ADDENDUM 1

March 06, 2020

ITB AP 35-20

CONSTRUCTION OF SATELLITE CONCOURSE "C" AT VPS
at
DESTIN-FORT WALTON BEACH AIRPORT
OKALOOSA COUNTY, FLORIDA

Please find attached the Documents for the above referenced Addendum No. 1. This Addendum is hereby made a part of the Contract Documents and Specifications of the above referenced project. All other requirements of the original Contract Documents and Specifications shall remain effective in their respective order.

The purpose of Addendum No. 1 is to set forth changes and/or additional information as referenced herein.

Note: The bidder shall acknowledge receipt of this addendum on the Bid Form, Page BF-1 in the space provided. Failure to do so may subject the bidders to disqualification.

Note: <u>The ITB Opening Date & Time remains unchanged.</u>

MLM-MARTIN
ARCHITECTS, INC.

Addendum No 1

Project:	ITB AP 35-20 Construction of Satellite Concourse "C"		
To:	Okaloosa County, Florida Board of County Commissioners Okaloosa County Purchasing Department 5479A Old Bethel Road Crestview, FL 32536	**From:**	MLM-Martin Architects, Inc. 668 N. Orlando Ave, Ste. 107 Maitland, FL 32751
ATTN:	Jessica Darr		Miguel A. Martin
RE:	Addendum No 1 [Δ 1]		
Date:	3/5/2020	**File:**	19672-511-10

ATTACHED IS ADDENDUM NO 1 TO THE SUBJECT CONTRACT DOCUMENTS. THIS ADDENDUM SETS FORTH CHANGES AND/OR ADDITIONAL INFORMATION AS REFERENCED HEREIN AND IS HEREBY MADE PART OF AND SHOULD BE ATTACHED TO THE CONTRACT DOCUMENTS. **ACKNOWLEDGE RECEIPT** OF ALL ADDENDA IN THE SPACE PROVIDED IN THE **BID FORM**. FAILURE TO DO SO MAY SUBJECT THE BIDDERS TO DISQUALIFICATION.

A. Specifications:

Item #1: Section 09 70 00 Epoxy Flooring Coatings
MODIFIED: paragraph 1.2-E. no 6" Base
DELETED: Paragraph 2.1-A.-1.-d.
DELETED: Paragraph 3.4-F.

Item #2: Section 10 26 13 Corner Guards
DELETE: Whole Section – Ref §10 26 23.13

Item #3: Section 10 26 23.13 Impact Resistant Wall Protection
MODIFIED: Paragraph 2.1 and 2.2 to indicate Aluminum 6063 T5 and list a basis of design.

Item #4: Section 12 48 16 Entrance Floor Matts
MODIFIED: Paragraph 2.1-A.-1. To indicate basis of design.
ADD: Paragraph 2.1-A.-2. To indicate an approved substitution.

B. Drawings:

Item #1: G211 - DETAIL B5 - **CLARIFIED** - SEALANT BEAD FOR FULL PERIMETER.

Item #2: G311 - PLAN D1 - **MODIFIED** - SPACE UTILIZATION @ COL LINE 16-18 FOR HOLDROOM SPILL OVER. PROVIDED GRAPHIC CLARITY ON COLUMN LINE MARKERS. NO MATERIAL CHANGE.

Item #3: AL001 - NOTE COMPONENTS OF CLADDING - **CORRECTED** - TO MATCH STRUCTURAL ON S003

Item #4: A401 - DETAIL A3 - **ADDED** - TO PROVIDE CLARITY ON CANOPY DRAINAGE AND ANCHORAGE.

Item #5: A411 - PLAN B1 - **MODIFIED** - TO INCLUDE SUMP AT ROOF DRAINS, ADDED KEYNOTE [07 22 16.530S].

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Item #6: A412 - PLAN B1 - **MODIFIED** - TO INCLUDE SUMP AT ROOF DRAINS, ADDED KEYNOTE [07 22 16.530S].
DETAIL A3 - **ADDED** - TO PROVIDE CLARITY ON CANOPY DRAINAGE AND ANCHORAGE.

Item #7: A413 - DETAIL A3 - **ADDED** - TO PROVIDE CLARITY ON CANOPY DRAINAGE AND ANCHORAGE.

Item #8: A414 - PLAN B1 - **MODIFIED** - TO INCLUDE SUMP AT ROOF DRAINS, ADDED KEYNOTE [07 22 16.530S].
DETAIL A3 - **ADDED** - TO PROVIDE CLARITY ON CANOPY DRAINAGE AND ANCHORAGE.

Item #9: A415 - PLAN B1 - **MODIFIED** - TO INCLUDE SUMP AT ROOF DRAINS, ADDED KEYNOTE [07 22 16.530S].
DETAIL A3 - **ADDED** - TO PROVIDE CLARITY ON CANOPY DRAINAGE AND ANCHORAGE.

Item #10: A416 - PLAN B1 - **MODIFIED** - TO INCLUDE SUMP AT ROOF DRAINS, ADDED KEYNOTE [07 22 16.530S].
DETAIL A3 - **ADDED** - TO PROVIDE CLARITY ON CANOPY DRAINAGE AND ANCHORAGE.

Item #11: A453 - PLAN C3 - **ADDED** - AIR PURIFIER LOCATION.
PLAN C1 - **ADDED** - AIR PURIFIER LOCATION.
PLAN B1 - **ADDED** - AIR PURIFIER LOCATION.
PLAN B3 - **ADDED** - AIR PURIFIER LOCATION.
PLAN A1 - **ADDED** - AIR PURIFIER LOCATION.

Item #12: A457 - LEGEND - **ADDED** - FOR MAKE AND MODEL INFORMATION.

Item #13: A781 - DETAIL C1 - **ADDED** - SECONDARY SEALANT PROVIDED AT EXTERIOR FINISH AND AIR/VAPOR BARRIER.
DETAIL A1 - **ADDED** - SECONDARY SEALANT PROVIDED AT EXTERIOR FINISH AND AIR/VAPOR BARRIER.
DETAIL A3 - **ADDED** - SECONDARY SEALANT PROVIDED AT EXTERIOR FINISH AND AIR/VAPOR BARRIER. PROVIDED CLARITY ON CASING BEAD.

Item #14: A841 - DETAIL E1 - **ADDED** - DIMENSION AND SLOPE TO SUMP ON DETAIL.
DETAIL A3 - **ADDED** - NOTE TO PROVIDE PAD AT LIGHTNING PROTECTION.
DETAIL A3 - **ADDED** - DIMENSION FOR MINIMUM FRONT FACE OF COPING.
DETAIL A3 - **ADDED** - DIMENSION FOR MINIMUM FRONT FACE OF COPING.

Item #15: A851 - DETAIL A4 - **ADDED** - BREAK METAL FLASHING TO COVER TRANSITION.
DETAIL C4 - **REMOVED** - A/V TAPE FROM LAPPING STUCCO ACCESSORY.
DETAIL D4 - **REMOVED** - A/V TAPE FROM LAPPING STUCCO ACCESSORY.
DETAIL D2 - **MODIFIED** - STUCCO ACCESSORY AND SEALANT NOTES.
DETAIL B2 - **MODIFIED** - STUCCO ACCESSORY AND SEALANT NOTES.

Item #16: A861 - DETAIL D1 - **ADDED** - BREAK METAL FLASHING TO COVER TRANSITION.
DETAIL D3 - **MODIFIED** - STUCCO ACCESSORY AND SEALANT NOTES.
DETAIL B3 - **MODIFIED** - STUCCO ACCESSORY AND SEALANT NOTES.

Item #17: A864 - DETAIL C3 - **ADDED** - INDICATION OF MASONRY CONTROL JOINTS AT REFERENCE LINE TO MATCH STRUCTURAL

Item #18: A881 - DETAIL D4&D5 - **CLARIFIED** - 1/2" SEALANT BEAD FOR FULL PERIMETER.
DETAIL E4 - **CLARIFIED** - SEALANT BEAD FOR FULL PERIMETER.

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DETAIL B5 - **CLARIFIED** - SEALANT BEAD FOR FULL PERIMETER.
DETAIL B2 - **MODIFIED** - STUCCO ACCESSORY AND SEALANT NOTES.
DETAIL B3 - **MODIFIED** - SEALANT NOTES.
DETAIL A4 - **MODIFIED** - STUCCO ACCESSORY.
DETAIL B4 - **MODIFIED** - STUCCO ACCESSORY.

Item #19: A901 - NOTE COMPONENTS OF CLADDING - **CORRECTED** - TO MATCH STRUCTURAL ON S003
Item #20: E000 - **ADDED** FLOOR BOX SYMBOL AND DESCRIPTION TO LEGEND.
Item #21: E110 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #22: E211 - **ADDED** NOTES AT UTILITY ENTRY.
Item #23: E212 - **ADDED** INFORMATION FOR EMERGENCY POWER INFRASTRUCTURE - **MODIFIED** CIRCUITS.
Item #24: E213 - **MODIFIED** CIRCUITS .
Item #25: E214 - **MODIFIED** CIRCUITS .
Item #26: E215 - **MODIFIED** CIRCUITS .
Item #27: E216 - **MODIFIED** CIRCUITS .
Item #28: E220 - **CLARIFIED** MECHANICAL CONNECTIONS.
Item #29: E311 - **MODIFIED** SSCP AREA.
Item #30: E312 - **ADDED** LIGHTING CONTROL OVERRIDE SYMBOLS.
Item #31: E313 - **ADDED** SWITCHES.
Item #32: E314 - **ADDED** SWITCHES.
Item #33: E315 - **ADDED** SWITCHES.
Item #34: E316 - **ADDED** SWITCHES.
Item #35: E410 - **REVISED** LIGHTNING PROTECTION AND GROUNDING SYSTEM.
Item #36: E501 - **REVISED** SINGLE LINE.
Item #37: E601 - **REVISED** SCHEDULES.
Item #38: E602 - **REVISED** SCHEDULES.
Item #39: E603 - **REVISED** SCHEDULES.
Item #40: E604 - **ADDED** LIGHTING CONTROLS SCHEDULE.
Item #41: E801 - **REISSUED** WITH SIGNATURE.
Item #42: E802 - **ADDED** NEW SHEET OF ELECTRICAL DETAILS.
Item #43: FA000 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #44: FA001 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #45: FA110 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #46: FA211 - **ADDED** HEX NOTE 1 FOR LHD.
Item #47: FA212 - **ADDED** HEX NOTE 1 FOR LHD.
Item #48: FA213 - **ADDED** HEX NOTE 1 FOR LHD.
Item #49: FA214 - **ADDED** HEX NOTE 1 FOR LHD.
Item #50: FA215 - **ADDED** HEX NOTE 1 FOR LHD.
Item #51: FA216 - **ADDED** HEX NOTE 1 FOR LHD.
Item #52: FA511 - **RISER** UPDATED WITH LHD - FP INTERFACE.
Item #53: FA810 - **CLARIFIED** DETAILS.
Item #54: FA811 - **REMOVED** DETECTOR DETAILS FROM SHEET.
Item #55: T001 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #56: T002 - **REVISED** MATRIX OF RESPONSIBILITY.
Item #57: T110 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #58: T111 - **CLARIFIED** IDF COVERAGE AREAS.
Item #59: T211 - **PROVIDED** NOTE ON POWER POLES.
Item #60: T212 - **PROVIDED** HEX NOTES 1 AND 2.

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Item #61: T213 - **PROVIDED** HEX NOTES 1 AND 2.
Item #62: T214 - **PROVIDED** HEX NOTES 1 AND 2.
Item #63: T215 - **PROVIDED** HEX NOTES 1 AND 2.
Item #64: T216 - **PROVIDED** HEX NOTE 1 .
Item #65: T411 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #66: T511 - **DELETE** EXISTING SHEET.
Item #67: T512 - **RENUMBERED** TO T511 WITH UPDATES TO CONTENT CLOUDED.
Item #68: T810 - **CLARIFIED** DETAILS 1,2,5,6 &7.
Item #69: T811 - **CLARIFIED** DETAILS 4&5 - **ADDED** DETAILS 8 &9.
Item #70: T901 - **MODIFIED** POWER REQUIREMENT NOTE.
Item #71: T902 - **MODIFIED** POWER REQUIREMENT NOTE.
Item #72: TP001 - **ADDED** RESPONSIBILITY MATRIX.
Item #73: TP002 - **DELETE** EXISTING SHEET.
Item #74: TP110 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #75: TP211 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #76: TP212 - **RELOCATED** SPEAKER.
Item #77: TP213 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #78: TP214 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #79: TP215 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #80: TP216 - **ADDED** SPEAKER.
Item #81: TP511 - **CLARIFIED** PAGING RISER.
Item #82: TP811 - **CLARIFIED** DETAILS 1&4 - **ADDED** DETAIL 5.
Item #83: TS001 - **MODIFIED** ABBREVIATIONS AND SYMBOLS LIST.
Item #84: TS002 - **MODIFIED** THE RESPONSIBILITY MATRIX.
Item #85: TS110 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #86: TS211 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #87: TS212 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #88: TS213 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #89: TS214 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #90: TS215 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #91: TS216 - **MODIFIED** DEVICES AT GATE C5.
Item #92: TS511 - **CLARIFIED** SINGLE LINE.
Item #93: TS512 - **CLARIFIED** DOOR HARDWARE INTERFACE.
Item #94: TS711 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #95: TS712 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #96: TS811 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.
Item #97: TS812 - **REMOVED** "PRELIMINARY DOCUMENT" STAMP.

C. Questions:

Item #1: How will the areas where gypsum and block meet be trimmed?
A: Aluminum Trim Ref. Sheet A863 & A864.

Item #2: Is there a requirement for Contractor to provided or keep a record BIM model?
A: No. We need the as-built set of plans but don't need to maintain a BIM model.

Item #3: Will this project be Landside or Airside (Badging and Security requirements?
A: Primarily Landside with SIDA fence planned to be one the East side of the project.

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Item #4: How will permits be handled between Owner and Contractor?
A: Contractor should only be responsible for permit pick up fees.

Item #5: Is there a published Budget?
A: No

Item #6: Award Date?
A: Bid Open on Mar 18th and get to BCC board April 7th meeting. Pre-con Early April.

Item #7: How will FAA and Environmental requirements and notifications be handled?
A: Owner has already started that process and will not be a responsibility of the Contractor.

Item #8: On some sheets of the drawings the words "PRELIMINARY DRAWINGS" needs to be removed.
A: Revised Electrical and Systems Drawings attached.

Item #9: Specification Section 10 28 13 paragraph 2.1 Toilet accessories manufactures: Listed on Schedule and as shown on drawings. There are none shown on drawings – see Sheet A457. Please provide manufacture's and model numbers for toilet accessories.
A: Sheet A457 has been revised to include the information requested.

Item #10: Detail C1/A781 item 10 26 13.5250 states an Aluminum Corner guard. But Specification 10 26 13 is for vinyl Corner guards and Specification 10 26 23.13 is for stainless steel corner guards. All detail on sheet A881 shows aluminum corner guards. Please clarify which corner guards are to be uses.
A: Disregard section for Vinyl Guards. See modified §102623.13 to indicate Aluminum as notated in Drawings/Details.

Item #11: General Conditions Para 5.4.8.1 - Please clarify if the contractor is to purchase Owner's Protective Liability Insurance (Owners and Contractors Protective Liability Coverage).
A: They need to purchase Contractors liability insurance and name Okaloosa County BOCC and the Architect as additional insured with a waiver of subrogation on all the policies. He should refer to the General Services Insurance Requirements revised 8/1/18 in GSIR-1 thru GSIR-5. This is supplement to the insurance requirements in OCSC-1 thru OCSC-6, which is a little clearer to understand as to what is required.

Item #12: Please provide the type of finish is on the stainless-steel rails.
A: 304 per §055000-2.1-H. with #4 Finish per§055000-2.12.-A.-1.

Item #13: Please indicate the wage determination that is to be used for this project.
A: The Davis-Bacon Act (DBA) applies to contracts involving the construction, alteration, and/or repair (including painting or decorating) of public buildings or public works. This will be the proper wage determination for the project but certified pay rolls are not required to be submitted with pay applications since there are no federal funds associated with this construction project. Under Executive Order (EO) 13658, effective January 1, 2020, an hourly minimum wage of $10.80 for calendar year 2020 applies to all contracts subject to the Service Contract Act or the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015.

Item #14: The spec (097000) calls for a 6" cove base but the finish schedule in the plans (drawing AF711) shows a rubber base (RB-1.) Can you clarify if rooms

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designated HPC4 get a six inch integral cove base or if it will have a rubber cove base installed?

A: for rooms indicated to receive HPC4 on AF711 shall receive Rubber base as scheduled (RB-1). The 6" Cove Base listed §097000-1.2-E. will be removed.

D. Other Items:

Item #1: Pre-Bid Conference Sign in sheet.
Item #2: Pre-Bid Conference Presentation.
Item #3: Substitution Request 001 §124816
Item #4: Substitution Request 002 §075400
Item #5: Substitution Request 003 §053100
Item #6: Substitution Request 004 §084229
Item #7: Substitution Request 005 §105020

End of Addendum No 1

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SECTION 09 70 00 – EPOXY FLOOR COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division -1 Specification sections, apply to the work of this section.

1.2 DESCRIPTION OF WORK:

A. To the extent shown on drawings and specified herein, Epoxy flooring and curbs.

B. This work includes the application of special coating systems to items and surfaces as scheduled including surface preparation, waterproofing coats, prime coats, and topcoats.

1. Special coating systems are defined as those types of materials and methods of application requiring more than normal skills and techniques for mixing handling and application.

C. Coat surfaces scheduled for special coating systems whether or not colors are designated, except where specifically noted as a surface not to be coated.

E. Floors, ~~6" base~~, equipment curbs, floor opening curbs, alcove curbs and door sill curbs.

1.3 QUALITY ASSURANCE:

A. Single-Source Responsibility: Provide primers and other undercoat material produced by the same manufacturer as the finish coats. Use only thinners recommended by the manufacturer and only within recommended limits.

B. Coordination of Work: Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of the total coatings systems for various substrates. Upon request, furnish information on the characteristics of specified finish materials, to ensure that compatible prime coats are used. Notify Architect of any anticipated problems using coating systems as specified.

1.4 SUBMITTALS: (SD-01, 02, 03, 14 & SD-16)

A. Product Data: Submit one (1) electronic copy to the Architect for review and approval in PDF format. Include manufacturer's technical information including basic materials analysis and application instructions for each coating material specified. List each material and cross-reference to the specific coating and finish system and application. Identify by manufacturer's catalog number and general classification. Provide specific physical color samples that are readily available.

B. Samples: Submit samples for the Architect's review of color and texture only. Provide a listing of material and application for each coat of each finish samples. Provide six (3) 4" square samples for each type of color and finish; define prime and finish coats.

1.5 DELIVERY, STORAGE, AND HANDLING:

A. Deliver materials to the job site in the manufacturer's original, new, unopened packages and containers bearing manufacturer's name and label and the following information:

Name or title of material.
Federal Specification number, if applicable.
Manufacturer's stock number and date of manufacture.
Manufacturer's name.
Contents by volume, for major pigment and vehicle constituents.
Thinning instructions.
Application instructions.
Color name and number.
Handling instructions and precautions.

B. Take precautions to ensure that workmen and work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and application of special coatings.

C. Store materials not in actual use in tightly-covered containers. Maintain containers used in storage of coatings in a clean condition, free of foreign materials and residue. Protect from freezing where necessary. Keep storage area neat and orderly. Remove oily rags and waste daily. Take all necessary precautionary measures to ensure that workmen and work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and application of stains.

1.6 JOB CONDITIONS:

A. Install work only when the manufactures recommendations of installation for temperature, humidity and cleanliness is met and confirmed.

B. Do not apply exterior coatings in rain, fog or mist, or when the relative humidity exceeds 85%, or to damp or wet surfaces, unless otherwise permitted by manufacturer's printed instructions.

C. Coating work may continue during inclement weather only if areas and surfaces to be coated are enclosed and the temperature within the area can be maintained within limits specified by the manufacturer during application and drying periods.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products to match existing floor as manufactured by "Stonhard", Inc. 800-257-7953.

1. Stongard MR- 1mm thick

   a. Waterproofing Membrane Stonproof ME7
   b. Finish Coat Stonkote GS4
   c. Primer Standard Primer and SL Primer
   ~~d. 6" integral seal cove base~~

2. Dur-A-Flex Inc.

3. Sika Corp., Industrial Flooring, 201 Polito Avenue,
   Lyndhurst, NJ 07071
   Phone 201.933.8800
   Fax 201.933.6225
   www.sikafloorusa.com

B. Texture and color per schedules on drawings.

2.2 INSPECTION

A. Material Quality: Provide best quality grade of various types of coatings as regularly manufactured by acceptable coating materials manufacturers. Use only materials displaying manufacturer's identification as a standard, best-grade product. Federal Specifications establish minimum acceptable quality for paint materials, except where other product identification used. Provide a written certification from coating manufacturer that materials provided meet or exceed these criteria.

B. Color Pigments: Pure, non-fading, applicable types to suite substrates and service indicated.

PART 3 - EXECUTION

3.1 INSPECTION:

A. Starting of coating work will be construed as the Applicator's acceptance of surfaces within any particular area.

B. Do not apply coating over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to formation of a durable coating film.

3.2 SURFACE PREPARATION:

A. General: Perform preparation and cleaning procedures in compliance with coating manufacturer's instructions for particular substrate conditions, and as herein specified.

1. Provide barrier coats over incompatible primers or remove and reprime as required. Notify Architect in writing of any anticipated problems in using the specified coating systems with substrates primed by others.

2. Remove hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items which are not to be coated, or provide surface-applied protection prior to surface preparation and coating operations. Remove, if necessary, for complete coating of items and adjacent surfaces. Following coating completion in each space or area, reinstall removed items, using workman skilled in trades involved.

B. Cementitious Surfaces: Prepare cementitious surfaces of concrete, concrete masonry, cement plaster and similar surfaces scheduled to receive special coatings by removing efflorescence, chalk, dust, dirt, grease, oils, and by roughing if required to remove glaze.

1. Determine alkalinity and moisture content of surfaces to be coated by performing appropriate tests. Do not apply coatings over surfaces where moisture content exceeds that permitted in manufacturer’s printed directions.
2. Mechanically prepare all surfaces to receive coating with a "Blastric Machine" removing all surface laitance, oil, grease, and dirt from surface and provide a mechanical profile for surface bonding.

3.3 MATERIAL PREPARATION:

A. General: Carefully mix and prepare materials in compliance with the coating manufacturer’s directions.

1. Do not mix coating materials produced by different manufacturers.
2. Maintain containers used in mixing and application in a clean condition, free of foreign materials and residue.
3. Stir materials before application to produce a mixture of uniform density, and as required during application. Do not stir film, which may form on surfaces, into the material. Remove film and, if necessary, strain the coating material before using.

3.4 APPLICATION

A. General: Apply special coatings by trowel, brush, roller, spray, squeegee, or other applicators in accordance with the manufacturer’s directions. Use brushes best suited for the type of material being applied.

B. Minimum Coating Thickness: Apply each material at not thinner than the manufacturer’s recommended spreading rate. Provide a total dry film or material thickness of the entire coating system as recommended by the manufacturer.

E. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or recoat work not in compliance with specified requirements.

F. ~~Wall Base material in rooms shall be the same color and thickness as the flooring material for Epoxy installations and shall extend vertically a minimum of 8” unless specified otherwise on the finish schedule~~.

3.5 CLEAN-UP AND PROTECTION

A. Clean-Up: During progress of work, remove from project site discarded materials, rubbish, cans and rags resulting from work. Upon completion of the work, clean all coating-spattered surfaces. Remove spattered coatings by washing, scraping or other proper methods, using care not to scratch or otherwise damage adjacent finished surfaces.

B. Protection: Protect work of other trades, whether to be coated or not, against damage. Correct damage by cleaning, repairing or replacing, and recoating as acceptable to the Architect. Leave the work in an undamaged condition.

C. Provide “Wet Paint” signs as required to protect newly-coated finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of coating operations.

END OF SECTION 09 70 00

SECTION 10 26 23.13 - IMPACT-RESISTANT WALL PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
1. Wall guards.

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1.3 SUBMITTALS

A. Product Data: Include construction details, material descriptions, impact strength, dimensions of individual components and profiles, and finishes for each impact-resistant wall-protection unit.

B. Shop Drawing: Include plan showing location of corner guards, plan detail for mounting and height.

C. Sample: Submit a sample for color and texture.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store impact-resistant wall-protection units in original undamaged packages and containers inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.

PART 2 - PRODUCTS

2.1 MATERIALS

A. ~~Stainless-Steel Sheet~~**Aluminum Extrusion**: ~~ASTM A 240/A 240M~~**6063 T5**.

B. Adhesive: Type recommended by manufacturer for use with material being adhered to substrate indicated.
1. Use adhesives and sealants that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

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a. Gypsum Board and Panel Adhesives: 50 g/L.
b. Multipurpose Construction Adhesives: 70 g/L.
c. Contact Adhesive: 250 g/L.

2.2 CORNER GUARDS

A. Surface-Mounted, Metal Corner Guards: Fabricated from 1-piece, formed metal with formed edges; with 90- or 135-degree turn to match wall condition.

1. Material: ~~Stainless steel, Type 304.~~**Aluminum 6063 T5**

~~a. Thickness: Minimum 16 Gauge.~~

~~b. Finish: Directional satin(vertical), No. 4~~

~~2. Corner Radius: 1/8 inch (3 mm).~~

2. ~~Mounting: Stainless Steel Screws and continuous S.S. clip. See drawings details.~~**Manufacturer: Fry Reglet – DMCT-1250 or approved Equal.**

3. **Mounting Mechanical Fastening as required by manufacturer.**

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2.3 FABRICATION

A. Fabricate impact-resistant wall-protection units to comply with requirements indicated for design, dimensions, and member sizes, including thicknesses of components.

2.4 METAL FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
1. Remove tool and die marks and stretch lines or blend into finish.
2. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.

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B. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

C. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and wall areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

1. Examine walls to which impact-resistant wall protection will be attached for blocking, grounds, and other solid backing that have been installed in the locations required for secure attachment of support fasteners.
2. For impact-resistant wall-protection units attached with adhesive or foam tape, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Proceed with installation only after unsatisfactory conditions have been corrected.
4. Corner guard edges will be buffed to remove any sharp edge. All metal edges will be rounded.

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3.2 PREPARATION

A. Complete finishing operations, including painting, before installing impact-resistant wall-protection system components.

B. Before installation, clean substrate to remove dust, debris, and loose particles.

3.3 INSTALLATION

A. General: Install impact-resistant wall-protection units level, plumb, and true to line without distortions. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.

3.4 CLEANING

A. Clean using methods and materials recommended in writing by manufacturer and or supplier of stainless steel corner guards.

END OF SECTION 10 26 23.13

SECTION 12 48 16 - ENTRANCE FLOOR GRILLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections (including all sustainability requirements), apply to this Section.
B. Section-03 30 00 Cast-In- Place Concrete
C. Section-09 65 19 LVT-Resilient Tile Flooring

1.2 SUMMARY

A. Section includes recessed floor grilles and frames.

1.3 COORDINATION

A. Coordinate size and location of recesses in concrete to receive floor grilles and frames.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for entrance floor grilles and frames.

B. Shop Drawings:
   1. Items penetrating floor grilles and frames, including door control devices.
   2. Divisions between grille sections.
   3. Perimeter floor moldings.

C. Samples: For the following products, in manufacturer's standard sizes:
   1. Floor Grille: Assembled section of floor grille.
   2. Frame Members: Sample of each type and color.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For floor grilles and frames to include in maintenance manuals.

1.6 FIELD CONDITIONS

A. Field Measurements: Indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide the following:

1. Construction Specialties, Inc. **– (Basis of Design)**

2. Kadee Industries – KD58 Stainless steel Grating

~~2.~~**3.** Or approved substitution

2.2 FLOOR GRIDS

A. Model and Description-G6 GridLine-Cradel 2, type 302 Stainless Steel, 5/8" deep. Wires to be .090" X.150" electronically welded and spaced .145" apart.

2.3 GRID FRAMES:

A. SSA- Stainless Steel Angle Frame, Type 304 Stainless Steel with 1/*' Exposed surface.

2.4 LOCK DOWN MECHANISM:

A. HL-Hidden Lock Down shall be a hidden device to secure the GridLine to the Concrete surface. Type 305 Stainless Steel.

2.5 ENTRANCE FLOOR GRILLES, GENERAL

A. Structural Performance: Provide floor grilles and frames capable of withstanding the following loads and stresses within limits and under conditions indicated:

1. Unit to withstand 1000 lb/wheel loads (load applied to a solid 5"x2" wide polyurethane wheel for 1000 passes without damage)

B. Accessibility Standard: Comply with applicable provisions in the Florida Building Code Fifth Edition - Accessibility.

2.6 FLOOR GRILLES

A. General: Provide manufacturer's standard floor-grille assemblies consisting of treads of type and profile indicated, interlocked or joined together by cross members, and other components needed to produce a complete installation.

B. Stainless-Steel Floor Grille: Type 304.

C. Lockdown: Hidden.

2.7 FRAMES

A. Provide manufacturer's standard SSA frames of 1/8" and style for grille type, for permanent recessed installation in subfloor, complete with installation anchorages and accessories. Unless otherwise indicated, fabricate frame of same material and finish as grilles.

2.8 MATERIALS

A. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666, Type 304.

B. Stainless-Steel Angles: ASTM A 276 or ASTM A 479/A 479M, Type 304.

2.9 FABRICATION

A. Shop fabricate floor grilles to greatest extent possible in sizes as indicated. Unless otherwise indicated, provide each grille as a single unit; do not exceed manufacturer's recommended maximum sizes for units that are removed for maintenance and cleaning. Where joints in grilles are necessary, space symmetrically and away from normal traffic lanes.

B. Fabricate frame members in single lengths or, where frame dimensions exceed maximum available lengths, provide minimum number of pieces possible, with hairline joints equally spaced and pieces spliced together by straight connecting pins.

2.10 STAINLESS-STEEL FINISHES

A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.

1. Run grain of directional finishes with long dimension of each piece.
2. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
3. Directional Satin Finish: No. 4.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and floor conditions for compliance with requirements for location, size, minimum recess depth, and other conditions affecting installation of floor grilles and frames.

B. Examine roughing-in for drainage piping systems to verify actual locations of piping connections before floor grille and frame and drain pan installation.

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

3.2 INSTALLATION

A. Install recessed floor grilles and frames to comply with manufacturer's written instructions at locations indicated and with top of floor grilles and frames in relationship to one another and to adjoining finished flooring as recommended by manufacturer. Set floor-grille tops at height for most effective cleaning

action. Coordinate top of floor-grille surfaces with doors that swing across grilles to provide clearance under door.

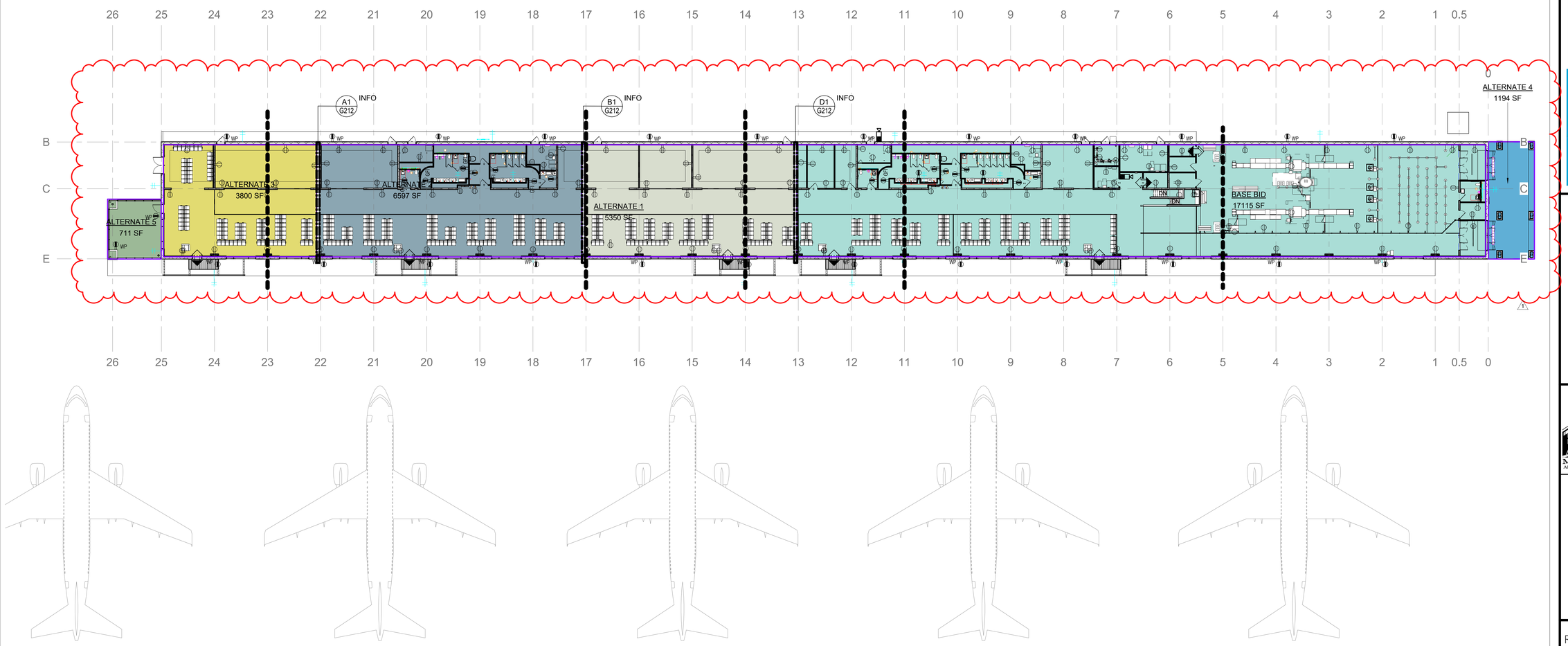
B. Verification of Conditions, examine areas and condition. Do not proceed until all unsatisfactory conditions have been corrected.

C. Follow manufacturer’s installation instructions.

3.3 PROTECTION

A. After completing frame installations, provide temporary filler of plywood or fiberboard in floor-grille recesses and cover frames with plywood protective flooring. Maintain protection until construction traffic has ended and Project is near Substantial Completion.

END OF SECTION 12 48 16



B1 ALTERNATE IDENTIFICATION PLAN CONCOURSE LEVEL

1" = 20'-0"

NORTH

ALTERNATE LEGEND

- ALTERNATE 1
  Concessions, Holdrooms C3 :
  REF LINES 13-17
- ALTERNATE 2
  Concessions, Restroom Core 2,
  Holdroom C4: REF LINES 17-22
- ALTERNATE 3
  Holdroom C5: REF LINES 22-25
- ALTERNATE 4
  Covered Entry Canopy and Structure
  Only; Slab in Base Bid
- ALTERNATE 5
  Outdoor Seating Area (Concessions)
- BASE BID
  Entry, TSA Support, SSCP,
  Restroom Core 1, Holdroom C1 & C2:
  REF LINES 00-13

ALTERNATE 6
SUBSTITUTE "CALLA" HIGH CAC 50
24" X 24" X 1-3/4" CEILING TILE FOR **ACT1**
SEE **AF712**

ALTERNATE 7
SUBSTITUTE CT2 FOR GT1 AND GT2
SEE **A45X SERIES & AF712**

SCALE: 1" = 20'-0"
0 5' 10' 20' 40'

OKALOOSA COUNTY

FLY VPS

C19-2811- AP
Construction
of Satellite
Concourse 'C'

MLM-MARTIN ARCHITECTS, INC.
668 N. ORLANDO AVE.
SUITE 107
MAITLAND, FL 32751
407.897.6764 (VOICE)
407.894.1338 (FAX)
WWW.MLM-MARTIN.COM
AA-C002208
ALL JOB #'S TYPE PROPERTY

MIGUEL A MARTIN
FL AR-98279

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	1" = 20'-0"

Drawing Title:

IDENTIFICATION OF ALTERNANTES

BID DOCUMENTS

Drawing No.:

G211

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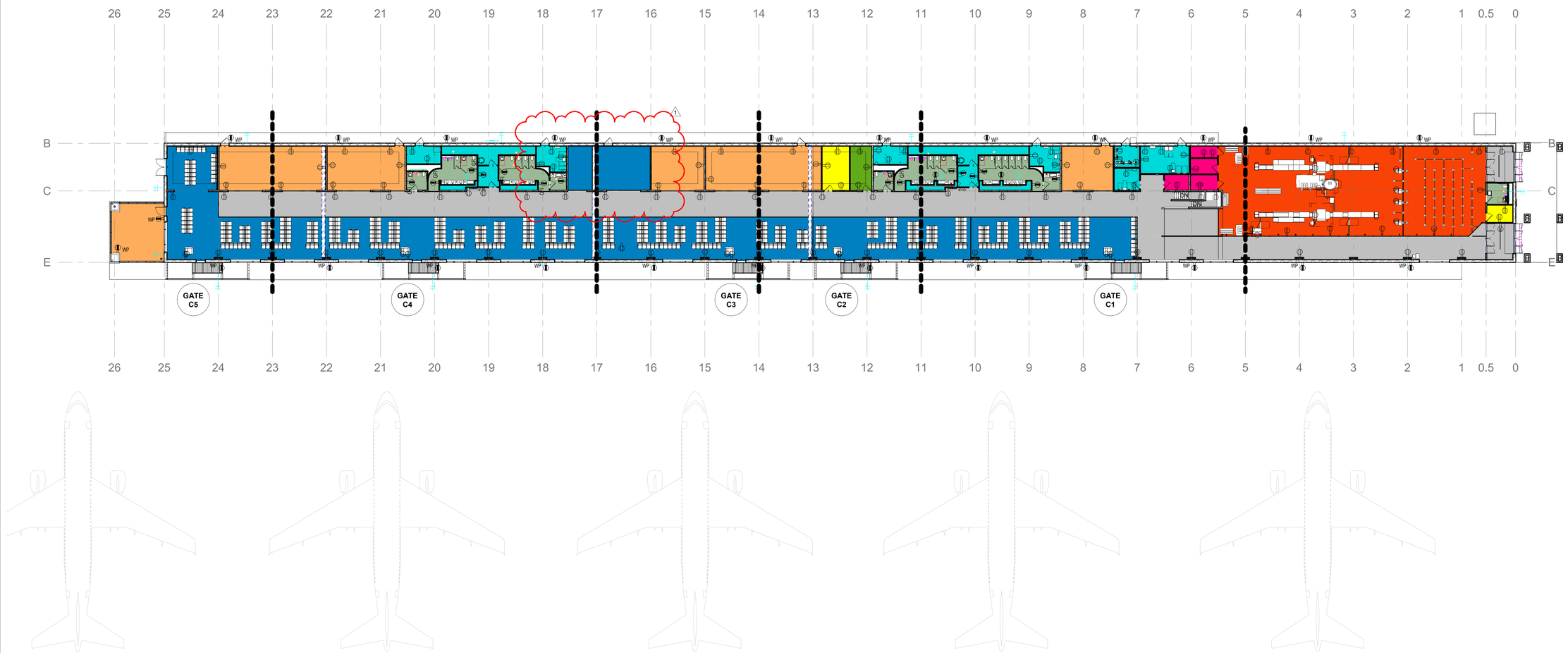

D1 SPACE UTILIZATION PLAN CONCOURSE LEVEL

1" = 20'-0"

NORTH

SPACE LEGEND

- ADMINISTRATION-AIRPORT
- CIRCULATION
- COMMERCIAL AIRLINE OPERATION - GATES
- COMMERCIAL AIRLINE OPERATION - OFFICES
- CONCESSIONAIRES
- RESTROOM
- SECURITY - TSA OFFICES
- SECURITY-PASSENGER SCREENING
- SUPPORT

SHEET PROVIDED FOR INFORMATION ONLY

SCALE: 1" = 20'-0"

0 5' 10' 20' 40'

C19-2811- AP
Construction of Satellite Concourse 'C'

MLM-MARTIN ARCHITECTS, INC.
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Drawing Scale:	1" = 20'-0"

Drawing Title:

SPACE UTILIZATION PLANS

BID DOCUMENTS

Drawing No.:

G311

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PROTECTION OF OPENINGS

PROTECTION OF OPENINGS IN FIRE BARRIER HORIZONTAL ASSEMBLIES

OPENINGS THROUGH A FLOOR/CEILING ASSEMBLIES SHALL BE PROTECTED IN ACCORDANCE WITH FBC SECTION 707 AND FFPC SECTION 8.6.

FIRE RESISTANCE RATINGS AND OPENING PROTECTION REQUIREMENTS
(FBC 707.6 AND TABLE 716.5)

EXIT SHAFTS:	2 HR WITH 90 MIN OPENINGS
ALL OTHER SHAFTS:	2 HR WITH 90 MIN OPENINGS
FIRE BARRIERS/PARTITIONS:	1 HR WITH 45 MIN OPENINGS
EXTERIOR BEARING WALLS:	1 HR WITH 45 MIN OPENINGS

DUCT PENETRATIONS (FBC 716.6)

PENETRATIONS BY DUCTS AND AIR TRANSFER OPENINGS OF A FLOOR, FLOOR/CEILING ASSEMBLY OR THE CEILING MEMBRANE OF A ROOF/CEILING ASSEMBLY SHALL BE PROTECTED BY A SHAFT ENCLOSURE THAT COMPLIES WITH FBC SECTION 707 OR SHALL COMPLY WITH FBC SECTION 716.6.

A DUCT AND AIR TRANSFER OPENING SYSTEM CONSTRUCTED OF APPROVED MATERIALS IN ACCORDANCE WITH THE FBC: MECHANICAL THAT PENETRATES A FIRE-RESISTANCE-RATED FLOOR/CEILING ASSEMBLY THAT CONNECTS NOT MORE THAN TWO STORIES IS PERMITTED WITHOUT SHAFT ENCLOSURE PROTECTION PROVIDED A FIRE DAMPER IS INSTALLED AT THE FLOOR LINE.

PROTECTION OF PENETRATIONS (FBC 714)

PENETRATIONS OF A FLOOR, FLOOR/CEILING ASSEMBLY, OR THE CEILING MEMBRANE OF A ROOF/CEILING ASSEMBLY SHALL BE PROTECTED BY A SHAFT ENCLOSURE IN ACCORDANCE WITH FBC SECTIONS 707 AND 713.4.
PENETRATIONS INTO OR THROUGH FIRE WALLS, FIRE BARRIERS, SMOKE BARRIER WALLS, AND FIRE PARTITIONS SHALL COMPLY WITH FBC SECTIONS 708 & 709 SUCH PENETRATIONS SHALL BE INSTALLED AS TESTED IN AN APPROVED FIRE-RESISTANCE RATED ASSEMBLY AND SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRE-STOP SYSTEM.

WHERE POTENTIAL FUEL SPILL POINTS ARE LOCATED LESS THAN 100 FT HORIZONTALLY FROM GLAZING MATERIAL COVERED OPENINGS IN THE TERMINAL BUILDING WALLS FACING THE AIRPORT RAMP, THEY SHALL BE PROTECTED. (4.1.5.3, NFPA 415, 2008)

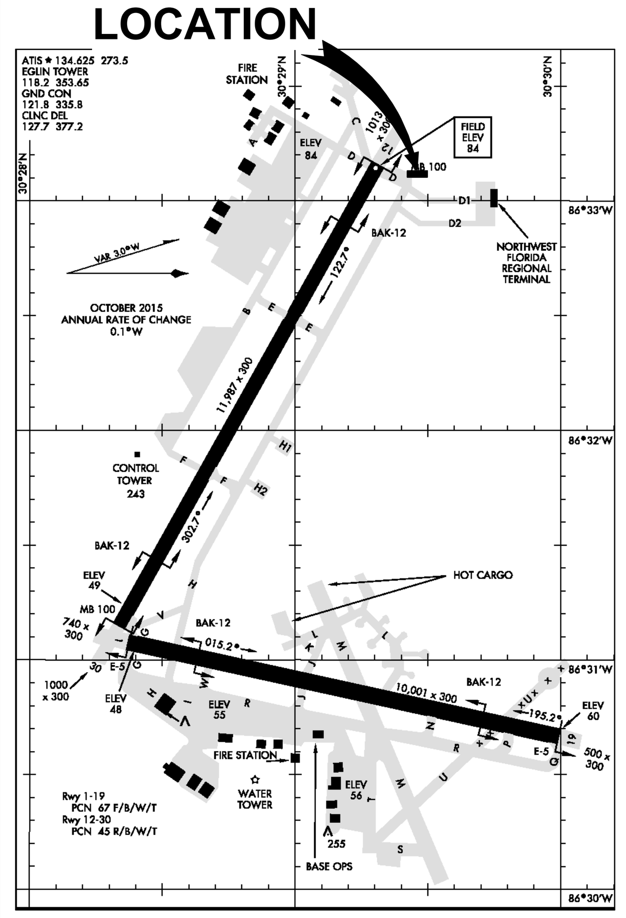
HORIZONTAL SLIDING DOORS

FBC 1010.1.4.3:
In other than Group H occupancies, special purpose horizontal sliding, accordion or folding door assemblies permitted to be a component of a means of egress in accordance with Exception 6 to Section 1010.1.2 shall comply with all of the following criteria:

1. The doors shall be power operated and shall be capable of being operated manually in the event of power failure.
2. The doors shall be openable by a simple method from both sides without special knowledge or effort.
3. The force required to operate the door shall not exceed 30 pounds (133 N) to set the door in motion and 15 pounds (67 N) to close the door or open it to the minimum required width.
4. The door shall be openable with a force not to exceed 15 pounds (67 N) when a force of 250 pounds (1100 N) is applied perpendicular to the door adjacent to the operating device.
5. The door assembly shall comply with the applicable fire protection rating and, where rated, shall be self-closing or automatic closing by smoke detection in accordance with Section 716.5.9.3, shall be installed in accordance with NFPA 80 and shall comply with Section 716.
6. The door assembly shall have an integrated standby power supply.
7. The door assembly power supply shall be electrically supervised.
8. The door shall open to the minimum required width within 10 seconds after activation of the operating device.

PROJECT LOCATION

PROJECT LOCATION



PROJECT DESCRIPTION

PROJECT ADDRESS:
1701 State Road 85N,
Eglin AFB, FL 32542-1498

Single story concrete masonry bearing wall construction with open webbed steel joist single ply membrane roofing structure. The project consists of a Satellite "Airside" Concourse Building with 2 holdrooms in base bid with alternates totaling a maximum ultimate build of 5 holdrooms, concessions, restrooms and TSA Passenger Security Screening Check Point.

APPLICABLE CODES

Florida Building Code Building -6th Edition (2017)
Florida Building Code Energy Conservation -6th Edition (2017)
Florida Building Code Accessibility -6th Edition (2017)
Florida Fire Prevention Code -6th Edition (2017)
Florida Building Code Plumbing -6th Edition (2017)
Florida Building Code Mechanical -6th Edition (2017)
NFPA 1, Uniform Fire Code, 2012 with Florida modifications
NFPA 13, 2010 Edition, Standard for Installation of Fire Sprinkler System
NFPA 70, 2011 Edition, National Electrical Code
NFPA 90A, 2012 Edition, Standard for Installation of Air-Conditioning Ventilation Systems
NFPA 10, Standard for Portable Fire Extinguishers, 2010
NFPA 72, National Fire Alarm and Signaling Code, 2010
NFPA 101, Life Safety Code, 2012 with Florida Modification
NFPA 419

FL ADMINISTRATIVE CODES & STATUTES

OCCUPANCY CLASIFICATION

USE AND OCCUPANCY CLASSIFICATION FBC Chapter 3
A-3
SECTION 306 Waiting areas in transportation terminals

BUILDING HEIGHTS AND AREAS

GENERAL BUILDING HEIGHTS AND AREAS FBC Chapter 5

ALLOWABLE BUILDING HEIGHTS AND AREAS FBC TABLE 503

TYPE OF CONSTRUCTION TYPE II-A - OCCUPANCY GROUP A-3
ALLOWABLE HEIGHT 85' - 0"
ALLOWABLE NUMBER OF STORIES 4
ALLOWABLE BUILDING AREA 62,000

MEZZANINES AND EQUIPMENT PLATFORMS FBC SECTION 505.2
ALLOWABLE MEZZANINE AND EQUIPMENT PLATFORM AREA 11458 SF

ACTUAL BUILDING HEIGHTS AND AREAS CHECK
ALLOWABLE HEIGHT WITH INCREASE 60' - 0" ≥ 22' - 7" ACTUAL -- OK!
ALLOWABLE NUMBER OF STORIES WITH INCREASE 4 ≥ 1 ACTUAL -- OK!
ALLOWABLE BUILDING AREA WITH INCREASE 62000 SF ≥ 34375 SF ACTUAL -- OK!
ALLOWABLE MEZZANINE AND EQUIPMENT PLATFORM AREA 11458 SF ≥ 0 SF ACTUAL -- OK!

TYPE OF CONSTRUCTION

CONSTRUCTION TYPE FBC Chapter 6
TYPE II-B

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS) FBC TABLE 601

Primary structural frame 0 hr
Bearing walls Exterior 0 hr
Bearing walls Interior 0 hr
Non-Bearing Exterior Walls **SEE TABLE 602**
Non-Bearing Walls Interior 0 hr
Floor construction and associated secondary members (see Section 202) 0 hr
Roof construction and associated secondary members (see Section 202) 0 hr

FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE FBC TABLE 602

FIRE SEPARATION DISTANCE = X (Feet) Values established by type of Construction Type and Occupancy Group

X < 5	1 hr
5 ≤ X < 10	1 hr
10 ≤ X < 30	0 hr
X ≥ 30	0 hr

HEADROOM

1. MEANS OF EGRESS SHALL BE DESIGNED AND MAINTAINED TO PROVIDE HEADROOM IN ACCORDANCE WITH OTHER SECTIONS OF THIS CODE, AND SUCH HEADROOM SHALL BE NOT LESS THAN 7 FT 6 IN. (2285 MM), WITH PROJECTIONS FROM THE CEILING NOT LESS THAN 6 FT 8 IN. (2030 MM) WITH A TOLERANCE OF-3/4 IN. (-19 MM), ABOVE THE FINISHED FLOOR, UNLESS OTHERWISE SPECIFIED BY THE FOLLOWING: FFPC SIXTH EDITION.

2. HEADROOM IN INDUSTRIAL EQUIPMENT ACCESS AREAS AS PROVIDED IN FFPC SIXTH EDITION 40.2.5.2 SHALL BE PERMITTED.

WALL DEMARCATION

FFPC SITH EDITION, NFPA1, 12.3
ALL FIRE-RESISTIVE CONSTRUCTION INCLUDING FIRE BARRIERS, FIRE WALLS, AND SMOKE BARRIERS SHALL BE PERMANENTLY STENCEILED WITH LETTERS NO LESS THAN SIX (6) INCHES IN HEIGHT ON THE PARTITION READING SUBSTANTIALLY AS FOLLOWS:

"FIRE AND SMOKE BARRIER -- PROTECT ALL OPENINGS"

TENANT SEPARATIONS

FLORIDA BUILDING CODE SECTION 709.1, EXCEPTION 4:
OTHER THAN DWELLING UNITS OR SLEEPING UNITS, WALLS USED TO SEPARATE INDIVIDUAL TENANT SPACES SHALL NOT BE REQUIRED TO HAVE A FIRE-RESISTANCE RATING WHEN THE BUILDING IS PROTECTED BY A COMPLETE AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH FBC SECTION 903.3.1.1.

MIXED OCCUPANCY

FLORIDA BUILDING CODE SECTION 508.3
A. THE BUILDING IS CLASSIFIED AS A NON-SEPARATED MIXED OCCUPANCY.
B. NO SEPARATION IS REQUIRED. (FBC 508.3.3)
C. NON-SEPARATED OCCUPANCIES SHALL BE INDIVIDUALLY CLASSIFIED IN ACCORDANCE WITH SECTION 302.1. THE REQUIREMENTS OF THIS CODE SHALL APPLY TO EACH PORTION OF THE BUILDING BASED ON THE OCCUPANCY CLASSIFICATION OF THAT SPACE EXCEPT THAT THE MOST RESTRICTIVE APPLICABLE PROVISIONS OF SECTION 403 AND CHAPTER 9 SHALL APPLY TO THE BUILDING OR PORTION THEREOF IN WHICH THE NON-SEPARATED OCCUPANCIES OCCURRED. (FBC 508.3.1)
D. THE ALLOWABLE BUILDING AREA AND HEIGHT OF THE BUILDING OR PORTION THEREOF SHALL BE BASED ON THE MOST RESTRICTIVE ALLOWANCES FOR THE OCCUPANCY GROUPS UNDER CONSIDERATION FOR THE TYPE OF CONSTRUCTION OF THE BUILDING IN ACCORDANCE WITH SECTION 503.1.

HANDRAILS AND GUARDRAILS

HANDRAILS AND GUARDRAILS SHALL BE PROVIDED ON BOTH SIDES OF ALL STAIRS AND RAMPS, IN ACCORDANCE WITH THE FOLLOWING:

A. STAIRS SHALL BE CLEAR OF ALL OBSTRUCTIONS EXCEPT PROJECTIONS NOT EXCEEDING 2 ½ INCHES AT OR BELOW HANDRAIL HEIGHT ON EACH SIDE.
B. NEW HANDRAILS SHALL BE INSTALLED TO PROVIDE A CLEARANCE OF NOT LESS THAN 2 ¼ INCHES BETWEEN THE HANDRAIL AND THE WALL TO WHICH IT IS FASTENED. (FFPC SIXTH ED 7.2.2.4.4.5)
C. HANDRAILS SHALL BE PROVIDED WITHIN 30 INCHES OF ALL PORTIONS OF THE STAIR WIDTH REQUIRED FOR EGRESS CAPACITY. (FFPC SIXTH ED 7.2.2.4.1.2)
D. HANDRAIL HEIGHT SHALL BE ≥ 34 IN. TO ≤ 38 IN. ABOVE THE SURFACE OF THE TREAD, MEASURED VERTICALLY FROM THE TOP OF THE RAIL FROM THE LEADING EDGE OF THE TREAD. (FFPC SIXTH ED 7.2.2.4.4.1)
E. HANDRAIL SHAPE, CIRCULAR CROSS SECTION WITH OUTSIDE DIAMETER ≥ 1-1/4 IN. TO ≤ 2 IN. OR, NON-CIRCULAR CROSS SECTION WITH PERIMETER ≥ 4 IN. TO ≤ 6-1/4 IN. AND LARGEST CROSS SECTION ≤ 2-1/4 IN. WITH ROUNDED EDGE (RADIUS ≥ 1/8 IN.). (FFPC SIXTH ED 7.2.2.4.4.6)
F. HANDRAILS AND GUARDS SHALL CONTINUE FOR THE FULL LENGTH OF EACH FLIGHT OF STAIRS. AT TURNS OF NEW STAIRS, INSIDE HANDRAILS SHALL BE CONTINUOUS BETWEEN FLIGHTS AT LANDINGS. (FFPC SIXTH ED 7.2.2.4.2)
G. HANDRAILS THAT ARE NOT CONTINUOUS BETWEEN FLIGHTS SHALL EXTEND HORIZONTALLY, AT THE REQUIRED HEIGHT, NOT LESS THAN 12 IN. BEYOND THE TOP RISER AND CONTINUE TO SLOPE FOR A DEPTH OF ONE TREAD BEYOND THE BOTTOM RISER. (FFPC SIXTH ED 7.2.2.4.4.10)
H. HANDRAIL ENDS SHALL BE RETURNED TO THE WALL OR FLOOR OR SHALL TERMINATE AT NEWEL POSTS. (FFPC SIXTH ED 7.2.2.4.9)
I. GUARDS ARE REQUIRED TO PREVENT FALLS OVER THE OPEN SIDE WHEN MEANS OF EGRESS IS MORE THAN 30 IN. ABOVE FLOOR OR GRADE BELOW. (FBC 1012)
J. GUARDRAIL HEIGHT MINIMUM: 42 IN. (FFPC 6TH ED 7.2.2.4.5.2)
K. OPEN GUARDS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN TO PREVENT 4 IN. DIAMETER SPHERE FROM PASSING THROUGH ANY OPENING UP TO A HEIGHT OF 34 INCHES.
L. FOR OPEN GUARDS, FROM A HEIGHT OF 34 INCHES TO 42 INCHES ABOVE THE ADJACENT WALKING SURFACES, A SPHERE 8 INCHES IN DIAMETER SHALL NOT PASS. (FBC 1012.3)

PLUMBING FIXTURES

PLUMBING FIXTURE COUNT

FIXTURES	CODE REQUIRED				DESIGNED			
	MEN	WOMEN	COMPANION	COMMON FIXT.	MEN	WOMEN	COMPANION	COMMON FIXT.
W.C.	1	2	-	-	2	8	2	-
URINALS	1	-	-	-	6	-	-	-
LAVATORIES	2	2	-	-	6	6	2	-
ADA GROUP	1	1	-	-	2	2	-	-
ADA STALL	-	-	FAA REQUIRED	-	-	-	PROVIDED	-
WATER FOUNTAINS	-	-	-	1 STD + 1 ADA	-	-	-	2 STD + 2 ADA
JANITOR SINK	-	-	-	-	-	-	-	2

Guide for Airport Terminal Restroom Planning & Design (2015)
Pages 13 & 14

Design Passenger = EQA x 158 x 0.80
5 x 158 x 0.80 = 632

Peak 20 Min Passanger Demand = 632 x 0.50 = 316

Design Factor = 316 x 0.50 = 158.25 ≈ 158
316 x 0.60 = 189.60 ≈190
(Generic utilization rate for passangers)

MAX men fixture = DF x Male %
190 x 0.50 / 13
7.3 ≈ 7
Womens Fixtures = 7.30 x 1.25 - Table 2.2 Assumes Female increase Factor of 1.25
9.125 ≈ 9

Anticipated MAX # of Passengers per aircraft
158 - 80% Load Factor
50% = Peak 20% for Origin and Destination Airports

Tables 2.1 Equivalent Aircraft Index
Group III = 1.0 EQA
1.0 EQA x 5 Gates = 5 EQA

Table 2.3 O&D Airports @ 60% utilization Table
Men 6 -7
Women 7.5 ≈ 8 to 8.75 ≈ 9

Restrooms are group for single sided gate concourse Layout ± 200' from gate MAX.

SEE SHEET A452

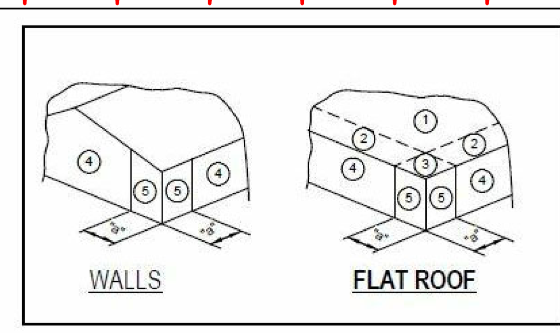
PANIC HARDWARE

1. ALL DOORS SERVING REQUIRED EXIT ENCLOSURES SHALL BE PROVIDED WITH PANIC HARDWARE OR FIRE EXIT HARDWARE COMPLYING WITH FFPC SIXTH ED 7.2.1.7, AS FOLLOWS: (FFPC 12.2.2.2.3)
   A. IT SHALL CONSIST OF A CROSS BAR OR PUSH PAD, THE ACTUATING PORTION OF WHICH EXTENDS ACROSS NOT LESS THAN ONE-HALF OF THE WIDTH OF THE DOOR LEAF.
   B. IT SHALL BE CONSTRUCTED SO THAT A HORIZONTAL FORCE NOT TO EXCEED 15 LBF ACTUATES THE CROSS BAR OR PUSH PAD AND LATCHES.
   C. IT SHALL BE MOUNTED BETWEEN 34 INCHES AND 48 INCHES ABOVE THE FLOOR.
   D. IT SHALL NOT BE EQUIPPED WITH ANY LOCKING DEVICE, SET SCREW, OR OTHER ARRANGEMENT THAT PREVENTS THE RELEASE OF THE LATCH WHEN PRESSURE IS APPLIED TO THE RELEASING DEVICE.
   E. DEVICES THAT HOLD THE LATCH IN THE RETRACTED POSITION SHALL BE PROHIBITED ON FIRE EXIT HARDWARE UNLESS LISTED AND APPROVED FOR THAT PURPOSE.
2. ASSEMBLY OCCUPANCUY: ANY DOOR IN A REQUIRED MEANS OF EGRESS FROM AN AREA HAVING AN OCCUPANT LOAD OF 50 OR MORE PERSONS SHALL BE PERMITTED TO BE PROVIDED WITH A LATCH OR LOCK ONLY IF THE LATCH OR LOCK IS PANIC HARDWARE OR FIRE EXIT HARDWARE COMPLYING WITH FFPC SIXTH ED 7.2.1.7, UNLESS PERMITTED BY ONE OF THE FOLLOWING: (1) THIS REQUIREMENT SHALL NOT APPLY TO DELAYED EGRESS LOCKS AS PERMITTED 12.2.2.2.5. (2) THIS REQUIREMENT SHALL NOT APPLY TO ACCESS CONTROLLED EGRESS DOORS AS PERMITTED IN 12.2.2.2.6.
3. ELECTRICAL ROOMS WITH EQUIPMENT RATED 1,200 AMPERES OR MORE AND OVER (6) SIX FEET WIDE THAT CONTAIN OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES WITH EXIT OR EXIT ACCESS DOORS SHALL BE EQUIPPED WITH PANIC HARDWARE OF FIRE EXIT HARDWARE. THE DOORS SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL. (FBC 1010.110)

PANIC HARDWARE

DELAYED EGRESS LOCKS COMPLYING WITH FFPC 7.2.1.6.1 SHALL BE PERMITTED ON DOORS OTHER THAN MAIN ENTRANCE/EXIT DOORS. THE A/E WILL FILE A DETERMINATION WITH OKALOOSA COUNTY BUILDING AND FIRE PLANS EXAMINER REQUESTING THE USE OF DELAYED EGRESS DEVICES AS A MEANS OF MAINTAINING LIFE SAFETY AND SECURITY OF THE AIRPORT/AIRCRAFT OPERATIONS AREA.
FBC 1010.1.9.7: **Delayed egress locking systems shall be permitted to be installed on doors serving any occupancy except Group A**, E and H in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907. The locking system shall be installed and operated in accordance with all of the following:
1. The delay electronics of the delayed egress locking system shall deactivate upon actuation of the automatic sprinkler system or automatic fire detection system, allowing immediate, free egress.
2. The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.
3. The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations.
4. An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only.
   Exception: Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door.
5. The egress path from any point shall not pass through more than one delayed egress locking system.
   Exception: In Group I-2 or I-3 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided the combined delay does not exceed 30 seconds.
6. A sign shall be provided on the door and shall be located above and within 12 inches (305 mm) of the door exit hardware:
   6.1.For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
   6.2.For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
   6.3.The sign shall comply with the visual character requirements in ICC A117.1.
   Exception: Where approved, in Group I occupancies, the installation of a sign is not required where care recipients who because of clinical needs require restraint or containment as part of the function of the treatment area.
7. Emergency lighting shall be provided on the egress side of the door.
8. The delayed egress locking system units shall be listed in accordance with UL 294

COMPONENTS OF CLADDING



ULTIMATE C&C WIND PRESSURES (ASCE 7-10)

BUILDING	a (FT)	Vult (MPH)	Vasd (MPH)	A (SF)	ZONE 1 (PSF)	ZONE 2 (PSF)	ZONE 3 (PSF)	ZONE 4 (PSF)	ZONE 5 (PSF)	ZONE 2H (PSF)	ZONE 3H (PSF)
MAIN	5.5	154	119	<10	+22.2 -54.5	+49.9 -91.5	+49.9 -91.5	+49.9 -54.1	+49.9 -66.5	- -78.6	- -78.6
				20	+20.8 -53.1	+47.7 -81.8	+47.7 -81.8	+47.7 -51.9	+47.7 -62.1	- -	- -
				50	+19 -51.3	+44.8 -68.9	+44.8 -68.9	+44.8 -48.9	+44.8 -56.3	- -	- -
				100+	+17.6 -49.9	+42.6 -59.1	+42.6 -59.1	+42.6 -46.7	+42.6 -51.9	- -	- -

ULTIMATE C&C WIND PRESSURES (ASCE 7-10)

BUILDING	a (FT)	Vult (MPH)	Vasd (MPH)	A (SF)	ZONE 1 (PSF)	ZONE 2 (PSF)	ZONE 3 (PSF)
CANOPY	3.0	154	119	≤9	+47.1 -42.7	+70.6 -65.7	+94.1 -128.2
				9< A ≤36	+47.1 -42.7	+70.6 -65.7	+70.6 -65.7
				>36	+47.1 -42.7	+47.1 -42.7	+47.1 -42.7

ULTIMATE C&C WIND PRESSURE PLAN NOTES:
1. WIND PRESSURE TABLE IS BASED ON FBC 2014/ASCE 7-10 ULTIMATE WIND SPEED, PRESSURES SHOWN ABOVE ARE ULTIMATE COMPONENTS AND CLADDING PRESSURES.

BASIS OF DESIGN: **SEE SHEET AL002**
MORE INFORMATION: **SEE SHEET S003**

ACCESS CONTROLLED EGRESS DOORS

ACCESS-CONTROLLED EGRES DOORS (FBC 1010.1.9.8). THE ELECTRIC LOCKS ON SENSOR RELEASED DOORS LOCATED IN A MEANS OF EGRESS IN BUILDINGS WITH OCCUPANCY IN GROUP A, B, & M; AND ENTRACNCE DOORS TO TENANT SPACES IN OCCUPANCY IN GROUP A, B, & M ARE PERMITTED WHERE INSTALLED AND OPERATED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
1. The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.
2. Loss of power to the lock or locking system shall automatically unlock the doors.
3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock—independent of other electronics—and the doors shall remain unlocked for not less than 30 seconds.
4. Activation of the building fire alarm system, where provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.
5. Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.
6. The door locking system units shall be listed in accordance with UL 294.

FIRE AND SMOKE PROTECTION

FIRE AND SMOKE PROTECTION FEATURES FBC Chapter 7
DEGREE OF OPENING PROTECTION Protected (P)

MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION FBC TABLE 705.8

FIRE SEPERATION DISTANCE (Feet)	ALLOWABLE AREA
0 to less than 3	0%
3 to less than 5	15%
5 to less than 10	25%
10 to less than 15	45%
15 to less than 20	75%
20 to less than 25	100%
25 to less than 30	100%
30 or greater	100%

0% = NOT PERMITED
100% = NO LIMIT

RESISTANCE RATINGS BASED ON OCCUPANCY GROUP A

FIRE WALL FIRE-RESISTANCE RATINGS FBC TABLE 706.4
FIRE-RESISTANCE RATING 3 HOURS

FIRE-RESISTANCE RATING REQUIREMENTS FOR FIRE BARRIER ASSEMBLIES OR HORIZONTAL ASSEMBLIES BETWEEN FIRE AREAS FBC TABLE 707.3.10
FIRE-RESISTANCE RATING 2 HOURS

INTERIOR FINISHES

INTERIOR FINISHES FBC Chapter 8
INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCYSPRINKLERED
Exit Enclosures and Exit Passage Ways B
Corridors B
Rooms and Enclosed spaces C

MEANS OF EGRESS SIZING

REQUIRED CAPACITY BASED ON OCCUPANT LOADS FBC Section 1005.3
BUILDING OCCUPANT LOAD 1476
§1005.3.1 STAIRWAYS @ 0.3" PER OCCUPANT | 18' - 6"
§1005.3.2 OTHER EGRESS COMPONENTS @ 0.2" PER OCCUPANT | 12' - 3"
**ASSUMPTION IS MADE OF BUILDING OCCUPANT LOAD DIVIDED BY 2. INDIVIDUAL COMPONENTS SHALL COMPLY WITH WIDTHS BASED ON THEIR LOAD BUT NO LESS THAN 34" PROVIDED.*

SEE AL211 FOR FOR ADDITONAL REQUIREMENTS

NOTE for NFPA 419 Review: This is a ground load facility. Meaning; there are no jet bridges nor are they anticipated to be installed. assumption made in event of emergency passengers onboard aircraft will egress directly to hard stand apron and not into building.

EXIT SIGNAGE

ACCESS TO ALL EXITS SHALL BE PROVIDED THROUGHOUT THE MEANS OF EGRESS BY APPROVED, READILY VISIBLE SIGNS, IN ACCORDANCE WITH FFPC SITH EDITION 7.10. SIGNAGE SHALL COMPLY WITH ICC/ANSI A117.1, AMERICAN NATIONAL STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES. SIGN PLACEMENT SHALL BE SUCH THAT NO POINT IN THE EXIT ACCESS CORRIDOR IS IN EXCESS OF THE RATED VIEWING DISTANCE OR 100 FT, WHICHEVER IS LESS, FROM THE NEAREST SIGN. **SEE AL211 FOR LOCATIONS**

EMERGENCY LIGHTING

EMERGENCY LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH FFPC 7.9. **SEE ELECTRICAL DRAWINGS FOR PLACEMENT**

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MLM-MARTIN ARCHITECTS, INC.

MIGUEL A MARTIN
FL AR-98279

SEAL

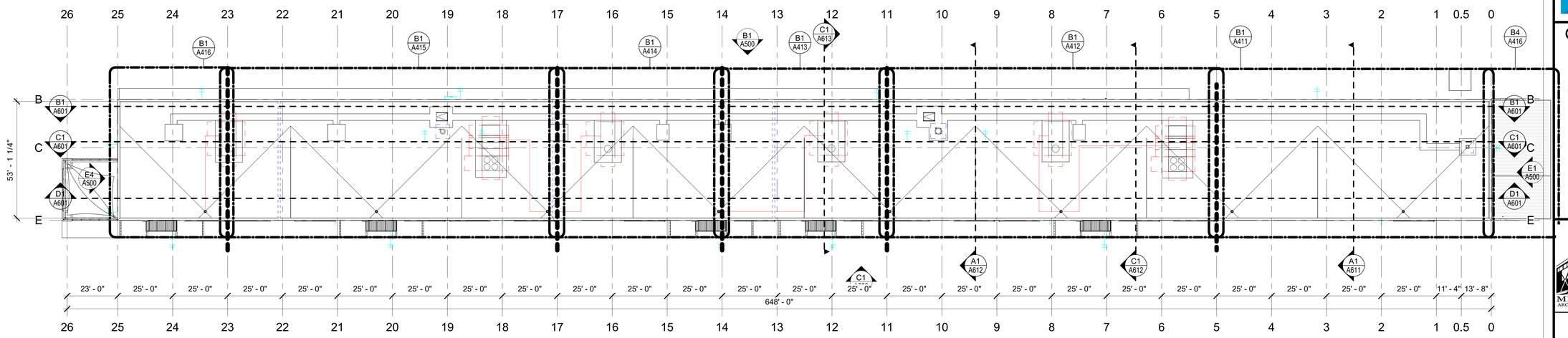
Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	12" = 1'-0"

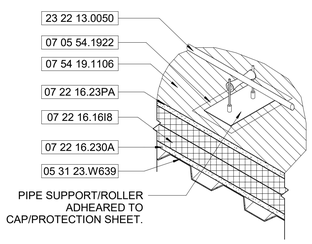
Drawing Title:
BUILDING CODE ANALYSIS
BID DOCUMENTS

Drawing No.:
AL001



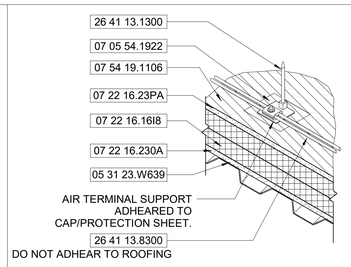
C1 OVERALL ROOF PLAN

1" = 20'-0"



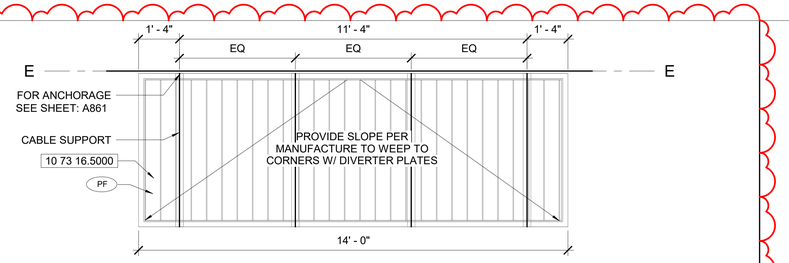
A1 PIPE SUPPORT

N.T.S.



A2 LIGHTING TERMINAL

N.T.S.



A3 PRE-FAB CANOPY PLAN DETAIL

1/2" = 1'-0"

SCALE: 1/2" = 1'-0"

0 6" 12" 24" 48"

KEYNOTES

NO.	
05 31 23.W639	TYP. 1-1/2" WR 20 GA. G90 STEEL ROOF DECK, SEE STRUCTURAL.
07 05 54.1922	TYP. PVC ROOFING MEMBRANE CAP/FLASHING PLY WELD.
07 22 16.16I8	TYP. 4" MIN. POLYISOCYANURATE RIGID FOAM ROOF BOARD INSULATION.
07 22 16.23PA	TYP. 5/8" PRIMED DENS DECK ROOF INSULATION COVER BOARD.
07 22 16.230A	TYP. 5/8" DENS DECK ROOF INSULATION COVER BOARD.
07 54 19.1106	TYP. COLD ADHESIVE APPLIED, 60 MIL PVC MEMBRAINE ROOFING.
10 73 16.5000	TYP. PREMANUFACTURED ALUMINUM CANOPY SYSTEM. PROVIDE SIGNED & SEALED CALCULATIONS/SHOPDRAWINGS COMPLYING W/ STRUCTURAL DESIGN LOADS.
23 22 13.0050	TYP. CONDENSATE PIPING, SEE MECH.
26 41 13.1300	TYP. LIGHTNING PROTECTION TERMINAL, SEE ELECTRICAL.
26 41 13.8300	TYP. LIGHTNING PROTECTION CONDUCTOR, SEE ELECTRICAL.

SCALE: 1" = 20'-0"

0 5' 10' 20' 40'

C19-2811- AP
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Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	AS NOTED

Drawing Title:

OVERALL ROOF PLAN

BID DOCUMENTS

Drawing No.:

A401

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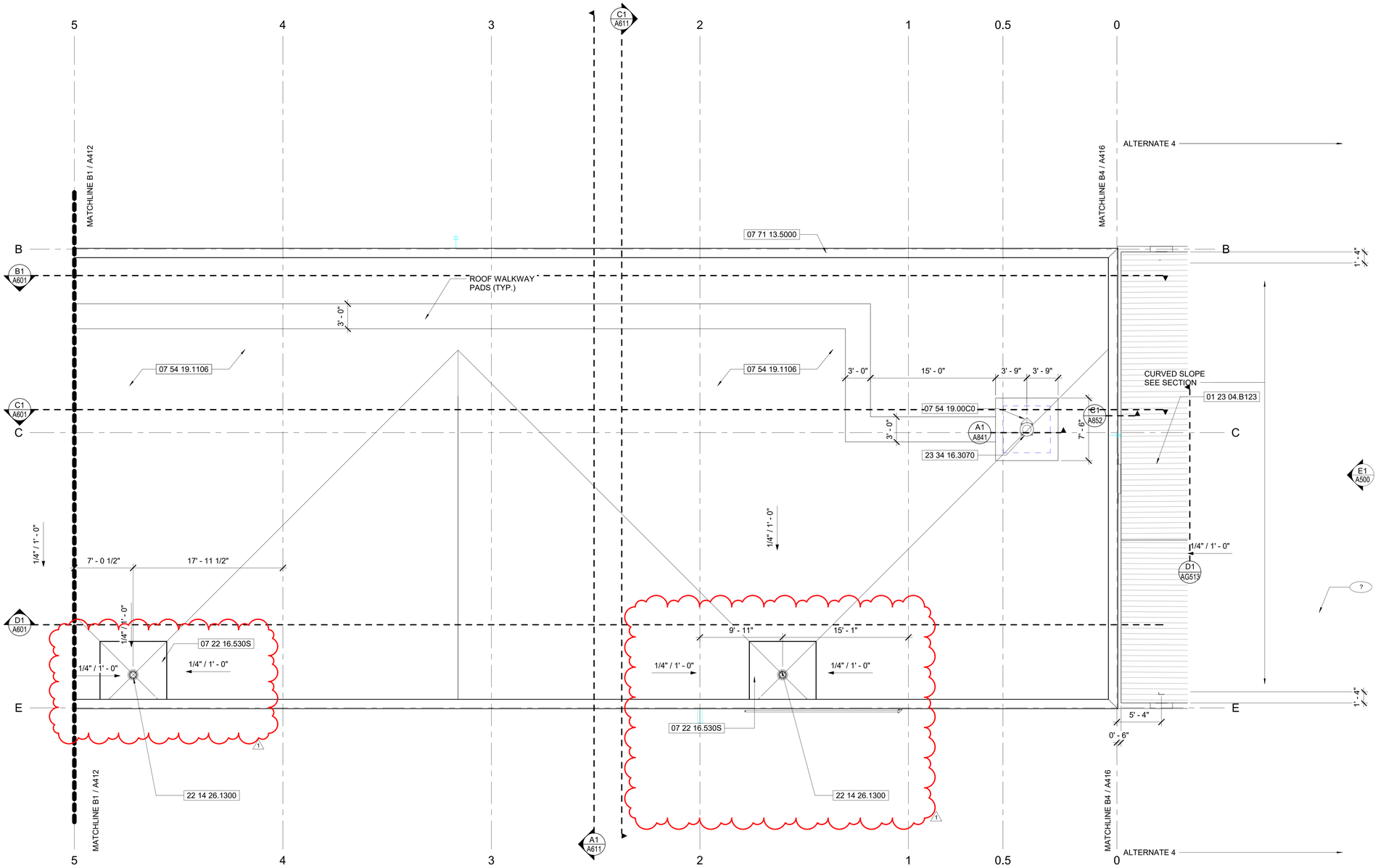

B1 PARTIAL ROOF PLAN AREA 1

3/16" = 1'-0"

NORTH

KEYNOTES

NO.	
01 23 04.B123	TYP. ALTERNATE 4 CANOPY CONTRUCTION WORK.
07 22 16.530S	TYP. 1/2" PER FOOT TAPPERED SUMP AT ROOF DRAIN, SEE DETAIL.
07 54 19.00C0	TYP. ROOF CRICKET.
07 54 19.1106	TYP. COLD ADHESIVE APPLIED, 60 MIL PVC MEMBRAINE ROOFING.
07 71 13.5000	TYP. ALUMNINUM MANUFACTURED COPING SYSTEM, INSTALLED PER MNFR. INSTRUCTIONS.
22 14 26.1300	TYP. FACILITY STORM ROOF DRAIN W/ INTRIGAL OVERFLOW, SEE PLUMBING.
23 34 16.3070	TYP. ROOF TOP CENTRIFUGAL HVAC/EXHAUST FAN ON CURB, SEE MECHANICAL.

SCALE: 3/16" = 1'-0"

0 16" 32" 64" 128"

C19-2811- AP Construction of Satellite Concourse 'C'

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1	18-FEB-2020	ADDENDUM 001

Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	3/16" = 1'-0"

Drawing Title:

ENLARGED ROOF PLAN - AREA 1

BID DOCUMENTS

Drawing No.:

A411

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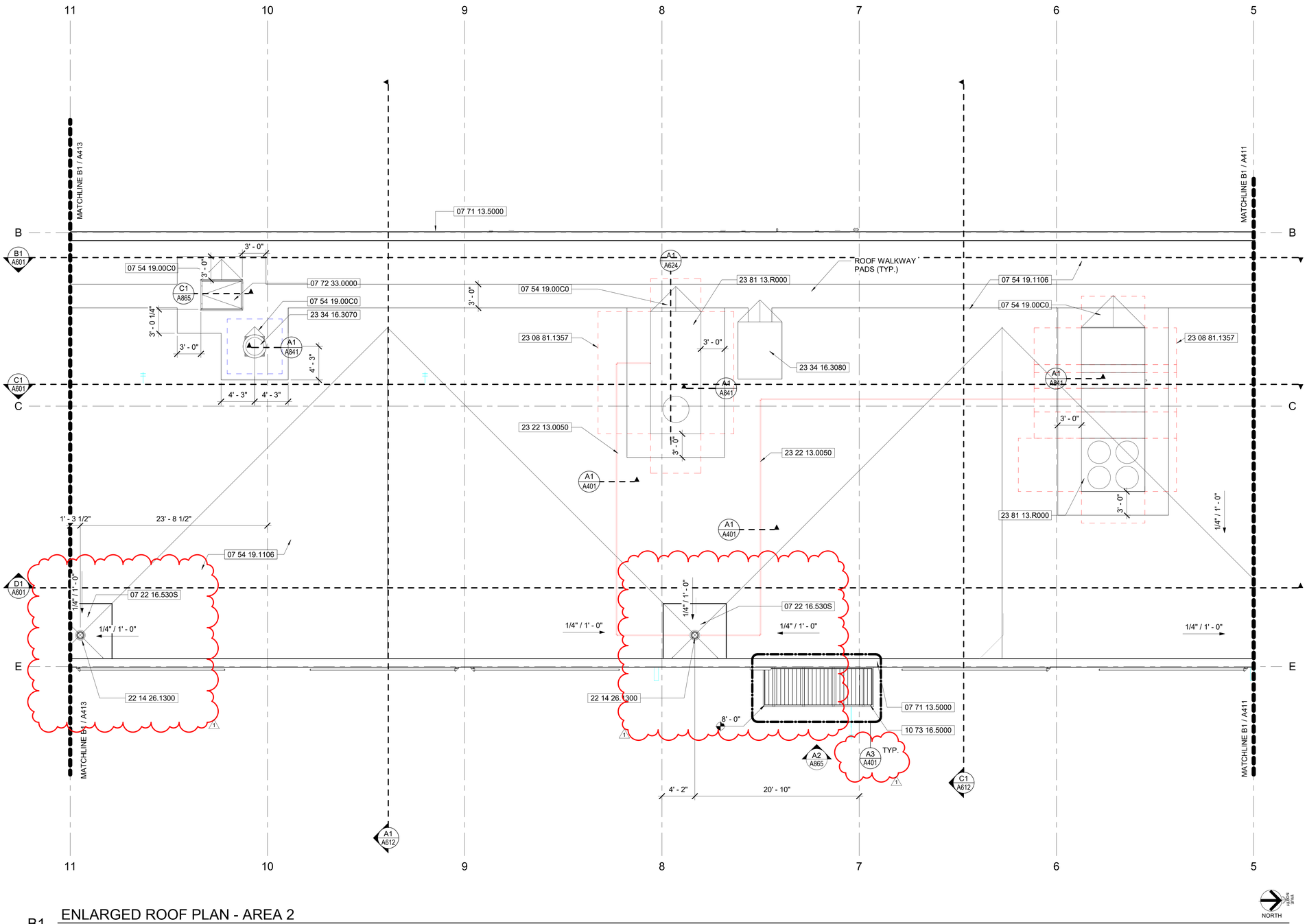

B1 ENLARGED ROOF PLAN - AREA 2

3/16" = 1'-0"

KEYNOTES

NO.	
07 22 16.530S	TYP. 1/2" PER FOOT TAPPERED SUMP AT ROOF DRAIN, SEE DETAIL.
07 54 19.00C0	TYP. ROOF CRICKET.
07 54 19.1106	TYP. COLD ADHESIVE APPLIED, 60 MIL PVC MEMBRAINE ROOFING.
07 71 13.5000	TYP. ALUMININUM MANUFACTURED COPING SYSTEM, INSTALLED PER MNFR. INSTRUCTIONS.
07 72 33.0000	TYP. SINGLE-LEAF ROOF ACCESS HATCH W/ CURB AND SAFETY RAIL.
10 73 16.5000	TYP. PREMANUFACTURED ALUMINUM CANOPY SYSTEM. PROVIDE SIGNED & SEALED CALCULATIONS/SHOPDRAWINGS COMPLYING W/ STRUCTURAL DESIGN LOADS.
22 14 26.1300	TYP. FACILITY STORM ROOF DRAIN W/ INTRIGAL OVERFLOW, SEE PLUMBING.
23 08 81.1357	TYP. SERVICE CLEARANCES OF PACKAGED ROOFTOP UNIT MAINTAIN UNOBSTRUCTED ACCESS, SEE MECH.
23 22 13.0050	TYP. CONDENSATE PIPING, SEE MECH.
23 34 16.3070	TYP. ROOF TOP CENTRIFUGAL HVAC/EXHAUST FAN ON CURB, SEE MECHANICAL.
23 34 16.3080	TYP. COORDINATE FINAL PLACEMENT OF ROOF TOP CENTRIFUGAL HVAC/EXHAUST FAN AND CURB WITH TENANT REQUIREMENTS AND BAR JOIST BELOW ROOF DECK, SEE MECH.
23 81 13.R000	TYP. PACKAGED ROOFTOP UNIT, SEE MECH.

SCALE: 3/16" = 1'-0"

0 16" 32" 64" 128"

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Construction of Satellite Concourse 'C'

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Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	3/16" = 1'-0"

Drawing Title:

ENLARGED ROOF PLAN - AREA 2

BID DOCUMENTS

Drawing No.:

A412

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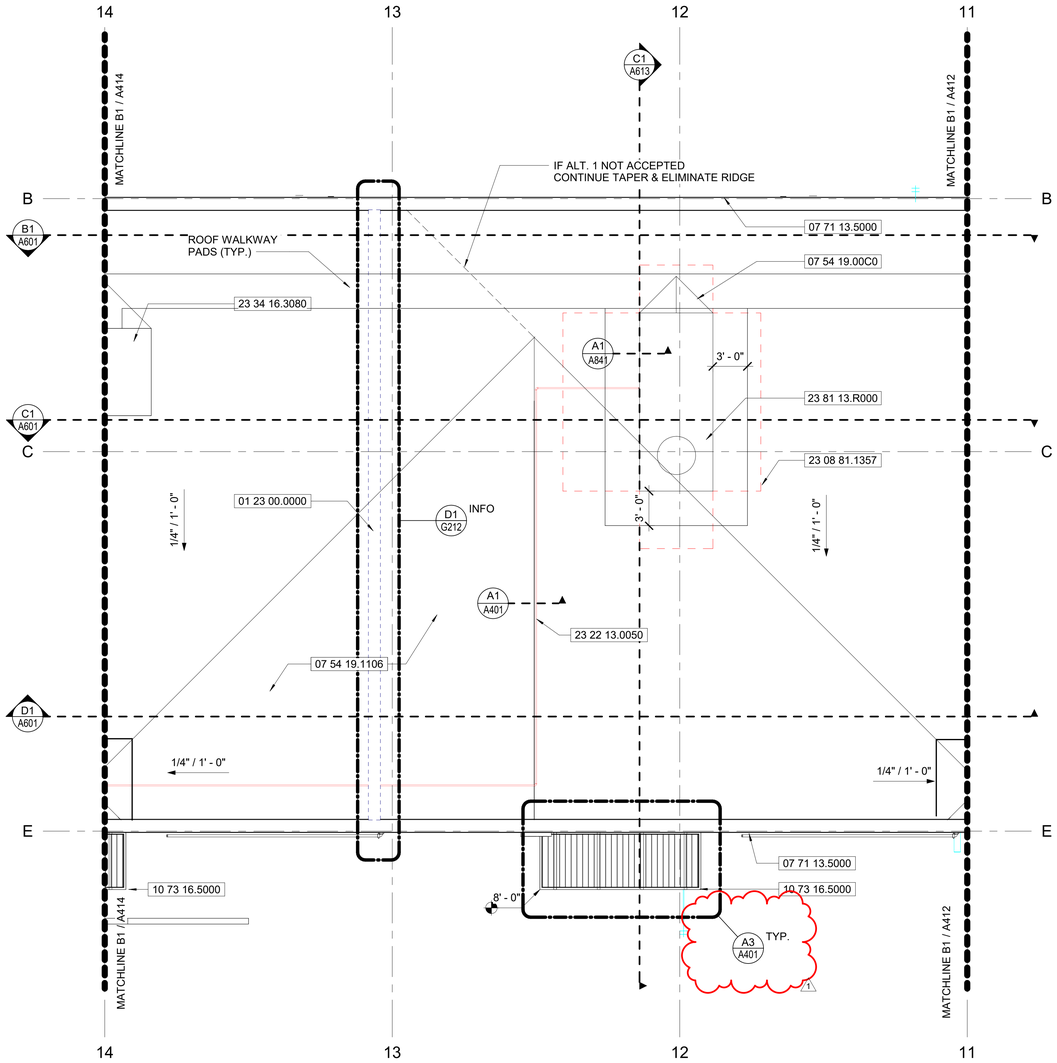

B1 ENLARGED ROOF PLAN - AREA 3

3/16" = 1'-0"

NORTH

KEYNOTES

NO.	
01 23 00.0000	LIMITS OF ALTERNATE WORK, SEE SPECIFICATIONS FOR MORE INFORMATION.
07 54 19.00C0	TYP. ROOF CRICKET.
07 54 19.1106	TYP. COLD ADHESIVE APPLIED, 60 MIL PVC MEMBRAINE ROOFING.
07 71 13.5000	TYP. ALUMNINUM MANUFACTURED COPING SYSTEM, INSTALLED PER MNFR. INSTRUCTIONS.
10 73 16.5000	TYP. PREMANUFACTURED ALUMINUM CANOPY SYSTEM. PROVIDE SIGNED & SEALED CALCULATIONS/SHOPDRAWINGS COMPLYING W/ STRUCTURAL DESIGN LOADS.
23 08 81.1357	TYP. SERVICE CLEARANCES OF PACKAGED ROOFTOP UNIT MAINTAIN UNOBSTRUCTED ACCESS, SEE MECH.
23 22 13.0050	TYP. CONDENSATE PIPING, SEE MECH.
23 34 16.3080	TYP. COORDINATE FINAL PLACEMENT OF ROOF TOP CENTRIFUGAL HVAC/EXHAUST FAN AND CURB WITH TENANT REQUIREMENTS AND BAR JOIST BELOW ROOF DECK, SEE MECH.
23 81 13.R000	TYP. PACKAGED ROOFTOP UNIT, SEE MECH.

SCALE: 3/16" = 1'-0"

0 16" 32" 64" 128"

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Issue Date:	21-JAN-2020
Drawing Scale:	3/16" = 1'-0"

Drawing Title:

ENLARGED ROOF PLAN - AREA 3

BID DOCUMENTS

Drawing No.:

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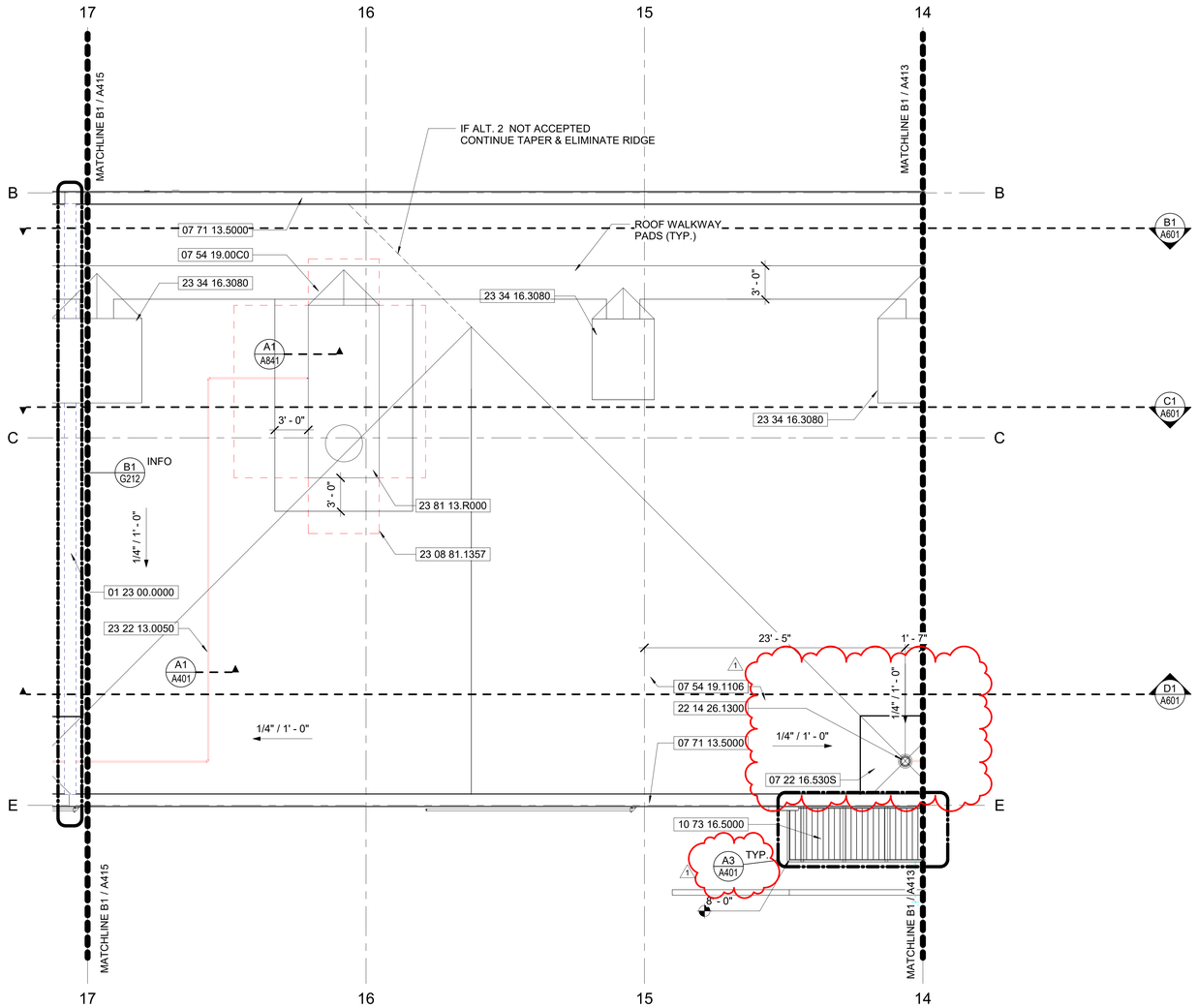

B1 ENLARGED ROOF PLAN - AREA 4

3/16" = 1'-0"

NORTH

KEYNOTES

NO.	
01 23 00.0000	LIMITS OF ALTERNATE WORK, SEE SPECIFICATIONS FOR MORE INFORMATION.
07 22 16.530S	TYP. 1/2" PER FOOT TAPPERED SUMP AT ROOF DRAIN, SEE DETAIL.
07 54 19.00C0	TYP. ROOF CRICKET.
07 54 19.1106	TYP. COLD ADHESIVE APPLIED, 60 MIL PVC MEMBRAINE ROOFING.
07 71 13.5000	TYP. ALUMNINUM MANUFACTURED COPING SYSTEM, INSTALLED PER MNFR. INSTRUCTIONS.
10 73 16.5000	TYP. PREMANUFACTURED ALUMINUM CANOPY SYSTEM. PROVIDE SIGNED & SEALED CALCULATIONS/SHOPDRAWINGS COMPLYING W/ STRUCTURAL DESIGN LOADS.
22 14 26.1300	TYP. FACILITY STORM ROOF DRAIN W/ INTRIGAL OVERFLOW, SEE PLUMBING.
23 08 81.1357	TYP. SERVICE CLEARANCES OF PACKAGED ROOFTOP UNIT MAINTAIN UNOBSTRUCTED ACCESS, SEE MECH.
23 22 13.0050	TYP. CONDENSATE PIPING, SEE MECH.
23 34 16.3080	TYP. COORDINATE FINAL PLACEMENT OF ROOF TOP CENTRIFUGAL HVAC/EXHAUST FAN AND CURB WITH TENANT REQUIREMENTS AND BAR JOIST BELOW ROOF DECK, SEE MECH.
23 81 13.R000	TYP. PACKAGED ROOFTOP UNIT, SEE MECH.

SCALE: 3/16" = 1'-0"

0 16" 32" 64" 128"

C19-2811- AP
Construction of Satellite Concourse 'C'

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ALM 308 & TYPE PROPERTY
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SEAL

Revisions

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Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	3/16" = 1'-0"

Drawing Title:

ENLARGED ROOF PLAN - AREA 4

BID DOCUMENTS

Drawing No.:

A414

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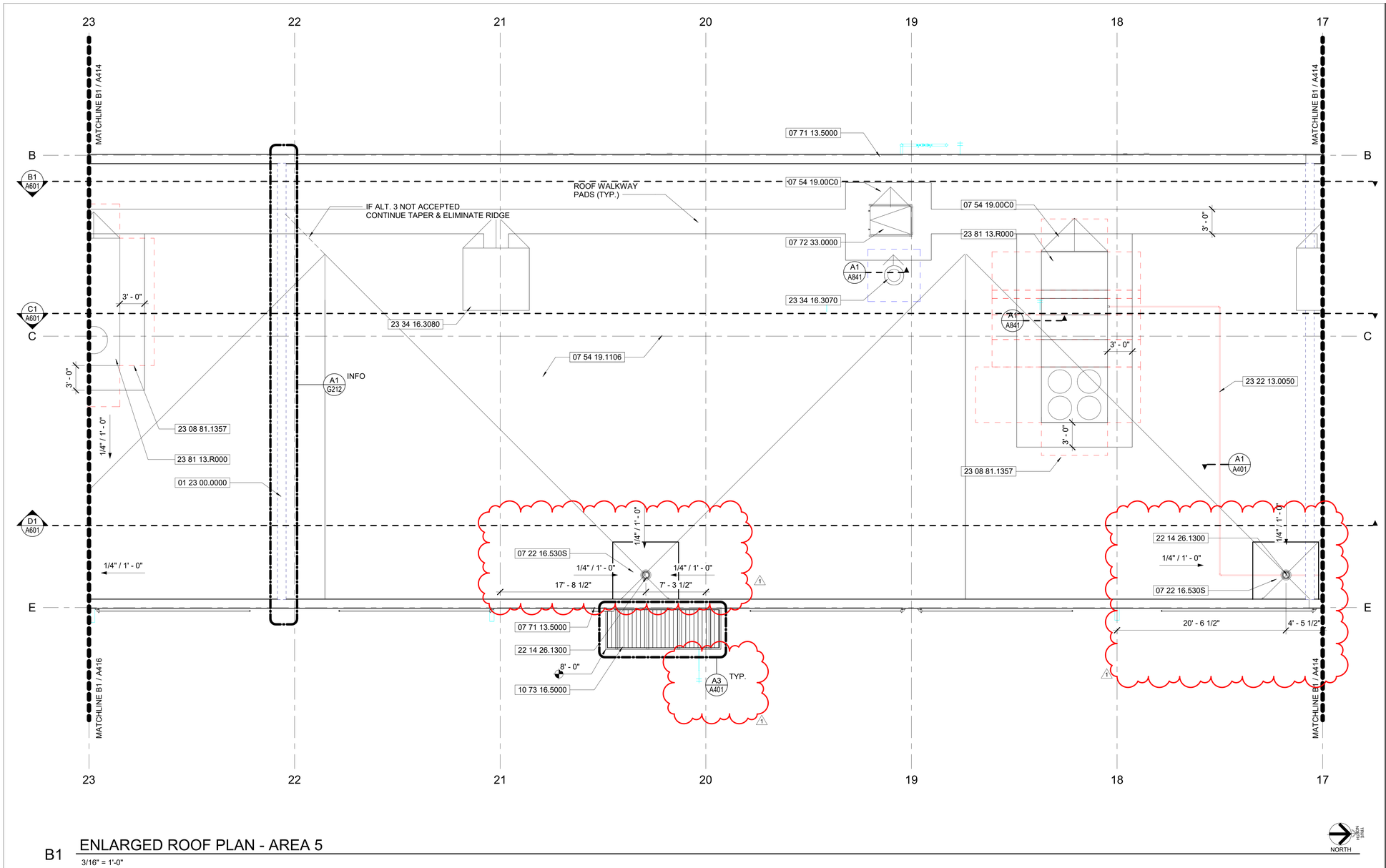

B1 ENLARGED ROOF PLAN - AREA 5

3/16" = 1'-0"

KEYNOTES

NO.	
01 23 00.0000	LIMITS OF ALTERNATE WORK, SEE SPECIFICATIONS FOR MORE INFORMATION.
07 22 16.530S	TYP. 1/2" PER FOOT TAPPERED SUMP AT ROOF DRAIN, SEE DETAIL.
07 54 19.00C0	TYP. ROOF CRICKET.
07 54 19.1106	TYP. COLD ADHESIVE APPLIED, 60 MIL PVC MEMBRAINE ROOFING.
07 71 13.5000	TYP. ALUMNINUM MANUFACTURED COPING SYSTEM, INSTALLED PER MNFR. INSTRUCTIONS.
07 72 33.0000	TYP. SINGLE-LEAF ROOF ACCESS HATCH W/ CURB AND SAFETY RAIL.
10 73 16.5000	TYP. PREMANUFACTURED ALUMINUM CANOPY SYSTEM. PROVIDE SIGNED & SEALED CALCULATIONS/SHOPDRAWINGS COMPLYING W/ STRUCTURAL DESIGN LOADS.
22 14 26.1300	TYP. FACILITY STORM ROOF DRAIN W/ INTRIGAL OVERFLOW, SEE PLUMBING.
23 08 81.1357	TYP. SERVICE CLEARANCES OF PACKAGED ROOFTOP UNIT MAINTAIN UNOBSTRUCTED ACCESS, SEE MECH.
23 22 13.0050	TYP. CONDENSATE PIPING, SEE MECH.
23 34 16.3070	TYP. ROOF TOP CENTRIFUGAL HVAC/EXHAUST FAN ON CURB, SEE MECHANICAL.
23 34 16.3080	TYP. COORDINATE FINAL PLACEMENT OF ROOF TOP CENTRIFUGAL HVAC/EXHAUST FAN AND CURB WITH TENANT REQUIREMENTS AND BAR JOIST BELOW ROOF DECK, SEE MECH.
23 81 13.R000	TYP. PACKAGED ROOFTOP UNIT, SEE MECH.

SCALE: 3/16" = 1'-0"

0 16" 32" 64" 128"

C19-2811- AP
Construction of Satellite Concourse 'C'

MLM-MARTIN ARCHITECTS, INC.
668 N. ORLANDO AVE.
SUITE 107
MAITLAND, FL 32751
407.897.6764 (VOICE)
407.894.1338 (FAX)
WWW.MLM-MARTIN.COM
AA-C002208
OLM 308-F TYPE PROPERTY

MIGUEL A MARTIN
FL AR-98279

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	3/16" = 1'-0"

Drawing Title:

ENLARGED ROOF PLAN - AREA 5

BID DOCUMENTS

Drawing No.:

A415

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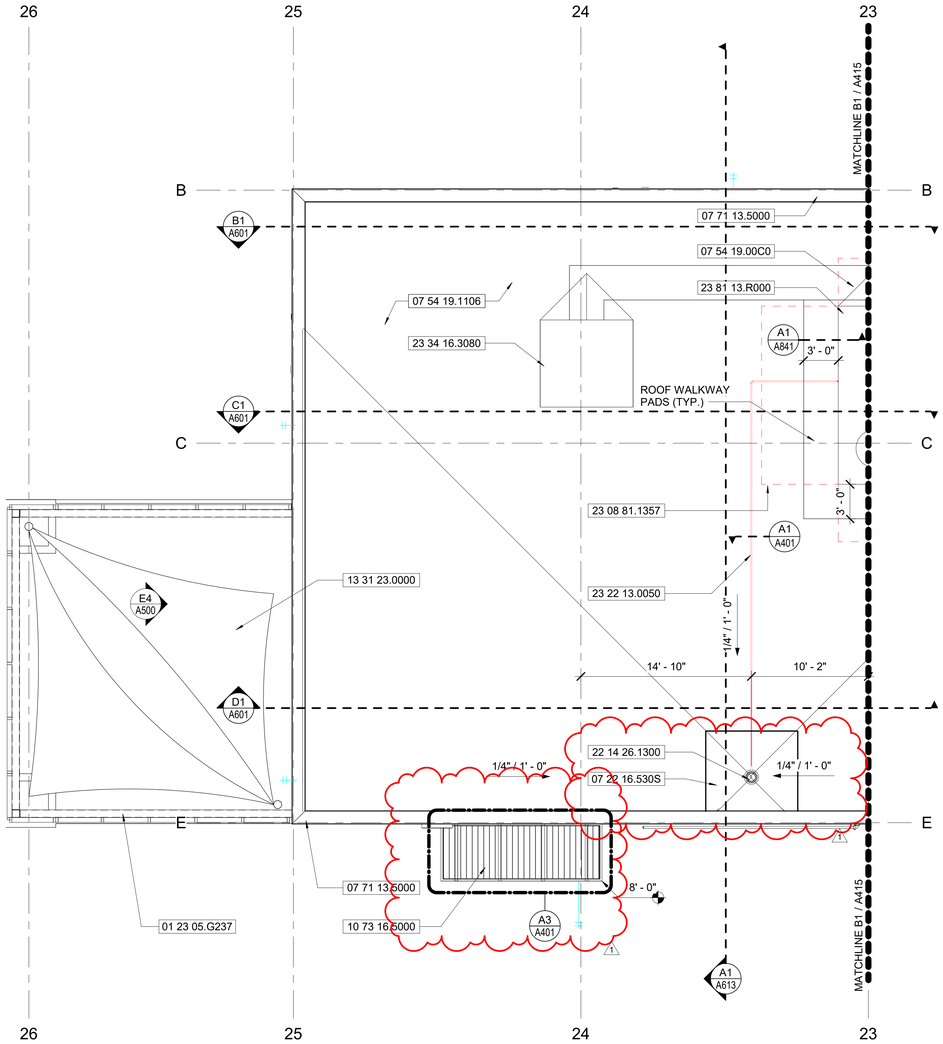
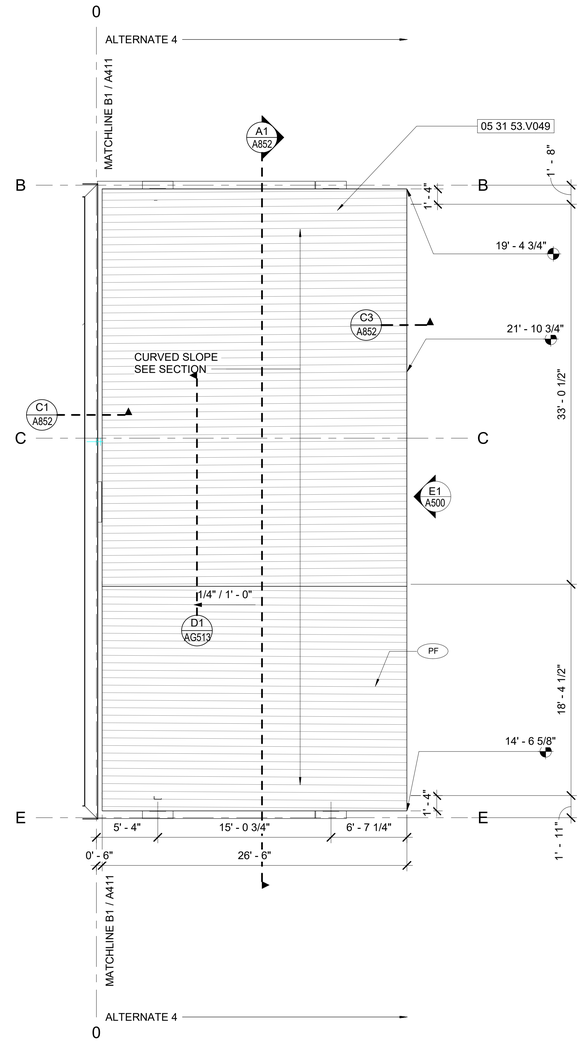


B1 ENLARGED ROOF PLAN - AREA 6

3/16" = 1'-0"



B4 ENLARGED ALTERNATE 4 ROOF PLAN

3/16" = 1'-0"

KEYNOTES

NO.	
01 23 05.G237	TYP. ALTERNATE 5 EXTERIOR CONCESSIONS PLAZA WORK.
05 31 53.V049	TYP. 4" DOVETAIL G-90 GALV. STEEL ARCHITECTURALLY EXPOSED DECK. BASIS OF DESIGN: EPIC TORIS 4 - CANOPY.
07 22 16.530S	TYP. 1/2" PER FOOT TAPPERED SUMP AT ROOF DRAIN, SEE DETAIL.
07 54 19.00C0	TYP. ROOF CRICKET.
07 54 19.1106	TYP. COLD ADHESIVE APPLIED, 60 MIL PVC MEMBRAINE ROOFING.
07 71 13.5000	TYP. ALUMNINUM MANUFACTURED COPING SYSTEM, INSTALLED PER MNFR. INSTRUCTIONS.
10 73 16.5000	TYP. PREMANUFACTURED ALUMINUM CANOPY SYSTEM. PROVIDE SIGNED & SEALED CALCULATIONS/SHOPDRAWINGS COMPLYING W/ STRUCTURAL DESIGN LOADS.
13 31 23.0000	TYP. TENSIONED FABRIC CANOPY SYSTEM, SEE MNFR. INSTRUCTIONS.
22 14 26.1300	TYP. FACILITY STORM ROOF DRAIN W/ INTRIGAL OVERFLOW, SEE PLUMBING.
23 08 81.1357	TYP. SERVICE CLEARANCES OF PACKAGED ROOFTOP UNIT MAINTAIN UNOBSTRUCTED ACCESS, SEE MECH.
23 22 13.0050	TYP. CONDENSATE PIPING, SEE MECH.
23 34 16.3080	TYP. COORDINATE FINAL PLACEMENT OF ROOF TOP CENTRIFUGAL HVAC/EXHAUST FAN AND CURB WITH TENANT REQUIREMENTS AND BAR JOIST BELOW ROOF DECK, SEE MECH.
23 81 13.R000	TYP. PACKAGED ROOFTOP UNIT, SEE MECH.

SCALE: 3/16" = 1'-0"

0 16" 32" 64" 128"

OKALOOSA COUNTY

FLY VPS

C19-2811- AP
Construction of Satellite Concourse 'C'

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Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	3/16" = 1'-0"

Drawing Title:

ENLARGED ROOF PLAN - AREA 6

BID DOCUMENTS

Drawing No.:

A416

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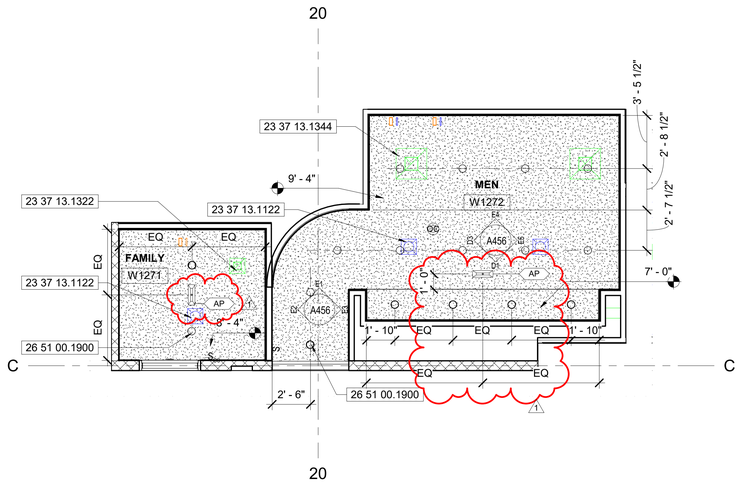
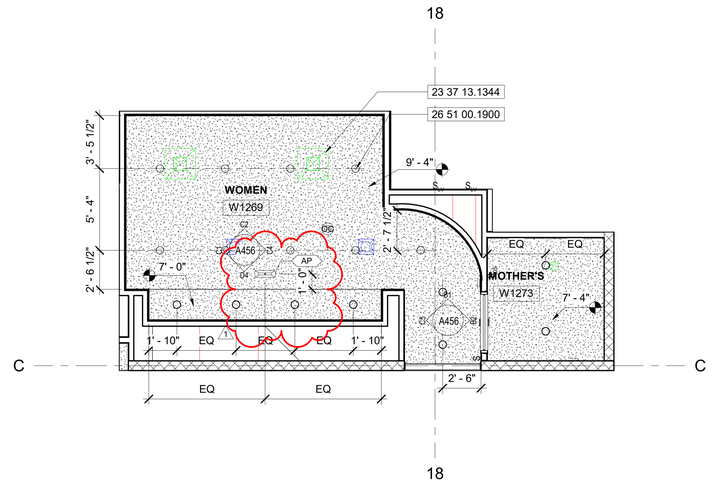


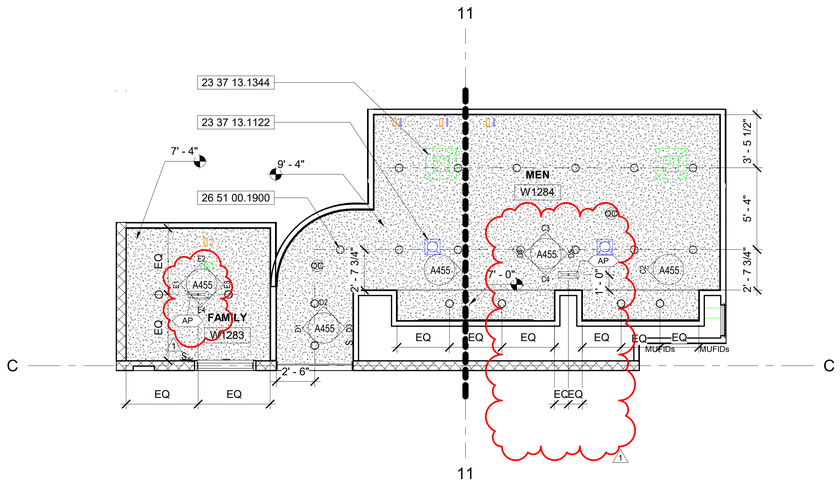
C1 ENLARGED MEN RESTROOM ALTERNATE 2 CEILING PLAN

1/4" = 1'-0"



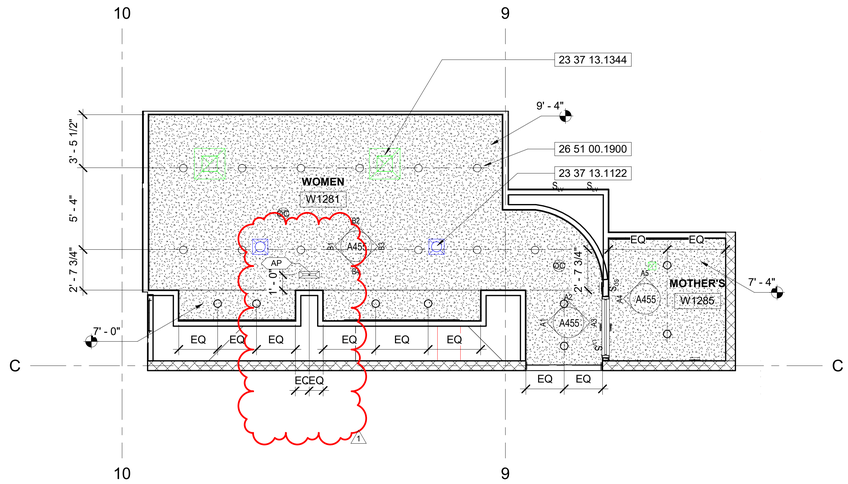
C3 ENLARGED WOMEN RESTROOM ALTERNATE CEILING PLAN

1/4" = 1'-0"



B1 ENLARGED MEN RESTROOM CEILING PLAN BASE BID

1/4" = 1'-0"



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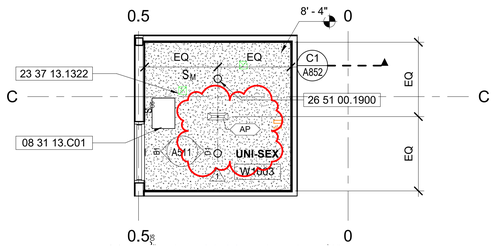
1/4" = 1'-0"



A1 ENLARGED RESTROOM CEILING PLAN (SSCP)

1/4" = 1'-0"

KEYNOTES

NO.	
08 31 13.C01	TYPICAL GALV. MTL. CEILING ACCESS DOOR, PAINT TO MATCH SURROUNDING
23 37 13.1122	TYP. 1' X 1' HVAC SUPPLY DIFFUSER, SEE MECH.
23 37 13.1322	TYP. 1' X 1' HVAC EXHAUST REGISTER, SEE MECH.
23 37 13.1344	TYP. 2'X2' HVAC EXHAUST REGISTER, SEE MECH.
26 51 00.1900	TYP. RECESSED CEILING MOUNTED LED "CAN", SEE ELECTRICAL FOR FIXTURE TYPE. PROVIDE MUD FLANGE FOR GWB INSTALL.

NOTES

1. REFER TO **AL641** FOR PARTITION TYPES
2. ALL PARTITIONS ARE DIMENSIONED FROM FACE OF FINISH TO FACE OF FINISH U.O.N.
3. FOR DOOR TYPES AND SCHEDULES REFER TO SHEET SERIES **A711**
4. REFER TO ELECTRICAL, TELECOM, AV, AND SIGNAGE DRAWINGS FOR OUTLET INFORMATION.
5. REFER TO **A457** FOR ACCESSORIES INFORMATION. (X)
6. REFER TO **A458** FOR COUNTERTOP AND OTHER RESTROOM DETAILS THAT APPLY TYPICALLY TO ALL LOCATIONS WITH IN RESTROOMS.

MATERIALS LEGEND

(?) MATERIAL CODE SYMBOL: SEE **AF712** FOR DEFINITIONS

CT1

CT2

P1

GT1 ALTERNATE 7 REPLACE WITH CT2

GT2 ALTERNATE 7 REPLACE WITH CT2

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

0 1' 2' 4' 8'

OKALOOSA COUNTY

FLY VPS

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Construction of Satellite Concourse 'C'

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ALM JOB # TYPE PROPERTY

MIGUEL A MARTIN
FL AR-98279

SEAL

Revisions

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Drawn By:	**ST, CC, DM, CB**
Checked By:	**MAM**
Issue Date:	**21-JAN-2020**
Drawing Scale:	**1/4" = 1'-0"**

Drawing Title:

ENLARGED RESTROOM CEILING PLAN

BID DOCUMENTS

Drawing No.:

A453

BIM 360://Design of Satellite Concourse/VPS-MLM_A.rvt

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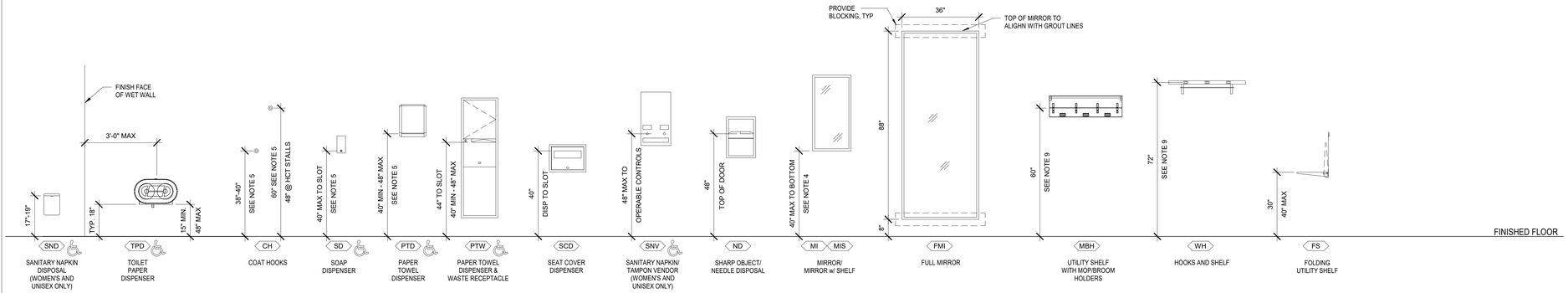
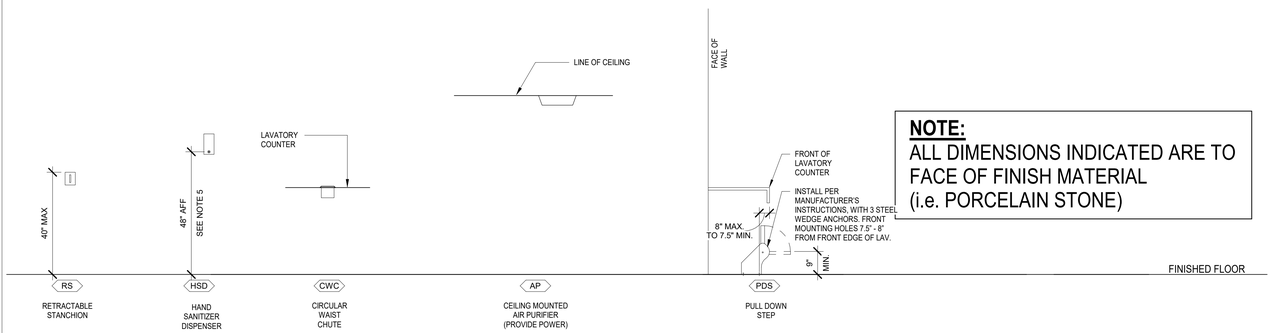
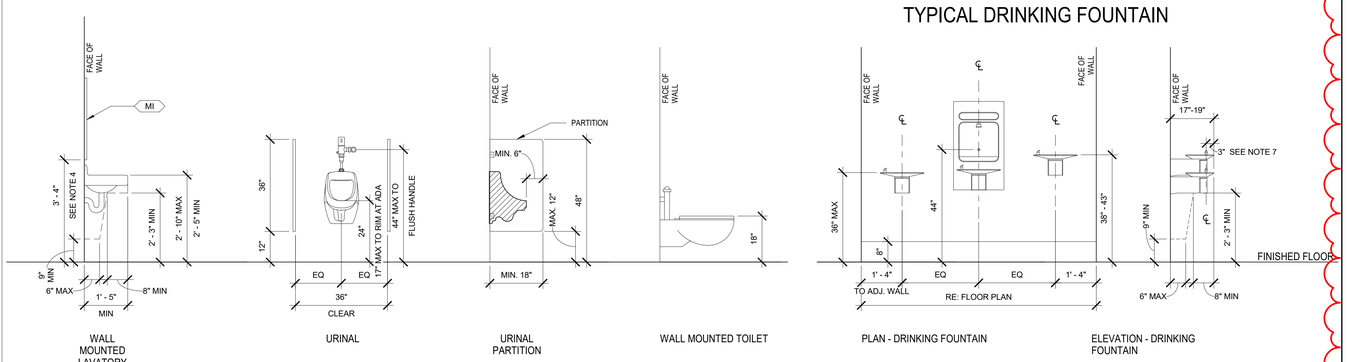
TOILET ACCESSORY ACCESSORY MOUNTING DIAGRAM





NOTE:
ALL DIMENSIONS INDICATED ARE TO FACE OF FINISH MATERIAL (i.e. PORCELAIN STONE)

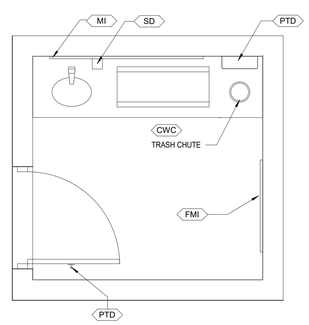
FIXTURE AND PARTITION MOUNTING DIAGRAM



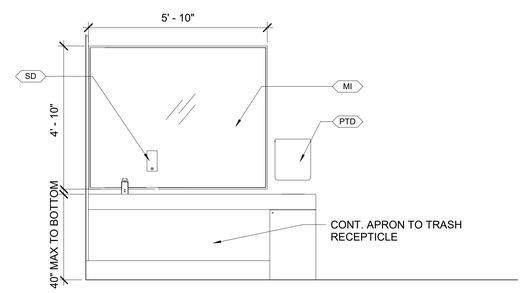
TYPICAL DRINKING FOUNTAIN

Key	Description	Manufacturer	Product No.
GB	Grab Bar – 42" 1-1/2" diameter stainless steel	Bradley Bobrick	812 B-6806
GB	Grab Bar – 36" 1-1/2" diameter stainless steel	Bradley Bobrick	812 B-6806
	Mop/broom holder – 4 holders	Bradley	9954
SCD	Seat cover dispenser - recessed	Bradley Bobrick	584 B-301
MI	Tilted glass mirror with shelf - 18"x36"	Bradley Bobrick	7405 B-166
MI	Mirror – accessible	Bobrick	B-290
SD	Soap dispenser – recessed	Bobrick	B-306
SD	Soap dispenser – surface (wall) mounted	Bobrick	B-2111
TPD	Toilet paper dispenser, surface mounted double 9" rolls	Bradley Bobrick	5425 B-2892
SND	Sanitary napkin disposal – surface mounted	Bradley Bobrick	4721/4722 - 15 B-254
SND	Sanitary napkin disposal – recessed	Bradley Bobrick	4732-1015 B-353
SND	Sanitary napkin disposal – partition mounted dual access	Bradley Bobrick	4721-15 B-354
SNV	Sanitary napkin vendor – surface mounted	Bradley Bobrick	4A20 (FREE) B-2706 50
SNV	Sanitary napkin vendor – recessed	Bradley Bobrick	402 B-3706-50
PTD	Automated paper towel dispenser and waste receptacle– recessed, 12 gallon	Georgia Pacific, enMotion	59491 with 59466
PTD	Automated paper towel dispenser – recessed	Georgia Pacific	59466 59471
PTD	Paper towel dispenser – non-automatic, surface mounted	Georgia Pacific	59466
	Fold down utility shelf - surface mounted	Bradley Bobrick	790 B-287
	Circular waste chute - 6" diameter	Bradley Bobrick	P10 – 696 B-352
	Retractable stanchion – recessed, full opening or 10 ft	Visiontron	700
	Hooks and shelf - 6	Bradley Bobrick	9124 B-298 shelf B-985 hook strip
MI	Mirror, custom – full size	Bradley Bobrick	705 series B-290 2472
WH	Robe hook - single	Bradley Bobrick	931 B-76717
WH	Robe hook - double	Bradley Bobrick	932 B-76727
	Garment rack/hooks – surface mounted with 3 hooks	Ex-Cell Kaiser	703 SA or 724 CHR
PDS	Pull down step	Step & Wash	SNW-SS 975B
AP	Ionizer (1 per 8 sanitary fixtures)	Biozone	AC series

TYPICAL MOTHER'S ROOM CONFIGURATION



PLAN - TYPICAL MOTHER'S ROOM



ELEVATION - MOTHER'S ROOM

C19-2811- AP
Construction of Satellite Concourse 'C'

MLM-MARTIN ARCHITECTS, INC.
668 N. ORLANDO AVE.
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WWW.MLM-MARTIN.COM
AA-C002208
ALM 30B-F-TYPE PROPERTY
MIGUEL A MARTIN
FL AR-98279

SEAL

Revisions

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1	18-FEB-2020	ADDENDUM 001

Project No.:	MLM-19672
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Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	NO SCALE

Drawing Title:

RESTROOM ACCESSORIES

BID DOCUMENTS

Drawing No.:

A457

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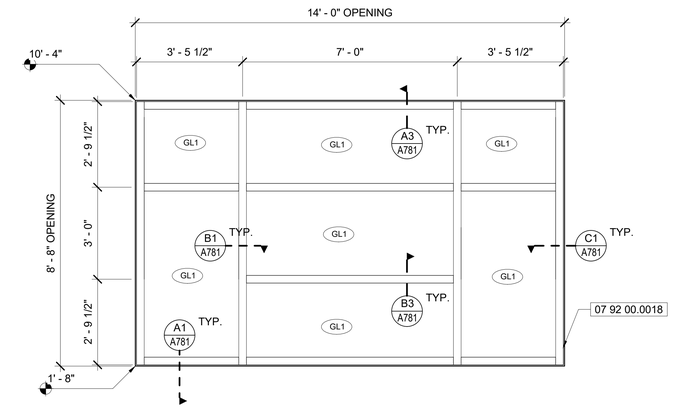
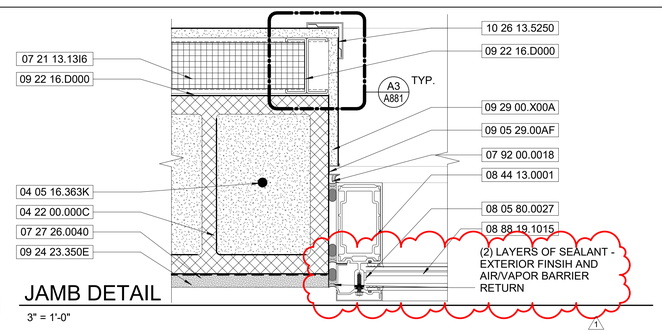


NOTE: ELEVATIONS PROVIDED ABOVE CONCOUSE LEVEL

SEE AF712 FOR GLAZING TYPE

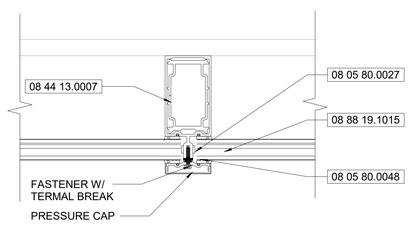
D4 WINDOW TYPE 'A' TYPICAL

1/2" = 1'-0"



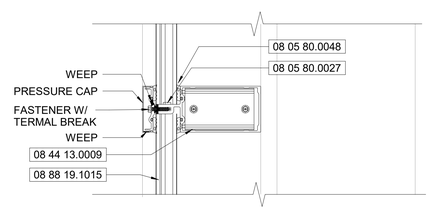
C1 JAMB DETAIL

3" = 1'-0"



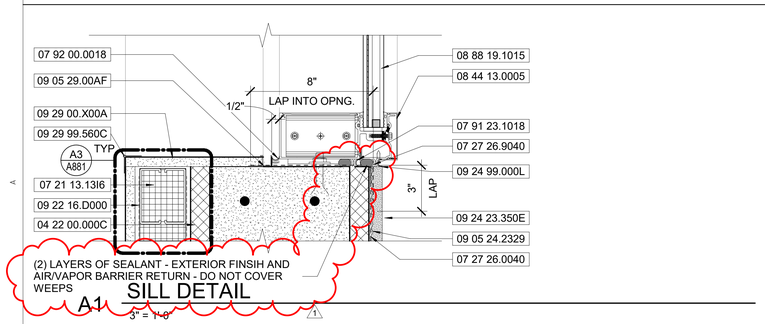
B1 VERTICAL MULLION DETAIL

3" = 1'-0"



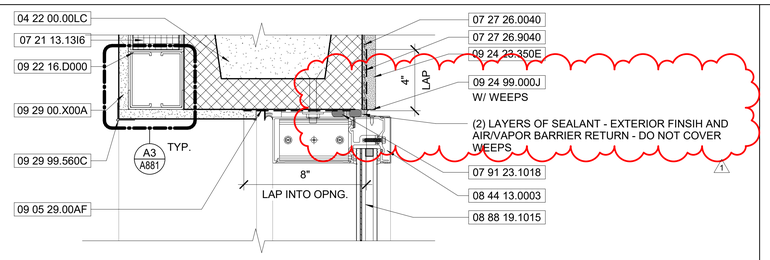
B3 HORIZONTAL MULLION DETAIL

3" = 1'-0"



A1 SILL DETAIL

3" = 1'-0"



A3 HEAD DETAIL

3" = 1'-0"

KEYNOTES

NO.	
04 05 16.363K	TYP. FILL CELL MASONRY W/ 3000 PSI GROUT.
04 22 00.000C	TYP. 12" NOMINAL CONCRETE MASONRY UNIT
04 22 00.00LC	TYP. 12" NOM. LINTEL CONCRETE MASONRY UNIT.
07 21 13.13I6	TYP. 3" THICK, POLYISOCYANURATE RIGID FOAM BOARD INSULATION.
07 27 26.0040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER.
07 27 26.9040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER JOINT REINFORCEMENT SELF ADHEARING SHEET.
07 91 23.1018	TYP. 1/2" BACKER ROD WITH JOINT SEALANT, CONT.
07 92 00.0018	TYP. 1/2" JOINT SEALANT, CONT.
08 05 80.0027	TYP. GLAZING BUTYL TAPE, PER MNFR.
08 05 80.0048	TYP. GLAZING RUBBERIZED GASKETING, PER MNFR.
08 44 13.0001	TYP. GLAZED ALUMINUM CUTAIN WALL ASSEMBLY - JAMB EXTRUSION.
08 44 13.0003	TYP. GLAZED ALUMINUM CUTAIN WALL ASSEMBLY - HEADER EXTRUSION.
08 44 13.0005	TYP. GLAZED ALUMINUM CUTAIN WALL ASSEMBLY - SILL EXTRUSION WITH MNFR. FLASHING CLIP.
08 44 13.0007	TYP. GLAZED ALUMINUM CUTAIN WALL ASSEMBLY - VERT. MULLION EXTRUSION WITH INTERNAL STEEL SUPPORT UN-INTURRUPTED SILL TO HEADER.
08 44 13.0009	TYP. GLAZED ALUMINUM CUTAIN WALL ASSEMBLY - HORIZONTAL MULLION EXTRUSION WITH CLIPS @VERT.
08 88 19.1015	TYP. 1-5/16" HURRICANE-RESISTANT INSULATED GLAZING UNIT.
09 05 24.2329	TYP. PAPER BACKED SELF FURRING GALV. LATH.
09 05 29.00AF	TYP. ALUMINUM GYPSUM BOARD 'F' REVEAL ACCESSORY.
09 22 16.D000	TYPICAL 3 5/8" GALV. METAL STUD FRAMING @ 24" OC UNO.
09 24 23.350E	TYP. 7/8", (3) LAYER SMOOTH CEMENT STUCCO PLASTERING.
09 24 99.000J	TYP. CEMENT PLASTERING 'J' TRIM ACESSORY.
09 24 99.000L	TYP. CEMENT PLASTERING 'L' TRIM ACESSORY.
09 29 00.X00A	TYPICAL 5/8" TYPE 'X' GYPSUM WALL BOARD
09 29 99.560C	TYP. GALV. GWB ASSEMBLY CORNER BEAD TRIM ACCESSORY.
10 26 13.5250	TYP. 2" BRUSHED ALUMINUM WALL CORNER GUARD.

SCALE: 3" = 1'-0"
0 1" 2" 4" 8"

SCALE: 1/2" = 1'-0"
0 6" 12" 24" 48"

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Construction of Satellite Concourse 'C'

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Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	AS NOTED

Drawing Title:

CURTAIN WALL TYPE 'A'

BID DOCUMENTS

Drawing No.:

A781

BIM 360://Design of Satellite Concourse/VPS-MLM_A.rvt
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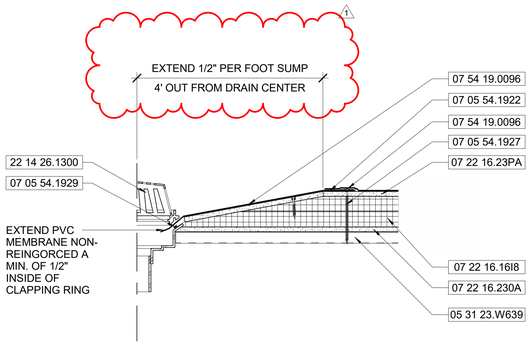
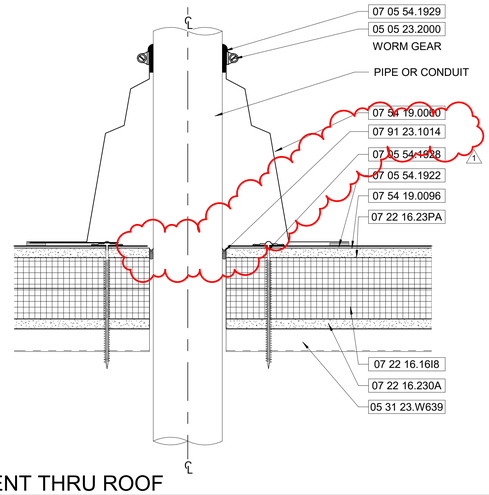


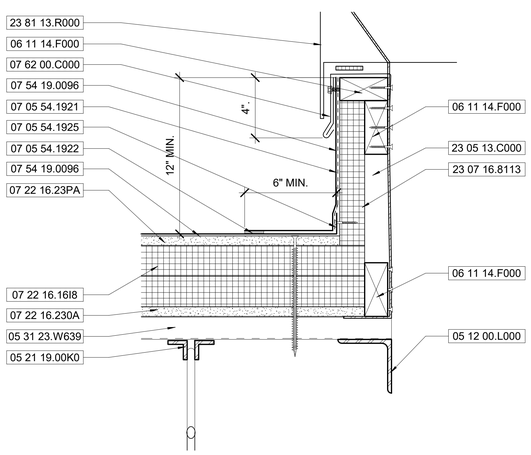
E1 ROOF DRAIN DETAIL

1 1/2" = 1'-0"



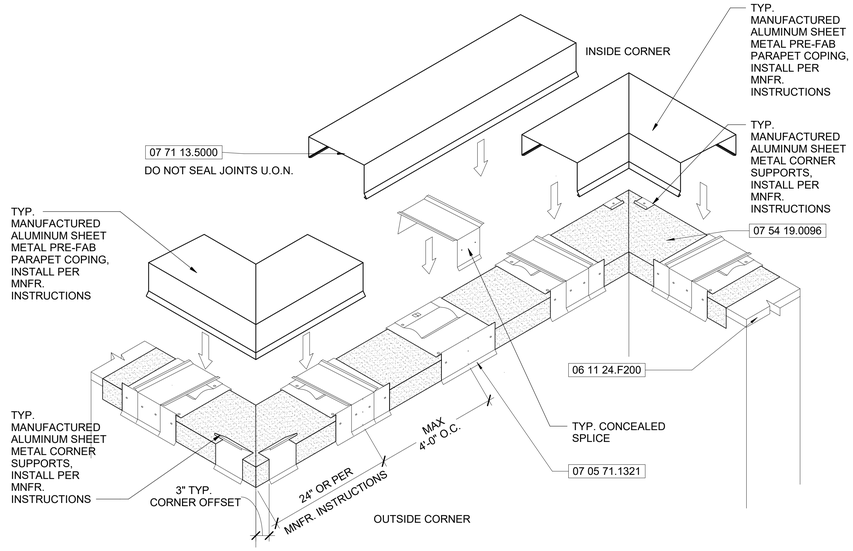
C1 VENT THRU ROOF

3" = 1'-0"



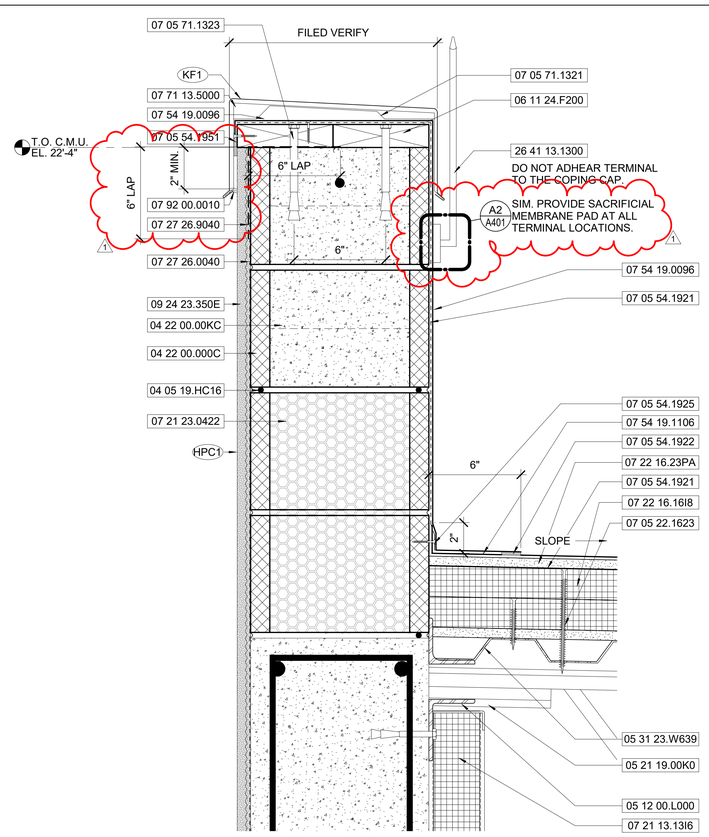
A1 EQUIPMENT ROOF CURB

3" = 1'-0"



D3 TYP. COPPING ASSEMBLY

N.T.S.



A3 TYP. PARAPET COPING DETAIL

3" = 1'-0"

KEYNOTES

NO.	
04 05 19.HC16	TYP. MASONRY HORIZONTAL GALVANIZED WIRE REINFORCING @ 16" O.C. MAX
04 22 00.000C	TYP. 12" NOMINAL CONCRETE MASONRY UNIT
04 22 00.00KC	TYP. 12" NOMINAL GROUT FILLED CONCRETE MASONRY KNOCK-OUT UNIT.
05 05 23.2000	TYP. STAINLESS STEEL FASTENER(S).
05 12 00.L000	TYP. STEEL ANGLE 'L' SHAPE MEMBER, SEE STRUCTURAL.
05 21 19.00K0	TYP. K SERIES OPEN WEB STEEL JOIST, SEE STRUCTURAL.
05 31 23.W639	TYP. 1-1/2" WR 20 GA. G90 STEEL ROOF DECK, SEE STRUCTURAL.
06 11 14.F000	TYP. NOMINAL FIRE RETARDINT WOOD BLOCKING, CONT.
06 11 24.F200	TYP. FIRE RETARDINT WOOD BLOCKING NAILER, CONT. CUT FROM (2) 2X NOMINAL.
07 05 22.1623	TYP. ROOF BOARD INSULATION FASTENERS, SEE MNFR. INSTRUCTIONS.
07 05 54.1921	TYP. PVC ROOFING MEMBRANE ADHESIVE COAT.
07 05 54.1922	TYP. PVC ROOFING MEMBRANE CAP/FLASHING PLY WELD.
07 05 54.1925	TYP. PVC ROOF MEMBRANE SYSTEM TERMINATION HARDWARE, FASTEN AND SEAL PER NOA/FLORIDA PRODUCT APPROVAL OR 8" OC MIN. WHICHEVER IS MORE RESTRICTIVE.
07 05 54.1927	TYP. PVC ROOF MEMBRANE SYSTEM FASTENERS AND STRESS PLATE HARDWARE @ 12" OC AROUND SUMP.
07 05 54.1928	TYP. PVC ROOF MEMBRANE SYSTEM FASTENERS AND STRESS PLATE HARDWARE MIN. (4).
07 05 54.1929	TYP. PVC ROOF MEMBRANE SYSTEM SEALANT.
07 05 54.1951	TYP. PVC ROOF MEMBRANE SYSTEM PREFORMED BUTYL TAPE SEALANT.

KEYNOTES

NO.	
07 05 71.1321	TYP. MANUFACTURED COPING CLEAT, INSTALL PER MNFR. INSTRUCTIONS.
07 05 71.1323	TYP. 1/2" DIA. SS EXPANSION BOLTS W/4" EMBEDMENT MIN. @ 16" CENTERS STAGGERED. PROVIDED (2) SIDE BY SIDE BOLTS ON EACH END OF BLOCKING SPLICES. HEADS SHALL BE COUNTERSUNK.
07 21 13.13I6	TYP. 3" THICK, POLYISOCYANURATE RIGID FOAM BOARD INSULATION.
07 21 23.0422	TYP. FILL ALL UN-GROUTED CELLS WITH INJECTED FOAM FILL INSULATION.
07 22 16.16I8	TYP. 4" MIN. POLYISOCYANURATE RIGID FOAM ROOF BOARD INSULATION.
07 22 16.23PA	TYP. 5/8" PRIMED DENS DECK ROOF INSULATION COVER BOARD.
07 22 16.230A	TYP. 5/8" DENS DECK ROOF INSULATION COVER BOARD.
07 27 26.0040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER.
07 27 26.9040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER JOINT REINFORCEMENT SELF ADHEARING SHEET.
07 54 19.0060	TYP. PVC MEMBRAINE ROOFING PRE-FORMED/MOLDED FLASHING.
07 54 19.0096	TYP. 60 MIL PVC MEMBRAINE ROOFING FLASHING SHEET.
07 54 19.1106	TYP. COLD ADHESIVE APPLIED, 60 MIL PVC MEMBRAINE ROOFING.
07 62 00.C000	TYP. STAINLESS STEEL COUNTER-FLASHING.
07 71 13.5000	TYP. ALUMNINUM MANUFACTURED COPING SYSTEM, INSTALLED PER MNFR. INSTRUCTIONS.
07 91 23.1014	TYP. 1/4" BACKER ROD WITH JOINT SEALANT, CONT.
07 92 00.0010	TYP. JOINT SEALANT, CONT.
09 24 23.350E	TYP. 7/8", (3) LAYER SMOOTH CEMENT STUCCO PLASTERING.
22 14 26.1300	TYP. FACILITY STORM ROOF DRAIN W/ INTRIGAL OVERFLOW, SEE PLUMBING.
23 05 13.C000	TYPICAL PRE-ENGINEERED MECHANICAL CURB FOR HVAC & FAN EQUIPMENT, SEE MECHANICAL
23 07 16.8113	TYP. RIGID INSULATION INSERTS FOR PRE-MANUFACTURED ROOF TOP MECHAINICAL EQUIPMENT CURB.
23 81 13.R000	TYP. PACKAGED ROOFTOP UNIT, SEE MECH.
26 41 13.1300	TYP. LIGHTNING PROTECTION TERMINAL, SEE ELECTRICAL.

SCALE: 3" = 1'-0"
0 1" 2" 4" 8"

C19-2811- AP
Construction of Satellite Concourse 'C'

MLM-MARTIN ARCHITECTS, INC.
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AA-C002208
ELM 3OR 4 TYPE PROPERTY
MIGUEL A MARTIN
FL AR-98279

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	AS NOTED

Drawing Title:

ROOFING DETAILS

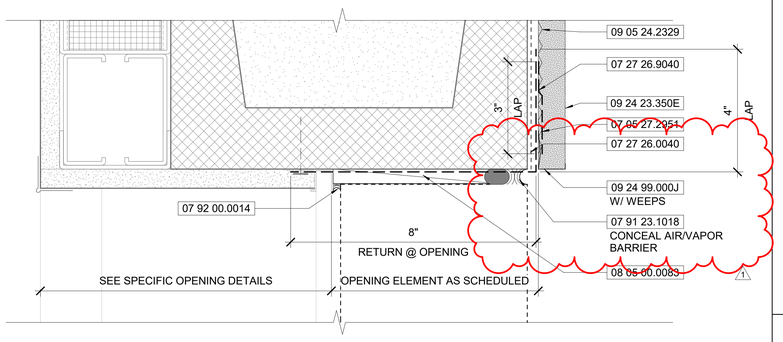
BID DOCUMENTS

Drawing No.:

A841

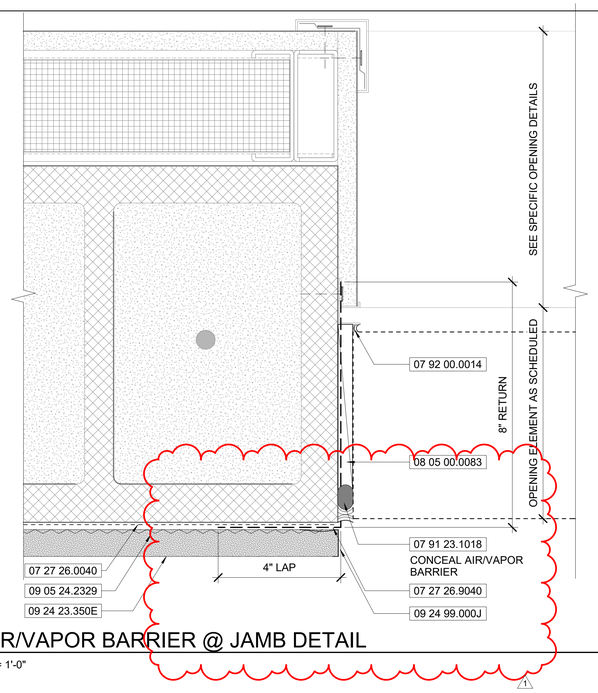
BIM 360://Design of Satellite Concourse/VPS-MLM_A.rvt

3/5/2020 4:28:48 PM



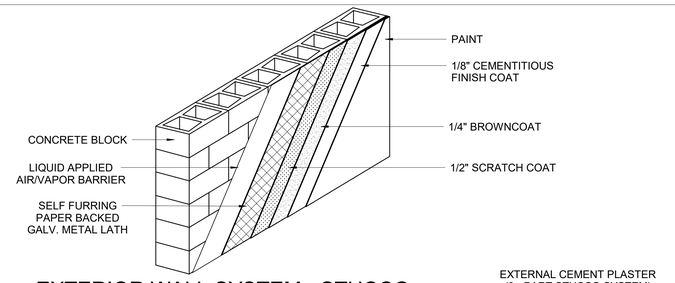
D2 AIR/VAPOR BARRIER @ HEAD DETAIL

6" = 1'-0"



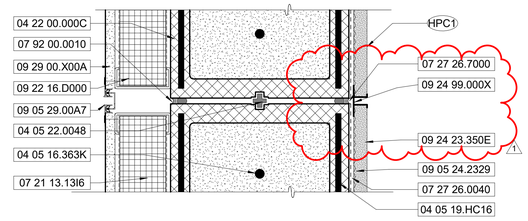
B2 AIR/VAPOR BARRIER @ JAMB DETAIL

6" = 1'-0"



E4 EXTERIOR WALL SYSTEM - STUCCO

N.T.S.



D4 TYPICAL CMU VERTICAL CONTROL JOINT DETAIL

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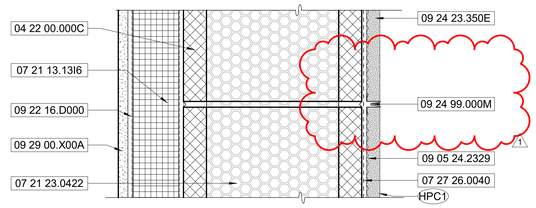
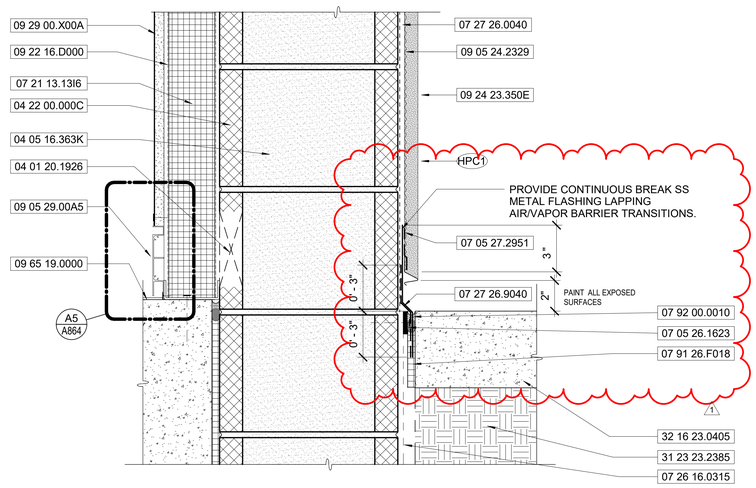


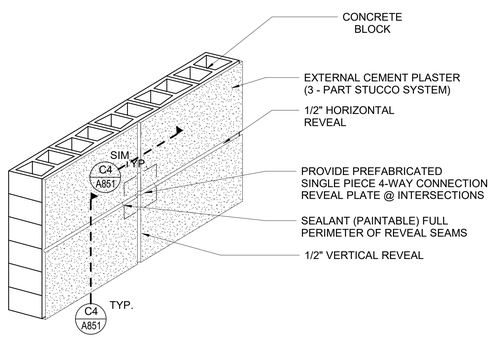
C4 TYPICAL STUCCO REVEAL DETAIL

3" = 1'-0"



A4 STUCCO WEEP SCREED BASE DETAIL

3" = 1'-0"



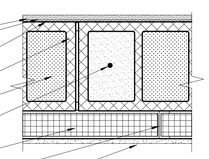
A2 REVEAL SYSTEM - STUCCO

N.T.S.

EWS1

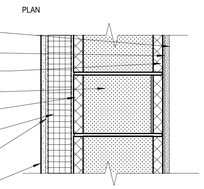
FROM EXTERIOR TO INTERIOR:

09 24 23.350E
09 05 24.2329
07 27 00.A01
04 22 00.000C
04 07 22.0000
04 05 16.363K
07 21 13.13I6
09 22 16.D000
09 29 00.X00A



PLAN

09 24 23.350E
09 05 24.2329
07 27 26.0040
04 07 22.0000
04 22 00.000C
07 21 13.13I6
09 22 16.D000
09 29 00.X00A



SECTION - FOR HEAD AND SILL CONDITIONS SEE WALL SECTIONS

KEYNOTES

NO.	
04 01 20.1926	TYP. MASONRY REINFORCING INSPECTION OPENING @ EACH FILLED CELL, SEE STRUCTURAL
04 05 16.363K	TYP. FILL CELL MASONRY W/ 3000 PSI GROUT.
04 05 19.HC16	TYP. MASONRY HORIZONTAL GALVANIZED WIRE REINFORCING @ 16" O.C. MAX
04 05 22.0048	TYP. CMU SASH EXPANSION MATERIAL, SEE SPECIFICATIONS.
04 07 22.0000	TYP. FILL ALL NON-GROUTED CELLS WITH INSULATION, SEE SPECIFICATIONS.
04 22 00.000C	TYP. 12" NOMINAL CONCRETE MASONRY UNIT
07 05 26.1623	TYP. BELOW GRADE VAPOR BARRIER TERMINATION BAR, FASTEN PER MNFR. INSTRUCTION.
07 05 27.2951	TYP. LAP 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER JOINT ADHESIVE TAPE OVER STUCCO ACCESSORY AND BARRIER.
07 21 13.13I6	TYP. 3" THICK, POLYISOCYANURATE RIGID FOAM BOARD INSULATION.
07 21 23.0422	TYP. FILL ALL UN-GROUTED CELLS WITH INJECTED FOAM FILL INSULATION.
07 26 16.0315	TYP. 15 MIL BELOW GRADE VAPOR BARRIER.
07 27 00.A01	TYPICAL PERMA-BARRIER
07 27 26.0040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER.
07 27 26.7000	FLUID APPLIED MEMBRANE VAPOR RETARDING AIR PARRIER COMPATABLE SEALANT.
07 27 26.9040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER JOINT REINFORCEMENT SELF ADHEARING SHEET.
07 91 23.1018	TYP. 1/2" BACKER ROD WITH JOINT SEALANT, CONT.
07 91 26.F018	TYP. 1/2" MINIERAL FIBER JOINT FILLER CONT.
07 92 00.0010	TYP. JOINT SEALANT, CONT.
07 92 00.0014	TYP. 1/4" JOINT SEALANT, CONT.
08 05 00.0083	TYP. PT/FR SHIM AS REQUIRED.
09 05 24.2329	TYP. PAPER BACKED SELF FURRING GALV. LATH.
09 05 29.00A5	TYP. ALUMINUM GYPSUM BOARD REVEAL BASE ACCESSORY.
09 05 29.00A7	TYP. ALUMINUM GYPSUM BOARD 3 PIECE COMPRESSION EXPANSION REVEAL ACCESSORY.
09 22 16.D000	TYPICAL 3 5/8" GALV. METAL STUD FRAMING @ 24" OC UNO.
09 24 23.350E	TYP. 7/8", (3) LAYER SMOOTH CEMENT STUCCO PLASTERING.
09 24 99.000J	TYP. CEMENT PLASTERING 'J' TRIM ACESSORY.
09 24 99.000M	TYP. CEMENT PLASTERING 'M' REVEAL SCREED ACESSORY.
09 24 99.000X	TYP. CEMENT PLASTERING EXPANSIN CHANNEL W/ 1/2" REVEAL SCREED ACESSORY.
09 29 00.X00A	TYPICAL 5/8" TYPE 'X' GYPSUM WALL BOARD
09 65 19.0000	TYP. LUXARY VINYL COMPOSITION TILE, SEE SCHEDULE.
31 23 23.2385	TYP. COMPACTED FILL TO A MIN. OF 85% COMPACTION AS PER ASTM D1557.
32 16 23.0405	TYP. 4" BROOM FINISHED CONCRETE SIDEWALK.

SCALE: 3" = 1'-0"
0 1" 2" 4" 8"

SCALE: 6" = 1'-0"
0 1/2"1" 2" 4"

OKALOOSA COUNTY

FLY VPS

C19-2811- AP
Construction of Satellite Concourse 'C'

MLM-MARTIN ARCHITECTS, INC.
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SUITE 107
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AA-C002208
ALM 308-2 TYPE PROPERTY

MIGUEL A MARTIN
FL AR-98279

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	AS NOTED

Drawing Title:

EXTERIOR WALL DETAILS

BID DOCUMENTS

Drawing No.:

A851

BIM 360://Design of Satellite Concourse/VPS-MLM_A.rvt

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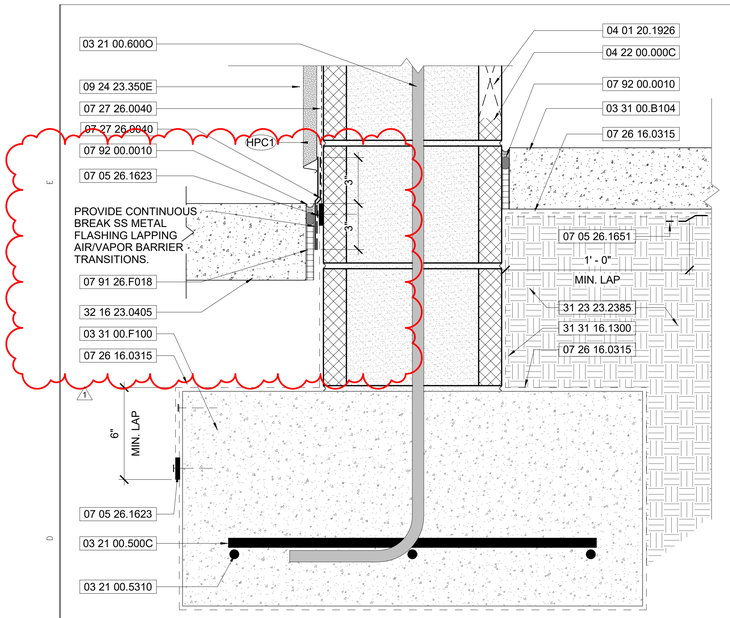
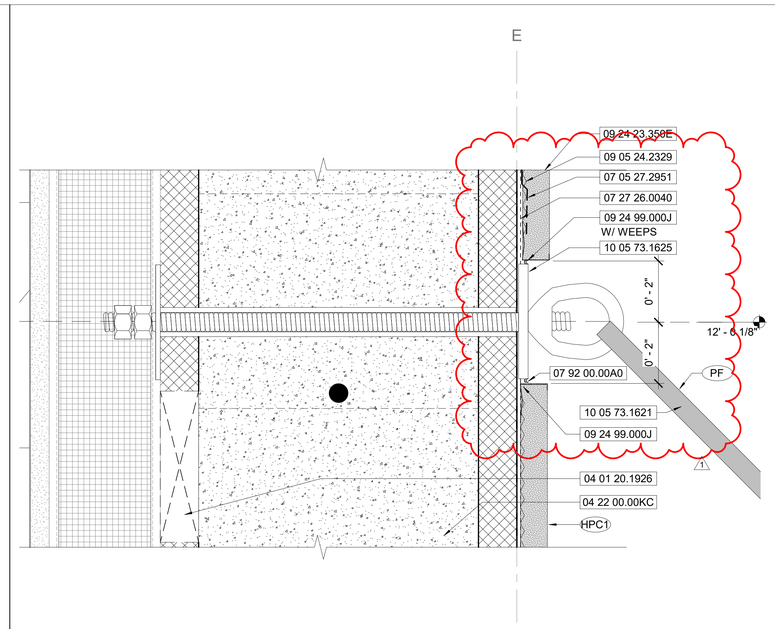


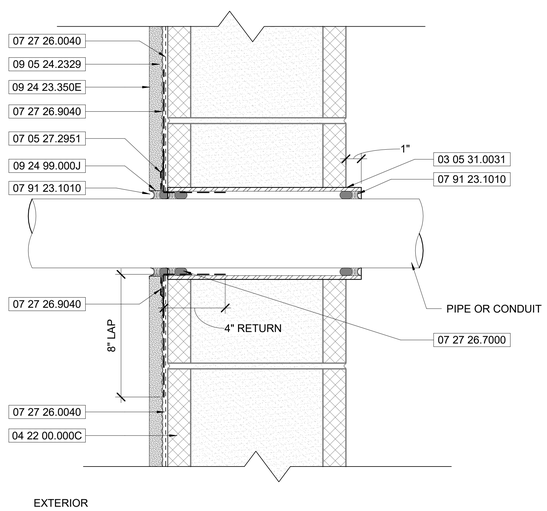
D1 TYP. VAPOR BARRIER INSTALLATION DETAIL

3" = 1'-0"



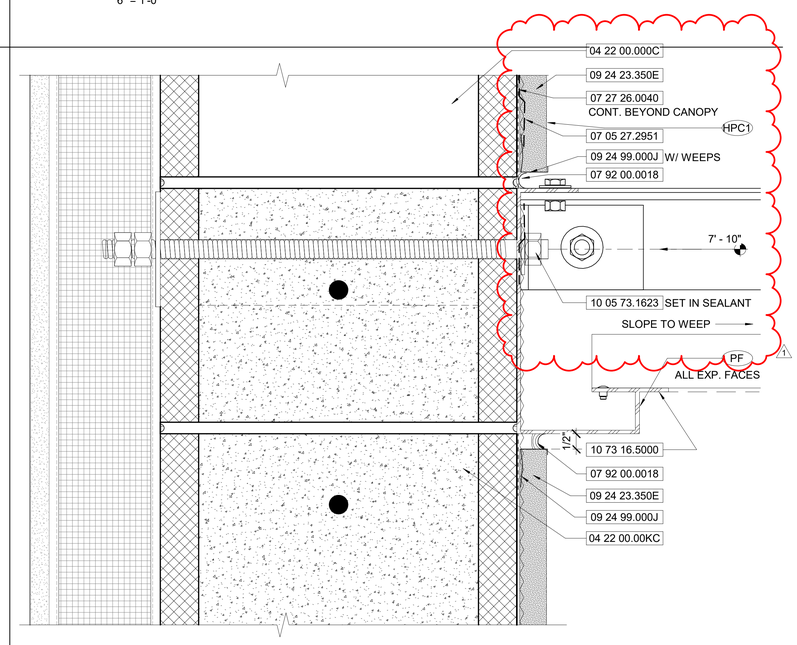
D3 TYPICAL UPPER CANOPY ATTACHMENT DETAIL

6" = 1'-0"



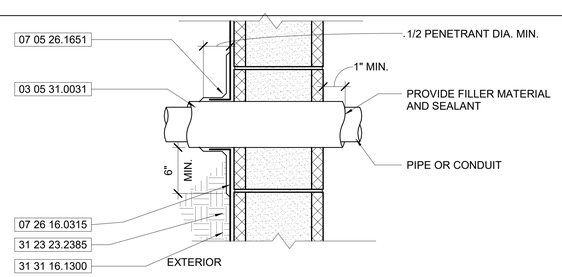
B1 PIPE PENETRATION @ ABOVE GRADE

3" = 1'-0"



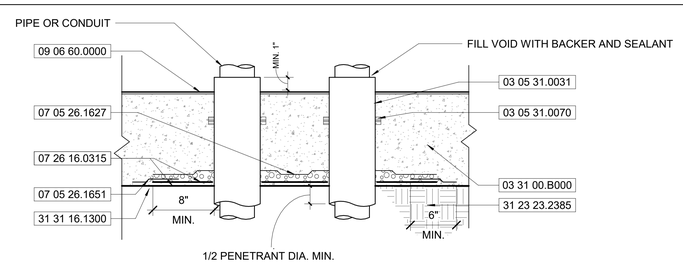
B3 TYPICAL LOWER CANOPY ATTACHMENT DETAIL

6" = 1'-0"



A1 PIPE PENETRATION @ SHALLOW FOUNDATION

1 1/2" = 1'-0"



A3 PIPE PENETRATIONS @ SHALLOW FOUNDATION & SOG

1 1/2" = 1'-0"

KEYNOTES

NO.	
03 05 31.0031	TYP. CAST SLEEVE FOR PENETRENTS.
03 05 31.0070	TYP. BUTYL TAPE AROUND SLEEVE.
03 21 00.500C	TYP. NO. 5 CONCRETE REINFORCEMENT BARS @ 12" OC, SEE STRUCTURAL.
03 21 00.600O	TYP. NO. 6 CONCRETE REINFORCEMENT BARS @ 24" OC, SEE STRUCTURAL.
03 21 00.5310	TYP. (3) NO. 5 CONCRETE REINFORCEMENT BARS CONT., SEE STRUCTURAL.
03 31 00.B000	TYP. STRUCTURAL CONCRETE FLOOR SLAB, SEE STRUCTURAL.
03 31 00.B104	TYP. 4" STRUCTURAL SLAB-ON-GRADE, SEE STRUCTURAL.
03 31 00.F100	TYP. CONTINOUS WALL FOUNDATION, SEE STRUCTURAL.
04 01 20.1926	TYP. MASONRY REINFORCING INSPECTION OPENING @ EACH FILLED CELL, SEE STRUCTURAL
04 22 00.000C	TYP. 12" NOMINAL CONCRETE MASONRY UNIT
04 22 00.00KC	TYP. 12" NOMINAL GROUT FILLED CONCRETE MASONRY KNOCK-OUT UNIT.
07 05 26.1623	TYP. BELOW GRADE VAPOR BARRIER TERMINATION BAR, FASTEN PER MNFR. INSTRUCTION.
07 05 26.1627	TYP. MASTIC SEALER FOR BELOW GRADE VAPOR BARRIER. USE MNFR. APPROVED MASTIC AND INSTALL AS INSTRUCTED.
07 05 26.1651	TYP. ADHESIVE JOINT TAPE FOR BELOW GRADE VAPOR BARRIER. USE MNFR. APPROVED TAPE AND INSTALL AS INSTRUCTED.
07 05 27.2951	TYP. LAP 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER JOINT ADHESIVE TAPE OVER STUCCO ACCESSORY AND BARRIER.
07 26 16.0315	TYP. 15 MIL BELOW GRADE VAPOR BARRIER.
07 27 26.0040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER.
07 27 26.7000	FLUID APPLIED MEMBRANE VAPOR RETARDING AIR PARRIER COMPATABLE SEALANT.

KEYNOTES

NO.	
07 27 26.9040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER JOINT REINFORCEMENT SELF ADHEARING SHEET.
07 91 23.1010	TYP. BACKER ROD WITH JOINT SEALANT, CONT.
07 91 26.F018	TYP. 1/2" MINIERAL FIBER JOINT FILLER CONT.
07 92 00.00A0	TYP. JOINT SEALANT, FULL PERIMETER.
07 92 00.0010	TYP. JOINT SEALANT, CONT.
07 92 00.0018	TYP. 1/2" JOINT SEALANT, CONT.
09 05 24.2329	TYP. PAPER BACKED SELF FURRING GALV. LATH.
09 06 60.0000	TYP. FINISH FLOOR SEE ROOM FINISH SCHEDULE.
09 24 23.350E	TYP. 7/8", (3) LAYER SMOOTH CEMENT STUCCO PLASTERING.
09 24 99.000J	TYP. CEMENT PLASTERING 'J' TRIM ACESSORY.
10 05 73.1621	TYP. CANOPY SUPPORT TENSION ROD.
10 05 73.1623	TYP. THREADED ROD THROUGH BOLT W/ COMPRESSIVE SLEAVE & BACKPLATE FOR LOWER CONNECTION OF CANOPY.
10 05 73.1625	TYP. THREADED ROD THROUGH BOLT W/ COMPRESSIVE SLEAVE & BACKPLATE FOR UPPER CONNECTION OF CANOPY SYSTEM EYE BOLT. ATTACHMENT POINT MUST REMAIN IN VERTICLE POSITION.
10 73 16.5000	TYP. PREMANUFACTURED ALUMINUM CANOPY SYSTEM. PROVIDE SIGNED & SEALED CALCULATIONS/SHOPDRAWINGS COMPLYING W/ STRUCTURAL DESIGN LOADS.
31 23 23.2385	TYP. COMPACTED FILL TO A MIN. OF 85% COMPACTION AS PER ASTM D1557.
31 31 16.1300	TYP. SPRAY TERMITE TOXICANT BARRIER.
32 16 23.0405	TYP. 4" BROOM FINISHED CONCRETE SIDEWALK.

SUBMITTAL

EXTERIOR CANOPY--(FOR EACH TYPE AND SIZE INSTALLED)--PROVIDE ONE OF THE FOLLOWING (TO INCLUDE COVER PAGE AND INSTALLATION DETAILS): FABRICATION DRAWINGS/ CALCULATIONS SIGNED & SEALED BY A FLORIDA REGISTERED ENGINEER OF RECORD, FLORIDA PRODUCT APPROVAL, MIAMI DADE NOA, OR (ICC-ES) NER. DOCUMENTS ARE TO BE PROVIDED BY THE SAME ROUTING METHOD AS DRAWINGS WERE SUBMITTED TO GROWTH MANAGEMENT. THIS IS TO BE SUBMITTED BEFORE A FRAMING INSPECTION. BUILDER WILL NOT BE ABLE TO SCHEDULE A FRAMING INSPECTION UNTIL A RESPONSE IS APPROVED. 2017 FBC 104.9, 107.2.1; FLORIDA ADMINISTRATIVE CODE 9B-72.005

SCALE: 1 1/2" = 1'-0"
0 2" 4" 8" 16"

SCALE: 3" = 1'-0"
0 1" 2" 4" 8"

SCALE: 6" = 1'-0"
0 1/2"1" 2" 4"

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Drawing Title:

SECTION DETAILS

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A861

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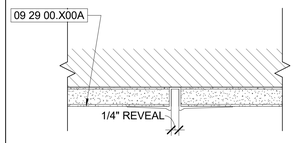
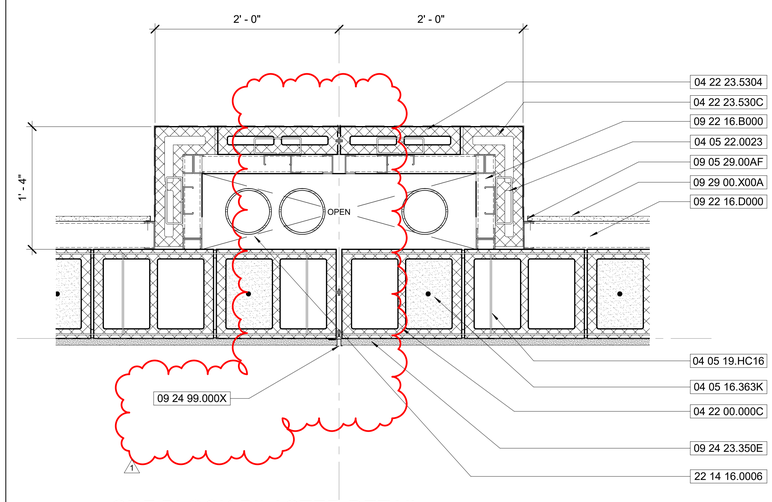
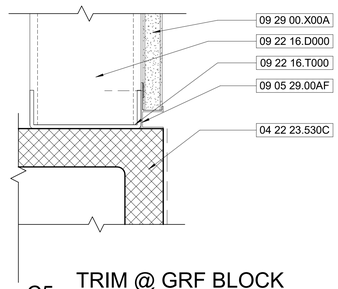
3/5/2020 4:29:34 PM



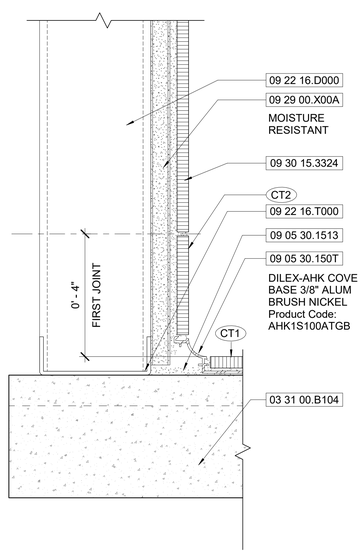
E5 GWB VERTICAL REVEAL
6" = 1'-0"



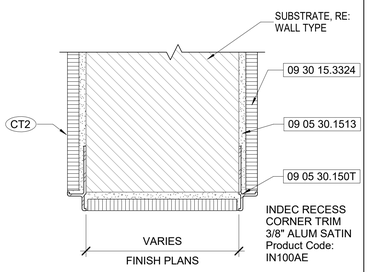
C3 GRF BLOCK PILASTER DETAIL
1 1/2" = 1'-0"



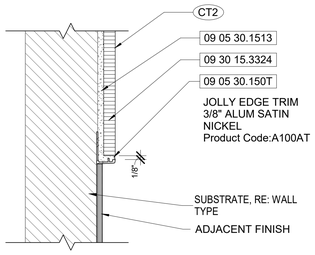
C5 TRIM @ GRF BLOCK
6" = 1'-0"



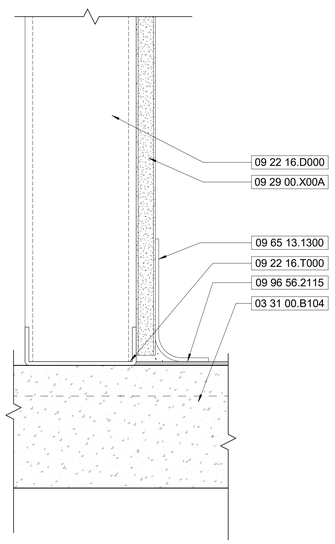
A1 LARGE FORMAT WALL TILE
6" = 1'-0"



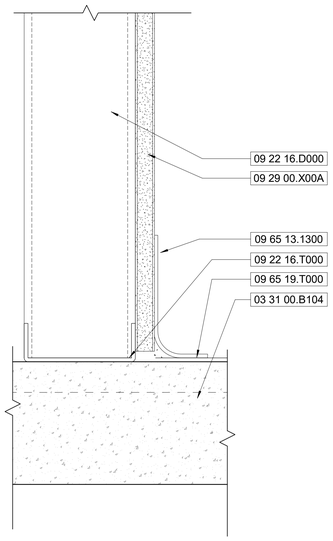
B2 TYPICAL TILE WALL END
6" = 1'-0"



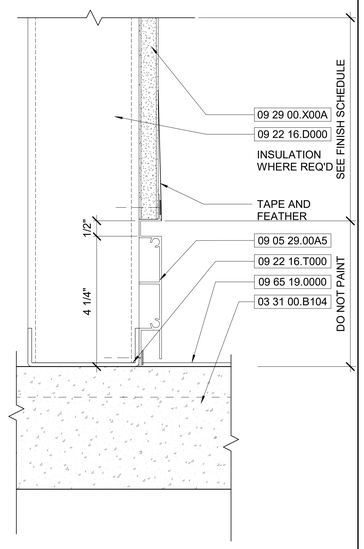
A2 TYP. TILE TERMINATION
6" = 1'-0"



A3 VINYL WALL BASE - HPC
6" = 1'-0"



A4 VINYL WALL BASE - VCT
6" = 1'-0"



A5 ALUM. WALL BASE - LVT
6" = 1'-0"

SCALE: 1 1/2" = 1'-0"
0 2" 4" 8" 16"

SCALE: 6" = 1'-0"
0 1/2"1" 2" 4"

KEYNOTES

NO.	
03 31 00.B104	TYP. 4" STRUCTURAL SLAB-ON-GRADE, SEE STRUCTURAL.
04 05 16.363K	TYP. FILL CELL MASONRY W/ 3000 PSI GROUT.
04 05 19.HC16	TYP. MASONRY HORIZONTAL GALVANIZED WIRE REINFORCING @ 16" O.C. MAX
04 05 22.0023	TYP. MASONRY WALL TIES @ 16" OC, VERT. & HORZ.
04 22 00.000C	TYP. 12" NOMINAL CONCRETE MASONRY UNIT
04 22 23.530C	TYP. BURNISHED CORNER CONCRETE MASONRY UNIT
04 22 23.5304	TYP. 4" BURNISHED CONCRETE MASONRY UNIT
09 05 29.00A5	TYP. ALUMINUM GYPSUM BOARD REVEAL BASE ACCESSORY.
09 05 29.00AF	TYP. ALUMINUM GYPSUM BOARD 'F' REVEAL ACCESSORY.
09 05 30.150T	TYP. ALUM. TRIM EXTRUSION FOR PROCELIAN STONE TILE TRANSITION.
09 05 30.1513	TYP. PROCELIAN STONE TILE THIN-SET MATERIAL, SEE SPECIFICATIONS.
09 22 16.B000	TYPICAL 2 1/2" GALV. METAL STUD FRAMING @ 24" OC UNO.
09 22 16.D000	TYPICAL 3 5/8" GALV. METAL STUD FRAMING @ 24" OC UNO.
09 22 16.T000	TYPICAL GALV. METAL TRACK RUNNER CONT.
09 24 23.350E	TYP. 7/8", (3) LAYER SMOOTH CEMENT STUCCO PLASTERING.
09 24 99.000X	TYP. CEMENT PLASTERING EXPANSIN CHANNEL W/ 1/2" REVEAL SCREED ACESSORY.
09 29 00.X00A	TYPICAL 5/8" TYPE 'X' GYPSUM WALL BOARD
09 30 15.3324	TYP. 12" X 24" RECTIFIED, PROCELIAN STONE WALL TILING.
09 65 13.1300	TYP. 4" VINYL COVE BASE; SEE SCHEDULE/
09 65 19.0000	TYP. LUXARY VINYL COMPOSITION TILE, SEE SCHEDULE.
09 65 19.T000	TYP. VINYL COMPOSITION TILE; SEE SCHEDULE.
09 96 56.2115	TYP. TEXTURED EPOXY FLOOR HIGH PERFORMANCE COATING.
22 14 16.0006	TYP. 6" STORM WATER LEADER, SEE PLUMBING, SUPPORT AS REQUIRED TO 12" CMU ONLY.

C19-2811- AP
Construction of Satellite Concourse 'C'

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AA-C002208
ULM 30B-F TYPE PROPERTY
MIGUEL A MARTIN
FL AR-98279

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	AS NOTED

Drawing Title:

WALL FINISH DETAILS

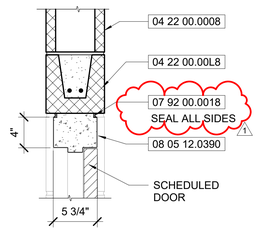
BID DOCUMENTS

Drawing No.:

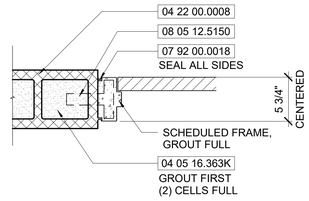
A864

BIM 360://Design of Satellite Concourse/VPS-MLM_A.rvt

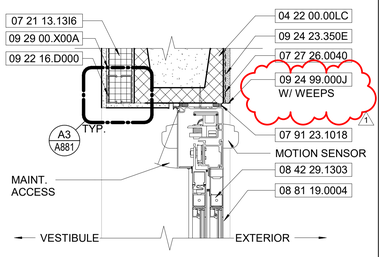
3/5/2020 4:29:46 PM



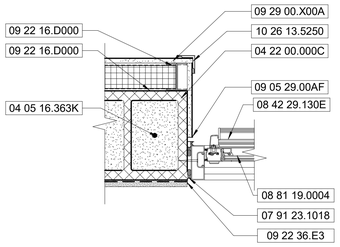
E4 HEAD @ CMU (ii)
1 1/2" = 1'-0"



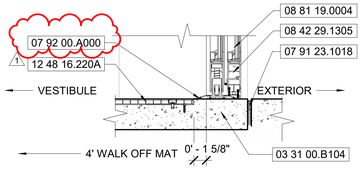
E5 JAMB @ CMU
1 1/2" = 1'-0"



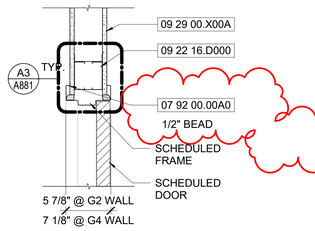
B1 EXT. SLIDING DOOR HEAD
1 1/2" = 1'-0"



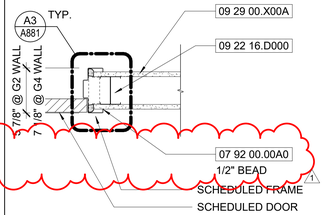
B2 EXT. SLIDING DOOR JAMB
1 1/2" = 1'-0"



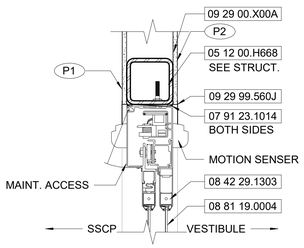
B3 EXT. SLIDING DOOR SILL
1 1/2" = 1'-0"



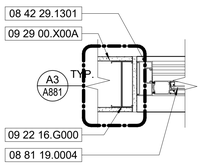
D4 HEAD @ GWB
1 1/2" = 1'-0"



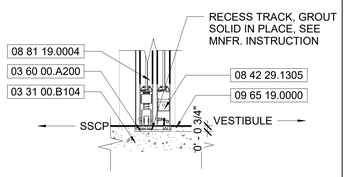
D5 JAMB @ GWB
1 1/2" = 1'-0"



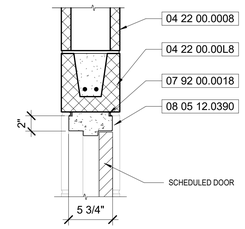
C1 INT. SLIDING DOOR HEAD
1 1/2" = 1'-0"



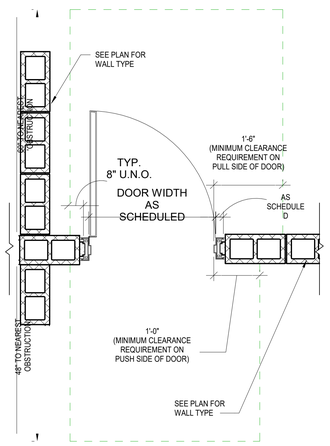
C2 INT. SLIDING DOOR JAMB
1 1/2" = 1'-0"



C3 INT. SLIDING DOOR SILL
1 1/2" = 1'-0"

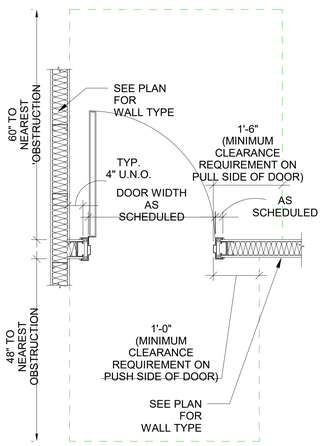


C4 HEAD @ CMU (i)
1 1/2" = 1'-0"



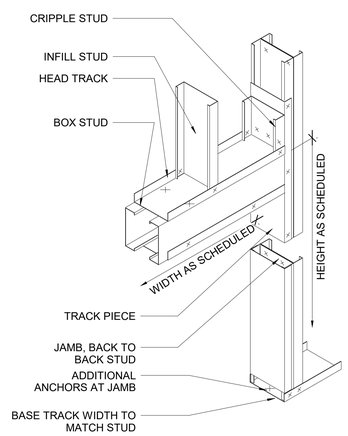
NOTE: MINIMUM CLEARANCES TO OBSTRUCTIONS SHOWN FOR FRONTAL APPROACH. SEE FBC: ACCESSIBILITY FOR ALTERNATE DOOR APPROACH CLEARANCES

A1 DOOR MOUNTING DETAIL
3/4" = 1'-0"



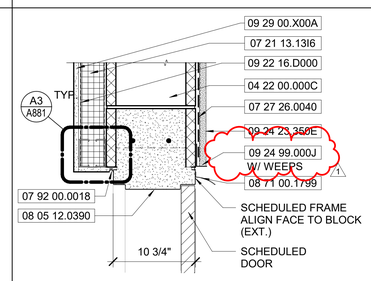
NOTE: MINIMUM CLEARANCES TO OBSTRUCTIONS SHOWN FOR FRONTAL APPROACH. SEE FBC: ACCESSIBILITY FOR ALTERNATE DOOR APPROACH CLEARANCES

A2 DOOR MOUNTING DETAIL
3/4" = 1'-0"

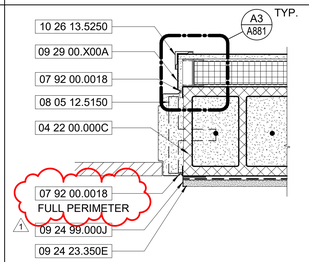


NOTE: EACH D0OR TO HAVE (5) FIVE ANCHORS PER JAMB

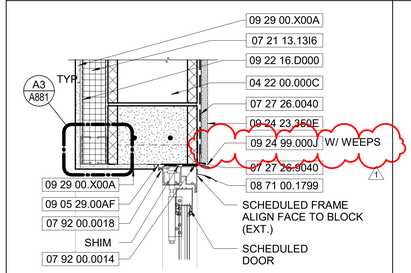
A3 DOOR FRAMING DETAIL
N.T.S.



B4 HEAD @ STUCCO
1 1/2" = 1'-0"



B5 JAMB @ STUCCO
1 1/2" = 1'-0"



A4 HEAD @ FOLDING
1 1/2" = 1'-0"

KEYNOTES

NO.	
03 31 00.B104	TYP. 4" STRUCTURAL SLAB-ON-GRADE, SEE STRUCTURAL.
03 60 00.A200	TYPICAL FILL SOLID W/ GROUT
04 05 16.363K	TYP. FILL CELL MASONRY W/ 3000 PSI GROUT.
04 22 00.000C	TYP. 12" NOMINAL CONCRETE MASONRY UNIT
04 22 00.00L8	TYP. 8" NOM. LINTEL CONCRETE MASONRY UNIT.
04 22 00.00LC	TYP. 12" NOM. LINTEL CONCRETE MASONRY UNIT.
04 22 00.0008	TYP. 8" NOMINAL CONCRETE MASONRY UNIT.
05 12 00.H668	TYP. HSS 6X6X1/2 STRUCTURAL STEEL FRAMING, SEE STRUCTURAL.
07 21 13.13I6	TYP. 3" THICK, POLYISOCYANURATE RIGID FOAM BOARD INSULATION.
07 27 26.0040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER.
07 27 26.9040	TYP. 40 MILL THICK FLUID-APPLIED MEMBRANE VAPOR RETARDING AIR BARRIER JOINT REINFORCEMENT SELF ADHEARING SHEET.
07 91 23.1014	TYP. 1/4" BACKER ROD WITH JOINT SEALANT, CONT.
07 91 23.1018	TYP. 1/2" BACKER ROD WITH JOINT SEALANT, CONT.
07 92 00.00A0	TYP. JOINT SEALANT, FULL PERIMETER.
07 92 00.0014	TYP. 1/4" JOINT SEALANT, CONT.
07 92 00.0018	TYP. 1/2" JOINT SEALANT, CONT.
07 92 00.A000	TYPICAL BED OF SEALANT
08 05 12.0390	TYP. FILL FRAME SOLID WITH GROUT.
08 05 12.5150	TYP. (5) MASONRY TIE ANCHORS PER JAMB.
08 42 29.130E	TYP. ALUMINUM FRAMED AUTOMATIC ENTRANCE PANIC EGRESS HARDWARE.
08 42 29.1301	TYP. ALUMINUM FRAMED AUTOMATIC ENTRANCE JAMB.
08 42 29.1303	TYP. ALUMINUM FRAMED AUTOMATIC ENTRANCE HEADER.
08 42 29.1305	TYP. ALUMINUM FRAMED AUTOMATIC ENTRANCE SILL.
08 71 00.1799	TYP. DOOR DRIP HARDWARE AS SCHEDULED.
08 81 19.0004	TYP. 1/4" CLEAR TEMPERED GLAZING.
09 05 29.00AF	TYP. ALUMINUM GYPSUM BOARD 'F' REVEAL ACCESSORY.
09 22 16.D000	TYPICAL 3 5/8" GALV. METAL STUD FRAMING @ 24" OC UNO.
09 22 16.G000	TYPICAL 6" GALV. METAL STUD FRAMING @16" OC UNO.
09 22 36.E3	5/8" "L" CASING BEAD
09 24 23.350E	TYP. 7/8", (3) LAYER SMOOTH CEMENT STUCCO PLASTERING.
09 24 99.000J	TYP. CEMENT PLASTERING 'J' TRIM ACESSORY.
09 29 00.X00A	TYPICAL 5/8" TYPE 'X' GYPSUM WALL BOARD
09 29 99.560J	TYP. GALV. GWB ASSEMBLY 'J' CASING BEAD TRIM ACCESSORY.
09 65 19.0000	TYP. LUXARY VINYL COMPOSITION TILE, SEE SCHEDULE.
10 26 13.5250	TYP. 2" BRUSHED ALUMINUM WALL CORNER GUARD.
12 48 16.220A	TYP. 5/8" SS 304 WALKOFF ENTRY MAT.

SCALE: 3/4" = 1'-0"
0 4" 8" 16" 32"

SCALE: 1 1/2" = 1'-0"
0 2" 4" 8" 16"

OKALOOSA COUNTY

FLY VPS

C19-2811- AP
Construction of Satellite Concourse 'C'

MLM-MARTIN ARCHITECTS, INC.
668 N. ORLANDO AVE.
SUITE 107
MAITLAND, FL 32751
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407.894.1338 (FAX)
WWW.MLM-MARTIN.COM
AA-C002208
OLM 30B-F TYPE PROPERTY
MIGUEL A MARTIN
FL AR-98279

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	AS NOTED

Drawing Title:

DOOR DETAILS

BID DOCUMENTS

Drawing No.:

A881

BIM 360://Design of Satellite Concourse/VPS-MLM_A.rvt

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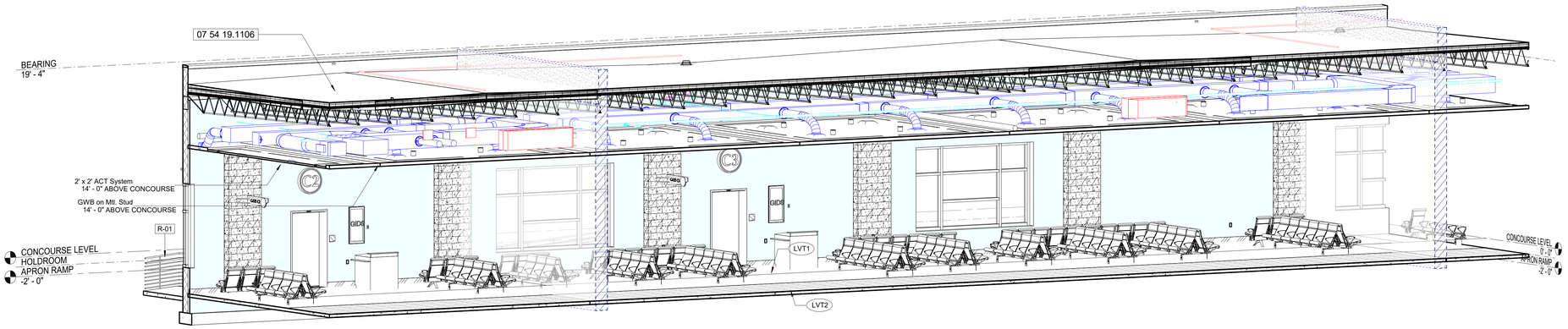
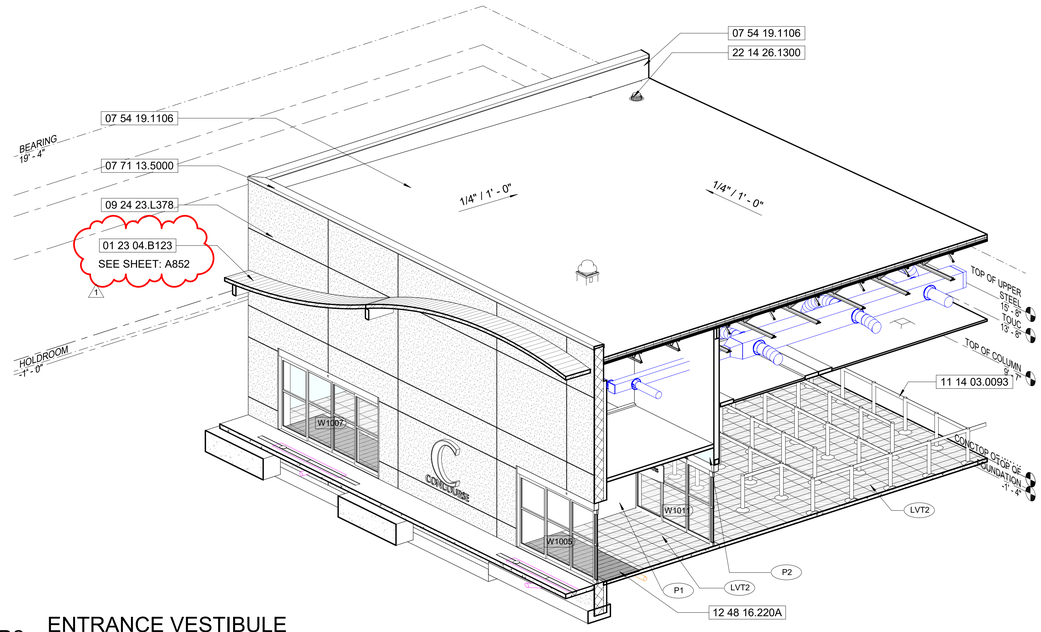


D1 HOLDROOM CROSSSECTION



B2 ENTRANCE VESTIBULE

KEYNOTES

NO.	
01 23 04.B123	TYP. ALTERNATE 4 CANOPY CONTRUCTION WORK.
07 54 19.1106	TYP. COLD ADHESIVE APPLIED, 60 MIL PVC MEMBRAINE ROOFING.
07 71 13.5000	TYP. ALUMNINUM MANUFACTURED COPING SYSTEM, INSTALLED PER MNFR. INSTRUCTIONS.
09 24 23.L378	TYP. SMOOTH 7/8" STUCCO, 3 COAT SYSTEM
11 14 03.0093	RETRACTABLE BELT STANCHION, NIC.
12 48 16.220A	TYP. 5/8" SS 304 WALKOFF ENTRY MAT.
22 14 26.1300	TYP. FACILITY STORM ROOF DRAIN W/ INTRIGAL OVERFLOW, SEE PLUMBING.

C19-2811- AP
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of Satellite
Concourse 'C'

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ALM 300 & TYPE PROPERTY
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FL AR-98279

SEAL

Revisions

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Project No.:	MLM-19672
Designed By:	MLM, MAM
Drawn By:	ST, CC, DM, CB
Checked By:	MAM
Issue Date:	21-JAN-2020
Drawing Scale:	NO SCALE

Drawing Title:

PERSPECTIVE BUILDING SECTIONS

BID DOCUMENTS

Drawing No.:

A901

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3/5/2020 4:30:58 PM

GENERAL ELECTRICAL NOTES:

1. ELECTRICAL INSTALLATION SHALL COMPLY WITH THE FOLLOWING CODES AND STANDARDS:
   - NFPA 70 – NATIONAL ELECTRICAL CODE (NEC 2014)
   - NFPA 70E – STANDARD FOR ELECTRICAL SAFETY IN THE WORK PLACE
   - NESC – NATIONAL ELECTRICAL SAFETY CODE
   - IBC – INTERNATIONAL BUILDING CODE
   - IEEE – NATIONAL ELECTRICAL SAFETY CODE
   - NEIS – NATIONAL ELECTRICAL INSTALLATION STANDARDS
   - AHT - LOCAL AUTHORITY HAVING JURISDICTION
2. CONTRACTOR SHALL IN A WORKMANLIKE MANNER, PROVIDE A COMPLETE OPERABLE SYSTEM; OUTLINE DESCRIPTION AND DIAGRAMMATIC REPRESENTATION OF SYSTEM OPERATION AND EQUIPMENT DOESN'T LIMIT CONTRACTOR LIABILITY FOR INSTALLATION OF A COMPLETE AND OPERABLE SYSTEM.
3. ARCHITECTURAL FEATURES SHOWN ON THESE DRAWINGS ARE FOR BACKGROUND INFORMATION ONLY. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ACTUAL BUILDING CONSTRUCTION OF WALLS AND CURBS. REFER TO MECHANICAL DRAWINGS FOR ACTUAL LOCATIONS OF MECHANICAL EQUIPMENT.
4. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE GENERAL ARRANGEMENTS OF THE VARIOUS SYSTEMS AND APPROXIMATE LOCATIONS OF THE EQUIPMENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THAT THERE IS ADEQUATE SPACE AT THE LOCATIONS INDICATED FOR ALL EQUIPMENT PRIOR TO INSTALLATION OF SAME. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL DIMENSIONS IN THE FIELD, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
5. COORDINATE ALL WORK WITH OTHER DIVISION TRADES; COORDINATE AND OBTAIN ELECTRICAL SERVICE WITH LOCALELECTRIC UTILITY (EVERSOURCE); COORDINATE ALL REQUIRED POWER OUTAGES WITH THE RESPONSIBLE ENTITIES.
6. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ANY NECESSARY PERMITS PRIOR TO BEGINNING OF WORK. AT COMPLETION OF THE WORK, THE ELECTRICAL CONTRACTOR SHALL ADJUST AND TEST ALL SYSTEMS AT THE DIRECTION OF THE OWNER AND OBTAIN AND DELIVER A FINAL CERTIFICATE OF APPROVAL FROM THE AUTHORITY HAVING JURISDICTION (AHJ).
7. CONTRACTOR SHALL ROUTE CONDUITS TO AVOID OBSTRUCTIONS AND PROVIDE ANY ADDITIONAL SUPPORT NECESSARY TO COMPLY WITH THE NEC.
8. CONTRACTOR SHALL INSTALL ALL ELECTRICAL EQUIPMENT WITH WORK SPACE CLEARANCE PER SECTION 110.26 OF THE NEC.
9. ALL CIRCUITS AND RACEWAYS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR (EGC). METALLIC RACEWAYS SHALL NOT BE USED AS AN EGC.
10. ALL BRANCH WIRING, DEVICES, JUNCTION BOXES, CONDUITS, EQUIPMENT, ETC. SHALL BE GROUNDED IN ACCORDANCE WITH THE NEC ARTICLE 250.
11. ALL EQUIPMENT SHALL BE LISTED BY UNDERWRITERS' LABORATORIES, INC. AND SHALL BEAR THE U.L. LABEL. PROVIDE ONLY NEW, UNDAMAGED EQUIPMENT.
12. CONDUIT INSTALLED INSIDE BUILDINGS SHALL BE ELECTRICAL METALLIC TUBING (EMT); CONDUIT INSTALLED OUTSIDE BUILDINGS SHALL BE RIGID GALVANIZED STEEL (RGS); CONDUIT INSTALLED UNDERGROUND SHALL BE RIGID POLY-VINYL CHLORIDE (PVC), SCHEDULE 40.
13. CONNECTION TO MOTOR COMPRESSOR AND VACCUM, TERMINAL BOXES, SOLENOID DEVICES HAVING ADJUSTABLE MOUNTING FACILITIES SUBJECT TO VIBRATION SHALL BE MADE IN LIQUID-TIGHT FLEXIBLE CONDUIT (LFC). A BONDING JUMPER SHALL BE PROVIDED WHENEVER A FLEXIBLE CONDUIT IS EMPLOYED.
14. ELECTRICAL CONNECTION TO ALL VIBRATING EQUIPMENT, SUCH AS MOTORS, COMPRESSORS, VACCUMES WITH ADJUSTABLE MOUNTING SHALL BE PROVIDED WHENEVER A FLEXIBLE CONDUIT IS EMPLOYED.
15. ALL WIRING METHODS SHALL ADHERE STRICTLY TO THE NEC. MINIMUM CONDUIT SIZE SHALL BE ¾"; MINIMUM WIRE SIZE SHALL BE #12AWG. ALL POWER CONDUCTORS INSULATION SHALL BE TYPE RHW, THW, THHW, THWN FOR 600V 75° TERMINATION AND THHN, THHW,THWN-2,RHW-2 FOR 600V 90° TERMINATION.
16. RACEWAYS IN ELECTRICALLY CLASSIFIED AREAS SHALL BE IN RIGID CONDUIT WITH SEALS.
17. ALL CIRCUITS ARE TO BE CLEARLY IDENTIFIED AND LABELED AT THE PANEL. PANEL SCHEDULES ARE TO BE TYPED AND SHALL BE COMPLETE AT TIME OF FINAL PUNCH LIST WALK THROUGH. ALL MAJOR PIECES OF ELECTRICAL EQUIPMENT SHALL BE LABELED WITH LAMINATE AND ENGRAVED LETTERING.
18. NO FEEDER OR BRANCH CIRCUIT WIRING SHOWN SHALL BE ALTERED OR CHANGED WITHOUT APPROVAL BY THE ENGINEER.
19. ALL CIRCUIT PROTECTIVE DEVICES SHALL HAVE THE REQUIRED RATING AND INTERRUPTING CAPACITY EQUAL TO OR GREATER THAN THE AVAILABLE SHORT-CIRCUIT CURRENT AT ITS SUPPLY TERMINAL; MINIMUM INTERRUPTING CAPACITY SHALL BE 10,000A. SYMMETRICAL A.I.C FOR 120/208V SYSTEMS, 120/240V SYSTEM AND 14,000A. SYMMETRICAL A.I.C FOR 277/480V SYSTEMS. REFER TO PANEL SCHEDULES FOR A.I.C RATINGS.
20. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF INSTALLATION PRINTS. THE CONTRACTOR SHALL RECORD ON THESE PRINTS ALL DEVIATIONS FROM THE CONTRACT DRAWINGS IN CONDUIT SIZING, ELECTRICAL LOADS AND CIRCUITS. AT THE COMPLETION OF TE WORK, THE CONTRACTOR SHALL SUBMIT THESE PRINTS TO THE OWNER FOR INCORPORATION INTO THE FINAL RECORD DRAWINGS.

ELECTRICAL POWER LEGEND

SYMBOL	DESCRIPTION
	WALL OUTLET BOX AND 20 AMP SINGLE RECEPTACLE
	WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE
	TWO GANG WALL OUTLET BOX AND TWO 20 AMP DUPLEX RECEPTACLES
1 WP	WALL OUTLET BOX AND 20 AMP GFI DUPLEX RECEPTACLE WP INDICATES WEATHERPROOF
IG	WALL OUTLET BOX AND 20 AMP ISOLATED GROUND DUPLEX RECEPTACLE (ORANGE DEVICE)
UPS	WALL OUTLET BOX AND 20 AMP ISOLATED GROUND DUPLEX RECEPTACLE (ORANGE DEVICE). PLATE TO BE STAINLESS STEEL ENGRAVED TO READ "UPS POWER".
	WALL OUTLET BOX AND RECESSED 15 AMP CLOCK RECEPTACLE STAINLESS STEEL
J	JUNCTION BOX MOUNTED IN FLOOR FOR POWER FEED TO EQUIPMENT. COORDINATE LOCATION OF JUNCTION BOX WITH ASSOCIATED EQUIPMENT AND PROVIDE ALL FINAL CONNECTIONS.
	PULLBOX OR MANHOLE, AS NOTED.
0.5	MOTOR. NUMBER INDICATES HORSEPOWER
R	RELAY, AS NOTED
	PHOTO CELL
	METER, AS NOTED
	HEATER/ELECTRICAL RESISTANCE, AS NOTED
	BUSBAR
	MAGNETIC MOTOR STARTER, MOTOR CONTROLLER OR CONTACTOR, AS NOTED
	DISCONNECT SWITCH, SIZE AS NOTED
	DISCONNECT SWITCH FUSED, SIZE AS NOTED
	MOTOR STARTER/DISCONNECT SWITCH, SIZE AS NOTED
T	TRANSFORMER
ATS	AUTOMATIC TRANSFER SWITCH
	CONTACTOR, FULL VOLTAGE NON-REVERSING
	DUAL ELEMENT TIME DELAY FUSE (DETD)
	FUSED DISCONNECT SWITCH HEAVY DUTY, NEMA TYPE 1 ENCLOSURE, UNLESS OTHERWISE INDICATED. DUAL ELEMENT TIME DELAY FUSE
1	FLOOR MOUNTED OUTLET BOX WITH 20 AMP DUBLEX RECEPTACLE

SYMBOL	DESCRIPTION
	NORMAL ELECTRICAL PANEL
	EMERGENCY ELECTRICAL PANEL
	STANDBY ELECTRICAL PANEL
	BRANCH CIRCUIT CONDUIT CONCEALED BELOW SLAB OR UNDERGROUND
E	EMERGENCY SYSTEM BRANCH CIRCUIT CONDUIT, CONCEALED (LIFE SAFETY BRANCH)
C	LEGALLY REQUIRED STANDBY SYSTEM BRANCH CIRCUIT CONDUIT, CONCEALED (CRITICAL BRANCH)
O	OPTIONAL STANDBY SYSTEM BRANCH CIRCUIT CONDUIT, CONCEALED (EQUIPMENT BRANCH)
IG	ISOLATED POWER SYSTEM CONDUIT, CONCEALED
UPS	UNINTERUPTABLE POWER SYSTEM BRANCH CIRCUIT WITH ISOLATED GROUND ON EMERGENCY SYSTEM (LIFE SAFETY BRANCH)
PP-1: 1,3,5	HOMERUN TO PANEL INDICATES BRANCH CIRCUIT(S) INDICATES PANELBOARD
	CONDUIT CAPPED OFF
	CONDUIT CONTINUED
	CONDUIT RUN UP
	CONDUIT RUN DOWN
	CONDUIT SEAL-OFF FITTING
G	GROUND WIRE, CONCEALED
	GROUND OR GROUND ROD AS NOTED
	AIR TERMINAL
	THERMAL MAGNETIC CIRCUIT BREAKER
	MOTOR OVERLOADS
	GROUND ROD
	TELE/POWER POLE
	SPECIAL SINGLE RECEPTACLE - TYPE 5-20R UNLESS OTHERWISE NOTED

ELECTRICAL LIGHTING LEGEND

SYMBOL	DESCRIPTION
A a	LIGHTING FIXTURE • A - FIXTURE TYPE • a - SWITCH OR CONTROL CIRCUIT • HALF SHADED INDICATES EMERGENCY CIRCUIT
S	WALL SWITCH, SINGLE POLE, SINGLE THROW, 20A, 120/277V. WALL MOUNT 48" AFF TO CENTERLINE OF DEVICE. LETTER INDICATES LIGHT FIXTURES CONTROLLED IF GIVEN WITH BRUSHED STAINLESS STEEL FACEPLATE AND OF COMMERCIAL GRADE. 'D' INDICATES DIMMING CONTROL SWITCH. 'OS' INDICATES OCCUPANCY SENSOR.
S^{a}_{OS}	WALL SWITCH, SINGLE POLE, SINGLE THROW, 20A, 120/277V. WALL MOUNT 48" AFF TO CENTERLINE OF DEVICE. LETTER INDICATES LIGHT FIXTURES CONTROLLED IF GIVEN WITH BRUSHED STAINLESS STEEL FACEPLATE AND OF COMMERCIAL GRADE. 'D' INDICATES DIMMING CONTROL SWITCH. 'OS' INDICATES OCCUPANCY SENSOR.
S_{3}	3-WAY WALL SWITCH, 20A, 120/277V. WALL MOUNT 48" AFF TO CENTERLINE OF DEVICE WITH BRUSHED STAINLESS STEEL FACEPLATE AND OF COMMERCIAL GRADE.
S_{M3}	MOTOR RATED MANUAL STARTER SWITCH. WALL MOUNT 48" AFF TO CENTERLINE OF DEVICE. INDICATES NUMBER OF POLES (1-POLE IF NOT INDICATED).

SINGLE LINE LEGEND

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	TRANSFORMER
	MOTOR
M	ELECTRICAL METER
	CURRENT TRANSFORMER
N E	MANUAL TRANSFER SWITCH
VFD	VARIABLE-FREQUENCY DRIVE
	DISCONNECT SWITCH

ELECTRICAL ABBREVIATIONS

(E)	EXISTING TO REMAIN
(R)	REMOVE
(RE)	RELOCATE EXISTING
A	AMPERE
AC	ALTERNATING CURRENT
ACH	ABOVE COUNTER HEIGHT
ADA	AMERICANS WITH DISABILITIES ACT
AF	AMPERE FRAME
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AT	AMPERE TRIP
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BICSI	BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL, INC
BLDG	BUILDING
BLR	BOILER
C	CONDUIT
CAT	CATEGORY
CB	CIRCUIT BREAKER
CD	CANDELA
CKT	CIRCUIT
CLG	CEILING
CND	CONDUIT
COMM	COMMUNICATION
CU	COPPER
dB	DECIBEL
DISP.	DISPLAY
DP	DISTRIBUTION PANEL
EC	ELECTRICAL CONTRACTOR
ELP	EMERGENCY LIGHTING PANEL
EMT	ELECTRICAL METALLIC TUBING
ERP	EMERGENCY RECEPTACLE PANEL
FIDS	FLIGHT INFORMATION DISPLAY SYSTEM
FLA	FULL LOAD AMPS
FLMC	FLEXIBLE LIQUIDTIGHT METALLIC CONDUIT
FMC	FLEXIBLE METALLIC CONDUIT
G,GND	GROUND
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSE POWER
JB	JUNCTION BOX
KVA	KILOVOLTAMPERE
KW	KILOWATT
LCP	LIGHTING CONTROL PANEL
LP	LIGHTING PANEL
LPS	LOCKED POWER SUPPLY
LTG	LIGHTING
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
MTD	MOUNTED
NEC	NATIONAL ELETRICAL CODE
OPS	OPERATIONS
P	POLE
PCAIR	PRE COMPRESSED AIR
PH	PHASE
PP	POWER PANEL
PVC	POLYVINYL CHLORIDE
REC	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RP	RECEPTACLE PANEL
RVS	REDUCED VOLTAGE STARTER
SCH	SCHEDULE
SHD	MOTORIZED SHADES
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATION
STP	SHIELDED TWISTED PAIR
SW	SWITCH
TEMP	TEMPORARY
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
XFMR	TRANSFORMER

OKALOOSA COUNTY

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
Designed By:	BA
Drawn By:	
Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

ELECTRICAL LEGENDS, NOTES & ABBREVIATIONS

BID DOCUMENT

Drawing No.:

E000

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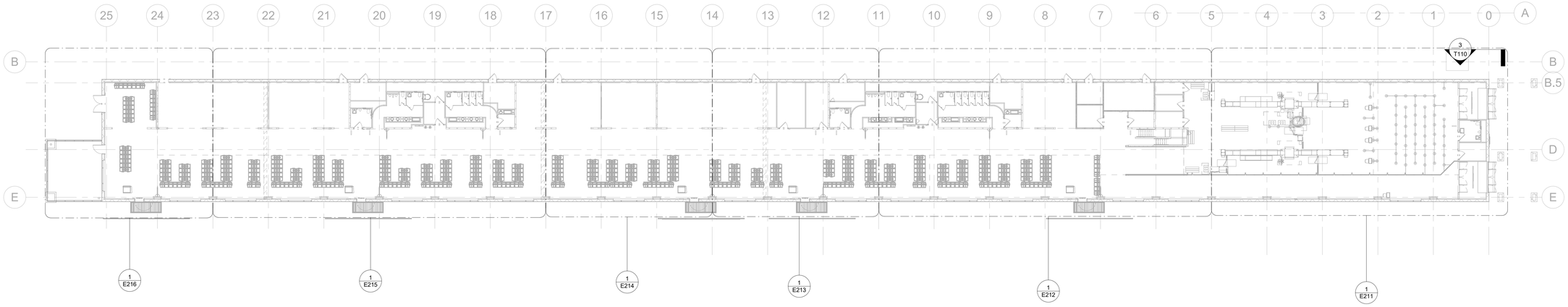
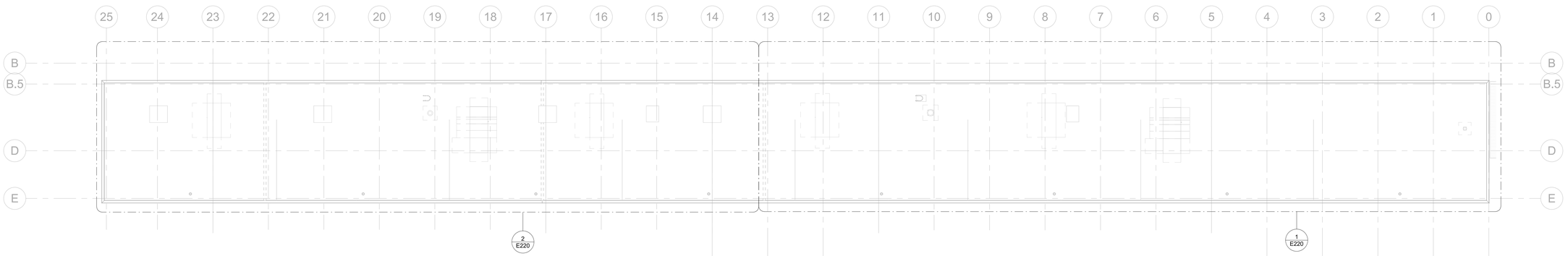
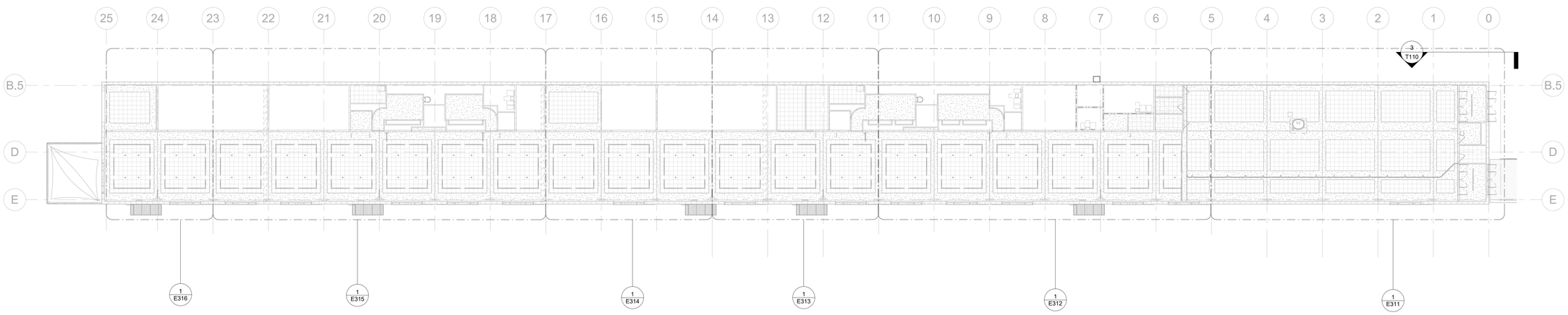


1 LEVEL 1 - POWER OVERALL
1" = 20'-0"



2 ROOF - POWER - OVERALL
1" = 20'-0"



3 LEVEL 1 - LIGHTING OVERALL
1" = 20'-0"

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Revisions

No.	Date	Description

Project No.:	**Project Number**
Designed By:	**BA**
Drawn By:	
Checked By:	**CMC**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

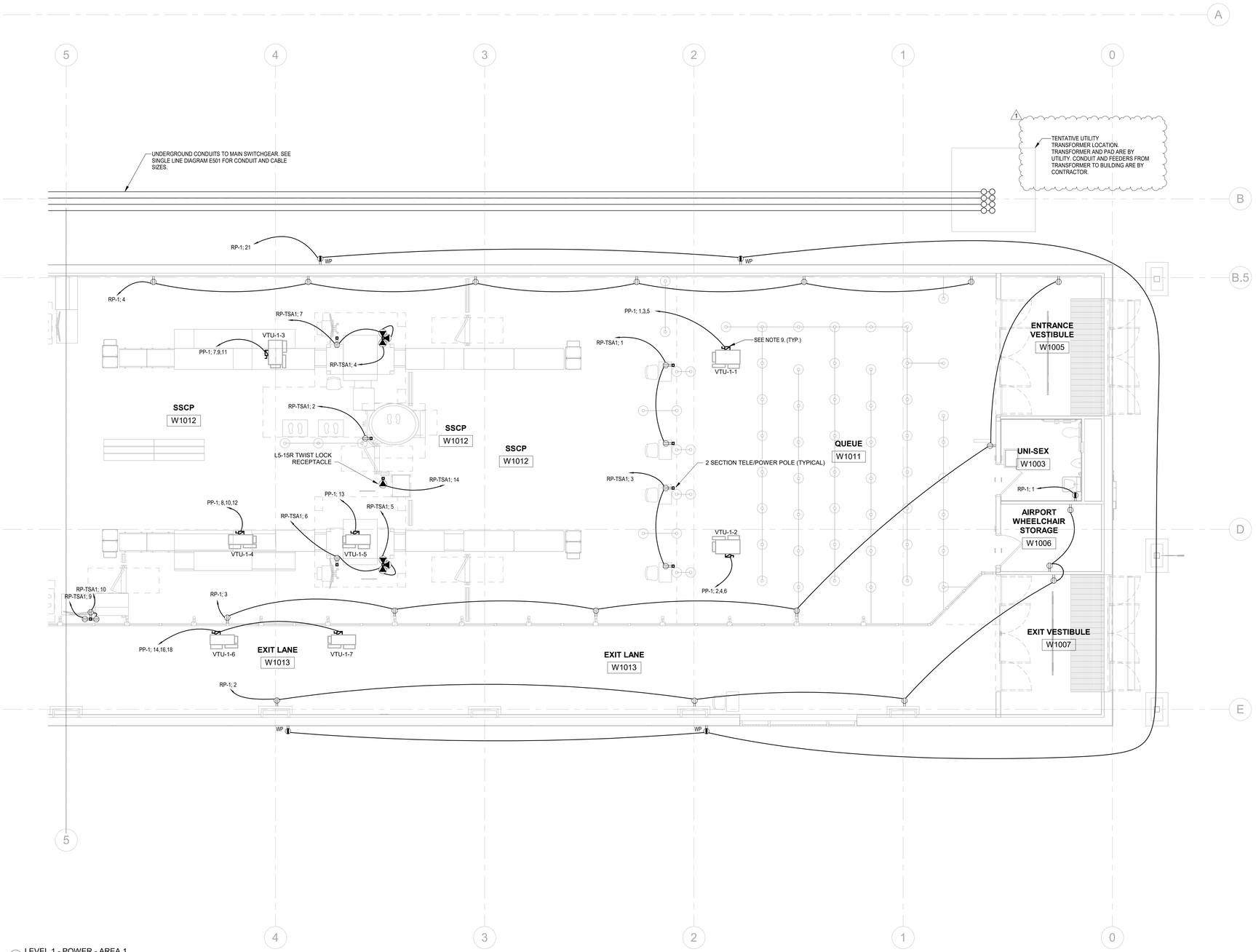
Drawing Title:

OVERALL
ELECTRICAL
FLOOR PLANS

BID DOCUMENT

Drawing No.:

E110



1 LEVEL 1 - POWER - AREA 1
3/16" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. SEE SHEET E000 FOR ELECTRICAL LEGEND, SYMBOLS, GENERAL NOTES & ABBREVIATIONS.
2. SEE SHEETS E601-E603 FOR SWITCHBOARD AND PANEL SCHEDULES.
3. SEE SHEET E604 FOR LIGHTING FIXTURE SCHEDULE.
4. SEE SHEET E801 FOR ELECTRICAL DETAILS.
5. REFER TO MECHANICAL DRAWINGS FOR MORE DETAILS ON HVAC EQUIPMENT.
6. FOR THE ACTUAL SERVICE ENTRANCE RUNS AND LOCATION OF PROPOSED GULF POWER UTILITY TRANSFORMER PAD, REFER TO THE CIVIL DRAWINGS PACKAGE.
7. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL 480V CABLES FROM THE SECONDARY SIDE OF THE SERVICE TRANSFORMERS TO THE MAIN SWITCHGEAR IN THE MAIN ELECTRICAL ROOM.
8. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA 3R.
9. VAV TERMINAL UNIT INTEGRAL FUSED DISCONNECT SWITCH PROVIDED BY UNIT MANUFACTURER.
10. COORDINATE MUFIDS RECEPTACLE MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.

ELECTRICAL - ADD ALTERNATE NOTES:

1. ELECTRICAL CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. INCLUDE MATERIALS AND LABOR COST FOR PANEL PP-2 (LOCATED IN ADD ALTERNATE #2) IN ADD ALTERNATE #1 BID PRICE. IF ADD ALTERNATE #1 IS SELECTED, BUT ADD ALTERNATE #2 IS NOT, ALL CIRCUITING FOR DEVICES WITHIN ADD ALTERNATE #1 SHALL BE CIRCUITED TO SPARE CIRCUIT BREAKERS IN PANELS IN ELECTRIC ROOM W1278.
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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
Designed By:	CMC
Drawn By:	JJS
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 1

BID DOCUMENT

Drawing No.:

E211

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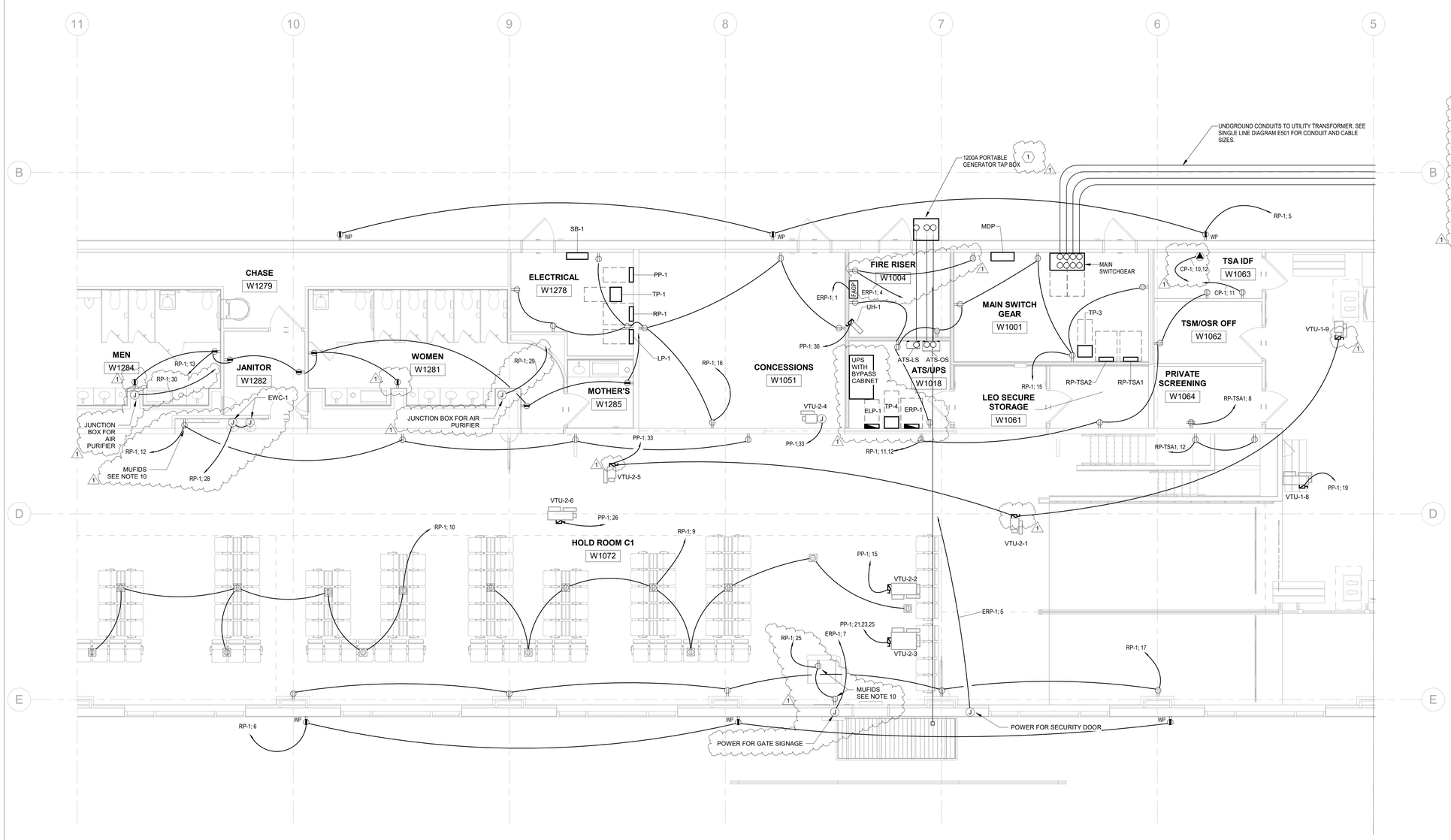

1 LEVEL 1 - POWER - AREA 2
3/16" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. SEE SHEET E000 FOR ELECTRICAL LEGEND, SYMBOLS, GENERAL NOTES & ABBREVIATIONS.
2. SEE SHEETS E601-E603 FOR SWITCHBOARD AND PANEL SCHEDULES.
3. SEE SHEET E604 FOR LIGHTING FIXTURE SCHEDULE.
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3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

KEYED NOTES

1	PROVIDE TAP BOX WITH NEMA 3R RATING. MOUNT ON PAD. PROVIDE ADDITIONAL LUGS FOR CONNECTION ON INTERIOR TO (2) MANUAL TRANSFER SWITCHES AS SHOWN ON SINGLE LINE DIAGRAM ON E501. PROVIDE PHASE ROTATION MONITOR KIT. PROVIDE POWERTRON 1200A UNIT OR APPROVED EQUAL. PROVIDE KIRK KEY INTERLOCK FEATURE WITH CONNECTION TO KIRK KEY AT SWITCHBOARD MAIN CIRCUIT BREAKER SO THAT ONLY ONE SOURCE CAN PROVIDE POWER TO THE BUILDING AT A TIME.

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Project No.:	Project Number
Designed By:	BA
Drawn By:	
Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	As indicated

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 2

BID DOCUMENT

Drawing No.:

E212

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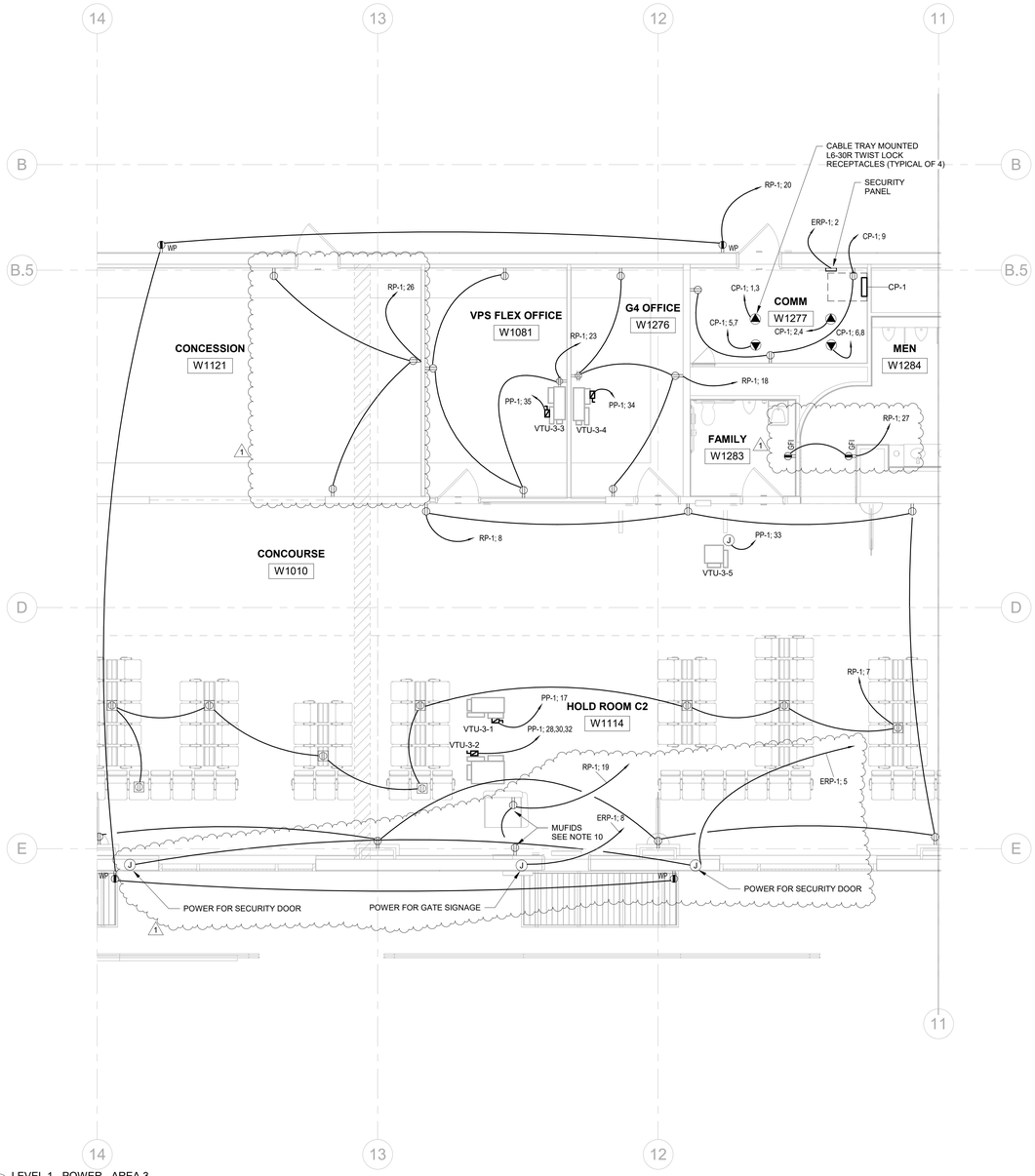

1 LEVEL 1 - POWER - AREA 3
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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Key Plan

Project No.:	Project Number
Designed By:	BA
Drawn By:	
Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:
ENLARGED FLOOR PLAN LEVEL 1 - AREA 3
DESIGN DEVELOPMENT

Drawing No.:
E213

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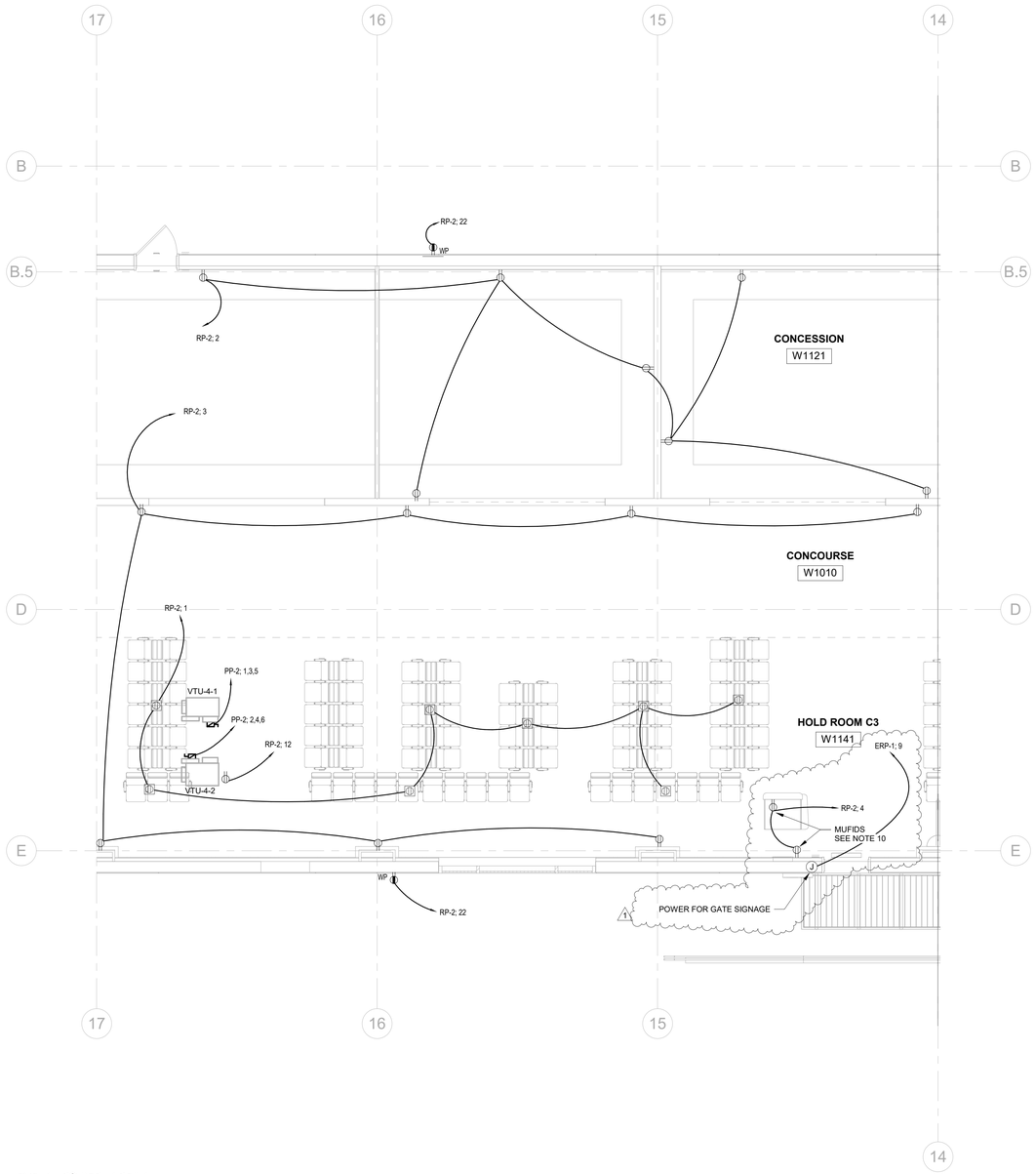

1 LEVEL 1 - POWER - AREA 4
3/16" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. SEE SHEET E000 FOR ELECTRICAL LEGEND, SYMBOLS, GENERAL NOTES & ABBREVIATIONS.
2. SEE SHEETS E601-E603 FOR SWITCHBOARD AND PANEL SCHEDULES.
3. SEE SHEET E604 FOR LIGHTING FIXTURE SCHEDULE.
4. SEE SHEET E801 FOR ELECTRICAL DETAILS.
5. REFER TO MECHANICAL DRAWINGS FOR MORE DETAILS ON HVAC EQUIPMENT.
6. FOR THE ACTUAL SERVICE ENTRANCE RUNS AND LOCATION OF PROPOSED GULF POWER UTILITY TRANSFORMER PAD, REFER TO THE CIVIL DRAWINGS PACKAGE.
7. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL 480V CABLES FROM THE SECONDARY SIDE OF THE SERVICE TRANSFORMERS TO THE MAIN SWITCHGEAR IN THE MAIN ELECTRICAL ROOM.
8. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA 3R.
9. VAV TERMINAL UNIT INTEGRAL FUSED DISCONNECT SWITCH PROVIDED BY UNIT MANUFACTURER.
10. COORDINATE MUFIDS RECEPTACLE MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.

1

ELECTRICAL - ADD ALTERNATE NOTES:

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3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

OKALOOSA COUNTY

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C19-2811-AP
Design of
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AA-C002208
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JOHN E. BURNS
LICENSE
No 62139
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**BA**
Drawn By:	
Checked By:	**CMC**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 4

BID DOCUMENT

Drawing No.:

E214

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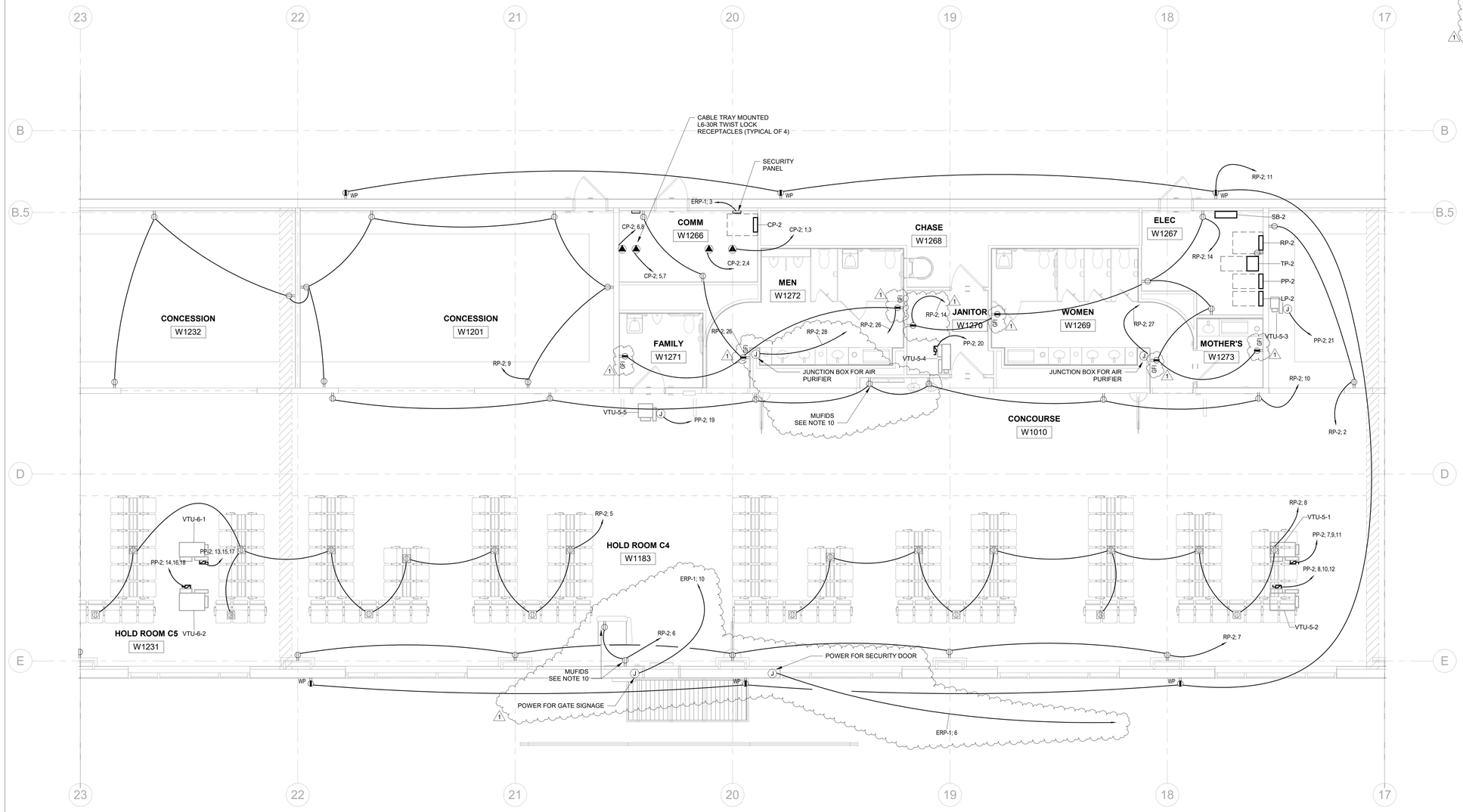

1 LEVEL 1 - POWER - AREA 5
3/16" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. SEE SHEET E000 FOR ELECTRICAL LEGEND, SYMBOLS, GENERAL NOTES & ABBREVIATIONS.
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Project No.:	Project Number
Designed By:	BA
Drawn By:	
Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 5

BID DOCUMENT

Drawing No.:

E215

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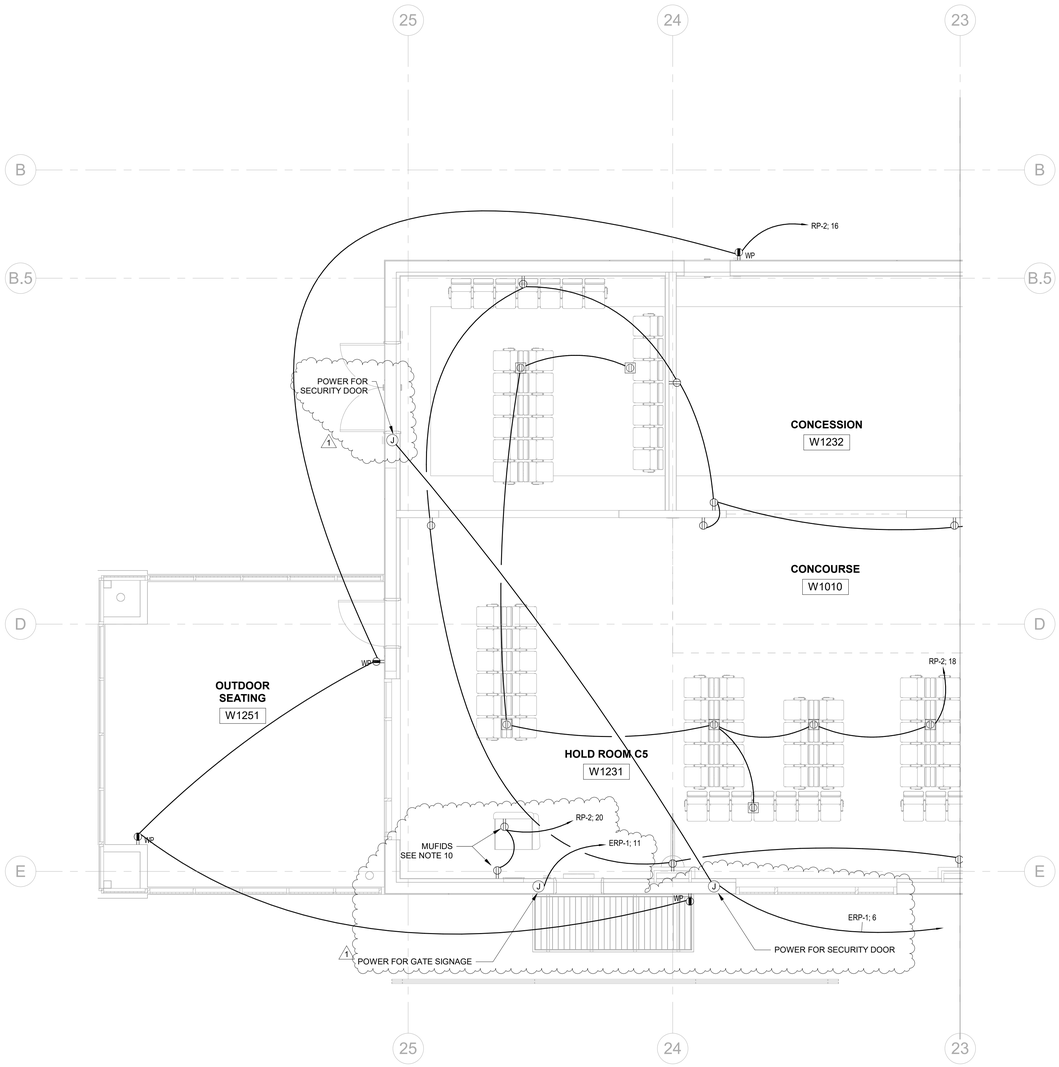

1 LEVEL 1 - POWER - AREA 6
3/16" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. SEE SHEET E000 FOR ELECTRICAL LEGEND, SYMBOLS, GENERAL NOTES & ABBREVIATIONS.
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OKALOOSA COUNTY

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Design of Satellite Concourse 'C'

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Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 6

BID DOCUMENT

Drawing No.:

E216

BIM 360://Design of Satellite Concourse\VPS_ETSTCFA.rvt

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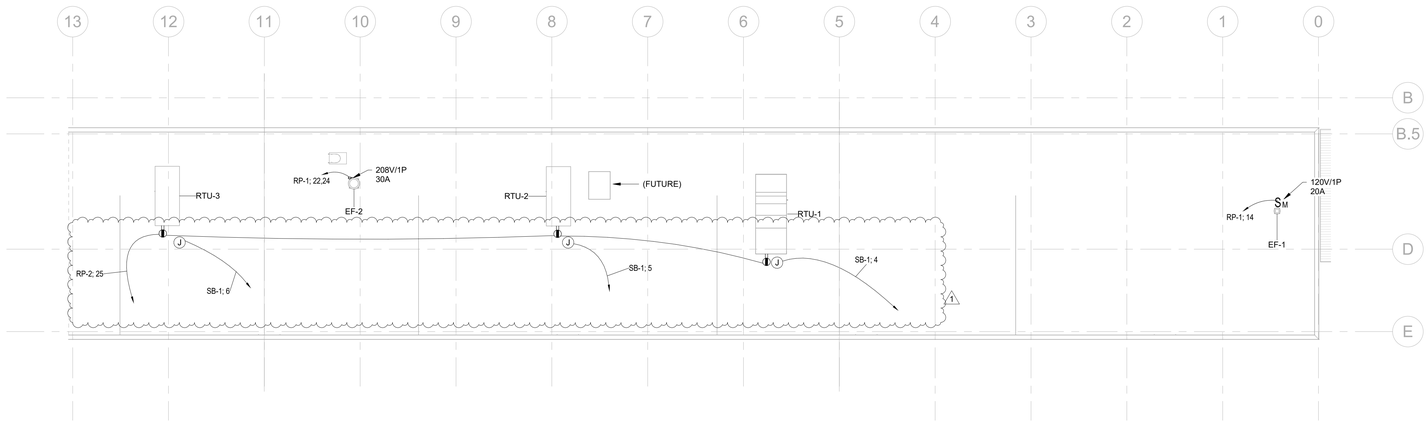
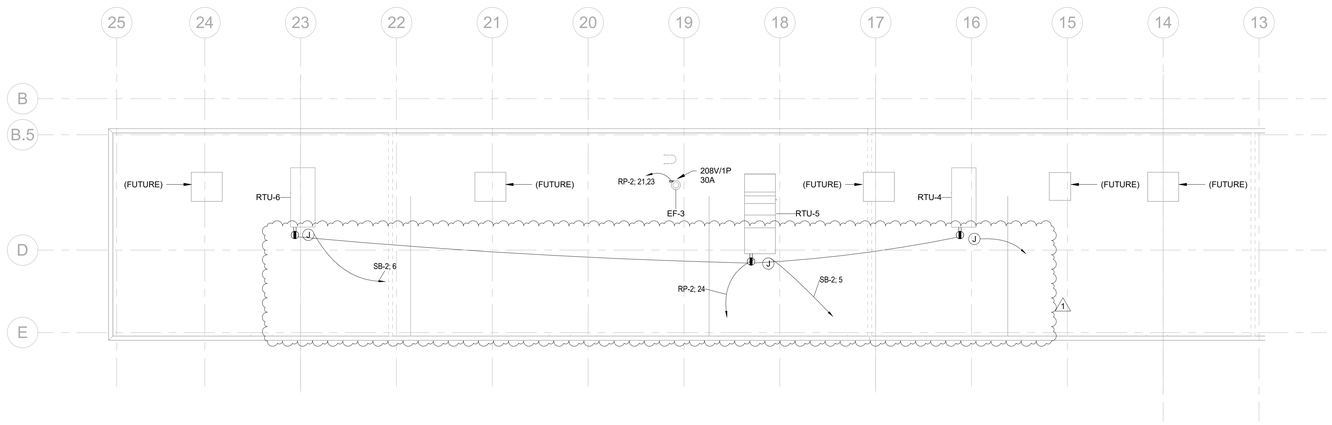


1 ROOF - POWER - BASE BID
1/16" = 1'-0"



2 ROOF - POWER - ALTERNATES
1/16" = 1'-0"

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OKALOOSA COUNTY

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Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	As indicated

Drawing Title:

ENLARGED FLOOR PLAN ROOF LEVEL

BID DOCUMENT

Drawing No.:

E220

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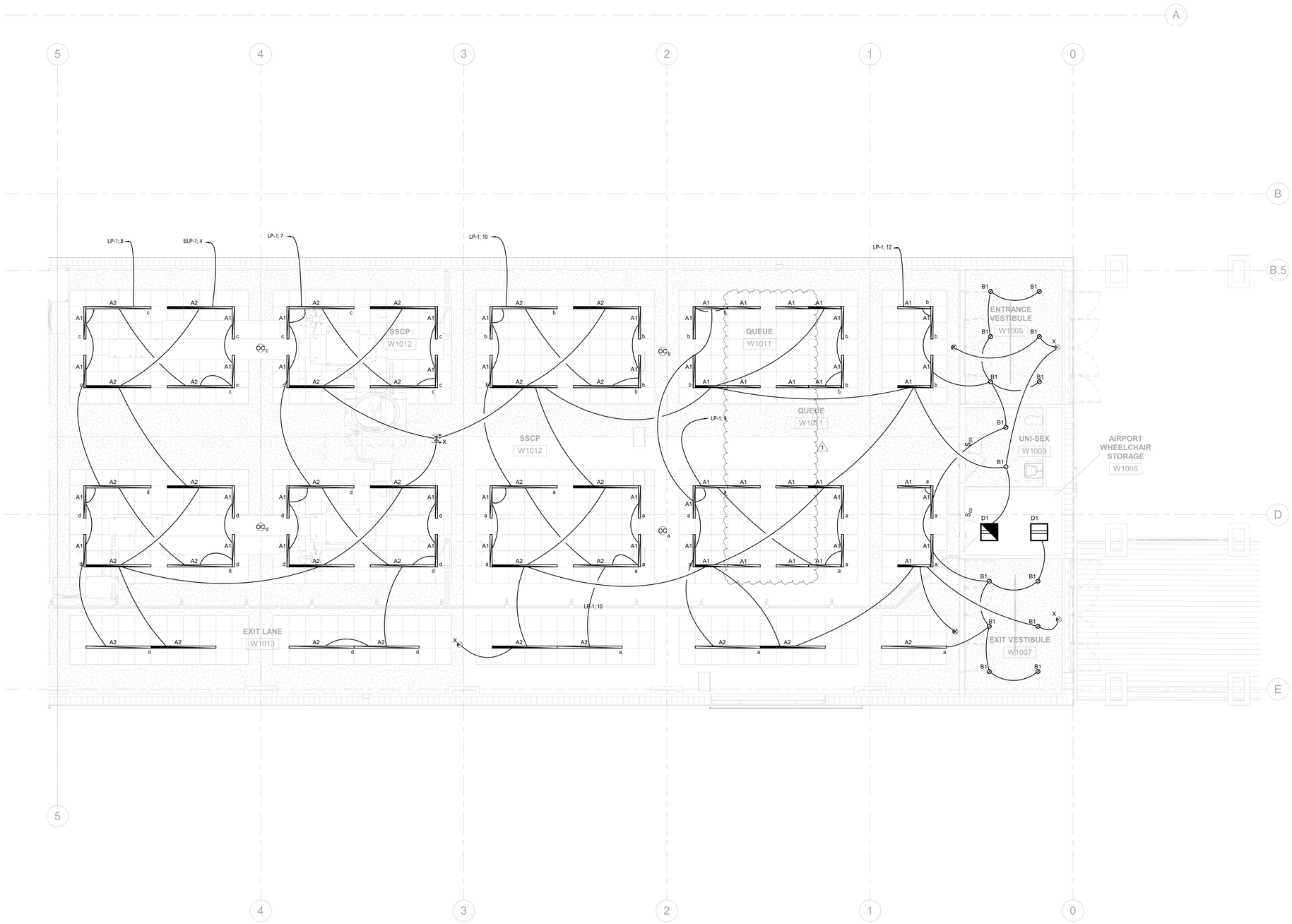

1 LEVEL 1 - LIGHTING - AREA 1
3/16" = 1'-0"

GENERAL ELECTRICAL NOTES:

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JOHN E. BURNS LICENSE No 62139 STATE OF FLORIDA PROFESSIONAL ENGINEER

SEAL

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1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
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Drawn By:	
Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	As indicated

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 1

BID DOCUMENT

Drawing No.:

E311

BIM 360://Design of Satellite Concourse\VPS_ETSTCFA.rvt

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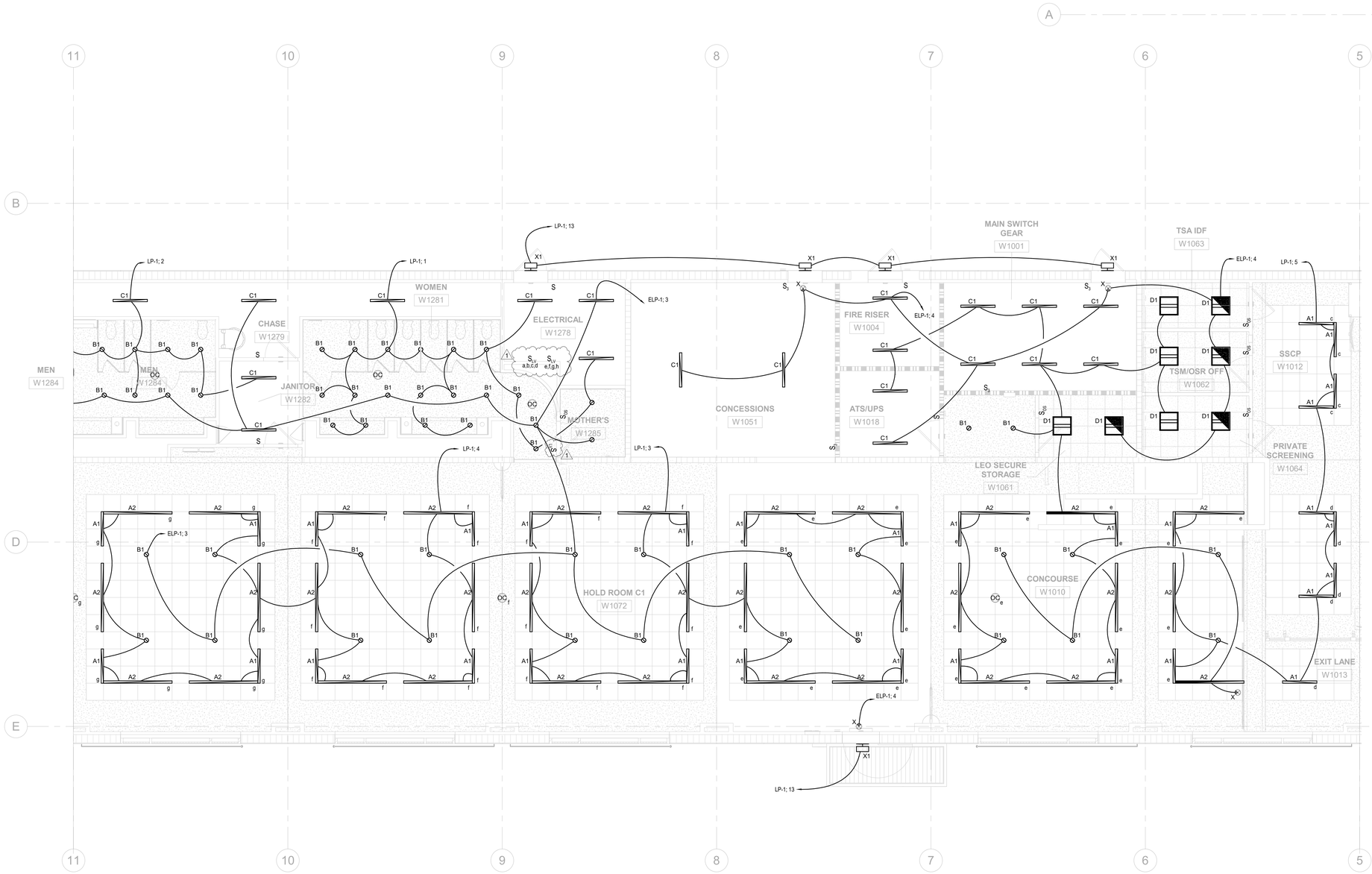

1 LEVEL 1 - LIGHTING - AREA 2
3/16" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. SEE SHEET E000 FOR ELECTRICAL LEGEND, SYMBOLS, GENERAL NOTES & ABBREVIATIONS.
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C19-2811-AP
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Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	As indicated

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 2

BID DOCUMENT

Drawing No.:

E312

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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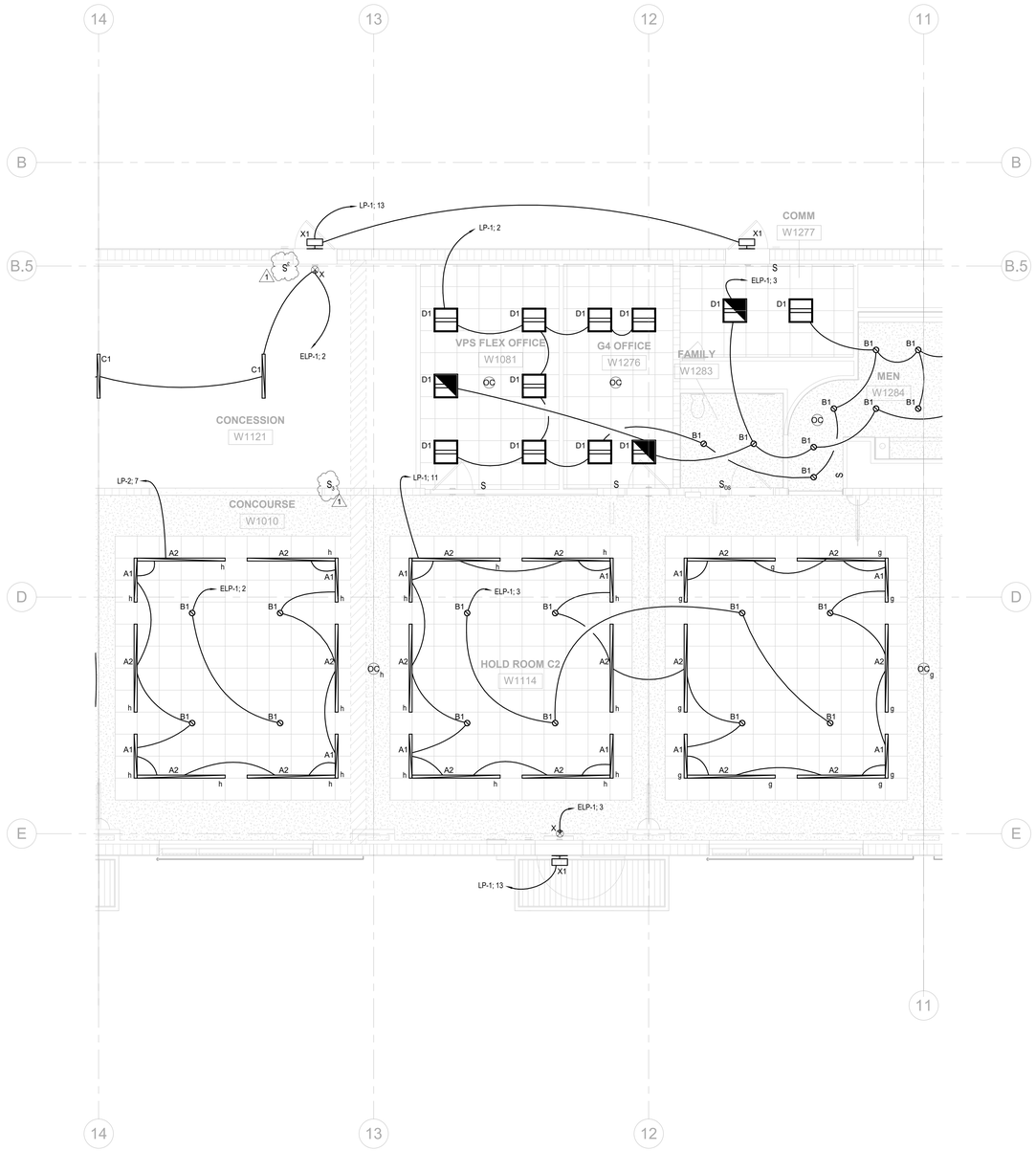

1 LEVEL 1 - LIGHTING - AREA 3
3/16" = 1'-0"

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1. SEE SHEET E000 FOR ELECTRICAL LEGEND, SYMBOLS, GENERAL NOTES & ABBREVIATIONS.
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ENLARGED FLOOR PLAN LEVEL 1 - AREA 3

BID DOCUMENT

Drawing No.:

E313

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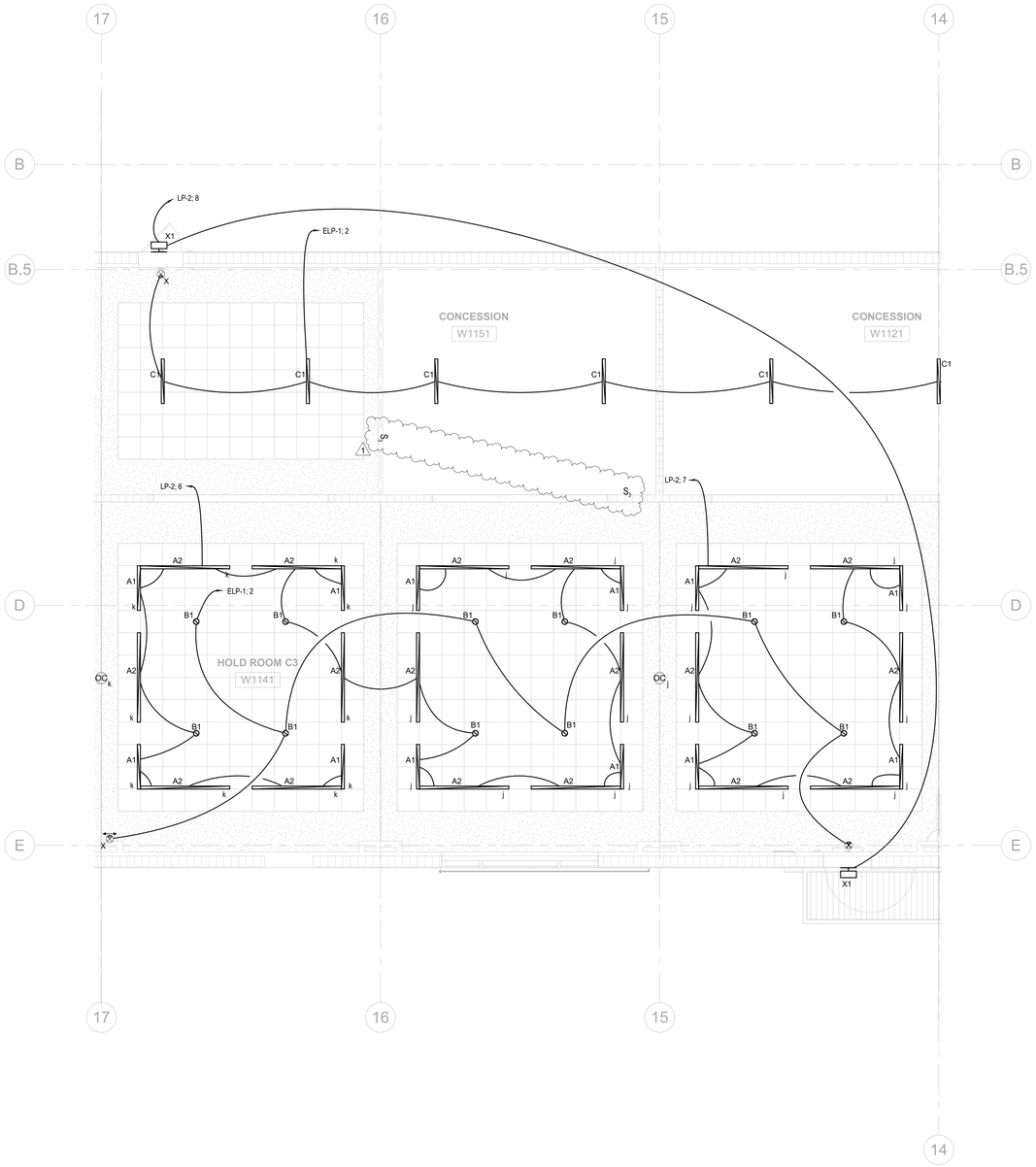

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3/16" = 1'-0"

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8. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA 3R.
9. VAV TERMINAL UNIT INTEGRAL FUSED DISCONNECT SWITCH PROVIDED BY UNIT MANUFACTURER.
10. COORDINATE MUFIDS RECEPTACLE MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.

1

ELECTRICAL - ADD ALTERNATE NOTES:

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3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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MLM JOB # TYPE PROPERTY

JOHN E. BURNS LICENSE No 62139 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
Designed By:	BA
Drawn By:	
Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	As indicated

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 4

BID DOCUMENT

Drawing No.:

E314

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt
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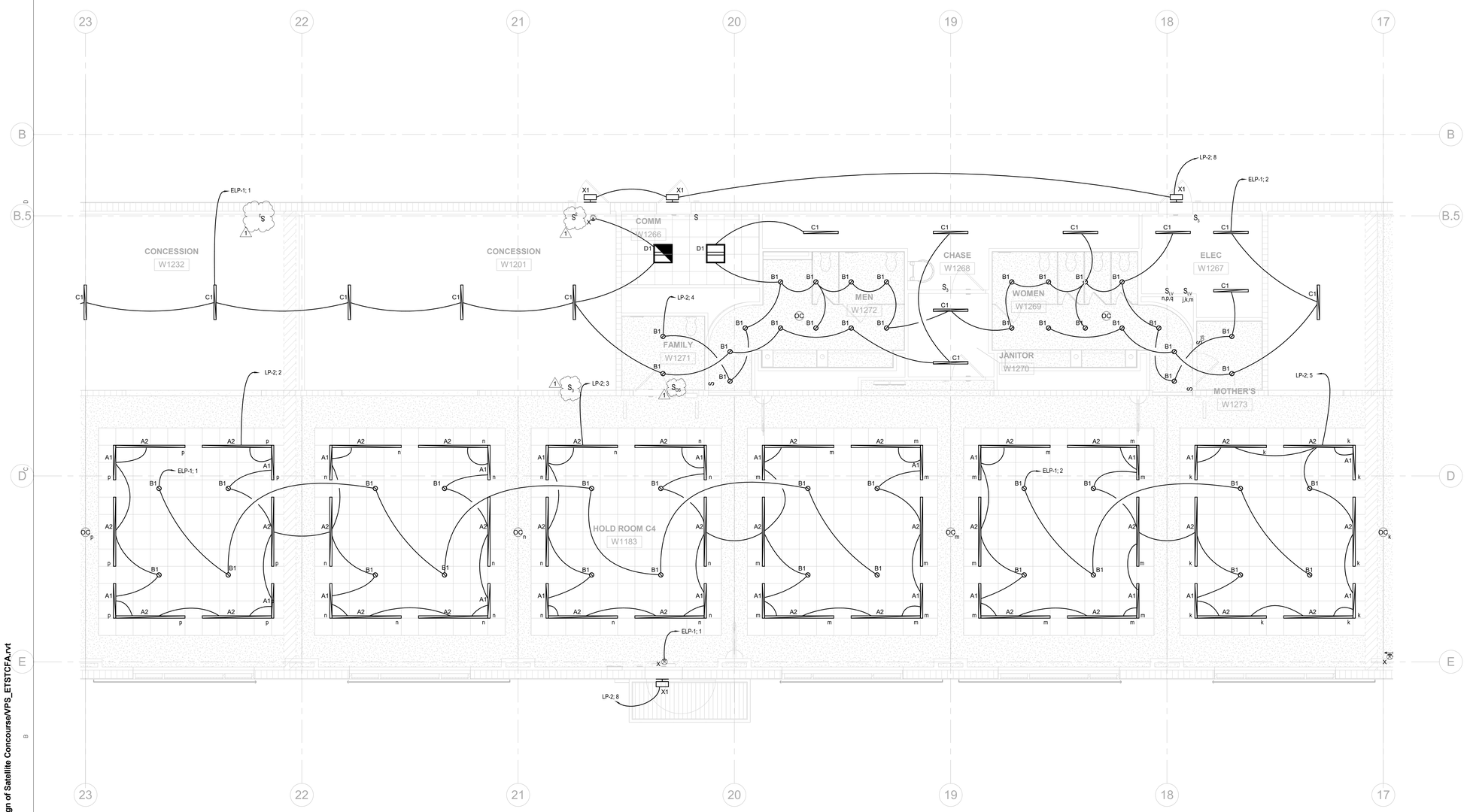

1 LEVEL 1 - LIGHTING - AREA 5
3/16" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. SEE SHEET E000 FOR ELECTRICAL LEGEND, SYMBOLS, GENERAL NOTES & ABBREVIATIONS.
2. SEE SHEETS E601-E603 FOR SWITCHBOARD AND PANEL SCHEDULES.
3. SEE SHEET E604 FOR LIGHTING FIXTURE SCHEDULE.
4. SEE SHEET E801 FOR ELECTRICAL DETAILS.
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Drawing Scale:	As indicated

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 5

BID DOCUMENT

Drawing No.:

E315

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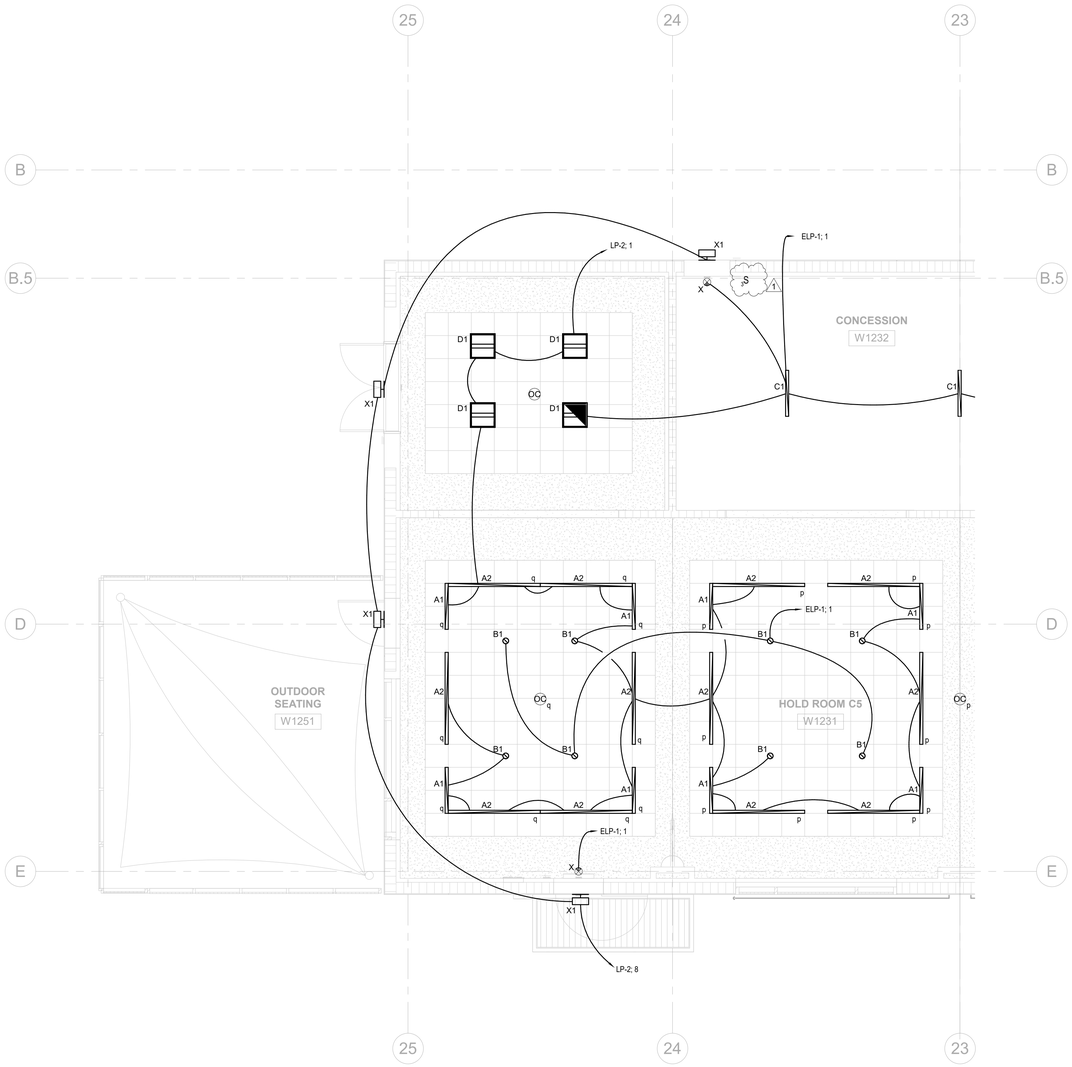

1 LEVEL 1 - LIGHTING - AREA 6
3/16" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. SEE SHEET E000 FOR ELECTRICAL LEGEND, SYMBOLS, GENERAL NOTES & ABBREVIATIONS.
2. SEE SHEETS E601-E603 FOR SWITCHBOARD AND PANEL SCHEDULES.
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Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 6

BID DOCUMENT

Drawing No.:

E316

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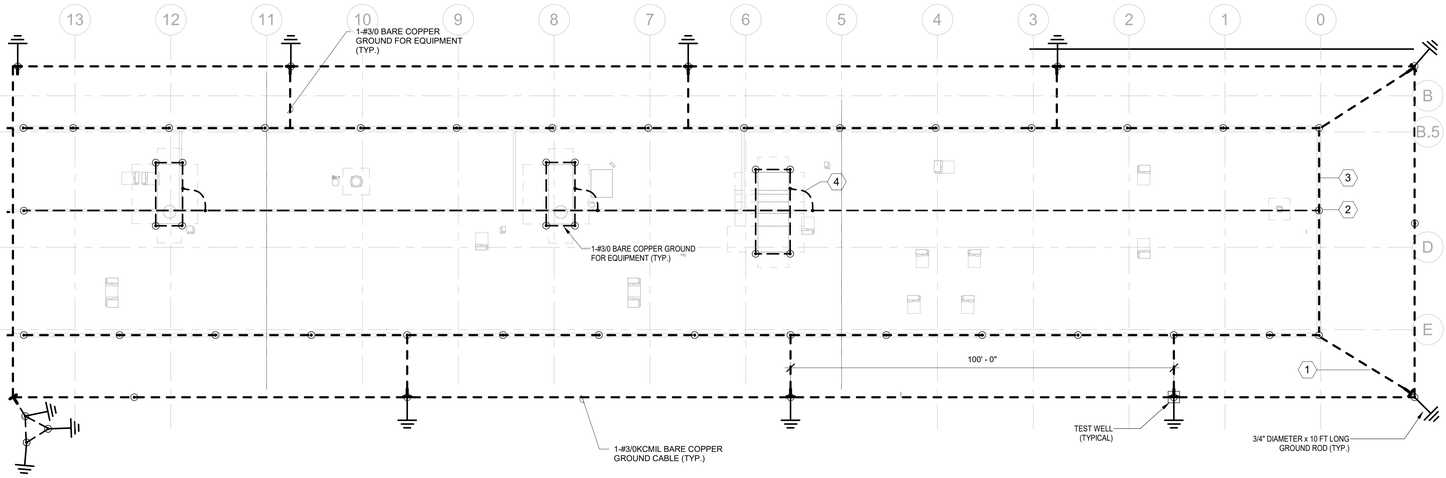
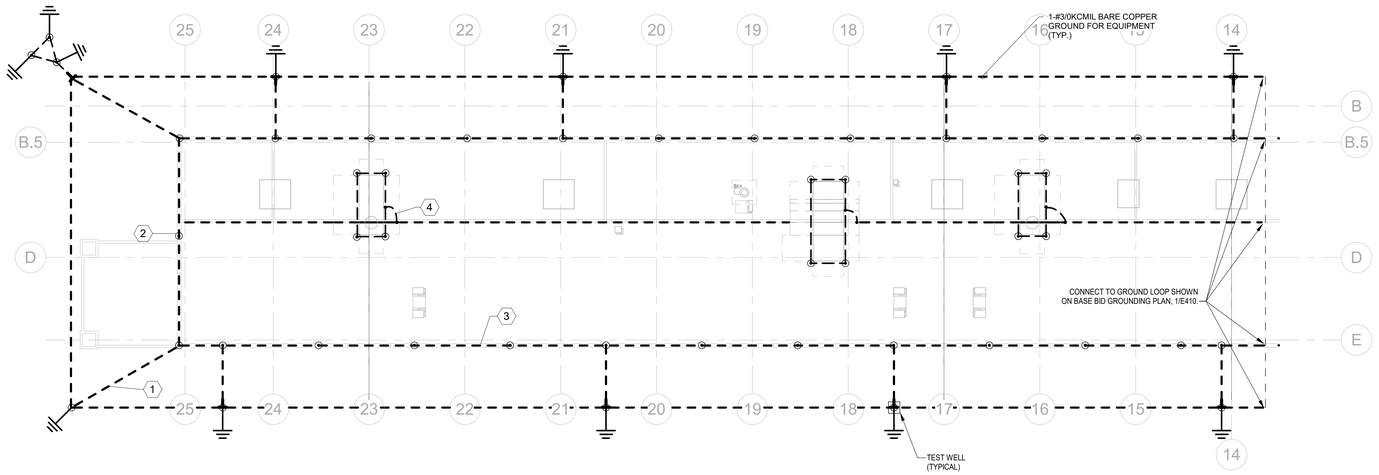


1 LEVEL_1_-_GROUNDING_&_LIGHTNING_PROTECTION_-_BASE_BID
1/16" = 1'-0"



2 LEVEL_1_-_GROUNDING_&_LIGHTNING_PROTECTION_-_ALTERNATES
1/16" = 1'-0"

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KEYED NOTES

Key Value	Keynote Text
1	PROVIDE CLASS 1 ALUMINUM LIGHTNING PROTECTION CABLE AS DOWN CONDUCTORS EVERY 100' ALONG PERIMETER
2	PROVIDE CROSS CONDUCTOR IN ACCORDANCE WITH NFPA 780, 4.8.3. FOR BLDG WIDTH GREATER THAN 50'. IN ADDITION CLASS 1 CONDUCTOR WILL BE USED TO BOND ROOF TOP MECHANICAL COMPONENTS AND OTHER METAL ITEMS.
3	ALL LIGHTNING PROTECTION ROOF CONDUCTORS SHALL BE CLASS 1 ALUMINUM TO AVOID DISSIMILAR METAL CONTACT
4	PROVIDE CLASS 1 CONNECTION TO MECHANICAL UNITS & AIR TERMINALS LOCATED ON TOP.

EC TO PROVIDE SIGNED/SEALED LIGHTNING PROTECTION SUBMITTAL PREPARED BY INSTALLATION COMPANY WITH LPI AND UL 96/96A CERTIFICATION

OKALOOSA COUNTY

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Drawing Scale:	As indicated

Drawing Title:

LIGHTNING AND GROUNDING PLAN

BID DOCUMENT

Drawing No.:

E410

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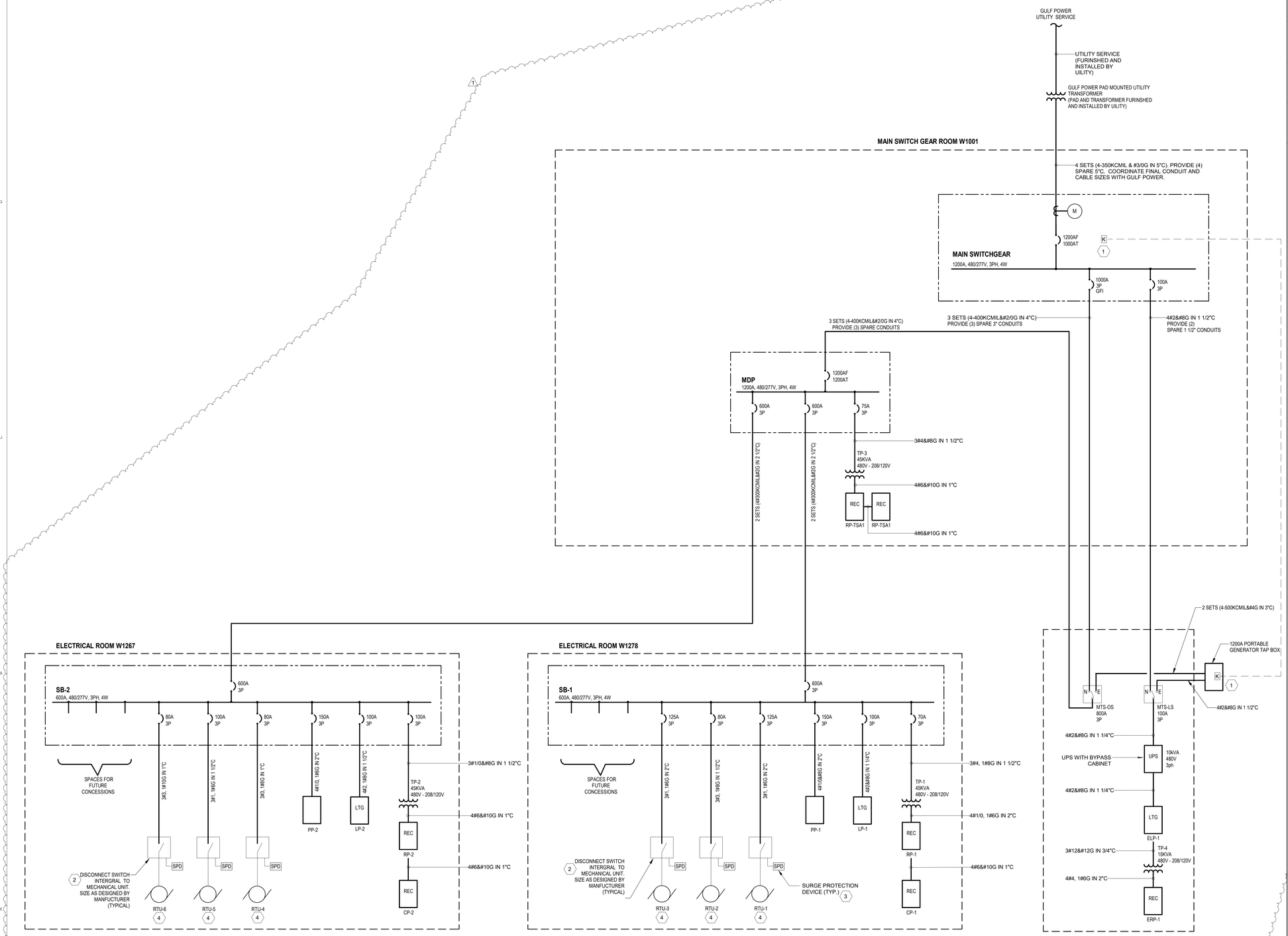

1 ELECTRICAL SINGLE LINE DIAGRAM
N.T.S.

GENERAL NOTES - SINGLE LINE DIAGRAM

1. ALL CIRCUIT BREAKERS ARE 3P UON.
2. PROVIDE ARC FLASH LABELS ON ALL ELECTRICAL PANELBOARDS, SWITCHBOARDS, MANUAL TRANSFER SWITCHES, AND DISCONNECT SWITCHES WARNING OF PRESENCE OF ARC FLASH AND NOTING PERSONNEL PROTECTIVE EQUIPMENT (PPE) OR CHARTS IN IEEE 1584 TO DETERMINE THE SAME AS REQUIRED IN NEC 110.16.

KEYED NOTES - SINGLE LINE DIAGRAM

1	PROVIDE KIRK KEY INTELOCK FEATURE WITH CONNECTION TO KIRK KEY AT PORTABLE GENERATOR TAP BOX SO THAT ONLY ONE SOURCE CAN PROVIDE POWER TO THE BUILDING AT A TIME.
2	INTEGRAL DISCONNECT WITH CIRCUIT BREAKER OR FUSING AS REQUIRED BY MANUFACTURER FOR OVERCURRENT OR SHORT CIRCUIT/GROUND FAULT PROTECTION RESPECTIVELY. VFD CONTROL IS PROVIDED BY MANUFACTURER.
3	PROVIDE TYPE 2 SURGE PROTECTIVE DEVICE (SPD) AS INDICATED IN ACCORDANCE WITH FLORIDA BUILDING CODE SECTION 449.3.15.6 SPD TO BE INSTALLED OUTDOORS NEAR EQUIPMENT.
4	THE UNITS ARE SPECIFIED WITH AN INDEPENDENTLY CIRCUITED CONVENIENCE RECEPTACLE WHICH WILL MEET THE NEEDS OF NEC 210.63 (2014ED), FOR SERVICING OF THE UNIT. ADDITIONALLY THE UNITS ARE SPECIFIED WITH AN INDEPENDENTLY WIRED MARINE LIGHT.

OKALOOSA COUNTY

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Drawing Scale:	

Drawing Title:

SINGLE LINE DIAGRAM - ELECTRICAL

BID DOCUMENT

Drawing No.:

E501

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Switchboard: MDP

MAIN RATING: 1200 A | **MAIN TYPE:** MCB | **ENCLOSURE:** Type 1 | **MINIMUM AIC RATING:** 65,000
MCB RATING: 1000 A | **WIRES:** 4 | **LOCATION:** SECURE STORAGE W1061 | **NEUTRAL RATING:**
VOLTAGE: 480Y/277V | **MOUNTING:** Surface | **FEED THROUGH LUGS:**
PHASE: 3 | **SUPPLY FROM:** | **GROUNDING BUS:**

NOTE	CKT	DESCRIPTION	WIRE SIZE	COND	P	FRAME	TRIP	LOAD
	1	SB-1	SEE SINGLE LINE DIAGRAM		3	600 A	600 A	344637 VA
	2	SB-2	SEE SINGLE LINE DIAGRAM		3	600 A	600 A	268942 VA
	3	TP-3	SEE SINGLE LINE DIAGRAM		3	100 A	70 A	7980 VA
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							

TOTAL CONNECTED LOAD: 621.56 kVA
TOTAL AMPS: 748 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	2400 VA	100.00%	2400 VA		
Lighting	10515 VA	100.00%	10515 VA	**TOTAL CONNECTED LOAD**	621559 VA
Lighting - Dwelling Unit	980 VA	100.00%	980 VA	**TOTAL ESTIMATED LOAD:**	609406 VA
Lighting - Exterior	1836 VA	125.00%	2295 VA	**TOTAL CONNECTED CURRENT:**	748 A
Power	561222 VA	100.00%	561222 VA	**TOTAL ESTIMATED DEMAND CURRENT**	733 A
Receptacle	34560 VA	64.47%	22280 VA		
RECEPTACLES	10620 VA	97.08%	10310 VA		

Notes:
SEE NOTES BELOW FOR SB-1 AND SB-2. TOTAL CONNECTED LOAD FOR SB-1 IS 418 KVA. TOTAL CONNECTED LOAD FOR SB-2 IS 343 KVA.

Switchboard: SB-1

MAIN RATING: 600 A | **MAIN TYPE:** MCB | **ENCLOSURE:** Type 1 | **MINIMUM AIC RATING:** 65,000 A
MCB RATING: 600 A | **WIRES:** 4 | **LOCATION:** STORAGE W1082 | **NEUTRAL RATING:** 100.00%
VOLTAGE: 480/277 Wye | **MOUNTING:** Surface | **FEED THROUGH LUGS:**
PHASE: 3 | **SUPPLY FROM:** MDP | **GROUNDING BUS:**

NOTE	CKT	DESCRIPTION	WIRE SIZE	COND	P	FRAME	TRIP	LOAD
	1	PANEL PP-1	SEE SINGLE LINE DIAGRAM		3	250 A	150 A	89000 VA
	2	PANEL LP-1	SEE SINGLE LINE DIAGRAM		3	250 A	100 A	7323 VA
	3	PANEL RP-1 VIA TRANSFORMER TP-1	SEE SINGLE LINE DIAGRAM		3	100 A	70 A	26336 VA
	4	RTU-1			3	400 A	20 A	97770 VA
	5	RTU-2			3	400 A	20 A	52840 VA
	6	RTU-3			3	400 A	20 A	71670 VA
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							

TOTAL CONNECTED LOAD: 344.64 kVA
TOTAL AMPS: 415 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	1320 VA	100.00%	1320 VA		
Lighting	5947 VA	100.00%	5947 VA	**TOTAL CONNECTED LOAD**	344637 VA
Lighting - Dwelling Unit	560 VA	100.00%	560 VA	**TOTAL ESTIMATED LOAD:**	341191 VA
Lighting - Exterior	816 VA	125.00%	1020 VA	**TOTAL CONNECTED CURRENT:**	415 A
Power	314696 VA	100.00%	314696 VA	**TOTAL ESTIMATED DEMAND CURRENT**	410 A
Receptacle	17280 VA	78.94%	13640 VA		
RECEPTACLES	4320 VA	100.00%	4320 VA		

Notes:
IN ADDITION TO THE ABOVE LOADS, WE ESTIMATE A TOTAL OF 25 KVA FOR EACH OF THE THREE GRAB AND GO CONCESSION AREAS, BRINGING THE TOTAL CONNECTED LOAD TO 418 KVA.

Switchboard: SB-2

MAIN RATING: 600 A | **MAIN TYPE:** MCB | **ENCLOSURE:** Type 1 | **MINIMUM AIC RATING:** 65,000 A
MCB RATING: 600 A | **WIRES:** 4 | **LOCATION:** JANITOR W1172 | **NEUTRAL RATING:** 100.00%
VOLTAGE: 480/277 Wye | **MOUNTING:** Surface | **FEED THROUGH LUGS:**
PHASE: 3 | **SUPPLY FROM:** MDP | **GROUNDING BUS:**

NOTE	CKT	DESCRIPTION	WIRE SIZE	COND	P	FRAME	TRIP	LOAD
	1	PANEL PP-2	SEE SINGLE LINE DIAGRAM		3	250 A	150 A	67580 VA
	2	PANEL LP-2	SEE SINGLE LINE DIAGRAM		3	250 A	100 A	6008 VA
	3	PANEL RP-2 VIA TP-2	SEE SINGLE LINE DIAGRAM		3	250 A	100 A	24606 VA
	4	RTU-4			3	400 A	20 A	49220 VA
	5	RTU-5			3	400 A	20 A	72580 VA
	6	RTU-6			3	400 A	20 A	49220 VA
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							

TOTAL CONNECTED LOAD: 268.94 kVA
TOTAL AMPS: 323 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	1080 VA	100.00%	1080 VA		
Lighting	4568 VA	100.00%	4568 VA	**TOTAL CONNECTED LOAD**	268942 VA
Lighting - Dwelling Unit	420 VA	100.00%	420 VA	**TOTAL ESTIMATED LOAD:**	266715 VA
Lighting - Exterior	1020 VA	125.00%	1275 VA	**TOTAL CONNECTED CURRENT:**	323 A
Power	240886 VA	100.00%	240886 VA	**TOTAL ESTIMATED DEMAND CURRENT**	321 A
Receptacle	14940 VA	83.47%	12470 VA		
RECEPTACLES	6300 VA	100.00%	6300 VA		

Notes:
IN ADDITION TO THE ABOVE LOADS, WE ESTIMATE A TOTAL OF 25 KVA FOR EACH OF THE THREE GRAB AND GO CONCESSION AREAS, BRINGING THE TOTAL CONNECTED LOAD TO 343 KVA.

OKALOOSA COUNTY

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SWITCHBOARD SCHEDULES

BID DOCUMENT

Drawing No.:

E601

BIM 360://Design of Satellite Concourse\VPS_ETSTCFA.rvt

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BRANCH PANEL: RP-TSA1

Location: SECURE STORAGE W1061
Supply From: TP-3
Mounting: Surface
Enclosure: Type 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 175 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	TSA PODIUM POWER POLES	20 A	1	2#12&#12G IN 3/4"C	360 VA	180 VA					2#12&#12G IN 3/4"C	1	20 A	AIT SCANNER	2
3	TSA PODIUM POWER POLES	20 A	1	2#12&#12G IN 3/4"C			360 VA	1920 VA			2#12&#12G IN 3/4"C	1	20 A	XRAY	4
5	XRAY	20 A	1	2#12&#12G IN 3/4"C					1920 VA	900 VA	2#12&#12G IN 3/4"C	1	20 A	TSA EQUIPMENT	6
7	TSA EQUIPMENT	20 A	1	2#12&#12G IN 3/4"C	900 VA	180 VA					2#12&#12G IN 3/4"C	1	20 A	PRIVATE SCREENING...	8
9	TSA EQUIPMENT	20 A	1	2#12&#12G IN 3/4"C			180 VA	360 VA			2#12&#12G IN 3/4"C	1	20 A	MEDIA EQUIPMENT	10
11	RP-TSA2	20 A	3	SEE SINGLE LINE...					0 VA	360 VA	2#12&#12G IN 3/4"C	1	20 A	TSA OBSERVATION WORK...	12
13	--	--	--	--	0 VA	360 VA					2#12 & 1#12G, 3/4"C.	1	20 A	WTMD	14
15	--	--	--	--			0 VA								16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	1980 VA		2820 VA		3180 VA						
				Total Amps:	17 A		25 A		28 A						

Panel Totals:
Total Conn. Load: 7980 VA
Total Est. Demand: 7980 VA
Total Conn. Current: 22 A
Total Est. Demand Current:... 22 A

Legend:

Notes:
PROVIDE WITH FEED THROUGH LUGS

BRANCH PANEL: RP-TSA2

Location: SECURE STORAGE W1061
Supply From: RP-TSA1
Mounting: Surface
Enclosure: Type 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 175 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1															2
3															4
5															6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	0 VA		0 VA		0 VA						
				Total Amps:	0 A		0 A		0 A						

Panel Totals:
Total Conn. Load: 0 VA
Total Est. Demand: 0 VA
Total Conn. Current: 0 A
Total Est. Demand Current:... 0 A

Legend:

Notes:

BRANCH PANEL: ELP-1

Location: ATS/UPS W1018
Supply From:
Mounting: Surface
Enclosure: Type 1
Volts: 480/277 Wye
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MCB
Mains Rating: 125 A
MCB Rating: 100 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	EMERGENCY LIGHTING	20 A	1	2#12 & 1#12G, 3/4"C.	487 VA	478 VA					2#12 & 1#12G, 3/4"C.	1	20 A	EMERGENCY LIGHTING	2
3	EMERGENCY LIGHTING	20 A	1	2#12 & 1#12G, 3/4"C.			370 VA	1205 VA			2#12 & 1#12G, 3/4"C.	1	20 A	EMERGENCY LIGHTING	4
5	TP-4	20 A	3	SEE SINGLE LINE...					1800 VA						6
7	--	--	--	--	1760 VA										8
9	--	--	--	--			3500 VA								10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	2722 VA		5051 VA		1800 VA						
				Total Amps:	10 A		19 A		6 A						

Panel Totals:
Total Conn. Load: 9571 VA
Total Est. Demand: 9571 VA
Total Conn. Current: 12 A
Total Est. Demand Current:... 12 A

Legend:

Notes:

BRANCH PANEL: ERP-1

Location: ATS/UPS W1018
Supply From: TP-4
Mounting: Surface
Enclosure: Type 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 60 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	FACP, W1004	20 A	1	2#12 & 1#12G, 3/4"C.	400 VA	400 VA					2#12 & 1#12G, 3/4"C.	1	20 A	SECURITY PANEL, W1277	2
3	SECURITY PANEL, W1266	20 A	1	2#12 & 1#12G, 3/4"C.			400 VA	360 VA				1	20 A	Receptacle	4
5	Power	20 A	1						1500 VA	1500 VA		1	20 A	Power	6
7	Power	20 A	1		500 VA	500 VA						1	20 A	Power	8
9	Power	20 A	1				500 VA	500 VA				1	20 A	Power	10
11	Power	20 A	1						500 VA						12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	1800 VA		1760 VA		3500 VA						
				Total Amps:	15 A		15 A		29 A						

Panel Totals:
Total Conn. Load: 7060 VA
Total Est. Demand: 7060 VA
Total Conn. Current: 20 A
Total Est. Demand Current:... 20 A

Legend:

Notes:

BRANCH PANEL: CP-1

Location: G4 OFFICE W1113
Supply From:
Mounting: Surface
Enclosure: Type 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 60 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	COMMUNICATIONS CABINET	30 A	2	2#10&#10G IN 3/4"C	1500 VA	1500 VA					2#10&#10G IN 3/4"C	2	30 A	COMMUNICATIONS CABINET	2
3	--	--	--	--			1500 VA	1500 VA			--	--	--	--	4
5	COMMUNICATIONS CABINET	30 A	2	2#10&#10G IN 3/4"C					1500 VA	1500 VA	2#10&#10G IN 3/4"C	2	30 A	COMMUNICATIONS CABINET	6
7	--	--	--	--	1500 VA	1500 VA					--	--	--	--	8
9	RECEPTACLES, W1277	20 A	1	2#12 & 1#12G, 3/4"C.			540 VA	180 VA				2	20 A	Power	10
11	Receptacle	20 A	1						180 VA	180 VA	--	--	--	--	12
				Total Load:	6000 VA		3720 VA		3360 VA						
				Total Amps:	50 A		31 A		28 A						

Panel Totals:
Total Conn. Load: 13080 VA
Total Est. Demand: 13080 VA
Total Conn. Current: 36 A
Total Est. Demand Current:... 36 A

Legend:

Notes:

BRANCH PANEL: CP-2

Location: COMM W1266
Supply From: RP-2
Mounting: Surface
Enclosure: Type 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 60 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	COMMUNICATIONS CABINET	30 A	2	2#10&#10G IN 3/4"C	180 VA	180 VA					2#10&#10G IN 3/4"C	2	30 A	COMMUNICATIONS CABINET	2
3	--	--	--	--			180 VA	180 VA			--	--	--	--	4
5	COMMUNICATIONS CABINET	30 A	2	2#10&#10G IN 3/4"C					180 VA	180 VA	2#10&#10G IN 3/4"C	2	30 A	COMMUNICATIONS CABINET	6
7	--	--	--	--	180 VA	180 VA					--	--	--	--	8
9															10
11															12
				Total Load:	720 VA		360 VA		360 VA						
				Total Amps:	6 A		3 A		3 A						

Panel Totals:
Total Conn. Load: 1440 VA
Total Est. Demand: 1440 VA
Total Conn. Current: 4 A
Total Est. Demand Current:... 4 A

Legend:

Notes:

OKALOOSA COUNTY

FLY VPS

C19-2811-AP
Design of
Satellite
Concourse 'C'

Burns
BURNS ENGINEERING, INC | 215 979-3700
TWO COMMERCE SQUARE,
2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

MLM-MARTIN ARCHITECTS, INC.
668 N. ORLANDO AVE.
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AA-C002208
MLM JOB # TYPE PROPERTY

JOHN E. BURNS LICENSE No 62139 STATE OF FLORIDA PROFESSIONAL ENGINEER

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**BA**
Drawn By:	
Checked By:	**CMC**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

PANEL SCHEDULES

BID DOCUMENT

Drawing No.:

E602

BIM 360://Design of Satellite Concourse\VPS_ETSTCFA.rvt
2/20/2020 4:57:45 PM

BRANCH PANEL: PP-1

Location: STORAGE W1082
Supply From: SB-1
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	VTU-1-1	20 A	3	3#10&#10G IN 3/4"C	4000 VA	2667 VA					3#10&#10G IN 3/4"C	3	15 A	VTU-1-2	2
3	--	--	--	--			4000 VA	2667 VA			--	--	--	--	4
5	--	--	--	--					4000 VA	2667 VA	--	--	--	--	6
7	VTU-1-3	20 A	3	3#12&#12G IN 3/4"C	3167 VA	1500 VA					3#12&#12G IN 3/4"C	3	15 A	VTU-1-4	8
9	--	--	--	--			3167 VA	1500 VA			--	--	--	--	10
11	--	--	--	--					3167 VA	1500 VA	--	--	--	--	12
13	VTU-1-5	20 A	1	2#12 & 1#12G, 3/4"C.	3500 VA	3000 VA					3#12&#12G IN 3/4"C	3	20 A	VTU-1-6 & 1-7	14
15	VTU-2-2	20 A	1	2#12 & 1#12G, 3/4"C.			4000 VA	3000 VA			--	--	--	--	16
17	VTU-3-1	20 A	1	2#12 & 1#12G, 3/4"C.					4000 VA	3000 VA	--	--	--	--	18
19	VTU-1-8	20 A	1	2#12&#12G IN 3/4"C	1000 VA										20
21	VTU-2-3	20 A	3	3#10&#10G IN 3/4"C			3833 VA								22
23	--	--	--	--					3833 VA						24
25	--	--	--	--	3833 VA	2500 VA					2#12&#12G IN 3/4"C	1	15 A	VTU-2-6	26
27								3833 VA			3#10&#10G IN 3/4"C	3	20 A	VTU 3-2	28
29										3833 VA	--	--	--	--	30
31						3833 VA					--	--	--	--	32
33	CTRLS VTU 1-9,2-1,2-4,2-5,3-5	20 A	1	2#12&#12G IN 3/4"C			2700 VA	1000 VA			2#12&#12G IN 3/4"C	1	20 A	VTU-3-4	34
35	VTU-3-5	20 A	1	2#12&#12G IN 3/4"C					1000 VA	3300 VA	2#12 & 1#12G, 3/4"C.	1	20 A	UH-1	36
37															38
39															40
41															42
				Total Load:	29000 VA		29700 VA		30300 VA						
				Total Amps:	105 A		108 A		110 A						

Panel Totals:
Total Conn. Load: 89000 VA
Total Est. Demand: 89000 VA
Total Conn. Current: 107 A
Total Est. Demand Current:... 107 A

Legend:

Notes:

BRANCH PANEL: PP-2

Location: JANITOR W1172
Supply From: SB-2
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	VTU 4-1	15 A	3	2#12&#12G IN 3/4"C	1833 VA	5167 VA					3#10&#10G IN 3/4"C	3	25 A	VTU 4-2	2
3	--	--	--	--			1833 VA	5167 VA			--	--	--	--	4
5	--	--	--	--					1833 VA	5167 VA	--	--	--	--	6
7	VTU-5-1	15 A	3	3#12&#12G IN 3/4"C	2333 VA	6333 VA					3#10&#10G IN 3/4"C	3	30 A	VTU-5-2	8
9	--	--	--	--			2333 VA	6333 VA			--	--	--	--	10
11	--	--	--	--					2333 VA	6333 VA	--	--	--	--	12
13	VTU-6-1	15 A	3	3#12&#12G IN 3/4"C	2000 VA	3833 VA					3#10&#10G IN 3/4"C	3	20 A	VTU-6-2	14
15	--	--	--	--			2000 VA	3833 VA			--	--	--	--	16
17	--	--	--	--					2000 VA	3833 VA	--	--	--	--	18
19	VTU-5-5	20 A	1	2#12 & 1#12G, 3/4"C.	540 VA	2000 VA					2#12 & 1#12G, 3/4"C.	1	20 A	VTU-5-4	20
21	VTU-5-3	20 A	1	2#12&#12G IN 3/4"C			540 VA								22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	24040 VA		22040 VA		21500 VA						
				Total Amps:	87 A		80 A		78 A						

Panel Totals:
Total Conn. Load: 67580 VA
Total Est. Demand: 67580 VA
Total Conn. Current: 81 A
Total Est. Demand Current:... 81 A

Legend:

Notes:

BRANCH PANEL: RP-1

Location: STORAGE W1082
Supply From: TP-1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	GFI RECEPTACLE, W1003	20 A	1	2#12 & 1#12G, 3/4"C.	180 VA	1080 VA					2#12 & 1#12G, 3/4"C.	1	20 A	TSA RECEPTACLES	2
3	TSA RECEPTACLES	20 A	1	2#12 & 1#12G, 3/4"C.			1080 VA	1080 VA			2#12 & 1#12G, 3/4"C.	1	20 A	TSA RECEPTACLES	4
5	EXTERIOR RECEPTACLES	20 A	1	2#12 & 1#12G, 3/4"C.					540 VA	540 VA	2#12 & 1#12G, 3/4"C.	1	20 A	EXTERIOR RECEPTACLES	6
7	HOLD RM FURNITURE USB...	20 A	1	2#12 & 1#12G, 3/4"C.	1620 VA	1260 VA					2#12 & 1#12G, 3/4"C.	1	20 A	RECEPTACLES, W1010	8
9	HOLD RM FURNITURE USB...	20 A	1	2#12&#12G IN 3/4"C			1440 VA	1260 VA			2#12&#12G IN 3/4"C	1	20 A	HOLD RM FURNITURE USB...	10
11	HOLD ROOM RECEPTACLES	20 A	1	2#12&#12G IN 3/4"C					720 VA	720 VA		1	20 A	Receptacle	12
13	TOILET RM & JANITOR...	20 A	1	2#12&#12G IN 3/4"C	1440 VA	240 VA					2#12 & 1#12G, 3/4"C.	1	20 A	EF-1	14
15	ULITITY ROOMS...	20 A	1	2#12&#12G IN 3/4"C			1440 VA	1440 VA			2#12 & 1#12G, 3/4"C.	1	20 A	RECEPTACLES,...	16
17	HOLD ROOM RECEPTACLES	20 A	1	2#12&#12G IN 3/4"C					900 VA	900 VA	2#12 & 1#12G, 3/4"C.	1	20 A	OFFICE RECEPTACLES...	18
19	HOLD RM PODIUM...	20 A	1	2#12&#12G IN 3/4"C	360 VA	720 VA					2#12&#12G IN 3/4"C	1	20 A	EXTERIOR RECEPTACLES	20
21	EXTERIOR RECEPTACLES	20 A	1	2#12&#12G IN 3/4"C			720 VA	1248 VA			2#10&#10G IN 3/4"C	2	25 A	EF-2	22
23	OFFICE RECEPTACLES...	20 A	1	2#12 & 1#12G, 3/4"C.					900 VA	1248 VA	--	--	--	--	24
25	HOLD RM PODIUM...	20 A	1	2#12 & 1#12G, 3/4"C.	360 VA	540 VA					2#12 & 1#12G, 3/4"C.	1	20 A	Receptacle	26
27	Receptacle	20 A	1	2#12 & 1#12G, 3/4"			360 VA	1000 VA			2#12&#12G IN 3/4"C	1	20 A	EWC-1	28
29	Power	20 A	1						500 VA	500 VA		1	20 A	Power	30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	7800 VA		11068 VA		7468 VA						
				Total Amps:	65 A		93 A		62 A						

Panel Totals:
Total Conn. Load: 26336 VA
Total Est. Demand: 22696 VA
Total Conn. Current: 73 A
Total Est. Demand Current:... 63 A

Legend:

Notes:

BRANCH PANEL: RP-2

Location: JANITOR W1172
Supply From: TP-2
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	HOLD RM FURNITURE USB...	20 A	1	2#12 & 1#12G, 3/4"C.	1440 VA	1620 VA					2#12 & 1#12G, 3/4"C.	1	20 A	CONCESSION RM...	2
3	HOLD ROOM RECEPTACLES	20 A	1	2#12 & 1#12G, 3/4"C.			1260 VA	360 VA			2#12 & 1#12G, 3/4"C.	1	20 A	HOLD RM PODIUM...	4
5	HOLD RM FURNITURE USB...	20 A	1	2#12 & 1#12G, 3/4"C.					1800 VA	360 VA	2#12 & 1#12G, 3/4"C.	1	20 A	HOLD RM PODIUM...	6
7	HOLD ROOM RECEPTACLES	20 A	1	2#12 & 1#12G, 3/4"C.	900 VA	1800 VA					2#12 & 1#12G, 3/4"C.	1	20 A	HOLD RM FURNITURE USB...	8
9	CONCESSION RM...	20 A	1	2#12 & 1#12G, 3/4"C.			1620 VA	1260 VA			2#12 & 1#12G, 3/4"C.	1	20 A	HOLD ROOM RECEPTACLES	10
11	EXTERIOR RECEPTACLES	20 A	1	2#12&#12G IN 3/4"C					1080 VA	180 VA	2#12 & 1#12G, 3/4"C.	1	20 A	HOLD RM PODIUM...	12
13	CP-2	60 A	3	SEE SINGLE LINE...	720 VA	1260 VA					2#12 & 1#12G, 3/4"C.	1	20 A	TOILET RM RECEPT	14
15	--	--	--	--			360 VA	720 VA			2#12 & 1#12G, 3/4"C.	1	20 A	EXTERIOR RECEPTACLES	16
17	--	--	--	--					360 VA	1260 VA	2#12 & 1#12G, 3/4"C.	1	20 A	HOLD RM FURNITURE USB...	18
19	VTU-5-5	20 A	1	2#12 & 1#12G, 3/4"C.	1620 VA	360 VA					2#12 & 1#12G, 3/4"C.	1	20 A	HOLD RM PODIUM...	20
21	EF-3	15 A	2	2#12 & 1#12G, 3/4"C.			463 VA	360 VA			2#12 & 1#12G, 3/4"C.	1	20 A	EXTERIOR RECEPTACLES	22
23	--	--	--	--					463 VA	540 VA		1	20 A	Receptacle	24
25	Receptacle	20 A	1		540 VA	900 VA						1	20 A	Receptacle	26
27	Power	20 A	1				500 VA	500 VA				1	20 A	Power	28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	11160 VA		7403 VA		6043 VA						
				Total Amps:	95 A		63 A		50 A						

Panel Totals:
Total Conn. Load: 24606 VA
Total Est. Demand: 22136 VA
Total Conn. Current: 68 A
Total Est. Demand Current:... 61 A

Legend:

Notes:

BRANCH PANEL: LP-1

Location: STORAGE W1082
Supply From: SB-1
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	LTG, W1281, W1278, W1285	20 A	1	2#12 & 1#12G, 3/4"C.	260 VA	358 VA					2#12 & 1#12G, 3/4"C.	1	20 A	LTG, W1081, W1276, W1277,...	2
3	LTG, W1072	20 A	1	2#12 & 1#12G, 3/4"C.			764 VA	764 VA			2#12 & 1#12G, 3/4"C.	1	20 A	LTG, W1114, W1072	4
5	LTG, W010, W1012, W013	20 A	1	2#12 & 1#12G, 3/4"C.					556 VA	650 VA	2#12 & 1#12G, 3/4"C.	1	20 A	LTG, W1010, W1061, W1001,...	6
7	LTG, W1012, W1013	20 A	1	2#12 & 1#12G, 3/4"C.	538 VA	507 VA					2#12 & 1#12G, 3/4"C.	1	20 A	LTG, W1012, W1013	8
9	LTG, W1011, W1013	20 A	1	2#12 & 1#12G, 3/4"C.			427 VA	507 VA			2#12 & 1#12G, 3/4"C.	1	20 A	LTG, W1012, W1013	10
11	LTG, W1114	20 A	1	2#12 & 1#12G, 3/4"C.					764 VA	424 VA	2#12 & 1#12G, 3/4"C.	1	20 A	LTG, W1011, W1013, W1005,...	12
13	EXTERIOR EGRESS...	20 A	1	2#12 & 1#12G, 3/4"C.	816 VA										14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	2471 VA		2462 VA		2390 VA						
				Total Amps:	9 A		9 A		9 A						

Panel Totals:
Total Conn. Load: 7323 VA
Total Est. Demand: 7526 VA
Total Conn. Current: 9 A
Total Est. Demand Current:... 9 A

Legend:

Notes:

BRANCH PANEL: LP-2

Location: JANITOR W1172
Supply From: SB-2
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

CKT	Circuit Description	Trip	Poles	Wire Size	A		B		C		Wire Size	Poles	Trip	Circuit Description	CKT
1	LTG, W1231	20 A	1	2#12 & 1#12G, 3/4"C.	821 VA	764 VA					2#12 & 1#12G, 3/4"C.	1	20 A	LTG, W1231, W1183	2
3	LTG, W1183	20 A	1	2#12 & 1#12G, 3/4"C.			764 VA	351 VA			2#12 & 1#12G, 3/4"C.	1	20 A	LTG, W1271, W1272, W1268,...	4
5	LTG, W1183	20 A	1	2#12 & 1#12G, 3/4"C.					764 VA	764 VA	2#12 & 1#12G, 3/4"C.	1	20 A	LTG, W1141	6
7	LTG, ,W1141	20 A	1	2#12 & 1#12G, 3/4"C.	764 VA	1020 VA					2#12 & 1#12G, 3/4"C.	1	20 A	EXTERIOR EGRESS...	8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	3369 VA		1112 VA		1528 VA						
				Total Amps:	12 A		4 A		6 A						

Panel Totals:
Total Conn. Load: 6008 VA
Total Est. Demand: 6263 VA
Total Conn. Current: 7 A
Total Est. Demand Current:... 8 A

Legend:

Notes:

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**BA**
Drawn By:	
Checked By:	**CMC**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

PANEL SCHEDULES

BID DOCUMENT

Drawing No.:

E603

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LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER*	LAMP	VOLTS	WATTS	CATALOG NUMBER*	MOUNTING	TOTAL FIXTURE QUANTITY
A1	8FT LED RECESSED LINEAR	LUMAX	LED	277	44 VA	N2LEDG43L4K96	RECESSED	143
A2	4FT LED RECESSED LINEAR	LUMAX	LED	277	31 VA	N2LEDG29L4K48	RECESSED	150
B1	6" LED DOWNLIGHT	HALO	LED	277	10 VA	HC610D010-HM612840-61WDWB	RECESSED	158
C1	4FT LED PENDANT INDUSTRIAL	METALUX	LED	277	31 VA	4SNLED-LD5-41SL-LN-UNV-L840-CD1-U	PENDANT 12' AFF	42
D1	2X2 LED RECESSED TROFFER	METALUX	LED	277	20 VA	22GR-LD5-24-F1-UNV-L840-CD1-U	RECESSED	28
X	EXIT SIGN WITH CHEVRONS AS INDICATED ON PLAN	HE WILLIAMS	LED	277	6 VA	EXIT-R-AC-WHT-D	SURFACE	19
X1	CROSSTOUR MAXX LED EXTERIOR WALL PACK WALKWAY LIGHTING	COOPER LIGHTING	LED	277	102 VA	XTOR12BWBZPC2	SURFACE	18

* OR APPROVED EQUAL FOR ALL PRODUCTS LISTED

LIGHTING CONTROL COMPONENT SCHEDULE

SYMBOL	DESCRIPTION	TYPE	MOUNTING	MANUFACTURER	MODEL NUMBER	TYPICAL COVERAGE	NOTES	TOTAL
OS_a	DUAL TECHNOLOGY CEILING SENSOR SET TO AUTO ON/OFF	DUAL TECHNOLOGY	CEILING	ACUITY	CMR-PDT-10	OPEN AREAS, TSA, HOLD ROOMS (36FT RADIAL COVERAGE)	LOWER CASE LETTER DENOTES SWITCHING ZONE. SET TO 50% AUTOMATIC ON, 100% WITH LOCAL OVERRIDE. PROVIDE EACH ZONE WITH POWER PACK. ACUITY # PP20. PROVIDE 0-10V WIRING FROM SENSOR TO CONTROLLED LIGHTING FIXTURES PER MANUFACTURER'S INSTRUCTIONS.	23
		120-277V TOGGLE	WALL	EATON	CS315			14
S_{LV} e,f	2 ZONE LOW VOLTAGE OVERRIDE SWITCH	OVERRIDE	WALL	ACUITY	LVPS-2BT		LOWER CASE LETTER DENOTES SWITCHING ZONES.	5
S_{OS}	DUAL TECHNOLOGY COMBINATION WALL MOUNTED OCCUPANCY SWITCH	DUAL TECHNOLOGY	WALL	ACUITY	WSX-PDT	SMALL ROOMS (20FT RADIAL COVERAGE)		10
S	SINGLE POLE 120-277V TOGGLE SWITCH	120-277V TOGGLE	WALL	EATON	CS115	UTILITY ROOMS		15

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
Designed By:	Designer
Drawn By:	Author
Checked By:	Checker
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

LIGHTING FIXTURE SCHEDULE

BID DOCUMENT

Drawing No.:

E604

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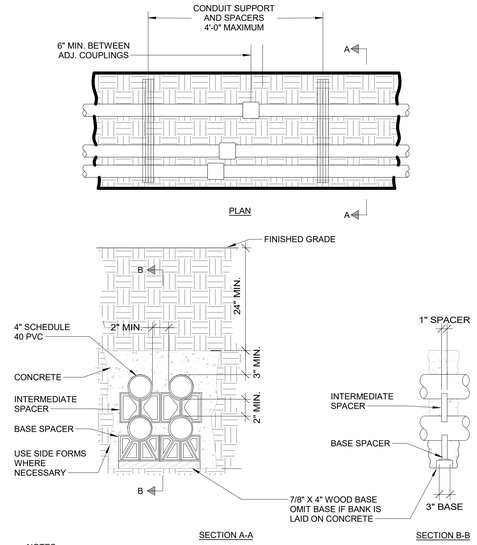


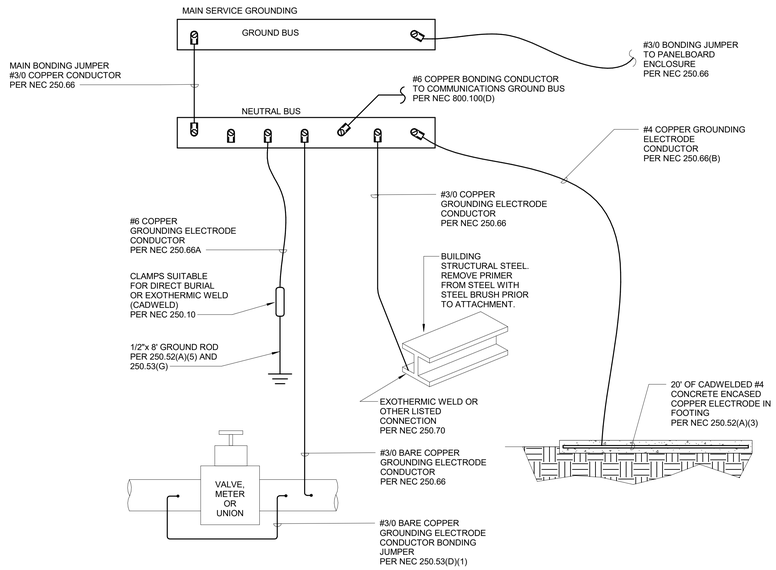
NOTES:

1. FOR SIZE AND NUMBER OF CONDUITS AS WELL AS DUCT BANK FORMATION, SEE PLANS.
2. AVOID OVER-EXCAVATION OF THE DUCTBANK TRENCH. DUCTBANK WALLS SHALL BE FORMED WITHIN 5 FEET OF A MANHOLE, WITHIN A "COMMON" UTILITIES TRENCH, AND IF THE WIDTH OF THE POUR WILL EXTEND BEYOND THE DIMENSION SHOWN ON THE DETAIL.
3. INSPECTION AND SIGN-OFF BY UNIVERSITY REPRESENTATIVE IS REQUIRED AFTER THE DUCTBANK BASE IS POURED AND THE CONDUITS ARE INSTALLED, BUT PRIOR TO FINAL CONCRETE ENCASEMENT.

1 CONCRETED_ENCASED_DUCT_BANK_DETAIL
N.T.S.

EXAMPLE:
MAIN DISTRIBUTION FEED IS
FOUR SETS OF (4) 350KCMIL
AND (1)#3/0 GND IN 4" CONDUIT

NOTE:
ALL GROUNDING ELECTRODES THAT ARE PRESENT SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM. WHERE NONE OF THESE GROUNDING ELECTRODES EXIST, ONE OR MORE OF THE GROUNDING ELECTRODES SHALL BE INSTALLED. FURTHERMORE, IF THE ONLY ELECTRODE AVAILABLE IS THE WATER PIPE, A SUPPLEMENTAL ELECTRODE IS REQUIRED.



2 GROUNDING_ELECTRODE_DETAIL
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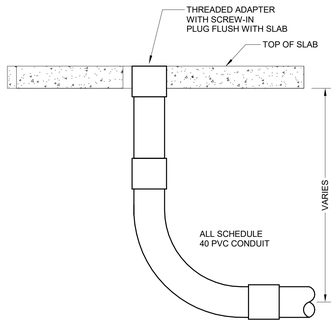

3 CONDUIT_STUB_UP_DETAIL
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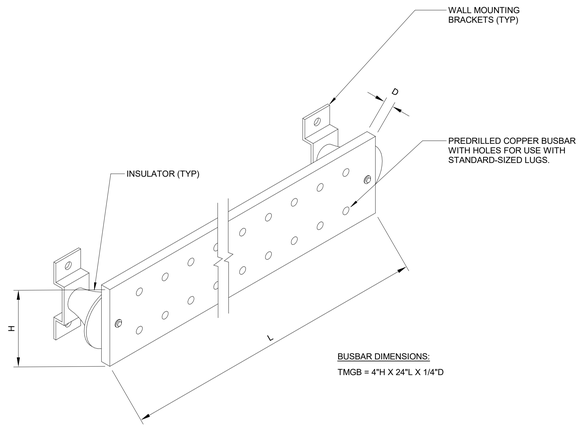

4 TELECOMMUNICATIONS_GROUNDING_DETAIL
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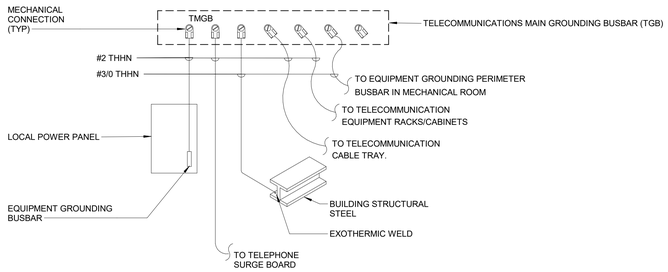

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Revisions

No.	Date	Description

Project No.:	Project Number
Designed By:	BA
Drawn By:	
Checked By:	CMC
Issue Date:	21-JAN-2020
Drawing Scale:	As indicated

Drawing Title:

DETAILS - ELECTRICAL

BID DOCUMENT

Drawing No.:

E801

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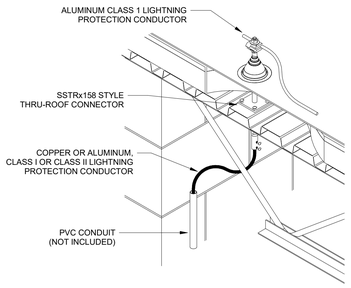

1 SSTRx158_-_STYLE_THRU-ROOF_CONNECTOR
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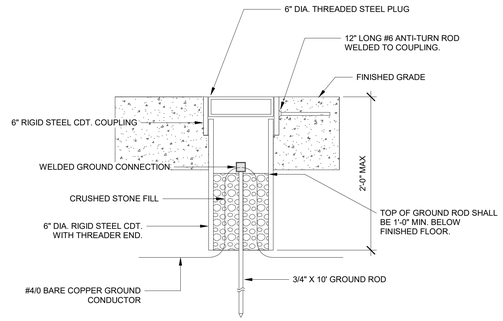

2 GROUND_CONDUCTOR_TEST_WELL_DETAIL
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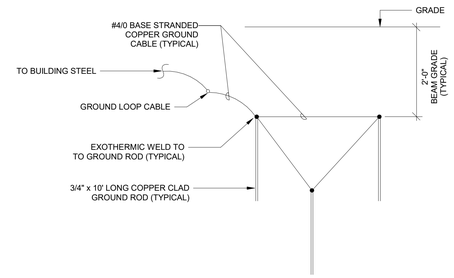
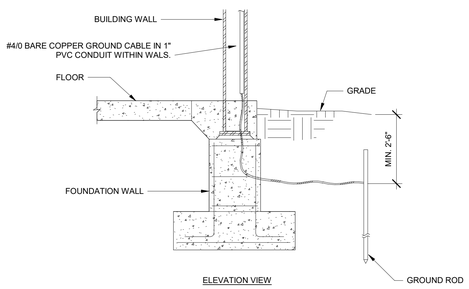


3 GROUND_ROD_COUNTERPOISE_DETAIL
N.T.S.



4 TYPICAL_LIGHTNING_DOWN_CONDUCTOR_GROUNDING_DETAIL
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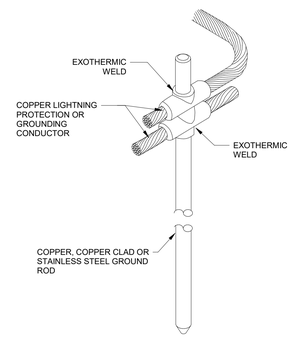

6 GROUND_ROD_DETAIL_EXOTHERMIC_WELD
N.T.S.

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**CC**
Drawn By:	**JJS**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	**N.T.S.**

Drawing Title:

DETAILS - ELECTRICAL 2

BID DOCUMENT

Drawing No.:

E802

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MOUNTING HEIGHTS

CEILING	SMOKE AND HEAT DETECTORS, 360° SECURITY MOTION DETECTORS, CCTV SURVEILLANCE CAMERAS, PUBLIC ADDRESS AND VOICE EVACUATION SPEAKERS, WIRELESS ACCESS POINTS. TV AND LCD PROJECTOR JACKS
8' A.F.G.	EXTERIOR VISUAL AND AUDIO/VISUAL FIRE ALARM NOTIFICATION DEVICES, EXTERIOR PUBLIC ADDRESS SPEAKERS.
7'-5" A.F.F.	CLOCKS, COMBINATION CLOCK/SPEAKERS, TRUMPET SPEAKERS
7'-0" A.F.F.	VISUAL AND AUDIO/VISUAL FIRE ALARM NOTIFICATION DEVICES, WALL MOUNTED SECURITY MOTION DETECTORS (CENTER OF DEVICE)
6" ABOVE DOOR JAMB	REQUEST TO EXIT MOTION DETECTORS
5'-6" A.F.F	TOP OF PLYWOOD TELEPHONE BACKBOARD
5'-4" A.F.F.	FIRE ALARM ANNUNCIATOR PANELS, FIRE FIGHTER CONTROL STATIONS, SECURITY ANNUNCIATOR PANELS, VISUAL DISPLAYS, TACTILE DISPLAYS
4'-8" A.F.G. MAX	PEDESTAL MOUNT INTERCOM PEDESTAL MOUNT CARD READER
4'-0" A.F.F.	"PS" TELEPHONE OUTLETS (TOP OF COIN SLOT),(WALL MOUNTED)-TELEPHONE INSTRUMENTS, INTERCOM STATIONS, FIRE FIGHTER TELEPHONE JACKS, FIRE ALARM MANUAL STATIONS, CARD READERS, MANUAL REQUEST TO EXIT DEVICES, WALL MOUNTED DURESS ALARM STATIONS, RESCUE ASSISTANCE PANELS, LCD KEYPADS (CENTER OF DEVICE)
UNDER COUNTER OR DESK	DURESS ALARM BUTTONS, DOOR RELEASE BUTTOMS
1'-6" A.F.F.	DATA/TELEPHONE JACKS, LOW TELEVISION JACKS, MICROPHONE JACKS
0'-0"	IN FLOOR JUNCTION BOXES FLUSH TO FINISHED FLOOR (FF) (DATA, TELEPHONE, MICROPHONE, MEDIA)

1. IN MASONRY CONSTRUCTION THE MOUNTING HEIGHTS SHALL BE USED FOR REFERENCE TO THE NEAREST BLOCK OR BRICK COURSING.
2. THE ABOVE MOUNTING ELEVATIONS ARE TO CENTER OF DEVICE AND SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE DRAWINGS AND/OR SPECIFICATIONS.
3. COORDINATE THE INSTALLATION AND MOUNTING ELEVATIONS OF ALL EQUIPMENT, DEVICES, CONTROLS AND APPURTENANCES WITH ARCHITECT AND ALL AFFECTED TRADES PRIOR TO INSTALLATION. DOCUMENT ALL MOUNTING ELEVATIONS FOR ALL EQUIPMENT, DEVICES, CONTROLS AND APPURTENANCES AT THE TIME OF SHOP DRAWING SUBMITTAL

FIRE ALARM ABBREVIATIONS

AFC	ABOVE FINISHED CEILING	LED	LIGHT EMITTING DIODE
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING
AFG	ABOVE FINISHED GRADE	LA	LIGHTNING ARRESTER
ADJ	ADJUSTABLE	LV	LOW VOLTAGE
AC	ALTERNATING CURRENT	MCB	MAIN CIRCUIT BREAKER
AL	ALUMINUM	MDP	MAIN DISTRIBUTION PANEL
ADA	AMERICAN DISABILITIES ACT	MLO	MAIN LUGS ONLY
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MH	MANHOLE
AWG	AMERICAN WIRE GAUGE	MTS	MANUAL TRANSFER SWITCH
AM	AMMETER	MFR	MANUFACTURER
A/AMP	AMPERE	MATV	MASTER ANTENNA TELEVISION
AMP	AMPERE	MC	MECHANICAL CONTRACTOR
APPROX.	APPROXIMATELLY	MV	MEDIUM VOLTAGE
ASY	ASYMETRIC	MH	METAL HALIDE
ATS	AUTOMATIC TRANSFER SWITCH	MCC	METAL-CLAD CABLE
BATT	BATTERY	MM	MILLIMETER
BFC	BELOW FINISHED CEILING	MV	MILLIVOLT
BLK	BLACK	MISC	MISCELLANEOUS
BRKT	BRACKET	MCP	MOTOR CIRCUIT PROTECTOR
BKR	BREAKER	MCC	MOTOR CONTROL CENTER
BLDG	BUILDING	MOD	MOTOR OPERATED DAMPER
CAB	CABINET	MTD	MOUNTED
CATV	CABLE TELEVISION	MTG.HT	MOUNTING HEIGHT
CD	CANDELA	NEC	NATIONAL ELECTRIC CODE
CLG	CEILING	NEMA	NATIONAL ELECTRIC MFR ASSOCIATION
CIR/CKT	CIRCUIT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CB	CIRCUIT BREAKER	NEXT	NEAR END CROSSTALK
CLR	CLEAR	NL	NIGHT LIGHT
CCTV	CLOSED CIRCUIT TELEVISION	NO	NORMALLY OPENED
COL	COLUMN	N/A	NOT AVAILABLE/NOT APPLICABLE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT
C	CONDUIT	NTS	NOT TO SCALE
CW	COOL WHITE	OC	ON CENTER
CU	COPPER	OH	OVERHEAD
CLF	CURRENT LIMITING FUSE	OL	OVERLOAD HEATER ELEMENT
CT	CURRENT TRANSFORMER	PNL	PANEL
dB	DECIBEL	PEW	PEWTER
DED	DEDICATED	PLY	PLYWOOD
DIA	DIAMETER	P	POLE
DC	DIRECT CURRENT	PVC	POLYVINYL CHORIDE
DISC	DISCONNECT	PT	POTENTIAL TRANSFORMER
DP	DISTRIBUTION PANEL	PP	POWER PANEL
DPDT	DOUBLE POLE DOUBLE-THROW	PB	PULL BOX
DNLT	DOWNLIGHT	RS	RAPID START
DWG	DRAWING	RECPT	RECEPTACLE
DE	DUAL ELEMENT	REFL	REFLECTOR
EA	EACH	(RE)	RELOCATE EXISTING
ELEC	ELECTRICAL	(R)	REMOVE
EC	ELECTRICAL CONTRACTOR	REQ	REQUIRED
EO	ELECTRICALLY OPERATED	RGS	RIGID GALVANIZED STEEL CONDUIT
ELEV	ELEVATOR	RM	ROOM
E	EMERGENCY	RIO	ROUGH IN ONLY
EQIP	EQUIPMENT	SCH	SCHEDULE
EF	EXHAUST FAN	SPST	SINGLE POLE DOUBLE THROW
(E)	EXISTING TO REMAIN	SPDT	SINGLE POLE SINGLE THROW
XP	EXPLOSION PROOF	SSB	SOLID STATE BALLAST
FEXT	FAR END CROSSTALK	SW	SWITCH
FA	FIRE ALARM	SWBD	SWITCHBOARD
FAA	FIRE ALARM ANNUNCIATOR	SWGR	SWITCHGEAR
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TSB	TECHNICAL SERVICE BULLETIN
FACP	FIRE ALARM CONTROL PANEL	T1A	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
FAGP	FIRE ALARM GRAPHIC ANNUNCIATOR PANEL	TELE	TELEPHONE
FIXT	FIXTURE	XFMR	TRANSFORMER
FL	FLOOR	TT	TWIN TUBE
FT	FOOTCANDLES	TSP	TWISTED SHIELDED PAIR
FLA	FULL LOAD AMPERES	TYP	TYPICAL
FVNR	FULL VOLTAGE NON-REVERSING	UL	UNDERWRITER'S LABORATORIES
GC	GENERAL CONTRACTOR	UPS	UNINTERRUPTABLE POWER SUPPLY
GEN	GENERATOR	UON	UNLESS OTHERWISE NOTED
GND/G	GROUND	UTP	UNSHIELDED TWISTED PAIR
GFI	GROUND FAULT INTERRUPTER	VP	VAPOR PROOF
HH	HAND HOLE	V	VOLT
HVAC	HEATING VENTILATING AIR CONDITIONING	VM	VOLTMETER
HZ	HERTZ	WITHIN	W/I
HID	HIGH INTENSITY DISCHARGE	WITHOUT	W/O
HPF	HIGH POWER FACTOR	WW	WARM WHITE
HV	HIGH VOLTAGE	W	WATT
HP	HORSEPOWER	WP	WEATHERPROOF
IPS	INVERTER POWER SUPPLY	W/	WITH
IG	ISOLATED GROUND		
JB	JUNCTION BOX		
KVAR	KILOVAR (REACTANCE)		
KVA	KILOVOLT AMPERE		
KW	KILOWATT		
KWH	KILOWATT HOUR METER		
LT	LIGHT		

FIRE ALARM SYMBOL LEGEND

FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL	FCPS	FIELD CHARGING POWER SUPPLY
FAAP	REMOTE LCD ANNUNCIATOR PANEL	FFCS	FIRE FIGHTERS COMMAND STATION
GAP	FIRE ALARM GRAPHIC ANNUNCIATOR PANEL	F XX	ADDRESSABLE FIRE ALARM MANUAL PULL STATION WG = LEXAN COVER W/SELF CONTAINED HORN WP = WEATHER PROOF I = INSTITUTION GRADE
MRAP	MASTER RESCUE ASSISTANCE PANEL		
VDP	COLOR VIDEO DISPLAY TERMINAL	F XX	HORN/STROBE UNIT SYNCRONIZED WALL MOUNT WG - WIRE GUARD WP - WEATHER PROOF
FS	CONNECTION SPRINKLER INITIATING DEVICE	F XX	HORN UNIT WALL MOUNT WG - WIRE GUARD WP - WEATHER PROOF
FS	CONNECTION SPRINKLER SUPERVISORY DEVICE		
	MAGNETIC DOOR HOLDER		END OF LINE SUPERVISORY DEVICE
M	ADDRESSABLE MONITOR MODULE	F XX	BELL UNIT WG - WIRE GUARD WP - WEATHER PROOF
BD XX	BEAM DETECTOR T - TRANSMITTER R - RECEIVER	D XX	STROBE UNIT SYNCRONIZED CEILING (XX-CD = CANDELA RATING) C = CEILING MTG. 110 CANDELA. WP = WEATHER PROOF WG = WIRE GUARD
C	ADDRESSABLE CONTROL MODULE		
H XX	ADDRESSABLE THERMAL DETECTOR COMBINATION RATE OF RISE AND FIXED TEMPERATURE SET AT 135 DEGREES F.	F XX	BELL/STROBE UNIT SYNCHRONIZED WALL MOUNT (XX-CD = CANDELA RATING) WG = WIRE GUARD WP = WEATHER PROOF
H XX	CONVENTIONAL THERMAL DETECTOR RC - RATE COMPENSATING TEMPERATURE SET AT 190 DEGREES F. AC - ABOVE CEILING - COMBINATION RATE OF RISE AND FIXED TEMPERATURE SET AT 135 DEGREES F. (INSTALLED ABOVE ACCESSIBLE CEILING) FX - FIXED TEMPERATURE SET AT 190 DEGREES F.	S	SPEAKER UNIT
		S XX	SPEAKER/STROBE UNIT SYNCRONIZED CEILING MOUNT (XX-CD = CANDELA RATING) WG = WIRE GUARD
S XX	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR WG - WIRE GUARD U - UNDER RAISED FLOOR DETECTION	S XX	SPEAKER/STROBE UNIT SYNCRONIZED WALL MOUNT (XX-CD = CANDELA RATING) WG = WIRE GUARD
D	ADDRESSABLE DUCT SMOKE DETECTOR S = SUPPLY R = RETURN	S	SPEAKER UNIT WALL MOUNT
GDP	DATA GATHERING PANEL (REMOTE TRANSPONDER)		
RAP	REMOTE RESCUE ASSISTANCE PANEL		

NOTE:
THIS IS A STANDARD SYMBOL LIST. ALL SYMBOLS MAY NOT APPEAR ON THIS PROJECT.

OKALOOSA COUNTY

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SEAL

Revisions

No.	Date	Description

Project No.:	Project Number
Designed By:	Designer
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:
FIRE ALARM - LEGEND, SYMBOLS & ABBREVIATIONS
BID DOCUMENT

Drawing No.:
FA000

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt
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ROOM SPACING FOR WALL-MOUNTED VISIBLE APPLIANCES MINIMUM REQUIRED LIGHT

OUTPUT (EFFECTIVE INTENSITY/CANDELA) IN ACCORDANCE WITH NFPA 72

MAXIMUM RM. SIZE	ONE LIGHT PER ROOM	TWO LIGHTS PER ROOM	FOUR LIGHTS PER ROOM
20 X 20	15cd	N/A	N/A
30 X 30	30cd	15cd	N/A
40 X 40	60cd	30cd	15cd
50 X 50	95cd	60cd	30cd
60 X 60	135cd	95cd	30cd
70 X 70	185cd	95cd	30cd
80 X 80	240cd	135cd	60cd
90 X 90	305cd	185cd	95cd
100 X 100	375cd	240cd	95cd
110 X 110	455cd	240cd	135cd
120 X 120	540cd	305cd	135cd
130 X 130	635cd	375cd	185cd

NA = NOT ALLOWABLE.

NOTE: CONTRACTOR WILL PROVIDE REQUIRED CANDELA RATED STROBES IN ACCORDANCE WITH THE ABOVE TABLE FOR ALL VISIBLE APPLIANCES BASED ON LOCATION AS INDICATED ON THE CONTRACT

NFPA 72 PERFORMANCE CRITERIA

ALARM CAPABILITY DURING ABNORMAL CONDITIONS		
TROUBLE INDICATION AT PROTECTED PREMISES		
ABNORMAL CONDITION	5	6
SINGLE OPEN	X	
SINGLE GROUND	X	X
WIRE-TO-WIRE SHORT	X	

NOTIFICATION APPLIANCE CIRCUITS

NFPA - CLASS B - STYLE Y

NOTIFICATION CIRCUITS NOTE:

THE ALARM SIGNAL DEVICES DO NOT HAVE TO BE WIRED SEQUENTIALLY BUT THEY:
-WILL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS
-WILL HAVE AN EOL
-WILL NOT BE T-TAPPED
-MUST BE IN CONDUIT

ALARM CAPABILITY DURING ABNORMAL CONDITIONS		
TROUBLE INDICATION AT PROTECTED PREMISES		
ALARM		
ABNORMAL CONDITION	X	
SINGLE OPEN	X	
SINGLE GROUND	X	R
WIRE-TO-WIRE SHORT	X	
WIRE-TO-WIRE SHORT & OPEN	X	
WIRE-TO-WIRE SHORT & GROUND	X	
OPEN & GROUND	X	
LOSS OF CARRIER(IF USED)/ CHANNEL INTERFACE	X	

SIGNALING LINE CIRCUITS (SLC)

NFPA - CLASS B - STYLE 4

INITIATION LOOP (SLC) NOTE:

THE ALARM INITIATION DEVICES DO NOT HAVE TO BE WIRED SEQUENTIALLY BUT THEY:
-WILL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS
-DO NOT HAVE AN EOL
-MAY BE T-TAPPED
-MAY HAVE UNIQUE ADDRESSES
-SHALL BE IN CONDUIT

ADDRESSABLE FIRE ALARM SYSTEM WIRE SCHEDULE

DESCRIPTION	TYPICAL DEVICES	NEC CLASSIFICATION	CABLE	TWISTED	No. OF CONDUCTORS	SHIELDED	NFPA CLASS	NFPA STYLE	IN CONDUIT	NOTES
ADDRESSABLE INITIATING LOOP (SLC)	MANUAL STATIONS, SMOKE/HEAT DETECTORS, INTERFACE MODULES	POWER-LIMITED	16 AWG	YES	2	PER MANUF.	B	4	YES	T-TAPPING PERMITTED, BUT DISCOURAGED, NO EOL'S.
NOTIFICATION APPLIANCE CIRCUIT (NAC)	HORNS, STROBES, BELLS	POWER-LIMITED	14 AWG	NO	2	NO	B	Y	YES	NO T-TAPPING, CIRCUITS FROM FACP'S: REQUIRED EOL, CIRCUITS FROM FCPS: REQUIRED EOL.
NOTIFICATION APPLIANCE CIRCUIT (NAC)	SPEAKERS	POWER-LIMITED	16 AWG	YES	2	YES	B	Y	YES	NO T-TAPPING, CIRCUITS FROM FACP'S: REQUIRED EOL, CIRCUITS FROM AMPLIFIERS/DGP'S: REQUIRED EOL.
24 VDC POWER	REMOTE ANNUNCIATORS, CONTROL MODULES, BEAM DETECTORS	POWER-LIMITED	14 AWG	NO	2	NO	B	N/A	YES	T-TAPPING PERMITTED.
PRINTER CABLE	PRINTER	POWER-LIMITED	-	YES	-	NO	N/A	N/A	YES	MAX. 25FT CABLE RUN (GREATER THAN 25FT IN LENGTH CONTRACTOR SHALL PROVIDE APPROPRIATE MODEMS)
RS485-TRANSPONDER NETWORK (SLC)	COMMUNICATION BETWEEN FACP'S AND TRANSPONDERS	POWER-LIMITED	18 AWG	YES	2	PER MANUF.	A	7a	YES	NO T-TAPPING, 5000 FT MAX.CABLE RUN,
CONVENTIONAL INITIATING LOOP (IDC)	CONVENTIONAL HEAT DETECTORS, BEAM DETECTORS	POWER-LIMITED	14 AWG	NO	2	YES	B	Y	YES	NO TAPPING, MANUFACTURERS REQUIRED EOL

ADDRESSABLE FIRE ALARM SYSTEM CABLE TYPE

NEC DESIGNATION *	DESCRIPTION	APPLICATION	CONDUCTOR MATERIAL	ACCEPTABLE FOR PROJECT
FPLP	FIRE, POWER LIMITED, PLENUM	SUITABLE FOR USE IN DUCTS, PLENUMS, AND OTHER SPACE USED FOR ENVIRONMENTAL AIR.	COPPER	NO
FPLR	FIRE, POWER LIMITED, RISER	SUITABLE FOR USE IN A VERTICAL RUN IN A SHAFT OR WHEN A WIRE RUN PASSES FROM FLOOR TO FLOOR.	COPPER	NO
FPL	FIRE, POWER LIMITED	SUITABLE FOR GENERAL-PURPOSE FIRE ALARM USE IN CONDUITS, WITH THE EXCEPTIONS OF THE ABOVE APPLICATIONS.	COPPER	YES

* CABLE TYPES ARE LISTED IN DESCENDING ORDER OF FIRE-RESISTANT RATING, PER NFPA 70, TABLE 760-71(h)

GENERAL FIRE ALARM SYSTEM NOTES:

1. THE FOLLOWING GENERAL NOTES AS LISTED BELOW APPLY TO ALL FIRE ALARM SYSTEM SCOPES OF WORK AS INDICATED ON THE FA SERIES DRAWINGS.
2. ALL EQUIPMENT SYMBOLS ARE SHOWN ON DRAWINGS AS CLOSE AS POSSIBLE TO THEIR INTENDED LOCATION. CONTRACTOR WILL COORDINATE IN THE FIELD THE PROPER INSTALLATION OF ALL EQUIPMENT, DEVICES, CONTROLS AND CABLING. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.
3. DRAWINGS FOR THIS WORK ARE DIAGRAMMATIC AND INTENDED TO CONVEY THE EXTENT, GENERAL ARRANGEMENT AND LOCATIONS OF THE WORK. BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN BASIC ITEMS SUCH AS ACCESS PANELS, CONDUITS, CABINET SIZES, PENETRATION SLEEVES, PULL BOXES, BACKBOXES AND JUNCTION BOXES MAY NOT BE SHOWN. INCLUDE ALL ITEMS WHERE REQUIRED BY CODE, MANUFACTURER AND RELATED SPECIFICATION SECTIONS FOR THE PROPER INSTALLATION OF ALL WORK.
4. THE SYSTEM WILL BE INSTALLED IN ACCORDANCE WITH ARTICLE 760 OF THE NATIONAL ELECTRIC CODE. ALL FIRE ALARM CABLE MUST BE INSTALLED IN DEDICATED CONDUITS IN ACCORDANCE WITH THE CABLING REQUIREMENTS SPECIFIED BY THE CONTRACT DOCUMENTS.
5. FIRE ALARM DEVICE MOUNTING HEIGHTS WILL COMPLY WITH ALL ANSI 117, NFPA 72 AND IBC REQUIREMENTS, AT THE MINIMUM INSTALL ALL DEVICES AS FOLLOWS:
   - MANUAL PULL STATION: 48" A.F.F. TO CENTER
   - AUDIBLE/VISUAL: 7'-0" A.F.F. TO BOTTOM OF STROBE LENS OR 8" BELOW CEILING TO CENTER OF STROBE LENS.
   - VISUAL: 7'-0" A.F.F. TO BOTTOM OF STROBE LENS OR 8" BELOW CEILING TO CENTER OF STROBE LENS.
   - EMERGENCY TELEPHONE JACKS: 48" A.F.F. TO CENTER
6. COORDINATE WITH ALL TRADES AND INTEGRATORS ALL CONDITIONS RELATED TO THE INSTALLATION OF ALL DEVICES. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE TRADES AND SYSTEM INTEGRATORS ALL INSTALLATION REQUIREMENTS IMPACTING THE PLACEMENT OF ALL SYSTEM COMPONENTS TO THE SATISFACTION OF ALL CONCERNED TRADES.
7. ALL EQUIPMENT CLEARANCES WILL BE IN ACCORDANCE WITH NFPA 70 REQUIREMENTS. ARRANGE EQUIPMENT TO FACILITATE UNRESTRICTED ACCESS FOR MAINTENANCE AND SERVICE AROUND ALL EQUIPMENT, COMPONENTS AND/OR CABLE TERMINATIONS.
8. COORDINATE EXACT LOCATION(S) OF ALL CEILING MOUNTED CABLE, CONDUITS, EQUIPMENT AND/OR DEVICES WITH ALL ARCHITECTURAL PLANS, REFLECTED CEILING PLANS AND AFFECTED TRADES PRIOR TO INSTALLATION.
9. WHERE EQUIPMENT AND/OR JUNCTION BOXES ARE INSTALLED ABOVE FINISHED CEILINGS, THE CONTRACTOR WILL PROVIDE ACCESS HATCHES LISTED FOR THE INTENDED APPLICATION. ACCESS HATCHES SHALL BE LOCATED SO THAT SERVICE ACCESS TO THE EQUIPMENT AND/OR JUNCTION BOXES IS UNIMPEDED.
10. THE FIRE ALARM SYSTEM WILL BE INSTALLED IN DEDICATED CONDUITS. ALL CONDUITS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 AND THE CONTRACT DOCUMENTS. ALL CONDUITS SHALL BE SIZED IN ACCORDANCE WITH NFPA 70 AND WILL BE A MINIMUM OF 3/4" UNLESS OTHERWISE NOTED. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
11. ALL CONDUITS/RACEWAYS WILL BE INSTALLED IN A MANNER THAT PREVENTS TAMPERING OR REMOVAL WHEN INSTALLED IN AREAS EXPOSED TO THE GENERAL POPULATION. PROVIDE TAMPER-RESISTANT INSTALLATION UTILIZING TORX WITH PEC" SECURITY-FASTENING DEVICES FOR ALL CONDUITS/RACEWAYS, EQUIPMENT, DEVICES AND APPURTENANCES IN ALL AREAS ACCESSIBLE TO THE GENERAL POPULATION AND/OR AREAS SUBJECTED TO TAMPERING OR VANDALISM. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
12. APPROVED EARTH GROUND WILL BE PROVIDED AT FIRE ALARM CONTROL PANEL CHASSIS. A CONDUIT GROUNDING TO BUILDING STEEL SHALL NOT BE CONSIDERED A ACCEPTABLE METHODOLOGY FOR GROUNDING OF FIRE ALARM CONTROL PANEL.
13. ALL SYSTEM WIRING AND EQUIPMENT INSTALLATIONS WILL BE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AND BY ALL IEEE, EIA, NEC AND MANUFACTURER'S REQUIREMENTS. WIRING WILL COMPLY WITH ALL STATE AND LOCAL ELECTRICAL CODES. ALL WIRING WILL TEST FREE FROM ALL GROUNDS, SHORTS AND EMI.
14. NO A.C. CARRYING CONDUCTORS ARE PERMITTED TO SHARE RACEWAYS WITH ANY FIRE ALARM INITIATING AND/OR NOTIFICATION CIRCUITS.
15. ALL AC ELECTRICAL CIRCUITS FEEDING THE FIRE ALARM CONTROL EQUIPMENT WILL BE EQUIPPED WITH DEDICATED CIRCUIT BREAKER LOCKOUT DEVICE IN ACCORDANCE WITH NFPA 72.
16. ALL WIRES AND CIRCUITS WILL BE METERED TO ENSURE THEY ARE FREE OF ANY GROUNDS AND SHORTS PRIOR TO COMMISSIONING OF THE SYSTEM.
17. ALL AUXILIARY ALARM RELAYS WILL BE INSTALLED WITHIN 3 FEET OF THE EQUIPMENT TO BE CONTROLLED IN ACCORDANCE WITH ALL NFPA 72 REQUIREMENTS.
18. ALL FIRE ALARM DEVICES AND EQUIPMENT WILL BE LABELED UNIQUE IDENTIFICATION NUMBER. ALL NUMBERS WILL CORRESPOND WITH NUMBERING SEQUENCE AS SUBMITTED ON THE PROJECT SHOP DRAWINGS. LABELS TO BE SIMILAR TO "BROTHER P-TOUCH" BLACK LETTERING ON WHITE BACKGROUND, SELF-ADHESIVE TAPE. ALL DEVICE LABELS WILL BE INSTALLED PRIOR TO SYSTEM CHECKOUT.
19. ALL PENETRATIONS OF WALLS AND FLOORS WILL BE FIRE STOPPED IN ACCORDANCE WITH THE ASTM AND NFPA. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION. INSTALLATION OF FIRE-STOPS SHALL BE PERFORMED BY AN APPLICATOR/INSTALLER QUALIFIED AND TRAINED BY THE MANUFACTURER. INSTALLATION WILL BE PERFORMED IN STRICT ACCORDANCE WITH MANUFACTURER'S DETAILED INSTALLATION PROCEDURES.
20. REFER TO SPECIFICATION SECTIONS 280500 AND 283111 AS WELL AS ALL RELATED SPECIFICATION SECTION FOR PROJECT SUBMITTAL REQUIREMENTS AND ADDITIONAL INFORMATION.
21. ALL EQUIPMENT ENCLOSURES LOCATED OUTSIDE OR IN ALL AREAS WITH HIGH MOISTURE OR A RELATIVE HUMIDITY OF 75% OR GREATER WILL BE NEMA 4X ENCLOSURES RATED FOR THAT APPLICATION.
22. ALL EQUIPMENT EXPOSED TO THE ENVIRONMENT OR INSTALLED IN PROXIMITY TO AREAS WITH HIGH MOISTURE, OR A RELATIVE HUMIDITY OF 75% OR GREATER WILL BE PROVIDED WITH ENCLOSURES AND OR BACKBOXES RATED FOR THE ENVIRONMENTAL CONDITIONS.
23. THE STROBE INTENSITY OF ALL VISUAL NOTIFICATION APPLIANCES WILL BE IN ACCORDANCE WITH NFPA 72 AND UL 1971. STROBE CANDELA RATINGS WILL BE PROVIDED IN ACCORDANCE WITH DEVICE LOCATIONS AND WILL CONFORM TO ALL ICC/ANSI 117 AND NFPA 72 INSTALLATION REQUIREMENTS. CONTRACTOR WILL PROVIDE THE REQUIRED CANDELA POWER AND LOCATE ALL VISUAL NOTIFICATION APPLIANCES AS REQUIRED TO MEET THE REQUIREMENTS OF ALL REFERENCED CODES AND STANDARDS.
24. THE FIRE ALARM CONTRACTOR SHALL FURNISH AND INSTALL A SIEMONS FC2025 DESIGO FIRE CONTROL PANEL WITH RELEASING MODULE XC120001-U1 AS THE LINEAR HEAT DECTECTOR FOR THE FIRE SUPPRESSION DELUGE SYSTEM LOCATED ON THE APRON SIDE OF THE NEW CONCOURSE.. THE FA CONTRACTOR SHALL COORDINATE WITH THE FIRE PROTECTION (SUPPRESSION) CONTRACTOR FOR CONNECTIVITY REQUIREMENTS.
25. THE FA CONTRACTOR SHALL FURNISH AND INSTALL THE JUCTION BOX TO HOUSE THE STRAIN RELEIF CONNECTOR AND THE END OF LINE RESISTOR.
26. THE FA CONTRACTOR SHALL FURNISH AND INSTALL THE HEAT DETECTOR CABLE FOR THE ENITRE LENGTH OF THE BUILDING FOR THE DELUGE SYSTEM.

OKALOOSA COUNTY

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Revisions

No.	Date	Description

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

FIRE ALARM - GENERAL NOTES

BID DOCUMENT

Drawing No.:

FA001

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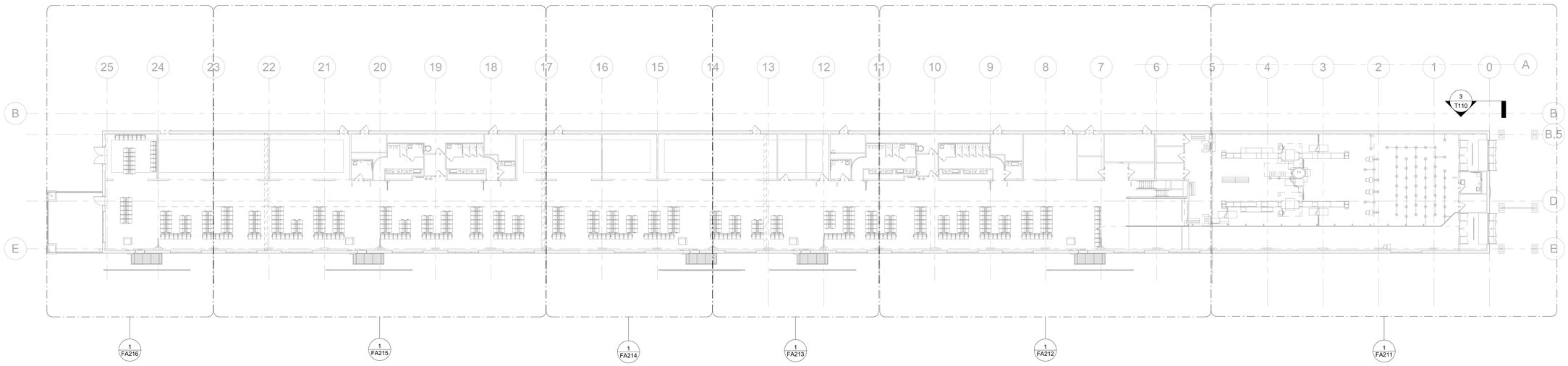

1 Level 1 - Fire Alarm
1" = 20'-0"

FIRE ALARM - ADD ALTERNATE NOTES:

1. FA CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. FA CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Project No.:	**Project Number**
Designed By:	**AB**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	**As indicated**

Drawing Title:

OVERALL FLOOR PLANS

BID DOCUMENT

Drawing No.:

FA110

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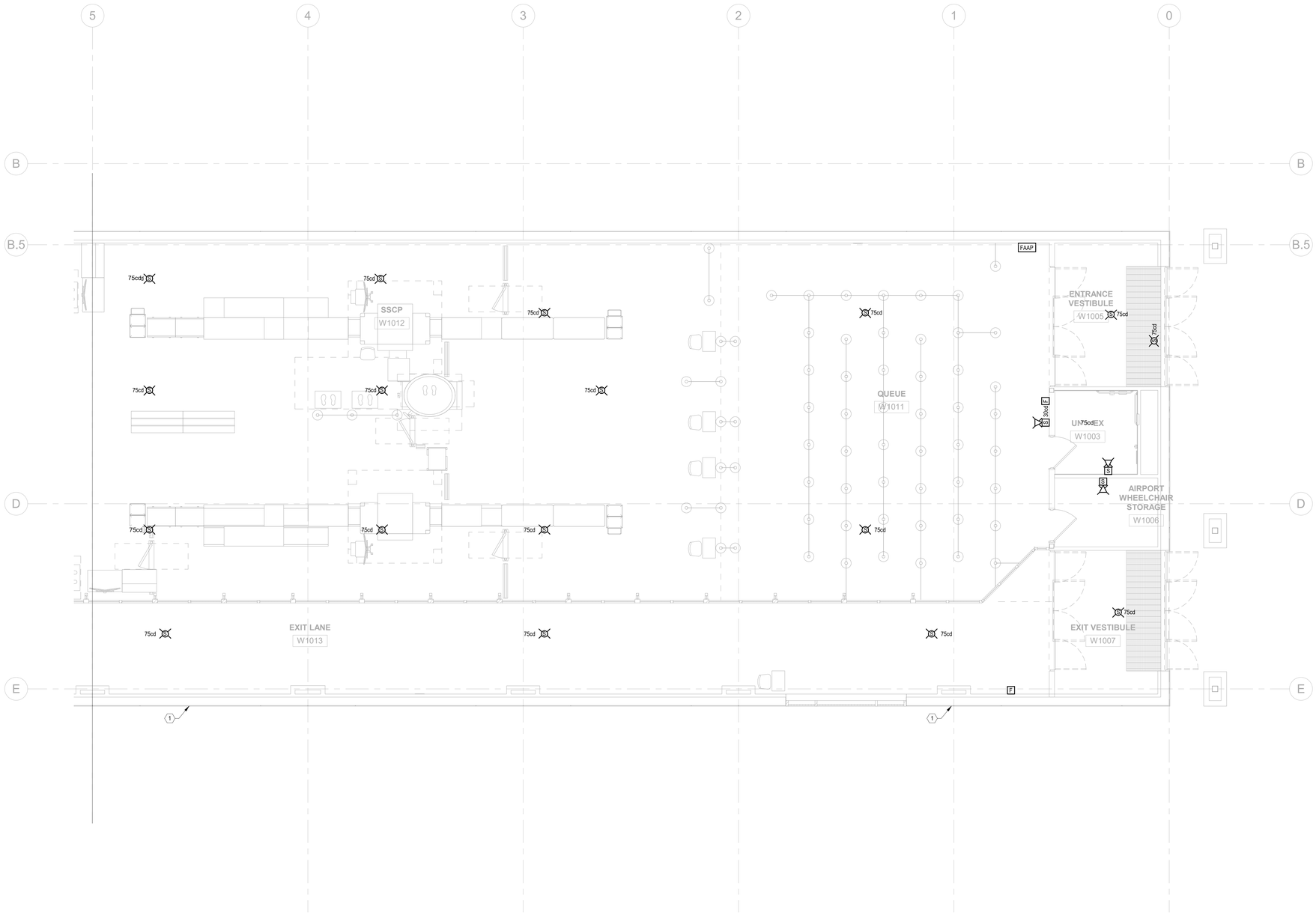

1 LEVEL 1 - FIRE ALARM - AREA 1
3/16" = 1'-0"

GENERAL NOTES:

1. FA CONTRACTOR SHALL PROVIDE ALL PANELS, EQUIPMENT, DEVICES, AND CONNECTIVITY RELATED TO THE FIRE ALARMS SYSTEM.
2. FA CONTRACTOR SHALL COORDINATE WITH THE FIRE SUPPRESSION CONTRACTOR FOR FLOW SWITCH,TAMPERS SWITCH AND SOLENOID DELUGE VALVE CONNECTIVITY.
3. FA CONTRACTOR SHALL FURNISH AND INSTALL LINEAR HEAT DETECTOR CABLE FOR THE DELUGE SYSTEM
4. FA CONTRACTOR SHALL FURNISH ALL DUCT DETECTORS AND COORDINATE PROVIDE TO THE DIVISION 21 CONTRACTOR.
5. CONTRACTOR SHALL FURNISH AND INSTALL LINEAR HEAT DETECTOR CABLE THE LENGTH OF THE BUILDING AS IDENTIFIED IN DRAWINGS.

KEYED NOTES:

CONTRACTOR SHALL FURNISH AND INSTALL:

1. LINEAR HEAT DETECTOR CABLE (LHD). LHD SHALL BE STRAPPED DIRECTLY TO THE DELUGE SPRINKLER PIPE USING MANUFACTURE SUPPORT TIES.
LHD CABLE SHALL BE ONE CONTINUOUS RUN FOR THE ENTIRE LENGTH OF THE BUILDING (APRON SIDE).

FIRE ALARM - ADD ALTERNATE NOTES:

1. FA CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. FA CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 1

BID DOCUMENT

Drawing No.:

FA211

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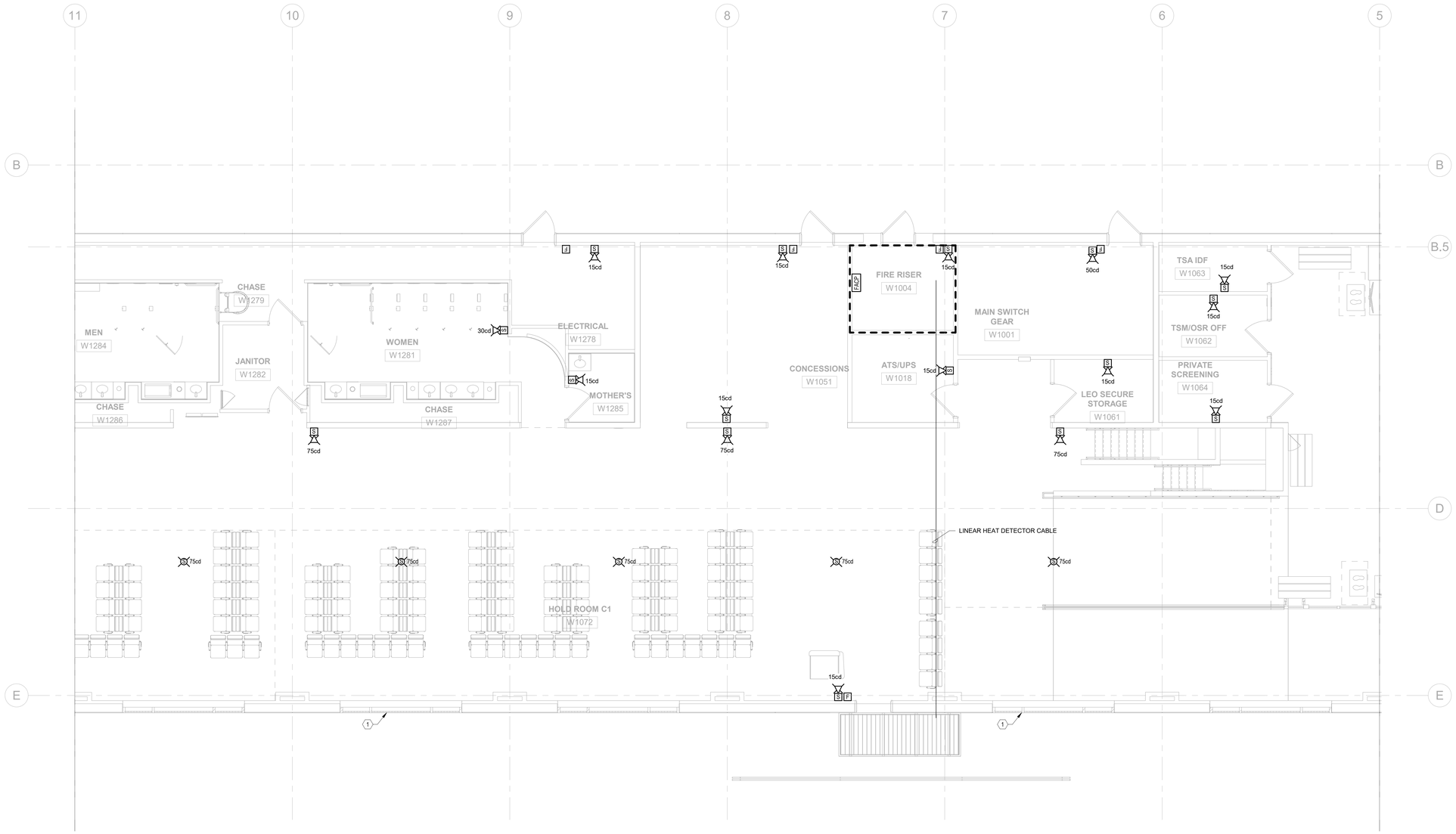

1 LEVEL 1 - FIRE ALARM - AREA 2
3/16" = 1'-0"

GENERAL NOTES:

1. FA CONTRACTOR SHALL PROVIDE ALL PANELS, EQUIPMENT, DEVICES, AND CONNECTIVITY RELATED TO THE FIRE ALARMS SYSTEM.
2. FA CONTRACTOR SHALL COORDINATE WITH THE FIRE SUPPRESSION CONTRACTOR FOR FLOW SWITCH,TAMPERS SWITCH AND SOLENOID DELUGE VALVE CONNECTIVITY.
3. FA CONTRACTOR SHALL FURNISH AND INSTALL LINEAR HEAT DETECTOR CABLE FOR THE DELUGE SYSTEM
4. FA CONTRACTOR SHALL FURNISH ALL DUCT DETECTORS AND COORDINATE PROVIDE TO THE DIVISION 21 CONTRACTOR.
5. CONTRACTOR SHALL FURNISH AND INSTALL LINEAR HEAT DETECTOR CABLE THE LENGTH OF THE BUILDING AS IDENTIFIED IN DRAWINGS.

1

KEYED NOTES:

CONTRACTOR SHALL FURNISH AND INSTALL:

1. LINEAR HEAT DETECTOR CABLE (LHD). LHD SHALL BE STRAPPED DIRECTLY TO THE DELUGE SPRINKLER PIPE USING MANUFACTURE SUPPORT TIES.
LHD CABLE SHALL BE ONE CONTINUOUS RUN FOR THE ENTIRE LENGTH OF THE BUILDING (APRON SIDE).

FIRE ALARM - ADD ALTERNATE NOTES:

1. FA CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. FA CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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1	18-FEB-2020	ADDENDUM 001

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Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 2

BID DOCUMENT

Drawing No.:

FA212

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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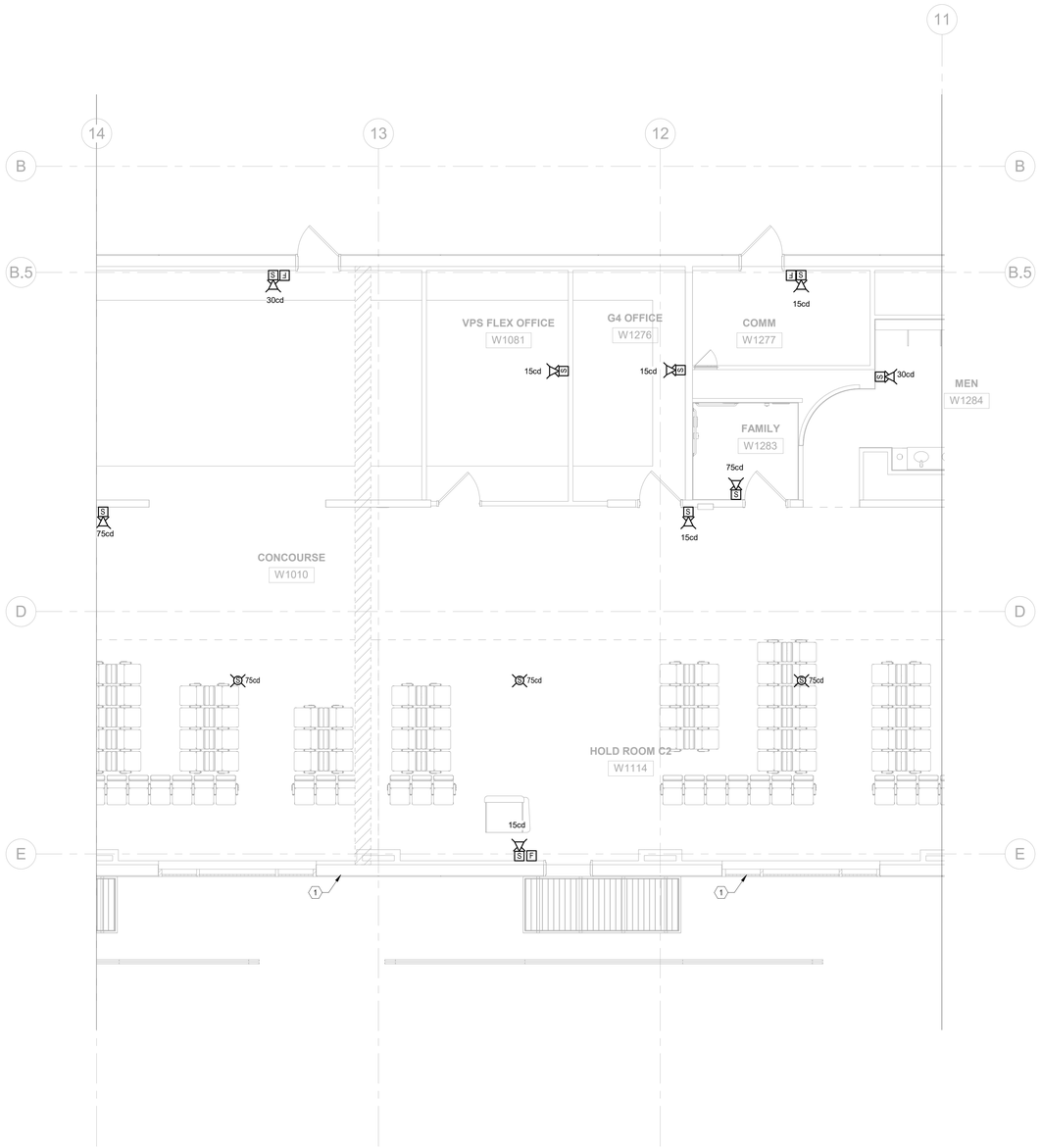

1 LEVEL 1 - FIRE ALARM - AREA 3
3/16" = 1'-0"

GENERAL NOTES:

1. FA CONTRACTOR SHALL PROVIDE ALL PANELS, EQUIPMENT, DEVICES, AND CONNECTIVITY RELATED TO THE FIRE ALARMS SYSTEM.
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5. CONTRACTOR SHALL FURNISH AND INSTALL LINEAR HEAT DETECTOR CABLE THE LENGTH OF THE BUILDING AS IDENTIFIED IN DRAWINGS.

KEYED NOTES:

CONTRACTOR SHALL FURNISH AND INSTALL:

1. LINEAR HEAT DETECTOR CABLE (LHD). LHD SHALL BE STRAPPED DIRECTLY TO THE DELUGE SPRINKLER PIPE USING MANUFACTURE SUPPORT TIES.
LHD CABLE SHALL BE ONE CONTINUOUS RUN FOR THE ENTIRE LENGTH OF THE BUILDING (APRON SIDE).

FIRE ALARM - ADD ALTERNATE NOTES:

1. FA CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. FA CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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JOHN E. BURNS
LICENSED
No 62139
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**AB**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**24-OCT-2019**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 3

BID DOCUMENT

Drawing No.:

FA213

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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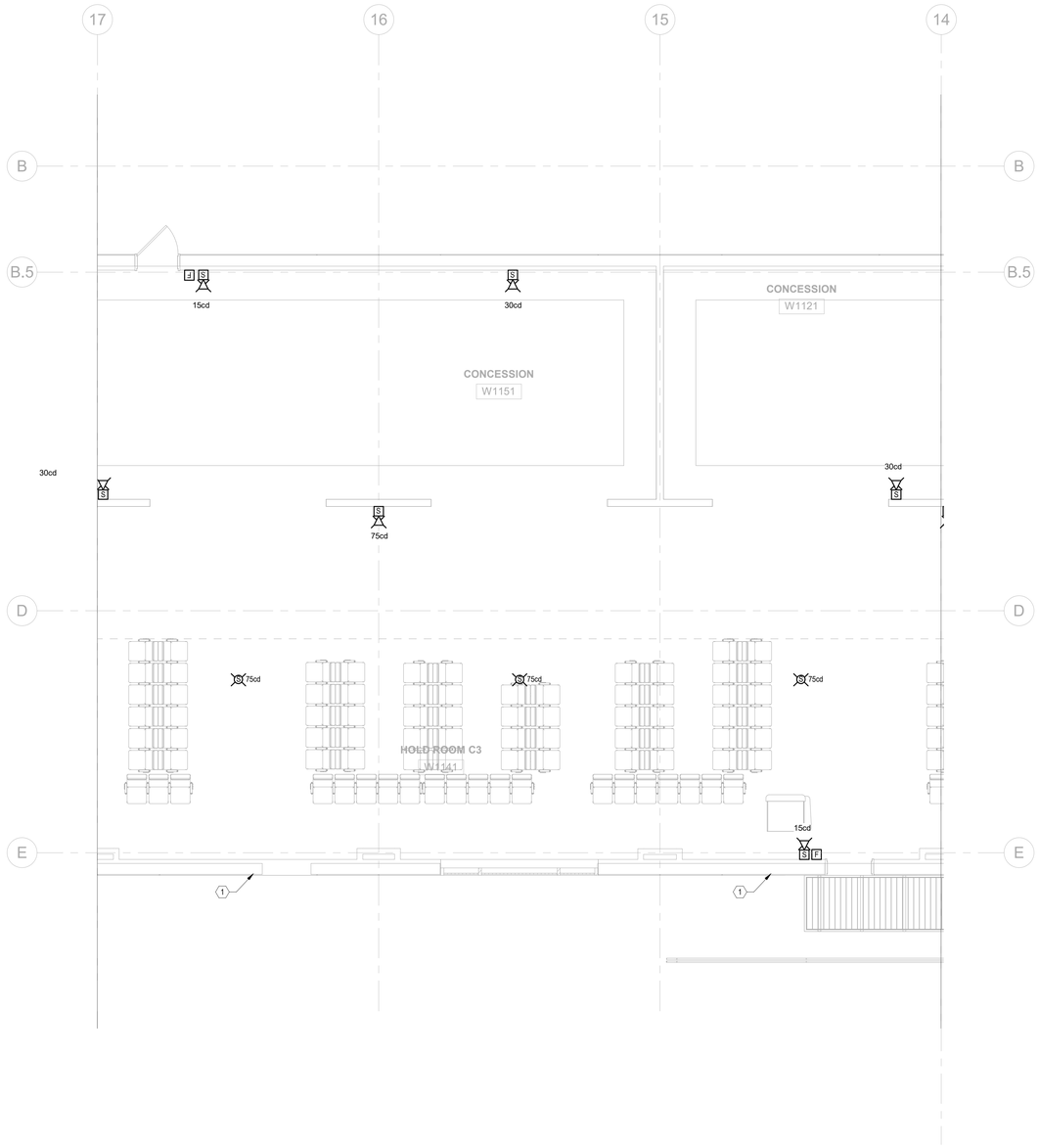

1 LEVEL 1 - FIRE ALARM - AREA 4
3/16" = 1'-0"

GENERAL NOTES:

1. FA CONTRACTOR SHALL PROVIDE ALL PANELS, EQUIPMENT, DEVICES, AND CONNECTIVITY RELATED TO THE FIRE ALARMS SYSTEM.
2. FA CONTRACTOR SHALL COORDINATE WITH THE FIRE SUPPRESSION CONTRACTOR FOR FLOW SWITCH,TAMPERS SWITCH AND SOLENOID DELUGE VALVE CONNECTIVITY.
3. FA CONTRACTOR SHALL FURNISH AND INSTALL LINEAR HEAT DETECTOR CABLE FOR THE DELUGE SYSTEM
4. FA CONTRACTOR SHALL FURNISH ALL DUCT DETECTORS AND COORDINATE PROVIDE TO THE DIVISION 21 CONTRACTOR.
5. CONTRACTOR SHALL FURNISH AND INSTALL LINEAR HEAT DETECTOR CABLE THE LENGTH OF THE BUILDING AS IDENTIFIED IN DRAWINGS.

KEYED NOTES:

CONTRACTOR SHALL FURNISH AND INSTALL:

1. LINEAR HEAT DETECTOR CABLE (LHD). LHD SHALL BE STRAPPED DIRECTLY TO THE DELUGE SPRINKLER PIPE USING MANUFACTURE SUPPORT TIES.
LHD CABLE SHALL BE ONE CONTINUOUS RUN FOR THE ENTIRE LENGTH OF THE BUILDING (APRON SIDE)

FIRE ALARM - ADD ALTERNATE NOTES:

1. FA CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. FA CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Project No.:	**Project Number**
Designed By:	**Designer**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 4

BID DOCUMENT

Drawing No.:

FA214

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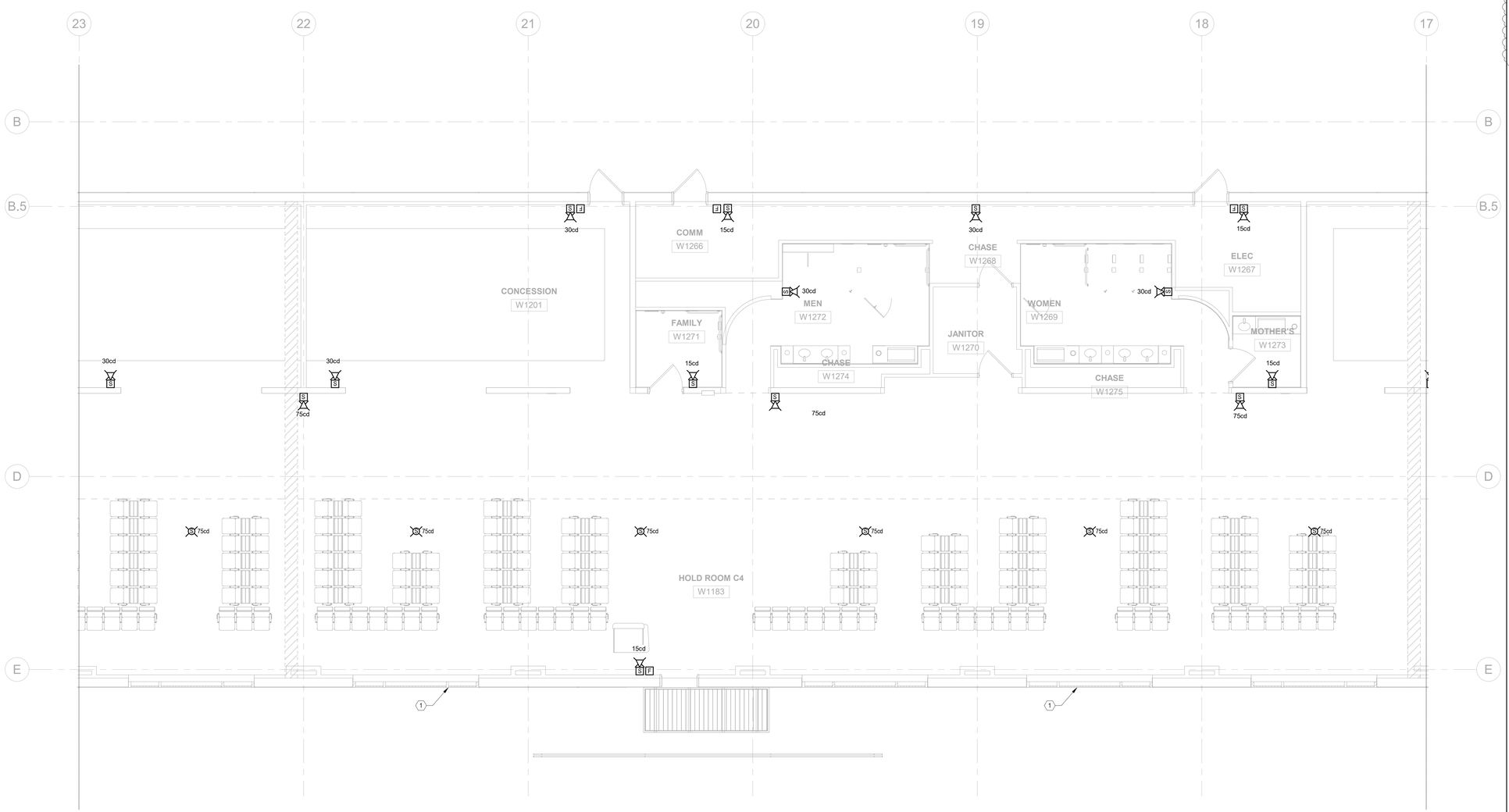

1 LEVEL 1 - FIRE ALARM - AREA 5
3/16" = 1'-0"

GENERAL NOTES:

1. FA CONTRACTOR SHALL PROVIDE ALL PANELS, EQUIPMENT, DEVICES, AND CONNECTIVITY RELATED TO THE FIRE ALARMS SYSTEM.
2. FA CONTRACTOR SHALL COORDINATE WITH THE FIRE SUPPRESSION CONTRACTOR FOR FLOW SWITCH,TAMPERS SWITCH AND SOLENOID DELUGE VALVE CONNECTIVITY.
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FIRE ALARM - ADD ALTERNATE NOTES:

1. FA CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
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1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**AB**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 5

BID DOCUMENT

Drawing No.:

FA215

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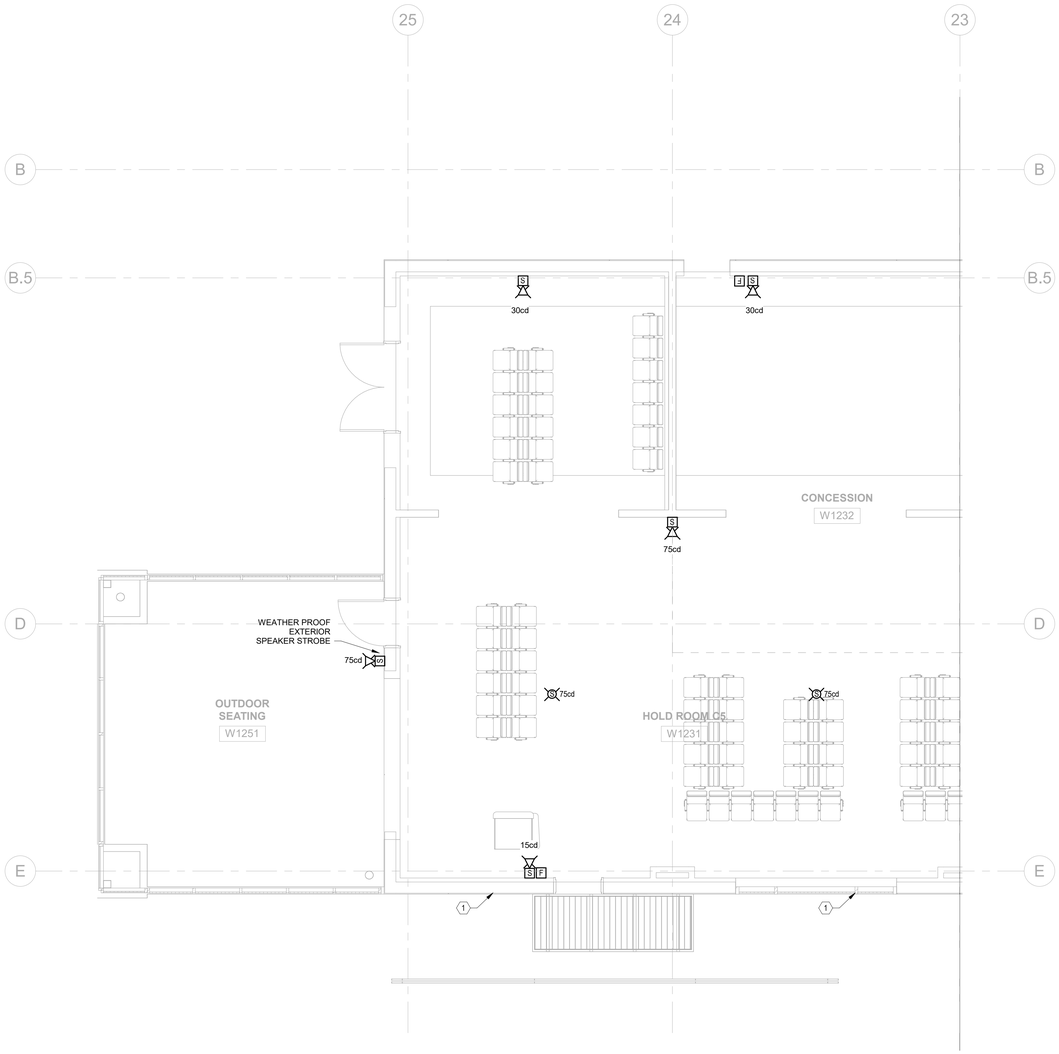

1 LEVEL 1 - FIRE ALARM - AREA 6
3/16" = 1'-0"

GENERAL NOTES:

1. FA CONTRACTOR SHALL PROVIDE ALL PANELS, EQUIPMENT, DEVICES, AND CONNECTIVITY RELATED TO THE FIRE ALARMS SYSTEM.
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FIRE ALARM - ADD ALTERNATE NOTES:

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Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 6

BID DOCUMENT

Drawing No.:

FA216

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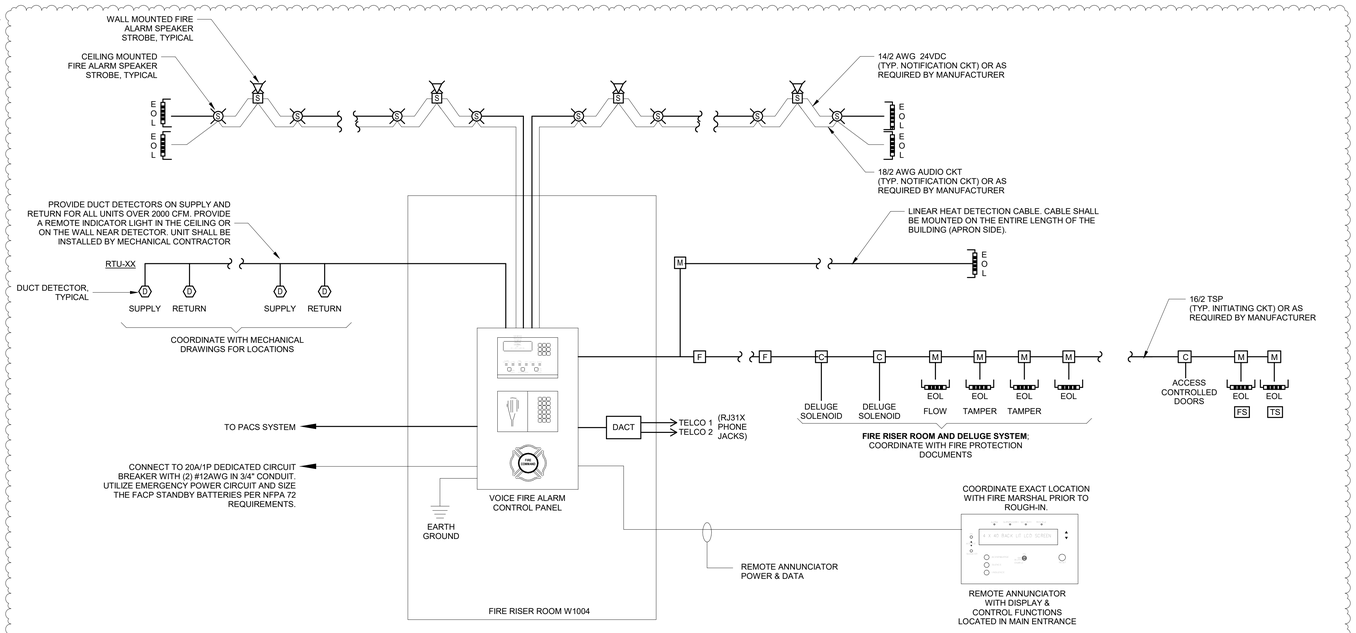

FIRE ALARM SYSTEM RISER NOTES:

1. THIS RISER DIAGRAM IS BASED ON SIEMENS BUILDING TECHNOLOGIES DESIGO VOICE FIRE ALARM CONTROL PANEL. THIS DIAGRAM IS DIAGRAMMATIC ONLY AND DOES NOT REPRESENT ACTUAL DEVICE QUANTITIES UNLESS OTHERWISE NOTED. IT IS A REPRESENTATION OF THE INTENDED SYSTEM FOR THIS PROJECT. SEE THE FLOOR PLANS FOR EXACT QUANTITIES AND LOCATIONS OF FIELD EQUIPMENT. SEE THE PROJECT SPECIFICATIONS FOR PERFORMANCE AND COMPLIANCE REQUIREMENTS. QUANTITY AND SIZE OF CONDUCTORS TO BE DETERMINED BY SIEMENS.
2. THE SYSTEM SHALL BE UL LISTED FOR FIRE [UL864] AND MASS NOTIFICATION [UL2572] IN ONE (1) FIRE ALARM CONTROL PANEL (FACP). IT SHALL ALSO SUPPORT GAS ALARM EVENTS FOR CO DETECTION, PER NFPA 72.
3. THE SYSTEM SHALL HAVE THE CAPACITY TO NETWORK UP TO 32 FIRE AND VOICE PANELS UTILIZING VOICE-OVER-IP (VOIP) TECHNOLOGY. ALL FIRE AND VOICE SIGNALS SENT OVER THE SAME CONDUCTORS. PEER-TO-PEER NETWORKED PANELS SHALL HAVE THE CAPABILITY OF DISPLAYING LOCAL OR GLOBAL EVENTS. THE NETWORK SHALL ALSO SUPPORT THE ABILITY TO INTERFACE WITH A UL LISTED DESKTOP WORKSTATION.
4. PROVIDE AUXILIARY FIRE ALARM SIGNAL PANEL(S) AND VOICE AMPLIFIERS W/ BATTERY BACKUP AS REQUIRED TO SUPPORT NOTIFICATION APPLIANCE LOADS. THE SYSTEM SHALL HAVE THE CAPABILITY TO SUPPORT A THREE-CHANNEL MESSAGE PLAYER WITH UP TO 300 MESSAGES.
5. PROVIDE A MANUAL VOICE PAGING SWITCHES FOR 'ALL CALL' FOR SIMULTANEOUSLY PAGING THE ENTIRE FACILITY AND SELECTIVE PAGING FOR EACH FLOOR AND FIRE AREA.
6. ALL WIRING REQUIREMENTS SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
7. PROVIDE END OF LINE RESISTERS AS NECESSARY.
8. ALL ADDRESSABLE SLC'S SHALL BE NFPA 72 CLASS B, STYLE 4.
9. ALL NOTIFICATION NAC'S SHALL BE NFPA 72 CLASS B, STYLE Y.
10. STROBE CANDELAS MUST BE SIZED PER NFPA 72 REQUIREMENTS BY THE FIRE ALARM VENDOR AND SHOWN ON THE SHOP DRAWINGS.
11. ALL PANEL BATTERY BACKUP (STANDBY & ALARM) SHALL BE SIZED PER NFPA 72 REQUIREMENTS.
12. A COMPLETE SET FOR FIRE ALARM PRODUCT CUTSHEETS, FIRE ALARM SHOP DRAWINGS, AND BATTERY/ VOLTAGE/ LOAD CALCULATIONS MUST BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION.
13. PRIMARY FACP POWER FED VIA BRANCH CIRCUIT(S) DEDICATED FOR THE FIRE ALARM SYSTEM.
14. ALL EARTH GROUND PANEL CONNECTIONS REQUIRED BY THE MANUFACTURER SHALL BE CONNECTED TO THE BUILDING'S GROUND. PANEL NEUTRAL OR GROUNDING TO CONDUIT/ BUILDING STEEL NOT ACCEPTABLE.
15. FOR EXTERIOR BUILDING MOUNTED LINEAR HEATER DETECTORS, CONTRACTOR SHALL INSTALL SYSTEMS AS RECOMMENDED BY THE FIRE ALARM MANUFACTURER. INCLUDE ALL SYSTEM REQUIREMENTS INCLUDING POWER, CONDUIT AND WIRING FOR A FULLY FUNCTIONING SYSTEM TO ACTIVATE THE EXTERIOR BUILDING MOUNTED DELUGE SYSTEM. COORDINATE WITH FIRE PROTECTION DOCUMENTS FOR ADDITIONAL INSTALLATION REQUIREMENTS.

FIRE ALARM SYSTEM MATRIX

DEVICE RESPONSE	SMOKE	HEAT	DUCT SMK	PULL	LINEAR HEAT DETECTOR	SPRINKLER
ANNUNCIATION AT FACP			■	■		■
ANNUNCIATION AT FAAP			■	■		■
TRANSMIT ALARM TO CENTRAL MONITORING STATION			■	■		■
TRANSMIT SUPERVISORY ALARM TO CENTRAL MONITORING STATION			■	■		■
ACTIVATION NOTIFICATION APPLIANCES				■		■
RELEASE ELECTRONICALLY CONTROLLED DOORS				■		■
DELUGE RELEASE VALVE					■	

1 FA RISER DIAGRAM
NONE

FIRE ALARM - ADD ALTERNATE NOTES:

1. FA CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. FA CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Project No.:	Project Number
Designed By:	AB
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Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

SINGLE LINE DIAGRAM - FIRE ALARM

BID DOCUMENT

Drawing No.:

FA511

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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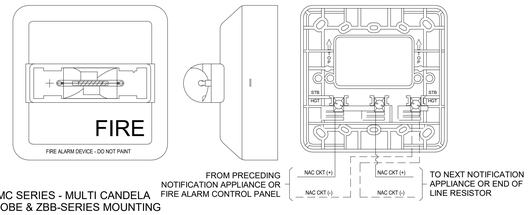
NOTES:
1. STROBES CAN BE SYNCHRONIZED USING THE SIEMENS DSC SYNC MODULE OR WITH THE BUILT-IN SYNC PROTOCOL IN SIEMENS PANELS AND POWER SUPPLIES.
2. FIELD SELECTABLE CANDELA.
3. Z SERIES DEVICES TO BE MOUNTED ON THE ZBB BACK PLATE. REMOVE DUST COVER BEFORE DEVICE INSTALLATION.
4. WHEN TERMINATING FIELD WIRES, DO NOT USE MORE LEAD LENGTH THAN REQUIRED. EXCESS LEAD LENGTH COULD RESULT IN INSUFFICIENT SPACE FOR THE APPLIANCE.
5. REFER TO THE APPLICABLE NFPA CODE AND FIELD DEVICE INSTALLATION FOR CORRECT MOUNTING HEIGTHS.
6. THE Z SERIES UNIVERSAL MOUNTING BACK PLATE CAN BE MOUNTED TO A SINGLE GANG, DOUBLE GANG, 4" SQUARE, 3 1/2" AND 4" OCTAGON ELECTRICAL BOX.
7. SEE INSTALLATION SHEET FOR ADDITIONAL INFORMATION ON MOUNTING AND CONNECTION OPTIONS.



ZR-MC SERIES - MULTI CANDELA STROBE & ZBB-SERIES MOUNTING PLATE
1 12" = 1'-0"

NOTES:
1. STROBES CAN BE SYNCHRONIZED USING THE SIEMENS DSC SYNC MODULE OR WITH THE BUILT-IN SYNC PROTOCOL IN SIEMENS PANELS AND POWER SUPPLIES.
2. FIELD SELECTABLE CANDELA, HORN TYPE AND dBA SETTING.
3. Z SERIES DEVICES TO BE MOUNTED ON THE ZBB BACK PLATE. REMOVE DUST COVER BEFORE DEVICE INSTALLATION.
4. WHEN TERMINATING FIELD WIRES, DO NOT USE MORE LEAD LENGTH THAN REQUIRED. EXCESS LEAD LENGTH COULD RESULT IN INSUFFICIENT SPACE FOR THE APPLIANCE.
5. REFER TO THE APPLICABLE NFPA CODE AND FIELD DEVICE INSTALLATION FOR CORRECT MOUNTING HEIGTHS.
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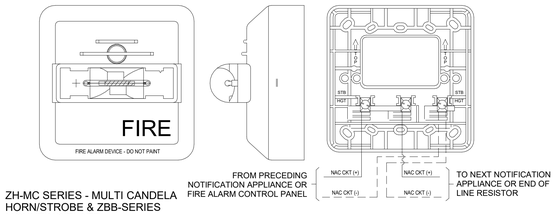
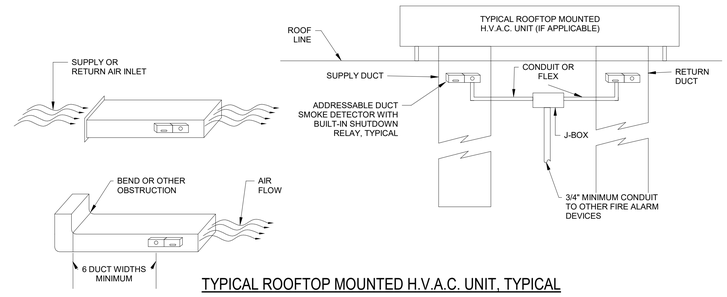
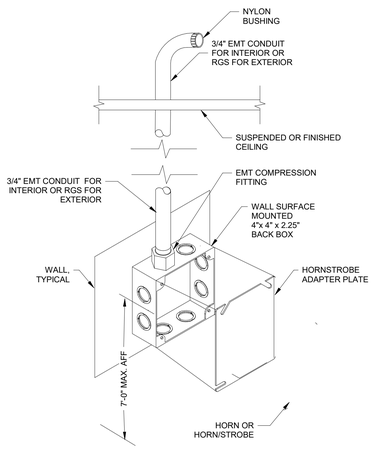


ZH-MC SERIES - MULTI CANDELA HORN/STROBE & ZBB-SERIES MOUNTING PLATE
2 12" = 1'-0"

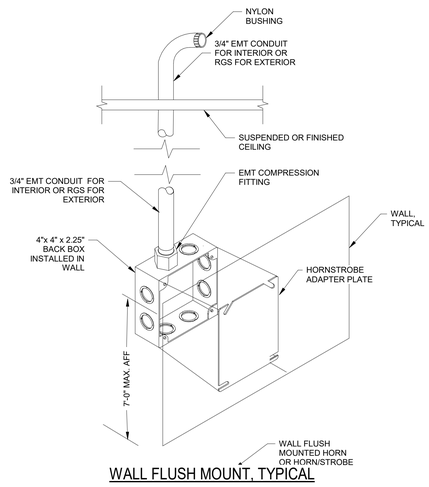


TYPICAL ROOFTOP MOUNTED H.V.A.C. UNIT, TYPICAL

FIRE ALARM DUCT SMOKE DETECTOR INSTALLATION DETAILS
3 NONE



WALL SURFACE MOUNT, TYPICAL



WALL FLUSH MOUNT, TYPICAL

NOTE:
1. TYPICAL STROBE OR HORN/STROBE SHALL USE MANUFACTURER BACBOX FOR ALL DEVICES UNLESS FLUSH MOUNTED.
2. HORN/STROBE SHALL BE WHEELOCK MODEL ET70WP-2475W-FR OR LATEST MODEL.
3. STROBE SHALL BE WHEELOCK MODEL RSS-24MCC-FW & RSS-24MCC-FR OR LATEST MODEL.

FIRE ALARM PULL STATION INSTALLATION DETAILS
4 NONE

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Project No.:	Project Number
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Issue Date:	21-JAN-2020
Drawing Scale:	

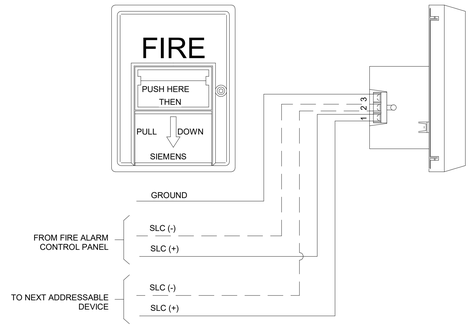
Drawing Title:

DETAILS - FIRE DEVICE INSTALLATION

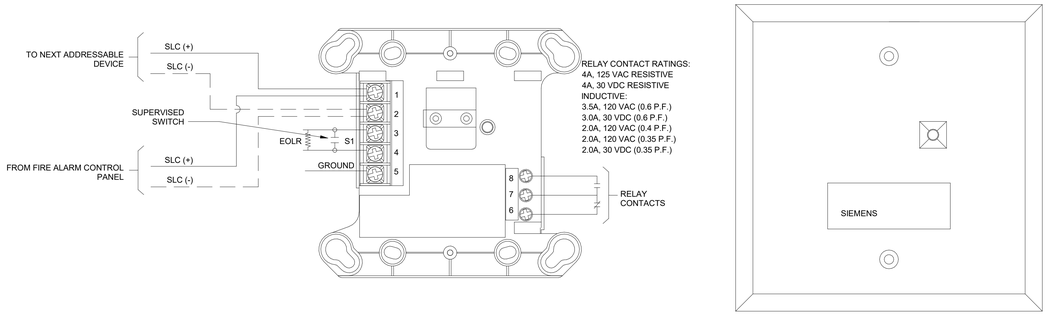
BID DOCUMENT

Drawing No.:

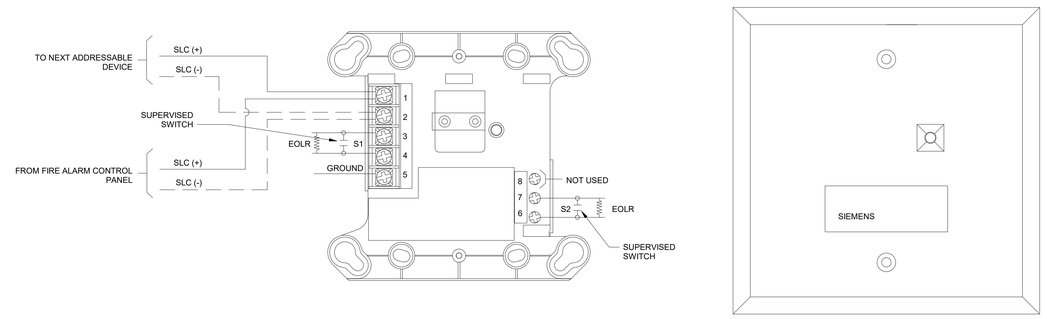
FA810



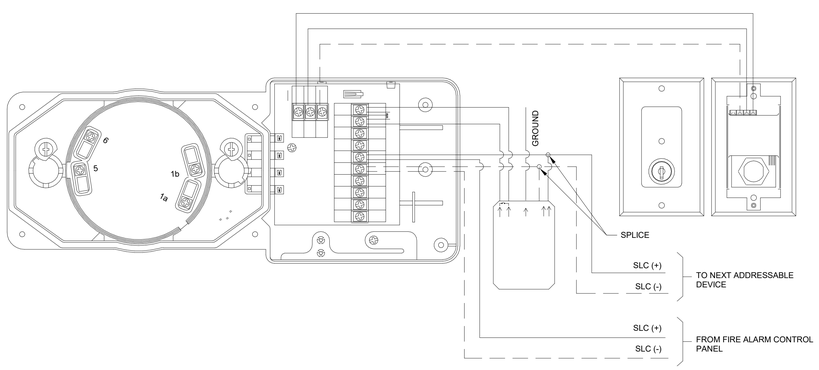
HMS - DUAL ACTION MANUAL PULL STATION



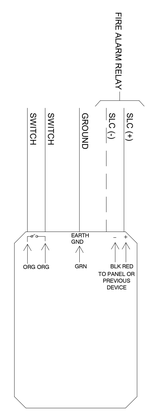
HTRI-R - RELAY MODULE



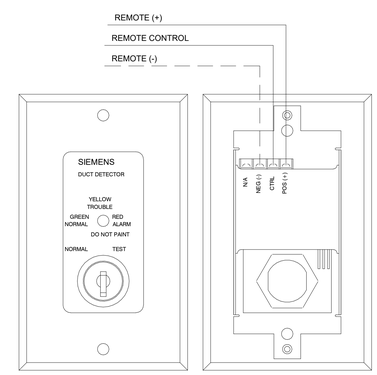
HTRI-D - MONITOR MODULE



FDBZ492-HR - AIR DUCT HOUSING WITH A FDBZ-RTL TEST SWITCH MODULE AND A HTRI-MINI MONITOR MODULE



HTRI-M - MINI MONITOR MODULE



FDBZ-RTL - TEST SWITCH MODULE

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Drawing Scale:	12" = 1'-0"

Drawing Title:

DETAILS - FIRE ALARM WIRING

BID DOCUMENT

Drawing No.:

FA811

BIM 360://Design of Satellite Concourse/VPS_EFISTCFA.rvt

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MOUNTING HEIGHTS

CEILING	SMOKE AND HEAT DETECTORS, 360° SECURITY MOTION DETECTORS, CCTV SURVEILLANCE CAMERAS, PUBLIC ADDRESS AND VOICE EVACUATION SPEAKERS, WIRELESS ACCESS POINTS. TV AND LCD PROJECTOR JACKS
8' A.F.G.	EXTERIOR VISUAL AND AUDIO/VISUAL FIRE ALARM NOTIFICATION DEVICES, EXTERIOR PUBLIC ADDRESS SPEAKERS.
7'-5" A.F.F.	CLOCKS, COMBINATION CLOCK/SPEAKERS, TRUMPET SPEAKERS
7'-0" A.F.F.	VISUAL AND AUDIO/VISUAL FIRE ALARM NOTIFICATION DEVICES, WALL MOUNTED SECURITY MOTION DETECTORS (CENTER OF DEVICE)
6" ABOVE DOOR JAMB	REQUEST TO EXIT MOTION DETECTORS
5'-6" A.F.F	TOP OF PLYWOOD TELEPHONE BACKBOARD
5'-4" A.F.F.	FIRE ALARM ANNUNCIATOR PANELS, FIRE FIGHTER CONTROL STATIONS, SECURITY ANNUNCIATOR PANELS, VISUAL DISPLAYS, TACTILE DISPLAYS
4'-8" A.F.G. MAX	PEDESTAL MOUNT INTERCOM PEDESTAL MOUNT CARD READER
4'-0" A.F.F.	"PS" TELEPHONE OUTLETS (TOP OF COIN SLOT),(WALL MOUNTED)-TELEPHONE INSTRUMENTS, INTERCOM STATIONS, FIRE FIGHTER TELEPHONE JACKS, FIRE ALARM MANUAL STATIONS, CARD READERS, MANUAL REQUEST TO EXIT DEVICES, WALL MOUNTED DURESS ALARM STATIONS, RESCUE ASSISTANCE PANELS, LCD KEYPADS (CENTER OF DEVICE)
UNDER COUNTER OR DESK	DURESS ALARM BUTTONS, DOOR RELEASE BUTTOMS
1'-6" A.F.F.	DATA/TELEPHONE JACKS, LOW TELEVISION JACKS, MICROPHONE JACKS
0'-0"	IN FLOOR JUNCTION BOXES FLUSH TO FINISHED FLOOR (FF) (DATA, TELEPHONE, MICROPHONE, MEDIA)

1. IN MASONRY CONSTRUCTION THE MOUNTING HEIGHTS SHALL BE USED FOR REFERENCE TO THE NEAREST BLOCK OR BRICK COURSING.
2. THE ABOVE MOUNTING ELEVATIONS ARE TO CENTER OF DEVICE AND SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE DRAWINGS AND/OR SPECIFICATIONS.
3. COORDINATE THE INSTALLATION AND MOUNTING ELEVATIONS OF ALL EQUIPMENT, DEVICES, CONTROLS AND APPURTENANCES WITH ARCHITECT AND ALL AFFECTED TRADES PRIOR TO INSTALLATION. DOCUMENT ALL MOUNTING ELEVATIONS FOR ALL EQUIPMENT, DEVICES, CONTROLS AND APPURTENANCES AT THE TIME OF SHOP DRAWING SUBMITTAL

TELECOMMUNICATION ABBREVIATIONS

A/AMP	AMPERE	KVA	KILOVOLT AMPERE
AC	ALTERNATING CURRENT	KVAR	KILOVAR (REACTANCE)
ACC	ACCENT	KW	KILOWATT
ACR	ATTENUATION/CROSSTALK RATIO	KWH	KILOWATT HOUR METER
ADJ	ADJUSTABLE	LA	LIGHTNING ARRESTER
AFF	ABOVE FINISHED FLOOR	LED	LIGHT EMITTING DIODE
AFG	ABOVE FINISHED GRADE	LT	LIGHT
AL	ALUMINUM	LTG	LIGHTING
AM	AMMETER	LV	LOW VOLTAGE
APPROX	APPROXIMATELE(LY)	MATV	MASTER ANTENNA TELEVISION
ASY	ASYMETRIC	MC	MECHANICAL CONTRACTOR
ATS	AUTOMATIC TRANSFER SWITCH	MCB	MAIN CIRCUIT BREAKER
AWG	AMERICAN WIRE GAUGE	MCC	METAL-CLAD CABLE
BATT	BATTERY	MCC	MOTOR CONTROL CENTER
BFC	BELOW FINISHED CEILING	MCP	MOTOR CIRCUIT PROTECTOR
BKR	BREAKER	MDP	MAIN DISTRIBUTION PANEL
BLDG	BUILDING	MFR	MANUFACTURER
BLK	BLACK	MH	MANHOLE
BRKT	BRACKET	MH	METAL HALIDE
C	CONDUIT	MISC	MISCELLANEOUS
CAB	CABINET	MLG	MAIN LUGS ONLY
CATV	CABLE TELEVISION	MM	MILLIMETER
CB	CIRCUIT BREAKER	MOD	MOTOR OPERATED DAMPER
CCTV	CLOSED CIRCUIT TELEVISION	MTD	MOUNTED
cd	CANDELA	MTG HT	MOUNTING HEIGHT
CIR/CKT	CIRCUIT	MTS	MANUAL TRANSFER SWITCH
CLF	CURRENT LIMITING FUSE	MUFIDS	MULTI-USER FLIGHT INFORMATION DISPLAY
CLG	CEILING	MV	MILLIVOLT
CLR	CLEAR	MV	MEDIUM VOLTAGE
COL	COLUMN	N/A	NOT AVAILABLE/NOT APPLICABLE
COMM	COMMUNICATION	NEC	NATIONAL ELECTRIC CODE
CT	CURRENT TRANSFORMER	NEMA	NATIONAL ELECTRIC MFR ASSOCIATION
CU	COPPER	NEXT	NEAR END CROSSTALK
CW	COOL WHITE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
DAS	DISTRIBUTED ANTENNA SYSTEM	NIC	NOT IN CONTRACT
dB	DECIBEL	NL	NIGHT LIGHT
DC	DIRECT CURRENT	NO	NORMALLY OPENED
DE	DUAL ELEMENT	NTS	NOT TO SCALE
DED	DEDICATED	OC	ON CENTER
DIA	DIAMETER	OH	OVERHEAD
DISC	DISCONNECT	OL	OVERLOAD HEATER ELEMENT
DNLT	DOWNLIGHT	P	POLE
DP	DISTRIBUTION PANEL	PB	PULL BOX
DPDT	DOUBLE POLE DOUBLE-THROW	PEW	PEWTER
DWG	DRAWING	PLY	PLYWOOD
EA	EACH	PNL	PANEL
EC	ELECTRICAL CONTRACTOR	PP	POWER PANEL
EF	EXHAUST FAN	PT	POTENTIAL TRANSFORMER
EIA	ELECTRONICS INDUSTRY ASSOCIATION	PVC	POLYVINYL CHORIDE
ELEC	ELECTRICAL	RECPT	RECEPTACLE
ELEV	ELEVATOR	REFL	REFLECTOR
EMERG	EMERGENCY	REQ	REQUIRED
EO	ELECTRICALLY OPERATED	RGS	RIGID GALVANIZED STEEL CONDUIT
EQIP	EQUIPMENT	RIO	ROUGH IN ONLY
ESB	ENERGY SAVING BALLAST	RM	ROOM
EVIDS	ELECTRONIC VIDEO INFORMATION DISPLAY SYSTEM	RS	RAPID START
EWC	ELECTRIC WATER COOLER	SCH	SCHEDULE
FA	FIRE ALARM	SPDT	SINGLE POLE SINGLE THROW
FAA	FIRE ALARM ANNUNCIATOR	SPST	SINGLE POLE DOUBLE THROW
FAAP	FIRE ALARM ANNUNCIATOR PANEL	SSB	SOLID STATE BALLAST
FACP	FIRE ALARM CONTROL PANEL	SW	SWITCH
FAGP	FIRE ALARM GRAPHIC ANNUNCIATOR PANEL	SWBD	SWITCHBOARD
FEXT	FAR END CROSSTALK	SWGR	SWITCHGEAR
FIXT	FIXTURE	TELE	TELEPHONE
FL	FLOOR	TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
FLA	FULL LOAD AMPERES	TSB	TECHNICAL SERVICE BULLETIN
FLOUR	FLUORESCENT	TSP	TWISTED SHIELDED PAIR
FT	FOOTCANDLES	TT	TWIN TUBE
FVNR	FULL VOLTAGE NON-REVERSING	TYP	TYPICAL
GC	GENERAL CONTRACTOR	UL	UNDERWRITER'S LABORATORIES
GEN	GENERATOR	UON	UNLESS OTHERWISE NOTED
GFI	GROUND FAULT INTERRUPTER	UPS	UNINTERRUPTABLE POWER SUPPLY
GND/G	GROUND	UTP	UNSHIELDED TWISTED PAIR
HH	HAND HOLE	V	VOLT
HID	HIGH INTENSITY DISCHARGE	VM	VOLTMETER
HP	HORSEPOWER	VP	VAPOR PROOF
HPF	HIGH POWER FACTOR	W	WATT
HV	HIGH VOLTAGE	W/	WITH
HVAC	HEATING VENTILATING AIR CONDITIONING	W/I	WITHIN
HZ	HERTZ	W/O	WITHOUT
IG	ISOLATED GROUND	WAP	WIRELESS ACCESS POINT
INCAN	INCANDESCENT	WP	WEATHERPROOF
IPS	INVERTER POWER SUPPLY	WW	WARM WHITE
JB	JUNCTION BOX	XFMR	TRANSFORMER
		XP	EXPLOSION PROOF

GENERAL COMMUNICATIONS SYSTEM NOTES:

1. THE FOLLOWING GENERAL NOTES AS LISTED BELOW SHALL APPLY TO ALL COMMUNICATIONS SYSTEM REQUIREMENTS AS INDICATED ON ALL TS- SERIES CONTRACT DRAWINGS.
2. DRAWINGS FOR THIS WORK ARE DIAGRAMMATIC AND INTENDED TO CONVEY THE EXTENT, GENERAL ARRANGEMENT AND LOCATIONS OF THE WORK. BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN BASIC ITEMS SUCH AS ACCESS PANELS, CONDUITS, CABINET SIZES, PENETRATION SLEEVES, PULL BOXES, BACKBOXES AND JUNCTION BOXES MAY NOT BE SHOWN. INCLUDE ALL ITEMS WHERE REQUIRED BY CODE, MANUFACTURER AND RELATED SPECIFICATION SECTIONS FOR THE PROPER INSTALLATION OF ALL WORK.
3. DUE TO SCALE OF THE DRAWINGS, ALL COMMUNICATIONS DEVICE SYMBOLS ARE SHOWN ON DRAWINGS AS CLOSE AS POSSIBLE TO THEIR INTENDED LOCATION. CONTRACTOR SHALL COORDINATE IN THE FIELD THE PROPER INSTALLATION OF ALL EQUIPMENT, DEVICES, CONTROLS AND CABLING. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.
4. COORDINATE WITH ALL TRADES AND SYSTEM INTEGRATORS ANY CONDITIONS RELATED TO THE INSTALLATION OF ALL SYSTEMS. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE TRADE ALL INSTALLATION REQUIREMENTS IMPACTING THE PLACEMENT OF ALL SYSTEM COMPONENTS TO THE SATISFACTION OF ALL CONCERNED TRADES.
5. COORDINATE EXACT LOCATION OF ALL DESK, FURNITURE OR COUNTER MOUNTED EQUIPMENT WITH OWNER AND ARCHITECT AND ALL AFFECTED TRADES PRIOR TO THE INSTALLATION OF ANY EQUIPMENT AND/OR CABLING.
6. COORDINATE EXACT LOCATION(S) OF ALL CEILING MOUNTED CABLE, CONDUITS, EQUIPMENT AND/OR DEVICES WITH ALL ARCHITECTURAL PLANS, REFLECTED CEILING PLANS AND ALL AFFECTED TRADES PRIOR TO INSTALLATION.
7. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT, DEVICES, CONNECTIVITY, SOFTWARE LICENSING, SOFTWARE UPGRADES, MOUNTING BRACKETS, SUPPORTS AND APPURTENANCES AND ADHERE TO MANUFACTURER INSTALLATION REQUIREMENTS IN THE CONTRACT DRAWINGS AND WRITTEN SPECIFICATIONS UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING EXACT LOCATION(S) OF ALL DATA, TELEPHONE AND A/V OUTLETS, ELECTRICAL RECEPTACLES AND EQUIPMENT WITH ALL ARCHITECTURAL PLANS, FURNITURE PLANS AND ALL AFFECTED TRADES PRIOR TO INSTALLATION. FAILURE TO PROPERLY COORDINATE PRIOR TO INSTALLATION SHALL RESULT IN THE CONTRACTOR PROVIDING ALL MODIFICATIONS AT NO ADDITIONAL COSTS TO THE PROJECT.
9. ALL HORIZONTAL CATEGORY 6 UTP CABLE SHALL BE PLENUM RATED CABLE AND SHALL BE BUNDLED AND ROUTED THROUGH THE FACILITY AND SHALL TERMINATE AT THE NEAREST MDF/IDF EQUIPMENT RACKS. ALL HORIZONTAL CABLE BUNDLES SHALL NOT CONTAIN ANY AC CONDUCTING CABLING. ALL HORIZONTAL CABLE DROPS SHALL NOT EXCEED 294' FROM PATCH PANEL TO OUTLET TERMINATION AND SHALL BE TESTED AND CERTIFIED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. REFER TO RELATED SPECIFICATIONS SECTIONS FOR ADDITIONAL INFORMATION.
10. ALL FIBER OPTIC BACKBONE CABLING SHALL BE ROUTED THROUGH THE FACILITY VIA DEDICATED CONDUITS AND VERTICAL PIPE CHASES INSTALLED WITH PROTECTIVE INNERDUCT CONDUIT SYSTEM AND SHALL TERMINATE AT ALL APPROPRIATE MDF/IDF EQUIPMENT RACKS. THE CONTRACTOR SHALL COORDINATE ALL EQUIPMENT, RACK SPACE REQUIREMENTS, WITH THE OWNER APPROPRIATE SYSTEM INTEGRATORS AND ARCHITECT. ALL FIBER OPTIC CABLING SHALL BE TESTED AND CERTIFIED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. REFER TO RELATED SPECIFICATIONS SECTIONS FOR ADDITIONAL INFORMATION.
11. ALL CONDUITS SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH NFPA 70 AND PROJECT SPECIFICATIONS. ALL CONDUITS SHALL BE A MINIMUM OF 3/4" UNLESS OTHERWISE NOTED.
12. ALL SYSTEM WIRING, CONDUITS AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AND BY ALL IEEE, ANSI/TIA, NEC AND MANUFACTURER'S REQUIREMENTS. ALL WIRING SHALL COMPLY WITH ALL STATE AND LOCAL ELECTRICAL CODES AND SHALL TEST FREE FROM ALL GROUNDS, SHORTS, STRAY VOLTAGES AND EMI.
13. PROVIDE ALL EQUIPMENT CLEARANCES IN ACCORDANCE WITH NEC REQUIREMENTS. ARRANGE EQUIPMENT TO FACILITATE UNRESTRICTED ACCESS FOR MAINTENANCE AND SERVICE AROUND ALL EQUIPMENT, COMPONENTS AND/OR CABLE TERMINATIONS.
14. PROPERLY GROUND AND BOND ALL EQUIPMENT, RACKS, CABINET'S, CONDUITS AND CABLE SHIELDS IN ACCORDANCE WITH ALL REQUIREMENTS OF THE NFPA 70, ANSI/TIA- 607-C AND EQUIPMENT MANUFACTURER. ALL EQUIPMENT AND COMMUNICATIONS CIRCUITS SHALL BE PROPERLY SURGE PROTECTED AND GROUNDED TO MINIMIZE DAMAGE DUE TO LIGHTNING STRIKES, SNEAK CURRENTS AND OTHER TRANSIENT VOLTAGE SPIKES. ALL SURGE PROTECTION AND GROUNDING SHALL BE IN ACCORDANCE WITH ALL REQUIREMENTS OF THE EQUIPMENT MANUFACTURER. NEC, IEEE AND ANSI/TIA.
15. WHERE EQUIPMENT AND/OR JUNCTION BOXES ARE INSTALLED ABOVE FINISHED CEILINGS, THE CONTRACTOR SHALL PROVIDE ACCESS HATCHES LISTED FOR THE INTENDED APPLICATION. ACCESS HATCHES SHALL BE LOCATED SO THAT SERVICE ACCESS TO THE EQUIPMENT AND/OR JUNCTION BOXES IS UNIMPEDED.
16. ALL PENETRATIONS OF WALLS AND/OR FLOORS SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE ASTM AND NFPA REQUIREMENTS. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION. INSTALLATION OF FIRE-STOPS SHALL BE PERFORMED BY AN APPLICATOR/INSTALLER QUALIFIED AND TRAINED BY THE MANUFACTURER. INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH MANUFACTURER'S DETAILED INSTALLATION PROCEDURES.
17. PROVIDE THE PROPER INTERFACES TO BUILDING FIRE ALARM, INTRUSION ALARM AND BUILDING AUTOMATION SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE LIFE SAFETY CODES AND MANUFACTURER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. COORDINATE WITH THE FIRE ALARM SYSTEM PROVIDER FOR ALL REQUIRED SYSTEM INTEGRATION REQUIREMENTS.
18. ALL EQUIPMENT ENCLOSURES LOCATED OUTSIDE OR IN ALL AREAS WITH HIGH MOISTURE OR A RELATIVE HUMIDITY OF 75% OR GREATER SHALL BE NEMA 4X STAINLESS STEEL AND RATED FOR THAT APPLICATION.
19. ALL DEVICES, COMPONENTS OR EQUIPMENT INSTALLED ON THE EXTERIOR OF THE FACILITY SHALL BE PROVIDED IN ACCORDANCE WITH ALL MANUFACTURERS' REQUIREMENTS TO ENSURE THE PROPER OPERATION WHEN EXPOSED TO THE ENVIRONMENTAL CONDITIONS AND/OR AVERAGE ANNUAL LOWEST TEMPERATURE THAT CAN BE ANTICIPATED FOR THE GEOGRAPHIC REGION OF THE FACILITY.
20. ALL INTERIOR AND/OR EXTERIOR COMPONENTS, DEVICES OR SYSTEMS EQUIPMENT EXPOSED TO THE GENERAL POPULATION SHALL BE INSTALLED IN SECURED EQUIPMENT ENCLOSURES WITH TAMPER SWITCHES AND INSTALLED IN SUCH A MANNER THAT RESISTS TAMPERING AND/OR REMOVAL WITHOUT THE USE OF SPECIALIZED TOOLS.
21. FOR EQUIPMENT INSTALLATIONS REQUIRING COORDINATION WITH OTHER TRADES THE CONTRACTOR SHALL PROVIDE ALL TEMPLATES, BACKBOXES AND EQUIPMENT ANCHOR BOLTS FOR MOUNTING OR FLUSH MOUNTING PREPARATION, (E.G. PEDESTALS OR OTHER DEVICES REQUIRING MOUNTING ON WALLS, CONCRETE PADS OR OTHER MATERIALS). COORDINATE DELIVERY OF TEMPLATES AND EQUIPMENT WITH ALL AFFECTED CONTRACTORS.
22. ALL COMMUNICATIONS EQUIPMENT MUST HAVE TRANSIENT SURGE PROTECTION TO COMPLY WITH UL AND NFPA 70 REQUIREMENTS. WHERE ANY CIRCUITS LEAVE THE BUILDING, ADDITIONAL TRANSIENT PROTECTION MUST BE PROVIDED FOR EACH CIRCUIT. ALL TRANSIENT PROTECTION DEVICES MUST BE UL LISTED UNDER STANDARD #497B (ISOLATED LOOP PROTECTORS).
23. REFER TO ALL RELATED CONTRACT DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND/OR REQUIREMENTS RELATED TO THE INSTALLATION, PROGRAMMING, TESTING, COMMISSIONING AND CERTIFICATION OF ALL COMMUNICATIONS SYSTEMS.

TELECOMMUNICATIONS SYMBOL LEGEND

▽XX	VOICE OUTLET* SUB TEXT REFERS TO CABLING CONFIGURATIONS REFER TO COMMUNICATIONS DETAIL SHEET
▼XX	COMBINATION VOICE AND DATA OUTLET* SUB TEXT REFERS TO CABLING CONFIGURATIONS REFER TO COMMUNICATIONS DETAIL SHEET
▽XX	COMBINATION VOICE AND DATA OUTLET* SUB TEXT REFERS TO CABLING CONFIGURATIONS REFER TO COMMUNICATIONS DETAIL SHEET
[▽]XX	FLUSH FLOOR MOUNT DATA OUTLET* SUB TEXT REFERS TO CABLING CONFIGURATIONS REFER TO COMMUNICATIONS DETAIL SHEET
▼XX	CEILING MOUNT DATA OUTLET SUB TEXT REFERS TO CABLING CONFIGURATIONS REFER TO COMMUNICATIONS DETAIL SHEET
MUFIDS	55" DISPLAY CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING REQUIREMENTS
AP	WIRELESS ACCESS POINT. W - WALL C - CEILING MOUNT
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
ZE	ZONE ENCLOSURE
&	FULL HEIGHT CABINET
	LADDER RACK

NOTES:

- REFER TO FLOOR PLANS FOR EXACT JACK LOCATION.
- COORDINATE THE INSTALLATION OF ALL DATA COMMUNICATION JACKS WITH THE LOCATION OF CIRCUITS PROVIDED FOR THE PROPER CONNECTION OF ALL COMPUTERS, PRINTERS, COPIERS REFER TO ELECTRICAL POWER DRAWINGS AND FURNITURE PLANS FOR EXACT DEVICE LOCATIONS.

** WIREMOLD RACEWAY AND POWER POLES ARE TO BE PROVIDED BY FURNITURE CONTRACTOR. COORDINATE WITH ELECTRICAL CONTRACTOR AND FURNITURE SYSTEMS PROVIDER FOR ALL INSTALLATION REQUIREMENTS.

THIS IS A STANDARD SYMBOL LIST. ALL SYMBOLS MAY NOT APPEAR ON THIS PROJECT.

TELECOMMUNICATIONS TAG INFORMATION

TYPE	DESCRIPTION	PORT QTY
A1	18" AFF WALL MOUNT, REFER TO ARCHTECTUAL PLANS FOR CEILING MOUNTED DEVICES	1
A2	18" AFF WALL MOUNT	2
A4	18" AFF WALL MOUNT	4
A6	PODIUM	6
WP	WALL PHONE MOUNT 48" AFF	6
D	EVIDS / MUFIDS	2
S2	TSA DATA	2
S6	TSA DATA	6
S12	TSA DATA	12
SC	SECURITY CAMERA CEILING MOUNT	1
SW	SECURITY CAMERA PARAPET WALL MOUNT	1
AP - C	WIRELESS ACCESS POINT CEILING MOUNT	1
AP - W	WIRELESS ACCESS POINT WALL MOUNT	1

OKALOOSA COUNTY

FLY VPS

C19-2811-AP
Design of
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Concourse 'C'

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SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

TELECOM NOTES, LEGEND AND ABBREVIATIONS

BID DOCUMENT

Drawing No.:

T001

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ITEM	SYSTEM	CONTRACTOR		OWNER		NOTES
		FURNISH	INSTALL	FURNISH	INSTALL	
1.0000	**DIVISION 27: PREMISE DISTRIBUTION SYSTEM (PDS)**					
1.0100	HEADEND AND SOFTWARE	-	-	X	X	EXISTING EQUIPMENT
1.0200	INTEGRATION TO EXISTING SYSTEM	X	X	-	-	
1.0300	INTERFACES	X	X	-	-	
1.0400	NETWORK COMPONENTS	X	X		-	(2) CISCO 12 PORT 3850, INSTALLED IN EXISTING TERMINAL ROOM B127. CONTRACTOR SHALL PROVIDE LAYER 2 SWITCH IN CONCOURSE C IDF W1277, W1266, TSA IDF 1063 AS REQUIRED.
1.0500	BACKBONE CABLE	X	X	-	-	MULTIMODE OM4 FIBER FROM EXISTING TERMINAL MDF B127 TO CONCOURSE C CONTRACTOR SHALL BUDGET: • 2,000' OF 96 STRAND OM4 FIBER • 1,000' OF 24 STRAND OM4 FIBER CONTRACTOR SHALL FURNISH AND INSTALL OM4 FIBER BETWEEN IDF'S.
1.0600	HORIZONTAL CABLE	X	X	-	-	CATEGORY 6 UTP PLENUM RATED CABLE, RG-6 QUAD SHIELDED COAXIAL CABLE
1.0700	FIELD DEVICES	X	X	-	-	CATEGORY 6 KEYSTONE JACKS; DATA FACEPLATES; COAX AND CONNECTORS; FIBER PATCH PANELS, COPPER PATCH PANELS, COUPLER /ADAPTER PLATES, CAT.6 PATCH CORDS, FIBER PATCH CORDS
2.0000	**DIVISION 27: VOICE OVER IP (VOIP) TELEPHONE SYSTEM**					
2.0100	HEADEND AND SOFTWARE	-	-	X	X	MITEL (EXISTING SYSTEM)
2.0200	INTEGRATION TO EXISTING SYSTEM	-	-	X	X	OWNER SHALL BE RESPONSIBLE FOR PROGRAMMING, VOICEMAIL, EXTENSION MAPPING IN CONCOURSE C.
2.0300	INTERFACES	X	X	-	-	GATEWAYS
2.0400	FIELD DEVICESIPONENTS	-	-	X	X	TELEPHONE HANDSETSICATES OVER NEW NETWORK IN CONCOURSE C TO EXISTING TERMINAL
3.0000	**DIVISION 27: WIRELESS LOCAL AREA NETWORK (WLAN) SYSTEM**					
3.0100	HEADEND AND SOFTWARE	-	-	x	x	ARUBA WIFI (EXISTING SYSTEM)
3.0200	INTEGRATION TO EXISTING SYSTEM	-	-	x	x	OWNER SHALL CONFIGURE AND PROGRAM WIRELESS ACCESS POINTS.
3.0300	INTERFACES	X	X	X	X	INTERFACES WILL BE BY OWNER IT UNLESS SPECIFIC INTERFACES ARE IDENTIFIED TO BE BY OTHERS.
3.0400	HORIZONTAL CABLE	-	-	-	-	REFER TO ITEM SECTION 1.0000 PREMISE DISTRIBUTION SYSTEM
3.0500	FIELD DEVICES - WIRELESS ACCESS POINTS	X	X	X	X	CONTRACTOR FURNISHES AND INSTALLS ALL MOUNTS, HOUSINGS, AND ENCLOSURES.
4.0000	**DIVISION 27: MUFIDS**					
4.0100	HEADEND AND SOFTWARE	-	-	X	X	INFAX (EXISTING)
4.0200	INTEGRATION TO EXISTING SYSTEM	X	X	-	-	CONTRACTOR SHALL BE RESPONSIBLE OR CONNECTIVITY, AND PROGRAMMING.
4.0300	INTERFACES	X	X	-	-	INTERFACES BY CONTRACTOR.
4.0700	FIELD DEVICES	X	X			WALL MOUNT BRACKETS, DISPLAYS, DISPLAY DEVICE COMPUTERS, CATEGORY AND HDMI CORDS
5.0000	**DIVISION 27: IPTV / CATV**					
5.0100	HEADEND AND SOFTWARE	-	-	X	X	OWNER SHALL BE RESPONSIBLE FOR CONTRACTING WITH THE LOCAL INTERNET SERVICE PROVIDERS FOR CONTENT AND SERVICES.
5.0200	INTEGRATION	-	-	X	X	OWNER SHALL BE RESPONSIBLE FOR ALL CONNECTIONS TO THE DISPLAYS.
5.0300	INTERFACES	X	X	-	-	BY CONTRACTOR.
5.0400	HORIZONTAL CABLE	-	-	-	-	REFER TO ITEM SECTION 1.0000 PREMISE DISTRIBUTION SYSTEM
5.0500	FIELD DEVICES	X	X			WALL MOUNT BRACKETS, DISPLAYS, DISPLAY DEVICE COMPUTERS, CATEGORY 6 UTP, AND HDMI CORDS

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SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**AB**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	**12" = 1'-0"**

Drawing Title:

TELECOM RESPONSIBILTIY MATRIX LEGEND

BID DOCUMENT

Drawing No.:

T002

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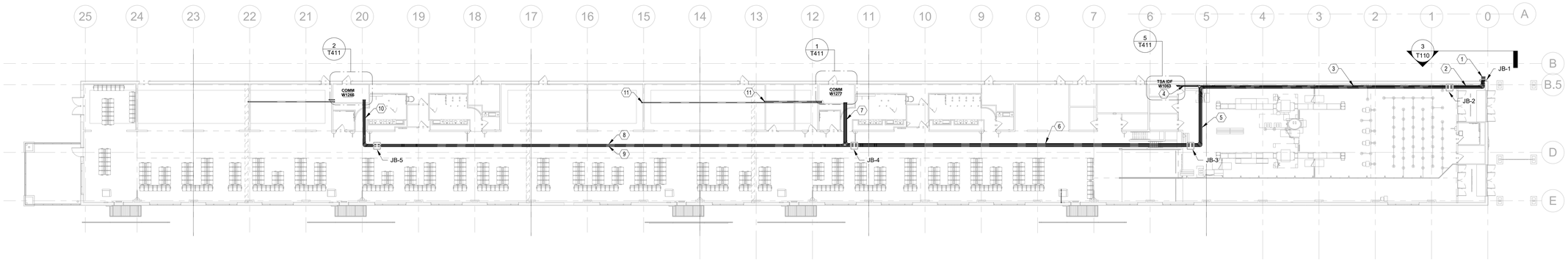
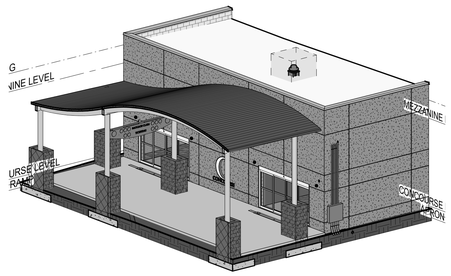
GENERAL NOTES

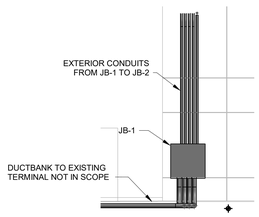
1. ALL OUTLETS AND EQUIPMENT SHOWN ARE DIAGRAMMATICAL IN REFERENCE TO THE FLOOR PLAN. THE DEVICES SHOWN SHALL BE INSTALLED TO REFLECT THE INTENT OF THE DRAWINGS.
2. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING OUTLET REQUIREMENTS.
3. COORDINATE WITH ALL OTHER TRADES AND DRAWINGS PRIOR TO INSTALLATION AND PLACEMENT OF WORKSTATION OUTLETS AND EQUIPMENT.



1 Level 1 - Technology
1" = 20'-0"



2 EXTERIOR CONDUITS



3 EXTERIOR CONDUITS
VPS

CONDUIT MATRIX:

KEYED NOTES	QTY.	CONDUIT SIZE	ORIGIN	DESTINATION
1	TBD	4"	CONDUITS FROM EXISTING TERMINAL (NOT IN SCOPE)	JB-1
2	5	2"	JB-1	JB-2
3	1	2"	JB-2	TSA COMM ROOM
4	1	2"	TSA COMM ROOM	JB-3
5	4	2"	JB-2	JB-3
6	5	2"	JB-3	JB-4
7	3	2"	JB-4	COMM ROOM W1277
8	2	2"	COMM ROOM W1277	JB-5
9	2	2"	JB-4	JB-5
10	4	2"	JB-5	COMM ROOM W1266
11	1	4"	COMM ROOM W1277	CONCESSIONS SPACE

CONDUIT NOTES:

1. CONTRACTOR SHALL COORDINATE CONDUIT ROUTING WITH AFFECTED TRADES.
2. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUITS, FITTINGS, MOUNTING HARDWARE, SUPPORTS AND APPURTENANCES.
3. CONTRACTOR SHALL INSTALL CONDUIT TO MANUFACTURER INSTALLATION GUIDELINES.

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Revisions

No.	Date	Description

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

OVERALL FLOOR PLANS

BID DOCUMENT

Drawing No.:

T110

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GENERAL NOTES

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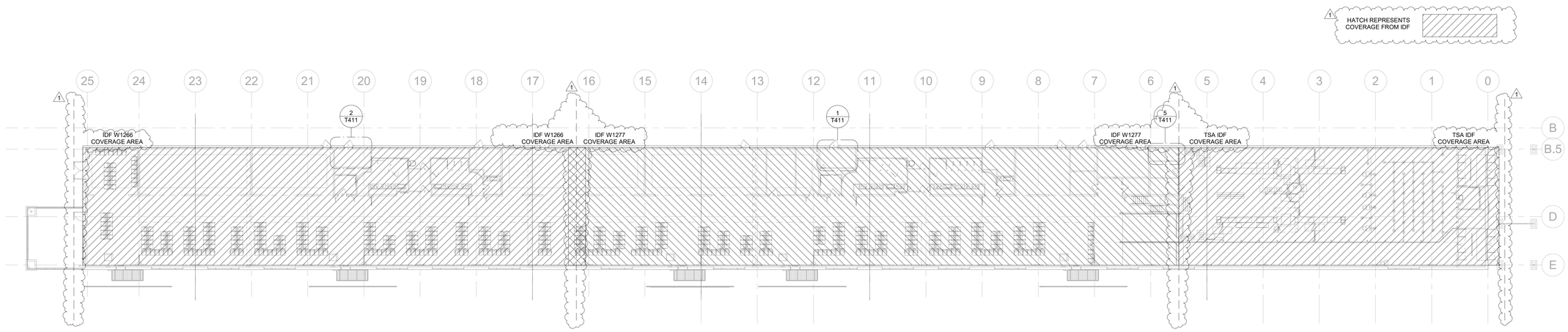
2. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING OUTLET REQUIREMENTS.
3. COORDINATE WITH ALL OTHER TRADES AND DRAWINGS PRIOR TO INSTALLATION AND PLACEMENT OF WORKSTATION OUTLETS AND EQUIPMENT.



1 Level 1 - IDF DATA COVERAGE ZONE
1" = 20'-0"

COMMUNICATIONS - ADD ALTERNATE NOTES:

1. COMMUNICATIONS CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. COMMUNICATIONS CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

OKALOOSA COUNTY

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1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
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Drawn By:	**AB**
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Issue Date:	**21-JAN-2020**
Drawing Scale:	**As indicated**

Drawing Title:

IDF DATA COVERAGE ZONE

BID DOCUMENT

Drawing No.:

T111

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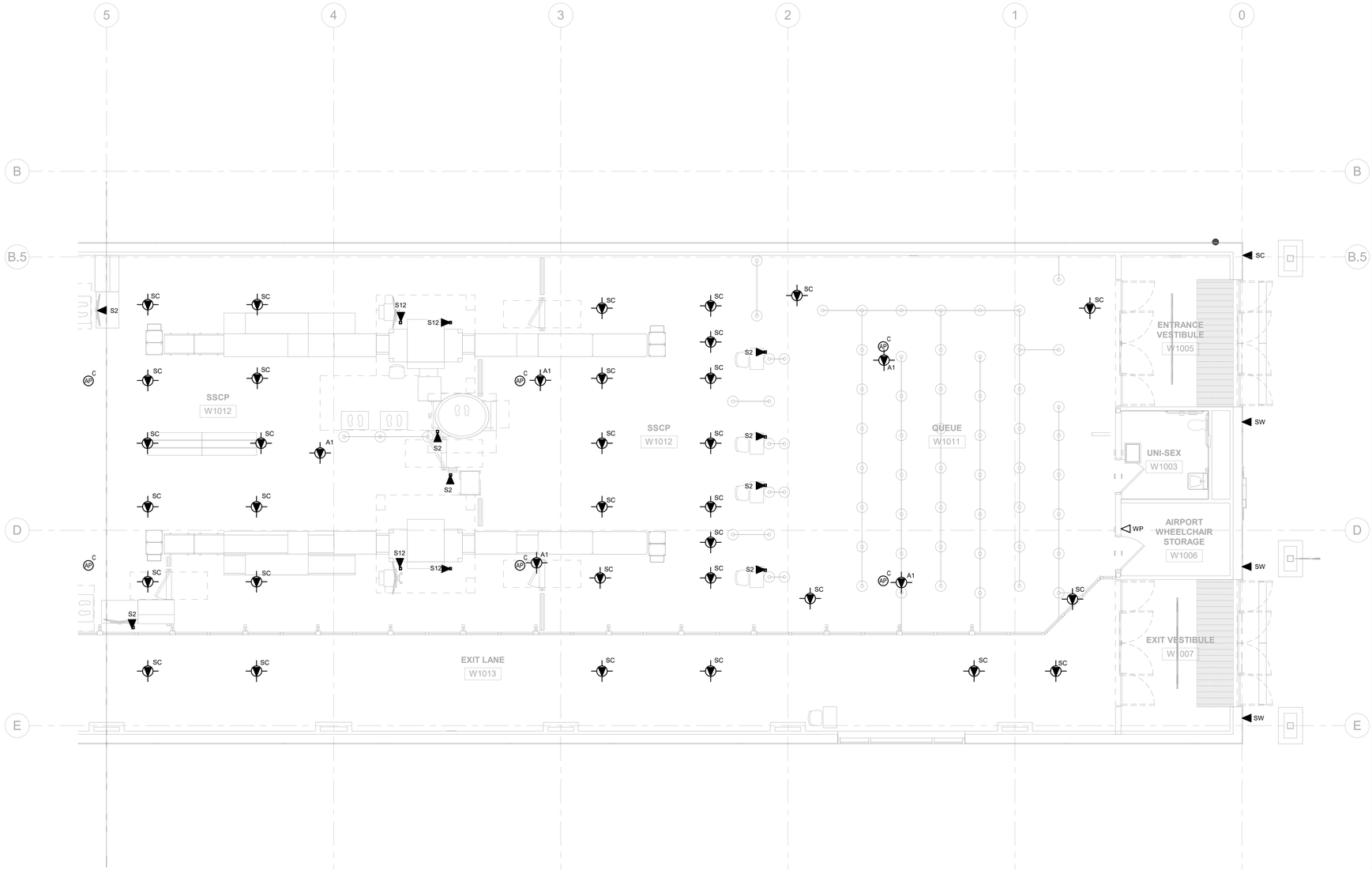

1 LEVEL 1 - TECHNOLOGY - AREA 1
3/16" = 1'-0"

GENERAL NOTES

1. ALL OUTLETS AND EQUIPMENT SHOWN ARE DIAGRAMMATICAL IN REFERENCE TO THE FLOOR PLAN. THE DEVICES SHOWN SHALL BE INSTALLED TO REFLECT THE INTENT OF THE DRAWINGS.
2. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING OUTLET REQUIREMENTS.
3. COORDINATE WITH ALL OTHER TRADES AND DRAWINGS PRIOR TO INSTALLATION AND PLACEMENT OF WORKSTATION OUTLETS AND EQUIPMENT.

NOTES:

1. THE CONTRACTOR SHALL TERMINATE CATEGORY 6 UTP CABLES SERVING TSA EQUIPMENT IN POWER POLES PROVIDED BY THE ELECTRICAL CONTRACTOR.
2. THE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL DRAWINGS FOR EXACT POWER POLE LAYOUT.
3. THE CONTRACTOR SHALL TERMINATE TSA CATEGORY 6 CABLES IN THE TSA COMMUNICATIONS IDF. TSA CABLE TYPE ARE AS FOLLOWS:
   - S2
   - S6
   - S12
4. THE CONTRACTOR SHALL PROVIDE ALL CATEGORY 6 PATCHING BETWEEN TSA EQUIPMENT AND IN TSA COMM ROOM W1063. REFER TO TSA CHECK POINT DESIGN GUIDELINE FOR FURTHER INFORMATION.
5. ALL WALL MOUNTED SC SYMBOLS IN THIS AREA SHALLBE MOUNTED TO POWER POLES PROVIDED BY THE ELECTRICAL CONTRACTOR

COMMUNICATIONS - ADD ALTERNATE NOTES:

1. COMMUNICATIONS CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. COMMUNICATIONS CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 1

BID DOCUMENT

Drawing No.:

T211

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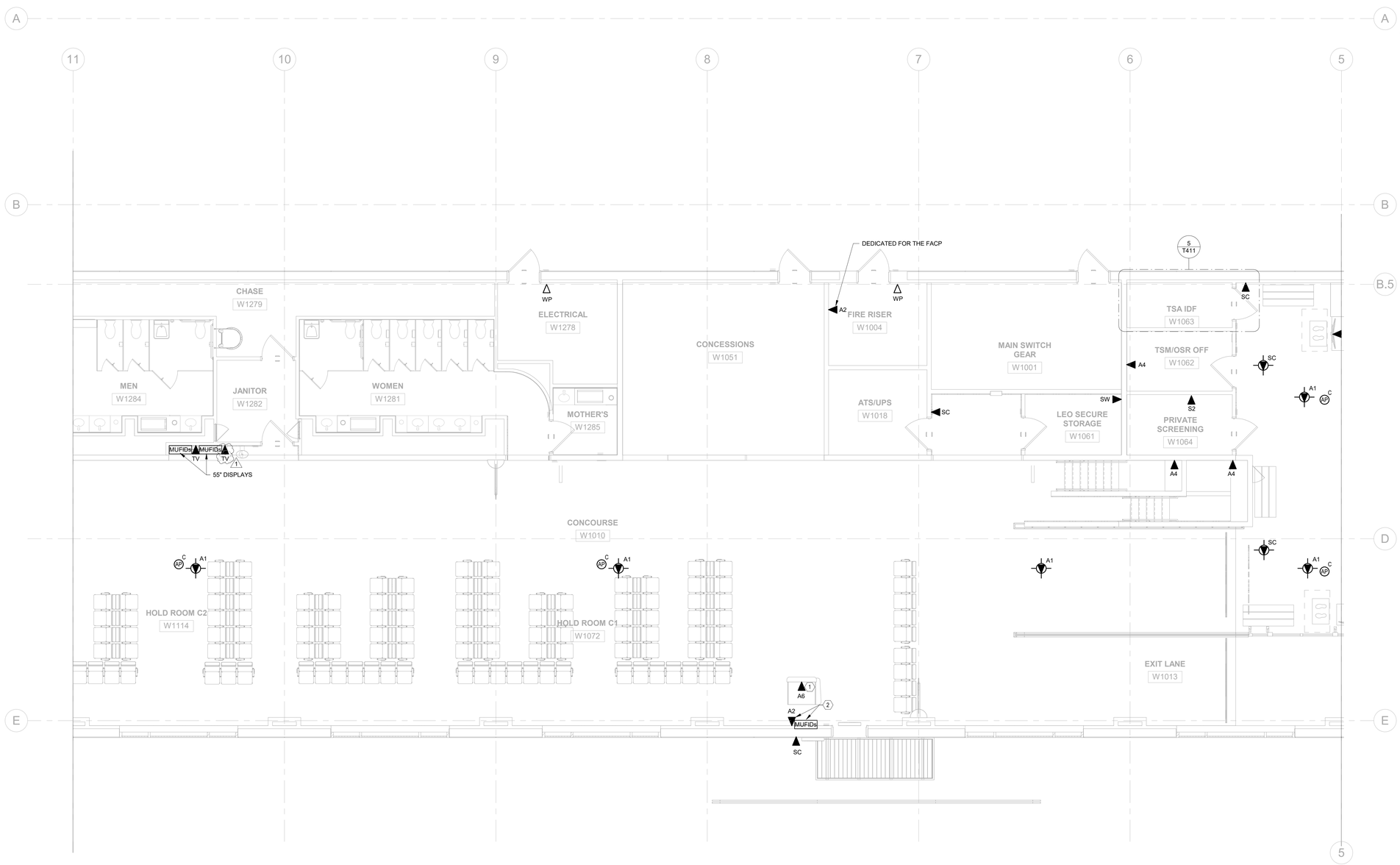

1 LEVEL 1 - TECHNOLOGY - AREA 2
3/16" = 1'-0"

GENERAL NOTES

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   - S12
4. THE CONTRACTOR SHALL PROVIDE ALL CATEGORY 6 PATCHING BETWEEN TSA EQUIPMENT. REFER TO TSA CHECK POINT DESIGN GUIDELINE FOR FURTHER INFORMATION.

1 **KEYED NOTES:**

CONTRACTOR SHALL FURNSH AND INSTALL:

1. (1) 1 1/4" EMT FROM THE NEAREST ACCESSIBLE CEILING TO PODIUM. REFER TO DETAILS FOR INSTALLATION REQUIREMENTS.
2. REFER TO ARCHITECTUAL DRAWINGS FOR MOUNTING HEIGHTS.

COMMUNICATIONS - ADD ALTERNATE NOTES:

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Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 2

BID DOCUMENT

Drawing No.:

T212

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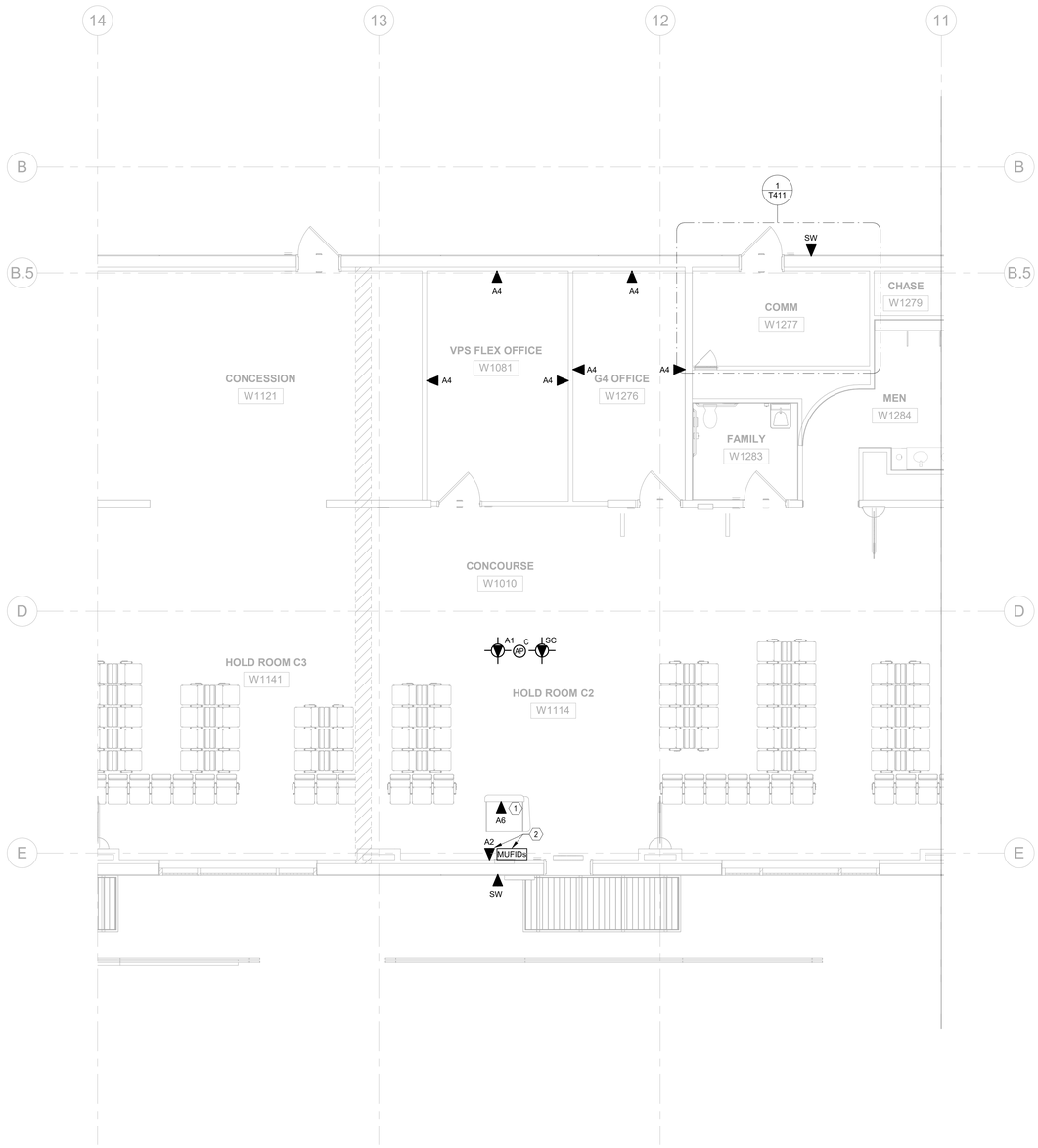

1 LEVEL 1 - TECHNOLOGY - AREA 3
3/16" = 1'-0"

GENERAL NOTES

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KEYED NOTES:

CONTRACTOR SHALL FURNSH AND INSTALL:

1. 1 1/4" EMT FROM THE NEAREST ACCESSIBLE CEILING TO PODIUM

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1

KEYED NOTES:

CONTRACTOR SHALL FURNSH AND INSTALL:

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2. REFER TO ARCHITECTUAL DRAWINGS FOR MOUNTING HEIGHTS.

OKALOOSA COUNTY

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Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 3

BID DOCUMENT

Drawing No.:

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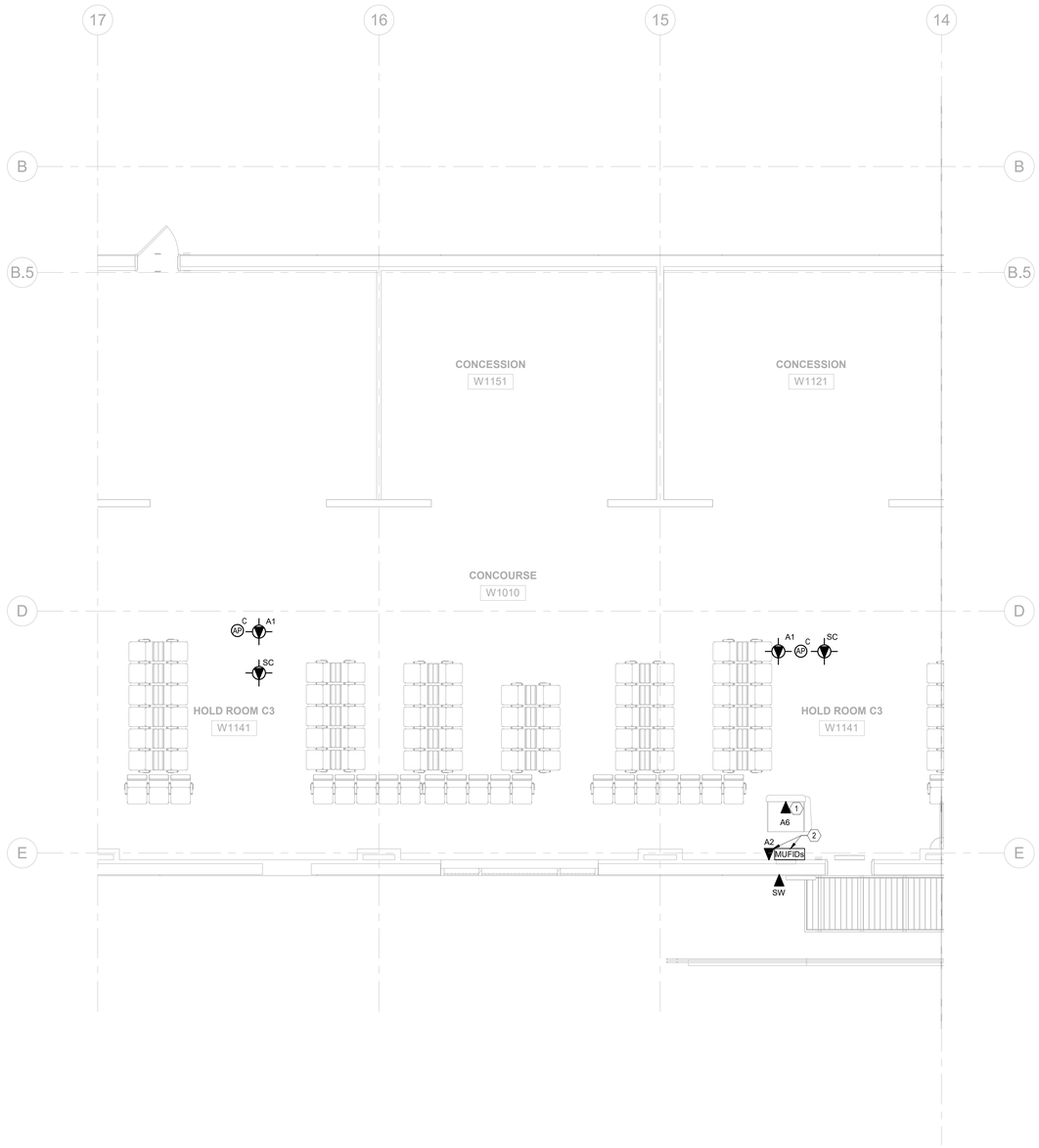

1 LEVEL 1 - TECHNOLOGY - AREA 4
3/16" = 1'-0"

GENERAL NOTES

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KEYED NOTES:

CONTRACTOR SHALL FURNSH AND INSTALL:

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KEYED NOTES:

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OKALOOSA COUNTY

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Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 4

BID DOCUMENT

Drawing No.:

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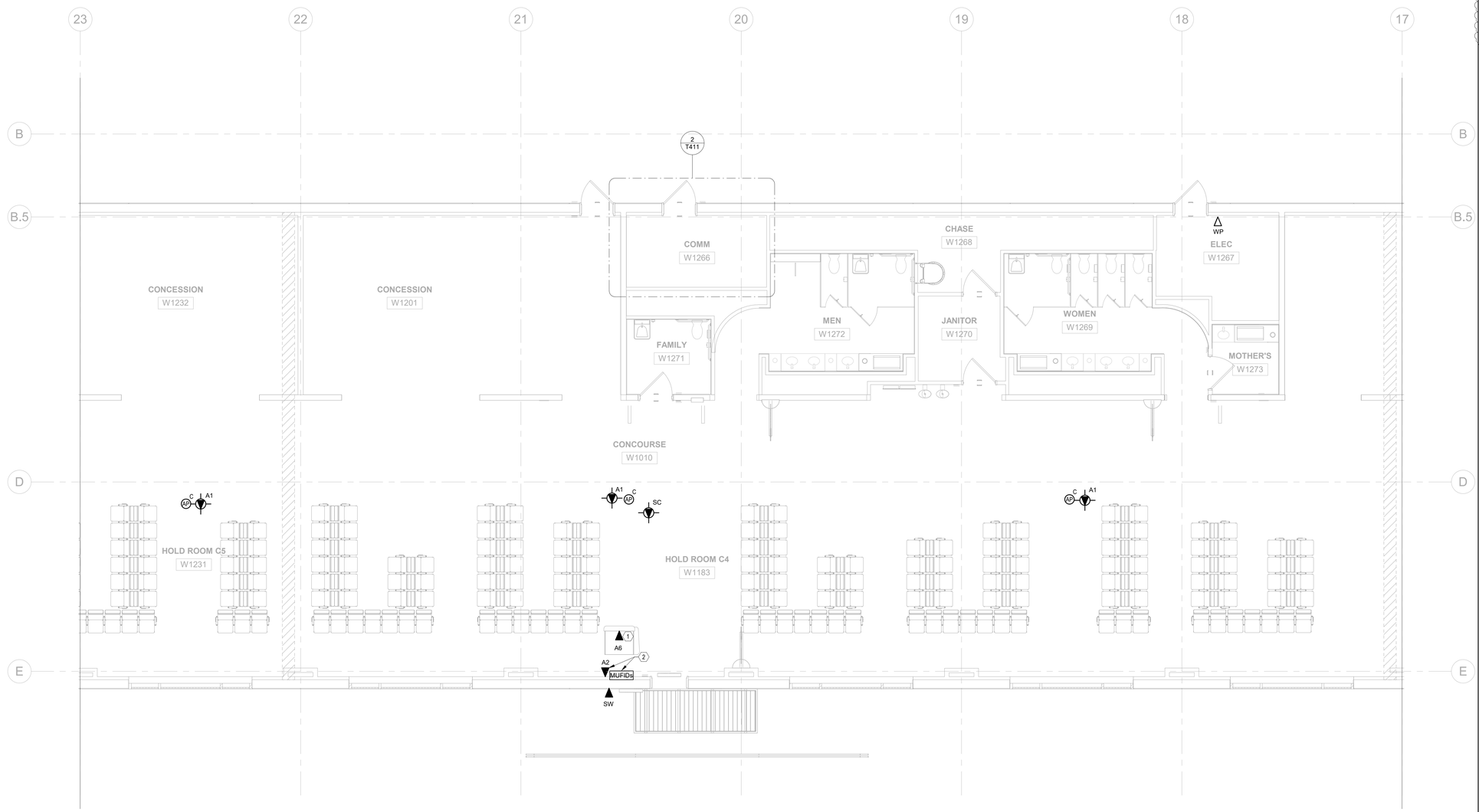

1 LEVEL 1 - TECHNOLOGY - AREA 5
3/16" = 1'-0"

GENERAL NOTES

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KEYED NOTES:

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Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 5

BID DOCUMENT

Drawing No.:

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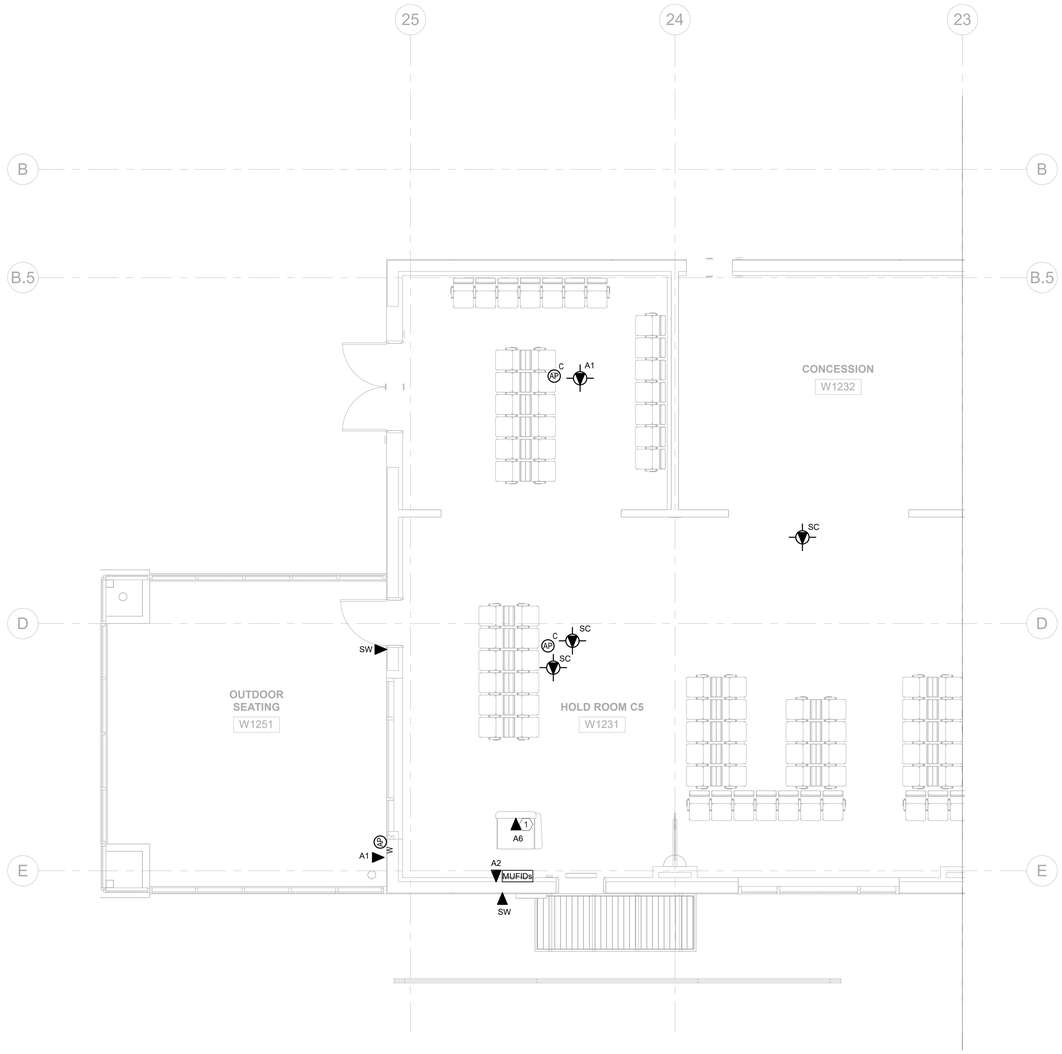

1 LEVEL 1 - TECHNOLOGY - AREA 6
3/16" = 1'-0"

GENERAL NOTES

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OKALOOSA COUNTY

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Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 6

BID DOCUMENT

Drawing No.:

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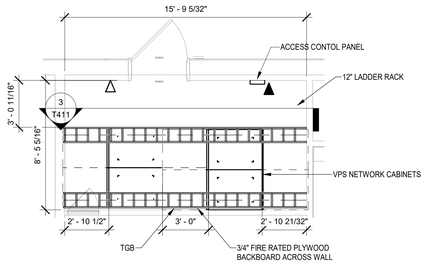
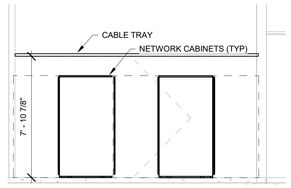
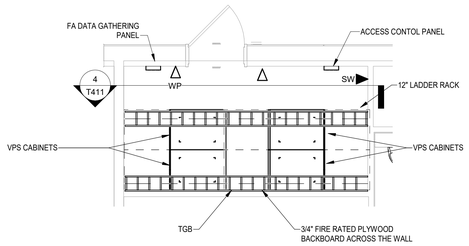


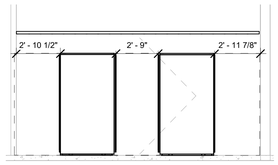
1 COMM ROOM W1277 - ENLARGED ROOM PLAN
1/4" = 1'-0"



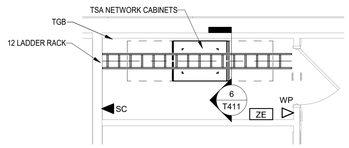
3 COMM ROOM W1277 - CABINET ELEVATIONS
1/4" = 1'-0"



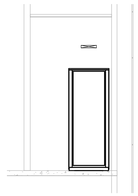
2 COMM ROOM W1266 - ENLARGED ROOM PLAN
1/4" = 1'-0"



4 COMM RM W1266 - CABINET ELEVATION
1/4" = 1'-0"



5 TSA IDF W1063 - ENLARGED ROOM PLAN
1/4" = 1'-0"



6 TSA IDF 1063 - CABINET ELEVATION
1/4" = 1'-0"

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Revisions

No.	Date	Description

Project No.:	**Project Number**
Designed By:	**AB**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED ROOM PLANS - IDF

BID DOCUMENT

Drawing No.:

T411

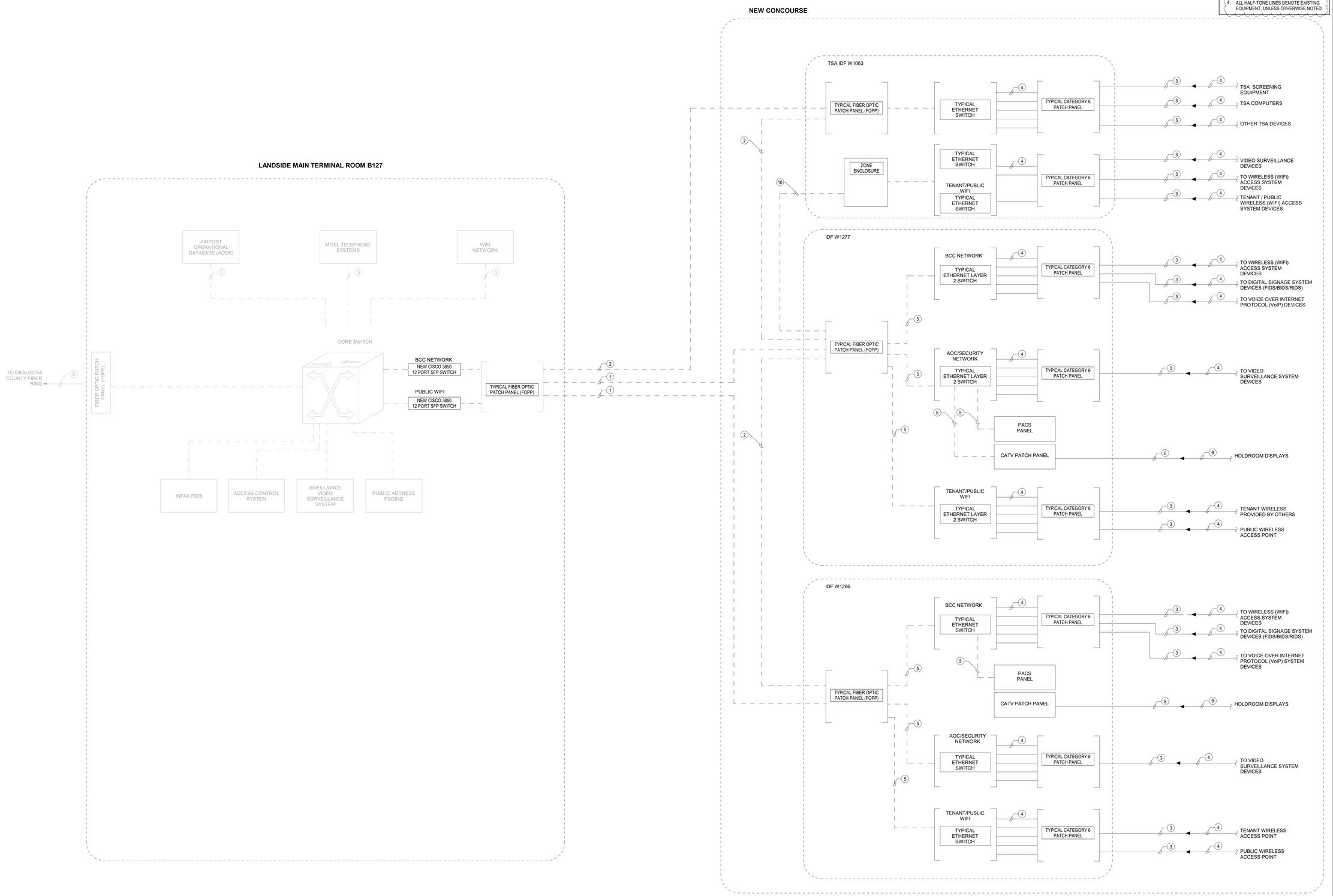
LEGEND

1. BACKBONE HORIZONTAL MULTI-MODE OM4 FIBER OPTIC CABLING, 48 STRANDS
2. HORIZONTAL MULTI-MODE OM4 FIBER OPTIC CABLING, 24 STRANDS
3. HORIZONTAL CATEGORY 6 CABLING
4. CATEGORY 6 PATCH CABLE, PROVIDE QUANTITY AS REQUIRED
5. FIBER OPTIC PATCH CABLE, SC TIPS PROVIDE QUANTITY AS REQUIRED
6. EXISTING COUNTY OWNED FIBER
7. NEW FIBER OPTIC PATCH PANEL SC WITH MULTI-MODE SC ADAPTERS
8. COAX RG6 QUAD SHIELDED PLENUM RATED CABLE WITH COMPRESSION FITTINGS
9. COAX PATCH CORD
10. COAX PATCH CORD

FIBER MEDIA
COPPER MEDIA
DATA DROP
EXISTING CORE SWITCH

GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO DEPICT ACTUAL DEVICE QUANTITIES. REFER TO FLOOR PLANS FOR DEVICE QUANTITIES. REFER TO SYSTEM DIAGRAMS FOR ADDITIONAL INFORMATION ON INDIVIDUAL NETWORK SYSTEMS.
2. CONTRACTOR SHALL PROVIDE ALL FIBER PATCH PANELS, PATCHING AND CONNECTIVITY TO THE EXISTING NETWORK. REFER TO THE NETWORK BACKBONE DIAGRAM FOR ADDITIONAL INFORMATION.
3. CONTRACTOR SHALL FURNISH AND INSTALL ALL PASSIVE AND ACTIVE NETWORK DEVICES FOR A COMPLETE AND FUNCTIONING SYSTEM. REFER TO DIVISION 27 SPECIFICATIONS FOR ADDITIONAL INFORMATION. CONTRACTOR SHALL COORDINATE ALL INSTALLATION ACTIVITIES WITH THE COUNTY.
4. ALL HALF-TONE LINES DENOTE EXISTING EQUIPMENT, UNLESS OTHERWISE NOTED.



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Drawing Title:

SINGLE LINE DIAGRAM - TECHNOLOGY

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Drawing No.:

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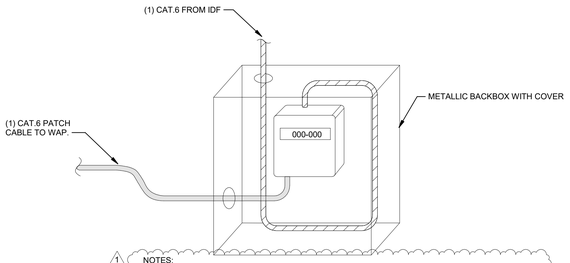
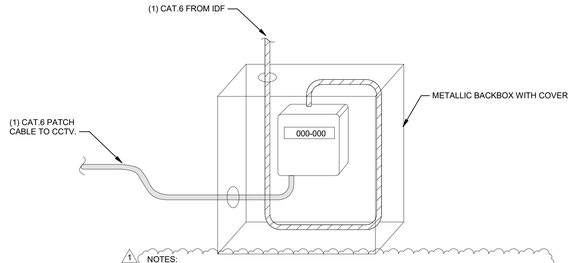


1 NOTES:
1. DATA CABLE AND JACK, TERMINATE ONTO PATCH PANEL IN THE ZONE SERVING IDF ON LAST PORTS OF LAST DATA PATCH PANEL AND LABEL.
2. PROVIDE A METAL ENCLOSURE WTH COVER TO HOUSE DATA OUTLET AND ASSEMBLY. PROVIDE A
3. TELECOMMUNICATIONS CONTRACTOR SHALL LEAVE OPEN KNOCK-OUT ON METALLIC BACKBOX FOR PATCHING.
4. INCLUDE ASSOCIATED IDF AND UNIQUE IDENTIFICATION ON ENCLOSURE COVER.
5. TELECOMMUNICATIONS CONTRACTOR SHALL LEAVE 10 FEET OF SLACK NEATLY COILED IN CEILING FOR RELOCATION.

A1

1 AP ABOVE CEILING OUTLET DETAIL
WAP
NTS



1 NOTES:
1. DATA CABLE AND JACK, TERMINATE ONTO PATCH PANEL IN THE ZONE SERVING IDF ON LAST PORTS OF LAST DATA PATCH PANEL AND LABEL.
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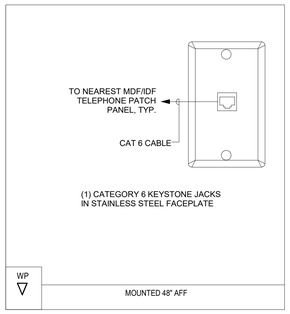
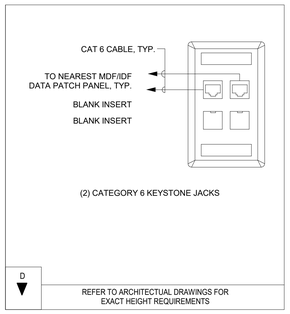
SC1

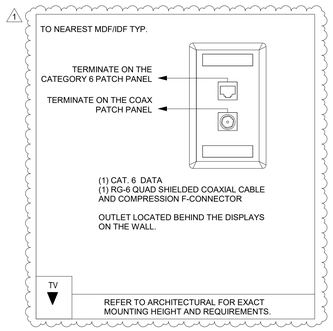
2 AP ABOVE CEILING OUTLET DETAIL
CCTV
NTS



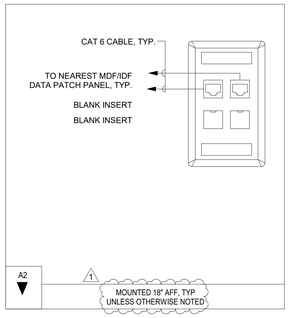
3 DATA OUTLET DETAIL - TYPE WP
NTS



4 MUFIDS DISPLAY OUTLET DETAIL - TYPE D
NTS



5 DATA OUTLET DETAIL - TYPE CATV
3" = 1'-0"



6 DATA OUTLET DETAIL - TYPE A2
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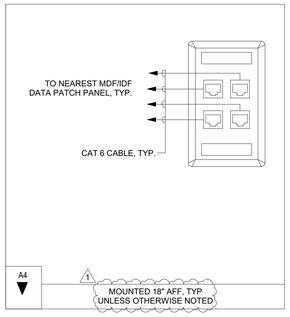

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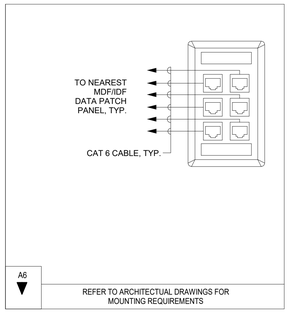

9 DATA OUTLET DETAIL - TYPE A6 - PODIUM
NTS

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Drawing Title:

DATA OUTLET DETAILS

BID DOCUMENT

Drawing No.:

T810

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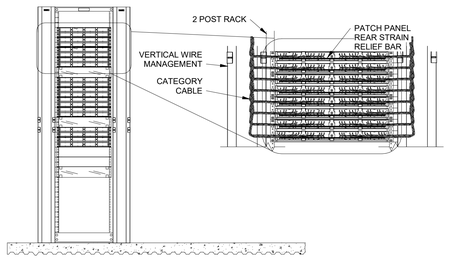
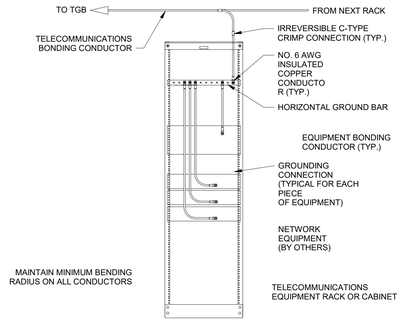


1 REAR CABLE TERMINATION
NTS



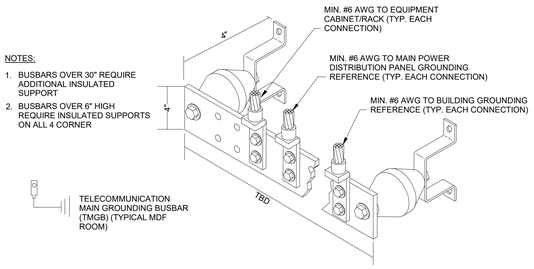
GENERAL NOTE

1. GROUNDING AND BONDING FOR ALL TELECOMMUNICATION EQUIPMENT AND PATHWAYS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH ANSI/TIA-607-B.
2. GROUNDING AND BONDING WITHIN OCIO ROOMS, LAN ROOMS AND RIC LOCATION SHALL FOLLOW SECTION 4.6.3 (EXAMPLE B) OF ANSI/TIA-607-B

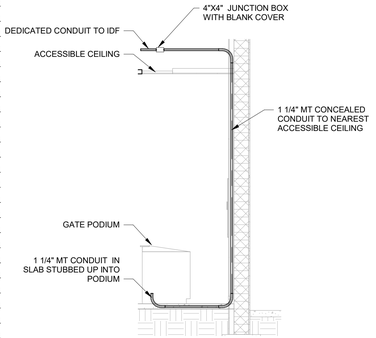
2 REAR RACK GROUNDING DETAIL
NTS

NOTES:

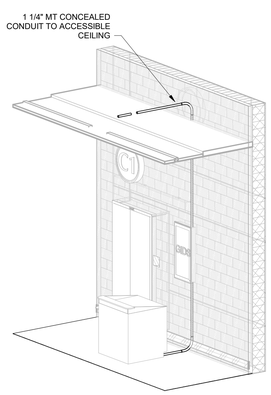
1. BUSBARS OVER 30" REQUIRE ADDITIONAL INSULATED SUPPORT
2. BUSBARS OVER 6" HIGH REQUIRE INSULATED SUPPORTS ON ALL 4 CORNER



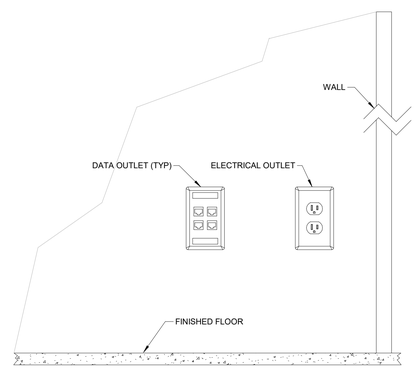
3 TELECOMMUNICATIONS BUSBAR
NTS



5 PODIUM CONDUITS DETAIL
NTS



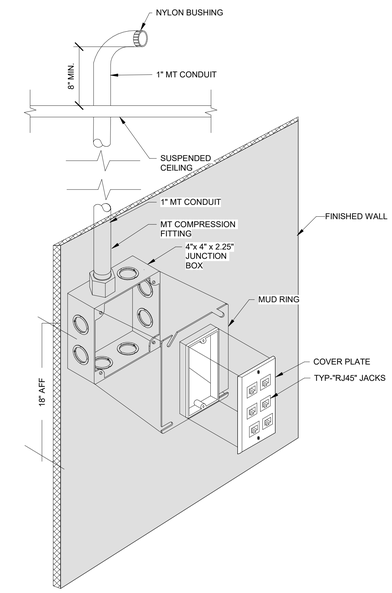
4 PODIUM CONDUIT ISOMETRIC VIEW



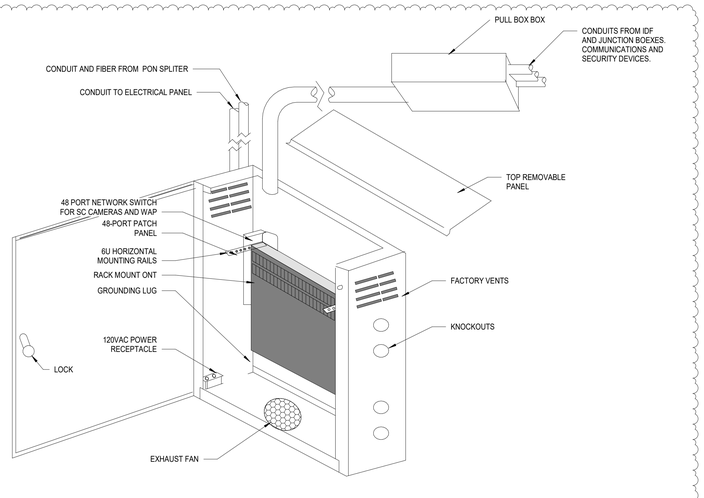
NOTES:

DATA OUTLETS SHALL BE MOUNTED ADJACENT TO THE ELECTRICAL OUTLET UNLESS OTHERWISE NOTED. REFER TO FLOOR PLANS FOR OUTLET TYPES.

6 DATA AND ELECTRICAL WALL MOUNTED DETAIL
NTS

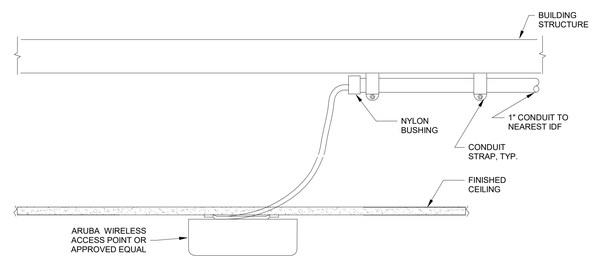


7 BACK BOX DETAIL
NTS



NOTES:
1. DATA CABLE SHALL BE TERMINATED IN JUNCTION BOX.
2. COORDINATED MOUNTING LOCATIONS WITH OTHER TRADES AND ARCHITECTURAL DRAWINGS.

8 SLIM WALL MOUNT ENCLOSURE TO DEVICE
NTS



9 WAP MOUNTING DETAIL
NTS

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DETAILS - TECHNOLOGY

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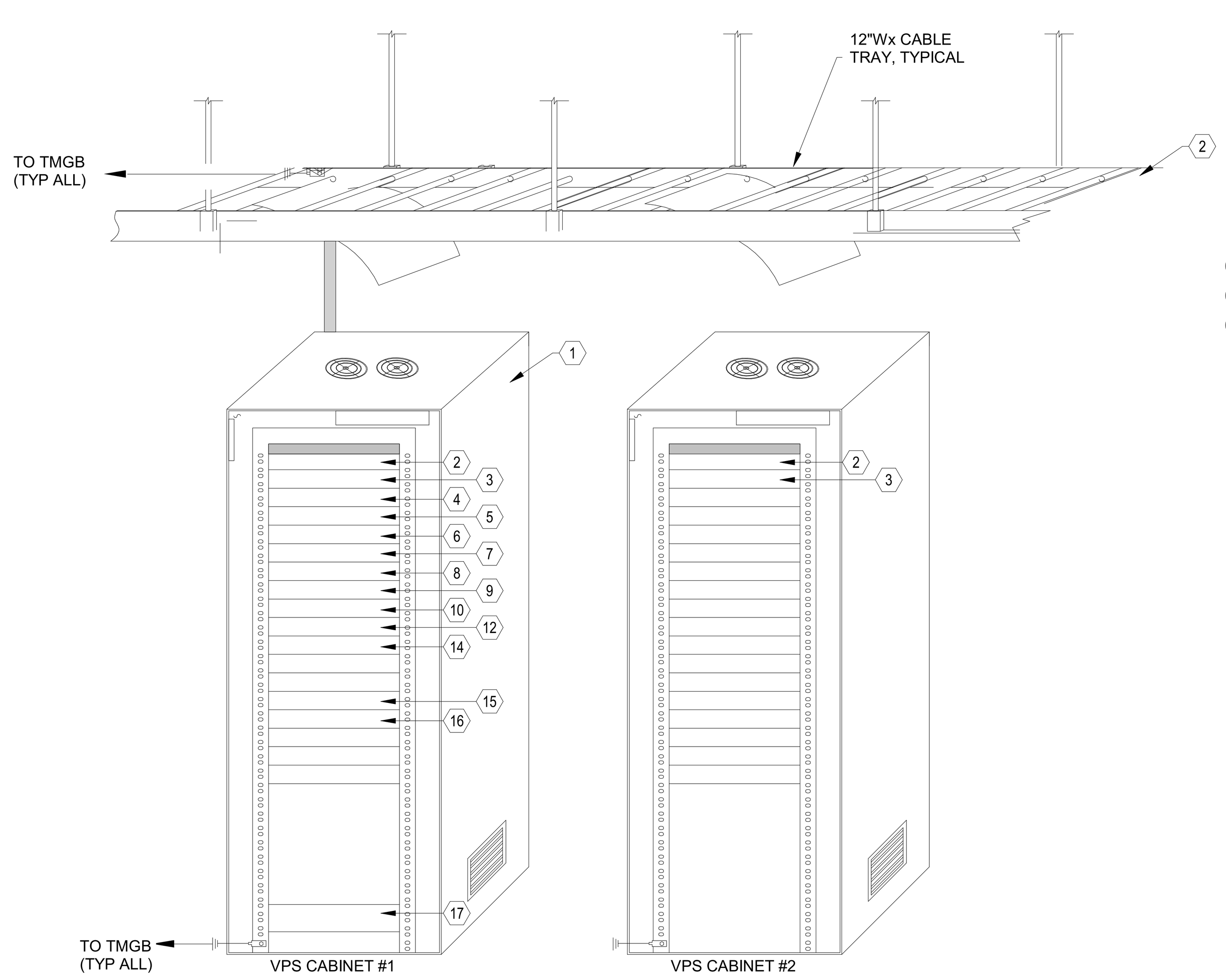
GENERAL CABINET/RACK NOTES:

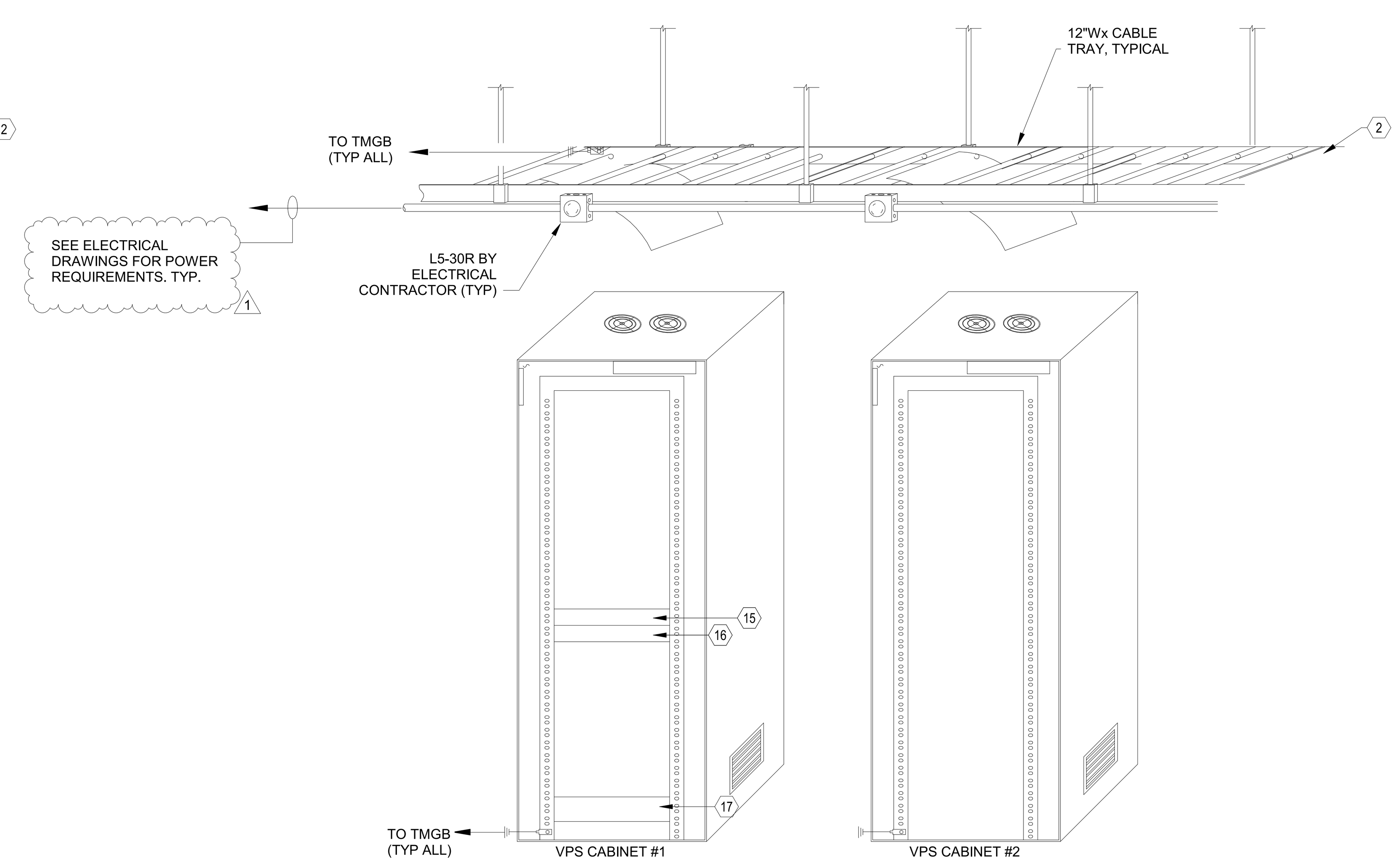
1. THE CABINET/RACK ELEVATION DETAILS ARE DIAGRAMMATIC ONLY AND HAVE BEEN PROVIDED TO DEPICT THE GENERAL ARRANGEMENT AND INSTALLATION OF THE NETWORK COMMUNICATIONS, RADIO, AND ELECTRONIC SECURITY COMPONENTS. THE CONTRACTOR SHALL PROVIDE ALL COMMUNICATIONS, RADIO, AND SECURITY EQUIPMENT CABINETS/RACKS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND SHALL BE CONFIGURED TO SUPPORT ALL EQUIPMENT, COMPONENTS AND CABLING NECESSARY TO MEET THE PERFORMANCE REQUIREMENTS OF ALL SYSTEMS SPECIFIED. THE CONTRACTOR SHALL PROVIDE ALL ELECTRICAL POWER, GROUNDING, SYSTEM COMPONENTS, EQUIPMENT, AND ALL APPURTENANCES AS REQUIRED TO PROVIDE FULLY OPERATING SYSTEMS IN ACCORDANCE WITH ALL PROJECT REQUIREMENTS.
2. THE COMMUNICATIONS EQUIPMENT ROOMS ARE A SHARED SPACE BETWEEN THE COMMUNICATIONS NETWORKS AND SECURITY ELECTRONIC SYSTEMS. IT SHALL BE THE RESPONSIBILITY OF THE TELECOMMUNICATIONS INTEGRATOR TO COORDINATE WITH THE SECURITY INTEGRATOR FOR ALL SPACE REQUIREMENTS. THE TELECOMMUNICATIONS INTEGRATOR SHALL DEMONSTRATE AT THE TIME OF SHOP DRAWING SUBMISSION THAT THE COORDINATION BETWEEN THE TWO DIVISION INTEGRATORS HAS MET THIS COORDINATION REQUIREMENT.
3. THE CONTRACTOR SHALL REVIEW ALL COMMUNICATIONS, RADIO, AND ELECTRONIC SECURITY DRAWINGS AS WELL AS ALL DIVISION 13 AND 16 SPECIFICATION SECTIONS RELATED TO THE INSTALLATION AND CONFIGURATION OF ALL EQUIPMENT, COMPONENTS, ELECTRICAL POWER AND EQUIPMENT CABINETS/RACKS INCLUDED AS PART OF THIS PROJECT.
4. COORDINATE WITH ALL APPLICABLE TRADES IN SUBMITTAL OF SHOP DRAWINGS AND THE INSTALLATION OF ALL EQUIPMENT CABINETS/RACKS. ALL SHOP DRAWINGS SHALL DETAIL SPACE CONDITIONS IN ORDER TO ACCOMMODATE OTHER CONCERNED TRADES, ALL EQUIPMENT LOCATIONS ARE SUBJECT TO FINAL REVIEW BY THE ARCHITECT.
5. ALL ELECTRICAL POWER SERVING THE RACK MOUNTED UPS UNITS AND ALL ASSOCIATED COMMUNICATIONS, RADIO, AND SECURITY EQUIPMENT SHALL BE PROVIDED FROM DEDICATED EMERGENCY ELECTRICAL DISTRIBUTION PANELS LOCATED WITHIN EACH COMMUNICATIONS AND RADIO EQUIPMENT ROOMS. COORDINATE WITH ELECTRICAL DRAWINGS FOR EXACT LOCATION AND SIZE OF EACH ELECTRICAL DISTRIBUTION PANEL.
6. PROVIDE IDENTIFICATION OF ALL EQUIPMENT CABINETS/RACKS, CONTROL PANELS, SUB-CONTROL PANELS, REMOTE RELAY CABINETS AND SECURITY EQUIPMENT PANELS, SYSTEM INTERFACE CABINETS, AND SIMILAR EQUIPMENT WITH 1-1/2 INCH WHITE LETTERING. ENGRAVED LAMINATED PLASTIC SIGNS SHALL BE USED FOR IDENTIFICATION AND SECURELY FASTENED IN ACCORDANCE WITH THE PROJECT REQUIREMENTS.
7. WORK SHALL BE NEAT IN APPEARANCE, FREE OF ROUGH EDGES, SCRATCHES, BLEMISHES, CRACKS AND EXPOSED GAPS. ALL EQUIPMENT SHALL BE SECURED TO THE MOUNTING SURFACE, AND FASTENED WITH HARDWARE APPROVED BY THE MANUFACTURER AND CAPABLE OF SUPPORTING THE RATED LOAD. ALL CABLES WITHIN ENCLOSURES SHALL BE NEATLY ROUTED AND TIE-WRAPPED WITH VELCRO STRAPS AT 6 INCHES ON CENTER (NYLON TIE-WRAPS ARE NOT ACCEPTABLE), ALL WIRE SPLICES SHALL BE TERMINATED ON TERMINAL STRIPS, SPLICES UTILIZING WIRE NUTS SHALL NOT BE ACCEPTABLE.
8. ALL WIRING SHALL TERMINATE ON FIXED TERMINAL STRIPS, PUNCH BLOCKS OR PATCH PANELS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. NO SPLICES SHALL BE PERMITTED IN UNDERGROUND PULL BOXES AND NON-ACCESSIBLE JUNCTION BOXES. ALL JUNCTION BOXES CONTAINING ANY SYSTEM SPLICES SHALL BE UNIQUELY IDENTIFIED.
9. PROVIDE ALL EQUIPMENT CLEARANCES IN ACCORDANCE WITH NEC REQUIREMENTS. ARRANGE EQUIPMENT TO FACILITATE UNRESTRICTED ACCESS FOR MAINTENANCE AND SERVICE AROUND ALL EQUIPMENT, COMPONENTS AND/OR CABLE TERMINATIONS.
10. ALL CONTROL EQUIPMENT MUST HAVE TRANSIENT PROTECTION TO COMPLY WITH UL864 REQUIREMENTS. WHERE ANY CIRCUITS LEAVE THE BUILDING, ADDITIONAL TRANSIENT PROTECTION MUST BE PROVIDED FOR EACH CIRCUIT. DEVICES MUST BE UL LISTED UNDER STANDARD #497B (ISOLATED LOOP PROTECTORS). ALL EQUIPMENT CABINETS SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC, IEEE AND MANUFACTURERS REQUIREMENTS.
11. ALL SYSTEM CABLING SHALL BE INSTALLED IN DEDICATED RACEWAYS OR CABLE TRAYS UNLESS OTHERWISE INDICATED.
12. ALL PENETRATIONS OF WALLS AND FLOORS SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE ASTM AND NFPA. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION. INSTALLATION OF FIRE-STOPS SHALL BE PERFORMED BY AN APPLICATOR/INSTALLER QUALIFIED AND TRAINED BY THE MANUFACTURER. INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH MANUFACTURER'S DETAILED INSTALLATION PROCEDURES.
13. REFER TO ALL RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
14. RACKS ARE SEPARATED FOR CLARITY PURPOSES ONLY. REFER TO FLOOR PLANS FOR EXACT LAYOUT AND QUANTITY.

GENERAL EQUIPMENT NOTES:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT, DEVICES, CABLING, CONNECTIVITY, PATCHING, MOUNTS AND SUPPORTS, APPURTENANCES AS INTENDED BY THE DRAWINGS.
2. THE CONTRACTOR SHALL USE THE FLOOR PLANS TO IDENTIFY THE EXACT QUANTIFY OF JACKS/FACEPLATES, AND FIELD DEVICES.
3. THE CONTRACTOR SHALL PROVIDE TERMINATE CCTV DATA ONTO A DEDICATED PATCH PANEL IN CABINET #1.
4. THE CONTRACTOR SHALL PROVIDE CISCO 3850 NETWORK SWITCH TO ACCOMMODATE THE AMOUNT OF CABLES WITHIN EACH IDF.



FRONT VIEW



REAR VIEW

	CABINET 1 KEY NOTES: IDF
1	84"Hx30"Wx42"D EQUIPMENT CABINET STANDARD TIA 19" RACK WITH VERTICAL AND HORIZONTAL WIRE MANAGEMENT
2	48 PORT FOPP (PROVIDE SPLICE PANELS AND FANOUT KITS)
3	1U HORIZONTAL WIRE MANAGEMENT
4	2U CAT. 6A 48 PORT PATCH PANEL
5	1U HORIZONTAL WIRE MANAGEMENT
6	2U CAT. 6A 48 PORT PATCH PANEL
7	1U HORIZONTAL WIRE MANAGEMENT
8	2U BLANK PANEL
9	2U BLANK PANEL
10	1U HORIZONTAL WIRE MANAGEMENT
11	2U CISCO 3850 48 PORT (BCC NETWORK SWITCH)
12	1U HORIZONTAL WIRE MANAGEMENT
13	2U CISCO 3850 48 PORT (SECURITY NETWORK SWITCH)
14	1U HORIZONTAL WIRE MANAGEMENT
15	2U CISCO 3850 48 PORT (WIFI NETWORK SWITCH)
16	1U HORIZONTAL WIRE MANAGEMENT
17	VERTICAL POWER DISTRIBUTION UNIT
18	VERTICAL POWER DISTRIBUTION UNIT
17	APC 3000VA SMART-UPS (MODEL SMT3000RM2U)

NOTE: ALL KEYED NOTES MAY NOT APPEAR IN EQUIPMENT CABINETS.

	CABINET #2 KEYED NOTES: IDF
1	84"Hx30"Wx42"D EQUIPMENT CABINET STANDARD TIA 19" RACK WITH VERTICAL AND HORIZONTAL WIRE MANAGEMENT
17	APC 3000VA SMART-UPS (MODEL SMT3000RM2U)

NOTE: ALL KEYED NOTES MAY NOT APPEAR IN EQUIPMENT CABINETS.

C19-2811-AP
Design of Satellite Concourse 'C'

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JOHN E. BURNS LICENSE No 62139 STATE OF FLORIDA PROFESSIONAL ENGINEER

SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

IDF W1266 RACK ELEVATION

BID DOCUMENT

Drawing No.:

T901

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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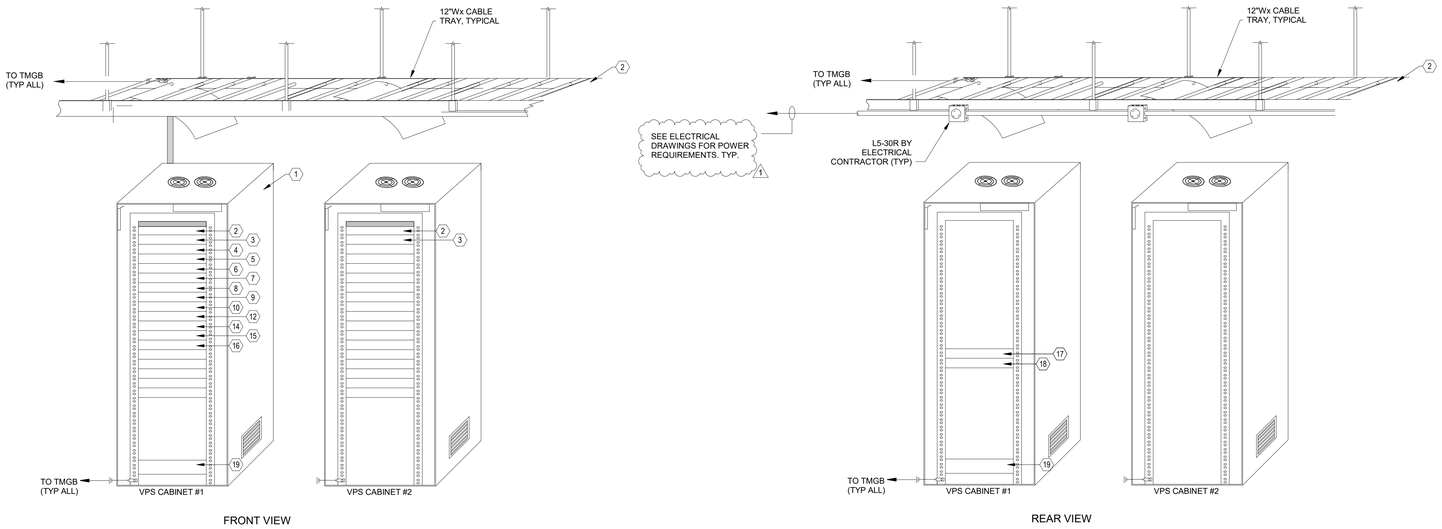
GENERAL CABINET/RACK NOTES:

1. THE CABINET/RACK ELEVATION DETAILS ARE DIAGRAMMATIC ONLY AND HAVE BEEN PROVIDED TO DEPICT THE GENERAL ARRANGEMENT AND INSTALLATION OF THE NETWORK COMMUNICATIONS, RADIO, AND ELECTRONIC SECURITY COMPONENTS. THE CONTRACTOR SHALL PROVIDE ALL COMMUNICATIONS, RADIO, AND SECURITY EQUIPMENT CABINETS/RACKS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND SHALL BE CONFIGURED TO SUPPORT ALL EQUIPMENT, COMPONENTS AND CABLING NECESSARY TO MEET THE PERFORMANCE REQUIREMENTS OF ALL SYSTEMS SPECIFIED. THE CONTRACTOR SHALL PROVIDE ALL ELECTRICAL POWER, GROUNDING, SYSTEM COMPONENTS, EQUIPMENT, AND ALL APPURTENANCES AS REQUIRED TO PROVIDE FULLY OPERATING SYSTEMS IN ACCORDANCE WITH ALL PROJECT REQUIREMENTS.
2. THE COMMUNICATIONS EQUIPMENT ROOMS ARE A SHARED SPACE BETWEEN THE COMMUNICATIONS NETWORKS AND SECURITY ELECTRONIC SYSTEMS. IT SHALL BE THE RESPONSIBILITY OF THE TELECOMMUNICATIONS INTEGRATOR TO COORDINATE WITH THE SECURITY INTEGRATOR FOR ALL SPACE REQUIREMENTS. THE TELECOMMUNICATIONS INTEGRATOR SHALL DEMONSTRATE AT THE TIME OF SHOP DRAWING SUBMISSION THAT THE COORDINATION BETWEEN THE TWO DIVISION INTEGRATORS HAS MET THIS COORDINATION REQUIREMENT.
3. THE CONTRACTOR SHALL REVIEW ALL COMMUNICATIONS, RADIO, AND ELECTRONIC SECURITY DRAWINGS AS WELL AS ALL DIVISION 13 AND 16 SPECIFICATION SECTIONS RELATED TO THE INSTALLATION AND CONFIGURATION OF ALL EQUIPMENT, COMPONENTS, ELECTRICAL POWER AND EQUIPMENT CABINETS/RACKS INCLUDED AS PART OF THIS PROJECT.
4. COORDINATE WITH ALL APPLICABLE TRADES IN SUBMITTAL OF SHOP DRAWINGS AND THE INSTALLATION OF ALL EQUIPMENT CABINETS/RACKS. ALL SHOP DRAWINGS SHALL DETAIL SPACE CONDITIONS IN ORDER TO ACCOMMODATE OTHER CONCERNED TRADES, ALL EQUIPMENT LOCATIONS ARE SUBJECT TO FINAL REVIEW BY THE ARCHITECT.
5. ALL ELECTRICAL POWER SERVING THE RACK MOUNTED UPS UNITS AND ALL ASSOCIATED COMMUNICATIONS, RADIO, AND SECURITY EQUIPMENT SHALL BE PROVIDED FROM DEDICATED EMERGENCY ELECTRICAL DISTRIBUTION PANELS LOCATED WITHIN EACH COMMUNICATIONS AND RADIO EQUIPMENT ROOMS. COORDINATE WITH ELECTRICAL DRAWINGS FOR EXACT LOCATION AND SIZE OF EACH ELECTRICAL DISTRIBUTION PANEL.
6. PROVIDE IDENTIFICATION OF ALL EQUIPMENT CABINETS/RACKS, CONTROL PANELS, SUB-CONTROL PANELS, REMOTE RELAY CABINETS AND SECURITY EQUIPMENT PANELS, SYSTEM INTERFACE CABINETS, AND SIMILAR EQUIPMENT WITH 1-1/2 INCH WHITE LETTERING. ENGRAVED LAMINATED PLASTIC SIGNS SHALL BE USED FOR IDENTIFICATION AND SECURELY FASTENED IN ACCORDANCE WITH THE PROJECT REQUIREMENTS.
7. WORK SHALL BE NEAT IN APPEARANCE, FREE OF ROUGH EDGES, SCRATCHES, BLEMISHES, CRACKS AND EXPOSED GAPS. ALL EQUIPMENT SHALL BE SECURED TO THE MOUNTING SURFACE, AND FASTENED WITH HARDWARE APPROVED BY THE MANUFACTURER AND CAPABLE OF SUPPORTING THE RATED LOAD. ALL CABLES WITHIN ENCLOSURES SHALL BE NEATLY ROUTED AND TIE-WRAPPED WITH VELCRO STRAPS AT 6 INCHES ON CENTER (NYLON TIE-WRAPS ARE NOT ACCEPTABLE). ALL WIRE SPLICES SHALL BE TERMINATED ON TERMINAL STRIPS. SPLICES UTILIZING WIRE NUTS SHALL NOT BE ACCEPTABLE.
8. ALL WIRING SHALL TERMINATE ON FIXED TERMINAL STRIPS, PUNCH BLOCKS OR PATCH PANELS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. NO SPLICES SHALL BE PERMITTED IN UNDERGROUND PULL BOXES AND NON-ACCESSIBLE JUNCTION BOXES. ALL JUNCTION BOXES CONTAINING ANY SYSTEM SPLICES SHALL BE UNIQUELY IDENTIFIED.
9. PROVIDE ALL EQUIPMENT CLEARANCES IN ACCORDANCE WITH NEC REQUIREMENTS. ARRANGE EQUIPMENT TO FACILITATE UNRESTRICTED ACCESS FOR MAINTENANCE AND SERVICE AROUND ALL EQUIPMENT, COMPONENTS AND/OR CABLE TERMINATIONS.
10. ALL CONTROL EQUIPMENT MUST HAVE TRANSIENT PROTECTION TO COMPLY WITH UL864 REQUIREMENTS. WHERE ANY CIRCUITS LEAVE THE BUILDING, ADDITIONAL TRANSIENT PROTECTION MUST BE PROVIDED FOR EACH CIRCUIT. DEVICES MUST BE UL LISTED UNDER STANDARD #497B (ISOLATED LOOP PROTECTORS). ALL EQUIPMENT CABINETS SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC, IEEE AND MANUFACTURERS REQUIREMENTS.
11. ALL SYSTEM CABLING SHALL BE INSTALLED IN DEDICATED RACEWAYS OR CABLE TRAYS UNLESS OTHERWISE INDICATED.
12. ALL PENETRATIONS OF WALLS AND FLOORS SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE ASTM AND NFPA. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION. INSTALLATION OF FIRE-STOPS SHALL BE PERFORMED BY AN APPLICATOR/INSTALLER QUALIFIED AND TRAINED BY THE MANUFACTURER. INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH MANUFACTURER'S DETAILED INSTALLATION PROCEDURES.
13. REFER TO ALL RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
14. RACKS ARE SEPARATED FOR CLARITY PURPOSES ONLY. REFER TO FLOOR PLANS FOR EXACT LAYOUT AND QUANTITY.

GENERAL EQUIPMENT NOTES:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT, DEVICES, CABLING, CONNECTIVITY, PATCHING, MOUNTS AND SUPPORTS, APPURTENANCES AS INTENDED BY THE DRAWINGS.
2. THE CONTRACTOR SHALL USE THE FLOOR PLANS TO IDENTIFY THE EXACT QUANTIFY OF JACKS/FACEPLATES, AND FIELD DEVICES.
3. THE CONTRACTOR SHALL PROVIDE TERMINATE CCTV DATA ONTO A DEDICATED PATCH PANEL IN CABINET #1.
4. THE CONTRACTOR SHALL PROVIDE CISCO 3850 NETWORK SWITCH TO ACCOMMODATE THE AMOUNT OF CABLES WITHIN EACH IDF.



1 IDF W1277 RACK ELEVATIONS
3/4" = 1'-0"

	CABINET 1 KEY NOTES: IDF
1	84"Hx30"Wx42"D EQUIPMENT CABINET STANDARD TIA 19" RACK WITH VERTICAL AND HORIZONTAL WIRE MANAGEMENT
2	48 PORT FOPP (PROVIDE SPLICE PANELS AND FANOUT KITS)
3	1U HORIZONTAL WIRE MANAGEMENT
4	2U CAT. 6A 48 PORT PATCH PANEL
5	1U HORIZONTAL WIRE MANAGEMENT
6	2U CAT. 6A 48 PORT PATCH PANEL
7	1U HORIZONTAL WIRE MANAGEMENT
8	2U BLANK PANEL
9	2U BLANK PANEL
10	1U HORIZONTAL WIRE MANAGEMENT
11	2U CISCO 3850 48 PORT (BCC NETWORK SWITCH)
12	1U HORIZONTAL WIRE MANAGEMENT
13	2U CISCO 3850 48 PORT (SECURITY NETWORK SWITCH)
14	1U HORIZONTAL WIRE MANAGEMENT
15	2U CISCO 3850 48 PORT (WIFI NETWORK SWITCH)
16	1U HORIZONTAL WIRE MANAGEMENT
17	VERTICAL POWER DISTRIBUTION UNIT
18	VERTICAL POWER DISTRIBUTION UNIT
19	APC 3000VA SMART-UPS (MODEL SMT3000RM2U)

NOTE: ALL KEYED NOTES MAY NOT APPEAR IN EQUIPMENT CABINETS.

	CABINET #2 KEYED NOTES: IDF
1	84"Hx30"Wx42"D EQUIPMENT CABINET STANDARD TIA 19" RACK WITH VERTICAL AND HORIZONTAL WIRE MANAGEMENT
17	VERTICAL POWER DISTRIBUTION UNIT
18	VERTICAL POWER DISTRIBUTION UNIT
19	APC 3000VA SMART-UPS (MODEL SMT3000RM2U)

NOTE: ALL KEYED NOTES MAY NOT APPEAR IN EQUIPMENT CABINETS.

OKALOOSA COUNTY

FLY VPS

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SEAL

Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

IDF W1277 RACK ELEVATION

BID DOCUMENT

Drawing No.:

T902

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt
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MOUNTING HEIGHTS

CEILING	SMOKE AND HEAT DETECTORS, 360° SECURITY MOTION DETECTORS, CCTV SURVEILLANCE CAMERAS, PUBLIC ADDRESS AND VOICE EVACUATION SPEAKERS, WIRELESS ACCESS POINTS. TV AND LCD PROJECTOR JACKS
8' A.F.G.	EXTERIOR VISUAL AND AUDIO/VISUAL FIRE ALARM NOTIFICATION DEVICES, EXTERIOR PUBLIC ADDRESS SPEAKERS.
7'-5" A.F.F.	CLOCKS, COMBINATION CLOCK/SPEAKERS, TRUMPET SPEAKERS
7'-0" A.F.F.	VISUAL AND AUDIO/VISUAL FIRE ALARM NOTIFICATION DEVICES, WALL MOUNTED SECURITY MOTION DETECTORS (CENTER OF DEVICE)
6" ABOVE DOOR JAMB	REQUEST TO EXIT MOTION DETECTORS
5'-6" A.F.F	TOP OF PLYWOOD TELEPHONE BACKBOARD
5'-4" A.F.F.	FIRE ALARM ANNUNCIATOR PANELS, FIRE FIGHTER CONTROL STATIONS, SECURITY ANNUNCIATOR PANELS
4'-8" A.F.G. MAX	PEDESTAL MOUNT INTERCOM PEDESTAL MOUNT CARD READER
4'-0" A.F.F.	"PS" TELEPHONE OUTLETS (TOP OF COIN SLOT),(WALL MOUNTED)-TELEPHONE INSTRUMENTS, INTERCOM STATIONS, FIRE FIGHTER TELEPHONE JACKS, FIRE ALARM MANUAL STATIONS, CARD READERS, MANUAL REQUEST TO EXIT DEVICES, WALL MOUNTED DURESS ALARM STATIONS, RESCUE ASSISTANCE PANELS, LCD KEYPADS (CENTER OF DEVICE)
UNDER COUNTER OR DESK	DURESS ALARM BUTTONS, DOOR RELEASE BUTTOMS
1'-6" A.F.F.	DATA/TELEPHONE JACKS, LOW TELEVISION JACKS, MICROPHONE JACKS
0'-0"	IN FLOOR JUNCTION BOXES FLUSH TO FINISHED FLOOR (FF) (DATA, TELEPHONE, MICROPHONE, MEDIA)

1. IN MASONRY CONSTRUCTION THE MOUNTING HEIGHTS SHALL BE USED FOR REFERENCE TO THE NEAREST BLOCK OR BRICK COURSING.
2. THE ABOVE MOUNTING ELEVATIONS ARE TO CENTER OF DEVICE AND SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE DRAWINGS AND/OR SPECIFICATIONS.
3. COORDINATE THE INSTALLATION AND MOUNTING ELEVATIONS OF ALL EQUIPMENT, DEVICES, CONTROLS AND APPURTENANCES WITH ARCHITECT AND ALL AFFECTED TRADES PRIOR TO INSTALLATION. DOCUMENT ALL MOUNTING ELEVATIONS FOR ALL EQUIPMENT, DEVICES, CONTROLS AND APPURTENANCES AT THE TIME OF SHOP DRAWING SUBMITTAL

PAGING ABBREVIATIONS

A/AMP	AMPERE
AC	ALTERNATING CURRENT
ACC	ACCENT
ACR	ATTENUATION/CROSSTALK RATIO
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
AM	AMMETER
APPROX	APPROXIMATELE(LY)
ASY	ASYMETRIC
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BFC	BELOW FINISHED CEILING
BKR	BREAKER
BLDG	BUILDING
BLK	BLACK
BRKT	BRACKET
C	CONDUIT
CAB	CABINET
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
cd	CANDELA
CIR/CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CLR	CLEAR
COL	COLUMN
COMM	COMMUNICATION
CT	CURRENT TRANSFORMER
CU	COPPER
CW	COOL WHITE
DAS	DISTRIBUTED ANTENNA SYSTEM
dB	DECIBEL
DC	DIRECT CURRENT
DE	DUAL ELEMENT
DED	DEDICATED
DIA	DIAMETER
DISC	DISCONNECT
DNLT	DOWNLIGHT
DP	DISTRIBUTION PANEL
DPDT	DOUBLE POLE DOUBLE-THROW
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EIA	ELECTRONICS INDUSTRY ASSOCIATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
EO	ELECTRICALLY OPERATED
EQIP	EQUIPMENT
ESB	ENERGY SAVING BALLAST
EVIDS	ELECTRONIC VIDEO INFORMATION DISPLAY SYSTEM
EWC	ELECTRIC WATER COOLER
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FAGP	FIRE ALARM GRAPHIC ANNUNCIATOR PANEL
FEXT	FAR END CROSSTALK
FIXT	FIXTURE
FL	FLOOR
FLA	FULL LOAD AMPERES
FLOUR	FLUORESCENT
FT	FOOTCANDLES
FVNR	FULL VOLTAGE NON-REVERSING
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GND/G	GROUND
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HV	HIGH VOLTAGE
HVAC	HEATING VENTILATING AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND
INCAN	INCANDESCENT
IPS	INVERTER POWER SUPPLY
JB	JUNCTION BOX
KVA	KILOVOLT AMPERE
KVAR	KILOVAR (REACTANCE)
KW	KILOWATT
KWH	KILOWATT HOUR METER
LA	LIGHTNING ARRESTER
LED	LIGHT EMITTING DIODE
LT	LIGHT
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	METAL-CLAD CABLE
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MH	METAL HALIDE
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MM	MILLIMETER
MOD	MOTOR OPERATED DAMPER
MTD	MOUNTED
MTG HT	MOUNTING HEIGHT
MTS	MANUAL TRANSFER SWITCH
MUFIDS	MULTI-USER FLIGHT INFORMATION DISPLAY
MV	MILLIVOLT
MV	MEDIUM VOLTAGE
N/A	NOT AVAILABLE/NOT APPLICABLE
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRIC MFR ASSOCIATION
NEXT	NEAR END CROSSTALK
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPENED
NTS	NOT TO SCALE
OC	ON CENTER
OH	OVERHEAD
OL	OVERLOAD HEATER ELEMENT
P	POLE
PB	PULL BOX
PEW	PEWTER
PLY	PLYWOOD
PNL	PANEL
PP	POWER PANEL
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHORIDE
RECPT	RECEPTACLE
REFL	REFLECTOR
REQ	REQUIRED
RGS	RIGID GALVANIZED STEEL CONDUIT
RIO	ROUGH IN ONLY
RM	ROOM
RS	RAPID START
SCH	SCHEDULE
SPDT	SINGLE POLE SINGLE THROW
SPST	SINGLE POLE DOUBLE THROW
SSB	SOLID STATE BALLAST
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TELE	TELEPHONE
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TSB	TECHNICAL SERVICE BULLETIN
TSP	TWISTED SHIELDED PAIR
TT	TWIN TUBE
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORIES
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLT
VM	VOLTMETER
VP	VAPOR PROOF
W	WATT
W/	WITH
W/I	WITHIN
W/O	WITHOUT
WAP	WIRELESS ACCESS POINT
WP	WEATHERPROOF
WW	WARM WHITE
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

GENERAL PAGING SYSTEM NOTES:

1. THE FOLLOWING GENERAL NOTES AS LISTED BELOW SHALL APPLY TO ALL PAGING SYSTEM REQUIREMENTS AS INDICATED ON ALL TP SERIES CONTRACT DRAWINGS.
2. THE EXTENT OF THE PAGING SYSTEM WORK FOR THIS PROJECT SHALL CONSIST OF THE GENERAL CONTRACTOR PROVIDING ALL CABLING, CONDUITS, BACKBOXES, DEVICES, COMPONENTS, ACTIVE ELECTRONICS, PROCESSORS, SERVERS, AND APPURTENANCES NECESSARY TO SUPPORT THE COMPLETE INSTALLATION OF THE PAGING SYSTEM IN ACCORDANCE WITH THE CONTRACT DRAWINGS. REFER TO RELATED DIVISION SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
3. THE COMMUNICATIONS EQUIPMENT ROOM SHALL BE A SHARED SPACE BETWEEN THE ELECTRONIC SECURITY, THE DATA/TELECOMMUNICATIONS AND PAGING SYSTEMS. IT SHALL BE THE RESPONSIBILITY OF ALL CONTRACTORS TO COORDINATE WITH ALL AFFECTED TRADES FOR PROPER EQUIPMENT SPACE REQUIREMENTS. ALL CONTRACTORS SHALL DEMONSTRATE AT THE TIME OF SHOP DRAWING SUBMISSION THAT THE COORDINATION BETWEEN ALL AFFECTED TRADES HAS MET ALL COORDINATION REQUIREMENTS.
4. DUE TO SCALE OF THE DRAWINGS, ALL PAGING SYSTEM EQUIPMENT SYMBOLS ARE SHOWN ON DRAWINGS AS CLOSE AS POSSIBLE TO THEIR INTENDED LOCATION. CONTRACTOR SHALL COORDINATE IN THE FIELD THE PROPER INSTALLATION OF ALL EQUIPMENT, DEVICES, CONTROLS, CONDUITS AND CABLING. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.
5. THE CONTRACTOR SHALL COORDINATE WITH ALL AFFECTED TRADES ANY CONDITIONS RELATED TO THE PROPER INSTALLATION OF ALL SYSTEMS. COORDINATION SHALL BE BETWEEN ALL APPROPRIATE TRADES REGARDING ALL INSTALLATION REQUIREMENTS IMPACTING THE PLACEMENT OF ALL SYSTEM CONDUITS, HARDWARE AND COMPONENTS TO THE SATISFACTION OF ALL CONCERNED TRADES.
6. COORDINATE EXACT LOCATION OF ALL DESK OR COUNTER MOUNTED EQUIPMENT WITH OWNER AND ARCHITECT AND ALL AFFECTED TRADES PRIOR TO THE INSTALLATION OF ANY EQUIPMENT AND/OR CABLING.
7. COORDINATE EXACT LOCATION(S) OF ALL CEILING MOUNTED CABLE, CONDUITS, EQUIPMENT AND/OR DEVICES WITH ALL ARCHITECTURAL PLANS, REFLECTED CEILING PLANS AND ALL AFFECTED TRADES PRIOR TO INSTALLATION.
8. ALL EXTERIOR PAGING SPEAKERS SHALL BE RATED FOR THE ENVIRONMENTAL APPLICATION AND BE PROVIDED WEATHERPROOF HOUSINGS AS INDICATED. ALL EXTERIOR PAGING SPEAKERS SHALL MEET IP65 (NEMA 4) SEALING REQUIREMENTS.
9. ALL PAGING SYSTEM CABLING SHALL BE INSTALLED IN DEDICATED CONDUITS PROVIDED BY THE GENERAL CONTRACTOR. ALL CONDUITS SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH NFPA 70 AND RELATED PROJECT SPECIFICATIONS. COORDINATE WITH THE ESS INTEGRATOR PRIOR TO INSTALLATION. ALL CONDUITS SHALL BE A MINIMUM OF 3/4" UNLESS OTHERWISE NOTED.
10. ALL CONDUITS/RACEWAYS SHALL BE INSTALLED IN A MANNER THAT PREVENTS TAMPERING OR REMOVAL WHEN INSTALLED IN AREAS EXPOSED TO THE GENERAL POPULATION. PROVIDE TAMPER-RESISTANT INSTALLATION UTILIZING "TORX WITH PEG" SECURITY-FASTENING DEVICES FOR ALL CONDUITS/RACEWAYS, EQUIPMENT, DEVICES AND APPURTENANCES IN ALL AREAS ACCESSIBLE TO THE GENERAL POPULATION AND/OR AREAS SUBJECTED TO TAMPERING OR VANDALISM.
11. ALL SYSTEM WIRING, CONDUITS AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AND BY ALL IEEE, EIA, NEC AND MANUFACTURER'S REQUIREMENTS. ALL WIRING SHALL COMPLY WITH ALL STATE AND LOCAL ELECTRICAL CODES AND SHALL TEST FREE FROM ALL GROUNDS, SHORTS STRAY VOLTAGES AND EMI.
12. PROVIDE ALL EQUIPMENT CLEARANCES IN ACCORDANCE WITH NEC REQUIREMENTS. ARRANGE EQUIPMENT TO FACILITATE UNRESTRICTED ACCESS FOR MAINTENANCE AND SERVICE AROUND ALL EQUIPMENT, COMPONENTS AND/OR CABLE TERMINATIONS.
13. PROPERLY GROUND ALL EQUIPMENT, RACKS, CABINET'S, CONDUITS AND CABLE SHIELDS IN ACCORDANCE WITH ALL REQUIREMENTS OF THE NFPA 70 AND EQUIPMENT MANUFACTURER. ALL EXTERIOR CCTV CAMERAS SHALL BE PROPERLY SURGE PROTECTED AND GROUNDED TO MINIMIZE DAMAGE DUE TO LIGHTNING STRIKES, SNEAK CURRENTS AND OTHER TRANSIENT VOLTAGE SPIKES. ALL SURGE PROTECTION AND GROUNDING SHALL BE IN ACCORDANCE WITH ALL REQUIREMENTS OF THE EQUIPMENT MANUFACTURER. NEC, IEEE AND TIA/EIA.
14. WHERE EQUIPMENT AND/OR JUNCTION BOXES ARE INSTALLED ABOVE FINISHED CEILINGS, THE CONTRACTOR SHALL PROVIDE ACCESS HATCHES LISTED FOR THE INTENDED APPLICATION. ACCESS HATCHES SHALL BE LOCATED SO THAT SERVICE ACCESS TO THE EQUIPMENT AND/OR JUNCTION BOXES IS UNIMPEDED.
15. ALL PENETRATIONS OF WALLS AND/OR FLOORS SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE ASTM AND NFPA REQUIREMENTS. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION. INSTALLATION OF FIRE-STOPS SHALL BE PERFORMED BY AN APPLICATOR/INSTALLER QUALIFIED AND TRAINED BY THE MANUFACTURER. INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH MANUFACTURER'S DETAILED INSTALLATION PROCEDURES.
16. ALL EQUIPMENT ENCLOSURES LOCATED OUTSIDE OR IN ALL AREAS WITH HIGH MOISTURE OR A RELATIVE HUMIDITY OF 75% OR GREATER SHALL BE NEMA 4X STAINLESS STEEL AND RATED FOR THAT APPLICATION.
17. ALL DEVICES, COMPONENTS OR EQUIPMENT INSTALLED ON THE EXTERIOR OF THE FACILITY SHALL BE PROVIDED IN ACCORDANCE WITH ALL MANUFACTURERS' REQUIREMENTS TO ENSURE THE PROPER OPERATION WHEN EXPOSED TO THE ENVIRONMENTAL CONDITIONS AND/OR AVERAGE ANNUAL LOWEST TEMPERATURE THAT CAN BE ANTICIPATED FOR THE GEOGRAPHIC REGION OF THE FACILITY.
18. ALL INTERIOR AND/OR EXTERIOR COMPONENTS, DEVICES OR SYSTEMS EQUIPMENT EXPOSED TO THE GENERAL POPULATION SHALL BE INSTALLED IN SECURED EQUIPMENTENCLOSURES WITH TAMPER SWITCHES AND INSTALLED IN SUCH A MANNER THAT RESISTS TAMPERING AND/OR REMOVAL WITHOUT THE USE OF SPECIALIZED TOOLS.
19. FOR EQUIPMENT INSTALLATIONS REQUIRING COORDINATION WITH OTHER TRADES THE CONTRACTOR SHALL PROVIDE ALL TEMPLATES, BACKBOXES AND EQUIPMENT ANCHOR BOLTS FOR MOUNTING OR FLUSH MOUNTING PREPARATION. (E.G. PEDESTALS OR OTHER DEVICES REQUIRING MOUNTING ON WALLS, CONCRETE PADS OR OTHER MATERIALS). COORDINATE DELIVERY OF TEMPLATES AND EQUIPMENT WITH ALL AFFECTED CONTRACTORS.
20. ALL CONTROL EQUIPMENT MUST HAVE TRANSIENT PROTECTION TO COMPLY WITH UL AND NFPA 70 REQUIREMENTS. WHERE ANY CIRCUITS LEAVE THE BUILDING, ADDITIONAL TRANSIENT PROTECTION MUST BE PROVIDED FOR EACH CIRCUIT. ALL TRANSIENT PROTECTION DEVICES MUST BE UL LISTED UNDER STANDARD #497B (ISOLATED LOOP PROTECTORS).
21. REFER TO SPECIFICATION SECTION 274215 AS WELL AS ALL RELATED SPECIFICATION SECTION FOR PROJECT SUBMITTAL REQUIREMENTS AND ADDITIONAL INFORMATION.

PUBLIC ADDRESS (PA) SYMBOL LEGEND

S VX	CEILING MOUNTED PAGING SPEAKER V = VOX CAPABILITY B = BI-DIRECTIONAL CAPABLE
S H	WALL MOUNTED PAGING SPEAKER V = VOX CAPABILITY B = BI-DIRECTIONAL CAPABLE WP = WEATHER PROOF
A	AMBIENT NOISE SENSING MICROPHONE

1

ITEM	SYSTEM	CONTRACTOR		OWNER		NOTES
		FURNISH	INSTALL	FURNISH	INSTALL	
1.0000	**DIVISION 27: PAGING**					
1.0100	HEADEND AND SOFTWARE	-	-	X	X	EXISTING PEAVEY PAGING SYTEM (HARDWARE / MEDIA/MATRIX (SOFTWARE)
1.0200	INTEGRATION TO EXISTING SYSTEM	X	X	-	-	PROGRAMMING, SPEAKERS ZONING / GROUPING
1.0300	INTERFACES	X	X	-	-	AMPLIFIERS, LINE CARDS, AUDIO BRIDGES
1.0400	NETWORK COMPONENTS	-	-	-	-	REFER TO TECHNOLOGY PACKAGE MATRIX ITEM 1.000 PREMISE DISTRIBUTION SYSTEM
1.0500	BACKBONE CABLE	-	-	-	-	REFER TO TECHNOLOGY PACKAGE MATRIX ITEM 1.000 PREMISE DISTRIBUTION SYSTEM
1.0600	HORIZONTAL CABLE	X	X	-	-	REFER TO TECHNOLOGY PACKAGE MATRIX PREMISE DISTRIBUTION SYSTEM FOR CABLING TO THE GATE PODIUM. CONTRACTOR SHALL PROVIDE ALL CABLING AND CONNECTIONS TO SPEAKERS, AMPLIFIERS AND AUDIO BRIDGE
1.0700	FIELD DEVICES	X	X	-	-	AMPLIFIERS, CONTROLLERS, MICROPHONES, SPEAKERS, AMBIENT NOISE SENSORS

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	As indicated

Drawing Title:

PAGING NOTES, LEGEND AND ABBREVIATIONS

BID DOCUMENT

Drawing No.:

TP001

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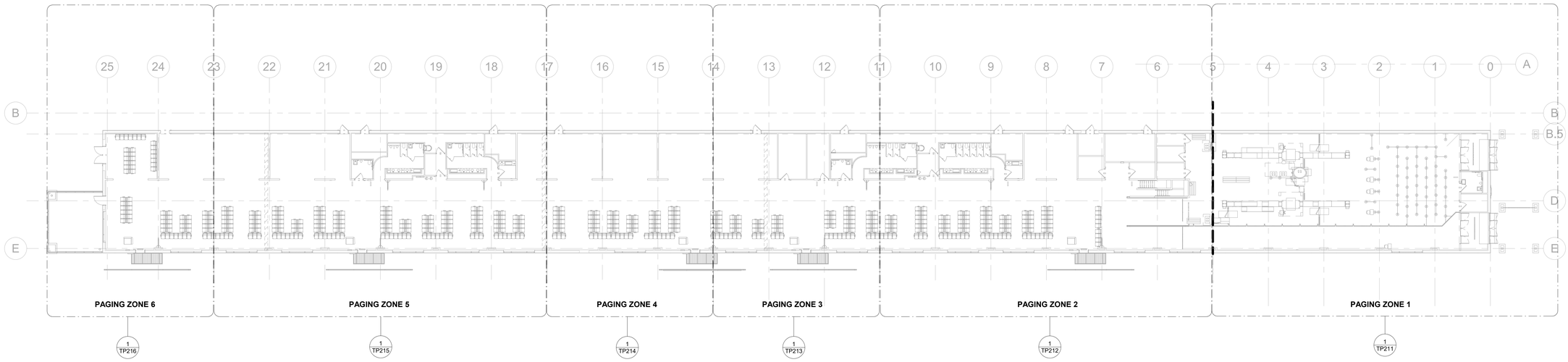

1 Level 1 - Paging
1" = 20'-0"

PAGING - ADD ALTERNATE NOTES:

1. PAGING CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. PAGING CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Drawing Scale:	**As indicated**

Drawing Title:

OVERALL FLOOR PLANS

BID DOCUMENT

Drawing No.:

TP110

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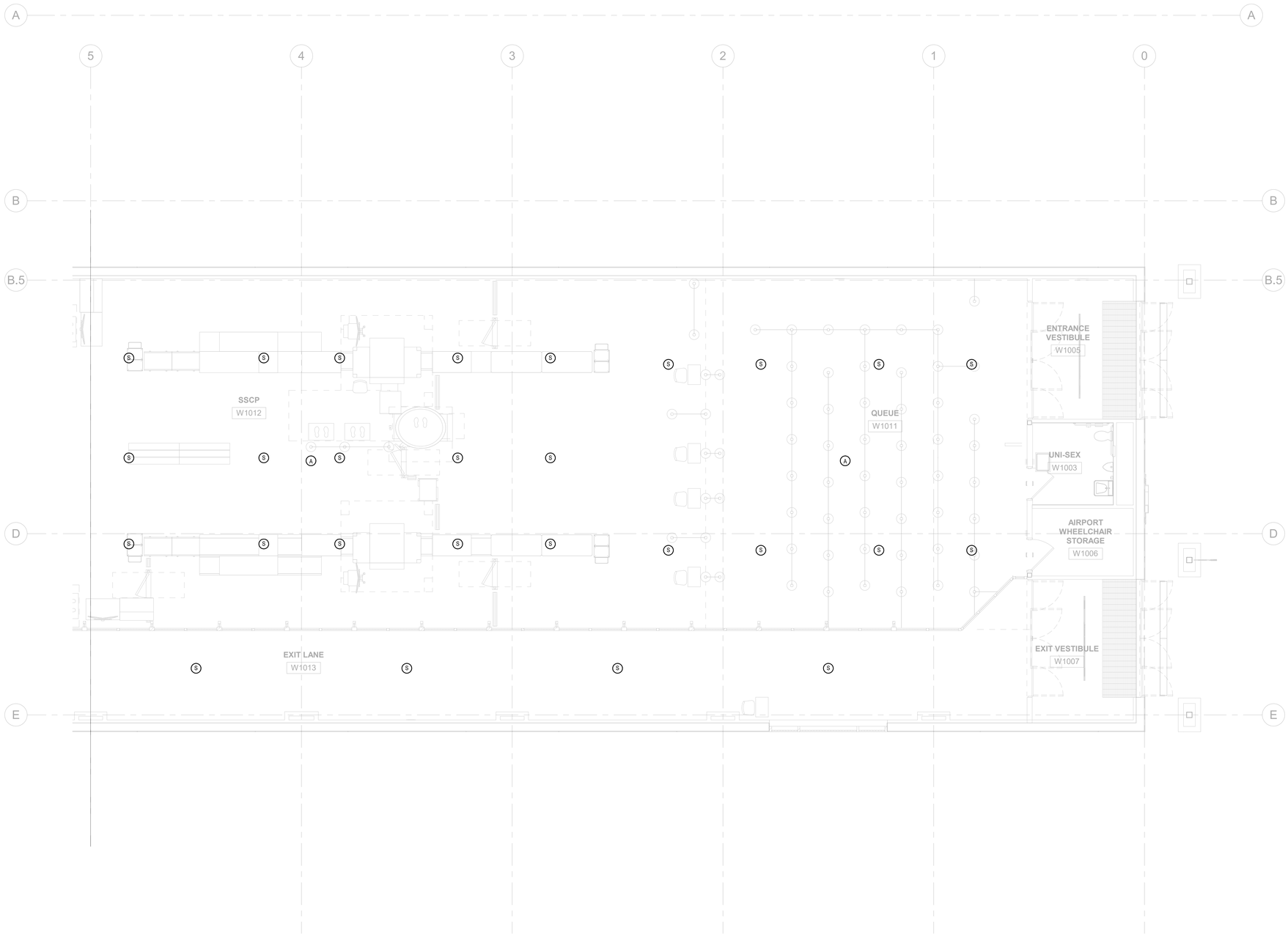

1 LEVEL 1 - PAGING - AREA 1
3/16" = 1'-0"

GENERAL NOTES

1. ALL SPEAKERS, AND EQUIPMENT SHOWN ARE DIAGRAMMATICAL IN REFERENCE TO THE FLOOR PLAN. THE DEVICES SHOWN SHALL BE INSTALLED TO REFLECT THE INTENT OF THE DRAWINGS.
2. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING REQUIREMENTS.
3. COORDINATE WITH ALL OTHER TRADES AND DRAWINGS PRIOR TO INSTALLATION AND PLACEMENT OF MICROPHONES AND PAGING SPEAKERS.

KEYED NOTES:

CONTRACTOR SHALL FURNSH AND INSTALL:

1 (1) MICROPHONE AT THE THESE LOCATIONS

PAGING - ADD ALTERNATE NOTES:

1. PAGING CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. PAGING CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Drawing Scale:	**As indicated**

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 1

BID DOCUMENT

Drawing No.:

TP211

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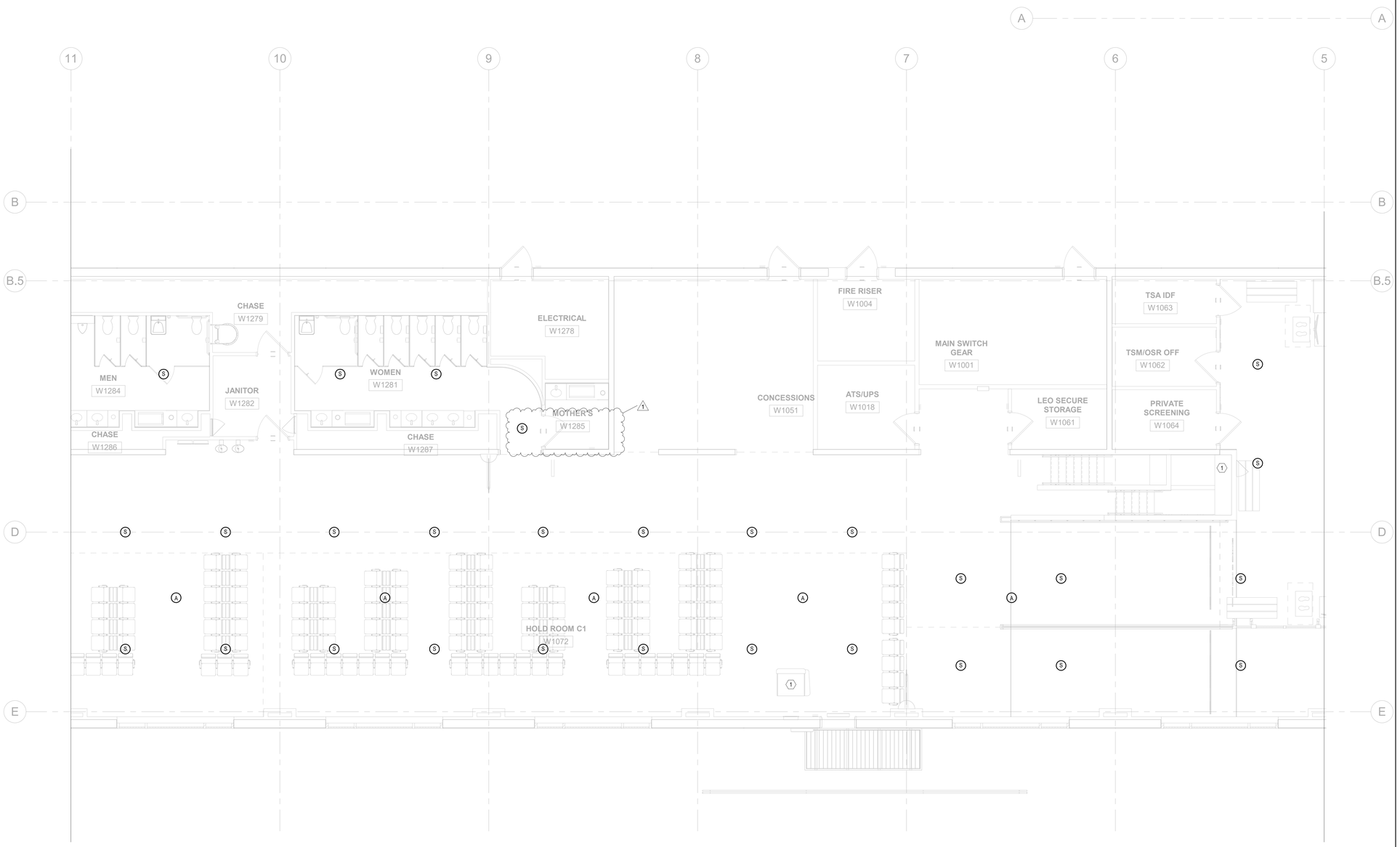

1 LEVEL 1 - PAGING - AREA 2
3/16" = 1'-0"

GENERAL NOTES

1. ALL OUTLETS AND EQUIPMENT SHOWN ARE DIAGRAMMATICAL IN REFERENCE TO THE FLOOR PLAN. THE DEVICES SHOWN SHALL BE INSTALLED TO REFLECT THE INTENT OF THE DRAWINGS.
2. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING OUTLET REQUIREMENTS.
3. COORDINATE WITH ALL OTHER TRADES AND DRAWINGS PRIOR TO INSTALLATION AND PLACEMENT OF WORKSTATION OUTLETS AND EQUIPMENT.

KEYED NOTES:

CONTRACTOR SHALL FURNSH AND INSTALL:

1. (1) MICROPHONE AT THE THESE LOCATIONS

PAGING - ADD ALTERNATE NOTES:

1. PAGING CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. PAGING CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 2

BID DOCUMENT

Drawing No.:

TP212

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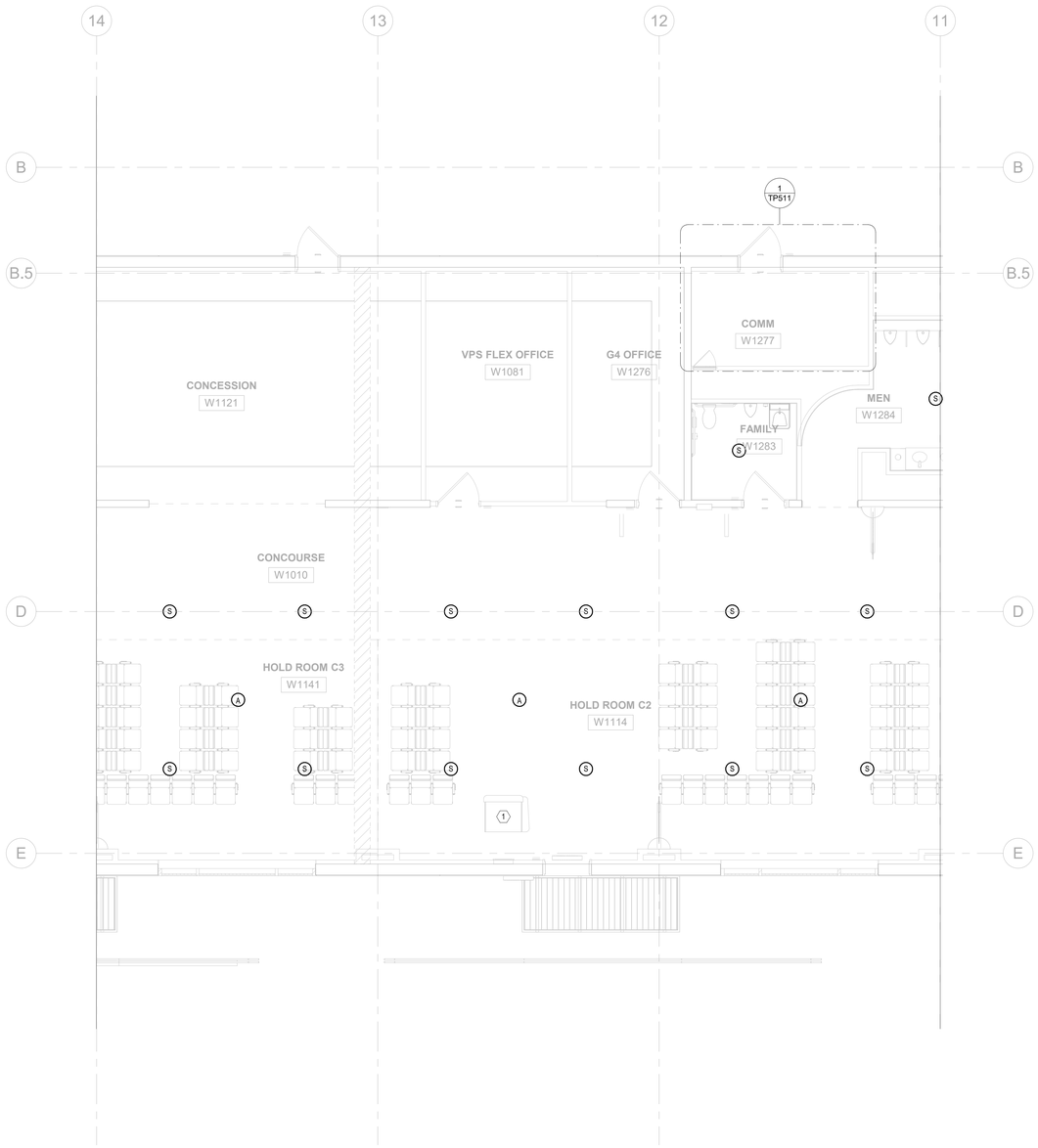

1 LEVEL 1 - PAGING - AREA 3
3/16" = 1'-0"

GENERAL NOTES

1. ALL SPEAKERS, AND EQUIPMENT SHOWN ARE DIAGRAMMATICAL IN REFERENCE TO THE FLOOR PLAN. THE DEVICES SHOWN SHALL BE INSTALLED TO REFLECT THE INTENT OF THE DRAWINGS.
2. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING REQUIREMENTS.
3. COORDINATE WITH ALL OTHER TRADES AND DRAWINGS PRIOR TO INSTALLATION AND PLACEMENT OF MICROPHONES AND PAGING SPEAKERS.

KEYED NOTES:

CONTRACTOR SHALL FURNSH AND INSTALL:

1. (1) MICROPHONE AT THE THESE LOCATIONS

PAGING - ADD ALTERNATE NOTES:

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Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 3

BID DOCUMENT

Drawing No.:

TP213

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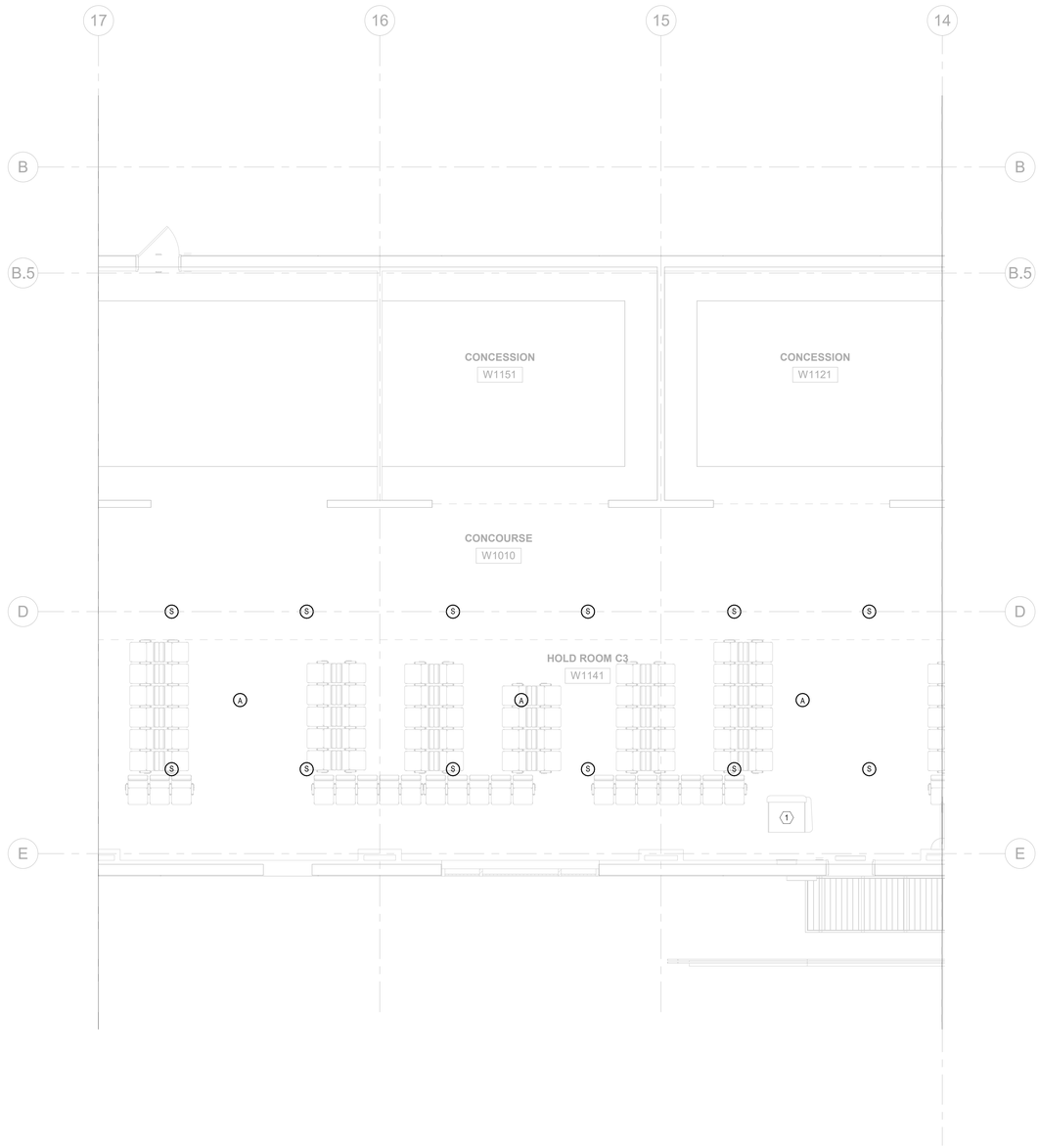

1 LEVEL 1 - PAGING - AREA 4
3/16" = 1'-0"

GENERAL NOTES

1. ALL SPEAKERS, AND EQUIPMENT SHOWN ARE DIAGRAMMATICAL IN REFERENCE TO THE FLOOR PLAN. THE DEVICES SHOWN SHALL BE INSTALLED TO REFLECT THE INTENT OF THE DRAWINGS.
2. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING REQUIREMENTS.
3. COORDINATE WITH ALL OTHER TRADES AND DRAWINGS PRIOR TO INSTALLATION AND PLACEMENT OF MICROPHONES AND PAGING SPEAKERS.

KEYED NOTES:

CONTRACTOR SHALL FURNSH AND INSTALL:

1. (1) MICROPHONE AT THE THESE LOCATIONS

PAGING - ADD ALTERNATE NOTES:

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Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 4

BID DOCUMENT

Drawing No.:

TP214

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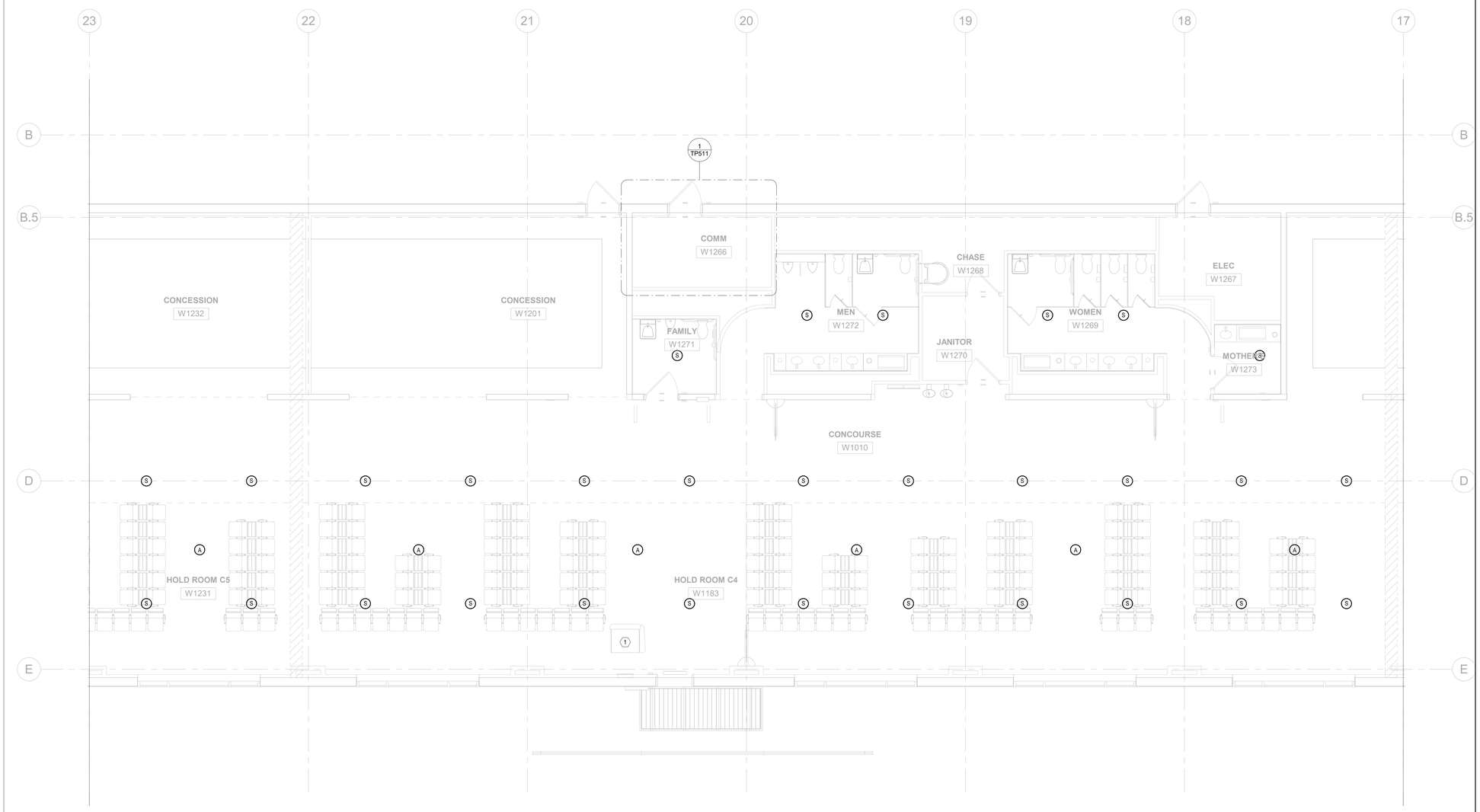

1 LEVEL 1 - PAGING - AREA 5
3/16" = 1'-0"

GENERAL NOTES

1. ALL SPEAKERS, AND EQUIPMENT SHOWN ARE DIAGRAMMATICAL IN REFERENCE TO THE FLOOR PLAN. THE DEVICES SHOWN SHALL BE INSTALLED TO REFLECT THE INTENT OF THE DRAWINGS.
2. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING REQUIREMENTS.
3. COORDINATE WITH ALL OTHER TRADES AND DRAWINGS PRIOR TO INSTALLATION AND PLACEMENT OF MICROPHONES AND PAGING SPEAKERS.

KEYED NOTES:

CONTRACTOR SHALL FURNSH AND INSTALL:

1. (1) MICROPHONE AT THE THESE LOCATIONS

PAGING - ADD ALTERNATE NOTES:

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Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 5

BID DOCUMENT

Drawing No.:

TP215

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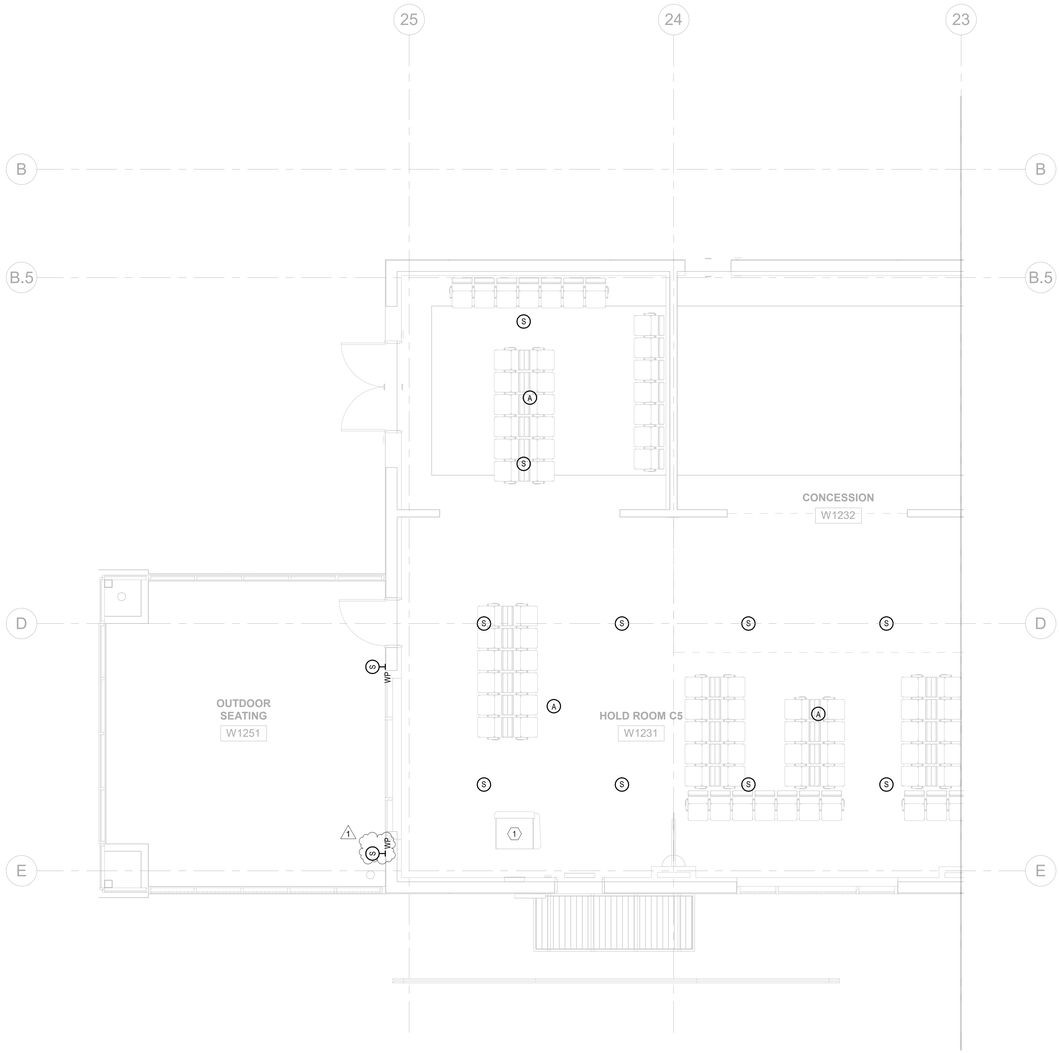

1 LEVEL 1 - PAGING - AREA 6
3/16" = 1'-0"

GENERAL NOTES

1. ALL SPEAKERS, AND EQUIPMENT SHOWN ARE DIAGRAMMATICAL IN REFERENCE TO THE FLOOR PLAN. THE DEVICES SHOWN SHALL BE INSTALLED TO REFLECT THE INTENT OF THE DRAWINGS.
2. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MOUNTING REQUIREMENTS.
3. COORDINATE WITH ALL OTHER TRADES AND DRAWINGS PRIOR TO INSTALLATION AND PLACEMENT OF MICROPHONES AND PAGING SPEAKERS.

KEYED NOTES:

CONTRACTOR SHALL FURNSH AND INSTALL:

1. (1) MICROPHONE AT THE THESE LOCATIONS

PAGING - ADD ALTERNATE NOTES:

1. PAGING CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
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Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 6

BID DOCUMENT

Drawing No.:

TP216

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NOTES:

1. FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND SYMBOLS, SEE DRAWING TP001.
2. RISER DIAGRAM IS DIAGRAMMATIC ONLY AND HAS BEEN PROVIDED TO DEPICT THE GENERAL ARRANGEMENT AND INSTALLATION REQUIREMENTS OF THE PUBLIC ANNOUNCEMENT (PA) SYSTEM. UNLESS OTHERWISE NOTED, ALL HEADEND PUBLIC ANNOUNCEMENT (PA) SYSTEM (PEAVEY MEDIAMATRIX) EQUIPMENT IS EXISTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONDUITS, CABLING, CONNECTING HARDWARE, MOUNTING HARDWARE, BACKBOXES, PULL/JUNCTION BOXES, TRENCHING/DUCTBANKS, PAGING SPEAKER MOUNTING BRACKETS, COMPONENTS, DEVICES, COMMISSIONING UNLESS OTHERWISE NOTED, AS WELL AS ALL LICENSES, ELECTRICAL POWER, GROUNDING AND APPURTENANCES AS REQUIRED TO PROVIDE FULLY OPERATIONAL SYSTEM.
3. REFER TO FLOOR PLANS FOR EXACT LOCATION AND QUANTITY OF PUBLIC ANNOUNCEMENT SPEAKERS.
4. ALL EQUIPMENT ARE NEW UNLESS OTHERWISE NOTED.

PAGING - ADD ALTERNATE NOTES:

1. PAGING CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
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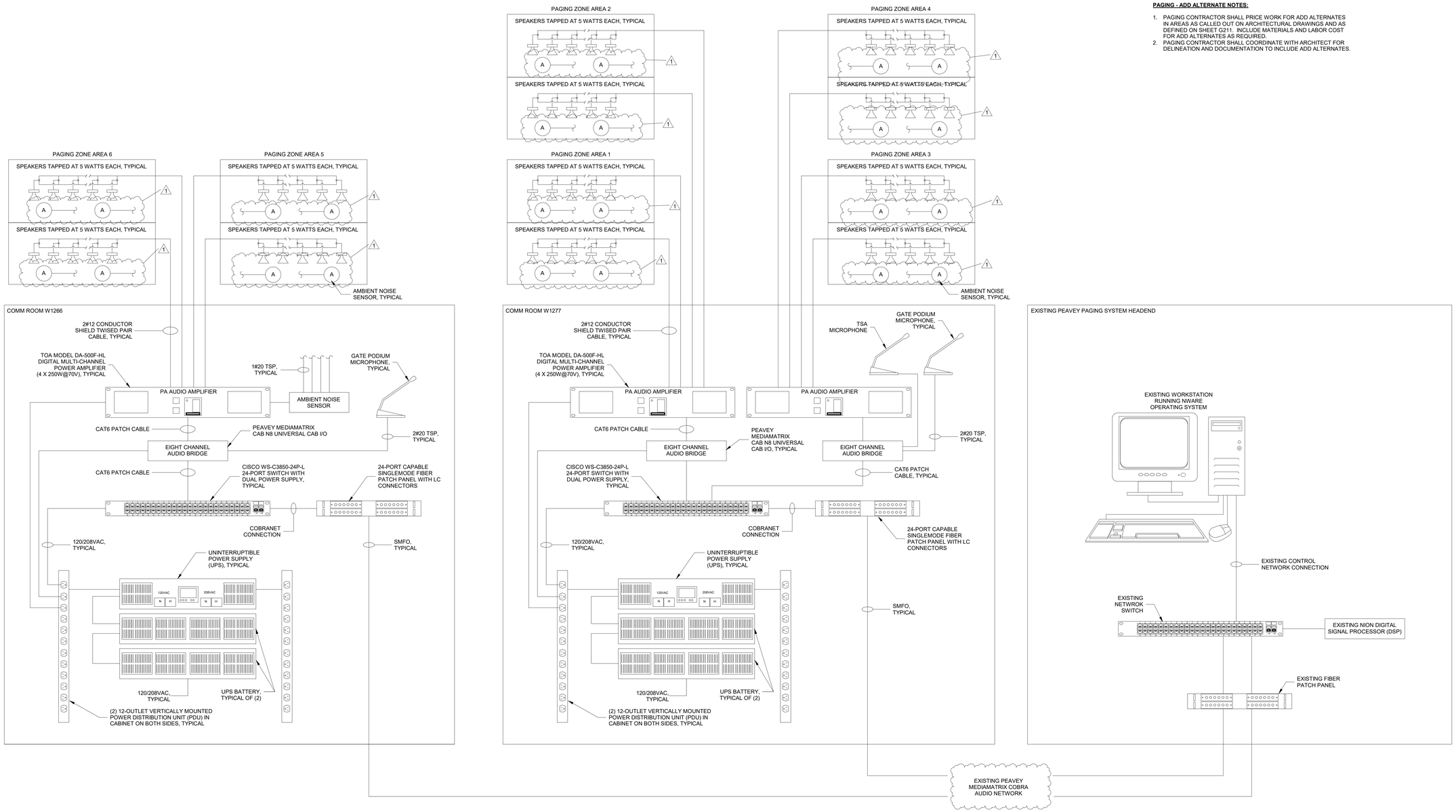

1 PASSENGER INFORMATION DISPLAY AND PUBLIC ANNOUNCEMENT RISER DIAGRAM
NONE

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Drawing Scale:	

Drawing Title:

SINGLE LINE DIAGRAM - PAGING

BID DOCUMENT

Drawing No.:

TP511

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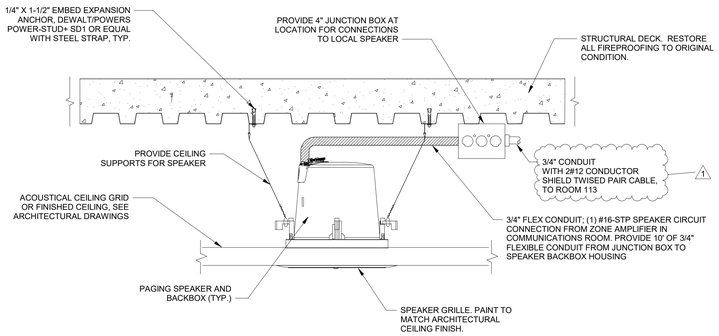
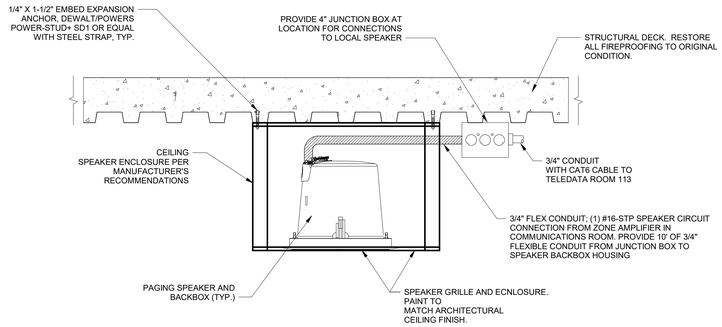
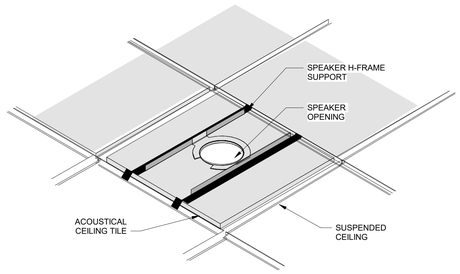


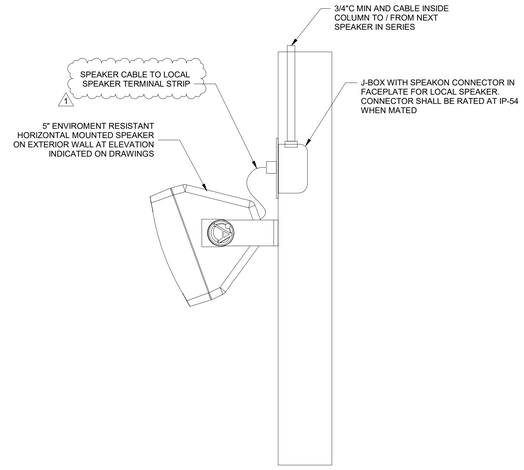
1 PA SPEAKER INSTALLATION DETAILS - FINISHED OR DROP CEILING
NONE



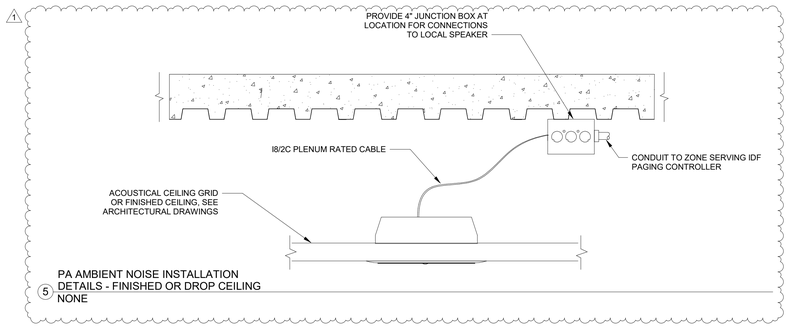
2 PA SPEAKER INSTALLATION DETAILS - STRUCTURAL CEILING
NONE



3 Airplane Top View Details
12" = 1'-0"



4 WALL MOUNT SPEAKER
1/8" = 1'-0"



5 PA AMBIENT NOISE INSTALLATION DETAILS - FINISHED OR DROP CEILING
NONE

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**AB**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

DETAILS - PAGING

BID DOCUMENT

Drawing No.:

TP811

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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MOUNTING HEIGHTS

CEILING	SMOKE AND HEAT DETECTORS, 360° SECURITY MOTION DETECTORS, CCTV SURVEILLANCE CAMERAS, PUBLIC ADDRESS AND VOICE EVACUATION SPEAKERS, WIRELESS ACCESS POINTS. TV AND LCD PROJECTOR JACKS
8' A.F.G.	EXTERIOR VISUAL AND AUDIO/VISUAL FIRE ALARM NOTIFICATION DEVICES, EXTERIOR PUBLIC ADDRESS SPEAKERS.
7'-5" A.F.F.	CLOCKS, COMBINATION CLOCK/SPEAKERS, TRUMPET SPEAKERS
7'-0" A.F.F.	VISUAL AND AUDIO/VISUAL FIRE ALARM NOTIFICATION DEVICES, WALL MOUNTED SECURITY MOTION DETECTORS (CENTER OF DEVICE)
6" ABOVE DOOR JAMB	REQUEST TO EXIT MOTION DETECTORS
5'-6" A.F.F	TOP OF PLYWOOD TELEPHONE BACKBOARD
5'-4" A.F.F.	FIRE ALARM ANNUNCIATOR PANELS, FIRE FIGHTER CONTROL STATIONS, SECURITY ANNUNCIATOR PANELS
4'-8" A.F.G. MAX	PEDESTAL MOUNT INTERCOM PEDESTAL MOUNT CARD READER
4'-0" A.F.F.	"PS" TELEPHONE OUTLETS (TOP OF COIN SLOT),(WALL MOUNTED)-TELEPHONE INSTRUMENTS, INTERCOM STATIONS, FIRE FIGHTER TELEPHONE JACKS, FIRE ALARM MANUAL STATIONS, CARD READERS, MANUAL REQUEST TO EXIT DEVICES, WALL MOUNTED DURESS ALARM STATIONS, RESCUE ASSISTANCE PANELS, LCD KEYPADS (CENTER OF DEVICE)
UNDER COUNTER OR DESK	DURESS ALARM BUTTONS, DOOR RELEASE BUTTOMS
1'-6" A.F.F.	DATA/TELEPHONE JACKS, LOW TELEVISION JACKS, MICROPHONE JACKS
0'-0"	IN FLOOR JUNCTION BOXES FLUSH TO FINISHED FLOOR (FF) (DATA, TELEPHONE, MICROPHONE, MEDIA)

1. IN MASONRY CONSTRUCTION THE MOUNTING HEIGHTS SHALL BE USED FOR REFERENCE TO THE NEAREST BLOCK OR BRICK COURSING.
2. THE ABOVE MOUNTING ELEVATIONS ARE TO CENTER OF DEVICE AND SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE DRAWINGS AND/OR SPECIFICATIONS.
3. COORDINATE THE INSTALLATION AND MOUNTING ELEVATIONS OF ALL EQUIPMENT, DEVICES, CONTROLS AND APPURTENANCES WITH ARCHITECT AND ALL AFFECTED TRADES PRIOR TO INSTALLATION. DOCUMENT ALL MOUNTING ELEVATIONS FOR ALL EQUIPMENT, DEVICES, CONTROLS AND APPURTENANCES AT THE TIME OF SHOP DRAWING SUBMITTAL

SECURITY ABBREVIATIONS

A/AMP	AMPERE	KVAR	KILOVAR (REACTANCE)
AC	ALTERNATING CURRENT	KW	KILOWATT
ACR	ATTENUATION/CROSSTALK RATIO	KWH	KILOWATT HOUR METER
ACS	ACCESS CONTROL SYSTEM	LA	LIGHTNING ARRESTER
ADJ	ADJUSTABLE	LED	LIGHT EMITTING DIODE
AFF	ABOVE FINISHED FLOOR	LT	LIGHT
AFG	ABOVE FINISHED GRADE	LTG	LIGHTING
AL	ALUMINUM	LV	LOW VOLTAGE
AM	AMMETER	MATV	MASTER ANTENNA TELEVISION
APPROX	APPROXIMATELE(LY)	MC	MECHANICAL CONTRACTOR
ASY	ASYMETRIC	MCB	MAIN CIRCUIT BREAKER
ATS	AUTOMATIC TRANSFER SWITCH	MCC	METAL-CLAD CABLE
AWG	AMERICAN WIRE GAUGE	MCC	MOTOR CONTROL CENTER
BATT	BATTERY	MCP	MOTOR CIRCUIT PROTECTOR
BFC	BELOW FINISHED CEILING	MDP	MAIN DISTRIBUTION PANEL
BKR	BREAKER	MFR	MANUFACTURER
BLDG	BUILDING	MH	MANHOLE
BLK	BLACK	MH	METAL HALIDE
BRKT	BRACKET	MISC	MISCELLANEOUS
C	CONDUIT	MM	MILLIMETER
CAB	CABINET	MTD	MOUNTED
CATV	CABLE TELEVISION	MTG HT	MOUNTING HEIGHT
CB	CIRCUIT BREAKER	MTS	MANUAL TRANSFER SWITCH
CCTV	CLOSED CIRCUIT TELEVISION	MV	MILLIVOLT
cd	CANDELA	MV	MEDIUM VOLTAGE
CIR/CKT	CIRCUIT	N/A	NOT AVAILABLE/NOT APPLICABLE
CLF	CURRENT LIMITING FUSE	NEC	NATIONAL ELECTRIC CODE
CLG	CEILING	NEMA	NATIONAL ELECTRIC MFR ASSOCIATION
CLR	CLEAR	NEXT	NEAR END CROSSTALK
COL	COLUMN	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
COMM	COMMUNICATION	NIC	NOT IN CONTRACT
CT	CURRENT TRANSFORMER	NL	NIGHT LIGHT
CU	COPPER	NO	NORMALLY OPENED
DAS	DISTRIBUTED ANTENNA SYSTEM	NTS	NOT TO SCALE
dB	DECIBEL	OC	ON CENTER
DC	DIRECT CURRENT	OH	OVERHEAD
DE	DUAL ELEMENT	OL	OVERLOAD HEATER ELEMENT
DED	DEDICATED	P	POLE
DIA	DIAMETER	PB	PULL BOX
DIB	DUAL READER DOOR INTERFACE BOX	PLY	PLYWOOD
DISC	DISCONNECT	PNL	PANEL
DNLT	DOWNLIGHT	PP	POWER PANEL
DP	DISTRIBUTION PANEL	PT	POTENTIAL TRANSFORMER
DPDT	DOUBLE POLE DOUBLE-THROW	PVC	POLYVINYL CHORIDE
DWG	DRAWING	RECPT	RECEPTACLE
EA	EACH	REFL	REFLECTOR
EC	ELECTRICAL CONTRACTOR	REQ	REQUIRED
EF	EXHAUST FAN	RGS	RIGID GALVANIZED STEEL CONDUIT
EIA	ELECTRONICS INDUSTRY ASSOCIATION	RO	ROUGH IN ONLY
ELEC	ELECTRICAL	RM	ROOM
ELEV	ELEVATOR	SCH	SCHEDULE
EMERG	EMERGENCY	SPDT	SINGLE POLE SINGLE THROW
EO	ELECTRICALLY OPERATED	SPST	SINGLE POLE DOUBLE THROW
EQIP	EQUIPMENT	SSB	SOLID STATE BALLAST
ESB	ENERGY SAVING BALLAST	SW	SWITCH
EWC	ELECTRIC WATER COOLER	SWBD	SWITCHBOARD
FA	FIRE ALARM	SWGR	SWITCHGEAR
FAA	FIRE ALARM ANNUNCIATOR	TELE	TELEPHONE
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
FACP	FIRE ALARM CONTROL PANEL	TSB	TECHNICAL SERVICE BULLETIN
FAGP	FIRE ALARM GRAPHIC ANNUNCIATOR PANEL	TSP	TWISTED SHIELDED PAIR
FEXT	FAR END CROSSTALK	TYP	TYPICAL
FIXT	FIXTURE	UL	UNDERWRITER'S LABORATORIES
FL	FLOOR	UON	UNLESS OTHERWISE NOTED
FLA	FULL LOAD AMPERES	UPS	UNINTERRUPTABLE POWER SUPPLY
FLOUR	FLUORESCENT	UTP	UNSHIELDED TWISTED PAIR
FT	FOOTCANDLES	V	VOLT
FVNR	FULL VOLTAGE NON-REVERSING	VM	VOLTMETER
GC	GENERAL CONTRACTOR	VP	VAPOR PROOF
GEN	GENERATOR	W	WATT
GFI	GROUND FAULT INTERRUPTER	W/	WITH
GND/G	GROUND	W/I	WITHIN
HH	HAND HOLE	W/O	WITHOUT
HID	HIGH INTENSITY DISCHARGE	WAP	WIRELESS ACCESS POINT
HP	HORSEPOWER	WP	WEATHERPROOF
HPF	HIGH POWER FACTOR	WW	WARM WHITE
HV	HIGH VOLTAGE	XFMR	TRANSFORMER
HVAC	HEATING VENTILATING AIR CONDITIONING	XP	EXPLOSION PROOF
HZ	HERTZ		
IG	ISOLATED GROUND		
INCAN	INCANDESCENT		
IPS	INVERTER POWER SUPPLY		
JB	JUNCTION BOX		
KVA	KILOVOLT AMPERE		

GENERAL SECURITY SYSTEM NOTES:

1. THE FOLLOWING GENERAL NOTES AS LISTED BELOW SHALL APPLY TO ALL ELECTRONIC SECURITY SYSTEM REQUIREMENTS AS INDICATED ON ALL TS SERIES CONTRACT DRAWINGS.
2. THE EXTENT OF THE ELECTRONIC SECURITY WORK FOR THIS PROJECT SHALL CONSIST OF THE GENERAL CONTRACTOR PROVIDING ALL CABLING, CONDUITS, BACKBOXES, DEVICES, COMPONENTS, ACTIVE ELECTRONICS, PROCESSORS, SERVERS, DOOR HARDWARE AND APPURTENANCES NECESSARY TO SUPPORT THE COMPLETE INSTALLATION OF BOTH ELECTRONIC ACCESS CONTROL AND VIDEO SURVEILLANCE SYSTEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS. REFER TO RELATED DIVISION SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
3. THE COMMUNICATIONS EQUIPMENT ROOM SHALL BE A SHARED SPACE BETWEEN THE ELECTRONIC SECURITY AND THE DATA/TELECOMMUNICATIONS SYSTEMS. IT SHALL BE THE RESPONSIBILITY OF ALL CONTRACTORS TO COORDINATE WITH ALL AFFECTED TRADES FOR PROPER EQUIPMENT SPACE REQUIREMENTS. ALL CONTRACTORS SHALL DEMONSTRATE AT THE TIME OF SHOP DRAWING SUBMISSION THAT THE COORDINATION BETWEEN ALL AFFECTED TRADES HAS MET ALL COORDINATION REQUIREMENTS.
4. DUE TO SCALE OF THE DRAWINGS, ALL SECURITY SYSTEM EQUIPMENT SYMBOLS ARE SHOWN ON DRAWINGS AS CLOSE AS POSSIBLE TO THEIR INTENDED LOCATION. CONTRACTOR SHALL COORDINATE IN THE FIELD THE PROPER INSTALLATION OF ALL EQUIPMENT, DEVICES, CONTROLS, CONDUITS AND CABLING. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.
5. THE CONTRACTOR SHALL COORDINATE WITH ALL AFFECTED TRADES ANY CONDITIONS RELATED TO THE PROPER INSTALLATION OF ALL SYSTEMS. COORDINATION SHALL BE BETWEEN ALL APPROPRIATE TRADES REGARDING ALL INSTALLATION REQUIREMENTS IMPACTING THE PLACEMENT OF ALL SYSTEM CONDUITS, HARDWARE AND COMPONENTS TO THE SATISFACTION OF ALL CONCERNED TRADES.
6. COORDINATE EXACT LOCATION OF ALL DESK OR COUNTER MOUNTED EQUIPMENT WITH OWNER AND ARCHITECT AND ALL AFFECTED TRADES PRIOR TO THE INSTALLATION OF ANY EQUIPMENT AND/OR CABLING.
7. COORDINATE EXACT LOCATION(S) OF ALL CEILING MOUNTED CABLE, CONDUITS, EQUIPMENT AND/OR DEVICES WITH ALL ARCHITECTURAL PLANS, REFLECTED CEILING PLANS AND ALL AFFECTED TRADES PRIOR TO INSTALLATION.
8. CCTV CAMERAS SHALL BE INSTALLED IN SUCH MANOR THAT ALL SURVEILLANCE VIEWS SHALL BE FREE FROM ALL OBSTRUCTIONS IN ORDER TO PROVIDE UNRESTRICTED VIEWING ANGLES.
9. CCTV CAMERAS INSTALLED IN AREAS WITH NON-FINISHED CEILINGS SHALL BE MOUNTED DIRECTLY TO WALLS, STRUCTURAL SUPPORTS OR THE UNDERSIDE OF ROOF DECK OF THE FACILITY. NO CAMERAS SHALL BE MOUNTED TO ANY PIPING AND/OR CONDUITS OR BLOCK ANY ACCESS HATCH'S, EQUIPMENT OR ENTRANCES. COORDINATE WITH ALL AFFECTED TRADE CONTRACTORS PRIOR TO INSTALLATION.
10. ALL INTERIOR CCTV CAMERAS SHALL BE INSTALLED IN LOW PROFILE, MINIMUM FOOTPRINT DETECTION GRADE TYPE ENCLOSURES AND SHALL BE INSTALLED BASED ON THE OPTIMUM CAMERA PLACEMENT TO OBTAIN THE MAXIMUM VISIBLE SURVEILLANCE OF THE AREA AS INDICATED ON THE CONTRACT DRAWINGS. COORDINATE EACH CAMERA LOCATION WITH REFLECTED CEILING PLANS AND AFFECTED TRADES PRIOR TO INSTALLATION. REVIEW ALL SURVEILLANCE COVERAGE AREAS AND ALARM PRE-SETS WITH OWNER AND ARCHITECT PRIOR TO FINAL PROGRAMMING.
11. ALL EXTERIOR CAMERAS SHALL BE RATED FOR THE ENVIRONMENTAL APPLICATION AND BE PROVIDED AS, PENDANT, POLE, PARAPET OR WALL MOUNTED DOME HOUSINGS AS INDICATED. ALL EXTERIOR CAMERAS SHALL BE MEET IP65 (NEMA 4) SEALING REQUIREMENTS AND SHALL BE SUPPLIED WITH AN INTERNAL HEATER AND BLOWER. ALL EXTERIOR CAMERAS SHALL BE INSTALLED BASED ON THE OPTIMUM CAMERA PLACEMENT TO OBTAIN THE MAXIMUM VISIBLE SURVEILLANCE OF THE AREA AS INDICATED ON THE CONTRACT DRAWINGS. REVIEW ALL SURVEILLANCE COVERAGE AREAS AND ALARM PRE-SETS WITH OWNER AND ARCHITECT PRIOR TO FINAL PROGRAMMING.
12. ALL SECURITY SYSTEM CABLING SHALL BE INSTALLED IN DEDICATED CONDUITS PROVIDED BY THE GENERAL CONTRACTOR. ALL CONDUITS SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH NFPA 70 AND RELATED PROJECT SPECIFICATIONS, COORDINATE WITH THE ESS INTEGRATOR PRIOR TO INSTALLATION. ALL CONDUITS SHALL BE A MINIMUM OF 3/4" UNLESS OTHERWISE NOTED.
13. ALL CONDUITS/RACEWAYS SHALL BE INSTALLED IN A MANNER THAT PREVENTS TAMPERING OR REMOVAL WHEN INSTALLED IN AREAS EXPOSED TO THE GENERAL POPULATION. PROVIDE TAMPER-RESISTANT INSTALLATION UTILIZING TORX WITH PEG' SECURITY-FASTENING DEVICES FOR ALL CONDUITS/RACEWAYS, EQUIPMENT, DEVICES AND APPURTENANCES IN ALL AREAS ACCESSIBLE TO THE GENERAL POPULATION AND/OR AREAS SUBJECTED TO TAMPERING OR VANDALISM.
14. ALL CCTV SURVEILLANCE CAMERA CABLING SHALL BE CATEGORY 6A UTP INSTALLED IN DEDICATED CONDUITS AND TERMINATED AT THE APPROPRIATE COMMUNICATIONS EQUIPMENT RACKS. ALL CCTV CONDUITS SHALL NOT CONTAIN ANY DATA, TELEPHONE OR AC CONDUCTING CABLING. ALL CCTV CABLE RUNS SHALL NOT EXCEED 295' FROM PATCH PANEL TO CAMERA TERMINATION AND SHALL BE TESTED AND CERTIFIED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. REFER TO RELATED DIVISION 27 SPECIFICATIONS SECTIONS FOR ADDITIONAL INFORMATION RELATED TO THE INSTALLATION AND TESTING OF CATEGORY 6 CABLING .
15. ALL SYSTEM WIRING, CONDUITS AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AND BY ALL IEEE, EIA, NEC AND MANUFACTURER'S REQUIREMENTS. ALL WIRING SHALL COMPLY WITH ALL STATE AND LOCAL ELECTRICAL CODES AND SHALL TEST FREE FROM ALL GROUNDS, SHORTS STRAY VOLTAGES AND EMI.
16. PROVIDE ALL EQUIPMENT CLEARANCES IN ACCORDANCE WITH NEC REQUIREMENTS. ARRANGE EQUIPMENT TO FACILITATE UNRESTRICTED ACCESS FOR MAINTENANCE AND SERVICE AROUND ALL EQUIPMENT, COMPONENTS AND/OR CABLE TERMINATIONS.
17. PROPERLY GROUND ALL EQUIPMENT, RACKS, CABINET'S, CONDUITS AND CABLE SHIELDS IN ACCORDANCE WITH ALL REQUIREMENTS OF THE NFPA 70 AND EQUIPMENT MANUFACTURER. ALL EXTERIOR CCTV CAMERAS SHALL BE PROPERLY SURGE PROTECTED AND GROUNDED TO MINIMIZE DAMAGE DUE TO LIGHTENING STRIKES, SNEAK CURRENTS AND OTHER TRANSIENT VOLTAGE SPIKES. ALL SURGE PROTECTION AND GROUNDING SHALL BE IN ACCORDANCE WITH ALL REQUIREMENTS OF THE EQUIPMENT MANUFACTURER. NEC, IEEE AND TIA/EIA.
18. WHERE EQUIPMENT AND/OR JUNCTION BOXES ARE INSTALLED ABOVE FINISHED CEILINGS, THE CONTRACTOR SHALL PROVIDE ACCESS HATCHES LISTED FOR THE INTENDED APPLICATION. ACCESS HATCHES SHALL BE LOCATED SO THAT SERVICE ACCESS TO THE EQUIPMENT AND/OR JUNCTION BOXES IS UNIMPEDED.
19. ALL PENETRATIONS OF WALLS AND/OR FLOORS SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE ASTM AND NFPA REQUIREMENTS. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION. INSTALLATION OF FIRE-STOPS SHALL BE PERFORMED BY AN APPLICATOR/INSTALLER QUALIFIED AND TRAINED BY THE MANUFACTURER. INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH MANUFACTURER'S DETAILED INSTALLATION PROCEDURES.
20. PROVIDE THE PROPER INTERFACE TO THE BUILDING FIRE ALARM SYSTEM AS REQUIRED BY APPLICABLE LIFE SAFETY CODES. COORDINATE WITH THE FIRE ALARM SYSTEM PROVIDER FOR PROPER SYSTEM INTEGRATION REQUIREMENTS.
21. ALL EQUIPMENT ENCLOSURES LOCATED OUTSIDE OR IN ALL AREAS WITH HIGH MOISTURE OR A RELATIVE HUMIDITY OF 75% OR GREATER SHALL BE NEMA 4X STAINLESS STEEL AND RATED FOR THAT APPLICATION.
22. ALL DEVICES, COMPONENTS OR EQUIPMENT INSTALLED ON THE EXTERIOR OF THE FACILITY SHALL BE PROVIDED IN ACCORDANCE WITH ALL MANUFACTURERS' REQUIREMENTS TO ENSURE THE PROPER OPERATION WHEN EXPOSED TO THE ENVIRONMENTAL CONDITIONS AND/OR AVERAGE ANNUAL LOWEST TEMPERATURE THAT CAN BE ANTICIPATED FOR THE GEOGRAPHIC REGION OF THE FACILITY.
23. ALL INTERIOR AND/OR EXTERIOR COMPONENTS, DEVICES OR SYSTEMS EQUIPMENT EXPOSED TO THE GENERAL POPULATION SHALL BE INSTALLED IN SECURED EQUIPMENTENCLOSURES WITH TAMPER SWITCHES AND INSTALLED IN SUCH A MANNER THAT RESISTS TAMPERING AND/OR REMOVAL WITHOUT THE USE OF SPECIALIZED TOOLS.
24. FOR EQUIPMENT INSTALLATIONS REQUIRING COORDINATION WITH OTHER TRADES THE CONTRACTOR SHALL PROVIDE ALL TEMPLATES, BACKBOXES AND EQUIPMENT ANCHOR BOLTS FOR MOUNTING OR FLUSH MOUNTING PREPARATION, (E.G. PEDESTALS OR OTHER DEVICES REQUIRING MOUNTING ON WALLS, CONCRETE PADS OR OTHER MATERIALS). COORDINATE DELIVERY OF TEMPLATES AND EQUIPMENT WITH ALL AFFECTED CONTRACTORS.
25. ALL CONTROL EQUIPMENT MUST HAVE TRANSIENT PROTECTION TO COMPLY WITH UL AND NFPA 70 REQUIREMENTS. WHERE ANY CIRCUITS LEAVE THE BUILDING, ADDITIONAL TRANSIENT PROTECTION MUST BE PROVIDED FOR EACH CIRCUIT. ALL TRANSIENT PROTECTION DEVICES MUST BE UL LISTED UNDER STANDARD # 497B (ISOLATED LOOP PROTECTORS).
26. REFER TO SPECIFICATION SECTION 280500 AS WELL AS ALL RELATED SPECIFICATION SECTION FOR PROJECT SUBMITTAL REQUIREMENTS AND ADDITIONAL INFORMATION.

ELECTRONIC SECURITY SYMBOL LEGEND

A111	DOOR NUMBER
	ACCESS CONTROLLED ENTRYWAY/DOOR INSTALLATION DETAIL TYPE ARCHITECTURAL DOOR NUMBER XX-YYYY UNSECURED SIDE SECURED SIDE
CR XX	PROXIMITY TYPE CARD READER P = PEDESTAL MOUNT M = MULLION MOUNT BM - BIOMETRIC READER
C	CONNECTION TO MAGNETIC DOOR POSTION SWITCH
L XX	CONNECTION TO REMOTE ELECTRONIC LOCK, LOCK POSITION SWITCH AND DOOR POSITION SWITCH A = ACTIVE DOOR - CONTROLLED BY CARD READER S = STATIC DOOR - REMOTELY CONTROLLED BY ACS
M X	CONNECTION TO MOTORIZED DOOR (OVERHEAD/SLIDING), LOCK POSITION SWITCH AND DOOR POSITION SWITCH
EX	CONNECTION TO "REQUEST TO EXIT" DEVICES (ASSOCIATED WITH ACCESS CONTROLLED DOORS ONLY)
P	PANIC BUTTON
S	SECURITY SIREN & WEATHERPROOF ENCLOSURE
XX	DOME CAMERA - FIXED XX = CAMERA NUMBER (TYPICAL) MP = MEGAPIXEL CAMERA
PTZ XX	DOME CAMERA - PAN, TILT, ZOOM XX = CAMERA NUMBER (TYPICAL)
E XXX	DOME CAMERA - EXTERIOR W/ HEATER & BLOWER XX = CAMERA NUMBER (TYPICAL) MP = MEGAPIXEL CAMERA
E XXX PTZ	PAN TILT ZOOM DOME CAMERA - EXTERIOR W/ HEATER & BLOWER XX = CAMERA NUMBER (TYPICAL)
CXXX.XXX	TYPICAL CAMERA DESIGNATIONS WHEN INDICATED CAMERA TYPE CAMERA NUMBER FLOOR/WING CAMERA E= EXISTING (WHEN INDICATED)
PS	24V DOOR POWER SUPPLY
APS	AUXILIARY POWER SUPPLY 24 VDC
CPS	CAMERA PWR SUPPLY 24 VAC

OKALOOSA COUNTY

FLY VPS

C19-2811-AP
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JOHN E. BURNS LICENSE No 62139 STATE OF FLORIDA PROFESSIONAL ENGINEER

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SECURITY NOTES, LEGEND AND ABBREVIATIONS

BID DOCUMENT

Drawing No.:

TS001

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ITEM	SYSTEM	CONTRACTOR		OWNER (AUTHORITY)		NOTES
		FURNISH	INSTALL	FURNISH	INSTALL	
1.0000	**DIVISION 28: PHYSICAL ACCESS CONTROL SYSTEM (PACS)**					
1.0100	PACS SOFTWARE LICENSES	-	-	X	X	SIEMENS (EXISTING SYSTEM)
1.0200	CONNECTION TO EXISTING SYSTEM (PANELS, DEVICES, POWER SUPPLIES)	X	X	-	-	NEW ACCESS CONTROL PANELS INSTALLED IN THE IDF TO SERVE CONCOURSE C.
1.0300	PACS SOFTWARE PROGRAMMING	X	X	-	-	
1.0400	PACS ALARM AND BADGING WORKSTATIONS	X	X	-	-	
1.0500	INTERFACES (FAS, BHS, ELEVATOR, AND DOOR CONTROLLERS)	X	X	-	-	
1.0600	INTERFACE TO VSS VIA PSIM (ADDITIONAL SITUATOR DOOR LICENSES)	X	X	-	-	
1.0700	INTERFACE TO IDS (ALARM MONITORING)	X	X	-	-	
1.0800	NETWORK COMPONENTS	-	-	-	-	REFER TO TELECOMM RESPONSIBILITY MATRIX DIV 27. CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF THE NEW ACCESS CONTROL PANEL TO EXISTING SYSTEM.
1.0900	BACKBONE CABLE	X	X	-	-	REFER TO TELECOMM RESPONSIBILITY MATRIX DIV 27
1.10	HORIZONTAL CABLE AND NETWORK PATCH CORDS	X	X	-	-	REFER TO TELECOMM RESPONSIBILITY MATRIX DIV 27
1.1100	DOOR HARDWARE - DIVISION 8	X	X	-	-	
1.1200	PACS DOOR DEVICES - READERS, AV ALARM DEVICES, AND LASER DETECTORS	X	X	-	-	
1.13a	DURESS BUTTON - OWNER	X	X	-	-	
1.13b	DURESS ALARM COMPONENTS (BUTTON, KEYSWITCH, AV DEVICE) - CBP	X	X	-	-	
1.13c	DURESS BUTTON - TSA	X	X	-	-	
1.1400	EXIT LANE PORTAL INTERFACE - BYPASS, CONTROL, AND ALARM LOGGING	X	X	-	-	
2.0000	**DIVISION 28: VIDEO SURVEILLANCE SYSTEM (VSS)**					
2.0100	NETWORK VIDEO STORAGE	-	-	X	X	EXISTING SYSTEM. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALLOCATED STORAGE DRIVES.
2.0200	VSS SOFTWARE LICENSES			X	X	ALL LICENCES SHALL BE BY OWNER.
2.0300	HEADEND SERVERS AND/OR MODIFICATIONS	-	-	X	X	
2.0400	VSS VIEWING WORKSTATIONS AND MONITORS	X	X	X	X	CONTRACTOR SHALL PROVIDE TWO (2) PC WORKSTATIONS FOR TSA VIEWING.
2.0500	PROGRAMMING TO EXISTING VSS SYSTEM	X	X	-	-	SUPERVISION BY OWNER
2.0600	INTERFACE TO PACS VIA PSIM (ADDITIONAL SITUATOR CAMERA LICENSES)	X	X	-	-	
2.0700	NETWORK COMPONENTS	-	-	-	-	REFER TO TELECOMM RESPONSIBILITY MATRIX DIV 27 ITEM 1.0000
2.0800	BACKBONE CABLE			-	-	REFER TO TELECOMM RESPONSIBILITY MATRIX DIV 27 ITEM 1.0000
2.0900	HORIZONTAL CABLE AND NETWORK PATCH CORDS	X	X	-	-	REFER TO TELECOMM RESPONSIBILITY MATRIX DIV 27 ITEM 1.0000
2.11	FIELD DEVICES (CAMERAS, MICROPHONES, CONVERTORS AND BRACKETS)	X	X	-	-	

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TS002

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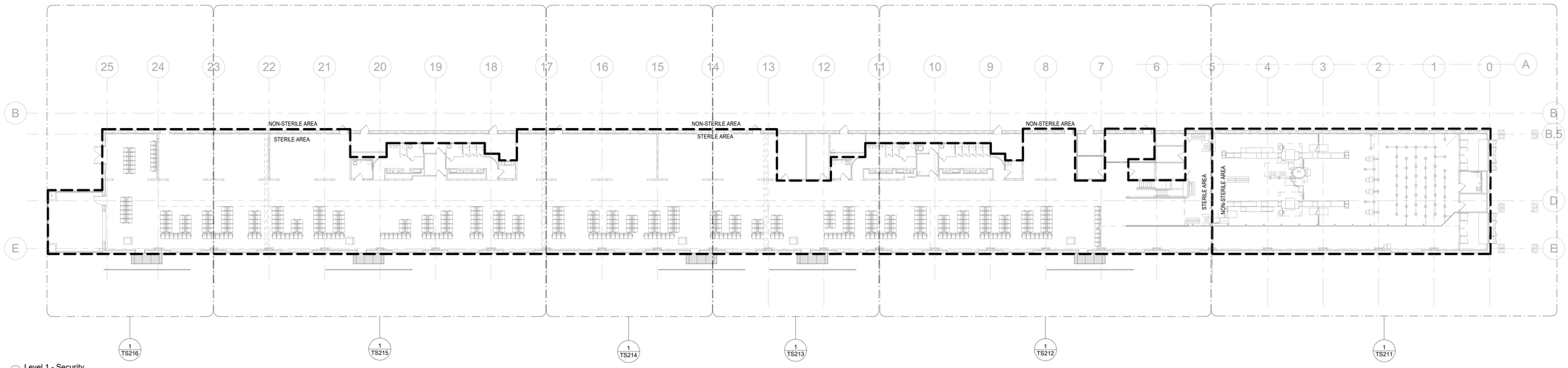
2/20/2020 5:07:11 PM



1 Level 1 - Security
1" = 20'-0"

SECURITY - ADD ALTERNATE NOTES:

1. SC CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. SC CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	**As indicated**

Drawing Title:

OVERALL FLOOR PLANS

BID DOCUMENT

Drawing No.:

TS110

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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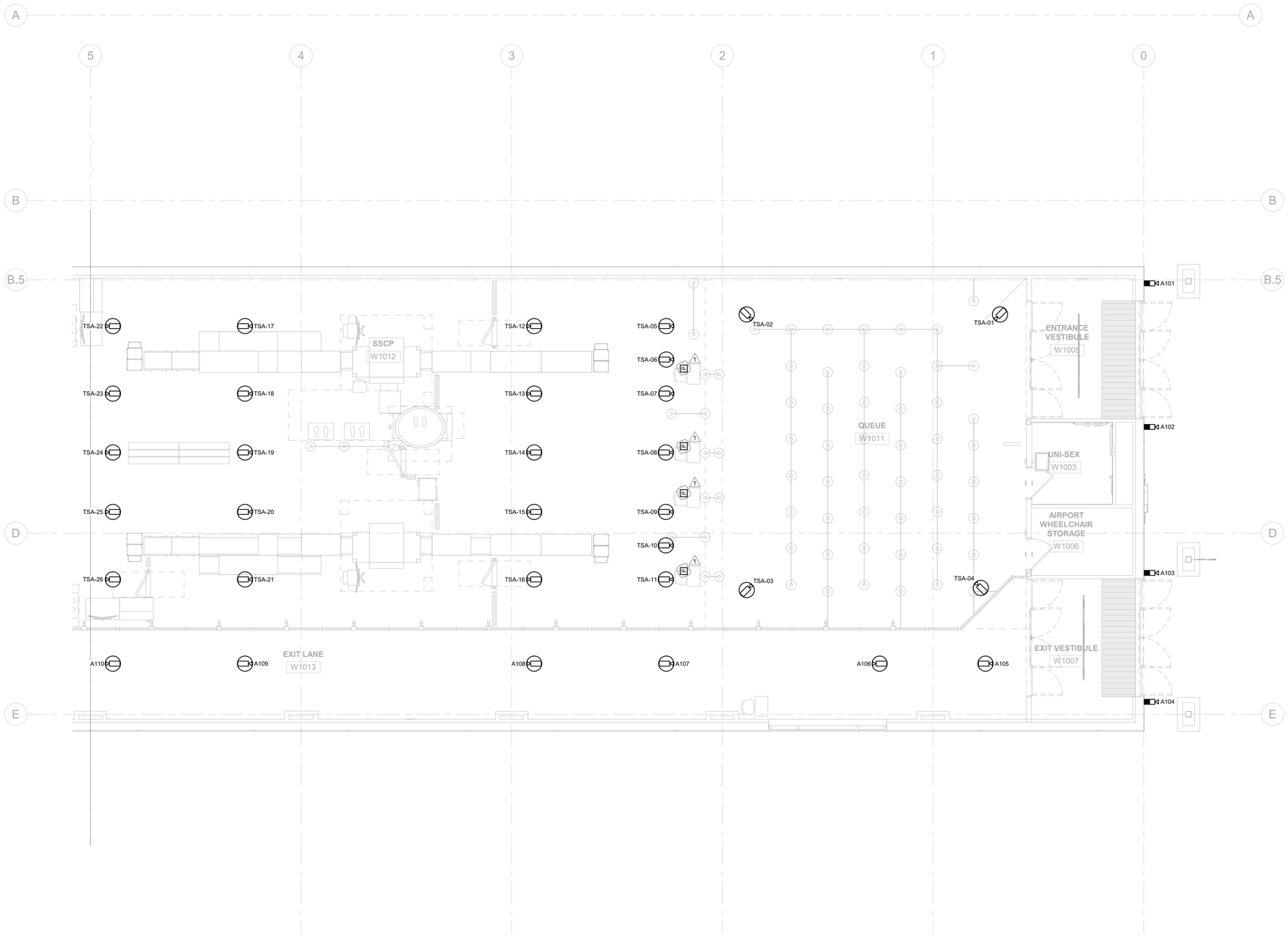

1 LEVEL 1 - SECURITY - AREA 1
3/16" = 1'-0"

SECURITY - ADD ALTERNATE NOTES:

1. SC CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. SC CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

OKALOOSA COUNTY

FLY VPS

C19-2811-AP
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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**AB**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 1

BID DOCUMENT

Drawing No.:

TS211

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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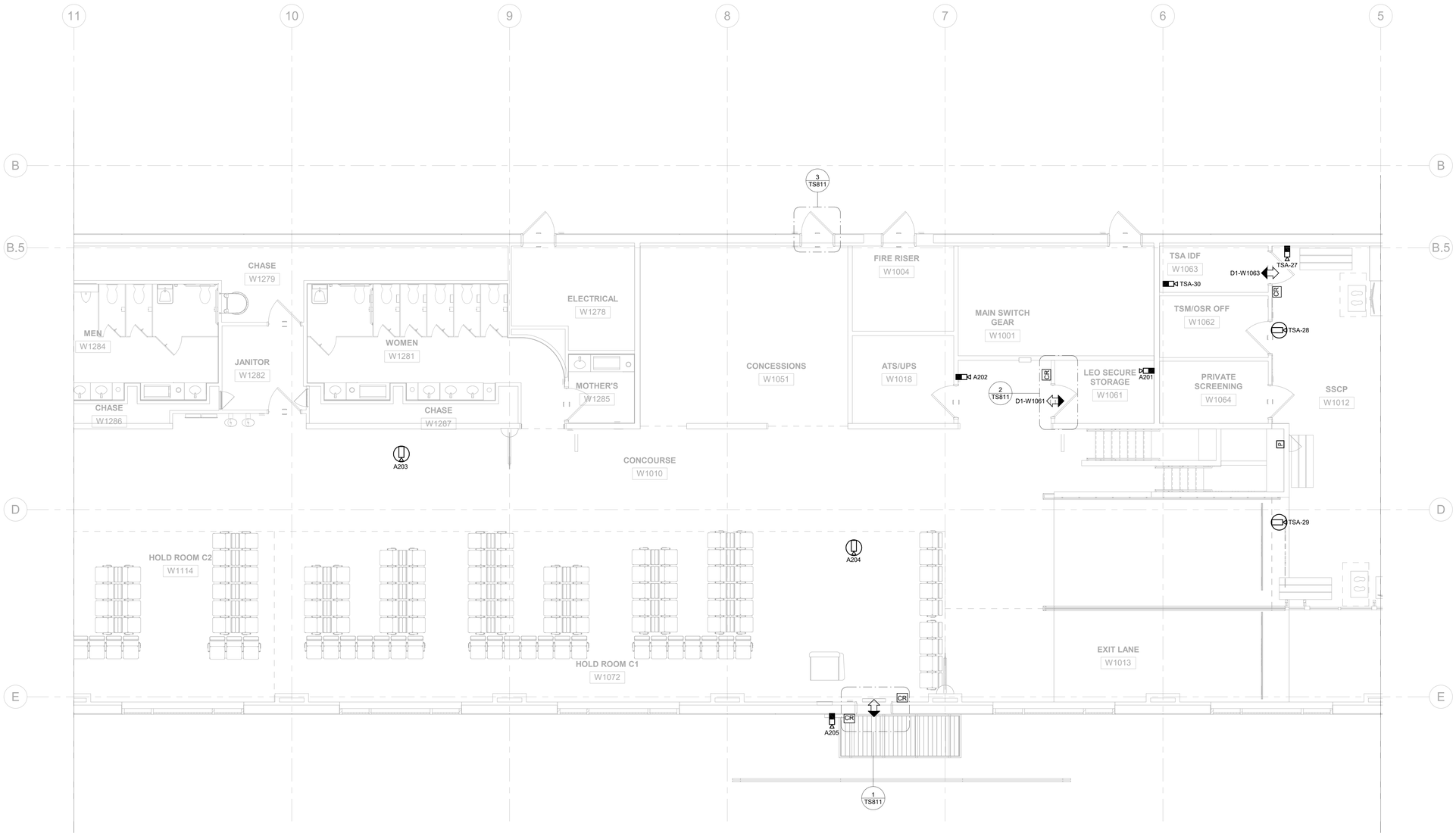

1 LEVEL 1 - SECURITY - AREA 2
3/16" = 1'-0"

SECURITY - ADD ALTERNATE NOTES:

1. SC CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. SC CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Project No.:	**Project Number**
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Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 2

BID DOCUMENT

Drawing No.:

TS212

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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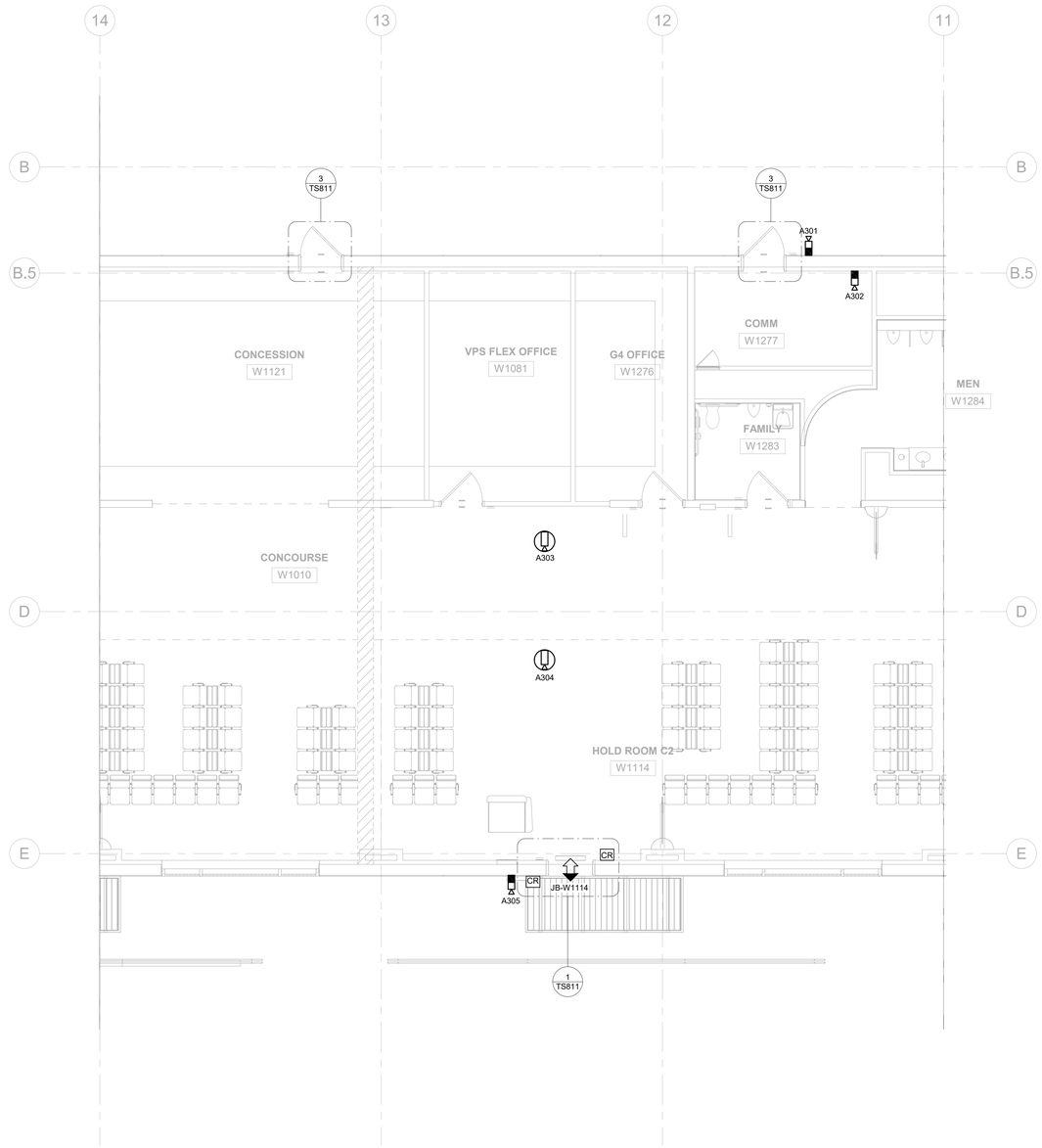

1 LEVEL 1 - SECURITY - AREA 3
3/16" = 1'-0"

SECURITY - ADD ALTERNATE NOTES:

1. SC CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
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Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 3

BID DOCUMENT

Drawing No.:

TS213

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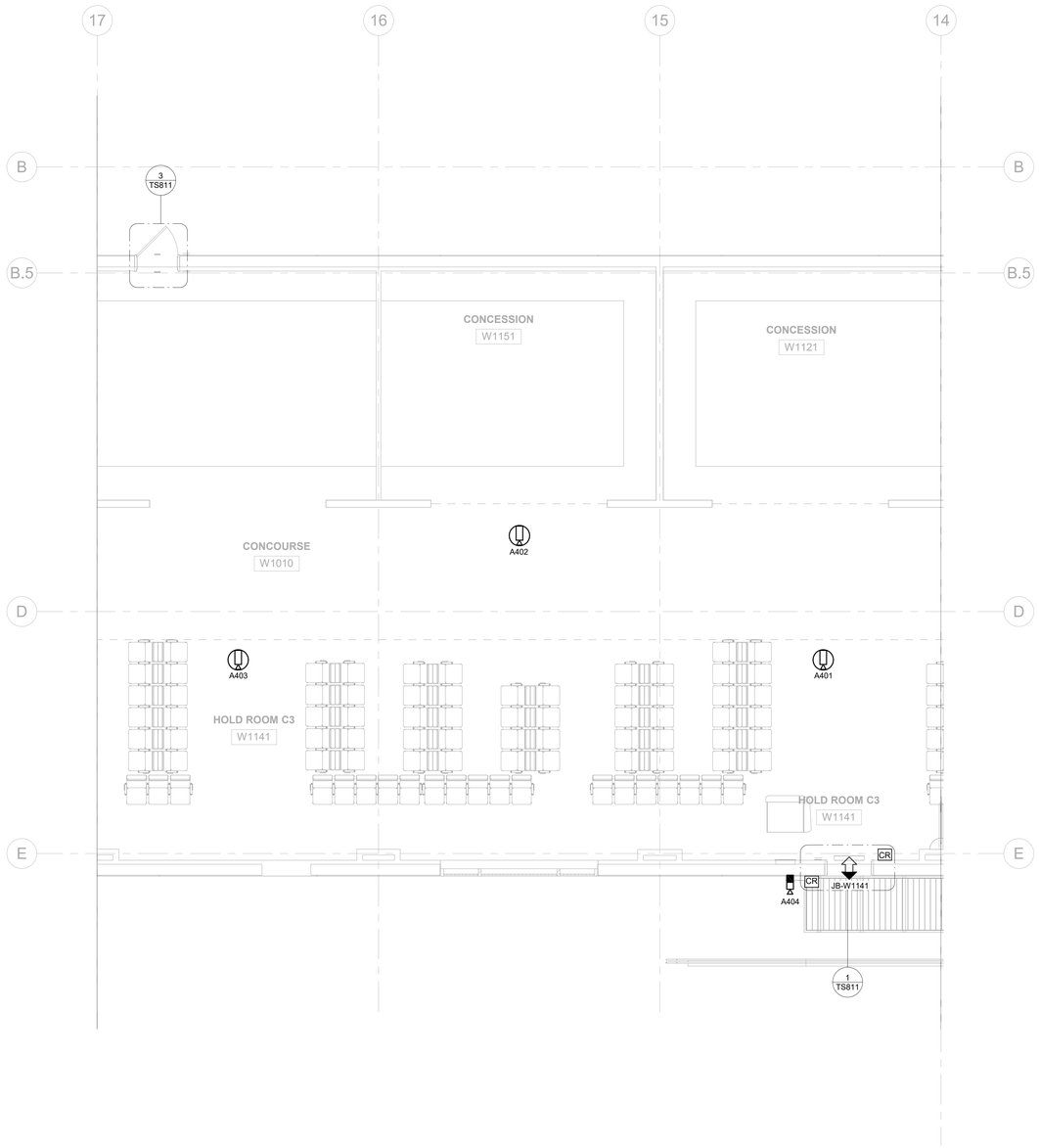

1 LEVEL 1 - SECURITY - AREA 4
3/16" = 1'-0"

SECURITY - ADD ALTERNATE NOTES:

1. SC CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
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Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 4

BID DOCUMENT

Drawing No.:

TS214

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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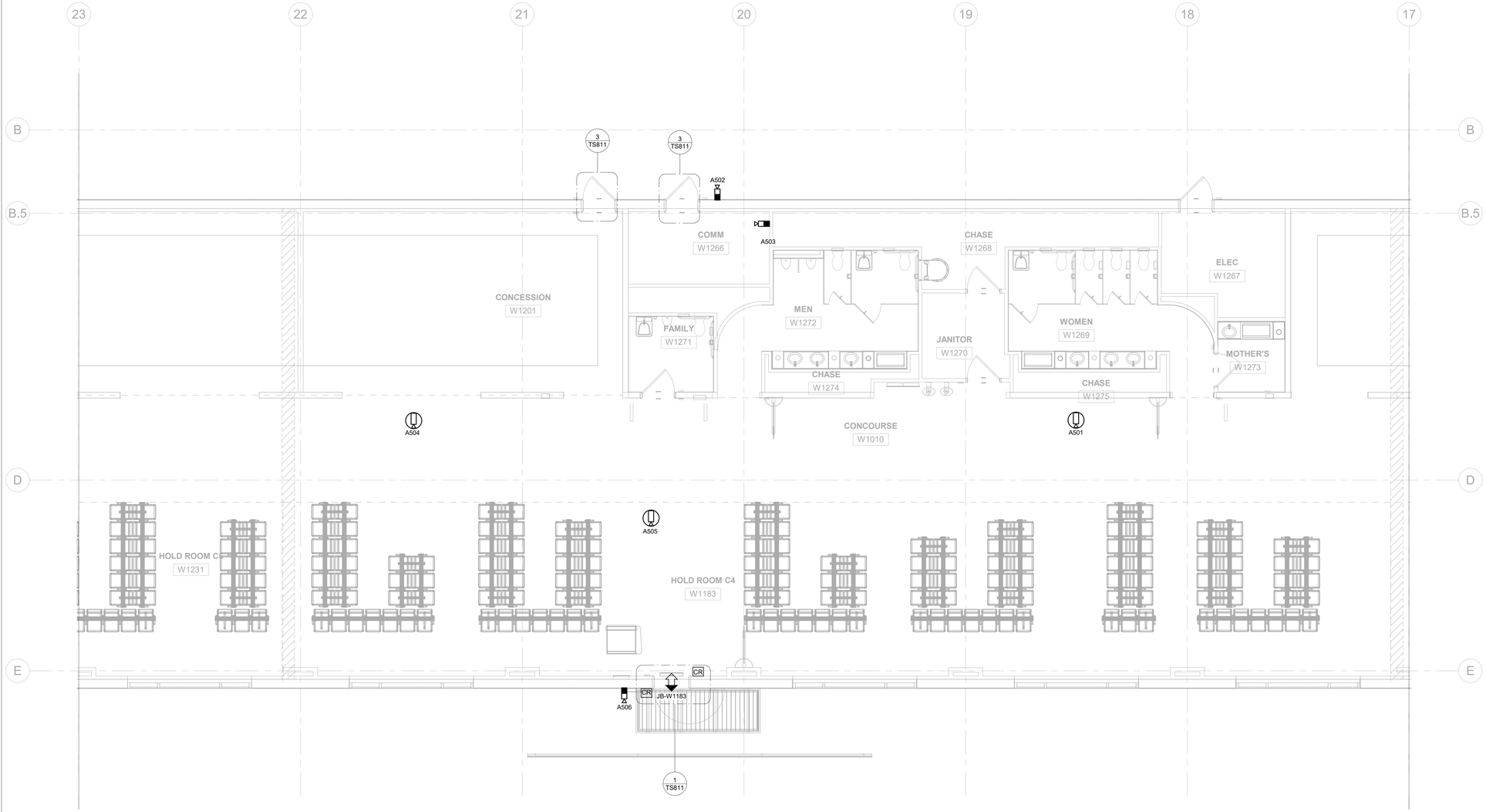

1 LEVEL 1 - SECURITY - AREA 5
3/16" = 1'-0"

SECURITY - ADD ALTERNATE NOTES:

1. SC CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
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Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 5

BID DOCUMENT

Drawing No.:

TS215

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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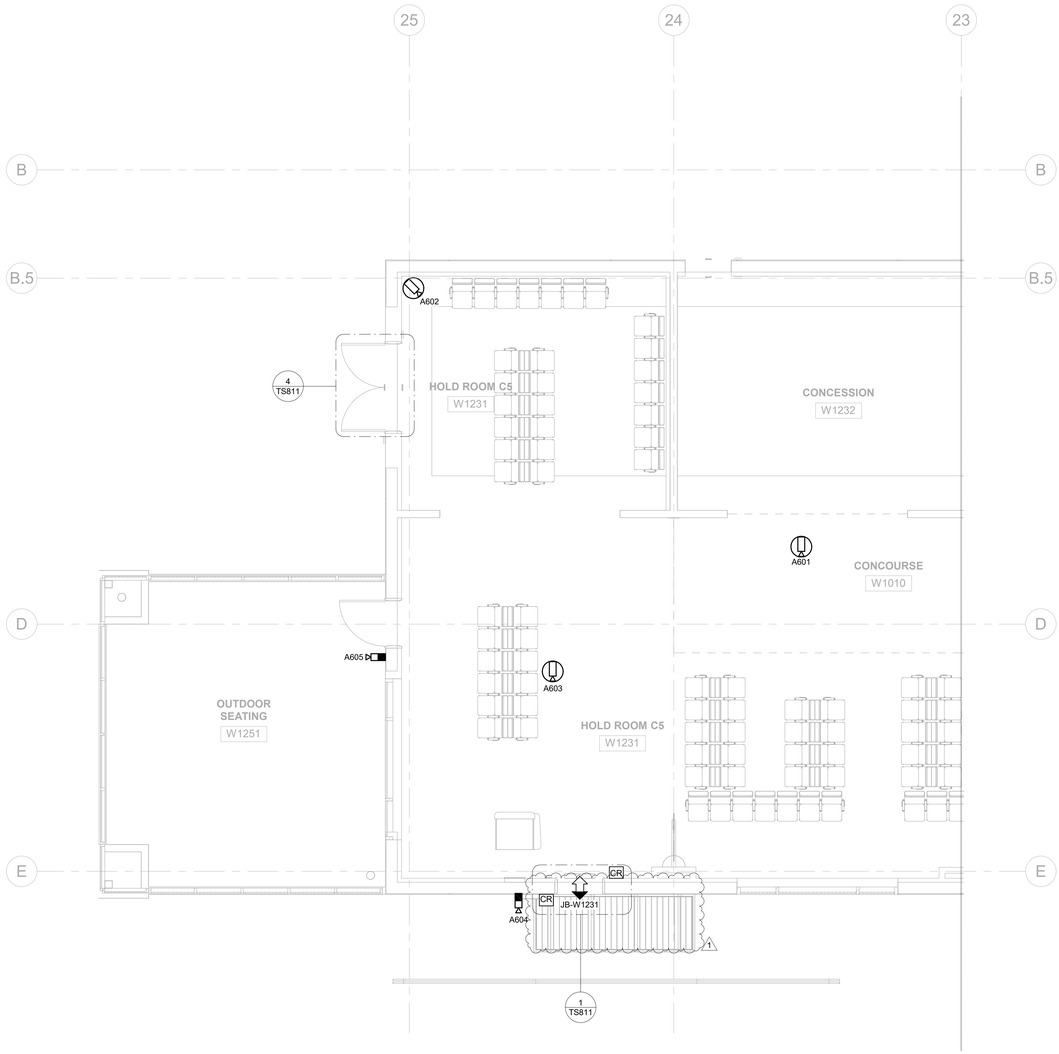

1 LEVEL 1 - SECURITY - AREA 6
3/16" = 1'-0"

SECURITY - ADD ALTERNATE NOTES:

1. SC CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. SC CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
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Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

ENLARGED FLOOR PLAN LEVEL 1 - AREA 6

BID DOCUMENT

Drawing No.:

TS216

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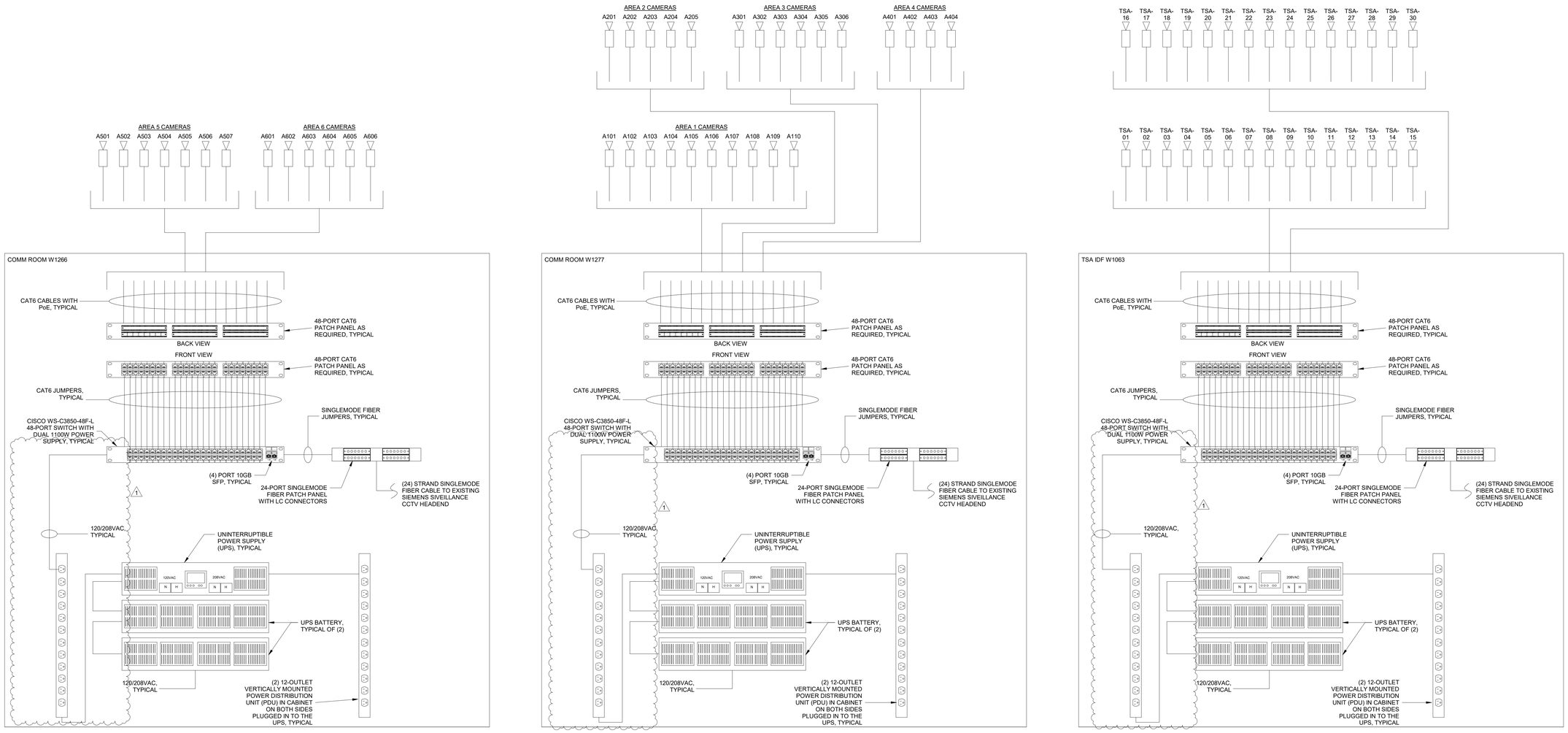
NOTES:

1. FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND SYMBOLS, SEE DRAWING TS001 AND TS002.
2. RISER DIAGRAM IS DIAGRAMMATIC ONLY AND HAS BEEN PROVIDED TO DEPICT THE GENERAL ARRANGEMENT AND INSTALLATION REQUIREMENTS OF THE VIDEO SURVEILLANCE SYSTEM. UNLESS OTHERWISE NOTED, ALL HEADEND VIDEO SURVEILLANCE SYSTEM (VERINT) EQUIPMENT IS EXISTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONDUITS, CABLING, CONNECTING HARDWARE, MOUNTING HARDWARE, BACKBOXES, PULLJUNCTION BOXES, TRENCHING/DUCTBANKS, CAMERA POLES, CAMERA MOUNTING BRACKETS, COMPONENTS, DEVICES, COMMISSIONING UNLESS OTHERWISE NOTED, AS WELL AS ALL LICENSES, ELECTRICAL POWER, GROUNDING AND APPURTENANCES AS REQUIRED TO PROVIDE FULLY OPERATIONAL SYSTEM.
3. REFER TO FLOOR PLANS FOR EXACT LOCATION AND QUANTITY OF CCTV CAMERAS.
4. ALL EQUIPMENT ARE NEW UNLESS OTHERWISE NOTED.

SECURITY - ADD ALTERNATE NOTES:

1. SC CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. SC CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.



1 CCTV RISER DIAGRAM
NONE

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2/20/2020 5:07:52 PM

OKALOOSA COUNTY

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**AB**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:

SINGLE LINE DIAGRAM - CCTV

BID DOCUMENT

Drawing No.:

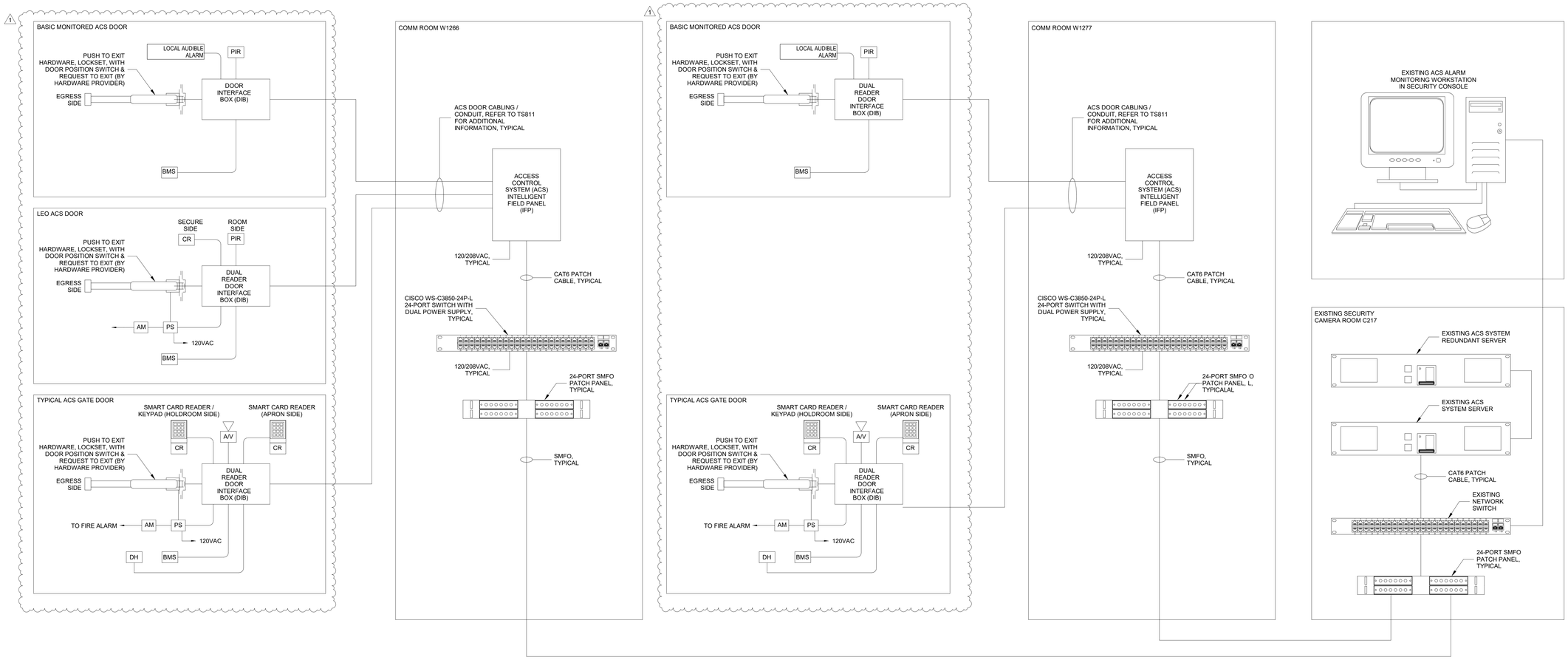
TS511

NOTES:

1. FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND SYMBOLS, SEE DRAWING ES000.
2. SEE DRAWING TS811 FOR TYPICAL ACCESS CONTROLLED DOOR INSTALLATION DETAILS. CONTRACTOR SHALL COORDINATE WITH DOOR HARDWARE PROVIDER.
3. RISER DIAGRAM IS DIAGRAMMATIC ONLY AND HAS BEEN PROVIDED TO DEPICT THE GENERAL ARRANGEMENT AND INSTALLATION REQUIREMENTS OF THE SECURITY ACCESS CONTROLLED SYSTEM (SACS). UNLESS OTHERWISE NOTED, ALL HEADEND SACS (GENETEC) EQUIPMENT IS EXISTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONDUITS, CABLING, CONNECTING HARDWARE, MOUNTING HARDWARE, BACKBOXES, PULL/JUNCTION BOXES, TRENCHING/DUCTBANKS, POLES, MOUNTING BRACKETS, COMPONENTS, DEVICES, COMMISSIONING UNLESS OTHERWISE NOTED, AS WELL AS ALL LICENSES, ELECTRICAL POWER, GROUNDING AND APPURTENANCES AS REQUIRED TO PROVIDE FULLY OPERATIONAL SYSTEM.
4. REFER TO FLOOR PLANS FOR EXACT LOCATION AND QUANTITY OF ACCESS CONTROLLED DOORS/GATES.

SECURITY - ADD ALTERNATE NOTES:

1. SC CONTRACTOR SHALL PRICE WORK FOR ADD ALTERNATES IN AREAS AS CALLED OUT ON ARCHITECTURAL DRAWINGS AND AS DEFINED ON SHEET G211. INCLUDE MATERIALS AND LABOR COST FOR ADD ALTERNATES AS REQUIRED.
2. SC CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR DELINEATION AND DOCUMENTATION TO INCLUDE ADD ALTERNATES.



1 ACCESS CONTROL SYSTEM (ACS) RISER DIAGRAM
NONE

OKALOOSA COUNTY

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Revisions

No.	Date	Description
1	18-FEB-2020	ADDENDUM 001

Project No.:	**Project Number**
Designed By:	**AB**
Drawn By:	**AB**
Checked By:	**JB**
Issue Date:	**21-JAN-2020**
Drawing Scale:	

Drawing Title:
SINGLE LINE DIAGRAM - ACCESS CONTROL
BID DOCUMENT

Drawing No.:
TS512

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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TSA CCTV CAMERA SCHEDULE

ID	TYPE	LOCATION	TARGET	MANUFACTURER	MODEL	LENS VARIFOCAL (mm)	RESOLUTION	POWER SUPPLY	POWER (W) PoE	SOURCE COMM. RM.	MOUNT STYLE	CABLE TYPE	CONDUIT	DWG. LOCATION / MOUNTING DETAIL	COMMENT
TSA-01	FIXED DOME	QUEUE W1011	TSA QUEING	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-02	FIXED DOME	QUEUE W1011	TSA QUEING	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-03	FIXED DOME	QUEUE W1011	TSA QUEING	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-04	FIXED DOME	QUEUE W1011	TSA QUEING	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-05	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-06	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-07	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-08	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-09	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-10	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-11	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-12	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-13	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-14	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-15	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-16	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-17	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-18	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-19	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-20	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-21	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-22	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-23	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-24	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-25	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-26	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-27	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	WALL FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1B-TS-812	
TSA-28	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-29	FIXED DOME	SSCP W1012	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
TSA-30	FIXED DOME	TSA IDF W1063	TSA CHECKPOINT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1063	WALL FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1B-TS-812	

FACILITY CCTV CAMERA SCHEDULE

ID	TYPE	LOCATION	TARGET	MANUFACTURER	MODEL	LENS VARIFOCAL (mm)	RESOLUTION	POWER SUPPLY	POWER (W) PoE	SOURCE COMM. RM.	MOUNT STYLE	CABLE TYPE	CONDUIT	DWG. LOCATION / MOUNTING DETAIL	COMMENT
A101	FIXED DOME	FRONT ENTRANCE/EXIT	FRONT ENTRANCE/EXIT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	WALL SURFACE	CAT6 (DATA & POWER)	EMT	TS211 / 1B-TS-812	
A102	FIXED DOME	FRONT ENTRANCE/EXIT	FRONT ENTRANCE/EXIT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	WALL SURFACE	CAT6 (DATA & POWER)	EMT	TS211 / 1B-TS-812	
A103	FIXED DOME	FRONT ENTRANCE/EXIT	FRONT ENTRANCE/EXIT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	WALL SURFACE	CAT6 (DATA & POWER)	EMT	TS211 / 1B-TS-812	
A104	FIXED DOME	FRONT ENTRANCE/EXIT	FRONT ENTRANCE/EXIT	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	WALL SURFACE	CAT6 (DATA & POWER)	EMT	TS211 / 1B-TS-812	
A105	FIXED DOME	EXIT LANE W1013	EXIT LANE W1013	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
A106	FIXED DOME	EXIT LANE W1013	EXIT LANE W1013	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
A107	FIXED DOME	EXIT LANE W1013	EXIT LANE W1013	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
A108	FIXED DOME	EXIT LANE W1013	EXIT LANE W1013	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
A109	FIXED DOME	EXIT LANE W1013	EXIT LANE W1013	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
A110	FIXED DOME	EXIT LANE W1013	EXIT LANE W1013	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS211 / 1A-TS-812	
A201	FIXED DOME	LEO SECURE STORAGE W1061	INTERIOR OF ROOM	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	WALL SURFACE	CAT6 (DATA & POWER)	EMT	TS212 / 1B-TS-812	
A202	FIXED DOME	OUTSIDE OF MAIN SWITCH GEAR W1001	MAIN SWITCH GEAR DOOR	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	WALL SURFACE	CAT6 (DATA & POWER)	EMT	TS212 / 1B-TS-812	
A203	360° FIXED DOME	HOLD ROOM C1 W1072	HOLD ROOM C1 & CORRIDOR	AXIS	M3058-PLVE	1.3mm	12MP	PoE	TYP. 7.8; MAX. 12.95	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS212 / 1A-TS-812	
A204	FIXED DOME	HOLD ROOM C1 W1072	BOARDING PODIUM & GATE	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS212 / 1A-TS-812	
A205	FIXED DOME	EXTERIOR OF HOLD ROOM C1 W1072 GATE	EXTERIOR GATE DOOR	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	EXTERIOR WALL ARM	CAT6 (DATA & POWER)	EMT	TS212 / 1D-TS-812	
A301	FIXED DOME	EXTERIOR OF COMM W1277	COMM ROOM 1277 DOOR	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	EXTERIOR WALL ARM	CAT6 (DATA & POWER)	EMT	TS213 / 1D-TS-812	
A302	FIXED DOME	INTERIOR OF COMM W1277	INTERIOR OF COMM W1277	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS213 / 1A-TS-812	
A303	360° FIXED DOME	HOLD ROOM C2 W1114	HOLD ROOM C2 & CORRIDOR	AXIS	M3058-PLVE	1.3mm	12MP	PoE	TYP. 7.8; MAX. 12.95	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS213 / 1A-TS-812	
A304	FIXED DOME	HOLD ROOM C2 W1114	BOARDING PODIUM & GATE	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS213 / 1A-TS-812	
A305	FIXED DOME	EXTERIOR OF HOLD ROOM C2 W1114 GATE	EXTERIOR GATE DOOR	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS213 / 1D-TS-812	
A401	FIXED DOME	HOLD ROOM C3 W1141	BOARDING PODIUM & GATE	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS214 / 1A-TS-812	
A402	360° FIXED DOME	HOLD ROOM C3 W1141	HOLD ROOM C3 & CORRIDOR	AXIS	M3058-PLVE	1.3mm	12MP	PoE	TYP. 7.8; MAX. 12.95	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS214 / 1A-TS-812	
A403	FIXED DOME	HOLD ROOM C3 W1141	BOARDING PODIUM & GATE	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS214 / 1A-TS-812	
A404	FIXED DOME	EXTERIOR OF HOLD ROOM C3 W1141 GATE	EXTERIOR GATE DOOR	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1277	EXTERIOR WALL ARM	CAT6 (DATA & POWER)	EMT	TS214 / 1D-TS-812	
A501	360° FIXED DOME	HOLD ROOM C4 W1183	HOLD ROOM C4 & CORRIDOR	AXIS	M3058-PLVE	1.3mm	12MP	PoE	TYP. 7.8; MAX. 12.95	COMM. ROOM W1266	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS215 / 1A-TS-812	
A502	FIXED DOME	EXTERIOR OF COMM W1266	COMM ROOM 1266 DOOR	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1266	EXTERIOR WALL ARM	CAT6 (DATA & POWER)	EMT	TS215 / 1D-TS-812	
A503	FIXED DOME	INTERIOR OF COMM W1266	INTERIOR OF COMM W1266	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1266	WALL SURFACE	CAT6 (DATA & POWER)	EMT	TS215 / 1B-TS-812	
A504	360° FIXED DOME	HOLD ROOM C4 W1183	HOLD ROOM C4 & CORRIDOR	AXIS	M3058-PLVE	1.3mm	12MP	PoE	TYP. 7.8; MAX. 12.95	COMM. ROOM W1266	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS215 / 1A-TS-812	
A505	FIXED DOME	HOLD ROOM C4 W1183	BOARDING PODIUM & GATE	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1266	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS215 / 1A-TS-812	
A506	FIXED DOME	EXTERIOR OF HOLD ROOM C3 W1141 GATE	EXTERIOR GATE DOOR	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1266	EXTERIOR WALL ARM	CAT6 (DATA & POWER)	EMT	TS215 / 1D-TS-812	
A601	360° FIXED DOME	HOLD ROOM C4 W1183	HOLD ROOM C4 & CORRIDOR	AXIS	M3058-PLVE	1.3mm	12MP	PoE	TYP. 7.8; MAX. 12.95	COMM. ROOM W1266	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS216 / 1A-TS-812	
A602	FIXED DOME	HOLD ROOM C5 W1231	BOARDING PODIUM & GATE	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1266	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS216 / 1A-TS-812	
A603	FIXED DOME	HOLD ROOM C5 W1231	LOUNGE AREA	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1266	CEILING FLUSH	CAT6 (DATA & POWER)	EMT	TS216 / 1A-TS-812	
A604	FIXED DOME	EXTERIOR OF HOLD ROOM C5 W1231 GATE	EXTERIOR GATE DOOR	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1266	EXTERIOR WALL ARM	CAT6 (DATA & POWER)	EMT	TS216 / 1D-TS-812	
A605	FIXED DOME	OUTDOOR SEATING W1251	OUTDOOR SEATING	AXIS	Q3515-LVE	3mm - 9mm	1080P	PoE	TYP. 5.6; MAX. 12.5	COMM. ROOM W1266	EXTERIOR WALL ARM	CAT6 (DATA & POWER)	EMT	TS216 / 1D-TS-812	

SECURITY CAMERA NOTES:

1. FINAL LOCATION OF ALL SECURITY CAMERAS SHALL BE REVIEWED AND APPROVED BY THE AUTHORITY.
2. THE CONTRACTOR SHALL PERFORM A FIELD SURVEY TO DETERMINE THE OPTIMAL METHOD OF MOUNTING ALL SECURITY CAMERAS.
3. MOUNT SECURITY CAMERAS A MINIMUM OF 8 FEET AFF/AFG OR AS INDICATED ON THE CAMERA SCHEDULE, EXCEPT WHERE EXISTING ARCHITECTURAL FEATURES AND CEILING DRIVE LOWER MOUNTING HEIGHTS.

C19-2811-AP
Design of
Satellite
Concourse 'C'

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AA-C002208
MLM JOB # TYPE PROPERTY

JOHN E. BURNS LICENSE No 62139 STATE OF FLORIDA PROFESSIONAL ENGINEER

SEAL

Revisions

No.	Date	Description

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

SCHEDULES - CCTV CAMERA

BID DOCUMENT

Drawing No.:

TS711

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

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DOOR SECURITY ACCESS CONTROL SYSTEM (SACS) SCHEDULE

ID	ARCH. DOOR #	ROOM NAME / LOCATION	SACS DOOR DETAIL	CARD READER ENTRY	CARD READER EXIT	DRAWING	SOURCE COMM. RM.	COMMENT
W1051	W1051	CONCESSONS	3 / TS811	YES	NO	TS212	COMM. ROOM W1277	
D1-W1061	W1061	LEO SECURE STORAGE W1061	2 / TS811	YES	NO	TS212	COMM. ROOM W1277	
W1277	W1277	COMM ROOM W1277	3 / TS811	NO	NO	TS213	COMM. ROOM W1277	
W1121	W1121	CONCESSIONS	3 / TS811	NO	NO	TS213	COMM. ROOM W1277	
W1114	W1114	APRON DOOR	1 / TS811	YES	YES	TS213	COMM. ROOM W1277	
W1141	W1141	APRON DOOR	1 / TS811	YES	YES	TS214	COMM. ROOM W1277	
W1151	W1151	CONCESSIONS	3 / TS811	NO	NO	TS214	COMM. ROOM W1266	
W1183	W1183	APRON DOOR	1 / TS811	YES	YES	TS215	COMM. ROOM W1266	
W1201	W1201	CONCESSIONS	3 / TS811	YES	YES	TS215	COMM. ROOM W1266	
W1266	W1266	COMM ROOM W1266	3 / TS811	NO	NO	TS215	COMM. ROOM W1266	
W1231	W1231	APRON DOOR	1 / TS811	YES	YES	TS216	COMM. ROOM W1266	
W1231	W1231	HOLD ROOM	4 / TS811	NO	NO	TS216	COMM. ROOM W1266	

SACS NOTES:

1. COORDINATE CONNECTION OF ALL ACCESS CONTROLLED DEVICES WITH DOOR HARDWARE PROVIDER.
2. REFER TO ARCHITECTURAL PLANS FOR DOOR NUMBERING.

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PROFESSIONAL ENGINEER

SEAL

Revisions

No.	Date	Description

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

SCHEDULES - DOOR ACCESS CONTROL

BID DOCUMENT

Drawing No.:

TS712

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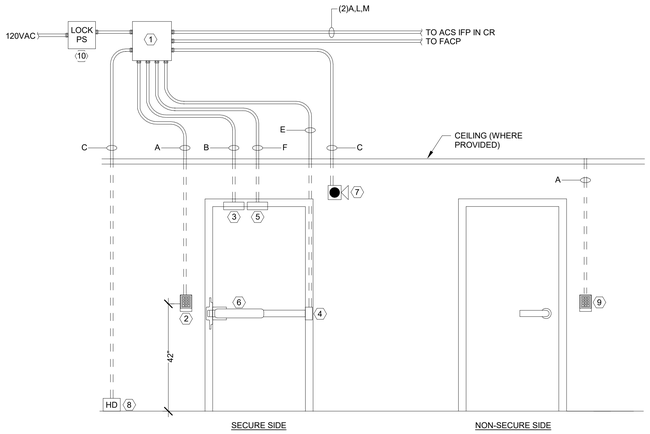
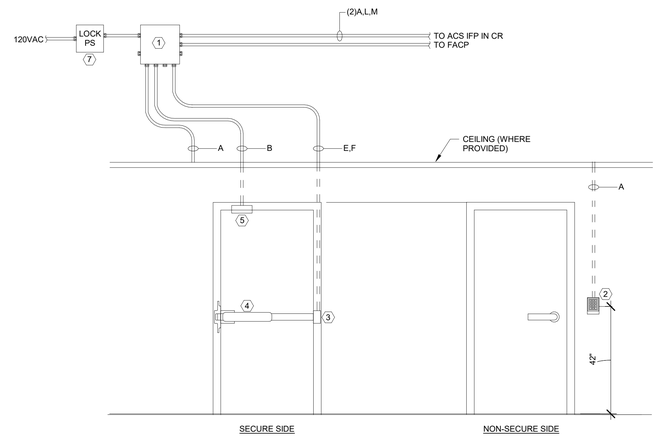


ACS EQUIPMENT AT DOOR:

1. DOOR INTERFACE BOX WITH TERMINAL STRIPS
2. SMART CARD READER / KEYPAD (INSIDE HOLDROOM)
3. BALANCED MAGNETIC SWITCH
4. POWER TRANSFER HINGE (DIV. 8)
5. ELECTROMAGNETIC LOCK WITH POWER SUPPLY (DIV. 8)
6. PANIC HARDWARE WITH REX SWITCH (DIV. 8)
7. AUDIBLE/VISUAL DEVICE
8. MAGNETIC DOOR HOLDER AND POWER SUPPLY (DIV. 8)
9. SMART CARD READER (INSIDE GATE DOOR)
10. ACS DOOR CONTROL MODULE AND POWER SUPPLY AT IFP

1 GATE DOOR ACS DOOR DETAIL
NTS



ACS EQUIPMENT AT DOOR:

1. DOOR INTERFACE BOX WITH TERMINAL STRIPS
2. SMART CARD READER (NON-EGRESS SIDE)
3. POWER TRANSFER HINGE (DIV. 8)
4. PANIC DELAY / LOCKING HARDWARE (DIV. 8) WITH POWER SUPPLY
5. BALANCED MAGNETIC SWITCH
6. FIRE ALARM INTERFACE AT IFP
7. ACS DOOR CONTROL MODULE WITH POWER SUPPLY AT IFP

2 LEO ACS DOOR DETAIL
NTS

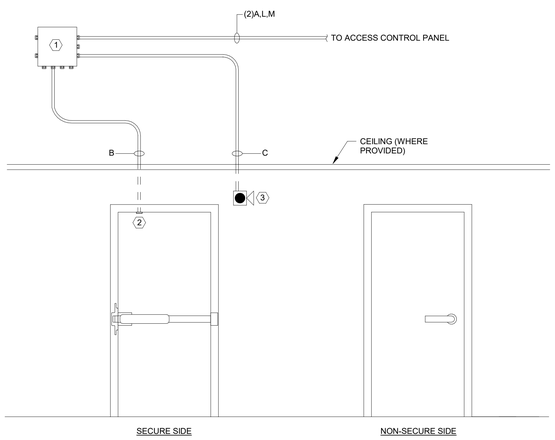
GENERAL ACS DETAIL NOTES:

1. THE DOOR DETAILS ARE DIAGRAMMATIC IN NATURE ONLY TO SHOW EQUIPMENT AND GENERAL WIRING INFORMATION. MOUNTING CONDITIONS, MATERIAL TYPES, DOOR SWINGS, ETC. ARE NOT SHOWN.
2. CONTRACTOR SHALL BE FAMILIAR WITH EACH DOOR AND ADAPT THE EQUIPMENT TO THE FIELD CONDITIONS.
3. SEE ELECTRICAL DRAWINGS FOR 120V POWER LOCATIONS.
4. ACS CABLING SHALL BE ROUTED IN CONDUIT. MINIMUM SIZE CONDUIT SHALL BE 3/4"C FROM ACS DEVICE TO THE DIB. MINIMUM SIZE CONDUIT FROM THE DIB TO THE IFP IN THE COMMUNICATIONS ROOM SHALL BE 1 1/2"C. CONDUIT SHALL BE CONCEALED. PROVIDE PULL BOXES AS REQUIRED BY THE NEC. FIELD ROUTE CONDUIT FROM THE ACS DEVICES TO THE DIB AND IFP. IF THE ACS SYSTEM PROPOSED BY THE CONTRACTOR USES LARGER CABLES THAN INDICATED IN THE CABLE SCHEDULE, THE CONTRACTOR SHALL INCREASE THE CONDUIT SIZE ACCORDINGLY TO MAINTAIN THE SPARE CONDUIT CAPACITY.

ACS CABLE SCHEDULE

TYPE	DESCRIPTION	CABLE TYPE	O.D. MM (IN)	BELDEN #
A	CARD READER CABLE	9 CONDUCTOR 18 AWG SHIELDED	6.91 (0.272)	5307FE
B	BALANCE MAGNETIC SWITCH	2 CONDUCTOR 22 AWG UNSHIELDED	3.25 (0.128)	5500UE
C	AUDIBLE/VISUAL CABLE	2 CONDUCTOR 16 AWG UNSHIELDED	4.67 (0.184)	5200UE
D	ACS DATA CABLE (RS485)	2 PAIR 22 AWG SHIELDED, EACH PAIR SHLD	4.78 (0.188)	5302UE
E	REQUEST TO EXIT / PANIC HARDWARE	2 CONDUCTOR 22 AWG UNSHIELDED	3.25 (0.128)	5500UE
F	MAG LOCK OR POWER CABLE	4 CONDUCTOR 16 AWG UNSHIELDED	5.49 (0.26)	5202UE
G	EMERGENCY MAG LOCK DATA CABLE, ELECTRIC DELAY HARDWARE OR MISC DATA	2 CONDUCTOR 22 AWG UNSHIELDED	3.25 (0.128)	5500UE
H	DIB TAMPER CABLE	2 CONDUCTOR 22 AWG UNSHIELDED	3.25 (0.128)	5500UE
J	DATA CABLE - ETHERNET	4 PAIR #23 AWG CAT6	5.77 (0.227)	
K	DATA CABLE - FIBER	6 STRAND 62.5/125 MICRON INDOOR/OUTDOOR LOOSE TUBE MULTI-MODE FIBER OPTIC CABLE	9.65 (0.38)	M9B810
L	INPUT BACKBONE CABLE	12 CONDUCTOR 22 AWG UNSHIELDED	5.92 (0.233)	5509UE
M	OUTPUT BACKBONE CABLE	7 CONDUCTOR 16 AWG UNSHIELDED	6.63 (0.261)	5205UE

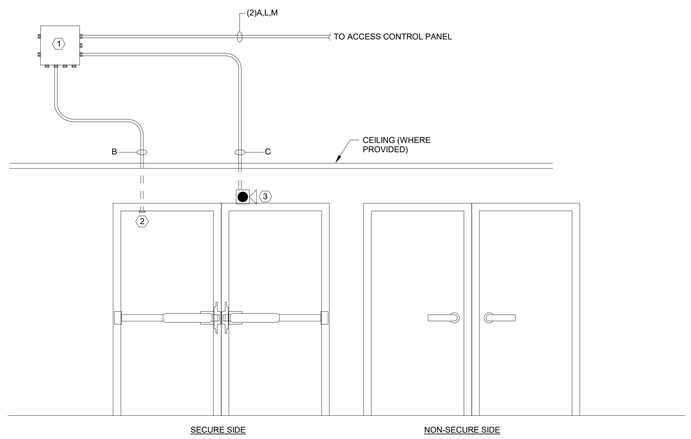
NOTE: CONTRACTOR SHALL VERIFY THE MANUFACTURER'S RECOMMDED CABLES FOR HIS SYSTEM AND USE THE APPROPRIATE CABLE TYPES. THE CABLES LISTED ARE BASED UPON BELDEN. EQUAL BY WEST PENN IS ACCEPTABLE. ANY INCREASE IN CONDUIT SIZE DUE TO THE SYSTEM CHOSEN SHALL BE THE CONTRACTOR'S RESPONSIBILITY. CABLE TYPES ARE PROVIDED FOR REFERENCE PURPOSES ONLY.



ACS EQUIPMENT AT DOOR:

1. DOOR INTERFACE BOX WITH TERMINAL STRIPS
2. DOOR CONTACT
3. LOCAL AUDIBLE ALARM

3 BASIC DOOR ACS DOOR DETAIL
NTS



ACS EQUIPMENT AT DOOR:

1. DOOR INTERFACE BOX WITH TERMINAL STRIPS
2. DOOR CONTACT
3. LOCAL AUDIBLE ALARM

4 BASIC DOUBLE DOOR ACS DOOR DETAIL
NTS

C19-2811-AP
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SEAL

Revisions

No.	Date	Description

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

DETAILS - SECURITY DOORS

BID DOCUMENT

Drawing No.:

TS811

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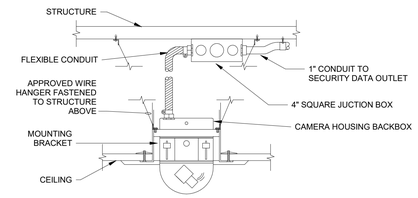
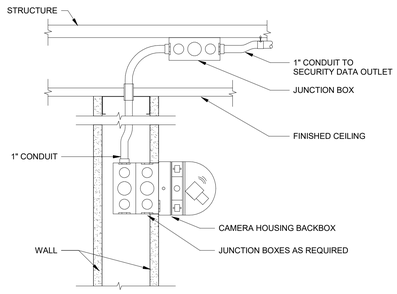
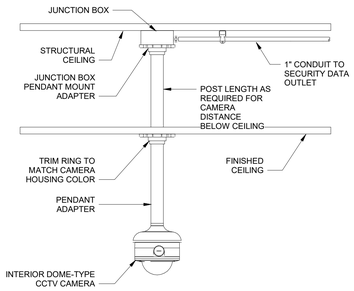


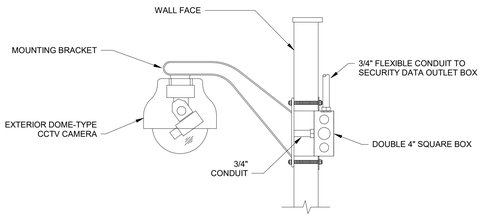
VSS CAMERA TYPE 1A -
INTERIOR/EXTERIOR FIXED/PTZ/180/360
1 DOME CEILING MOUNT
NTS



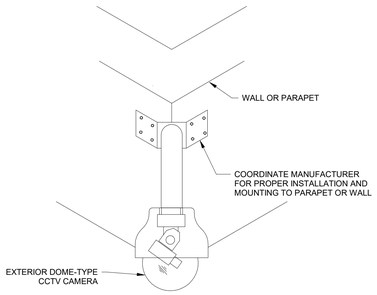
VSS CAMERA TYPE 1B -
INTERIOR/EXTERIOR FIXED/PTZ/180
2 WALL FLUSH MOUNT
NTS



VSS CAMERA TYPE 1C -
FIXED/PTZ/180/360 CEILING PENDANT
3 MOUNT
NTS



VSS CAMERA TYPE 1D -
INTERIOR/EXTERIOR FIXED/PTZ/180/360
4 DOME ARM/PENDANT MOUNT
NTS



VSS CAMERA TYPE 1E -
INTERIOR/EXTERIOR FIXED/PTZ/180/360
5 CORNER MOUNT
NTS

C19-2811-AP
Design of
Satellite
Concourse 'C'

Burns
BURNS ENGINEERING, INC | 215 929-2700
TWO COMMERCE SQUARE,
2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

MLM-MARTIN ARCHITECTS, INC.
668 N. ORLANDO AVE.
SUITE 107
MAITLAND, FL 32751
407.897.6764 (VOICE)
407.894.1338 (FAX)
WWW.MLM-MARTIN.COM
AA-C002208
MLM JOB # TYPE PROPERTY

JOHN E. BURNS
LICENSED
No 62139
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SEAL

Revisions

No.	Date	Description

Project No.:	Project Number
Designed By:	AB
Drawn By:	AB
Checked By:	JB
Issue Date:	21-JAN-2020
Drawing Scale:	

Drawing Title:

DETAILS -
SECURITY CCTV

BID DOCUMENT

Drawing No.:

TS812

BIM 360://Design of Satellite Concourse/VPS_ETSTCFA.rvt

2/20/2020 5:08:06 PM

PRE-BID CONFERENCE SIGN-IN SHEET

February 25, 2020 at 11:00 a.m. Central

West Terminal Construction
Destin-Fort Walton Beach Airport

NAME	REPRESENTING	TELEPHONE	E-MAIL ADDRESS
Tracy Stage	Okaloosa County Airports	850-651-7160	tstage@myokaloosa.com
Chad Rogers	Okaloosa County Airports	850-651-7160	rrogers@myokaloosa.com
Allyson Oury	Okaloosa County Airports	850-651-7160	aoury@myokaloosa.com
Mike Stenson	Okaloosa County Airports	850-651-7160	mstenson@myokaloosa.com
Ray Beasley	Okaloosa County Airports	850-651-7160	rbeasley@myokaloosa.com
Oscar Williams	Okaloosa County Airports	850-651-7160	owilliams@myokaloosa.com
Terry Kerwell	Okaloosa County Airports	850-651-7160	tkerwell@myokaloosa.com
Miguel Martin	MLM-Martin Architects, Inc.	407-617-0715	MAMartin@mlm-martin.com
Darren McDonald	EMR	850-685-7056	DMCDONALD@EMR-INC.COM
JOE FULTON	MODERN SOUND	251.380.9080	joe_fulton@modernsound.net

PRE-BID CONFERENCE SIGN-IN SHEET

February 25, 2020 at 11:00 a.m. Central

West Terminal Construction
Destin-Fort Walton Beach Airport

NAME	REPRESENTING	TELEPHONE	E-MAIL ADDRESS
John Hoehn	WHITESELL-GREEN	850-434-5311	JHOEHN@WHITESELL-GREEN.COM
D. Brazeal	Modern Sound	251-331-5262	douglas_brazeal@modernsound.net
Alex Kowalsky	Archer Western	850-509-4941	akowalsky@walshgroup.com
Jack Dillon	Whitesell-green	239-253-5576	jdillon@whitesell-green.com
Dale E. Whitaker	LORD & SON	850-863-5158	dale@lordandson.com
Scott Odom	Marathon Electrical	205 778-7753	rodom@marathonelectrical.com
Mark Gardner	Childers Construction	850-585-4226	mgardner@childers-construction.com
Gary Bearden	Bearden Electric	850-863-2131	gary@beardenelectric.com
Brent Hobbs	Cross Environmental Services	850-428-9358	bhobbs@crossenv.com
Brandon Miller	WHITE-SPUNNER CONSTRUCTION	251-471-5189	ESTIMATING@WHITE-SPUNNER.COM

PRE-BID CONFERENCE SIGN-IN SHEET

February 25, 2020 at 11:00 a.m. Central

West Terminal Construction
Destin-Fort Walton Beach Airport

NAME	REPRESENTING	TELEPHONE	E-MAIL ADDRESS
DeRita Mason	PUR	850-689-5960	dmason@myokaloosa.com
Jeff Hyde	PUR	850-689-5960	jhyde@myokaloosa.com

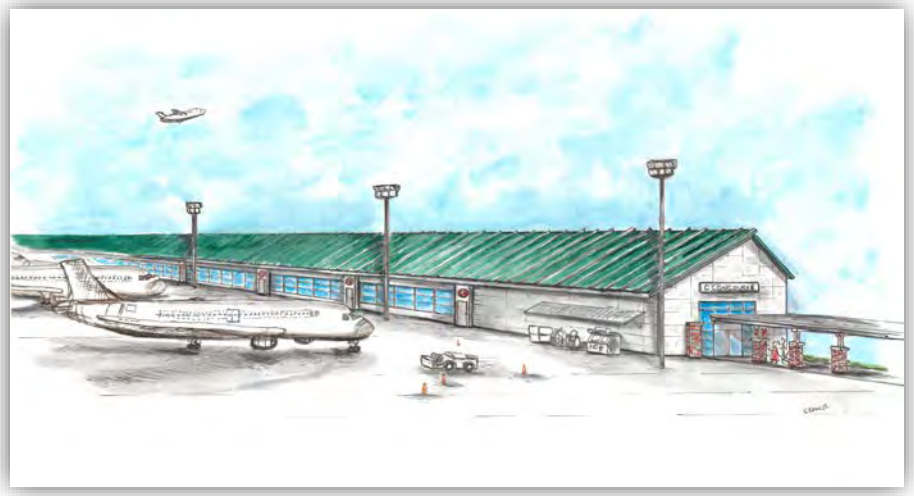
ITB AP 35-20
Construction of Satellite Concourse ‘C’ at Destin-Fort Walton Beach Airport

MLM-MARTIN
ARCHITECTS, INC.

Meeting Agenda

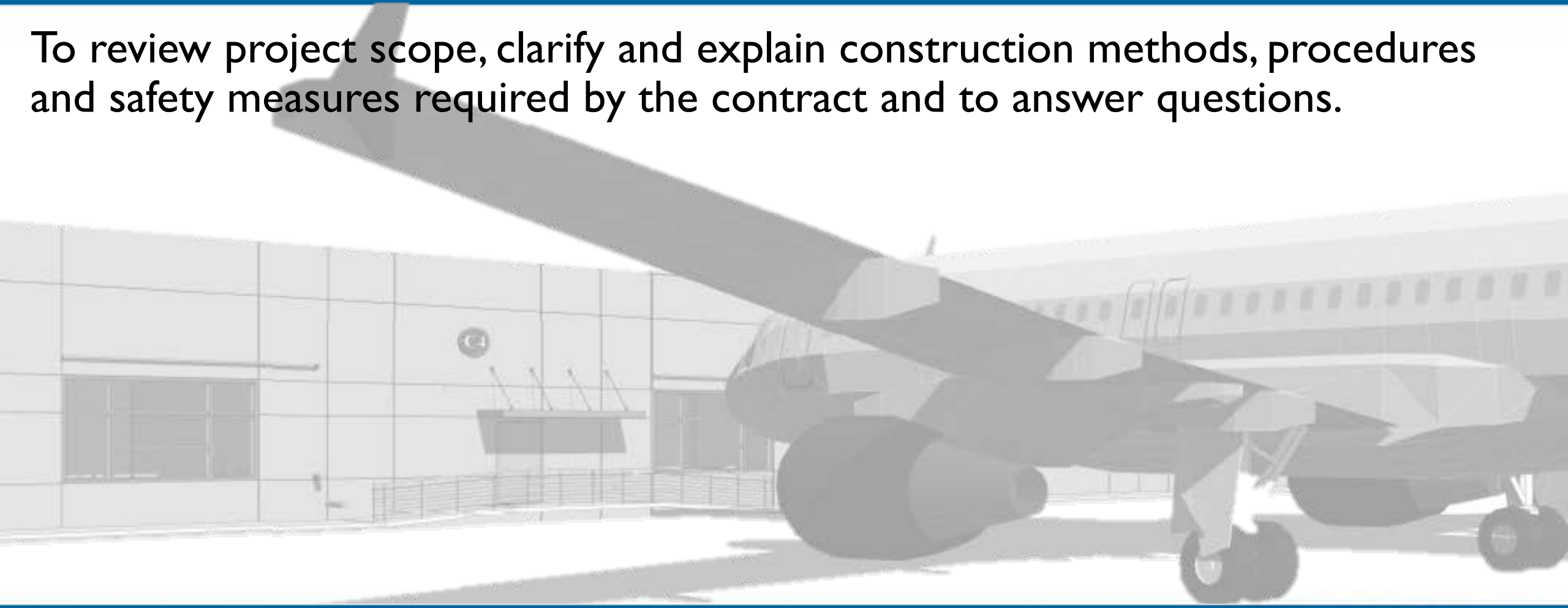
- Introduction of Participants
- Purpose
- Scope of Work
- Administration and Legal Requirements
- Discussion / Questions

Wanted: Team Member



We are here today:

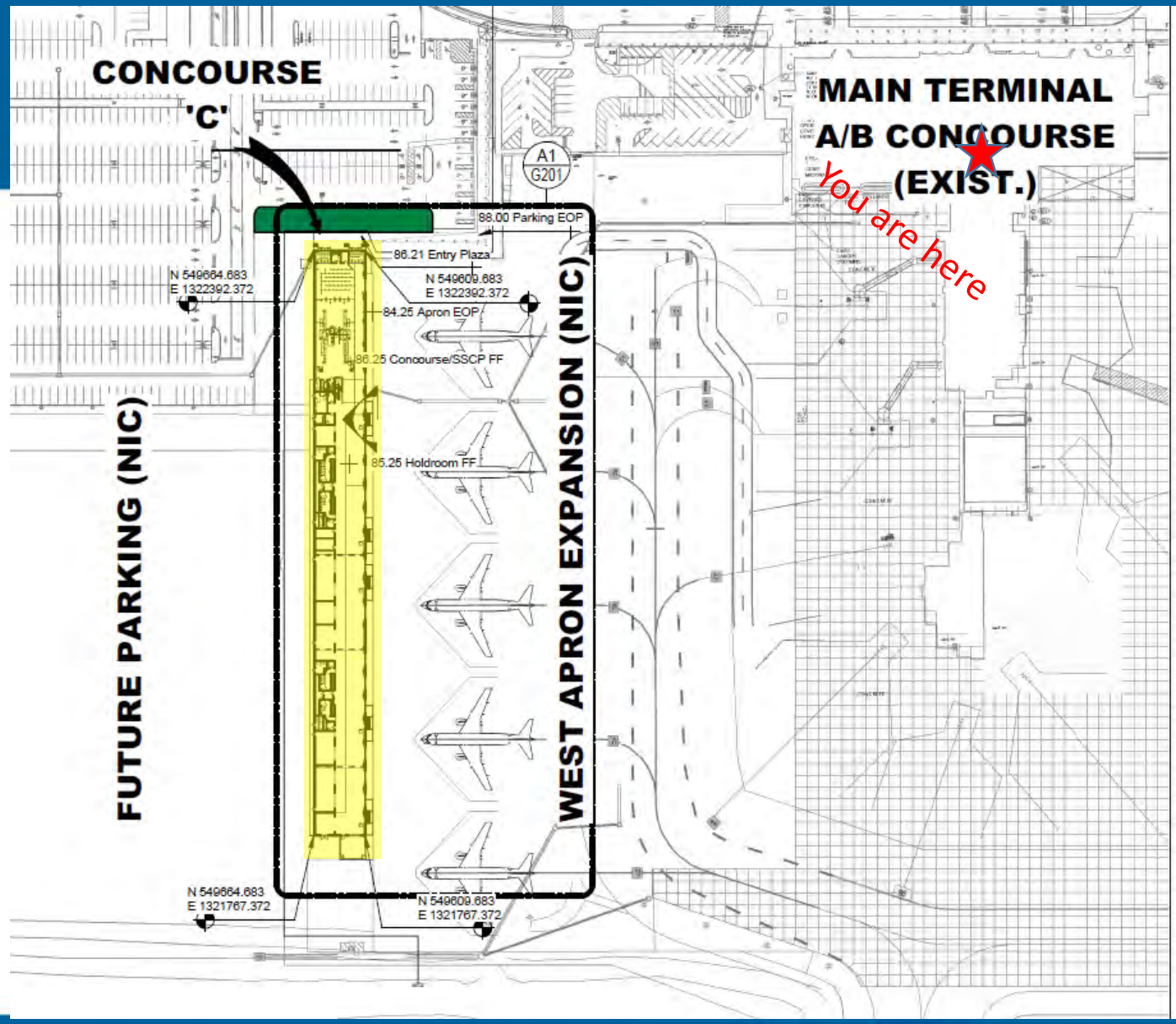
To review project scope, clarify and explain construction methods, procedures and safety measures required by the contract and to answer questions.



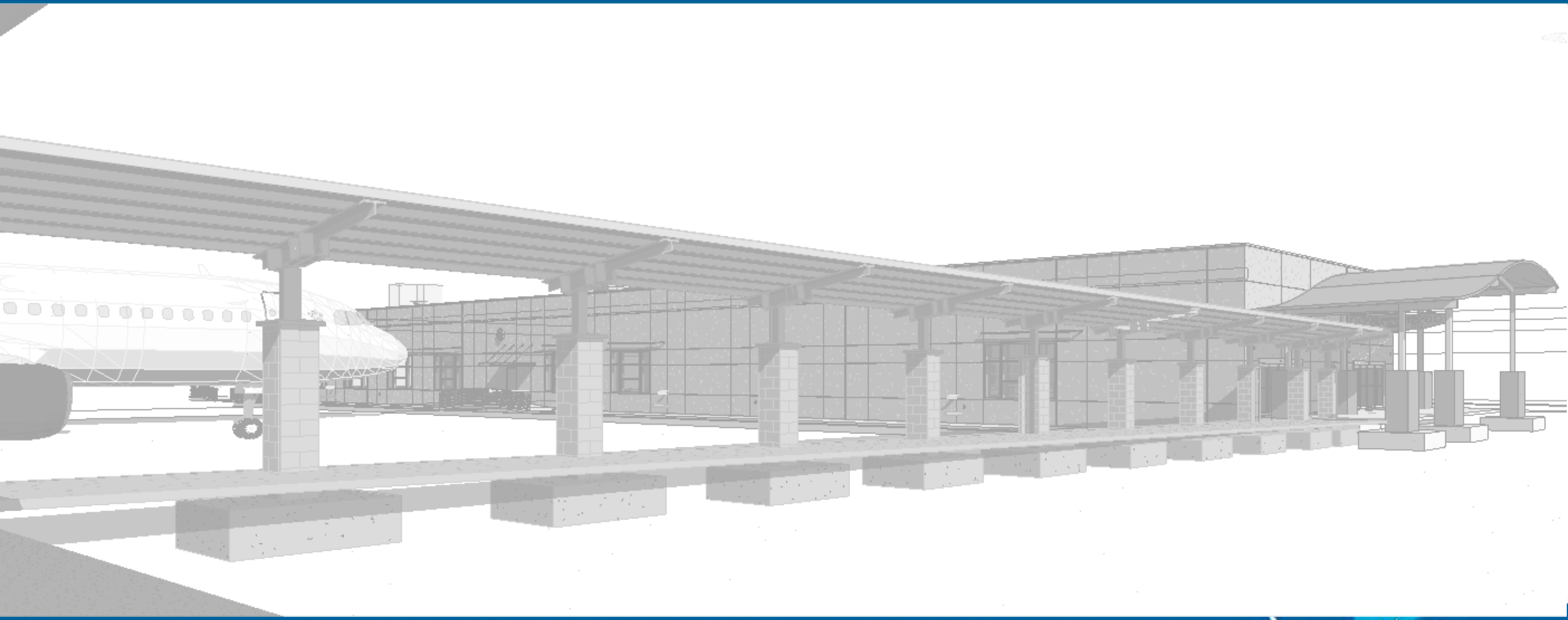
Project Overview

- Construct a new single story stand-alone concourse building with up to (5) five ground loading aircraft gates; inclusive of a security screening checkpoint, concessions shell space, restrooms and support spaces

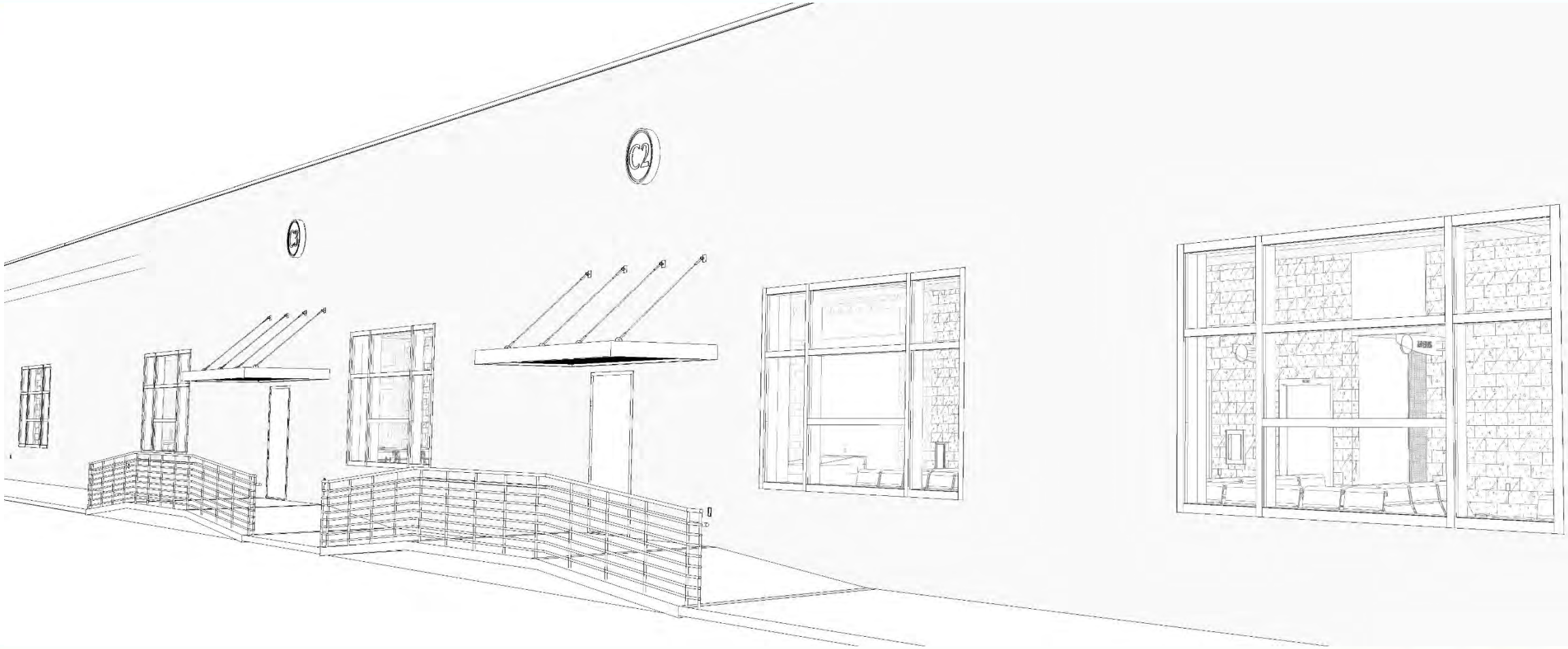
- Construction consists of masonry bearing walls, open web steel joist and insulated single ply membrane roofing



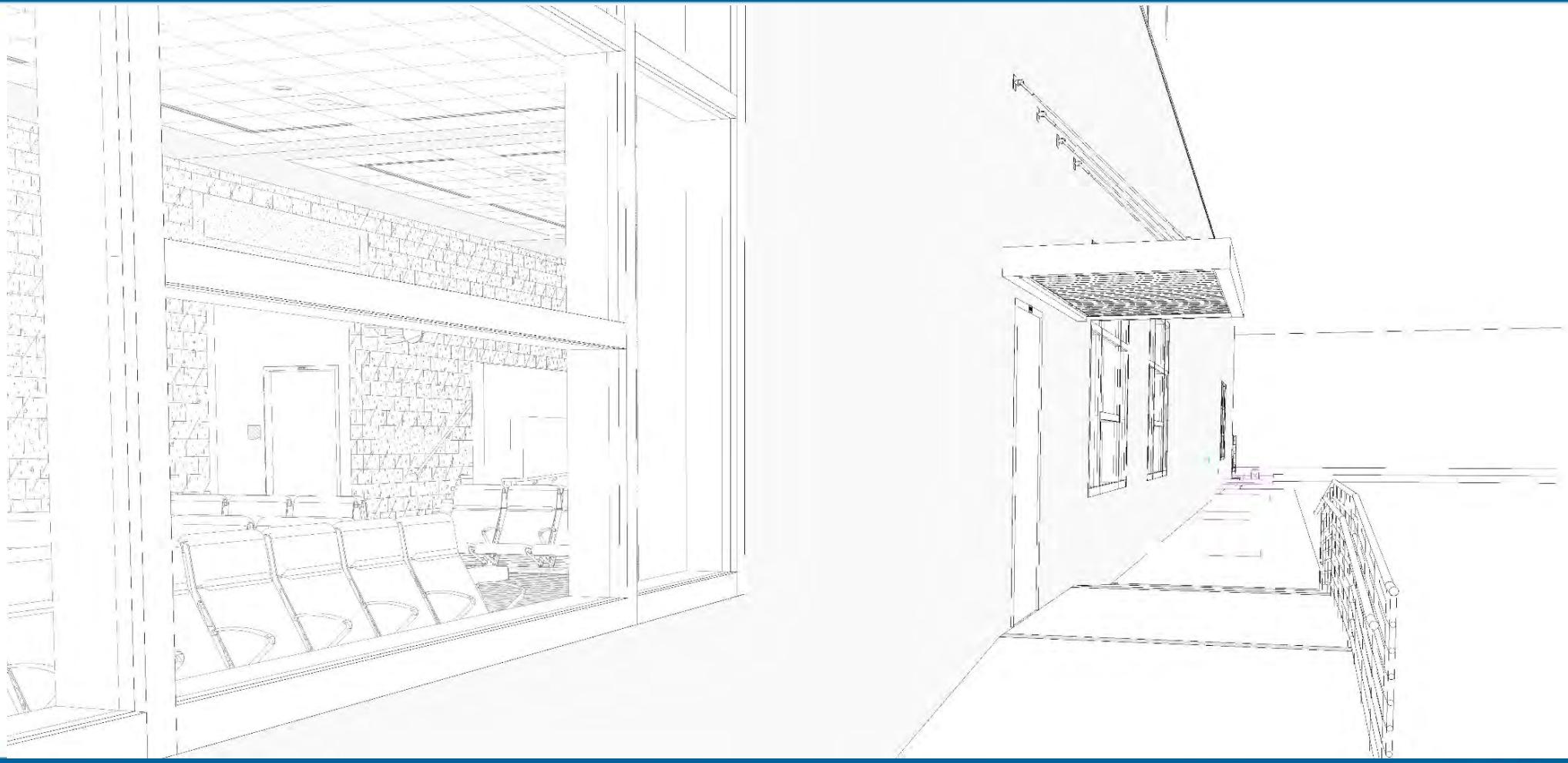
Design Overview



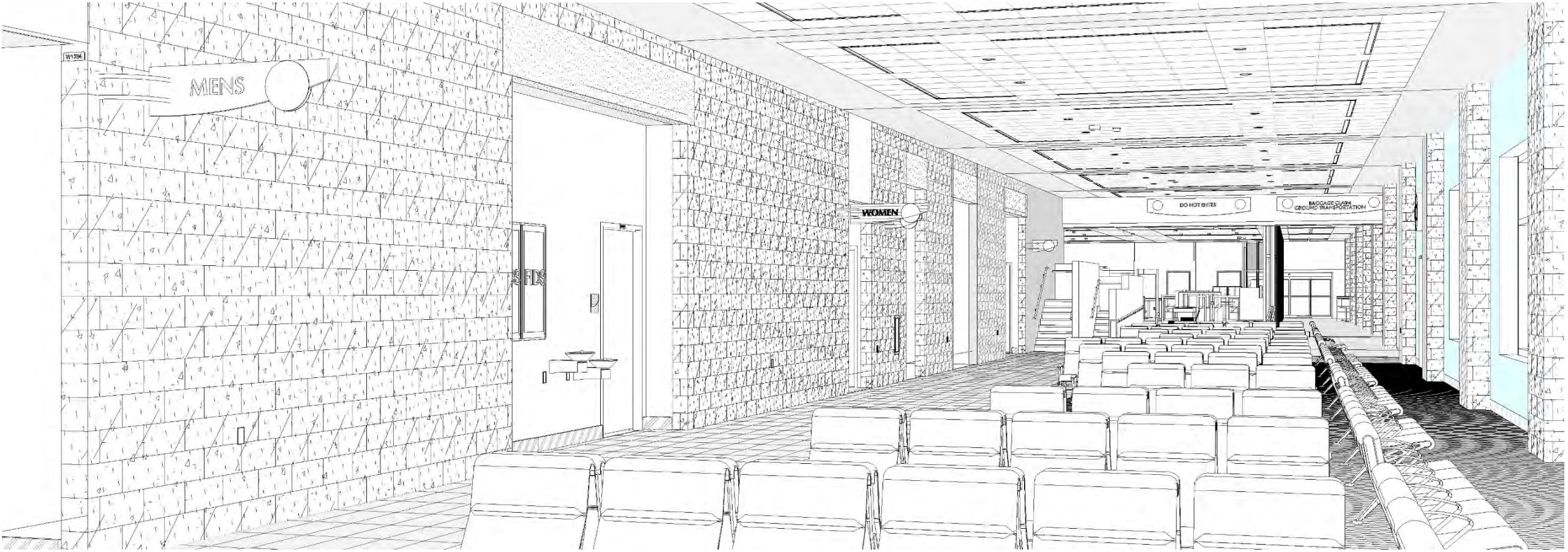
Air-side Access (no boarding bridges)



Air-side Exterior



Interior Space View



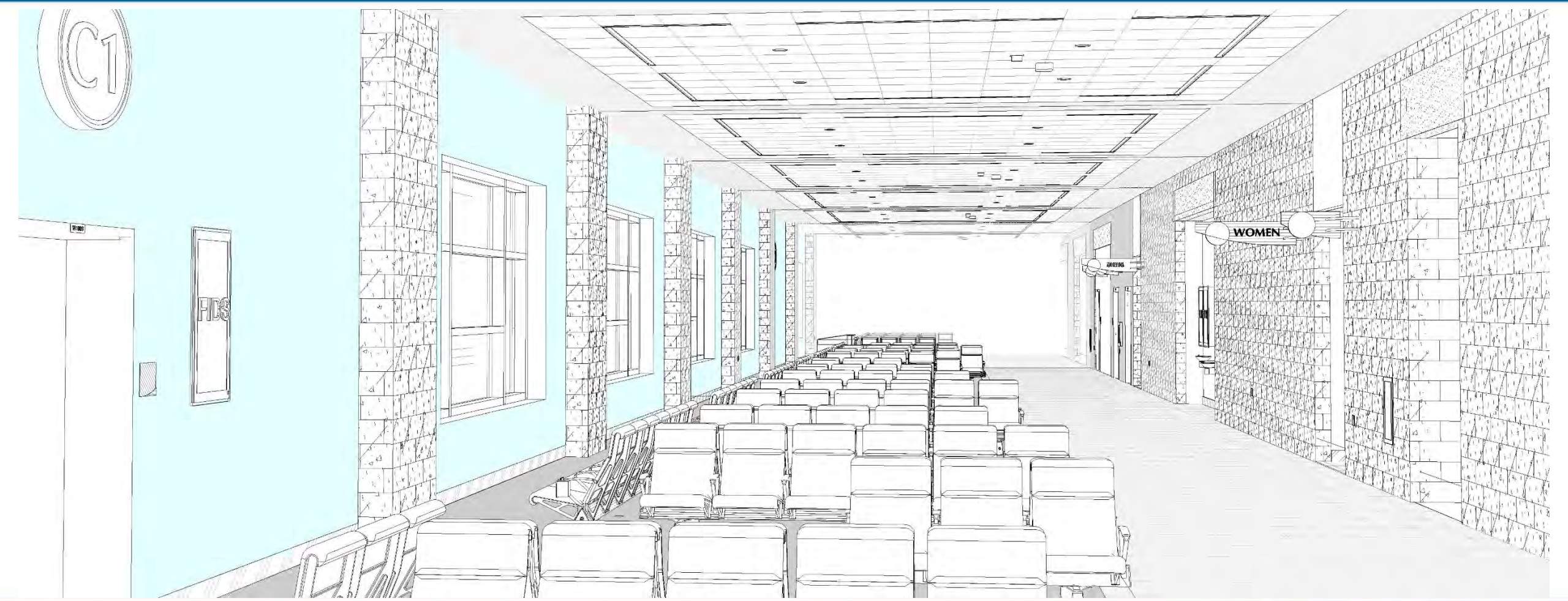
Concourse Entrance / Exit View

Building Entrance (Alt 4)

Entrance to Concourse (TSA Equip View)

Exit of TSA Area (Admin Space)

South Facing Interior View



Restroom Layout

Bid Schedule

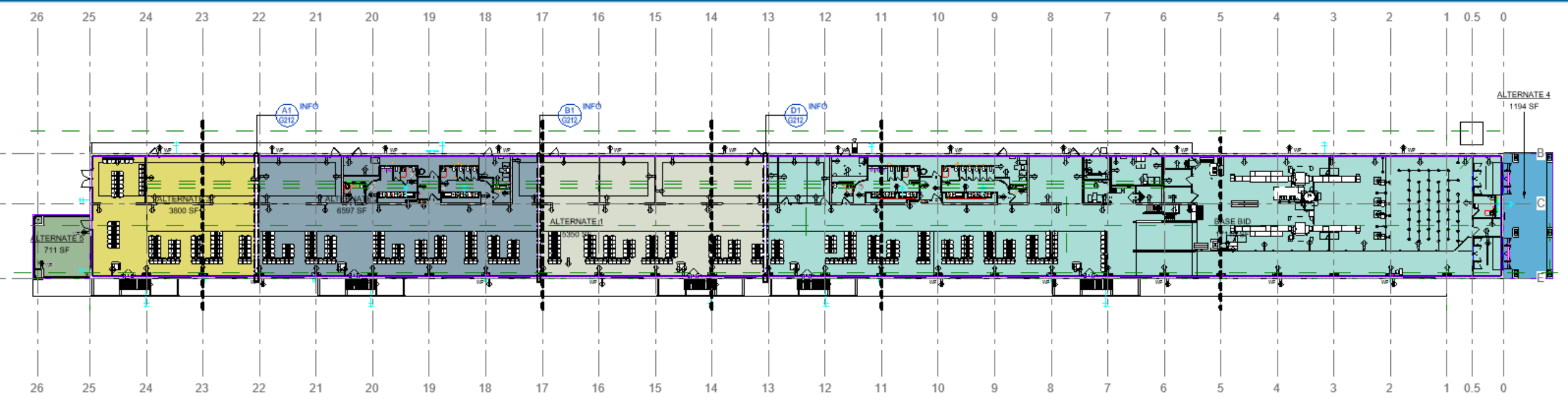
- Look at Alternate Information Sheets provided in the Set

G211 & G212

- Base bid and all alternates are lump sum each
- County may award the base only or any combination of base and alternates

Item Description	Quantity	Unit	Amount
BASE BID: Entry, TSA Support, (SSCP) Security Screening Check Point, Restroom Core 1, Holdroom C1 & C2, Reference Line 0-13	1	ea	
ADD ALTERNATE NO 1: Concessions, Holdroom C3, Reference Line 13-17	1	ea	
ADD ALTERNATE NO 2: Concessions, Restroom Core 2. Holdroom C4, Reference Line 17-22	1	ea	
ADD ALTERNATE NO 3: Holdroom C5, Reference Line 22-25	1	ea	
ADD ALTERNATE NO 4: Covered Entry Canopy and Structure Only; SLAB IS IN BASE BID	1	ea	
ADD ALTERNATE NO 5: Outdoor Seating Area (Concessions)	1	ea	
ADD ALTERNATE NO 6: Substitute "CALLA" HIGH CAC 50 24" X 24" x 1 ¾" Ceiling Tile for ACT1, See AF712	1	ea	
ADD ALTERNATE NO 7: Substitute CT2 for GT1 and GT2, See A45X SERIES & AF712	1	ea	

Construction Bid Plan



17,115SF	BASE BID Entry, TSA Support, SSCP, Restroom Core 1, Holdroom C1 & C2: REF LINES 00-13
5,350SF	ALTERNATE 1 Concessions, Holdrooms C3 : REF LINES 13-17
6,597SF	ALTERNATE 2 Concessions, Restroom Core 2, Holdroom C4: REF LINES 17-22
3,800SF	ALTERNATE 3 Holdroom C5: REF LINES 22-25
1,194SF	ALTERNATE 4 Covered Entry Canopy and Structure Only; Slab in Base Bid
711SF	ALTERNATE 5 Outdoor Seating Area (Concessions)

ALTERNATE 6
SUBSTITUTE "CALLA" HIGH CAC 50
24" X 24" X 1-3/4" CEILING TILE FOR **ACT1**
SEE **AF712**

ALTERNATE 7
SUBSTITUTE CT2 FOR GT1 AND GT2
SEE **A45X SERIES & AF712**

Surrounding Projects

- Start June
- Year + length
- Exterior cams

BHS/TICKETING

- Start March
- 60/120 days
- Exterior cams

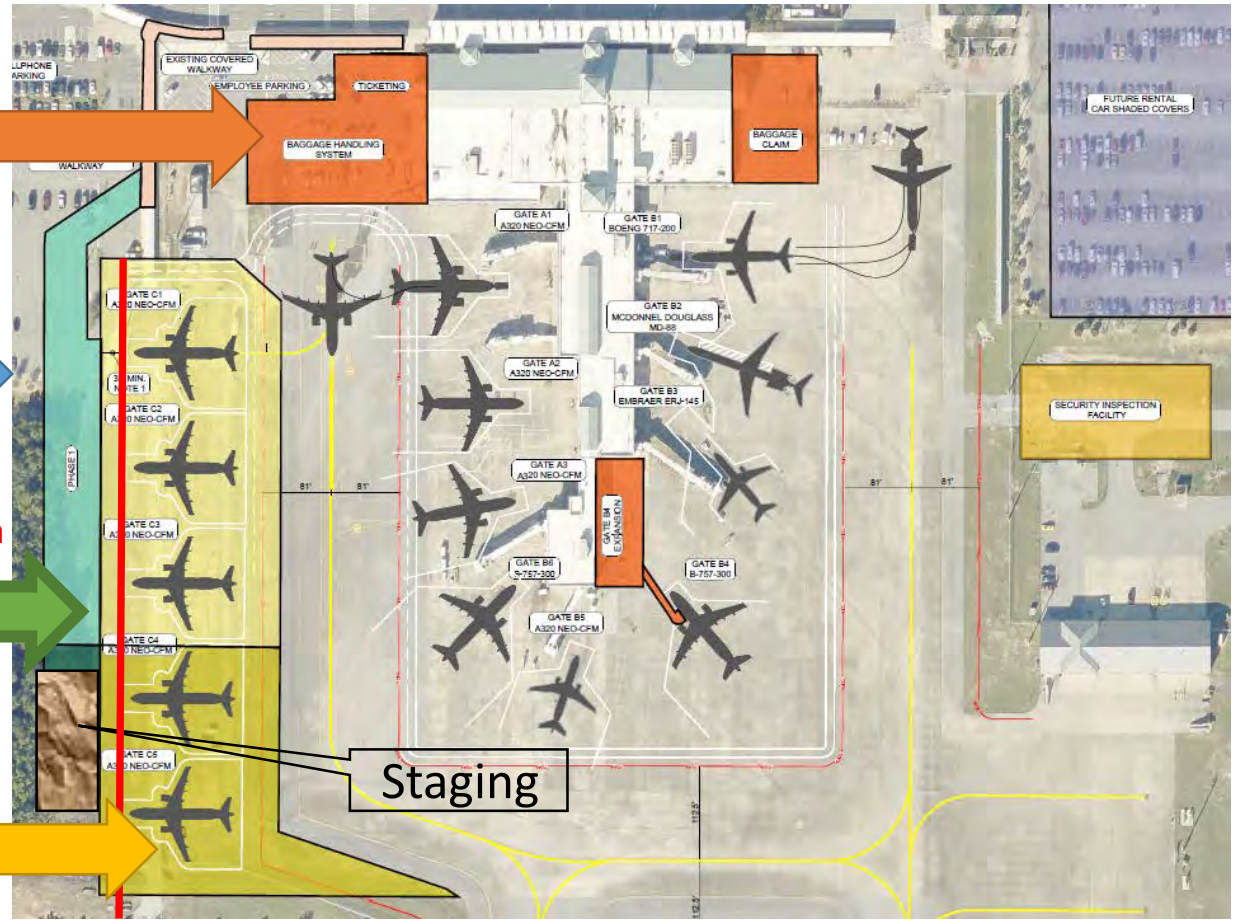
B Parking

Out of secure area

CONCOURSE C

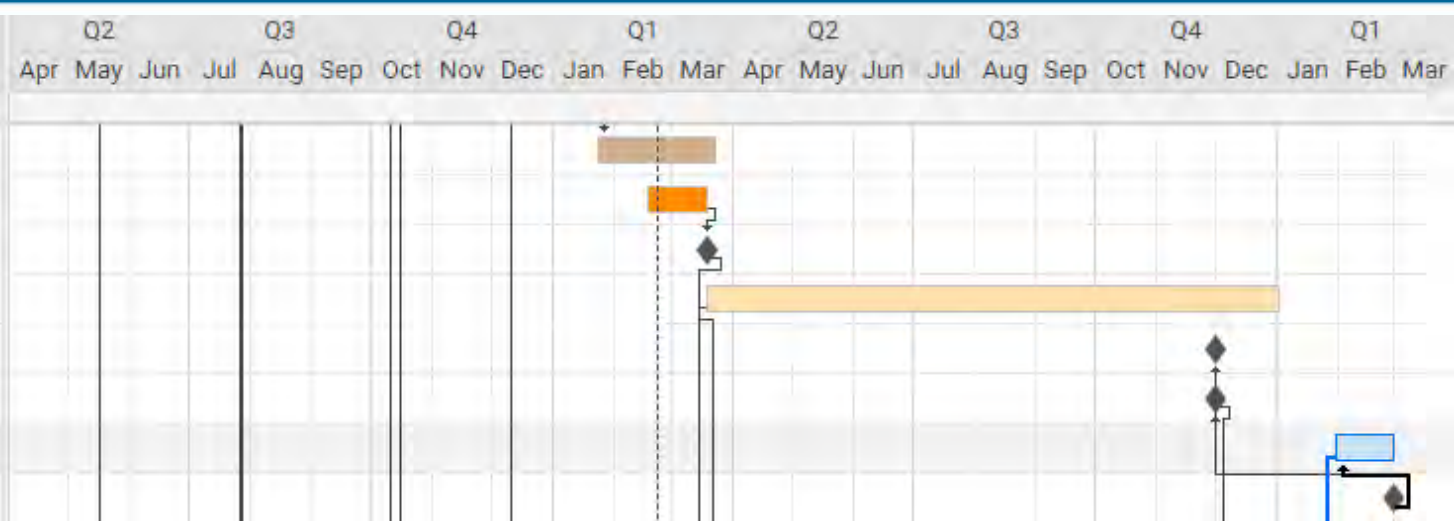
- Haul Route
- Stub Utilities
- Drainage

WEST APRON EXPANSION



Project Bid & Construction Schedule

Task Name	Du...	Start	Finish
Building Permit	60d	01/23/20	03/22/20
Bid Period	31d	02/17/20	03/18/20
Bid Close	0	03/18/20	03/18/20
Construction	290d	03/18/20	01/01/21
TSA areas clear and ready for install	0	12/01/20	12/01/20
Tenant Shell spaces Availavble	0	12/01/20	12/01/20
Operational Readiness (Owner shake Down)	30d	01/30/21	02/28/21
Open For Operation	0	03/01/21	03/01/21



- Look to sign/approve contract immediately and issue NTP
- Liquidated Damages ($3,902/day)
  - Overall project substantial/final completion
  - December 1st 2020 for building envelope shell ready for concessions build-out

Substitutions

Instructions to Respondents (ITC) § 9

- The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to the County, acceptance of the substitution "or equal" to material or equipment, will typically be considered by the County after the contract is awarded. However, any proposed substitution that represents a deviation from the design intent, must be approved prior to submission of the bid responses. A determination as to whether a design deviation or particular item that changes the design intent of the plans or specification is acceptable as a substitute or "equal" will be made by the County and Architect/Engineer. Design deviations approved prior to bid submittals will be made known to other contractors through an addendum.

Instruction To Bidders

Be sure to read and Fill out all forms included in section **BF**

Use **blue ink** to fill out originals

Be sure to check the purchasing website, demandstar and/or bidnetdirect for published addenda

Addenda / Bid Opening

- All questions about the meaning or intent of these Project Documents are to be directed to Issuing Office. Interpretations or clarifications considered necessary by Issuing Office in response to such questions will be issued by Addenda on the Purchasing website and bid net as mentioned above. Questions received after the question deadline may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- Addenda may also be issued to modify these Project Documents as deemed advisable by Owner or Architect/Engineer.

- Last Day for Questions
  - **March 4th 2020**
- Last Day for posted Addenda
  - **March 11th 2020**
- Bids Due/Opening
  - **March 18th 2020 (3pm)**

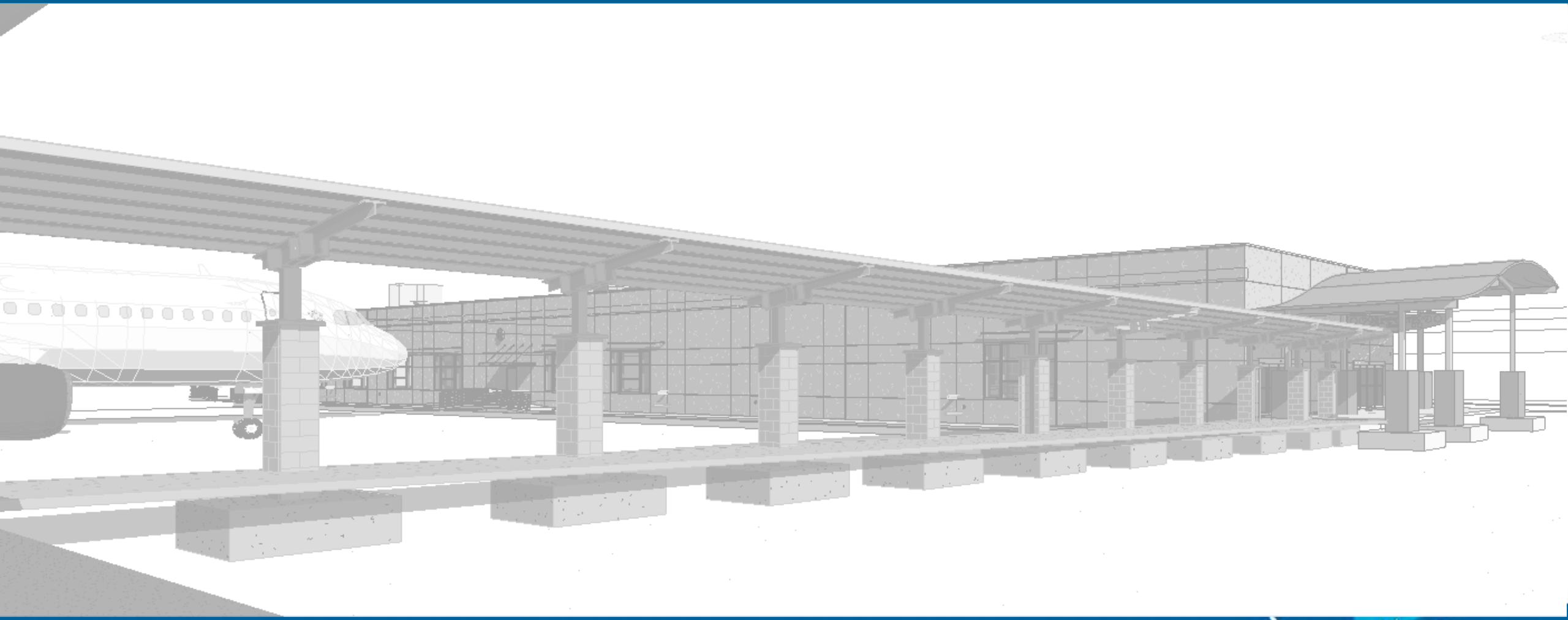
Send Questions to:

Okaloosa County Purchasing Department
5479A Old Bethel Road
Crestview, FL 32536

Email: jdarr@myokaloosa.com

(850) 689-5960

Questions



MLM-MARTIN
ARCHITECTS, INC.

substitution request review

Project:	ITB AP 35-20 Construction of Satellite Concourse "C"	**Owner:**	Okaloosa County, Florida Board of County Commissioners
Project Address:	Destin-Fort Walton Beach Airport 1701- State Road 85 North Eglin AFB, Florida 32542-1498		Okaloosa County Purchasing Department 5479A Old Bethel Road Crestview, FL 32536
		OAR:	Jessica Darr
To:	Kadee Industries, Inc. 7160 Krick Road Walton Hills, OH 44146	**From:**	MLM-Martin Architects, Inc. 668 N. Orlando Ave, Ste. 107 Maitland, FL 32751
ATTN:	Marie Behra		Miguel A. Martin, Assoc. AIA
Substitution #:	001 – 12 48 16 Entrance Floor Matts		
Section:	12 48 16 Entrance Floor Matts		
Date:	3/5/2020	**File:**	19672-511-20

■ **Approved - Supply Submittal Materials as Specified.**	☐ **Approved with Exceptions Noted**	☐ **Rejected Use Specified Materials**	☐ **Request Received too Late Use Specified Materials**

The above substitution request was reviewed as follows:

As submitted the product meets the requirements of specification. Refer to plans for locations and details for intent of installation.

End of substitution request review description

668 North Orlando Avenue, Suite 107, Maitland, FL 32751
Phone 407 897 6764, Fax 407 894 1338,
mamartin@mlm-martin.com www.mlm-martin.com License No. AA C002208

RECEIVED

FEB 21 2020

407-894-1338

SUBSTITUTION REQUEST

(During the Bidding/Negotiating Stage)

Attention:	**Project Architect**
Firm:	**MLM-Martin Architects Inc**
Address:	668 N Orlando Ave Ste 107 Maitland, FL 32751-4459
Project:	**Destin-Fort Walton Beach Airport Satellite Concourse**
Location:	Eglin AFB, FL
Bid Date:	3/18/20

Specification Section: 12 48 16

Proposed Substitute: Add Kadee Industries as an approved Manufacturer for Model **KD58 Stainless Steel Grating**

Manufacturer: Kadee Industries, Inc. Address: 7160 Krick Rd., Walton Hills, Ohio 44146 Phone: (800) 321-3827 Fax: (440) 439-6889

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Comparable warranty will be furnished for proposed substitution as for specified product.
- Comparable maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.

Submitted by: Marie Behra, Sales, Kadee Industries mbehra@kadeeindustries.com

Signed by: Marie Behra Date: 02/21/20

Firm:	Kadee Industries, Inc.
Address:	7160 Krick Road Walton Hills, OH 44146
Telephone:	800-321-3827 Fax: 440-439-6889

A/E's REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: Date:

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐

MODEL **KD58**

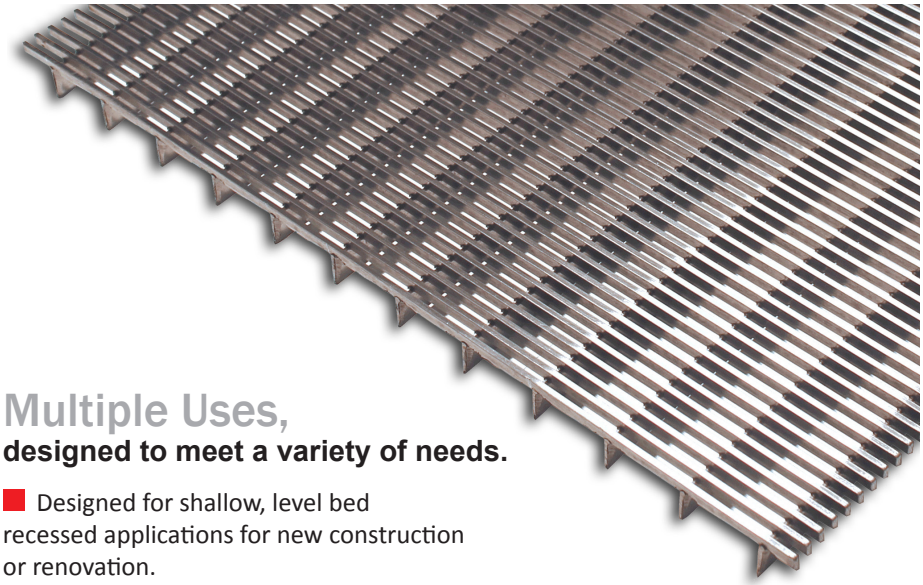
SSS Clean Tread™

5/8" STAINLESS STEEL GRATING

SAFE, SELF-CLEANING, STAINLESS STEEL ENTRANCE SYSTEMS

Applications

- ENTRANCE GRILLES:
  - LEVEL BED
- AIR GRILLES
- LIGHT DIFFUSERS
- REVOLVING DOORS
- CEILING AND WALL APPLICATIONS



Specifications

- **Section 12 48 16 Entrance Floor Grilles**

Furnish and install SSS Clean Tread Model KD58 Stainless Steel Grating as manufactured by Kadee Industries, Walton Hills, Ohio.
Phone: (800) 321-3827

- **Construction:**

Tread Material manufactured from Type 304 Stainless Steel .071" x .177" surface wires spaced with a .125" slot opening and resistance welded to .070" x 0.5" Type 304 Stainless Steel support rods spaced 1" on center.

Construction Each juncture of surface wires to support rods shall have electric resistance welded joints. Hidden or visual locking devices are provided to fasten grating.

Framing 6063-T6 Extruded Aluminum or Type 304 Stainless Steel. There are custom-made pit liners available in aluminum or stainless steel for drainage or evaporation applications.

- **Warranty** 5 years - details on back cover.

Multiple Uses,

designed to meet a variety of needs.

- Designed for shallow, level bed recessed applications for new construction or renovation.
- Wires are evenly spaced providing safe support for high heels, canes, wheelchairs, crutches and other walking aids.
- Custom designs available to fit almost any application.
- 59.9% air flow, great for registers.
- Self-cleaning design reduces regular maintenance costs.
- Slip Resistant with a minimum Coefficient of Friction of 0.6 in dry and wet testing.

KD38

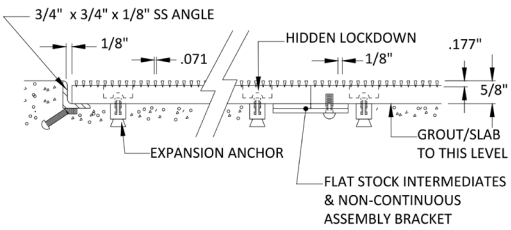
3/8" STAINLESS STEEL GRATING

The KD38 is similar to the model KD58, but at 3/8" thickness. It is an excellent alternative to aluminum or vinyl entrance mats, with a much longer life and lower maintenance. KD38 was designed as an ideal replacement or upgrade to standard worn out roll-out mats.

LEED Information

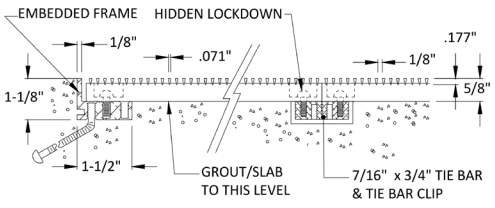
Environmental concerns are an important consideration to specifiers making material selections for products. Stainless steel's long service life and 100% recyclability make it an excellent environmental performer. Kadee Industries' SSS Clean Tread Stainless Steel Grating is manufactured from stainless steel comprised of 80% post consumer recycled content and 15% pre-consumer recycled content.

KD58 SS Grating SS Frame

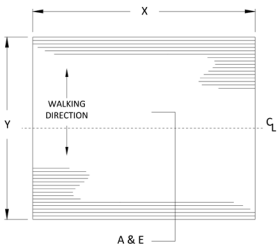


Section A & E

KD58 SS Grating Aluminum Frame



Section A & E



7160 Krick Rd • Walton Hills, OH 44146 • (800) 321-3827 Ph. • (440) 439-6889 Fax • www.kadeeindustries.com • floormats@kadeeindustries.com

MLM-MARTIN
ARCHITECTS, INC.

substitution request review

Project:	ITB AP 35-20 Construction of Satellite Concourse "C"	**Owner:**	Okaloosa County, Florida Board of County Commissioners
Project Address:	Destin-Fort Walton Beach Airport 1701- State Road 85 North Eglin AFB, Florida 32542-1498		Okaloosa County Purchasing Department 5479A Old Bethel Road Crestview, FL 32536
		OAR:	Jessica Darr
To:	Seaman Corporation 1000 Venture Blvd Wooster, Ohio 44691	**From:**	MLM-Martin Architects, Inc. 668 N. Orlando Ave, Ste. 107 Maitland, FL 32751
ATTN:	Dave Shultz, RRO, CDT		Miguel A. Martin, Assoc. AIA
Substitution #:	002 – 07 54 00 Thermoplastic Membrane Roofing		
Section:	07 54 00 Thermoplastic Membrane Roofing		
Date:	3/5/2020	**File:**	19672-511-20

☐ **Approved - Supply Submittal Materials as Specified.**	☐ **Approved with Exceptions Noted**	■ **Rejected Use Specified Materials**	☐ **Request Received too Late Use Specified Materials**

The above substitution request was reviewed as follows:

Although the Fibertite 45SM membrane meets the performance characteristics used as the basis of design. Allowing the thickness of the membrane to be reduced would open the possibility of alternative inferior products to be submitted. The 60mill thickness is included in the specification to level the field with knowledge that multiple products can meet the criteria at the specified thickness.

End of substitution request review description

668 North Orlando Avenue, Suite 107, Maitland, FL 32751
Phone 407 897 6764, Fax 407 894 1338,
mamartin@mlm-martin.com www.mlm-martin.com License No. AA C002208

From:	Miguel A Martin
To:	Miguel A Martin
Subject:	FW: Substitution Request - Destin-Fort Walton Beach Airport Satellite Concourse
Date:	Thursday, March 5, 2020 10:42:13 AM
Attachments:	image001.png FTR Physical Properties Comparison vs DuroLast.pdf 45 mil FiberTite-SM.pdf FL Projects Still Performing.pdf

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From: Dave Shultz <dshultz@seamancorp.com>
Sent: Monday, March 02, 2020 10:27 AM
To: Jeffrey Hyde <jhyde@myokaloosa.com>
Subject: Substitution Request - Destin-Fort Walton Beach Airport Satellite Concourse

Okaloosa County Board of Commissioners:

My name is Dave Shultz and I am the Central Florida Territory Manager for FiberTite Roofing Solutions. I respectfully submit a **Substitution Request under Specification Section 07-54-00 Thermoplastic Membrane Roofing** for the **Dustin-Ft Worth Beach Airport Satellite Concourse Project**.

FiberTite Roofing membranes are a Performance Based roofing membrane that rely on the superior performance of our solid KEE Plasticizer for longevity, in lieu of membrane thickness. As such, we are **submitting our 45SM membrane in lieu of the 60SM that is specified.**

There is no other single-ply roofing material on the market today that has the proven track record of FiberTite in the extreme Florida climate. Our history in Florida dates back to 1979 with 4 million sq. ft. of our 36 mil membrane installed in the 1980's, much of which is still performing today! Our 45SM KEE Thermoplastic Membrane, that falls under ASTM 6754, is a PVC based membrane that includes greater than 50% of the solid plasticizer KEE. This solid high molecular weight plasticizer does not migrate out of the sheet like the liquid plasticizers used in a standard PVC membrane meeting ASTM 4434. In addition, FiberTite roofs are extremely chemical and puncture resistant. We are the only single-ply manufacturer that includes Hail Coverage up to ¾" in diameter in our standard warranty for no additional fee, we do not exclude ponding water, and 95% of all FiberTite roofs installed since our product was introduced in 1979 are still in service today. And we've never changed our formulation!

FiberTite certifies that the Product Substitution will not require changes to the Contract Documents or affect work of other trades including, but not limited to, changes to the design by the A/E. Further, we certify that the FiberTite 45SM membrane is equal in quality and all aspects of performance and appearance to the items specified.

<u>A few of the benefits of choosing a FiberTite system</u>:

1. The Strongest Membrane on the Market:
   a. Seaman Corporation has a superior weld technology that has proven to withstand hurricane force winds.
   b. FiberTite has a base fabric that is tighter than any product in the industry causing the membrane to out-perform any other roofing membrane with regards to tear, puncture and rupture.
   c. YouTube Video Demonstration:

2. Chemical Resistance:
   a. FiberTite is made predominately from a polymer called Elvaloy which allows it to be

unaffected by chemicals such as Jet Fuel.

b. FiberTite is a preferred membrane in food processing plants and airports due to animal fats and jet fuels penetrating the roof.

c. YouTube Video Demonstration:

3. Fire Resistance:

a. FiberTite is non-combustible and will not perpetuate fire.

b. YouTube Video Demonstration:

Thank you for your consideration. Please call with questions, comments or concerns. I look forward to your reply.

Dave Shultz, RRO, CDT
Direct Sales Representative - Central Florida
Seaman Corporation
1000 Venture Blvd Wooster, Ohio 44691
C: 386-847-2833
dshultz@seamancorp.com
www.seamancorp.com

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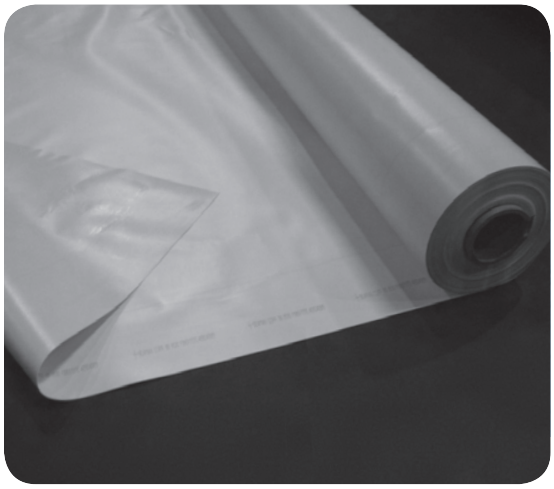

45 mil FiberTite-SM

Product Data

Seaman Corporation's 45 mil FiberTite-SM features an 18 x 19 / 840 x 1,000 denier weft reinforced polyester knit fabric, coated with a proprietary compound, utilizing DuPont's™ Elvaloy® Ketone Ethylene Ester (KEE) as the principle polymer in the hybrid vinyl alloy coating.

DESCRIPTION

45 mil FiberTite-SM is a 40-oz sq. yd/nominal 45-mil (1.1 mm) thick membrane. 45 mil FiberTite-SM not only meets or exceeds the minimum physical property requirements enumerated in ASTM D6754-02 Standard Specification for Ketone Ethylene Ester (KEE) Based Sheet Roofing, but exceeds the physical properties and performance characteristics of 60-mil competitive products.

Seaman Corporation is vertically integrated, which allows complete control over the manufacturing process from the selection of the yarns, to the engineering, knitting and weaving of the base fabrics to the final coating process. Today, FiberTite Roofing Membranes are the result of Seaman Corporation's 60 years of applied fabric engineering and coating technology.

All FiberTite Roofing Membranes are constructed using high tenacity/heavy weight yarns to create a base fabric reinforcement to impart superior puncture, tensile and tear resistance properties. The base polyester fabrics are primed with a unique and proprietary adhesive coat that lays the foundation to physically bond the KEE coatings to the "fiber" to maximize seam strength and overall membrane performance.

45 mil FiberTite-SM is coated on the face with Seaman Corporation's original "KEE" formulation to provide superior hot air welding characteristics, extreme UV resistance, broad chemical resistance and long-term flexibility and reparability for the installed roofing membrane system. The back side of the membrane is coated with a slightly modified (SM) economical version of Seaman Corporation's original KEE compound to control membrane costs while offering additional thickness and weather ability. Additionally, 45 mil FiberTite-SM exhibits excellent tear, puncture, fungus, algae and flame resistance that make FiberTite Roofing Systems some of the most sustainable roofing systems available.

45 mil FiberTite-SM membrane is manufactured in conventional, 74-in and 100-in wide by 100-ft roll goods. 45 mil FiberTite-SM is also available in customized prefabricated roll widths and lengths that incorporate integrated fastening tabs, sealing tabs and also "no-tab" rolls of membrane up to 20-ft wide by 100-ft in length. Field seaming of the membrane is accomplished by fusing the thermoplastic membrane with conventional hot air welding equipment.

PHYSICAL PROPERTIES

ASTM D6754-02	Mininimum Requirements	45 mil Typical
Thickness, mm (in.) *ASTM D 751*	0.79 (0.031)	1.14 (0.045 nom.)
Thickness over Fiber, mm (in) *Optical method (inches)*	0.15 (0.006)	.37 (0.0145)
Breaking Strength, N (lbf) *ASTM D 751 proc. B - strip*	1175 (265)	1557 (350)
Elongation at Break, % *ASTM D 751 - strip*	15	18
Tear Strength, N (lbf) *ASTM D 751 Proc. B. Tongue Tear*	335 (75)	445 (100)
Linear Dimensional Change *ASTM D 1204 max (%)*	1.3	0.63
Fabric Adhesion, N/m (lbf/in) *ASTM D 751*	225 (13)	no peel
Retention of Properties after Heat Aging *ASTM D 3045 - 176°f/56 days* **Breaking Strength, strip, % original** **Elongation at Break, strip, % original**	 90 90	 90 90
Low Temperature Bend after Heat Aging	-30	-40
Low Temperature Bend *ASTM D 2136 (°f)*	-30	-40
Change in Weight after Exposure in Water *D 471 158°f, 166 h, one side only, max. (%)*	0.0, +6.0	0.0, +3.7
Factory Seam Strength, N (lbf) *ASTM D 751 Grab Method*	1780 (400)	> Fabric Break
Hydrostatic Resistance, Mpa (psi) *ASTM D751*	3.5 (500)	5.2 (750)
Static Puncture Resistance *ASTM D 5602 (99 lbf)*	pass	pass
Dynamic Puncture Resistance (J) *ASTM D 5635*	10	25

FiberTite Seaman Corporation
INTELLIGENT ROOFING SOLUTIONS

For more information on FiberTite Systems and accessories please call:
Seaman Corporation (800) 927-8578
International (330) 262-1111
www.fibertite.com

FiberTite® is a registered trademark of Seaman Corporation.

FM APPROVED — Subject to the conditions of Approval for a roof covering when installed as described in the current edition of the Approval Guide.

CRRC DC196 CHARTER MEMBER

CFFA CHEMICAL FABRICS & FILM ASSOCIATION, INC.

UL — As to an external fire exposure only. See UL directory of products certified for Canada and UL roofing materials and systems directory 34KL, 48P0, 97P9.

ES ESR-1456

BBA

MIAMI-DADE COUNTY APPROVED

SPRI

45 mil FiberTite-SM

Product Data

APPLICATION

45 mil FiberTite-SM Roofing Systems carry extensive FM Global and Underwriters Laboratories approvals. 45 mil FiberTite-SM Roofing Systems can be installed by mechanically fastening the membrane with FiberTite Magnum Fasteners and Stress Plates or adhering the membrane in FTR 190e bonding adhesive or FTR 490 bonding adhesive to pre-approved substrates. 45 mil FiberTite-SM can also be installed in typical ballast configurations using conventional stone or paver ballast.

For specific installation recommendations and requirements, please consult the most current versions of Seaman Corporation's Guide Specifications for the Installation of FiberTite Roofing Systems.

PHYSICAL PROPERTIES (cont.)

ASTM D6754-02	Mininimum Requirements	45 mil Typical
Accelerated Weathering *Practice G 155 / xenon*	5000hr	>10000hr
cracking (7x magnification)	none	none
crazing (7x magnification)	none	none
Accelerated Weathering *Practice G 154 / UVA*	5000hr	>10000hr
cracking (7x magnification)	none	none
crazing (7x magnification)	none	none
Fungi Resistance **Sustained Growth** *Practice G 21, 28 days* **Discoloration**	no growth none	no growth none
Abrasion Test, cycles *D 3389 H-18 wheel / 1,000 g load*	1,500	2,000+
Additional Physical Properties		
Tensile Strength (psi) *ASTM D882*	8500	
Breaking Strength (lbs) *ASTM D751, Grab Method*	450	
Puncture Resistance (lbs) *ASTM D751, Bursting Strength*	350	
Water Vapor Transmission *ASTM E96 proc. A (gm/m2/24hrs)*	1.3	
Shore A Hardness *ASTM D2240*	87	
Flame Resistance *MIL-C-20696C / Type II Class 2*	pass	
Oil Resistance, MIL-C 20696C *No swelling, cracking or leaking*	none	
Hydrocarbon Resistance, MIL-C-20696C *No swelling, cracking or leaking*	none	
High Temperature Dead Load *ASTM D751 (50 lbs, 160°F, 4 hrs)*	pass	
Energy Attributes (Color DC196 Off-White)		
Solar Reflectance *ASTM E903* *ASTM E1918*	79% 83%	
Solar Reflectance (3 yr aged) *ASTM C1549*	Un-Cleaned 66%	Cleaned 78%
Solar Emmittance *ASTM E408* *ASTM C1371*	95% 85%	
Solar Emmittance (3 yr aged) *ASTM C1371*	Un-Cleaned 74%	Cleaned 81%
Energy Star	yes	
Solar Reflective Index (SRI) *ASTM E1980*	98.54	
LEED 2.2 - Heat Island Effect *SS Credit 7.2*	1 Credit	

FiberTite®
Seaman Corporation
INTELLIGENT
ROOFING SOLUTIONS

FiberTite vs. DuroLast EV PVC w/KEE & DuroLast PVC

Property	Nominal 36-mil FiberTite	Nominal 45-mil FiberTite-SM	Nominal 50-mil FiberTite-XT	Nominal 60-mil DuroLast EV	Nominal 60-mil DuroLast PVC
Thickness, overall, mil - ASTM D751	33	41	45	62	56
Thickness, coating over reinforcement, mil - ASTM D6754, Annex 1	9	14	15	26	23
Unit Mass, lb/ft^2	21	28	30	39	34
Breaking Strength, lbf - ASTM D751, Procedure B - Strip	319	378	391	295	320
Elongation @ Fabric Break, % - ASTM D751, Procedure B	24	28	28	42	34
Elongation @ Coating Break, % - ASTM D751 Procedure B	24	28	28	283	63
Bursting Strength, psi - ASTM D751 - 1-in Ball Burst	287	306	250	240	275
Tearing Strength, lbf - ASTM D751, Procedure B - Tongue Tear	113	128	138	222	129
Fabric Adhesion, pli , ASTM D751, 12-in/min	could not initiate peel	could not initiate peel	could not initiate peel	could not initiate peel	could not initiate peel
Hydrostatic resistance, Mullen, psi - ASTM D751, Procedure 1	> 600	> 600	> 600	> 600	594
Chemical Resistance - Unit Mass, % of Control					
Jet Fuel	99	95	100	102	88
Compressor Oil	99	99	100	100	93
Hexane	95	90	95	93	84
Chemical Resistance, Hardness, % of Control					
Jet Fuel	100	99	99	96	106
Compressor Oil	101	101	101	101	106
Hexane	101	102	101	101	108
Polymer Content, % KEE Weight - NMR per National Research Council Canada	45	35	47	31	n/a

FiberTite Roofs – West Coast of Florida

Sarasota Agriculture Center – Sarasota, FL
Date: 10/20/1983

Seven Lakes Building 4 - Fort Myers, FL
Date: 08/22/1989

Windward Bay (Villas 5-8) – Longboat Key, FL
Date: 06/05/1984

MacArthur Beach Racquet Club
Date: 03/07/1990

Bank of Naples – Naples, FL
Date: 08/21/1985

Mira Mar Plaza – Sarasota, FL
Date: 06/22/1990

FiberTite Roofs – West Coast of Florida

Ironwood G – Bradenton, FL
Date: 01/19/1993

Lido Ambassador – Sarasota, FL
Date: 04/14/1997

Sarasota Memorial Hospital Lakeside – Sarasota, FL
Date: 09/16/1997

Ironwood I – Bradenton, FL
Date: 03/04/1998

Children's Services – Pensacola, FL
Date: 02/14/1997

MLM-MARTIN
ARCHITECTS, INC.

substitution request review

Project:	ITB AP 35-20 Construction of Satellite Concourse "C"	**Owner:**	Okaloosa County, Florida Board of County Commissioners
Project Address:	Destin-Fort Walton Beach Airport 1701- State Road 85 North Eglin AFB, Florida 32542-1498		Okaloosa County Purchasing Department 5479A Old Bethel Road Crestview, FL 32536
		OAR:	Jessica Darr
To:	New Millennium Building Systems 7575 W. Jefferson Blvd. Ft. Wayne, IN 46835	**From:**	MLM-Martin Architects, Inc. 668 N. Orlando Ave, Ste. 107 Maitland, FL 32751
ATTN:	Sean Smilth		Miguel A. Martin, Assoc. AIA
Substitution #:	003 – 05 31 00 Steel Decking		
Section:	05 31 00 Steel Decking		
Date:	3/5/2020	**File:**	19672-511-20

☐ **Approved - Supply Submittal Materials as Specified.**	☐ **Approved with Exceptions Noted**	■ **Rejected Use Specified Materials**	☐ **Request Received too Late Use Specified Materials**

The above substitution request was reviewed as follows:

New Millennium Building Systems is listed as an approved manufacturer of Decking - §053100-2.2-A.-2.

Products offered by New Millennium conforming to notes on structural drawings Key note 1 indicating a "1 ½" metal roof deck and detail 7/S503 indicates Type B." is acceptable.

The Toris 4 noted as basis of design. is for use on the Canopy (Alternate 4 work) only §053100-2.2-B.-2. – The design of this canopy include the basis of 4" deck height and the requirement for the deck to be factory finished with polyvinylidene fluoride coating per Architectural Drawings.

End of substitution request review description

668 North Orlando Avenue, Suite 107, Maitland, FL 32751
Phone 407 897 6764, Fax 407 894 1338,
mamartin@mlm-martin.com www.mlm-martin.com License No. AA C002208

Advancement of Construction Technology

SUBSTITUTION REQUEST
(Bidding Phase)

Project: Destin-Ft. Walton Beach Airport
Satellite Concourse C

Substitution Request Number _____

From: Sean Smith

To: MLM – Martin Architects, Inc.
668 N Orlando Ave. Ste 107
Maitland, FL 32751

Date: 3/2//2020

A/E Project Number: _____

Re: Toris 4

Contract For: Long-span dovetail steel deck

Specification Title: Steel Decking

Description: Steel Deck

Section: Section 053100 Page: 053100

Article: Part 2 Products

Proposed Substitution: Versa-Dek 3.5 LS

Manufacturer: New Millennium Building Systems Address: 7575 W. Jefferson Blvd. Ft. Wayne, IN 4604 Phone: 618-694-5610

Trade Name: Long-span dovetail steel deck Model No.: n/a

Installer: T.B.D. Address: T.B.D. Phone: T.B.D.

History: ☐ New product ☐ 2-5 years old ☐ 5-10 years old X☐ More than 10 years old

Differences between proposed substitution and specified product: ½" profile height difference.

X☐ Point-by-point comparative data attached

Reason for not providing specified item: New Millennium Building Systems was not specified for the roof deck. Toris 4 deck is basis of design.

Similar Installation:

Project: Walker Natatorium

Architect: Christner

Address: 730 Chopin Dr, Kirkwood, MO 63122

Owner: Kirkwood School District

Date Installed: July 2016

Proposed substitution affects other parts of Work: X ☐ No ☐ Yes; explain _____

Savings to Owner for accepting substitution: T.B.D. ($T.B.D.).

Proposed substitution changes Contract Time: X ☐ No ☐ Yes [Add] [Deduct] _____ days.

Supporting Data Attached: ☐ Drawings X☐ Product Data ☐ Samples X☐ Tests X☐ Reports ☐ Side by side comparison

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SUBSTITUTION REQUEST
(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Sean Smith

Signed by: Sean M. Smith

Firm: New Millennium Building Systems

Address: 7575 W. Jefferson Blvd. Ft. Wayne, IN 46804

Telephone: 618-694-5610

Attachments: Please find attached a letter, side by side deck comparison, and ESR report.

A/E's REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01330.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: Date:

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____

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NEW MILLENNIUM
BUILDING SYSTEMS

March 2, 2020

MLM – Martin Architects, Inc.
668 N Orlando Ave. Ste 107
Maitland, FL 32751

RE: Destin-Ft. Walton Beach Airport Satellite Concourse C

Dear Sir or Madame:

We are seeking approval of our Versa-Dek 3.5 LS as a suitable equivalent to the specified Toris 4 called out in the plans and specifications for this project. Both decks are dovetail deck, but Toris 4 is a proprietary type of dovetail deck. Standard dovetail decks come in 2" and 3.5" profile heights. The following documents are enclosed for your review:

- Side by side product comparison.
- ESR-ICC test report.
- Substitution request form.

New Millennium Building Systems hereby certifies that all our Metal Roof and/or Floor Decks and Accessories are designed and manufactured in accordance with the Standard Deck Specifications of the Steel Deck Institute (SDI). All section properties and load tables are determined using the American iron and Steel Institute's "Specifications for the Design and Cold-Formed Steel Structural Members", 2001 Edition. Additional information on our family of products may be obtained from our website, www.newmill.com. We have 2000 standard details available.

We sincerely appreciate your professional cooperation and attention in this matter.

Thanks and Warm Regards,

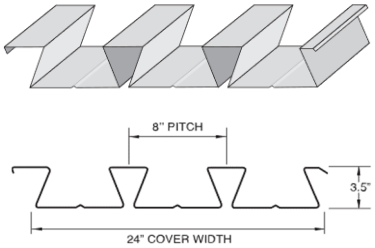
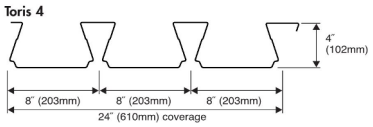
Sean M. Smith

Sean M. Smith

Market Development Manager
New Millennium Building Systems
Work: (618)-694-5610
sean.smith@newmill.com

NEW MILLENNIUM
BUILDING SYSTEMS

Project: Satellite Concourse C
Location: Elgin AFB, FL

Deck Area	S411 Enlarged Roof Framing Plan - Area 1		
			Notes
Product Description			
Type	3.5 Versa-Dek® LS	Toris 4	
Height (in.)	3.5	4	
Steel Thickness (Gauge / in.)	16 GA / 0.0598	18 GA / 0.0474	
Steel Yield Strength, F_y (KSI)	40 / A653 Grade 40	40 / A653 Grade 40	
ICC Report	ESR-2657	IAPMO ES ER-0226	
Deck Weight (PSF)	5.54	4.4	
Profile Section Properties			
Moment of Inertia, Id (in^4/ftw)	3.394	3.420	See ESR-2657 page 7 & ER-0226 page 6
Section Modulus, Positive Bending, Sp (in^3/ftw)	1.504	1.240	
Section Modulus, Negative Bending, Sn (in^3/ftw)	1.573	1.240	
Design & Installation			
Deck Design	Single Span or Greater	Single Span or Greater	See attached load table (page 2 of 2) & ER-0226 page 11
Span Length (Ft. - in.)	15'-3"	15'-3"	
Design Superimposed Total Load (psf)	20 (SDL) + 20 (LL) = 40	20 (SDL) + 20 (LL) = 40	
Allowable Superimposed Uniform Load (psf)	57	64*	*Interpolated value

NEW MILLENNIUM
BUILDING SYSTEMS

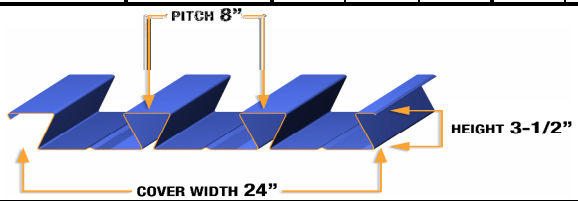
VERSA-DEK® 3.5 LS ROOF (ASD)

3-1/2" high x 8" pitch x 24" wide

SECTION PROPERTIES

fy=40 ksi

GAGE	Wd	I_D (DEFLECTION)	Sp	Sn	Rbe			Rbi			Va
					2"	3"	4"	4"	5"	6"	
20	3.33	1.959	0.775	0.910	681	781	865	1437	1546	1645	3619
19	3.88	2.324	0.946	1.072	911	1040	1150	1903	2043	2170	4934
18	4.40	2.664	1.113	1.226	1151	1311	1446	2390	2561	2717	6345
16	5.54	3.394	1.504	1.573	1771	2007	2205	3638	3888	4114	8867



ASD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM ASD LOADS (psf)											
Span	Load Combinations	SINGLE SPAN				DOUBLE SPAN				TRIPLE SPAN			
		GAGE											
		20	19	18	16	20	19	18	16	20	19	18	16
12' - 0"	D+L (Strength)	83	101	119	162	92*	113*	130*	167*	106*	140*	163*	210*
	D+L (Deflection)	71	84	97	123	92	113	130	167	106	140	163	210
	L (Deflection)	50	59	67	86	92	113	130	167	93	111	127	162
12' - 3"	D+L (Strength)	79	97	114	155	91*	109*	125*	160*	103*	136*	156*	201*
	D+L (Deflection)	67	79	91	116	91	109	125	160	103	136	156	201
	L (Deflection)	47	55	63	81	91	109	125	160	88	104	120	152
12' - 6"	D+L (Strength)	76	93	110	148	88*	104*	120*	154*	101*	130*	150*	193*
	D+L (Deflection)	63	74	85	109	88	104	120	154	101	130	150	193
	L (Deflection)	44	52	60	76	88	104	120	154	83	98	112	143
12' - 9"	D+L (Strength)	73	89	105	143	85*	100*	115*	148*	99*	125*	144*	185*
	D+L (Deflection)	59	70	80	102	85	100	115	148	99	125	144	185
	L (Deflection)	41	49	56	72	85	100	115	148	78	92	106	135
13' - 0"	D+L (Strength)	70	86	101	137	81*	96*	110*	142*	97*	120*	138*	178*
	D+L (Deflection)	55	66	75	96	81	96	110	142	97	120	138	178
	L (Deflection)	39	46	53	68	81	96	110	142	74	87	100	127
13' - 3"	D+L (Strength)	67	82	97	132	78*	92*	106*	137*	95*	116*	133*	171*
	D+L (Deflection)	52	62	71	90	78	92	106	137	95	116	133	171
	L (Deflection)	37	44	50	64	78	92	106	137	69	82	94	120
13' - 6"	D+L (Strength)	65	79	93	127	75*	89*	102*	131*	93*	112*	128*	165*
	D+L (Deflection)	49	58	67	85	75	89	102	131	93	112	128	165
	L (Deflection)	35	41	47	60	75	89	102	131	66	78	89	114
13' - 9"	D+L (Strength)	62	76	90	122	72*	86*	98*	127*				
	D+L (Deflection)	46	55	63	80	72	86	98	127				
	L (Deflection)	33	39	45	57	72	86	98	127				
14' - 0"	D+L (Strength)	60	73	86	117	70*	83*	95*	122*				
	D+L (Deflection)	44	52	59	76	70	83	95	122				
	L (Deflection)	31	37	42	54	70	83	95	122				
14' - 3"	D+L (Strength)	58	71	83	113	67*	80*	91*	117*				
	D+L (Deflection)	41	49	56	71	67	80	91	117				
	L (Deflection)	30	35	40	51	67	80	91	117				
14' - 6"	D+L (Strength)	56	68	80	109	65*	77*	88*	113*				
	D+L (Deflection)	39	46	53	68	65	77	88	113				
	L (Deflection)	28	33	38	49	65	77	88	113				
14' - 9"	D+L (Strength)	54	66	77	105	63*	74*	85*	109*				
	D+L (Deflection)	37	44	50	64	63	74	85	109				
	L (Deflection)	27	32	36	46	63	74	85	109				
15' - 0"	D+L (Strength)	52	63	75	101	61*	72*	82*	106*				
	D+L (Deflection)	35	41	47	60	61	72	82	106				
	L (Deflection)	25	30	35	44	61	72	82	106				
15' - 3"	D+L (Strength)	50	61	72	98	58*	69*	79*	102*				
	D+L (Deflection)	33	39	45	57	58	69	79	102				
	L (Deflection)	24	29	33	42	58	69	79	101				

12' - 0"	D+L (Strength)	83	← Max. superimposed ASD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	71	← Max. superimposed ASD dead + live load (psf) (governed by deflection limitation of L/240 or 1")
	L (Deflection)	50	← Max. superimposed ASD live load (psf) (governed by deflection limitation of L/360 or 1")

↑ Vertical load span (center to center spacing)

Wd Weight of deck (uncoated), psf
I_D Moment of inertia for deflection per foot of deck width, $(in^4)/ft$
Sp Section modulus for positive bending per foot of deck width, $(in^3)/ft$
Sn Section modulus for negative bending per foot of deck width, $(in^3)/ft$
Va Allowable shear value per foot of deck width, plf
Rbe Allowable exterior web crippling value per foot of deck width, plf
Rbi Allowable interior web crippling value per foot of deck width, plf
D Uniform dead load, psf
L Uniform live load, psf

Notes:
1. Bending strength based on allowable flexural stress of 24 ksi.
2. Loads marked with asterisk (*) are governed by moment & shear or interior reactions (web crippling) assuming 4" of interior bearing.
3. An upper limit of 400 psf has been applied to the loads.
4. Deck length over 45'-0" require inquiry and special accommodations. Please contact NMBS for further information.

The section properties table is based on AISI S100-07/S2-10 North American Specification for the Design of Cold-Formed Steel Structural Members with Supplement No. 2.
Acoustical profile is also available.

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Reissued 03/2018
This report is subject to renewal 03/2020.

DIVISION: 05 00 00—METALS
SECTION: 05 31 00—STEEL DECKING
SECTION: 05 31 23—STEEL ROOF DECKING

REPORT HOLDER:

NEW MILLENNIUM BUILDING SYSTEMS, LLC

7575 WEST JEFFERSON BOULEVARD
FORT WAYNE, INDIANA 46804

EVALUATION SUBJECT:

NEW MILLENNIUM STEEL ROOF DECK PANELS: D4.5, D6 AND D7.5 DEEP-DEK®; D4.5A, D6A AND D7.5A DEEP-DEK® ACOUSTICAL; D4.5C, D6C AND D7.5C DEEP-DEK® CELLULAR; D4.5CA, D6CA AND D7.5CA DEEP-DEK® CELLULAR ACOUSTICAL; VERSA-DEK® ROOF DECK PANELS; AND VERSA-DEK® ACOUSTICAL ROOF DECK PANELS

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ICC-ES Evaluation Report

ESR-2657

Reissued March 2018
Revised April 2018
This report is subject to renewal March 2020.

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DIVISION: 05 00 00—METALS
Section: 05 31 00—Steel Decking
Section: 05 31 23—Steel Roof Decking

REPORT HOLDER:

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EVALUATION SUBJECT:

NEW MILLENNIUM STEEL ROOF DECK PANELS: D4.5, D6 AND D7.5 DEEP-DEK®; D4.5A, D6A AND D7.5A DEEP-DEK® ACOUSTICAL; D4.5C, D6C AND D7.5C DEEP-DEK® CELLULAR; D4.5CA, D6CA AND D7.5CA DEEP-DEK® CELLULAR ACOUSTICAL; VERSA-DEK® ROOF DECK PANELS; AND VERSA-DEK® ACOUSTICAL ROOF DECK PANELS

1.0 EVALUATION SCOPE

Compliance with the following code:

2015, 2012, 2009, and 2006 *International Building Code®* (IBC)

Property evaluated:

Structural

2.0 USES

The New Millennium Deep-Dek®, Deep-Dek® Cellular, Deep-Dek® Acoustical, Deep-Dek® Cellular Acoustical, Versa-Dek and Versa-Dek Acoustical steel deck panels are used as roof decks to support the code-required roof loads, and as components of horizontal diaphragms.

3.0 DESCRIPTION

3.1 General:

The deck panels with dimensions and profiles as shown in Figure 1 are cold-formed from steel sheets complying with the following:

- ASTM A653 SS Grade 40 steel with a G40 galvanization. An optional prime paint is available for the bottom surface which is applied over the galvanization. Also applicable for cellular deck panels.
- ASTM A1008 SS Grade 40 steel with a mill finished (bare steel) top surface primed painted bottom surface. Optional coatings are available for the top surface.

3.2 D4.5, D6 and D7.5 Deep-Dek® Panels:

The D4.5, D6, and D7.5 deck panels are fluted, hat sections as shown in Figure 1, and are available in design thicknesses ranging from No. 14 to No. 20 gage [0.0747 inch (1.90 mm) to 0.0358 inch (0.909 mm)].

3.3 D4.5C, D6C and D7.5C Deep-Dek® Cellular Panels:

The deck panels consist of fluted, hat sections that are factory-welded to pan, liner sections, as shown in Figure 1. The deck panels are available with hat section design thicknesses ranging from No. 14 to No. 20 gage [0.0747 inch (1.90 mm) to 0.0358 inch (0.909 mm)] and liner section design thicknesses ranging from No. 14 to No. 20 gage [0.0747 inch (1.90 mm) to 0.0358 inch (0.909 mm)].

3.4 D4.5A, D6A and D7.5A Deep-Dek® Acoustical Panels:

These deck panels are the same as the D4.5, D6 and D7.5 Deep-Dek® panels described in Section 3.2 above, except the webs of the panels are perforated with holes. See Figure 3 for perforation patterns.

3.5 D4.5CA, D6CA and D7.5CA Deep-Dek® Cellular Acoustical Panels:

These deck panels are the same as the D4.5C, D6C and D7.5C Deep-Dek® Cellular panels described in Section 3.3 above, except the bottom liner sections of the panels are perforated with holes. See Figure 3 for perforation patterns.

3.6 Versa-Dek® S, S ES, LS, LS ES and 3.5 LS Deck Panels:

The deck panels are fluted sections as shown in Figure 1 and are available in design thicknesses ranging from No. 16 to No. 22 gage [0.0598 inch (1.52 mm) to 0.0295 inch (0.749 mm)]. 3.5LS panels are available in design thicknesses ranging from No. 16 to No. 20 gage [0.0598 inch (1.52 mm) to 0.0358 inch (0.909 mm)].

3.7 Versa-Dek® S Acoustical, S ES Acoustical, LS Acoustical, LS ES Acoustical and 3.5 LS Acoustical Deck Panels:

These deck panels are the same as those described in Section 3.6, except that the bottom flange of the panels is perforated with holes. See Figure 2 for perforation patterns.

3.8 Support Connections:

3.8.1 Arc Spot (Puddle) Welds: Arc spot (puddle) welds must have a minimum effective fusion area to supporting

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members of at least $^1/_2$ inch (13 mm) in diameter. Arc spot welds must be made using E60 or E70 filler metal and must comply with AWS D1.3.

3.8.2 Hilti X-ENP-19-L15 Powder-Driven Fastener: The fastener must be as recognized in ESR-2197 and ESR-2776.

3.8.3 Hilti X-HSN 24 Powder-Driven Fastener: The fastener must be as recognized in ESR-2197, and ESR-2776.

3.9 Seam (Sidelap) Connections:

3.9.1 Arc Seam Welds: Arc seam welds must have a minimum length of 1.5 inches (38 mm).

3.9.2 Fillet Welds: Fillet welds must have a minimum length of 1.5 inches (38 mm).

3.9.3 #10 Screws: Screws must be self-drilling or self-piercing tapping screws complying with ASTM C1513. The screws must be long enough to penetrate through the connected steel panels with a minimum of three threads protruding past the back side of the connected deck panels.

3.9.4 #12 Screws: Screws must be self-drilling or self-piercing tapping screws complying with ASTM C1513. The screws must be long enough to penetrate through the connected steel panels with a minimum of three threads protruding past the back side of the connected deck panels.

3.9.5 Hilti S-SLC01 M HWH Self-Piercing Screw and Hilti S-SLC02 M HWH Self-Drilling Screw: The fasteners must be as recognized in ESR-2776. The screws must be long enough to penetrate through the connected steel panels with a minimum of three threads protruding past the back side of the connected panels.

4.0 TABULATED DESIGN VALUES:

4.1 Section Properties: Deck panel section properties are provided in Table 1.

4.1.1 Support Reactions: Support reactions must not exceed the allowable reactions based on web crippling of the deck panels provided in Table 2.

4.1.2 Diaphragm Design:

4.1.2.1 Shear and Flexibility Factors.

Allowable diaphragm shear and shear stiffness (G') values are provided in Tables 4 through 54. The flexibility factor (F) is equal to 1000/G', where G' is in kips per inch and F is in micro-inches/lbf.

4.1.2.2 Flexibility Limitations: Diaphragm span/depth limitations based on diaphragm flexibility must comply with Table 3.

4.1.2.3 Deflections: Diaphragm deflection (Δ) must be calculated using the equation noted in Table 3.

5.0 CONDITIONS OF USE

The New Millennium steel roof deck panels described in this report comply with, or are suitable alternatives to what is specified in, the code noted in Section 1.0 of this report, subject to the following conditions:

5.1 The deck panels are manufactured, identified and installed in accordance with this report, the approved plans and New Millennium's published installation guidelines and instructions. If there is a conflict between the manufacturer's published installation guidelines and instructions and this report, the most restrictive governs.

5.2 The design base-metal thicknesses for all steel deck panels are indicated in Table 1. The thickness delivered to the jobsite must be at least 95 percent of the design base-metal thickness.

5.3 The minimum loads of IBC Section 1607 must be considered by the design professional based on the specific occupancy or use, as applicable.

5.4 Special inspection must be provided in accordance with Chapter 17 of the IBC.

5.5 Use of New Millennium steel roof panels without a roof covering has not been evaluated.

5.6 Calculations and details demonstrating that the loads applied to the decks comply with this report must be submitted to the code official for approval. Calculations and drawings must be prepared, signed, and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.7 The cellular deck panels are fabricated in Memphis, Tennessee under a quality program with regular ongoing inspections by ICC-ES.

The other deck panels are also fabricated in Memphis, Tennessee under a quality program with annual inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with ICC-ES Acceptance Criteria for Steel Deck Roof and Floor Systems (AC43), dated April 2016.

6.2 Data in accordance with ICC-ES Acceptance Criteria for Steel Deck Roof and Floor Systems (AC43), dated October 2010 (editorially revised September 2013).

7.0 IDENTIFICATION

Each bundle of the New Millenium steel deck panels described in this report is identified by labeling bearing the manufacturer's name (New Millenium Building Systems, LLC) and the manufacturing location (MD—Memphis, Tennessee); the deck panel profile name; the design thickness; the minimum specified yield strength; the cover width of the panel; and the evaluation report number (ESR-2657).

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ALLOWABLE DIAPHRAGM SHEAR VALUES AND SHEAR STIFFNESS FACTORS

TABLE	DECK PANEL	SUPPORT CONNECTION	SIDELAP CONNECTIONS	PAGE
4	Deep Dek 4.5	½" Effective Weld Diameter	$1^1/_2$" Seam Welds	10
5		½" Effective Weld Diameter	#10 Screws	11
6		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	12
7	Deep Dek 6	½" Effective Weld Diameter	$1^1/_2$" Seam Welds	13
8		½" Effective Weld Diameter	#10 Screws	14
9		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	15
10	Deep Dek 7.5	½" Effective Weld Diameter	$1^1/_2$" Seam Welds	16
11		½" Effective Weld Diameter	#10 Screws	17
12		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	18
13	Deep Dek 4.5 Cellular	½" Effective Weld Diameter	#10 Screws & $1^1/_2$" Seam Welds	19
14		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	20
15	Deep Dek 6 Cellular	½" Effective Weld Diameter	#10 Screws & $1^1/_2$" Seam Welds	21
16		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	22
17	Deep Dek 7.5 Cellular	$^1/_2$" Effective Weld Diameter	#10 Screws & $1^1/_2$" Seam Welds	23
18		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	24
19	Deep Dek 4.5 Acoustical	$^1/_2$" Effective Weld Diameter	#10 Screws & $1^1/_2$" Seam Welds	25
20		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	26
21	Deep Dek 6 Acoustical	$^1/_2$" Effective Weld Diameter	#10 Screws & $1^1/_2$" Seam Welds	27
22		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	28
23	Deep Dek 7.5 Acoustical	$^1/_2$" Effective Weld Diameter	#10 Screws & $1^1/_2$" Seam Welds	29
24		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	30
25	Deep Dek 4.5 Cellular Acoustical	$^1/_2$" Effective Weld Diameter	#10 Screws & $1^1/_2$" Seam Welds	31
26		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	32
27	Deep Dek 6 Cellular Acoustical	$^1/_2$" Effective Weld Diameter	#10 Screws & $1^1/_2$" Seam Welds	33
28		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	34
29	Deep Dek 7.5 Cellular Acoustical	$^1/_2$" Effective Weld Diameter	#10 Screws& $1^1/_2$" Seam Welds	35
30		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	36

ALLOWABLE DIAPHRAGM SHEAR VALUES AND SHEAR STIFFNESS FACTORS (CONTINUED)

TABLE	DECK PANEL	SUPPORT CONNECTION	SIDELAP CONNECTIONS	PAGE
31	Versa-Dek S & LS	$^1/_2$" Effective Weld Diameter	#10 Screws	37
32		$^1/_2$" Effective Weld Diameter	$1^1/_2$" Fillet Welds or $1^1/_2$" Seam Welds	38
33		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	39
34		Hilti X-HSN24	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	40
35	Versa-Dek S ES & LS ES	$^1/_2$" Effective Weld Diameter	#10 Screws	41
36		$^1/_2$" Effective Weld Diameter	$1^1/_2$" Fillet Welds or $1^1/_2$" Seam Welds	42
37		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	43
38		Hilti X-HSN24	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	44
39	Versa-Dek 3.5 LS	$^1/_2$" Effective Weld Diameter	#10 Screws	45
40		$^1/_2$" Effective Weld Diameter	$1^1/_2$" Fillet Welds or $1^1/_2$" Seam Welds	46
41		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	47
42		Hilti X-HSN24	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	48
43	Versa-Dek S Acoustical & LS Acoustical	$^1/_2$" Effective Weld Diameter	#10 Screws	49
44		$^1/_2$" Effective Weld Diameter	$1^1/_2$" Fillet Welds or $1^1/_2$" Seam Welds	50
45		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	51
46		Hilti X-HSN24	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	52
47	Versa-Dek S ES Acoustical & LS ES Acoustical	$^1/_2$" Effective Weld Diameter	#10 Screws	53
48		$^1/_2$" Effective Weld Diameter	$1^1/_2$" Fillet Welds or $1^1/_2$" Seam Welds	54
49		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	55
50		Hilti X-HSN24	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	56
51	Versa-Dek 3.5 LS Acoustical	$^1/_2$" Effective Weld Diameter	#10 Screws	57
52		$^1/_2$" Effective Weld Diameter	$1^1/_2$" Fillet Welds or $1^1/_2$" Seam Welds	58
53		Hilti X-ENP-19-L15	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	59
54		Hilti X-HSN24	Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws	60

Figure **Page**

1 Steel Deck Panel Profiles and Attachment Patterns at Supports 61
2 Perforation Patterns of Versa-Dek Acoustical Profiles 62
3 Perforation Patterns of Deep-Dek Acoustical & Deep-Dek Cellular Acoustical Profiles 63

For **SI** dimensions: 1 inch = 25.4 mm; 1 plf = 14.6 N/m; 1 inch^2 = 645.16 mm^2; 1 inch^3 = 16.4 × 10^4 mm^3; 1 inch^4 = 41.6 × 10^4 mm^4;1 psf = 4.88 kg/m^2; 1 psf = 47.88 N; 1 pcf = 16.018 kg/m^3; 1 inch-kip = 0.113 kN-m; 1 kip = 4.448 kN; 1 ksi = 6.89 MPa; 1 foot = 304.8 mm.

TABLE 1A—SECTION PROPERTIES [1, 2, 3, 4]

DECK PANEL	GAGE	BASE METAL DESIGN THICKNESS (inches)	EFFECTIVE MOMENT OF INERTIA (in^4/ft width)		EFFECTIVE MOMENT OF INERTIA for DEFLECTION, I_D (in^4/ft width)		EFFECTIVE SECTION MODULUS (in^3/ft width)	
		t	Normal, I_{on}	Inverted, I_{oi}	Simple Span	Multiple Span	Normal, S_{en}	Inverted, S_{ei}
Deep-Dek® 4.5	20	0.0358	2.613	2.978	2.735	2.978	0.984	1.207
	18	0.0474	3.778	3.939	3.832	3.939	1.491	1.596
	16	0.0598	4.963	4.963	4.963	4.963	1.972	2.011
	14	0.0747	6.191	6.191	6.191	6.191	2.507	2.507
Deep-Dek® 6	20	0.0358	5.083	5.629	5.304	5.668	1.367	1.711
	18	0.0474	7.292	7.601	7.395	7.601	2.172	2.358
	16	0.0598	9.579	9.579	9.579	9.579	2.915	2.971
	14	0.0747	11.950	11.950	11.950	11.950	3.705	3.705
Deep-Dek® 7.5	20	0.0358	8.446	9.131	8.828	9.285	1.712	2.162
	18	0.0474	12.191	12.420	12.357	12.510	2.909	3.049
	16	0.0598	15.992	15.992	15.992	15.992	3.936	4.009
	14	0.0747	19.952	19.952	19.952	19.952	5.000	5.000
Deep-Dek® 4.5 Cellular	20/20	0.0358/ 0.0358	4.083	4.058	4.343	4.343	1.051	1.545
	20/18	0.0358/ 0.0474	4.322	4.628	4.634	4.839	1.054	1.603
	18/20	0.0474/ 0.0358	5.638	4.995	5.750	5.750	1.728	2.008
	18/18	0.0474/ 0.0474	6.085	5.626	6.210	6.210	1.727	2.076
	18/16	0.0474/ 0.0598	6.491	6.277	6.629	6.629	1.726	2.141
	16/18	0.0598/ 0.0474	7.655	6.647	7.655	7.655	2.449	2.574
	16/16	0.0598/ 0.0598	8.180	7.378	8.180	8.180	2.493	2.651
	16/14	0.0598/ 0.0747	8.730	8.157	8.730	8.730	2.539	2.726
	14/16	0.0747/ 0.0598	9.619	8.638	9.619	9.619	3.353	3.254
	14/14	0.0747/ 0.0747	10.264	9.511	10.264	10.264	3.413	3.345
Deep-Dek® 6 Cellular	20/20	0.0358/ 0.0358	7.351	7.645	7.912	8.107	1.417	2.207
	20/18	0.0358/ 0.0474	7.759	8.626	8.430	9.008	1.418	2.286
	18/20	0.0474/ 0.0358	10.524	9.414	10.713	10.713	2.346	2.862
	18/18	0.0474/ 0.0474	11.248	10.507	11.495	11.495	2.335	2.958
	18/16	0.0474/ 0.0598	11.814	11.624	12.146	12.146	2.331	3.047
	16/18	0.0598/ 0.0474	14.204	12.437	14.204	14.204	3.514	3.665
	16/16	0.0598/ 0.0598	15.167	13.682	15.167	15.167	3.500	3.772
	16/14	0.0598/ 0.0747	16.178	15.086	16.178	16.178	3.485	3.879
	14/16	0.0747/ 0.0598	17.832	16.050	17.832	17.832	4.779	4.627
	14/14	0.0747/ 0.0747	19.010	17.597	19.010	19.010	4.867	4.755
Deep-Dek® 7.5 Cellular	20/20	0.0358/ 0.0358	11.608	12.445	12.639	13.197	1.787	2.922
	20/18	0.0358/ 0.0474	12.234	13.997	13.461	14.636	1.787	3.030
	18/20	0.0474/ 0.0358	16.796	15.352	17.211	17.211	2.958	3.785
	18/18	0.0474/ 0.0474	17.772	17.060	18.349	18.349	2.948	3.916
	18/16	0.0474/ 0.0598	18.646	18.832	19.380	19.503	2.942	4.038
	16/18	0.0598/ 0.0474	23.094	20.217	23.094	23.094	4.447	4.846
	16/16	0.0598/ 0.0598	24.659	22.170	24.659	24.659	4.422	4.992
	16/14	0.0598/ 0.0747	25.934	24.426	26.059	26.059	4.404	5.141
	14/16	0.0747/ 0.0598	28.977	26.028	28.977	28.977	6.346	6.118
	14/14	0.0747/ 0.0747	30.884	28.493	30.884	30.884	6.436	6.295

Notes:

[1] Effective properties are based on yield stress of 40 ksi.

[2] The design thickness is the uncoated base-metal thickness of the deck panel.

[3] For the cellular deck panels, the first number is the design base metal thickness of the profiled deck panel and the second number is the design base metal thickness of the bottom flat sheet.

[4] Tabulated I_D values calculated using the following equations are permitted for deflection calculations of deck under uniform loads:

- I_D for a simple span is permitted to be equal to $(I_x + 2*I_{on})/3$ or I_{on}.
- I_D for multiple spans is permitted to be equal to $(I_x + 2*I_{oi})/3$, $(I_x + 2*I_{on})/3$ or the minimum of I_{on} and I_{oi}.

TABLE 1B—SECTION PROPERTIES [1, 2, 3, 4]

DECK PANEL	GAGE	BASE METAL DESIGN THICKNESS (inches)	EFFECTIVE MOMENT OF INERTIA (in^4/ft width)		EFFECTIVE MOMENT OF INERTIA for DEFLECTION, I_D (in^4/ft width)		EFFECTIVE SECTION MODULUS (in^3/ft width)	
		t	Normal, I_{on}	Inverted, I_{oi}	Simple Span	Multiple Span	Normal, S_{en}	Inverted, S_{ei}
Deep-Dek® 4.5 Acoustical	20	0.0358	2.425	2.789	2.546	2.789	0.904	1.127
	18	0.0474	3.533	3.690	3.586	3.690	1.385	1.491
	16	0.0598	4.652	4.652	4.652	4.652	1.840	1.879
	14	0.0747	5.806	5.806	5.806	5.806	2.344	2.344
Deep-Dek® 6 Acoustical	20	0.0358	4.615	5.143	4.836	5.188	1.195	1.542
	18	0.0474	6.680	6.983	6.781	6.983	1.972	2.159
	16	0.0598	8.804	8.804	8.804	8.804	2.665	2.721
	14	0.0747	10.989	10.989	10.989	10.989	3.395	3.395
Deep-Dek® 7.5 Acoustical	20	0.0358	7.417	8.126	7.829	8.301	1.448	1.897
	18	0.0474	10.959	11.132	11.122	11.238	2.528	2.710
	16	0.0598	14.434	14.434	14.434	14.434	3.531	3.606
	14	0.0747	18.017	18.017	18.017	18.017	4.500	4.500
Deep-Dek® 4.5 Cellular Acoustical	20/20	0.0358/ 0.0358	4.001	4.061	4.243	4.283	1.051	1.545
	20/18	0.0358/ 0.0474	4.235	4.624	4.528	4.787	1.053	1.603
	18/20	0.0474/ 0.0358	5.490	4.998	5.597	5.597	1.723	2.008
	18/18	0.0474/ 0.0474	5.920	5.623	6.040	6.040	1.728	2.075
	18/16	0.0474/ 0.0598	6.315	6.261	6.447	6.447	1.726	2.139
	16/18	0.0598/ 0.0474	7.446	6.646	7.446	7.446	2.430	2.574
	16/16	0.0598/ 0.0598	7.951	7.363	7.951	7.951	2.474	2.650
	16/14	0.0598/ 0.0747	8.485	8.117	8.485	8.485	2.520	2.723
	14/16	0.0747/ 0.0598	9.354	8.624	9.354	9.354	3.327	3.252
	14/14	0.0747/ 0.0747	9.975	9.472	9.975	9.975	3.387	3.342
Deep-Dek® 6 Cellular Acoustical	20/20	0.0358/ 0.0358	7.210	7.647	7.735	8.026	1.417	2.207
	20/18	0.0358/ 0.0474	7.612	8.615	8.242	8.910	1.417	2.285
	18/20	0.0474/ 0.0358	10.252	9.417	10.434	10.434	2.350	2.863
	18/18	0.0474/ 0.0474	11.012	10.497	11.228	11.228	2.338	2.957
	18/16	0.0474/ 0.0598	11.570	11.590	11.865	11.878	2.332	3.044
	16/18	0.0598/ 0.0474	13.824	12.429	13.824	13.824	3.486	3.665
	16/16	0.0598/ 0.0598	14.749	13.649	14.749	14.749	3.508	3.769
	16/14	0.0598/ 0.0747	15.728	15.008	15.728	15.728	3.490	3.874
	14/16	0.0747/ 0.0598	17.351	16.019	17.351	17.351	4.741	4.624
	14/14	0.0747/ 0.0747	18.482	17.520	18.482	18.482	4.827	4.750
Deep-Dek® 7.5 Cellular Acoustical	20/20	0.0358/ 0.0358	11.391	12.445	12.361	13.064	1.787	2.922
	20/18	0.0358/ 0.0474	12.008	13.976	13.164	14.476	1.786	3.029
	18/20	0.0474/ 0.0358	16.474	15.354	16.840	16.840	2.961	3.785
	18/18	0.0474/ 0.0474	17.416	17.041	17.934	17.934	2.950	3.914
	18/16	0.0474/ 0.0598	18.270	18.775	18.937	19.273	2.943	4.035
	16/18	0.0598/ 0.0474	22.483	20.200	22.483	22.483	4.458	4.845
	16/16	0.0598/ 0.0598	23.982	22.115	23.982	23.982	4.430	4.988
	16/14	0.0598/ 0.0747	25.392	24.299	25.453	25.453	4.410	5.134
	14/16	0.0747/ 0.0598	28.205	25.976	28.205	28.205	6.292	6.114
	14/14	0.0747/ 0.0747	30.032	28.368	30.032	30.032	6.414	6.287

See Table 1A notes.

TABLE 1C—SECTION PROPERTIES [1, 2, 3, 4]

DECK PANEL	GAGE	BASE METAL DESIGN THICKNESS (inches)	EFFECTIVE MOMENT OF INERTIA (in^4/ft width)		EFFECTIVE MOMENT OF INERTIA for DEFLECTION, I_D (in^4/ft width)		EFFECTIVE SECTION MODULUS (in^3/ft width)	
		t	Normal, I_{on}	Inverted, I_{oi}	Simple Span	Multiple Span	Normal, S_{en}	Inverted, S_{ei}
Versa-Dek® S	22	0.0295	0.398	0.322	0.399	0.399	0.286	0.256
	20	0.0358	0.485	0.416	0.485	0.485	0.356	0.319
	18	0.0474	0.640	0.596	0.640	0.640	0.473	0.438
	16	0.0598	0.805	0.786	0.805	0.805	0.595	0.567
Versa-Dek® S Acoustical	22	0.0295	0.376	0.315	0.377	0.377	0.281	0.256
	20	0.0358	0.457	0.406	0.457	0.457	0.350	0.318
	18	0.0474	0.604	0.577	0.604	0.604	0.465	0.436
	16	0.0598	0.760	0.753	0.760	0.760	0.585	0.564
Versa-Dek® S ES	22	0.0295	0.422	0.337	0.422	0.422	0.307	0.273
	20	0.0358	0.511	0.437	0.511	0.511	0.390	0.346
	18	0.0474	0.674	0.627	0.674	0.674	0.514	0.475
	16	0.0598	0.848	0.828	0.848	0.848	0.646	0.615
Versa-Dek® S ES Acoustical	22	0.0295	0.399	0.331	0.399	0.399	0.302	0.269
	20	0.0358	0.483	0.427	0.483	0.483	0.383	0.345
	18	0.0474	0.638	0.607	0.638	0.638	0.506	0.473
	16	0.0598	0.802	0.794	0.802	0.802	0.636	0.612
Versa-Dek® LS	22	0.0295	0.396	0.370	0.397	0.397	0.284	0.280
	20	0.0358	0.482	0.464	0.482	0.482	0.354	0.345
	18	0.0474	0.637	0.637	0.637	0.637	0.471	0.463
	16	0.0598	0.801	0.801	0.801	0.801	0.593	0.589
Versa-Dek® LS Acoustical	22	0.0295	0.374	0.365	0.375	0.375	0.279	0.281
	20	0.0358	0.455	0.454	0.455	0.455	0.348	0.344
	18	0.0474	0.601	0.601	0.601	0.601	0.463	0.461
	16	0.0598	0.755	0.755	0.755	0.755	0.582	0.582
Versa-Dek® LS ES	22	0.0295	0.417	0.406	0.417	0.417	0.304	0.309
	20	0.0358	0.505	0.506	0.505	0.506	0.386	0.379
	18	0.0474	0.667	0.667	0.667	0.667	0.510	0.507
	16	0.0598	0.838	0.838	0.838	0.838	0.640	0.640
Versa-Dek® LS ES Acoustical	22	0.0295	0.393	0.393	0.393	0.393	0.298	0.308
	20	0.0358	0.476	0.476	0.476	0.476	0.379	0.377
	18	0.0474	0.628	0.628	0.628	0.628	0.500	0.500
	16	0.0598	0.789	0.789	0.789	0.789	0.629	0.629
Versa-Dek® 3.5 LS	20	0.0358	1.917	1.766	1.959	1.959	0.775	0.910
	19	0.0418	2.296	2.129	2.324	2.324	0.946	1.072
	18	0.0474	2.648	2.475	2.664	2.664	1.113	1.226
	16	0.0568	3.394	3.262	3.394	3.394	1.504	1.573
Versa-Dek® 3.5 LS Acoustical	20	0.0358	1.766	1.742	1.803	1.803	0.754	0.909
	19	0.0418	2.113	2.089	2.139	2.139	0.921	1.072
	18	0.0474	2.436	2.418	2.451	2.451	1.084	1.224
	16	0.0598	3.122	3.123	3.122	3.123	1.466	1.564

See Table 1A notes.

TABLE 2—ALLOWABLE REACTIONS BASED ON WEB CRIPPLING, plf (ASD)[1,2,3]

DECK TYPE	HAT GAGE	HAT BASE METAL THICKNESS	BEARING LENGTH (inch)									
			2		3		4		5		6	
		(in)	Interior	End	Interior	End	Interior	End	Interior	End	Interior	End
Deep-Dek® 4.5 Deep-Dek® 4.5 Cellular Deep-Dek® 4.5 Cellular Acoustical	20	0.0358	-	463	930	531	1018	588	1095	638	1164	684
	18	0.0474	-	788	1555	898	1693	990	1815	1072	1925	1145
	16	0.0598	-	1219	2379	1381	2580	1518	2757	1638	2917	1747
	14	0.0747	-	1847	3574	2082	3860	2279	4113	2453	4341	2610
Deep-Dek® 6 Deep-Dek® 6 Cellular Deep-Dek® 6 Cellular Acoustical	20	0.0358	-	435	923	499	1010	552	1087	600	1156	642
	18	0.0474	-	748	1545	852	1682	940	1803	1018	1913	1087
	16	0.0598	-	1166	2365	1321	2565	1452	2741	1567	2900	1671
	14	0.0747	-	1778	3556	2003	3841	2193	4092	2360	4319	2512
Deep-Dek® 7.5 Deep-Dek® 7.5 Cellular Deep-Dek® 7.5 Cellular Acoustical	20	0.0358	-	398	683	411	748	422	806	432	858	441
	18	0.0474	-	714	1536	813	1673	896	1793	970	1902	1037
	16	0.0598	-	1120	2353	1269	2552	1394	2727	1505	2886	1605
	14	0.0747	-	1716	3540	1934	3824	2117	4074	2279	4300	2425
Deep-Dek® 4.5 Acoustical	20	0.0358	-	463	673	531	737	588	794	638	845	684
	18	0.0474	-	788	1120	898	1221	990	1310	1071	1391	1145
	16	0.0598	-	1219	1706	1381	1853	1518	1982	1638	2099	1747
	14	0.0747	-	1847	2554	2082	2763	2279	2947	2453	3113	2610
Deep-Dek® 6 Acoustical	20	0.0358	-	433	671	447	736	460	792	470	843	480
	18	0.0474	-	748	1117	843	1218	863	1307	881	1387	898
	16	0.0598	-	1166	1703	1321	1849	1438	1978	1465	2094	1490
	14	0.0747	-	1778	2550	2003	2758	2193	2942	2360	3107	2403
Deep-Dek® 7.5 Acoustical	20	0.0358	-	398	683	411	748	422	806	432	858	441
	18	0.0474	-	714	1134	788	1236	807	1326	824	1408	840
	16	0.0598	-	1120	1725	1269	1873	1360	2004	1385	2122	1409
	14	0.0747	-	1716	2580	1934	2790	2117	2976	2256	3144	2291
Versa-Dek® S Versa-Dek® LS Versa-Dek® S Acoustical Versa-Dek® LS Acoustical	22	0.0295	-	705	1260	812	1383	902	1491	981	-	-
	20	0.0358	-	1004	1794	1151	1963	1275	2112	1384	-	-
	18	0.0474	-	1673	2993	1905	3260	2101	3494	2274	-	-
	16	0.0598	-	2550	4572	2889	4958	3175	5298	3426	-	-
Versa-Dek® S ES Versa-Dek® LS ES Versa-Dek® S ES Acoustical Versa-Dek® LS ES Acoustical	22	0.0295	-	718	1282	826	1408	918	1518	999	-	-
	20	0.0358	-	1022	1827	1172	1999	1298	2150	1409	-	-
	18	0.0474	-	1702	3047	1939	3318	2139	3557	2315	-	-
	16	0.0598	-	2596	4654	2941	5047	3231	5393	3487	-	-
Versa-Dek® 3.5 LS Versa-Dek® 3.5 LS Acoustical	20	0.0358	-	681	1313	781	1437	865	1546	939	1645	1006
	19	0.0418	-	911	1744	1040	1903	1150	2043	1246	2170	1333
	18	0.0474	-	1151	2194	1311	2390	1446	2561	1565	2717	1672
	16	0.0598	-	1771	3355	2007	3638	2205	3888	2380	4114	2538

Notes:

[1]Tabulated values are based on a yield stress of 40 ksi and one-flange loading with fasteners at supports.

[2]Support reactions must not be greater than the tabulated values.

[3]For the cellular deck panels, the tabulated values are based on the base metal thickness of the top fluted hat section.

TABLE 3—DIAPHRAGM FLEXIBILITY LIMITATIONS[1,2,3,4]

F	MAXIMUM DIAPHRAGM SPAN FOR MASONRY OR CONCRETE WALLS (feet)	DIAPHRAGM SPAN-DEPTH LIMITATION			
		Rotation Not Considered in Diaphragm		Rotation Considered in Diaphragm	
		Masonry or Concrete Walls	Flexible Walls	Masonry or Concrete Walls	Flexible Walls
More than 150	Not used	Not used	2:1	Not used	$1^1/_2$:1
70-150	200	2:1 or as required for deflection	3:1	Not used	2:1
10-70	400	$2^1/_2$:1 or as required for deflection	4:1	As required for deflection	$2^1/_2$:1
1-10	No limitation	3:1 or as required for deflection	5:1	As required for deflection	3:1
Less than 1	No limitation	As required for deflection	No limitation	As required for deflection	$3^1/_2$:1

[1]Diaphragms must be investigated regarding their flexibility and recommended span-depth limitations.

[2]Diaphragms supporting masonry or concrete walls must have their deflections limited to the following amount:

$$\Delta_{wall} = \frac{H^2 f_c}{0.01\, Et}$$

where:

H = Unsupported height of wall in feet.
t = Thickness of wall in inches.
E = Modulus of elasticity of wall material for deflection determination in pounds per square inch.
f_c = Allowable compression strength of wall material in flexure in pounds per square inch. For concrete, $f_c = 0.45\, f'_c$. For masonry, $f_c = F_b = 0.33\, f'_m$.

[3]The total deflection Δ of the diaphragm may be computed from the equation: $\Delta = \Delta_f + \Delta_w$

where:

Δ_f = Flexural deflection of the diaphragm determined in the same manner as the deflection of beams.
Δ_w = The web deflection may be determined by the equation:

$$\Delta_w = \frac{q_{ave}\, L\, F}{10^6}$$

where:

L = Distance in feet between vertical resisting element (such as shear wall) and the point to which the deflection is to be determined.
q_{ave} = Average shear in diaphragm in pounds per foot over length L.
F = Flexibility factor: The average micro inches (μm) a diaphragm web will deflect in a span of 1 foot (m) under a shear of 1 pound per foot (N/m). $F = \frac{10^3}{G'}$, Where G' = effective shear modules based on profile and thickness of deck panel and type and spacing of connectors.

[4]When applying these limitations to cantilevered diaphragms, the allowable span-depth ratio will be half that shown.

TABLE 4—DEEP-DEK® 4.5 – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**
SIDELAP CONNECTION: **$1^1/_2$" Seam Welds**

S = Allowable Diaphragm Shear (plf)
G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12 / 2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	1321	1312	1306	1301	1297	1294	1291	1289
		G'	9.1	10.5	11.8	13.1	14.4	15.7	16.9	18.2
	12"	S	1049	1027	1010	996	986	977	969	963
		G'	8.9	10.2	11.4	12.7	13.9	15.0	16.1	17.2
	18"	S	775	754	739	727	717	710	703	697
		G'	8.7	9.9	11.1	12.3	13.4	14.4	15.5	16.4
	24"	S	617	597	581	569	560	552	545	540
		G'	8.5	9.7	10.8	11.9	13.0	13.9	14.9	15.8
	30"	S	523	502	487	475	465	457	451	445
		G'	8.4	9.5	10.6	11.6	12.6	13.5	14.4	15.2
	36"	S	460	439	424	412	402	394	388	382
		G'	8.3	9.4	10.4	11.4	12.3	13.1	13.9	14.7
18 0.0474"	6"	S	1725	1714	1706	1699	1694	1690	1686	1684
		G'	17.5	20.1	22.6	25.0	27.3	29.5	31.7	33.7
	12"	S	1370	1341	1319	1301	1287	1276	1266	1258
		G'	16.9	19.2	21.4	23.5	25.5	27.4	29.3	31.0
	18"	S	1012	985	965	950	937	927	918	911
		G'	16.3	18.4	20.4	22.3	24.1	25.8	27.4	28.9
	24"	S	806	780	759	744	731	721	712	705
		G'	15.8	17.8	19.6	21.3	22.9	24.4	25.8	27.1
	30"	S	683	656	636	620	608	597	589	582
		G'	15.5	17.3	19.0	20.5	21.9	23.3	24.5	25.6
	36"	S	601	574	553	538	525	515	506	499
		G'	15.1	16.8	18.4	19.8	21.1	22.3	23.4	24.4
16 0.0598"	6"	S	2145	2131	2121	2113	2107	2101	2097	2093
		G'	29.8	33.9	37.8	41.5	45.1	48.4	51.7	54.8
	12"	S	1704	1667	1640	1618	1601	1586	1574	1564
		G'	28.1	31.6	34.9	38.0	40.9	43.7	46.2	48.6
	18"	S	1259	1225	1200	1181	1165	1152	1142	1133
		G'	26.7	29.9	32.7	35.3	37.8	40.0	42.1	44.0
	24"	S	1003	969	944	925	909	896	886	877
		G'	25.6	28.4	30.9	33.2	35.3	37.1	38.9	40.4
	30"	S	849	816	791	771	755	743	732	723
		G'	24.8	27.3	29.5	31.4	33.2	34.8	36.2	37.6
	36"	S	747	713	688	669	653	640	630	621
		G'	24.0	26.3	28.2	30.0	31.5	32.9	34.1	35.2
14 0.0747"	6"	S	2632	2615	2603	2593	2585	2579	2573	2569
		G'	48.5	54.7	60.5	65.9	70.9	75.7	80.2	84.4
	12"	S	2091	2046	2012	1986	1964	1947	1932	1919
		G'	44.6	49.6	54.1	58.3	62.1	65.6	68.9	71.9
	18"	S	1545	1504	1473	1449	1430	1414	1401	1390
		G'	41.6	45.8	49.5	52.8	55.8	58.5	60.9	63.2
	24"	S	1230	1189	1159	1135	1116	1100	1087	1076
		G'	39.3	42.8	45.9	48.6	51.0	53.1	55.0	56.7
	30"	S	1042	1001	970	946	927	911	898	887
		G'	37.4	40.5	43.0	45.3	47.2	48.9	50.4	51.7
	36"	S	916	875	844	820	801	786	773	762
		G'	35.9	38.5	40.7	42.6	44.2	45.5	46.7	47.8

ATTACHMENT PATTERN: 12 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	1485	1453	1429	1410	1395	1383	1373	1365
		G'	9.1	10.5	11.8	13.2	14.5	15.7	17.0	18.2
	12"	S	1156	1126	1103	1086	1072	1060	1051	1043
		G'	8.9	10.2	11.5	12.7	13.9	15.1	16.2	17.3
	18"	S	840	810	788	771	757	745	736	728
		G'	8.7	10.0	11.2	12.3	13.5	14.5	15.6	16.6
	24"	S	683	653	630	613	599	588	578	570
		G'	8.6	9.8	10.9	12.0	13.1	14.1	15.0	15.9
	30"	S	588	558	536	518	504	493	483	475
		G'	8.5	9.7	10.7	11.8	12.8	13.7	14.6	15.4
	36"	S	525	495	473	455	441	430	420	412
		G'	8.4	9.5	10.6	11.6	12.5	13.3	14.2	14.9
18 0.0474"	6"	S	1940	1898	1867	1842	1823	1807	1794	1783
		G'	17.6	20.1	22.6	25.0	27.3	29.5	31.7	33.8
	12"	S	1509	1470	1441	1418	1400	1385	1373	1362
		G'	16.9	19.3	21.5	23.6	25.6	27.6	29.4	31.2
	18"	S	1098	1059	1029	1006	988	973	961	950
		G'	16.5	18.6	20.6	22.5	24.3	26.0	27.6	29.2
	24"	S	892	853	823	801	782	767	755	744
		G'	16.1	18.1	19.9	21.7	23.3	24.8	26.2	27.5
	30"	S	768	729	700	677	659	644	631	621
		G'	15.7	17.6	19.4	20.9	22.4	23.7	25.0	26.2
	36"	S	686	647	617	595	576	561	549	539
		G'	15.5	17.3	18.9	20.3	21.7	22.9	24.0	25.0
16 0.0598"	6"	S	2412	2360	2321	2291	2267	2247	2230	2216
		G'	29.9	34.0	37.9	41.6	45.2	48.5	51.8	54.9
	12"	S	1877	1828	1792	1763	1741	1722	1707	1694
		G'	28.3	31.9	35.2	38.3	41.2	44.0	46.6	49.0
	18"	S	1365	1316	1280	1251	1229	1210	1195	1182
		G'	27.1	30.3	33.2	35.8	38.3	40.6	42.7	44.6
	24"	S	1109	1060	1024	995	973	954	939	926
		G'	26.2	29.0	31.6	33.9	36.0	37.9	39.6	41.2
	30"	S	955	906	870	842	819	800	785	772
		G'	25.4	28.0	30.3	32.3	34.1	35.8	37.2	38.6
	36"	S	853	804	768	739	717	698	683	670
		G'	24.8	27.2	29.2	31.0	32.6	34.0	35.3	36.4
14 0.0747"	6"	S	2960	2896	2848	2811	2782	2757	2737	2720
		G'	48.7	54.9	60.7	66.1	71.1	75.9	80.4	84.6
	12"	S	2303	2244	2199	2164	2136	2114	2095	2079
		G'	45.0	50.1	54.7	58.9	62.7	66.3	69.5	72.6
	18"	S	1675	1615	1570	1536	1508	1485	1466	1450
		G'	42.4	46.6	50.4	53.8	56.8	59.5	62.0	64.2
	24"	S	1360	1301	1256	1221	1194	1171	1152	1136
		G'	40.4	44.0	47.2	49.9	52.3	54.5	56.4	58.1
	30"	S	1172	1112	1068	1033	1005	982	963	947
		G'	38.8	41.9	44.6	46.9	48.9	50.6	52.1	53.5
	36"	S	1046	987	942	907	879	857	838	822
		G'	37.5	40.3	42.6	44.5	46.2	47.5	48.7	49.8

Notes:

1.) Tabulated values based on a "SINGLE SPAN CONDITION".
2.) Tabulated S values include a safety factor (Ω) of 3 for welded support connections and 2.5 for powder actuated fastener support connections which represent seismic loading (worst case). The following resistance (ϕ) and safety (Ω) factors shown are from Table D5 of AISI S100:

LOAD TYPE OR COMBINATIONS INCLUDING	CONNECTION TYPE	CONNETION RELATED Ω (ASD)	Φ (LRFD)
Earthquake	Welds	3.00	0.55
	Screws or Powder Actuated	2.50	0.65
Wind	Welds	2.35	0.70
	Screws or Powder Actuated	2.35	0.70
All Others	Welds	2.65	0.60
	Screws or Powder Actuated	2.50	0.65

3.) Support connections parallel to deck flutes spaced at 12 inches o.c.

4.) See ESR-2776 for support steel requierments/limitations in regards to Hilti fasteners support connections (Hilti X-ENP-19-L15 & Hilti X-HSN24).

5.) For 22 to 18 gage non-cellular decks and 20 to 18 gage liner sections of cellular decks, use S-SLC 01 M HWH, S-SLC02 M HWH or #12 screws for sidelaps. For 16 gage non-cellular decks and 16 gage liner sections of cellular decks, use S-SLC02 M HWH or #12 screws for sidelaps. For 14 gage non-cellular decks and 14 gage liner sections of cellular decks, use #12 screws for sidelaps.

TABLE 5—DEEP-DEK® 4.5 – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: $^1/_2$" Effective Weld Diameter

SIDELAP CONNECTION: #10 Screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12 / 2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	600	587	578	571	565	560	556	553
		G'	8.8	10.0	11.3	12.5	13.6	14.7	15.8	16.9
	12"	S	343	331	322	314	309	304	300	297
		G'	8.4	9.5	10.6	11.6	12.5	13.4	14.3	15.1
	18"	S	258	246	236	229	223	219	215	211
		G'	8.1	9.1	10.0	10.9	11.7	12.5	13.2	13.9
	24"	S	215	203	194	186	181	176	172	169
		G'	7.8	8.7	9.6	10.4	11.1	11.7	12.3	12.9
	30"	S	190	177	168	161	155	150	146	143
		G'	7.6	8.5	9.2	9.9	10.6	11.1	11.7	12.1
	36"	S	172	160	151	144	138	133	129	126
		G'	7.5	8.3	9.0	9.6	10.1	10.6	11.1	11.5
18 0.0474"	6"	S	792	776	764	755	747	741	736	731
		G'	16.5	18.8	20.9	22.9	24.8	26.6	28.3	30.0
	12"	S	453	437	425	415	408	402	396	392
		G'	15.3	17.1	18.8	20.4	21.8	23.1	24.4	25.5
	18"	S	340	324	312	302	295	289	283	279
		G'	14.4	16.0	17.4	18.6	19.7	20.7	21.7	22.5
	24"	S	284	267	255	246	238	232	227	222
		G'	13.8	15.1	16.3	17.3	18.2	19.0	19.7	20.4
	30"	S	250	233	221	212	204	198	193	189
		G'	13.3	14.4	15.4	16.3	17.0	17.7	18.2	18.7
	36"	S	227	211	199	189	182	175	170	166
		G'	12.9	13.9	14.7	15.5	16.1	16.6	17.0	17.4
16 0.0598"	6"	S	998	978	963	951	941	934	927	922
		G'	27.3	30.6	33.7	36.6	39.3	41.8	44.1	46.3
	12"	S	570	550	535	523	513	506	499	494
		G'	24.4	26.9	29.1	31.1	32.9	34.5	36.0	37.4
	18"	S	427	407	392	380	371	363	357	351
		G'	22.5	24.4	26.1	27.5	28.8	29.9	30.9	31.8
	24"	S	356	336	321	309	299	292	285	280
		G'	21.1	22.6	23.9	25.0	26.0	26.8	27.5	28.1
	30"	S	313	293	278	266	257	249	243	237
		G'	20.0	21.3	22.3	23.2	23.9	24.4	24.9	25.3
	36"	S	285	265	249	238	228	220	214	209
		G'	19.2	20.3	21.1	21.7	22.2	22.7	23.0	23.3
14 0.0747"	6"	S	1244	1219	1201	1186	1174	1165	1157	1150
		G'	42.8	47.4	51.6	55.4	58.8	61.9	64.8	67.5
	12"	S	710	685	666	652	640	630	622	616
		G'	36.7	39.8	42.4	44.7	46.7	48.4	50.0	51.4
	18"	S	532	507	488	473	462	452	444	437
		G'	32.9	35.0	36.8	38.3	39.5	40.6	41.5	42.3
	24"	S	442	417	399	384	373	363	355	348
		G'	30.3	31.8	33.1	34.0	34.8	35.5	36.0	36.5
	30"	S	389	364	345	331	319	310	302	295
		G'	28.4	29.5	30.4	31.0	31.5	31.9	32.2	32.4
	36"	S	353	328	310	295	283	274	266	259
		G'	26.9	27.8	28.3	28.7	29.0	29.2	29.3	29.4

ATTACHMENT PATTERN: 12 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	665	643	627	614	604	596	589	583
		G'	8.8	10.1	11.3	12.5	13.7	14.8	15.9	16.9
	12"	S	409	387	371	358	348	340	333	327
		G'	8.5	9.6	10.7	11.7	12.7	13.6	14.5	15.4
	18"	S	323	301	285	273	262	254	247	241
		G'	8.2	9.3	10.3	11.2	12.0	12.8	13.6	14.2
	24"	S	280	259	242	230	220	211	205	199
		G'	8.1	9.0	9.9	10.7	11.5	12.2	12.8	13.4
	30"	S	255	233	217	204	194	186	179	173
		G'	7.9	8.8	9.7	10.4	11.1	11.7	12.3	12.8
	36"	S	238	216	200	187	177	169	162	156
		G'	7.8	8.7	9.5	10.1	10.8	11.3	11.8	12.2
18 0.0474"	6"	S	878	849	828	811	798	787	778	771
		G'	16.7	18.9	21.0	23.1	25.0	26.8	28.5	30.2
	12"	S	538	510	489	472	459	448	439	431
		G'	15.6	17.5	19.2	20.8	22.3	23.6	24.9	26.1
	18"	S	425	397	376	359	346	335	326	318
		G'	14.9	16.6	18.0	19.3	20.5	21.5	22.5	23.4
	24"	S	369	340	319	303	289	279	269	262
		G'	14.5	15.9	17.1	18.2	19.2	20.0	20.8	21.5
	30"	S	335	307	285	269	255	245	236	228
		G'	14.1	15.4	16.5	17.4	18.2	18.9	19.5	20.0
	36"	S	312	284	263	246	233	222	213	205
		G'	13.8	15.0	16.0	16.8	17.4	18.0	18.5	18.9
16 0.0598"	6"	S	1104	1069	1042	1022	1005	992	980	971
		G'	27.6	31.0	34.1	37.0	39.7	42.2	44.6	46.8
	12"	S	676	641	614	594	577	564	552	543
		G'	25.1	27.7	30.0	32.0	33.9	35.5	37.0	38.4
	18"	S	533	498	472	451	434	421	410	400
		G'	23.6	25.6	27.4	28.9	30.3	31.4	32.4	33.3
	24"	S	462	427	400	380	363	350	338	329
		G'	22.5	24.2	25.6	26.8	27.8	28.6	29.3	29.9
	30"	S	419	384	357	337	320	307	295	286
		G'	21.7	23.2	24.3	25.3	26.0	26.6	27.1	27.5
	36"	S	391	355	329	308	292	278	267	257
		G'	21.1	22.4	23.3	24.1	24.6	25.1	25.4	25.7
14 0.0747"	6"	S	1374	1331	1298	1273	1253	1236	1222	1210
		G'	43.5	48.1	52.3	56.1	59.6	62.8	65.7	68.3
	12"	S	840	796	764	738	718	701	687	676
		G'	38.2	41.4	44.1	46.4	48.4	50.2	51.8	53.2
	18"	S	662	618	585	560	540	523	509	498
		G'	35.0	37.3	39.2	40.7	42.0	43.0	44.0	44.7
	24"	S	572	529	496	471	451	434	420	408
		G'	33.0	34.7	36.0	37.0	37.8	38.4	39.0	39.4
	30"	S	519	475	443	417	397	381	367	355
		G'	31.5	32.8	33.7	34.4	34.9	35.2	35.5	35.7
	36"	S	483	440	407	382	362	345	331	319
		G'	30.3	31.4	32.0	32.5	32.7	32.9	32.9	32.9

See Table 4 notes.

TABLE 6—DEEP-DEK® 4.5 – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: **Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)**

SIDELAP CONNECTION: **Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12 / 2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	713	702	694	688	682	678	675	672
		G'	8.8	10.1	11.3	12.5	13.6	14.8	15.8	16.9
	12"	S	417	407	400	394	390	386	383	380
		G'	8.4	9.6	10.6	11.7	12.6	13.6	14.4	15.3
	18"	S	301	291	284	278	274	270	267	264
		G'	8.2	9.2	10.1	11.0	11.9	12.7	13.4	14.1
	24"	S	243	233	226	220	216	212	209	206
		G'	8.0	8.9	9.8	10.6	11.3	12.0	12.6	13.2
	30"	S	209	199	191	186	181	177	174	171
		G'	7.8	8.7	9.5	10.2	10.9	11.5	12.0	12.5
	36"	S	185	175	168	162	158	154	151	148
		G'	7.7	8.5	9.3	9.9	10.5	11.0	11.5	11.9
18 0.0474"	6"	S	941	927	916	908	901	895	891	887
		G'	16.6	18.8	21.0	23.0	24.9	26.7	28.4	30.1
	12"	S	551	539	529	521	515	510	506	503
		G'	15.5	17.3	19.0	20.6	22.1	23.4	24.7	25.8
	18"	S	398	385	375	368	362	357	353	349
		G'	14.7	16.3	17.7	19.0	20.1	21.2	22.1	23.0
	24"	S	321	308	299	291	285	280	276	272
		G'	14.2	15.5	16.8	17.8	18.7	19.6	20.3	21.0
	30"	S	275	262	253	245	239	234	230	226
		G'	13.7	15.0	16.0	16.9	17.7	18.3	18.9	19.4
	36"	S	245	232	222	214	208	203	199	196
		G'	13.4	14.5	15.4	16.2	16.8	17.4	17.9	18.3
16 0.0598"	6"	S	1182	1165	1151	1141	1133	1126	1120	1115
		G'	27.5	30.8	33.9	36.8	39.5	42.0	44.4	46.6
	12"	S	695	679	666	657	649	643	638	634
		G'	24.8	27.4	29.6	31.6	33.4	35.1	36.6	37.9
	18"	S	501	485	473	463	456	450	444	440
		G'	23.1	25.1	26.8	28.3	29.6	30.7	31.8	32.7
	24"	S	404	388	376	367	359	353	348	343
		G'	21.9	23.5	24.9	26.0	27.0	27.8	28.5	29.1
	30"	S	346	330	318	308	301	295	290	285
		G'	21.0	22.4	23.5	24.3	25.0	25.6	26.1	26.5
	36"	S	308	291	279	270	262	256	251	246
		G'	20.3	21.5	22.4	23.0	23.6	24.0	24.3	24.6
14 0.0747"	6"	S	1469	1448	1432	1419	1409	1401	1394	1388
		G'	43.2	47.8	52.0	55.8	59.2	62.4	65.3	67.9
	12"	S	866	846	831	820	810	803	796	791
		G'	37.5	40.7	43.3	45.6	47.6	49.4	51.0	52.4
	18"	S	625	605	589	578	568	561	554	549
		G'	34.1	36.3	38.1	39.6	40.9	41.9	42.8	43.6
	24"	S	504	484	469	457	448	440	433	428
		G'	31.8	33.4	34.7	35.7	36.5	37.1	37.6	38.1
	30"	S	431	411	396	384	375	367	361	356
		G'	30.1	31.3	32.2	32.9	33.4	33.7	34.0	34.2
	36"	S	383	363	348	336	327	319	313	307
		G'	28.9	29.8	30.4	30.8	31.0	31.2	31.3	31.3

ATTACHMENT PATTERN: 12 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	805	789	778	768	761	755	750	746
		G'	8.8	10.1	11.4	12.6	13.7	14.9	15.9	17.0
	12"	S	457	442	430	421	414	408	403	398
		G'	8.6	9.7	10.8	11.9	12.9	13.8	14.7	15.6
	18"	S	341	326	314	305	298	292	287	283
		G'	8.4	9.5	10.5	11.4	12.3	13.1	13.9	14.6
	24"	S	283	268	256	247	240	234	229	225
		G'	8.2	9.3	10.2	11.1	11.9	12.6	13.2	13.9
	30"	S	249	233	221	212	205	199	194	190
		G'	8.1	9.1	10.0	10.8	11.5	12.2	12.8	13.3
	36"	S	225	210	198	189	182	176	171	167
		G'	8.1	9.0	9.9	10.6	11.3	11.9	12.4	12.9
18 0.0474"	6"	S	1064	1044	1028	1016	1007	999	993	987
		G'	16.8	19.0	21.2	23.2	25.2	27.0	28.7	30.4
	12"	S	604	583	568	556	547	539	532	527
		G'	15.9	17.8	19.6	21.2	22.7	24.1	25.4	26.6
	18"	S	450	430	415	403	393	385	379	373
		G'	15.4	17.1	18.6	19.9	21.1	22.3	23.3	24.2
	24"	S	374	353	338	326	316	309	302	297
		G'	15.0	16.5	17.9	19.0	20.1	21.0	21.8	22.5
	30"	S	328	307	292	280	270	263	256	251
		G'	14.7	16.1	17.3	18.4	19.3	20.0	20.7	21.2
	36"	S	297	277	261	249	240	232	225	220
		G'	14.5	15.8	16.9	17.9	18.6	19.3	19.8	20.3
16 0.0598"	6"	S	1341	1315	1296	1281	1269	1259	1251	1244
		G'	27.9	31.3	34.4	37.4	40.1	42.6	45.0	47.2
	12"	S	760	734	715	700	688	679	671	664
		G'	25.8	28.4	30.8	32.9	34.8	36.5	38.0	39.4
	18"	S	566	541	522	507	495	485	477	470
		G'	24.5	26.7	28.6	30.2	31.6	32.8	33.9	34.8
	24"	S	470	444	425	410	398	388	380	373
		G'	23.7	25.6	27.1	28.4	29.5	30.4	31.1	31.7
	30"	S	411	386	367	352	340	330	322	315
		G'	23.1	24.7	26.1	27.1	27.9	28.6	29.1	29.6
	36"	S	373	347	328	313	301	292	283	277
		G'	22.6	24.1	25.3	26.1	26.8	27.3	27.7	27.9
14 0.0747"	6"	S	1672	1640	1617	1598	1584	1572	1562	1553
		G'	44.1	48.8	53.1	56.9	60.4	63.6	66.5	69.2
	12"	S	947	915	891	873	858	846	836	828
		G'	39.5	42.8	45.6	48.0	50.1	51.9	53.5	54.9
	18"	S	705	673	650	631	616	604	594	586
		G'	36.9	39.4	41.4	43.0	44.3	45.4	46.3	47.1
	24"	S	584	552	529	510	496	484	474	465
		G'	35.2	37.2	38.7	39.8	40.6	41.3	41.8	42.2
	30"	S	511	480	456	438	423	411	401	392
		G'	34.0	35.6	36.7	37.5	38.0	38.4	38.6	38.8
	36"	S	463	431	408	389	375	363	353	344
		G'	33.2	34.5	35.3	35.9	36.2	36.3	36.3	36.3

See Table 4 notes

TABLE 7—DEEP-DEK® 6 – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: $^1/_2$" Effective Weld Diameter

SIDELAP CONNECTION: $1^1/_2$" Seam Welds

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12 / 2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	1312	1306	1301	1297	1294	1291	1289	1287
		G'	6.6	7.5	8.3	9.2	10.0	10.9	11.7	12.5
	12"	S	1027	1010	996	986	977	969	963	958
		G'	6.5	7.3	8.2	9.0	9.8	10.5	11.3	12.0
	18"	S	754	739	727	717	710	703	697	692
		G'	6.4	7.2	8.0	8.8	9.5	10.2	10.9	11.6
	24"	S	597	581	569	560	552	545	540	535
		G'	6.3	7.1	7.8	8.6	9.3	10.0	10.6	11.3
	30"	S	502	487	475	465	457	451	445	441
		G'	6.2	7.0	7.7	8.4	9.1	9.7	10.4	11.0
	36"	S	439	424	412	402	394	388	382	377
		G'	6.2	6.9	7.6	8.3	8.9	9.5	10.1	10.7
18 0.0474"	6"	S	1714	1706	1699	1694	1690	1686	1684	1681
		G'	12.9	14.5	16.1	17.7	19.2	20.8	22.2	23.7
	12"	S	1341	1319	1301	1287	1276	1266	1258	1251
		G'	12.5	14.0	15.5	17.0	18.4	19.7	21.0	22.3
	18"	S	985	965	950	937	927	918	911	904
		G'	12.2	13.6	15.0	16.3	17.6	18.8	20.0	21.2
	24"	S	780	759	744	731	721	712	705	699
		G'	11.9	13.2	14.5	15.8	17.0	18.1	19.1	20.2
	30"	S	656	636	620	608	597	589	582	575
		G'	11.6	12.9	14.2	15.3	16.4	17.4	18.4	19.3
	36"	S	574	553	538	525	515	506	499	493
		G'	11.4	12.7	13.8	14.9	15.9	16.9	17.7	18.6
16 0.0598"	6"	S	2131	2121	2113	2107	2101	2097	2093	2090
		G'	22.1	24.8	27.4	29.9	32.4	34.8	37.1	39.3
	12"	S	1667	1640	1618	1601	1586	1574	1564	1555
		G'	21.1	23.5	25.8	28.1	30.2	32.2	34.2	36.0
	18"	S	1225	1200	1181	1165	1152	1142	1133	1124
		G'	20.3	22.5	24.6	26.5	28.4	30.2	31.8	33.4
	24"	S	969	944	925	909	896	886	877	869
		G'	19.6	21.6	23.5	25.3	26.9	28.5	29.9	31.3
	30"	S	816	791	771	755	743	732	723	715
		G'	19.0	20.9	22.6	24.2	25.7	27.0	28.3	29.5
	36"	S	713	688	669	653	640	630	621	613
		G'	18.6	20.3	21.9	23.3	24.6	25.8	27.0	28.0
14 0.0747"	6"	S	2615	2603	2593	2585	2579	2573	2569	2565
		G'	36.4	40.6	44.7	48.5	52.2	55.7	59.1	62.3
	12"	S	2046	2012	1986	1964	1947	1932	1919	1909
		G'	34.1	37.7	41.1	44.2	47.2	50.0	52.7	55.2
	18"	S	1504	1473	1449	1430	1414	1401	1390	1379
		G'	32.2	35.4	38.3	40.9	43.4	45.7	47.8	49.8
	24"	S	1189	1159	1135	1116	1100	1087	1076	1066
		G'	30.7	33.5	36.0	38.3	40.4	42.3	44.0	45.7
	30"	S	1001	970	946	927	911	898	887	878
		G'	29.5	32.0	34.1	36.1	37.9	39.5	41.0	42.3
	36"	S	875	844	820	801	786	773	762	752
		G'	28.5	30.7	32.6	34.3	35.8	37.2	38.5	39.6

ATTACHMENT PATTERN: 12 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	1453	1429	1410	1395	1383	1373	1365	1357
		G'	6.6	7.5	8.3	9.2	10.0	10.9	11.7	12.5
	12"	S	1126	1103	1086	1072	1060	1051	1043	1036
		G'	6.5	7.3	8.2	9.0	9.8	10.6	11.3	12.1
	18"	S	810	788	771	757	745	736	728	721
		G'	6.4	7.2	8.0	8.8	9.5	10.3	11.0	11.7
	24"	S	653	630	613	599	588	578	570	563
		G'	6.3	7.1	7.9	8.6	9.3	10.0	10.7	11.4
	30"	S	558	536	518	504	493	483	475	468
		G'	6.3	7.0	7.8	8.5	9.2	9.8	10.5	11.1
	36"	S	495	473	455	441	430	420	412	405
		G'	6.2	7.0	7.7	8.4	9.0	9.7	10.3	10.8
18 0.0474"	6"	S	1898	1867	1842	1823	1807	1794	1783	1773
		G'	12.9	14.5	16.1	17.7	19.3	20.8	22.3	23.7
	12"	S	1470	1441	1418	1400	1385	1373	1362	1353
		G'	12.5	14.1	15.6	17.0	18.4	19.8	21.1	22.4
	18"	S	1059	1029	1006	988	973	961	950	941
		G'	12.2	13.7	15.1	16.4	17.7	19.0	20.1	21.3
	24"	S	853	823	801	782	767	755	744	735
		G'	12.0	13.4	14.7	15.9	17.1	18.3	19.3	20.4
	30"	S	729	700	677	659	644	631	621	612
		G'	11.8	13.1	14.4	15.5	16.6	17.7	18.7	19.6
	36"	S	647	617	595	576	561	549	539	530
		G'	11.6	12.9	14.1	15.2	16.2	17.2	18.1	18.9
16 0.0598"	6"	S	2360	2321	2291	2267	2247	2230	2216	2204
		G'	22.1	24.8	27.4	30.0	32.5	34.8	37.1	39.4
	12"	S	1828	1792	1763	1741	1722	1707	1694	1683
		G'	21.2	23.6	26.0	28.2	30.3	32.4	34.3	36.2
	18"	S	1316	1280	1251	1229	1210	1195	1182	1170
		G'	20.5	22.7	24.8	26.8	28.7	30.5	32.1	33.7
	24"	S	1060	1024	995	973	954	939	926	914
		G'	19.9	21.9	23.9	25.7	27.3	28.9	30.4	31.7
	30"	S	906	870	842	819	800	785	772	761
		G'	19.4	21.3	23.1	24.7	26.2	27.6	28.9	30.1
	36"	S	804	768	739	717	698	683	670	658
		G'	19.0	20.8	22.4	23.9	25.3	26.5	27.7	28.7
14 0.0747"	6"	S	2896	2848	2811	2782	2757	2737	2720	2705
		G'	36.5	40.7	44.8	48.6	52.3	55.8	59.2	62.5
	12"	S	2244	2199	2164	2136	2114	2095	2079	2065
		G'	34.3	38.0	41.4	44.5	47.5	50.4	53.0	55.6
	18"	S	1615	1570	1536	1508	1485	1466	1450	1436
		G'	32.7	35.8	38.8	41.5	44.0	46.3	48.4	50.5
	24"	S	1301	1256	1221	1194	1171	1152	1136	1122
		G'	31.4	34.2	36.7	39.0	41.2	43.1	44.9	46.5
	30"	S	1112	1068	1033	1005	982	963	947	933
		G'	30.3	32.8	35.1	37.1	38.9	40.6	42.1	43.4
	36"	S	987	942	907	879	857	838	822	808
		G'	29.4	31.7	33.7	35.5	37.1	38.5	39.7	40.9

See Table 4 notes.

TABLE 8—DEEP-DEK® 6 – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **#10 Screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12 / 2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	587	578	571	565	560	556	553	550
		G'	6.4	7.3	8.1	8.9	9.6	10.4	11.1	11.8
	12"	S	331	322	314	309	304	300	297	294
		G'	6.2	7.0	7.7	8.4	9.1	9.7	10.4	11.0
	18"	S	246	236	229	223	219	215	211	208
		G'	6.0	6.7	7.4	8.0	8.6	9.2	9.8	10.3
	24"	S	203	194	186	181	176	172	169	166
		G'	5.9	6.5	7.1	7.7	8.3	8.8	9.3	9.7
	30"	S	177	168	161	155	150	146	143	140
		G'	5.8	6.4	6.9	7.5	8.0	8.4	8.9	9.3
	36"	S	160	151	144	138	133	129	126	123
		G'	5.7	6.2	6.8	7.3	7.7	8.1	8.5	8.9
18 0.0474"	6"	S	776	764	755	747	741	736	731	728
		G'	12.3	13.8	15.2	16.6	18.0	19.3	20.5	21.7
	12"	S	437	425	415	408	402	396	392	388
		G'	11.6	12.9	14.1	15.2	16.3	17.4	18.3	19.3
	18"	S	324	312	302	295	289	283	279	275
		G'	11.0	12.2	13.2	14.2	15.1	15.9	16.7	17.5
	24"	S	267	255	246	238	232	227	222	219
		G'	10.6	11.6	12.5	13.4	14.1	14.9	15.5	16.1
	30"	S	233	221	212	204	198	193	189	185
		G'	10.3	11.2	12.0	12.7	13.4	14.0	14.5	15.1
	36"	S	211	199	189	182	175	170	166	162
		G'	10.0	10.8	11.6	12.2	12.8	13.3	13.8	14.2
16 0.0598"	6"	S	978	963	951	941	934	927	922	917
		G'	20.6	23.0	25.2	27.3	29.3	31.2	33.0	34.8
	12"	S	550	535	523	513	506	499	494	489
		G'	18.9	20.7	22.5	24.1	25.5	26.9	28.2	29.4
	18"	S	407	392	380	371	363	357	351	347
		G'	17.6	19.2	20.5	21.8	22.9	24.0	24.9	25.8
	24"	S	336	321	309	299	292	285	280	275
		G'	16.7	18.0	19.1	20.1	21.0	21.8	22.6	23.2
	30"	S	293	278	266	257	249	243	237	232
		G'	15.9	17.0	18.0	18.8	19.6	20.2	20.8	21.3
	36"	S	265	249	238	228	220	214	209	204
		G'	15.4	16.3	17.1	17.8	18.4	18.9	19.4	19.8
14 0.0747"	6"	S	1219	1201	1186	1174	1165	1157	1150	1145
		G'	33.1	36.4	39.6	42.5	45.3	47.9	50.3	52.6
	12"	S	685	666	652	640	630	622	616	610
		G'	29.2	31.6	33.8	35.8	37.6	39.3	40.8	42.2
	18"	S	507	488	473	462	452	444	437	432
		G'	26.5	28.4	30.0	31.4	32.7	33.8	34.8	35.8
	24"	S	417	399	384	373	363	355	348	343
		G'	24.6	26.1	27.3	28.4	29.3	30.1	30.8	31.4
	30"	S	364	345	331	319	310	302	295	289
		G'	23.2	24.4	25.3	26.1	26.8	27.4	27.9	28.3
	36"	S	328	310	295	283	274	266	259	254
		G'	22.1	23.1	23.8	24.4	24.9	25.3	25.6	25.9

ATTACHMENT PATTERN: 12 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	643	627	614	604	596	589	583	578
		G'	6.4	7.3	8.1	8.9	9.7	10.4	11.2	11.9
	12"	S	387	371	358	348	340	333	327	322
		G'	6.3	7.0	7.8	8.5	9.2	9.8	10.5	11.1
	18"	S	301	285	273	262	254	247	241	236
		G'	6.1	6.8	7.5	8.2	8.8	9.4	9.9	10.5
	24"	S	259	242	230	220	211	205	199	194
		G'	6.0	6.7	7.3	7.9	8.5	9.0	9.5	10.0
	30"	S	233	217	204	194	186	179	173	168
		G'	5.9	6.6	7.2	7.7	8.2	8.7	9.2	9.6
	36"	S	216	200	187	177	169	162	156	151
		G'	5.9	6.5	7.0	7.6	8.0	8.5	8.9	9.3
18 0.0474"	6"	S	849	828	811	798	787	778	771	764
		G'	12.4	13.9	15.3	16.7	18.1	19.4	20.6	21.9
	12"	S	510	489	472	459	448	439	431	425
		G'	11.7	13.1	14.3	15.5	16.6	17.6	18.6	19.6
	18"	S	397	376	359	346	335	326	318	312
		G'	11.3	12.5	13.6	14.6	15.5	16.4	17.2	18.0
	24"	S	340	319	303	289	279	269	262	255
		G'	11.0	12.1	13.0	13.9	14.7	15.5	16.1	16.8
	30"	S	307	285	269	255	245	236	228	221
		G'	10.7	11.7	12.6	13.4	14.1	14.7	15.3	15.9
	36"	S	284	263	246	233	222	213	205	199
		G'	10.6	11.5	12.3	13.0	13.6	14.2	14.7	15.1
16 0.0598"	6"	S	1069	1042	1022	1005	992	980	971	963
		G'	20.8	23.1	25.4	27.5	29.5	31.4	33.3	35.0
	12"	S	641	614	594	577	564	552	543	535
		G'	19.3	21.2	22.9	24.6	26.1	27.5	28.8	30.0
	18"	S	498	472	451	434	421	410	400	392
		G'	18.2	19.9	21.3	22.6	23.8	24.9	25.8	26.8
	24"	S	427	400	380	363	350	338	329	321
		G'	17.5	18.9	20.1	21.2	22.2	23.0	23.8	24.4
	30"	S	384	357	337	320	307	295	286	278
		G'	17.0	18.2	19.2	20.1	20.9	21.6	22.2	22.7
	36"	S	355	329	308	292	278	267	257	249
		G'	16.5	17.6	18.5	19.3	20.0	20.5	21.0	21.4
14 0.0747"	6"	S	1331	1298	1273	1253	1236	1222	1210	1200
		G'	33.4	36.8	40.0	42.9	45.7	48.3	50.7	53.0
	12"	S	796	764	738	718	701	687	676	666
		G'	30.0	32.5	34.8	36.8	38.7	40.3	41.9	43.3
	18"	S	618	585	560	540	523	509	498	487
		G'	27.8	29.8	31.5	33.0	34.3	35.4	36.5	37.4
	24"	S	529	496	471	451	434	420	408	398
		G'	26.3	27.9	29.2	30.3	31.3	32.1	32.8	33.4
	30"	S	475	443	417	397	381	367	355	345
		G'	25.2	26.5	27.6	28.4	29.1	29.7	30.2	30.6
	36"	S	440	407	382	362	345	331	319	309
		G'	24.4	25.5	26.3	27.0	27.5	27.9	28.2	28.5

See Table 4 notes.

TABLE 9—DEEP-DEK® 6 – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: **Hilti X-ENP-19-L15** (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: **Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12 / 2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	702	694	688	682	678	675	672	669
		G'	6.4	7.3	8.1	8.9	9.6	10.4	11.1	11.9
	12"	S	407	400	394	390	386	383	380	378
		G'	6.2	7.0	7.7	8.4	9.1	9.8	10.4	11.0
	18"	S	291	284	278	274	270	267	264	262
		G'	6.1	6.8	7.5	8.1	8.7	9.3	9.9	10.4
	24"	S	233	226	220	216	212	209	206	204
		G'	5.9	6.6	7.2	7.8	8.4	8.9	9.4	9.9
	30"	S	199	191	186	181	177	174	171	169
		G'	5.9	6.5	7.1	7.6	8.1	8.6	9.0	9.5
	36"	S	175	168	162	158	154	151	148	146
		G'	5.8	6.4	6.9	7.4	7.9	8.3	8.7	9.1
18 0.0474"	6"	S	927	916	908	901	895	891	887	883
		G'	12.3	13.8	15.3	16.7	18.0	19.3	20.6	21.8
	12"	S	539	529	521	515	510	506	503	500
		G'	11.7	13.0	14.2	15.4	16.5	17.5	18.5	19.4
	18"	S	385	375	368	362	357	353	349	346
		G'	11.2	12.3	13.4	14.4	15.3	16.2	17.0	17.8
	24"	S	308	299	291	285	280	276	272	270
		G'	10.8	11.9	12.8	13.7	14.5	15.2	15.9	16.5
	30"	S	262	253	245	239	234	230	226	223
		G'	10.5	11.5	12.3	13.1	13.8	14.4	15.0	15.5
	36"	S	232	222	214	208	203	199	196	193
		G'	10.3	11.2	12.0	12.6	13.2	13.8	14.3	14.7
16 0.0598"	6"	S	1165	1151	1141	1133	1126	1120	1115	1111
		G'	20.7	23.1	25.3	27.4	29.4	31.3	33.2	34.9
	12"	S	679	666	657	649	643	638	634	630
		G'	19.1	21.0	22.7	24.3	25.8	27.2	28.5	29.7
	18"	S	485	473	463	456	450	444	440	436
		G'	18.0	19.5	21.0	22.2	23.4	24.5	25.4	26.3
	24"	S	388	376	367	359	353	348	343	340
		G'	17.1	18.5	19.7	20.7	21.6	22.5	23.2	23.9
	30"	S	330	318	308	301	295	290	285	281
		G'	16.5	17.7	18.7	19.6	20.3	21.0	21.6	22.1
	36"	S	291	279	270	262	256	251	246	243
		G'	16.0	17.1	17.9	18.7	19.3	19.8	20.3	20.7
14 0.0747"	6"	S	1448	1432	1419	1409	1401	1394	1388	1382
		G'	33.2	36.6	39.8	42.8	45.5	48.1	50.5	52.8
	12"	S	846	831	820	810	803	796	791	786
		G'	29.6	32.1	34.3	36.4	38.2	39.9	41.4	42.8
	18"	S	605	589	578	568	561	554	549	544
		G'	27.3	29.2	30.8	32.3	33.6	34.7	35.7	36.6
	24"	S	484	469	457	448	440	433	428	423
		G'	25.6	27.1	28.4	29.5	30.4	31.2	31.9	32.5
	30"	S	411	396	384	375	367	361	356	351
		G'	24.4	25.6	26.6	27.4	28.1	28.7	29.1	29.6
	36"	S	363	348	336	327	319	313	307	303
		G'	23.4	24.4	25.2	25.8	26.3	26.7	27.1	27.3

ATTACHMENT PATTERN: 12 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	789	778	768	761	755	750	746	742
		G'	6.5	7.3	8.1	8.9	9.7	10.4	11.2	11.9
	12"	S	442	430	421	414	408	403	398	395
		G'	6.3	7.1	7.8	8.5	9.2	9.9	10.6	11.2
	18"	S	326	314	305	298	292	287	283	279
		G'	6.2	6.9	7.6	8.3	8.9	9.5	10.1	10.6
	24"	S	268	256	247	240	234	229	225	221
		G'	6.1	6.8	7.5	8.1	8.7	9.2	9.7	10.2
	30"	S	233	221	212	205	199	194	190	186
		G'	6.0	6.7	7.3	7.9	8.5	9.0	9.5	9.9
	36"	S	210	198	189	182	176	171	167	163
		G'	6.0	6.6	7.2	7.8	8.3	8.8	9.3	9.7
18 0.0474"	6"	S	1044	1028	1016	1007	999	993	987	982
		G'	12.4	13.9	15.4	16.8	18.1	19.5	20.7	22.0
	12"	S	583	568	556	547	539	532	527	522
		G'	11.9	13.2	14.5	15.7	16.8	17.9	18.9	19.9
	18"	S	430	415	403	393	385	379	373	369
		G'	11.5	12.7	13.9	14.9	15.9	16.8	17.6	18.4
	24"	S	353	338	326	316	309	302	297	292
		G'	11.3	12.4	13.4	14.4	15.2	16.0	16.7	17.4
	30"	S	307	292	280	270	263	256	251	246
		G'	11.1	12.2	13.1	13.9	14.7	15.4	16.0	16.6
	36"	S	277	261	249	240	232	225	220	215
		G'	11.0	12.0	12.8	13.6	14.3	14.9	15.5	16.0
16 0.0598"	6"	S	1315	1296	1281	1269	1259	1251	1244	1238
		G'	20.9	23.3	25.5	27.7	29.7	31.6	33.5	35.2
	12"	S	734	715	700	688	679	671	664	658
		G'	19.6	21.6	23.4	25.0	26.6	28.0	29.4	30.6
	18"	S	541	522	507	495	485	477	470	464
		G'	18.8	20.5	22.0	23.3	24.6	25.7	26.7	27.6
	24"	S	444	425	410	398	388	380	373	367
		G'	18.2	19.7	21.0	22.2	23.2	24.1	24.9	25.6
	30"	S	386	367	352	340	330	322	315	309
		G'	17.8	19.1	20.3	21.3	22.1	22.9	23.5	24.1
	36"	S	347	328	313	301	292	283	277	271
		G'	17.5	18.7	19.7	20.6	21.3	22.0	22.5	22.9
14 0.0747"	6"	S	1640	1617	1598	1584	1572	1562	1553	1546
		G'	33.7	37.2	40.4	43.4	46.2	48.8	51.2	53.5
	12"	S	915	891	873	858	846	836	828	820
		G'	30.7	33.4	35.7	37.8	39.7	41.4	43.0	44.4
	18"	S	673	650	631	616	604	594	586	579
		G'	28.9	31.0	32.8	34.4	35.8	37.0	38.0	39.0
	24"	S	552	529	510	496	484	474	465	458
		G'	27.7	29.5	30.9	32.1	33.2	34.0	34.7	35.4
	30"	S	480	456	438	423	411	401	392	385
		G'	26.9	28.4	29.5	30.5	31.3	31.9	32.4	32.8
	36"	S	431	408	389	375	363	353	344	337
		G'	26.2	27.5	28.5	29.3	29.9	30.3	30.7	30.9

See Table 4 notes.

TABLE 10—DEEP-DEK® 7.5 – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **$1^1/_2$" Seam Welds**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12 / 2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	1306	1301	1297	1294	1291	1289	1287	1285
		G'	5.2	5.8	6.4	7.0	7.6	8.1	8.7	9.3
	12"	S	1010	996	986	977	969	963	958	953
		G'	5.1	5.7	6.3	6.8	7.4	7.9	8.5	9.0
	18"	S	739	727	717	710	703	697	692	687
		G'	5.0	5.6	6.2	6.7	7.2	7.8	8.3	8.8
	24"	S	581	569	560	552	545	540	535	531
		G'	5.0	5.5	6.1	6.6	7.1	7.6	8.1	8.6
	30"	S	487	475	465	457	451	445	441	436
		G'	4.9	5.5	6.0	6.5	7.0	7.5	8.0	8.4
	36"	S	424	412	402	394	388	382	377	373
		G'	4.9	5.4	5.9	6.4	6.9	7.4	7.8	8.3
18 0.0474"	6"	S	1706	1699	1694	1690	1686	1684	1681	1679
		G'	10.1	11.3	12.4	13.5	14.6	15.7	16.8	17.8
	12"	S	1319	1301	1287	1276	1266	1258	1251	1245
		G'	9.9	11.0	12.0	13.1	14.1	15.1	16.1	17.0
	18"	S	965	950	937	927	918	911	904	897
		G'	9.7	10.7	11.7	12.7	13.6	14.6	15.5	16.3
	24"	S	759	744	731	721	712	705	699	694
		G'	9.5	10.5	11.4	12.3	13.2	14.1	14.9	15.7
	30"	S	636	620	608	597	589	582	575	570
		G'	9.3	10.3	11.2	12.0	12.9	13.7	14.5	15.2
	36"	S	553	538	525	515	506	499	493	488
		G'	9.2	10.1	11.0	11.8	12.6	13.3	14.0	14.7
16 0.0598"	6"	S	2121	2113	2107	2101	2097	2093	2090	2087
		G'	17.4	19.4	21.2	23.1	24.9	26.6	28.3	30.0
	12"	S	1640	1618	1601	1586	1574	1564	1555	1548
		G'	16.8	18.6	20.3	21.9	23.5	25.1	26.6	28.0
	18"	S	1200	1181	1165	1152	1142	1133	1124	1116
		G'	16.3	17.9	19.5	21.0	22.4	23.8	25.1	26.4
	24"	S	944	925	909	896	886	877	869	862
		G'	15.8	17.3	18.8	20.2	21.5	22.7	23.9	25.0
	30"	S	791	771	755	743	732	723	715	709
		G'	15.4	16.9	18.2	19.5	20.7	21.8	22.9	23.9
	36"	S	688	669	653	640	630	621	613	606
		G'	15.1	16.4	17.7	18.8	19.9	21.0	21.9	22.9
14 0.0747"	6"	S	2603	2593	2585	2579	2573	2569	2565	2562
		G'	29.0	32.1	35.0	37.9	40.7	43.3	45.9	48.4
	12"	S	2012	1986	1964	1947	1932	1919	1909	1899
		G'	27.5	30.2	32.8	35.2	37.5	39.8	41.9	44.0
	18"	S	1473	1449	1430	1414	1401	1390	1379	1369
		G'	26.2	28.6	30.9	33.0	35.0	36.9	38.7	40.5
	24"	S	1159	1135	1116	1100	1087	1076	1066	1058
		G'	25.2	27.4	29.4	31.2	33.0	34.6	36.2	37.6
	30"	S	970	946	927	911	898	887	878	870
		G'	24.3	26.3	28.1	29.7	31.3	32.7	34.0	35.3
	36"	S	844	820	801	786	773	762	752	744
		G'	23.6	25.4	27.0	28.5	29.8	31.1	32.3	33.3

ATTACHMENT PATTERN: 12 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	1429	1410	1395	1383	1373	1365	1357	1351
		G'	5.2	5.8	6.4	7.0	7.6	8.1	8.7	9.3
	12"	S	1103	1086	1072	1060	1051	1043	1036	1030
		G'	5.1	5.7	6.3	6.8	7.4	8.0	8.5	9.0
	18"	S	788	771	757	745	736	728	721	715
		G'	5.0	5.6	6.2	6.7	7.3	7.8	8.3	8.8
	24"	S	630	613	599	588	578	570	563	557
		G'	5.0	5.6	6.1	6.6	7.1	7.7	8.2	8.6
	30"	S	536	518	504	493	483	475	468	463
		G'	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
	36"	S	473	455	441	430	420	412	405	399
		G'	4.9	5.4	6.0	6.5	7.0	7.4	7.9	8.3
18 0.0474"	6"	S	1867	1842	1823	1807	1794	1783	1773	1765
		G'	10.1	11.3	12.4	13.5	14.6	15.7	16.8	17.8
	12"	S	1441	1418	1400	1385	1373	1362	1353	1345
		G'	9.9	11.0	12.1	13.1	14.1	15.1	16.1	17.1
	18"	S	1029	1006	988	973	961	950	941	934
		G'	9.7	10.7	11.8	12.7	13.7	14.6	15.5	16.4
	24"	S	823	801	782	767	755	744	735	728
		G'	9.5	10.5	11.5	12.4	13.3	14.2	15.0	15.9
	30"	S	700	677	659	644	631	621	612	604
		G'	9.4	10.4	11.3	12.2	13.0	13.8	14.6	15.4
	36"	S	617	595	576	561	549	539	530	522
		G'	9.3	10.2	11.1	11.9	12.7	13.5	14.2	15.0
16 0.0598"	6"	S	2321	2291	2267	2247	2230	2216	2204	2194
		G'	17.5	19.4	21.3	23.1	24.9	26.7	28.4	30.0
	12"	S	1792	1763	1741	1722	1707	1694	1683	1673
		G'	16.9	18.6	20.4	22.0	23.6	25.2	26.7	28.1
	18"	S	1280	1251	1229	1210	1195	1182	1170	1161
		G'	16.4	18.0	19.6	21.1	22.6	24.0	25.3	26.6
	24"	S	1024	995	973	954	939	926	914	905
		G'	16.0	17.5	19.0	20.4	21.7	23.0	24.2	25.3
	30"	S	870	842	819	800	785	772	761	751
		G'	15.7	17.1	18.5	19.8	21.0	22.1	23.2	24.2
	36"	S	768	739	717	698	683	670	658	649
		G'	15.4	16.7	18.0	19.2	20.3	21.4	22.4	23.3
14 0.0747"	6"	S	2848	2811	2782	2757	2737	2720	2705	2693
		G'	29.1	32.1	35.1	38.0	40.7	43.4	46.0	48.5
	12"	S	2199	2164	2136	2114	2095	2079	2065	2053
		G'	27.6	30.3	32.9	35.4	37.7	40.0	42.1	44.2
	18"	S	1570	1536	1508	1485	1466	1450	1436	1424
		G'	26.5	28.9	31.2	33.4	35.4	37.3	39.1	40.8
	24"	S	1256	1221	1194	1171	1152	1136	1122	1110
		G'	25.6	27.8	29.8	31.7	33.5	35.2	36.7	38.2
	30"	S	1068	1033	1005	982	963	947	933	922
		G'	24.8	26.8	28.7	30.4	31.9	33.4	34.8	36.0
	36"	S	942	907	879	857	838	822	808	796
		G'	24.2	26.0	27.7	29.2	30.6	31.9	33.1	34.2

See Table 4 notes.

TABLE 11—DEEP-DEK® 7.5 – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **1/2" Effective Weld Diameter**

SIDELAP CONNECTION: **#10 Screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12 / 2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	578	571	565	560	556	553	550	548
		G'	5.1	5.6	6.2	6.8	7.3	7.9	8.4	8.9
	12"	S	322	314	309	304	300	297	294	291
		G'	4.9	5.5	6.0	6.5	7.0	7.5	8.0	8.4
	18"	S	236	229	223	219	215	211	208	206
		G'	4.8	5.3	5.8	6.3	6.7	7.2	7.6	8.0
	24"	S	194	186	181	176	172	169	166	163
		G'	4.7	5.2	5.6	6.1	6.5	6.9	7.3	7.7
	30"	S	168	161	155	150	146	143	140	138
		G'	4.6	5.1	5.5	5.9	6.3	6.7	7.0	7.4
	36"	S	151	144	138	133	129	126	123	121
		G'	4.5	5.0	5.4	5.8	6.1	6.5	6.8	7.1
18 0.0474"	6"	S	764	755	747	741	736	731	728	724
		G'	9.8	10.8	11.9	12.9	13.9	14.8	15.8	16.7
	12"	S	425	415	408	402	396	392	388	385
		G'	9.3	10.2	11.1	12.0	12.8	13.7	14.4	15.2
	18"	S	312	302	295	289	283	279	275	272
		G'	8.9	9.8	10.6	11.3	12.1	12.8	13.4	14.0
	24"	S	255	246	238	232	227	222	219	216
		G'	8.6	9.4	10.1	10.8	11.4	12.0	12.6	13.1
	30"	S	221	212	204	198	193	189	185	182
		G'	8.4	9.1	9.7	10.3	10.9	11.4	11.9	12.4
	36"	S	199	189	182	175	170	166	162	159
		G'	8.2	8.8	9.4	10.0	10.5	10.9	11.4	11.8
16 0.0598"	6"	S	963	951	941	934	927	922	917	913
		G'	16.5	18.2	19.9	21.5	23.0	24.5	25.9	27.3
	12"	S	535	523	513	506	499	494	489	485
		G'	15.3	16.8	18.1	19.4	20.6	21.7	22.8	23.8
	18"	S	392	380	371	363	357	351	347	342
		G'	14.5	15.7	16.8	17.8	18.8	19.7	20.6	21.4
	24"	S	321	309	299	292	285	280	275	271
		G'	13.8	14.8	15.8	16.7	17.5	18.2	18.9	19.5
	30"	S	278	266	257	249	243	237	232	228
		G'	13.2	14.2	15.0	15.7	16.4	17.0	17.6	18.1
	36"	S	249	238	228	220	214	209	204	200
		G'	12.8	13.6	14.3	15.0	15.6	16.1	16.5	17.0
14 0.0747"	6"	S	1201	1186	1174	1165	1157	1150	1145	1140
		G'	26.8	29.4	31.8	34.1	36.3	38.4	40.4	42.3
	12"	S	666	652	640	630	622	616	610	605
		G'	24.1	26.1	27.9	29.6	31.1	32.6	33.9	35.2
	18"	S	488	473	462	452	444	437	432	427
		G'	22.2	23.8	25.2	26.5	27.6	28.7	29.7	30.6
	24"	S	399	384	373	363	355	348	343	338
		G'	20.8	22.1	23.2	24.2	25.1	25.9	26.6	27.3
	30"	S	345	331	319	310	302	295	289	284
		G'	19.7	20.7	21.7	22.5	23.2	23.8	24.3	24.8
	36"	S	310	295	283	274	266	259	254	249
		G'	18.8	19.7	20.5	21.1	21.7	22.1	22.6	22.9

ATTACHMENT PATTERN: 12 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	627	614	604	596	589	583	578	574
		G'	5.1	5.7	6.2	6.8	7.3	7.9	8.4	8.9
	12"	S	371	358	348	340	333	327	322	317
		G'	4.9	5.5	6.0	6.5	7.0	7.5	8.0	8.5
	18"	S	285	273	262	254	247	241	236	232
		G'	4.8	5.4	5.9	6.3	6.8	7.3	7.7	8.1
	24"	S	242	230	220	211	205	199	194	189
		G'	4.8	5.3	5.7	6.2	6.6	7.0	7.4	7.8
	30"	S	217	204	194	186	179	173	168	164
		G'	4.7	5.2	5.6	6.1	6.5	6.8	7.2	7.6
	36"	S	200	187	177	169	162	156	151	147
		G'	4.7	5.1	5.5	5.9	6.3	6.7	7.0	7.4
18 0.0474"	6"	S	828	811	798	787	778	771	764	758
		G'	9.8	10.9	11.9	12.9	13.9	14.9	15.8	16.7
	12"	S	489	472	459	448	439	431	425	419
		G'	9.4	10.3	11.3	12.1	13.0	13.8	14.6	15.4
	18"	S	376	359	346	335	326	318	312	306
		G'	9.1	10.0	10.8	11.6	12.3	13.0	13.7	14.3
	24"	S	319	303	289	279	269	262	255	250
		G'	8.8	9.7	10.4	11.1	11.8	12.4	13.0	13.5
	30"	S	285	269	255	245	236	228	221	216
		G'	8.7	9.4	10.1	10.8	11.4	11.9	12.4	12.9
	36"	S	263	246	233	222	213	205	199	193
		G'	8.5	9.2	9.9	10.5	11.0	11.5	12.0	12.4
16 0.0598"	6"	S	1042	1022	1005	992	980	971	963	956
		G'	16.6	18.3	20.0	21.6	23.1	24.6	26.0	27.4
	12"	S	614	594	577	564	552	543	535	528
		G'	15.6	17.0	18.4	19.7	20.9	22.1	23.2	24.2
	18"	S	472	451	434	421	410	400	392	385
		G'	14.9	16.1	17.3	18.4	19.4	20.3	21.2	22.0
	24"	S	400	380	363	350	338	329	321	314
		G'	14.3	15.4	16.4	17.4	18.2	19.0	19.7	20.4
	30"	S	357	337	320	307	295	286	278	271
		G'	13.9	14.9	15.8	16.6	17.3	18.0	18.6	19.1
	36"	S	329	308	292	278	267	257	249	242
		G'	13.6	14.5	15.3	16.0	16.6	17.2	17.7	18.1
14 0.0747"	6"	S	1298	1273	1253	1236	1222	1210	1200	1192
		G'	27.0	29.6	32.0	34.4	36.6	38.7	40.6	42.6
	12"	S	764	738	718	701	687	676	666	657
		G'	24.6	26.7	28.5	30.2	31.8	33.3	34.7	36.0
	18"	S	585	560	540	523	509	498	487	479
		G'	23.0	24.7	26.1	27.5	28.7	29.8	30.8	31.7
	24"	S	496	471	451	434	420	408	398	390
		G'	21.9	23.3	24.5	25.5	26.5	27.3	28.1	28.7
	30"	S	443	417	397	381	367	355	345	336
		G'	21.0	22.2	23.2	24.1	24.8	25.5	26.0	26.5
	36"	S	407	382	362	345	331	319	309	301
		G'	20.4	21.4	22.2	22.9	23.5	24.0	24.5	24.9

See Table 4 notes.

TABLE 12—DEEP-DEK® 7.5 – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: **Hilti X-ENP-19-L15** (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: **Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12 / 2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	694	688	682	678	675	672	669	667
		G'	5.1	5.6	6.2	6.8	7.3	7.9	8.4	8.9
	12"	S	400	394	390	386	383	380	378	376
		G'	4.9	5.5	6.0	6.5	7.0	7.5	8.0	8.4
	18"	S	284	278	274	270	267	264	262	260
		G'	4.8	5.3	5.8	6.3	6.8	7.2	7.6	8.1
	24"	S	226	220	216	212	209	206	204	202
		G'	4.7	5.2	5.7	6.1	6.6	7.0	7.4	7.7
	30"	S	191	186	181	177	174	171	169	167
		G'	4.7	5.1	5.6	6.0	6.4	6.8	7.1	7.5
	36"	S	168	162	158	154	151	148	146	144
		G'	4.6	5.1	5.5	5.9	6.2	6.6	6.9	7.3
18 0.0474"	6"	S	916	908	901	895	891	887	883	880
		G'	9.8	10.8	11.9	12.9	13.9	14.9	15.8	16.7
	12"	S	529	521	515	510	506	503	500	497
		G'	9.3	10.3	11.2	12.1	12.9	13.7	14.5	15.3
	18"	S	375	368	362	357	353	349	346	344
		G'	9.0	9.9	10.7	11.5	12.2	12.9	13.6	14.2
	24"	S	299	291	285	280	276	272	270	267
		G'	8.7	9.5	10.3	11.0	11.6	12.2	12.8	13.4
	30"	S	253	245	239	234	230	226	223	221
		G'	8.5	9.3	10.0	10.6	11.2	11.7	12.2	12.7
	36"	S	222	214	208	203	199	196	193	190
		G'	8.4	9.1	9.7	10.3	10.8	11.3	11.7	12.1
16 0.0598"	6"	S	1151	1141	1133	1126	1120	1115	1111	1107
		G'	16.6	18.3	19.9	21.5	23.1	24.5	26.0	27.3
	12"	S	666	657	649	643	638	634	630	627
		G'	15.5	16.9	18.3	19.5	20.8	21.9	23.0	24.0
	18"	S	473	463	456	450	444	440	436	433
		G'	14.7	15.9	17.1	18.1	19.1	20.0	20.9	21.7
	24"	S	376	367	359	353	348	343	340	336
		G'	14.1	15.2	16.2	17.1	17.9	18.6	19.3	20.0
	30"	S	318	308	301	295	290	285	281	278
		G'	13.6	14.6	15.4	16.2	16.9	17.6	18.1	18.7
	36"	S	279	270	262	256	251	246	243	239
		G'	13.2	14.1	14.9	15.6	16.2	16.7	17.2	17.6
14 0.0747"	6"	S	1432	1419	1409	1401	1394	1388	1382	1378
		G'	26.9	29.5	31.9	34.2	36.4	38.5	40.5	42.4
	12"	S	831	820	810	803	796	791	786	782
		G'	24.4	26.4	28.2	29.9	31.5	33.0	34.3	35.6
	18"	S	589	578	568	561	554	549	544	540
		G'	22.7	24.3	25.7	27.0	28.2	29.3	30.3	31.2
	24"	S	469	457	448	440	433	428	423	419
		G'	21.4	22.7	23.9	24.9	25.8	26.7	27.4	28.1
	30"	S	396	384	375	367	361	356	351	347
		G'	20.5	21.6	22.5	23.4	24.1	24.7	25.3	25.8
	36"	S	348	336	327	319	313	307	303	299
		G'	19.7	20.6	21.4	22.1	22.7	23.2	23.6	24.0

ATTACHMENT PATTERN: 12 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	778	768	761	755	750	746	742	739
		G'	5.1	5.7	6.2	6.8	7.4	7.9	8.4	9.0
	12"	S	430	421	414	408	403	398	395	392
		G'	5.0	5.5	6.1	6.6	7.1	7.6	8.1	8.5
	18"	S	314	305	298	292	287	283	279	276
		G'	4.9	5.4	5.9	6.4	6.9	7.3	7.8	8.2
	24"	S	256	247	240	234	229	225	221	218
		G'	4.8	5.3	5.8	6.3	6.7	7.2	7.6	8.0
	30"	S	221	212	205	199	194	190	186	183
		G'	4.8	5.3	5.7	6.2	6.6	7.0	7.4	7.8
	36"	S	198	189	182	176	171	167	163	160
		G'	4.8	5.2	5.7	6.1	6.5	6.9	7.2	7.6
18 0.0474"	6"	S	1028	1016	1007	999	993	987	982	978
		G'	9.8	10.9	11.9	13.0	14.0	14.9	15.9	16.8
	12"	S	568	556	547	539	532	527	522	518
		G'	9.5	10.4	11.4	12.3	13.1	14.0	14.8	15.5
	18"	S	415	403	393	385	379	373	369	365
		G'	9.2	10.1	11.0	11.8	12.5	13.3	13.9	14.6
	24"	S	338	326	316	309	302	297	292	288
		G'	9.0	9.9	10.7	11.4	12.1	12.7	13.3	13.9
	30"	S	292	280	270	263	256	251	246	242
		G'	8.9	9.7	10.4	11.1	11.7	12.3	12.9	13.4
	36"	S	261	249	240	232	225	220	215	211
		G'	8.8	9.6	10.2	10.9	11.5	12.0	12.5	13.0
16 0.0598"	6"	S	1296	1281	1269	1259	1251	1244	1238	1233
		G'	16.7	18.4	20.1	21.7	23.2	24.7	26.1	27.5
	12"	S	715	700	688	679	671	664	658	653
		G'	15.8	17.3	18.7	20.0	21.2	22.4	23.5	24.6
	18"	S	522	507	495	485	477	470	464	459
		G'	15.2	16.5	17.7	18.8	19.9	20.8	21.7	22.6
	24"	S	425	410	398	388	380	373	367	362
		G'	14.8	15.9	17.0	18.0	18.9	19.7	20.4	21.1
	30"	S	367	352	340	330	322	315	309	304
		G'	14.4	15.5	16.5	17.4	18.1	18.8	19.5	20.0
	36"	S	328	313	301	292	283	277	271	266
		G'	14.2	15.2	16.1	16.9	17.6	18.2	18.7	19.2
14 0.0747"	6"	S	1617	1598	1584	1572	1562	1553	1546	1540
		G'	27.2	29.8	32.3	34.6	36.8	38.9	40.9	42.9
	12"	S	891	873	858	846	836	828	820	814
		G'	25.1	27.2	29.1	30.8	32.5	34.0	35.4	36.7
	18"	S	650	631	616	604	594	586	579	572
		G'	23.8	25.5	27.0	28.4	29.7	30.8	31.8	32.8
	24"	S	529	510	496	484	474	465	458	451
		G'	22.9	24.3	25.6	26.7	27.7	28.6	29.4	30.1
	30"	S	456	438	423	411	401	392	385	379
		G'	22.2	23.5	24.6	25.5	26.3	27.0	27.6	28.2
	36"	S	408	389	375	363	353	344	337	331
		G'	21.7	22.8	23.8	24.6	25.2	25.8	26.3	26.7

See Table 4 notes.

TABLE 13—DEEP-DEK® 4.5 CELLULAR – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: $^1/_2$" Effective Weld Diameter — **S** = Allowable Diaphragm Shear (plf) — **G'** = Stiffness Factor (kips/in.)

SIDELAP CONNECTION: #10 Screws — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP	FACTOR	DECK SPAN - C to C SUPPORT 12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20/20 0.0358"/	12"	S	486	454	429	410	395	382	372	363
		G'	66.3	70.3	73.5	76.2	78.5	80.5	82.2	83.7
	24"	S	358	325	301	282	266	254	243	235
		G'	53.0	54.5	55.5	56.2	56.7	57.1	57.4	57.6
	36"	S	316	283	258	239	224	211	201	192
		G'	46.7	47.0	47.1	46.9	46.8	46.5	46.3	46.0
20/18 0.0358"/	12"	S	607	569	540	518	500	485	473	463
		G'	87.0	88.7	89.9	90.8	91.5	92.0	92.5	92.8
	24"	S	437	399	370	348	330	316	304	293
		G'	63.1	62.4	61.6	61.0	60.3	59.8	59.2	58.8
	36"	S	381	342	314	292	274	259	247	237
		G'	53.2	51.6	50.2	48.9	47.9	46.9	46.1	45.4
18/20 0.0474"/	12"	S	517	480	452	430	413	399	387	377
		G'	68.7	74.1	78.7	82.7	86.2	89.2	91.9	94.3
	24"	S	389	352	324	302	285	270	259	249
		G'	57.4	60.2	62.3	64.0	65.3	66.4	67.3	68.0
	36"	S	346	309	281	259	242	228	216	206
		G'	51.7	53.2	54.1	54.7	55.1	55.4	55.5	55.6
18/18 0.0474"/	12"	S	622	581	551	528	509	494	481	470
		G'	98.5	101.9	104.6	106.7	108.4	109.9	111.0	112.0
	24"	S	452	412	382	358	339	324	311	300
		G'	74.4	74.6	74.6	74.4	74.2	73.9	73.6	73.3
	36"	S	396	355	325	302	283	267	255	244
		G'	63.8	62.8	61.7	60.7	59.7	58.9	58.1	57.4
18/16 0.0474"/	12"	S	718	677	646	621	602	586	573	562
		G'	113.8	114.6	115.1	115.3	115.5	115.6	115.6	115.7
	24"	S	504	463	432	407	388	372	359	348
		G'	80.2	78.4	76.8	75.5	74.4	73.4	72.5	71.7
	36"	S	433	391	360	336	317	301	288	277
		G'	66.7	64.1	61.9	60.0	58.5	57.1	56.0	55.0
16/18 0.0598"/	12"	S	622	581	551	528	509	494	481	470
		G'	106.2	111.6	115.8	119.3	122.2	124.6	126.7	128.5
	24"	S	452	412	382	358	339	324	311	300
		G'	83.2	84.7	85.6	86.1	86.5	86.7	86.8	86.8
	36"	S	396	355	325	302	283	267	255	244
		G'	72.5	72.4	71.9	71.3	70.7	70.1	69.5	68.9
16/16 0.0598"/	12"	S	718	677	646	621	602	586	573	562
		G'	129.8	132.1	133.7	134.9	135.8	136.6	137.1	137.6
	24"	S	504	463	432	407	388	372	359	348
		G'	94.1	92.9	91.7	90.6	89.6	88.7	87.9	87.2
	36"	S	433	391	360	336	317	301	288	277
		G'	79.3	76.8	74.6	72.7	71.1	69.7	68.5	67.4
16/14 0.0598"/	12"	S	833	791	759	734	714	698	684	673
		G'	140.4	139.8	139.2	138.6	138.1	137.7	137.2	136.9
	24"	S	566	523	492	467	447	430	417	405
		G'	96.3	93.2	90.8	88.8	87.1	85.6	84.4	83.4
	36"	S	477	434	402	378	358	341	328	316
		G'	79.3	75.5	72.4	70.0	67.9	66.2	64.7	63.5
14/16 0.0747"/	12"	S	718	677	646	621	602	586	573	562
		G'	144.3	148.6	151.8	154.3	156.4	158.0	159.4	160.5
	24"	S	504	463	432	407	388	372	359	348
		G'	107.9	107.6	107.2	106.6	106.0	105.4	104.8	104.3
	36"	S	433	391	360	336	317	301	288	277
		G'	92.0	90.1	88.3	86.6	85.0	83.7	82.5	81.4
14/14 0.0747"/	12"	S	833	791	759	734	714	698	684	673
		G'	162.8	163.5	163.8	163.9	163.9	163.9	163.8	163.7
	24"	S	566	523	492	467	447	430	417	405
		G'	114.2	111.4	109.0	107.0	105.3	103.8	102.5	101.4
	36"	S	477	434	402	378	358	341	328	316
		G'	94.9	90.9	87.7	85.0	82.7	80.8	79.1	77.7

SIDELAP CONNECTION: $1^1/_2$" Seam Welds — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP	FACTOR	DECK SPAN - C to C SUPPORT 12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20/20 0.0358"/	12"	S	1191	1151	1120	1097	1078	1062	1049	1039
		G'	84.6	92.4	99.3	105.4	110.8	115.7	120.1	124.1
	24"	S	738	697	667	643	624	609	596	585
		G'	71.9	76.8	80.8	84.2	87.0	89.5	91.7	93.6
	36"	S	587	546	516	492	473	458	445	434
		G'	64.5	67.7	70.2	72.1	73.7	75.1	76.2	77.1
20/18 0.0358"/	12"	S	1522	1474	1438	1410	1387	1369	1353	1340
		G'	129.2	136.0	141.6	146.2	150.1	153.5	156.4	158.9
	24"	S	930	882	846	818	795	777	761	748
		G'	98.7	101.1	102.9	104.2	105.3	106.1	106.8	107.3
	36"	S	733	684	648	620	598	579	564	551
		G'	83.5	84.0	84.2	84.2	84.1	84.0	83.9	83.7
18/20 0.0474"/	12"	S	1208	1163	1130	1104	1083	1066	1052	1039
		G'	82.7	91.6	99.7	107.0	113.6	119.7	125.3	130.5
	24"	S	761	716	683	657	636	619	604	592
		G'	73.2	79.5	84.9	89.6	93.8	97.5	100.7	103.6
	36"	S	612	567	534	507	487	470	455	443
		G'	67.2	71.9	75.8	79.0	81.8	84.1	86.2	87.9
18/18 0.0474"/	12"	S	1532	1482	1444	1415	1391	1372	1356	1342
		G'	136.7	146.1	154.1	160.9	166.8	171.9	176.5	180.5
	24"	S	942	892	854	825	801	782	766	753
		G'	109.6	114.2	117.7	120.5	122.9	124.8	126.4	127.8
	36"	S	746	695	658	628	605	586	570	556
		G'	95.1	97.3	98.8	99.8	100.6	101.2	101.6	101.9
18/16 0.0474"/	12"	S	1894	1840	1799	1767	1742	1721	1702	1684
		G'	178.7	185.4	190.8	195.1	198.7	201.7	204.2	206.4
	24"	S	1137	1083	1042	1011	985	965	947	933
		G'	131.1	132.5	133.4	134.0	134.4	134.6	134.8	134.9
	36"	S	885	831	790	758	733	712	695	680
		G'	108.8	108.1	107.2	106.4	105.6	104.9	104.3	103.7
16/18 0.0598"/	12"	S	1554	1504	1466	1436	1413	1393	1377	1364
		G'	139.6	151.2	161.3	170.0	177.7	184.6	190.7	196.1
	24"	S	954	904	866	836	813	793	777	764
		G'	116.3	123.0	128.3	132.8	136.5	139.7	142.4	144.7
	36"	S	754	704	666	636	613	593	577	564
		G'	103.1	107.1	110.1	112.4	114.2	115.7	116.9	117.9
16/16 0.0598"/	12"	S	1922	1867	1826	1795	1769	1746	1725	1708
		G'	193.2	202.9	210.8	217.3	222.8	227.5	231.5	235.1
	24"	S	1152	1098	1057	1025	999	979	961	946
		G'	147.4	150.7	153.1	154.9	156.3	157.4	158.3	159.0
	36"	S	896	841	800	768	743	722	705	690
		G'	124.6	125.2	125.3	125.2	125.0	124.7	124.4	124.1
16/14 0.0598"/	12"	S	2322	2259	2211	2173	2143	2118	2097	2079
		G'	232.6	238.1	242.3	245.6	248.2	250.4	252.2	253.8
	24"	S	1398	1339	1294	1259	1231	1209	1190	1174
		G'	164.0	163.7	163.3	162.8	162.3	161.8	161.3	160.9
	36"	S	1071	1012	967	932	905	882	863	847
		G'	133.7	131.2	129.1	127.3	125.7	124.3	123.1	122.1
14/16 0.0747"/	12"	S	1955	1900	1859	1827	1799	1774	1753	1736
		G'	203.7	216.6	227.3	236.4	244.2	250.9	256.8	262.0
	24"	S	1170	1115	1074	1042	1016	995	978	963
		G'	161.4	167.1	171.5	175.0	177.8	180.1	182.0	183.6
	36"	S	908	854	812	780	755	734	716	701
		G'	139.1	141.5	143.1	144.1	144.8	145.2	145.5	145.7
14/14 0.0747"/	12"	S	2354	2291	2243	2206	2176	2151	2130	2112
		G'	257.7	266.5	273.3	278.8	283.3	287.1	290.3	293.1
	24"	S	1421	1361	1316	1281	1253	1230	1211	1194
		G'	188.0	189.4	190.2	190.6	190.9	191.1	191.1	191.1
	36"	S	1087	1027	982	947	919	896	877	861
		G'	155.6	154.0	152.5	151.1	149.9	148.7	147.7	146.7

See Table 4 notes.

TABLE 14—DEEP-DEK® 4.5 CELLULAR – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24 / 3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20/20 0.0358"/0.0358"	12"	S	504	481	465	452	441	433	426	420
		G'	68.2	72.2	75.5	78.3	80.5	82.5	84.1	85.6
	18"	S	388	366	349	336	326	317	310	304
		G'	60.9	63.4	65.2	66.6	67.8	68.6	69.4	69.9
	24"	S	330	308	291	278	268	259	252	246
		G'	56.2	57.7	58.7	59.4	59.8	60.1	60.3	60.4
20/18 0.0358"/0.0474"	12"	S	631	606	588	574	563	553	546	539
		G'	90.8	92.3	93.4	94.1	94.6	95.0	95.3	95.5
	18"	S	477	453	435	421	409	400	392	386
		G'	76.7	76.6	76.2	75.8	75.4	75.0	74.6	74.2
	24"	S	401	376	358	344	333	323	316	309
		G'	68.4	67.4	66.3	65.3	64.4	63.6	62.9	62.2
18/20 0.0474"/0.0358"	12"	S	509	486	469	455	444	436	428	422
		G'	70.2	75.8	80.5	84.5	88.0	91.1	93.7	96.1
	18"	S	393	370	353	339	329	320	313	306
		G'	64.2	68.2	71.4	74.0	76.1	78.0	79.5	80.8
	24"	S	335	312	295	281	271	262	255	248
		G'	60.2	63.2	65.4	67.1	68.4	69.5	70.3	71.0
18/18 0.0474"/0.0474"	12"	S	631	606	588	574	563	553	546	539
		G'	102.2	105.6	108.2	110.2	111.8	113.1	114.1	115.0
	18"	S	477	453	435	421	409	400	392	386
		G'	88.4	89.6	90.4	90.8	91.1	91.2	91.2	91.2
	24"	S	401	376	358	344	333	323	316	309
		G'	79.9	80.0	79.7	79.3	78.8	78.3	77.8	77.3
18/16 0.0474"/0.0598"	12"	S	761	735	716	701	689	679	671	664
		G'	119.5	119.9	120.0	119.9	119.8	119.6	119.4	119.2
	18"	S	568	542	523	508	496	486	478	471
		G'	99.1	97.7	96.3	95.1	94.0	93.1	92.2	91.4
	24"	S	471	445	426	411	399	389	381	374
		G'	87.5	85.1	83.0	81.2	79.7	78.3	77.1	76.1
16/18 0.0598"/0.0474"	12"	S	631	606	588	574	563	553	546	539
		G'	109.6	115.0	119.3	122.7	125.5	127.9	129.9	131.6
	18"	S	477	453	435	421	409	400	392	386
		G'	96.8	99.7	101.8	103.3	104.4	105.2	105.9	106.4
	24"	S	401	376	358	344	333	323	316	309
		G'	88.7	90.1	90.9	91.3	91.5	91.5	91.4	91.3
16/16 0.0598"/0.0598"	12"	S	761	735	716	701	689	679	671	664
		G'	135.6	137.6	138.9	139.9	140.5	141.0	141.3	141.6
	18"	S	568	542	523	508	496	486	478	471
		G'	114.4	114.0	113.4	112.7	112.0	111.3	110.7	110.1
	24"	S	471	445	426	411	399	389	381	374
		G'	102.0	100.3	98.7	97.1	95.7	94.5	93.3	92.3
16/14 0.0598"/0.0747"	12"	S	915	885	862	844	829	817	807	798
		G'	148.0	146.7	145.6	144.5	143.6	142.7	141.9	141.3
	18"	S	676	649	628	612	599	589	580	573
		G'	120.8	117.7	115.2	113.0	111.2	109.6	108.3	107.1
	24"	S	555	528	507	491	478	468	459	452
		G'	105.6	101.7	98.5	95.8	93.6	91.6	90.0	88.6
14/16 0.0747"/0.0598"	12"	S	761	735	716	701	689	679	671	664
		G'	149.9	154.1	157.2	159.5	161.3	162.8	163.9	164.9
	18"	S	568	542	523	508	496	486	478	471
		G'	128.8	130.0	130.5	130.7	130.7	130.6	130.4	130.1
	24"	S	471	445	426	411	399	389	381	374
		G'	116.1	115.6	114.8	113.8	112.8	111.8	110.9	110.1
14/14 0.0747"/0.0747"	12"	S	915	885	862	844	829	817	807	798
		G'	171.0	171.1	170.8	170.5	170.0	169.6	169.2	168.8
	18"	S	676	649	628	612	599	589	580	573
		G'	141.5	139.1	136.9	135.0	133.3	131.8	130.5	129.3
	24"	S	555	528	507	491	478	468	459	452
		G'	124.7	121.0	117.9	115.2	112.8	110.8	109.1	107.5

ATTACHMENT PATTERN: 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20/20 0.0358"/0.0358	12"	S	505	483	466	453	442	434	427	421
		G'	68.6	72.6	75.9	78.7	80.9	82.9	84.5	86.0
	18"	S	389	367	350	337	327	318	311	305
		G'	61.4	63.9	65.8	67.2	68.3	69.2	69.9	70.4
	24"	S	332	309	292	279	269	260	253	247
		G'	56.8	58.3	59.3	60.0	60.4	60.7	60.9	61.0
20/18 0.0358"/0.0474	12"	S	633	608	590	575	564	554	547	540
		G'	91.6	93.1	94.1	94.8	95.3	95.6	95.9	96.1
	18"	S	479	455	436	422	410	401	393	387
		G'	77.6	77.4	77.1	76.6	76.1	75.7	75.3	74.8
	24"	S	402	378	359	345	334	324	317	310
		G'	69.5	68.4	67.3	66.2	65.3	64.4	63.6	62.9
18/20 0.0474"/0.0358	12"	S	510	487	470	456	446	437	429	423
		G'	70.5	76.1	80.8	84.9	88.4	91.4	94.1	96.5
	18"	S	395	371	354	340	330	321	313	307
		G'	64.7	68.7	71.9	74.5	76.6	78.5	80.0	81.3
	24"	S	337	313	296	283	272	263	255	249
		G'	60.8	63.7	66.0	67.7	69.0	70.1	70.9	71.6
18/18 0.0474"/0.0474	12"	S	633	608	590	575	564	554	547	540
		G'	102.9	106.3	108.9	110.9	112.4	113.7	114.7	115.6
	18"	S	479	455	436	422	410	401	393	387
		G'	89.3	90.6	91.3	91.7	91.9	92.0	92.0	91.9
	24"	S	402	378	359	345	334	324	317	310
		G'	81.0	81.1	80.7	80.3	79.7	79.2	78.7	78.1
18/16 0.0474"/0.0598	12"	S	763	737	718	702	690	680	672	665
		G'	120.6	120.9	120.9	120.8	120.6	120.4	120.2	120.0
	18"	S	569	543	524	509	497	487	479	472
		G'	100.4	98.9	97.5	96.2	95.0	94.0	93.1	92.2
	24"	S	473	447	427	412	400	390	382	375
		G'	89.0	86.5	84.3	82.4	80.7	79.3	78.1	77.0
16/18 0.0598"/0.0474	12"	S	633	608	590	575	564	554	547	540
		G'	110.3	115.7	120.0	123.4	126.2	128.5	130.5	132.2
	18"	S	479	455	436	422	410	401	393	387
		G'	97.6	100.6	102.6	104.1	105.2	106.1	106.7	107.2
	24"	S	402	378	359	345	334	324	317	310
		G'	89.7	91.2	92.0	92.3	92.5	92.4	92.3	92.2
16/16 0.0598"/0.0598	12"	S	763	737	718	702	690	680	672	665
		G'	136.7	138.7	140.0	140.9	141.5	141.9	142.2	142.4
	18"	S	569	543	524	509	497	487	479	472
		G'	115.8	115.3	114.6	113.9	113.1	112.4	111.7	111.0
	24"	S	473	447	427	412	400	390	382	375
		G'	103.6	101.8	100.0	98.4	96.9	95.6	94.4	93.3
16/14 0.0598"/0.0747	12"	S	920	892	871	855	842	832	823	815
		G'	149.5	148.1	146.9	145.7	144.6	143.7	142.9	142.2
	18"	S	678	650	629	613	600	590	581	574
		G'	122.5	119.3	116.6	114.4	112.4	110.8	109.3	108.1
	24"	S	557	529	509	492	479	469	460	453
		G'	107.5	103.4	100.0	97.2	94.9	92.8	91.1	89.6
14/16 0.0747"/0.0598	12"	S	763	737	718	702	690	680	672	665
		G'	151.1	155.2	158.2	160.5	162.3	163.7	164.8	165.7
	18"	S	569	543	524	509	497	487	479	472
		G'	130.3	131.4	131.9	132.0	131.9	131.7	131.5	131.2
	24"	S	473	447	427	412	400	390	382	375
		G'	117.8	117.2	116.2	115.2	114.1	113.1	112.1	111.2
14/14 0.0747"/0.0747	12"	S	920	892	871	855	842	832	823	815
		G'	172.6	172.6	172.2	171.8	171.3	170.8	170.3	169.8
	18"	S	678	650	629	613	600	590	581	574
		G'	143.4	140.8	138.5	136.5	134.7	133.1	131.7	130.5
	24"	S	557	529	509	492	479	469	460	453
		G'	126.8	123.0	119.7	116.8	114.4	112.2	110.4	108.8

See Table 4 notes.

TABLE 15—DEEP-DEK® 6 CELLULAR – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: 1/2" Effective Weld Diameter — **S** = Allowable Diaphragm Shear (plf) — **G'** = Stiffness Factor (kips/in.)

SIDELAP CONNECTION: #10 Screws — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20/20 0.0358"/	12"	S	454	429	410	395	382	372	363	355
		G'	63.3	66.8	69.7	72.2	74.4	76.3	78.0	79.5
	24"	S	325	301	282	266	254	243	235	227
		G'	50.2	51.6	52.6	53.3	53.9	54.4	54.8	55.1
	36"	S	283	258	239	224	211	201	192	184
		G'	43.8	44.2	44.4	44.5	44.4	44.4	44.3	44.2
20/18 0.0358"/	12"	S	569	540	518	500	485	473	463	454
		G'	83.6	85.2	86.5	87.5	88.3	89.0	89.6	90.0
	24"	S	399	370	348	330	316	304	293	285
		G'	59.8	59.4	59.0	58.6	58.2	57.8	57.5	57.1
	36"	S	342	314	292	274	259	247	237	228
		G'	49.8	48.7	47.7	46.8	46.0	45.3	44.6	44.1
18/20 0.0474"/	12"	S	480	452	430	413	399	387	377	368
		G'	65.5	70.1	74.1	77.7	80.8	83.7	86.2	88.5
	24"	S	352	324	302	285	270	259	249	240
		G'	54.4	56.8	58.7	60.3	61.6	62.8	63.7	64.5
	36"	S	309	281	259	242	228	216	206	197
		G'	48.6	49.9	50.8	51.5	52.0	52.4	52.7	52.9
18/18 0.0474"/	12"	S	581	551	528	509	494	481	470	461
		G'	94.3	97.5	100.0	102.1	103.9	105.4	106.7	107.8
	24"	S	412	382	358	339	324	311	300	291
		G'	70.5	70.9	71.1	71.2	71.1	71.1	71.0	70.9
	36"	S	355	325	302	283	267	255	244	234
		G'	59.8	59.1	58.4	57.8	57.1	56.5	56.0	55.5
18/16 0.0474"/	12"	S	677	646	621	602	586	573	562	552
		G'	109.5	110.5	111.2	111.7	112.1	112.4	112.6	112.8
	24"	S	463	432	407	388	372	359	348	339
		G'	76.0	74.8	73.7	72.8	71.9	71.2	70.5	70.0
	36"	S	391	360	336	317	301	288	277	267
		G'	62.5	60.5	58.9	57.5	56.3	55.2	54.3	53.5
16/18 0.0598"/	12"	S	581	551	528	509	494	481	470	461
		G'	101.5	106.2	110.1	113.4	116.2	118.6	120.7	122.6
	24"	S	412	382	358	339	324	311	300	291
		G'	78.8	80.2	81.2	82.0	82.5	82.9	83.2	83.4
	36"	S	355	325	302	283	267	255	244	234
		G'	68.0	68.1	67.9	67.6	67.3	67.0	66.6	66.2
16/16 0.0598"/	12"	S	677	646	621	602	586	573	562	552
		G'	124.6	126.9	128.6	130.0	131.1	132.0	132.8	133.4
	24"	S	463	432	407	388	372	359	348	339
		G'	89.1	88.4	87.7	87.0	86.4	85.8	85.3	84.8
	36"	S	391	360	336	317	301	288	277	267
		G'	74.2	72.4	70.9	69.5	68.3	67.2	66.3	65.4
16/14 0.0598"/	12"	S	791	759	734	714	698	684	673	663
		G'	135.2	135.1	135.0	134.8	134.6	134.4	134.2	134.0
	24"	S	523	492	467	447	430	417	405	396
		G'	91.2	89.0	87.3	85.7	84.4	83.3	82.4	81.5
	36"	S	434	402	378	358	341	328	316	307
		G'	74.1	71.3	69.0	67.1	65.5	64.1	62.9	61.8
14/16 0.0747"/	12"	S	677	646	621	602	586	573	562	552
		G'	138.2	142.1	145.3	147.9	150.0	151.8	153.3	154.6
	24"	S	463	432	407	388	372	359	348	339
		G'	102.1	102.3	102.2	102.0	101.8	101.5	101.2	100.9
	36"	S	391	360	336	317	301	288	277	267
		G'	86.2	84.9	83.6	82.5	81.4	80.4	79.5	78.7
14/14 0.0747"/	12"	S	791	759	734	714	698	684	673	663
		G'	156.6	157.6	158.3	158.7	159.1	159.3	159.5	159.7
	24"	S	523	492	467	447	430	417	405	396
		G'	108.1	106.2	104.6	103.1	101.9	100.7	99.8	98.9
	36"	S	434	402	378	358	341	328	316	307
		G'	88.7	85.8	83.4	81.3	79.6	78.0	76.7	75.5

SIDELAP CONNECTION: 1 1/2" Seam Welds — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20/20 0.0358"/ 0.0358"	12"	S	1151	1120	1097	1078	1062	1049	1039	1029
		G'	80.8	87.4	93.3	98.7	103.5	108.0	112.0	115.7
	24"	S	697	667	643	624	609	596	585	576
		G'	68.6	72.7	76.3	79.4	82.1	84.4	86.5	88.4
	36"	S	546	516	492	473	458	445	434	425
		G'	61.2	64.0	66.3	68.2	69.7	71.1	72.2	73.3
20/18 0.0358"/ 0.0474"	12"	S	1474	1438	1410	1387	1369	1353	1340	1329
		G'	124.4	130.4	135.4	139.7	143.4	146.7	149.5	152.1
	24"	S	882	846	818	795	777	761	748	737
		G'	94.5	96.8	98.6	100.0	101.2	102.2	103.0	103.7
	36"	S	684	648	620	598	579	564	551	540
		G'	79.4	80.1	80.5	80.8	80.9	81.0	81.0	81.0
18/20 0.0474"/ 0.0358"	12"	S	1163	1130	1104	1083	1066	1052	1039	1029
		G'	78.8	86.2	93.0	99.3	105.1	110.5	115.5	120.1
	24"	S	716	683	657	636	619	604	592	582
		G'	69.6	74.9	79.6	83.8	87.5	90.9	93.9	96.7
	36"	S	567	534	507	487	470	455	443	433
		G'	63.8	67.7	71.1	74.1	76.6	78.9	80.8	82.6
18/18 0.0474"/ 0.0474"	12"	S	1482	1444	1415	1391	1372	1356	1342	1331
		G'	131.0	139.2	146.2	152.3	157.8	162.6	166.9	170.8
	24"	S	892	854	825	801	782	766	753	741
		G'	104.7	108.8	112.1	114.8	117.1	119.1	120.8	122.3
	36"	S	695	658	628	605	586	570	556	545
		G'	90.3	92.4	94.0	95.2	96.1	96.8	97.4	97.9
18/16 0.0474"/ 0.0598"	12"	S	1840	1799	1767	1742	1721	1702	1684	1669
		G'	172.5	178.5	183.5	187.6	191.1	194.2	196.8	199.1
	24"	S	1083	1042	1011	985	965	947	933	920
		G'	125.7	127.3	128.4	129.2	129.9	130.4	130.8	131.1
	36"	S	831	790	758	733	712	695	680	668
		G'	103.5	103.2	102.9	102.4	102.0	101.6	101.2	100.9
16/18 0.0598"/ 0.0474"	12"	S	1504	1466	1436	1413	1393	1377	1364	1352
		G'	133.4	143.2	151.9	159.7	166.6	172.9	178.5	183.7
	24"	S	904	866	836	813	793	777	764	752
		G'	110.9	116.7	121.5	125.6	129.1	132.2	134.9	137.3
	36"	S	704	666	636	613	593	577	564	552
		G'	97.8	101.4	104.2	106.5	108.4	110.0	111.3	112.4
16/16 0.0598"/ 0.0598"	12"	S	1867	1826	1795	1769	1746	1725	1708	1692
		G'	185.7	194.3	201.4	207.5	212.7	217.3	221.3	224.8
	24"	S	1098	1057	1025	999	979	961	946	934
		G'	141.0	144.2	146.7	148.6	150.2	151.5	152.6	153.5
	36"	S	841	800	768	743	722	705	690	677
		G'	118.4	119.3	119.7	120.0	120.1	120.2	120.2	120.1
16/14 0.0598"/ 0.0747"	12"	S	2259	2211	2173	2143	2118	2097	2079	2064
		G'	225.1	230.2	234.3	237.6	240.4	242.8	244.8	246.5
	24"	S	1339	1294	1259	1231	1209	1190	1174	1160
		G'	157.4	157.7	157.7	157.7	157.6	157.4	157.3	157.1
	36"	S	1012	967	932	905	882	863	847	833
		G'	127.2	125.6	124.2	122.9	121.8	120.8	120.0	119.2
14/16 0.0747"/ 0.0598"	12"	S	1900	1859	1827	1799	1774	1753	1736	1720
		G'	195.2	206.3	215.8	224.1	231.3	237.6	243.3	248.4
	24"	S	1115	1074	1042	1016	995	978	963	950
		G'	154.1	159.3	163.5	166.9	169.8	172.2	174.3	176.1
	36"	S	854	812	780	755	734	716	701	689
		G'	132.1	134.4	136.2	137.4	138.4	139.2	139.8	140.2
14/14 0.0747"/ 0.0747"	12"	S	2291	2243	2206	2176	2151	2130	2112	2097
		G'	248.5	256.4	262.8	268.2	272.7	276.5	279.9	282.8
	24"	S	1361	1316	1281	1253	1230	1211	1194	1181
		G'	180.1	181.8	183.0	183.9	184.5	185.0	185.4	185.7
	36"	S	1027	982	947	919	896	877	861	847
		G'	147.9	147.1	146.3	145.5	144.7	144.0	143.3	142.7

See Table 4 notes

TABLE 16—DEEP-DEK® 6 CELLULAR – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24 / 3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20/20 0.0358"/0.0358"	12"	S	481	465	452	441	433	426	420	415
		G'	65.0	68.5	71.4	73.9	76.1	78.0	79.6	81.1
	18"	S	366	349	336	326	317	310	304	299
		G'	57.7	59.9	61.6	63.0	64.2	65.1	65.9	66.6
	24"	S	308	291	278	268	259	252	246	241
		G'	53.0	54.3	55.3	56.1	56.6	57.1	57.4	57.6
20/18 0.0358"/0.0474"	12"	S	606	588	574	563	553	546	539	534
		G'	86.8	88.4	89.5	90.4	91.1	91.6	92.1	92.4
	18"	S	453	435	421	409	400	392	386	380
		G'	72.7	72.8	72.8	72.7	72.5	72.3	72.1	71.9
	24"	S	376	358	344	333	323	316	309	303
		G'	64.4	63.8	63.1	62.4	61.8	61.3	60.7	60.2
18/20 0.0474"/0.0358"	12"	S	486	469	455	444	436	428	422	417
		G'	66.8	71.5	75.5	79.1	82.3	85.2	87.7	90.0
	18"	S	370	353	339	329	320	313	306	301
		G'	60.8	64.2	67.0	69.4	71.5	73.2	74.8	76.1
	24"	S	312	295	281	271	262	255	248	243
		G'	56.8	59.3	61.3	63.0	64.3	65.4	66.3	67.1
18/18 0.0474"/0.0474"	12"	S	606	588	574	563	553	546	539	534
		G'	97.5	100.6	103.1	105.1	106.8	108.2	109.3	110.4
	18"	S	453	435	421	409	400	392	386	380
		G'	83.7	85.0	85.9	86.6	87.0	87.4	87.6	87.8
	24"	S	376	358	344	333	323	316	309	303
		G'	75.2	75.5	75.6	75.4	75.2	75.0	74.7	74.5
18/16 0.0474"/0.0598"	12"	S	735	716	701	689	679	671	664	658
		G'	114.3	115.0	115.4	115.7	115.8	115.9	116.0	116.0
	18"	S	542	523	508	496	486	478	471	465
		G'	93.9	93.1	92.3	91.5	90.7	90.1	89.5	88.9
	24"	S	445	426	411	399	389	381	374	368
		G'	82.3	80.6	79.2	77.8	76.7	75.7	74.7	73.9
16/18 0.0598"/0.0474"	12"	S	606	588	574	563	553	546	539	534
		G'	104.4	109.1	113.0	116.3	119.0	121.4	123.4	125.2
	18"	S	453	435	421	409	400	392	386	380
		G'	91.6	94.3	96.3	97.9	99.1	100.2	101.0	101.7
	24"	S	376	358	344	333	323	316	309	303
		G'	83.5	84.9	85.8	86.5	86.9	87.1	87.3	87.4
16/16 0.0598"/0.0598"	12"	S	735	716	701	689	679	671	664	658
		G'	129.5	131.6	133.1	134.3	135.2	135.9	136.5	137.0
	18"	S	542	523	508	496	486	478	471	465
		G'	108.4	108.4	108.3	108.0	107.7	107.3	107.0	106.6
	24"	S	445	426	411	399	389	381	374	368
		G'	96.0	94.9	93.8	92.8	91.8	90.9	90.1	89.4
16/14 0.0598"/0.0747"	12"	S	885	862	844	829	817	807	798	791
		G'	141.7	141.1	140.5	139.9	139.4	138.9	138.4	138.0
	18"	S	649	628	612	599	589	580	573	566
		G'	114.5	112.4	110.6	109.0	107.7	106.5	105.4	104.5
	24"	S	528	507	491	478	468	459	452	445
		G'	99.3	96.4	94.0	92.0	90.3	88.7	87.4	86.3
14/16 0.0747"/0.0598"	12"	S	735	716	701	689	679	671	664	658
		G'	143.0	146.8	149.9	152.3	154.3	155.9	157.3	158.4
	18"	S	542	523	508	496	486	478	471	465
		G'	122.0	123.3	124.2	124.7	125.0	125.2	125.4	125.4
	24"	S	445	426	411	399	389	381	374	368
		G'	109.2	109.1	108.8	108.3	107.8	107.2	106.6	106.1
14/14 0.0747"/0.0747"	12"	S	885	862	844	829	817	807	798	791
		G'	163.5	164.1	164.3	164.5	164.5	164.4	164.3	164.2
	18"	S	649	628	612	599	589	580	573	566
		G'	134.0	132.5	131.1	129.8	128.6	127.6	126.7	125.8
	24"	S	528	507	491	478	468	459	452	445
		G'	117.2	114.6	112.4	110.4	108.6	107.1	105.7	104.5

ATTACHMENT PATTERN: 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20/20 0.0358"/0.0358	12"	S	483	466	453	442	434	427	421	416
		G'	65.3	68.8	71.7	74.3	76.4	78.3	80.0	81.4
	18"	S	367	350	337	327	318	311	305	300
		G'	58.1	60.3	62.1	63.5	64.6	65.6	66.4	67.0
	24"	S	309	292	279	269	260	253	247	242
		G'	53.5	54.9	55.9	56.6	57.2	57.6	57.9	58.1
20/18 0.0358"/0.0474	12"	S	608	590	575	564	554	547	540	534
		G'	87.5	89.0	90.1	91.0	91.6	92.1	92.6	92.9
	18"	S	455	436	422	410	401	393	387	381
		G'	73.5	73.6	73.5	73.4	73.2	72.9	72.7	72.5
	24"	S	378	359	345	334	324	317	310	304
		G'	65.3	64.6	63.9	63.2	62.6	61.9	61.4	60.9
18/20 0.0474"/0.0358	12"	S	487	470	456	446	437	429	423	418
		G'	67.0	71.7	75.8	79.4	82.6	85.5	88.0	90.3
	18"	S	371	354	340	330	321	313	307	302
		G'	61.2	64.6	67.4	69.8	71.9	73.7	75.2	76.6
	24"	S	313	296	283	272	263	255	249	244
		G'	57.2	59.8	61.8	63.5	64.8	65.9	66.8	67.6
18/18 0.0474"/0.0474	12"	S	608	590	575	564	554	547	540	534
		G'	98.1	101.2	103.7	105.7	107.3	108.7	109.9	110.9
	18"	S	455	436	422	410	401	393	387	381
		G'	84.5	85.8	86.7	87.3	87.7	88.0	88.3	88.4
	24"	S	378	359	345	334	324	317	310	304
		G'	76.2	76.4	76.4	76.3	76.1	75.8	75.5	75.2
18/16 0.0474"/0.0598	12"	S	737	718	702	690	680	672	665	659
		G'	115.3	115.9	116.3	116.5	116.6	116.6	116.6	116.6
	18"	S	543	524	509	497	487	479	472	466
		G'	95.1	94.2	93.3	92.4	91.6	90.9	90.3	89.7
	24"	S	447	427	412	400	390	382	375	369
		G'	83.5	81.8	80.2	78.9	77.6	76.5	75.6	74.7
16/18 0.0598"/0.0474	12"	S	608	590	575	564	554	547	540	534
		G'	105.0	109.7	113.6	116.8	119.6	121.9	124.0	125.8
	18"	S	455	436	422	410	401	393	387	381
		G'	92.4	95.0	97.1	98.6	99.9	100.9	101.7	102.4
	24"	S	378	359	345	334	324	317	310	304
		G'	84.4	85.8	86.7	87.3	87.7	88.0	88.1	88.2
16/16 0.0598"/0.0598	12"	S	737	718	702	690	680	672	665	659
		G'	130.5	132.5	134.0	135.1	136.0	136.7	137.2	137.7
	18"	S	543	524	509	497	487	479	472	466
		G'	109.6	109.6	109.4	109.0	108.6	108.2	107.8	107.5
	24"	S	447	427	412	400	390	382	375	369
		G'	97.3	96.2	95.0	93.9	92.9	91.9	91.1	90.3
16/14 0.0598"/0.0747	12"	S	892	871	855	842	832	823	815	809
		G'	143.0	142.3	141.6	141.0	140.4	139.8	139.3	138.8
	18"	S	650	629	613	600	590	581	574	567
		G'	116.0	113.8	111.9	110.2	108.8	107.5	106.4	105.4
	24"	S	529	509	492	479	469	460	453	446
		G'	100.9	97.9	95.4	93.3	91.4	89.8	88.5	87.2
14/16 0.0747"/0.0598	12"	S	737	718	702	690	680	672	665	659
		G'	143.9	147.8	150.8	153.2	155.1	156.7	158.1	159.2
	18"	S	543	524	509	497	487	479	472	466
		G'	123.2	124.5	125.3	125.8	126.1	126.3	126.3	126.3
	24"	S	447	427	412	400	390	382	375	369
		G'	110.6	110.5	110.1	109.5	109.0	108.3	107.7	107.2
14/14 0.0747"/0.0747	12"	S	892	871	855	842	832	823	815	809
		G'	164.9	165.4	165.6	165.6	165.5	165.4	165.3	165.1
	18"	S	650	629	613	600	590	581	574	567
		G'	135.7	134.1	132.5	131.2	129.9	128.8	127.8	126.9
	24"	S	529	509	492	479	469	460	453	446
		G'	119.0	116.3	113.9	111.8	110.0	108.3	106.9	105.6

See Table 4 notes.

TABLE 17—DEEP-DEK® 7.5 CELLULAR – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: $^1/_2$" Effective Weld Diameter — **S** = Allowable Diaphragm Shear (plf) — **G'** = Stiffness Factor (kips/in.)

SIDELAP CONNECTION: #10 Screws — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20/20 0.0358"/	12"	S	429	410	395	382	372	363	355	349
		G'	61.3	64.4	67.0	69.3	71.3	73.2	74.8	76.3
	24"	S	301	282	266	254	243	235	227	220
		G'	48.2	49.5	50.4	51.2	51.9	52.4	52.8	53.2
	36"	S	258	239	224	211	201	192	184	178
		G'	41.7	42.2	42.4	42.6	42.6	42.7	42.7	42.6
20/18 0.0358"/	12"	S	540	518	500	485	473	463	454	447
		G'	81.1	82.7	84.0	85.0	85.9	86.6	87.2	87.8
	24"	S	370	348	330	316	304	293	285	277
		G'	57.4	57.2	57.0	56.7	56.5	56.2	56.0	55.8
	36"	S	314	292	274	259	247	237	228	220
		G'	47.3	46.5	45.7	45.1	44.4	43.9	43.4	42.9
18/20 0.0474"/	12"	S	452	430	413	399	387	377	368	361
		G'	63.3	67.3	70.8	74.0	76.9	79.6	81.9	84.1
	24"	S	324	302	285	270	259	249	240	233
		G'	52.2	54.3	56.1	57.6	58.9	60.0	61.0	61.8
	36"	S	281	259	242	228	216	206	197	190
		G'	46.3	47.5	48.4	49.1	49.7	50.1	50.5	50.8
18/18 0.0474"/	12"	S	551	528	509	494	481	470	461	453
		G'	91.4	94.3	96.7	98.7	100.4	101.9	103.2	104.4
	24"	S	382	358	339	324	311	300	291	283
		G'	67.6	68.1	68.5	68.7	68.8	68.9	68.9	68.9
	36"	S	325	302	283	267	255	244	234	226
		G'	56.9	56.4	56.0	55.5	55.1	54.6	54.2	53.9
18/16 0.0474"/	12"	S	646	621	602	586	573	562	552	544
		G'	106.4	107.4	108.2	108.9	109.4	109.8	110.1	110.4
	24"	S	432	407	388	372	359	348	339	330
		G'	72.9	72.0	71.3	70.6	70.0	69.4	68.9	68.5
	36"	S	360	336	317	301	288	277	267	259
		G'	59.3	57.8	56.5	55.4	54.5	53.6	52.9	52.2
16/18 0.0598"/	12"	S	551	528	509	494	481	470	461	453
		G'	98.3	102.4	105.9	109.0	111.7	114.0	116.1	118.0
	24"	S	382	358	339	324	311	300	291	283
		G'	75.6	77.0	78.0	78.8	79.5	80.0	80.4	80.7
	36"	S	325	302	283	267	255	244	234	226
		G'	64.7	64.9	64.9	64.8	64.7	64.5	64.3	64.1
16/16 0.0598"/	12"	S	646	621	602	586	573	562	552	544
		G'	120.9	123.1	124.8	126.2	127.4	128.4	129.3	130.0
	24"	S	432	407	388	372	359	348	339	330
		G'	85.5	85.1	84.7	84.3	83.8	83.5	83.1	82.8
	36"	S	360	336	317	301	288	277	267	259
		G'	70.4	69.1	68.0	66.9	66.0	65.2	64.4	63.7
16/14 0.0598"/	12"	S	759	734	714	698	684	673	663	654
		G'	131.4	131.6	131.7	131.8	131.8	131.7	131.7	131.6
	24"	S	492	467	447	430	417	405	396	387
		G'	87.4	85.8	84.5	83.3	82.3	81.4	80.6	80.0
	36"	S	402	378	358	341	328	316	307	298
		G'	70.3	68.1	66.3	64.8	63.5	62.3	61.3	60.5
14/16 0.0747"/	12"	S	646	621	602	586	573	562	552	544
		G'	133.9	137.5	140.5	143.0	145.1	147.0	148.5	149.9
	24"	S	432	407	388	372	359	348	339	330
		G'	97.9	98.3	98.4	98.5	98.5	98.4	98.3	98.2
	36"	S	360	336	317	301	288	277	267	259
		G'	81.9	81.0	80.1	79.3	78.5	77.8	77.1	76.5
14/14 0.0747"/	12"	S	759	734	714	698	684	673	663	654
		G'	152.0	153.2	154.0	154.7	155.3	155.7	156.0	156.3
	24"	S	492	467	447	430	417	405	396	387
		G'	103.7	102.3	101.1	100.0	99.1	98.3	97.5	96.8
	36"	S	402	378	358	341	328	316	307	298
		G'	84.2	82.0	80.1	78.5	77.1	75.8	74.7	73.7

SIDELAP CONNECTION: $1^1/_2$" Seam Welds — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20/20 0.0358"/ 0.0358"	12"	S	1120	1097	1078	1062	1049	1039	1029	1021
		G'	78.3	84.0	89.2	93.9	98.3	102.3	106.0	109.4
	24"	S	667	643	624	609	596	585	576	568
		G'	66.3	69.9	73.1	75.9	78.4	80.6	82.6	84.4
	36"	S	516	492	473	458	445	434	425	416
		G'	59.0	61.4	63.5	65.2	66.8	68.1	69.2	70.3
20/18 0.0358"/ 0.0474"	12"	S	1438	1410	1387	1369	1353	1340	1329	1320
		G'	121.0	126.3	130.9	134.9	138.4	141.5	144.3	146.8
	24"	S	846	818	795	777	761	748	737	728
		G'	91.6	93.7	95.4	96.9	98.1	99.1	100.0	100.7
	36"	S	648	620	598	579	564	551	540	530
		G'	76.5	77.2	77.7	78.1	78.4	78.6	78.8	78.9
18/20 0.0474"/ 0.0358"	12"	S	1130	1104	1083	1066	1052	1039	1029	1020
		G'	76.1	82.5	88.4	93.9	99.0	103.8	108.3	112.6
	24"	S	683	657	636	619	604	592	582	573
		G'	67.2	71.8	75.9	79.6	83.0	86.1	88.9	91.5
	36"	S	534	507	487	470	455	443	433	424
		G'	61.4	64.8	67.8	70.5	72.9	75.0	76.8	78.5
18/18 0.0474"/ 0.0474"	12"	S	1444	1415	1391	1372	1356	1342	1331	1321
		G'	127.1	134.2	140.5	146.1	151.1	155.6	159.6	163.3
	24"	S	854	825	801	782	766	753	741	731
		G'	101.3	104.9	108.0	110.6	112.8	114.8	116.5	118.0
	36"	S	658	628	605	586	570	556	545	534
		G'	86.9	88.9	90.4	91.6	92.6	93.5	94.2	94.8
18/16 0.0474"/ 0.0598"	12"	S	1799	1767	1742	1721	1702	1684	1669	1656
		G'	168.0	173.5	178.1	182.0	185.4	188.4	191.0	193.3
	24"	S	1042	1011	985	965	947	933	920	909
		G'	121.9	123.4	124.6	125.6	126.4	127.0	127.5	128.0
	36"	S	790	758	733	712	695	680	668	657
		G'	99.7	99.6	99.5	99.4	99.2	99.0	98.7	98.5
16/18 0.0598"/ 0.0474"	12"	S	1466	1436	1413	1393	1377	1364	1352	1342
		G'	129.2	137.7	145.3	152.2	158.5	164.2	169.5	174.3
	24"	S	866	836	813	793	777	764	752	742
		G'	107.1	112.2	116.5	120.3	123.7	126.6	129.2	131.6
	36"	S	666	636	613	593	577	564	552	542
		G'	94.1	97.3	99.9	102.1	104.0	105.6	106.9	108.1
16/16 0.0598"/ 0.0598"	12"	S	1826	1795	1769	1746	1725	1708	1692	1679
		G'	180.5	188.1	194.6	200.2	205.1	209.5	213.4	216.8
	24"	S	1057	1025	999	979	961	946	934	923
		G'	136.5	139.5	141.9	143.8	145.5	146.9	148.1	149.1
	36"	S	800	768	743	722	705	690	677	666
		G'	113.9	114.9	115.6	116.0	116.4	116.6	116.8	116.9
16/14 0.0598"/ 0.0747"	12"	S	2211	2173	2143	2118	2097	2079	2064	2051
		G'	219.6	224.4	228.3	231.6	234.3	236.7	238.8	240.6
	24"	S	1294	1259	1231	1209	1190	1174	1160	1148
		G'	152.7	153.2	153.5	153.7	153.8	153.9	153.9	154.0
	36"	S	967	932	905	882	863	847	833	821
		G'	122.4	121.3	120.4	119.5	118.7	118.0	117.4	116.8
14/16 0.0747"/ 0.0598"	12"	S	1859	1827	1799	1774	1753	1736	1720	1707
		G'	189.3	199.0	207.5	215.0	221.7	227.6	233.0	237.8
	24"	S	1074	1042	1016	995	978	963	950	939
		G'	149.0	153.6	157.5	160.8	163.6	166.1	168.2	170.1
	36"	S	812	780	755	734	716	701	689	678
		G'	127.0	129.3	131.0	132.4	133.5	134.5	135.2	135.8
14/14 0.0747"/ 0.0747"	12"	S	2243	2206	2176	2151	2130	2112	2097	2084
		G'	242.0	249.1	255.0	260.1	264.5	268.3	271.6	274.5
	24"	S	1316	1281	1253	1230	1211	1194	1181	1169
		G'	174.5	176.3	177.6	178.7	179.6	180.3	180.8	181.3
	36"	S	982	947	919	896	877	861	847	835
		G'	142.3	141.9	141.5	141.1	140.7	140.2	139.8	139.4

See Table 4 notes.

TABLE 18—DEEP-DEK® 7.5 CELLULAR – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)
SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)
G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24 / 3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20/20 0.0358"/0.0358"	12"	S	465	452	441	433	426	420	415	410
		G'	62.7	65.8	68.4	70.8	72.8	74.6	76.2	77.7
	18"	S	349	336	326	317	310	304	299	294
		G'	55.4	57.4	59.0	60.3	61.5	62.4	63.3	64.0
	24"	S	291	278	268	259	252	246	241	237
		G'	50.7	51.9	52.9	53.6	54.2	54.7	55.1	55.4
20/18 0.0358"/0.0474"	12"	S	588	574	563	553	546	539	534	529
		G'	84.0	85.4	86.6	87.5	88.3	89.0	89.5	90.0
	18"	S	435	421	409	400	392	386	380	375
		G'	69.8	70.1	70.2	70.3	70.2	70.2	70.1	70.0
	24"	S	358	344	333	323	316	309	303	299
		G'	61.4	61.0	60.6	60.2	59.8	59.4	59.0	58.6
18/20 0.0474"/0.0358"	12"	S	469	455	444	436	428	422	417	412
		G'	64.4	68.4	72.1	75.3	78.2	80.8	83.2	85.4
	18"	S	353	339	329	320	313	306	301	296
		G'	58.4	61.4	63.9	66.1	68.0	69.7	71.2	72.6
	24"	S	295	281	271	262	255	248	243	239
		G'	54.4	56.6	58.4	59.9	61.2	62.3	63.3	64.1
18/18 0.0474"/0.0474"	12"	S	588	574	563	553	546	539	534	529
		G'	94.2	97.0	99.3	101.3	102.9	104.4	105.6	106.7
	18"	S	435	421	409	400	392	386	380	375
		G'	80.4	81.7	82.6	83.4	83.9	84.4	84.7	85.0
	24"	S	358	344	333	323	316	309	303	299
		G'	71.8	72.2	72.4	72.5	72.5	72.4	72.3	72.2
18/16 0.0474"/0.0598"	12"	S	716	701	689	679	671	664	658	653
		G'	110.6	111.4	112.0	112.4	112.7	113.0	113.2	113.3
	18"	S	523	508	496	486	478	471	465	460
		G'	90.2	89.7	89.1	88.6	88.2	87.7	87.3	86.9
	24"	S	426	411	399	389	381	374	368	363
		G'	78.4	77.2	76.1	75.2	74.3	73.5	72.8	72.1
16/18 0.0598"/0.0474"	12"	S	588	574	563	553	546	539	534	529
		G'	100.7	104.9	108.5	111.5	114.1	116.4	118.5	120.3
	18"	S	435	421	409	400	392	386	380	375
		G'	88.0	90.4	92.3	93.9	95.2	96.3	97.2	98.0
	24"	S	358	344	333	323	316	309	303	299
		G'	79.7	81.1	82.1	82.8	83.3	83.7	84.0	84.2
16/16 0.0598"/0.0598"	12"	S	716	701	689	679	671	664	658	653
		G'	125.1	127.2	128.7	130.0	131.0	131.9	132.6	133.2
	18"	S	523	508	496	486	478	471	465	460
		G'	104.0	104.3	104.4	104.3	104.3	104.1	104.0	103.8
	24"	S	426	411	399	389	381	374	368	363
		G'	91.5	90.8	90.1	89.4	88.7	88.1	87.5	87.0
16/14 0.0598"/0.0747"	12"	S	862	844	829	817	807	798	791	785
		G'	137.1	136.9	136.7	136.4	136.1	135.8	135.6	135.3
	18"	S	628	612	599	589	580	573	566	561
		G'	109.8	108.3	107.0	105.9	104.8	103.9	103.1	102.4
	24"	S	507	491	478	468	459	452	445	440
		G'	94.5	92.4	90.6	89.0	87.6	86.4	85.3	84.4
14/16 0.0747"/0.0598"	12"	S	716	701	689	679	671	664	658	653
		G'	138.0	141.6	144.5	146.8	148.9	150.6	152.1	153.3
	18"	S	523	508	496	486	478	471	465	460
		G'	117.0	118.4	119.4	120.1	120.7	121.1	121.4	121.6
	24"	S	426	411	399	389	381	374	368	363
		G'	104.2	104.3	104.3	104.1	103.8	103.5	103.2	102.9
14/14 0.0747"/0.0747"	12"	S	862	844	829	817	807	798	791	785
		G'	158.0	158.9	159.4	159.8	160.1	160.2	160.4	160.5
	18"	S	628	612	599	589	580	573	566	561
		G'	128.6	127.6	126.7	125.8	125.0	124.2	123.5	122.9
	24"	S	507	491	478	468	459	452	445	440
		G'	111.7	109.8	108.1	106.6	105.2	104.0	102.9	102.0

ATTACHMENT PATTERN: 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20/20 0.0358"/0.0358	12"	S	466	453	442	434	427	421	416	411
		G'	63.0	66.1	68.7	71.1	73.1	74.9	76.5	77.9
	18"	S	350	337	327	318	311	305	300	295
		G'	55.8	57.8	59.4	60.7	61.9	62.8	63.7	64.4
	24"	S	292	279	269	260	253	247	242	237
		G'	51.1	52.4	53.4	54.1	54.7	55.2	55.6	55.9
20/18 0.0358"/0.0474	12"	S	590	575	564	554	547	540	534	529
		G'	84.5	86.0	87.1	88.1	88.8	89.4	89.9	90.4
	18"	S	436	422	410	401	393	387	381	376
		G'	70.5	70.8	70.9	70.9	70.8	70.8	70.7	70.6
	24"	S	359	345	334	324	317	310	304	299
		G'	62.2	61.8	61.3	60.9	60.4	60.0	59.6	59.2
18/20 0.0474"/0.0358	12"	S	470	456	446	437	429	423	418	413
		G'	64.6	68.7	72.3	75.5	78.5	81.1	83.5	85.7
	18"	S	354	340	330	321	313	307	302	297
		G'	58.8	61.7	64.3	66.5	68.4	70.1	71.6	72.9
	24"	S	296	283	272	263	255	249	244	239
		G'	54.8	57.0	58.8	60.4	61.7	62.8	63.7	64.5
18/18 0.0474"/0.0474	12"	S	590	575	564	554	547	540	534	529
		G'	94.7	97.5	99.8	101.8	103.4	104.9	106.1	107.2
	18"	S	436	422	410	401	393	387	381	376
		G'	81.1	82.4	83.3	84.0	84.6	85.0	85.3	85.6
	24"	S	359	345	334	324	317	310	304	299
		G'	72.7	73.0	73.2	73.2	73.2	73.1	73.0	72.8
18/16 0.0474"/0.0598	12"	S	718	702	690	680	672	665	659	654
		G'	111.4	112.2	112.7	113.1	113.4	113.6	113.8	113.9
	18"	S	524	509	497	487	479	472	466	460
		G'	91.2	90.6	90.0	89.5	88.9	88.5	88.0	87.6
	24"	S	427	412	400	390	382	375	369	364
		G'	79.5	78.3	77.1	76.1	75.1	74.3	73.5	72.9
16/18 0.0598"/0.0474	12"	S	590	575	564	554	547	540	534	529
		G'	101.2	105.4	108.9	112.0	114.6	116.9	119.0	120.8
	18"	S	436	422	410	401	393	387	381	376
		G'	88.6	91.0	93.0	94.5	95.8	96.9	97.8	98.6
	24"	S	359	345	334	324	317	310	304	299
		G'	80.5	81.9	82.9	83.6	84.1	84.5	84.7	85.0
16/16 0.0598"/0.0598	12"	S	718	702	690	680	672	665	659	654
		G'	126.0	128.0	129.5	130.8	131.8	132.6	133.3	133.9
	18"	S	524	509	497	487	479	472	466	460
		G'	105.1	105.3	105.3	105.3	105.1	105.0	104.8	104.6
	24"	S	427	412	400	390	382	375	369	364
		G'	92.7	92.0	91.2	90.4	89.7	89.0	88.4	87.8
16/14 0.0598"/0.0747	12"	S	871	855	842	832	823	815	809	803
		G'	138.2	138.0	137.6	137.3	137.0	136.6	136.3	136.1
	18"	S	629	613	600	590	581	574	567	562
		G'	111.1	109.5	108.2	106.9	105.8	104.9	104.0	103.2
	24"	S	509	492	479	469	460	453	446	441
		G'	96.0	93.7	91.8	90.1	88.7	87.4	86.2	85.2
14/16 0.0747"/0.0598	12"	S	718	702	690	680	672	665	659	654
		G'	138.8	142.4	145.2	147.6	149.6	151.3	152.8	154.0
	18"	S	524	509	497	487	479	472	466	460
		G'	118.1	119.5	120.4	121.1	121.6	122.0	122.2	122.4
	24"	S	427	412	400	390	382	375	369	364
		G'	105.4	105.5	105.4	105.2	104.9	104.5	104.2	103.8
14/14 0.0747"/0.0747	12"	S	871	855	842	832	823	815	809	803
		G'	159.2	160.0	160.5	160.8	161.0	161.2	161.2	161.3
	18"	S	629	613	600	590	581	574	567	562
		G'	130.0	129.0	127.9	127.0	126.1	125.3	124.6	123.9
	24"	S	509	492	479	469	460	453	446	441
		G'	113.2	111.2	109.5	107.9	106.4	105.2	104.0	103.0

See Table 4 notes.

TABLE 19—DEEP-DEK® 4.5 ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: $^1/_2$" Effective Weld Diameter **S** = Allowable Diaphragm Shear (plf) **G'** = Stiffness Factor (kips/in.)

SIDELAP CONNECTION: #10 Screws — **ATTACHMENT PATTERN:** 12/2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	528	517	509	502	497	493	490	487
		G'	5.9	6.8	7.7	8.5	9.4	10.2	11.0	11.7
	12"	S	302	291	283	277	272	268	264	261
		G'	5.7	6.5	7.3	8.1	8.8	9.5	10.2	10.9
	18"	S	227	216	208	202	197	192	189	186
		G'	5.6	6.3	7.1	7.8	8.4	9.0	9.7	10.2
	24"	S	189	179	170	164	159	155	151	148
		G'	5.5	6.2	6.8	7.5	8.1	8.6	9.2	9.7
	30"	S	167	156	148	141	136	132	129	126
		G'	5.4	6.0	6.7	7.3	7.8	8.3	8.8	9.2
	36"	S	152	141	133	126	121	117	114	111
		G'	5.3	5.9	6.5	7.1	7.6	8.0	8.5	8.9
18 0.0474"	6"	S	697	683	672	664	657	652	647	644
		G'	11.3	13.0	14.6	16.1	17.5	19.0	20.3	21.6
	12"	S	399	385	374	366	359	354	349	345
		G'	10.8	12.2	13.5	14.8	16.0	17.1	18.2	19.2
	18"	S	299	285	274	266	259	254	249	246
		G'	10.3	11.6	12.8	13.8	14.8	15.8	16.7	17.5
	24"	S	250	235	225	216	210	204	200	196
		G'	10.0	11.1	12.2	13.1	14.0	14.7	15.5	16.1
	30"	S	220	206	195	186	180	174	170	166
		G'	9.7	10.7	11.7	12.5	13.3	13.9	14.5	15.1
	36"	S	200	186	175	167	160	154	150	146
		G'	9.5	10.4	11.3	12.0	12.7	13.3	13.8	14.3
16 0.0598"	6"	S	878	861	847	837	829	822	816	811
		G'	19.2	21.8	24.2	26.5	28.7	30.8	32.8	34.8
	12"	S	502	484	471	460	452	445	439	435
		G'	17.7	19.8	21.7	23.5	25.2	26.7	28.1	29.5
	18"	S	376	358	345	335	326	320	314	309
		G'	16.7	18.4	20.0	21.4	22.7	23.9	24.9	25.9
	24"	S	313	296	282	272	264	257	251	246
		G'	15.9	17.4	18.7	19.9	20.9	21.8	22.6	23.4
	30"	S	276	258	245	234	226	219	213	209
		G'	15.3	16.6	17.7	18.7	19.5	20.2	20.9	21.4
	36"	S	251	233	220	209	201	194	188	184
		G'	14.8	16.0	16.9	17.7	18.4	19.0	19.5	19.9
14 0.0747"	6"	S	1095	1073	1057	1044	1034	1025	1018	1012
		G'	31.0	34.8	38.3	41.6	44.7	47.6	50.3	52.8
	12"	S	625	603	586	573	563	555	548	542
		G'	27.7	30.5	33.0	35.3	37.3	39.2	40.9	42.4
	18"	S	468	446	429	417	406	398	391	385
		G'	25.4	27.6	29.5	31.2	32.6	33.9	35.0	36.0
	24"	S	389	367	351	338	328	320	313	307
		G'	23.8	25.6	27.1	28.3	29.3	30.2	31.0	31.7
	30"	S	342	320	304	291	281	272	266	260
		G'	22.6	24.1	25.2	26.2	26.9	27.6	28.1	28.6
	36"	S	311	289	273	260	250	241	234	228
		G'	21.7	22.9	23.8	24.5	25.1	25.6	25.9	26.3

SIDELAP CONNECTION: $1^1/_2$" Seam Welds — **ATTACHMENT PATTERN:** 12/2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	1162	1155	1149	1145	1141	1139	1136	1134
		G'	6.0	7.0	7.9	8.8	9.7	10.6	11.5	12.4
	12"	S	923	903	888	877	867	860	853	847
		G'	5.9	6.8	7.7	8.6	9.5	10.3	11.1	11.9
	18"	S	682	664	650	640	631	624	619	614
		G'	5.9	6.7	7.6	8.4	9.2	10.0	10.8	11.5
	24"	S	543	525	512	501	493	486	480	475
		G'	5.8	6.6	7.5	8.3	9.0	9.8	10.5	11.2
	30"	S	460	442	428	418	409	403	397	392
		G'	5.7	6.6	7.4	8.1	8.9	9.6	10.3	10.9
	36"	S	405	387	373	362	354	347	341	336
		G'	5.7	6.5	7.3	8.0	8.7	9.4	10.0	10.6
18 0.0474"	6"	S	1518	1508	1501	1496	1491	1487	1484	1482
		G'	11.8	13.6	15.4	17.1	18.7	20.4	22.0	23.5
	12"	S	1206	1180	1161	1145	1133	1123	1114	1107
		G'	11.5	13.2	14.8	16.4	17.9	19.4	20.8	22.2
	18"	S	891	867	850	836	825	816	808	802
		G'	11.2	12.8	14.3	15.8	17.2	18.5	19.8	21.1
	24"	S	710	686	668	655	643	634	627	621
		G'	11.0	12.5	13.9	15.3	16.6	17.8	19.0	20.1
	30"	S	601	577	560	546	535	526	518	512
		G'	10.8	12.3	13.6	14.9	16.1	17.2	18.3	19.3
	36"	S	529	505	487	473	462	453	446	439
		G'	10.7	12.0	13.3	14.5	15.6	16.7	17.6	18.6
16 0.0598"	6"	S	1888	1876	1867	1859	1854	1849	1845	1842
		G'	20.4	23.3	26.2	29.0	31.7	34.3	36.8	39.3
	12"	S	1499	1467	1443	1424	1409	1396	1385	1376
		G'	19.5	22.2	24.8	27.3	29.6	31.8	34.0	36.0
	18"	S	1108	1078	1056	1039	1025	1014	1005	997
		G'	18.9	21.4	23.7	25.9	27.9	29.9	31.7	33.4
	24"	S	882	853	831	814	800	789	779	772
		G'	18.3	20.6	22.7	24.7	26.5	28.2	29.8	31.3
	30"	S	747	718	696	679	665	654	644	636
		G'	17.9	20.0	21.9	23.7	25.3	26.9	28.3	29.6
	36"	S	657	628	606	588	575	563	554	546
		G'	17.5	19.5	21.2	22.9	24.3	25.7	26.9	28.1
14 0.0747"	6"	S	2316	2302	2291	2282	2275	2269	2265	2261
		G'	33.9	38.5	43.0	47.3	51.4	55.3	59.0	62.6
	12"	S	1840	1801	1771	1747	1729	1713	1700	1689
		G'	31.9	35.9	39.7	43.3	46.6	49.7	52.7	55.4
	18"	S	1359	1323	1296	1275	1258	1244	1233	1223
		G'	30.3	33.9	37.1	40.2	42.9	45.5	47.9	50.1
	24"	S	1083	1047	1020	999	982	968	956	947
		G'	29.1	32.2	35.1	37.7	40.0	42.2	44.1	45.9
	30"	S	917	881	854	833	816	802	791	781
		G'	28.1	30.9	33.4	35.7	37.7	39.5	41.1	42.6
	36"	S	806	770	743	722	705	691	680	670
		G'	27.2	29.8	32.0	34.0	35.7	37.3	38.7	39.9

See Table 4 notes.

TABLE 20—DEEP-DEK® 4.5 ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: **Hilti X-ENP-19-L15** (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: **Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12/2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	628	618	611	605	601	597	594	591
		G'	5.9	6.8	7.7	8.5	9.4	10.2	11.0	11.8
	12"	S	367	358	352	347	343	340	337	334
		G'	5.7	6.6	7.4	8.1	8.9	9.6	10.3	11.0
	18"	S	265	256	250	245	241	238	235	232
		G'	5.6	6.4	7.1	7.8	8.5	9.1	9.8	10.3
	24"	S	214	205	199	194	190	187	184	181
		G'	5.5	6.3	6.9	7.6	8.2	8.8	9.3	9.8
	30"	S	184	175	168	163	159	156	153	151
		G'	5.4	6.1	6.8	7.4	8.0	8.5	9.0	9.4
	36"	S	163	154	148	143	139	136	133	130
		G'	5.4	6.1	6.7	7.2	7.8	8.3	8.7	9.1
18 0.0474"	6"	S	828	815	806	799	793	788	784	780
		G'	11.4	13.0	14.6	16.1	17.6	19.0	20.4	21.7
	12"	S	485	474	465	459	453	449	445	442
		G'	10.8	12.3	13.6	14.9	16.1	17.3	18.4	19.4
	18"	S	350	339	330	324	318	314	310	307
		G'	10.5	11.8	12.9	14.1	15.1	16.0	16.9	17.8
	24"	S	283	271	263	256	251	247	243	240
		G'	10.2	11.4	12.4	13.4	14.3	15.1	15.8	16.5
	30"	S	242	231	222	216	210	206	202	199
		G'	10.0	11.0	12.0	12.9	13.7	14.4	15.0	15.6
	36"	S	215	204	195	189	183	179	175	172
		G'	9.8	10.8	11.7	12.5	13.2	13.8	14.3	14.8
16 0.0598"	6"	S	1040	1025	1013	1004	997	991	986	981
		G'	19.2	21.8	24.3	26.6	28.9	31.0	33.0	34.9
	12"	S	611	597	586	578	571	566	561	558
		G'	17.9	20.0	22.0	23.8	25.5	27.0	28.5	29.8
	18"	S	441	427	416	408	401	396	391	387
		G'	17.0	18.8	20.4	21.9	23.2	24.4	25.5	26.4
	24"	S	356	342	331	323	316	311	306	302
		G'	16.3	17.9	19.3	20.5	21.5	22.5	23.3	24.1
	30"	S	305	291	280	272	265	259	255	251
		G'	15.8	17.2	18.4	19.4	20.3	21.1	21.7	22.3
	36"	S	271	256	246	237	231	225	221	217
		G'	15.4	16.7	17.7	18.6	19.3	19.9	20.5	20.9
14 0.0747"	6"	S	1293	1274	1260	1249	1240	1233	1226	1221
		G'	31.2	35.0	38.6	41.9	44.9	47.8	50.5	53.1
	12"	S	763	745	732	721	713	706	701	696
		G'	28.1	31.0	33.6	35.9	37.9	39.8	41.5	43.1
	18"	S	550	532	519	509	500	494	488	483
		G'	26.1	28.4	30.4	32.1	33.5	34.8	36.0	37.0
	24"	S	443	426	412	402	394	387	382	377
		G'	24.8	26.6	28.1	29.4	30.5	31.4	32.2	32.9
	30"	S	380	362	349	338	330	323	318	313
		G'	23.7	25.3	26.5	27.5	28.3	29.0	29.5	30.0
	36"	S	337	319	306	296	287	281	275	270
		G'	22.9	24.3	25.3	26.0	26.6	27.1	27.5	27.8

ATTACHMENT PATTERN: 12/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20 0.0358"	6"	S	708	695	684	676	670	665	660	657
		G'	5.9	6.8	7.7	8.6	9.4	10.2	11.0	11.8
	12"	S	402	389	378	370	364	359	354	351
		G'	5.8	6.6	7.5	8.2	9.0	9.7	10.4	11.1
	18"	S	300	287	276	268	262	257	252	249
		G'	5.7	6.5	7.3	8.0	8.7	9.4	10.0	10.6
	24"	S	249	236	225	217	211	206	201	198
		G'	5.7	6.4	7.2	7.8	8.5	9.1	9.7	10.2
	30"	S	219	205	195	187	180	175	171	167
		G'	5.6	6.4	7.1	7.7	8.3	8.9	9.4	9.9
	36"	S	198	185	174	166	160	155	150	147
		G'	5.6	6.3	7.0	7.6	8.2	8.7	9.2	9.7
18 0.0474"	6"	S	936	918	905	894	886	879	874	869
		G'	11.4	13.1	14.7	16.2	17.7	19.1	20.5	21.9
	12"	S	531	513	500	489	481	474	468	464
		G'	11.0	12.5	13.9	15.2	16.5	17.7	18.8	19.8
	18"	S	396	378	365	354	346	339	333	329
		G'	10.8	12.1	13.4	14.6	15.6	16.6	17.6	18.4
	24"	S	329	311	297	287	279	272	266	261
		G'	10.6	11.9	13.0	14.1	15.0	15.9	16.7	17.4
	30"	S	288	270	257	246	238	231	225	221
		G'	10.4	11.7	12.7	13.7	14.6	15.4	16.1	16.7
	36"	S	261	243	230	219	211	204	198	194
		G'	10.3	11.5	12.5	13.4	14.2	14.9	15.5	16.1
16 0.0598"	6"	S	1180	1157	1140	1127	1117	1108	1101	1095
		G'	19.4	22.1	24.6	26.9	29.2	31.3	33.3	35.3
	12"	S	669	646	629	616	606	597	590	584
		G'	18.4	20.6	22.7	24.5	26.3	27.9	29.3	30.7
	18"	S	498	476	459	446	436	427	420	414
		G'	17.7	19.7	21.4	23.0	24.4	25.7	26.8	27.8
	24"	S	413	391	374	361	350	342	335	329
		G'	17.3	19.1	20.6	21.9	23.1	24.1	25.0	25.8
	30"	S	362	340	323	310	299	291	284	277
		G'	17.0	18.6	20.0	21.2	22.2	23.0	23.7	24.4
	36"	S	328	306	289	276	265	257	249	243
		G'	16.7	18.2	19.5	20.6	21.4	22.2	22.8	23.3
14 0.0747"	6"	S	1471	1444	1423	1407	1394	1383	1374	1367
		G'	31.6	35.5	39.1	42.5	45.6	48.5	51.3	53.8
	12"	S	833	805	784	768	755	745	736	728
		G'	29.2	32.2	34.9	37.3	39.5	41.4	43.2	44.8
	18"	S	620	592	572	556	543	532	523	516
		G'	27.8	30.3	32.4	34.2	35.8	37.2	38.4	39.4
	24"	S	514	486	465	449	436	426	417	409
		G'	26.8	28.9	30.7	32.2	33.4	34.4	35.2	35.9
	30"	S	450	422	401	385	372	362	353	345
		G'	26.1	28.0	29.5	30.7	31.6	32.4	33.0	33.4
	36"	S	407	380	359	343	330	319	310	303
		G'	25.6	27.3	28.6	29.5	30.3	30.8	31.3	31.6

See Table 4 notes.

TABLE 21—DEEP-DEK® 6 ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: 1/2" Effective Weld Diameter **S** = Allowable Diaphragm Shear (plf) **G'** = Stiffness Factor (kips/in.)

SIDELAP CONNECTION: #10 Screws

ATTACHMENT PATTERN: 12/2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	446	439	434	429	426	423	420	418
		G'	3.1	3.6	4.0	4.4	4.8	5.2	5.6	6.0
	12"	S	252	245	239	235	231	228	226	223
		G'	3.1	3.5	3.9	4.3	4.7	5.0	5.4	5.8
	18"	S	187	180	174	170	166	163	161	159
		G'	3.0	3.4	3.8	4.2	4.5	4.9	5.2	5.6
	24"	S	154	147	142	137	134	131	128	126
		G'	3.0	3.4	3.7	4.1	4.4	4.8	5.1	5.4
	30"	S	135	128	122	118	114	111	109	107
		G'	3.0	3.3	3.7	4.0	4.4	4.7	5.0	5.3
	36"	S	122	115	109	105	101	98	96	94
		G'	2.9	3.3	3.6	4.0	4.3	4.6	4.9	5.1
18 0.0474"	6"	S	590	581	574	568	563	559	556	553
		G'	6.1	6.9	7.7	8.5	9.3	10.0	10.8	11.5
	12"	S	332	323	316	310	305	301	298	295
		G'	6.0	6.7	7.4	8.1	8.8	9.5	10.1	10.8
	18"	S	246	237	230	224	219	216	212	209
		G'	5.8	6.5	7.2	7.8	8.5	9.1	9.6	10.2
	24"	S	203	194	187	181	176	173	169	166
		G'	5.7	6.4	7.0	7.6	8.1	8.7	9.2	9.7
	30"	S	178	168	161	155	151	147	143	141
		G'	5.6	6.2	6.8	7.4	7.9	8.4	8.9	9.3
	36"	S	160	151	144	138	133	130	126	123
		G'	5.5	6.1	6.7	7.2	7.7	8.1	8.6	9.0
16 0.0598"	6"	S	743	732	723	716	710	705	701	697
		G'	10.6	11.9	13.3	14.5	15.8	17.0	18.2	19.3
	12"	S	418	406	398	390	384	380	375	372
		G'	10.1	11.3	12.5	13.6	14.6	15.6	16.6	17.5
	18"	S	310	298	289	282	276	271	267	263
		G'	9.7	10.8	11.8	12.8	13.7	14.6	15.4	16.2
	24"	S	255	244	235	228	222	217	213	209
		G'	9.5	10.4	11.4	12.2	13.0	13.8	14.5	15.1
	30"	S	223	211	202	195	189	184	180	177
		G'	9.2	10.1	11.0	11.7	12.4	13.1	13.7	14.3
	36"	S	201	190	181	174	168	163	159	155
		G'	9.0	9.9	10.6	11.3	12.0	12.6	13.1	13.6
14 0.0747"	6"	S	927	913	902	893	885	879	874	870
		G'	17.7	19.8	21.8	23.8	25.7	27.5	29.3	31.0
	12"	S	521	506	495	486	479	473	468	464
		G'	16.5	18.3	20.0	21.5	23.0	24.5	25.8	27.1
	18"	S	385	371	360	351	344	338	333	328
		G'	15.6	17.2	18.6	19.9	21.1	22.2	23.3	24.3
	24"	S	317	303	292	283	276	270	265	261
		G'	14.9	16.3	17.5	18.6	19.6	20.6	21.4	22.2
	30"	S	277	263	251	243	235	229	224	220
		G'	14.4	15.6	16.7	17.6	18.5	19.3	20.0	20.6
	36"	S	250	235	224	216	208	202	197	193
		G'	14.0	15.1	16.0	16.8	17.6	18.2	18.8	19.3

SIDELAP CONNECTION: 1 1/2" Seam Welds

ATTACHMENT PATTERN: 12/2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	997	993	989	986	983	981	980	978
		G'	3.2	3.6	4.0	4.5	4.9	5.3	5.7	6.2
	12"	S	780	767	757	749	742	737	732	728
		G'	3.2	3.6	4.0	4.4	4.8	5.2	5.6	6.0
	18"	S	574	562	553	545	539	534	530	526
		G'	3.1	3.5	4.0	4.4	4.8	5.2	5.6	5.9
	24"	S	454	442	433	426	420	415	410	407
		G'	3.1	3.5	3.9	4.3	4.7	5.1	5.5	5.9
	30"	S	382	370	361	354	348	343	339	335
		G'	3.1	3.5	3.9	4.3	4.7	5.0	5.4	5.8
	36"	S	334	322	313	306	300	295	291	287
		G'	3.1	3.5	3.9	4.2	4.6	5.0	5.3	5.7
18 0.0474"	6"	S	1303	1297	1292	1288	1285	1282	1280	1278
		G'	6.3	7.1	8.0	8.8	9.6	10.4	11.2	12.0
	12"	S	1019	1002	989	978	970	962	956	951
		G'	6.2	7.0	7.8	8.6	9.4	10.1	10.9	11.6
	18"	S	749	734	722	712	705	698	693	687
		G'	6.1	6.9	7.7	8.4	9.2	9.9	10.6	11.3
	24"	S	593	577	565	556	548	542	536	531
		G'	6.0	6.8	7.6	8.3	9.0	9.7	10.4	11.0
	30"	S	499	483	471	462	454	448	442	437
		G'	6.0	6.7	7.4	8.2	8.8	9.5	10.2	10.8
	36"	S	436	421	409	399	392	385	380	375
		G'	5.9	6.6	7.4	8.0	8.7	9.3	10.0	10.6
16 0.0598"	6"	S	1620	1612	1606	1601	1597	1594	1591	1589
		G'	11.0	12.4	13.8	15.2	16.6	18.0	19.3	20.6
	12"	S	1267	1246	1230	1217	1206	1197	1189	1182
		G'	10.7	12.1	13.4	14.7	16.0	17.3	18.5	19.7
	18"	S	931	912	897	886	876	868	861	854
		G'	10.5	11.8	13.1	14.3	15.5	16.7	17.8	18.9
	24"	S	737	718	703	691	681	673	666	661
		G'	10.3	11.6	12.8	13.9	15.1	16.1	17.2	18.2
	30"	S	620	601	586	574	565	556	550	544
		G'	10.2	11.4	12.5	13.6	14.7	15.7	16.6	17.6
	36"	S	542	523	508	496	487	479	472	466
		G'	10.0	11.2	12.3	13.3	14.3	15.3	16.2	17.0
14 0.0747"	6"	S	1988	1978	1971	1965	1960	1956	1952	1949
		G'	18.6	21.0	23.3	25.6	27.8	30.0	32.1	34.2
	12"	S	1555	1529	1509	1493	1480	1468	1459	1451
		G'	17.9	20.2	22.3	24.3	26.3	28.3	30.1	31.9
	18"	S	1143	1119	1101	1087	1075	1065	1057	1048
		G'	17.4	19.5	21.4	23.3	25.1	26.8	28.5	30.1
	24"	S	904	881	862	848	836	826	818	811
		G'	17.0	18.9	20.7	22.4	24.0	25.6	27.1	28.5
	30"	S	761	737	719	705	693	683	674	667
		G'	16.6	18.4	20.1	21.7	23.2	24.6	25.9	27.1
	36"	S	665	642	624	609	597	587	579	572
		G'	16.3	18.0	19.5	21.0	22.4	23.7	24.9	26.0

See Table 4 notes

TABLE 22—DEEP-DEK® 6 ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)
SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)
G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12/2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	534	528	523	519	516	513	511	509
		G'	3.1	3.6	4.0	4.4	4.8	5.2	5.6	6.0
	12"	S	310	304	300	296	293	291	289	287
		G'	3.1	3.5	3.9	4.3	4.7	5.0	5.4	5.8
	18"	S	222	216	212	208	205	203	201	199
		G'	3.1	3.4	3.8	4.2	4.6	4.9	5.3	5.6
	24"	S	178	172	168	164	161	159	157	155
		G'	3.0	3.4	3.8	4.1	4.5	4.8	5.1	5.5
	30"	S	151	145	141	138	135	132	130	129
		G'	3.0	3.4	3.7	4.1	4.4	4.7	5.0	5.3
	36"	S	133	128	124	120	117	115	113	111
		G'	3.0	3.3	3.7	4.0	4.3	4.6	4.9	5.2
18 0.0474"	6"	S	704	696	690	685	680	677	674	671
		G'	6.1	7.0	7.7	8.5	9.3	10.0	10.8	11.5
	12"	S	409	402	396	392	388	385	382	380
		G'	6.0	6.7	7.5	8.2	8.9	9.5	10.2	10.8
	18"	S	293	285	280	275	271	268	266	263
		G'	5.9	6.6	7.2	7.9	8.5	9.1	9.7	10.3
	24"	S	234	227	221	217	213	210	207	205
		G'	5.8	6.4	7.1	7.7	8.3	8.8	9.3	9.8
	30"	S	199	192	186	182	178	175	172	170
		G'	5.7	6.3	6.9	7.5	8.0	8.5	9.0	9.5
	36"	S	176	169	163	158	155	152	149	147
		G'	5.6	6.2	6.8	7.3	7.8	8.3	8.8	9.2
16 0.0598"	6"	S	885	875	867	861	856	851	848	844
		G'	10.6	12.0	13.3	14.6	15.8	17.0	18.2	19.4
	12"	S	516	507	499	494	489	485	482	479
		G'	10.2	11.4	12.5	13.7	14.7	15.7	16.7	17.7
	18"	S	369	359	352	346	342	338	335	332
		G'	9.9	11.0	12.0	13.0	13.9	14.8	15.6	16.4
	24"	S	295	286	279	273	268	264	261	258
		G'	9.6	10.6	11.6	12.4	13.3	14.0	14.7	15.4
	30"	S	251	242	235	229	224	220	217	214
		G'	9.4	10.3	11.2	12.0	12.7	13.4	14.1	14.6
	36"	S	222	212	205	199	195	191	187	185
		G'	9.2	10.1	10.9	11.7	12.3	12.9	13.5	14.0
14 0.0747"	6"	S	1101	1088	1079	1071	1065	1059	1055	1051
		G'	17.7	19.8	21.9	23.9	25.8	27.6	29.4	31.1
	12"	S	643	632	623	616	610	605	601	598
		G'	16.6	18.4	20.1	21.7	23.3	24.7	26.0	27.3
	18"	S	460	448	439	432	426	421	417	414
		G'	15.9	17.4	18.9	20.2	21.5	22.6	23.7	24.7
	24"	S	368	356	347	340	334	330	325	322
		G'	15.3	16.7	17.9	19.1	20.1	21.1	22.0	22.8
	30"	S	313	301	292	285	279	274	270	267
		G'	14.8	16.1	17.2	18.2	19.1	19.9	20.6	21.3
	36"	S	276	264	255	248	243	238	234	230
		G'	14.5	15.6	16.6	17.5	18.3	18.9	19.5	20.1

ATTACHMENT PATTERN: 12/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20 0.0358"	6"	S	600	591	584	579	574	570	567	564
		G'	3.2	3.6	4.0	4.4	4.8	5.2	5.6	6.0
	12"	S	336	327	320	314	310	306	303	300
		G'	3.1	3.5	3.9	4.3	4.7	5.1	5.5	5.8
	18"	S	248	239	232	226	222	218	215	212
		G'	3.1	3.5	3.9	4.2	4.6	5.0	5.3	5.7
	24"	S	204	195	188	182	178	174	171	168
		G'	3.1	3.5	3.8	4.2	4.6	4.9	5.2	5.6
	30"	S	177	168	161	156	151	148	144	142
		G'	3.0	3.4	3.8	4.2	4.5	4.8	5.2	5.5
	36"	S	160	151	144	138	134	130	127	124
		G'	3.0	3.4	3.8	4.1	4.5	4.8	5.1	5.4
18 0.0474"	6"	S	793	782	773	765	759	754	750	747
		G'	6.2	7.0	7.8	8.6	9.3	10.1	10.8	11.5
	12"	S	443	432	423	416	410	405	400	397
		G'	6.0	6.8	7.5	8.3	9.0	9.6	10.3	10.9
	18"	S	327	315	306	299	293	288	284	280
		G'	5.9	6.7	7.4	8.0	8.7	9.3	9.9	10.5
	24"	S	269	257	248	241	235	230	226	222
		G'	5.9	6.6	7.2	7.9	8.5	9.1	9.6	10.1
	30"	S	234	222	213	206	200	195	191	187
		G'	5.8	6.5	7.1	7.8	8.3	8.9	9.4	9.9
	36"	S	210	199	190	182	176	171	167	164
		G'	5.8	6.4	7.1	7.7	8.2	8.7	9.2	9.7
16 0.0598"	6"	S	1000	985	974	965	957	951	946	941
		G'	10.7	12.0	13.4	14.6	15.9	17.1	18.3	19.5
	12"	S	558	544	532	523	516	510	505	500
		G'	10.3	11.6	12.7	13.9	15.0	16.0	17.0	18.0
	18"	S	411	397	385	376	369	363	357	353
		G'	10.1	11.2	12.3	13.3	14.3	15.2	16.1	16.9
	24"	S	338	323	312	303	295	289	284	279
		G'	9.9	11.0	12.0	12.9	13.8	14.6	15.4	16.1
	30"	S	293	279	268	259	251	245	240	235
		G'	9.8	10.8	11.8	12.6	13.4	14.2	14.9	15.5
	36"	S	264	249	238	229	222	216	210	206
		G'	9.7	10.7	11.6	12.4	13.1	13.8	14.4	15.0
14 0.0747"	6"	S	1247	1229	1215	1204	1195	1187	1180	1175
		G'	17.8	20.0	22.1	24.1	26.0	27.8	29.6	31.4
	12"	S	696	678	664	652	643	636	629	624
		G'	17.0	18.8	20.6	22.2	23.8	25.3	26.7	28.0
	18"	S	512	494	480	469	459	452	445	440
		G'	16.4	18.1	19.6	21.0	22.3	23.6	24.7	25.7
	24"	S	420	402	388	377	368	360	354	348
		G'	16.0	17.5	18.9	20.2	21.3	22.3	23.3	24.1
	30"	S	365	347	333	322	312	305	298	293
		G'	15.7	17.1	18.4	19.5	20.5	21.4	22.2	22.9
	36"	S	328	310	296	285	276	268	262	256
		G'	15.5	16.8	18.0	19.0	19.9	20.7	21.4	22.0

See Table 4 notes.

TABLE 23—DEEP-DEK® 7.5 ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter** **S** = Allowable Diaphragm Shear (plf) **G'** = Stiffness Factor (kips/in.)

SIDELAP CONNECTION: **#10 Screws**

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT (ATTACHMENT PATTERN: 12/2) 16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	503	497	492	487	484	481	479	476
		G'	2.1	2.4	2.6	2.9	3.1	3.3	3.6	3.8
	12"	S	280	274	269	264	261	258	256	254
		G'	2.1	2.3	2.6	2.8	3.0	3.3	3.5	3.7
	18"	S	206	199	194	190	187	184	181	179
		G'	2.1	2.3	2.5	2.8	3.0	3.2	3.4	3.6
	24"	S	168	162	157	153	150	147	144	142
		G'	2.0	2.3	2.5	2.7	2.9	3.2	3.4	3.6
	30"	S	146	140	135	131	127	124	122	120
		G'	2.0	2.3	2.5	2.7	2.9	3.1	3.3	3.5
	36"	S	131	125	120	116	112	110	107	105
		G'	2.0	2.2	2.5	2.7	2.9	3.1	3.3	3.4
18 0.0474"	6"	S	665	657	650	645	640	636	633	630
		G'	4.1	4.6	5.1	5.6	6.0	6.5	7.0	7.4
	12"	S	370	361	355	349	345	341	338	335
		G'	4.0	4.5	5.0	5.4	5.8	6.3	6.7	7.1
	18"	S	271	263	256	251	247	243	240	237
		G'	4.0	4.4	4.8	5.3	5.7	6.1	6.5	6.8
	24"	S	222	214	207	202	197	194	190	188
		G'	3.9	4.3	4.7	5.1	5.5	5.9	6.3	6.6
	30"	S	193	184	178	172	168	164	161	158
		G'	3.9	4.3	4.7	5.0	5.4	5.8	6.1	6.4
	36"	S	173	165	158	153	148	144	141	138
		G'	3.8	4.2	4.6	5.0	5.3	5.6	6.0	6.3
16 0.0598"	6"	S	838	827	819	812	807	802	798	794
		G'	7.2	8.0	8.8	9.6	10.4	11.2	12.0	12.7
	12"	S	465	455	447	440	434	430	426	422
		G'	7.0	7.7	8.5	9.2	9.9	10.6	11.3	11.9
	18"	S	341	331	323	316	310	306	302	298
		G'	6.8	7.5	8.2	8.8	9.5	10.1	10.7	11.3
	24"	S	279	269	261	254	248	244	239	236
		G'	6.6	7.3	7.9	8.5	9.1	9.7	10.2	10.7
	30"	S	242	232	223	217	211	206	202	199
		G'	6.5	7.1	7.7	8.3	8.8	9.3	9.8	10.3
	36"	S	217	207	199	192	186	181	177	174
		G'	6.4	7.0	7.5	8.1	8.6	9.0	9.5	9.9
14 0.0747"	6"	S	1045	1032	1022	1014	1007	1001	996	991
		G'	12.1	13.5	14.8	16.1	17.3	18.5	19.7	20.9
	12"	S	580	567	557	548	542	536	531	526
		G'	11.5	12.7	13.9	15.0	16.1	17.1	18.1	19.0
	18"	S	425	412	402	393	387	381	376	371
		G'	11.1	12.2	13.2	14.1	15.1	15.9	16.8	17.6
	24"	S	347	334	324	316	309	303	298	294
		G'	10.7	11.7	12.6	13.5	14.3	15.0	15.8	16.4
	30"	S	300	288	278	269	262	257	252	247
		G'	10.4	11.3	12.1	12.9	13.6	14.3	14.9	15.5
	36"	S	269	257	247	238	231	226	221	216
		G'	10.2	11.0	11.8	12.5	13.1	13.7	14.2	14.8

SIDELAP CONNECTION: **$1^1/_2$" Seam Welds**

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT (ATTACHMENT PATTERN: 12/2) 16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	1136	1132	1128	1126	1123	1121	1120	1118
		G'	2.1	2.4	2.6	2.9	3.1	3.4	3.6	3.9
	12"	S	878	867	857	850	843	838	833	829
		G'	2.1	2.4	2.6	2.9	3.1	3.4	3.6	3.8
	18"	S	643	633	624	617	612	607	602	598
		G'	2.1	2.4	2.6	2.8	3.1	3.3	3.6	3.8
	24"	S	506	495	487	480	475	470	466	462
		G'	2.1	2.3	2.6	2.8	3.1	3.3	3.5	3.8
	30"	S	424	413	405	398	392	387	383	380
		G'	2.1	2.3	2.6	2.8	3.0	3.3	3.5	3.7
	36"	S	369	358	350	343	337	333	328	325
		G'	2.1	2.3	2.6	2.8	3.0	3.2	3.5	3.7
18 0.0474"	6"	S	1484	1479	1474	1470	1467	1465	1463	1461
		G'	4.2	4.7	5.2	5.7	6.2	6.7	7.1	7.6
	12"	S	1147	1132	1120	1110	1102	1094	1088	1083
		G'	4.2	4.6	5.1	5.6	6.1	6.6	7.0	7.5
	18"	S	840	826	815	806	799	793	787	781
		G'	4.1	4.6	5.1	5.5	6.0	6.5	6.9	7.3
	24"	S	661	647	636	627	620	614	608	603
		G'	4.1	4.6	5.0	5.5	5.9	6.4	6.8	7.2
	30"	S	553	540	529	520	512	506	501	496
		G'	4.1	4.5	5.0	5.4	5.8	6.3	6.7	7.1
	36"	S	482	468	457	448	441	434	429	424
		G'	4.0	4.5	4.9	5.4	5.8	6.2	6.6	7.0
16 0.0598"	6"	S	1845	1838	1833	1828	1824	1821	1818	1816
		G'	7.4	8.2	9.1	9.9	10.8	11.6	12.4	13.3
	12"	S	1427	1408	1393	1380	1370	1361	1353	1347
		G'	7.2	8.1	8.9	9.7	10.5	11.3	12.1	12.9
	18"	S	1044	1027	1014	1003	993	986	978	971
		G'	7.1	8.0	8.8	9.5	10.3	11.1	11.8	12.5
	24"	S	821	805	791	780	771	763	756	750
		G'	7.1	7.8	8.6	9.4	10.1	10.8	11.5	12.2
	30"	S	688	671	657	646	637	629	622	617
		G'	7.0	7.7	8.5	9.2	9.9	10.6	11.3	11.9
	36"	S	599	582	568	557	548	540	533	527
		G'	6.9	7.7	8.4	9.1	9.7	10.4	11.0	11.7
14 0.0747"	6"	S	2265	2256	2249	2244	2239	2235	2232	2229
		G'	12.6	14.0	15.4	16.9	18.2	19.6	21.0	22.3
	12"	S	1751	1728	1709	1694	1681	1670	1661	1652
		G'	12.3	13.6	15.0	16.3	17.6	18.9	20.1	21.3
	18"	S	1281	1261	1244	1230	1219	1209	1200	1191
		G'	12.0	13.3	14.6	15.8	17.0	18.2	19.3	20.5
	24"	S	1008	987	971	957	946	936	928	921
		G'	11.8	13.0	14.2	15.4	16.5	17.6	18.7	19.7
	30"	S	844	823	807	793	782	772	764	757
		G'	11.6	12.8	13.9	15.0	16.1	17.1	18.1	19.1
	36"	S	735	714	697	684	672	663	654	647
		G'	11.4	12.6	13.7	14.7	15.7	16.7	17.6	18.5

See Table 4 notes.

TABLE 24—DEEP-DEK® 7.5 ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: **Hilti X-ENP-19-L15** (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: **Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 12/2

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	604	598	594	590	587	584	582	580
		G'	2.1	2.4	2.6	2.9	3.1	3.3	3.6	3.8
	12"	S	348	343	339	336	333	331	329	327
		G'	2.1	2.3	2.6	2.8	3.0	3.3	3.5	3.7
	18"	S	247	242	238	235	232	230	228	226
		G'	2.1	2.3	2.5	2.8	3.0	3.2	3.4	3.7
	24"	S	197	192	188	184	182	179	177	176
		G'	2.1	2.3	2.5	2.7	3.0	3.2	3.4	3.6
	30"	S	166	161	157	154	151	149	147	145
		G'	2.0	2.3	2.5	2.7	2.9	3.1	3.3	3.5
	36"	S	146	141	137	134	131	129	127	125
		G'	2.0	2.3	2.5	2.7	2.9	3.1	3.3	3.5
18 0.0474"	6"	S	797	790	784	779	775	771	768	766
		G'	4.1	4.6	5.1	5.6	6.0	6.5	7.0	7.4
	12"	S	460	454	448	444	440	437	435	433
		G'	4.1	4.5	5.0	5.4	5.9	6.3	6.7	7.1
	18"	S	327	320	315	310	307	304	301	299
		G'	4.0	4.4	4.9	5.3	5.7	6.1	6.5	6.9
	24"	S	260	253	248	244	240	237	235	232
		G'	3.9	4.4	4.8	5.2	5.6	6.0	6.3	6.7
	30"	S	220	213	208	204	200	197	194	192
		G'	3.9	4.3	4.7	5.1	5.5	5.8	6.2	6.5
	36"	S	193	187	181	177	173	170	168	166
		G'	3.9	4.3	4.7	5.0	5.4	5.7	6.0	6.4
16 0.0598"	6"	S	1002	993	985	979	974	970	967	963
		G'	7.2	8.0	8.8	9.6	10.4	11.2	12.0	12.7
	12"	S	580	572	565	560	555	551	548	545
		G'	7.0	7.8	8.5	9.2	9.9	10.6	11.3	12.0
	18"	S	411	403	397	391	387	383	380	377
		G'	6.8	7.5	8.2	8.9	9.5	10.2	10.8	11.4
	24"	S	327	319	312	307	302	299	295	293
		G'	6.7	7.4	8.0	8.6	9.2	9.8	10.3	10.9
	30"	S	277	268	262	256	252	248	245	242
		G'	6.6	7.2	7.8	8.4	9.0	9.5	10.0	10.5
	36"	S	243	235	228	223	218	214	211	208
		G'	6.5	7.1	7.7	8.2	8.7	9.2	9.7	10.1
14 0.0747"	6"	S	1246	1235	1226	1219	1212	1207	1203	1199
		G'	12.1	13.5	14.8	16.1	17.4	18.6	19.8	20.9
	12"	S	723	713	705	698	693	688	684	680
		G'	11.6	12.8	14.0	15.1	16.1	17.2	18.2	19.1
	18"	S	513	503	495	488	482	478	474	470
		G'	11.2	12.3	13.3	14.3	15.2	16.1	17.0	17.8
	24"	S	408	398	389	383	377	372	368	365
		G'	10.9	11.9	12.8	13.7	14.5	15.3	16.0	16.7
	30"	S	345	334	326	320	314	309	305	302
		G'	10.6	11.6	12.4	13.2	14.0	14.6	15.3	15.9
	36"	S	303	292	284	278	272	267	263	260
		G'	10.4	11.3	12.1	12.8	13.5	14.1	14.7	15.2

ATTACHMENT PATTERN: 12/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20 0.0358"	6"	S	676	669	662	657	653	649	646	643
		G'	2.1	2.4	2.6	2.9	3.1	3.3	3.6	3.8
	12"	S	374	366	360	355	350	347	344	341
		G'	2.1	2.3	2.6	2.8	3.1	3.3	3.5	3.7
	18"	S	273	265	259	254	250	246	243	240
		G'	2.1	2.3	2.6	2.8	3.0	3.2	3.5	3.7
	24"	S	223	215	209	203	199	195	192	190
		G'	2.1	2.3	2.5	2.8	3.0	3.2	3.4	3.6
	30"	S	193	185	178	173	169	165	162	159
		G'	2.1	2.3	2.5	2.7	3.0	3.2	3.4	3.6
	36"	S	172	165	158	153	149	145	142	139
		G'	2.1	2.3	2.5	2.7	2.9	3.2	3.4	3.6
18 0.0474"	6"	S	895	884	876	869	864	859	855	851
		G'	4.1	4.6	5.1	5.6	6.1	6.5	7.0	7.4
	12"	S	494	484	476	469	463	458	454	451
		G'	4.1	4.5	5.0	5.5	5.9	6.3	6.8	7.2
	18"	S	361	350	342	335	330	325	321	317
		G'	4.0	4.5	4.9	5.4	5.8	6.2	6.6	7.0
	24"	S	294	284	275	269	263	258	254	250
		G'	4.0	4.4	4.9	5.3	5.7	6.1	6.4	6.8
	30"	S	254	244	235	229	223	218	214	210
		G'	4.0	4.4	4.8	5.2	5.6	6.0	6.3	6.7
	36"	S	227	217	209	202	196	191	187	184
		G'	4.0	4.4	4.8	5.2	5.5	5.9	6.2	6.6
16 0.0598"	6"	S	1128	1115	1104	1096	1089	1083	1078	1073
		G'	7.2	8.1	8.9	9.7	10.5	11.2	12.0	12.8
	12"	S	622	609	599	591	583	577	572	568
		G'	7.1	7.8	8.6	9.3	10.0	10.7	11.4	12.1
	18"	S	454	441	431	422	415	409	404	399
		G'	6.9	7.7	8.4	9.1	9.7	10.4	11.0	11.6
	24"	S	370	357	346	338	331	325	320	315
		G'	6.8	7.5	8.2	8.9	9.5	10.1	10.6	11.2
	30"	S	319	306	296	287	280	274	269	265
		G'	6.8	7.5	8.1	8.7	9.3	9.8	10.4	10.9
	36"	S	286	273	262	254	247	241	236	231
		G'	6.7	7.4	8.0	8.6	9.1	9.7	10.2	10.6
14 0.0747"	6"	S	1407	1391	1378	1367	1359	1351	1345	1339
		G'	12.2	13.6	14.9	16.2	17.4	18.7	19.9	21.1
	12"	S	776	760	747	736	728	720	714	708
		G'	11.8	13.0	14.2	15.3	16.4	17.4	18.5	19.4
	18"	S	565	549	536	526	517	510	503	498
		G'	11.5	12.6	13.7	14.7	15.7	16.6	17.5	18.3
	24"	S	460	444	431	421	412	405	398	393
		G'	11.2	12.3	13.3	14.2	15.1	15.9	16.7	17.4
	30"	S	397	381	368	358	349	342	335	330
		G'	11.1	12.1	13.0	13.9	14.7	15.4	16.1	16.8
	36"	S	355	339	326	316	307	299	293	288
		G'	10.9	11.9	12.8	13.6	14.3	15.0	15.6	16.2

See Table 4 notes.

TABLE 25—DEEP-DEK® 4.5 CELLULAR ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: $^1/_2$" Effective Weld Diameter — **S** = Allowable Diaphragm Shear (plf) — **G'** = Stiffness Factor (kips/in.)

SIDELAP CONNECTION: #10 Screws — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20/20 0.0358"/	12"	S	486	454	429	410	395	382	372	363
		G'	20.8	23.5	26.1	28.5	30.7	32.9	34.9	36.8
	24"	S	358	325	301	282	266	254	243	235
		G'	19.3	21.5	23.4	25.1	26.7	28.2	29.5	30.7
	36"	S	316	283	258	239	224	211	201	192
		G'	18.4	20.2	21.8	23.1	24.3	25.3	26.3	27.1
20/18 0.0358"/	12"	S	607	569	540	518	500	485	473	463
		G'	38.9	42.6	45.9	48.8	51.4	53.7	55.8	57.7
	24"	S	437	399	370	348	330	316	304	293
		G'	33.3	35.4	37.2	38.6	39.8	40.8	41.7	42.4
	36"	S	381	342	314	292	274	259	247	237
		G'	30.3	31.7	32.7	33.4	34.0	34.4	34.8	35.0
18/20 0.0474"/	12"	S	517	480	452	430	413	399	387	377
		G'	19.1	21.7	24.3	26.7	29.1	31.3	33.5	35.6
	24"	S	389	352	324	302	285	270	259	249
		G'	18.1	20.4	22.5	24.4	26.3	28.0	29.6	31.0
	36"	S	346	309	281	259	242	228	216	206
		G'	17.5	19.5	21.3	23.0	24.5	25.8	27.0	28.2
18/18 0.0474"/	12"	S	622	581	551	528	509	494	481	470
		G'	37.7	42.0	45.8	49.3	52.5	55.5	58.2	60.7
	24"	S	452	412	382	358	339	324	311	300
		G'	33.6	36.5	39.0	41.1	42.9	44.5	45.9	47.2
	36"	S	396	355	325	302	283	267	255	244
		G'	31.2	33.4	35.1	36.5	37.7	38.6	39.4	40.1
18/16 0.0474"/	12"	S	718	677	646	621	602	586	573	562
		G'	59.1	63.6	67.5	70.9	73.8	76.3	78.6	80.6
	24"	S	504	463	432	407	388	372	359	348
		G'	48.5	50.7	52.3	53.5	54.5	55.3	56.0	56.5
	36"	S	433	391	360	336	317	301	288	277
		G'	43.2	44.3	44.9	45.3	45.5	45.6	45.6	45.6
16/18 0.0598"/	12"	S	622	581	551	528	509	494	481	470
		G'	36.0	40.5	44.6	48.5	52.0	55.4	58.5	61.5
	24"	S	452	412	382	358	339	324	311	300
		G'	32.9	36.3	39.3	41.9	44.3	46.4	48.3	50.0
	36"	S	396	355	325	302	283	267	255	244
		G'	31.1	33.8	36.1	38.1	39.7	41.2	42.4	43.5
16/16 0.0598"/	12"	S	718	677	646	621	602	586	573	562
		G'	59.3	64.9	69.7	74.0	77.8	81.2	84.2	87.0
	24"	S	504	463	432	407	388	372	359	348
		G'	50.6	53.7	56.3	58.3	60.1	61.5	62.7	63.7
	36"	S	433	391	360	336	317	301	288	277
		G'	45.9	47.9	49.3	50.4	51.2	51.7	52.2	52.5
16/14 0.0598"/	12"	S	833	791	759	734	714	698	684	673
		G'	84.6	89.4	93.4	96.7	99.4	101.8	103.8	105.5
	24"	S	566	523	492	467	447	430	417	405
		G'	66.3	67.8	68.8	69.5	69.9	70.2	70.5	70.6
	36"	S	477	434	402	378	358	341	328	316
		G'	57.8	57.9	57.7	57.4	57.0	56.6	56.2	55.8
14/16 0.0747"/	12"	S	718	677	646	621	602	586	573	562
		G'	58.3	64.5	70.1	75.2	79.8	84.0	87.8	91.3
	24"	S	504	463	432	407	388	372	359	348
		G'	51.3	55.4	58.8	61.7	64.2	66.4	68.2	69.9
	36"	S	433	391	360	336	317	301	288	277
		G'	47.4	50.3	52.6	54.4	55.9	57.1	58.0	58.8
14/14 0.0747"/	12"	S	833	791	759	734	714	698	684	673
		G'	87.8	94.2	99.6	104.1	108.1	111.5	114.5	117.2
	24"	S	566	523	492	467	447	430	417	405
		G'	71.4	74.2	76.3	77.8	79.1	80.0	80.8	81.4
	36"	S	477	434	402	378	358	341	328	316
		G'	63.3	64.5	65.2	65.5	65.6	65.6	65.5	65.4

SIDELAP CONNECTION: $1^1/_2$" Seam Welds — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20/20 0.0358"/ 0.0358"	12"	S	1191	1151	1120	1097	1078	1062	1049	1039
		G'	22.3	25.6	28.7	31.8	34.7	37.5	40.3	42.9
	24"	S	738	697	667	643	624	609	596	585
		G'	21.3	24.2	26.9	29.5	32.0	34.3	36.5	38.6
	36"	S	587	546	516	492	473	458	445	434
		G'	20.6	23.2	25.7	27.9	30.0	31.9	33.8	35.5
20/18 0.0358"/ 0.0474"	12"	S	1522	1474	1438	1410	1387	1369	1353	1340
		G'	45.5	51.2	56.4	61.3	65.8	70.0	74.0	77.8
	24"	S	930	882	846	818	795	777	761	748
		G'	41.1	45.3	49.1	52.4	55.5	58.2	60.7	63.0
	36"	S	733	684	648	620	598	579	564	551
		G'	38.2	41.5	44.4	46.8	49.0	50.9	52.5	54.0
18/20 0.0474"/ 0.0358"	12"	S	1208	1163	1130	1104	1083	1066	1052	1039
		G'	20.0	23.0	26.0	28.9	31.7	34.4	37.1	39.7
	24"	S	761	716	683	657	636	619	604	592
		G'	19.4	22.2	24.9	27.4	29.9	32.3	34.6	36.8
	36"	S	612	567	534	507	487	470	455	443
		G'	18.9	21.5	24.0	26.4	28.6	30.7	32.7	34.6
18/18 0.0474"/ 0.0474"	12"	S	1532	1482	1444	1415	1391	1372	1356	1342
		G'	42.2	47.9	53.3	58.4	63.2	67.8	72.2	76.3
	24"	S	942	892	854	825	801	782	766	753
		G'	39.2	43.9	48.2	52.1	55.7	59.0	62.1	65.0
	36"	S	746	695	658	628	605	586	570	556
		G'	37.2	41.1	44.7	47.8	50.6	53.2	55.5	57.6
18/16 0.0474"/ 0.0598"	12"	S	1894	1840	1799	1767	1742	1721	1702	1684
		G'	72.7	80.8	88.0	94.7	100.7	106.3	111.4	116.2
	24"	S	1137	1083	1042	1011	985	965	947	933
		G'	63.4	68.8	73.5	77.5	81.1	84.2	87.0	89.5
	36"	S	885	831	790	758	733	712	695	680
		G'	57.7	61.6	64.8	67.4	69.7	71.6	73.2	74.6
16/18 0.0598"/ 0.0474"	12"	S	1554	1504	1466	1436	1413	1393	1377	1364
		G'	39.2	44.7	50.0	55.1	60.0	64.7	69.3	73.6
	24"	S	954	904	866	836	813	793	777	764
		G'	37.1	41.9	46.3	50.5	54.5	58.2	61.7	65.0
	36"	S	754	704	666	636	613	593	577	564
		G'	35.6	39.9	43.7	47.3	50.6	53.6	56.3	58.9
16/16 0.0598"/ 0.0598"	12"	S	1922	1867	1826	1795	1769	1746	1725	1708
		G'	69.8	78.3	86.1	93.4	100.2	106.5	112.4	117.9
	24"	S	1152	1098	1057	1025	999	979	961	946
		G'	62.7	69.0	74.6	79.6	84.1	88.1	91.8	95.1
	36"	S	896	841	800	768	743	722	705	690
		G'	58.2	63.1	67.3	71.0	74.1	76.8	79.3	81.4
16/14 0.0598"/ 0.0747"	12"	S	2322	2259	2211	2173	2143	2118	2097	2079
		G'	111.1	121.5	130.7	138.8	146.0	152.5	158.4	163.7
	24"	S	1398	1339	1294	1259	1231	1209	1190	1174
		G'	92.6	98.7	103.6	107.8	111.3	114.4	117.0	119.3
	36"	S	1071	1012	967	932	905	882	863	847
		G'	82.1	85.8	88.7	91.0	92.8	94.3	95.5	96.5
14/16 0.0747"/ 0.0598"	12"	S	1955	1900	1859	1827	1799	1774	1753	1736
		G'	66.0	74.7	82.8	90.5	97.7	104.5	110.9	117.1
	24"	S	1170	1115	1074	1042	1016	995	978	963
		G'	60.9	67.8	74.0	79.8	85.0	89.8	94.2	98.3
	36"	S	908	854	812	780	755	734	716	701
		G'	57.4	63.1	68.2	72.7	76.6	80.2	83.4	86.3
14/14 0.0747"/ 0.0747"	12"	S	2354	2291	2243	2206	2176	2151	2130	2112
		G'	109.5	121.1	131.6	141.1	149.7	157.5	164.7	171.3
	24"	S	1421	1361	1316	1281	1253	1230	1211	1194
		G'	94.6	102.2	108.7	114.3	119.2	123.5	127.3	130.6
	36"	S	1087	1027	982	947	919	896	877	861
		G'	85.6	91.0	95.3	98.8	101.8	104.3	106.4	108.2

See Table 4 notes.

TABLE 26—DEEP-DEK® 4.5 CELLULAR ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)
SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)
G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24 / 3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20/20 0.0358"/0.0358"	12"	S	504	481	465	452	441	433	426	420
		G'	21.0	23.8	26.3	28.8	31.0	33.2	35.2	37.2
	18"	S	388	366	349	336	326	317	310	304
		G'	20.3	22.7	25.0	27.0	28.9	30.7	32.4	33.9
	24"	S	330	308	291	278	268	259	252	246
		G'	19.7	21.9	24.0	25.8	27.4	28.9	30.2	31.5
20/18 0.0358"/0.0474"	12"	S	631	606	588	574	563	553	546	539
		G'	39.6	43.4	46.8	49.7	52.4	54.7	56.8	58.7
	18"	S	477	453	435	421	409	400	392	386
		G'	36.7	39.6	42.0	44.1	45.9	47.4	48.7	49.9
	24"	S	401	376	358	344	333	323	316	309
		G'	34.7	37.0	38.9	40.4	41.6	42.6	43.5	44.2
18/20 0.0474"/0.0358"	12"	S	509	486	469	455	444	436	428	422
		G'	19.2	21.9	24.5	26.9	29.3	31.6	33.7	35.8
	18"	S	393	370	353	339	329	320	313	306
		G'	18.7	21.2	23.6	25.8	27.9	29.8	31.7	33.5
	24"	S	335	312	295	281	271	262	255	248
		G'	18.3	20.7	22.9	24.9	26.8	28.5	30.1	31.6
18/18 0.0474"/0.0474"	12"	S	631	606	588	574	563	553	546	539
		G'	38.2	42.6	46.5	50.0	53.3	56.3	59.0	61.5
	18"	S	477	453	435	421	409	400	392	386
		G'	36.1	39.7	42.9	45.6	48.1	50.3	52.2	54.0
	24"	S	401	376	358	344	333	323	316	309
		G'	34.6	37.7	40.3	42.5	44.4	46.1	47.6	48.8
18/16 0.0474"/0.0598"	12"	S	761	735	716	701	689	679	671	664
		G'	60.5	65.2	69.2	72.6	75.5	78.1	80.3	82.3
	18"	S	568	542	523	508	496	486	478	471
		G'	54.8	58.1	60.6	62.7	64.4	65.8	67.0	68.0
	24"	S	471	445	426	411	399	389	381	374
		G'	51.1	53.4	55.1	56.4	57.3	58.1	58.7	59.2
16/18 0.0598"/0.0474"	12"	S	631	606	588	574	563	553	546	539
		G'	36.4	40.9	45.1	49.0	52.6	56.0	59.2	62.2
	18"	S	477	453	435	421	409	400	392	386
		G'	34.8	38.8	42.4	45.6	48.5	51.2	53.7	55.9
	24"	S	401	376	358	344	333	323	316	309
		G'	33.7	37.3	40.4	43.1	45.5	47.7	49.7	51.4
16/16 0.0598"/0.0598"	12"	S	761	735	716	701	689	679	671	664
		G'	60.5	66.2	71.1	75.4	79.3	82.7	85.8	88.6
	18"	S	568	542	523	508	496	486	478	471
		G'	55.9	60.2	63.8	66.8	69.3	71.5	73.5	75.1
	24"	S	471	445	426	411	399	389	381	374
		G'	52.8	56.1	58.8	61.0	62.7	64.2	65.4	66.4
16/14 0.0598"/0.0747"	12"	S	915	885	862	844	829	817	807	798
		G'	87.3	92.2	96.2	99.5	102.2	104.5	106.4	108.1
	18"	S	676	649	628	612	599	589	580	573
		G'	77.0	79.9	81.9	83.5	84.7	85.6	86.3	86.9
	24"	S	555	528	507	491	478	468	459	452
		G'	70.6	72.2	73.1	73.7	74.0	74.2	74.3	74.3
14/16 0.0747"/0.0598"	12"	S	761	735	716	701	689	679	671	664
		G'	59.2	65.5	71.2	76.4	81.0	85.3	89.1	92.7
	18"	S	568	542	523	508	496	486	478	471
		G'	55.6	60.7	65.2	69.1	72.5	75.5	78.2	80.6
	24"	S	471	445	426	411	399	389	381	374
		G'	53.1	57.4	61.0	64.1	66.6	68.9	70.8	72.4
14/14 0.0747"/0.0747"	12"	S	915	885	862	844	829	817	807	798
		G'	90.1	96.6	102.1	106.7	110.7	114.1	117.1	119.8
	18"	S	676	649	628	612	599	589	580	573
		G'	81.2	85.5	88.9	91.7	93.9	95.7	97.2	98.4
	24"	S	555	528	507	491	478	468	459	452
		G'	75.4	78.4	80.5	82.1	83.2	84.1	84.8	85.3

ATTACHMENT PATTERN: 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"
20/20 0.0358"/0.0358	12"	S	505	483	466	453	442	434	427	421
		G'	21.0	23.8	26.4	28.8	31.1	33.3	35.3	37.2
	18"	S	389	367	350	337	327	318	311	305
		G'	20.3	22.8	25.0	27.1	29.0	30.8	32.5	34.0
	24"	S	332	309	292	279	269	260	253	247
		G'	19.8	22.0	24.1	25.9	27.5	29.0	30.4	31.6
20/18 0.0358"/0.0474	12"	S	633	608	590	575	564	554	547	540
		G'	39.8	43.6	47.0	49.9	52.5	54.9	57.0	58.9
	18"	S	479	455	436	422	410	401	393	387
		G'	36.9	39.8	42.3	44.4	46.2	47.7	49.0	50.2
	24"	S	402	378	359	345	334	324	317	310
		G'	35.0	37.3	39.2	40.7	41.9	42.9	43.8	44.5
18/20 0.0474"/0.0358	12"	S	510	487	470	456	446	437	429	423
		G'	19.2	21.9	24.5	27.0	29.3	31.6	33.8	35.9
	18"	S	395	371	354	340	330	321	313	307
		G'	18.7	21.2	23.6	25.8	27.9	29.9	31.8	33.5
	24"	S	337	313	296	283	272	263	255	249
		G'	18.4	20.8	22.9	25.0	26.8	28.6	30.2	31.8
18/18 0.0474"/0.0474	12"	S	633	608	590	575	564	554	547	540
		G'	38.3	42.7	46.6	50.2	53.4	56.4	59.2	61.7
	18"	S	479	455	436	422	410	401	393	387
		G'	36.3	39.9	43.1	45.8	48.3	50.5	52.5	54.3
	24"	S	402	378	359	345	334	324	317	310
		G'	34.8	37.9	40.6	42.8	44.7	46.4	47.9	49.1
18/16 0.0474"/0.0598	12"	S	763	737	718	702	690	680	672	665
		G'	60.8	65.5	69.5	72.9	75.9	78.4	80.7	82.6
	18"	S	569	543	524	509	497	487	479	472
		G'	55.2	58.5	61.1	63.2	64.9	66.3	67.5	68.5
	24"	S	473	447	427	412	400	390	382	375
		G'	51.6	53.9	55.6	56.9	57.9	58.6	59.2	59.7
16/18 0.0598"/0.0474	12"	S	633	608	590	575	564	554	547	540
		G'	36.4	41.0	45.2	49.1	52.8	56.2	59.3	62.3
	18"	S	479	455	436	422	410	401	393	387
		G'	35.0	38.9	42.5	45.8	48.7	51.4	53.9	56.1
	24"	S	402	378	359	345	334	324	317	310
		G'	33.9	37.4	40.6	43.3	45.8	48.0	50.0	51.7
16/16 0.0598"/0.0598	12"	S	763	737	718	702	690	680	672	665
		G'	60.7	66.4	71.4	75.7	79.6	83.0	86.1	88.9
	18"	S	569	543	524	509	497	487	479	472
		G'	56.2	60.5	64.1	67.2	69.8	72.0	73.9	75.6
	24"	S	473	447	427	412	400	390	382	375
		G'	53.2	56.6	59.3	61.5	63.3	64.7	65.9	66.9
16/14 0.0598"/0.0747	12"	S	920	892	871	855	842	832	823	815
		G'	87.8	92.8	96.8	100.0	102.7	105.0	107.0	108.7
	18"	S	678	650	629	613	600	590	581	574
		G'	77.8	80.6	82.7	84.2	85.4	86.3	87.0	87.6
	24"	S	557	529	509	492	479	469	460	453
		G'	71.4	73.0	74.0	74.5	74.8	75.0	75.0	75.0
14/16 0.0747"/0.0598	12"	S	763	737	718	702	690	680	672	665
		G'	59.3	65.7	71.5	76.6	81.3	85.5	89.4	93.0
	18"	S	569	543	524	509	497	487	479	472
		G'	55.8	61.0	65.5	69.5	72.9	75.9	78.6	81.0
	24"	S	473	447	427	412	400	390	382	375
		G'	53.4	57.8	61.4	64.5	67.1	69.3	71.3	72.9
14/14 0.0747"/0.0747	12"	S	920	892	871	855	842	832	823	815
		G'	90.5	97.1	102.6	107.3	111.2	114.7	117.7	120.3
	18"	S	678	650	629	613	600	590	581	574
		G'	81.8	86.2	89.6	92.4	94.6	96.4	97.9	99.1
	24"	S	557	529	509	492	479	469	460	453
		G'	76.1	79.2	81.3	82.9	84.1	84.9	85.6	86.1

See Table 4 notes.

TABLE 27—DEEP-DEK® 6 CELLULAR ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: $^1/_2$" Effective Weld Diameter — **S** = Allowable Diaphragm Shear (plf) — **G'** = Stiffness Factor (kips/in.)

SIDELAP CONNECTION: #10 Screws — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20/20 0.0358"/	12"	S	445	420	402	387	374	364	355	348
		G'	28.3	31.2	33.9	36.4	38.7	40.8	42.9	44.8
	24"	S	319	295	276	261	249	239	230	223
		G'	25.4	27.4	29.2	30.9	32.3	33.6	34.8	35.9
	36"	S	277	253	234	219	207	197	188	181
		G'	23.6	25.2	26.5	27.7	28.6	29.5	30.2	30.9
20/18 0.0358"/	12"	S	557	529	507	490	476	464	454	445
		G'	49.1	52.4	55.2	57.7	60.0	61.9	63.7	65.3
	24"	S	391	363	341	324	309	298	287	279
		G'	39.8	41.3	42.6	43.6	44.4	45.0	45.6	46.1
	36"	S	336	308	286	268	254	242	232	223
		G'	35.1	35.8	36.3	36.7	36.9	37.0	37.1	37.2
18/20 0.0474"/	12"	S	470	443	422	405	391	379	369	361
		G'	26.5	29.5	32.3	35.0	37.5	39.9	42.2	44.4
	24"	S	345	317	296	279	265	253	244	235
		G'	24.5	26.8	29.0	31.0	32.8	34.4	36.0	37.4
	36"	S	303	275	254	237	223	212	202	193
		G'	23.2	25.2	26.9	28.5	29.8	31.1	32.2	33.2
18/18 0.0474"/	12"	S	570	540	517	499	484	471	460	451
		G'	49.3	53.4	57.1	60.3	63.3	66.1	68.5	70.8
	24"	S	404	374	351	333	317	305	294	285
		G'	41.9	44.3	46.3	48.0	49.5	50.7	51.8	52.8
	36"	S	348	319	296	277	262	249	239	230
		G'	37.9	39.4	40.6	41.5	42.3	42.8	43.3	43.7
18/16 0.0474"/	12"	S	663	633	609	590	575	562	551	541
		G'	71.7	75.3	78.4	81.1	83.4	85.4	87.1	88.7
	24"	S	453	423	399	380	365	352	341	332
		G'	55.6	56.8	57.7	58.4	58.9	59.3	59.6	59.9
	36"	S	383	353	329	310	295	282	271	262
		G'	48.0	48.2	48.2	48.1	48.0	47.8	47.6	47.4
16/18 0.0598"/	12"	S	570	540	517	499	484	471	460	451
		G'	48.3	52.8	57.0	60.8	64.4	67.7	70.7	73.5
	24"	S	404	374	351	333	317	305	294	285
		G'	42.4	45.5	48.2	50.5	52.5	54.3	55.9	57.4
	36"	S	348	319	296	277	262	249	239	230
		G'	39.1	41.3	43.1	44.7	45.9	47.0	47.9	48.7
16/16 0.0598"/	12"	S	663	633	609	590	575	562	551	541
		G'	74.4	79.2	83.4	87.1	90.3	93.1	95.7	98.0
	24"	S	453	423	399	380	365	352	341	332
		G'	60.1	62.3	64.0	65.4	66.6	67.5	68.3	68.9
	36"	S	383	353	329	310	295	282	271	262
		G'	52.9	53.9	54.6	55.0	55.3	55.4	55.5	55.6
16/14 0.0598"/	12"	S	775	744	719	700	684	671	659	650
		G'	98.3	101.7	104.5	106.8	108.7	110.3	111.7	113.0
	24"	S	513	482	457	438	422	409	397	388
		G'	72.7	73.2	73.4	73.5	73.5	73.4	73.3	73.2
	36"	S	426	394	370	351	335	321	310	300
		G'	61.5	60.8	60.1	59.3	58.7	58.1	57.5	56.9
14/16 0.0747"/	12"	S	663	633	609	590	575	562	551	541
		G'	75.2	81.1	86.3	90.9	95.0	98.8	102.2	105.3
	24"	S	453	423	399	380	365	352	341	332
		G'	63.1	66.3	69.0	71.2	73.1	74.7	76.1	77.3
	36"	S	383	353	329	310	295	282	271	262
		G'	56.6	58.6	60.0	61.1	62.0	62.6	63.1	63.6
14/14 0.0747"/	12"	S	775	744	719	700	684	671	659	650
		G'	105.3	110.3	114.5	118.0	121.0	123.6	125.9	127.9
	24"	S	513	482	457	438	422	409	397	388
		G'	80.9	82.4	83.5	84.2	84.8	85.2	85.5	85.7
	36"	S	426	394	370	351	335	321	310	300
		G'	69.6	69.6	69.4	69.1	68.8	68.4	68.0	67.6

SIDELAP CONNECTION: $1^1/_2$" Seam Welds — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20/20 0.0358"/ 0.0358"	12"	S	1128	1098	1075	1056	1041	1028	1018	1009
		G'	31.4	35.1	38.6	42.0	45.3	48.4	51.4	54.3
	24"	S	683	654	630	612	597	584	573	564
		G'	29.3	32.4	35.3	38.1	40.6	43.0	45.3	47.4
	36"	S	535	505	482	464	449	436	425	416
		G'	27.9	30.6	33.0	35.3	37.4	39.3	41.1	42.7
20/18 0.0358"/ 0.0474"	12"	S	1444	1409	1381	1359	1341	1326	1314	1303
		G'	60.8	66.5	71.8	76.6	81.1	85.3	89.1	92.7
	24"	S	864	829	801	779	761	746	733	722
		G'	52.6	56.5	59.9	62.9	65.6	68.0	70.2	72.2
	36"	S	671	635	608	586	568	553	540	529
		G'	47.6	50.4	52.7	54.7	56.5	58.0	59.3	60.4
18/20 0.0474"/ 0.0358"	12"	S	1140	1107	1082	1061	1044	1031	1019	1009
		G'	28.4	32.0	35.4	38.8	42.0	45.1	48.2	51.1
	24"	S	702	669	643	623	606	592	580	570
		G'	27.2	30.3	33.3	36.2	38.9	41.5	44.0	46.3
	36"	S	556	523	497	477	460	446	434	424
		G'	26.2	29.1	31.7	34.2	36.6	38.8	40.9	42.8
18/18 0.0474"/ 0.0474"	12"	S	1452	1415	1386	1363	1345	1329	1316	1304
		G'	57.7	63.8	69.6	74.9	80.0	84.7	89.2	93.4
	24"	S	874	837	808	785	767	751	738	726
		G'	52.0	56.6	60.8	64.6	68.0	71.2	74.1	76.8
	36"	S	682	645	616	593	574	558	545	534
		G'	48.2	51.8	55.0	57.8	60.3	62.6	64.6	66.4
18/16 0.0474"/ 0.0598"	12"	S	1803	1763	1732	1707	1687	1668	1651	1636
		G'	94.1	101.8	108.6	114.8	120.4	125.5	130.2	134.5
	24"	S	1061	1021	990	966	945	928	914	902
		G'	78.3	82.8	86.6	90.0	92.8	95.4	97.6	99.6
	36"	S	814	774	743	718	698	681	667	655
		G'	69.0	71.9	74.2	76.1	77.7	79.0	80.2	81.1
16/18 0.0598"/ 0.0474"	12"	S	1473	1436	1407	1384	1365	1350	1336	1325
		G'	54.4	60.6	66.5	72.0	77.4	82.4	87.3	91.9
	24"	S	886	848	820	796	777	762	748	737
		G'	50.3	55.3	59.9	64.2	68.2	71.9	75.4	78.6
	36"	S	690	652	624	600	582	566	552	541
		G'	47.4	51.6	55.4	58.8	61.9	64.8	67.4	69.8
16/16 0.0598"/ 0.0598"	12"	S	1830	1790	1759	1734	1711	1691	1673	1658
		G'	92.6	101.1	108.9	116.1	122.7	128.8	134.4	139.7
	24"	S	1076	1036	1004	979	959	942	928	915
		G'	79.9	85.6	90.6	95.0	98.9	102.4	105.6	108.4
	36"	S	824	784	753	728	708	691	676	664
		G'	72.1	76.2	79.6	82.5	84.9	87.1	89.0	90.6
16/14 0.0598"/ 0.0747"	12"	S	2214	2167	2130	2100	2076	2055	2038	2023
		G'	138.4	147.5	155.5	162.5	168.6	174.2	179.1	183.6
	24"	S	1312	1268	1234	1207	1185	1166	1150	1137
		G'	109.5	114.0	117.6	120.6	123.2	125.4	127.3	128.9
	36"	S	992	948	914	887	864	846	830	816
		G'	93.9	96.2	97.9	99.2	100.2	101.0	101.7	102.2
14/16 0.0747"/ 0.0598"	12"	S	1862	1822	1791	1764	1739	1718	1701	1686
		G'	89.4	98.5	107.0	114.9	122.3	129.2	135.6	141.7
	24"	S	1093	1053	1021	996	975	958	944	931
		G'	79.7	86.4	92.3	97.7	102.6	107.0	111.1	114.8
	36"	S	836	796	765	740	719	702	687	675
		G'	73.4	78.5	83.0	86.8	90.3	93.3	96.0	98.4
14/14 0.0747"/ 0.0747"	12"	S	2245	2199	2162	2132	2108	2087	2070	2055
		G'	140.2	151.1	160.7	169.3	177.1	184.2	190.6	196.4
	24"	S	1334	1289	1255	1228	1205	1186	1171	1157
		G'	115.5	121.7	126.9	131.3	135.2	138.5	141.5	144.1
	36"	S	1007	963	928	901	879	860	844	830
		G'	101.3	105.1	108.1	110.5	112.5	114.2	115.6	116.8

See Table 4 notes

TABLE 28—DEEP-DEK® 6 CELLULAR ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)
SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)
G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24 / 3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20/20 0.0358"/0.0358"	12"	S	472	455	443	433	424	417	412	406
		G'	28.6	31.6	34.3	36.8	39.1	41.3	43.3	45.3
	18"	S	358	342	329	319	311	304	298	293
		G'	27.1	29.6	31.8	33.9	35.7	37.4	38.9	40.4
	24"	S	301	285	272	262	254	247	241	236
		G'	26.0	28.2	30.1	31.8	33.3	34.6	35.8	36.9
20/18 0.0358"/0.0474"	12"	S	594	576	563	551	542	535	528	523
		G'	50.2	53.5	56.4	59.0	61.2	63.2	65.0	66.5
	18"	S	444	426	412	401	392	384	378	373
		G'	45.1	47.4	49.3	50.9	52.2	53.4	54.3	55.2
	24"	S	369	351	337	326	317	309	303	297
		G'	41.8	43.4	44.7	45.7	46.4	47.1	47.6	48.1
18/20 0.0474"/0.0358"	12"	S	476	459	446	436	427	420	414	409
		G'	26.7	29.7	32.6	35.3	37.8	40.2	42.6	44.8
	18"	S	362	346	332	322	313	306	300	295
		G'	25.7	28.4	30.9	33.2	35.4	37.4	39.3	41.0
	24"	S	306	289	276	265	257	249	243	238
		G'	25.0	27.4	29.6	31.6	33.5	35.2	36.8	38.3
18/18 0.0474"/0.0474"	12"	S	594	576	563	551	542	535	528	523
		G'	50.1	54.3	58.0	61.4	64.4	67.1	69.6	71.9
	18"	S	444	426	412	401	392	384	378	373
		G'	46.2	49.4	52.2	54.6	56.6	58.5	60.1	61.6
	24"	S	369	351	337	326	317	309	303	297
		G'	43.5	46.1	48.2	49.9	51.4	52.7	53.8	54.7
18/16 0.0474"/0.0598"	12"	S	721	702	687	675	666	658	651	645
		G'	73.7	77.4	80.5	83.2	85.4	87.4	89.1	90.6
	18"	S	531	512	497	486	476	468	461	455
		G'	64.7	66.8	68.5	69.9	71.0	71.9	72.6	73.2
	24"	S	436	417	403	391	381	373	366	361
		G'	58.9	60.2	61.0	61.6	62.1	62.4	62.6	62.7
16/18 0.0598"/0.0474"	12"	S	594	576	563	551	542	535	528	523
		G'	48.9	53.5	57.8	61.7	65.2	68.6	71.6	74.5
	18"	S	444	426	412	401	392	384	378	373
		G'	45.9	49.7	53.1	56.1	58.8	61.2	63.5	65.5
	24"	S	369	351	337	326	317	309	303	297
		G'	43.8	47.0	49.7	52.1	54.2	56.1	57.8	59.2
16/16 0.0598"/0.0598"	12"	S	721	702	687	675	666	658	651	645
		G'	76.1	81.0	85.3	89.0	92.2	95.1	97.6	99.9
	18"	S	531	512	497	486	476	468	461	455
		G'	68.3	71.6	74.3	76.6	78.5	80.1	81.5	82.7
	24"	S	436	417	403	391	381	373	366	361
		G'	63.1	65.4	67.2	68.6	69.7	70.6	71.4	71.9
16/14 0.0598"/0.0747"	12"	S	867	845	827	813	801	791	783	775
		G'	101.6	105.1	107.8	110.0	111.8	113.4	114.7	115.8
	18"	S	636	616	600	587	577	568	561	555
		G'	86.8	88.3	89.2	89.9	90.4	90.8	91.1	91.3
	24"	S	517	497	481	469	459	450	443	437
		G'	77.8	78.1	78.2	78.0	77.8	77.6	77.3	77.0
14/16 0.0747"/0.0598"	12"	S	721	702	687	675	666	658	651	645
		G'	76.6	82.6	87.8	92.5	96.7	100.5	103.9	107.1
	18"	S	531	512	497	486	476	468	461	455
		G'	70.2	74.6	78.3	81.6	84.4	86.8	89.0	90.9
	24"	S	436	417	403	391	381	373	366	361
		G'	65.7	69.2	71.9	74.2	76.1	77.8	79.1	80.3
14/14 0.0747"/0.0747"	12"	S	867	845	827	813	801	791	783	775
		G'	108.4	113.4	117.6	121.1	124.1	126.7	128.9	130.8
	18"	S	636	616	600	587	577	568	561	555
		G'	94.6	97.4	99.6	101.2	102.6	103.6	104.5	105.2
	24"	S	517	497	481	469	459	450	443	437
		G'	85.9	87.4	88.4	89.0	89.4	89.7	89.8	89.9

ATTACHMENT PATTERN: 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"
20/20 0.0358"/0.0358	12"	S	473	457	444	434	425	418	412	407
		G'	28.7	31.6	34.3	36.9	39.2	41.4	43.4	45.4
	18"	S	360	343	330	320	312	305	299	294
		G'	27.2	29.7	32.0	34.0	35.8	37.5	39.1	40.5
	24"	S	303	286	274	263	255	248	242	237
		G'	26.2	28.3	30.2	31.9	33.4	34.8	36.0	37.1
20/18 0.0358"/0.0474	12"	S	596	578	564	553	543	536	529	524
		G'	50.4	53.8	56.7	59.2	61.5	63.4	65.2	66.8
	18"	S	445	427	413	402	393	385	379	373
		G'	45.4	47.7	49.6	51.2	52.6	53.7	54.7	55.5
	24"	S	370	352	338	327	318	310	304	298
		G'	42.1	43.8	45.1	46.1	46.9	47.5	48.0	48.5
18/20 0.0474"/0.0358	12"	S	478	461	447	437	428	421	415	409
		G'	26.8	29.8	32.6	35.3	37.9	40.3	42.6	44.8
	18"	S	364	347	334	323	314	307	301	296
		G'	25.8	28.5	31.0	33.3	35.5	37.5	39.4	41.2
	24"	S	307	290	277	266	258	250	244	239
		G'	25.1	27.5	29.7	31.8	33.6	35.4	37.0	38.4
18/18 0.0474"/0.0474	12"	S	596	578	564	553	543	536	529	524
		G'	50.3	54.5	58.2	61.6	64.6	67.3	69.8	72.1
	18"	S	445	427	413	402	393	385	379	373
		G'	46.5	49.7	52.5	54.9	57.0	58.8	60.4	61.9
	24"	S	370	352	338	327	318	310	304	298
		G'	43.8	46.4	48.5	50.3	51.8	53.1	54.2	55.1
18/16 0.0474"/0.0598	12"	S	722	703	688	676	667	659	652	646
		G'	74.1	77.8	80.9	83.6	85.9	87.8	89.5	91.0
	18"	S	533	513	499	487	477	469	462	456
		G'	65.2	67.4	69.1	70.4	71.5	72.4	73.1	73.7
	24"	S	438	419	404	392	382	374	367	361
		G'	59.5	60.8	61.7	62.3	62.7	63.0	63.2	63.3
16/18 0.0598"/0.0474	12"	S	596	578	564	553	543	536	529	524
		G'	49.0	53.7	57.9	61.8	65.4	68.7	71.8	74.7
	18"	S	445	427	413	402	393	385	379	373
		G'	46.1	49.9	53.3	56.3	59.1	61.5	63.7	65.8
	24"	S	370	352	338	327	318	310	304	298
		G'	44.0	47.2	50.0	52.5	54.6	56.5	58.1	59.6
16/16 0.0598"/0.0598	12"	S	722	703	688	676	667	659	652	646
		G'	76.4	81.4	85.6	89.3	92.6	95.4	98.0	100.3
	18"	S	533	513	499	487	477	469	462	456
		G'	68.8	72.1	74.9	77.1	79.0	80.6	82.0	83.2
	24"	S	438	419	404	392	382	374	367	361
		G'	63.7	66.1	67.9	69.3	70.4	71.2	72.0	72.5
16/14 0.0598"/0.0747	12"	S	874	854	838	825	815	806	799	793
		G'	102.3	105.7	108.4	110.6	112.4	114.0	115.2	116.4
	18"	S	637	617	601	588	578	569	562	556
		G'	87.7	89.1	90.1	90.7	91.2	91.5	91.8	91.9
	24"	S	519	498	483	470	460	451	444	437
		G'	78.8	79.1	79.1	78.9	78.7	78.4	78.1	77.8
14/16 0.0747"/0.0598	12"	S	722	703	688	676	667	659	652	646
		G'	76.9	82.9	88.2	92.9	97.1	100.9	104.3	107.4
	18"	S	533	513	499	487	477	469	462	456
		G'	70.6	75.0	78.8	82.1	84.9	87.3	89.5	91.4
	24"	S	438	419	404	392	382	374	367	361
		G'	66.2	69.7	72.5	74.8	76.7	78.4	79.7	80.9
14/14 0.0747"/0.0747	12"	S	874	854	838	825	815	806	799	793
		G'	109.0	114.1	118.2	121.7	124.7	127.3	129.5	131.4
	18"	S	637	617	601	588	578	569	562	556
		G'	95.4	98.2	100.4	102.0	103.4	104.4	105.3	106.0
	24"	S	519	498	483	470	460	451	444	437
		G'	86.9	88.4	89.3	89.9	90.3	90.6	90.7	90.7

See Table 4 notes.

TABLE 29—DEEP-DEK® 7.5 CELLULAR ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: $^1/_2$" Effective Weld Diameter — **S** = Allowable Diaphragm Shear (plf) — **G'** = Stiffness Factor (kips/in.)

SIDELAP CONNECTION: #10 Screws — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20/20 0.0358"/	12"	S	420	402	387	374	364	355	348	342
		G'	34.3	37.1	39.7	42.0	44.3	46.3	48.3	50.1
	24"	S	295	276	261	249	239	230	223	216
		G'	29.8	31.6	33.2	34.6	35.9	37.0	38.1	39.0
	36"	S	253	234	219	207	197	188	181	174
		G'	27.2	28.5	29.5	30.5	31.2	31.9	32.5	33.0
20/18 0.0358"/	12"	S	529	507	490	476	464	454	445	438
		G'	56.0	58.7	61.2	63.3	65.2	66.9	68.3	69.7
	24"	S	363	341	324	309	298	287	279	271
		G'	43.6	44.6	45.5	46.2	46.7	47.2	47.6	47.9
	36"	S	308	286	268	254	242	232	223	216
		G'	37.5	37.8	38.0	38.1	38.2	38.2	38.2	38.1
18/20 0.0474"/	12"	S	443	422	405	391	379	369	361	354
		G'	32.7	35.7	38.5	41.2	43.7	46.1	48.4	50.5
	24"	S	317	296	279	265	253	244	235	228
		G'	29.5	31.7	33.7	35.6	37.3	38.8	40.2	41.6
	36"	S	275	254	237	223	212	202	193	186
		G'	27.5	29.2	30.8	32.1	33.3	34.4	35.4	36.2
18/18 0.0474"/	12"	S	540	517	499	484	471	460	451	443
		G'	57.8	61.4	64.7	67.7	70.4	72.8	75.0	77.0
	24"	S	374	351	333	317	305	294	285	277
		G'	47.3	49.2	50.7	52.1	53.2	54.2	55.1	55.8
	36"	S	319	296	277	262	249	239	230	222
		G'	41.7	42.8	43.5	44.2	44.6	45.0	45.3	45.5
18/16 0.0474"/	12"	S	633	609	590	575	562	551	541	533
		G'	79.5	82.4	84.9	87.0	88.8	90.4	91.8	93.0
	24"	S	423	399	380	365	352	341	332	324
		G'	59.2	59.9	60.3	60.7	61.0	61.1	61.3	61.4
	36"	S	353	329	310	295	282	271	262	254
		G'	49.9	49.7	49.4	49.1	48.8	48.5	48.3	48.0
16/18 0.0598"/	12"	S	540	517	499	484	471	460	451	443
		G'	57.7	62.0	65.9	69.5	72.8	75.9	78.7	81.3
	24"	S	374	351	333	317	305	294	285	277
		G'	49.0	51.7	53.9	55.9	57.6	59.1	60.5	61.7
	36"	S	319	296	277	262	249	239	230	222
		G'	44.2	45.9	47.3	48.5	49.4	50.2	50.9	51.5
16/16 0.0598"/	12"	S	633	609	590	575	562	551	541	533
		G'	84.4	88.5	92.0	95.1	97.8	100.2	102.3	104.2
	24"	S	423	399	380	365	352	341	332	324
		G'	65.5	67.0	68.2	69.1	69.9	70.5	71.1	71.5
	36"	S	353	329	310	295	282	271	262	254
		G'	56.3	56.7	56.9	57.0	57.0	57.0	56.9	56.8
16/14 0.0598"/	12"	S	744	719	700	684	671	659	650	641
		G'	105.9	108.4	110.4	112.1	113.5	114.7	115.7	116.6
	24"	S	482	457	438	422	409	397	388	379
		G'	75.4	75.3	75.2	75.0	74.8	74.6	74.4	74.2
	36"	S	394	370	351	335	321	310	300	292
		G'	62.3	61.3	60.5	59.6	58.9	58.2	57.6	57.1
14/16 0.0747"/	12"	S	633	609	590	575	562	551	541	533
		G'	87.3	92.4	97.0	101.1	104.7	108.0	111.0	113.7
	24"	S	423	399	380	365	352	341	332	324
		G'	70.4	72.9	74.9	76.6	78.0	79.2	80.3	81.2
	36"	S	353	329	310	295	282	271	262	254
		G'	61.7	62.9	63.8	64.5	64.9	65.3	65.6	65.8
14/14 0.0747"/	12"	S	744	719	700	684	671	659	650	641
		G'	115.9	119.8	123.0	125.7	128.1	130.2	131.9	133.5
	24"	S	482	457	438	422	409	397	388	379
		G'	85.5	86.3	86.8	87.1	87.3	87.4	87.5	87.6
	36"	S	394	370	351	335	321	310	300	292
		G'	71.8	71.3	70.8	70.3	69.7	69.2	68.7	68.3

SIDELAP CONNECTION: $1^1/_2$" Seam Welds — **ATTACHMENT PATTERN:** 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20/20 0.0358"/ 0.0358"	12"	S	1098	1075	1056	1041	1028	1018	1009	1001
		G'	39.0	42.8	46.5	50.0	53.3	56.5	59.6	62.5
	24"	S	654	630	612	597	584	573	564	556
		G'	35.8	38.9	41.7	44.4	46.9	49.2	51.4	53.5
	36"	S	505	482	464	449	436	425	416	408
		G'	33.5	36.1	38.4	40.5	42.5	44.2	45.9	47.4
20/18 0.0358"/ 0.0474"	12"	S	1409	1381	1359	1341	1326	1314	1303	1293
		G'	72.4	77.8	82.8	87.4	91.5	95.4	99.0	102.3
	24"	S	829	801	779	761	746	733	722	713
		G'	60.7	64.1	67.0	69.7	72.0	74.1	75.9	77.6
	36"	S	635	608	586	568	553	540	529	520
		G'	53.7	55.9	57.8	59.4	60.8	62.0	63.0	64.0
18/20 0.0474"/ 0.0358"	12"	S	1107	1082	1061	1044	1031	1019	1009	1000
		G'	35.8	39.6	43.2	46.7	50.1	53.4	56.5	59.6
	24"	S	669	643	623	606	592	580	570	562
		G'	33.7	36.9	40.0	42.9	45.6	48.2	50.7	53.1
	36"	S	523	497	477	460	446	434	424	415
		G'	32.2	35.0	37.6	40.1	42.4	44.5	46.6	48.5
18/18 0.0474"/ 0.0474"	12"	S	1415	1386	1363	1345	1329	1316	1304	1294
		G'	70.2	76.2	81.8	87.1	92.0	96.6	100.9	105.0
	24"	S	837	808	785	767	751	738	726	716
		G'	61.5	65.8	69.6	73.1	76.2	79.1	81.8	84.2
	36"	S	645	616	593	574	558	545	534	524
		G'	55.9	59.1	61.9	64.3	66.5	68.4	70.1	71.7
18/16 0.0474"/ 0.0598"	12"	S	1763	1732	1707	1687	1668	1651	1636	1623
		G'	109.5	116.4	122.6	128.1	133.1	137.6	141.8	145.6
	24"	S	1021	990	966	945	928	914	902	891
		G'	87.8	91.5	94.6	97.3	99.7	101.7	103.5	105.2
	36"	S	774	743	718	698	681	667	655	644
		G'	75.7	77.8	79.4	80.8	81.9	82.9	83.7	84.4
16/18 0.0598"/ 0.0474"	12"	S	1436	1407	1384	1365	1350	1336	1325	1315
		G'	67.1	73.3	79.3	84.9	90.2	95.2	100.0	104.6
	24"	S	848	820	796	777	762	748	737	727
		G'	60.6	65.4	69.9	73.9	77.7	81.2	84.5	87.5
	36"	S	652	624	600	582	566	552	541	531
		G'	56.2	60.1	63.5	66.6	69.5	72.0	74.4	76.5
16/16 0.0598"/ 0.0598"	12"	S	1790	1759	1734	1711	1691	1673	1658	1645
		G'	109.8	117.8	125.1	131.7	137.8	143.4	148.6	153.5
	24"	S	1036	1004	979	959	942	928	915	905
		G'	91.8	96.7	101.0	104.7	108.1	111.1	113.7	116.2
	36"	S	784	753	728	708	691	676	664	653
		G'	81.0	84.2	86.9	89.2	91.1	92.8	94.3	95.6
16/14 0.0598"/ 0.0747"	12"	S	2167	2130	2100	2076	2055	2038	2023	2010
		G'	156.6	164.3	171.0	177.0	182.2	186.9	191.0	194.8
	24"	S	1268	1234	1207	1185	1166	1150	1137	1125
		G'	119.3	122.6	125.3	127.6	129.5	131.1	132.6	133.8
	36"	S	948	914	887	864	846	830	816	805
		G'	100.0	101.3	102.3	103.1	103.7	104.1	104.5	104.8
14/16 0.0747"/ 0.0598"	12"	S	1822	1791	1764	1739	1718	1701	1686	1673
		G'	107.8	116.7	124.8	132.4	139.4	146.0	152.1	157.9
	24"	S	1053	1021	996	975	958	944	931	921
		G'	93.4	99.4	104.8	109.6	114.0	118.0	121.6	124.9
	36"	S	796	765	740	719	702	687	675	664
		G'	84.3	88.6	92.4	95.7	98.5	101.1	103.3	105.4
14/14 0.0747"/ 0.0747"	12"	S	2199	2162	2132	2108	2087	2070	2055	2042
		G'	161.8	171.4	179.9	187.5	194.3	200.5	206.1	211.2
	24"	S	1289	1255	1228	1205	1186	1171	1157	1145
		G'	128.5	133.4	137.6	141.1	144.2	146.9	149.2	151.3
	36"	S	963	928	901	879	860	844	830	819
		G'	110.2	112.8	114.9	116.6	118.0	119.2	120.2	121.0

See Table 4 notes.

TABLE 30—DEEP-DEK® 7.5 CELLULAR ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)
SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)
G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24 / 3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20/20 0.0358"/0.0358"	12"	S	455	443	433	424	417	412	406	402
		G'	34.7	37.5	40.2	42.6	44.8	46.9	48.8	50.7
	18"	S	342	329	319	311	304	298	293	289
		G'	32.4	34.7	36.7	38.6	40.3	41.8	43.2	44.5
	24"	S	285	272	262	254	247	241	236	232
		G'	30.7	32.6	34.3	35.7	37.0	38.2	39.2	40.2
20/18 0.0358"/0.0474"	12"	S	576	563	551	542	535	528	523	518
		G'	57.3	60.1	62.6	64.7	66.6	68.2	69.7	71.0
	18"	S	426	412	401	392	384	378	373	368
		G'	50.3	52.1	53.5	54.7	55.8	56.6	57.4	58.0
	24"	S	351	337	326	317	309	303	297	293
		G'	45.8	46.9	47.8	48.4	49.0	49.4	49.7	50.0
18/20 0.0474"/0.0358"	12"	S	459	446	436	427	420	414	409	404
		G'	33.0	36.0	38.9	41.6	44.1	46.6	48.8	51.0
	18"	S	346	332	322	313	306	300	295	291
		G'	31.3	34.0	36.4	38.6	40.7	42.6	44.4	46.1
	24"	S	289	276	265	257	249	243	238	234
		G'	30.1	32.4	34.5	36.4	38.2	39.8	41.2	42.6
18/18 0.0474"/0.0474"	12"	S	576	563	551	542	535	528	523	518
		G'	58.8	62.6	65.9	68.9	71.6	74.0	76.2	78.3
	18"	S	426	412	401	392	384	378	373	368
		G'	53.1	55.8	58.1	60.1	61.8	63.4	64.7	65.9
	24"	S	351	337	326	317	309	303	297	293
		G'	49.3	51.2	52.9	54.2	55.4	56.4	57.2	57.9
18/16 0.0474"/0.0598"	12"	S	702	687	675	666	658	651	645	640
		G'	81.8	84.7	87.2	89.2	91.0	92.5	93.9	95.1
	18"	S	512	497	486	476	468	461	455	450
		G'	70.1	71.5	72.7	73.6	74.3	74.9	75.3	75.7
	24"	S	417	403	391	381	373	366	361	356
		G'	62.8	63.4	63.8	64.0	64.2	64.3	64.3	64.3
16/18 0.0598"/0.0474"	12"	S	576	563	551	542	535	528	523	518
		G'	58.5	62.9	66.9	70.5	73.9	76.9	79.8	82.4
	18"	S	426	412	401	392	384	378	373	368
		G'	54.0	57.4	60.4	63.0	65.4	67.6	69.5	71.3
	24"	S	351	337	326	317	309	303	297	293
		G'	50.7	53.5	55.8	57.8	59.6	61.1	62.5	63.7
16/16 0.0598"/0.0598"	12"	S	702	687	675	666	658	651	645	640
		G'	86.5	90.6	94.1	97.2	99.9	102.3	104.4	106.3
	18"	S	512	497	486	476	468	461	455	450
		G'	75.9	78.4	80.4	82.1	83.5	84.7	85.8	86.7
	24"	S	417	403	391	381	373	366	361	356
		G'	69.0	70.5	71.7	72.6	73.3	73.8	74.2	74.6
16/14 0.0598"/0.0747"	12"	S	845	827	813	801	791	783	775	769
		G'	109.6	111.9	113.9	115.4	116.7	117.8	118.7	119.5
	18"	S	616	600	587	577	568	561	555	550
		G'	91.4	92.1	92.5	92.8	92.9	93.0	93.1	93.1
	24"	S	497	481	469	459	450	443	437	431
		G'	80.6	80.3	80.0	79.6	79.1	78.7	78.3	77.9
14/16 0.0747"/0.0598"	12"	S	702	687	675	666	658	651	645	640
		G'	89.0	94.2	98.9	103.0	106.6	109.9	112.9	115.6
	18"	S	512	497	486	476	468	461	455	450
		G'	79.8	83.4	86.5	89.1	91.3	93.3	95.1	96.6
	24"	S	417	403	391	381	373	366	361	356
		G'	73.6	76.2	78.2	79.9	81.4	82.5	83.5	84.4
14/14 0.0747"/0.0747"	12"	S	845	827	813	801	791	783	775	769
		G'	119.4	123.2	126.4	129.1	131.4	133.3	135.0	136.5
	18"	S	616	600	587	577	568	561	555	550
		G'	101.8	103.6	104.9	105.9	106.8	107.4	107.9	108.4
	24"	S	497	481	469	459	450	443	437	431
		G'	90.9	91.5	91.8	92.0	92.0	92.0	91.9	91.8

ATTACHMENT PATTERN: 24 / 4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20/20 0.0358"/0.0358	12"	S	457	444	434	425	418	412	407	403
		G'	34.8	37.6	40.3	42.7	44.9	47.0	49.0	50.8
	18"	S	343	330	320	312	305	299	294	289
		G'	32.5	34.8	36.9	38.7	40.4	42.0	43.4	44.7
	24"	S	286	274	263	255	248	242	237	232
		G'	30.9	32.8	34.5	35.9	37.2	38.4	39.5	40.4
20/18 0.0358"/0.0474	12"	S	578	564	553	543	536	529	524	519
		G'	57.6	60.4	62.8	65.0	66.9	68.5	70.0	71.3
	18"	S	427	413	402	393	385	379	373	369
		G'	50.7	52.5	53.9	55.1	56.1	57.0	57.7	58.4
	24"	S	352	338	327	318	310	304	298	293
		G'	46.3	47.4	48.2	48.9	49.4	49.8	50.1	50.4
18/20 0.0474"/0.0358	12"	S	461	447	437	428	421	415	409	405
		G'	33.0	36.1	39.0	41.7	44.2	46.6	48.9	51.1
	18"	S	347	334	323	314	307	301	296	291
		G'	31.4	34.1	36.5	38.7	40.8	42.8	44.6	46.3
	24"	S	290	277	266	258	250	244	239	234
		G'	30.3	32.6	34.7	36.6	38.3	39.9	41.4	42.8
18/18 0.0474"/0.0474	12"	S	578	564	553	543	536	529	524	519
		G'	59.0	62.8	66.1	69.1	71.8	74.3	76.5	78.5
	18"	S	427	413	402	393	385	379	373	369
		G'	53.4	56.1	58.4	60.4	62.2	63.7	65.1	66.3
	24"	S	352	338	327	318	310	304	298	293
		G'	49.7	51.7	53.3	54.7	55.8	56.8	57.6	58.4
18/16 0.0474"/0.0598	12"	S	703	688	676	667	659	652	646	641
		G'	82.3	85.2	87.6	89.7	91.4	93.0	94.3	95.5
	18"	S	513	499	487	477	469	462	456	451
		G'	70.7	72.1	73.3	74.1	74.8	75.4	75.9	76.3
	24"	S	419	404	392	382	374	367	361	356
		G'	63.5	64.1	64.5	64.7	64.8	64.9	64.9	64.9
16/18 0.0598"/0.0474	12"	S	578	564	553	543	536	529	524	519
		G'	58.7	63.1	67.1	70.7	74.1	77.1	80.0	82.6
	18"	S	427	413	402	393	385	379	373	369
		G'	54.2	57.6	60.6	63.3	65.7	67.9	69.8	71.6
	24"	S	352	338	327	318	310	304	298	293
		G'	51.1	53.8	56.2	58.2	60.0	61.5	62.9	64.1
16/16 0.0598"/0.0598	12"	S	703	688	676	667	659	652	646	641
		G'	86.9	91.0	94.5	97.6	100.3	102.7	104.8	106.7
	18"	S	513	499	487	477	469	462	456	451
		G'	76.4	78.9	81.0	82.7	84.1	85.3	86.3	87.2
	24"	S	419	404	392	382	374	367	361	356
		G'	69.6	71.2	72.3	73.2	73.9	74.5	74.9	75.2
16/14 0.0598"/0.0747	12"	S	854	838	825	815	806	799	793	787
		G'	110.3	112.7	114.5	116.1	117.3	118.4	119.3	120.1
	18"	S	617	601	588	578	569	562	556	550
		G'	92.3	93.0	93.4	93.6	93.7	93.8	93.8	93.8
	24"	S	498	483	470	460	451	444	437	432
		G'	81.6	81.3	80.9	80.5	80.0	79.5	79.1	78.7
14/16 0.0747"/0.0598	12"	S	703	688	676	667	659	652	646	641
		G'	89.3	94.6	99.2	103.3	107.0	110.3	113.3	116.0
	18"	S	513	499	487	477	469	462	456	451
		G'	80.3	83.9	87.0	89.6	91.9	93.9	95.6	97.1
	24"	S	419	404	392	382	374	367	361	356
		G'	74.2	76.8	78.9	80.6	82.0	83.2	84.2	85.0
14/14 0.0747"/0.0747	12"	S	854	838	825	815	806	799	793	787
		G'	120.1	123.9	127.1	129.8	132.0	134.0	135.7	137.1
	18"	S	617	601	588	578	569	562	556	550
		G'	102.7	104.4	105.8	106.8	107.6	108.2	108.7	109.1
	24"	S	498	483	470	460	451	444	437	432
		G'	91.9	92.5	92.8	92.9	92.9	92.9	92.7	92.6

See Table 4 notes.

TABLE 31—VERSA-DEK® S & LS – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **#10 Screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24.5/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	636	609	589	572	559	547	538	529
		G'	34.6	37.7	40.6	43.2	45.6	47.8	49.9	51.8
	12"	S	425	398	378	361	347	336	327	318
		G'	32.3	34.8	37.1	39.0	40.8	42.4	43.9	45.2
	18"	S	355	328	307	291	277	266	256	248
		G'	30.9	33.0	34.9	36.5	37.8	39.0	40.1	41.0
	24"	S	319	293	272	255	242	231	221	213
		G'	30.0	31.8	33.4	34.7	35.8	36.7	37.5	38.2
	30"	S	298	272	251	234	221	209	200	192
		G'	29.3	31.0	32.3	33.4	34.3	35.0	35.6	36.1
	36"	S	284	258	237	220	207	195	186	178
		G'	28.8	30.3	31.5	32.4	33.1	33.7	34.2	34.5
20 0.0358"	6"	S	770	738	713	693	677	663	651	642
		G'	50.1	54.1	57.6	60.8	63.7	66.3	68.6	70.8
	12"	S	514	482	457	437	420	407	395	385
		G'	45.9	48.8	51.4	53.5	55.4	57.1	58.6	59.9
	18"	S	429	396	371	351	335	321	310	300
		G'	43.4	45.7	47.6	49.2	50.5	51.6	52.5	53.4
	24"	S	386	354	329	309	292	279	267	257
		G'	41.7	43.6	45.1	46.3	47.2	48.0	48.6	49.0
	30"	S	360	328	303	283	267	253	242	232
		G'	40.6	42.2	43.3	44.2	44.9	45.4	45.7	46.0
	36"	S	343	311	286	266	250	236	224	215
		G'	39.7	41.1	42.0	42.7	43.1	43.4	43.6	43.7
18 0.0474"	6"	S	1031	974	941	915	893	875	860	847
		G'	82.1	87.0	91.3	95.0	98.2	101.1	103.6	105.9
	12"	S	692	634	602	575	554	536	521	508
		G'	72.6	75.6	78.1	80.2	81.9	83.3	84.6	85.6
	18"	S	579	521	489	462	441	423	408	395
		G'	67.2	69.2	70.8	71.9	72.8	73.4	73.9	74.3
	24"	S	522	465	432	406	384	367	351	339
		G'	63.8	65.2	66.0	66.6	66.9	67.1	67.2	67.2
	30"	S	488	431	398	372	351	333	318	305
		G'	61.5	62.3	62.8	62.9	62.9	62.7	62.5	62.2
	36"	S	465	408	376	349	328	310	295	282
		G'	59.7	60.3	60.4	60.2	59.9	59.5	59.1	58.6
16 0.0598"	6"	S	1312	1238	1183	1150	1124	1101	1082	1066
		G'	118.1	123.3	127.7	131.4	134.6	137.3	139.7	141.8
	12"	S	884	810	755	722	696	673	654	638
		G'	101.0	103.6	105.5	107.0	108.2	109.2	109.9	110.5
	18"	S	741	667	612	580	553	531	512	496
		G'	92.0	93.1	93.8	94.1	94.3	94.3	94.3	94.1
	24"	S	670	596	541	508	482	459	440	424
		G'	86.4	86.6	86.5	86.1	85.7	85.1	84.6	84.0
	30"	S	627	553	498	465	439	417	398	382
		G'	82.6	82.2	81.5	80.7	79.8	78.9	78.0	77.2
	36"	S	599	524	470	437	410	388	369	353
		G'	79.8	79.0	77.9	76.8	75.6	74.4	73.3	72.2

ATTACHMENT PATTERN: 24.5/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	756	715	682	656	635	617	602	590
		G'	34.9	38.1	41.0	43.7	46.1	48.4	50.5	52.4
	12"	S	545	504	471	445	424	406	391	378
		G'	33.1	35.8	38.1	40.2	42.0	43.7	45.1	46.5
	18"	S	475	433	401	375	354	336	321	308
		G'	32.1	34.4	36.4	38.1	39.6	40.8	42.0	42.9
	24"	S	440	398	366	340	318	301	286	273
		G'	31.4	33.5	35.3	36.7	37.9	39.0	39.8	40.6
	30"	S	419	377	344	319	297	280	265	252
		G'	31.0	32.9	34.5	35.7	36.8	37.6	38.3	38.9
	36"	S	405	363	330	304	283	266	251	238
		G'	30.6	32.4	33.9	35.0	35.9	36.6	37.2	37.6
20 0.0358"	6"	S	915	865	826	795	769	748	730	714
		G'	50.9	54.9	58.5	61.7	64.6	67.2	69.6	71.8
	12"	S	659	609	570	538	513	491	473	458
		G'	47.4	50.5	53.2	55.5	57.4	59.2	60.7	62.0
	18"	S	574	523	484	453	427	406	388	372
		G'	45.5	48.1	50.2	51.9	53.3	54.5	55.5	56.4
	24"	S	531	481	441	410	385	363	345	330
		G'	44.3	46.5	48.3	49.6	50.7	51.5	52.2	52.7
	30"	S	505	455	416	385	359	338	320	304
		G'	43.5	45.4	46.9	48.0	48.8	49.4	49.8	50.1
	36"	S	488	438	399	368	342	321	303	287
		G'	42.9	44.6	45.9	46.8	47.4	47.8	48.1	48.2
18 0.0474"	6"	S	1220	1139	1088	1047	1014	986	962	942
		G'	83.8	88.8	93.2	96.9	100.1	103.0	105.6	107.8
	12"	S	881	800	749	708	675	647	623	603
		G'	75.9	79.2	81.9	84.0	85.7	87.2	88.4	89.4
	18"	S	768	687	636	595	562	534	510	490
		G'	71.8	74.1	75.8	77.0	77.9	78.6	79.1	79.5
	24"	S	711	631	579	538	505	477	453	433
		G'	69.2	70.9	72.0	72.7	73.1	73.3	73.3	73.2
	30"	S	677	597	545	505	471	443	420	399
		G'	67.4	68.7	69.4	69.7	69.7	69.6	69.3	69.0
	36"	S	655	574	523	482	448	421	397	377
		G'	66.2	67.1	67.5	67.5	67.3	66.9	66.4	65.8
16 0.0598"	6"	S	1548	1444	1366	1315	1273	1239	1209	1184
		G'	121.2	126.6	131.0	134.7	137.8	140.5	142.8	144.9
	12"	S	1120	1016	938	887	845	811	781	756
		G'	107.0	109.7	111.7	113.1	114.3	115.1	115.7	116.2
	18"	S	977	873	795	744	703	668	639	613
		G'	99.7	101.0	101.8	102.1	102.1	102.0	101.8	101.5
	24"	S	906	802	724	673	631	597	567	542
		G'	95.3	95.8	95.7	95.3	94.8	94.1	93.3	92.5
	30"	S	863	759	681	630	589	554	524	499
		G'	92.3	92.3	91.7	90.8	89.8	88.7	87.6	86.5
	36"	S	834	730	653	602	560	525	496	471
		G'	90.2	89.7	88.8	87.6	86.2	84.9	83.5	82.2

See Table 4 notes.

TABLE 32—VERSA-DEK® S & LS – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **1 $^1/_2$" Long Fillet Welds or 1 $^1/_2$" Seam Welds**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24.5/4			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	1273	1245	1223	1205	1191	1179	1169	1017*
		G'	36.8	40.5	43.9	47.1	50.1	52.9	55.5	58.0
	12"	S	1017	985	959	938	921	906	894	883
		G'	35.3	38.6	41.6	44.4	47.0	49.4	51.6	53.6
	18"	S	819	782	753	731	712	696	683	671
		G'	34.2	37.2	40.0	42.4	44.7	46.7	48.6	50.4
	24"	S	688	651	623	600	581	565	552	541
		G'	33.4	36.2	38.7	40.9	42.9	44.7	46.3	47.8
	30"	S	610	573	544	521	502	487	473	462
		G'	32.8	35.4	37.6	39.7	41.4	43.0	44.5	45.8
	36"	S	557	521	492	469	450	434	421	410
		G'	32.3	34.7	36.8	38.7	40.3	41.7	43.0	44.1
20 0.0358"	6"	S	1534	1500	1473	1452	1435	1420	1408	1232*
		G'	54.5	59.4	63.9	68.1	71.9	75.4	78.6	81.6
	12"	S	1225	1186	1155	1130	1109	1092	1077	1064
		G'	51.6	55.8	59.6	63.0	66.2	69.0	71.6	73.9
	18"	S	987	942	908	880	857	839	823	809
		G'	49.5	53.2	56.5	59.4	62.0	64.4	66.5	68.4
	24"	S	829	785	750	722	700	681	665	651
		G'	48.0	51.3	54.2	56.7	58.9	60.9	62.6	64.1
	30"	S	735	690	656	628	605	586	570	557
		G'	46.8	49.8	52.4	54.6	56.5	58.1	59.5	60.8
	36"	S	672	627	592	565	542	523	507	494
		G'	45.9	48.6	50.9	52.9	54.5	55.9	57.1	58.2
18 0.0474"	6"	S	2003	1959	1924	1897	1874	1855	1839	1626*
		G'	92.6	99.5	105.6	111.0	115.9	120.4	124.4	128.0
	12"	S	1600	1550	1509	1477	1449	1426	1406	1389
		G'	85.5	90.9	95.7	99.8	103.4	106.6	109.5	112.1
	18"	S	1304	1231	1186	1150	1120	1095	1074	1057
		G'	80.7	85.1	88.9	92.1	94.8	97.3	99.4	101.2
	24"	S	1098	1025	980	944	914	889	869	851
		G'	77.2	80.9	84.0	86.5	88.6	90.4	92.0	93.3
	30"	S	975	901	856	820	791	766	745	727
		G'	74.6	77.7	80.2	82.2	83.9	85.2	86.3	87.3
	36"	S	892	819	774	738	708	684	663	645
		G'	72.6	75.2	77.3	78.9	80.1	81.1	81.9	82.6
16 0.0598"	6"	S	2491	2436	2393	2358	2330	2307	2287	2043*
		G'	138.1	146.4	153.6	159.9	165.4	170.3	174.7	178.6
	12"	S	1989	1927	1877	1836	1802	1773	1749	1727
		G'	124.4	130.4	135.4	139.7	143.4	146.6	149.4	151.8
	18"	S	1626	1544	1474	1429	1393	1362	1336	1314
		G'	115.5	119.9	123.5	126.5	129.0	131.1	132.9	134.4
	24"	S	1383	1288	1218	1173	1136	1106	1080	1058
		G'	109.2	112.6	115.2	117.2	118.8	120.2	121.2	122.2
	30"	S	1229	1135	1065	1020	983	952	926	904
		G'	104.6	107.1	108.9	110.3	111.3	112.1	112.6	113.1
	36"	S	1127	1032	962	917	880	850	824	802
		G'	101.0	102.9	104.2	105.0	105.5	105.8	106.0	106.1

ATTACHMENT PATTERN: 24.5/8			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	1496	1440	1396	1361	1332	1309	1180*	1017*
		G'	36.9	40.6	44.0	47.2	50.2	53.1	55.7	58.1
	12"	S	1201	1149	1109	1076	1050	1028	1009	993
		G'	35.6	38.9	42.0	44.8	47.4	49.8	52.0	54.1
	18"	S	939	887	847	815	788	766	748	732
		G'	34.7	37.7	40.5	43.0	45.3	47.4	49.3	51.1
	24"	S	809	757	716	684	657	635	617	601
		G'	34.0	36.9	39.4	41.7	43.7	45.6	47.3	48.8
	30"	S	730	678	638	605	579	557	538	522
		G'	33.5	36.2	38.6	40.7	42.5	44.2	45.7	47.0
	36"	S	678	626	585	553	527	505	486	470
		G'	33.1	35.7	37.9	39.8	41.6	43.0	44.4	45.6
20 0.0358"	6"	S	1802	1734	1682	1640	1605	1577	1429*	1232*
		G'	54.7	59.6	64.2	68.3	72.1	75.6	78.9	81.9
	12"	S	1447	1384	1336	1297	1265	1238	1216	1197
		G'	52.1	56.4	60.2	63.7	66.8	69.7	72.3	74.6
	18"	S	1132	1069	1020	982	950	923	901	881
		G'	50.4	54.2	57.5	60.5	63.1	65.5	67.6	69.5
	24"	S	974	912	863	824	792	765	743	724
		G'	49.1	52.6	55.5	58.1	60.4	62.4	64.2	65.8
	30"	S	880	817	768	729	697	671	648	629
		G'	48.2	51.3	54.0	56.3	58.3	60.0	61.5	62.8
	36"	S	817	754	705	666	634	608	585	566
		G'	47.4	50.4	52.8	54.9	56.6	58.1	59.4	60.5
18 0.0474"	6"	S	2354	2266	2197	2142	2097	2060	1885*	1626*
		G'	93.1	100.0	106.1	111.6	116.5	120.9	124.9	128.6
	12"	S	1905	1809	1745	1694	1652	1618	1588	1563
		G'	86.7	92.3	97.0	101.2	104.9	108.1	111.0	113.6
	18"	S	1494	1397	1333	1282	1241	1206	1176	1151
		G'	82.6	87.2	91.0	94.3	97.1	99.5	101.6	103.5
	24"	S	1288	1191	1127	1076	1035	1000	971	945
		G'	79.7	83.6	86.8	89.4	91.6	93.4	95.0	96.3
	30"	S	1164	1067	1004	953	911	876	847	822
		G'	77.6	81.0	83.6	85.7	87.4	88.8	90.0	90.9
	36"	S	1082	985	921	870	829	794	765	739
		G'	75.9	78.9	81.1	82.9	84.2	85.3	86.1	86.7
16 0.0598"	6"	S	2927	2817	2732	2663	2608	2561	2370*	2043*
		G'	139.1	147.4	154.6	160.9	166.4	171.3	175.6	179.5
	12"	S	2386	2263	2170	2106	2055	2011	1975	1944
		G'	126.7	132.8	137.9	142.1	145.8	149.0	151.8	154.2
	18"	S	1874	1751	1657	1594	1542	1499	1463	1431
		G'	119.0	123.6	127.3	130.2	132.7	134.8	136.5	138.0
	24"	S	1618	1495	1401	1338	1286	1243	1207	1175
		G'	113.7	117.2	119.9	122.0	123.6	124.9	125.9	126.8
	30"	S	1465	1341	1248	1184	1133	1090	1053	1022
		G'	109.9	112.6	114.6	116.0	117.0	117.7	118.2	118.5
	36"	S	1362	1238	1145	1082	1030	987	951	919
		G'	107.0	109.1	110.5	111.4	111.9	112.1	112.2	112.2

See Table 4 notes.

TABLE 33—VERSA-DEK® S & LS – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24.5/4			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	650	635	623	614	606	599	594	589
		G'	34.8	38.0	40.9	43.5	46.0	48.2	50.3	52.2
	12"	S	418	401	389	378	370	363	357	352
		G'	32.9	35.5	37.8	39.8	41.7	43.3	44.8	46.1
	18"	S	322	306	293	283	275	268	262	257
		G'	31.8	34.0	36.0	37.6	39.1	40.3	41.4	42.4
	24"	S	274	258	245	235	227	220	214	209
		G'	31.0	33.1	34.7	36.1	37.3	38.3	39.2	39.9
	30"	S	246	229	217	207	198	191	185	180
		G'	30.5	32.4	33.9	35.1	36.1	36.9	37.5	38.1
	36"	S	227	210	198	187	179	172	166	161
		G'	30.1	31.8	33.2	34.3	35.1	35.8	36.3	36.7
20 0.0358"	6"	S	786	769	755	743	734	726	719	713
		G'	50.7	54.7	58.2	61.4	64.3	66.9	69.3	71.5
	12"	S	506	486	471	459	449	440	433	427
		G'	47.0	50.1	52.7	54.9	56.8	58.5	60.0	61.4
	18"	S	390	370	355	343	333	324	317	311
		G'	44.9	47.4	49.4	51.1	52.5	53.7	54.6	55.5
	24"	S	332	312	297	285	275	266	259	253
		G'	43.6	45.7	47.4	48.7	49.7	50.5	51.1	51.6
	30"	S	297	278	262	250	240	232	225	218
		G'	42.7	44.5	45.9	46.9	47.7	48.2	48.6	48.9
	36"	S	274	255	239	227	217	208	201	195
		G'	42.0	43.6	44.8	45.6	46.2	46.6	46.8	46.9
18 0.0474"	6"	S	1036	1013	995	980	967	957	948	940
		G'	83.3	88.3	92.6	96.3	99.6	102.4	105.0	107.2
	12"	S	677	642	622	606	593	582	572	564
		G'	75.0	78.2	80.8	82.9	84.6	86.0	87.2	88.3
	18"	S	524	489	469	452	439	428	419	411
		G'	70.5	72.7	74.3	75.5	76.4	77.1	77.6	77.9
	24"	S	447	412	392	376	363	352	342	334
		G'	67.7	69.3	70.3	70.9	71.3	71.4	71.5	71.4
	30"	S	401	366	346	330	317	306	296	288
		G'	65.8	66.9	67.5	67.7	67.7	67.6	67.3	67.0
	36"	S	370	335	315	299	286	275	266	258
		G'	64.4	65.2	65.5	65.4	65.2	64.7	64.2	63.7
16 0.0598"	6"	S	1300	1271	1249	1230	1215	1202	1191	1181
		G'	120.3	125.6	130.0	133.7	136.8	139.5	141.9	143.9
	12"	S	863	817	783	763	746	732	721	711
		G'	105.2	107.9	109.9	111.3	112.5	113.3	114.0	114.5
	18"	S	669	623	589	569	553	539	527	517
		G'	97.5	98.7	99.4	99.7	99.8	99.7	99.6	99.3
	24"	S	572	526	492	472	456	442	430	420
		G'	92.7	93.1	93.0	92.7	92.1	91.4	90.7	90.0
	30"	S	514	468	434	414	398	384	372	362
		G'	89.6	89.4	88.7	87.9	86.9	85.8	84.8	83.7
	36"	S	475	429	396	376	359	345	334	324
		G'	87.3	86.7	85.6	84.4	83.1	81.8	80.5	79.2

ATTACHMENT PATTERN: 24.5/8			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	793	765	744	727	713	701	691	683
		G'	35.4	38.6	41.6	44.3	46.8	49.1	51.2	53.1
	12"	S	506	479	458	440	427	415	405	397
		G'	34.0	36.8	39.3	41.5	43.4	45.1	46.7	48.1
	18"	S	411	383	362	345	331	319	310	301
		G'	33.3	35.8	38.0	39.9	41.5	42.9	44.1	45.2
	24"	S	363	336	314	297	283	272	262	253
		G'	32.8	35.2	37.2	38.9	40.3	41.5	42.5	43.3
	30"	S	334	307	286	269	255	243	233	225
		G'	32.5	34.8	36.6	38.2	39.4	40.5	41.3	42.0
	36"	S	315	288	267	249	236	224	214	206
		G'	32.3	34.5	36.2	37.7	38.8	39.7	40.5	41.1
20 0.0358"	6"	S	960	927	902	881	864	850	838	828
		G'	51.7	55.9	59.5	62.8	65.8	68.4	70.8	73.0
	12"	S	613	580	554	533	517	503	491	480
		G'	49.1	52.4	55.3	57.7	59.8	61.6	63.2	64.6
	18"	S	497	464	438	418	401	387	375	365
		G'	47.7	50.6	53.0	55.0	56.6	57.9	59.0	59.9
	24"	S	439	406	380	360	343	329	317	307
		G'	46.9	49.5	51.6	53.2	54.5	55.6	56.4	57.0
	30"	S	404	371	345	325	308	294	282	272
		G'	46.4	48.8	50.6	52.1	53.1	53.9	54.5	55.0
	36"	S	381	348	322	302	285	271	259	249
		G'	46.0	48.2	49.9	51.2	52.1	52.8	53.2	53.5
18 0.0474"	6"	S	1277	1225	1191	1164	1142	1124	1108	1094
		G'	85.8	91.0	95.5	99.3	102.6	105.5	108.0	110.3
	12"	S	817	764	731	704	682	663	648	634
		G'	79.7	83.3	86.2	88.5	90.4	91.9	93.1	94.2
	18"	S	664	611	577	550	528	510	494	481
		G'	76.6	79.4	81.5	83.0	84.1	84.8	85.4	85.7
	24"	S	587	534	501	474	451	433	418	404
		G'	74.8	77.1	78.6	79.6	80.2	80.5	80.6	80.5
	30"	S	541	488	455	428	405	387	371	358
		G'	73.5	75.5	76.7	77.3	77.6	77.6	77.4	77.0
	36"	S	510	458	424	397	375	356	341	327
		G'	72.7	74.3	75.3	75.7	75.7	75.5	75.0	74.5
16 0.0598"	6"	S	1610	1550	1499	1465	1438	1415	1394	1376
		G'	125.0	130.5	135.0	138.8	141.9	144.6	146.9	148.9
	12"	S	1037	969	918	884	857	834	814	798
		G'	113.7	116.8	119.0	120.5	121.7	122.5	123.1	123.4
	18"	S	843	775	725	691	663	640	621	604
		G'	108.2	110.0	111.0	111.5	111.6	111.5	111.1	110.7
	24"	S	746	679	628	594	567	544	524	507
		G'	104.9	106.0	106.3	106.1	105.6	104.9	104.0	103.1
	30"	S	688	620	570	536	508	485	466	449
		G'	102.8	103.3	103.2	102.5	101.6	100.5	99.3	98.0
	36"	S	649	582	531	497	470	447	427	411
		G'	101.2	101.5	100.9	100.0	98.7	97.3	95.9	94.4

See Table 4 notes.

TABLE 34—VERSA-DEK® S & LS – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: **Hilti X-HSN24** (0.125 inch ≤ steel substrate thickness ≤ 0.375 inch)

SIDELAP CONNECTION: **Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24.5/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	630	617	607	598	591	585	580	575
		G'	34.4	37.6	40.4	43.1	45.5	47.7	49.7	51.6
	12"	S	411	396	384	374	366	359	354	349
		G'	32.0	34.5	36.7	38.7	40.5	42.1	43.5	44.8
	18"	S	316	300	288	278	271	264	258	254
		G'	30.5	32.6	34.4	36.0	37.3	38.5	39.5	40.4
	24"	S	268	252	240	231	223	216	211	206
		G'	29.5	31.3	32.8	34.1	35.1	36.0	36.8	37.5
	30"	S	239	224	212	202	194	188	182	177
		G'	28.8	30.3	31.6	32.7	33.5	34.2	34.8	35.3
	36"	S	220	205	193	183	175	168	163	158
		G'	28.2	29.6	30.7	31.6	32.3	32.8	33.3	33.6
20 0.0358"	6"	S	763	747	734	724	715	708	702	697
		G'	49.9	53.9	57.4	60.6	63.4	66.0	68.4	70.5
	12"	S	498	480	465	453	444	436	429	423
		G'	45.4	48.3	50.8	53.0	54.8	56.5	58.0	59.3
	18"	S	382	364	349	337	328	320	313	307
		G'	42.7	45.0	46.8	48.4	49.7	50.7	51.7	52.5
	24"	S	324	306	291	279	270	262	255	249
		G'	40.9	42.7	44.1	45.3	46.2	46.9	47.5	48.0
	30"	S	290	271	256	245	235	227	220	215
		G'	39.6	41.1	42.2	43.1	43.7	44.1	44.5	44.7
	36"	S	267	248	233	221	212	204	197	191
		G'	38.7	39.9	40.8	41.4	41.8	42.1	42.2	42.3
18 0.0474"	6"	S	1005	984	967	954	943	934	926	919
		G'	81.6	86.5	90.8	94.5	97.7	100.6	103.1	105.4
	12"	S	667	633	614	599	586	576	567	559
		G'	71.5	74.6	77.0	79.1	80.8	82.2	83.5	84.5
	18"	S	513	480	461	445	433	422	414	406
		G'	65.8	67.8	69.3	70.4	71.2	71.9	72.5	72.9
	24"	S	436	403	384	369	356	346	337	329
		G'	62.1	63.4	64.2	64.8	65.1	65.3	65.4	65.4
	30"	S	390	357	338	323	310	300	291	283
		G'	59.6	60.4	60.7	60.9	60.8	60.7	60.5	60.3
	36"	S	360	326	307	292	279	269	260	253
		G'	57.7	58.1	58.2	58.0	57.7	57.3	56.9	56.5
16 0.0598"	6"	S	1260	1235	1214	1198	1184	1172	1162	1154
		G'	117.2	122.4	126.8	130.5	133.7	136.5	138.9	141.0
	12"	S	848	805	773	754	738	725	714	705
		G'	99.3	101.8	103.8	105.3	106.5	107.5	108.3	109.0
	18"	S	655	611	579	560	545	531	520	511
		G'	89.7	90.8	91.4	91.8	92.0	92.1	92.1	92.1
	24"	S	558	515	483	463	448	435	424	414
		G'	83.7	83.9	83.8	83.5	83.0	82.6	82.1	81.6
	30"	S	500	457	425	405	390	377	366	356
		G'	79.6	79.2	78.5	77.7	76.9	76.1	75.3	74.5
	36"	S	461	418	386	367	351	338	327	317
		G'	76.6	75.7	74.7	73.6	72.5	71.4	70.4	69.4

ATTACHMENT PATTERN: 24.5/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	780	754	734	717	703	691	681	672
		G'	34.9	38.0	40.9	43.6	46.0	48.3	50.3	52.3
	12"	S	494	468	448	432	418	407	398	390
		G'	33.0	35.6	37.9	39.9	41.8	43.4	44.9	46.2
	18"	S	398	372	352	336	323	312	303	295
		G'	31.9	34.1	36.1	37.8	39.2	40.5	41.6	42.6
	24"	S	350	324	304	288	275	264	255	247
		G'	31.2	33.2	34.9	36.3	37.5	38.5	39.4	40.1
	30"	S	322	296	276	260	247	236	226	218
		G'	30.7	32.5	34.1	35.3	36.3	37.1	37.8	38.3
	36"	S	303	277	257	241	227	216	207	199
		G'	30.3	32.0	33.4	34.5	35.4	36.1	36.6	37.0
20 0.0358"	6"	S	945	914	890	869	852	837	825	815
		G'	50.7	54.7	58.3	61.5	64.4	67.0	69.4	71.6
	12"	S	597	566	542	523	507	494	482	473
		G'	47.1	50.2	52.8	55.1	57.0	58.7	60.2	61.6
	18"	S	482	450	426	407	391	378	367	357
		G'	45.1	47.6	49.7	51.4	52.8	53.9	54.9	55.8
	24"	S	424	392	368	349	333	320	309	299
		G'	43.8	46.0	47.6	49.0	50.0	50.8	51.5	52.0
	30"	S	389	358	333	314	298	285	274	264
		G'	42.9	44.8	46.2	47.3	48.0	48.6	49.0	49.3
	36"	S	366	335	310	291	275	262	251	241
		G'	42.3	44.0	45.2	46.0	46.6	47.0	47.2	47.3
18 0.0474"	6"	S	1250	1207	1173	1146	1124	1105	1089	1076
		G'	83.5	88.5	92.8	96.5	99.8	102.6	105.2	107.4
	12"	S	796	747	715	690	669	652	637	624
		G'	75.3	78.5	81.1	83.2	85.0	86.4	87.6	88.6
	18"	S	643	593	562	536	515	498	483	471
		G'	70.9	73.1	74.8	76.0	76.9	77.6	78.1	78.4
	24"	S	566	517	485	460	439	421	407	394
		G'	68.2	69.8	70.8	71.5	71.8	72.0	72.1	72.0
	30"	S	520	471	439	413	393	375	361	348
		G'	66.3	67.5	68.1	68.4	68.4	68.2	67.9	67.6
	36"	S	489	440	408	383	362	345	330	317
		G'	64.9	65.8	66.1	66.1	65.8	65.4	64.9	64.4
16 0.0598"	6"	S	1569	1516	1475	1441	1413	1390	1370	1353
		G'	120.6	125.9	130.3	134.0	137.1	139.8	142.2	144.2
	12"	S	1010	946	899	867	841	819	801	785
		G'	105.8	108.5	110.4	111.9	113.0	113.9	114.5	115.1
	18"	S	816	753	705	673	647	626	607	592
		G'	98.2	99.5	100.2	100.5	100.6	100.5	100.3	100.0
	24"	S	720	656	608	577	551	529	511	495
		G'	93.6	94.0	93.9	93.5	92.9	92.3	91.5	90.8
	30"	S	662	598	550	519	493	471	453	437
		G'	90.4	90.3	89.7	88.8	87.8	86.7	85.7	84.6
	36"	S	623	559	512	480	454	432	414	398
		G'	88.2	87.6	86.6	85.4	84.1	82.7	81.4	80.2

See Table 4 notes.

TABLE 35—VERSA-DEK® S ES & LS ES – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **#10 Screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	634	608	587	571	557	546	537	528
		G'	32.8	35.8	38.6	41.2	43.6	45.8	47.8	49.7
	12"	S	423	397	376	360	346	335	325	317
		G'	30.7	33.2	35.4	37.3	39.1	40.7	42.1	43.4
	18"	S	353	326	306	289	276	265	255	247
		G'	29.4	31.5	33.3	34.9	36.3	37.5	38.5	39.5
	24"	S	317	291	271	254	241	229	220	212
		G'	28.6	30.4	31.9	33.2	34.3	35.3	36.1	36.8
	30"	S	296	270	249	233	219	208	199	191
		G'	27.9	29.6	30.9	32.0	32.9	33.7	34.3	34.8
	36"	S	282	256	235	219	205	194	185	177
		G'	27.5	29.0	30.2	31.1	31.9	32.5	32.9	33.3
20 0.0358"	6"	S	768	736	711	691	675	662	650	640
		G'	47.8	51.7	55.1	58.3	61.1	63.7	66.0	68.2
	12"	S	512	480	455	435	419	405	394	384
		G'	43.8	46.7	49.3	51.4	53.3	55.0	56.5	57.8
	18"	S	426	394	370	350	334	320	309	299
		G'	41.5	43.8	45.7	47.3	48.6	49.8	50.8	51.6
	24"	S	384	352	327	307	291	277	266	256
		G'	40.0	41.9	43.4	44.6	45.5	46.3	46.9	47.5
	30"	S	358	326	301	281	265	252	240	230
		G'	38.9	40.5	41.7	42.6	43.3	43.8	44.2	44.5
	36"	S	341	309	284	264	248	235	223	213
		G'	38.0	39.4	40.4	41.1	41.6	42.0	42.2	42.3
18 0.0474"	6"	S	1028	971	939	913	891	874	859	846
		G'	78.8	83.7	87.9	91.6	94.9	97.8	100.4	102.7
	12"	S	689	632	599	573	552	534	519	507
		G'	69.8	72.9	75.4	77.5	79.3	80.8	82.0	83.1
	18"	S	576	519	486	460	439	421	406	394
		G'	64.7	66.8	68.4	69.6	70.5	71.2	71.8	72.2
	24"	S	519	462	430	404	383	365	350	337
		G'	61.5	62.9	63.9	64.5	64.9	65.1	65.3	65.3
	30"	S	485	428	396	370	349	331	316	303
		G'	59.2	60.2	60.7	61.0	61.0	60.9	60.7	60.5
	36"	S	462	406	373	347	326	308	293	280
		G'	57.6	58.2	58.4	58.4	58.1	57.8	57.4	57.0
16 0.0598"	6"	S	1308	1234	1180	1148	1121	1099	1080	1064
		G'	113.9	119.2	123.6	127.4	130.7	133.5	135.9	138.1
	12"	S	880	806	752	720	693	671	652	636
		G'	97.6	100.3	102.4	104.0	105.2	106.2	107.1	107.7
	18"	S	738	664	609	577	551	528	510	494
		G'	89.0	90.3	91.0	91.5	91.7	91.8	91.8	91.8
	24"	S	666	592	538	506	479	457	438	422
		G'	83.6	84.0	84.0	83.8	83.4	82.9	82.5	82.0
	30"	S	624	550	495	463	436	414	396	380
		G'	80.0	79.7	79.2	78.5	77.7	76.9	76.1	75.3
	36"	S	595	521	467	434	408	386	367	351
		G'	77.3	76.7	75.7	74.7	73.6	72.5	71.5	70.5

ATTACHMENT PATTERN: 24/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	756	714	682	656	635	617	602	589
		G'	33.1	36.2	39.1	41.7	44.1	46.3	48.3	50.2
	12"	S	545	503	471	445	424	406	391	378
		G'	31.5	34.1	36.4	38.4	40.2	41.9	43.3	44.7
	18"	S	474	433	400	374	353	335	321	308
		G'	30.5	32.8	34.8	36.4	37.9	39.2	40.3	41.3
	24"	S	439	397	365	339	318	300	285	273
		G'	29.9	32.0	33.7	35.2	36.4	37.4	38.3	39.1
	30"	S	418	376	344	318	297	279	264	251
		G'	29.5	31.4	33.0	34.2	35.3	36.2	36.9	37.5
	36"	S	404	362	330	304	283	265	250	237
		G'	29.2	31.0	32.4	33.6	34.5	35.2	35.8	36.3
20 0.0358"	6"	S	914	864	825	794	768	747	729	714
		G'	48.5	52.4	55.9	59.1	62.0	64.6	66.9	69.1
	12"	S	658	608	569	538	512	491	473	457
		G'	45.3	48.4	51.0	53.3	55.2	57.0	58.5	59.8
	18"	S	573	523	484	452	427	405	387	372
		G'	43.5	46.1	48.2	49.9	51.4	52.6	53.6	54.5
	24"	S	530	480	441	410	384	363	345	329
		G'	42.4	44.6	46.3	47.7	48.8	49.7	50.4	51.0
	30"	S	504	454	415	384	358	337	319	304
		G'	41.6	43.6	45.1	46.2	47.1	47.7	48.2	48.5
	36"	S	487	437	398	367	341	320	302	287
		G'	41.0	42.8	44.1	45.1	45.8	46.2	46.5	46.7
18 0.0474"	6"	S	1219	1138	1087	1047	1013	985	962	942
		G'	80.4	85.4	89.7	93.5	96.7	99.6	102.2	104.5
	12"	S	880	799	748	707	674	646	622	602
		G'	73.0	76.3	79.0	81.2	83.0	84.5	85.7	86.8
	18"	S	767	686	635	594	561	533	509	489
		G'	69.0	71.4	73.2	74.5	75.5	76.3	76.8	77.2
	24"	S	710	630	579	538	504	476	453	433
		G'	66.6	68.4	69.6	70.4	70.8	71.1	71.2	71.2
	30"	S	676	596	545	504	470	442	419	399
		G'	64.9	66.3	67.1	67.5	67.6	67.6	67.4	67.1
	36"	S	654	573	522	481	448	420	396	376
		G'	63.7	64.8	65.3	65.4	65.3	65.0	64.6	64.1
16 0.0598"	6"	S	1546	1443	1365	1314	1272	1238	1208	1183
		G'	116.9	122.3	126.8	130.6	133.8	136.5	138.9	141.0
	12"	S	1118	1015	937	886	845	810	781	755
		G'	103.3	106.2	108.3	109.9	111.1	112.0	112.7	113.3
	18"	S	976	872	794	743	702	667	638	613
		G'	96.4	97.9	98.8	99.2	99.4	99.4	99.2	99.0
	24"	S	904	801	723	672	631	596	567	541
		G'	92.2	92.9	93.0	92.7	92.3	91.7	91.0	90.3
	30"	S	861	758	680	629	588	553	524	499
		G'	89.4	89.5	89.1	88.3	87.4	86.5	85.5	84.4
	36"	S	833	729	652	601	559	525	495	470
		G'	87.3	87.1	86.3	85.2	84.0	82.7	81.5	80.2

See Table 4 notes.

TABLE 36—VERSA-DEK® S ES & LS ES – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **1 $^1/_2$" Long Fillet Welds or 1 $^1/_2$" Seam Welds**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	1271	1243	1221	1204	1190	1178	1168	1065*
		G'	34.8	38.4	41.7	44.8	47.8	50.5	53.1	55.5
	12"	S	1020	988	962	941	924	909	896	885
		G'	33.5	36.7	39.6	42.4	44.9	47.2	49.4	51.4
	18"	S	817	781	752	729	710	695	682	670
		G'	32.5	35.4	38.1	40.5	42.7	44.7	46.6	48.3
	24"	S	686	650	621	598	580	564	551	540
		G'	31.8	34.5	36.9	39.1	41.0	42.8	44.4	45.9
	30"	S	608	571	543	520	501	486	472	461
		G'	31.2	33.7	35.9	37.9	39.7	41.3	42.7	44.0
	36"	S	556	519	490	468	449	433	420	409
		G'	30.7	33.1	35.1	37.0	38.6	40.0	41.3	42.4
20 0.0358"	6"	S	1532	1498	1472	1451	1433	1419	1407	1290*
		G'	51.8	56.6	61.0	65.1	68.8	72.2	75.4	78.4
	12"	S	1229	1190	1159	1134	1113	1095	1080	1067
		G'	49.1	53.3	57.0	60.4	63.4	66.2	68.8	71.2
	18"	S	984	940	906	878	856	837	821	808
		G'	47.2	50.9	54.1	57.0	59.6	61.9	64.0	65.9
	24"	S	827	783	748	721	698	680	664	650
		G'	45.8	49.1	51.9	54.4	56.6	58.6	60.3	61.9
	30"	S	732	688	654	626	604	585	569	556
		G'	44.7	47.7	50.2	52.4	54.3	56.0	57.4	58.7
	36"	S	669	625	591	563	541	522	506	492
		G'	43.8	46.6	48.8	50.8	52.4	53.9	55.1	56.2
18 0.0474"	6"	S	2001	1957	1922	1895	1873	1854	1838	1702*
		G'	88.6	95.4	101.4	106.9	111.7	116.1	120.2	123.8
	12"	S	1606	1555	1514	1481	1454	1431	1411	1393
		G'	81.9	87.4	92.1	96.2	99.8	103.1	106.0	108.6
	18"	S	1301	1228	1183	1147	1118	1094	1073	1055
		G'	77.4	81.9	85.6	88.9	91.7	94.1	96.3	98.2
	24"	S	1095	1022	977	942	912	888	867	849
		G'	74.2	77.9	81.0	83.5	85.7	87.6	89.2	90.5
	30"	S	972	899	854	818	789	764	743	726
		G'	71.7	74.9	77.4	79.5	81.2	82.6	83.8	84.8
	36"	S	889	816	772	736	706	682	661	643
		G'	69.8	72.5	74.6	76.3	77.6	78.6	79.5	80.2
16 0.0598"	6"	S	2488	2433	2390	2356	2328	2305	2285	2139*
		G'	132.9	141.2	148.4	154.7	160.3	165.2	169.6	173.6
	12"	S	1997	1934	1883	1842	1808	1779	1754	1733
		G'	119.9	125.9	131.0	135.3	139.1	142.4	145.2	147.8
	18"	S	1628	1541	1471	1427	1390	1360	1334	1312
		G'	111.4	115.9	119.6	122.7	125.2	127.4	129.3	130.9
	24"	S	1379	1285	1215	1171	1134	1104	1078	1056
		G'	105.5	108.9	111.6	113.7	115.5	116.9	118.0	119.0
	30"	S	1225	1132	1062	1017	980	950	924	902
		G'	101.0	103.7	105.6	107.1	108.2	109.0	109.7	110.2
	36"	S	1123	1029	959	915	878	848	822	800
		G'	97.6	99.7	101.0	102.0	102.6	103.0	103.2	103.4

ATTACHMENT PATTERN: 24/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	1496	1440	1396	1361	1332	1309	1235*	1065*
		G'	34.9	38.5	41.8	45.0	47.9	50.6	53.2	55.6
	12"	S	1200	1148	1108	1076	1049	1027	1009	993
		G'	33.7	37.0	39.9	42.7	45.2	47.6	49.7	51.8
	18"	S	939	887	846	814	788	766	747	731
		G'	32.9	35.9	38.6	41.0	43.3	45.3	47.2	49.0
	24"	S	808	756	716	683	657	635	616	600
		G'	32.3	35.1	37.6	39.8	41.8	43.7	45.3	46.8
	30"	S	729	678	637	605	579	557	538	522
		G'	31.8	34.5	36.8	38.9	40.7	42.3	43.8	45.2
	36"	S	677	625	585	553	526	504	486	470
		G'	31.5	34.0	36.2	38.1	39.8	41.3	42.6	43.8
20 0.0358"	6"	S	1802	1734	1682	1640	1605	1577	1496*	1290*
		G'	52.0	56.8	61.2	65.3	69.0	72.5	75.7	78.7
	12"	S	1446	1384	1335	1296	1264	1238	1215	1196
		G'	49.6	53.8	57.6	61.0	64.1	66.9	69.5	71.8
	18"	S	1131	1068	1020	981	949	923	900	881
		G'	48.0	51.7	55.0	58.0	60.6	63.0	65.1	67.0
	24"	S	973	911	862	823	791	765	743	723
		G'	46.8	50.2	53.2	55.8	58.0	60.0	61.8	63.4
	30"	S	879	816	768	729	697	670	648	629
		G'	46.0	49.1	51.8	54.1	56.1	57.8	59.3	60.6
	36"	S	816	753	705	666	634	607	585	566
		G'	45.3	48.2	50.7	52.7	54.5	56.0	57.3	58.4
18 0.0474"	6"	S	2354	2266	2197	2142	2097	2060	1973*	1702*
		G'	89.1	95.9	102.0	107.4	112.3	116.7	120.7	124.4
	12"	S	1904	1808	1744	1693	1652	1617	1588	1563
		G'	83.1	88.6	93.4	97.5	101.2	104.5	107.4	110.0
	18"	S	1492	1396	1332	1281	1240	1205	1176	1151
		G'	79.2	83.8	87.7	91.0	93.8	96.3	98.5	100.4
	24"	S	1286	1190	1126	1075	1034	999	970	945
		G'	76.5	80.4	83.7	86.3	88.6	90.5	92.1	93.5
	30"	S	1163	1066	1003	952	910	876	846	821
		G'	74.5	77.9	80.6	82.8	84.6	86.1	87.3	88.3
	36"	S	1081	984	920	870	828	793	764	739
		G'	73.0	76.0	78.3	80.1	81.5	82.6	83.5	84.2
16 0.0598"	6"	S	2927	2817	2732	2663	2608	2561	2481*	2139*
		G'	133.8	142.2	149.4	155.7	161.2	166.2	170.6	174.6
	12"	S	2385	2261	2168	2105	2054	2011	1974	1943
		G'	122.1	128.2	133.4	137.7	141.5	144.7	147.6	150.1
	18"	S	1873	1749	1656	1593	1542	1498	1462	1431
		G'	114.8	119.5	123.2	126.3	128.9	131.0	132.8	134.4
	24"	S	1617	1493	1400	1337	1285	1242	1206	1175
		G'	109.8	113.4	116.2	118.4	120.1	121.5	122.6	123.5
	30"	S	1463	1340	1247	1184	1132	1089	1052	1021
		G'	106.1	109.0	111.1	112.6	113.7	114.5	115.1	115.5
	36"	S	1361	1237	1144	1081	1029	986	950	919
		G'	103.3	105.6	107.2	108.2	108.8	109.1	109.3	109.4

See Table 4 notes.

TABLE 37—VERSA-DEK® S ES & LS ES – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	652	638	626	616	608	602	596	591
		G'	33.0	36.1	38.9	41.5	43.9	46.1	48.1	50.0
	12"	S	416	400	387	377	369	362	356	352
		G'	31.3	33.8	36.1	38.1	39.9	41.5	43.0	44.3
	18"	S	321	304	292	282	274	267	261	256
		G'	30.2	32.4	34.3	36.0	37.4	38.7	39.8	40.8
	24"	S	273	257	244	234	226	219	213	208
		G'	29.5	31.5	33.2	34.6	35.8	36.8	37.7	38.4
	30"	S	244	228	216	205	197	190	185	180
		G'	29.0	30.9	32.4	33.6	34.6	35.4	36.1	36.7
	36"	S	225	209	196	186	178	171	166	161
		G'	28.7	30.4	31.8	32.8	33.7	34.4	35.0	35.4
20 0.0358"	6"	S	790	772	758	746	736	728	721	716
		G'	48.3	52.2	55.7	58.9	61.7	64.3	66.7	68.8
	12"	S	504	485	469	457	447	439	432	426
		G'	44.9	47.9	50.5	52.7	54.6	56.4	57.9	59.2
	18"	S	388	369	354	341	332	323	316	310
		G'	42.9	45.4	47.4	49.1	50.5	51.7	52.7	53.6
	24"	S	330	311	296	284	274	265	258	252
		G'	41.7	43.8	45.5	46.8	47.8	48.7	49.4	49.9
	30"	S	296	276	261	249	239	231	224	218
		G'	40.8	42.7	44.1	45.1	45.9	46.5	47.0	47.3
	36"	S	272	253	238	226	216	207	200	194
		G'	40.2	41.8	43.0	43.9	44.5	44.9	45.2	45.4
18 0.0474"	6"	S	1040	1017	998	983	971	961	952	944
		G'	79.9	84.9	89.2	92.9	96.2	99.0	101.6	103.9
	12"	S	675	640	620	604	591	580	571	563
		G'	72.0	75.3	77.9	80.1	81.8	83.3	84.6	85.7
	18"	S	521	487	467	451	438	427	418	410
		G'	67.8	70.1	71.8	73.0	74.0	74.7	75.3	75.7
	24"	S	445	410	390	374	361	350	341	333
		G'	65.1	66.8	67.9	68.6	69.0	69.3	69.4	69.4
	30"	S	399	364	344	328	315	304	295	287
		G'	63.3	64.5	65.2	65.5	65.6	65.5	65.3	65.1
	36"	S	368	333	313	297	284	273	264	256
		G'	61.9	62.9	63.3	63.3	63.1	62.8	62.4	61.9
16 0.0598"	6"	S	1305	1277	1254	1235	1220	1207	1195	1186
		G'	116.0	121.3	125.8	129.6	132.8	135.6	138.0	140.1
	12"	S	859	814	780	761	744	731	719	709
		G'	101.6	104.4	106.5	108.0	109.3	110.2	111.0	111.6
	18"	S	666	620	587	567	551	537	526	516
		G'	94.2	95.6	96.4	96.9	97.0	97.0	96.9	96.8
	24"	S	569	524	490	470	454	440	429	419
		G'	89.7	90.2	90.3	90.0	89.5	89.0	88.4	87.7
	30"	S	511	466	432	412	396	382	371	361
		G'	86.6	86.6	86.1	85.3	84.5	83.5	82.6	81.6
	36"	S	472	427	393	373	357	344	332	322
		G'	84.4	84.0	83.1	82.0	80.8	79.6	78.4	77.2

ATTACHMENT PATTERN: 24/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	792	765	744	727	713	701	691	683
		G'	33.6	36.7	39.6	42.2	44.7	46.9	49.0	50.9
	12"	S	506	478	457	440	426	415	405	396
		G'	32.3	35.0	37.4	39.6	41.5	43.2	44.8	46.2
	18"	S	410	383	362	345	331	319	309	301
		G'	31.6	34.1	36.3	38.1	39.7	41.1	42.4	43.5
	24"	S	363	335	314	297	283	271	262	253
		G'	31.2	33.5	35.5	37.2	38.6	39.8	40.8	41.7
	30"	S	334	307	285	268	254	243	233	225
		G'	30.9	33.1	35.0	36.5	37.8	38.9	39.7	40.5
	36"	S	315	288	266	249	235	224	214	205
		G'	30.7	32.9	34.6	36.1	37.2	38.2	38.9	39.6
20 0.0358"	6"	S	960	927	901	881	864	850	838	828
		G'	49.3	53.3	56.9	60.1	63.1	65.7	68.1	70.3
	12"	S	612	579	554	533	516	502	490	480
		G'	46.8	50.1	52.9	55.4	57.5	59.3	60.9	62.3
	18"	S	496	463	438	417	400	386	375	364
		G'	45.6	48.4	50.8	52.8	54.4	55.8	56.9	57.9
	24"	S	439	406	380	359	342	328	317	306
		G'	44.8	47.4	49.5	51.2	52.5	53.5	54.4	55.1
	30"	S	404	371	345	325	308	294	282	272
		G'	44.3	46.7	48.6	50.0	51.2	52.0	52.7	53.1
	36"	S	381	348	322	301	285	271	259	248
		G'	43.9	46.2	47.9	49.2	50.2	50.9	51.4	51.7
18 0.0474"	6"	S	1277	1224	1190	1164	1142	1123	1108	1094
		G'	82.3	87.5	91.9	95.7	99.0	102.0	104.6	106.9
	12"	S	816	764	730	703	681	663	647	634
		G'	76.5	80.2	83.1	85.5	87.4	89.0	90.3	91.4
	18"	S	663	610	577	550	528	509	494	481
		G'	73.6	76.5	78.6	80.2	81.4	82.2	82.8	83.3
	24"	S	586	534	500	473	451	433	417	404
		G'	71.9	74.3	75.9	77.0	77.7	78.1	78.2	78.3
	30"	S	540	488	454	427	405	387	371	358
		G'	70.7	72.8	74.0	74.8	75.2	75.3	75.1	74.9
	36"	S	510	457	423	396	374	356	340	327
		G'	69.9	71.7	72.7	73.2	73.4	73.2	72.9	72.4
16 0.0598"	6"	S	1613	1549	1498	1465	1437	1414	1395	1378
		G'	120.5	126.1	130.7	134.5	137.7	140.5	142.8	144.9
	12"	S	1036	968	918	884	856	833	814	797
		G'	109.7	113.0	115.3	117.0	118.2	119.1	119.8	120.3
	18"	S	842	775	724	690	663	640	620	604
		G'	104.5	106.5	107.7	108.3	108.5	108.5	108.3	108.0
	24"	S	745	678	627	594	566	543	524	507
		G'	101.4	102.7	103.1	103.1	102.7	102.1	101.4	100.6
	30"	S	687	620	569	535	508	485	466	449
		G'	99.3	100.1	100.1	99.6	98.8	97.8	96.8	95.6
	36"	S	649	581	530	497	469	446	427	410
		G'	97.9	98.3	98.0	97.2	96.1	94.8	93.5	92.1

See Table 4 notes.

TABLE 38—VERSA-DEK® S ES & LS ES – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-HSN24 (0.125 inch ≤ steel substrate thickness ≤ 0.375 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	633	620	609	601	593	587	582	578
		G'	32.7	35.7	38.5	41.1	43.4	45.6	47.6	49.5
	12"	S	410	394	382	373	365	359	353	348
		G'	30.5	32.9	35.1	37.0	38.8	40.3	41.8	43.1
	18"	S	314	299	287	277	270	263	258	253
		G'	29.1	31.1	32.9	34.4	35.8	37.0	38.0	38.9
	24"	S	267	251	239	230	222	215	210	205
		G'	28.1	29.9	31.4	32.6	33.7	34.6	35.4	36.1
	30"	S	238	223	211	201	193	187	181	177
		G'	27.4	29.0	30.3	31.3	32.2	32.9	33.5	34.0
	36"	S	219	203	192	182	174	168	162	157
		G'	26.9	28.3	29.4	30.3	31.0	31.6	32.1	32.4
20 0.0358"	6"	S	766	750	737	727	718	711	705	700
		G'	47.6	51.5	54.9	58.0	60.9	63.4	65.8	67.9
	12"	S	497	478	464	452	443	435	428	422
		G'	43.4	46.3	48.7	50.9	52.8	54.4	55.9	57.2
	18"	S	381	362	348	336	327	319	312	306
		G'	40.9	43.1	45.0	46.5	47.8	49.0	49.9	50.8
	24"	S	323	304	290	278	269	261	254	249
		G'	39.2	41.0	42.4	43.6	44.5	45.3	45.9	46.4
	30"	S	288	269	255	243	234	226	219	214
		G'	38.0	39.5	40.6	41.5	42.1	42.6	43.0	43.3
	36"	S	265	246	232	220	211	203	196	191
		G'	37.0	38.3	39.2	39.9	40.3	40.7	40.9	41.0
18 0.0474"	6"	S	1009	988	972	958	947	938	929	923
		G'	78.3	83.2	87.4	91.1	94.4	97.3	99.8	102.2
	12"	S	664	631	612	597	585	574	566	558
		G'	68.8	71.9	74.4	76.4	78.2	79.7	81.0	82.1
	18"	S	511	478	459	444	431	421	412	405
		G'	63.4	65.4	66.9	68.1	69.0	69.8	70.4	70.8
	24"	S	434	401	382	367	355	344	336	328
		G'	59.9	61.2	62.1	62.7	63.1	63.4	63.5	63.6
	30"	S	388	355	336	321	309	298	290	282
		G'	57.4	58.3	58.8	59.0	59.0	59.0	58.8	58.6
	36"	S	357	324	306	290	278	268	259	251
		G'	55.6	56.1	56.3	56.2	56.0	55.7	55.3	54.9
16 0.0598"	6"	S	1266	1240	1220	1203	1189	1178	1168	1159
		G'	113.0	118.3	122.8	126.5	129.8	132.6	135.1	137.3
	12"	S	846	803	771	752	736	723	712	703
		G'	95.9	98.6	100.6	102.3	103.5	104.6	105.5	106.2
	18"	S	652	609	577	558	543	530	519	510
		G'	86.7	88.0	88.8	89.2	89.5	89.7	89.8	89.8
	24"	S	555	512	480	462	446	433	422	413
		G'	81.0	81.3	81.3	81.1	80.8	80.4	80.0	79.6
	30"	S	497	454	422	403	388	375	364	355
		G'	77.0	76.8	76.3	75.6	74.9	74.1	73.4	72.7
	36"	S	458	415	384	365	349	336	325	316
		G'	74.2	73.5	72.6	71.6	70.5	69.5	68.6	67.7

ATTACHMENT PATTERN: 24/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	780	754	734	718	704	692	682	673
		G'	33.1	36.2	39.0	41.6	44.0	46.2	48.2	50.1
	12"	S	493	467	447	431	418	407	398	390
		G'	31.3	33.9	36.2	38.2	40.0	41.6	43.1	44.4
	18"	S	398	372	352	336	323	312	302	295
		G'	30.3	32.6	34.5	36.1	37.6	38.9	40.0	41.0
	24"	S	350	324	304	288	275	264	255	247
		G'	29.7	31.7	33.4	34.8	36.0	37.0	37.9	38.6
	30"	S	321	295	275	259	246	235	226	218
		G'	29.2	31.1	32.6	33.8	34.8	35.7	36.4	37.0
	36"	S	302	276	256	240	227	216	207	199
		G'	28.9	30.6	32.0	33.1	34.0	34.7	35.3	35.7
20 0.0358"	6"	S	945	914	889	870	853	839	826	816
		G'	48.3	52.3	55.8	58.9	61.8	64.4	66.8	68.9
	12"	S	597	566	542	522	507	493	482	473
		G'	45.0	48.0	50.6	52.9	54.9	56.6	58.1	59.4
	18"	S	481	450	426	406	391	377	366	357
		G'	43.1	45.6	47.7	49.4	50.8	52.0	53.0	53.9
	24"	S	423	392	368	349	333	320	308	299
		G'	41.9	44.1	45.8	47.1	48.2	49.0	49.7	50.3
	30"	S	388	357	333	314	298	285	274	264
		G'	41.1	43.0	44.4	45.5	46.3	46.9	47.4	47.7
	36"	S	365	334	310	291	275	262	250	241
		G'	40.5	42.2	43.4	44.3	45.0	45.4	45.7	45.8
18 0.0474"	6"	S	1252	1207	1175	1148	1126	1107	1091	1077
		G'	80.1	85.0	89.3	93.1	96.4	99.2	101.8	104.1
	12"	S	796	746	715	689	668	651	637	624
		G'	72.3	75.6	78.3	80.4	82.2	83.7	85.0	86.1
	18"	S	642	593	561	536	515	498	483	471
		G'	68.2	70.5	72.3	73.6	74.5	75.3	75.8	76.2
	24"	S	566	516	484	459	438	421	406	394
		G'	65.6	67.3	68.5	69.2	69.7	69.9	70.0	70.0
	30"	S	520	470	438	413	392	375	360	348
		G'	63.9	65.2	65.9	66.2	66.3	66.2	66.0	65.8
	36"	S	489	439	408	382	362	344	330	317
		G'	62.6	63.6	64.0	64.1	63.9	63.6	63.1	62.7
16 0.0598"	6"	S	1573	1519	1477	1443	1415	1392	1372	1355
		G'	116.3	121.7	126.1	129.9	133.1	135.9	138.3	140.4
	12"	S	1009	946	898	866	840	819	801	785
		G'	102.2	105.0	107.1	108.7	109.9	110.8	111.6	112.2
	18"	S	816	752	705	673	647	625	607	591
		G'	95.0	96.4	97.2	97.7	97.8	97.8	97.7	97.5
	24"	S	719	655	608	576	550	529	510	495
		G'	90.5	91.1	91.2	90.9	90.5	89.9	89.3	88.6
	30"	S	661	597	550	518	492	470	452	437
		G'	87.6	87.6	87.1	86.4	85.5	84.5	83.6	82.6
	36"	S	622	559	511	479	453	432	413	398
		G'	85.4	85.0	84.2	83.1	81.9	80.7	79.5	78.3

See Table 4 notes.

TABLE 39—VERSA-DEK® 3.5 LS – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **#10 Screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	699	661	637	619	606	595	587	580
		G'	12.9	15.7	18.2	20.7	23.0	25.2	27.2	29.2
	12"	S	442	405	380	363	350	339	331	324
		G'	12.6	15.1	17.4	19.6	21.6	23.4	25.1	26.8
	18"	S	357	320	295	277	264	254	246	239
		G'	12.3	14.7	16.8	18.7	20.5	22.1	23.6	24.9
	24"	S	314	277	252	235	221	211	203	196
		G'	12.1	14.3	16.3	18.1	19.7	21.1	22.4	23.5
	30"	S	289	252	227	209	196	186	177	171
		G'	12.0	14.1	15.9	17.6	19.0	20.3	21.4	22.4
	36"	S	272	234	210	192	179	168	160	153
		G'	11.9	13.9	15.7	17.2	18.5	19.6	20.6	21.5
19 0.0418"	6"	S	814	771	743	722	707	695	685	677
		G'	18.4	22.1	25.6	28.8	31.8	34.7	37.3	39.8
	12"	S	515	472	443	423	407	395	386	378
		G'	17.7	21.1	24.1	26.8	29.3	31.6	33.7	35.6
	18"	S	415	372	344	323	308	296	286	278
		G'	17.2	20.3	23.0	25.4	27.5	29.4	31.1	32.7
	24"	S	366	323	294	273	258	246	236	228
		G'	16.9	19.7	22.2	24.3	26.2	27.8	29.2	30.5
	30"	S	336	293	264	243	228	216	206	199
		G'	16.7	19.3	21.6	23.5	25.1	26.5	27.7	28.8
	36"	S	316	273	244	223	208	196	186	179
		G'	16.4	19.0	21.1	22.8	24.2	25.4	26.5	27.4
18 0.0474"	6"	S	922	873	841	818	801	787	776	767
		G'	24.3	29.1	33.4	37.4	41.1	44.5	47.6	50.5
	12"	S	583	534	502	479	461	448	437	428
		G'	23.2	27.4	31.0	34.3	37.2	39.8	42.2	44.4
	18"	S	470	421	389	366	348	335	324	315
		G'	22.5	26.2	29.3	32.1	34.5	36.6	38.5	40.1
	24"	S	413	365	332	309	292	278	267	259
		G'	21.9	25.3	28.1	30.5	32.5	34.2	35.7	37.0
	30"	S	379	331	298	275	258	244	233	225
		G'	21.5	24.6	27.2	29.2	31.0	32.4	33.6	34.7
	36"	S	357	308	276	253	235	222	211	202
		G'	21.2	24.1	26.4	28.3	29.7	30.9	32.0	32.8
16 0.0598"	6"	S	1160	1099	1059	1030	1008	991	978	967
		G'	40.1	47.2	53.4	59.0	64.0	68.5	72.6	76.3
	12"	S	732	671	631	602	580	563	550	539
		G'	37.5	43.3	48.1	52.3	55.9	59.1	61.9	64.3
	18"	S	589	528	488	459	437	421	407	396
		G'	35.8	40.7	44.6	47.9	50.6	52.9	54.9	56.6
	24"	S	518	457	417	388	366	349	336	325
		G'	34.6	38.8	42.1	44.7	46.8	48.6	50.0	51.2
	30"	S	475	414	374	345	323	306	293	282
		G'	33.7	37.5	40.2	42.4	44.0	45.3	46.4	47.2
	36"	S	446	386	345	316	295	278	264	253
		G'	33.0	36.4	38.8	40.5	41.8	42.8	43.6	44.2

ATTACHMENT PATTERN: 24/6

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	772	720	685	661	642	628	616	607
		G'	13.0	15.7	18.3	20.8	23.1	25.3	27.3	29.3
	12"	S	515	464	429	405	386	372	360	351
		G'	12.7	15.2	17.6	19.7	21.8	23.6	25.4	27.0
	18"	S	430	378	344	319	301	286	275	265
		G'	12.5	14.9	17.1	19.0	20.8	22.5	24.0	25.4
	24"	S	387	336	301	276	258	244	232	223
		G'	12.3	14.6	16.7	18.5	20.1	21.6	22.9	24.1
	30"	S	362	310	275	251	232	218	206	197
		G'	12.2	14.4	16.4	18.1	19.6	20.9	22.1	23.2
	36"	S	345	293	258	234	215	201	189	180
		G'	12.1	14.3	16.2	17.8	19.2	20.4	21.5	22.4
19 0.0418"	6"	S	899	839	799	770	749	732	719	708
		G'	18.5	22.2	25.7	28.9	32.0	34.8	37.5	39.9
	12"	S	600	540	500	471	450	433	420	409
		G'	17.9	21.3	24.4	27.2	29.7	32.0	34.1	36.1
	18"	S	500	440	400	371	350	333	320	309
		G'	17.5	20.7	23.5	25.9	28.1	30.1	31.8	33.4
	24"	S	450	390	350	322	300	284	270	259
		G'	17.3	20.2	22.8	25.0	27.0	28.6	30.1	31.4
	30"	S	420	360	320	292	270	254	240	229
		G'	17.1	19.9	22.3	24.3	26.1	27.6	28.8	29.9
	36"	S	400	340	300	272	250	234	220	209
		G'	16.9	19.7	21.9	23.8	25.4	26.7	27.8	28.8
18 0.0474"	6"	S	1017	950	905	872	848	829	814	802
		G'	24.4	29.2	33.6	37.6	41.3	44.7	47.8	50.8
	12"	S	678	611	565	533	509	490	475	463
		G'	23.5	27.7	31.5	34.8	37.7	40.4	42.8	45.0
	18"	S	565	497	452	420	396	377	362	350
		G'	22.9	26.8	30.1	32.9	35.4	37.5	39.5	41.2
	24"	S	509	441	396	364	339	321	306	293
		G'	22.5	26.1	29.1	31.5	33.7	35.5	37.0	38.4
	30"	S	475	407	362	330	305	287	272	259
		G'	22.2	25.6	28.3	30.5	32.4	33.9	35.2	36.3
	36"	S	452	384	339	307	283	264	249	237
		G'	22.0	25.2	27.7	29.7	31.4	32.7	33.8	34.7
16 0.0598"	6"	S	1278	1194	1138	1097	1067	1044	1025	1010
		G'	40.4	47.5	53.8	59.4	64.4	69.0	73.1	76.8
	12"	S	850	766	710	669	639	616	597	582
		G'	38.2	44.1	49.1	53.3	57.0	60.2	63.0	65.5
	18"	S	708	623	567	527	497	473	455	439
		G'	36.8	42.0	46.1	49.5	52.3	54.7	56.7	58.4
	24"	S	636	552	496	455	425	402	383	368
		G'	35.9	40.5	44.0	46.8	49.0	50.8	52.3	53.5
	30"	S	593	509	453	413	383	359	340	325
		G'	35.3	39.4	42.5	44.8	46.6	48.0	49.1	49.9
	36"	S	565	481	424	384	354	331	312	297
		G'	34.7	38.6	41.3	43.3	44.8	45.8	46.6	47.2

See Table 4 notes.

TABLE 40—VERSA-DEK® 3.5 LS – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **1 $^1/_2$" Long Fillet Welds or 1 $^1/_2$" Seam Welds**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	1413	1382	1362	1348	1337	1329	1322	1316
		G'	13.2	16.1	18.9	21.6	24.1	26.5	28.9	31.1
	12"	S	1079	1037	1008	986	970	957	946	938
		G'	13.0	15.8	18.5	21.0	23.3	25.6	27.7	29.8
	18"	S	882	830	794	768	748	732	719	709
		G'	12.9	15.6	18.1	20.5	22.7	24.8	26.8	28.7
	24"	S	745	691	655	629	609	594	582	572
		G'	12.7	15.3	17.8	20.0	22.1	24.1	26.0	27.7
	30"	S	651	596	560	534	515	500	488	478
		G'	12.6	15.2	17.5	19.7	21.7	23.5	25.2	26.9
	36"	S	588	533	497	471	452	437	424	415
		G'	12.5	15.0	17.3	19.3	21.3	23.0	24.6	26.1
19 0.0418"	6"	S	1638	1603	1579	1563	1550	1541	1533	1526
		G'	19.0	23.0	26.8	30.4	33.8	37.1	40.2	43.1
	12"	S	1251	1202	1168	1144	1125	1110	1097	1087
		G'	18.6	22.4	26.0	29.3	32.5	35.4	38.2	40.8
	18"	S	1023	963	921	891	867	849	834	822
		G'	18.3	21.9	25.3	28.4	31.3	34.0	36.5	38.8
	24"	S	864	801	759	729	706	689	675	663
		G'	18.0	21.5	24.7	27.7	30.3	32.8	35.1	37.2
	30"	S	754	691	649	619	597	579	565	554
		G'	17.8	21.2	24.3	27.0	29.5	31.8	33.9	35.8
	36"	S	681	618	576	546	524	506	492	481
		G'	17.7	20.9	23.9	26.5	28.8	30.9	32.9	34.6
18 0.0474"	6"	S	1845	1806	1779	1761	1747	1736	1727	1720
		G'	25.3	30.5	35.4	40.0	44.2	48.3	52.1	55.6
	12"	S	1409	1354	1316	1288	1267	1250	1236	1225
		G'	24.7	29.5	34.0	38.2	42.0	45.6	48.9	52.0
	18"	S	1153	1085	1038	1003	977	956	940	926
		G'	24.2	28.8	32.9	36.7	40.2	43.4	46.4	49.1
	24"	S	973	902	855	821	796	776	760	747
		G'	23.8	28.1	32.1	35.6	38.7	41.6	44.3	46.7
	30"	S	850	779	731	698	672	653	637	624
		G'	23.5	27.6	31.3	34.6	37.5	40.1	42.5	44.6
	36"	S	768	696	649	615	590	570	554	541
		G'	23.2	27.2	30.7	33.7	36.4	38.8	41.0	42.9
16 0.0598"	6"	S	2294	2245	2213	2189	2172	2158	2147	2138
		G'	42.5	50.6	58.0	64.8	71.1	76.8	82.1	87.0
	12"	S	1752	1684	1637	1602	1575	1554	1537	1523
		G'	40.9	48.3	54.8	60.7	66.1	70.9	75.3	79.3
	18"	S	1433	1349	1290	1247	1215	1189	1168	1151
		G'	39.7	46.5	52.4	57.6	62.2	66.3	70.0	73.4
	24"	S	1210	1122	1063	1021	989	965	945	929
		G'	38.8	45.0	50.4	55.0	59.1	62.6	65.8	68.6
	30"	S	1057	968	909	867	836	811	792	776
		G'	38.0	43.8	48.7	52.9	56.5	59.6	62.4	64.8
	36"	S	954	866	807	765	733	709	689	673
		G'	37.4	42.9	47.4	51.2	54.4	57.1	59.5	61.6

ATTACHMENT PATTERN: 24/6

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	1590	1524	1480	1449	1426	1407	1393	1381
		G'	13.2	16.1	18.9	21.6	24.1	26.6	28.9	31.1
	12"	S	1291	1222	1176	1142	1114	1093	1076	1062
		G'	13.0	15.8	18.5	21.0	23.4	25.6	27.8	29.8
	18"	S	976	907	861	828	803	784	769	756
		G'	12.9	15.6	18.2	20.5	22.8	24.9	26.9	28.8
	24"	S	818	749	703	670	646	627	611	599
		G'	12.8	15.4	17.9	20.2	22.3	24.3	26.1	27.9
	30"	S	724	655	609	576	551	532	517	504
		G'	12.7	15.3	17.7	19.8	21.9	23.7	25.5	27.1
	36"	S	661	592	546	513	488	469	454	441
		G'	12.6	15.2	17.5	19.6	21.5	23.3	24.9	26.4
19 0.0418"	6"	S	1843	1767	1717	1680	1653	1632	1615	1601
		G'	19.0	23.0	26.8	30.5	33.9	37.1	40.2	43.1
	12"	S	1497	1417	1364	1324	1292	1267	1247	1231
		G'	18.6	22.5	26.1	29.4	32.5	35.5	38.3	40.9
	18"	S	1132	1052	998	960	932	909	892	877
		G'	18.4	22.0	25.4	28.6	31.5	34.2	36.7	39.0
	24"	S	949	869	815	777	749	727	709	694
		G'	18.2	21.7	24.9	27.9	30.6	33.1	35.4	37.5
	30"	S	839	759	706	668	639	617	599	585
		G'	18.0	21.4	24.5	27.3	29.9	32.2	34.3	36.2
	36"	S	766	686	633	595	566	544	526	511
		G'	17.9	21.2	24.2	26.8	29.2	31.4	33.4	35.1
18 0.0474"	6"	S	2077	1991	1934	1893	1862	1839	1819	1804
		G'	25.3	30.5	35.4	40.0	44.3	48.3	52.1	55.7
	12"	S	1687	1596	1536	1491	1456	1428	1405	1387
		G'	24.7	29.6	34.2	38.3	42.2	45.7	49.1	52.2
	18"	S	1275	1185	1125	1082	1049	1024	1004	988
		G'	24.3	28.9	33.2	37.0	40.5	43.7	46.7	49.4
	24"	S	1069	979	919	876	844	819	798	782
		G'	24.0	28.4	32.4	35.9	39.1	42.1	44.7	47.1
	30"	S	945	855	795	752	720	695	675	659
		G'	23.7	28.0	31.7	35.0	38.0	40.7	43.1	45.2
	36"	S	863	773	713	670	638	613	593	576
		G'	23.5	27.6	31.2	34.3	37.1	39.5	41.7	43.7
16 0.0598"	6"	S	2582	2476	2405	2354	2316	2286	2262	2243
		G'	42.5	50.7	58.1	64.9	71.2	76.9	82.2	87.1
	12"	S	2097	1985	1910	1854	1810	1775	1747	1724
		G'	41.1	48.5	55.1	61.0	66.4	71.2	75.7	79.7
	18"	S	1585	1473	1398	1345	1305	1274	1249	1228
		G'	40.1	46.9	52.8	58.1	62.8	66.9	70.6	74.0
	24"	S	1329	1217	1142	1089	1049	1018	993	972
		G'	39.3	45.6	51.1	55.8	59.9	63.5	66.7	69.6
	30"	S	1175	1063	989	935	895	864	839	819
		G'	38.6	44.6	49.6	53.9	57.6	60.7	63.5	65.9
	36"	S	1073	961	886	833	793	762	737	716
		G'	38.1	43.8	48.4	52.3	55.6	58.4	60.9	63.0

See Table 4 notes.

TABLE 41—VERSA-DEK® 3.5 LS – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: **Hilti X-ENP-19-L15** (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: **Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	683	667	656	648	642	637	633	630
		G'	12.9	15.7	18.3	20.7	23.0	25.2	27.3	29.2
	12"	S	440	422	409	401	394	389	385	380
		G'	12.6	15.1	17.5	19.6	21.6	23.5	25.2	26.9
	18"	S	324	306	293	285	278	273	269	266
		G'	12.4	14.7	16.9	18.8	20.6	22.2	23.7	25.1
	24"	S	266	248	235	227	220	215	211	208
		G'	12.2	14.5	16.5	18.3	19.9	21.3	22.6	23.8
	30"	S	231	213	201	192	185	180	176	173
		G'	12.1	14.2	16.1	17.8	19.2	20.5	21.7	22.7
	36"	S	208	190	178	169	162	157	153	150
		G'	12.0	14.1	15.9	17.4	18.8	19.9	20.9	21.9
19 0.0418"	6"	S	796	777	764	755	748	742	738	734
		G'	18.4	22.2	25.6	28.9	31.9	34.7	37.4	39.8
	12"	S	513	492	478	467	460	454	449	444
		G'	17.8	21.1	24.2	27.0	29.5	31.8	33.9	35.8
	18"	S	378	356	342	332	324	319	314	310
		G'	17.4	20.5	23.2	25.6	27.7	29.7	31.4	33.0
	24"	S	310	289	275	264	257	251	246	242
		G'	17.1	20.0	22.4	24.6	26.5	28.1	29.6	30.9
	30"	S	270	248	234	224	216	210	206	202
		G'	16.8	19.6	21.9	23.8	25.5	26.9	28.1	29.2
	36"	S	243	221	207	197	189	183	178	175
		G'	16.7	19.3	21.4	23.2	24.7	25.9	27.0	27.9
18 0.0474"	6"	S	900	879	865	854	846	840	835	831
		G'	24.4	29.1	33.5	37.5	41.1	44.5	47.7	50.6
	12"	S	581	557	541	530	521	514	508	502
		G'	23.3	27.5	31.2	34.5	37.4	40.1	42.5	44.6
	18"	S	428	404	388	376	368	361	356	351
		G'	22.7	26.4	29.6	32.4	34.8	37.0	38.9	40.5
	24"	S	351	327	311	300	291	284	279	275
		G'	22.2	25.6	28.5	30.9	33.0	34.7	36.2	37.6
	30"	S	305	281	265	254	245	238	233	228
		G'	21.8	25.0	27.6	29.8	31.5	33.0	34.2	35.3
	36"	S	275	250	234	223	214	208	202	198
		G'	21.6	24.6	26.9	28.9	30.4	31.6	32.7	33.5
16 0.0598"	6"	S	1129	1103	1085	1072	1063	1055	1049	1043
		G'	40.2	47.3	53.6	59.1	64.1	68.7	72.8	76.5
	12"	S	732	702	682	668	657	648	639	632
		G'	37.8	43.6	48.5	52.7	56.3	59.5	62.3	64.8
	18"	S	539	509	488	474	463	455	448	443
		G'	36.2	41.2	45.2	48.5	51.3	53.6	55.6	57.3
	24"	S	442	412	392	377	366	358	351	346
		G'	35.1	39.5	42.9	45.5	47.7	49.4	50.9	52.1
	30"	S	384	354	334	319	308	300	293	288
		G'	34.3	38.2	41.1	43.3	45.0	46.4	47.4	48.3
	36"	S	345	315	295	280	270	261	255	249
		G'	33.7	37.3	39.8	41.6	43.0	44.0	44.8	45.3

ATTACHMENT PATTERN: 24/6

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	851	815	791	774	761	750	742	735
		G'	13.0	15.8	18.4	20.8	23.1	25.3	27.4	29.4
	12"	S	509	476	455	440	428	419	412	406
		G'	12.7	15.3	17.7	19.9	22.0	23.9	25.6	27.3
	18"	S	393	361	339	324	312	304	296	291
		G'	12.6	15.1	17.3	19.3	21.2	22.9	24.4	25.8
	24"	S	335	303	281	266	255	246	238	233
		G'	12.5	14.9	17.0	18.9	20.6	22.1	23.5	24.7
	30"	S	300	268	246	231	220	211	204	198
		G'	12.4	14.7	16.8	18.6	20.1	21.5	22.8	23.9
	36"	S	277	245	223	208	197	188	181	175
		G'	12.3	14.6	16.6	18.3	19.8	21.1	22.2	23.2
19 0.0418"	6"	S	991	950	922	902	887	875	865	858
		G'	18.5	22.3	25.8	29.1	32.1	35.0	37.6	40.1
	12"	S	593	556	531	513	500	489	481	474
		G'	18.0	21.5	24.6	27.5	30.0	32.4	34.5	36.5
	18"	S	457	420	395	378	364	354	346	339
		G'	17.8	21.0	23.9	26.4	28.7	30.7	32.5	34.1
	24"	S	390	353	328	310	297	286	278	271
		G'	17.6	20.7	23.3	25.7	27.7	29.5	31.0	32.4
	30"	S	349	312	287	269	256	246	237	231
		G'	17.4	20.4	23.0	25.1	27.0	28.5	29.9	31.1
	36"	S	322	285	260	242	229	219	210	204
		G'	17.3	20.2	22.7	24.7	26.4	27.8	29.0	30.0
18 0.0474"	6"	S	1122	1076	1044	1021	1004	991	980	971
		G'	24.6	29.4	33.7	37.8	41.5	44.9	48.1	51.0
	12"	S	671	629	601	581	566	554	545	537
		G'	23.8	28.1	31.9	35.3	38.3	41.0	43.5	45.7
	18"	S	518	476	448	428	413	401	392	384
		G'	23.3	27.3	30.7	33.6	36.2	38.4	40.4	42.2
	24"	S	441	399	371	351	336	324	315	307
		G'	23.0	26.7	29.9	32.5	34.7	36.7	38.3	39.7
	30"	S	395	353	325	305	290	278	269	261
		G'	22.8	26.4	29.3	31.7	33.7	35.3	36.7	37.9
	36"	S	364	322	294	274	259	247	238	230
		G'	22.6	26.1	28.8	31.0	32.8	34.3	35.5	36.4
16 0.0598"	6"	S	1410	1352	1313	1285	1264	1247	1233	1222
		G'	40.7	47.8	54.2	59.8	64.9	69.4	73.6	77.3
	12"	S	844	792	757	731	713	698	686	677
		G'	38.8	44.9	50.0	54.4	58.1	61.4	64.2	66.8
	18"	S	651	598	563	538	519	505	493	483
		G'	37.7	43.1	47.4	51.0	53.9	56.4	58.5	60.2
	24"	S	554	501	466	441	422	408	396	386
		G'	37.0	41.9	45.7	48.7	51.1	53.0	54.5	55.8
	30"	S	496	443	408	383	364	350	338	328
		G'	36.5	41.0	44.5	47.1	49.0	50.5	51.7	52.6
	36"	S	457	404	369	344	326	311	299	290
		G'	36.1	40.4	43.5	45.8	47.5	48.7	49.6	50.2

See Table 4 notes.

TABLE 42—VERSA-DEK® 3.5 LS – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-HSN24 (0.125 inch ≤ steel substrate thickness ≤ 0.375 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	662	647	638	630	625	621	617	614
		G'	12.9	15.6	18.2	20.7	23.0	25.1	27.2	29.2
	12"	S	436	419	407	399	391	384	379	375
		G'	12.5	15.0	17.3	19.5	21.4	23.3	25.0	26.6
	18"	S	321	303	291	283	276	271	268	264
		G'	12.2	14.5	16.6	18.6	20.3	21.9	23.4	24.7
	24"	S	263	245	233	225	218	214	210	206
		G'	12.0	14.2	16.1	17.8	19.4	20.8	22.0	23.2
	30"	S	228	210	198	190	184	179	175	172
		G'	11.8	13.9	15.7	17.3	18.7	19.9	21.0	22.0
	36"	S	205	187	175	167	161	156	152	148
		G'	11.7	13.7	15.3	16.8	18.1	19.2	20.1	21.0
19 0.0418"	6"	S	770	754	742	734	728	723	719	716
		G'	18.3	22.1	25.5	28.8	31.8	34.6	37.2	39.7
	12"	S	509	489	475	465	455	448	442	437
		G'	17.6	20.9	23.9	26.7	29.1	31.4	33.5	35.4
	18"	S	374	353	340	330	322	317	312	308
		G'	17.1	20.1	22.7	25.1	27.2	29.1	30.8	32.3
	24"	S	306	286	272	262	255	249	245	241
		G'	16.7	19.5	21.8	23.9	25.7	27.3	28.7	30.0
	30"	S	266	245	231	222	214	209	204	200
		G'	16.4	19.0	21.1	23.0	24.5	25.9	27.1	28.1
	36"	S	239	218	204	194	187	181	177	173
		G'	16.1	18.6	20.5	22.2	23.6	24.8	25.8	26.6
18 0.0474"	6"	S	871	853	840	830	823	818	813	810
		G'	24.3	29.0	33.3	37.3	41.0	44.3	47.5	50.4
	12"	S	577	554	538	526	516	507	501	495
		G'	23.1	27.2	30.8	34.0	36.9	39.5	41.9	44.1
	18"	S	423	400	385	374	365	359	354	350
		G'	22.2	25.8	29.0	31.7	34.0	36.1	38.0	39.6
	24"	S	347	324	308	297	289	282	277	273
		G'	21.6	24.9	27.6	29.9	31.9	33.6	35.0	36.3
	30"	S	301	278	262	251	243	236	231	227
		G'	21.1	24.1	26.5	28.5	30.2	31.6	32.8	33.8
	36"	S	270	247	231	220	212	206	200	196
		G'	20.7	23.5	25.7	27.4	28.8	30.0	31.0	31.8
16 0.0598"	6"	S	1092	1069	1054	1042	1033	1027	1021	1016
		G'	40.0	47.0	53.2	58.8	63.8	68.3	72.3	76.1
	12"	S	727	698	678	662	649	638	630	623
		G'	37.1	42.8	47.6	51.8	55.3	58.5	61.3	63.7
	18"	S	533	504	485	471	460	452	446	441
		G'	35.2	40.0	43.8	47.0	49.7	52.0	54.0	55.7
	24"	S	436	407	388	374	364	356	349	344
		G'	33.8	37.9	41.1	43.6	45.7	47.4	48.8	50.0
	30"	S	378	349	330	316	306	297	291	286
		G'	32.8	36.3	39.0	41.0	42.6	43.9	45.0	45.8
	36"	S	340	311	291	277	267	259	252	247
		G'	32.0	35.1	37.4	39.0	40.3	41.2	42.0	42.6

ATTACHMENT PATTERN: 24/6

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	832	799	777	761	749	740	732	726
		G'	12.9	15.7	18.3	20.7	23.0	25.2	27.3	29.3
	12"	S	500	470	449	435	424	416	409	403
		G'	12.6	15.2	17.5	19.7	21.7	23.5	25.3	26.9
	18"	S	384	354	334	319	308	300	293	288
		G'	12.4	14.8	16.9	18.9	20.7	22.3	23.8	25.2
	24"	S	326	296	276	261	250	242	235	230
		G'	12.2	14.5	16.5	18.3	19.9	21.4	22.7	23.9
	30"	S	292	261	241	226	216	207	200	195
		G'	12.1	14.3	16.2	17.9	19.4	20.7	21.8	22.9
	36"	S	268	238	218	203	192	184	177	172
		G'	12.0	14.1	16.0	17.5	18.9	20.1	21.1	22.0
19 0.0418"	6"	S	969	931	906	887	873	862	853	846
		G'	18.4	22.2	25.7	28.9	31.9	34.7	37.4	39.9
	12"	S	583	548	524	507	495	485	477	471
		G'	17.8	21.2	24.2	27.0	29.5	31.8	34.0	35.9
	18"	S	448	412	389	372	359	350	342	335
		G'	17.4	20.5	23.3	25.7	27.9	29.8	31.5	33.1
	24"	S	380	345	321	304	292	282	274	268
		G'	17.1	20.0	22.6	24.7	26.6	28.3	29.7	31.0
	30"	S	340	304	281	264	251	241	234	227
		G'	16.9	19.7	22.0	24.0	25.7	27.1	28.4	29.4
	36"	S	313	277	254	237	224	214	206	200
		G'	16.7	19.4	21.6	23.4	24.9	26.2	27.3	28.2
18 0.0474"	6"	S	1097	1055	1026	1005	989	977	967	959
		G'	24.4	29.2	33.5	37.5	41.2	44.6	47.7	50.7
	12"	S	660	620	594	575	561	549	541	533
		G'	23.4	27.6	31.3	34.6	37.5	40.2	42.6	44.8
	18"	S	507	467	440	421	407	396	387	380
		G'	22.8	26.5	29.8	32.6	35.0	37.1	39.0	40.7
	24"	S	430	390	364	345	330	319	310	303
		G'	22.3	25.8	28.7	31.1	33.2	34.9	36.5	37.8
	30"	S	384	344	318	299	284	273	264	257
		G'	22.0	25.2	27.8	30.0	31.8	33.3	34.5	35.6
	36"	S	353	314	287	268	254	243	234	226
		G'	21.7	24.8	27.2	29.1	30.7	32.0	33.0	33.9
16 0.0598"	6"	S	1379	1326	1290	1264	1244	1229	1216	1206
		G'	40.3	47.4	53.6	59.2	64.2	68.7	72.8	76.6
	12"	S	831	781	747	724	706	692	681	672
		G'	37.9	43.7	48.7	52.9	56.5	59.7	62.5	65.0
	18"	S	637	587	554	530	512	498	487	478
		G'	36.4	41.4	45.5	48.8	51.6	53.9	55.9	57.6
	24"	S	540	490	457	433	416	402	391	382
		G'	35.4	39.8	43.2	45.9	48.1	49.9	51.3	52.5
	30"	S	482	432	399	375	357	344	333	323
		G'	34.6	38.6	41.6	43.8	45.5	46.9	47.9	48.8
	36"	S	443	394	360	337	319	305	294	285
		G'	34.1	37.7	40.3	42.2	43.5	44.6	45.3	45.9

See Table 4 notes.

TABLE 43—VERSA-DEK® S ACOUSTICAL & LS ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: $^1/_2$" Effective Weld Diameter

SIDELAP CONNECTION: #10 Screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24.5/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	480	473	468	463	459	456	454	452
		G'	19.3	20.3	21.1	21.8	22.4	22.9	23.4	23.8
	12"	S	269	262	256	252	248	245	243	240
		G'	18.4	19.3	19.9	20.5	21.0	21.4	21.8	22.1
	18"	S	199	192	186	182	178	175	172	170
		G'	17.8	18.5	19.1	19.6	20.0	20.3	20.6	20.9
	24"	S	164	157	151	146	143	140	137	135
		G'	17.4	18.0	18.5	18.9	19.2	19.5	19.7	19.9
	30"	S	143	135	130	125	122	119	116	114
		G'	17.0	17.6	18.0	18.3	18.6	18.8	19.0	19.1
	36"	S	129	121	116	111	108	105	102	100
		G'	16.7	17.2	17.6	17.9	18.1	18.3	18.4	18.5
20 0.0358"	6"	S	579	571	564	559	555	552	549	546
		G'	27.5	28.7	29.6	30.4	31.1	31.8	32.3	32.8
	12"	S	323	315	308	303	299	295	292	290
		G'	26.2	27.1	27.9	28.5	29.0	29.5	29.9	30.2
	18"	S	238	229	223	218	213	210	207	204
		G'	25.4	26.1	26.7	27.2	27.6	28.0	28.2	28.5
	24"	S	195	187	180	175	171	167	164	162
		G'	24.8	25.4	25.9	26.3	26.6	26.8	27.0	27.2
	30"	S	169	161	154	149	145	142	139	136
		G'	24.4	24.9	25.3	25.6	25.9	26.0	26.1	26.2
	36"	S	152	144	137	132	128	125	122	119
		G'	24.1	24.5	24.9	25.1	25.3	25.4	25.4	25.5
18 0.0474"	6"	S	769	755	747	740	734	730	726	723
		G'	46.3	47.8	49.1	50.1	51.0	51.8	52.5	53.0
	12"	S	430	416	407	401	395	391	387	383
		G'	43.1	44.2	45.0	45.7	46.2	46.7	47.1	47.4
	18"	S	317	303	294	288	282	277	274	270
		G'	41.2	41.9	42.5	42.9	43.2	43.4	43.6	43.7
	24"	S	260	246	238	231	226	221	217	214
		G'	39.9	40.4	40.7	40.9	41.1	41.1	41.2	41.2
	30"	S	226	212	204	197	192	187	183	180
		G'	38.9	39.3	39.5	39.5	39.5	39.4	39.3	39.2
	36"	S	204	190	181	175	169	164	160	157
		G'	38.2	38.5	38.5	38.4	38.3	38.1	38.0	37.8
16 0.0598"	6"	S	973	955	941	933	926	920	915	911
		G'	74.6	76.6	78.3	79.7	80.8	81.8	82.7	83.4
	12"	S	545	527	513	505	498	492	487	483
		G'	67.4	68.5	69.4	70.0	70.5	70.9	71.2	71.5
	18"	S	402	384	371	362	355	350	345	340
		G'	63.3	63.8	64.1	64.3	64.3	64.3	64.3	64.3
	24"	S	331	313	299	291	284	278	273	269
		G'	60.6	60.7	60.6	60.4	60.2	59.9	59.7	59.4
	30"	S	288	270	257	248	241	235	230	226
		G'	58.7	58.5	58.1	57.7	57.3	56.8	56.3	55.9
	36"	S	260	242	228	220	213	207	202	198
		G'	57.3	56.8	56.3	55.7	55.0	54.4	53.8	53.2

ATTACHMENT PATTERN: 24.5/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	571	552	538	526	517	509	502	497
		G'	19.4	20.4	21.2	21.9	22.5	23.0	23.5	23.9
	12"	S	360	341	327	315	306	298	291	286
		G'	18.7	19.5	20.2	20.7	21.2	21.6	22.0	22.3
	18"	S	289	271	256	245	235	228	221	215
		G'	18.1	18.9	19.4	19.9	20.3	20.7	21.0	21.2
	24"	S	254	235	221	210	200	192	186	180
		G'	17.8	18.4	18.9	19.3	19.7	20.0	20.2	20.4
	30"	S	233	214	200	188	179	171	165	159
		G'	17.5	18.1	18.6	18.9	19.2	19.4	19.6	19.7
	36"	S	219	200	186	174	165	157	151	145
		G'	17.3	17.9	18.3	18.6	18.8	19.0	19.1	19.2
20 0.0358"	6"	S	676	656	640	627	617	608	601	595
		G'	27.7	28.9	29.9	30.7	31.4	32.0	32.5	33.0
	12"	S	420	400	384	371	361	352	345	338
		G'	26.7	27.6	28.4	29.0	29.6	30.0	30.4	30.7
	18"	S	335	314	298	286	275	267	259	253
		G'	26.1	26.9	27.5	28.0	28.5	28.8	29.1	29.3
	24"	S	292	272	256	243	233	224	217	210
		G'	25.7	26.4	26.9	27.4	27.7	27.9	28.1	28.3
	30"	S	266	246	230	217	207	198	191	185
		G'	25.4	26.0	26.5	26.9	27.1	27.3	27.4	27.5
	36"	S	249	229	213	200	190	181	174	168
		G'	25.2	25.8	26.2	26.5	26.7	26.8	26.9	26.9
18 0.0474"	6"	S	896	866	845	829	815	804	794	786
		G'	46.8	48.4	49.6	50.7	51.5	52.3	52.9	53.5
	12"	S	557	527	506	490	476	465	455	447
		G'	44.3	45.4	46.2	46.9	47.4	47.9	48.2	48.5
	18"	S	444	414	393	376	363	352	342	334
		G'	42.8	43.7	44.2	44.7	45.0	45.2	45.3	45.5
	24"	S	387	357	337	320	306	295	285	277
		G'	41.9	42.5	42.9	43.2	43.3	43.4	43.4	43.3
	30"	S	353	323	303	286	272	261	251	243
		G'	41.3	41.7	42.0	42.1	42.1	42.0	41.9	41.8
	36"	S	331	301	280	263	250	238	229	221
		G'	40.8	41.1	41.3	41.3	41.2	41.1	40.9	40.7
16 0.0598"	6"	S	1131	1093	1064	1043	1026	1012	1000	990
		G'	75.8	77.9	79.5	80.9	82.0	82.9	83.7	84.4
	12"	S	703	665	636	615	598	584	572	562
		G'	70.0	71.1	72.0	72.6	73.0	73.4	73.6	73.8
	18"	S	560	522	493	473	456	442	430	419
		G'	66.8	67.4	67.7	67.9	67.9	67.8	67.7	67.6
	24"	S	489	451	422	401	384	370	358	348
		G'	64.8	65.0	65.0	64.8	64.6	64.2	63.9	63.5
	30"	S	446	408	379	359	342	327	315	305
		G'	63.4	63.4	63.1	62.7	62.2	61.7	61.2	60.6
	36"	S	417	380	351	330	313	299	287	277
		G'	62.4	62.2	61.7	61.1	60.5	59.8	59.1	58.5

See Table 4 notes.

TABLE 44—VERSA-DEK® S ACOUSTICAL & LS ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **1 $^1/_2$" Long Fillet Welds or 1 $^1/_2$" Seam Welds**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24.5/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	955	934	917	904	893	884	877	870
		G'	20.1	21.2	22.1	22.9	23.5	24.1	24.7	25.1
	12"	S	896	874	857	843	831	821	812	805
		G'	19.6	20.6	21.4	22.2	22.8	23.3	23.8	24.2
	18"	S	663	646	632	622	613	605	599	594
		G'	19.2	20.1	20.9	21.6	22.2	22.7	23.1	23.5
	24"	S	533	515	502	491	482	474	468	463
		G'	18.9	19.8	20.5	21.1	21.6	22.1	22.5	22.8
	30"	S	454	437	423	412	403	396	390	384
		G'	18.7	19.5	20.1	20.7	21.2	21.6	22.0	22.3
	36"	S	402	384	371	360	351	344	337	332
		G'	18.4	19.2	19.8	20.4	20.8	21.2	21.5	21.8
20 0.0358"	6"	S	1028	1005	987	973	961	952	943	936
		G'	28.8	30.1	31.2	32.2	33.0	33.7	34.3	34.9
	12"	S	1023	1001	984	969	957	947	938	930
		G'	27.9	29.1	30.1	31.0	31.7	32.4	32.9	33.4
	18"	S	796	775	759	746	736	727	720	713
		G'	27.3	28.4	29.3	30.1	30.7	31.3	31.8	32.2
	24"	S	638	617	601	589	578	569	562	556
		G'	26.9	27.9	28.7	29.4	30.0	30.5	30.9	31.3
	30"	S	543	523	507	494	484	475	467	461
		G'	26.5	27.4	28.2	28.8	29.3	29.8	30.1	30.4
	36"	S	480	460	444	431	421	412	404	398
		G'	26.2	27.1	27.8	28.3	28.8	29.2	29.5	29.8
18 0.0474"	6"	S	1342	1313	1289	1271	1256	1243	1232	1223
		G'	49.5	51.4	52.9	54.3	55.4	56.4	57.3	58.0
	12"	S	1337	1308	1285	1266	1250	1237	1225	1215
		G'	47.4	49.0	50.3	51.4	52.4	53.2	53.9	54.5
	18"	S	1042	1012	992	975	961	950	940	932
		G'	45.9	47.3	48.4	49.3	50.1	50.8	51.3	51.8
	24"	S	836	807	786	769	755	744	734	726
		G'	44.7	45.9	46.9	47.7	48.3	48.8	49.3	49.7
	30"	S	713	683	662	645	632	620	611	602
		G'	43.8	44.9	45.7	46.3	46.9	47.3	47.6	47.9
	36"	S	631	601	580	563	549	538	528	520
		G'	43.1	44.0	44.7	45.3	45.7	46.0	46.3	46.5
16 0.0598"	6"	S	1669	1632	1603	1580	1561	1546	1532	1521
		G'	82.1	85.0	87.3	89.3	91.0	92.5	93.8	94.9
	12"	S	1662	1626	1598	1574	1554	1537	1523	1511
		G'	77.0	79.3	81.1	82.7	83.9	85.0	85.9	86.8
	18"	S	1299	1262	1233	1212	1195	1181	1169	1158
		G'	73.5	75.3	76.7	77.9	78.8	79.6	80.2	80.8
	24"	S	1043	1006	977	956	939	925	913	902
		G'	71.0	72.3	73.4	74.2	74.9	75.4	75.8	76.2
	30"	S	890	852	823	802	785	771	759	749
		G'	69.0	70.1	70.8	71.4	71.8	72.1	72.4	72.6
	36"	S	787	750	721	700	683	669	657	646
		G'	67.4	68.2	68.8	69.1	69.4	69.5	69.6	69.6

ATTACHMENT PATTERN: 24.5/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	1122	1080	1047	1021	999	982	967	954
		G'	20.1	21.2	22.1	22.9	23.6	24.2	24.7	25.2
	12"	S	1015	987	964	946	932	920	909	900
		G'	19.7	20.7	21.5	22.2	22.8	23.4	23.9	24.3
	18"	S	754	725	703	685	670	658	648	639
		G'	19.3	20.2	21.0	21.7	22.3	22.8	23.2	23.6
	24"	S	623	594	572	554	539	527	517	508
		G'	19.0	19.9	20.6	21.3	21.8	22.2	22.6	23.0
	30"	S	544	516	493	475	461	449	438	429
		G'	18.8	19.7	20.3	20.9	21.4	21.8	22.2	22.5
	36"	S	492	463	441	423	408	396	386	377
		G'	18.7	19.4	20.1	20.6	21.1	21.4	21.8	22.1
20 0.0358"	6"	S	1207	1162	1127	1099	1076	1057	1040	1026
		G'	28.8	30.1	31.3	32.2	33.0	33.7	34.4	34.9
	12"	S	1207	1162	1127	1099	1076	1057	1040	1026
		G'	28.1	29.3	30.3	31.2	31.9	32.5	33.1	33.6
	18"	S	893	860	835	814	798	784	772	762
		G'	27.6	28.7	29.6	30.4	31.0	31.6	32.1	32.5
	24"	S	735	702	677	657	640	626	614	604
		G'	27.2	28.2	29.1	29.8	30.3	30.8	31.3	31.6
	30"	S	641	608	582	562	545	532	520	510
		G'	26.9	27.9	28.7	29.3	29.8	30.2	30.6	30.9
	36"	S	578	545	519	499	482	468	457	447
		G'	26.7	27.6	28.3	28.9	29.4	29.8	30.1	30.4
18 0.0474"	6"	S	1577	1518	1472	1435	1405	1380	1359	1341
		G'	49.6	51.5	53.1	54.4	55.6	56.5	57.4	58.2
	12"	S	1577	1518	1472	1435	1405	1380	1359	1341
		G'	47.7	49.4	50.7	51.8	52.8	53.6	54.3	54.9
	18"	S	1169	1123	1090	1064	1042	1024	1008	995
		G'	46.5	47.9	49.0	50.0	50.7	51.4	51.9	52.4
	24"	S	963	918	884	858	836	818	802	789
		G'	45.5	46.8	47.8	48.5	49.2	49.7	50.1	50.5
	30"	S	840	794	761	734	712	694	679	666
		G'	44.8	45.9	46.8	47.4	48.0	48.4	48.7	49.0
	36"	S	757	712	678	652	630	612	597	583
		G'	44.3	45.3	46.0	46.6	47.0	47.3	47.5	47.7
16 0.0598"	6"	S	1961	1888	1830	1785	1747	1716	1690	1667
		G'	82.4	85.3	87.7	89.6	91.3	92.8	94.0	95.2
	12"	S	1961	1888	1830	1785	1747	1716	1690	1667
		G'	77.9	80.2	82.0	83.5	84.8	85.8	86.7	87.5
	18"	S	1457	1400	1356	1322	1295	1273	1254	1237
		G'	75.0	76.7	78.1	79.3	80.2	80.9	81.5	82.1
	24"	S	1201	1144	1099	1066	1039	1017	998	981
		G'	72.8	74.3	75.3	76.1	76.8	77.3	77.6	78.0
	30"	S	1048	990	946	913	886	863	844	828
		G'	71.2	72.4	73.2	73.7	74.1	74.4	74.6	74.8
	36"	S	945	888	843	810	783	761	742	725
		G'	70.0	70.9	71.5	71.8	72.1	72.2	72.2	72.2

See Table 4 notes.

TABLE 45—VERSA-DEK® S ACOUSTICAL & LS ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24.5/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	571	560	551	544	539	534	530	526
		G'	19.4	20.3	21.1	21.8	22.4	23.0	23.4	23.8
	12"	S	328	323	319	316	313	311	309	307
		G'	18.5	19.3	20.0	20.5	21.0	21.4	21.8	22.2
	18"	S	232	227	223	220	217	215	213	212
		G'	17.9	18.6	19.1	19.6	20.0	20.4	20.7	20.9
	24"	S	185	180	176	172	170	168	166	164
		G'	17.4	18.0	18.5	18.9	19.2	19.5	19.8	20.0
	30"	S	156	151	147	144	141	139	137	136
		G'	17.1	17.6	18.0	18.4	18.6	18.9	19.0	19.2
	36"	S	137	132	128	125	122	120	118	116
		G'	16.8	17.3	17.7	17.9	18.2	18.3	18.5	18.6
20 0.0358"	6"	S	615	603	594	586	580	575	571	567
		G'	27.3	28.5	29.5	30.3	31.0	31.6	32.1	32.6
	12"	S	398	392	387	383	380	377	375	373
		G'	25.8	26.7	27.4	28.1	28.6	29.0	29.4	29.8
	18"	S	282	276	271	267	264	261	259	257
		G'	24.7	25.4	26.0	26.5	26.9	27.2	27.5	27.8
	24"	S	224	218	213	209	206	203	201	199
		G'	23.9	24.5	25.0	25.4	25.7	25.9	26.1	26.3
	30"	S	189	183	178	174	171	169	166	164
		G'	23.3	23.8	24.2	24.5	24.7	24.9	25.0	25.1
	36"	S	166	160	155	151	148	145	143	141
		G'	22.9	23.3	23.6	23.8	23.9	24.0	24.1	24.1
18 0.0474"	6"	S	805	789	777	767	759	752	746	741
		G'	45.9	47.4	48.7	49.7	50.6	51.4	52.1	52.7
	12"	S	528	518	512	507	503	499	496	494
		G'	42.1	43.1	44.0	44.7	45.3	45.7	46.1	46.5
	18"	S	375	365	358	353	349	346	343	340
		G'	39.6	40.4	40.9	41.3	41.7	41.9	42.1	42.3
	24"	S	298	288	282	277	272	269	266	263
		G'	37.9	38.4	38.7	39.0	39.1	39.2	39.3	39.3
	30"	S	252	242	236	231	226	223	220	217
		G'	36.7	37.0	37.1	37.2	37.2	37.2	37.1	37.0
	36"	S	222	211	205	200	196	192	189	187
		G'	35.7	35.9	35.9	35.8	35.7	35.6	35.4	35.3
16 0.0598"	6"	S	1002	982	967	955	945	936	929	923
		G'	73.6	75.7	77.4	78.8	80.0	81.0	81.9	82.6
	12"	S	669	655	646	639	634	630	626	623
		G'	65.2	66.3	67.2	67.9	68.5	69.0	69.4	69.7
	18"	S	475	462	452	446	440	436	432	429
		G'	60.1	60.6	61.0	61.2	61.4	61.5	61.5	61.6
	24"	S	378	365	355	349	344	339	335	332
		G'	56.7	56.8	56.8	56.7	56.5	56.4	56.2	56.0
	30"	S	320	307	297	291	286	281	277	274
		G'	54.2	54.0	53.7	53.4	53.0	52.6	52.3	52.0
	36"	S	281	268	259	252	247	242	239	236
		G'	52.4	51.9	51.4	50.8	50.3	49.8	49.3	48.9

ATTACHMENT PATTERN: 24.5/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	681	662	642	626	613	602	592	585
		G'	19.5	20.4	21.2	21.9	22.5	23.1	23.5	23.9
	12"	S	394	381	370	362	355	350	345	341
		G'	18.7	19.5	20.2	20.8	21.3	21.7	22.1	22.4
	18"	S	299	285	275	267	260	254	249	245
		G'	18.3	19.0	19.6	20.1	20.5	20.8	21.1	21.4
	24"	S	251	238	227	219	212	206	202	197
		G'	17.9	18.6	19.1	19.5	19.9	20.1	20.4	20.6
	30"	S	222	209	199	190	183	178	173	169
		G'	17.7	18.3	18.7	19.1	19.4	19.6	19.8	20.0
	36"	S	203	190	179	171	164	159	154	150
		G'	17.5	18.1	18.5	18.8	19.0	19.2	19.4	19.5
20 0.0358"	6"	S	741	713	691	674	660	648	638	630
		G'	27.5	28.7	29.6	30.5	31.2	31.8	32.3	32.8
	12"	S	469	454	442	433	425	419	413	409
		G'	26.2	27.1	27.9	28.5	29.1	29.5	29.9	30.2
	18"	S	353	338	327	317	309	303	298	293
		G'	25.4	26.2	26.8	27.3	27.7	28.0	28.3	28.5
	24"	S	296	280	269	259	251	245	240	235
		G'	24.8	25.5	26.0	26.4	26.7	26.9	27.1	27.2
	30"	S	261	246	234	224	217	210	205	200
		G'	24.4	25.0	25.4	25.7	25.9	26.1	26.2	26.3
	36"	S	238	222	211	201	194	187	182	177
		G'	24.1	24.6	24.9	25.2	25.3	25.4	25.5	25.5
18 0.0474"	6"	S	969	932	904	881	863	848	835	823
		G'	46.3	47.9	49.1	50.2	51.0	51.8	52.5	53.0
	12"	S	622	600	585	572	562	554	547	540
		G'	43.2	44.2	45.1	45.7	46.3	46.7	47.1	47.4
	18"	S	469	447	431	419	409	400	393	387
		G'	41.2	42.0	42.5	42.9	43.2	43.5	43.7	43.8
	24"	S	392	370	355	342	332	324	316	310
		G'	39.9	40.5	40.8	41.0	41.1	41.2	41.2	41.2
	30"	S	346	324	309	296	286	278	270	264
		G'	39.0	39.4	39.5	39.6	39.6	39.5	39.4	39.3
	36"	S	315	293	278	265	255	247	240	234
		G'	38.3	38.5	38.6	38.5	38.4	38.2	38.1	37.9
16 0.0598"	6"	S	1206	1161	1126	1097	1074	1055	1039	1025
		G'	74.6	76.7	78.4	79.7	80.9	81.9	82.7	83.4
	12"	S	785	757	736	721	708	698	689	681
		G'	67.5	68.6	69.5	70.1	70.6	71.0	71.3	71.6
	18"	S	592	564	543	527	515	504	495	487
		G'	63.4	63.9	64.2	64.4	64.5	64.5	64.4	64.4
	24"	S	495	467	446	430	418	407	398	391
		G'	60.7	60.8	60.8	60.6	60.4	60.1	59.8	59.5
	30"	S	437	409	388	372	360	349	340	333
		G'	58.8	58.6	58.3	57.9	57.4	57.0	56.5	56.0
	36"	S	398	370	349	334	321	310	301	294
		G'	57.4	57.0	56.5	55.9	55.2	54.6	54.0	53.4

See Table 4 notes.

TABLE 46—VERSA-DEK® S ACOUSTICAL & LS ACOUSTICAL– ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-HSN24 (0.125 inch ≤ steel substrate thickness ≤ 0.375 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24.5/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	530	520	512	505	500	496	492	489
		G'	19.3	20.2	21.1	21.8	22.4	22.9	23.4	23.8
	12"	S	328	323	319	316	313	311	309	307
		G'	18.3	19.1	19.8	20.4	20.9	21.3	21.7	22.0
	18"	S	232	227	223	220	218	215	213	212
		G'	17.6	18.3	18.8	19.3	19.7	20.1	20.4	20.6
	24"	S	185	180	176	172	170	168	166	164
		G'	17.0	17.6	18.1	18.5	18.8	19.1	19.4	19.6
	30"	S	156	151	147	144	141	139	137	136
		G'	16.6	17.1	17.5	17.9	18.1	18.4	18.5	18.7
	36"	S	137	132	128	125	122	120	118	116
		G'	16.3	16.7	17.1	17.4	17.6	17.7	17.9	18.0
20 0.0358"	6"	S	571	560	551	544	539	534	530	526
		G'	27.2	28.4	29.3	30.2	30.9	31.5	32.0	32.5
	12"	S	398	392	387	383	380	377	375	373
		G'	25.5	26.4	27.1	27.8	28.3	28.8	29.2	29.5
	18"	S	282	276	271	267	264	261	259	257
		G'	24.2	24.9	25.5	26.0	26.4	26.8	27.1	27.3
	24"	S	224	218	213	209	206	203	201	199
		G'	23.3	23.9	24.3	24.7	25.0	25.3	25.5	25.6
	30"	S	189	183	178	174	171	169	166	164
		G'	22.6	23.0	23.4	23.7	23.9	24.1	24.2	24.3
	36"	S	166	160	155	151	148	145	143	141
		G'	22.0	22.4	22.7	22.9	23.0	23.1	23.2	23.2
18 0.0474"	6"	S	747	732	721	712	704	698	693	688
		G'	45.6	47.1	48.4	49.5	50.4	51.2	51.9	52.5
	12"	S	528	518	512	507	503	499	496	494
		G'	41.4	42.5	43.3	44.0	44.6	45.1	45.6	45.9
	18"	S	375	365	358	353	349	346	343	340
		G'	38.6	39.3	39.9	40.3	40.7	41.0	41.2	41.4
	24"	S	298	288	282	277	272	269	266	264
		G'	36.6	37.0	37.4	37.6	37.8	37.9	38.0	38.1
	30"	S	252	242	236	231	226	223	220	217
		G'	35.1	35.3	35.5	35.6	35.6	35.6	35.6	35.6
	36"	S	221	211	205	200	196	192	189	187
		G'	33.9	34.0	34.0	34.0	33.9	33.8	33.7	33.6
16 0.0598"	6"	S	930	912	898	886	877	869	863	857
		G'	72.9	75.1	76.8	78.2	79.4	80.5	81.4	82.2
	12"	S	668	655	646	639	634	630	626	623
		G'	63.7	64.9	65.8	66.6	67.2	67.7	68.2	68.6
	18"	S	475	462	452	446	440	436	432	429
		G'	57.9	58.5	58.9	59.2	59.5	59.6	59.8	59.9
	24"	S	378	365	355	349	344	339	335	332
		G'	53.9	54.1	54.2	54.2	54.1	54.0	54.0	53.9
	30"	S	320	307	297	291	286	281	277	274
		G'	51.1	50.9	50.7	50.4	50.2	49.9	49.7	49.5
	36"	S	281	268	259	252	247	242	239	236
		G'	48.9	48.5	48.0	47.6	47.2	46.8	46.4	46.1

ATTACHMENT PATTERN: 24.5/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	639	615	596	581	569	559	550	543
		G'	19.4	20.3	21.1	21.8	22.4	23.0	23.4	23.8
	12"	S	390	377	367	359	352	347	342	338
		G'	18.5	19.3	20.0	20.5	21.0	21.5	21.8	22.2
	18"	S	294	281	271	263	257	251	247	243
		G'	17.9	18.6	19.2	19.6	20.0	20.4	20.7	20.9
	24"	S	246	234	224	216	209	204	199	195
		G'	17.4	18.1	18.6	19.0	19.3	19.6	19.8	20.0
	30"	S	218	205	195	187	180	175	170	166
		G'	17.1	17.7	18.1	18.4	18.7	18.9	19.1	19.2
	36"	S	199	186	176	168	161	156	151	147
		G'	16.9	17.3	17.7	18.0	18.2	18.4	18.5	18.6
20 0.0358"	6"	S	688	662	642	626	613	602	593	585
		G'	27.4	28.5	29.5	30.3	31.0	31.6	32.1	32.6
	12"	S	464	450	438	429	422	416	411	406
		G'	25.8	26.7	27.5	28.1	28.6	29.1	29.5	29.8
	18"	S	348	334	323	314	306	300	295	290
		G'	24.7	25.5	26.1	26.6	27.0	27.3	27.6	27.8
	24"	S	290	276	265	256	248	242	237	232
		G'	24.0	24.6	25.1	25.4	25.7	26.0	26.2	26.3
	30"	S	256	241	230	221	213	207	202	198
		G'	23.4	23.9	24.3	24.6	24.8	24.9	25.1	25.1
	36"	S	232	218	207	198	190	184	179	174
		G'	23.0	23.4	23.7	23.9	24.0	24.1	24.2	24.2
18 0.0474"	6"	S	899	866	840	819	801	787	775	765
		G'	45.9	47.4	48.7	49.8	50.7	51.4	52.1	52.7
	12"	S	615	594	580	568	558	550	543	537
		G'	42.1	43.2	44.1	44.7	45.3	45.8	46.2	46.5
	18"	S	462	441	426	414	405	396	390	384
		G'	39.7	40.5	41.0	41.4	41.8	42.0	42.2	42.4
	24"	S	385	364	349	338	328	320	313	307
		G'	38.1	38.5	38.9	39.1	39.2	39.3	39.4	39.4
	30"	S	339	318	303	291	282	274	267	261
		G'	36.8	37.1	37.3	37.3	37.3	37.3	37.2	37.2
	36"	S	308	288	273	261	251	243	236	230
		G'	35.9	36.0	36.0	36.0	35.9	35.7	35.6	35.4
16 0.0598"	6"	S	1120	1078	1045	1019	998	980	965	952
		G'	73.6	75.7	77.4	78.8	80.0	81.0	81.9	82.7
	12"	S	776	750	730	715	703	693	684	677
		G'	65.3	66.5	67.4	68.1	68.6	69.1	69.5	69.8
	18"	S	583	557	536	521	509	499	491	483
		G'	60.3	60.8	61.2	61.4	61.6	61.7	61.7	61.7
	24"	S	486	460	440	425	413	402	394	386
		G'	56.9	57.0	57.0	56.9	56.7	56.6	56.4	56.2
	30"	S	428	402	381	367	354	344	336	328
		G'	54.5	54.3	54.0	53.6	53.3	52.9	52.5	52.2
	36"	S	389	363	343	328	316	306	297	290
		G'	52.7	52.2	51.7	51.2	50.6	50.1	49.6	49.2

See Table 4 notes.

TABLE 47—VERSA-DEK® S ES ACOUSTICAL & LS ES ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **#10 Screws**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	479	472	466	462	459	456	453	451
		G'	18.7	19.6	20.4	21.1	21.7	22.3	22.7	23.2
	12"	S	268	261	255	251	247	244	242	240
		G'	17.8	18.6	19.3	19.9	20.4	20.8	21.2	21.5
	18"	S	197	190	185	181	177	174	172	169
		G'	17.2	17.9	18.5	19.0	19.4	19.7	20.0	20.3
	24"	S	162	155	150	145	142	139	136	134
		G'	16.8	17.4	17.9	18.3	18.6	18.9	19.2	19.4
	30"	S	141	134	129	124	121	118	115	113
		G'	16.4	17.0	17.4	17.8	18.1	18.3	18.5	18.6
	36"	S	127	120	115	110	107	104	101	99
		G'	16.2	16.7	17.1	17.3	17.6	17.8	17.9	18.0
20 0.0358"	6"	S	578	569	563	558	554	551	548	545
		G'	26.6	27.8	28.7	29.5	30.3	30.9	31.4	31.9
	12"	S	321	313	307	302	298	294	292	289
		G'	25.3	26.3	27.0	27.7	28.2	28.7	29.1	29.4
	18"	S	236	228	222	217	212	209	206	204
		G'	24.5	25.3	25.9	26.4	26.9	27.2	27.5	27.7
	24"	S	193	185	179	174	170	166	163	161
		G'	24.0	24.7	25.2	25.6	25.9	26.1	26.3	26.5
	30"	S	168	160	153	148	144	141	138	135
		G'	23.6	24.2	24.6	24.9	25.1	25.3	25.4	25.5
	36"	S	151	142	136	131	127	124	121	118
		G'	23.3	23.8	24.1	24.4	24.6	24.7	24.8	24.8
18 0.0474"	6"	S	767	753	745	739	733	729	725	722
		G'	44.8	46.4	47.6	48.7	49.6	50.4	51.1	51.7
	12"	S	428	414	406	399	394	389	386	382
		G'	41.7	42.8	43.7	44.4	45.0	45.5	45.9	46.2
	18"	S	315	301	293	286	281	276	272	269
		G'	39.9	40.7	41.3	41.7	42.0	42.3	42.5	42.6
	24"	S	258	245	236	230	224	220	216	213
		G'	38.6	39.2	39.6	39.8	40.0	40.1	40.1	40.1
	30"	S	224	211	202	196	190	186	182	179
		G'	37.7	38.1	38.3	38.4	38.4	38.4	38.3	38.3
	36"	S	202	188	180	173	168	163	159	156
		G'	37.1	37.3	37.4	37.4	37.3	37.2	37.0	36.8
16 0.0598"	6"	S	970	953	939	931	924	919	914	910
		G'	72.1	74.2	75.9	77.3	78.5	79.5	80.3	81.1
	12"	S	542	525	511	503	496	491	486	482
		G'	65.2	66.4	67.3	68.0	68.5	69.0	69.3	69.6
	18"	S	400	382	369	361	354	348	343	339
		G'	61.3	61.9	62.2	62.4	62.5	62.6	62.6	62.6
	24"	S	328	311	297	289	282	277	272	268
		G'	58.7	58.9	58.8	58.7	58.5	58.3	58.1	57.8
	30"	S	286	268	255	246	240	234	229	225
		G'	56.8	56.7	56.5	56.1	55.7	55.3	54.8	54.4
	36"	S	257	239	226	218	211	205	201	197
		G'	55.5	55.1	54.7	54.1	53.5	53.0	52.4	51.9

ATTACHMENT PATTERN: 24/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	570	552	537	526	517	509	502	496
		G'	18.7	19.7	20.5	21.2	21.8	22.4	22.8	23.2
	12"	S	359	341	326	315	305	298	291	285
		G'	18.0	18.8	19.5	20.1	20.6	21.0	21.4	21.7
	18"	S	289	270	256	244	235	227	221	215
		G'	17.5	18.2	18.8	19.3	19.7	20.1	20.4	20.7
	24"	S	253	235	221	209	200	192	185	180
		G'	17.2	17.8	18.3	18.8	19.1	19.4	19.6	19.9
	30"	S	232	214	200	188	179	171	164	159
		G'	16.9	17.5	18.0	18.3	18.6	18.9	19.1	19.2
	36"	S	218	200	185	174	165	157	150	145
		G'	16.7	17.3	17.7	18.0	18.3	18.4	18.6	18.7
20 0.0358"	6"	S	676	655	640	627	616	608	601	594
		G'	26.8	28.0	28.9	29.8	30.5	31.1	31.6	32.1
	12"	S	419	399	383	371	360	352	344	338
		G'	25.8	26.8	27.6	28.2	28.7	29.2	29.6	29.9
	18"	S	334	314	298	285	275	266	259	253
		G'	25.2	26.1	26.7	27.2	27.7	28.0	28.3	28.5
	24"	S	291	271	255	243	232	224	216	210
		G'	24.8	25.6	26.1	26.6	26.9	27.2	27.4	27.6
	30"	S	266	245	230	217	207	198	191	184
		G'	24.6	25.2	25.7	26.1	26.4	26.6	26.7	26.8
	36"	S	249	228	212	200	189	181	174	167
		G'	24.4	25.0	25.4	25.7	26.0	26.1	26.2	26.3
18 0.0474"	6"	S	895	866	845	828	815	803	794	786
		G'	45.3	46.9	48.2	49.2	50.1	50.9	51.5	52.1
	12"	S	556	526	506	489	475	464	455	446
		G'	42.9	44.0	44.9	45.6	46.1	46.6	47.0	47.3
	18"	S	443	413	393	376	362	351	341	333
		G'	41.5	42.3	43.0	43.4	43.7	44.0	44.2	44.3
	24"	S	386	357	336	319	306	295	285	277
		G'	40.6	41.3	41.7	42.0	42.1	42.2	42.3	42.3
	30"	S	352	323	302	285	272	261	251	243
		G'	40.0	40.5	40.8	40.9	41.0	41.0	40.9	40.8
	36"	S	330	300	279	263	249	238	228	220
		G'	39.5	39.9	40.1	40.2	40.1	40.0	39.8	39.7
16 0.0598"	6"	S	1130	1092	1063	1043	1026	1012	1000	989
		G'	73.3	75.4	77.1	78.4	79.6	80.5	81.4	82.1
	12"	S	702	664	635	615	598	584	572	562
		G'	67.7	68.9	69.8	70.5	71.0	71.3	71.6	71.9
	18"	S	559	521	493	472	455	441	429	419
		G'	64.7	65.3	65.7	65.9	66.0	66.0	65.9	65.8
	24"	S	488	450	421	401	384	370	358	348
		G'	62.8	63.1	63.1	63.0	62.8	62.5	62.2	61.9
	30"	S	445	407	379	358	341	327	315	305
		G'	61.4	61.5	61.3	60.9	60.5	60.0	59.6	59.1
	36"	S	416	379	350	329	312	298	286	276
		G'	60.5	60.3	59.9	59.4	58.8	58.2	57.6	57.0

See Table 4 notes.

TABLE 48—VERSA-DEK® S ES ACOUSTICAL & LS ES ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **1 $^1/_2$" Long Fillet Welds or 1 $^1/_2$" Seam Welds**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	954	933	916	903	892	884	876	870
		G'	19.4	20.4	21.3	22.1	22.8	23.4	24.0	24.4
	12"	S	902	879	862	847	835	825	816	809
		G'	18.9	19.9	20.7	21.5	22.1	22.6	23.1	23.6
	18"	S	662	645	631	621	612	604	598	593
		G'	18.5	19.5	20.2	20.9	21.5	22.0	22.4	22.8
	24"	S	531	514	500	490	481	474	467	462
		G'	18.2	19.1	19.8	20.5	21.0	21.5	21.9	22.2
	30"	S	453	435	422	411	402	395	389	384
		G'	18.0	18.8	19.5	20.1	20.6	21.0	21.4	21.7
	36"	S	400	383	370	359	350	343	337	331
		G'	17.8	18.6	19.2	19.7	20.2	20.6	20.9	21.2
20 0.0358"	6"	S	1026	1004	986	972	961	951	943	936
		G'	27.8	29.1	30.2	31.2	32.0	32.8	33.4	34.0
	12"	S	1026	1004	986	972	961	951	943	936
		G'	27.0	28.2	29.2	30.1	30.8	31.5	32.0	32.5
	18"	S	794	774	758	745	735	726	719	713
		G'	26.4	27.5	28.4	29.2	29.9	30.4	30.9	31.4
	24"	S	637	616	600	588	577	569	561	555
		G'	26.0	27.0	27.8	28.5	29.1	29.6	30.1	30.4
	30"	S	542	522	506	493	483	474	467	460
		G'	25.6	26.6	27.3	28.0	28.5	28.9	29.3	29.7
	36"	S	479	459	443	430	420	411	404	397
		G'	25.3	26.2	26.9	27.5	28.0	28.4	28.7	29.0
18 0.0474"	6"	S	1341	1311	1288	1270	1255	1242	1232	1223
		G'	47.8	49.7	51.3	52.7	53.8	54.8	55.7	56.5
	12"	S	1341	1311	1288	1270	1255	1242	1232	1222
		G'	45.8	47.5	48.8	50.0	50.9	51.8	52.5	53.1
	18"	S	1040	1011	990	973	960	949	939	931
		G'	44.4	45.8	47.0	47.9	48.7	49.4	50.0	50.5
	24"	S	834	805	784	767	754	743	733	725
		G'	43.3	44.5	45.5	46.3	47.0	47.5	48.0	48.4
	30"	S	711	681	660	644	630	619	609	601
		G'	42.4	43.5	44.4	45.0	45.6	46.0	46.4	46.7
	36"	S	629	599	578	562	548	537	527	519
		G'	41.7	42.7	43.4	44.0	44.4	44.8	45.1	45.3
16 0.0598"	6"	S	1667	1630	1602	1579	1560	1545	1531	1520
		G'	79.3	82.2	84.5	86.5	88.3	89.7	91.0	92.2
	12"	S	1667	1630	1602	1579	1560	1545	1531	1520
		G'	74.5	76.7	78.6	80.1	81.4	82.5	83.5	84.3
	18"	S	1297	1259	1231	1210	1193	1179	1167	1157
		G'	71.1	72.9	74.4	75.5	76.5	77.3	78.0	78.5
	24"	S	1041	1003	975	954	937	923	911	901
		G'	68.6	70.1	71.2	72.0	72.7	73.3	73.7	74.1
	30"	S	887	850	821	801	784	770	758	748
		G'	66.7	67.9	68.7	69.3	69.8	70.1	70.4	70.6
	36"	S	785	747	719	698	681	667	655	645
		G'	65.2	66.1	66.7	67.1	67.4	67.6	67.7	67.7

ATTACHMENT PATTERN: 24/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT							
			7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	1122	1080	1047	1021	999	982	967	954
		G'	19.4	20.5	21.4	22.1	22.8	23.4	24.0	24.5
	12"	S	1015	986	964	946	931	919	909	900
		G'	19.0	19.9	20.8	21.5	22.1	22.7	23.2	23.6
	18"	S	753	724	702	684	670	658	647	638
		G'	18.6	19.6	20.3	21.0	21.6	22.1	22.5	22.9
	24"	S	622	594	571	553	539	527	516	508
		G'	18.4	19.2	20.0	20.6	21.1	21.6	22.0	22.4
	30"	S	544	515	493	475	460	448	438	429
		G'	18.2	19.0	19.7	20.3	20.8	21.2	21.6	21.9
	36"	S	491	463	441	423	408	396	386	377
		G'	18.0	18.8	19.4	20.0	20.4	20.8	21.2	21.5
20 0.0358"	6"	S	1207	1162	1127	1099	1076	1057	1040	1026
		G'	27.8	29.2	30.3	31.2	32.1	32.8	33.4	34.0
	12"	S	1207	1162	1127	1099	1076	1057	1040	1026
		G'	27.1	28.4	29.4	30.2	31.0	31.6	32.2	32.7
	18"	S	892	860	834	814	797	783	772	762
		G'	26.7	27.8	28.7	29.5	30.1	30.7	31.2	31.6
	24"	S	735	702	677	656	640	626	614	604
		G'	26.3	27.3	28.2	28.9	29.5	30.0	30.4	30.8
	30"	S	640	607	582	562	545	531	519	509
		G'	26.0	27.0	27.8	28.4	29.0	29.4	29.8	30.1
	36"	S	577	544	519	499	482	468	456	446
		G'	25.8	26.7	27.5	28.1	28.5	29.0	29.3	29.6
18 0.0474"	6"	S	1577	1518	1472	1435	1405	1380	1359	1341
		G'	48.0	49.9	51.5	52.8	54.0	55.0	55.8	56.6
	12"	S	1577	1518	1472	1435	1405	1380	1359	1341
		G'	46.2	47.8	49.2	50.3	51.3	52.1	52.8	53.4
	18"	S	1169	1123	1090	1063	1041	1023	1008	995
		G'	45.0	46.4	47.6	48.5	49.3	50.0	50.6	51.1
	24"	S	963	917	884	857	835	817	802	789
		G'	44.1	45.4	46.4	47.2	47.8	48.4	48.8	49.2
	30"	S	839	793	760	734	712	694	678	665
		G'	43.4	44.5	45.4	46.1	46.6	47.1	47.4	47.7
	36"	S	757	711	678	651	630	611	596	583
		G'	42.9	43.9	44.7	45.2	45.7	46.0	46.3	46.5
16 0.0598"	6"	S	1961	1888	1830	1785	1747	1716	1690	1667
		G'	79.6	82.5	84.8	86.8	88.5	90.0	91.3	92.4
	12"	S	1961	1888	1830	1785	1747	1716	1690	1667
		G'	75.3	77.6	79.4	81.0	82.2	83.3	84.3	85.1
	18"	S	1456	1399	1355	1322	1295	1272	1253	1237
		G'	72.5	74.3	75.7	76.9	77.8	78.6	79.2	79.8
	24"	S	1200	1143	1099	1066	1039	1016	997	981
		G'	70.4	71.9	73.0	73.9	74.5	75.1	75.5	75.8
	30"	S	1047	989	945	912	885	863	844	827
		G'	68.9	70.1	71.0	71.6	72.0	72.3	72.6	72.7
	36"	S	944	887	843	810	783	760	741	725
		G'	67.7	68.7	69.3	69.8	70.0	70.2	70.2	70.3

See Table 4 notes.

TABLE 49—VERSA-DEK® S ES ACOUSTICAL & LS ES ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/4			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	570	559	551	544	538	533	529	526
		G'	18.7	19.6	20.4	21.1	21.7	22.3	22.8	23.2
	12"	S	327	322	318	315	312	310	308	307
		G'	17.8	18.6	19.3	19.9	20.4	20.8	21.2	21.5
	18"	S	231	226	222	219	217	215	213	211
		G'	17.2	17.9	18.5	19.0	19.4	19.8	20.1	20.3
	24"	S	183	179	175	172	169	167	165	164
		G'	16.8	17.4	17.9	18.3	18.7	19.0	19.2	19.4
	30"	S	155	150	146	143	140	138	136	135
		G'	16.5	17.0	17.5	17.8	18.1	18.3	18.5	18.7
	36"	S	136	131	127	124	121	119	117	116
		G'	16.2	16.7	17.1	17.4	17.6	17.8	18.0	18.1
20 0.0358"	6"	S	614	602	593	585	579	574	570	566
		G'	26.4	27.6	28.6	29.4	30.1	30.7	31.3	31.7
	12"	S	397	390	386	382	379	376	374	372
		G'	24.9	25.8	26.6	27.2	27.8	28.3	28.7	29.0
	18"	S	281	275	270	266	263	260	258	256
		G'	23.9	24.6	25.3	25.7	26.2	26.5	26.8	27.1
	24"	S	223	217	212	208	205	203	200	199
		G'	23.1	23.8	24.3	24.6	25.0	25.2	25.4	25.6
	30"	S	188	182	177	173	170	168	166	164
		G'	22.6	23.1	23.5	23.8	24.0	24.2	24.3	24.4
	36"	S	165	159	154	150	147	145	142	141
		G'	22.2	22.6	22.9	23.1	23.3	23.4	23.5	23.5
18 0.0474"	6"	S	803	788	775	766	758	751	745	741
		G'	44.4	46.0	47.2	48.3	49.2	50.0	50.7	51.3
	12"	S	527	517	511	506	502	498	495	493
		G'	40.8	41.9	42.7	43.4	44.0	44.5	44.9	45.3
	18"	S	373	363	357	352	348	345	342	339
		G'	38.4	39.2	39.8	40.2	40.6	40.8	41.1	41.3
	24"	S	297	287	280	276	271	268	265	263
		G'	36.8	37.3	37.6	37.9	38.1	38.2	38.3	38.3
	30"	S	251	241	234	229	225	222	219	217
		G'	35.6	35.9	36.1	36.2	36.2	36.2	36.2	36.1
	36"	S	220	210	204	199	195	191	188	186
		G'	34.7	34.8	34.9	34.8	34.8	34.6	34.5	34.4
16 0.0598"	6"	S	1000	981	965	953	943	935	928	922
		G'	71.1	73.2	75.0	76.4	77.6	78.7	79.5	80.3
	12"	S	667	654	644	638	633	628	625	622
		G'	63.1	64.3	65.2	66.0	66.6	67.1	67.5	67.8
	18"	S	473	460	451	444	439	435	431	428
		G'	58.2	58.8	59.2	59.5	59.7	59.8	59.9	60.0
	24"	S	376	363	354	347	342	338	334	331
		G'	54.9	55.1	55.1	55.1	55.0	54.8	54.7	54.6
	30"	S	318	305	296	289	284	280	276	273
		G'	52.5	52.4	52.2	51.9	51.6	51.2	50.9	50.6
	36"	S	279	267	257	251	246	241	238	235
		G'	50.8	50.4	49.9	49.4	49.0	48.5	48.1	47.6

ATTACHMENT PATTERN: 24/8			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	680	662	642	626	613	602	592	585
		G'	18.8	19.7	20.5	21.2	21.8	22.4	22.9	23.3
	12"	S	394	381	370	362	355	349	345	340
		G'	18.1	18.9	19.6	20.2	20.7	21.1	21.5	21.8
	18"	S	299	285	275	266	260	254	249	245
		G'	17.6	18.4	19.0	19.4	19.9	20.2	20.5	20.8
	24"	S	251	237	227	219	212	206	201	197
		G'	17.3	18.0	18.5	18.9	19.3	19.6	19.8	20.0
	30"	S	222	209	198	190	183	178	173	169
		G'	17.1	17.7	18.2	18.5	18.8	19.1	19.3	19.4
	36"	S	203	190	179	171	164	158	154	150
		G'	16.9	17.5	17.9	18.2	18.5	18.7	18.8	19.0
20 0.0358"	6"	S	741	713	691	674	660	648	638	630
		G'	26.6	27.8	28.7	29.6	30.3	30.9	31.4	31.9
	12"	S	469	454	442	433	425	419	413	409
		G'	25.3	26.3	27.1	27.7	28.2	28.7	29.1	29.4
	18"	S	353	338	326	317	309	303	297	293
		G'	24.6	25.3	26.0	26.5	26.9	27.2	27.5	27.8
	24"	S	295	280	268	259	251	245	239	235
		G'	24.0	24.7	25.2	25.6	25.9	26.2	26.4	26.5
	30"	S	260	245	234	224	216	210	205	200
		G'	23.6	24.2	24.6	25.0	25.2	25.4	25.5	25.6
	36"	S	237	222	210	201	193	187	181	177
		G'	23.3	23.8	24.2	24.5	24.6	24.7	24.8	24.9
18 0.0474"	6"	S	969	932	904	881	863	848	835	823
		G'	44.8	46.4	47.7	48.7	49.6	50.4	51.1	51.7
	12"	S	622	600	584	572	562	553	546	540
		G'	41.8	42.9	43.8	44.5	45.0	45.5	45.9	46.2
	18"	S	468	446	431	419	408	400	393	387
		G'	40.0	40.7	41.3	41.8	42.1	42.3	42.5	42.7
	24"	S	391	370	354	342	332	323	316	310
		G'	38.7	39.3	39.7	39.9	40.1	40.1	40.2	40.2
	30"	S	345	324	308	296	286	277	270	264
		G'	37.8	38.2	38.4	38.5	38.6	38.5	38.5	38.4
	36"	S	315	293	278	265	255	247	240	233
		G'	37.2	37.4	37.5	37.5	37.4	37.3	37.1	36.9
16 0.0598"	6"	S	1206	1161	1126	1097	1074	1055	1039	1025
		G'	72.1	74.2	75.9	77.3	78.5	79.5	80.4	81.1
	12"	S	785	757	736	720	708	697	688	681
		G'	65.3	66.5	67.4	68.1	68.6	69.0	69.4	69.7
	18"	S	591	563	542	527	514	504	495	487
		G'	61.4	62.0	62.4	62.6	62.7	62.7	62.7	62.7
	24"	S	494	467	446	430	417	407	398	390
		G'	58.8	59.0	59.0	58.9	58.7	58.5	58.3	58.0
	30"	S	436	409	388	372	359	349	340	332
		G'	57.0	56.9	56.7	56.3	55.9	55.5	55.0	54.6
	36"	S	397	370	349	333	321	310	301	294
		G'	55.7	55.4	54.9	54.3	53.8	53.2	52.6	52.1

See Table 4 notes.

TABLE 50—VERSA-DEK® S ES ACOUSTICAL & LS ES ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-HSN24 (0.125 inch ≤ steel substrate thickness ≤ 0.375 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/3			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	530	519	511	505	500	495	491	488
		G'	18.6	19.6	20.4	21.1	21.7	22.2	22.7	23.1
	12"	S	327	322	318	315	312	310	308	307
		G'	17.7	18.5	19.2	19.7	20.2	20.7	21.1	21.4
	18"	S	231	226	222	219	217	215	213	211
		G'	17.0	17.7	18.2	18.7	19.1	19.5	19.8	20.1
	24"	S	184	179	175	172	169	167	165	164
		G'	16.5	17.1	17.6	18.0	18.3	18.6	18.8	19.0
	30"	S	155	150	146	143	140	138	137	135
		G'	16.1	16.6	17.0	17.3	17.6	17.9	18.0	18.2
	36"	S	136	131	127	124	121	119	117	116
		G'	15.7	16.2	16.6	16.8	17.1	17.3	17.4	17.5
20 0.0358"	6"	S	570	559	551	544	538	533	529	526
		G'	26.3	27.5	28.4	29.3	30.0	30.6	31.2	31.6
	12"	S	397	391	386	382	379	376	374	372
		G'	24.6	25.5	26.3	27.0	27.5	28.0	28.4	28.8
	18"	S	281	275	270	266	263	261	258	257
		G'	23.4	24.2	24.8	25.3	25.7	26.1	26.4	26.6
	24"	S	223	217	212	208	205	203	200	199
		G'	22.5	23.2	23.6	24.0	24.3	24.6	24.8	25.0
	30"	S	188	182	177	173	170	168	166	164
		G'	21.9	22.4	22.7	23.0	23.2	23.4	23.6	23.7
	36"	S	165	159	154	150	147	145	142	141
		G'	21.3	21.7	22.0	22.2	22.4	22.5	22.6	22.6
18 0.0474"	6"	S	746	731	720	711	704	697	692	688
		G'	44.1	45.7	47.0	48.1	49.0	49.8	50.5	51.1
	12"	S	527	517	511	506	502	498	495	493
		G'	40.1	41.2	42.1	42.8	43.4	43.9	44.4	44.8
	18"	S	373	364	357	352	348	345	342	339
		G'	37.4	38.2	38.7	39.2	39.6	39.9	40.2	40.4
	24"	S	297	287	281	276	272	268	265	263
		G'	35.5	36.0	36.3	36.6	36.8	37.0	37.1	37.2
	30"	S	251	241	235	230	225	222	219	217
		G'	34.0	34.3	34.5	34.6	34.7	34.7	34.7	34.7
	36"	S	220	210	204	199	195	191	189	186
		G'	32.9	33.0	33.1	33.1	33.0	33.0	32.9	32.8
16 0.0598"	6"	S	929	911	896	885	876	868	862	856
		G'	70.5	72.7	74.4	75.9	77.1	78.2	79.1	79.9
	12"	S	666	654	644	638	633	628	625	622
		G'	61.7	62.9	63.9	64.7	65.3	65.9	66.3	66.7
	18"	S	473	460	451	444	439	435	431	428
		G'	56.1	56.8	57.2	57.6	57.8	58.0	58.2	58.3
	24"	S	376	363	354	348	342	338	334	331
		G'	52.3	52.5	52.6	52.7	52.7	52.6	52.6	52.5
	30"	S	318	305	296	289	284	280	276	273
		G'	49.5	49.4	49.3	49.1	48.9	48.6	48.4	48.2
	36"	S	279	267	257	251	246	241	238	235
		G'	47.4	47.1	46.7	46.3	45.9	45.6	45.2	44.9

ATTACHMENT PATTERN: 24/6			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	13' - 0"	14' - 0"
22 0.0295"	6"	S	639	615	596	581	569	559	550	543
		G'	18.7	19.6	20.4	21.1	21.8	22.3	22.8	23.2
	12"	S	389	376	367	359	352	347	342	338
		G'	17.8	18.7	19.3	19.9	20.4	20.9	21.2	21.6
	18"	S	294	281	271	263	257	251	247	243
		G'	17.3	18.0	18.6	19.0	19.5	19.8	20.1	20.4
	24"	S	246	233	223	215	209	203	199	195
		G'	16.9	17.5	18.0	18.4	18.7	19.0	19.3	19.5
	30"	S	217	205	195	187	180	175	170	166
		G'	16.5	17.1	17.5	17.9	18.2	18.4	18.6	18.7
	36"	S	198	186	176	168	161	156	151	147
		G'	16.3	16.8	17.2	17.5	17.7	17.9	18.0	18.2
20 0.0358"	6"	S	688	662	642	626	613	602	593	585
		G'	26.4	27.6	28.6	29.4	30.1	30.7	31.3	31.8
	12"	S	464	449	438	429	422	416	410	406
		G'	24.9	25.9	26.6	27.3	27.8	28.3	28.7	29.0
	18"	S	348	334	322	313	306	300	295	290
		G'	23.9	24.7	25.3	25.8	26.2	26.6	26.9	27.1
	24"	S	290	276	264	255	248	242	237	232
		G'	23.2	23.8	24.3	24.7	25.0	25.3	25.5	25.6
	30"	S	255	241	230	221	213	207	202	197
		G'	22.7	23.2	23.6	23.9	24.1	24.3	24.4	24.5
	36"	S	232	218	206	197	190	184	179	174
		G'	22.3	22.7	23.0	23.2	23.4	23.5	23.6	23.6
18 0.0474"	6"	S	899	866	840	819	801	787	775	765
		G'	44.4	46.0	47.3	48.3	49.3	50.0	50.7	51.3
	12"	S	615	594	579	567	558	550	543	537
		G'	40.8	41.9	42.8	43.5	44.1	44.6	45.0	45.4
	18"	S	461	441	426	414	404	396	389	383
		G'	38.5	39.3	39.9	40.3	40.7	40.9	41.2	41.4
	24"	S	385	364	349	337	328	319	313	307
		G'	36.9	37.4	37.8	38.0	38.2	38.3	38.4	38.5
	30"	S	339	318	303	291	282	273	267	261
		G'	35.7	36.1	36.3	36.3	36.4	36.4	36.3	36.3
	36"	S	308	287	272	261	251	243	236	230
		G'	34.8	35.0	35.1	35.0	34.9	34.8	34.7	34.6
16 0.0598"	6"	S	1120	1078	1045	1019	998	980	965	952
		G'	71.2	73.3	75.0	76.5	77.7	78.7	79.6	80.4
	12"	S	776	750	730	715	703	692	684	677
		G'	63.2	64.5	65.4	66.1	66.7	67.2	67.6	67.9
	18"	S	582	556	536	521	509	499	490	483
		G'	58.4	59.0	59.4	59.7	59.9	60.0	60.1	60.1
	24"	S	486	459	439	424	412	402	394	386
		G'	55.2	55.4	55.4	55.3	55.2	55.1	55.0	54.8
	30"	S	428	401	381	366	354	344	335	328
		G'	52.9	52.7	52.5	52.2	51.9	51.5	51.2	50.9
	36"	S	389	363	342	328	315	305	297	289
		G'	51.1	50.7	50.3	49.8	49.3	48.8	48.4	47.9

See Table 4 notes.

TABLE 51—VERSA-DEK® 3.5 LS ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: 1/2" Effective Weld Diameter

SIDELAP CONNECTION: #10 Screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/4

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	613	587	569	556	546	539	532	527
		G'	8.9	10.1	11.2	12.0	12.8	13.4	14.0	14.5
	12"	S	389	362	345	332	323	315	309	305
		G'	8.7	9.9	10.8	11.6	12.3	12.9	13.4	13.8
	18"	S	303	277	259	247	237	230	224	219
		G'	8.6	9.7	10.5	11.3	11.9	12.4	12.9	13.3
	24"	S	261	234	217	204	195	187	181	177
		G'	8.5	9.5	10.3	11.0	11.6	12.1	12.5	12.8
	30"	S	235	209	191	178	169	162	156	151
		G'	8.4	9.4	10.1	10.8	11.3	11.7	12.1	12.4
	36"	S	218	191	174	161	152	145	139	134
		G'	8.3	9.2	10.0	10.6	11.1	11.5	11.8	12.1
19 0.0418"	6"	S	713	683	663	648	636	627	620	614
		G'	12.2	13.7	15.0	16.0	16.9	17.7	18.3	18.9
	12"	S	453	422	402	387	376	368	361	355
		G'	11.8	13.3	14.4	15.3	16.1	16.8	17.4	17.9
	18"	S	353	323	302	287	277	268	261	256
		G'	11.6	12.9	14.0	14.8	15.5	16.1	16.6	17.0
	24"	S	303	273	252	238	227	218	211	206
		G'	11.4	12.6	13.6	14.4	15.0	15.5	16.0	16.4
	30"	S	273	243	222	208	197	188	181	176
		G'	11.3	12.4	13.3	14.0	14.6	15.1	15.4	15.8
	36"	S	253	223	202	188	177	168	162	156
		G'	11.1	12.2	13.1	13.7	14.2	14.7	15.0	15.3
18 0.0474"	6"	S	806	773	750	733	720	710	702	695
		G'	15.7	17.5	19.0	20.2	21.2	22.1	22.9	23.5
	12"	S	513	478	455	439	426	417	409	403
		G'	15.1	16.8	18.1	19.2	20.1	20.8	21.5	22.0
	18"	S	400	365	342	325	313	303	296	290
		G'	14.8	16.3	17.5	18.4	19.2	19.8	20.4	20.9
	24"	S	343	308	285	269	257	247	239	233
		G'	14.5	15.9	16.9	17.8	18.5	19.0	19.5	19.9
	30"	S	309	274	251	235	223	213	205	199
		G'	14.3	15.5	16.5	17.3	17.9	18.4	18.8	19.1
	36"	S	286	252	229	212	200	190	183	176
		G'	14.1	15.3	16.2	16.8	17.4	17.8	18.1	18.4
16 0.0598"	6"	S	1011	970	941	920	904	892	882	874
		G'	25.1	27.7	29.8	31.4	32.8	33.9	34.9	35.7
	12"	S	644	601	572	552	536	524	515	507
		G'	24.1	26.3	28.0	29.4	30.5	31.4	32.2	32.9
	18"	S	502	458	430	409	394	382	372	364
		G'	23.4	25.3	26.8	28.0	28.9	29.6	30.2	30.7
	24"	S	430	387	358	338	322	310	301	293
		G'	22.9	24.6	25.9	26.9	27.6	28.2	28.7	29.1
	30"	S	387	344	316	295	280	268	258	250
		G'	22.5	24.1	25.2	26.0	26.6	27.1	27.4	27.7
	36"	S	359	316	287	266	251	239	229	222
		G'	22.2	23.6	24.6	25.3	25.8	26.2	26.4	26.7

ATTACHMENT PATTERN: 24/8

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	692	656	632	615	603	593	585	578
		G'	8.9	10.2	11.2	12.0	12.8	13.4	14.0	14.5
	12"	S	436	400	376	359	346	336	328	322
		G'	8.8	9.9	10.9	11.7	12.3	12.9	13.4	13.9
	18"	S	351	315	291	274	261	251	243	237
		G'	8.6	9.7	10.6	11.4	12.0	12.5	13.0	13.4
	24"	S	308	272	248	231	218	208	200	194
		G'	8.5	9.6	10.4	11.1	11.7	12.2	12.6	13.0
	30"	S	282	246	223	205	193	183	175	168
		G'	8.5	9.5	10.3	10.9	11.5	11.9	12.3	12.6
	36"	S	265	229	205	188	176	166	158	151
		G'	8.4	9.4	10.2	10.8	11.3	11.7	12.0	12.3
19 0.0418"	6"	S	807	765	738	718	703	691	682	675
		G'	12.2	13.7	15.0	16.1	16.9	17.7	18.4	18.9
	12"	S	508	466	438	419	404	392	383	375
		G'	11.9	13.3	14.5	15.4	16.2	16.9	17.5	18.0
	18"	S	408	367	339	319	304	292	283	276
		G'	11.7	13.0	14.1	14.9	15.7	16.2	16.8	17.2
	24"	S	358	317	289	269	254	243	233	226
		G'	11.6	12.8	13.8	14.6	15.2	15.7	16.2	16.6
	30"	S	328	287	259	239	224	213	203	196
		G'	11.4	12.6	13.5	14.3	14.9	15.3	15.7	16.1
	36"	S	308	267	239	219	204	193	184	176
		G'	11.3	12.5	13.4	14.0	14.6	15.0	15.3	15.6
18 0.0474"	6"	S	914	867	836	813	796	783	773	764
		G'	15.7	17.5	19.0	20.3	21.3	22.2	22.9	23.6
	12"	S	575	528	496	474	457	444	434	425
		G'	15.2	16.9	18.2	19.3	20.2	21.0	21.6	22.2
	18"	S	462	415	383	361	344	331	321	312
		G'	14.9	16.5	17.7	18.6	19.4	20.0	20.6	21.1
	24"	S	405	358	327	304	288	275	264	256
		G'	14.7	16.1	17.2	18.1	18.8	19.3	19.8	20.2
	30"	S	371	324	293	270	254	241	230	222
		G'	14.5	15.9	16.9	17.6	18.3	18.7	19.1	19.5
	36"	S	348	301	270	248	231	218	208	199
		G'	14.4	15.7	16.6	17.3	17.8	18.3	18.6	18.9
16 0.0598"	6"	S	1149	1091	1052	1024	1003	987	974	963
		G'	25.2	27.8	29.9	31.5	32.9	34.0	35.0	35.8
	12"	S	721	663	624	596	575	559	546	535
		G'	24.4	26.6	28.4	29.7	30.9	31.8	32.5	33.2
	18"	S	579	520	481	453	432	416	403	392
		G'	23.8	25.8	27.3	28.5	29.4	30.2	30.8	31.3
	24"	S	507	449	410	382	361	345	332	321
		G'	23.4	25.3	26.6	27.6	28.4	28.9	29.4	29.8
	30"	S	465	406	367	339	318	302	289	278
		G'	23.1	24.8	26.0	26.9	27.5	28.0	28.4	28.7
	36"	S	436	377	338	310	290	273	260	250
		G'	22.9	24.5	25.6	26.3	26.9	27.3	27.5	27.7

See Table 4 notes.

TABLE 52—VERSA-DEK® 3.5 LS ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-3]

SUPPORT CONNECTION: **$^1/_2$" Effective Weld Diameter**

SIDELAP CONNECTION: **1 $^1/_2$" Long Fillet Welds or 1 $^1/_2$" Seam Welds**

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/3

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	918	899	886	876	869	864	859	856
		G'	9.1	10.3	11.4	12.3	13.1	13.8	14.4	14.9
	12"	S	868	848	833	823	814	808	802	798
		G'	9.0	10.2	11.2	12.1	12.9	13.5	14.1	14.6
	18"	S	732	702	681	665	653	644	636	630
		G'	8.9	10.1	11.1	11.9	12.7	13.3	13.9	14.3
	24"	S	642	607	581	563	549	538	529	521
		G'	8.8	10.0	11.0	11.8	12.5	13.1	13.6	14.1
	30"	S	581	541	514	493	478	466	456	448
		G'	8.8	9.9	10.9	11.7	12.3	12.9	13.4	13.9
	36"	S	534	490	461	440	425	413	403	395
		G'	8.7	9.8	10.8	11.5	12.2	12.7	13.2	13.6
19 0.0418"	6"	S	1065	1042	1027	1016	1008	1002	996	992
		G'	12.4	14.1	15.4	16.5	17.5	18.3	19.0	19.7
	12"	S	1007	983	966	954	944	936	930	925
		G'	12.3	13.8	15.1	16.2	17.1	17.9	18.6	19.1
	18"	S	849	814	789	771	757	746	737	730
		G'	12.1	13.6	14.9	15.9	16.8	17.5	18.1	18.7
	24"	S	745	703	674	653	636	623	613	604
		G'	12.0	13.5	14.7	15.6	16.5	17.2	17.8	18.3
	30"	S	673	627	596	572	554	540	528	519
		G'	11.9	13.3	14.5	15.4	16.2	16.9	17.4	17.9
	36"	S	619	568	535	511	492	478	467	458
		G'	11.8	13.2	14.3	15.2	16.0	16.6	17.1	17.6
18 0.0474"	6"	S	1200	1174	1157	1145	1135	1128	1123	1118
		G'	16.1	18.0	19.6	21.0	22.1	23.1	23.9	24.6
	12"	S	1134	1107	1089	1074	1064	1055	1048	1042
		G'	15.8	17.7	19.2	20.5	21.5	22.4	23.2	23.9
	18"	S	956	917	889	869	853	841	831	822
		G'	15.6	17.4	18.8	20.0	21.0	21.9	22.6	23.2
	24"	S	839	792	760	735	717	702	690	680
		G'	15.4	17.1	18.5	19.6	20.6	21.4	22.0	22.6
	30"	S	758	707	671	644	624	608	595	585
		G'	15.3	16.9	18.2	19.3	20.2	20.9	21.6	22.1
	36"	S	697	640	602	575	555	539	526	516
		G'	15.1	16.7	18.0	19.0	19.8	20.5	21.1	21.6
16 0.0598"	6"	S	1491	1460	1438	1423	1412	1403	1396	1390
		G'	26.0	28.9	31.1	33.0	34.5	35.8	37.0	37.9
	12"	S	1410	1377	1353	1336	1322	1312	1303	1296
		G'	25.4	28.1	30.2	31.9	33.3	34.5	35.5	36.4
	18"	S	1189	1140	1106	1080	1061	1045	1033	1022
		G'	25.0	27.5	29.4	31.0	32.3	33.4	34.3	35.1
	24"	S	1043	985	944	914	891	873	858	846
		G'	24.6	27.0	28.8	30.3	31.4	32.4	33.2	34.0
	30"	S	943	879	834	801	776	756	740	727
		G'	24.3	26.5	28.3	29.6	30.7	31.6	32.3	33.0
	36"	S	867	796	749	715	690	670	654	641
		G'	24.0	26.2	27.8	29.1	30.1	30.9	31.6	32.1

ATTACHMENT PATTERN: 24/6

GAGE	SIDE LAP SPACING	FACTOR	DECK SPAN - C to C SUPPORT 8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	1034	991	962	942	927	915	906	898
		G'	9.1	10.3	11.4	12.3	13.1	13.8	14.4	15.0
	12"	S	1034	991	962	942	927	915	906	898
		G'	9.0	10.2	11.3	12.1	12.9	13.6	14.1	14.6
	18"	S	893	839	803	776	756	740	728	717
		G'	8.9	10.1	11.1	12.0	12.7	13.3	13.9	14.4
	24"	S	739	686	650	625	606	591	580	570
		G'	8.8	10.0	11.0	11.8	12.5	13.1	13.7	14.1
	30"	S	644	591	556	531	512	497	485	475
		G'	8.8	9.9	10.9	11.7	12.4	13.0	13.5	13.9
	36"	S	581	528	493	467	449	434	422	412
		G'	8.8	9.9	10.8	11.6	12.2	12.8	13.3	13.7
19 0.0418"	6"	S	1198	1149	1116	1092	1075	1061	1050	1041
		G'	12.4	14.1	15.4	16.5	17.5	18.3	19.0	19.7
	12"	S	1198	1149	1116	1092	1075	1061	1050	1041
		G'	12.3	13.8	15.1	16.2	17.1	17.9	18.6	19.2
	18"	S	1035	973	931	900	877	858	844	832
		G'	12.2	13.7	14.9	15.9	16.8	17.5	18.2	18.7
	24"	S	857	795	754	725	703	686	672	661
		G'	12.1	13.5	14.7	15.7	16.5	17.2	17.8	18.3
	30"	S	747	685	644	615	593	576	562	551
		G'	12.0	13.4	14.5	15.5	16.3	16.9	17.5	18.0
	36"	S	674	612	571	542	520	503	489	478
		G'	11.9	13.3	14.4	15.3	16.1	16.7	17.2	17.7
18 0.0474"	6"	S	1350	1294	1257	1231	1211	1195	1183	1173
		G'	16.1	18.1	19.7	21.0	22.1	23.1	23.9	24.6
	12"	S	1350	1294	1257	1231	1211	1195	1183	1173
		G'	15.8	17.7	19.2	20.5	21.5	22.4	23.2	23.9
	18"	S	1166	1096	1048	1014	988	967	951	937
		G'	15.6	17.4	18.9	20.1	21.1	21.9	22.6	23.3
	24"	S	965	896	850	817	792	772	757	744
		G'	15.5	17.2	18.6	19.7	20.7	21.4	22.1	22.7
	30"	S	842	772	726	693	668	649	633	621
		G'	15.3	17.0	18.3	19.4	20.3	21.0	21.7	22.2
	36"	S	759	690	644	611	586	567	551	538
		G'	15.2	16.9	18.1	19.1	20.0	20.7	21.3	21.8
16 0.0598"	6"	S	1679	1609	1563	1530	1505	1486	1471	1458
		G'	26.1	28.9	31.2	33.0	34.6	35.9	37.0	37.9
	12"	S	1679	1609	1563	1530	1505	1486	1471	1458
		G'	25.5	28.2	30.3	32.0	33.4	34.6	35.6	36.5
	18"	S	1450	1363	1303	1260	1228	1202	1182	1165
		G'	25.1	27.6	29.6	31.2	32.5	33.5	34.4	35.2
	24"	S	1200	1114	1056	1015	984	960	941	926
		G'	24.8	27.2	29.0	30.5	31.7	32.7	33.5	34.2
	30"	S	1046	960	903	862	831	807	788	772
		G'	24.5	26.8	28.6	29.9	31.0	31.9	32.7	33.3
	36"	S	944	858	800	759	728	704	685	669
		G'	24.3	26.5	28.2	29.4	30.4	31.3	31.9	32.5

See Table 4 notes.

TABLE 53—VERSA-DEK® 3.5 LS ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-ENP-19-L15 (steel substrate thickness ≥ 0.25 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/3			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	538	531	526	523	520	518	517	516
		G'	8.9	10.1	11.2	12.0	12.8	13.4	14.0	14.5
	12"	S	393	379	369	362	357	352	349	346
		G'	8.7	9.8	10.8	11.6	12.3	12.8	13.4	13.8
	18"	S	307	292	282	275	270	264	260	257
		G'	8.5	9.6	10.5	11.2	11.9	12.4	12.8	13.2
	24"	S	249	234	224	217	212	208	204	202
		G'	8.4	9.4	10.3	10.9	11.5	12.0	12.4	12.8
	30"	S	214	199	189	182	177	173	169	167
		G'	8.3	9.3	10.1	10.7	11.2	11.7	12.0	12.4
	36"	S	191	176	166	159	154	150	146	144
		G'	8.2	9.2	9.9	10.5	11.0	11.4	11.7	12.0
19 0.0418"	6"	S	624	616	610	607	604	602	600	598
		G'	12.2	13.7	15.0	16.0	16.9	17.7	18.3	18.9
	12"	S	458	441	430	422	415	410	406	403
		G'	11.8	13.2	14.4	15.3	16.1	16.8	17.3	17.9
	18"	S	358	341	329	321	314	308	303	300
		G'	11.5	12.8	13.9	14.7	15.4	16.0	16.5	17.0
	24"	S	291	273	262	253	247	242	238	235
		G'	11.3	12.5	13.5	14.3	14.9	15.4	15.9	16.3
	30"	S	250	233	221	213	206	202	198	195
		G'	11.2	12.3	13.2	13.9	14.5	14.9	15.3	15.7
	36"	S	223	206	194	186	179	175	171	167
		G'	11.0	12.1	12.9	13.6	14.1	14.5	14.8	15.1
18 0.0474"	6"	S	703	694	688	684	681	678	676	674
		G'	15.7	17.5	19.0	20.2	21.2	22.1	22.9	23.5
	12"	S	518	500	487	477	470	465	460	456
		G'	15.1	16.8	18.1	19.1	20.0	20.8	21.4	22.0
	18"	S	406	386	373	364	356	349	344	339
		G'	14.7	16.2	17.4	18.3	19.1	19.7	20.3	20.8
	24"	S	329	309	296	287	280	274	270	266
		G'	14.4	15.7	16.8	17.6	18.3	18.9	19.4	19.8
	30"	S	283	263	250	241	234	228	224	220
		G'	14.1	15.4	16.3	17.1	17.7	18.2	18.6	18.9
	36"	S	252	233	220	210	203	198	193	190
		G'	13.9	15.1	16.0	16.6	17.2	17.6	17.9	18.2
16 0.0598"	6"	S	876	864	857	851	847	844	842	840
		G'	25.0	27.6	29.7	31.3	32.7	33.8	34.8	35.6
	12"	S	650	627	611	600	591	584	578	574
		G'	23.8	26.0	27.7	29.1	30.2	31.1	31.9	32.6
	18"	S	511	487	470	458	447	439	432	427
		G'	22.9	24.8	26.3	27.4	28.3	29.1	29.7	30.2
	24"	S	415	390	373	362	353	346	340	336
		G'	22.2	23.9	25.1	26.1	26.8	27.4	27.9	28.3
	30"	S	356	332	315	303	295	288	282	278
		G'	21.7	23.2	24.2	25.0	25.6	26.1	26.5	26.8
	36"	S	318	293	277	265	256	249	244	239
		G'	21.2	22.6	23.5	24.1	24.6	25.0	25.3	25.6

ATTACHMENT PATTERN: 24/6			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	617	594	579	568	560	554	549	544
		G'	8.9	10.2	11.2	12.0	12.8	13.4	14.0	14.5
	12"	S	468	444	428	416	408	401	396	391
		G'	8.7	9.9	10.8	11.6	12.3	12.9	13.4	13.9
	18"	S	352	328	312	301	292	285	280	276
		G'	8.6	9.7	10.6	11.3	12.0	12.5	12.9	13.3
	24"	S	294	270	254	243	234	227	222	218
		G'	8.5	9.6	10.4	11.1	11.7	12.1	12.6	12.9
	30"	S	259	235	219	208	199	193	187	183
		G'	8.4	9.4	10.2	10.9	11.4	11.9	12.2	12.6
	36"	S	236	212	196	185	176	169	164	160
		G'	8.4	9.4	10.1	10.7	11.2	11.6	12.0	12.3
19 0.0418"	6"	S	716	689	672	659	650	642	637	632
		G'	12.2	13.7	15.0	16.0	16.9	17.7	18.4	18.9
	12"	S	545	518	499	486	476	468	462	456
		G'	11.9	13.3	14.4	15.4	16.2	16.9	17.4	17.9
	18"	S	410	382	364	350	341	333	327	322
		G'	11.7	13.0	14.0	14.9	15.6	16.2	16.7	17.1
	24"	S	342	315	296	283	273	265	259	254
		G'	11.5	12.7	13.7	14.5	15.1	15.7	16.1	16.5
	30"	S	302	274	255	242	232	225	218	213
		G'	11.4	12.6	13.5	14.2	14.8	15.2	15.6	16.0
	36"	S	275	247	228	215	205	198	191	186
		G'	11.3	12.4	13.3	13.9	14.5	14.9	15.2	15.5
18 0.0474"	6"	S	807	777	757	743	732	724	718	712
		G'	15.7	17.5	19.0	20.2	21.3	22.1	22.9	23.6
	12"	S	618	586	565	550	539	531	524	517
		G'	15.2	16.9	18.2	19.3	20.2	20.9	21.6	22.1
	18"	S	464	433	412	397	386	377	370	364
		G'	14.9	16.4	17.6	18.6	19.3	20.0	20.5	21.0
	24"	S	388	356	335	320	309	300	293	288
		G'	14.6	16.0	17.1	18.0	18.7	19.2	19.7	20.1
	30"	S	342	310	289	274	263	254	247	242
		G'	14.4	15.8	16.8	17.5	18.1	18.6	19.0	19.3
	36"	S	311	279	259	244	232	224	217	211
		G'	14.3	15.5	16.5	17.1	17.7	18.1	18.5	18.7
16 0.0598"	6"	S	1005	968	943	925	912	902	893	887
		G'	25.1	27.7	29.7	31.4	32.8	33.9	34.9	35.7
	12"	S	778	738	712	693	679	668	659	651
		G'	24.0	26.3	28.0	29.4	30.5	31.4	32.2	32.8
	18"	S	584	545	519	500	486	475	466	459
		G'	23.3	25.3	26.7	27.9	28.8	29.5	30.1	30.6
	24"	S	487	448	422	403	389	378	369	362
		G'	22.8	24.5	25.8	26.7	27.5	28.1	28.6	29.0
	30"	S	429	390	364	345	331	320	311	304
		G'	22.3	23.9	25.0	25.8	26.5	26.9	27.3	27.6
	36"	S	390	351	325	306	292	281	273	265
		G'	22.0	23.5	24.4	25.1	25.6	26.0	26.3	26.5

See Table 4 notes.

TABLE 54—VERSA-DEK® 3.5 LS ACOUSTICAL – ALLOWABLE DIAPHRAGM SHEAR[1-5]

SUPPORT CONNECTION: Hilti X-HSN24 (0.125 inch ≤ steel substrate thickness ≤ 0.375 inch)

SIDELAP CONNECTION: Hilti S-SLC01 M HWH, S-SLC02 M HWH or #12 self-drilling screws

S = Allowable Diaphragm Shear (plf)

G' = Stiffness Factor (kips/in.)

ATTACHMENT PATTERN: 24/3			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	499	493	489	486	483	481	480	479
		G'	8.9	10.1	11.1	12.0	12.8	13.4	14.0	14.5
	12"	S	382	369	360	354	349	345	342	339
		G'	8.7	9.8	10.8	11.6	12.2	12.8	13.3	13.8
	18"	S	305	290	279	271	265	260	256	253
		G'	8.5	9.6	10.5	11.2	11.8	12.3	12.8	13.2
	24"	S	247	232	223	216	211	207	203	201
		G'	8.4	9.4	10.2	10.9	11.4	11.9	12.3	12.7
	30"	S	212	198	188	181	176	172	169	166
		G'	8.2	9.2	10.0	10.6	11.1	11.5	11.9	12.2
	36"	S	189	174	165	158	153	149	145	143
		G'	8.1	9.0	9.8	10.4	10.8	11.2	11.6	11.9
19 0.0418"	6"	S	579	572	567	563	561	559	557	556
		G'	12.2	13.7	14.9	16.0	16.9	17.7	18.3	18.9
	12"	S	445	430	420	412	406	402	398	395
		G'	11.8	13.2	14.3	15.3	16.0	16.7	17.3	17.8
	18"	S	356	338	325	316	309	303	299	295
		G'	11.5	12.8	13.8	14.6	15.4	15.9	16.5	16.9
	24"	S	288	271	260	252	246	241	237	234
		G'	11.2	12.4	13.4	14.1	14.8	15.3	15.7	16.1
	30"	S	247	230	219	211	205	200	197	194
		G'	11.0	12.1	13.0	13.7	14.3	14.8	15.1	15.5
	36"	S	220	203	192	184	178	173	170	167
		G'	10.9	11.9	12.7	13.3	13.9	14.3	14.6	14.9
18 0.0474"	6"	S	653	645	639	635	632	630	628	626
		G'	15.6	17.5	19.0	20.2	21.2	22.1	22.8	23.5
	12"	S	503	486	475	466	460	455	451	447
		G'	15.0	16.7	18.0	19.1	20.0	20.7	21.4	21.9
	18"	S	403	382	368	357	350	343	338	334
		G'	14.6	16.1	17.2	18.2	19.0	19.6	20.2	20.6
	24"	S	326	307	294	285	278	273	269	265
		G'	14.2	15.6	16.6	17.5	18.1	18.7	19.2	19.6
	30"	S	280	261	248	239	232	227	223	219
		G'	13.9	15.2	16.1	16.9	17.4	17.9	18.3	18.7
	36"	S	250	230	218	209	202	196	192	189
		G'	13.7	14.8	15.7	16.3	16.9	17.3	17.6	17.9
16 0.0598"	6"	S	813	803	796	791	787	784	782	780
		G'	25.0	27.6	29.6	31.3	32.6	33.8	34.7	35.6
	12"	S	632	611	596	586	578	571	566	562
		G'	23.6	25.9	27.6	28.9	30.1	31.0	31.8	32.4
	18"	S	506	480	462	449	439	432	425	420
		G'	22.6	24.6	26.0	27.2	28.1	28.8	29.5	30.0
	24"	S	411	387	371	359	351	344	339	334
		G'	21.9	23.5	24.8	25.7	26.5	27.1	27.6	28.0
	30"	S	353	329	313	301	293	286	281	276
		G'	21.2	22.7	23.8	24.6	25.2	25.7	26.1	26.4
	36"	S	314	290	274	263	254	247	242	238
		G'	20.7	22.0	22.9	23.6	24.1	24.5	24.8	25.0

ATTACHMENT PATTERN: 24/6			DECK SPAN - C to C SUPPORT							
GAGE	SIDE LAP SPACING	FACTOR	8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"
20 0.0358"	6"	S	573	552	538	528	520	514	509	506
		G'	8.9	10.1	11.2	12.0	12.8	13.4	14.0	14.5
	12"	S	462	439	424	413	405	397	392	387
		G'	8.7	9.9	10.8	11.6	12.3	12.9	13.4	13.8
	18"	S	346	323	308	297	289	283	278	274
		G'	8.6	9.6	10.5	11.2	11.9	12.4	12.9	13.3
	24"	S	288	266	250	239	231	225	220	216
		G'	8.4	9.5	10.3	11.0	11.5	12.0	12.4	12.8
	30"	S	254	231	216	205	197	190	185	181
		G'	8.3	9.3	10.1	10.7	11.2	11.7	12.1	12.4
	36"	S	230	208	192	182	173	167	162	158
		G'	8.3	9.2	9.9	10.5	11.0	11.4	11.7	12.0
19 0.0418"	6"	S	665	640	624	612	603	597	591	587
		G'	12.2	13.7	15.0	16.0	16.9	17.7	18.3	18.9
	12"	S	539	512	495	482	472	463	457	451
		G'	11.8	13.2	14.4	15.3	16.1	16.8	17.4	17.9
	18"	S	404	377	360	347	337	330	324	319
		G'	11.6	12.9	13.9	14.8	15.5	16.1	16.6	17.0
	24"	S	336	310	292	279	270	262	256	252
		G'	11.4	12.6	13.5	14.3	14.9	15.5	15.9	16.3
	30"	S	295	269	251	239	229	222	216	211
		G'	11.2	12.3	13.2	13.9	14.5	15.0	15.4	15.7
	36"	S	268	242	224	212	202	195	189	184
		G'	11.1	12.1	13.0	13.6	14.1	14.5	14.9	15.2
18 0.0474"	6"	S	749	722	703	690	680	672	666	661
		G'	15.7	17.5	19.0	20.2	21.2	22.1	22.9	23.5
	12"	S	611	581	561	546	534	525	517	511
		G'	15.1	16.8	18.1	19.2	20.1	20.8	21.4	22.0
	18"	S	457	427	407	393	382	374	367	362
		G'	14.7	16.2	17.4	18.3	19.1	19.8	20.3	20.8
	24"	S	380	351	331	316	306	297	291	285
		G'	14.4	15.8	16.8	17.7	18.4	18.9	19.4	19.8
	30"	S	334	304	285	270	260	251	245	239
		G'	14.2	15.4	16.4	17.1	17.7	18.2	18.6	19.0
	36"	S	304	274	254	240	229	221	214	208
		G'	13.9	15.1	16.0	16.7	17.2	17.6	18.0	18.3
16 0.0598"	6"	S	933	898	875	859	847	837	830	823
		G'	25.0	27.6	29.7	31.3	32.7	33.8	34.8	35.6
	12"	S	769	731	706	687	672	660	651	643
		G'	23.8	26.0	27.8	29.1	30.2	31.2	31.9	32.6
	18"	S	575	538	513	495	481	471	463	456
		G'	22.9	24.9	26.3	27.5	28.4	29.1	29.7	30.3
	24"	S	478	441	416	398	385	374	366	359
		G'	22.3	24.0	25.2	26.2	26.9	27.5	28.0	28.4
	30"	S	420	383	358	340	327	316	308	301
		G'	21.7	23.2	24.3	25.1	25.7	26.2	26.6	26.9
	36"	S	382	344	319	301	288	277	269	262
		G'	21.3	22.7	23.6	24.3	24.8	25.1	25.4	25.7

See Table 4 notes.

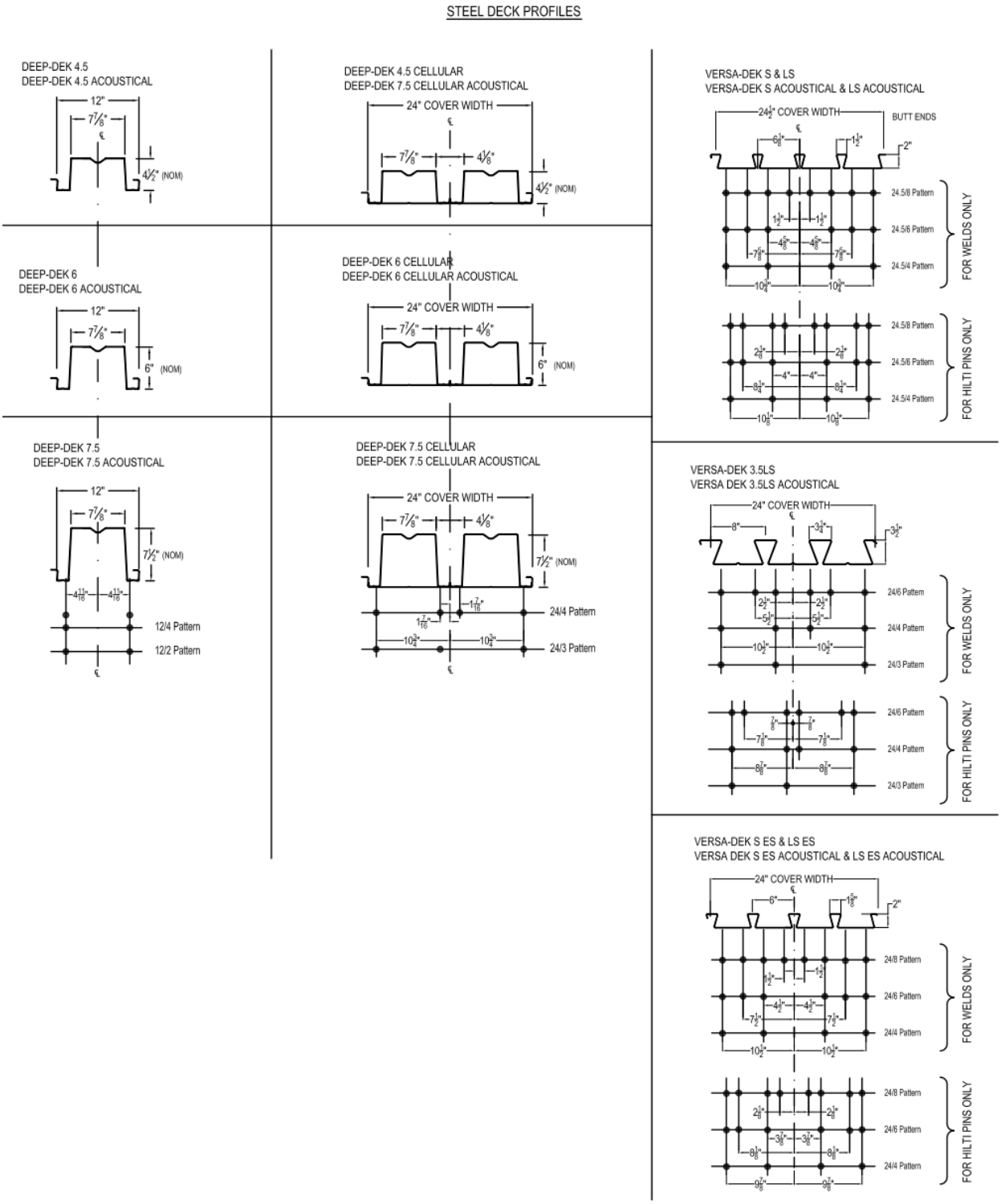


FIGURE 1—STEEL DECK PANEL PROFILES AND ATTACHMENT PATTERNS AT SUPPORTS

DECK TYPE	PERFORATION DIAMETER (in.)	PERFORATION SPACING, a
Versa-Dek® S Acoustical, Versa-Dek® LS Acoustical	0.156	31 spaces @ 0.1875" = 5.813"
Versa-Dek® S ES Acoustical, Versa-Dek® LS ES Acoustical	0.157	30 spaces @ 0.1895" = 5.685"
Versa-Dek® 3.5 LS Acoustical	0.156	46 spaces @ 0.162" = 7.452"

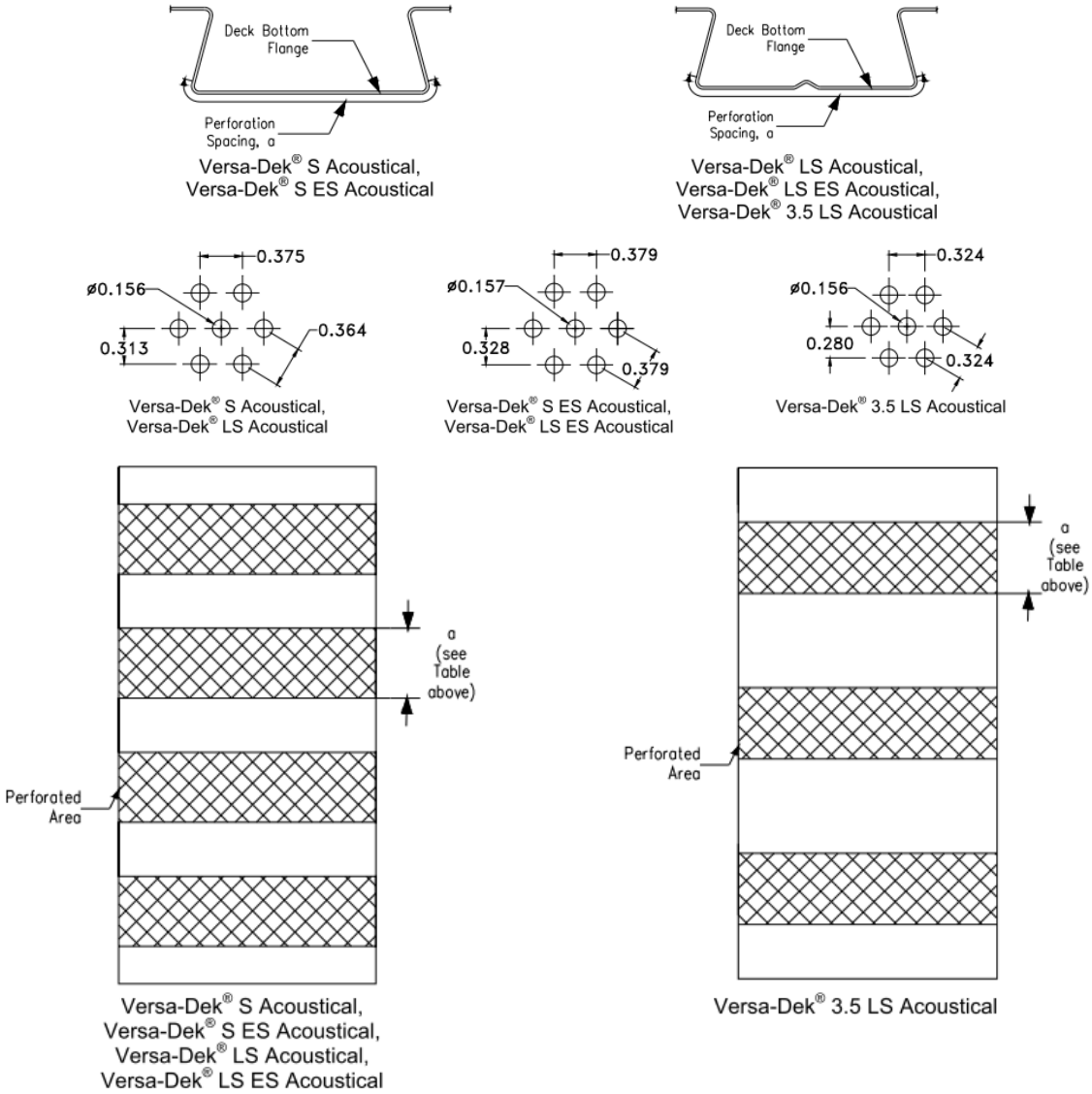
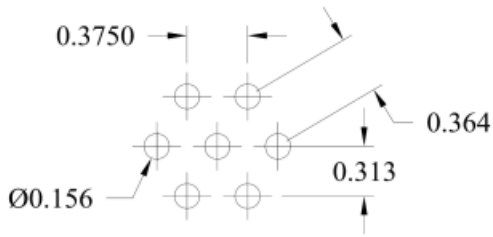
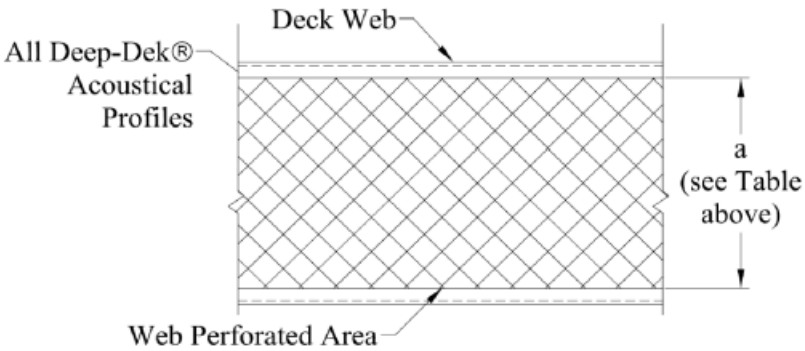


FIGURE 2—PERFORATION PATTERNS OF VERSA-DEK ACOUSTICAL PROFILES

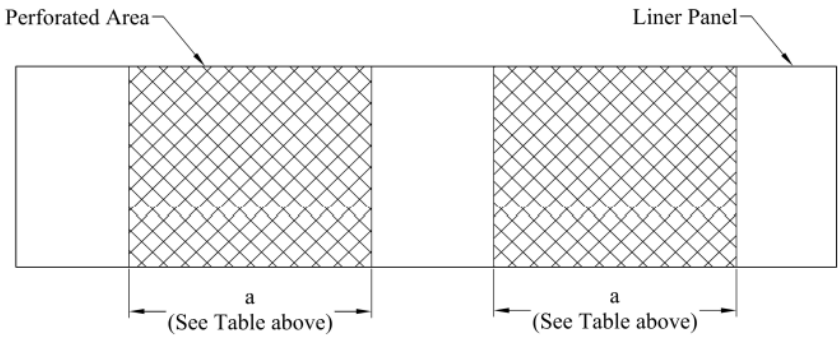
DECK TYPE	PERFORATION DIAMETER (in)	PERFORATION SPACING, a
Deep-Dek® 4.5 Acoustical	0.156	10 spaces @ 0.375" = 3.750"
Deep-Dek® 6 Acoustical	0.156	14 spaces @ 0.375" = 5.250"
Deep-Dek® 7.5 Acoustical	0.156	18 spaces @ 0.375" = 6.750"
Deep-Dek® Cellular Acoustical	0.156	21 spaces @ 0.375" = 7.875"



All Deep-Dek® Acoustical & Deep-Dek® Cellular Acoustical Profiles



All Deep-Dek® Acoustical Profiles



All Deep-Dek® Cellular Acoustical Profiles

FIGURE 3—PERFORATION PATTERNS OF DEEP-DEK® ACOUSTICAL & DEEP-DEK® CELLULAR ACOUSTICAL

ICC-ES Evaluation Report

ESR-2657 CBC Supplement

Reissued March 2018

This report is subject to renewal March 2020.

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DIVISION: 05 00 00—METALS
Section: 05 31 00—Steel Decking
Section: 05 31 23—Steel Roof Decking

REPORT HOLDER:

NEW MILLENNIUM BUILDING SYSTEMS, LLC
7575 WEST JEFFERSON BOULEVARD
FORT WAYNE, INDIANA 46804
(260) 969-3500
www.newmill.com

EVALUATION SUBJECT:

NEW MILLENNIUM STEEL ROOF DECK PANELS: D4.5, D6 AND D7.5 DEEP-DEK®; D4.5A, D6A AND D7.5A DEEP-DEK® ACOUSTICAL; D4.5C, D6C AND D7.5C DEEP-DEK® CELLULAR; D4.5CA, D6CA AND D7.5CA DEEP-DEK® CELLULAR ACOUSTICAL; VERSA-DEK® ROOF DECK PANELS; AND VERSA-DEK® ACOUSTICAL ROOF DECK PANELS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that New Millennium Steel Roof Deck Panels: D4.5, D6 and D7.5 Deep-Dek®; D4.5A, D6A AND D7.5A Deep-Dek® Acoustical; D4.5C, D6C and D7.5C Deep-Dek® Cellular; D4.5CA, D6CA and D7.5CA Deep-Dek® Cellular Acoustical; Versa-Dek® roof deck panels; and Versa-Dek® Acoustical roof deck panels, recognized in ICC-ES master evaluation report ESR-2657, have also been evaluated for compliance with Chapters 22 and 22A of the code noted below.

Applicable code edition:

2013 *California Building Code* (CBC)

2.0 CONCLUSIONS

The New Millennium Steel Roof Deck Panels: D4.5, D6 and D7.5 Deep-Dek®; D4.5A, D6A and D7.5A Deep-Dek® Acoustical; D4.5C, D6C AND D7.5C Deep-Dek® Cellular; D4.5CA, D6CA AND D7.5CA Deep-Dek® Cellular Acoustical; Versa-Dek® roof deck panels; and Versa-Dek® Acoustical roof deck panels, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2657, comply with CBC Chapters 22 and 22A, provided the design and installation are in accordance with the 2012 *International Building Code®* (IBC) provisions noted in the master report and the additional requirements of the CBC Chapters 16, 16A, 17, 17A, 22 and 22A, as applicable.

This supplement expires concurrently with the master report, reissued March 2018 and revised April 2018.

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.

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MLM-MARTIN
ARCHITECTS, INC.

substitution request review

Project:	ITB AP 35-20 Construction of Satellite Concourse "C"	**Owner:**	Okaloosa County, Florida Board of County Commissioners
Project Address:	Destin-Fort Walton Beach Airport 1701- State Road 85 North Eglin AFB, Florida 32542-1498		Okaloosa County Purchasing Department 5479A Old Bethel Road Crestview, FL 32536
		OAR:	Jessica Darr
To:	Record Doors 4324 Phil Hargett Court Monroe, NC 28110	**From:**	MLM-Martin Architects, Inc. 668 N. Orlando Ave, Ste. 107 Maitland, FL 32751
ATTN:	Pamela Czahoroski		Miguel A. Martin, Assoc. AIA
Substitution #:	004 – 08 42 29 Automatic Entrance Doors		
Section:	08 42 29 Automatic Entrance Doors		
Date:	3/5/2020	**File:**	19672-511-20

☐ **Approved - Supply Submittal Materials as Specified.**	■ **Approved with Exceptions Noted**	☐ **Rejected Use Specified Materials**	☐ **Request Received too Late Use Specified Materials**

The above substitution request was reviewed as follows:

Drawings provided for evaluation indicate single slide (max opening 84"). Project requires Bi Parting (14'-0" opening).

This approval is contingent on the following:

1. Opening can be provided as scheduled in drawings.
2. Emergency brake away opening width meets or exceeds 153.5" as indicated on sheet AL211.
3. Opening sensors able to operate without interference within vestibule depth indicated on sheet A211.
4. Glazing can be tinted to match curtain wall glazing as specified §084929-2.4-C.-1.
5. Florida Product Approval/NOA provided in the request Expires prior to anticipated NTP for Contract. A new valid Florida Product Approval/NOA would be required.

End of substitution request review description

668 North Orlando Avenue, Suite 107, Maitland, FL 32751
Phone 407 897 6764, Fax 407 894 1338,
mamartin@mlm-martin.com www.mlm-martin.com License No. AA C002208

From: Czahoroski Pamela A.
To: Jesica Darr
Subject: Substitution Request- Construction of Satellite Concourse C at VPS Destin-Fort Walton Beach Airport
Date: Wednesday, February 26, 2020 12:38:52 PM
Attachments: Sub request 2020.pdf

Ms Darr,

We would very much appreciate the opportunity to bid on the Hurricane Automatic Sliding door package for this project. As we are not currently listed as an approved manufacturer, we would greatly appreciate your assistance with the processing of the attached substitution request. It should contain all information needed to demonstrate our product as an approved equal. Please let me know if you think additional information will be necessary.

Please note that record-usa also manufacturers automatic sliding, folding, and revolving door systems. As I did not receive specifications for either of these products, please let me know if they will be included in the project so that we may bid those scopes as well.

Let me know if I can answer any questions or provide further details.

Thank you for your time and consideration.

Respectfully,
Pamela

Pamela Czahoroski
Inside Sales

record-usa
4324 Phil Hargett Court
Monroe, NC 28110

☎ 704-290-0216
Pamela.Czahoroski@recorddoors.com
www.recorddoors.com

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

record-usa

"4324 Phil Hargett Ct. (28110) ● PO Box 3099 ● Monroe, NC 28111-3099 USA
704-289-9212 ● TOLL FREE: 800-438-1937 ● FAX: 704-289-2024"

Product Substitution Request Form

(Voluntary Alternative)

We respectfully submit for consideration the following product(s) in lieu of the specified item(s) for the below named project:

Project Name: **Construction of Satellite Concourse C at VPS Destin-Fort Walton Beach Airport** **Bid Date:** 3/18/2020
City, State: Eglin, FL
Firm: **Phone #:** (850)-729-1400
Attn: **Fax #:**

Plans / Specs Information

Drawing Date	Drawing No.	Drawing Name	Door Marks
n/a	n/a	Door Schedule	W1005,W1007,W1011,W1013

Specification Section(s)	Paragraph(s)	Specified Items
084229	2.1	Stanley

Proposed Substitution(s)

	record-usa Series 5100 Automatic Sliding Entrance Doors
	record-usa Series 5200 All-Glass Automatic Sliding Entrance Doors
X	record-usa Series 5400 Hurricane Storm Front Automatic Sliding Door
	record-usa Series 4900 ALL-In-One Bifold/BiSwing Manual ICU Door
	record-usa Series 5900 ICU Manual Door
	record-usa Series 8100 Automatic Swing Operator
	record-usa Series 8600 Overhead Concealed Operator

Certification of Equal Performance and Assumption of Liability for Equal Performance

Per instructions, attached is complete information on changes to Drawings and/or Specifications, which proposed substitution will require for its proper installation. Submitted are all necessary details and substantiating data to prove equal quality and performance to that which is specified, as well as clearly marked literature to indicate equality in performance.

The undersigned states that the function, appearance, and quality are equivalent or superior to the specified item.

Submitted by: Pamela Czahoroski **Phone #:** (704)-290-0216
Title: Inside Sales **Fax:** (704) 289-2024
Email: Pamela Czahoroski@recorddoors.com **Website:** www.recorddoors.com

Signature shall be by person having authority to legally bind his firm to the above terms. Failure to provide legally binding signature will result in retraction of approval.

For use by architect:

	Accepted		Accepted as noted
	Not Accepted		Received too late

Substitution Request Form (con't)

A Does the Substitution affect dimensions shown on Drawings?

[ ] Yes [X] No

If yes, clearly indicate changes:

B. Will the undersigned pay for the changes in the building design, including engineering and detailing cost caused by the requested substitution?

[ ] Yes [X] No

If no, fully explain: **No change necessary**

C. What affect does the substitution have on other contracts or on other trades?

None

D. What affect does the substitution have on construction schedule?

None

E. Manufacturer's warranties of propose and specified items are:

[ ] Same [X] Different Fully Explain: **2 Year Warranty**

F. Reason for Request:

To allow for competitive bidding

G. Itemized comparison of specified item(s) with the proposed substitution; list significant Variations:

Equivalent product

H. Accurate cost data comparing proposed substitution with the product specified.

We will lower initial costs with competitive bidding and future costs with 2 year warranty.

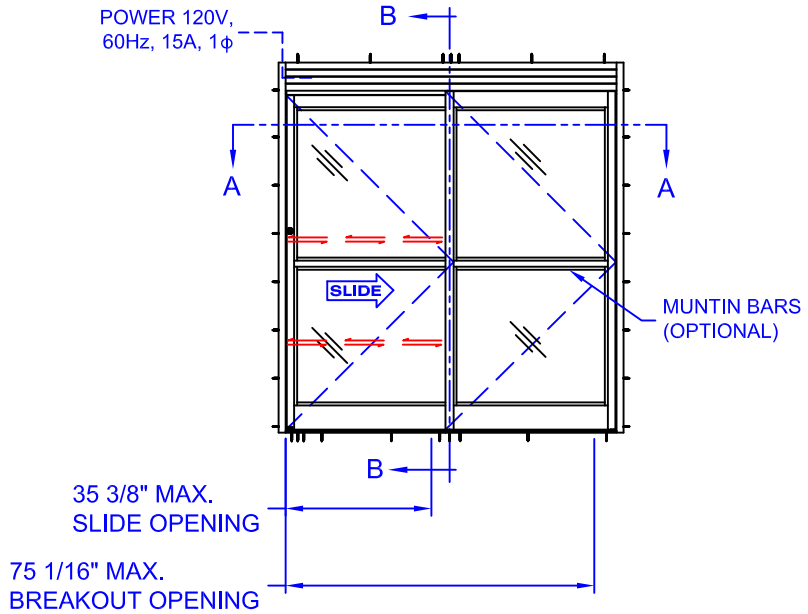
I. Product manufactured location:

Monroe, North Carolina

J. Designation of maintenance services and sources: _____

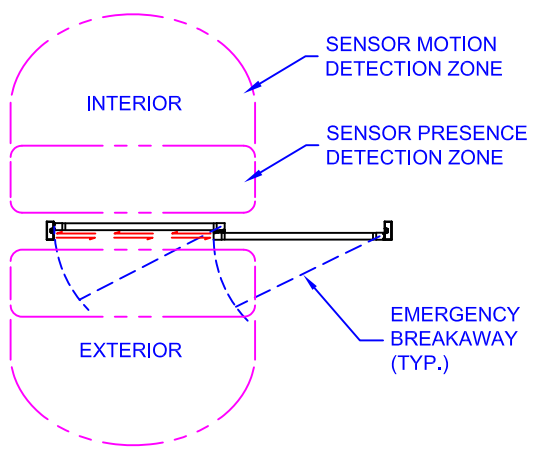
For a complete understanding of record automatic door systems and our products, please see the below video link:

http://youtu.be/mUn1fIb8JUY



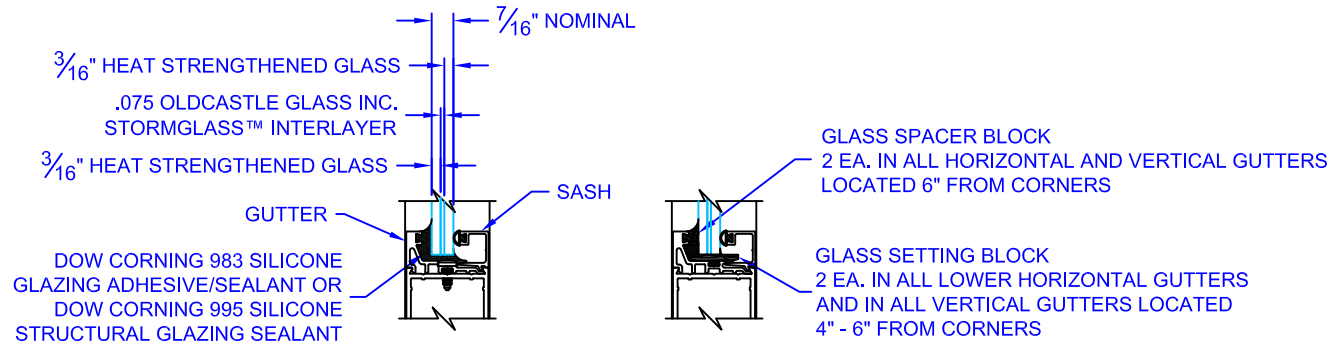
ELEVATION VIEW

SCALE: 1/2" = 1'



PLAN VIEW

SCALE: 1/2" = 1'



SECTION AT GUTTER SCREW LOCATION | **SECTION AT GLASS SETTING BLOCK LOCATION**

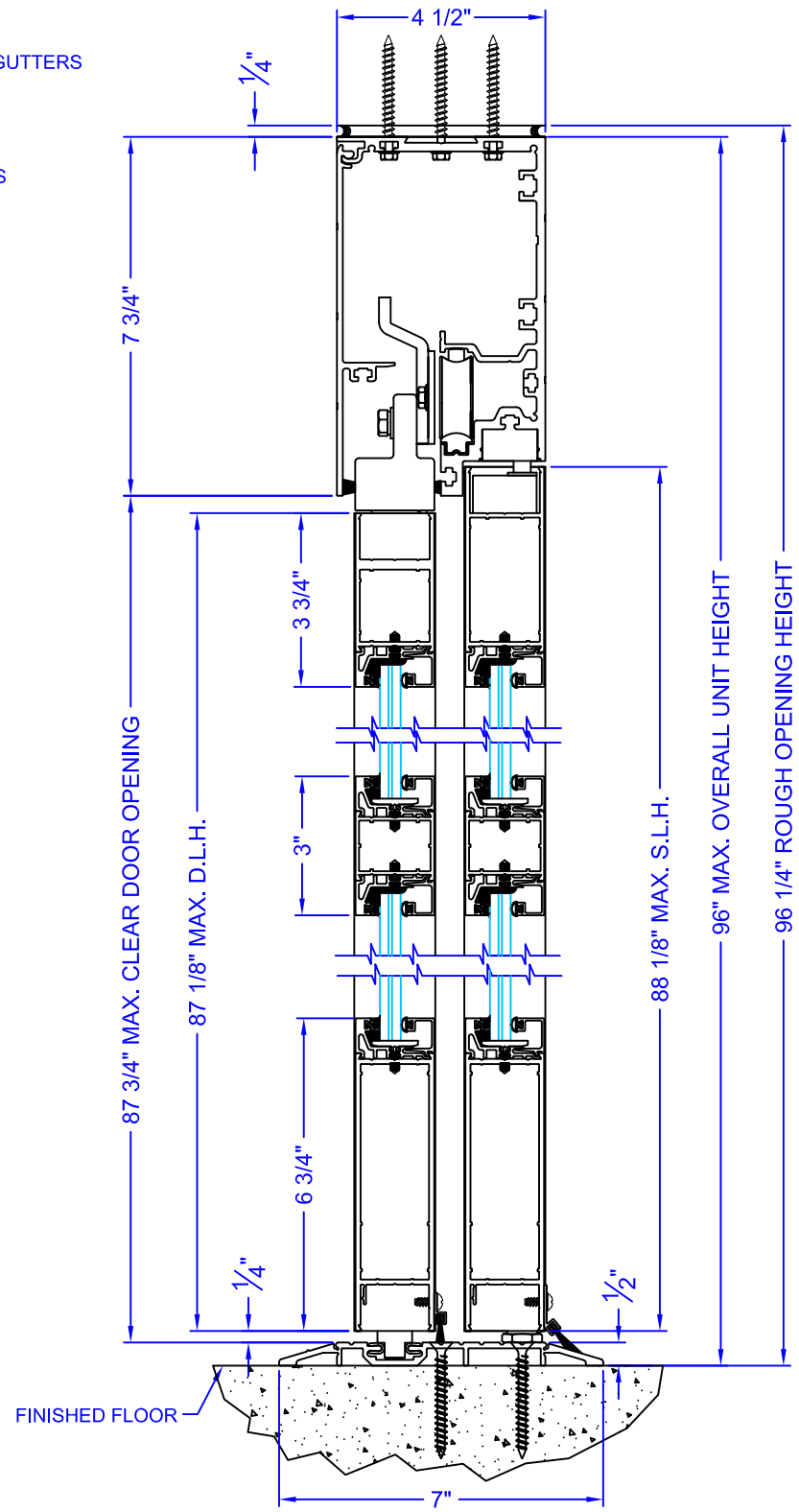
TYPICAL GLAZING DETAIL
(ALL LITES)

NOTES:

1. FINISH AS SPECIFIED.
2. THRESHOLD PHOTOELECTRIC SAFETY BEAMS AT 24" AND 48" ABOVE FLOOR.
3. DISPLAY CONTROL PANEL (ONE PER UNIT).
4. GLASS (OLDCASTLE 7/16" LAMINATED IMPACT-RESISTANT STORMGLASS™) AND GLAZING BY RECORD-USA INSTALLING DEALER.
5. CAULKING AND SEALING BY RECORD-USA INSTALLING DEALER.
6. THE FOLLOWING ITEMS TO BE PROVIDED BY OTHERS:
   A. FINISHED OPENING PLUMB, SQUARE, AND OF ADEQUATE CONSTRUCTION TO RECEIVE DOOR OPERATING EQUIPMENT.
   B. 120VAC, 15A, 60HZ, 1ϕ DEDICATED ELECTRICAL SERVICE TO EACH UNIT.

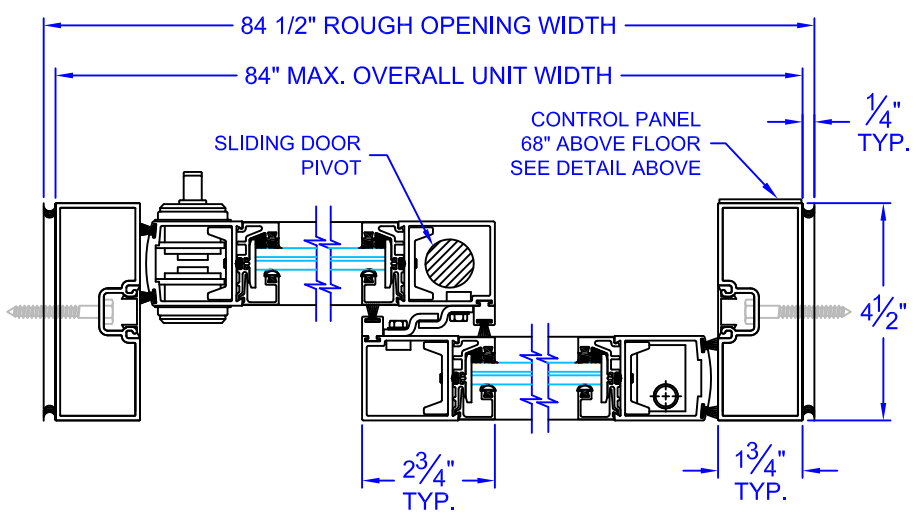
ANCHOR SCHEDULE

LOCATION	QUANTITY	ANCHOR TYPE	SUBSTRATE		
			CONCRETE	WOOD	STEEL
HEADER	13	TAPCON	¼ X 2" HEX WASHER HEAD		
		LAG BOLT (GALVANIZED)		¼ X 2" HEX WASHER HEAD	
		TEK (SDS) SCREW			¼ X 2" HEX WASHER HEAD
SILL (PIN GUIDE & THRESHOLD)	16	TAPCON	¼ X 2¼" PHILLIPS FLAT HEAD	¼ X 2¼" PHILLIPS FLAT HEAD	
		TEK (SDS) SCREW			¼-14 X 1½" PHILLIPS FLAT HEAD
SIDE JAMBS	8 EA.	TAPCON	¼ X 3¼" HEX WASHER HEAD		
		LAG BOLT (GALVANIZED)		¼ X 2½" HEX WASHER HEAD	
		TEK (SDS) SCREW			¼-14 X 2" HEX WASHER HEAD



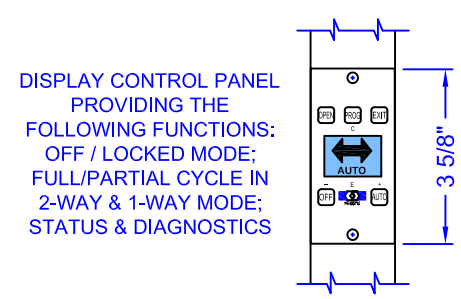
SECTION B-B

SCALE: 1/2 SIZE



SECTION A-A

SCALE: 1/2 SIZE



CONTROL PANEL

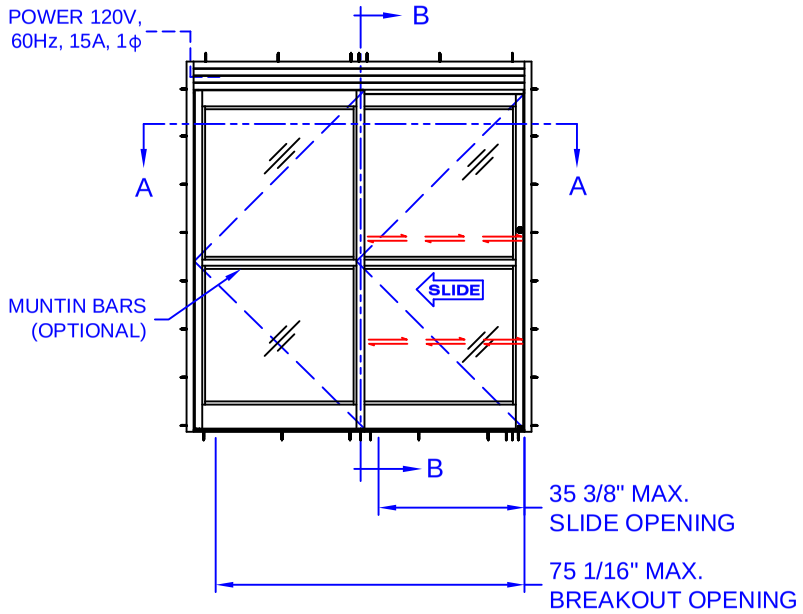
SCALE: 1/2 SIZE

SCALED FOR 24" X 36" PRINT

SERIES: 5400 FINISH: AS NOTED TYPE: 5405 SX-SO	DEALER:
SIZE: AS NOTED DWN.:	JOB:
NO. / REVISIONS / DATE	LOCATION:
	ARCHITECT:
	CONTRACTOR:

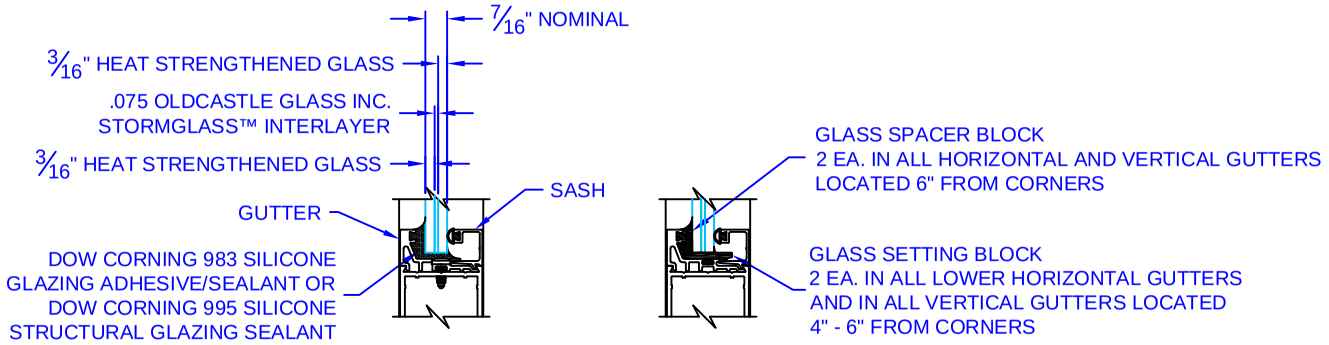
record-usa
4324 PHIL HARGETT COURT
MONROE, NC 28110

DATE:_____ SD#_____SHEET __OF __



ELEVATION VIEW

SCALE: 1/2" = 1'



SECTION AT GUTTER SCREW LOCATION **SECTION AT GLASS SETTING BLOCK LOCATION**

TYPICAL GLAZING DETAIL
(ALL LITES)

NOTES:

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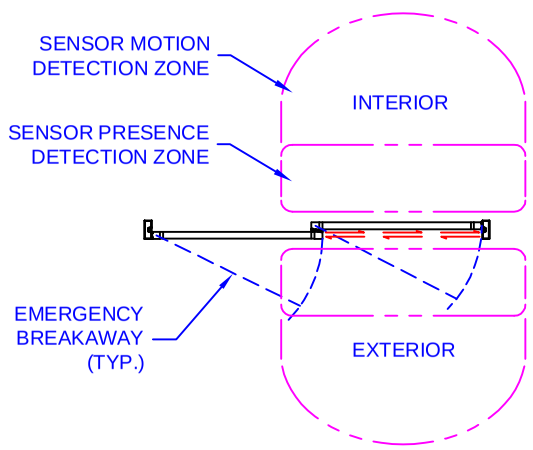
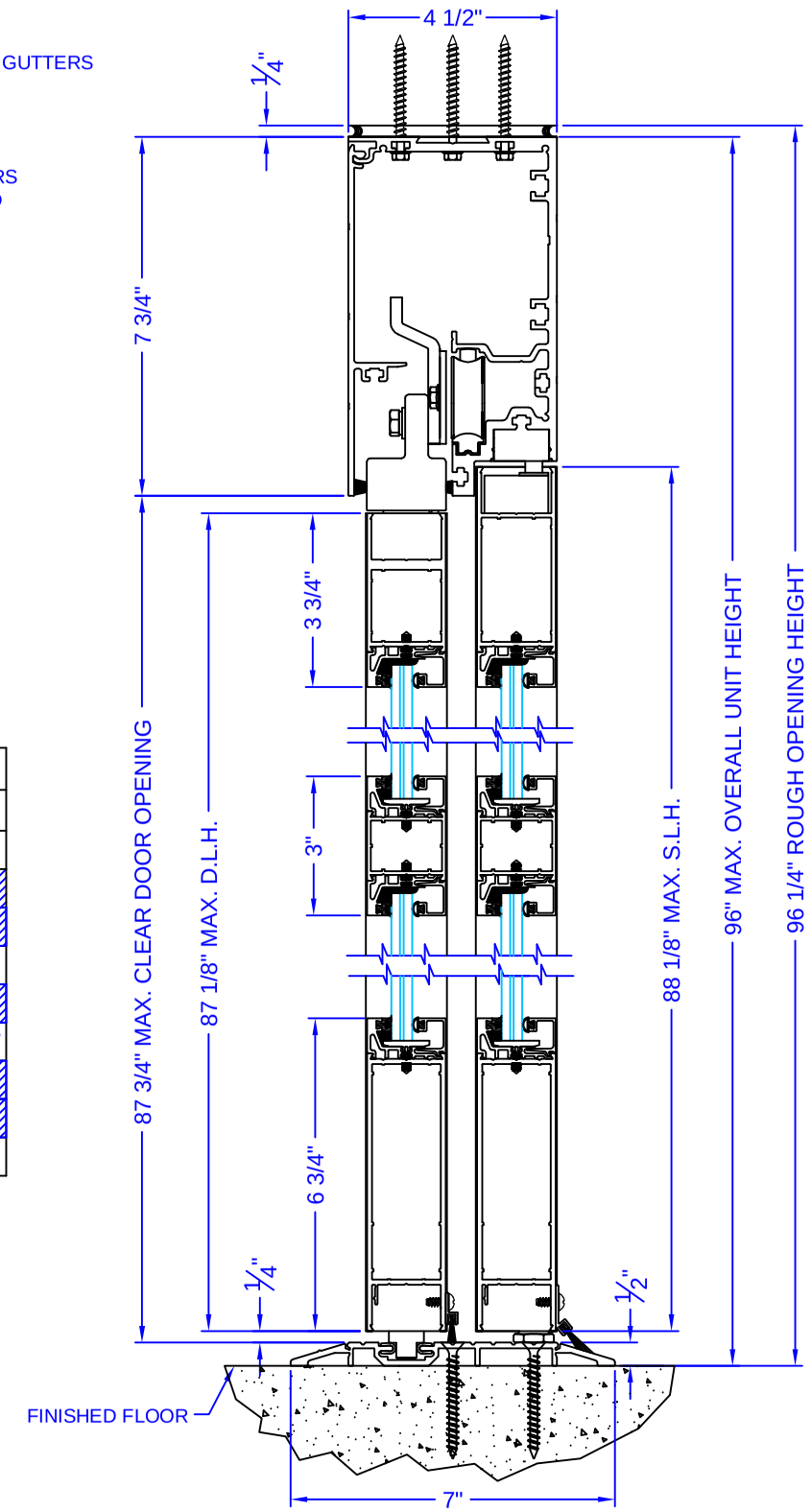


PLAN VIEW

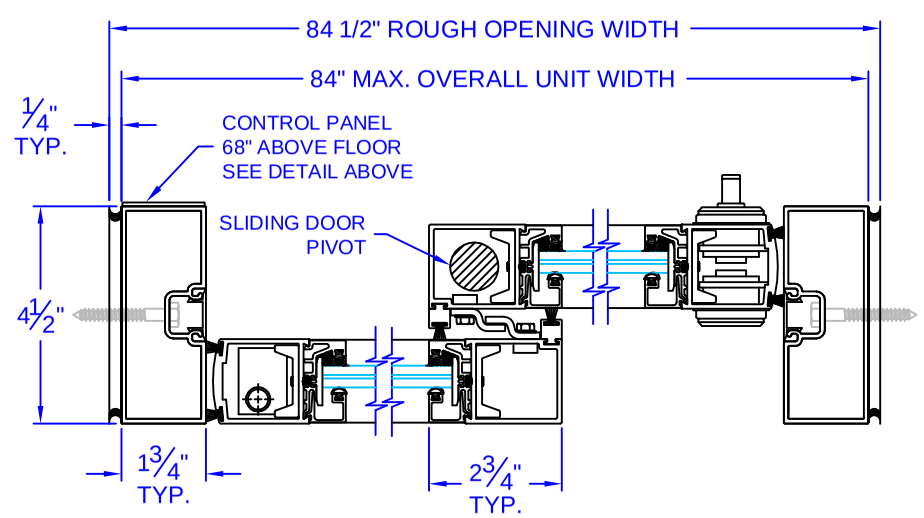
SCALE: 1/2" = 1'

ANCHOR SCHEDULE					
LOCATION	QUANTITY	ANCHOR TYPE	SUBSTRATE		
			CONCRETE	WOOD	STEEL
HEADER	13	TAPCON	¼ X 2" HEX WASHER HEAD		
		LAG BOLT (GALVANIZED)		¼ X 2" HEX WASHER HEAD	
		TEK (SDS) SCREW			¼ X 2" HEX WASHER HEAD
SILL (PIN GUIDE & THRESHOLD)	16	TAPCON	¼ X 2¼" PHILLIPS FLAT HEAD	¼ X 2¼" PHILLIPS FLAT HEAD	
		TEK (SDS) SCREW			¼-14 X 1½" PHILLIPS FLAT HEAD
SIDE JAMBS	8 EA.	TAPCON	¼ X 3¼" HEX WASHER HEAD		
		LAG BOLT (GALVANIZED)		¼ X 2½" HEX WASHER HEAD	
		TEK (SDS) SCREW			¼-14 X 2" HEX WASHER HEAD



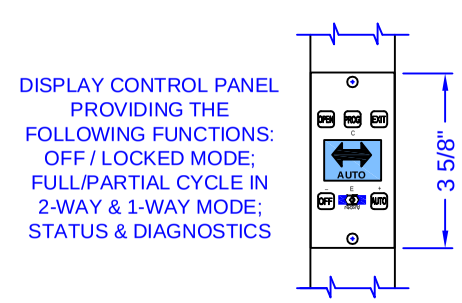
SECTION B-B

SCALE: 1/2 SIZE



SECTION A-A

SCALE: 1/2 SIZE

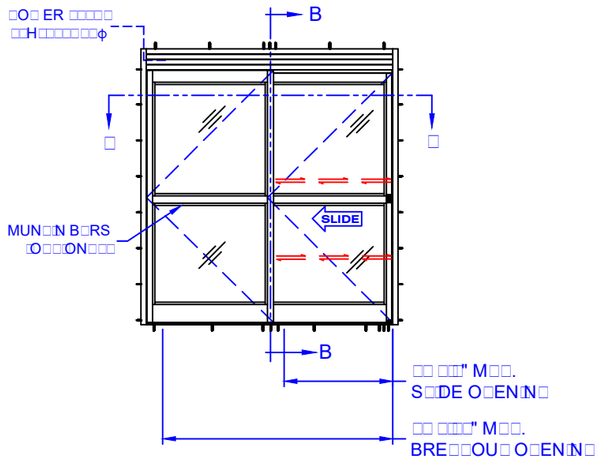


CONTROL PANEL

SCALE: 1/2 SIZE

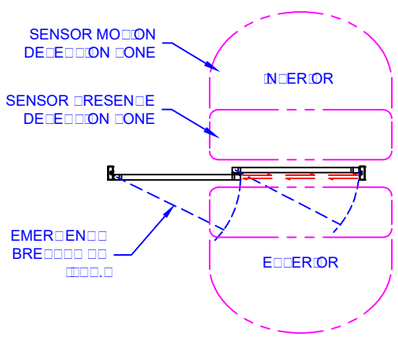
SCALED FOR 24" X 36" PRINT

SERIES: 5400 FINISH: AS NOTED TYPE: 5404 SO-SX	DEALER:	record-usa
SIZE: AS NOTED DWN.:	JOB:	4324 PHIL HARGETT COUR
NO. / REVISIONS / DATE	LOCATION:	MONROE, NC 28110
	ARCHITECT:	DATE: SD#: SHEET OF
	CONTRACTOR:	



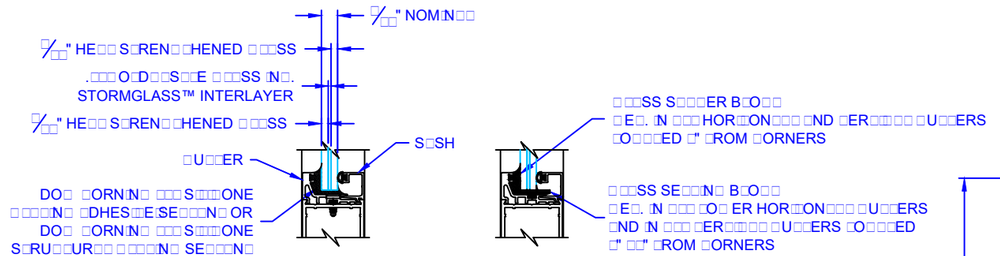
ELEVATION VIEW

S□□□E□ □□□" □ □□



PLAN VIEW

S□□□E□ □□□" □ □□



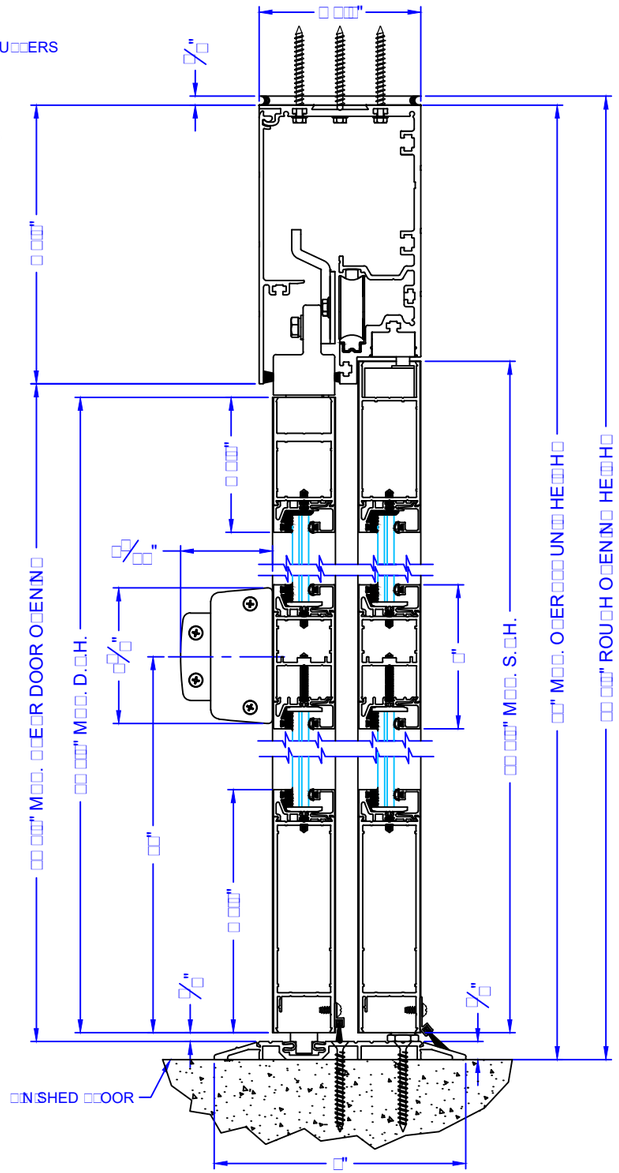
SECTION AT GUTTER SCREW LOCATION | **SECTION AT GLASS SETTING BLOCK LOCATION**

TYPICAL GLAZING DETAIL
(ALL LITES)

NO□ES□

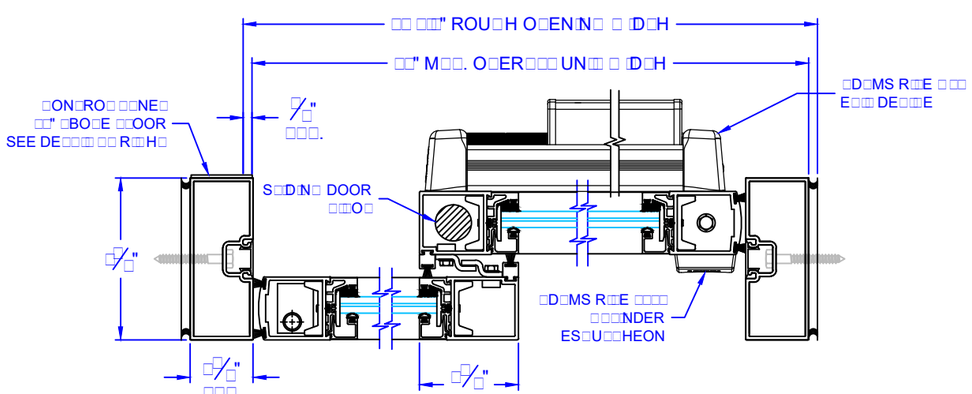
□. □□N□SH □S S□E□ □□□ED.
□. □HRESHO□D □HO□OE□E□□R□□ S□□E□□ BE□MS □□ □□" □ND □□" □BO□E □□OOR.
□. D□S□□□□ □ON□RO□ □□NE□ □ONE □ER UN□□□
□. GLASS (OLDCASTLE 7/16" LAMINATED IMPACT-RESISTANT STORMGLASS™) AND □□□□N□ B□ RE□ORD□US□ □NS□□□□N□ DE□□ER.
□. □□U□□N□ □ND SE□□N□ B□ RE□ORD□US□ □NS□□□□N□ DE□□ER.
□. □HE □O□□O□ □N□ □□EMS □O BE □RO□□DED B□ O□HERS□
□. □N□SHED O□EN□N□ □□UMB□S□U□RE□□ND O□ □DE□U□□E □ONS□RU□□□ON □O RE□E□□E DOOR O□ER□□□N□ E□U□□MEN□.
B. □□□□□□□□□□□□□H□□□□ϕ DED□□□□ED E□E□□R□□□ SER□□□E □O E□□H UN□□.

ANCHOR SCHEDULE					
LOCATION	QUANTITY	□N□HOR □□□E	SUBSTRATE		
			□ON□RE□E	□ OOD	S□EE□
HEADER	13	□□□□ON	¼ X 2" HEX □ □SHER HE□D		
		□□□ BO□□ □□ □□□□N□□ED□		¼ X 2" HEX □ □SHER HE□D	
		□E□ □SDS□S□RE□			¼ X 2" HEX □ □SHER HE□D
SILL (PIN GUIDE & THRESHOLD)	16	□□□□ON	¼ X 2¼" PHILLIPS □□□□ HE□D	¼ X 2¼" PHILLIPS □□□□ HE□D	
		□E□ □SDS□S□RE□			¼-14 X 1½" PHILLIPS □□□□ HE□D
S□DE J□MBS	8 EA.	□□□□ON	¼ X 3¼" HEX □ □SHER HE□D		
		□□□ BO□□ □□ □□□□N□□ED□		¼ X 2½" HEX □ □SHER HE□D	
		□E□ □SDS□S□RE□			¼-14 X 2" HEX □ □SHER HE□D



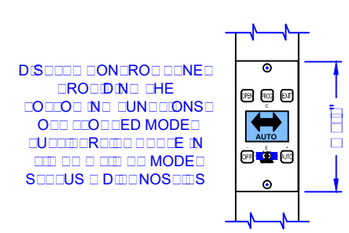
SECTION B-B

S□□□E□ □□□ S□□E



SECTION A-A

S□□□E□ □□□ S□□E



CONTROL PANEL

S□□□E□ □□□ S□□E

SERIES: 5400	FINISH: AS NOTED	TYPE: 5404 SD-SX
SIZE: AS NOTED	DWN.:_____	

NO.	REVISIONS	DATE

DEALER:_____
JOB:_____
LOCATION:_____
ARCHITECT:_____
CONTRACTOR:_____

record-usa
4324 PHIL HARGETT COURT
MONROE, NC 28110

DATE:_____ SD#_____SHEET __OF __

SCALED FOR 24" X 36" PRINT

	Record 5400	**Stanley 3000 Dura-Storm**
Standard Warranty (complete unit)	2 years	1 year
Roller Track Warranty	Lifetime	1 year
Roller Warranty	3 years	1 year
Rollers per panel*	4	2
Operating Temperature Range	negative 40 to 140 Fahrenheit	negative 30 to 130 Fahrenheit
Maximum Door Panel Weight	300 lbs	220 lbs
Header Size*	4-1/2" x 7"	6" x 8"
PSF	65 PSF	50 PSF
NOA	Yes	Yes
Power Consumption	100 Watts	650 Watts
Motor Size****	1/8 HP	1/4 HP
Bi-Part Package Size	14' x 8'	14' X 7' 8"
Door Panel Construction*	Mortise Block	Through-Bolts
Diagnostics	Exposed via LCD SMART Panel	Stanley Personnel Only
Life cycle counter	Exposed via LCD SMART Panel	Stanley Personnel Only
Safety Adjustments	Software limits to ANSI 156.10	Relies on Service Tech to comply
Weather Stripping	Extruded Channel in Door Panels	Adhesive "stick on" weather stripping
Standard Safety Detection	2 infrared curtains, 2 beams	1 infrared curtain, 2 beams
Uni-Directional Motion Detection	Standard	Standard
Bottom Guide Design*	Round Pin=Anti-Friction, Smooth, Quiet	Fork Guide=Friction & Wear

Power Consumption

record-usa 5100 series 100W

Besam Unislide 250 W

Horton 2000/2003 300W

Stanley Dura-Slide 600W

record

your global partner for entrance solutions

Series 5100 Sliding Door System

Electrical Cost Study

Door Moving (1,000,000 cycles per year)

- Average open and close cycle is 8 seconds
- Annual cycle time is 2,222 hours
- Usage of 1000 W* .00011W = .011W
- Annual cost is approximately $24.44/yr (2,222* .001W)

Door at rest

- Series 5100 uses 25 W @ rest/25* .00011 = 0.00275 per hr
- 1 year = 365 days * 24 hours or 8,760 hrs
- Annual @ rest cost = 8,760 hours* .00275 =$24.09 per year

The average cost of electricity = 0.11 kWh or 0.00011 Wh*

record

your global partner for entrance solutions

STANDARD FEATURES AND OPTIONS

record-usa SERIES 5400 LMI & SERIES 5500 NI
STORM FRONT HURRICANE-RATED AUTOMATIC SLIDING DOORS

Series Nomenclature:

- 5400 LMI (**L**arge **M**issile **I**mpact)
- Series 5500 NI (**N**on-**I**mpact)

Applicable State of Florida and Miami-Dade County building code test protocols:

- TAS 201-94 – Large Missile Impact Test Procedures (Series 5400 LMI units only)
- TAS 202-94 – Air Infiltration Test, Uniform Static Air Pressure Structural Test, and Forced Entry Test (All units)
- TAS 203-94 – Cyclic Wind Pressure Loading Test (Series 5400 LMI units only)

Configurations:

- Narrow stile single slide (5X04 SO-SX, 5X05 SX-SO) full breakout units
- Narrow stile bipart (5X06 SO-SX-SX-SO) full breakout units

Maximum Unit Sizes:

- Single slide units – 7' (84") OFW x 8' (96") OFH
- Bipart units – 14' (168") OFW x 8' (96") OFH

Design Loads and Glazing:

- Series 5400 LMI units
  - Design Loads (PSF): +65 / -70
  - Glazing: Oldcastle 7/16" (3/16" HS / .075 Interlayer / 3/16" HS) laminated StormGlass™, wet glazed with either Dow Corning 983 Silicone Glazing Adhesive/Sealant or Dow Corning 995 Structural Glazing Sealant
- Series 5500 NI units
  - Design Loads (PSF): +55 / -60
  - Glazing: Any standard tempered glass can be used, from ¼" single pane to 1" IG, wet glazed with commercially available clear silicone sealant.

Bottom Guide Systems:

- Surface ramped pin guide with ½" saddle threshold or ½" carpet/saddle threshold
- Recess pin guide with ½" recessed threshold in door opening area

Standard Features:

- 6" bottom rails
- Keyed 2-point flushbolt locking (all SX panels) with inside thumbturn
- Surface-applied sweep strips (all panels)
- Steel channel reinforcing in all vertical stiles
- Display control panel

STANDARD FEATURES AND OPTIONS

record-usa **SERIES 5400 LMI & SERIES 5500 NI**

STORM FRONT **HURRICANE-RATED AUTOMATIC SLIDING DOORS**

Optional Features Available:

- 10” bottom rails
- 3” horizontal muntin bars (limit of 1 per panel)
- Inside cylinder in lieu of inside thumbturn
- Adams Rite G86 exit device locking with outside cylinder/escutcheon (in lieu of flushbolts all SX panels) to meet Means of Egress Life Safety codes
- Electric locking (Fail-Safe or Fail-Secure)
- Display panel with enclosure, dual rocker switch panel, rocker switch / key switch panel

Configurations, Features and Options NOT Available:

- Fixed panel (O-SX, SX-O, O-SX-SX-O) or surface applied (P-SX, SX-P, P-SX-SX-P) units, including Reverse Breakout (RBO) units
- 3-panel or 6-panel telescope units
- Bottom rails shorter than 6”
- Units with transom
- 1” side jambs
- Mullion material side jambs
- ‘No Threshold’ or ‘¼” Threshold’ options
- Door closers in SX or SO panels
- Limit arms in SO panels
- Toe rollers in SX panels
- Multiple horizontal muntin bars in panels
- Vertical muntin bars in panels
- ‘No Doors’ or ‘Doors By Others’ options

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Record-USA, Inc.
4324 Phil Hargett Court
Monroe, NC 28110

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA -Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "5400" Aluminum Automatic Sliding Glass Door w/ Breakout-LMI

APPROVAL DOCUMENT: Drawing No. **14-2163** (former **09-REU-0001**), titled "Series 5400 Automatic Sliding Glass Door", sheets 1 through 23 of 23 prepared by Engineering Express, dated 02/12/15, signed and sealed by Frank L. Bernando, P.E., bearing the Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control section.

MISSILE IMPACT RATING: Large and Small Missile Impact

LIMITATIONS:

1. See Head and Sill anchor Layout in sheet **4**. The Jamb anchors OC spacing not to exceed **12**".
2. Not approved where water infiltration is required.
3. Electrical/ Electronic functions are not part of this approval and to be reviewed by appropriate Bldg. official
4. Full length steel channel reinforcements at stiles are required per sheet **10**.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and series and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises & renews NOA # 12-0403.06** and consists of this page 1 and evidence pages E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Ishaq I. Chanda, P.E.**

MIAMI-DADE COUNTY APPROVED

6/11/15

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections (submitted under files, see below)
2. Drawing No. **14-2163** (former **09-REU-0001**), titled "Series 5400 Automatic Sliding Glass Door", sheets 1 through 23 of 23 prepared by Engineering Express, dated 02/12/15, signed and sealed by Frank L. Bernando, P.E.

B. TESTS (submitted under files # 12-0403.06/#09-0712.12)

1. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94 (**0.29** cfm/ft^2@1.57PSF)
   2) Uniform Static Air Pressure Test, per FBC, TAS 202-94
   3) Water Resistance Test, per FBC, TAS 202-94 (Not Performed)
   4) Large Missile Impact Test per FBC, TAS 201-94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   6) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94

along with installation diagram of aluminum automatic entrance door, prepared by American Testing Lab, Inc. Test Report No. **ATLNC 0428.01-08,** dated 04/29/09, signed and sealed by David Johnson, P.E.
Note: This test report has been revised by an addendum letter dated 01/20/10, issued by American Testing Lab, signed and sealed by David Johnson, P.E.

C. CALCULATIONS

1. Anchor Verification Calculations, complying w/ FBC-2014, dated 02/09/15, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E.
2. Glazing complies w/ ASTME-1300-02, -04 & -09.

D. QUALITY ASSURANCE

1. Miami Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **#14-0423.11** issued to Oldcastle Building Envelope, Inc.(NJ) for "**StormGlass: Saflex CP-(VS-XX) interlayer w/ PET core**", expiring on 12/11/18.

F. STATEMENTS

1. Statement letter of conformance to FBC 2014 and letter of no financial interest, prepared by Engineering Express, both dated 02/10/15, signed and sealed by Frank L. Bennardo, P.E.
2. Lab compliance as part of the above referenced test report.

G. OTHER

1. This NOA **revises & renews** NOA # **12-0403.06**, expiring on 03/17/20.
2. Test proposal **#08-0238**, approved by BCCO.

Ishaq I. Chanda

Ishaq I. Chanda, P.E.
Product Control Examiner
NOA No. 15-0316.04
Expiration Date: March 17, 2020
Approval Date: June 11, 2015

SECTION 08460 - AUTOMATIC SLIDING DOORS

PART 1 - GENERAL

1.01 SUMMARY

A. WORK INCLUDED: Furnish and install automatic aluminum door system(s), factory fabricated. Door packages shall be complete and without damage or defect.

B. RELATED WORK:
1. Section 07920 – Joint Sealers
2. Section 08410 – Aluminum Entrances and Storefronts
3. Section 08700 – Finish Hardware
4. Section 08800 – Glazing
5. Section 16000 – Electrical

1.02 RELATED WORK

A. The following exclusions are covered in other Sections:
1. Preparation of the plumb and square masonry opening
2. Floor preparation
3. Electrical supply and connection (dedicated 120 VAC, 15 amp circuit to each operator/header)

1.03 SUBMITTALS

A. PRODUCT DATA: Provide complete product and installation documentation as provided by the manufacturer.

B. SHOP DRAWINGS: Provide details of door construction including profiles, dimensioned layout, and assembly including finish, glazing, electrical, and anchoring requirements.

C. Contract Closeout: Provide manufacturer's Warranty documentation and Owners Manual.

1.04 QUALITY ASSURANCE

A. Manufacturer must have a minimum of five (5) years experience in the fabrication of aluminum-and-glass door assembly similar to those specified. Door packages shall be warranted against defect in material and workmanship for a period of two years from the date of installation.

B. Installation shall be approved by an AAADM certified inspector.

1.05 WARRANTY

A. Door packages shall be warranted against defect in material and workmanship for a period of two years from the date of installation, and a lifetime warranty on the roller track.

PART 2 - PRODUCT

2.01 MANUFACTURER

record-usa
Monroe, North Carolina, USA
(704) 289-9212

2.02 DESIGN

A. Series 5400 Bi-Part Slider-Full Breakout Sliding Doors as tested in conformance with Dade County Requirements by ATL.

Tests Conducted: **FBC, HVHZ TAS201-94, TAS202-94, TAS 203-94 Qualifying: ASTM E 283, E 330**

B. DESIGN PRESSURES: + 65.0 psf, - 70.0 psf

C. SLIDING DOOR PACKAGE: Sliding door packages shall be complete including operator, sliding doors, sidelites, headers, jambs, thresholds, bottom door guides, and activation and safety sensors.

D. DOORS AND FRAMES: All structural aluminum sections shall be 6063-T5 alloy with exposed surfaces anodized to matching architectural finish. Extruded aluminum header and cover shall conceal replaceable roller track, and integrated anti-derail extrusion. Door carrier assemblies shall incorporate four 1¾" diameter roller assemblies with sealed ball bearings and Grade 8 alloy steel hanger bolts. Concealed bottom door guides shall provide stable movement of sliding panels. Narrow stile door and sidelite construction shall utilize 1¾" deep x 2" wide vertical profiles and 6" or 10" bottom rails. Mohair weather pile shall run full height at front of sliding doors, back of side lites, and between the doors and side lites.
   1. Side jambs and transom framing shall be 1¾" x 4½".

E. OPERATOR: Door movement shall be driven by a sealed DC gear motor and nylon reinforced drive belt. The multifunction microprocessor control shall provide fully adjustable open, close, and check speeds. An adjustable hold open time delay (1-30 seconds) shall be provided. The microprocessor shall provide a safety-first recycle/stop feature if closing/opening is obstructed. The control shall provide a self-monitor system that compensates each cycle for changes in temperature, wind load, pressure and mechanical drag and checks for proper internal operation. The control shall automatically adjust motor speeds, checking action, and other operating characteristics. A backlit jamb mounted LCD display panel shall be provided as standard and shall have the following modes: Automatic, Off, Exit Only, Full Open, and Partial Open, and shall allow authorized service personnel to make door performance adjustments to the control. The reduced opening distance shall be field adjustable and can be constant or a function of traffic frequency. Selectable ratchet mode shall keep the door in the open position until a second activation signal. The operator shall allow the door to be opened manually in power off conditions. Optional battery pack shall automatically either open or close the door(s) after power is lost.

F. EMERGENCY EGRESS: Sliding doors and swing-out side lites shall be capable of being swung out to 90° from any position of slide movement (except for SR units) and require no more than 50 lbf. (222 N) of force applied at the lock stile to open. Units with this emergency egress feature comply with Chapter 5, Means of Egress, of Code for Safety from Fire in Buildings & Structures, NFPA 101.

G. SECURITY: The sliding doors shall be fitted with a International Door Closer Inc. DH-1820-H hook bolt deadlock with HB-4015-N Header Bolt Set. Biparting units shall include a two-point lock Adams Rite MS1880 Flush Bolt. Units with swing-out side lites shall incorporate mechanical interlocks between the sliding doors and side lites to guard against forced entry when the unit is locked.

H. Optional Security: Adams Rite G86exit device locking with outside cylinder/escutcheon (in lieu of flush bolts all SX panels) to meet Means of Egress Life Safety Codes.

I. Optional Electric locking: May be Fail-Safe or Fail Secure

J. FINISH: All exposed surfaces shall be 204-R1 clear anodized for Class 2 architectural finish or dark bronze or black anodized for Class 1 architectural finish. Painted packages to match storefront are optional.

K. SAFETY AND ACTIVATING DEVICES: Unit shall have two infrared safety beams installed at 24" and 48" from the finished floor. On bi-parting units, beams will be installed in the vertical stiles of the side lites. The beams will not be active when the doors are fully closed. Motion/presence sensors shall be installed on both sides of the unit to detect traffic approaching the door from either direction. For units intended for one-way traffic only, the detection sensor on the side not intended for use shall not be active when the doors are fully closed.

2.03 REQUIREMENTS FOR WORK SPECIFIED IN OTHER SECTIONS

A. ELECTRICAL: The General Contractor or Electrical Contractor shall furnish and install all wiring to the operator. Provide 120VAC, 60 Hz, 1 phase, 15 amp service to each operator header on a separate, dedicated circuit routed into the header.

B. GLASS AND GLAZING: Glazing bead and setting blocks shall be in compliance with ANSI Z97.1.
1. Note: Laminator's Bug (Permanent Identification) verified prior to testing
2. Glazing Material: 0.449" laminated Storm glass. 3/16" HS glass / 0.075" Venceva Composite (VS-XX) interlayer / 3/16" HS glass, laminated by Old Castle Glass, Inc.
3. Glazing Method: The doors are glazed from the outside. The glass is supported on the interior side by an extruded aluminum gutter (part # 5-11-4044) that is attached to the stiles and rails with # 10-16 x ½" PPH thread forming screws, staggered 2" from each end and sealant 4" – 6" on center. Glass is wet glazed on the interior side with a Geon 8700 insert (glass spacer block) (part # 6-11-9002) (0.318 x 0.274), (2) in all horizontal and vertical gutters located at 6" from corners, and Dow Corning 983 silicone sealant (specimens A, A1 and C1) or Dow Corning 995 silicone sealant (specimen D), Glass bite 31/64". The glass is supported on the exterior side by an extruded aluminum sash, ¼" square (part # 5-11-4040)(0.628" x 0.815" x 0.050" typical wall thickness) and glazed with a EPDM Glazing bulb (part # 6-11-9001)(0.331" x 0.320"). (2) glass setting blocks (part # 6-11-9007)(material 93 Duro, 082BA) in all lower horizontal gutters and in all vertical gutters, each, located 4" – 6" from corners.

PART 3 - EXECUTION

3.01 INSPECTION

A. Inspect frame opening for correct size, plumb and square, and level floor for safe and reliable performance. Provide written notification to the appropriate personnel of conditions not acceptable to the installer and/or manufacturer. Proceed with installation only after necessary corrections are made by the general contractor to insure a suitable opening.

3.02 INSTALLATION

A. Install sliding door unit plumb, square, and level in properly prepared and supported opening, using specified fasteners, as required by installation instructions, Test report and as detailed on the shop drawings.

3.03 INSTRUCTION

A. Following the installation and final adjustments, the installer shall fully instruct the facility manager as to correct operating procedure and safety requirements of the sliding door package.

3.04 FINAL CLEANUP

A. After installation and adjustment for smooth, reliable operation, clean the door package and remove all surplus material, equipment, and debris incidental to this work.

END OF SECTION

automatic door solutions

Automatic door technology as you´ve never seen it before!

automatic doors

Complete Satisfaction and Quality

Our top priority is your complete satisfaction with the quality of our products and services.

By this we mean:

- Individual professional advice in choosing building access solutions for people and goods;
- A wide range of high-tech products to meet the requirements of modern building automation;
- Elegant designs with numerous options, compatible with any architectural style or building plan.

There are 22 record subsidiaries in Europe and the USA, and we have over 50 years' experience in mechanics, sensor technology, electronics and software for automatic door systems and related products.

Talk to us about your needs!

Thank you for your confidence in our company; we look forward to hearing from you.

Our corporate headquarters in Monroe, NC. This state of the art facility allows us to manufacture quality entrances, on time and when you need them. With over 60,000 sq. feet, our facility provides the latest manufacturing techniques and machinery to provide nothing less than your total and complete satisfaction.

5100 Series Sliding Doors

All record-usa Series 5100 automatic sliding entrances allow the sliding doors to break away and swing in the direction of egress when force is applied (similar to a swing door). The doors can be pushed to swing at any point in the door opening or closing cycle (except for Reverse Breakout units), and the force required to break the doors away is mechanically adjustable. On units with exterior swing-out sidelights, breaking the doors away will also cause the sidelights to swing in the same direction as the sliding doors. These units also incorporate mechanical interlocks that lock the sliding doors and sidelights together when the doors are full closed. record-usa utilizes 1 3/4" x 4 1/2" framing for the side jambs and transom members on all sliding entrances. Where applications require, optional 1" x 4 1/2" or 4 1/2" x 4 1/2" framing may be substituted. On telescope, full pocket, and surface mount units, 1 3/4 x 6 1/2" framing is standard with optional 1' x 6 1/2" framing also available. On surface mounted units, 1 3/4" x 2 3/4" (narrow stile) or 1 3/4" x 4 1/4" (medium stile) filler tubes are mounted against the wall or storefront in place of sidelights to provide a weather seal and members to mount the safely beams.

Options

- Electric Locking: Concealed electric locks are available in both fail safe (unlock on loss of power) and fail secure (lock on loss of power) operation. The electric locks are mounted in the header and operate as a carriage lock that automatically locks the door against slide after each open-close cycle, or can be unlocked for daytime use and locked at night.
- Battery Pack: A constant charge battery pack is available for use with building alarm and security systems to ensure that entrances are secured in an emergency. The battery pack can be provided to open or close the door upon loss of incoming electrical power or when signaled from the security system. An UPS (uninterruptible power supply) that provides 300 door opening cycles is also available.
- Exit Devices: Recessed vertical rod exit devices are available on inside slides as well as outside slides. These devices extend across the full width of the door panel. Exit devices are mounted at the same height as the muntin bar (41-5/8" from the floor or threshold to the centerline of the exit device/muntin bar.)
- Partial Open Feature: A selectable partial opening feature is available for applications that require a full width opening during pleasant weather conditions but a partial opening during harsh weather. The microprocessor-based operator control offers an infinite number of partial opening settings. The partial opening can be constant or automatic depending on traffic volume. In the automatic mode during high traffic conditions, the control will override the reduced opening setting and open the door to the full opening available. Once traffic decreases, the control will return to the reduced opening.

S.M.A.R.T. Panel:

- The 5100 introduces a new control panel with an intuitive interface and visual feedback of door status. Selecting the operational mode of the door is a single button press, and the built-in display will provide confirmation.
- The control panel can be manually locked, preventing unauthorized alteration by those who do not have permission to adjust the door.
- Two control panels can be installed on the same door;one at the unit and one remote.
- The control panel will automatically provide an alert message if an abnormal condition occurs.
- Provides user with the phone number of the authorized service agent.
- Reminds you of your commitment in performing a daily safety check.
- Provides information regarding objects in track that may negatively impact the operation of the door.
- Displays current door setting in regard to traffic selection and egress.
- Indicates when a door has been accidentally broken out.
- Identifies if a safety beam has failed or been damaged.
- Notifies user of which part needs replacement due to failure or abuse.

Available in Telescoping & Surface Applied Packages

record sliding door series comply with ANSI 156.10; IBC2003; UL325; CUL and NFPA101.

www.recorddoors.com

record

your global partner for entrance solutions

5100 Series
The Greener Door

record-usa's new 5100 series sliding door offers the very latest in automatic door technology to assure the quietest, smoothest performance in a sleek and elegant design. Offering a variable breadth of configurations and functions, the 5100 series assures the architect and building owner a wide array of capabilities in ensuring the most safe, secure and attractive entranceway available by choosing from the following options:

record-usa recognizes the importance of the Green initiative.

Disposing of items that can be recycled diminishes energy, water and natural resources that could be saved by recycling. Creating an environment of cultural responsibility has been a focus of ours over the past several years and will remain as such for the foreseeable future.

Energy Consumption of record-usa 5100 Series sliding door systems:

The Standby load has been tested at 25 watts. This is when the door is closed at rest and set on automatic mode, with other peripherals connected such as sensors, locking, etc.

The maximum loading (continuously in full operation) has been tested at 100 watts. Most leading competitor's average from 250 W to 600 W. This is when the door is under permanent and maximum operation combined with the maximum door leaf weight of 225 pounds per panel. With the motor voltage at 35VDC, the operator is classified as Class II.

Exclusive Traffic Sensitive "Smart" opening logic reduces air infiltration.

When low traffic is sensed the door operates to a selectable reduced opening. When two-way and/or higher volume is sensed, the door operates at full opening width. This is achieved automatically without the requirement of having to go to the door and adjust the operating mode.

By automatically changing the opening and closing width based on pedestrian traffic flow record reduces air loss out of the building.

Construction Waste Management

Product manufactured by record-usa ships in recycled cardboard that is suited for further recycling or for possible reuse when required. We never use hard to dispose of styrofoam like other manufacturers. This eliminates or greatly reduces extensive re-usable garbage/material being delivered to and or buried in public disposal areas.

- Electronics allow for both low wattage consumption and energy efficiency
- Traffic Sensitive Sensor provides controlled and timed opening and closing cycles
- 1" glazing offers protection from the
- elements and reduces hot/cold transfer from interior and or exterior
- Rubber seals between panels and extended bottom door sweeps reduce and eliminate air and smoke infiltration
- Door closers assure panel coming closed after breakout reducing loss of building heat or cold
- Extended door sweeps add extra resistance to the elements keeping cold air and snow out and heat in thereby saving on heating and air conditioning costs as well

5200 series All Glass

- Clear line of sight unhindered by vertical stiles
- Single slide or bipart packages available
- For use with ½" tempered glass

5300 series Heavy Duty

- Virtually silent operation incorporating dual motor operation
- Available for door panels glazed with ¼" glass up to 10 feet tall; ½" and 1" up to 9 feet
- Each door panel may weigh up to 375 pounds

5400 series Impact Rated Hurricane

- Steel reinforced doors and panels
- No lock required on SO panels
- Complies with Dade County NOA 15-0316.04
- Incorporates 7/16" Old Castle Glazing
- LMI series (Large Missile Impact)

5500 Series Non Impact Rated Hurricane

- Steel reinforced doors and panels
- No lock required on SO panels
- Complies with Dade County NOA 15-0316.05
- Incorporates Glazing from ¼" to 1" (in ¼" increments)
- Wind load Series

5600 Series

- Choose the 5600 series when desiring to automate wood, hollow metal or other door types and still get the reliability, durability and silence of the 5100 series.

Other Options:

Bullet Resistant Doors:

- Utilizes 1" thick glass laminate UL 753 Level II rated
- Utilizes 7/16" Amortex Composite UL 752 Level III rated (concealed in aluminum extrusions)

5900 Series Manual ICU Doors

Health care environments are challenging in that the need for a door way to rapidly provide break out capability in the event of emergency patient care is always evident.

ICU doors are used to provide separation between patient rooms and other areas of the hospital.

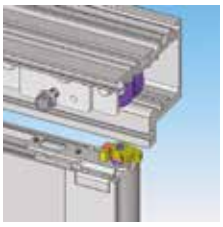
ICU doors are specified to eliminate critical life safety situations arising when possible delays may result due to hospital personnel hesitating momentarily when transporting patients due to slow moving doorways.

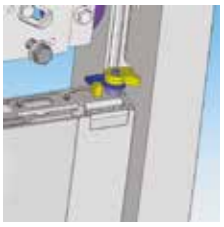
record-usa's manual sliding ICU door packages are available in multiple configurations that allow the architect total freedom in the design of a patient facility.One may select from two, three or four panel options, both with or without floor tracks.Other possibilities include either three or six panel telescopic designs, again both with and without floor tracks. To satisfy all of the requirements of the healthcare facility, the doors may be specified to breakaway either into the patient room, or out into the hallway–whichever option best allows for quick and unimpeded transportation of patients either in wheelchairs or on gurneys.

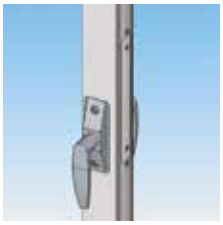
Note: With trackless units, breakaway capability may only be achieved for the sidelite assembly and the active sliding door leaf when the doors reach the fully open position.With standard pin guide track units sidelite and sliding door assemblies breakout from any position during the slide travel of the door.

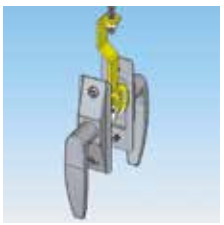
- PrivacyVue™ Glass
- Integral Blinds
- Self Closing
- Automatic

MEETS UL 1784









5900 Series Manual ICU Doors Positive Latching

(exclusive design allows for latching at the top on Bi-Parts)

record-usa's unique positive latching system on their manual ICU doors is different from that of the competition in that it latches inside the header and not on exposed vertical members which is quite common.

5800 Series IC Matic Low Energy Power Operated Sliding Doors

Healthcare environments are constantly changing to meet the rigorous demands and expectations of an aging population concerned with the possibility of disease spreading through human contact.

As such, the automatic door market has adapted and recently introduced products to meet these requirements.

The record IC-Matic is a low energy power operation sliding door system ideal for intensive care wards. A sleek design and reduced header height proves attractive while the ability to open automatically through jamb or wall mounted touchless wall plates eliminates the need to physically touch an activation device, thereby reducing greatly the spread of germs.

Unique Positive Latching

Utilizing a fail secure lock with an emergency manual override, the IC Matic positive latching mechanism ensures that the door is securely shut every time the door closes after both the sliding and breakout motions. This allows one to freely exit the room in case of power loss and fire. The IC Matic positive latching mechanism fully complies with UL 1784, NFPA 101 and NFPA 105.

For normal door operation, when it is closed the lock will always be engaged. In order to release this lock under normal operation, simply activate the door using your chosen touchless knowing act activation accessory. The entire locking mechanism is firmly enclosed inside the header; there are no protrusions from the door or jamb tube into the door opening area. The lock throws a rod directly into the factory prepared cutout on the door catch, securely locking the sliding motion of the door.

4900 Series
All-in-One Bi-Fold/Bi-Swing Manual Doors

Introducing the new record-usa ALL-IN-ONE door package. Ideally used to eliminate the possible impedance in a hallway of hospital personnel with patients caused by open door leaves, the dual folding-swinging ALL-IN-ONE door system assures that narrow hallways remain clear of possible obstructions that other door — systems may cause.

In the event of an emergency, standard ICU packages may cause concern by breaking into the hallway to allow quick egress from the patient room.Doors of this type also may rely on a floor track system that slows a patient's travel while on a gurney or may lead to discomfort as they proceed over the track. ICU doors are also usually manufactured with hard to grasp handles that are very difficult to open when the nurse may have his/her hands full. Nurses now may easily back into the swing side of the door system and enter the doorway even when handling food trays, patient charts, etc.

When large doorways are desired to allow the simple transportation of carts,wheelchairs or other equipment, standard ICU doors are provided with a breakout feature to allow the door panels to fold in one direction and stack.This design feature provides a larger than normal clear door way opening than swinging doors may allow. But when choosing record usa's ALL-IN-ONE door package the requirement of a breakaway feature is eliminated simply by opening the bi-fold and biswing door quickly and easily. This ingenious three panel door system offers the combination of both a folding door and a double acting swing door system.Inherent to the creativity of the design is the ability to select which side of the unit the folding door panels are on and which side the swinging door unit is on– whichever allows the quickest egress should an emergency situation arise.

record
your global partner for entrance solutions

4500 Series
Automatic Slide/Fold Doors

Elegant-silent-reliable

Where space is at a premium, record's Slide/Fold door allows quick and easy access.Ideally suited to buildings with narrow entrances, it is the perfect solution for restaurants, hotels,business premises, hospitals and homes for the elderly, as well as offices and private buildings.The Slide/Fold doors use record's proven system drive and control units, and have all the features and functions of record's 5100 series standard operator. The Slide/Fold can be either surface applied or mounted between jambs.

Reasons why the record Slide/Fold is vastly superior to standard folding door systems:

- Provides a much larger door opening in even the most restricted doorways (for example a 78" opening provides a 64.625" clear opening as opposed to a 51" clear opening).
- Eliminates the requirement of finger guard at the jamb – a component that consistently fails
- A folding pivot is subject to torsional loads and fatigue failure caused by –
  - a.) location of the pivot point with respect to the alignment of the panels;
  - b.) flexing (twisting) of the door panels during normal operation;
  - c.) jerky operation of the drive mechanism. By aligning the pivot with the door panels, the record design will reduce torsional problems associated with the projected pivot used on the current folding door.
- Moving the pivot closer to the jamb provides additional support of the pivot and increases the clear opening of the door. The record bottom pivot is a sealed, precision bearing mounted into a hardened steel ring, which provides protection for the bearing. Being positioned adjacent to the jamb also increases net door opening and abuse protection.

6100 Series
(for squared header assemblies please specify 6200 series)

record-usa's 6100 series is the ideal choice for interior door ways that demand reliability, durability and silence. The 6100 was designed to meet all requirements of both ANSI A156.19 for power assist and low energy power operated doors as well as applications that must comply within the parameters as defined by the ADA Civil Rights Law.

8100 Series
(for squared header assemblies please specify 8200 series)

The 8100 series as manufactured by record-usa provides the end user with the best solution for interior or exterior entrances. Since the 8100 has complete control of the door throughout its entire opening AND closing cycle and may be programmed for either ANSI A 156.19 or ANSI A 156.10 (power operated pedestrian doors) applications, the 8100 promises to be your choice for heavily used doorways that require a long lasting unit. The 8100 retains the completely silent performance of the 6100 series as well.

8600 Series

The record 8600 overhead concealed package incorporates the 8100 series operator but is supplied complete with a medium stile, center pivoted aluminum door panel, standard 1 ¾" X 4 ½" jambs, cylinder and lock; push bar; offset-pull handle; finger guards and threshold (wide stiles also available.)

8700 Series

When the requirement of an overhead concealed unit that can be used on offset or butt hinge applications is evident, the record-usa 8700 series provides attractive aesthetics as well as durable performance.The 8700 series is supplied with a continuous hinge gear only.

	6100 Series	8100 Series
Doors	Interior	Interior/Exterior
Weights	up to 175 lbs.	up to 350 lbs.*
ANSI	156.19	156.19/156.10
Arm	Standard	Standard/Track/Offset
Door Size	36" or 72"	up to 51" Single & 108" Pairs
Warranty	1 Year	2 Year
Non Handed	✓	✓
Overhead Concealed	✓	✓
Inswing Doors	✓	✓
Outswing Doors	✓	✓
Double Egress	✓	✓
On/Off/Hold Open Switch	✓	✓
Microprocessor Control	✓	✓
Surface Applied	✓	✓
Center Hung	✓	✓
Center Pivoted doorrs Butt/Offset Hung Doors	✓	✓
Deep Reveal Applications	✓	✓
ADA Compliance	✓	✓
Fire Rated Openings	✓	✓
Standard Anodized	✓	✓
Paint	✓	✓
Clad	✓	✓
Eletromechanical	✓	✓
Push to Start	✓	✓
Power Boost (Latch Assist)	✓	✓
No Relay Required for Electric Strikes	✓	✓
No Lockout Relay Required for Sensors	✓	✓
Built-in Power Supply for Sensors	✓	✓
Built in Power Supply for Sensors	✓	✓
Optional Remote Digital Control Panel	✓	✓

Features/Options:

- Available with either squared headers or rounded headers
- Brake option available to maintain door position at the full open and/or full closed position(s) on the 8100 Series
- Reveals up to 24" in depth
- Extended arm adaptors to provide clearance in multiple framing conditions
- UL listed for both UL325 and UL228
- Non-handing operator assembly
- Easily configurable with the record-usa S.M.A.R.T panel
- One header for simultaneous, independent and double egress pairs
- Can be prepped for automation on one door leaf and used with manual closers by LCN, Jackson, Ryobi, etc. on the other
- Two year warranty is standard on the 8100 Series
- Overhead design (see the 8600 Series on the next page) provides completely concealed application
- Non handed to maximize all field condition applications
- The 8100 is adjustable from low energy to high speed operation to meet application needs and ANSI code requirements
- Unit is capable of either push or pull operation with either standard or track arm configuration
- The 8100 is able to confidently and safely operate door
- leaves up to 350 pounds* and 48". The 6100 series may be selected for doors up to 48" and weighing up to 175 pounds.
- Built in interface for electric locking eliminates the need for additional costly peripherals
- Push to start operation saves on the installation and expense of additional activation devices
- Latch assist closing ensures closing to overcome stack and wind conditions (saves heating and/or air conditioning expense) or to overcome applied door hardware such as electric strikes that may otherwise bind, causing a breach of security
- Obstruction shut down halts the door when an object is detected to provide additional safety throughout the door operation
- Recycle on obstruction reopens the door upon making contact with an object or individual to provide additional safety throughout the door operation
- Built in lock out relay provides simplified coordination with safety devices

*Consult Factory

In the Floor
Sliders

In the Floor
Swingers

High Speed
Roll-Up Doors

Thermally
Broken Doors

Exit Lane
Breach Control

Security
Portals

➔ record USA

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➔ Headquarters

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tel.: +41 44 954 91 91 – e-mail: info@agta-record.com – www.agta-record.com

www.recorddoors.com

record

your global partner for entrance solutions

MLM-MARTIN
ARCHITECTS, INC.

substitution request review

Project:	ITB AP 35-20 Construction of Satellite Concourse "C"	**Owner:**	Okaloosa County, Florida Board of County Commissioners
Project Address:	Destin-Fort Walton Beach Airport 1701- State Road 85 North Eglin AFB, Florida 32542-1498		Okaloosa County Purchasing Department 5479A Old Bethel Road Crestview, FL 32536
		OAR:	Jessica Darr
To:	Gulf South Metals, LLC. 615 Wynn Road Summerdale, AL 36580	**From:**	MLM-Martin Architects, Inc. 668 N. Orlando Ave, Ste. 107 Maitland, FL 32751
ATTN:	Michael Furr		Miguel A. Martin, Assoc. AIA
Substitution #:	005 – 10 50 20 Aluminum Sun Shade		
Section:	10 50 20 Aluminum Sun Shade		
Date:	3/5/2020	**File:**	19672-511-20

☐ **Approved - Supply Submittal Materials as Specified.**	☐ **Approved with Exceptions Noted**	■ **Rejected Use Specified Materials**	☐ **Request Received too Late Use Specified Materials**

The above substitution request was reviewed as follows:

"Extruded Aluminum Walkway Cover" Product Submitted does not match the application of exterior sun control devices as defined within the Bid Documents as Cable Suspended – Exterior Wall mounted Canopy.

End of substitution request review description

668 North Orlando Avenue, Suite 107, Maitland, FL 32751
Phone 407 897 6764, Fax 407 894 1338,
mamartin@mlm-martin.com www.mlm-martin.com License No. AA C002208

From: michael furr
To: Jesica Darr
Subject: PRODUCT APPROVAL - CANOPIES - CONSTRUCT SATELLITE CONCOURSE "C"
Date: Tuesday, February 25, 2020 3:42:22 PM
Attachments: 23173_Gulf South Metals Brochure.pdf
Construction Concourse C.docx

Good afternoon,

We are requesting product approval for the Destin-Fort Walton Beach Airport job.
We are referencing section 10 5020 ALUMINUM SUN SHADE.
Attached is our product information.

Please let me know if there is any further information I can provide!
Have a great day!

-Michael Furr
Gulf South Metals
615 Wynn Rd. Summerdale, AL 36580
Phone: 251-989-6443
Fax: 251-989-6430

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

GULF SOUTH METALS ~ALUMINUM CANOPIES~WALKWAY COVERS~AWNINGS

PRIOR APPROVAL REQUEST

For

DESTIN-FORT WALTON BEACH AIRPORT

CONSTRUCTION OF SATELLITE CONCOURSE "C"

TO: OKALOOSA PURCHASING DEPT

ATTN: J. DARR

DATE: 2/25/2020

BID DATE: 3/18/2020

SPECIFICATION SECTION: –SECTION 10 5020 ALUMINUM SUN SHADE

SPECIFIED ITEM: CANOPIES

PROPOSED SUBSTITUTE: GULF SOUTH METALS

MANUFACTURER: GULF SOUTH METALS, SUMMERDALE, AL

DEVIATIONS FROM SPECIFICATIONS: NONE

USE and INSTALLATION: As per specifications – SECTION 10 5020

CHANGES IN WORK REQURIED: NONE

TECHNICAL DATA: SEE ATTACHED

We appreciate your consideration. Please call if you have any questions or need additional information.

Regards,

Michael Furr

Gulf South Metals, LLC.

615 Wynn Road Summerdale, AL 36580 Office: 251.989.6443 Fax: 251.989.6430

GSM Gulf South Metals

Aluminum Canopies • Walkway Covers • Bus-Loading Areas • Dock Canopies • Metal Awnings

17869 Samantha Drive • Foley, AL 36535 • (251) 943-6443 • Fax: (251) 943-6432

ENGINEERING DATA

Gulf South Metals is qualified to assist you in all elements related to the design, engineering, fabrication and installation of Extruded Aluminum Canopy Systems. Our canopy systems are fabricated using the highest quality components to ensure long life and durability.

Canopy Systems

- Aluminum Canopies, Walkway Covers, Bus Canopies, Parent Drop-Off Canopies, Door Canopies, Dock Canopies, Entrance Canopies, Metal Awnings

Canopy Design

- Dry Walk canopy system: combines perpendicular decking with perimeter guttering that forces the water to the perimeter of the canopy and allows the canopy system to carry as much as two times the amount of water as traditional canopy systems.
- Traditional canopy system: designed to have the decking run the long way and draining through wet beams.

Design Requirements

- Our canopy systems are designed to follow the IBC 2006, local building codes, or as required by the Architect/Owner.

Dry Walk Canopy System — Perpendicular Deck and Perimeter Gutter

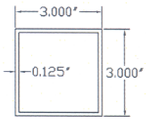
Post spacing using 6" gutter (@ 20lb Live Load) - Dry Walk Design										
Canopy width	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"
Distance between posts	15'-6"	14'-6"	13'-6"	12'-6"	12'-0"	11'-6"	11'-0"	10'-6"	10'-2"	9'-9"
Post spacing using 8" gutter (@ 20lb Live Load) - Dry Walk Design										
Canopy width	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"
Distance between posts	20'-6"	19'-0"	17'-6"	16'-6"	15'-9"	15'-0"	14'-6"	13'-9"	13'-6"	12'-9"

Traditional Canopy System — Decking Long Ways and Wet Beams

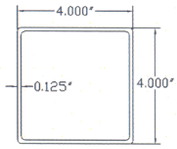
Post spacing due to Canopy Width (Traditional Canopy)											
Canopy Width (ft)	8	9	10	11	12	13	14	15	16	17	18
4"x6" Beam:											
Post Spacing*	16'-0"	16'-0"	16'-0"	14'-10"	12'-5"	10'-7"	9'-2"	7'-11"	7'-0"	6'-2"	5'-6"
Deflection (inches)	0.2462	0.3944	0.6011	0.8174	0.9727	1.1416	1.324	1.5199	1.7293	1.9522	2.1886
4"x8" Beam:											
Post Spacing*	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	14'-6"	12'-6"	10'-11"	9'-7"	8'-6"	7'-7"
Deflection (inches)	0.1317	0.2109	0.3215	0.4706	0.6666	0.8358	0.9693	1.1127	1.2661	1.4293	1.6023

*Canopy widths assume posts are at edge of beam - no cantilever.

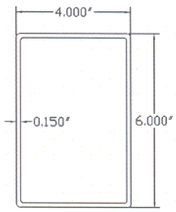
COLUMNS (Extruded)



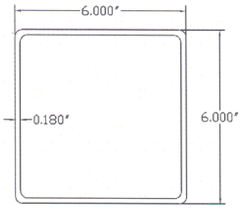
3″ x 3″ Post
I: 1.984 in^4
S: 1.323 in^3



4″ x 4″ Post
I: 4.847 in^4
S: 2.422 in^3

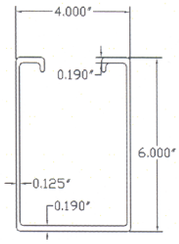


4″ x 6″ Post
I: 14.807 in^4
S: 4.936 in^3

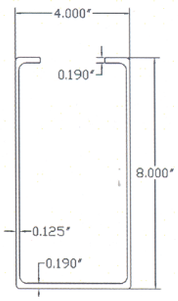


6″ x 6″ Post
I: 23.624 in^4
S: 7.875 in^3

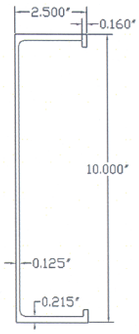
BEAMS (Extruded)



4″ x 6″ Beam
I: 13.638 in^4
S: 4.094 in^3

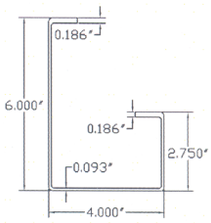


4″ x 8″ Beam
I: 25.503 in^4
S: 5.605 in^3

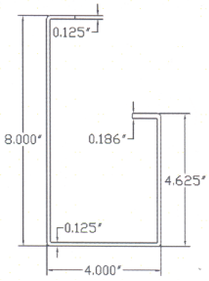


10″ C-Beam
I: 36.845 in^4
S: 7.369 in^3

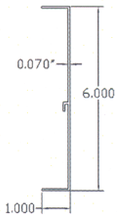
GUTTER AND FASCIA (Extruded)



6″ Gutter
I: 6.282 in^4
S: 1.705 in^3

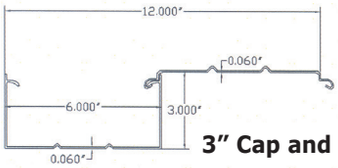


8″ Gutter
I: 14.580 in^4
S: 2.919 in^3

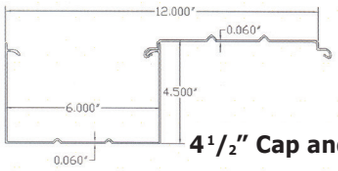


6″ False Fascia
I: 2.838 in^4
S: 0.883 in^3

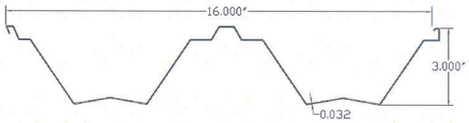
DECKING (Extruded and Roll Form)



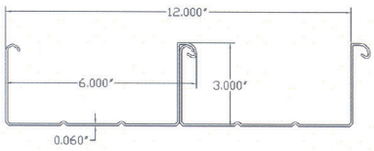
3″ Cap and Pan



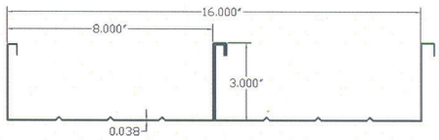
4 1/2″ Cap and Pan



3″ Roll Form with Pan



3″ Flat Pan



3″ Roll Form Flat Pan

Maximum decking spans (Dry Walk & Traditional Canopies)

3″ Panel Span (extruded)			4 1/2″ Panel Span (extruded)			3″ Flat Panel Span (extruded)			3″x16″ Roll Formed W-Pan	
Live Load	3″ Panel 0.060″	3″ Panel 0.080″	Live Load	4 1/2″ Panel 0.060″	4 1/2″ Panel 0.080″	Live Load	3″ Panel 0.060″	3″ Panel 0.080″	Live Load	0.032″ Panel
20	16′-0″	18′-1″	20	19′-2″	16′-0″	20	14′-6″	16′-7″	20	13′-0″
25	14′-9″	16′-8″	25	17′-0″	19′-1″	25	13′-1″	15′-4″	25	11′-10″
30	13′-6″	15′-5″	30	15′-10″	17′-11″	30	11′-8″	14′-1″	30	10′-8″
35	12′-3″	14′-1″	35	14′-7″	16′-8″	35	10′-5″	12′-9″	35	9′-11″
40	11′-0″	12′-9″	40	13′-5″	15′-6″	40	9′-2″	11′-5″	40	9′-2″

Above loads are based on L/60 (IBC 2006, Table 1604.3 Section H)

SPECIFICATIONS

General: The aluminum canopy shall be an all extruded structural system with the design being either Dry Walk (perpendicular decking and perimeter gutter) or Traditional (decking running long way) as manufactured by **Gulf South Metals.** All extrusions shall be aluminum alloy 6063/T-6 temper. All materials will be fabricated only from approved shop drawings from Architect/Owner.

Load/Design Requirements: The system shall be designed to follow the International Building Code 2006, ASCE 7-05 and the local building codes, or as required by the Architect/Owner.

Roof Deck: All sections shall be interlocked in the field to form self flashing, and structurally rigid connections. The deck shall be assembled with no exposed interlocking joints on the underside.

Construction: Columns, beams and perimeter guttering shall be either mechanically fastened with concealed stainless steel fasteners or factory welded bents if shipping allows.

Finishes: Aluminum extrusions shall have a factory applied baked enamel finish AAMA 2603 or anodized as per Aluminum Association Specifications AA-M-10C-22A-42. Color to be selected from **Gulf South Metals** standard colors.

Erection: Erections shall be scheduled after all work in the canopy area is complete. Column sleeves (styrofoam block-outs) are furnished by **Gulf South Metals** and installed by the General Contractor, according to the approved shop drawings.

Certification: Design calculations and stamped drawings signed by a Registered Professional Engineer can be provided upon request from the Architect/Owner.

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