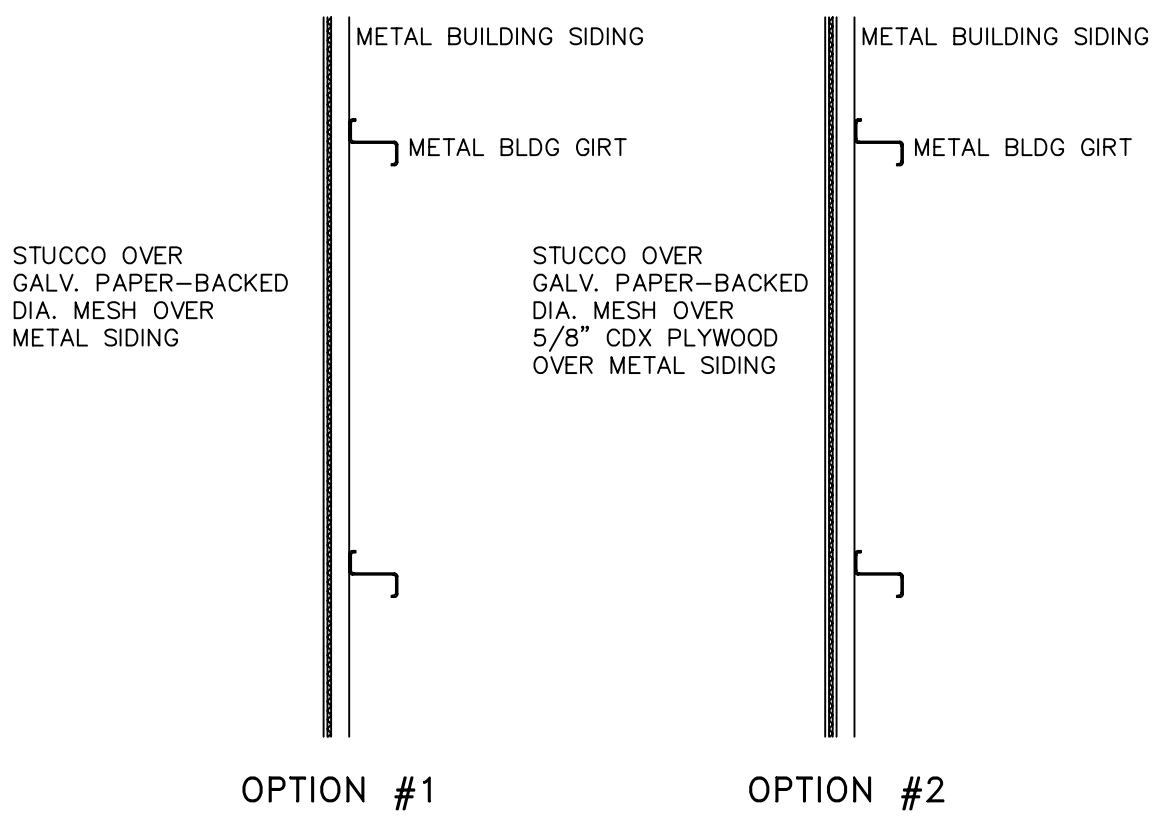


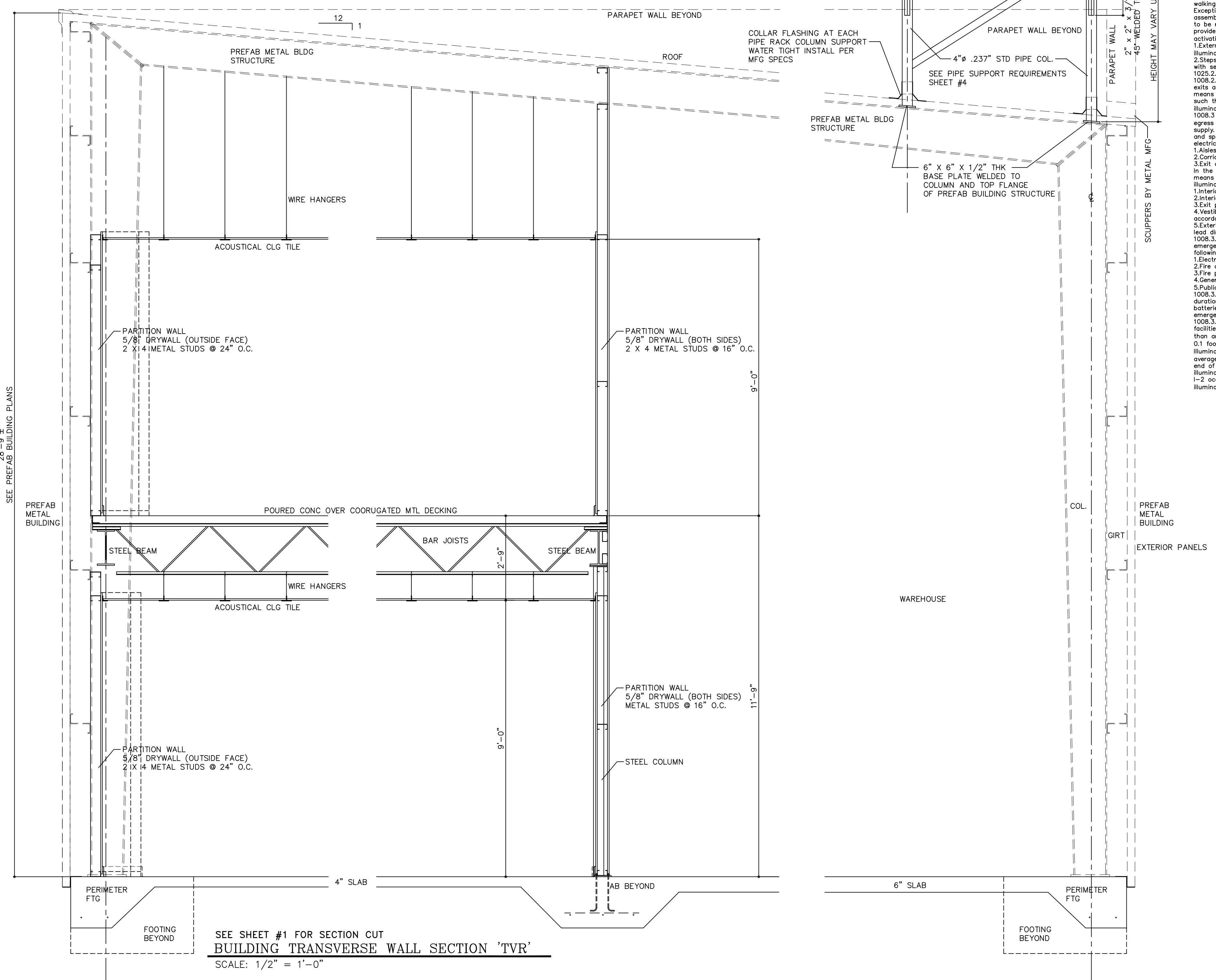
FOOTING CALCULATIONS

Footings	Footings	Footings	Footings	Footings	Footings
F4	F5	F6	F7	F8	F9
<p>Results Footing Design: Controlled by Gravity Load</p> <p>Total Uplift = 1287 lb Tributary Area = 117 sf Net Uplift = 11 psf Cubic Feet = 24.50 cf Cubic Yards = 0.91 cy Weight of Footing Due to Uplift (lbs) = 3675 lb Required Footing Depth (ft) = 2.00 ft Required Footing Width (ft-sq) = 3.50 ft-sq Footing Depth Due to Gravity (inches) = 24.00 inches Footing Size Due to Gravity (Ft-Sq) = 3.45 x 3.45 Footing Weight Due to Gravity = 3562 lb</p> <p>Footing Size: Column to Footing = Left of Center (Eccentric Loading) Square Footing (inches) = 42 x 42 Square Footing (Ft-Sq) = 3.50 x 3.50 Depth of Footing (inches) = 24.00 inches Depth of Footing (feet) = 2.00 feet Steel Placement = 3 # 5 @ 15 Inch O.C. E.W. 2 Layer(s)</p>	<p>Results Footing Design: Controlled by Gravity Load</p> <p>Total Uplift = 2860 lb Tributary Area = 260 sf Net Uplift = 11 psf Cubic Feet = 34.72 cf Cubic Yards = 1.29 cy Weight of Footing Due to Uplift (lbs) = 5208 lb Required Footing Depth (ft) = 2.00 ft Required Footing Width (ft-sq) = 4.17 ft-sq Footing Depth Due to Gravity (inches) = 24.00 inches Footing Size Due to Gravity (Ft-Sq) = 4.06 x 4.06 Footing Weight Due to Gravity = 4950 lb</p> <p>Footing Size: Column to Footing = Left of Center (Eccentric Loading) Square Footing (inches) = 50 x 50 Square Footing (Ft-Sq) = 4.17 x 4.17 Depth of Footing (inches) = 24.00 inches Depth of Footing (feet) = 2.00 feet Steel Placement = 3 # 5 @ 15 Inch O.C. E.W. 2 Layer(s)</p>	<p>Results Footing Design: Controlled by Gravity Load</p> <p>Total Uplift = 2574 lb Tributary Area = 234 sf Net Uplift = 11 psf Cubic Feet = 56.41 cf Cubic Yards = 2.09 cy Weight of Footing Due to Uplift (lbs) = 8461 lb Required Footing Depth (ft) = 2.33 ft Required Footing Width (ft-sq) = 4.52 ft-sq Footing Depth Due to Gravity (inches) = 28.00 inches Footing Size Due to Gravity (Ft-Sq) = 4.91 x 4.91 Footing Weight Due to Gravity = 8449 lb</p> <p>Footing Size: Column to Footing = Left of Center (Eccentric Loading) Square Footing (inches) = 59 x 59 Square Footing (Ft-Sq) = 4.92 x 4.92 Depth of Footing (inches) = 28.00 inches Depth of Footing (feet) = 2.33 feet Steel Placement = 4 # 5 @ 14 Inch O.C. E.W. 2 Layer(s)</p>	<p>Results Footing Design: Controlled by Gravity Load</p> <p>Total Uplift = 5720 lb Tributary Area = 520 sf Net Uplift = 11 psf Cubic Feet = 114.08 cf Cubic Yards = 4.23 cy Weight of Footing Due to Uplift (lbs) = 17113 lb Required Footing Depth (ft) = 3.00 ft Required Footing Width (ft-sq) = 6.17 ft-sq Footing Depth Due to Gravity (inches) = 36.00 inches Footing Size Due to Gravity (Ft-Sq) = 6.13 x 6.13 Footing Weight Due to Gravity = 16897 lb</p> <p>Footing Size: Column to Footing = Left of Center (Eccentric Loading) Square Footing (inches) = 74 x 74 Square Footing (Ft-Sq) = 6.17 x 6.17 Depth of Footing (inches) = 36.00 inches Depth of Footing (feet) = 3.00 feet Steel Placement = 7 # 5 @ 11 Inch O.C. E.W. 2 Layer(s)</p>	<p>Results Footing Design: Controlled by Gravity Load</p> <p>Total Uplift = 2860 lb Tributary Area = 260 sf Net Uplift = 11 psf Cubic Feet = 66.74 cf Cubic Yards = 2.47 cy Weight of Footing Due to Uplift (lbs) = 10010 lb Required Footing Depth (ft) = 2.50 ft Required Footing Width (ft-sq) = 5.17 ft-sq Footing Depth Due to Gravity (inches) = 30.00 inches Footing Size Due to Gravity (Ft-Sq) = 5.14 x 5.14 Footing Weight Due to Gravity = 9900 lb</p> <p>Footing Size: Column to Footing = Left of Center (Eccentric Loading) Square Footing (inches) = 52 x 52 Square Footing (Ft-Sq) = 5.17 x 5.17 Depth of Footing (inches) = 30.00 inches Depth of Footing (feet) = 2.50 feet Steel Placement = 5 # 5 @ 13 Inch O.C. E.W. 2 Layer(s)</p>	<p>Results Footing Design: Controlled by Gravity Load</p> <p>Total Uplift = 1287 lb Tributary Area = 117 sf Net Uplift = 11 psf Cubic Feet = 18.38 cf Cubic Yards = 0.68 cy Weight of Footing Due to Uplift (lbs) = 2756 lb Required Footing Depth (ft) = 1.50 ft Required Footing Width (ft-sq) = 3.50 ft-sq Footing Depth Due to Gravity (inches) = 18.00 inches Footing Size Due to Gravity (Ft-Sq) = 3.30 x 3.30 Footing Weight Due to Gravity = 2447 lb</p> <p>Footing Size: Column to Footing = Left of Center (Eccentric Loading) Square Footing (inches) = 42 x 42 Square Footing (Ft-Sq) = 3.50 x 3.50 Depth of Footing (inches) = 18.00 inches Depth of Footing (feet) = 1.50 feet Steel Placement = 2 # 5 @ 17 Inch O.C. E.W. 2 Layer(s)</p>



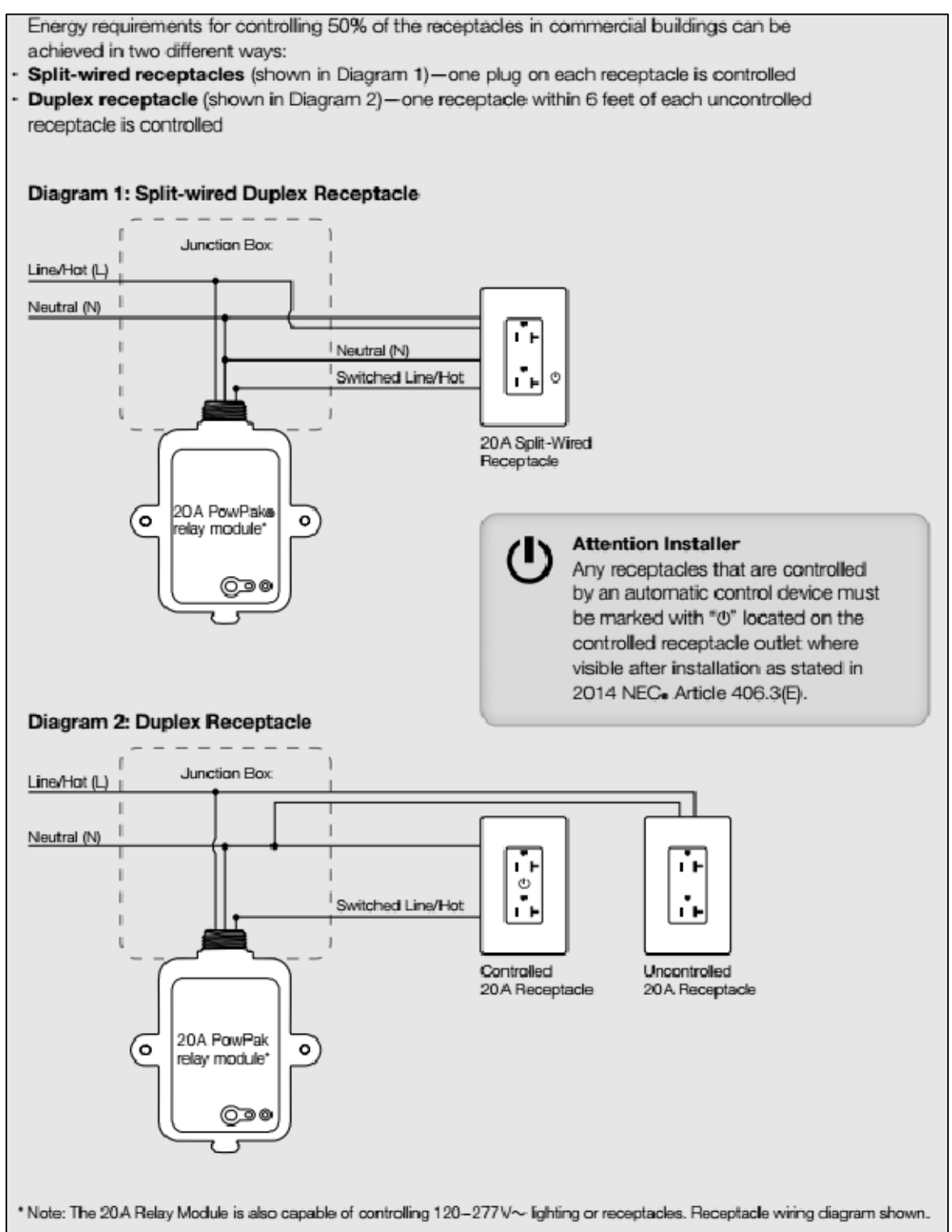
OPTIONAL EXTERIOR WALL FINISHES
SCALE: 3/8" = 1'-0"

PIPES (SUSPENDED - RACK SUPPORTED)					
CARBON STEEL - SCHEDULE 40					
SIZE/DIAMETER (INCH)	EMPTY - LBS/FT	OPERATING - LBS/FT	WALL THICKNESS (INCHES)	NUMBER OF PIPES	TOTAL WT / FT
6	19.0	31.0	0.280	4	124
4	10.8	16.0	0.226	2	32



NOTE: LIGHT SUPPLIER TO PROVIDE LIGHT PER SECTION 1008 SECTION 1008 MEANS OF EGRESS ILLUMINATION 1008.1 Means of egress illumination: illumination shall be provided in the means of egress in accordance with Section 1008.2. Under emergency 1008.2 illumination required. The means of egress serving a room or space shall be illuminated at all times that the room or space is occupied.

1. Occupancies in Group U.
2. Aisle egressways in Group A.
3. Dwelling units and sleeping units in Groups R-1, R-2 and R-3.
4. Sleeping units of Group I occupancies.
1008.2.1 Illumination level under normal power. The means of egress illumination level shall be not less than 1 footcandle (1 lux) at the walking surface.
Exception: For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the walking surface is permitted to be reduced during performances by one of the following methods provided that the required illumination is automatically restored upon activation of a premises' fire alarm system:
1. Externally illuminated walking surfaces shall be permitted to be illuminated to not less than 0.2 footcandle (2.15 lux).
2. Stairs, landings and the sides of ramps shall be permitted to be marked with self-luminous materials in accordance with Sections 1025.2.1, 1025.2.2 and 1025.2.4 by systems listed in accordance with UL 1994.
1008.2.2 Exit discharge. In Group I-2 occupancies where two or more exits are required, on the exterior landings required by Section 1010.6.1, means of egress illumination levels for the exit discharge shall be provided such that failure of any single lighting unit shall not reduce the illumination level on that landing to less than 1 footcandle (1 lux).
1008.3 Emergency power for illumination. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. 1008.3.1 General. In the event of power supply failure in rooms and spaces that require two or more means of egress, an emergency electrical system shall automatically illuminate all of the following areas:
1. Aisles.
2. Corridors.
3. Exit access stairways and ramps. 1008.3.2 Buildings. In the event of power supply failure in buildings that require two or more means of egress, an emergency electrical system shall automatically illuminate all of the following areas:
1. Interior exit access stairways and ramps.
2. Interior and exterior exit stairways and ramps.
3. Exit passageways.
4. Vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.1.
5. Exterior landings as required by Section 1010.1.6 for exit doorways that lead directly to the exit discharge.
1008.3.3 Rooms and spaces. In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:
1. Electrical equipment rooms.
2. Fire command centers.
3. Fire pump rooms.
4. Generator rooms.
5. Public restrooms with an area greater than 300 square feet (27.87 m2).
1008.3.4 Duration. The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 2702.
1008.3.5 Illumination level under emergency power. Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 1 footcandle (1 lux) and a minimum at any point of 0.1 footcandle (1 lux) measured along the path of egress at floor level. Illumination levels shall be permitted to decline to 0.5 footcandle (5 lux) average and a minimum at any point of 0.06 footcandle (0.6 lux) at the end of the emergency lighting time duration. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. In Group I-2 occupancies, failure of any single lighting unit shall not reduce the illumination level to less than 0.2 foot-candle (2.2 lux).



WIND LOADING ANALYSIS - MWFRS and Components/Cladding
Per ASCE 7-10

Design Criteria:
Wind Speed, V(wt) = 139 mph (Wind Map) - Ultimate
Wind Speed, V(nom) = 110 mph - Nominal
Bldg. Classification = II (Occupancy Category)
Exposure Category = B
Ridge Height, hr = 25.50 ft. (h = ht + he)
Eave Height, he = 24.50 ft. (h = ht + he)
Building Width, W = 52.00 ft. (Normal to Building Ridge)
Building Length, L = 53.33 ft. (Parallel to Building Ridge)
Roof Type = Gable (Gable or Monostope)
Topo. Factor, Kzt = 1.00
Wall C&C Name = Wall (Girt, Sliding, Wall, or Fastener)
Wall C&C Eff. Area = 150.00 ft.^2 (for Component/Cladding)
Roof C&C Name = Decking (Purlin, Joist, Decking, or Fastener)
Roof C&C Eff. Area = 312.00 ft.^2 (for Component/Cladding)
Overhang Eff. Area = 0.00 ft.^2 (for Component/Cladding)
For Transverse Direction: (wind perpendicular to ridge)
Roof Angle, θ = 4.40 deg.
Mean Roof Ht., h = 24.50 ft. (h = ht + he for θ < 10 deg.)
Adjustment Factor, λ = 1 (adjusts for height and exposure)
Wall & Roof End Zone Width, a = 5.2 ft. (use: "2a" for MWFRS, "a" for C&C)

Transverse MWFRS Net Pressures, ps (psf)

Location	Direction	Zone	Load Case 1	Load Case 2
A = end zone of wall	Horizontal	A	19.20	—
B = end zone of roof	Horizontal	B	0.00	—
C = interior zone of wall	Horizontal	C	12.70	—
D = interior zone of roof	Horizontal	D	0.00	—
E = end zone of windward roof	Vertical	E	-23.10	—
F = end zone of leeward roof	Vertical	F	-13.10	—
G = interior zone of windward roof	Vertical	G	-16.00	—
H = interior zone of leeward roof	Vertical	H	-10.10	—

For Longitudinal Direction: (wind parallel to ridge)
Roof Angle, θ = 0.00 deg. (assumed)
Mean Roof Ht., h = 25.50 ft. (h = ht + he/2)
Adjustment Factor, λ = 1 (adjusts for height and exposure)

Longitudinal MWFRS Net Pressures, ps (psf)

Location	Direction	Zone	Load Case 1	Load Case 2
A = end zone of wall	Horizontal	A	19.20	—
B = end zone of roof	Horizontal	B	0.00	—
C = interior zone of wall	Horizontal	C	12.70	—
D = interior zone of roof	Horizontal	D	0.00	—
E = end zone of windward roof	Vertical	E	-23.10	—
F = end zone of leeward roof	Vertical	F	-13.10	—
G = interior zone of windward roof	Vertical	G	-16.00	—
H = interior zone of leeward roof	Vertical	H	-10.10	—

Total Design MWFRS Horizontal Load (kips)
Transverse
Longitudinal

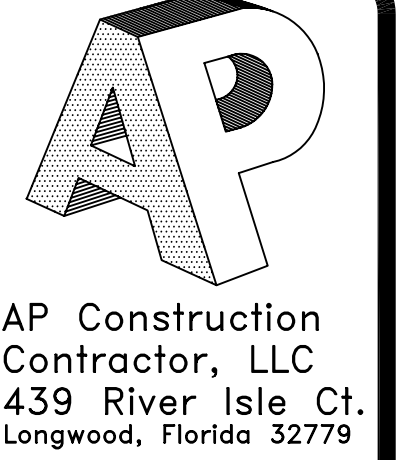
Load Case 1	Load Case 2	Min. Load	Load Case 1	Load Case 2	Min. Load
19.91	—	14.13	20.21	—	13.26

Formulas:
Ph(Trans) = ((Pc)(L-4a) + Pa(4a)) + (Pt)(L-4a) + Pb(4a) (h = ht + he) / 1000
Ph(Trans)(min) = P(min) * L * tv / 1000, where: P(min) = 10.0 psf on projected area
Ph(Long) = (Pa)(ht + he) / 2 + a * Pct((ht + he) / 2) * W / (ht + he) / 2 + 4a) / 1000
Ph(Long)(min) = P(min) * W * (ht + he) / 2 / 1000, where: P(min) = 10.0 psf on full area

Components & Cladding Net Pressures, ps (psf)

Item	Location	Zone	Pos. (+)	Neg. (-)		
Wall	4 = interior zone of wall	4	18.21	-20.11		
			5 = end zone of wall	5	18.21	-22.04
			1 = interior zone of roof	1	7.00	-19.50
Roof	2 = end zone of roof	2	7.00	-23.60		
			3 = corner zone of roof	3	7.00	-23.60
			2 = end zone of o.h.	2	—	—
Roof Overhang	3 = corner zone of o.h.	3	—	—		
			—	—		

ALL CONTRACTORS AND SUB-CONTRACTORS ARE TO REVIEW THE ENTIRE SET OF PLANS INCLUDING THE GENERAL NOTES AND OTHER INFORMATION IN THESE PLANS PRIOR TO AND DURING CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY - DO NOT SCALE DRAWINGS.



New Control Room FOR
Florida Caribbean Distillers Co
425 Recker Highway, Auburndale, Polk County, Florida

JULIAN J. GARCIA
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Web Site: jgarcia.com
Email: architect@jgarcia.com

THESE PLANS ARE NOT VALID UNLESS THEY ARE SIGNED AND SEALED

Signature: _____

DRAWN: JUG
CHECKED: JUG
DATE: 10/25/19
SCALE: AS SHOWN
JOB NUMBER: 1804908C-Auburndale
SHEET: 4 OF 8 SHEETS