL. 32757
TEL - 352-385-1030 FAX - 352-385-1035
info@rabits-architect.com www.rabits-architect.com

SIGN/SEAL

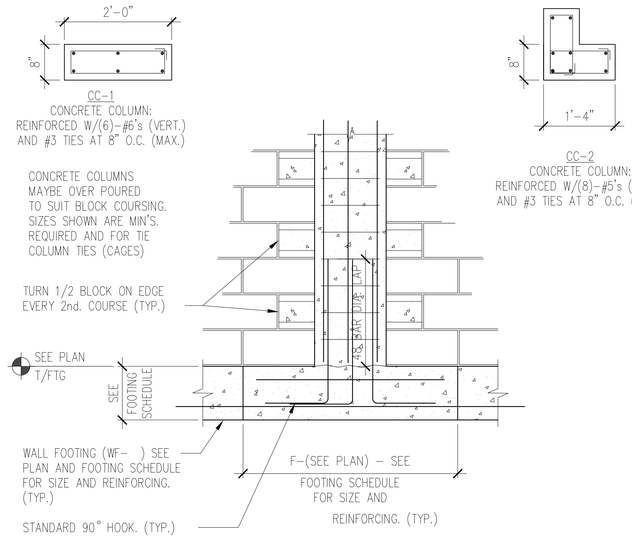
DATE

SHEET S3.01

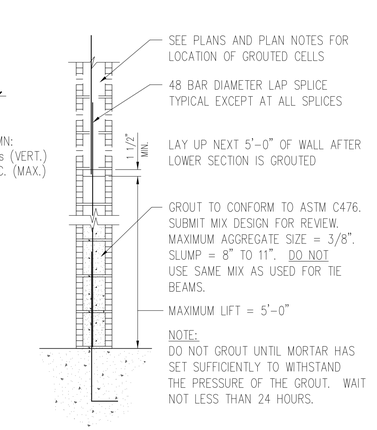
OF — —



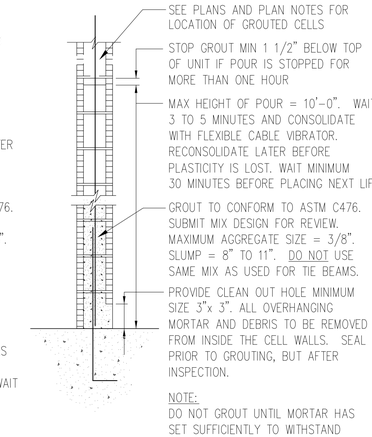
1 EXTERIOR CMU WALL AT FOOTING
SCALE: 3/4" = 1'-0"



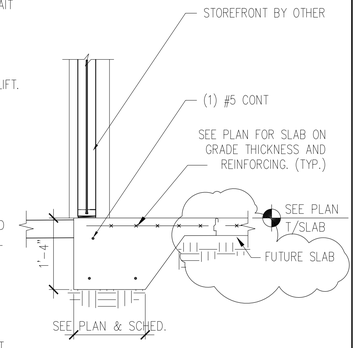
2 CONCRETE TIE COLUMN AT FOOTING AND TYPES
SCALE: 3/4" = 1'-0"



3 GROUTING SECTION TYPICAL LOW LIFT
SCALE: 3/4" = 1'-0"

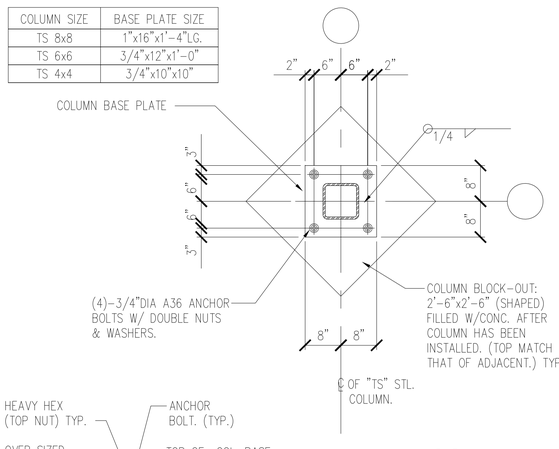


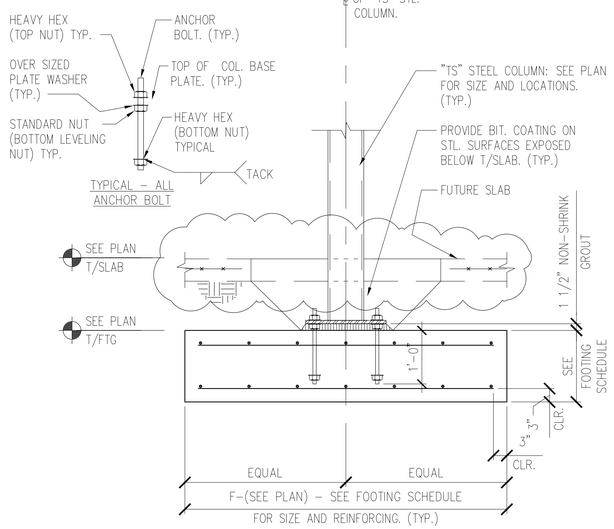
4 GROUTING SECTION TYPICAL HIGH LIFT
SCALE: 3/4" = 1'-0"



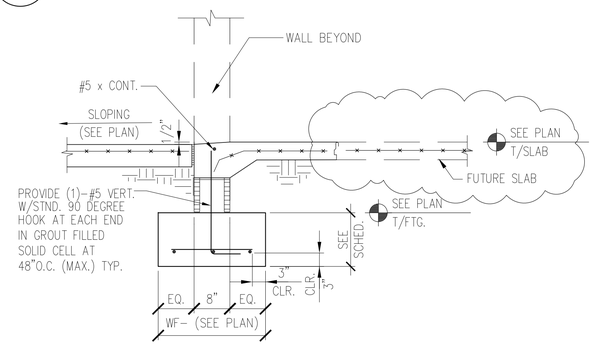
5 SECTION
SCALE: 3/4" = 1'-0"

COLUMN SIZE	BASE PLATE SIZE
TS 8x8	1"x16"x1'-4"LG.
TS 6x6	3/4"x12"x1'-0"
TS 4x4	3/4"x10"x10"

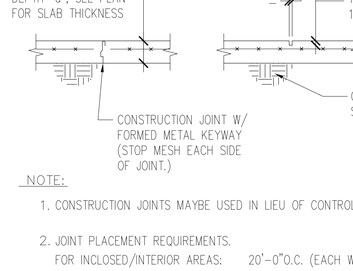




6 STEEL COL. AT FOOTING
SCALE: 3/4" = 1'-0"



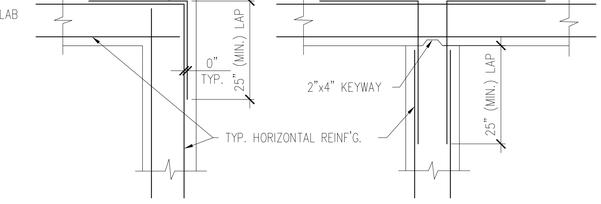
7 SECTION @ CMU WALL OPENING
SCALE: 3/4" = 1'-0"



NOTE:

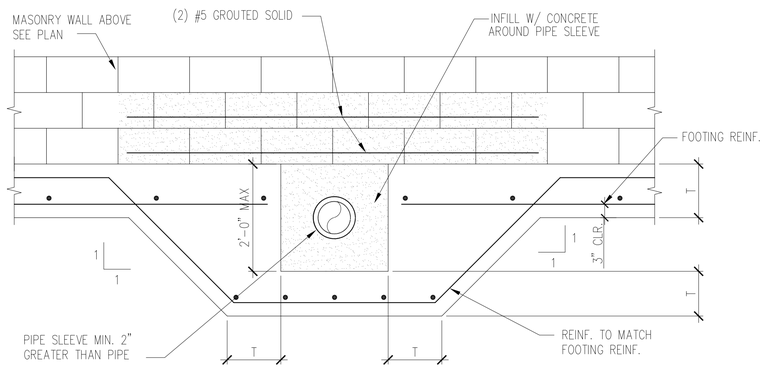
1. CONSTRUCTION JOINTS MAYBE USED IN LIEU OF CONTROL JOINTS.
2. JOINT PLACEMENT REQUIREMENTS.
   FOR INCLOSED/INTERIOR AREAS: 20'-0"O.C. (EACH WAY)
   FOR OUTSIDE/EXTERIOR AREAS: 8'-0"O.C (EACH WAY)
   WHERE SLAB IS TO RECEIVE TILE FINISH, COORDINATE JOINT LOCATIONS WITH TILE MORTAR JOINTS.

8 TYPICAL CONTROL JOINT DETAIL
SCALE: 3/4" = 1'-0"

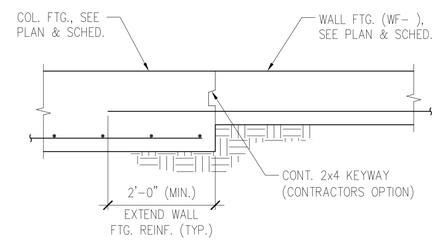


NOTE:
PROVIDE MATCHING CORNER BARS FOR ALL HORIZONTAL REINFORCING AT INTERSECTIONS & CORNERS OF ALL FOOTINGS, THICKENED SLABS ON GRADE, WALLS, AND BEAMS UNLESS NOTED OTHERWISE..

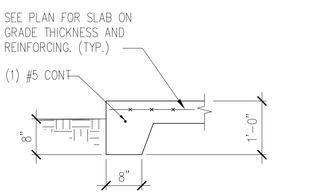
9 TYP. HORIZ. REINF'G @ CONC. BEAMS AND FTGS.
SCALE: 3/4" = 1'-0"



10 TYP PIPE PENETRATION AT FOOTING
SCALE: 3/4" = 1'-0"



11 TYP. WALL FOOTING AT COLUMN FOOTING
SCALE: 3/4" = 1'-0"



12 SLAB EDGE DETAIL
SCALE: 3/4" = 1'-0"

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Certificate of Authorization No. 25873
Minsheng Xie P.E.
Florida No. 51161

07-16-19

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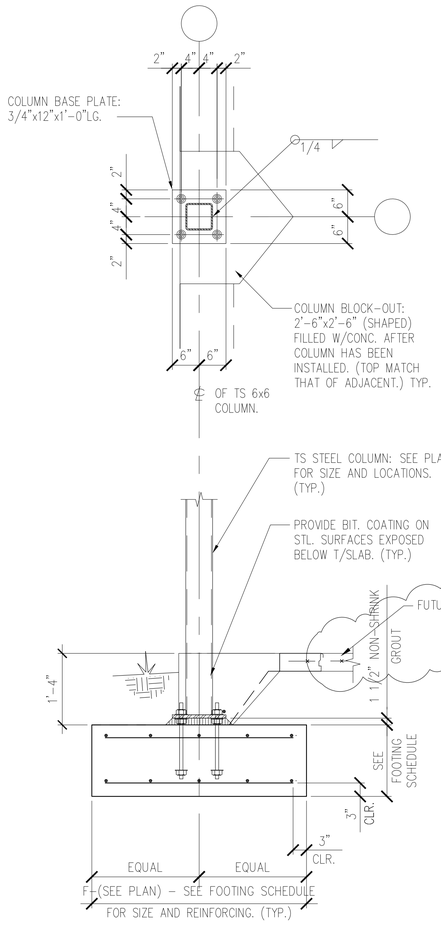
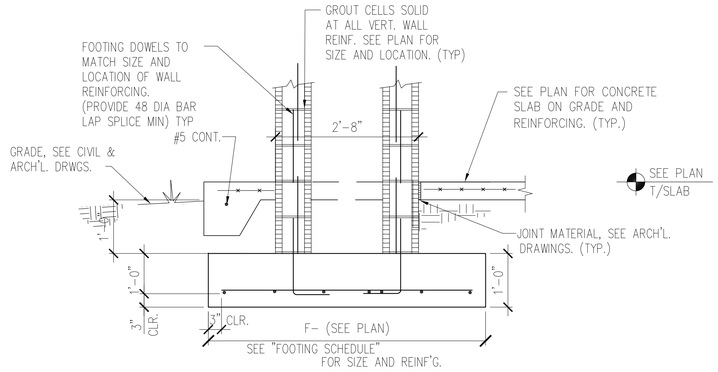


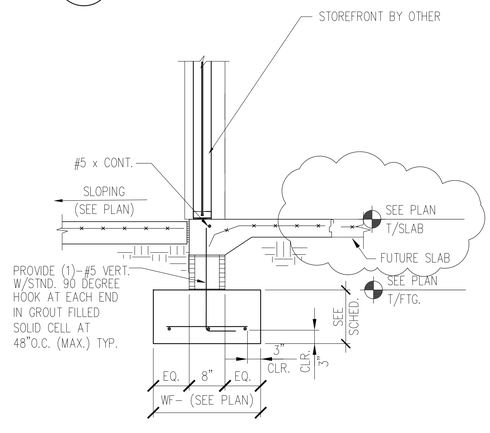


2 SECTION AT COLUMN FOOTING

SCALE: 3/4" = 1'-0"

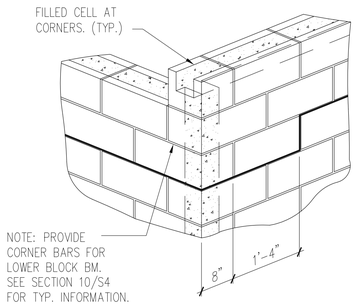
1 STEEL COL. AT FOOTING

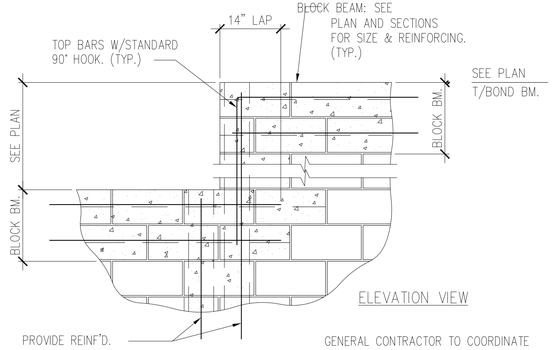
SCALE: 3/4" = 1'-0"



3 SECTION

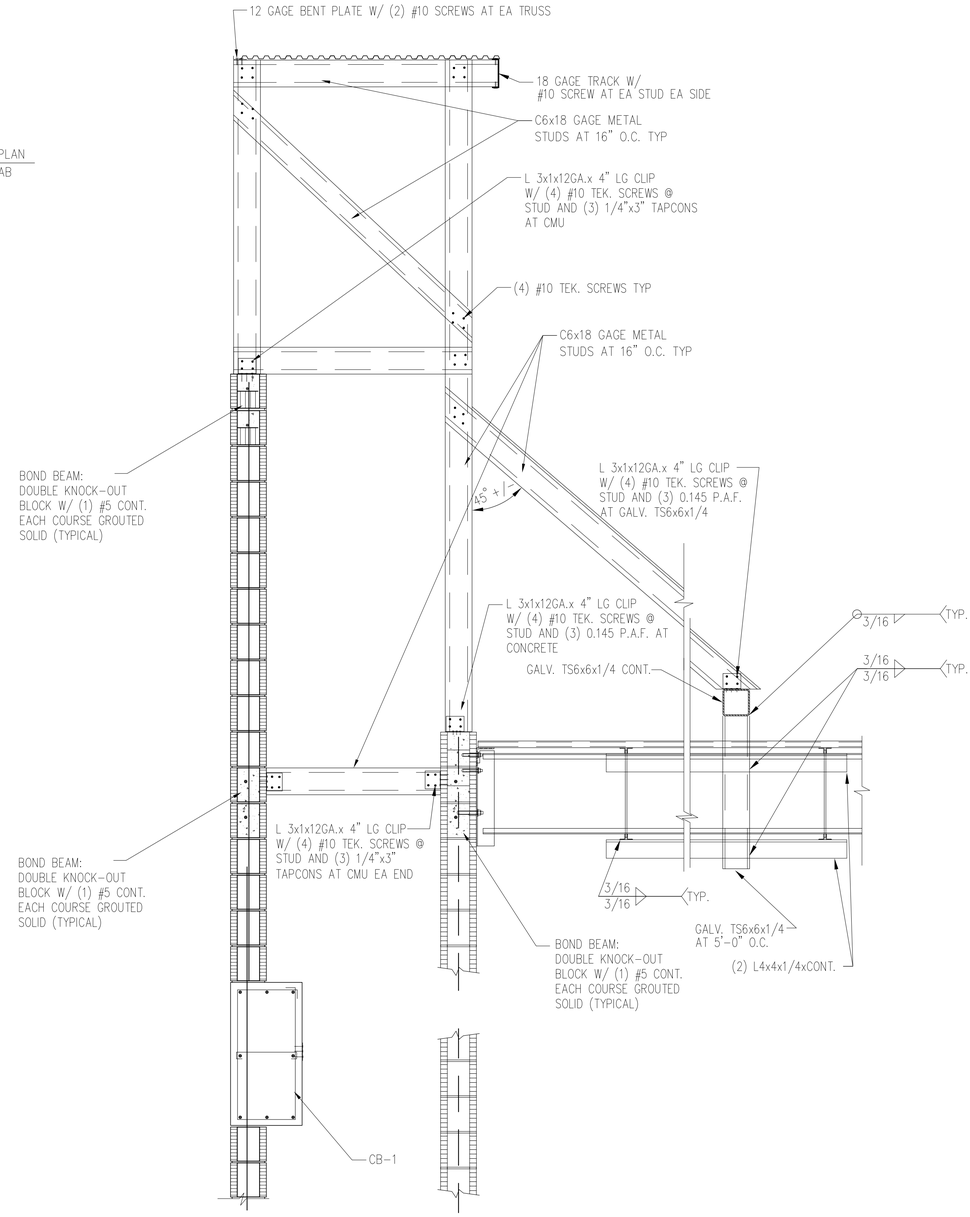
SCALE: 3/4" = 1'-0"





4 STEPPED BLOCK BEAM DETAIL

SCALE: 3/4" = 1'-0"



5 SECTION

SCALE: 3/4" = 1'-0"

REVISIONS

1	2	3	4	5	6	7	8

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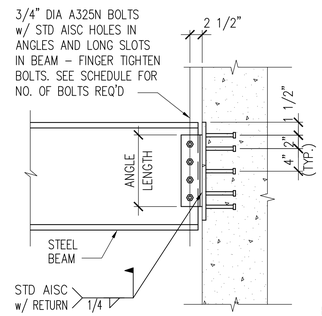
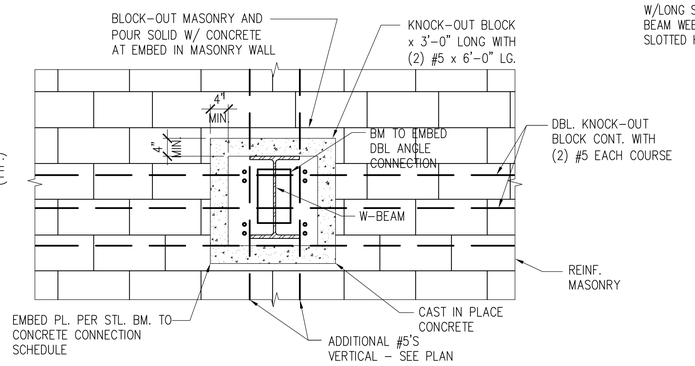
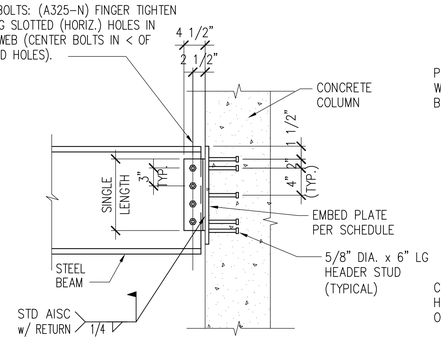


CONNECTION TO CONCRETE
(UNLESS NOTED OTHERWISE)



CONNECTION TO MASONRY
(UNLESS NOTED OTHERWISE)

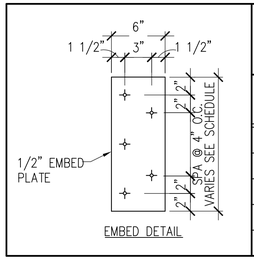


CONNECTION TO CONCRETE AT
NARROW FACE

STL BM TO CONC CONNECTION SCHEDULE

STEEL BEAM SIZE	STEEL CLIP ANGLE CONNECTION		CONCRETE EMBED CONNECTION	
	ANGLE LENGTH (IN)	BOLTS	EMBED PLATE	HEADED STUDS
W24, W27	18	6	1/2 x 15 x 2'–0"	(12) 3/4" DIA IN (4) ROWS
W18, W21	15	5	1/2 x 15 x 1'–6"	(9) 3/4" DIA IN (3) ROWS
W14, W16,	12	4	1/2 x 15 x 1'–3"	(9) 3/4" DIA IN (2) ROWS
W12	9	3	1/2 x 15 x 1'–3'	(6) 3/4" DIA IN (2) ROWS
STL JOIST TO CONC	SEE SECT	N/A	1/2 x 12 x 1'–0"	(4) 3/4" DIA IN (2) ROWS

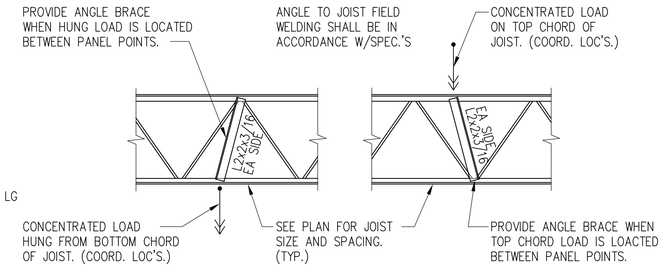
NOTE: 1 ALL STUDS ARE 5 1/2" AND EQUALLY SPACED
2 MINIMUM EDGE DISTANCE FROM CL OF STUDS TO FACE OF CONCRETE SHALL NOT BE LESS THAN 4" WITHOUT APPROVAL BY ENGINEER
3 PROVIDE NELSON TYPE STUDS OR APPROVED EQUAL BY ARCHITECT



EMBED DETAIL

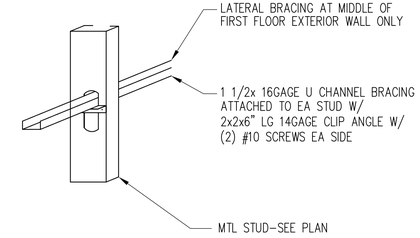
STL BM TO CONCRETE CONNECTION SCHEDULE AT END OF WALLS AND NARROW COLUMN FACE

STEEL BEAM SIZE	# OF BOLTS	SINGLE PLATE SIZE		SINGLE PLATE WELD TO EMBED	# OF STUDS	EMBED PLATE LENGTH
		t	l			
W10, W12	(3)	5/16"	9"	1/4" FILLET	(4)	12"
W14, W16	(4)	5/16"	12"	1/4" FILLET	(5)	16"
W18	(5)	3/8"	15"	5/16" FILLET	(6)	20"
W21	(6)	3/8"	18"	5/16" FILLET	(7)	24"
W24,W27	(7)	3/8"	21"	5/16" FILLET	(8)	28"



2 STEEL JOIST REINFORCING DETAIL

SCALE: 3/4" = 1'-0"



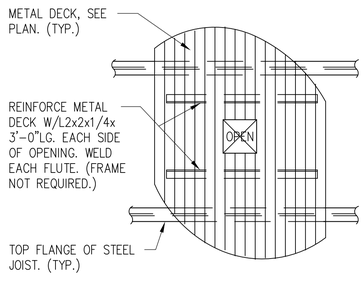
HORIZONTAL BRIDGING

5 TYP. WALL LATERAL BRACING DETAIL

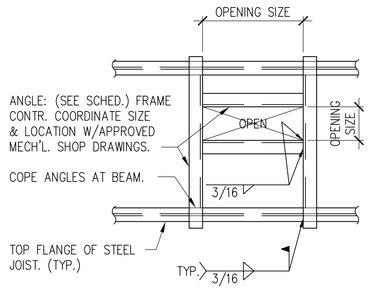
SCALE: 3/4" = 1'-0"

1 STL BM TO CONC CONNECTION SCHEDULE

SCALE: 3/4" = 1'-0"



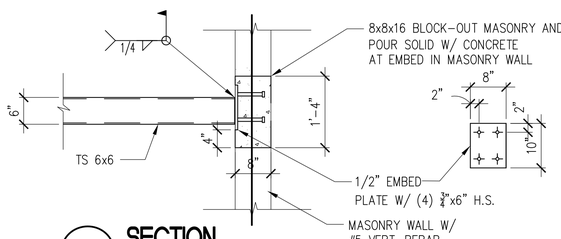
SMALL OPENING DETAIL
SMALLER THAN 12" SQ. & LARGER THAN 6" SQ.



LARGE OPENING DETAIL
LARGER THAN 12" SQUARE OR ROUND

3 ROOF OPENING DETAILS

SCALE: 3/4" = 1'-0"

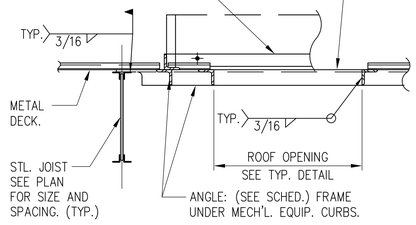


7 SECTION

SCALE: 3/4" = 1'-0"

ANGLE: (SEE SCHED.) W/1/2"DIA. HOLES AT 24"OC (MAX.) IN VERT. LEG TO SUPPORT WOOD BLOCKING OR PREFAB CURBS. CONTR. TO COORD. CURB SIZE AND LOCATION W/APPROVED MECH'L. SHOP DRAWINGS. (TYP.)

L4x4x1/4 FRAME TYP.

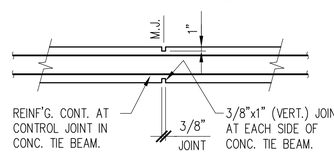


ROOF TOP UNIT FRAME SCHEDULE	
UNIT WEIGHT	ANGLE SIZE:
0 – 675 LBS	L4x3x1/4 (L.L.H.)
676 – 1500 LBS.	L4x4x5/16
1501 – 3000 LBS.	L6x3x3/8 (L.L.H.)
3001 – 6000 LBS.	L6x6x3/8
6001 – 10000 LBS.	L8x6x3/4

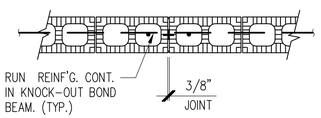
NOTE:
SEE SECTION 3/S9 FOR ADDITIONAL JOIST REINFORCING INFORMATION. (AS REQUIRED)

4 ROOF MECH UNIT FRAMING

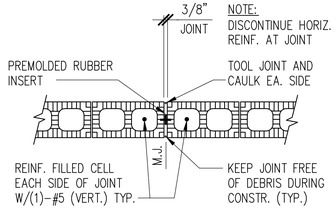
SCALE: 3/4" = 1'-0"



AT TIE BM./BM.



AT BOND BEAM

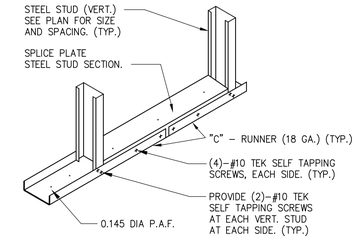


AT FOUNDATION

LOCATION FOR CONTROL JOINT
LOCATION SEE PLAN TO MATCH W/ ARCH STUCCO JOINT

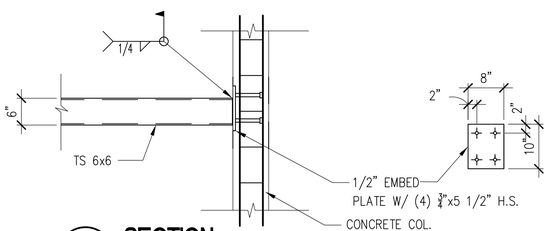
8 MASONRY JOINTS

SCALE: 3/4" = 1'-0"



6 TYP. 'C'-RUNNER SPLICE

SCALE: 3/4" = 1'-0"



9 SECTION

SCALE: 3/4" = 1'-0"

06-05-19

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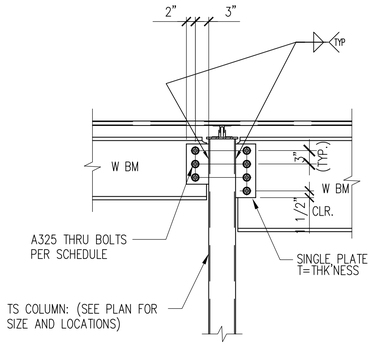
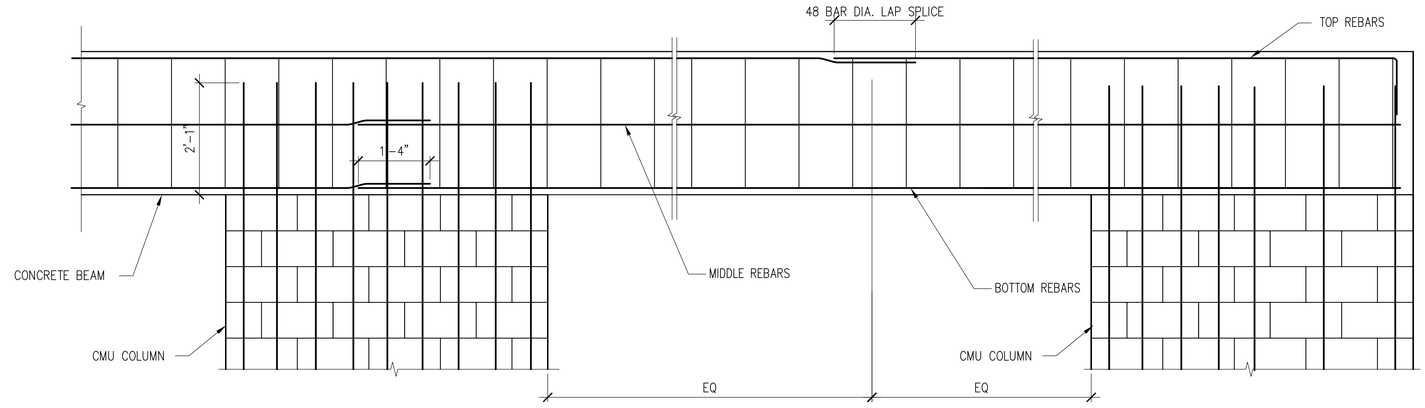


KIPS CAPACITY	BEAM SIZE	3/4" DIA # OF BOLTS	SIZE t	SIZE L	WELD FILLET
8.2	W8	(2)	1/4	6	3/16
16.2	W10 & W12	(3)	5/16	9	1/4
26.1	W14 & W16	(4)	3/8	15	5/16
36.3	W18	(5)	3/8	15	5/16
46.3	W21	(6)	3/8	18	5/16
56.4	W24 & W27	(7)	3/8	21	5/16

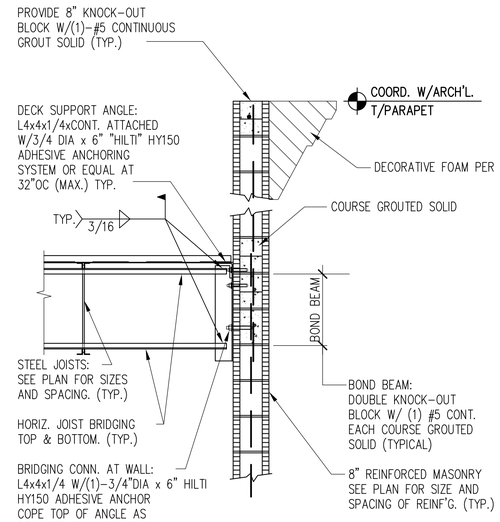
1 TYP. BEAM SINGLE PLATE CONN. TO TUBE COL.

SCALE: 3/4" = 1'-0"



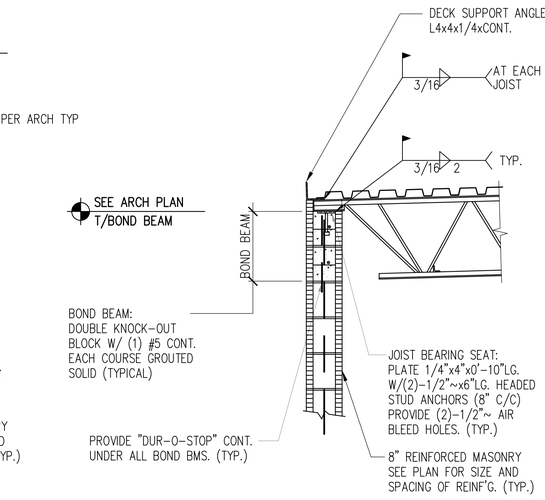
2 TYP. REBAR AT CONCRETE BEAM SPLICE DETAIL

SCALE: N.T.S.



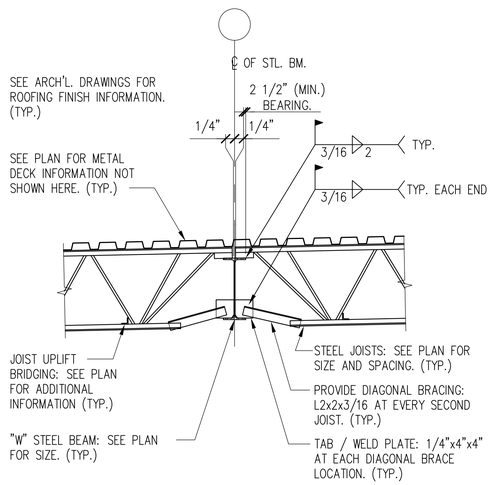
3 JOIST BRIDGING AT CMU WALL

SCALE: 3/4" = 1'-0"



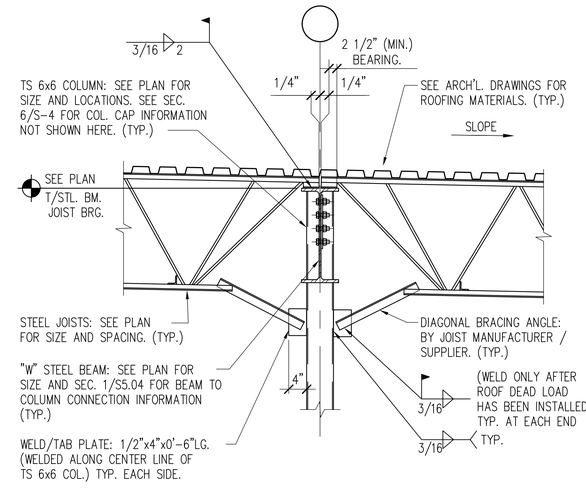
4 JOIST BEARING AT CMU WALL

SCALE: 3/4" = 1'-0"



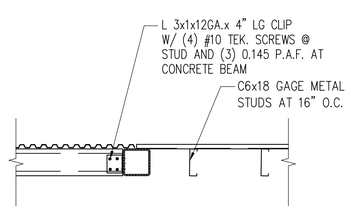
5 JOIST BEARING AT STEEL BEAM

SCALE: 3/4" = 1'-0"



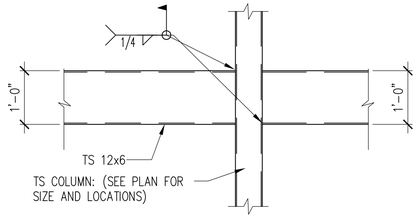
6 JOIST BRG. AT STEEL COLUMN

SCALE: 3/4" = 1'-0"



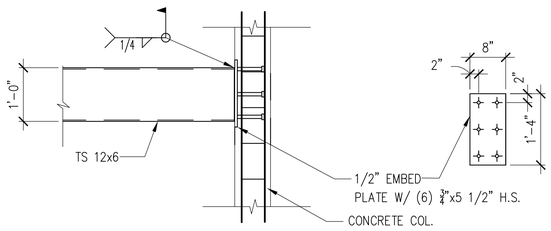
7 SECTION

SCALE: 3/4" = 1'-0"



8 TS BEAM TO TS COL. CONNCETION

SCALE: 3/4" = 1'-0"



9 SECTION

SCALE: 3/4" = 1'-0"

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STRUCTURAL DESIGN GROUP
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Orlando, Florida 32817 - 407-677-5565 Fax 407-730-2999
Certificate of Authorization No. 25873
Minsheng Xie P.E.
Florida No. 51161

06-05-19

REVISIONS 1 2 3 4 5 6 7 8

PROJECT NO. 17SCS1803-01

DATE 03/26/2018

NEW RETAIL CENTER FOR:
KADMAR PLAZA
ORLANDO, FLORIDA

AA26002490
RABITS & ROMANO ARCHITECTURE
PLANNING AND DESIGN
245 SOUTH HIGHLAND ST.
SUITE 9 MOUNT DORA, FL. 32757
TEL - 352-385-1030
FAX - 352-385-1035
info@rabits-architect.com
www.rabits-architect.com

SIGN/SEAL

DATE

SHEET S5.04

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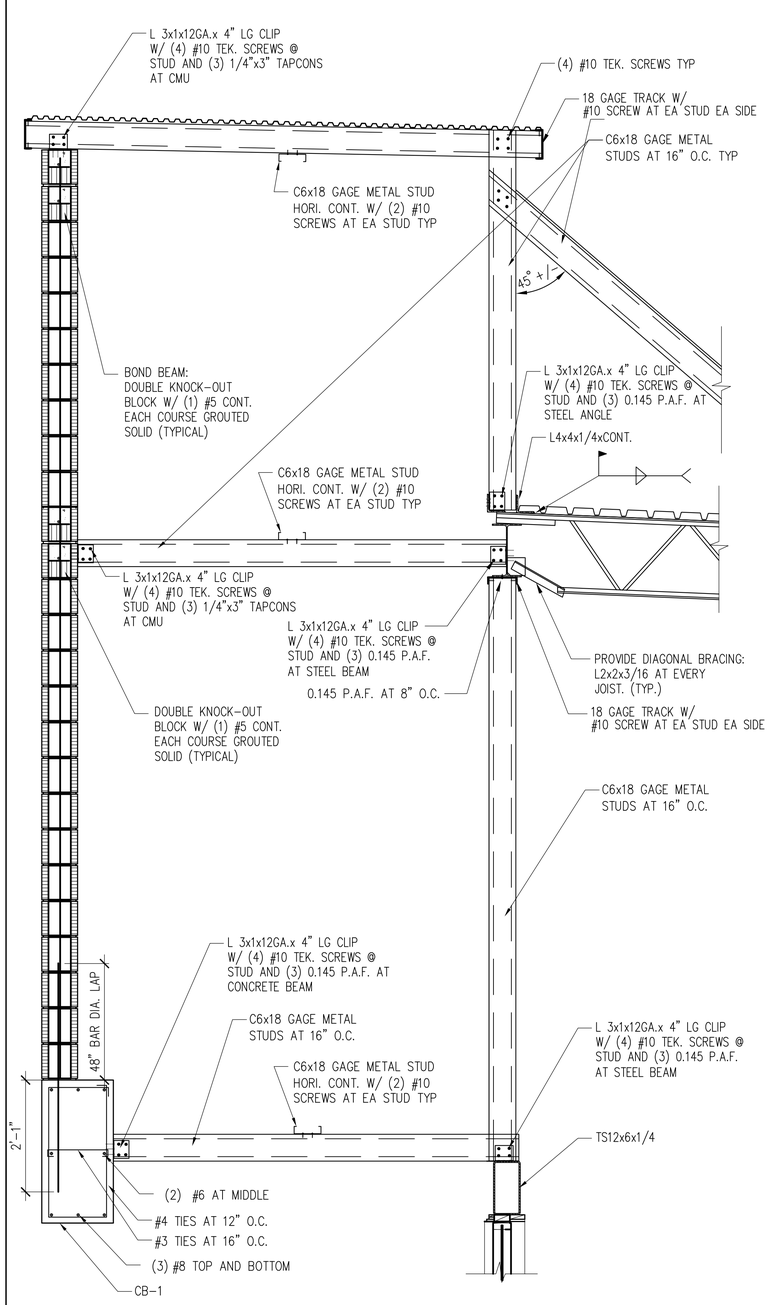
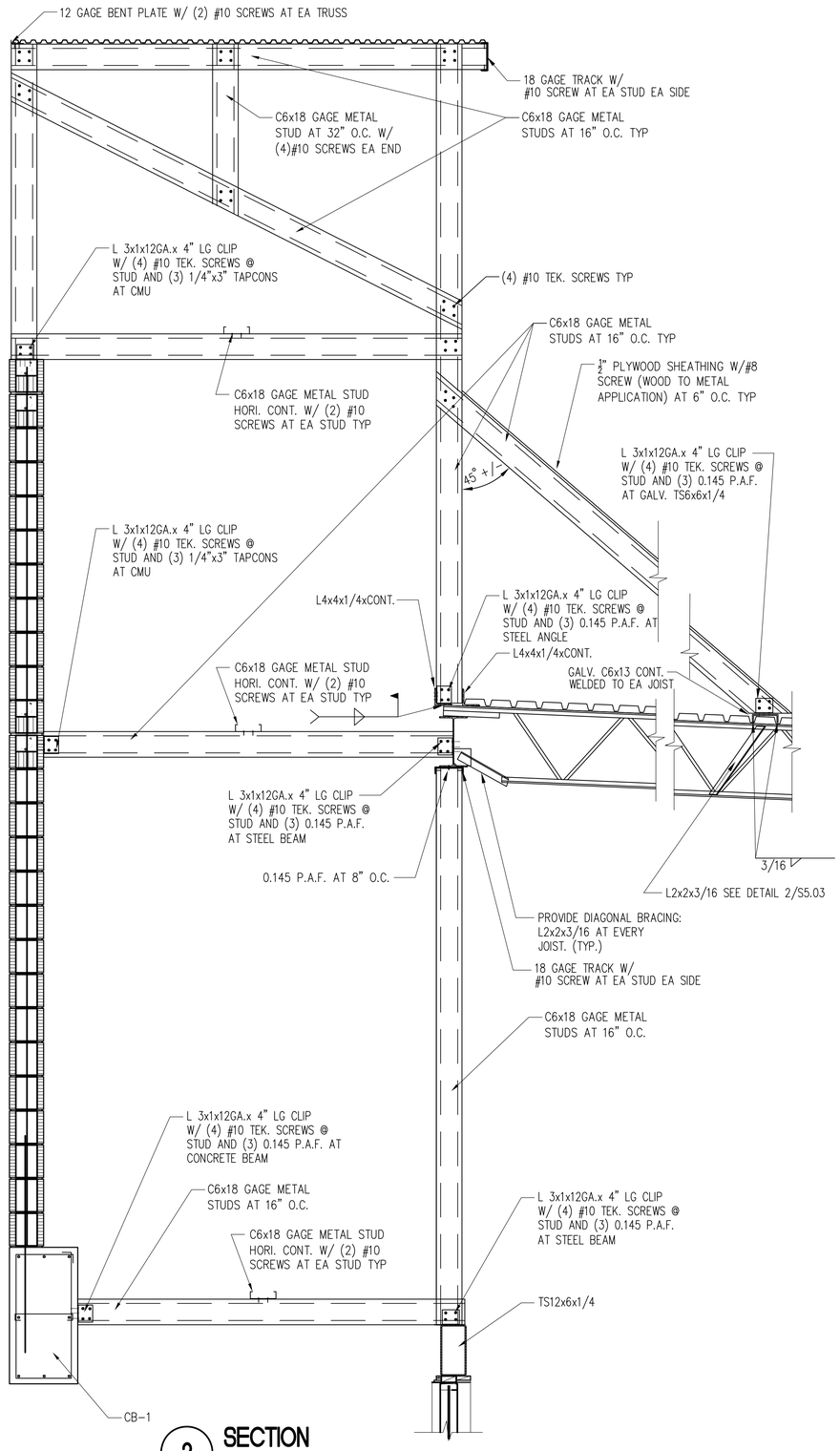
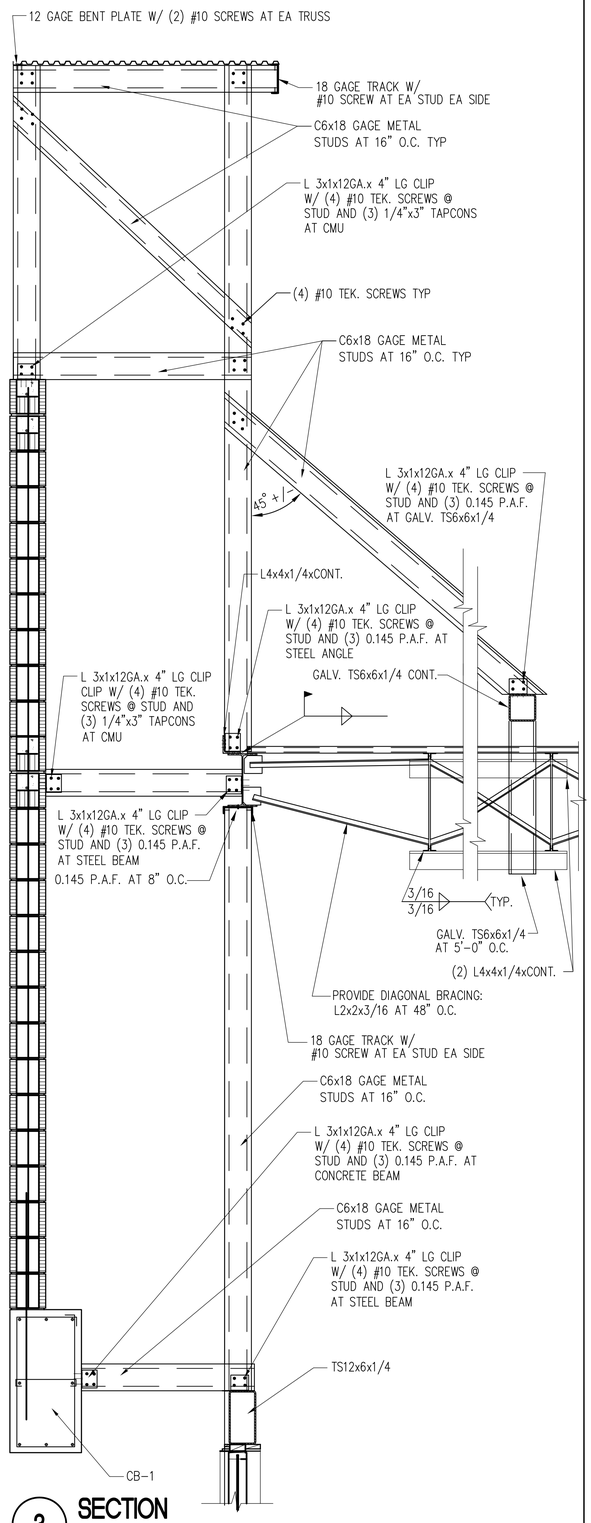


1 **SECTION**
SCALE: 3/4" = 1'-0"



2 **SECTION**
SCALE: 3/4" = 1'-0"



3 **SECTION**
SCALE: 3/4" = 1'-0"

07-03-19

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