



Martha's Vineyard Commission

OLD STONE BUILDING • 33 NEW YORK AVENUE

PO BOX 1447 • OAK BLUFFS, MA 02557

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INFO@MVCOMMISSION.ORG • WWW.MVCOMMISSION.ORG

October 26, 2021

Allen Scott
SAV Associates, LLC
15 North Line Road
Edgartown, MA 02539

Re: MVC Decision for DRI 194-M (SAV/FedEx Ground Redevelopment)

Dear Allen,

I am writing to confirm that on Oct. 21, 2021, the Martha's Vineyard Commission voted to approve the proposed redevelopment of the SAV/FedEx Ground facility at 15 North Line Road, Edgartown (DRI 194-M) with conditions. The Commission had previously voted on Sept. 9, 2021, to not require a public hearing.

The proposal is to demolish Buildings C and D in the center of the site, and replace them with two 12'x50' modular docks for FedEx Ground operations. The new docks will increase the number of vehicle delivery doors from seven to 20 (18 van-load doors and two trailer doors), and decrease the total square footage of buildings on the lot by 3,300 ft². The two existing 12'x50' modular docks will be converted into employee offices and a customer service center. A gravel area north of the existing Buildings C and D will be replaced with asphalt. The complete DRI file is available at the link below, or by contacting the DRI Coordinator:

<https://www.mvcommission.org/dri/summary/194/58402>

The commission voted to accept the Applicant's offers, which are attached here (letter from Robert Ranallo of FedEx Ground dated Oct. 19, 2021), as modified by the following conditions:

1. In regard to the Applicant's Offer #1 (Onsite Solar), the purchased RECs must be recognized as Class I RECs by the state of Massachusetts.
2. In regard to the Applicant's Offer #1 (Onsite Solar), if and when it becomes possible to do so on the project site, the Applicant shall install solar panels to the maximum extent feasible, with final plans provided to the MVC.
3. In regard to the Applicant's Offer #4 (Zero Emission Service Provider Vehicles), if any of the stated timeframes (Dec. 31, 2025; Dec. 31, 2028; and Dec. 31, 2030) cannot be met,

regardless of whether zero-emission vehicles are commercially available, the Applicant shall return to the MVC for a modification of this DRI.

The town may now proceed with the permitting process.

Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Alex Elvin". The signature is written in a cursive, slightly slanted style.

Alex Elvin

DRI Coordinator

cc: Reade Milne (Edgartown Building Inspector)
Kevin Brennan (Airport Properties Manager)
Mary Burns (Vortex Engineering)
Robert Jones (Vortex Engineering)
Chris Myers (Vortex Engineering)
Andrew Wilke (Vortex Engineering)
Jennifer Jamison (FedEx)
Robert Ranallo (FedEx)



1000 FedEx Drive
Moon Township, PA 15108

October 19, 2021

To: Martha's Vineyard Commission
The Olde Stone Building
33 New York Avenue
Oak Bluffs, MA 02557

FedEx Confidential and Proprietary Business Information provided solely for the Martha's Vineyard Commission's consideration of the FedEx Ground project in Martha's Vineyard Business Park. Please do not publish or distribute.

FedEx Ground contracts with independent, incorporated businesses to provide package pickup and delivery services. Those independent businesses provide services with their own vehicles operated by their own employees. The vehicles are leased to FedEx Ground only for purposes of providing the contracted-for services.

1. All Electric Facility

FedEx Ground's proposed facility is all electric.

2. Onsite Solar

The FedEx Ground facility will consist of premanufactured units that cannot support the weight of traditional rooftop mounted solar installations. However, FedEx Ground is investigating the installation of on-site solar but is unable to commit to the installation due to the unique nature of this project. To further explain, the FedEx Ground Modular Docks are pre-manufactured buildings governed by the State of Massachusetts, which specifically comply with State statutes and the rules/regulations adopted by the Board of Building Regulation and Standard Forms. As such, incidental Dead Roof Loading is not accommodated and applicable laws and regulations require that 10psf (reference Exhibit 'B') be utilized. The attached calculations support the legally required dead roof loading and further demonstrate that if additional dead roof loading is added, the roof structure system would fail (reference Exhibit 'C'). Because this has the potential to be a Life Safety issue, traditional rooftop mounted solar installations are not feasible.

Until such time as on-site solar is feasible to install, if ever, FedEx Ground shall purchase Renewable Energy Credits (RECs) originating from a project(s) sited in the New England ISO region. The amount of RECs purchased annually shall be commensurate with the estimated production of a system that could physically fit within the footprint of roof space of the proposed facility. This production estimate has been found to be 43 MWh annually.

Please understand, this is by no means a deviation from our commitment to continually explore, investigate, and innovate for solutions to bring our facilities and fleets into a sustainable and zero emission goal for the future to come.

3. Electric Vehicle Charging Infrastructure

FedEx Ground will install infrastructure to enable the charging of electric vehicles.

4. Zero Emission Service Provider Vehicles

FedEx Ground shall take reasonable efforts to ensure that companies with which FedEx Ground contracts to provide services for FedEx Ground use zero emission vehicles/delivery vans/trucks (Class 2 through 6) as follows: For any vehicle (Class 2 through 6) used in connection with the FedEx Ground station, FedEx Ground shall take reasonable efforts to ensure that service providers satisfy the following thresholds: (i) 33% of service provider vehicles will be zero emission vehicles by December 31, 2025, or when commercially available, whichever date is later, (ii) 66% of service provider vehicles will be zero emission vehicles by December 31, 2028, or when commercially available, whichever date is later, and (iii) 100% of service provider vehicles will be zero emission vehicles by December 31, 2030, or when commercially available, whichever date is later.

This requirement shall apply to service provider vehicles operating under FedEx Ground's operating authority that the service providers use to provide services more than 70% of the calendar year and excludes supplemental, spare or rental vehicles that service providers may use when maintaining their fleet or servicing volume surges.

In the event that there is a disruption in the manufacturing of zero emission vehicles/trucks or that sufficient vehicles/trucks are not commercially available for the intended application, the timeline may be adjusted to accommodate the manufacturing disruption or unavailability of commercially available vehicles/trucks.

DocuSigned by:

Bob Ranallo

F059G58F0EAD40D...

Robert Ranallo

Managing Director Facilities Project Engineering
FedEx Ground

EXHIBIT 'B'
MODULAR DOCK PLANS

MANUFACTURER INFORMATION

NAME: WHITLEY EAST LLC
ADDRESS: 64 HESS RD
LEOLA, PA 17540

DESIGN CODES:

7TH EDITION 780 CMR MASS. BUILDING CODE (2015 IBC w/ STATE AMENDMENTS)
7TH EDITION 780 CMR MASS. BUILDING CODE (2015 IMC w/ STATE AMENDMENTS)
248 CMR 10.00 UNIFORM STATE PLUMBING CODE
7TH EDITION 780 CMR MASS. BUILDING CODE (2018 IECC w/ STATE AMENDMENTS)
527 CMR 1.00 MASS COMPREHENSIVE FIRE SAFETY CODE (2015 NFPA 1 w/ STATE AMENDMENTS)
527 CMR 12.00 MASS ELECTRICAL CODE (2020 NEC w/ STATE AMENDMENTS)
521 CMR ARCHITECTURAL ACCESS BOARD

MANUFACTURER INFORMATION

NAME: WHITLEY EAST LLC
ADDRESS: 64 HESS RD
LEOLA, PA 17540

CERTIFICATION NUMBER: MC 460
EXPIRATION DATE: 9-26-2021

BUILDING INFORMATION

PROJECT NAME: FEDEX GROUND PACKAGE FACILITY
MODEL DESIGNATION: 7721
SITE ADDRESS: 15 NORTH LINE ROAD, EDGARTOWN, MA 02539
OCCUPANCY TYPE: S-2
CONSTRUCTION TYPE: V-B (STEEL CONSTRUCTION - UNPROTECTED)
BUILDING AREA: 1176 SQ. FT.
ENCLOSED SPACE: 10584 CU. FT.
BUILDING HEIGHT ABOVE GRADE: 13'-9" (APPROXIMATE)
OCCUPANT LOAD: 3, OR LESS
SPECIAL SYSTEMS: NONE

FIRE ALARM: SYSTEM SUPPLIED AND INSTALLED ON SITE BY CERTIFIED INSTALLER
FIRE SUPPRESSION: NONE

BUILDING DESIGN LOADS

Table with 2 columns: Load Type and Value. Includes FLOOR LIVE LOAD UNIFORM (125 PSF), FLOOR LIVE LOAD CONCENTRATED (N/A LBS), FLOOR IMPACT LOAD (N/A LBS), FLOOR DEAD LOAD (18 PSF), ROOF LIVE LOAD (REQUIRED) (35 PSF), ROOF LIVE LOAD (REQUIRED) (35 PSF), GROUND SNOW LOAD (10 PSF), ROOF DEAD LOAD (10 PSF), FLAT ROOF SNOW LOAD (35 PSF), SNOW EXPOSURE FACTOR (1.00), SNOW LOAD IMPORTANCE FACTOR (1.00), THERMAL FACTOR (N/A), RAIN ON SNOW SURCHARGE LOAD (140 MPH), BASIC WIND SPEED (V10) (108.4 MPH), BASIC WIND SPEED (V50) (110.4 MPH), RISK CATEGORY (II), WIND EXPOSURE (B), DESIGN WIND PRESSURE (HORIZONTAL) (31.18 PSF), DESIGN WIND PRESSURE (UPLIFT) (28.10 PSF), SEISMIC IMPORTANCE FACTOR (1.00), SEISMIC DESIGN CATEGORY (B), SPECTRAL RESPONSE COEFFICIENT SDS (0.145), SPECTRAL RESPONSE COEFFICIENT SD1 (0.082), SITE CLASS (D), BASIC SEISMIC-FORCE-RESISTING SYSTEM (A,16), DESIGN BASE SHEAR (1295.90 LBS)

SPECIAL USE PROVISIONS

- 1) THIS BUILDING SHALL NOT BE USED AS AN ADDITION TO ANOTHER BUILDING IF IT WILL DOWNGRADE THE CONSTRUCTION TYPE, OR REDUCE THE OPEN PERIMETER, OR IN ANY WAY JEOPARDIZE LIFE SAFETY FEATURES OF THE EXISTING BUILDING
2) THIS BUILDING IS LIMITED TO PLACEMENT IN AREA WITH DESIGN CONDITIONS LESS THAN OR EQUAL TO THOSE NOTED ABOVE.
3) TOILET FACILITIES FOR THE BUILDING ARE TO BE PROVIDED IN ACCORDANCE WITH 248 CMR 10.00 BY CERTIFIED INSTALLER.

METHOD OF VENTILATION

COMBINATION OF NATURAL AND MECHANICAL

MECHANICAL INFORMATION

TYPE OF HVAC: RADIANT ELECTRICAL RESISTANCE
OTHER FUEL BURNING EQUIPMENT: NONE
TYPE OF CHIMNEY/VENTING SYSTEM: NONE

ENERGY COMPLIANCE

U-VALUES FOR BUILDING THERMAL ENVELOPE

- WALLS - SET MODULES ON FOUNDATION AND CONNECT TO PIERS
FLOOR - INSTALL FLOOR, WALL AND ROOF CLOSE-UP MATERIAL
ROOF - INSTALL ALL SITE-SUPPLIED EQUIPMENT
DOORS - CONNECT UTILITIES TO BUILDING AND CROSS SEAM ELECTRIC
WINDOWS - INSTALL EXTERIOR MATELINE CLOSE-UP MATERIAL
INSTALL EXTERIOR MATELINE CLOSE-UP MATERIAL
INSTALL SKIRTING, CRAWL SPACE VENTILATION AND CRAWLSPACE ACCESS

NOTE: ITEMS TO BE INSTALLED AT SITE ARE SUBJECT TO INSPECTIONS BY LOCAL AUTHORITY HAVING JURISDICTION

NOTES:

- 1) 48 HOUR NOTIFICATION TO LOCAL AUTHORITY HAVING JURISDICTION IS REQUIRED TO BE GIVEN PRIOR TO THE BUILDING SET
2) THIS BUILDING IS SOLAR READY PER 780 CMR 13 C403.2
3) THIS BUILDING TO BE LOCATED MORE THAN 10 FEET FROM PROPERTY LINE OR ASSUMED PROPERTY LINE, AND 20' BETWEEN BUILDINGS

THIRD PARTY INSPECTION AGENCY INFORMATION

NAME: TR ARNOLD ASSOCIATES

THIRD PARTY INSPECTION AGENCY INFORMATION

NAME: TR ARNOLD ASSOCIATES

AUTHORIZATION NUMBER: TPIA-03
EXPIRATION DATE: 04-30-2022

VORTEX ENGINEERING INC.
FEDEX GROUND PACKAGE FACILITY

SITE ADDRESS:

15 NORTH LINE ROAD, EDGARTOWN, MA 02539

Module Shipping Information table with columns: Module Serial Number, Module Number, Module Size, Module Shipping Height, Module Shipping Weight, Allowable Ship Loose Weight / Ballast, Axle Quantity, Tire Size, Coupler Type, Coupler Size, Coupler MFR., Coupler Height Above Grade

MODULE SIZES INCLUDE HITCH AND OVERHANGS. SIZES SUBJECT TO GROWTH DURING CONSTRUCTION. DIMENSIONS TO BE FIELD VERIFIED BEFORE UNIT SHIPS AND DEALER TO BE NOTIFIED WITH FINAL FIELD VERIFIED DIMENSIONS

INDEX (11 SHEETS TOTAL):

- C1.0 COVER SHEET
A0.0 SPECIFICATIONS
A1.0 EXTERIOR ELEVATIONS
A2.0 SUGGESTED BLOCKING PLAN
A2.1 FLOOR PLAN
A3.1 REFLECTED CEILING PLAN
E2.1 ELECTRICAL PLAN
E6.1 CONDUIT FILL CHART
E7.0 ELECTRICAL SCHEDULES
S1.1 FRAME PLAN
S2.1 BUILDING SECTIONS
S4.1 ROOF FRAMING PLAN

GENERAL CONTRACTOR NOTES:

- 1. WHITLEY MFG. IS NOT RESPONSIBLE FOR LIQUIDATED DAMAGES.
2. WHITLEY MFG. IS NOT RESPONSIBLE FOR FEDERAL OR LOCAL CODES.
3. MANUFACTURERS LIMITED WARRANTY IS FOR 1 YEAR FROM THE DATE OF THE MANUFACTURERS INVOICE DATE ONLY.
4. WHITLEY STANDARD WARRANTY APPLIES UNLESS STATED OTHERWISE. WARRANTY CLAIMS NOT REPORTED AND APPROVED WILL NOT BE CONSIDERED FOR REIMBURSEMENT.
5. IN THE EVENT THAT ANY WARRANTY REPAIRS ARE REQUIRED FOR A WHITLEY BUILDING, WE ASK THAT YOU PLEASE CONTACT OUR REPRESENTATIVE TO RESOLVE ANY ISSUES. WE RESERVE THE RIGHT TO REPAIR OR REPLACE THE ISSUE FIRST IN A TIMELY MANNER AGREED UPON WITH OUR LABOR RATES, NOT SITE RATES.
6. A COPY OF OUR WARRANTY SHIPS WITH BUILDING. PLEASE LET US KNOW IF YOU WOULD LIKE A COPY IN ADVANCE.
7. ALL BUILDINGS HAVE STANDARD SET-UP ITEMS THAT NEED TO BE COMPLETED BY SET-UP SUBCONTRACTOR (I.E. - DOOR ADJUSTMENTS, HVAC BALANCING, CROSS SEAM CONNECTIONS, ETC.)
8. WHITLEY MFG. IS NOT RESPONSIBLE FOR ANY DAMAGES RESULTING FROM ACCIDENTAL OR NEGLIGENT ACTS BY THE TRANSPORTATION COMPANIES. DRIVER'S WILL SIGN A RELEASE OF RESPONSIBILITIES AND SUGGESTED TRAVEL SPEED MUST BE ADHERED TO.
9. ANY GAS LINES WILL NEED TO BE BY CERTIFIED INSTALLER AND PLUMBED BY A SITE LICENSED PLUMBER, NOT BY WHITLEY.
10. ANY DRAWING, PURCHASING, CUSTOMER CHANGE OR IN-CONSTRUCTION CHANGE DETERMINED NOT AFFECTING CODE APPROVAL (EX: CHANGE OF BRAND NAME MATERIALS) MAY BE CHANGED AT DISCRETION OF WHITLEY MANUFACTURING. SO LONG AS DRAWINGS REFLECT THE APPROPRIATE REVISION MARKS TO INDICATE WHERE THE REVISION HAS TAKEN PLACE ON THE DRAWING AND IS DATED ELECTRONICALLY IN THE MANUFACTURERS ELECTRONIC FILE FOR THE PROJECT
11. DIMENSIONS LISTED HEREIN TO BE HELD TO STANDARD CONSTRUCTION TOLERANCES AT DISCRETION OF WHITLEY MANUFACTURING UNLESS NOTED OTHERWISE.
12. TERMINOLOGY USED WITHIN THE MODULAR BUILDING INDUSTRY AND / OR COMPANY MAY DIFFER FROM COMMON NOMENCLATURE IN THE CONSTRUCTION INDUSTRY. WHILE WHITLEY STRIVES TO USE COMMON CONSTRUCTION TERMINOLOGY, WHITLEY RESERVES THE RIGHT TO USE AND INTERPRET LANGUAGE IT DEEMS NECESSARY TO CONVEY IT'S METHODS OF CONSTRUCTION

ABBREVIATIONS

Table with 2 columns: Abbv. and Word. Includes Abbv. UP #*, A.F.F., ACT, BD, CAB, CLG, COL, CONC, CPT, CU, FT., DCW, DHW, DHWR, DTHW, DWG, EER, EOS, EQ, EXG, EXT, FLR, FRT, GC, GFCI, GLS, GWB, GYP, HPP, HVAC, HWD, INT., MAX, MFR, MIN, MTD, N/A, NTS, O.C., PNL, PT, RM, SAN, SHT, SIM, SQ. FT., STD, STL, TEL, TYP., UNO, V, VTR, WD, WP, Ø

GENERAL SYMBOL LEGEND

Table with 2 columns: Symbol and Description. Includes VIEW NUMBER, NAME AND SCALE (1 View Name 1/8" = 1'-0"), ELEVATION SYMBOL (1 SIM A101), SECTION SYMBOL (1 SIM A101), REVISION TAG (1), WINDOW TAG (11), DOOR TAG (101), ROOM NAME, NUMBER AND AREA (Room name 101 150 SF), WELD SYMBOL (0 0)

HATCH LEGEND

- BATT INSULATION
CONCRETE
STEEL
WOOD
RIGID INSULATION
PLYWOOD / OSB
GYPSUM

WHITLEY EAST LLC
64 HESS RD
LEOLA, PA 17540
717-656-2081
APPROVED:
APPROVED AS NOTED:
RETURN FOR CORRECTION:
BY:
DATE:
UPON APPROVAL, THESE DRAWINGS WILL TAKE PRECEDENCE OVER ALL PREVIOUS DRAWINGS FOR THIS PROJECT

SPACE RESERVED FOR STATE SEAL ONLY
SPACE RESERVED FOR THIRD PARTY INSPECTION SEAL ONLY
SPACE RESERVED FOR P.E. SEAL ONLY
Civil Engineer Kevin M. Finn, P.E., Inc.
815 Waterbury Park Drive
Elkhart, IN 46517
MA PE Lic. # 39636
KEVIN M. FINN
CIVIL
No. 39636
REGISTERED PROFESSIONAL ENGINEER

Table with 3 columns: No., Revision Description, Date. Includes 1 Customer approval drawings (03.01.2021), 2 Corrections per PE mark-ups (05.07.2021), 3 Corrections per TPIA deviations (05.14.2021)

THIS DRAWING AND ALL INFORMATION CONTAINED HEREON IS THE PROPERTY OF WHITLEY MFG. CO., INC. AND IS NOT TO BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF WHITLEY MFG. CO., INC. WHITLEY MFG. CO., INC., ASSUMES NO RESPONSIBILITY FOR UNAUTHORIZED USE OF THIS DRAWING.

Whitley East, LLC
64 HESS ROAD
LEOLA, PA 17540
PHONE: 717.656.2081
www.whitleyman.com

Drawn By: EP
Checked By: CZ/DL
Rev: 4

COVER SHEET
VORTEX ENGINEERING, INC.
FEDEX GROUND PACKAGE FACILITY
(2) 50'-0"x11'-9" MODULES
Serial No. 2443-44
Quote No. 47615-99
Model No. 7721
Job No. 2021-005-WP
5/14/2021 8:52:43 AM
Scale: As indicated
Page No. C1.0

CERTIFIED INSTALLER: VORTEX ENGINEERING, INC.
 PROJECT NAME: FEDEX GROUND PACKAGE FACILITY
 SERIAL NUMBER: 2443-44
 MODEL NUMBER: 7721
 JOB I.D. #: 2021-005-WP
 MODEL SIZE: 100'X12' (2) 54'-2"x12'-0" MODULES

APPROX. MODULE SHIPPING HEIGHT (PEAK OF ROOF): 13'-6"

A-FRAME:
 1 TYPE: OUTRIGGER
 2 MAIN BEAM: W10"x12# I-BEAM (ROLLED)
 3 X-MEMBER: W8"x10# I-BEAM (ROLLED) AT 48" O.C.
 4 OUTRIGGERS: W8"x9# I-BEAM (ROLLED) AT 48" O.C. WITH 7/12" x 2" 14ga (MIN) FORMED ZEE
 5 HITCH: BOLT-ON COUPLER
 6 AXLES: FOUR - TANDEM LEADING AND TRAILING
 7 SPRINGS: MULTI-LEAF, OVERSLUNG
 8 TIRES: w/ 4" HANGERS, EQUALIZERS, AND AXLE ATTACHING PARTS
 9 TIE DOWN: 8'00" X 14.5, 14 PLY OVER THE FRAME
 NOTE: PROVIDED & INSTALLED BY CERTIFIED INSTALLER.
 10 MISC: SEE SUGGESTED BLOCKING PLAN FOR TIE DOWN LOCATIONS
 11 MISC: PUNCH OR DRILL 1/2"DIA. HOLE 32" O.C. TOP FLANGE OF FRAME FOR EXTERIOR WALL ATTACHMENT
 12 MISC: PUNCH OR DRILL 1/2"DIA. HOLE 48" O.C. BOTTOM FLANGE AT EXTERIOR FRONT/REAR BUMPER FOR SKIRTING ATTACHMENT
 13 MISC: 1 1/2" x 1 1/2" 14ga STEEL ANGLE AT ENDS OF MODULES FOR B-DECK CAP
 14 UNDER COATING: THIS UNIT WILL HAVE STEEL POSTS RUST INHIBITIVE LATEX TYPE PAINT, BLACK. 100% COVERAGE OF STRUCTURAL MEMBERS.

B-FLOOR:
 1 BOTTOM BOARD: NONE
 2 INSULATION: R-28 (4" NOMINAL) SPRAYED CLOSED-CELL FOAM INSULATION
 NOTE: NOT REQUIRED TO HAVE AN IGNITION BARRIER PER U.E.S. EVALUATION REPORT # 146
 3 JOISTS: NONE. DECKING TO BE APPLIED DIRECTLY TO CROSS MEMBERS
 4 DECKING: 3/4" ADVANTECH UNDERLAYMENT OVER 20 GAUGE METAL DECK W/ 1 1/2" RIBS
 (HOLD BACK ADVANTECH DECKING 10" AT MATELINE)
 5 COVERING: NONE. PLYWOOD DECK TO BE PAINTED BY CERTIFIED INSTALLER.
 NOTE: CLEAR SILICONE SEALANT TO BE APPLIED BETWEEN INTERIOR WALL COVERING AND FLOOR COVERING

C-EXTERIOR WALLS:
 NOTE: AT OPEN MATELINE AREAS TO BE COVERED W/ VISQUEEN, INSTALL PANELING STRIPS AT 2' O.C. VERTICALLY, FOR THE FIRST SIX-FOOT LENGTH OF OPEN AREA.
 NOTE: DO NOT REMOVE TEMPORARY ROOF BRACING SUPPORTS AT MODULE SIDES UNTIL MODULE IS SET ON PERMANENT FOUNDATION.
 1 STUDS: 1 5/8" X 6" (18 GA.) STEEL 18" O.C.
 WIDBL. STUDS EACH END OF SIDEWALLS
 3"x6" 18ga JAMBSTUD AND HEADER TO BE INSTALLED AT DOOR OPENINGS, OPENINGS TO BE WRAPPED WITH LUMBER
 2 BOTTOM PLATE: 1 1/4" X 6" (18 GA.) STEEL TRACK
 3 TOP PLATE: 1 1/4" X 6" (18 GA.) STEEL TRACK
 4 COVERING: 29ga COMMERCIAL STEEL SIDING w/ 3/4" HIGH RIB AND 29ga STEEL TRIMS
 NOTE: APPLY HORIZONTAL 3"W 16ga FLAT STEEL STRAP TO INTERIOR SIDE OF STUDS FOR FASTENING WALL COVERING AT 32" O.C. VERTICALLY
 5 SHEATHING: 1/2" F.R.T. PLYWOOD
 6 SHEATHING: AIR INFILTRATION BARRIER (TYVEK OR EQUAL)
 7 INSULATION: R-19 UNFACED FIBERGLASS BATT
 8 SIDING: 29ga COMMERCIAL STEEL SIDING w/ 3/4" HIGH RIB
 NOTE: START SIDING 2" BELOW FINISHED FLOOR
 9 EXT. TRIM: 29ga COMMERCIAL STEEL
 J-CHANNEL - DOORS
 BOTTOM STARTER
 TOP SIDE STARTER
 OUTSIDE CORNERS
 10 SKIRTING: NONE, SUPPLIED AND INSTALLED BY CERTIFIED INSTALLER
 COLUMNS: HSS 4x4x1/4 SHEAR BENT COLUMNS

D-INTERIOR WALLS: NONE

E-ROOF:
 1 RAFTERS: 2" x 8" 12ga COLD-FORMED "C" AT 48" O.C.
 WITH 2" x 8" 12ga COLD-FORMED TRACK OVER SIDEWALLS
 2 MATE BEAM: STEEL C-CHANNEL C10"x15.3#
 NOTE: 1/2" DIA. HOLES 32" O.C. IN BOTTOM CHORD OF BEAM TO ATTACH SHIPPING WALLS
 3 CEILING: NONE. RAFTERS TO BE PAINTED AND EXPOSED
 4 INSULATION: TAPERED RIGID INSULATION (MIN. 5" THICK; R-30)
 5 SHEATHING: 20ga METAL DECK WITH 1 1/2" RIBS
 6 COVERBOARD: 1/2" DENSDECK OVER TAPERED RIGID INSULATION
 7 ROOFING: EPDM RUBBER 1-PC MEMBRANE .45 mil. BLACK
 8 GUTTER: NONE. GUTTER, DOWNSPOUTS, ETC. TO BE PROVIDED AND INSTALLED BY CERTIFIED INSTALLER

F-DOORS: SEE DOOR SCHEDULE ON A0.0

G-WINDOWS: NONE

H-ELECTRICAL:
 1 LOAD CENTER: 120/208 V., 3-PHASE-WYE, 60 HZ, 4-WIRE, 200 AMP MAIN BREAKER TYPE, 10KAIC
 2 SERV ENT: 2" EMT THRU FLOOR
 NOTE: ALL SERVICE ENT. WIRING TO BE TYPE THWN COPPER.
 NOTE: MAIN DISTRIBUTION PANEL, & OR MAIN DISCONNECT SWITCH, TO BE PROVIDED AND INSTALLED BY CERTIFIED INSTALLER-INCLUDING ALL REQUIRED FEEDER WIRING, CONDUIT, ETC., TO CONNECT INSTALLED LOAD CENTERS.
 3 WIRING: EMT (#12 MIN WIRE SIZE) - TYPE THHN
 NOTE: EMT TO BE USED WHERE EXPOSED
 3a WIRING: MC CABLE W/ INTERLOCKING TAPE SHEATH (#12 MIN WIRE SIZE) - TYPE THHN
 NOTE: MC CABLE TO BE USED IN WALL CAVITIES
 3b CROSS-SEAM WIRING: PIGTAIL AND JUNCTION BOX
 4 INT. LIGHTS: 48" LED SURFACE MOUNT, LOW PROFILE
 5 EXT. LIGHTS: LUMAX DKLED2L4K48-9FA, OR EQUAL LED WALL PACK - WEATHERPROOF WITH PHOTOCELL LITHONIA OLWP, OR EQUAL
 UP 74" TO BOTTOM
 6 EXT. LIGHTS: 40 WATT LED FLOOD LIGHT - WEATHERPROOF RADIANCE LIGHTING FLOOD LIGHT OR EQUAL MOUNTED TO THE TOP CORNER OF EACH ROLL-UP DOOR OPENING
 7 EGRESS LIGHTS: EXIT/EMERGENCY LIGHT W/ BATTERY PACK & EXTERIOR REMOTE HEAD (W.P.) - UP 84" TO BOTTOM
 NOTE: EXT. HEAD SHIPPED LOOSE. FOR INSTALLATION BY CERTIFIED INSTALLER.
 8 RECEPTS: 125V20A TAMPER-RESISTANT DUPLEX
 UP 18" TO BOTTOM OF BOX UNLESS NOTED OTHERWISE
 9 RECEPTS: 125V20A WEATHER RESISTANT DUPLEX; TOP AND BOTTOM SEPARATED INTO TWO GFCI PROTECTED CIRCUITS WITH WEATHERPROOF IN-USE COVER - UP 6" TO BOTTOM
 NOTE: ALL RECEPTS ARE TO BE GROUNDING TYPE
 10 SWITCHES: 120V20A SINGLE POLE - UP 44" TO BOTTOM
 11 SWITCHES: 120V20A CEILING-MOUNTED OCCUPANCY SENSOR
 12 SWITCHES: 120V20A 3-WAY - UP 44" TO BOTTOM
 13 MISC: PERSONNEL DOOR ALARMS (F1 DOORS ONLY) - HARD WIRED INTO THE ELECTRICAL SYSTEM
 DETEX ACDEXAX-2500S1S-X EASY KIT WITH MAGNETIC SWITCH, POWER SUPPLY, HORN/STROBE, AND EXIT ALARM
 WALL-MOUNTED TIMER SWITCH (FOR HEATERS) - UP 44" TO BOTTOM
 INTERMATIC KM2ST-1G OR EQUAL
 14 MISC: 30 AMP DEFINITE PURPOSE 3 POLE CONTACTOR WITH 120V COIL FOR TIMER CONTROL OF HEATERS
 15 MISC: (2) CONTACTORS TO BE MOUNTED IN 8"x8"x6"D PULL BOX
 NOTE: CLEAR SILICONE SEALANT TO BE APPLIED BETWEEN INTERIOR WALL COVERING AND FLOOR COVERING

J-PLUMBING: NONE

K-H.V.A.C.:
 1 HEATING: 48" 4KW 3PH INFRARED HEATERS
 BBC INDUSTRIES BLACK BODY I43-4000-240V
 2 COOLING: 2600 CFM CEILING-MOUNTED FAN WITH YOKE MOUNT PATTERSON H14A w/ YOKE MOUNT

L-FURNITURE & INTERIOR FURNISHINGS: NONE

M-MISCELLANEOUS:
 1 10# ABC FIRE EXTINGUISHER W/BRACKETS
 2 EXTERIOR & INTERIOR MATELINE CLOSE-UP MATERIAL SHIPPED LOOSE FOR INSTALLATION BY CERTIFIED INSTALLER.

UNIT LABELS:
 THIRD PARTY LABEL
 STATE OF MA LABEL
 DATA PLATES AND LABELS LOCATED ON LOAD CENTER COVER, UNLESS OTHERWISE SPECIFIED.
 MBI LABEL

GENERAL SPECIFICATION NOTES:
 1) BUILDING NOT TO BE LOCATED IN A DESIGNATED FIRE ZONE.
 2) THIS BUILDING SHALL BE LOCATED MORE THAN 30 FEET AWAY FROM ANY PROPERTY LINE OR ANY INTERIOR LOT LINE BETWEEN IT AND ANY OTHER BUILDING.
 3) THIS BUILDING NOT TO BE LOCATED IN A FLOOD PRONE AREA.
 4) WHITLEY MFG. CO., INC. IS NOT RESPONSIBLE FOR THE LOCAL BUILDING CODE REQUIREMENTS OVER AND ABOVE THE ENCLOSED SPECIFICATIONS. THE SPECIFICATIONS ARE BASED ON THE DESIGN PARAMETERS OF THE CODES LISTED ABOVE.
 5) THIS BUILDING DOES NOT HAVE FIRE-RATED EXTERIOR WALLS.
 6) THIS BUILDING SHALL NOT BE LOCATED IN AREAS WITH SNOW, WIND, AND/OR SEISMIC LOADS IN EXCESS OF THOSE NOTED ABOVE IN BUILDING DESIGN LOADS.

Modular Manufacturers Scope Clarifications
Section
Floor
 Insulation: Insulation for mate lines ships loose for installation by certified installer
 Decking: Decking held back at mate lines, installation at mate lines by certified installer
 Floor Covering: Floor decking to be painted by certified installer
Walls and Partitions
 Wall: Wall covering run to mateline; 29ga steel tee shipped loose for install by certified installer
 Siding: Siding run to mateline; 29ga steel tee shipped loose for install by certified installer
 Insulation: Insulation for seam closures ships loose for installation by certified installer
 Skirt: Provided and installed by certified installer
Roof
 Roofing: Mate line flashing ships loose for installation by certified installer
 Roofing: Self Bridging mate line flashing with backer rod ships loose for installation by certified installer
 Insulation: Insulation for mate line ships loose for installation by certified installer
Doors
 Adjustments: Final adjustments of doors after modules are set is by certified installer
Electric
 Load Center: One load center per module, interconnect and MDP by certified installer
 Crossovers: Junction boxes with flexible metal conduit whips installed and tagged by factory; certified installer to terminate on site
 Egress Lighting: Connection of batteries required on site by certified installer
 Switches: Occupancy sensors may require adjustment by certified installer
HVAC
 Controls: Circuit breaker to be switch for fans
 Controls: Timers installed by factory, testing by certified installer
Warranty
 Warranty: Manufacturers standard warranty applies, documents ship loose in warranty pack
 Warranty: Component manufacturers extended warranty are passed to end user
 Warranty: Manufacturing plant must be notified of any warranty claims
 Warranty: Warranty claims will not be reimbursed without notification and prior approval

Door Schedule												
Mark	Description	Count	Width	Height	Rough Width	Rough Height	Frame Type	Frame Throat	Lite	Fire Rating	Hardware Set	Comments
F1	16ga STEEL INSULATED DOOR	4	3' - 0"	6' - 8"	3' - 2"	6' - 9"	14ga STEEL KD	6 1/8"	N/A	N/A	A	
F2	ROLL UP OVERHEAD COIL DOOR	18	4' - 6"	6' - 8"	4' - 6"	6' - 9"	FINISHED OPENING	N/A	N/A	N/A	B	WAYNE DALTON DS-350 OR EQUAL
(F3)	ROLL UP OVERHEAD COIL DOOR	2	8' - 0"	7' - 6"	8' - 0"	7' - 7"	FINISHED OPENING	N/A	N/A	N/A	B	WAYNE DALTON DS-350 OR EQUAL

Door Hardware Schedule		
Hardware Set	Description	Comments
A	SCHALGE N070BD LEVER LOCKSET WITH SPARTA 628 LOCK	CONSTRUCTION CORES ONLY - FINAL KEYING BY CERTIFIED INSTALLER - GRADE 1
	LCN 4041 DOOR CLOSER	WITH CUSH 689 - GRADE 1
	DETEX DOOR ALARM	ACDEXAX-2500S1S-X EASY KIT
	4.5" x 4.5" BB NRP HINGES	STAINLES STEEL
	WEATHERSTRIPPING	
	THRESHOLD	
	DOOR SWEEP	
B	INTERIOR SLIDE BOLT	
	MANUAL PUSH UP WITH PULL ROPE	
	WEATHER STRIPPING	
	THRESHOLD	

Material Color Chart		
Material	Color	Comments
29ga INTERIOR SIDING	TO BE WHITE	WITH 3/4" HIGH RIB
29ga INTERIOR SIDING TRIMS	TO BE WHITE	
29ga EXTERIOR SIDING	TO BE SELECTED FROM MFRS. STD. COLORS	WITH 3/4" HIGH RIB
29ga EXTERIOR TRIM	TO BE SELECTED FROM MFRS. STD. COLORS	
MAN DOORS AND FRAMES	TO BE SELECTED FROM MFRS. STD. COLORS	SHERWIN WILLIAMS DTM PAINT
ROLL-UP OVERHEAD DOOR	TO BE SELECTED FROM MFRS. STD. COLORS	
EXPOSED RAFTERS AND DECK, MOUNTING CHANNELS, AND CLIPS	TO BE BLACK	
EPDM ROOF MEMBRANE	TO BE BLACK	
ELECTRICAL DEVICES	TO BE WHITE	
GALVANIZED ELECTRICAL DEVICE COVER PLATES	TO BE MILL FINISH	
INFRARED HEATERS	TO BE BLACK	
CEILING MOUNT FANS	TO BE BLUE	



No.	Revision Description	Date
1	Customer approval drawings	03.01.2021
2	Customer verification changes	04.06.2021

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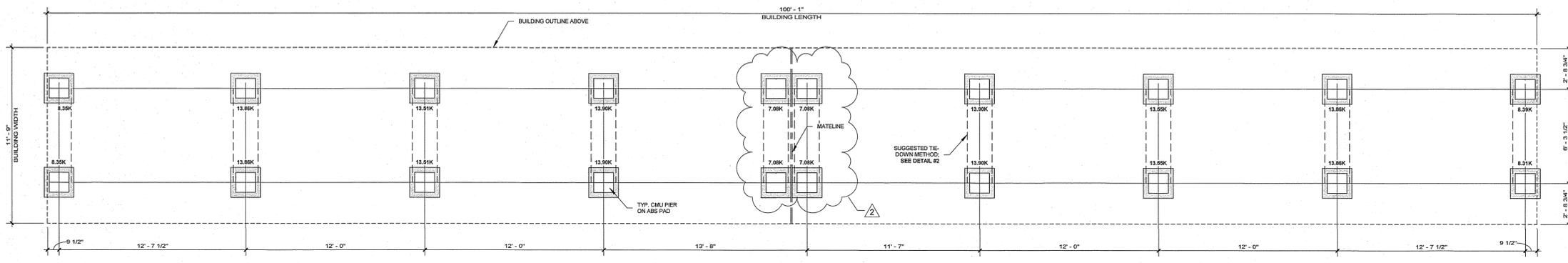
Drawn By: EP
 Checked By: CZ/DL
 Rev: 2

SPECIFICATIONS
VORTEX ENGINEERING, INC.
FEDEX GROUND PACKAGE FACILITY
(2) 50'-0"x11'-9" MODULES

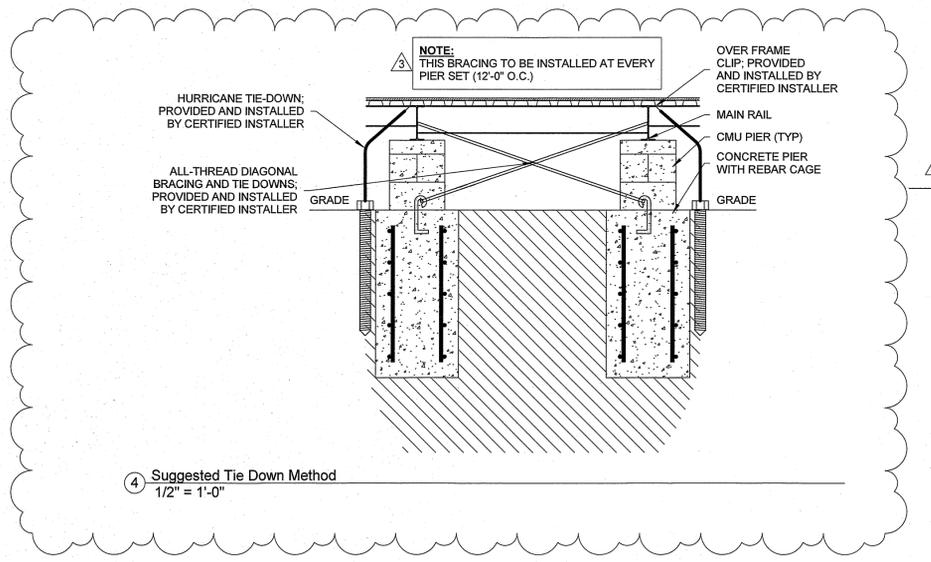
Serial No. 2443-44
 Quote No. 47615-99
 Model No. 7721
 Job No. 2021-005-WP
 Date: 5/14/2021 8:52:38 AM
 Scale:
 Page No.
A0.0

5/14/2021 8:52:38 AM

NOTE:
TIE DOWN METHOD AT ENDWALLS
OF THIS BUILDING TO BE PROVIDED
BY REGISTERED DESIGN PROFESSIONAL
RESPONSIBLE FOR FOUNDATION DESIGN



3 Suggested Blocking Plan
1/4" = 1'-0"



4 Suggested Tie Down Method
1/2" = 1'-0"

FOUNDATION DISCLAIMER:
BLOCKING PLAN GIVEN BY WHITLEY MANUFACTURING IS A SUGGESTED DESIGN.
WORKING FOUNDATION TO BE DESIGNED BY PROFESSIONAL ENGINEER PER LOCAL SOIL AND CLIMATE CONDITIONS AND SUBJECT TO REVIEW AND INSPECTION BY THE LOCAL AUTHORITY HAVING JURISDICTION.

- FOUNDATION NOTES:**
- LOADS ARE IN 1000 LBS.
 - CRAWL SPACE VENTILATION SHALL NOT BE LESS THAN 1/150TH OF THE CRAWL SPACE HORIZONTAL AREA.
 - PROVIDE ACCESS TO CRAWL SPACE. (MINIMUM 22" x 24")
 - MINIMUM FOOTING DEPTH 3'-6" OR AS REQUIRED BY LOCAL CONDITIONS
 - WEIGHTS LISTED REPRESENT COMBINED VERTICAL LIVE AND DEAD LOADS ON SUGGESTED PIER LAYOUT



No.	Revision Description	Date
1	Customer approval drawings	03.01.2021
2	Customer verification changes	04.06.2021
3	Corrections per PE mark-ups	05.07.2021

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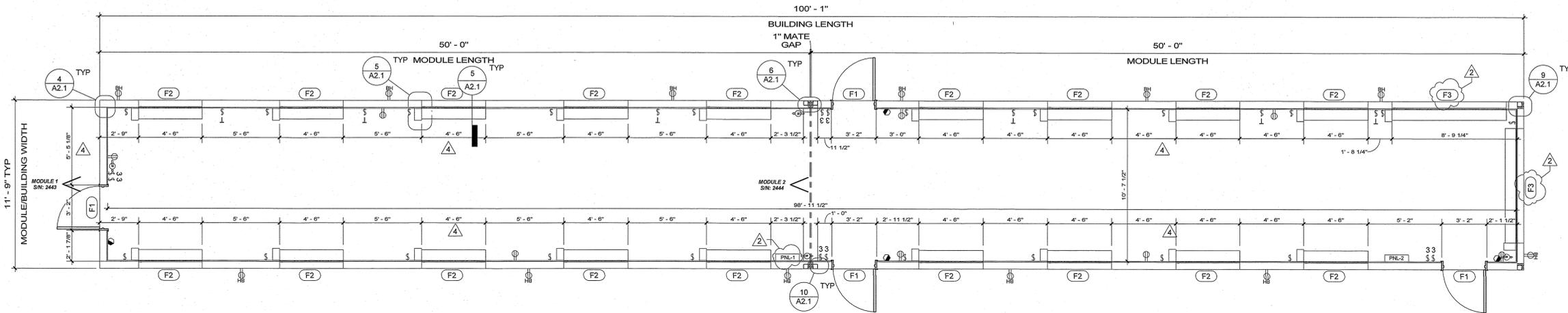


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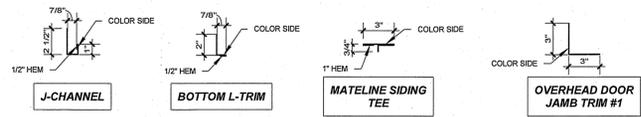
Drawn By: EP
Checked By: CZ/DL
Rev: 3

SUGGESTED BLOCKING PLAN
VORTEX ENGINEERING, INC.
FEDEX GROUND PACKAGE FACILITY
(2) 50'-0"x11'-9" MODULES

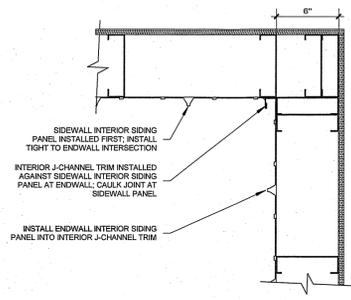
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Quote No. 47615-99	Scale: As indicated
Model No. 7721	Page No.
Job No. 2021-005-WP	A2.0



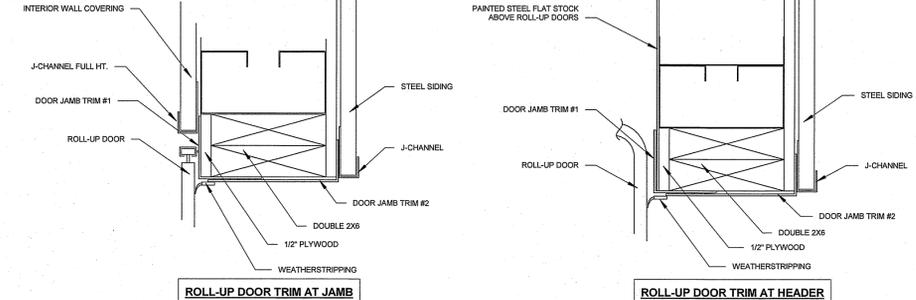
1 Floor Plan
1/4" = 1'-0"



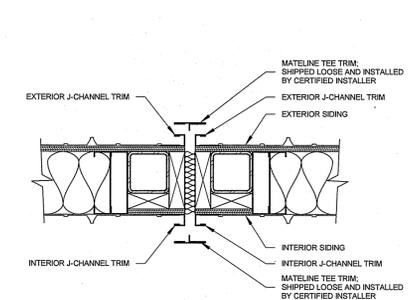
3 Interior Siding Trim Details
1 1/2" = 1'-0"



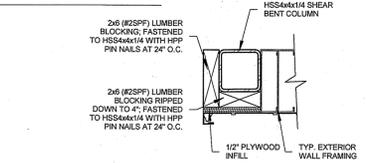
4 Interior Corner Detail - Typical
1 1/2" = 1'-0"



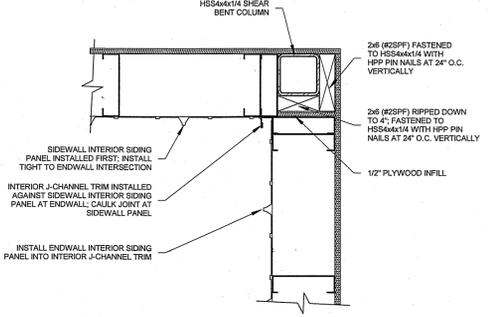
5 Roll-Up Door Trim Details
3" = 1'-0"



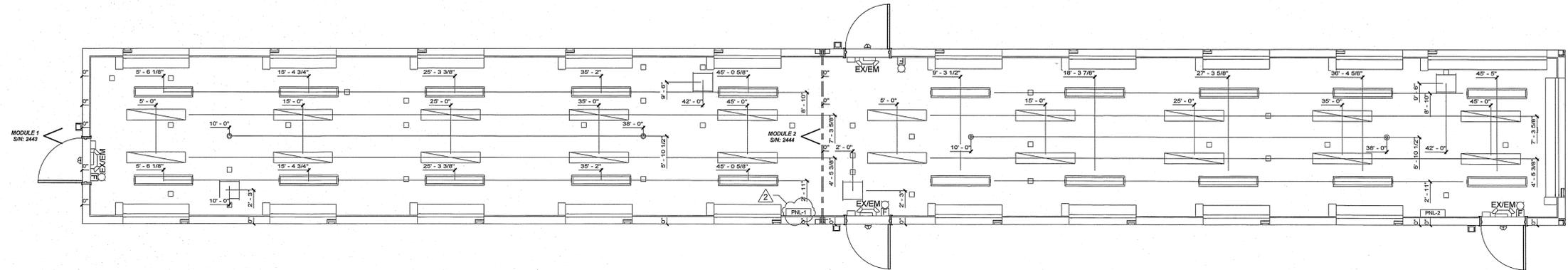
6 Mateline Close Up Detail - Walls
1 1/2" = 1'-0"



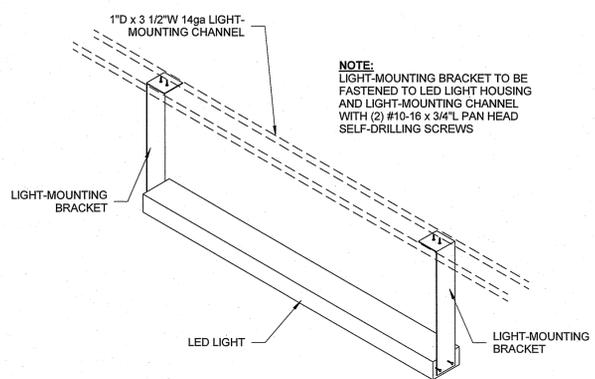
10 Column Pack-Out at Mateline
1 1/2" = 1'-0"



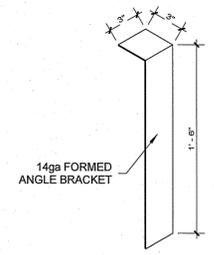
9 Interior Corner Detail - At Shear Bent Column
1 1/2" = 1'-0"



2 Reflected Ceiling Plan
1/4" = 1'-0"



7 Light Mounting Detail
1" = 1'-0"



8 Light-Mounting Bracket
1 1/2" = 1'-0"

Legend	
[Symbol]	LOADCENTER
[Symbol]	48" SURFACE-MOUNT LOW-PROFILE INTERIOR LIGHT
[Symbol]	WEATHERPROOF LED WALL PACK WITH PHOTOCELL
[Symbol]	40 WATT LED FLOOD LIGHT
[Symbol]	EXEM EXTREMELY LIGHT WITH BACK-UP BATTERY
[Symbol]	REMOTE HEAD
[Symbol]	120V/20A TAMPER-RESISTANT DUPLEX RECEPTACLE
[Symbol]	120V/20A WEATHER-RESISTANT DUPLEX WITH WEATHERPROOF BUZE COVER, TOP AND BOTTOM OF RECEPT SEPARATED INTO TWO GFCI CIRCUITS
[Symbol]	120V/20A SINGLE POLE LIGHT SWITCH
[Symbol]	120V/20A CEILING-MOUNTED OCCUPANCY SENSOR
[Symbol]	120V/20A THREE-WAY LIGHT SWITCH
[Symbol]	DOOR ALARM POWER SUPPLY
[Symbol]	DOOR ALARM HORN/STROBE
[Symbol]	DOOR ALARM EXIT ALARM
[Symbol]	WALL-MOUNTED TIMER SWITCH FOR HEATERS
[Symbol]	4KW INFRARED CEILING-MOUNTED HEATERS
[Symbol]	2600 CFM CEILING-MOUNTED FAN WITH YOKE MOUNT
[Symbol]	10# ABC FIRE EXTINGUISHER WITH MOUNTING BRACKET, SHIPPED LOOSE
ITEMS REPRESENTED BY DASHED LINES TO BE SHIPPED LOOSE FOR INSTALL ON SITE BY OTHERS	

No.	Revision Description	Date
1	Customer approval drawings	03.01.2021
2	Customer verification changes	04.06.2021
4	Corrections per TPIA deviations.	05.14.2021

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Drawn By: EP
Checked By: DL/CZ
Rev: 4

FLOOR PLAN / REFLECTED CEILING PLAN
VORTEX ENGINEERING, INC.
FEDEX GROUND PACKAGE FACILITY
(2) 50'-0"x11'-9" MODULES



Serial No. 2443-44	5/14/2021	Date: 8:52:42 AM
Quote No. 47615-99	Scale: As indicated	
Model No. 7721	Page No.	
Job No. 2021-005-WP		A2.1

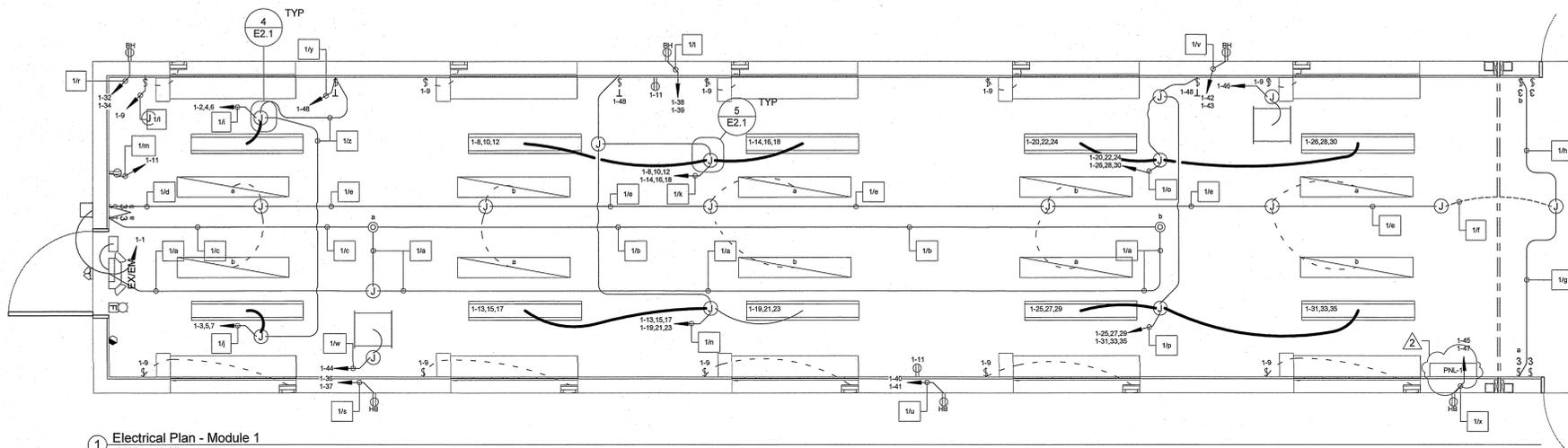
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ELECTRICAL GENERAL NOTES:

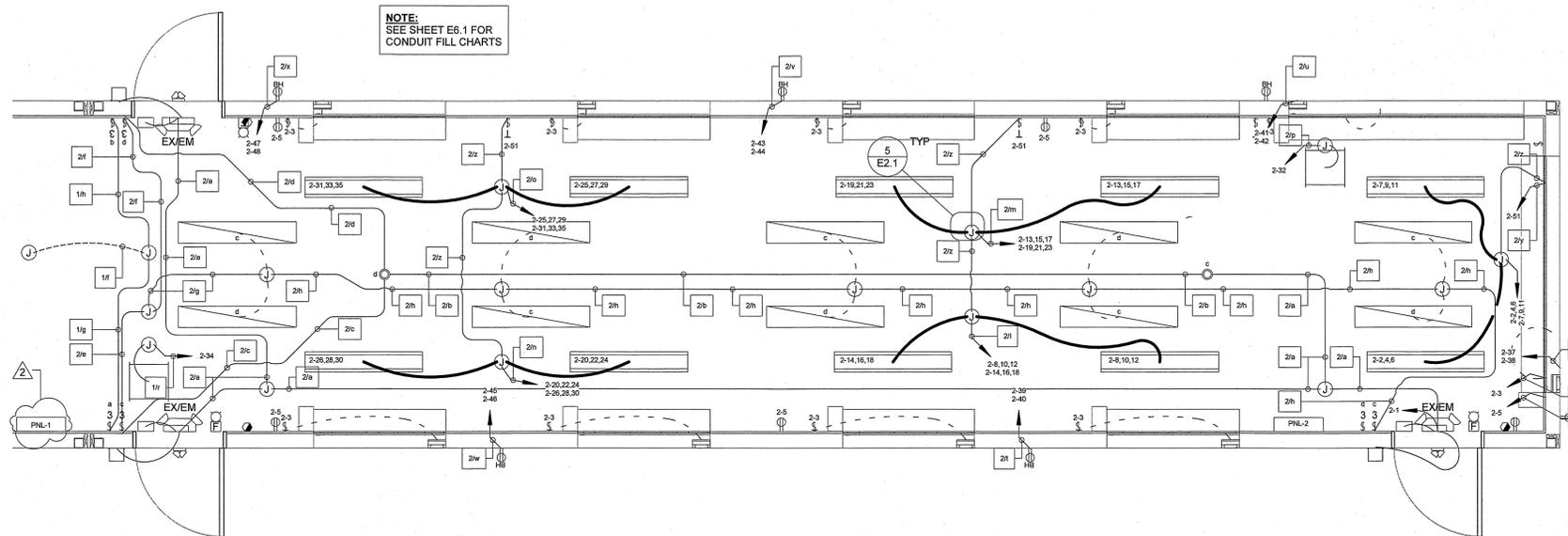
1. ALL RECEPTACLES TO BE GROUNDING TYPE
2. ALL WIRING TO BE PER N.E.C. THHN (CU) WITH GROUND (90) IN EMT CONDUIT IF EXPOSED AND MC CABLE WITH TAPE SHEATH IF CONCEALED IN WALLS.
3. MAIN PANEL TO BE MARKED "SUITABLE FOR USE AS SERVICE EQUIPMENT" AND HAVE BREAKER / FUSE TYPE OVERCURRENT PROTECTION
4. PROPER THERMAL OVERLOAD PROTECTION TO BE PROVIDED FOR ALL MOTORS
5. DISCONNECTING MEANS WITHIN SIGHT REQUIRED FOR ALL MOTORS
6. WEATHERPROOF PROTECTION REQUIRED FOR ALL OUTDOOR LIGHTS AND / OR RECEPTACLES
7. PROPER WORKING CLEARANCES TO BE PROVIDED AND MAINTAINED ABOUT ALL ELECTRICAL EQUIPMENT
8. ALL EMERGENCY LIGHTING (IF REQUIRED) AND EXIT SIGNS WILL BE CONNECTED AHEAD OF ANY LOCAL SWITCHES PER N.E.C. ARTICLE 700
9. ALL EMERGENCY LIGHTING HAS A BATTERY PACK TO ASSURE CONTINUED ILLUMINATION
10. GROUNDING ELECTRODE SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 250 N.E.C.
11. MAIN DISTRIBUTION PANEL (S) SHALL BE INSTALLED ON SITE PER CERTIFIED INSTALLER CONTRACTUAL AGREEMENT
12. SERVICE ENTRANCE CONDUCTORS TO BE 75 DEG. CELSIUS COPPER TYPE THWN

ELECTRICAL FIELD NOTES:

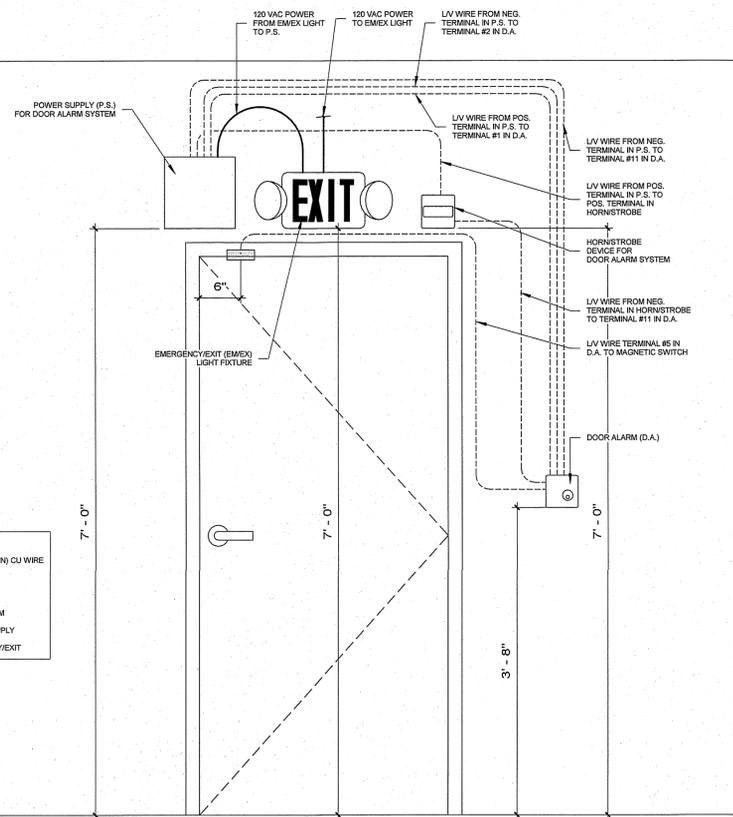
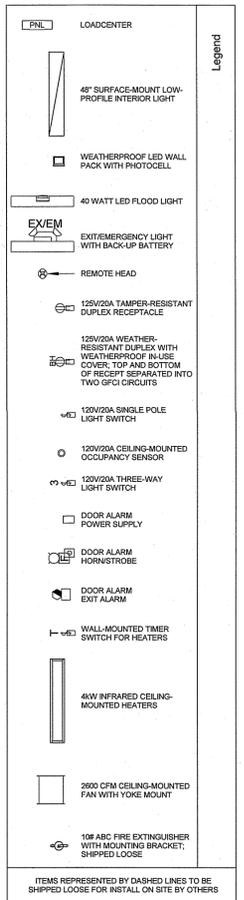
1. ELECTRICAL SERVICE ENTRANCE CONDUCTORS TO BE PROVIDED AND INSTALLED BY CERTIFIED INSTALLER PER CONTRACTUAL AGREEMENT
2. GROUNDING ELECTRODES TO BE PROVIDED AND INSTALLED BY CERTIFIED INSTALLER PER CONTRACTUAL AGREEMENT



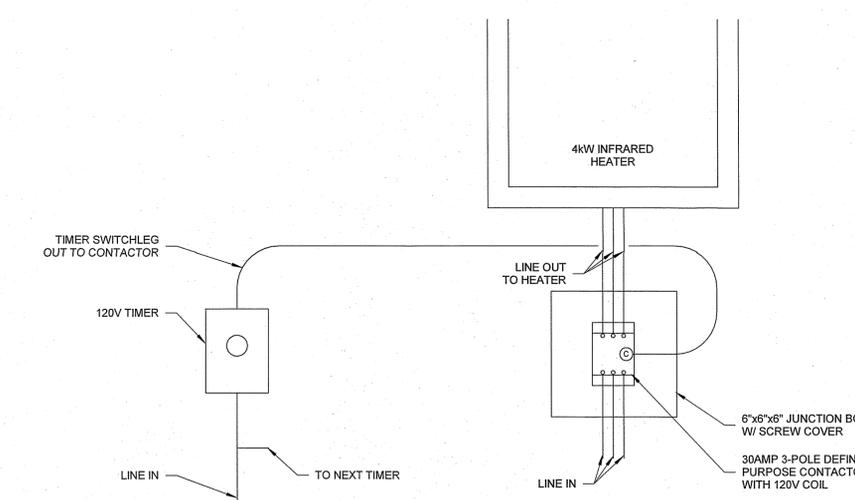
1 Electrical Plan - Module 1
3/8" = 1'-0"



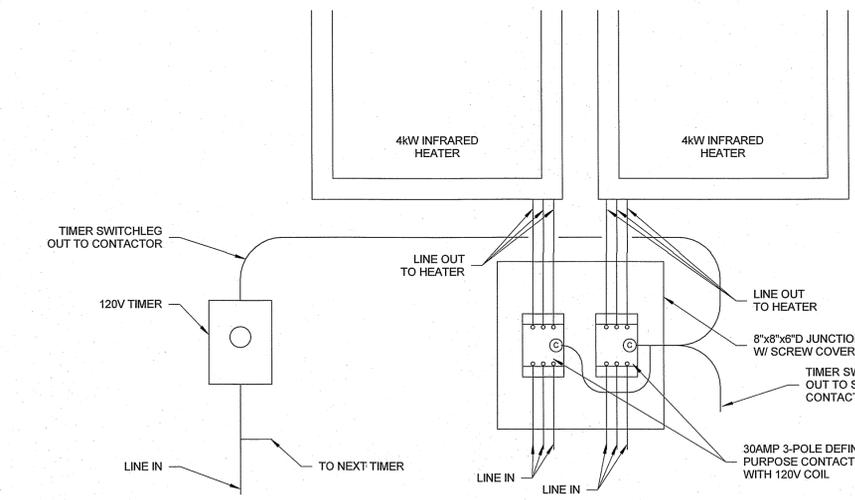
2 Electrical Plan - Module 2
3/8" = 1'-0"



3 Door Alarm Wiring Schematic
1" = 1'-0"



4 Heater Contactor Diagram - Single
3" = 1'-0"



5 Heater Contactor Diagram - Double
3" = 1'-0"

LEGEND:
LV WIRE = #22 AWG (MIN) CU WIRE
POS. = POSITIVE
NEG. = NEGATIVE
D.A. = DOOR ALARM
P.S. = POWER SUPPLY
EMEX = EMERGENCY/EXIT

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1	Customer approval drawings	03.01.2021
2	Customer verification changes	04.05.2021

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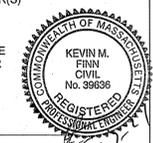


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Drawn By: EP
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ELECTRICAL PLAN
VORTEX ENGINEERING, INC.
FEDEX GROUND PACKAGE FACILITY
(2) 50'-0"x11'-9" MODULES

Serial No. 2443-44
Quote No. 47615-99
Model No. 7721
Job No. 2021-005-WP
Date: 5/14/2021 8:52:45 AM
Scale: As indicated
Page No. E2.1



5/14/2021 8:52:45 AM

CONDUIT WIRE FILL CHART												PAGE #	1
SERIAL #:		JOB: FEDEX GROUND PACKAGE FACILITY											
MOD. #:		JOB # 2021-005-WP											
CONDUIT RUN ID. NO./LETTER	CIRC. NUMBER	CONDUIT TYPE/SIZE (1/2" EMT, UN-LESS NOTED)	WIRE SIZE #12, UN-LESS NOTED	WIRE COLORS				USE					
				B: BLACK	R: RED	L: LINE	N: NEUTRAL	G: GROUND	SL: SWITCH LEG				
				BL: BLUE	BR: BROWN	Y: YELLOW	O: ORANGE	W: WHITE	GR: GRAY	T: TRAVELER	IG: ISOL. GROUND		
				G: GREEN	P: PURPLE	PK: PINK							
1/a	1-1	1/2" EMT	#12	B	L	W	N	G					
1/b	1-1	1/2" EMT	#12	O	SL-b	W	N	G					
1/c	1-1	1/2" EMT	#12	Y	SL-a	W	N	G					
1/d	1-1	1/2" EMT	#12	P	T-a	PK	T-b	W	N	G			
1/e	1-1	1/2" EMT	#12	PK	T-b	Y	SL-a	O	SL-b	W	N		
1/f	1-1	1/2" GREENFIELD	#12	W	N	G							
1/g	1-1	1/2" EMT	#12	P	T-a	Y	SL-a	W	N	G			
1/h	1-1	1/2" EMT	#12	PK	T-b	O	SL-b	W	N	G			
1/i	1-2,4,6	1/2" EMT	#12	B	L	R	L	W	N	G			
1/j	1-3,5,7	1/2" EMT	#12	R	L	BL	L	W	N	G			

CONDUIT WIRE FILL CHART												PAGE #	2
SERIAL #:		JOB: FEDEX GROUND PACKAGE FACILITY											
MOD. #:		JOB # 2021-005-WP											
CONDUIT RUN ID. NO./LETTER	CIRC. NUMBER	CONDUIT TYPE/SIZE (1/2" EMT, UN-LESS NOTED)	WIRE SIZE #12, UN-LESS NOTED	WIRE COLORS				USE					
				B: BLACK	R: RED	L: LINE	N: NEUTRAL	G: GROUND	SL: SWITCH LEG				
				BL: BLUE	BR: BROWN	Y: YELLOW	O: ORANGE	W: WHITE	GR: GRAY	T: TRAVELER	IG: ISOL. GROUND		
				G: GREEN	P: PURPLE	PK: PINK							
1/k	1-8,10,12	3/4" EMT	#12	B	L	R	L	W	N	G			
	1-14,16,18			BL	L	W	N	G					
1/l	1-9	1/2" EMT	#12	R	L	W	N	G					
1/m	1-11	1/2" EMT	#12	BL	L	W	N	G					
1/n	1-13,15,17	3/4" EMT	#12	B	L	R	L	W	N	G			
	1-19,21,23			BL	L	W	N	G					
1/o	1-20,22,24	3/4" EMT	#12	B	L	R	L	W	N	G			
	1-26,28,30			BL	L	W	N	G					
1/p	1-25,27,29	3/4" EMT	#12	B	L	R	L	W	N	G			
	1-31,33,35			BL	L	W	N	G					
1/r	1-32	1/2" EMT	#12	B	L	R	L	W	N	G			
	1-34			BL	L	W	N	G					

CONDUIT WIRE FILL CHART												PAGE #	3
SERIAL #:		JOB: FEDEX GROUND PACKAGE FACILITY											
MOD. #:		JOB # 2021-005-WP											
CONDUIT RUN ID. NO./LETTER	CIRC. NUMBER	CONDUIT TYPE/SIZE (1/2" EMT, UN-LESS NOTED)	WIRE SIZE #12, UN-LESS NOTED	WIRE COLORS				USE					
				B: BLACK	R: RED	L: LINE	N: NEUTRAL	G: GROUND	SL: SWITCH LEG				
				BL: BLUE	BR: BROWN	Y: YELLOW	O: ORANGE	W: WHITE	GR: GRAY	T: TRAVELER	IG: ISOL. GROUND		
				G: GREEN	P: PURPLE	PK: PINK							
1/s	1-36	1/2" EMT	#12	BL	L	W	N	G					
	1-37			B	L	W	N	G					
1/t	1-38	1/2" EMT	#12	B	L	W	N	G					
	1-39			R	L	W	N	G					
1/u	1-40	1/2" EMT	#12	R	L	W	N	G					
	1-41			BL	L	W	N	G					
1/v	1-42	1/2" EMT	#12	BL	L	W	N	G					
	1-43			B	L	W	N	G					
1/w	1-44	1/2" EMT	#12	B	L	W	N	G					
	1-45			R	L	W	N	G					
1/x	1-47	1/2" EMT	#12	BL	L	W	N	G					
	1-46			BL	L	W	N	G					
1/y	1-48	1/2" EMT	#12	BL	L	W	N	G					
	1-48			G									
1/z	1-48	1/2" EMT	#12	BR	SL	W	N	G					

CONDUIT WIRE FILL CHART												PAGE #	4
SERIAL #:		JOB: FEDEX GROUND PACKAGE FACILITY											
MOD. #:		JOB # 2021-005-WP											
CONDUIT RUN ID. NO./LETTER	CIRC. NUMBER	CONDUIT TYPE/SIZE (1/2" EMT, UN-LESS NOTED)	WIRE SIZE #12, UN-LESS NOTED	WIRE COLORS				USE					
				B: BLACK	R: RED	L: LINE	N: NEUTRAL	G: GROUND	SL: SWITCH LEG				
				BL: BLUE	BR: BROWN	Y: YELLOW	O: ORANGE	W: WHITE	GR: GRAY	T: TRAVELER	IG: ISOL. GROUND		
				G: GREEN	P: PURPLE	PK: PINK							
2/a	2-1	1/2" EMT	#12	B	L	W	N	G					
2/b	2-1	1/2" EMT	#12	B	L	Y	SL-c	W	N	G			
2/c	2-1	1/2" EMT	#12	Y	SL-c	W	N	G					
2/d	2-1	1/2" EMT	#12	O	SL-d	W	N	G					
2/e	2-1	1/2" EMT	#12	P	T-c	W	N	G					
2/f	2-1	1/2" EMT	#12	PK	T-d	W	N	G					
2/g	2-1	1/2" EMT	#12	P	T-c	PK	T-d	W	N	G			
2/h	2-1	1/2" EMT	#12	Y	SL-c	O	SL-d	W	N	G			
2/i	2-2,4,6	3/4" EMT	#12	B	L	R	L	W	N	G			
	2-7,9,11			BL	L	W	N	G					
2/j	2-3	1/2" EMT	#12	R	L	W	N	G					
2/k	2-5	1/2" EMT	#12	BL	L	W	N	G					

CONDUIT WIRE FILL CHART												PAGE #	5
SERIAL #:		JOB: FEDEX GROUND PACKAGE FACILITY											
MOD. #:		JOB # 2021-005-WP											
CONDUIT RUN ID. NO./LETTER	CIRC. NUMBER	CONDUIT TYPE/SIZE (1/2" EMT, UN-LESS NOTED)	WIRE SIZE #12, UN-LESS NOTED	WIRE COLORS				USE					
				B: BLACK	R: RED	L: LINE	N: NEUTRAL	G: GROUND	SL: SWITCH LEG				
				BL: BLUE	BR: BROWN	Y: YELLOW	O: ORANGE	W: WHITE	GR: GRAY	T: TRAVELER	IG: ISOL. GROUND		
				G: GREEN	P: PURPLE	PK: PINK							
2/l	2-8,10,12	3/4" EMT	#12	B	L	R	L	W	N	G			
	2-14,16,18			BL	L	W	N	G					
2/m	2-13,15,17	3/4" EMT	#12	B	L	R	L	W	N	G			
	2-19,21,23			BL	L	W	N	G					
2/n	2-20,22,24	3/4" EMT	#12	B	L	R	L	W	N	G			
	2-26,28,30			BL	L	W	N	G					
2/o	2-25,27,29	3/4" EMT	#12	B	L	R	L	W	N	G			
	2-31,33,35			BL	L	W	N	G					
2/p	2-32	1/2" EMT	#12	B	L	W	N	G					
2/r	2-34	1/2" EMT	#12	R	L	W	N	G					
2/s	2-37	1/2" EMT	#12	B	L	W	N	G					
	2-38			BL	L	W	N	G					

CONDUIT WIRE FILL CHART												PAGE #	6
SERIAL #:		JOB: FEDEX GROUND PACKAGE FACILITY											
MOD. #:		JOB # 2021-005-WP											
CONDUIT RUN ID. NO./LETTER	CIRC. NUMBER	CONDUIT TYPE/SIZE (1/2" EMT, UN-LESS NOTED)	WIRE SIZE #12, UN-LESS NOTED	WIRE COLORS				USE					
				B: BLACK	R: RED	L: LINE	N: NEUTRAL	G: GROUND	SL: SWITCH LEG				
				BL: BLUE	BR: BROWN	Y: YELLOW	O: ORANGE	W: WHITE	GR: GRAY	T: TRAVELER	IG: ISOL. GROUND		
				G: GREEN	P: PURPLE	PK: PINK							
2/t	2-39	1/2" EMT	#12	R	L	W	N	G					
	2-40			R	L	W	N	G					
2/u	2-41	1/2" EMT	#12	BL	L	W	N	G					
	2-42			BL	L	W	N	G					
2/v	2-43	1/2" EMT	#12	B	L	W	N	G					
	2-44			W	N	W	N	G					
2/w	2-45	1/2" EMT	#12	R	L	W	N	G					
	2-46			R	L	W	N	G					
2/x	2-47	1/2" EMT	#12	BL	L	W	N	G					
	2-48			BL	L	W	N	G					
2/y	2-51	1/2" EMT	#12	R	L	W	N	G					
2/z	2-51	1/2" EMT	#12	BR	SL	W	N	G					



No.	Revision Description	Date
1	Customer approval drawings	03.01.2021

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Drawn By: EP
Checked By: CZ/DL
Rev: 1

CONDUIT FILL CHART
VORTEX ENGINEERING, INC.
FEDEX GROUND PACKAGE FACILITY
(2) 50'-0"x11'-9" MODULES

Serial No. 2443-44
Quote No. 47615-99
Model No. 7721
Job No. 2021-005-WP
5/14/2021 Date: 8:52:48 AM
Scale:
Page No. E6.1

5/14/2021 8:52:48 AM

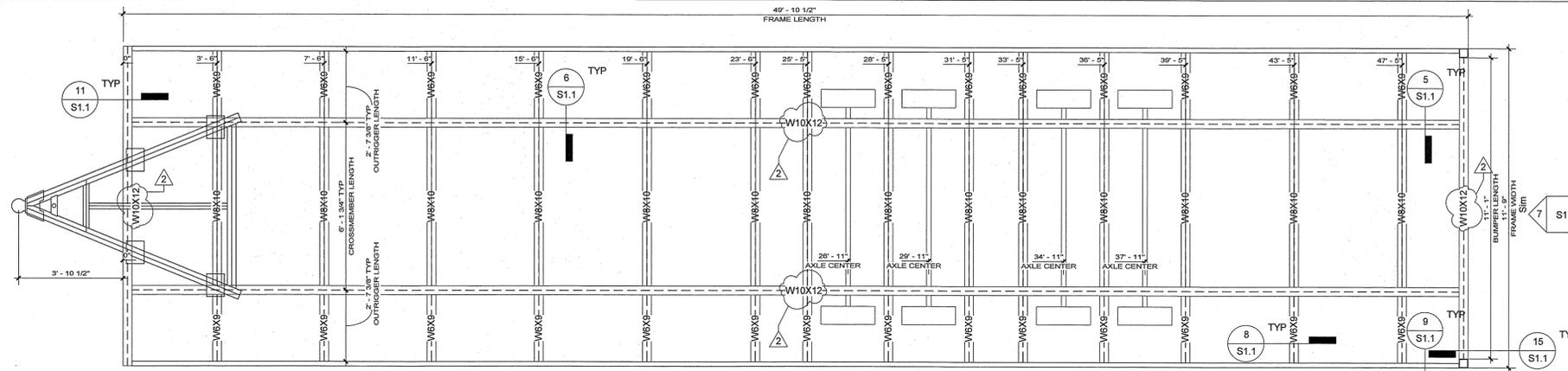
MODEL # 7721
PANEL # 1
UNIT WIDTH: 11.75 FT.
UNIT LENGTH: 50 FT.
TOTAL SQUARE FOOTAGE: 587.5 SQ. FT.
TOTAL CALCULATED LIGHTING LOAD: 2096.25 WATTS
TOTAL CONNECTED LIGHTING LOAD: 1041 WATTS
TOTAL WATTS (w/ FACTOR) FOR LOADCENTER: 6470.17 WATTS

MODEL # 7721
PANEL # 2
UNIT WIDTH: 11.75 FT.
UNIT LENGTH: 50 FT.
TOTAL SQUARE FOOTAGE: 587.5 SQ. FT.
TOTAL CALCULATED LIGHTING LOAD: 2096.25 WATTS
TOTAL CONNECTED LIGHTING LOAD: 1073 WATTS
TOTAL WATTS (w/ FACTOR) FOR LOADCENTER: 65130.17 WATTS

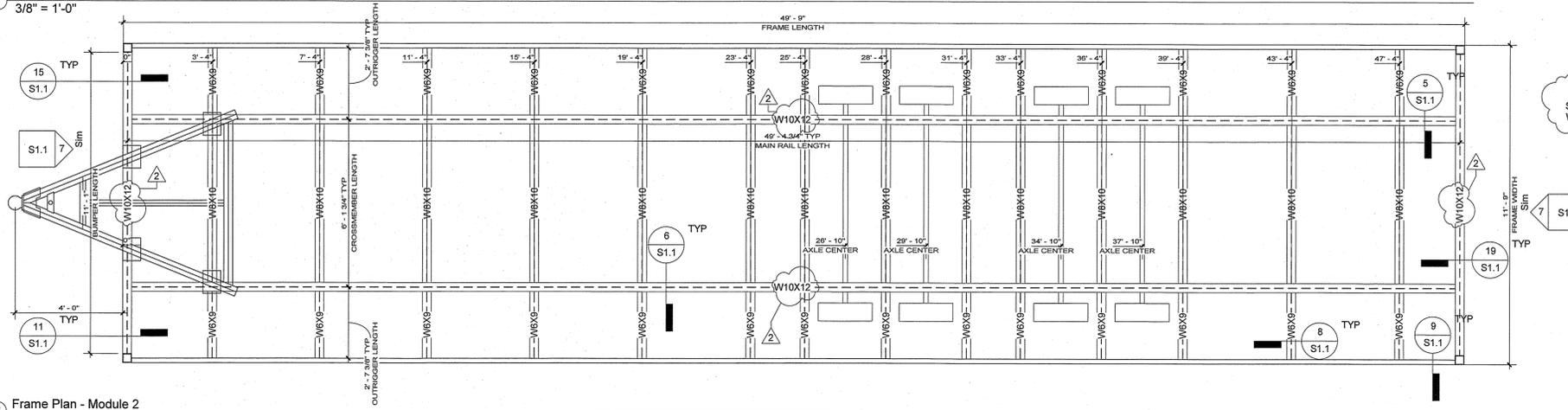
WIRE SIZE	PNL #	CIRC #	BRKR #	DESCRIPTION	DEVICES QTY	PHASE A	PHASE B	PHASE C	WATTAGE OF DEVICES	TOTAL WATTS	FACTOR OF DIVERSITY	TOTAL WATTS w/ FACTOR
#12	1-1	20A1P		EXIT/EMERGENCY LT.	1	3.8			4	1.25	5	14
#12				LED EXT. LT.	1	29.0			29	1.25	36	109
#12				1x4 LED LT.	10	400.0			400	1.25	500	1438
#12	1-2	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-3	20A3P		4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	1-4			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	1-5			4KW INFRARED HEATER	1				1150.5	1.25	1438	1438
#12	1-6			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	1-7			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-8	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-9	20A1P		LED DOCK LT.	10	400.0			400	1.25	500	1438
#12	1-10			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-11	20A1P		RECEPTS	3		540.0		180	1.00	540	1438
#12	1-12			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	1-13	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-14	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-15			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	1-16			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-17			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	1-18			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	1-19	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-20	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-21			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-22			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-23			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	1-24			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	1-25	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-26	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-27			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	1-28			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-29			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	1-30			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	1-31	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	1-32	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-33			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	1-34	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-35			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	1-36	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-37	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-38	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-39	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-40	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-41	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-42	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-43	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-44	20A1P		PATTERSON H14a FAN	1	336.0			336	1.00	336	1500
#12	1-45	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-46	20A1P		PATTERSON H14a FAN	1	336.0			336	1.00	336	1500
#12	1-47	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	1-48	20A1P		HEATER TIMER	3		360.0		120	1.00	360	1500
#12	1-49	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	1-50	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	1-51	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	1-52	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	1-53	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	1-54	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0

WIRE SIZE	PNL #	CIRC #	BRKR #	DESCRIPTION	DEVICES QTY	PHASE A	PHASE B	PHASE C	WATTAGE OF DEVICES	TOTAL WATTS	FACTOR OF DIVERSITY	TOTAL WATTS w/ FACTOR
#12	2-1	20A1P		EXIT/EMERGENCY LT.	3	11.4			4	1.25	14	14
#12				LED EXT. LT.	3	87.0			29	1.25	36	109
#12				1x4 LED LT.	10	400.0			400	1.25	500	1438
#12	2-2	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-3	20A1P		LED DOCK LT.	9		360.0		40	1.25	450	1438
#12	2-4			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	2-5	20A1P		RECEPTS	6		1150.5		180	1.00	900	1438
#12	2-6			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	2-7	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-8	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-9			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	2-10			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	2-11			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	2-12			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-13	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-14	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-15			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	2-16			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	2-17			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	2-18			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	2-19	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-20	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-21			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-22			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-23			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	2-24			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	2-25	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-26	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-27			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	2-28			4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-29			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	2-30			4KW INFRARED HEATER	1			1150.5	1150	1.25	1438	1438
#12	2-31	20A3P		4KW INFRARED HEATER	1	1150.5			1150	1.25	1438	1438
#12	2-32	20A1P		PATTERSON H14a FAN	1	336.0			336	1.00	336	1500
#12	2-33			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	2-34	20A1P		PATTERSON H14a FAN	1	336.0			336	1.00	336	1500
#12	2-35			4KW INFRARED HEATER	1		1150.5		1150	1.25	1438	1438
#12	2-36	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	2-37	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-38	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-39	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-40	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-41	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-42	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-43	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-44	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-45	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-46	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-47	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-48	20A1P GFCI		BLOCK HEATER RECEPT.	1	1500.0			1500	1.00	1500	1500
#12	2-49	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	2-50	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	2-51	20A1P		HEATER TIMER	3		360.0		120	1.00	360	1500
#12	2-52	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	2-53	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0
#12	2-54	N/A		UNUSED SPACE	0	0.0			0	0.00	0	0

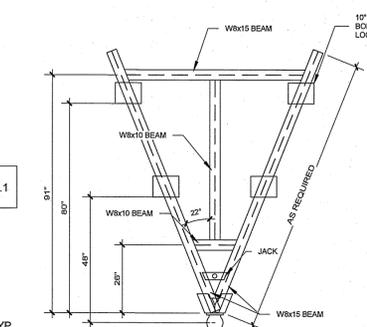
TOTAL WATTAGE, PHASE "A" = 18273.3 WATTS
TOTAL WATTAGE, PHASE "B" = 18240.5 WATTS
TOTAL WATTAGE, PHASE "C" = 18404.5 WATTS



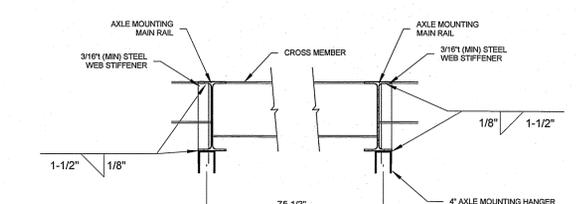
1 Frame Plan - Module 1
3/8" = 1'-0"



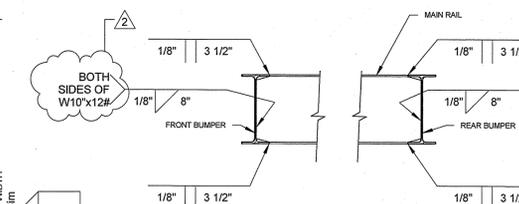
2 Frame Plan - Module 2
3/8" = 1'-0"



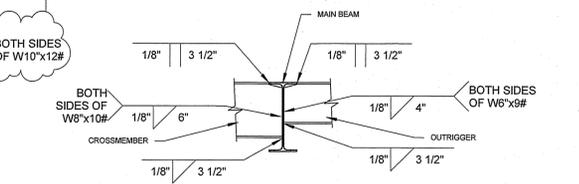
3 Standard Hitch Detail
3/8" = 1'-0"



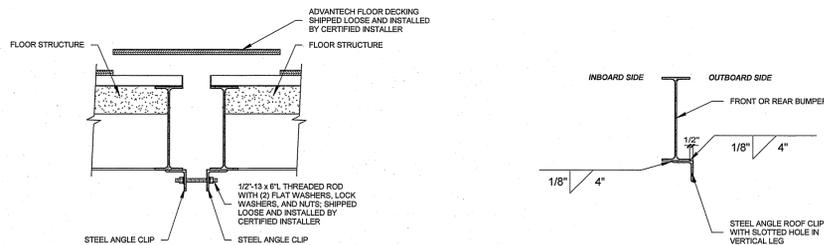
4 Axle Mounting Bracket Reinforcement
1" = 1'-0"



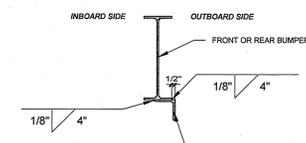
5 Connection Detail - Front/Rear Bumper
1" = 1'-0"



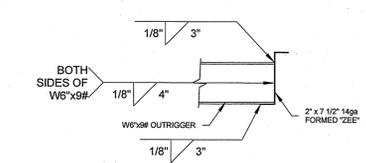
6 Connection Detail - Crossmember
1" = 1'-0"



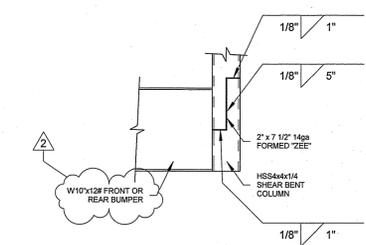
14 Mateline Connection Detail - Floor
1" = 1'-0"



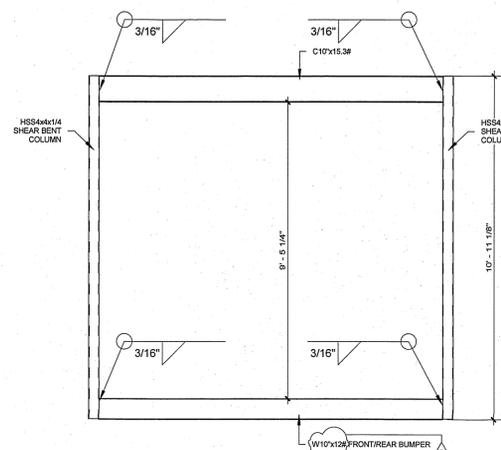
15 Steel Angle Clip Install
1" = 1'-0"



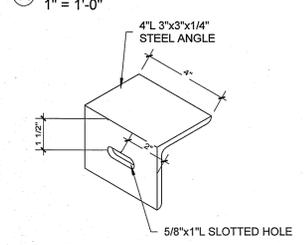
8 Connection Detail - Zee to Outrigger
1" = 1'-0"



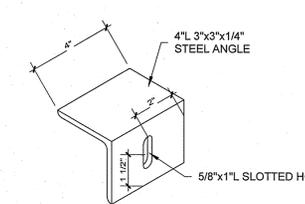
9 Connection Detail - Zee to Shear Bent Column
1" = 1'-0"



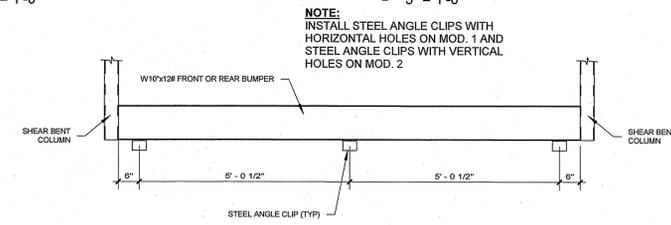
7 Connection Detail - Shear Bent Columns
3/8" = 1'-0"



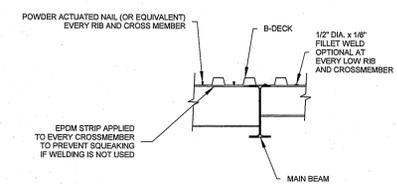
16 Steel Angle Clip with Horizontal Slotted Hole
3" = 1'-0"



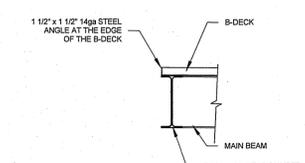
17 Steel Angle Clip w/ Vertical Slotted Hole
3" = 1'-0"



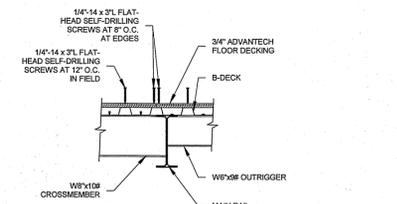
18 Steel Angle Clip Pattern
1/2" = 1'-0"



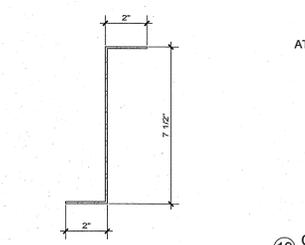
10 Connection Detail - B-Deck to Frame
3/4" = 1'-0"



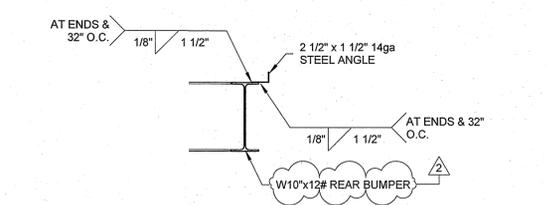
11 Connection Detail - B-Deck Edge Protection
3/4" = 1'-0"



12 Connection Detail - Plywood to B-Deck
3/4" = 1'-0"



13 7 1/2" x 2" 14ga Steel Zee
3" = 1'-0"



19 Connection Detail - Extension Angle
1" = 1'-0"



No.	Revision Description	Date
1	Customer approval drawings	03.01.2021
2	Customer verification changes	04.06.2021

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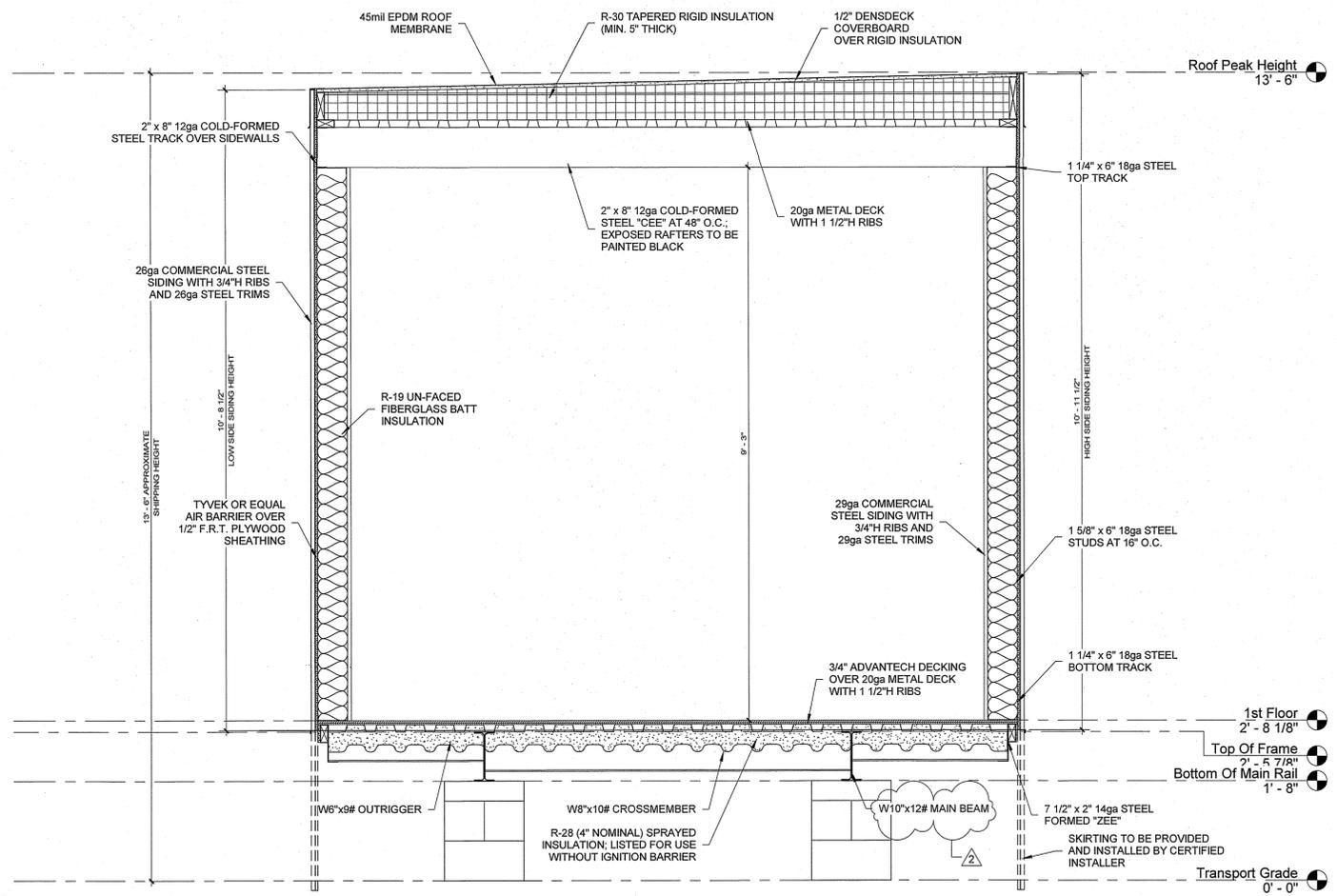


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Drawn By: EP
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Rev: 2

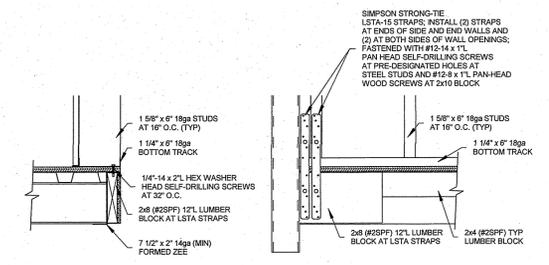
FRAME PLAN
VORTEX ENGINEERING, INC.
FEDEX GROUND PACKAGE FACILITY
(2) 50'-0"x11'-9" MODULES

Serial No. 2443-44
Quote No. 47615-99
Model No. 7721
Job No. 2021-005-WP
5/14/2021 Date: 8:52:52 AM
Scale: As indicated
Page No. S1.1

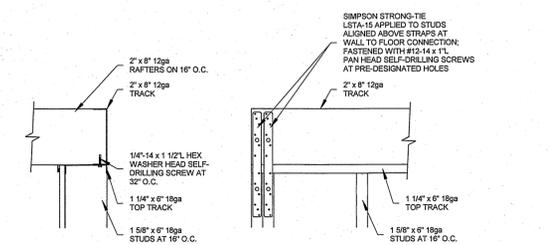


1 Cross Section
3/4" = 1'-0"

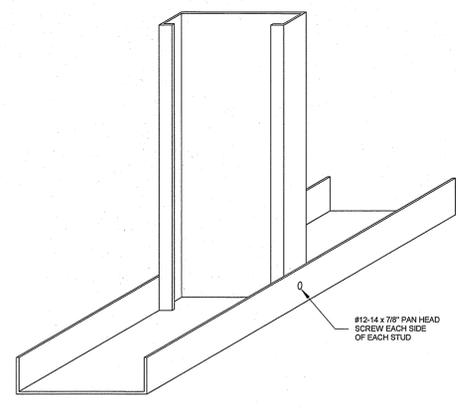
FASTENING SCHEDULE		
ROOF		
MATERIAL	FASTENER	PATTERN
EPDM	MULE-HIDE ACRYLIC WATER-BASED ADHESIVE	FULL COVERAGE
RIGID INSULATION	SCREWS AT CORNERS OF INSULATION BOARDS TO HOLD IN PLACE	
5/8" DENSDECK	SEE DETAIL MHT-FM-728 ON SHEET S4.1	
STEEL DECK	SEE DETAIL #6 ON SHEET S4.1	
RAFTERS TO TRACK	SEE DETAIL #3 ON SHEET S4.1	
RAFTER FRAME TO C10x15.3#	SEE DETAIL #4 ON S2.2	
WALLS		
MATERIAL	FASTENER	PATTERN
STUDS TO TRACK	SEE DETAIL #2 ON S2.1	
INTERIOR SIDING	PER MFRS. INSTALLATION INSTRUCTIONS	
1/2" NON-COMB. PLYWOOD SHEATHING	#10-16 x 1 1/4" FLAT HEAD SELF-TAPPING SCREWS	3" O.C. AT PANEL EDGES AND 12" O.C. IN FIELD
INTERIOR HORIZONTAL FLAT STRAPPING	#6-18 x 1" PAN HEAD SELF-TAPPING SCREWS	(2) AT EACH STUD
SIDING	SEE MFRS. INSTALLATION INSTRUCTIONS FOR HIGH WIND	
FLOOR		
MATERIAL	FASTENER	PATTERN
PLYWOOD TO B-DECK	SEE DETAIL #12 ON S1.1	
B-DECK TO FRAME	SEE DETAIL #10 ON S1.1	
FRONT/REAR BUMPER TO MAIN BEAM	SEE DETAIL #5 ON S1.1	
OUTRIGGER TO MAIN BEAM	SEE DETAIL #6 ON S1.1	
CROSSMEMBER TO MAIN BEAM	SEE DETAIL #6 ON S1.1	
ALL FASTENERS LISTED ABOVE MAY BE SUBSTITUTED WITH FASTENERS OR FASTENING METHODS OF EQUAL OR GREATER STRENGTH		



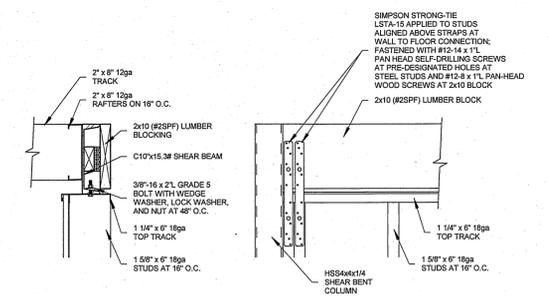
Connection Detail - Ext. Walls to Floor
(Typical)
1" = 1'-0"



Connection Detail - Ext. Walls to Roof
(Typical)
1" = 1'-0"



2 Steel Stud to Track
3" = 1'-0"



Connection Detail - Ext. Walls to Roof (At Shear Bent End)
1" = 1'-0"



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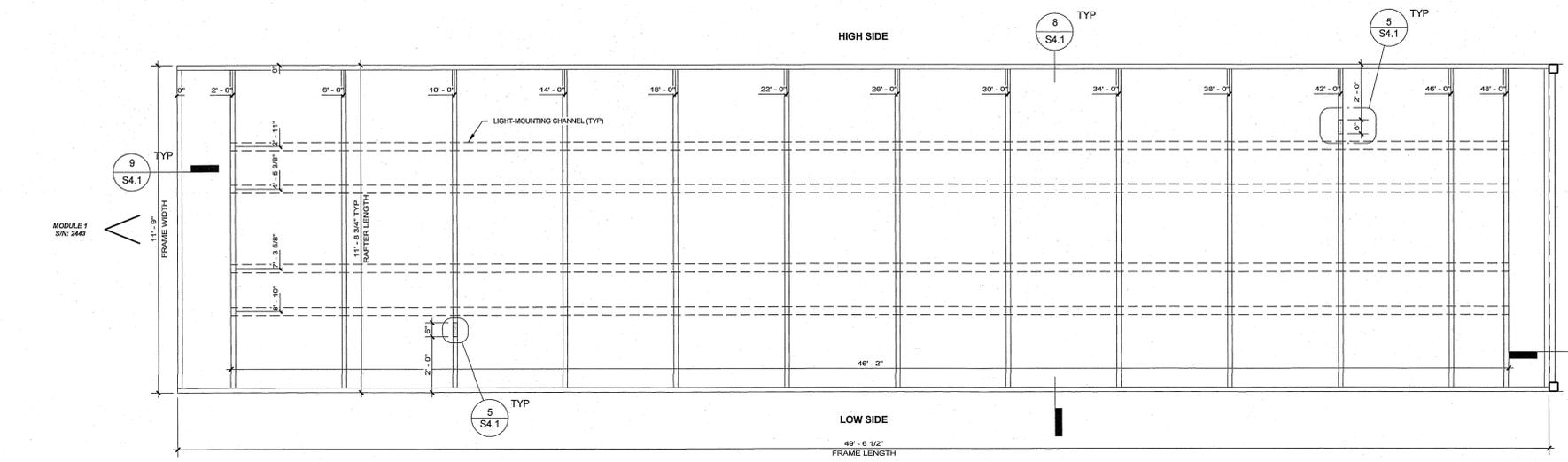


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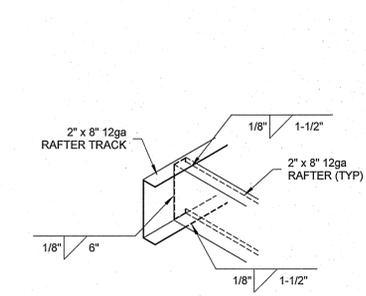
Drawn By:	EP
Checked By:	CZ/DL
Rev:	2

BUILDING SECTIONS
VORTEX ENGINEERING, INC.
FEDEX GROUND PACKAGE FACILITY
(2) 50'-0"x11'-9" MODULES

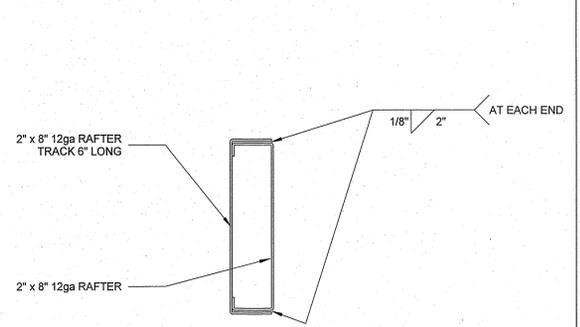
Serial No.	2443-44	Date:	5/14/2021
Quote No.	47615-99	Scale:	As indicated
Model No.	7721	Page No.	S2.1
Job No.	2021-005-WP		



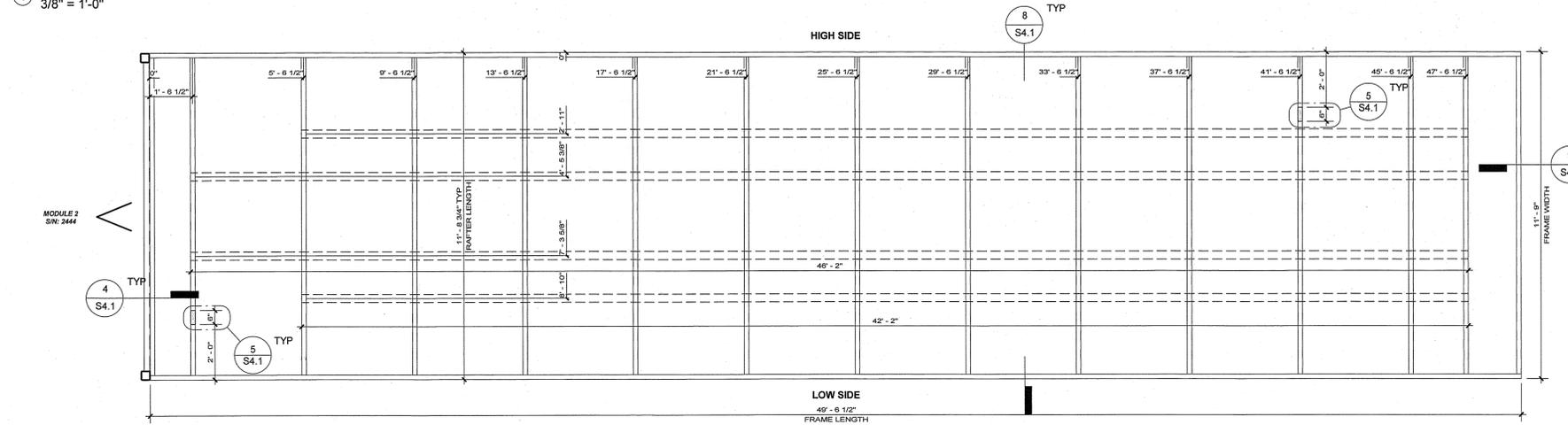
1 Roof Framing Plan - Module 1
3/8" = 1'-0"



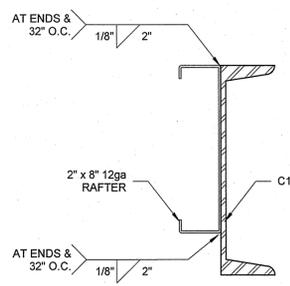
3 Connection Detail - Rafter to Track
1" = 1'-0"



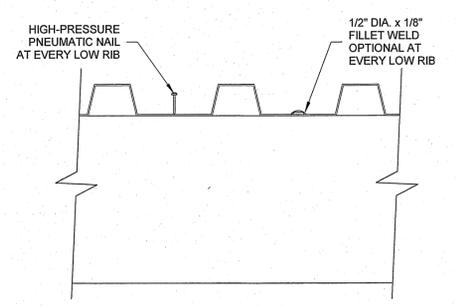
5 Fan Mounting Reinforcement Detail
3" = 1'-0"



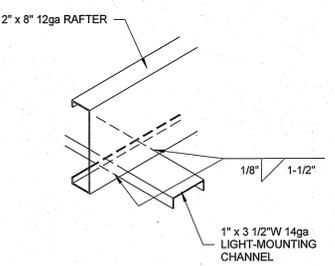
2 Roof Framing Plan - Module 2
3/8" = 1'-0"



4 Connection Detail - Roof Frame to C10\"/>



6 Connection Detail - Deck to Rafter
3" = 1'-0"



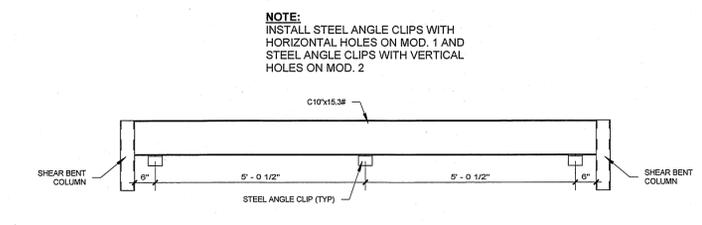
7 Light-Mount Channel to Rafter
1 1/2" = 1'-0"

NOTES:

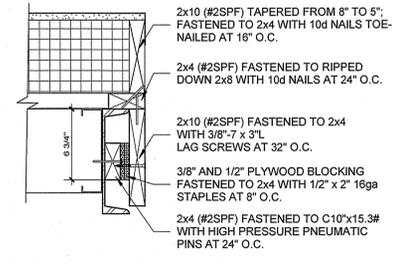
- THESE FASTENING PATTERNS ARE TO BE USED WHEN THE PROJECT REQUIRES A FACTORY MUTUAL RATED SYSTEM. CONTACT MULE-HIDE TECHNICAL DEPARTMENT FOR APPROPRIATE USE OF THESE PATTERNS.
- MULE-HIDE INSULATION FASTENERS AND 3" DIAMETER PLATES MUST BE USED FOR INSULATION ATTACHMENT.
- REFER TO MULE-HIDE WIND UPLIFT RATINGS FOR APPROPRIATE FASTENER DENSITY REQUIRED.
- FASTENER DENSITY INCREASES BASED ON THE FOLLOWING:
 - 50% FOR PERIMETERS WITH A MINIMUM OF 1 FASTENER EVERY 2 SQUARE FEET NOT TO EXCEED 1 FASTENER EVERY 1 SQUARE FEET
 - CONSTANT DENSITY OF 1 FASTENER EVERY 1 SQUARE FEET FOR CORNERS.

FIELD (16) 1 FASTENER PER EVERY 2 SQ. FT.
PERIMETER (24) 1 FASTENER PER EVERY 1.33 SQ. FT.
CORNERS (32) 1 FASTENER PER EVERY 1 SQ. FT.

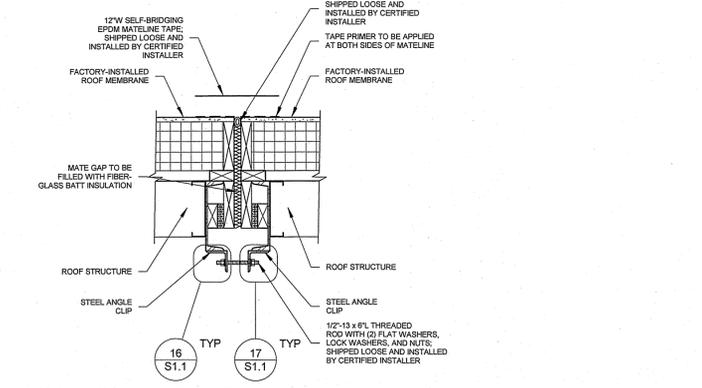
MULE-HIDE PRODUCTS CO., INC.
FM - 16 FIELD FASTENERS PER 4' X 8' BOARD PATTERN LAYOUT SYSTEMS: FULLY ADHERED
DETAIL NO.: MHT-FM-726
REVISION DATE: 10/2013



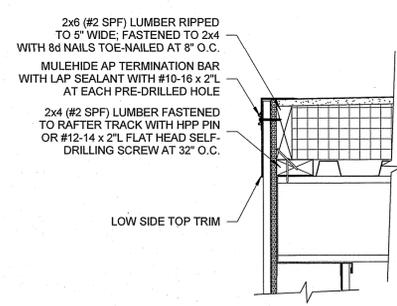
11 Steel Angle Clip at Roof Pattern
1/2" = 1'-0"



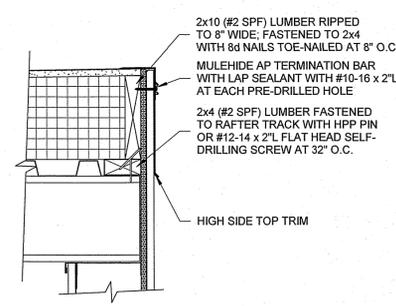
12 Roof Edge Detail - Mateline Endwall
1 1/2" = 1'-0"



10 Mateline Connection Detail - Roof
1" = 1'-0"



8 Roof Edge Detail - Sidewalls
1 1/2" = 1'-0"



9 Roof Edge Detail - Endwall
1 1/2" = 1'-0"



No.	Revision Description	Date
1	Customer approval drawings	03.01.2021

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Drawn By:	EP
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Rev:	1

ROOF FRAMING PLAN
VORTEX ENGINEERING, INC.
FEDEX GROUND PACKAGE FACILITY
(2) 50'-0"x11'-9" MODULES

Serial No.	2443-44	5/14/2021	Date:
Quote No.	47615-99	8:52:56 AM	Scale:
Model No.	7721		As indicated
Job No.	2021-005-WP		Page No.
			S4.1

EXHIBIT 'C'
MODULAR DOCK CALCULATIONS

WHITLEY EAST
TRIUMPH

Subj: Seismic Vs. Wind

Engr: Kevin M. Finn, P.E., Inc.
815 Waterbury Park Drive
Elkhart, IN 46517
MA P.E. Lic. No. 39636

LOCATION - LIMITED TO SEISMIC SPECIFICATIONS - MA

2015 INTERNATIONAL BUILDING CODE
2017 MA 9TH EDITION BUILDING CODE

MODEL - 7721 / SN 2443-44
FEDEX - GROUND

35 psf GROUND SNOW LOAD - 35 PSF FLAT LIVE LOAD

$$TW (wt) = l \times w \times [(15 \text{ psf}) + (35 \text{ psf} - 30) \times .25]$$
$$= 19093.75 \text{ LBS}$$

Cs IS THE MINIMUM Cs VALUE CALCULATED TO
THE LEFT

Sds = 0.145 Cd = 2
S = 1.30
Sd1 = 0.08 IE = 1
R = 2

$$Vr = CsW = 1384.3 \text{ LBS}$$

$$Cs = Sds / (R/IE) = 0.0725$$

$$Cs = SD1 / ((R/IE)T) = 0.41 \leftarrow \text{need not exceed}$$
$$Cs = 0.044SdsIE = 0.00638 \text{ (abs. Min)}$$

SITE CLASS - D SEISMIC DESIGN CATEGORY - B

$$V = 1384.30 \text{ lbs} \quad T = 0.1N = 0.1000$$

WALL HEIGHT = 12.25 FT
WALL LENGTH = 100 FT

Fa = 1.6
Fv = 2.4

SEISMIC VS. WIND

WIND BASED ON WIND - WALL LOAD CALC - 140 MPH, EXP. B

$$q = 12.894 \quad B \text{ to } B = 1 \text{ (15' HT)} \quad W = q(GCp) = 12.89 \text{ PSF}$$
$$\text{TOTAL WIND FORCE ON LONGITUDINAL WALL} = 15794.9 \text{ LBS}$$

(WIND CONTROLS)

$$\text{TOTAL FORCE ON END WALL} = 1855.90 \text{ LBS (WIND CONTROLS)}$$
$$\text{VS. SEISMIC} = 1384.30 \text{ LBS - OK FOR ENDWALLS}$$

$$\text{TOTAL BASE SHEAR} = 4300.00 \text{ LBS (CONSERVATIVE)}$$

SEISMIC USE GROUP - I

$$Sd1 = 0.082$$

$$Sds = 0.145$$

SEISMIC DESIGN CATEGORY - B

BASIC SEISMIC FORCE RESISTING SYSTEM
- BEARING WALL - B-2

ANALYSIS PROCEDURE
- EQUIVALENT LATERAL FORCE PROCEDURE



THIS CALCULATION CONSIDERS THE COLUMN SUPPORTING THE HORIZONTAL DIAPHRAGM FOR WIND RESISTANCE.

WIND SPEED - 140 MPH, EXP. B
ENCLOSED BUILDING FACTOR =

BUILDING CODE REFERENCE: 2020 FL BC (2018 IBC)
IMPORTANCE FACTOR = 1
0.18

qs = 13.19 PSF - INTERIOR ZONE
VS END ZONES - USE WORST CASE USED

TOTAL WIND LOAD USED FOR LATERAL RESISTANCE DESIGN = 13.19 PSF

TOTAL HORIZONTAL FORCE APPLIED AT TOP OF ROOF TO TOP PLATE CONNECTION -

ROOF PROJECTION = 0.1 FT
WALL / ROOF PROJECTION = I 10.25 FT

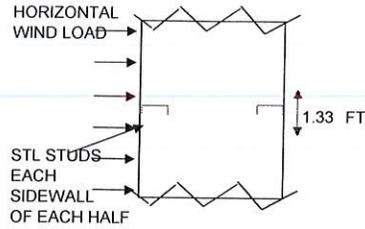
FORCE (PLF) AT AT WALL COL = 17.54 PLF

APPLIED HORIZ. FORCE AT POST OR COLUMN LINE (STD STUD TRIB WIDTH) = W = 1.8 PLF

EFFECT OF LEEWARD FRAMING NOT INCLUDED BELOW
VERY CONSERVATIVE

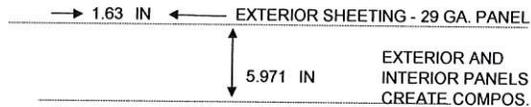
USE END FRAME AS CANTILEVERED BEAM IN PLACE OF THE END SHEARWALL

APPLIED BENDING MOMENT TO EACH END FRAME $W \times L^2 / 2$ (EACH STUD) = 921.6 FT-LBS



WALL STUD EQUIVALENT = USE 1-5/8" x 6" x 18GA STEEL STUD

lo = 2.316 in t = 0.0451 IN
Sx = 0.772 in d = 5.971 IN
A = 0.447 in width = 1.63 IN
Fy = 33 ksi LDF = 1.3
r = 1.1



RESULTANT BENDING STRESS = fb = M/Sx = 14325 psi
NOTE - EFFECTIVELY LEEWARD AND WINDARD ARE IN EFFECT.
LEEWARD IS NOT USED IN THIS CASE.

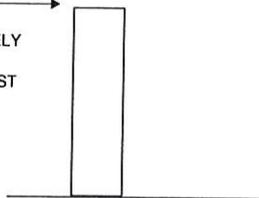
REACTION SCREW CONNECTION STUD TO TRACK = 1852.1 LBS
#12 SCREW - 662 LBS - EACH STUD
#10 SCREW - 475 - 3" O.C. (5 USED)
TWO NO. 10 / 1 NO. 12 = 1612.0 LBS x 1.3
35.25 LBS LBS - EACH STUD

ALLOWABLE Fb = 25740 psi

DEAD LOAD OVERTURNING =

DEFLECTION = $PL^3/3EI$ = 0.494 IN VS. ALLOWABLE DEFLECTION = $2L/180$ = 1.367 IN - ok STEEL FINISH

1.75 lbs TO EACH POST CONSERVATIVELY APPLIED TO WINDWARD POST



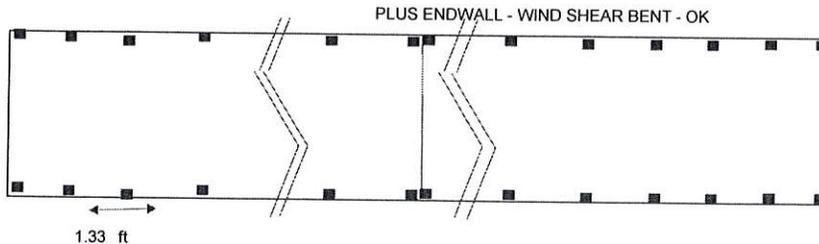
Cc = 127
I = 123 IN
K = 1 IN
Kl/r = 111.82
Kl/r / Cc = 0.8805
Fa = 3.87402



DEAD LOAD - Pa = 154.6875 LBS fa = 346.057 PSI fa / Fa < 15%

COMBINED - fa / Fa + fb / Fb = 0.64584 < 1.0 - ok

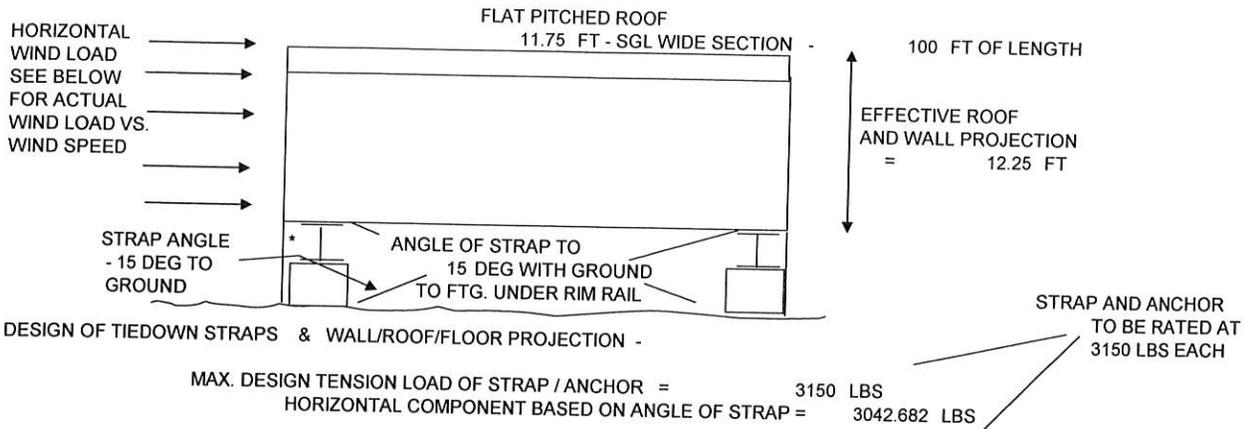
SHEAR - fv = 3.9 PSI



THE LOAD CONDITIONS FOR THE TIEDOWN SYSTEM ARE BASED ON THE INDICATED WIND SPEED
 THE BUILDING CODE REFERENCE IS 9TH ED MA BC 2015 INTERNATIONAL BUILDING CODE

THIS CALCULATION IS FOR DEVELOPMENT OF THE GROUND ANCHORING TIE DOWN
 SYSTEM FOR A MANUFACTURED MODULAR STRUCTURE.

WIND LOAD IS BASED ON THE CONDITION OF A MAX.
 15' BUILDING HT. OFF THE GROUND



MAXIMUM SPACING OF STRAP TIEDOWN -

WIND SPEED	HORIZONTAL WIND LOAD	LATERAL LOAD APPLIED TO FLOOR RIM	FRICTIONAL RESISTANCE	SPACING OF GROUND ANCHORS
140 MPH, EXP. B	12.89376 PSF	157.95 PLF	12.24	20.88 FT O.C.

STRAP - ANCHOR SPECIFICATIONS - RATED AT MIN. 3150 LBS

ANCHOR - ANCHOR-SUR DIVISION MODEL 48SH OR MINUTE MAN ANCHORS MODEL 650-DH
 STRAP - FEDERAL SPECIFICATION QQ-S-781H, TYPE 1, CLASS B, GRADE 1 - 1-1/4" x 0.035"



VERTICAL TIEDOWN -

WIND UPLIFT = 11.5 PSF

VERTICAL UPLIFT COMP.

= 815.2213 LBS
 810.75 LBS - APPLIED WIND UPLIFT LOAD

MIN. ACTUAL DEAD LOAD = 30 PSF - 100% X 60% APPLIED FOR FRICTIONAL DEAD LOAD RESISTANCE - SEE BELOW

OVERTURNING -

REACTION AT SIDEWALL = (WIND PRESS. x WALL HT.^2 / 2 - 60% (DEAD LOAD) x UNIT WIDTH^2 / 2) / UNIT WIDTH
 = -23.42 LBS PER LINEAL FT. OF LENGTH OF BUILDING
 THEREFORE, SINCE NEGATIVE NO VERTICAL TIEDOWN REQUIRED

WHITLEY MANUFACTURING CO., INC.
CALCULATION INDEX

MODEL #:		7721
SHEET	CALCULATION	
NO.	DESCRIPTION	
1	COVER SHEET	
2	OUTRIGGER MAIN BEAM CALCULATION	
3	SHEAR BENT TUBE COLUMN CALCULATION	
4	ROOF FRAMING CALCULATION	
5 - 9	COMcheck	
10	STEEL DECK SPAN CHART	
10	SHEETS TOTAL	

WHITLEY MANUFACTURING CO., INC.

DATE: 05/05/21

MODEL # 7721

OUTRIGGER FRAME, MAIN RAIL STRUCTURAL CALCULATION

=====

DESIGN SPECIFICATIONS

YIELD OF STEEL =	36 ksi	E OF STEEL =	29000 ksi
ROOF DEAD LOAD =	10 psf	FLOOR DEAD LOAD =	18 psf
ROOF LIVE LOAD =	40 psf	FLOOR LIVE LOAD =	125 psf
WALL DEAD LOAD =	54 plf	CONC LIVE LOAD =	2000 lbs
ESTIMATED TOTAL WEIGHT OF UNIT IS	=		23178 lbs

FRAMING CONFIGURATION

WIDTH OF UNIT =	11.8 ft	XMEMB SPACING =	48 ins
LENGTH OF UNIT =	50.0 ft	XMEMB LENGTH =	138 ins
PIER SPACING =	12.7 ft	UNBRACED LENGTH =	12 ins

MAIN FRAME STRINGER

SECTION: W10X12

ALLOWABLE BENDING STRESS F_b =	21.01 ksi	
ACTUAL BENDING STRESS f_b =	20.99 ksi	SECTION OK
ALLOWABLE SHEAR STRESS F_v =	14.40 ksi	
ACTUAL SHEAR STRESS f_v =	4.01 ksi	SECTION OK
ALLOWABLE DEFL = SPAN/ 360 =	0.42 ins	
ACTUAL MAXIMUM DEFL. =	0.23	DEFLECTION OK



WHITLEY MANUFACTURING CO., INC

DATE: 05/05/21

MODEL # 7721

STEEL TUBE SHEAR BENT COLUMN CALCULATION

DESIGN SPECIFICATIONS

YIELD OF STEEL = 46 ksi E OF STEEL = 29000 ksi

HEIGHT @ HIGH SIDE OF ROOF 10.39 FT. RIBUTARY LENGTH 30.00 FT.
 LATERAL PRESSURE: 14.800 PSF TOTAL LATERAL FORCE: 4611.50 LB's

FRAMING CONFIGURATION: VERTICAL TUBE, WELDED TO TRANSVERSE W12"x14 # @ BOTTOM AND TC
 C10"x 15.3 @ TOP. SEE DWG. S1.1 FOR DETAIL

TUBE COLUMN HEIGHT = 10.927 ft COLUMN / STUD SPACING = 360 ins MAX.
 EFFECTIVE LENGTH 9.095 Ft TO BRACED CONNECTION**

STEEL TUBE COLUMN

SECTION: 4x4x1/4 TUBE

ALLOWABLE BENDING STRESS $F_b =$ 31.61 ksi
 ACTUAL BENDING STRESS $f_b =$ 14.12 ksi SECTION OK

ALLOWABLE SHEAR STRESS $F_v =$ 18.40 ksi
 MAXIMUM SHEAR FORCE $V =$ 2.02 kips
 ACTUAL SHEAR STRESS $f_v =$ 1.01 ksi SECTION OK

LENGTH OF 0.188 WELD REQD = 5.04 ins EACH END

ALLOWABLE DEFL = SPAN/ 360 = 0.35 ins
 ACTUAL MAXIMUM DEFL. = 0.29 DEFLECTION OK

CHECK WELDING OF COLUMNS TO BASE W10"x12 LB/FT & TOP C10"x15.3 LB/FT

Column size/type: 4"x 4"x 1/4" HSS ASTM A500, GRADE B, 46KSI
 Max. column span: 30.00 Ft. Max. Horiz. Pressure on column: 4611.5 lb's
 Welding Electrode: E70XX Max. Uplift resisted by column: -3341.7 lb's
 Bead length, per weld: 3.00 In. MIN. Total force applied to column: 7953.2 lb's
 No. of welds @ ea. End of col: (2) Total shear resistance, per connection: 8352.7 lb's
 Bead size: 3/16 In Base shear, per weld: 1.392 Kip/In.*

* Note: Total shear includes addn'l reduction (safety) factor of 2:1

OK, WELD STRENGTH EXCEEDS FORCE APPLIED TO COLUMN

NOTE: SAME WELDING REQUIREMENTS FOR BOTH COLUMN BASE AND COLUMN TOP.



WHITLEY MANUFACTURING CO., INC.

DATE: 05/05/21

MODEL #

7721

ROOF BEAM CALCULATIONS

DESIGN SPECIFICATIONS

YIELD OF STEEL =	36 ksi	E OF STEEL =	29000 ksi
ROOF DEAD LOAD =	10 psf		
ROOF LIVE LOAD =	40 psf		

FRAMING CONFIGURATION

WIDTH OF UNIT =	11.8 ft	RAFTR SPACING =	48 ins
LENGTH OF UNIT =	60 ft	RAFTR LENGTH =	138 ins
FRAMING SPACING =	1.3 ft	UNBRACED LENGTH =	141 ins
SPAN CONDITION:	SINGLI-SPAN	SPECIFY LAG BOLT INSTRUCTION	
		AT EVERY OTHER FLOOR JOIST	

ROOF SPAN BEAM

SECTION: CD 800T200-12ga

ALLOWABLE BENDING STRESS $F_b =$	21.60 ksi
ACTUAL BENDING STRESS $f_b =$	0.14 ksi SECTION OK
ALLOWABLE SHEAR STRESS $F_v =$	14.40 ksi
ACTUAL SHEAR STRESS $f_v =$	0.25 ksi SECTION OK
ALLOWABLE DEFL = SPAN/ 240 =	0.07 ins
ACTUAL MAXIMUM DEFL. =	0.00 DEFLECTION OK



STEEL RAFTER TYPE

SECTION: CD 800S200-12ga

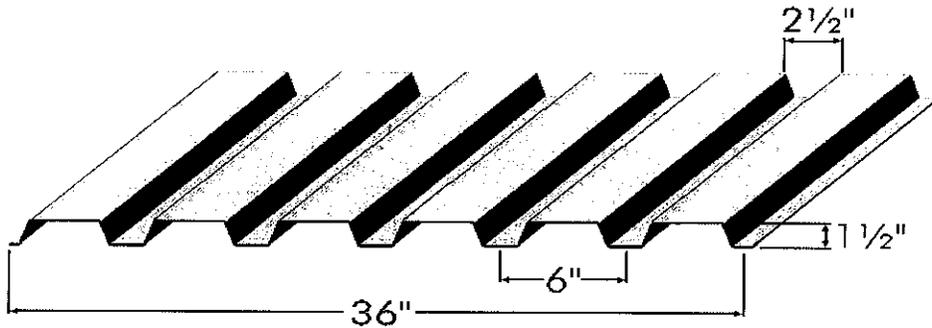
ALLOWABLE BENDING STRESS $F_b =$	21.60 ksi
ACTUAL BENDING STRESS $f_b =$	14.16 ksi SECTION OK
ALLOWABLE SHEAR STRESS $F_v =$	14.40 ksi
MAXIMUM SHEAR FORCE $V =$	1.18 kips
ACTUAL SHEAR STRESS $f_v =$	1.52 ksi SECTION OK
LENGTH OF 0.125 WELD REQD =	2.00 ins EACH END
ALLOWABLE DEFL = SPAN/ 240 =	0.58 ins
ACTUAL MAXIMUM DEFL. =	0.23 DEFLECTION OK

TOES ON FORMED CHANNELS MUST BE TWO INCHES LONG

SECTION PROPERTIES

fy = 33 ksi

GAGE	t (in)	Wd (psf)	Ip (in^4)	In (in^4)	Sp (in^3)	Sn (in^3)	Rbe (lb/ft)		Rbi (lb/ft)		Va (lb/ft)	
							LRFD	ASD	LRFD	ASD	LRFD	ASD
22	0.0295	1.7	0.162	0.187	0.194	0.202	597	430	1404	1013	2587	1794
20	0.0358	2.0	0.209	0.227	0.240	0.250	828	597	2167	1563	3140	2177
18	0.0474	2.7	0.299	0.304	0.327	0.335	1344	969	3815	2751	4157	2882
16	0.0598	3.3	0.383	0.383	0.420	0.422	2028	1462	5919	4269	5245	3636



MAXIMUM ALLOWABLE UNIFORM TOTAL LOADS, (psf) **

GAGE	SINGLE SPAN				DOUBLE SPAN				TRIPLE SPAN															
	22	20	18	16	22	20	18	16	22	20	18	16												
span	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD												
3'-0"	398	284	400	352	400	400	400	400	374	270	400	349	400	400	400	400	400	400	400	400	400	400	400	
3'-6"	257	209	330	259	400	352	400	400	321	211	400	260	400	348	400	400	365	259	400	319	400	400	400	400
4'-0"	176	160	224	198	317	270	400	347	256	162	315	200	400	269	400	339	315	200	388	247	400	331	400	400
4'-6"	126	126	161	157	226	213	286	274	204	129	251	159	337	213	400	269	229	160	294	197	400	264	400	333
5'-0"	95	95	120	120	167	167	211	211	166	105	204	129	274	174	346	219	170	130	217	160	306	215	389	271
5'-6"	74	74	92	92	128	128	161	161	137	87	169	107	227	144	287	182	130	108	165	133	232	179	295	225
6'-0"	59	59	74	74	101	101	126	126	116	73	143	90	191	121	242	153	103	91	130	112	181	151	229	190
6'-6"			60	60	82	82	102	102	99	63	122	77	164	103	206	131	83	78	104	96	145	129	182	162
7'-0"			50	50	67	67	83	83	84	54	105	67	141	89	178	113	68	67	85	83	118	111	148	140
7'-6"					57	57	70	70			88	58	122	78	153	98			71	71	98	97	122	122
8'-0"					48	48	59	59			75	51	102	69	128	87			60	60	82	82	103	103
8'-6"							51	51					87	61	109	77					70	70	87	87
9'-0"							44	44					75	54	93	68					61	61	75	75
9'-6"													65	49	81	61					53	53	65	65
10'-0"															71	56							57	57
10'-6"															62	50							51	51
11'-0"																								

MAXIMUM CONSTRUCTION SPANS

span	5'-9"	6'-6"	7'-9"	8'-10"	6'-9"	7'-8"	9'-2"	10'-5"	6'-9"	7'-8"	9'-2"	10'-5"
cantilever	2'-0"	2'-4"	2'-8"	3'-0"	2'-0"	2'-4"	2'-8"	3'-0"	2'-0"	2'-4"	2'-8"	3'-0"
FM	6'-0"	6'-6"	7'-5"	-	6'-0"	6'-6"	7'-5"	-	6'-0"	6'-6"	7'-5"	-

LRFD ASD ← design method

3'-0" 398 284 ← maximum allowable uniform total (dead+live) load **

↑ span (center-to-center of supports)

- t Design thickness of deck
- Wd Weight of deck (uncoated)
- As Average area of steel of deck per foot width
- Ip Moment of inertia of deck for positive bending
- In Moment of inertia of deck for negative bending
- Sp Section modulus of deck for positive bending
- Sn Section modulus of deck for negative bending
- Rbe Allowable exterior web crippling value per foot of deck (based on 2" of end bearing)
- Rbi Allowable interior web crippling value per foot of deck (based on 4" of interior bearing)
- Va Allowable shear value per foot of deck
- span Maximum single or multiple span during construction
- cantilever Maximum cantilever during construction
- FM Maximum allowable span per Factory Mutual
- fy 33 ksi (for determining maximum loads)
- f span 26 ksi (for determining maximum spans)
- ** An assumed 10 psf dead load is added to deflection