



ST. TAMMANY PARISH

PATRICIA P. BRISTER
PARISH PRESIDENT

May 22, 2019

Please find the following addendum to the below mentioned BID.

Addendum No.: 3

Bid#: 19-13-1/19-13-2

Project Name: Airport Corporate Hangar Facilities

Bid Due Date: May 28, 2019

GENERAL INFORMATION:

1. The following changes were made to the DRAWINGS:

Replace Sheets 9 and 13 with attached revised Sheets 9 and 13 dated May 20, 2019.

2. PRIOR APPROVALS: *(The following manufacturers are prior approved provided that the product and its application meets or exceeds the requirements of the drawings and specifications. Listed below are manufacturers who are recognized as capable of producing products or equipment equal to those specified. Products or equipment will be considered acceptable, providing the equipment meets, or exceeds the specification requirements, fits the available space, and has the capacity and performance requirements. Products shall also be similar in appearance, construction, and performance (as published by an independent laboratory report.)*

The listed (prior-approved) equipment are not given with respect to any specific model, series, catalog number, etc. Suppliers are cautioned that before their equipment is approved, it will be incumbent upon them to demonstrate to the architect or engineer, that the product or equipment is (in fact) equal to the requirements specified and conforms fully to all specification requirements.)



ST. TAMMANY PARISH

PATRICIA P. BRISTER
PARISH PRESIDENT

Section 13 34 19– Metal Building Systems – Terminal:

Manufacturers listed below will be considered acceptable, providing their product meets, or exceeds the specification and performance requirements, and meets all wind load, uplift and structural requirements.

OAKLAND METAL BUILDINGS, FLORENCE, AL.
RED DOT, ATHENS, TX.

Section 13 34 20– Pre-Engineered Hangar System:

Manufacturers listed below will be considered acceptable, providing their product meets, or exceeds the specification and performance requirements, and meets all wind load, uplift and structural requirements.

RED DOT BUILDINGS, ATHENS, TX.

QUESTIONS & ANSWERS:

Question 1: On sheet # E3.00 note # 4 states electrical etc. to be in mill work in the reception area. I see no indication of cabinetry in this location. Are cabinets to be installed anywhere other than the break room?

Answer 1: No, there are no other cabinets to be installed anywhere other than the break room. Move the power and communication outlet at note #4 in the reception area, to the wall and install under the window, rather than in the slab.

Question 2: Drawings call for electric hand driers at each bathroom, however, there is no description in the specifications.

Answer 2: There are no hand dryers in the project, delete all references.

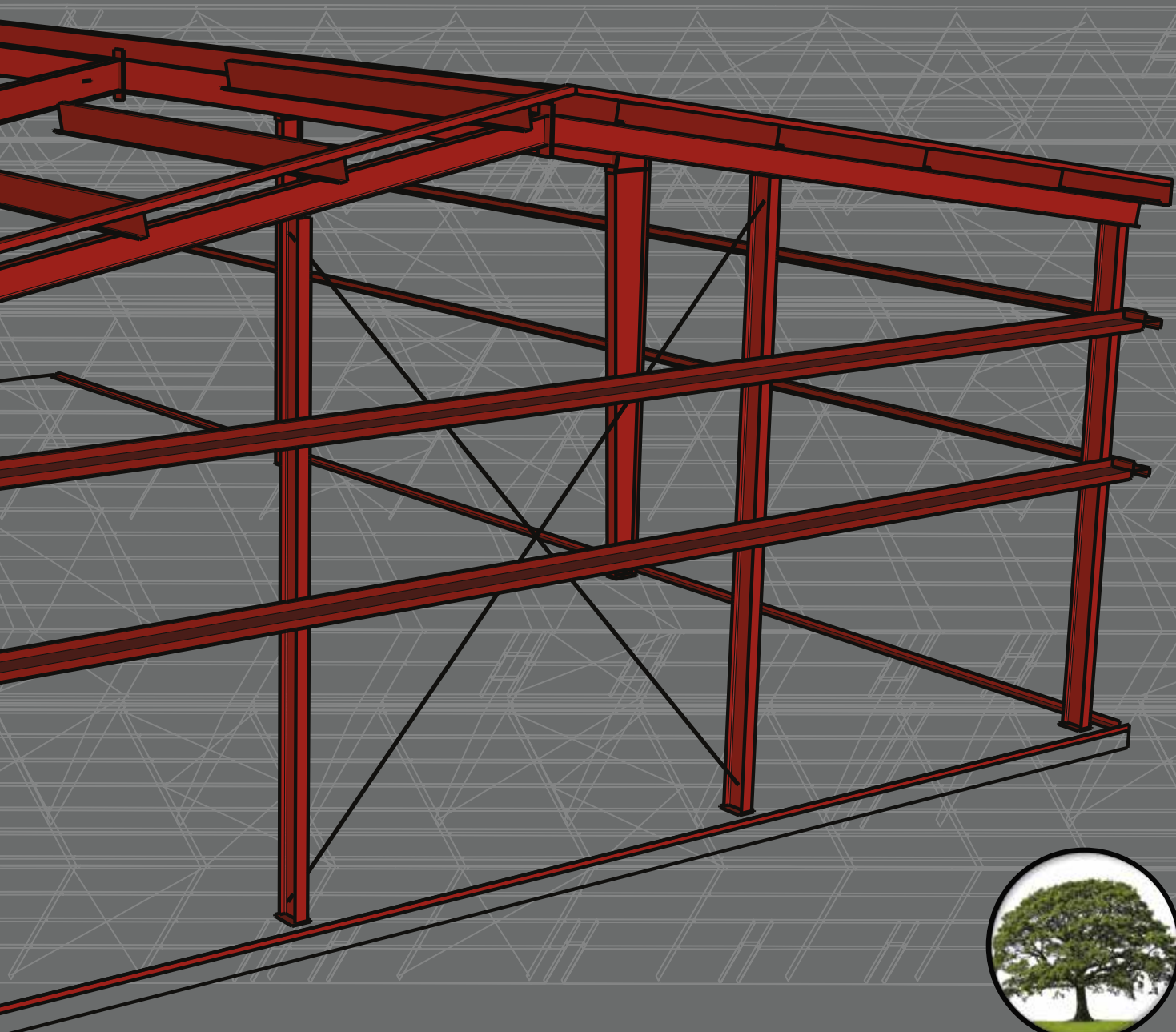
ATTACHMENTS:

Sheet 9 Grading and Drainage Plan

Sheet 13 Hangar Foundation Plan

Prior Approved Specifications

<< End of Addendum # 3 >>



Celebrating 54 Years Strong

oaklandmetal.com
800.458.5081

WHAT WE DO

800.458.5081

INDUSTRIAL





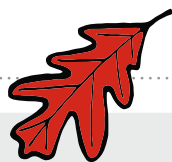
INSTITUTIONAL



Oakland continually adapts to the marketplace by offering the latest innovations.

WHAT WE DO

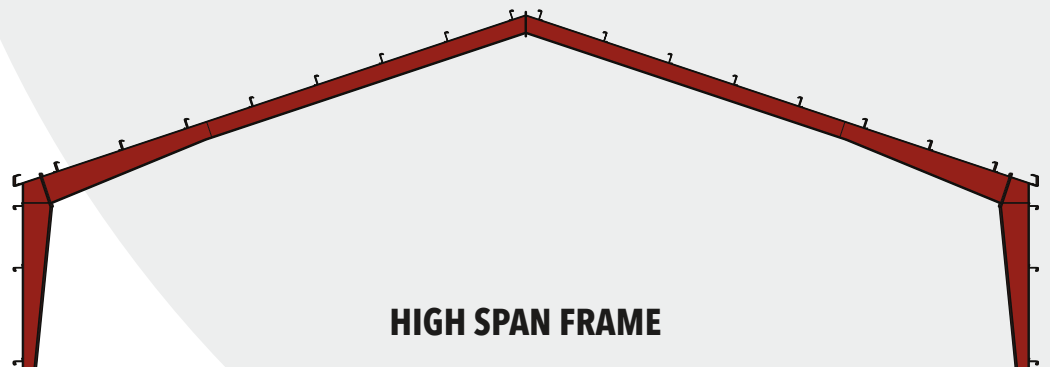
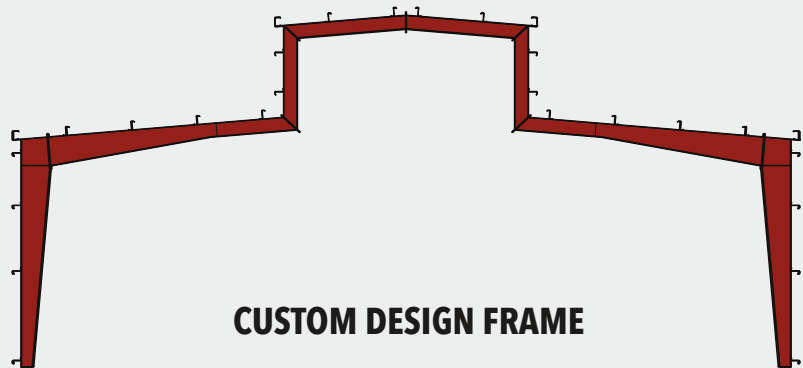
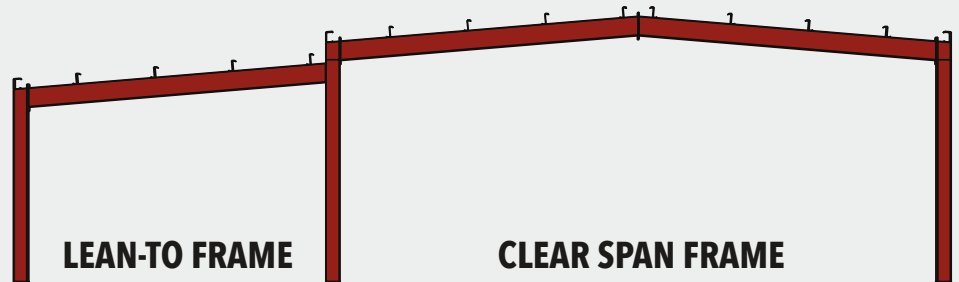
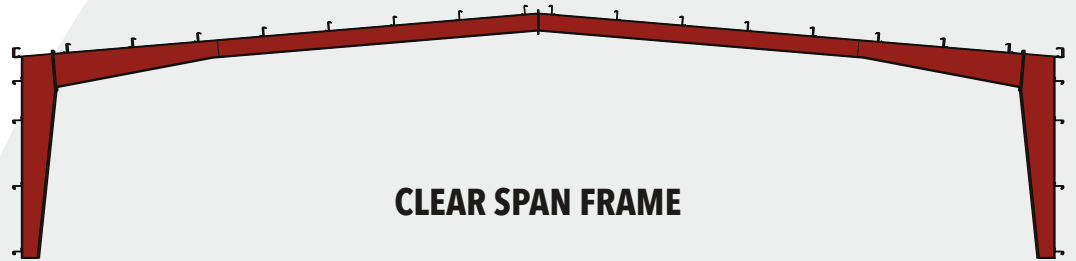
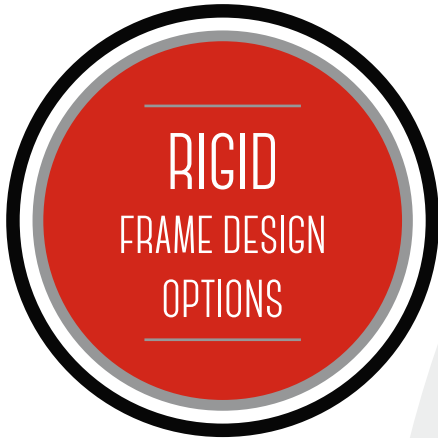
800.458.5081



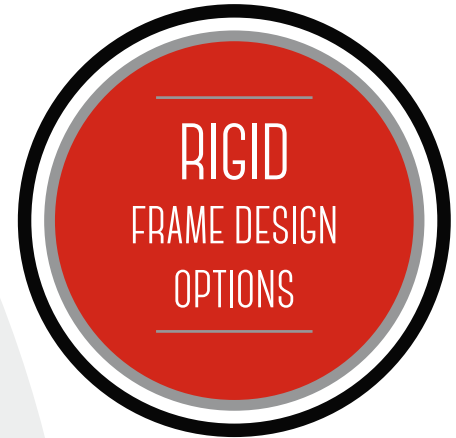
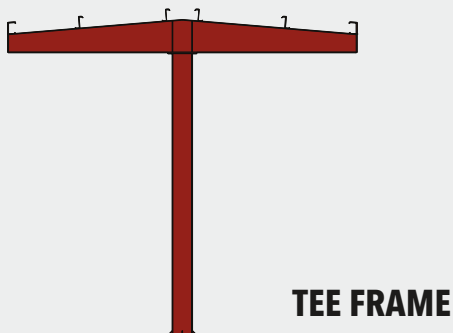
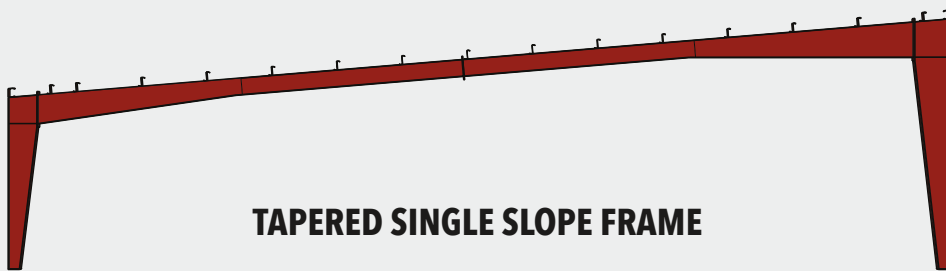
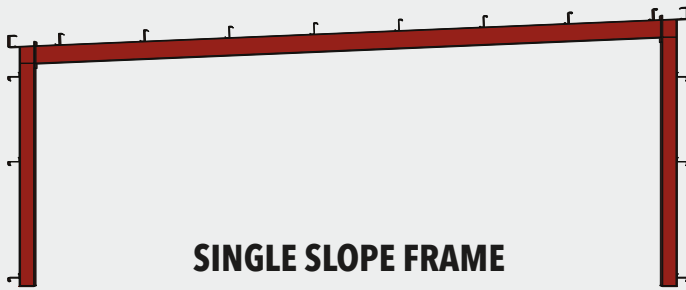
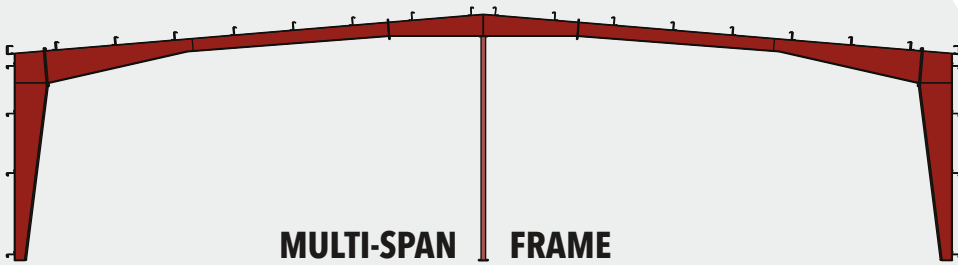
Oakland focuses on providing a high-quality experience for our customers from start to finish.







- Offers capability for innovative designs and special applications
- All frame options can be designed for either bypass or flush wall girts
- Available with tapered or straight columns

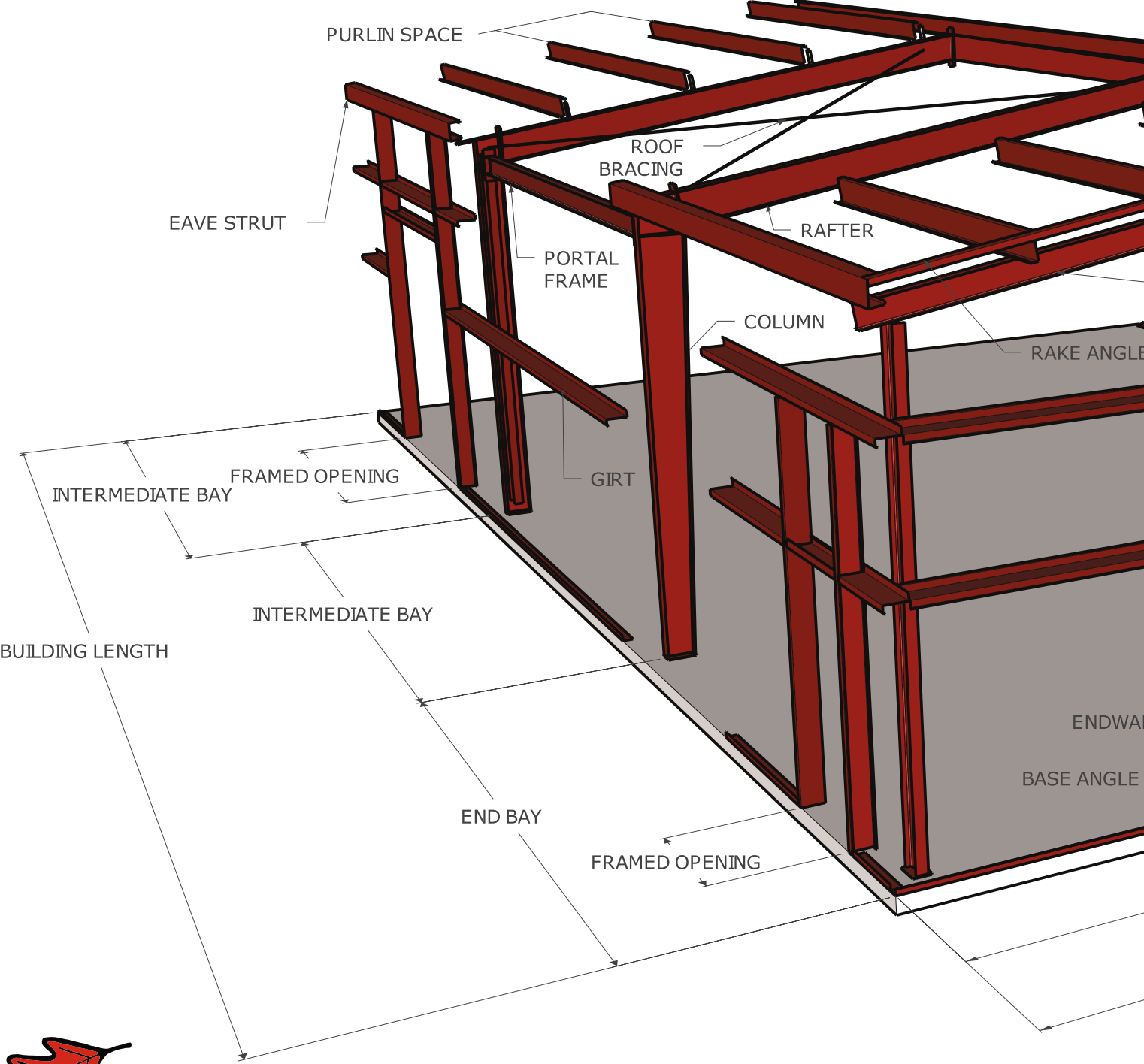


Our 109,000 square foot production facility offers capacity for the largest projects, as well as a "fast lane" for smaller buildings allowing for consistent lead times, regardless of project size.

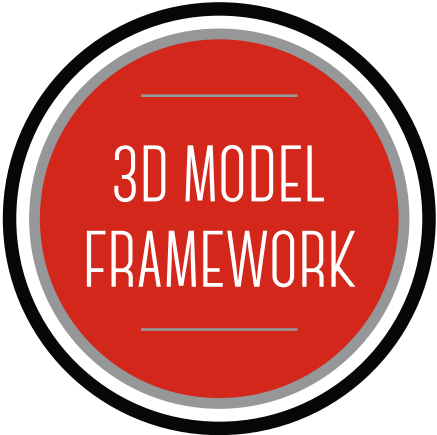
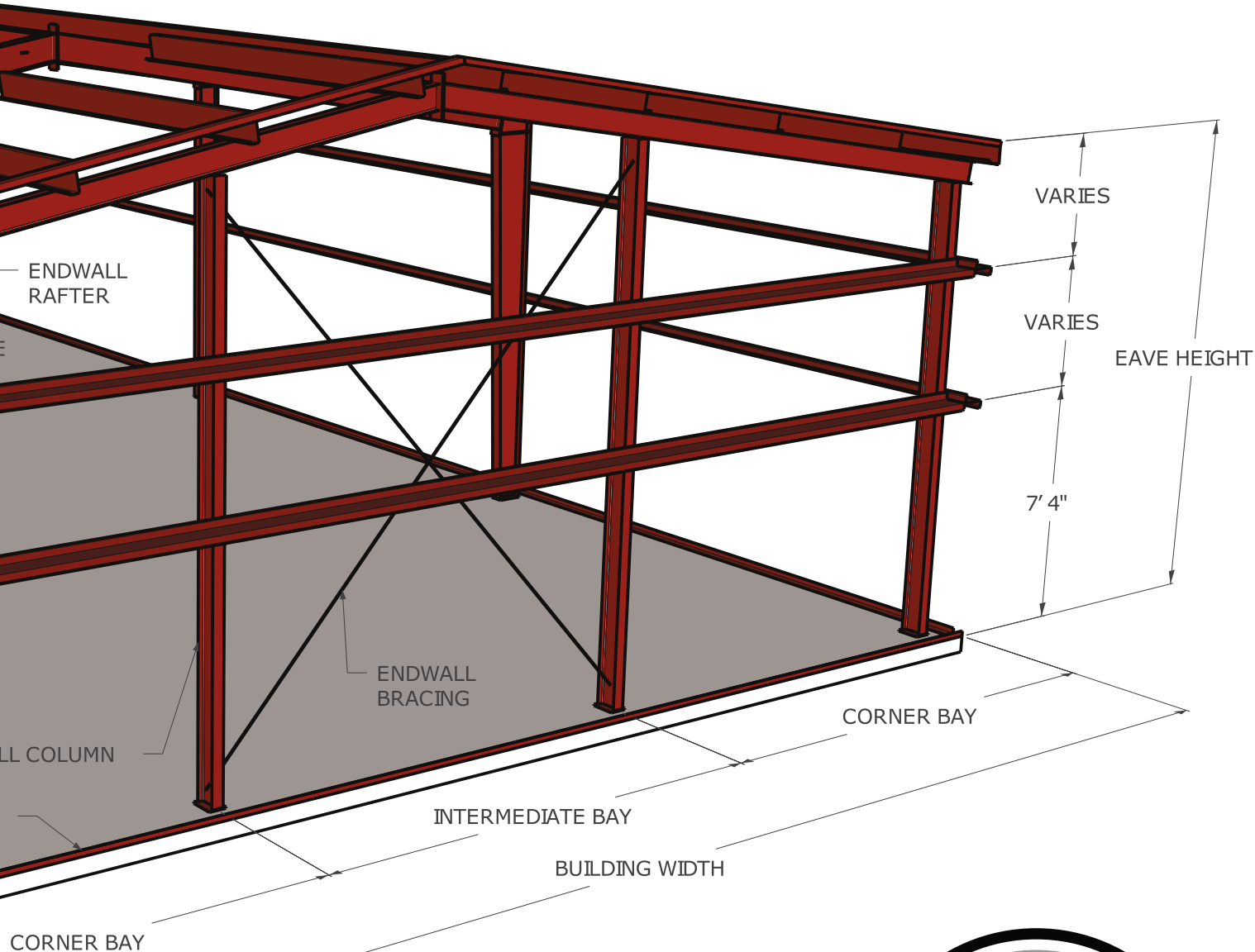


WHAT WE OFFER

800.458.5081



With 160 years combined experience in the industry, you can be confident in our production team's skill and knowledge of manufacturing quality structures.

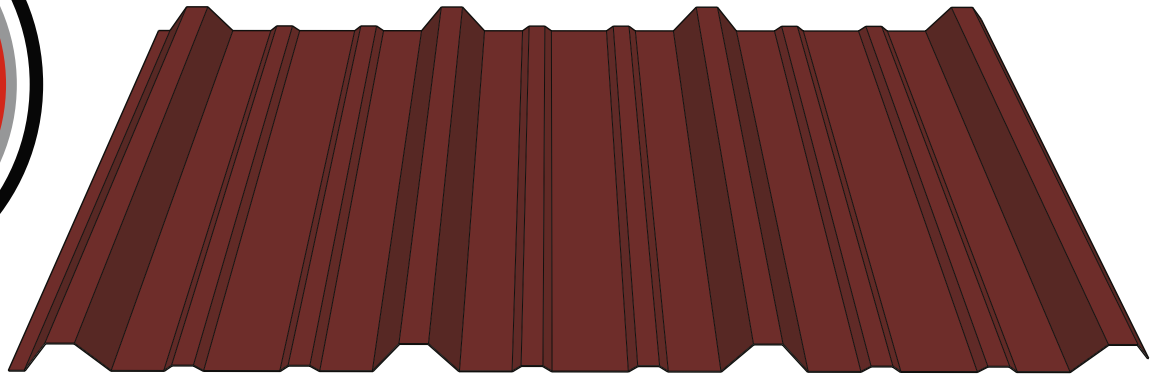


WHAT WE OFFER

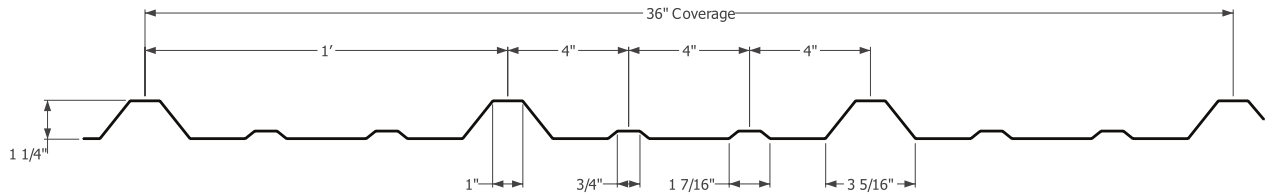
800.458.5081



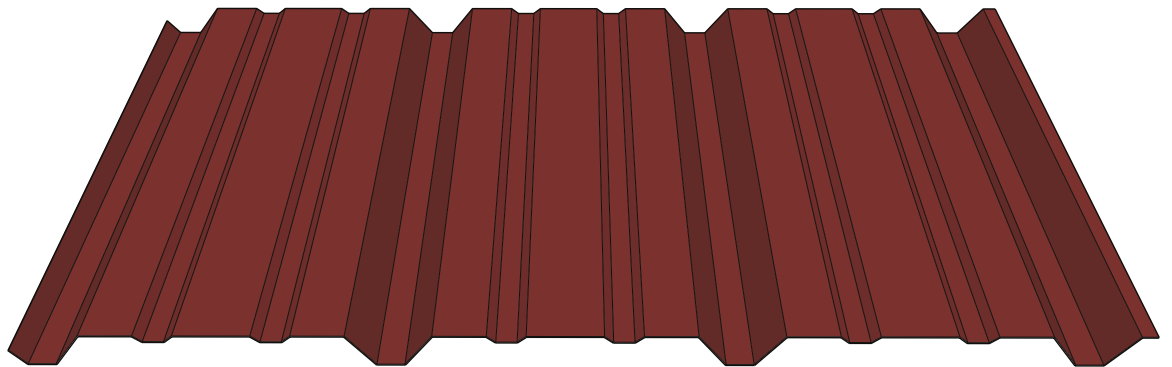
Colors shown for illustration only. Please request actual color chips prior to selection.



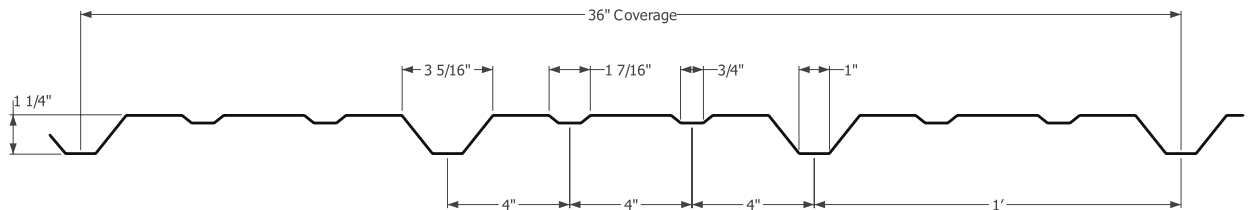
PBR PANEL (ROOF/WALL)



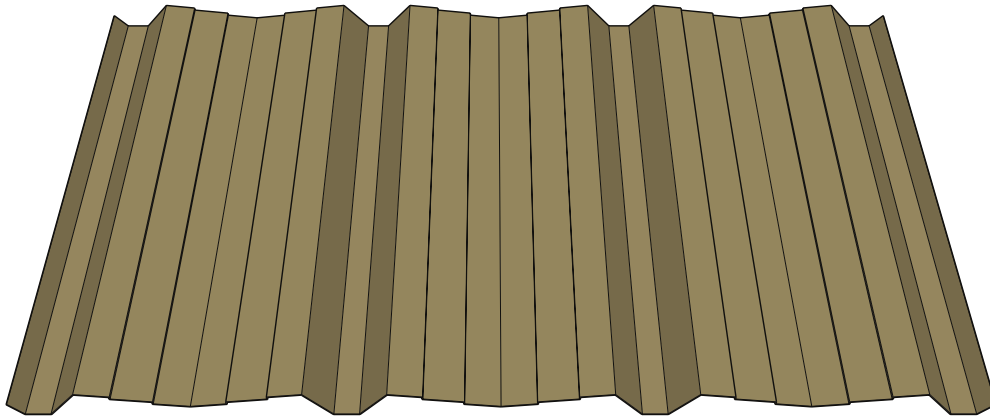
- 36" wide coverage
- 1-1/4" high ribs spaced 12" on center
- Customer favorite for appearance, strength and value
- Available in 24 and 26 gauge thickness
- Painted or galvalume
- 20-year limited warranty



PBR REVERSE PANEL (WALL)

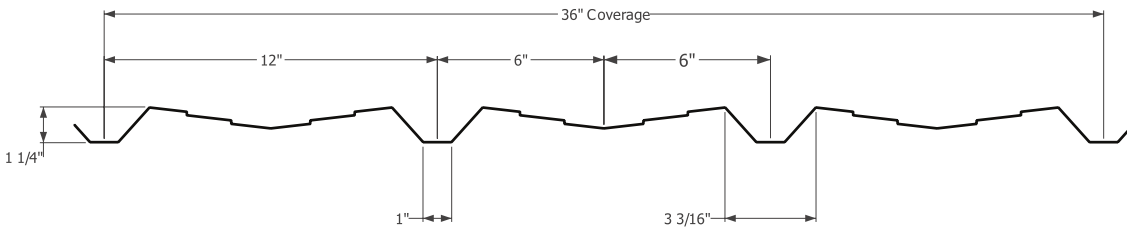


Pricing for specialty panels is available upon request.



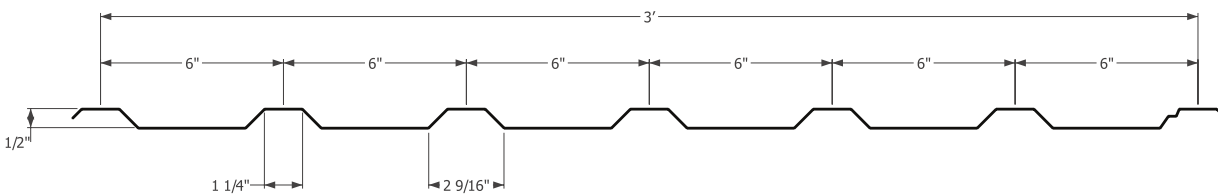
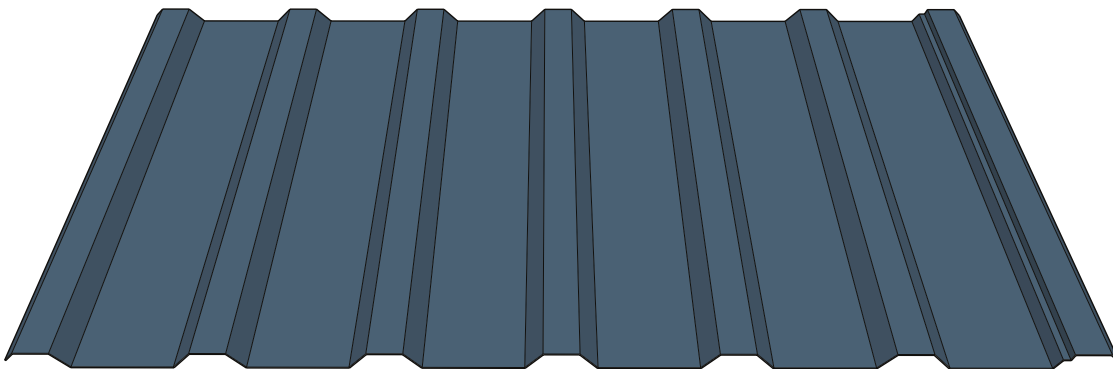
A PANEL (WALL)

- 36" wide coverage
- 1-1/4" deep inverted ribs spaced 12" on center
- Available in 24 and 26 gauge thickness
- Painted or galvalume
- 20-year limited warranty

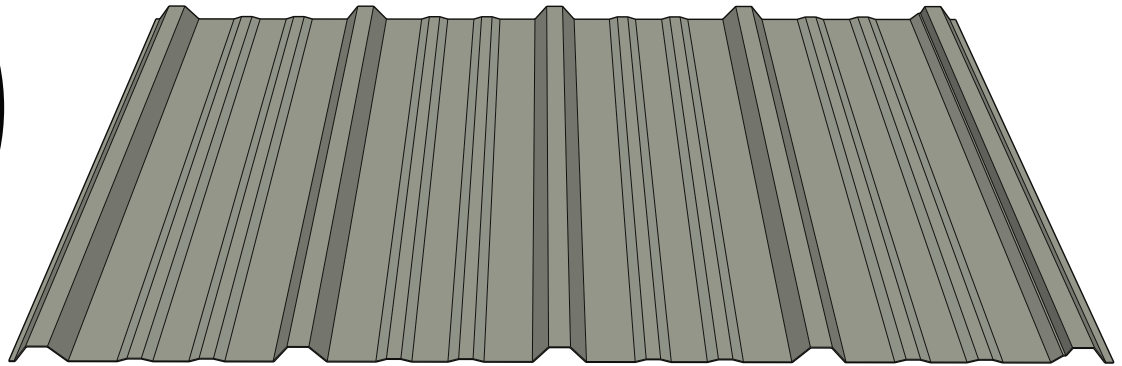


S PANEL (UTILITY)

- 36" wide coverage
- 1/2" high ribs spaced 6" on center
- Available in 26 gauge thickness
- Painted or galvalume
- 20-year limited warranty

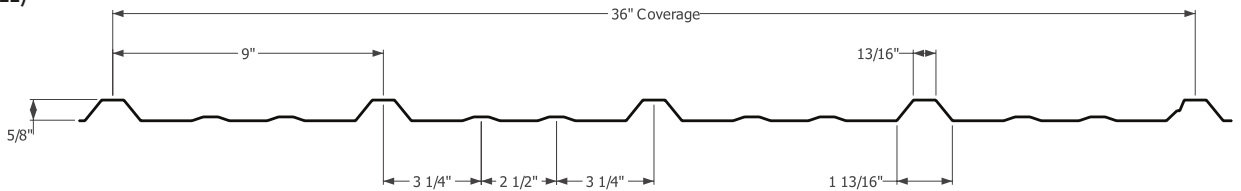


We also offer a full line of components and accessories to complete your next project.



D PANEL (ROOF/WALL)

- 36" wide coverage
- 5/8" high ribs spaced 9" on center
- Available in 26 and 29 gauge thickness
- Painted or galvalume
- 20-year limited warranty
- Low profile panel used for agricultural/residential applications only

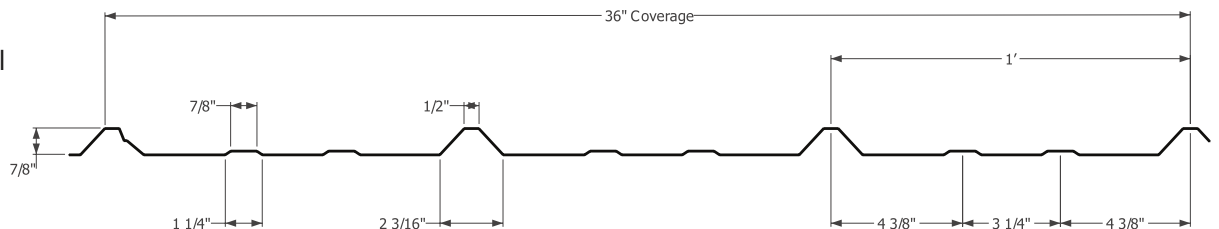
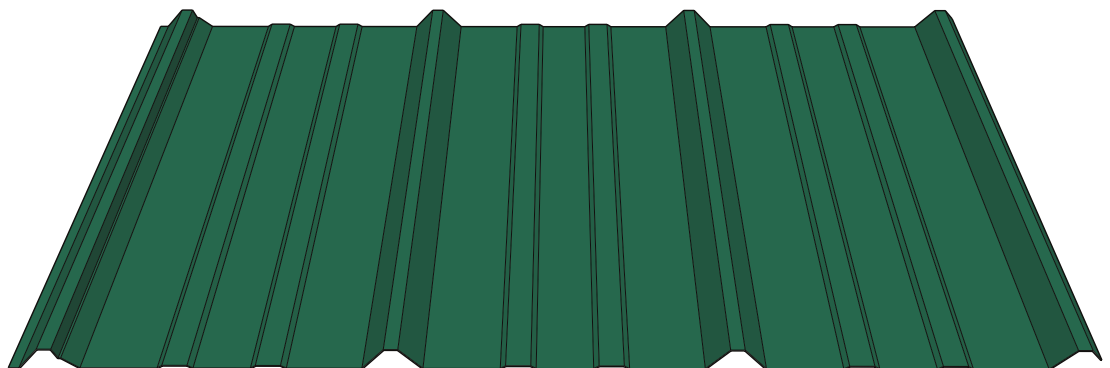


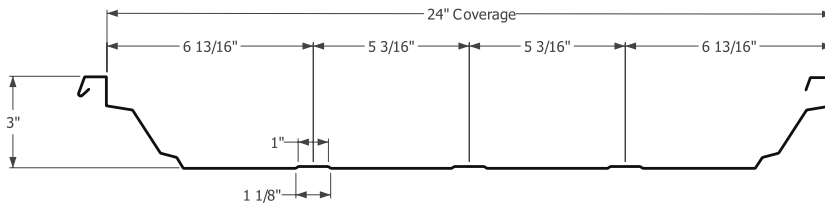
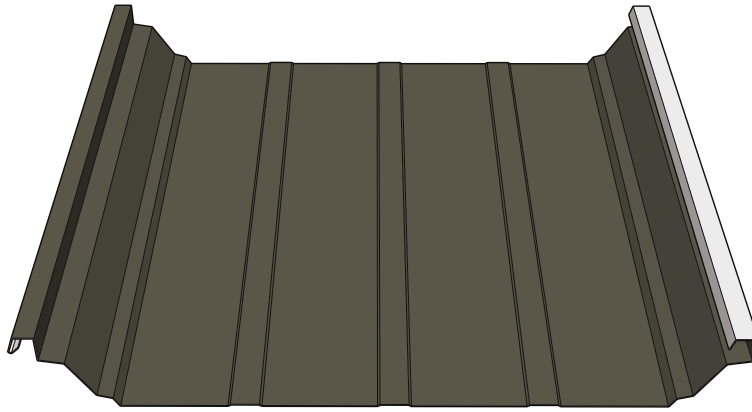
Colors shown for illustration only. Please request actual color chips prior to selection.

Pricing for specialty panels is available upon request.

AR PANEL (ROOF/WALL)

- 36" wide coverage
- 7/8" high ribs spaced 12" on center
- Available in 26 and 29 gauge thickness
- Painted or galvalume
- 20-year limited warranty
- Low profile panel used for agricultural/residential applications only





OSS 24 ROOF PANEL

- Standing seam – secured using clips
- 24" coverage
- 3" high ribs
- Available in 24 gauge thickness
- Painted or galvalume
- 20-year limited warranty

MOST POPULAR SOFFIT PANEL OPTIONS:

ARTISAN PANEL L12

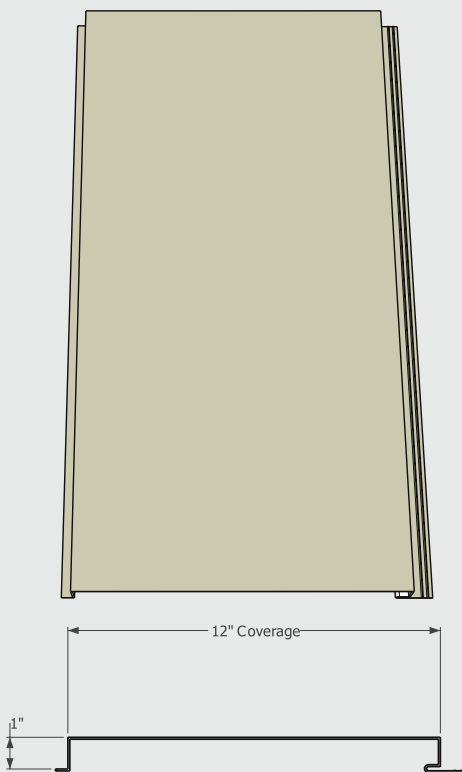
- Smooth, flat appearance
- 12" coverage
- 3" high ribs
- Available in 24 gauge thickness
- Painted or galvalume
- 20-year limited warranty

S PANEL

- 36" wide coverage
- 1/2" high ribs spaced 6" on center
- Available in 26 gauge thickness
- Painted or galvalume
- 20-year limited warranty
- See page 11 for image

PBR PANEL

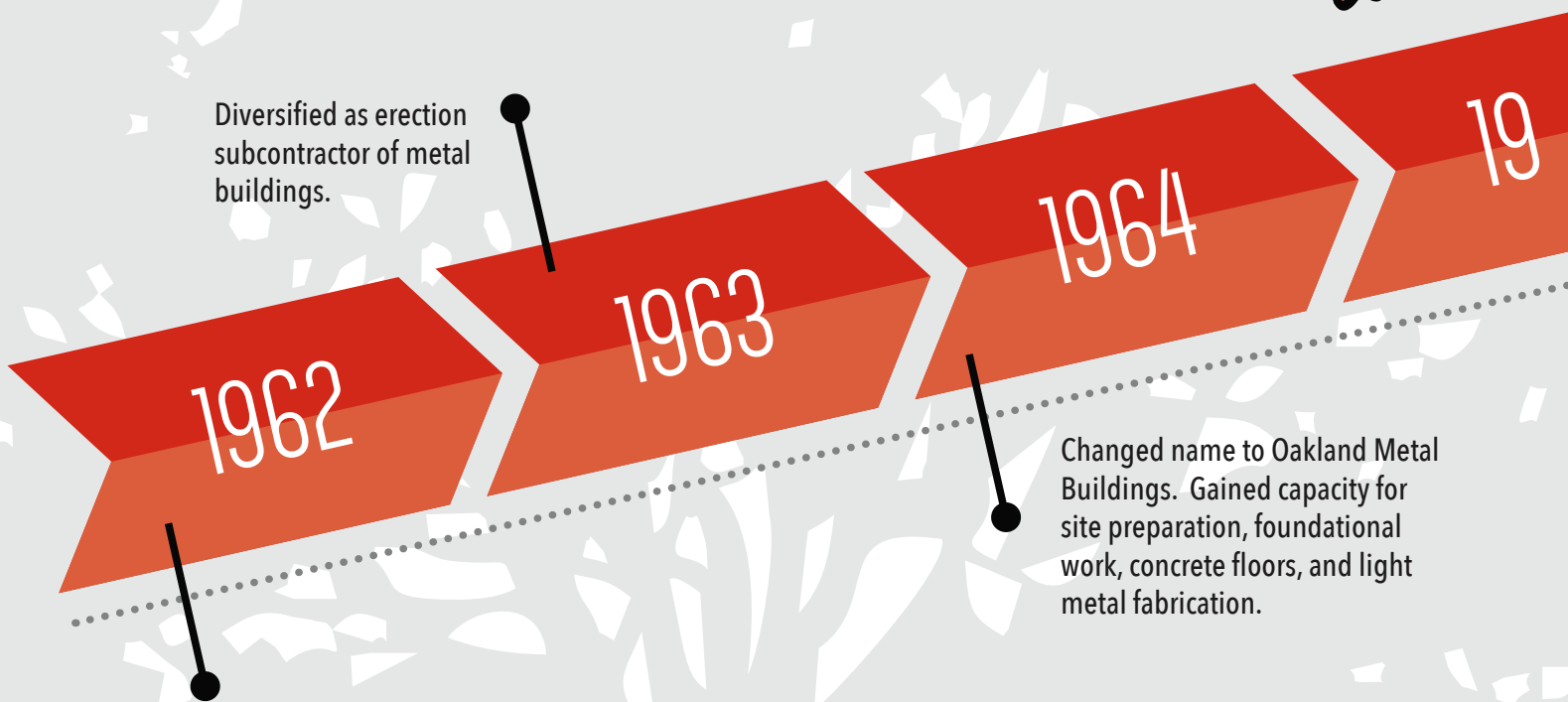
- 36" wide coverage
- 1-1/4" high ribs spaced 12" on center
- Available in 24 and 26 gauge thickness
- Painted or galvalume
- 20-year limited warranty
- See page 10 for image



ARTISAN PANEL L12

OAKLAND METAL BUILDINGS

A family's path to success



Diversified as erection subcontractor of metal buildings.

1962

1963

1964

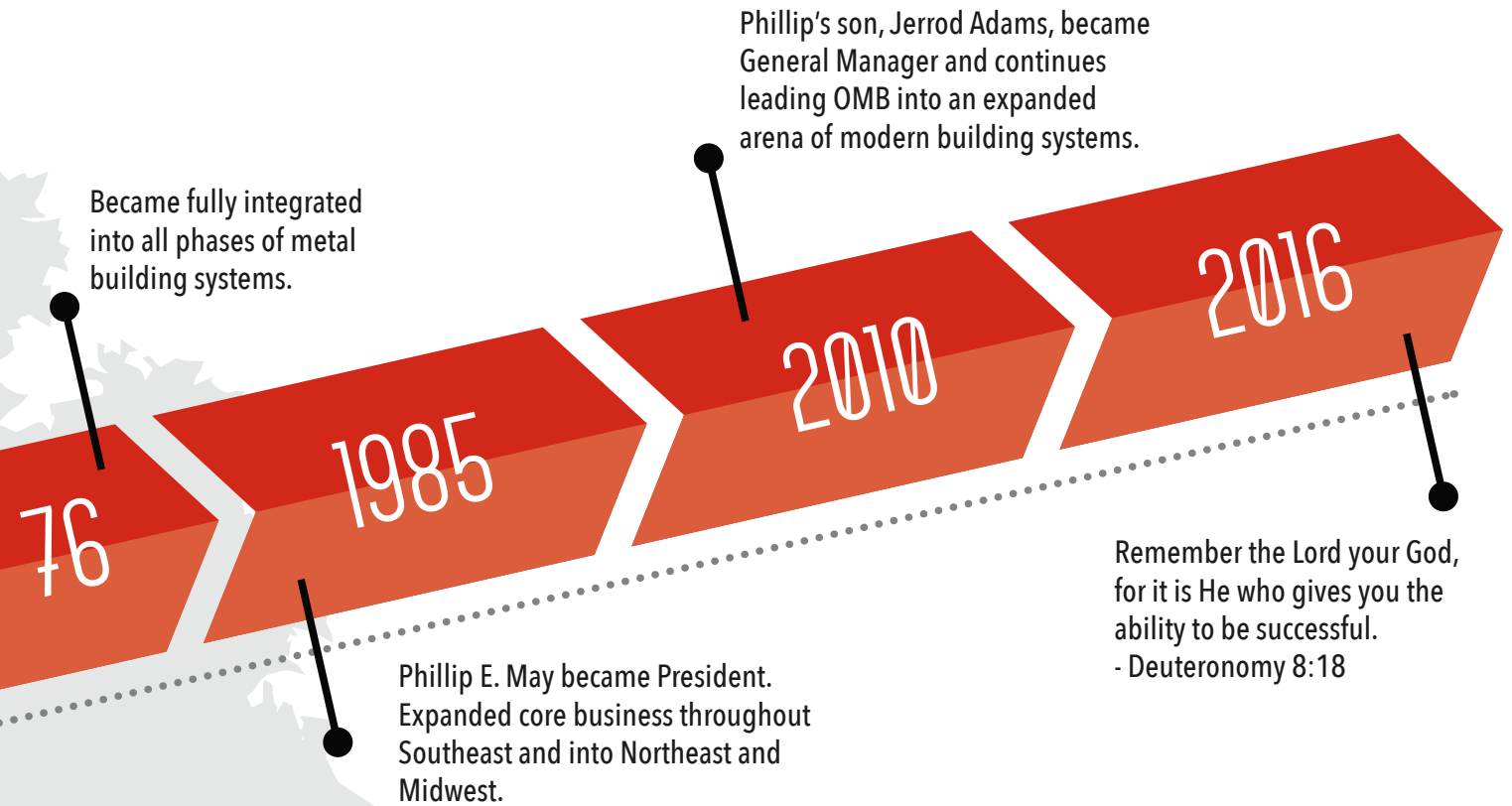
1965

Changed name to Oakland Metal Buildings. Gained capacity for site preparation, foundational work, concrete floors, and light metal fabrication.

Founded by Edward R. May as Shoals Roofing Company. Installed industrial and commercial panels.



Celebrating 54 Years Strong



Three generations strong



Edward R. May



Phillip E. May



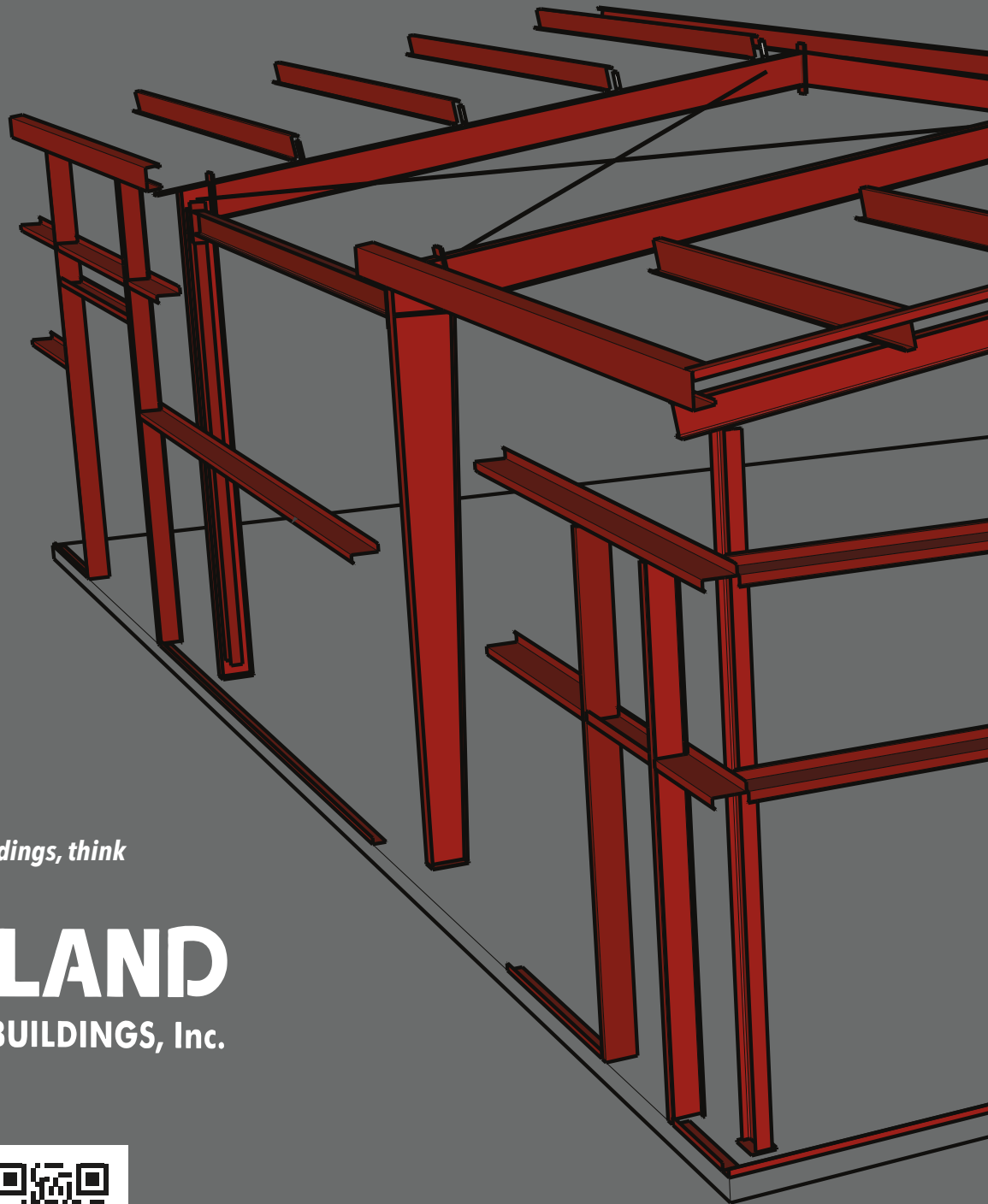
Jerrod Adams

OAKLAND, YOUR METAL BUILDING SYSTEMS PARTNER:

..... CONFIDENCE

..... QUALITY

..... COMPETITIVE PRICING



When you think metal buildings, think



800-458-5081
256-764-7943
oaklandmetal.com
24350 County Road 14
Florence, AL 35633





SUBSTITUTION REQUEST (During the Bidding Phase)

Project: St. Tammany Parish Regional Airport
Airport Corporate Hangar Facilities
To: Purchasing
Re: Pre Engineered Metal Building Systems
Substitution Request Number:
From: Red Dot Buildings / Kenny Shackelford
Date: 05/16/19
A/E Project Number: H.011701
Contract For: PEMB

Specification Title:
Section: 13 3419 Page:
Description: Pre-engineered building
Article/Paragraph:

Proposed Substitution: Request Red Dot Buildings be approved as PEMB manufacturer
Manufacturer: Red Dot Buildings Address: Athens, TX Phone: 800.657.2234
Trade Name: Red Dot Buildings Model No.: N/A

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.
Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

- 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.
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.

Submitted by: Kenny Shackelford
Signed by: Leatie Moore
Firm: Red Dot Buildings
Address: 1209 West Corsicana Street Athens, Tx 75751
Telephone: 800.657.2234

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:

Supporting Data Attached: Drawings X Product Data Samples Tests Reports

SUBCONTRACTOR QUALIFICATION INFORMATION

Last Updated February 04,2019

Red Dot Buildings
1209 West Corsicana St.
Athens, TX 75751

www.reddotbuildings.com

Office Phone: (800) 657-2234 Fax: (903) 675-9180

- Corporation
- Established in 1963
- 89 Employees
- Scope of work: Pre-Engineered Metal Buildings

Financial:

- **Tax ID:** 75-1156321 **D & B:** 00-735-7585 **LA St. License #:** 52991
- **Bank References:** Texas Bank & Trust 5 yr. History
300 East Whaley \$5.2 MM line of credit; renews yrly.
Longview, Texas 75601
(903) 237-5500

Surety Company:

Ward & Moore Ins. Services LP Tracie Gafford tgafford@ward-moore.com
12700 Park Central Dr., Ste. 1440 214-221-8300
Dallas, TX 75251

Bonding Capacity: Single Job: Not Specified, per project. Aggregate: Not Specified, per project
Credit: A
Largest Bond to date: \$2.5 MM

Insurance:

General Liability/Auto/Umbrella

Ward & Moore Ins. Services LP Tracie Gafford tgafford@ward-moore.com
12700 Park Central Dr., Ste. 1440 214-221-8300
Dallas, TX 75251

Worker's Comp.

Hibbs- hallmark & CO Sherry Pettit sherry.pettit@hibbshallmark.com
PO Box 8357
Tyler, Texas 75711

Coverage Type	Limits	Company
▪ Workmen's Compensation	\$1,000,000	Texas Mutual Ins. Co.
▪ General Liability	\$1,000,000	Employers Mutual Casualty Co.
▪ Excess / Umbrella Liability	\$5,000,000	Underwriter's @ Lloyd's London
▪ Automobile Liability	\$1,000,000	Employers Mutual Casualty Co.

Legalities:

- Has your organization ever failed to complete any work award to it? **No**
- Has your organization filed any lawsuits or requested arbitration with regard to construction contracts within the last five (5) years? **No**
- Within the last five (5) years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? **No**

Safety Performance:

- Company's Interstate Experience Rating Modifier (EMR) for the last five years:

Year:	Rating
• 2016	0.92
• 2017	0.92
• 2018	0.92

References:

- SpawGlass (Austin division) 111 Smith Road, Austin, Texas 78721
- Bartlett Cocke (Austin Division) 7901 E Riverside Dr #100 Austin, Texas 78744
- Hooker Contracting 70 NE Interstate 410 Loop #970 San Antonio, Texas 78216
- American Constructors 11900 West Parmer Lane Austin, Texas 78613

Supplier References:

- Metal Building Components, L.P. 1804 Jack McKay Blvd, Ennis, TX 75120
- Central States Manufacturing, 2538, 660 Grigsby Way, Cedar Hill, TX 75104
- Dallas Fastener Inc, 1825 Westpark Dr #200, Grand Prairie, TX 75050
- Vulcraft, 16000 Stuebner Airline Rd #520, Spring, TX 77379



INTERNATIONAL
ACCREDITATION
SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

RED DOT BUILDINGS

1209 WEST CORSICANA STREET
ATHENS, TEXAS 75751

Inspection Program for the Manufacture of Metal Building Systems MB-226

has met the requirements of AC472, IAS *Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems, Part A-Fabrication of Structural Weldments and Cold-formed Products Requiring Welding, Part C-Design of Metal Building Systems*, and the in-plant inspection program is in compliance with Section 1704.2.5.1 of the 2015 *International Building Code*®, Section 1704.2.5.2 of the 2012 *International Building Code*®, and Section 1704.2.2 of earlier code editions. Periodic plant inspections are conducted by Architectural Testing, Inc. (AA-676) to monitor compliance with the requirements of AC472.

This certificate is valid up to June 1, 2019.

(Accreditation does not cover the product or the specific design or performance characteristic of the manufactured products)



This accreditation certificate supersedes any IAS accreditation bearing an earlier effective date. The certificate becomes invalid upon suspension, cancellation or revocation of accreditation. See www.iasonline.org for current accreditation information, or contact IAS at 562-364-8201.



Raj Nathan
President



METAL BUILDING MANUFACTURERS ASSOCIATION

1300 SUMNER AVE., CLEVELAND, OHIO 44115-2851 • (216) 241-7333 FAX (216) 241-0105
E-Mail: mbma@mbma.com • URL: www.mbma.com

General Manager – THOMAS ASSOCIATES, INC.

February 20, 2019

To Whom It May Concern:

SUBJECT: Membership

This letter will serve to advise that Red Dot Buildings of Athens, Texas has been a member in good standing of the Metal Building Manufacturers Association since July of 2009.

We trust this information will be of assistance.

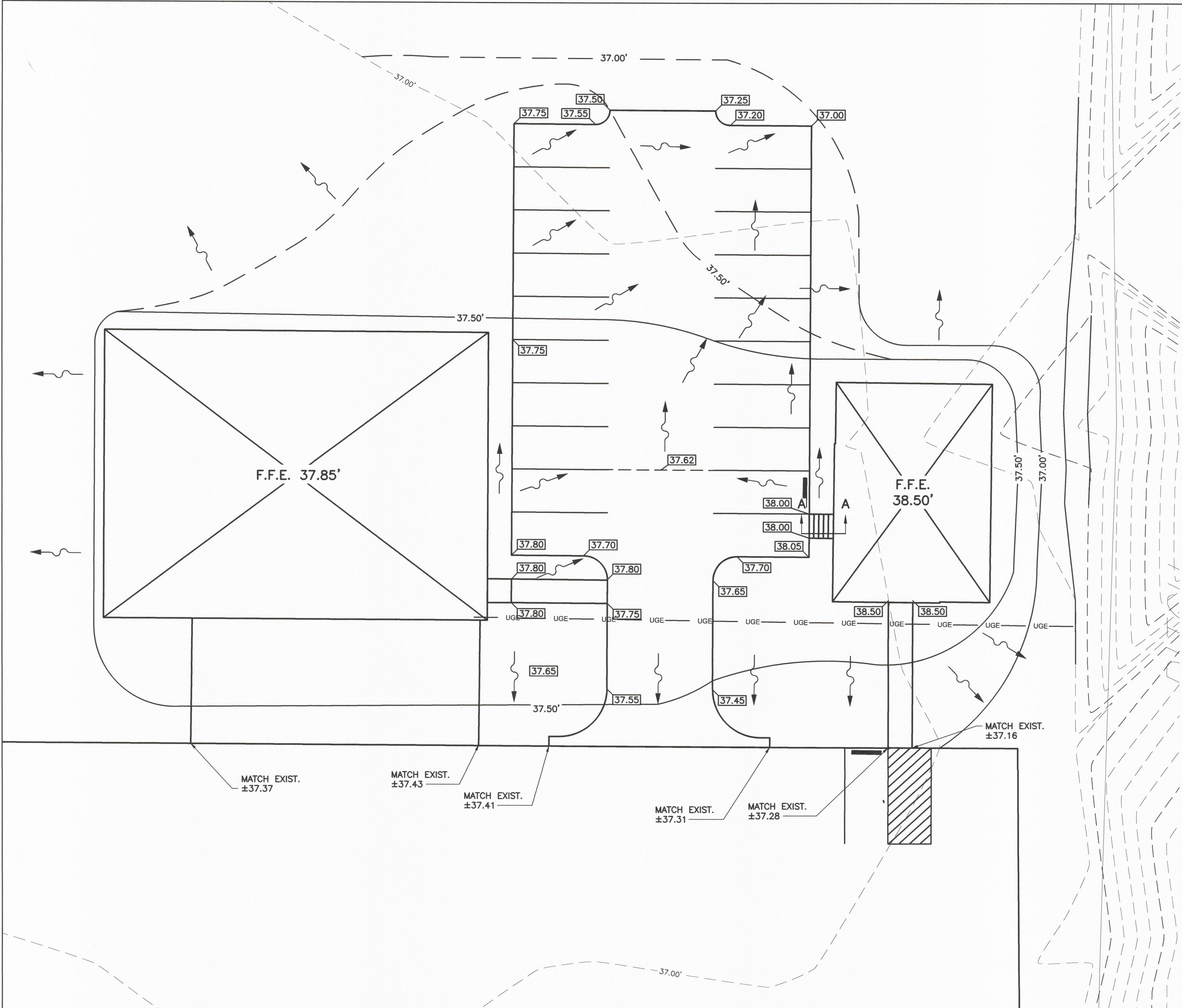
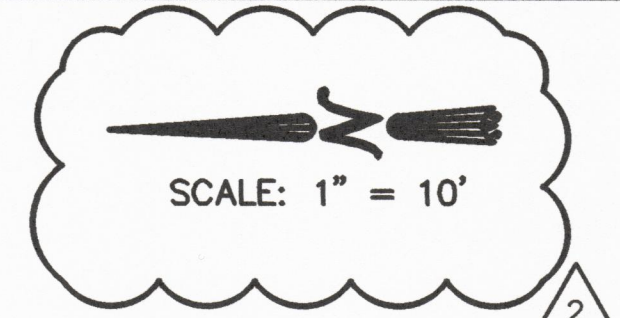
Sincerely,

A handwritten signature in black ink that reads "Tony Bouquot". The signature is written in a cursive style with a large initial "T".

Tony P. Bouquot
General Manager

TPB:cn

FINAL PLANS



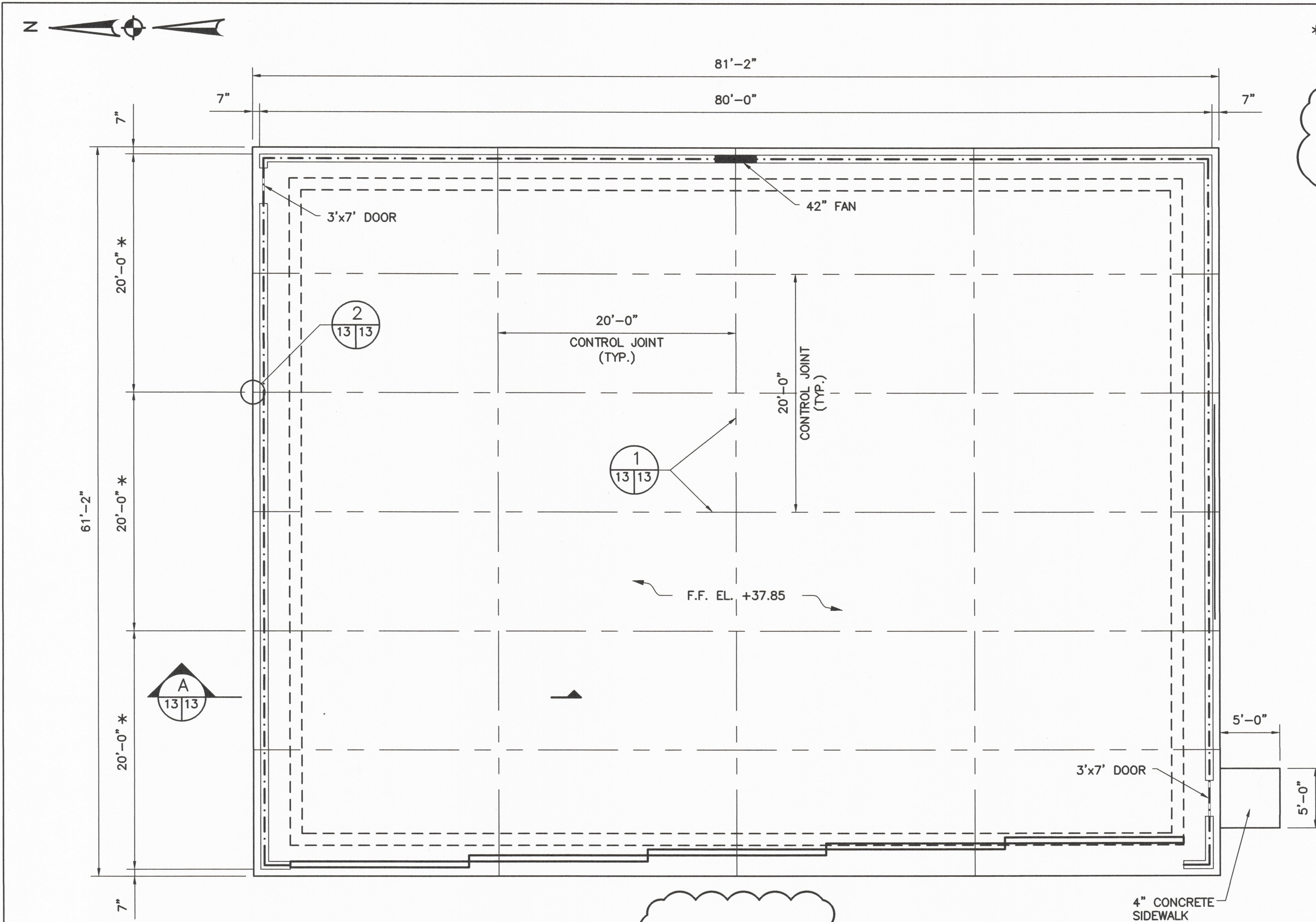
LEGEND

- 37.20 FINISHED GRADE
- FLOW DIRECTION
- 1/2' EXISTING CONTOURS
- PROPOSED CONTOUR
- PROPOSED CONTOUR (ALTERNATE 1)

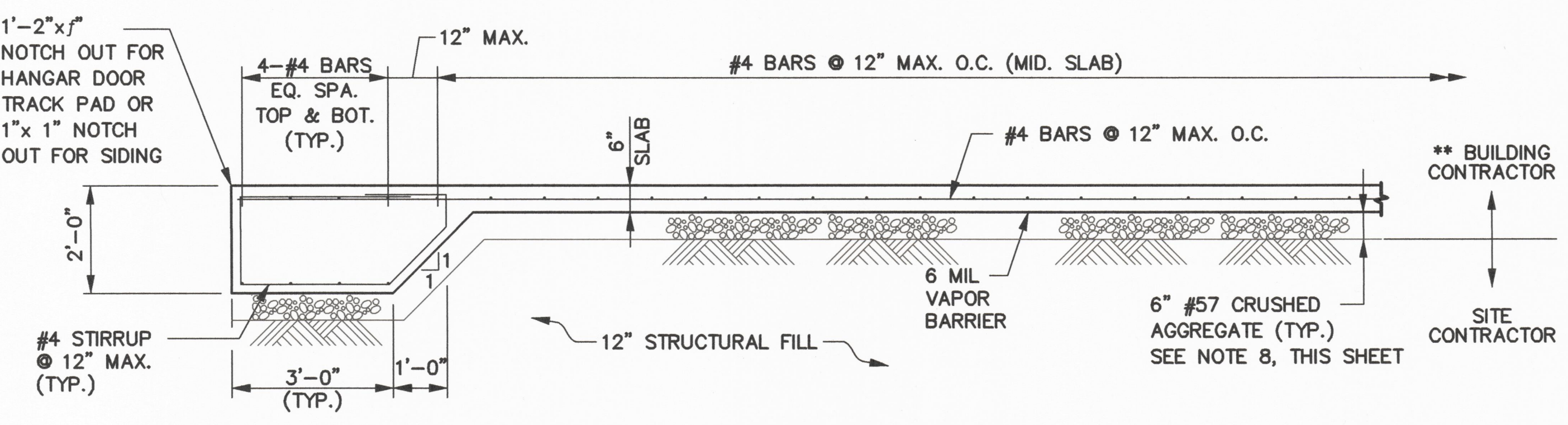
NOTES:

1. GRADE TO DRAIN AWAY FROM THE BUILDINGS.
2. ALL ELEVATIONS REFER TO THE NAV88 DATUM.
3. GRADING SHALL FOLLOW THE ARROWS AS INDICATED ON THE DRAWING.

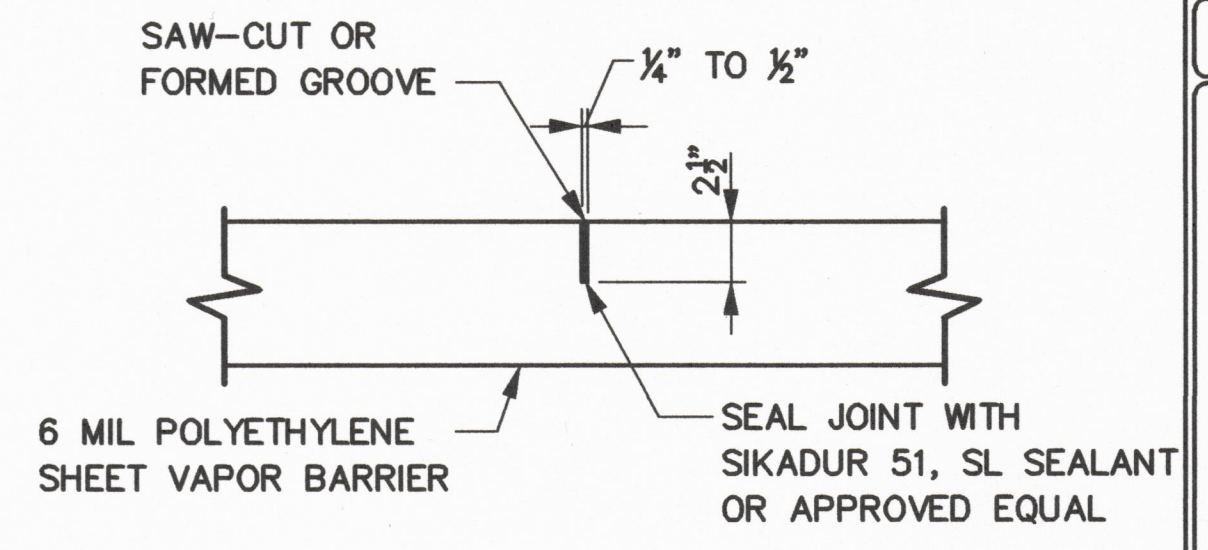
SHEET	09				
DESIGNED	A.B.	PARISH	ST. TAMMANY	ADDENDUM 3	
CHECKED	E.L.	STATE		REVISION DESCRIPTION	
DATE	01/31/19	PROJECT	H-011701		
NO.	2	DATE	08/20/2019	BY	
<p>ST. TAMMANY REGIONAL AIRPORT GRADING & DRAINAGE PLAN AIRPORT CORPORATE HANGAR FACILITIES</p>					
<p>VOLKERT INC.</p>					



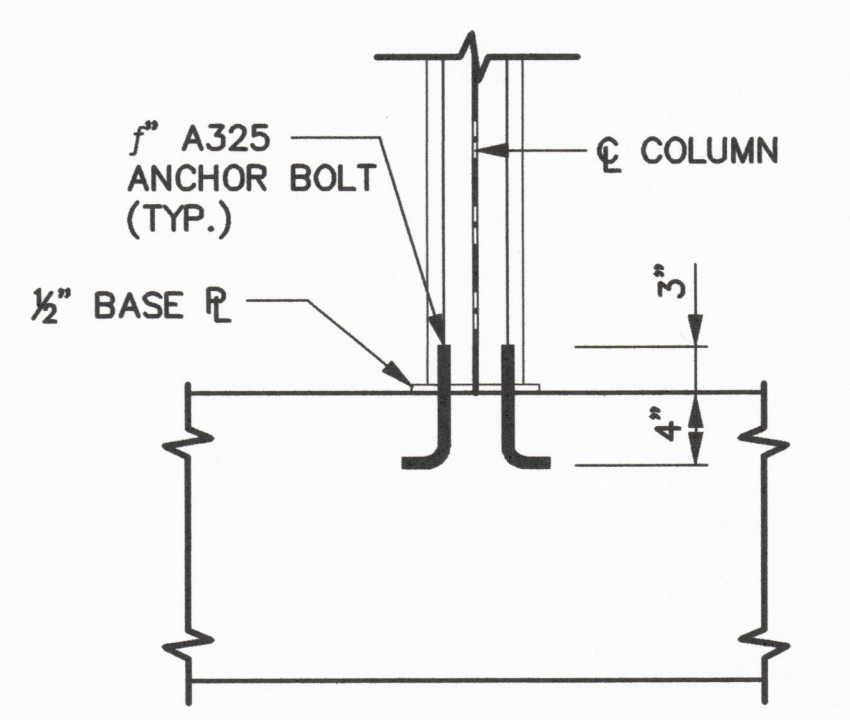
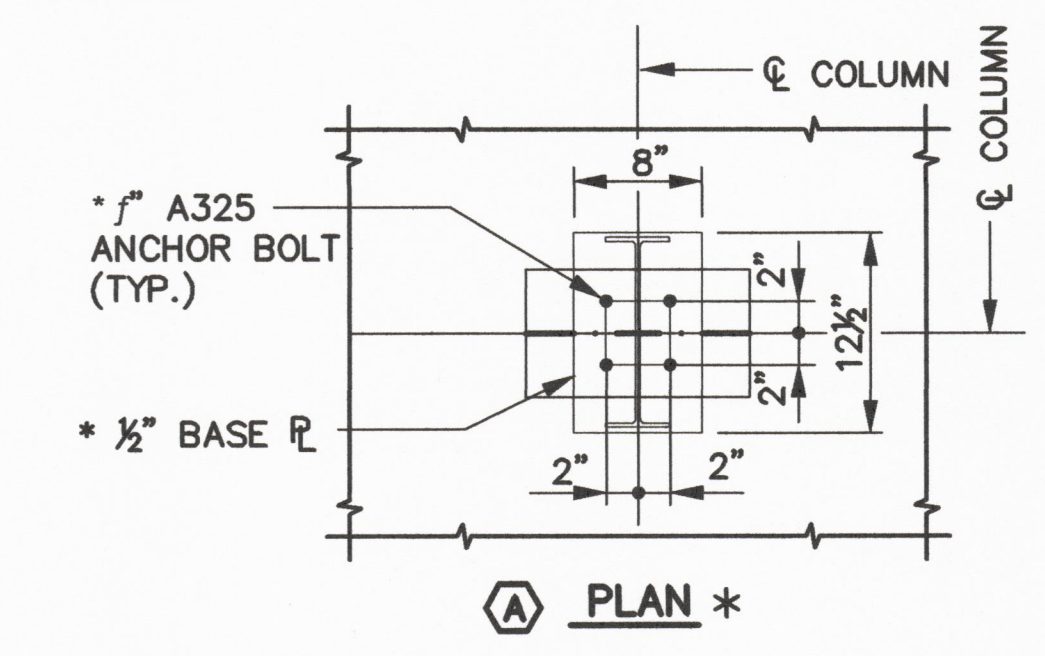
PLAN
SCALE: 3/16" = 1'-0"



A SLAB REINFORCEMENT *
SCALE: 1/2" = 1'-0"



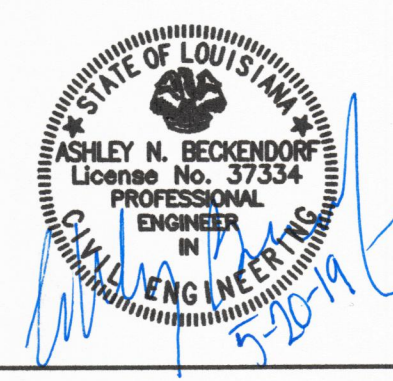
1 TYPICAL CONTROL JOINT
SCALE: 1 1/2" = 1'-0"



2 ANCHOR BOLT DETAIL *
SCALE: 1" = 1'-0"

GENERAL CONCRETE NOTES:

- ALL CONCRETE SHALL BE NORMAL WEIGHT AND DEVELOP 3,000 PSI ALL REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS INDICATED OTHERWISE.
- CONTINUOUS BARS IN FOUNDATIONS SHALL HAVE SPLICES STAGGERED A MINIMUM OF 4'-0".
- DETAIL BARS IN ACCORDANCE WITH A.C.I. DETAILING MANUAL AND A.C.I. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST EDITIONS.
- PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOWN ON THE DRAWINGS.
- WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185 MIN. (GRADE 60). PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT W.W.F. AT POSITIONS INDICATED ON THE DRAWINGS. WIRE FABRIC MUST LAP ONE FULL MESH PLUS 6" AT ALL SIDE AND END LAPS, AND SHALL BE TIED TOGETHER.
- CONSTRUCTION JOINTS NOT REQUIRED WHEN SLAB IS POURED IN ONE CONTINUOUS POUR, OTHERWISE CONTRACTOR SHALL SUBMIT PROPOSED POURING SEQUENCE WITH CONSTRUCTION JOINT LOCATIONS TO THE ENGINEER FOR APPROVAL. METAL S.I.P. FORMS MAY BE SUBSTITUTED FOR SAWCUT JOINTS AT NO ADDITIONAL COST.
- THE BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE FOUNDATION AND SLAB.
- SEE APPENDIX C FOR GEOTECHNICAL REPORT AND RECOMMENDATIONS.
- THE TRACK SYSTEM FOR THE SLIDING DOORS SHALL BE DESIGNED TO DRAIN.



SHEET	13
DESIGNED	A.B.
CHECKED	E.L.
DATE	01/31/19
PROJECT	H-011701
PARISH	ST. TAMMANY
REVISION DESCRIPTION	ADDENDUM 3
NO.	1
DATE	05/08/2019
NO.	2
DATE	05/20/2019
BY	AMB
BY	AMB
BY	BY
ST. TAMMANY REGIONAL AIRPORT HANGAR FOUNDATION PLAN (SAMPLE)	
AIRPORT CORPORATE HANGAR FACILITIES	
VOLKERT INC.	



ST. TAMMANY PARISH

PATRICIA P. BRISTER
PARISH PRESIDENT

May 15, 2019

Please find the following addendum to the below mentioned BID.

Addendum No.: 2

Bid#: 19-13-1 / 19-13-2

Project Name: Airport Corporate Hangar Facilities

Bid Due Date: Tuesday, May 28, 2019

GENERAL INFORMATION:

1. Please note that the Bid Opening has been pushed to Tuesday, May 28, 2019. Time and location remains the same. The last day to submit written inquiries is Thursday, May 16, 2019 at 2:00 PM.

<< End of Addendum #2 >>



ST. TAMMANY PARISH

PATRICIA P. BRISTER
PARISH PRESIDENT

May 13, 2019

Please find the following addendum to the below mentioned BID.

Addendum No.: 1

Bid#: 19-13-1/19-13-2

Project Name: Airport Corporate Hangar Facilities

Bid Due Date: May 16, 2019

GENERAL INFORMATION:

1. The project number on Bid Express is 19-13-1 and the project number on the bid package is 19-13-2. Either one of these project numbers will be accepted.
2. The following changes were made to the SPECIFICATIONS:

Section 04

The alternative language was changed, so therefore Delete Section 04 LOUISIANA UNIFORM PUBLIC WORK BID FORM in its entirety and replace with attached Section 04 (Revised) LOUISIANA UNIFORM PUBLIC WORK BID FORM.

3. The following changes were made to the DRAWINGS:

Replace Sheets 4, 5a, 5b, 7, 10, 11, 12, 13 with attached revised Sheets 4, 5a, 5b, 7, 10, 11, 12, 13, dated May 8, 2019.

Add sheet 17. This sheet was not included in the online version on bidexpress.com. Please include this sheet as part of the drawing set.

4. PRIOR APPROVALS: *(The following manufacturers are prior approved provided that the product and its application meets or exceeds the requirements of the drawings and specifications. Listed below are manufacturers who are recognized as capable of producing products or equipment equal to those specified. Products or equipment will be considered*



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acceptable, providing the equipment meets, or exceeds the specification requirements, fits the available space, and has the capacity and performance requirements. Products shall also be similar in appearance, construction, and performance (as published by an independent laboratory report.)

The listed (prior-approved) equipment are not given with respect to any specific model, series, catalog number, etc. Suppliers are cautioned that before their equipment is approved, it will be incumbent upon them to demonstrate to the architect or engineer, that the product or equipment is (in fact) equal to the requirements specified and conforms fully to all specification requirements.)

Section 13 34 19– Metal Building Systems – Terminal:

Approved, provided the roof supplier can meet the wind uplift required, if the roof is provided independent of the building.

Approved Manufacturers:

UNION CORRUGATING ML200 2 INCH STANDING SEAM METAL ROOF PANEL

Manufacturers listed below will be considered acceptable, providing their product meets, or exceeds the specification and performance requirements, and meets all wind load, uplift and structural requirements.

PINNACLE STRUCTURES, INC., CABOT ARKANSAS.
BAYOU BUILDINGS BY IDEAL STEEL, BROUSSARD, LA.

Section 13 34 20– Pre-Engineered Hangar System:

Manufacturers listed below will be considered acceptable, providing their product meets, or exceeds the specification and performance requirements, and meets all wind load, uplift and structural requirements.

BAYOU BUILDINGS BY IDEAL STEEL, BROUSSARD, LA.

Section 26 51 00– Lighting:

Listed below are manufacturers who are recognized as capable of producing products or equipment equal to those specified. Products or equipment will be considered acceptable, providing the equipment meets, or exceeds the specification requirements, fits the available space, and has the capacity and performance requirements. Lighting fixtures shall also be



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similar in appearance, construction, and performance (as published by an independent laboratory report).

The listed (prior-approved) equipment are not given with respect to any specific model, series, catalog number, etc. Suppliers are cautioned that before their equipment is approved, it will be incumbent upon them to demonstrate to the architect or engineer, that the product or equipment is (in fact) equal to the requirements specified and conforms fully to all specification requirements.

Approved Manufacturers:

ELITE LIGHTING – F1,F2,F9
COLUMBIA LIGHTING – F3,F4,F5,F6,F7
COMPASS – F8,F8A
BROWNLEE LIGHTING – F10
HUBBELL – F11
HUBBELL LIGHTING CONTROLS
HALO COMMERCIAL - F1,F2,F9
METALUX – F3,F4,F5,F6,F7
EXITRONIX – F8,F8A
OXYGEN LIGHTING – F10
LUMARK – F11

M5.01 and M5.02:

Approved Equipment Manufacturers (Terminal):

Manual Dampers, Fire Dampers - POTTORFF
Gravity Hoods, Fans - PENBARRY

QUESTIONS & ANSWERS:

Question 1: Could the old hangar be used as a laydown area?

Answer 1: No, the hangar is still rented by Air Reldan. See Sheets 03A and 03B for laydown areas.

Question 2: Some of the contractors were confused with the parking lot in the base bid and the 2 alternates. Questions were regarding the sub-base for the alternates.

Answer 2: This has been revised on the Bid Form for clarification and is attached.



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Question 3: On sheet #10 there is a detail titled " Construction Joint ". Does the wiggly line below " plastic preformed strip " represent key joint? Are the plastics strips to be removed and the void filled with joint filler; or do you intend that the strips be of the type that locks in over metal key material and left in place?

Answer 3: The detail has been removed. The two joints required for a sidewalk are shown in the standard sidewalk detail and noted under the General Notes above the detail on Sheet 10 attached.

Question 4: I assume you would like to reinforce concrete parking with 6 X 12 /01 mesh or 6 X 6 # 6 or # 10 wire mesh. Am I correct?

Answer 4: If the joint plan provided is used or one approved per ACI guidelines, reinforcement is not needed.

Question 5: I assume that you would like to have wheel stops in each parking stall. Correct?

Answer 5: Wheel stops are required in each stall. This has been updated on Sheet 7 attached.

Question 6: Please refer to detail 3 on sheet A300. What is the composition of the wall below glass store fronts? Dry wall?

Answer 6: Composition of the interior wall below the glass storefronts is similar construction to the rest of the interior walls – 5/8” gyp. board, finished and painted, on metal studs, and 4” vinyl base.

Question 7: I estimate the cost of silt fencing as drawn to be \$8,000.00 + - and confusing; how do you staple wire mesh to a steel post? Is it necessary to spend \$8,000.00 For such fencing when standard silt fencing could be installed for about \$300.00 ? Additionally, there are several hundred feet of grassy, flat terrain between the work site and the drainage ditch to the rear. The grass alone would filter any run-off prior to any fill or excavated material entering public systems.

Answer 7: Silt fencing is required. The post can be stakes, but it must be maintained in upright position. See sheet 11 (attached) for updated detail.

Question 8: Per page, A 3.00 glazing legend section, glass is to be SOLAR GRAY but per the specification, book glazing is to be SOLAR BRONZE. Also, the Low-e is not defined it can be solarban 60 or solarban 70. Please advise.



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Answer 8: Glass shall be Solar Bronze, with Solarban 60 low-e coating.

Question 9: Is this project sales tax exempt? If the project is sales tax exempt can the government provide a sales tax exemption certification?

Answer 9: This project is not sales tax exempt.

Question 10: Will the Parish provide comprehensive written badging requirements for the project if badging is required.

Answer 10: Badging is not required.

Question 11: Where will the designated parking area be for workers accessing the construction site?

Answer 11: The existing parking lot will be available for use. If anything other than that is needed the Parish will work with the General Contractor to determine.

Question 12: Will the government accept the use of the industry leading Procore Project management software as the primary submittal and data tracking tool for this project?

Answer 12: This is not needed for the Parish.

Question 13: Does the Parish have a fire alarm servicer that they currently work with? What is the name and contact information of the person or persons that will need to be coordinated with for security and fire alarm and suppression systems work and/or disruptions?

Answer 13: Parish will consult with the General contractor on this.

Question 14: Has the work area been checked for Asbestos?

Answer 14: The Parish confirms there are no signs of asbestos.

Question 15: What is the Parish's policy if asbestos products are encountered during construction?

Answer 15: Please refer to Section 08 and Section 09 of the bidding documents.



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Question 16: Does the Parish currently have a 3rd party testing service for those items requiring testing or is the contractor free to locate and hire applicable testing firms?

Answer 16: The general contractor is free to locate and hire.

Question 17: Who is responsible for Utility locations?

Answer 17: The contractor is responsible for calling 411 for Utility locations. The parish will connect sewer and water to the stub outs provided from the contractor. The contractor will be responsible for power to both buildings.

Question 18: Due to current potentially significant tariffs being place on the importation of building materials such as wood or steel by the current Presidential Executive Branch, if a tariff is placed after bid time and before award will the government consider a price escalation on a contract value for products such as steel or wood should the executive branch levee tariffs effecting such materials? Most of these materials would still have been Buy American compliant as the tariffs would increase pricing on all steel and wood materials, regardless of origin.

Answer 18: Please refer to Parish bidding documents, Section 2, #11. Bidders are responsible for any fluctuations. Please bid accordingly.

Question 19: Does this project require a dedicated SSHO?

Answer 19: A Site Safety and Health officer is not required.

Question 20: Which company is responsible for the HVAC controls and who is the point of contact?

Answer 20: The scope of controls for this project can be performed by a licensed mechanical or electrical contractor.

Question 21: Can the sign-in sheet for the site visit be published prior to bid?

Answer 21: Yes, see attached.

Question 22: What is the collateral Load for the Terminal and the Hangar?

Answer 22: For Terminal - Structure shall be designed to meet 134 mph wind load as specified on the drawings.

For Hangar – Structure shall be designed to meet 130 mph wind load as specified in Section 13 34 20.



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Question 23: What is the primer color? I saw a note in the specs requesting the angle at the base be galv. G90 so I wasn't sure about the primary or secondary)

Answer 23: The manufacturer's standard primer for primary and secondary framing are acceptable (red is acceptable). No base angle is required for the Terminal. The final color of the panel finishes is specified in Section 13 34 20 for the Hangar.

Question 24: If standard purlin depth required per ABC design can be used

Answer 24: Purlin depth /gauge shall be designed by mfg. to meet the required wind load. (For Terminal)

Question 25: Sheet 03a Note #1 Do the haul road pavements in question met DOTD/ FAA specs at this time?

Answer 25: The condition of the haul road should be inspected by the contractor, noted, and taken pictures prior to construction. The haul road would only need to be replaced if it is damaged during or after construction. If it is not up to par for hauling purposes another haul route may be established by the Parish.

Question 26: Sheet # 4 Note # 4-5 What is the age and composition of the existing paving and base?

Answer 26: General Contractor to determine.

Question 27: Sheet # 4 Note # 11 References a Mobilization item, please clarify. Note # 30 also references an item, Excavation.

Answer 27: These references have been removed.

Question 28: Is water available on site?

Answer 28: Yes.

Question 29: Sheet # 12 Please address note # 2.

Answer 29: This note has been updated.

Question 30: Sheet #13 Reference stone base material; is stone required or is that to be determined by the contractor as noted for other items?



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Answer 30: This sheet is a preliminary layout and is meant to help the general contractor come up with pricing, but the engineering of the slab shall be finalized after the Pre-Engineered building is completed by a licensed engineer of the contractor's choosing.

Question 31: Sheet # 5a What is the depth of the concrete drive and parking?

Answer 31: Please see revised sheet 5A.

Question 32: Is a parking lot/ roadway surface included in the base bid?

Answer 32: No.

Question 33: If the concrete alternate is accepted will the hanger ramp still be asphalt?

Answer 33: Yes, it must match the apron that is already in place.

Question 34: How are sewer and water terminated?

Answer 34: Refer to plan P2.01, G.C. shall be responsible to bring sewer and water to outside of the building as shown on this plan. St. Tammany Parish will bring sewer and water service to this point, G.C. to make final tie-ins.

Question 35: On the terminal - Do you need Red Dot to provide the 2 1/2" Vertical Hat channels shown on sheet A4.12, or is this something you would like your drywall supplier pick up?

Answer 35: Either is acceptable. This is a coordination item between the G.C. and the sub-contractor. (For Terminal)

Question 36: In the Pre-Engineered Hangar System specifications (section 13 34 20) page 2 line 1.3, A, specifies a 60' x 18' hangar door opening. Sheet 12 of the drawings shows 60' x 20'. Can you confirm door opening size required?

Answer 36: It should be 60' x 18'. See the revised sheet 12.

Question 37: Section 13 34 20 - 3 paragraph 2.1. A specifies R-panel roof but does not specify panel gauge or finish. Can you provide required panel gauge and panel finish (siliconized polyester, Kynrar, or Galvalume finish)?



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Answer 37: Roof panels shall have minimum of 26 gauge. SMP, Kynar, or galvalume finish are all acceptable.

Question 38: Section 13 34 20 - 4 paragraph 2.1 B calls for minimum of 2" insulation in the roof. No insulation is specified for the walls. Will wall insulation be required? If so, can you provide thickness or R-value requirements?

Answer 38: No wall insulation required.

Question 39: Section 13 34 20 - 4 Paragraph 2.2 WALL PANEL describes a 26ga. wall panel with a depth of 1 1/4". It also describes the panel as an "Architectural Type Wall Panel". Can you provide us with the specific panel profile required?

Answer 39: Disregard "architectural type wall panel". There is no specific panel profile required, but the Parish would like it to look close to the T-Hangar building at the airport.

Question 40: Do you need Red Dot to provide the hangar door, or will you be buying the door direct?

Answer 40: The parish will not provide the door.

Question 41: AISC?

Answer 41: The building manufacturer shall be certified by either IAS, AISC, or ISO. The building manufacturer will use standards, specifications, recommendations, findings and/or interpretations of professionally-recognized groups such as AISC, AISI, AWS, ASTM, CSA, CWB, MBMA, Federal Specifications and research by MBMA as the basis for establishing design, drafting, fabrication and quality criteria, practices and tolerances.

Question 42: Is it intended that there be metal key joint material used in the construction of a concrete drive and parking should alternate 1 be chosen? If so, is the preformed strip above the key of the type that remains part of a finished product?

Answer 42: See answer 3 above.

Question 43: Should there be steel reinforcing in a concrete drive and parking? If so, would you please describe?

Answer 43: See answer 4 above.



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Question 44: Is it intended that there be wheel stops in all parking stalls?

Answer 44: See answer 5 above.

Question 45: Is it intended that the PEB structural steel be finish painted or simply factory primed? (Referring to the hangar.)

Answer 45: Factory primed.

Question 46: Drawings will have to be submitted for review prior to issuance of a building permit. Who is to pay for the review, owner or contractor?

Answer 47: The contractor is to pay for all reviews and permits.

ATTACHMENTS:

Section 04 (Revised) Louisiana Uniform Public Bid Form

Sheet 4 Project Notes

Sheet 5a Typical Sections – Alternate 1

Sheet 5b Typical Sections – Alternate 2

Sheet 7 Site Plan

Sheet 10 Concrete Details

Sheet 11 Miscellaneous Details

Sheet 12 Hangar Layout

Sheet 13 Hangar Foundation Plan

Sheet 17 Demolition Plan

Pre-Bid Meeting Sign-in Sheet

Prior Approved Specifications

<< End of Addendum # 1 >>

Section 04 (Revised)

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: St. Tammany Parish Government
21454 Koop Dr., Suite 2F
Mandeville, La 70471

BID FOR: Airport Corporate Hangar Facilities
Bid No: 19-13-2

(Owner to provide name of project and other identifying information.)

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: Volkert, Inc. and dated: January 31st, 2019.

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following ADDENDA: (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging)

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of: Dollars (\$)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 Provide a concrete drive and parking as per plans for the lump sum of: Dollars (\$)

Alternate No. 2 Provide an asphalt drive and parking as per plans for the lump sum of: Dollars (\$)

Alternate No. 3 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of: Dollars (\$)

NAME OF BIDDER:

ADDRESS OF BIDDER:

LOUISIANA CONTRACTOR'S LICENSE NUMBER:

NAME OF AUTHORIZED SIGNATORY OF BIDDER:

TITLE OF AUTHORIZED SIGNATORY OF BIDDER:

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **:

DATE:

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

** A CORPORATE RESOLUTION OR WRITTEN EVIDENCE of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

PROJECT NOTES

1. THE PROJECT IS SUBJECT TO ALL INSPECTIONS PROVIDED IN THE CONTRACT DOCUMENTS AND TO INSPECTIONS BY REPRESENTATIVES OF ST. TAMMANY PARISH, THE FEDERAL AVIATION ADMINISTRATION (FAA), THE LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY, AND THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT (LADOTD).
2. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE OWNERS REPRESENTATIVE, THE FAA, AND OTHER CONTRACTORS AND UTILITY COMPANIES AT, OR IN CLOSE PROXIMITY TO THE SITE.
3. ALL CONTRACTOR VEHICLES SHALL BE FLAGGED AND/OR LIGHTED IN ACCORDANCE WITH THE FAA "CONTRACTOR AIRPORT SECURITY AND OPERATIONAL REGULATIONS". ONLY THE ESSENTIAL VEHICLES AND EQUIPMENT PROPERLY MARKED AND ACTIVELY ENGAGED IN THE WORK WILL BE PERMITTED WITHIN THE AIR OPERATIONS AREA. ALL OTHER VEHICLES SHALL BE PARKED AT AREAS PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
4. THE LOCATION OF THE HAUL ROUTE ON THE AIRPORT SITE IS SHOWN ON THE SAFETY PLAN AND IS SUBJECT TO CHANGE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE HAUL ROUTE LEADING TO THE SITE AND DETERMINE THAT HIS EQUIPMENT, MEANS, AND METHODS WILL NOT CAUSE DAMAGE TO THE HAUL ROUTE. THE CONTRACTOR SHALL COORDINATE WITH ST. TAMMANY PARISH, AND OTHER OWNERS HAVING JURISDICTION TO ENSURE THE HAUL ROUTE SELECTED WILL SUPPORT LOADS THE CONTRACTOR PLANS TO HAUL. THE CONTRACTOR SHOULD NOT ASSUME ALL ROADS WILL SUPPORT THE LEGAL LIMIT. ANY DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT, MEANS, OR METHODS SHALL BE REPAIRED AT NO COST TO THE OWNER.
5. HAUL ROUTES SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND RESTORED UPON COMPLETION OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND TO THE OWNER'S SATISFACTION AND AT NO COST TO THE OWNER.
6. THE STAGING AREA, SHOWN ON THE SAFETY PLAN IS AVAILABLE TO THE CONTRACTOR FOR EQUIPMENT, IF NEEDED. ONLY APPROXIMATE SIZES AND LOCATIONS ARE SHOWN AND THE CONTRACTOR SHALL DEVELOP A PLAN AND PRESENT IT TO THE ENGINEER FOR REVIEW. THE STAGING AREAS SHALL BE USED FOR PROJECT SUPPLIES, EQUIPMENT, AND THE FIELD TRAILER AS NEEDED. THE STAGING AREA LOCATIONS ARE SUBJECT TO THE EQUIPMENT HEIGHT RESTRICTIONS CONTAINED IN THESE DOCUMENTS.
7. ALL CONTRACTOR VEHICLES AND CONSTRUCTION TRAFFIC SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION LIMITS OR HAUL ROUTES UNLESS OTHERWISE AUTHORIZED.
8. EROSION CONTROL MEASURES AND OTHER MISCELLANEOUS CONSTRUCTION ITEMS REQUIRED TO CONSTRUCT ADDITIONAL HAUL ROUTES OR ACCESS POINTS ON THE AIRPORT WILL BE THE CONTRACTOR'S RESPONSIBILITY, AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE WORK. ALL ROADS TO AIRPORT FACILITIES SHALL REMAIN OPEN AND MAINTAINED AT ALL TIMES. NO DIRECT PAYMENT.
9. ALL WORK TO BE DONE ON THIS PROJECT SHALL PROCEED IN ACCORDANCE WITH THE CONSTRUCTION PHASING PLAN IN SECTION 1 OF THE TECHNICAL SPECIFICATIONS. THE CONTRACTOR IS REQUIRED TO BECOME FAMILIAR WITH THE CONSTRUCTION PHASING PLAN. THE PHASING PLAN SHALL BE FOLLOWED EXACTLY. DEVIATIONS FROM THIS PLAN WILL NOT BE PERMITTED UNLESS PREVIOUSLY APPROVED IN WRITING BY THE ENGINEER.
10. DATES AND TIMES WILL BE ESTABLISHED AT THE PRE-CONSTRUCTION CONFERENCE FOR WEEKLY PROGRESS MEETINGS TO BE HELD WITH THE CONTRACTOR, ENGINEER, AND AIRPORT OWNER. THE CONTRACTOR'S SUPERINTENDENT AND SAFETY OFFICER SHALL ATTEND EACH MEETING, ADDITIONAL ATTENDEES MAY INCLUDE AIRPORT TENANTS, SUBCONTRACTORS, UTILITY COMPANY REPRESENTATIVES, THE FAA, OR OTHERS.
11. THE CONTRACTOR WILL PROVIDE A BULLETIN BOARD AT THE SITE AND SHALL POST ALL REQUIRED PERMITS, AND EEO NOTICES IN A WEATHER-PROTECTED ENCLOSURE.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF THE EXISTING AIRPORT PAVEMENT, LIGHTING, AND NAVAIDS DURING CONSTRUCTION. ALL DAMAGE RESULTING FROM THE CONTRACTOR'S ACTIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
13. GRASS AREAS OUTSIDE OF THE AREAS DEPICTED ON THE PLANS THAT ARE DISTURBED BY THE CONTRACTOR SHALL BE RESTORED AND GRASSED TO PRE-CONSTRUCTION CONDITION. THERE WILL BE NO DIRECT PAY FOR THIS WORK.
14. WHERE EXCAVATION AND BACKFILL IS NECESSARY FOR PROPER GRADING, IT SHALL BE PAID FOR UNDER UNCLASSIFIED EXCAVATION AND BACKFILL.

15. ANY FINES LEVIED AGAINST THE OWNER DUE TO CONTRACTOR'S OPERATIONS AND/OR ACTIVITIES SHALL BE PAID BY THE CONTRACTOR.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY, EFFICIENCY, AND ADEQUACY OF HIS OPERATION AND SHALL INITIATE HIS OWN SAFETY PROGRAM. THE CONTRACTOR SHALL COMPLY WITH ALL DEPARTMENT OF LABOR, SAFETY, AND HEALTH REGULATIONS AS SPECIFIED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED, THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, AND AS STATED IN SECTION 2 OF THE SPECIAL CONDITIONS.
17. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE IF THE REQUIRED CONSTRUCTION CAN BE PERFORMED WITHIN THE AREA PROVIDED AND COMPLY WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) FOR CONSTRUCTION PROJECTS OF THIS TYPE. ANY SAFETY MEASURES OR METHODS OF CONSTRUCTION THAT ARE NECESSARY IN THE CONSTRUCTION OF THIS PROJECT TO COMPLY WITH THESE REGULATIONS ARE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE PROVIDED WITH ALL COSTS TO BE INCLUDED IN THE VARIOUS PAY ITEMS OF THE CONTRACT (NO DIRECT PAYMENT).
18. PRODUCT SUBMITTALS AND SHOP DRAWINGS SHALL BE SUBMITTED AT LEAST 5 DAYS PRIOR TO INSTALLATION OF THE PRODUCT.
19. THE CONTRACTOR SHALL SUBMIT AN UPDATED CONSTRUCTION SCHEDULE MONTHLY.
20. A FIELD OFFICE WILL NOT BE REQUIRED AS PART OF THIS PROJECT.
21. THE CONTRACTOR SHALL NOT USE AIRPORT TERMINAL OR FIXED BASED OPERATOR FACILITIES.
22. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES AND DRAINAGE STRUCTURES PRIOR TO THE START OF CONSTRUCTION.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANIES FOR USE OF UTILITY SERVICES AND SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH SAID SERVICES.
24. ALL PRACTICAL AND NECESSARY EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND THE TRANSPORT OF SEDIMENT TO DOWNSTREAM AREAS. SUCH EFFORTS SHALL BE IN ACCORDANCE WITH THE LDEQ AND LADOTD DESIGN POLICY FOR EROSION CONTROL FOR LOUISIANA CONSTRUCTION. EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR AND REESTABLISH GRADES AND VEGETATION AT THE CONTRACTOR'S OWN EXPENSE.
25. TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2006 EDITION, SECTION 204, AND AS SHOWN IN THE PLANS.
26. ALL FILL SLOPES SHALL BE PROTECTED FROM EROSION AND SHALL BE STABILIZED AS SOON AS POSSIBLE.
27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINES ISSUED BY LDEQ FOR FAILURE TO INSTALL AND MAINTAIN NECESSARY EROSION CONTROL MEASURES.
28. CONTRACTOR SHALL, IN WRITING, REQUEST TO MEET WITH THE ENGINEER PRIOR TO COMPLETION OF THE PROJECT FOR PUNCH LIST/ACCEPTANCE OF PROJECT.
29. CONCRETE SPLASH BLOCKS SHALL BE INSTALLED AT EACH DOWNSPOUT TO PREVENT EROSION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL THEM ACCORDING TO RECOMMENDATIONS MADE BY THE MANUFACTURER. DIMENSIONS ARE SHOWN IN DETAILS ON SHEET 11.
30. A MINIMUM OF EIGHTEEN (18) INCHES OF MUCK EXCAVATION SHALL BE PERFORMED UNDER AND AROUND ALL STRUCTURES. SEE NOTES 6 & 7 ON SHEET 7.
31. HORIZONTAL COORDINATES ARE REFERENCES TO NAD83.
32. ELEVATIONS ARE REFERENCED TO NAVD 88.
33. THE NAME OF ANY MANUFACTURER, BRAND, OR MAKE LISTED ON THE DRAWINGS IS FOR THE PURPOSE OF ESTABLISHING A MINIMUM ACCEPTABLE STANDARD OR QUALITY DESIRED BY THE PARISH. ALL PRODUCTS BID MUST HAVE PRIOR APPROVAL AS "PRIOR APPROVED EQUAL".

PERMIT AND UTILITY CONTACTS:

WATER, SEWER, & PERMITS:
 ST. TAMMANY PARISH GOVERNMENT
 21454 KOOP DR.
 MANDEVILLE, LA 70471
 PERMITS: (985) 898-2574
 ENVIRONMENTAL SERVICES: (985) 898-2535

ELECTRIC:
 WST ELECTRIC
 21504 MIRE DR.
 ABITA SPRINGS, LA 70448
 (958) 892-8804

SHEET	04				
DESIGNED	A.B.	RETAINED	P.L.	DATE	01/31/19
CHECKED	E.L.	CHECKED	E.L.	SHEET	
				NO.	1
				DATE	05/08/2019
				ADDENDUM 1	
				REVISION	
				DESCRIPTION	
				AND	
				BY	
				PARISH	ST. TAMMANY
				STATE PROJECT	H.011701

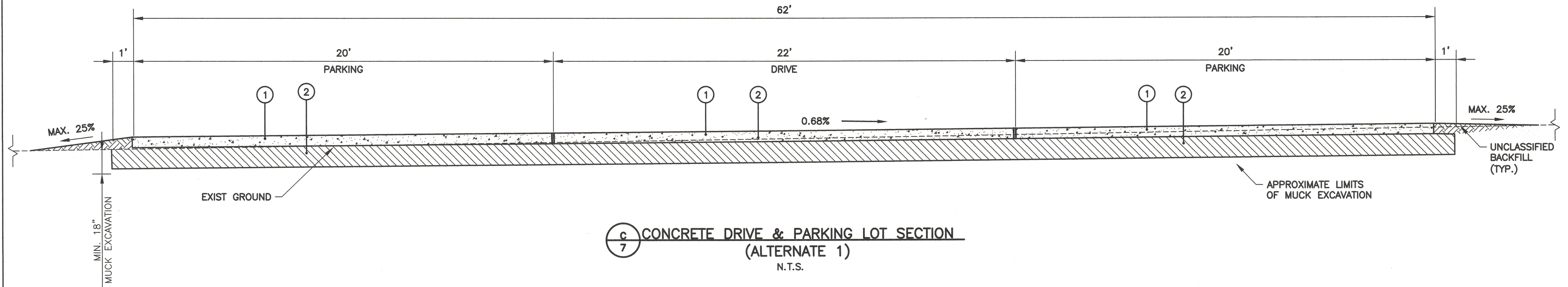
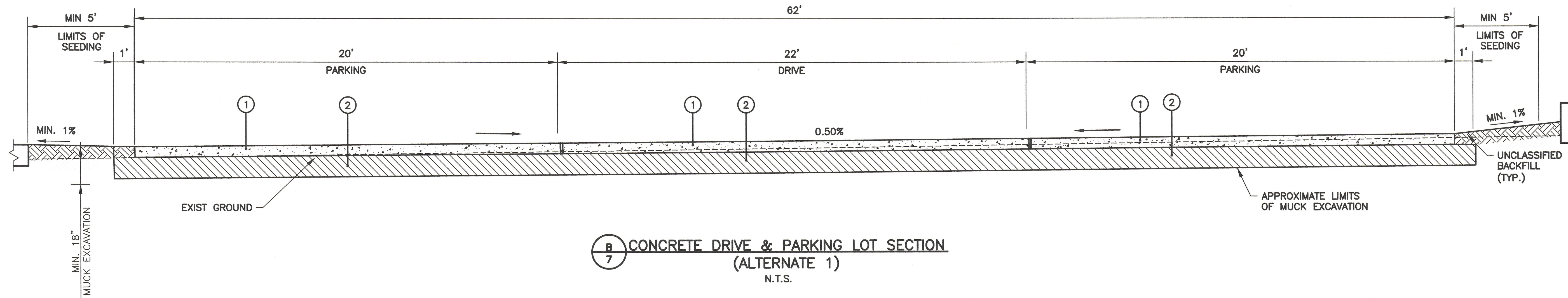
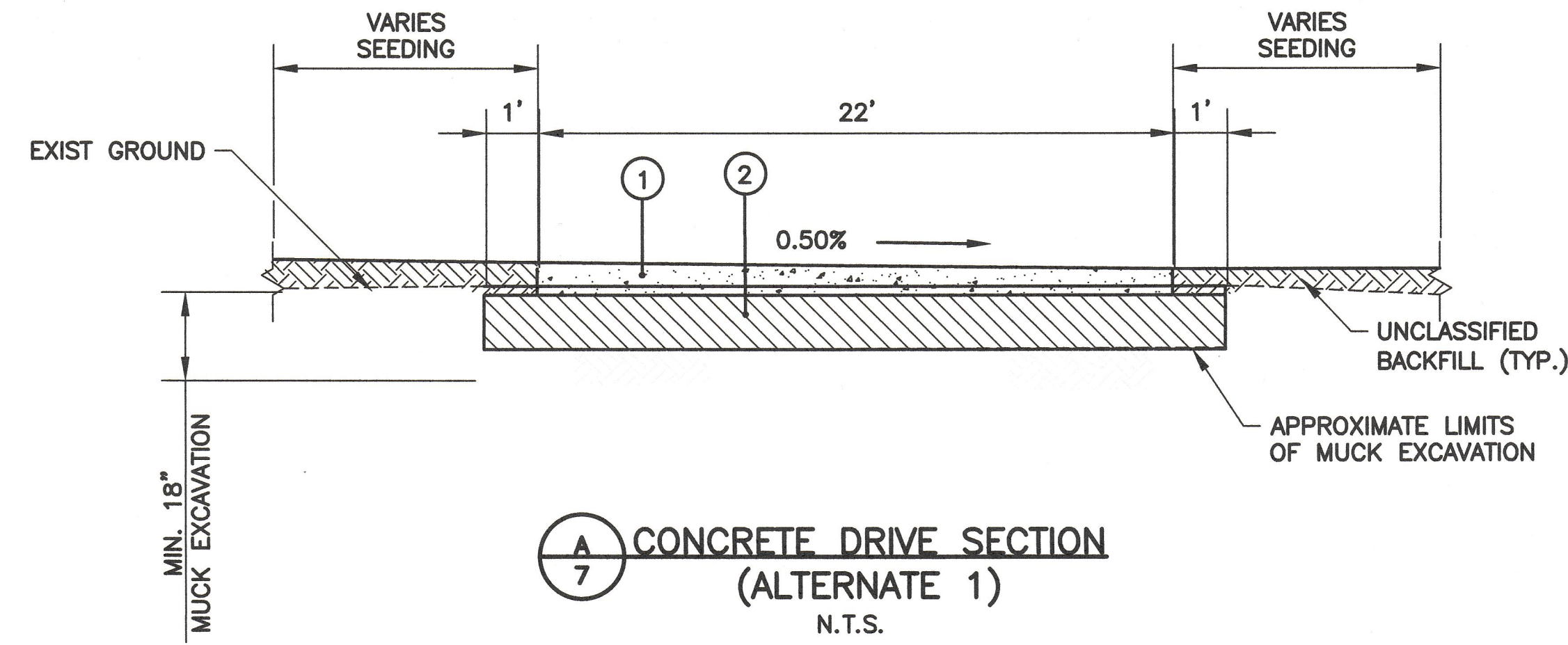
ST. TAMMANY REGIONAL AIRPORT
PROJECT NOTES

AIRPORT CORPORATE HANGAR FACILITIES

ASHLEY N. BECKENDORF
 License No. 27334
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING

VOLKERT INC.

FINAL PLANS

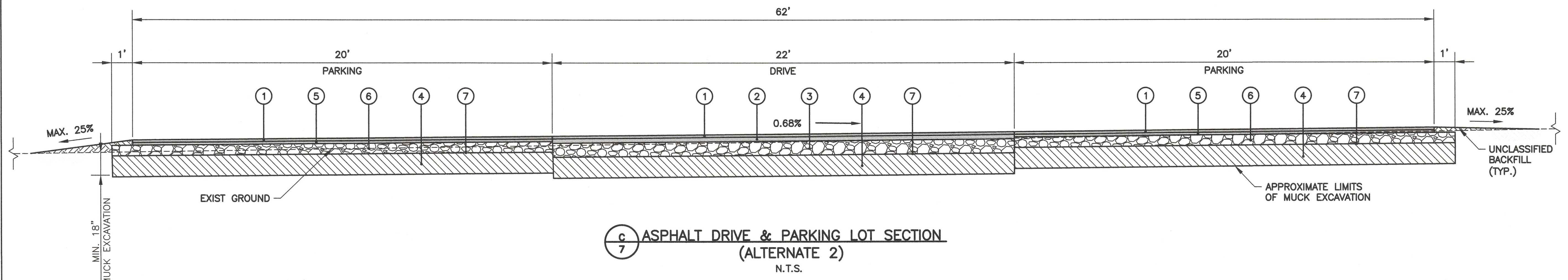
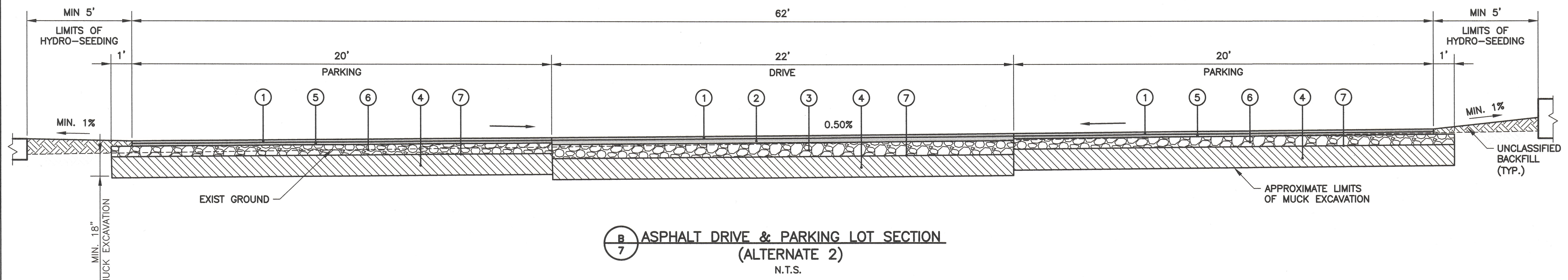
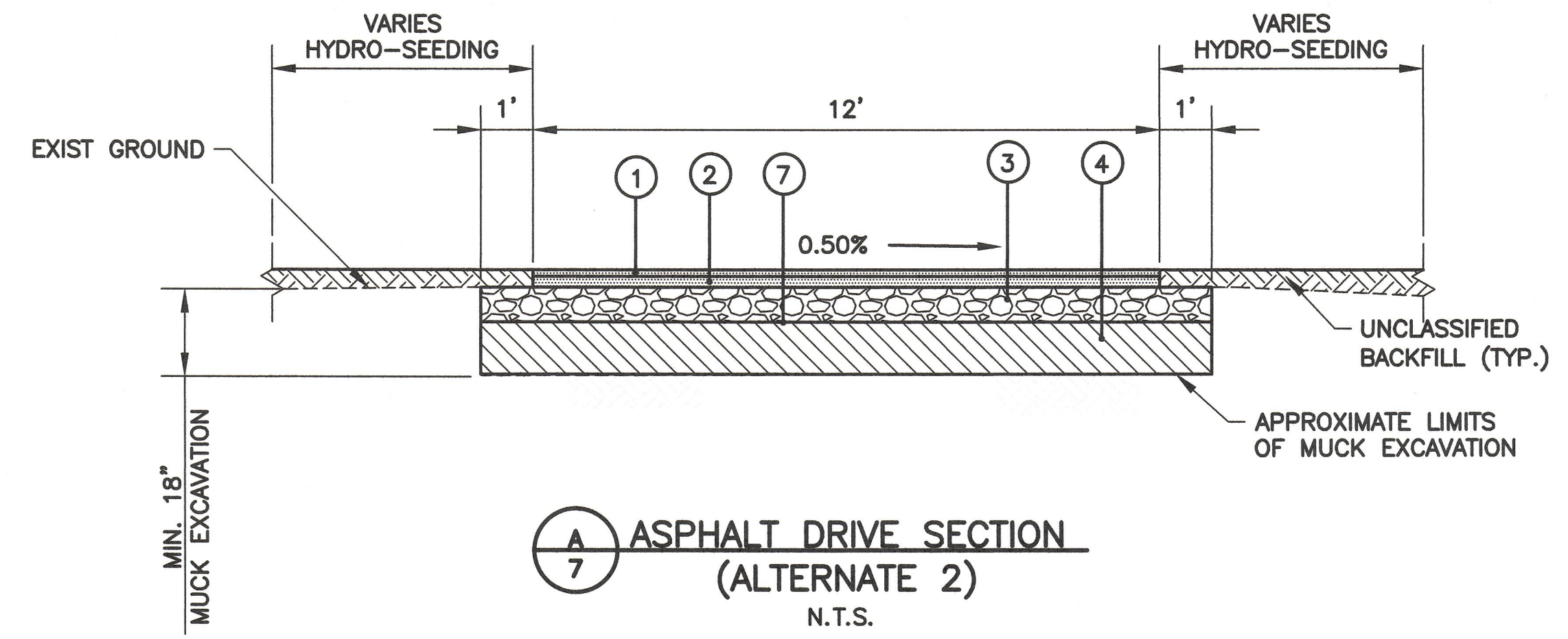


- LEGEND:
- ① 6" PORTLAND CEMENT CONCRETE
 - ② 12" STRUCTURAL BACKFILL

SHEET	5a
PARISH	ST. TAMMANY
STATE PROJECT	H.011701
DESIGNED	A.B.
CHECKED	E.L.
DATE	01/31/19
REVISION DESCRIPTION	
NO.	1
DATE	05/08/2018
ST. TAMMANY REGIONAL AIRPORT TYPICAL SECTIONS - ALT 1 AIRPORT CORPORATE HANGAR FACILITIES	
VOLKERT INC.	

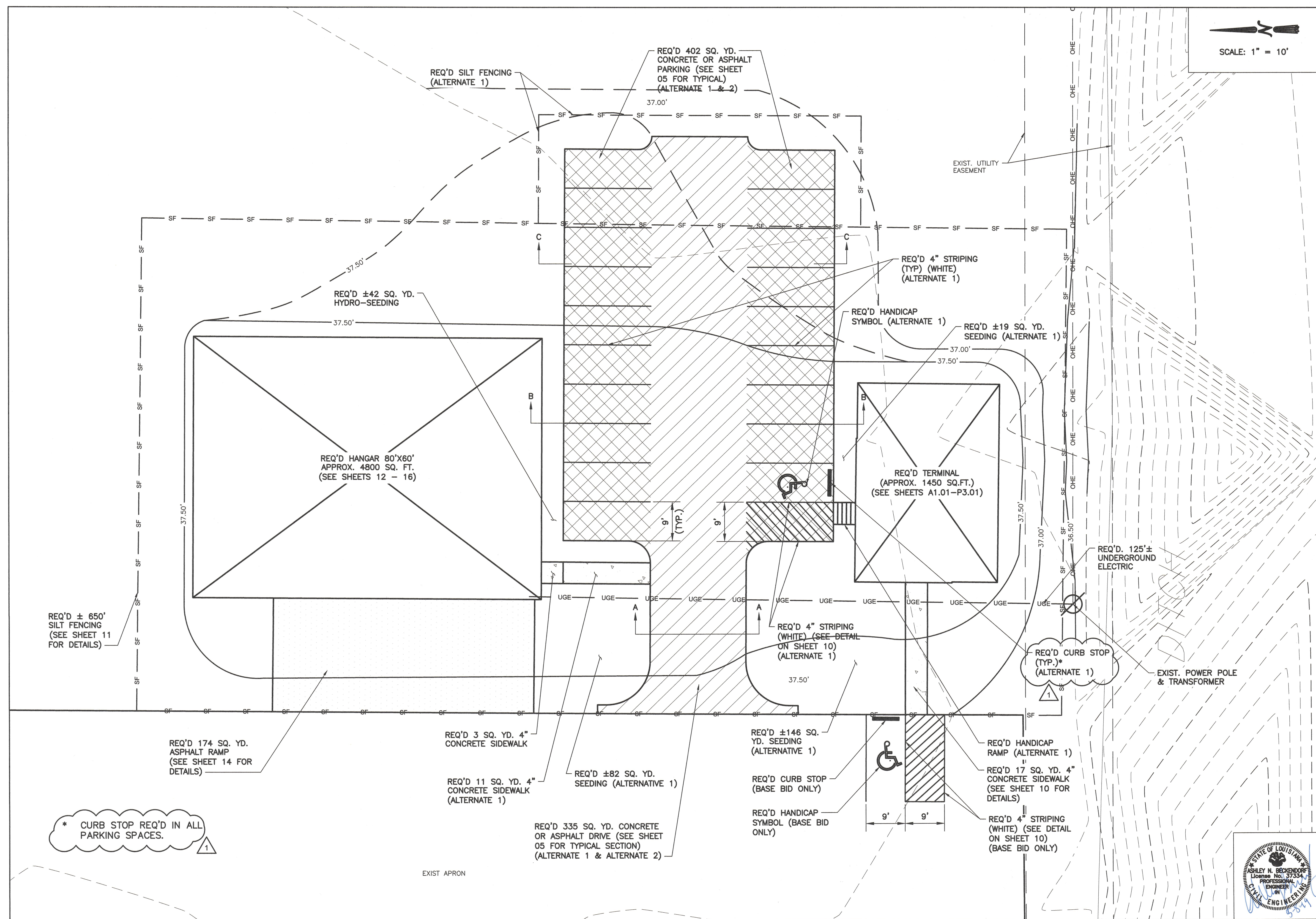


FINAL PLANS



- LEGEND:
- ① 1 1/2" WEARING COURSE
 - ② 2 1/2" BINDER COURSE
 - ③ 8" CRUSHED AGGREGATE BASE COURSE
 - ④ 12" STRUCTURAL BACKFILL
 - ⑤ 1 1/2" BINDER COURSE
 - ⑥ 6" CRUSHED AGGREGATE BASE COURSE
 - ⑦ GEOTEXTILE FABRIC

FINAL PLANS



* CURB STOP REQ'D IN ALL PARKING SPACES.

ST. TAMMANY
PARISH

DESIGNED
CHECKED
E.L.
P.L.
DATE
01/31/19

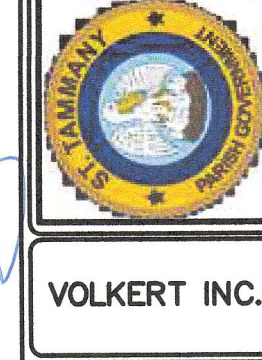
APPENDIX 1
REVISION DESCRIPTION
NO. DATE

1 05/08/2019

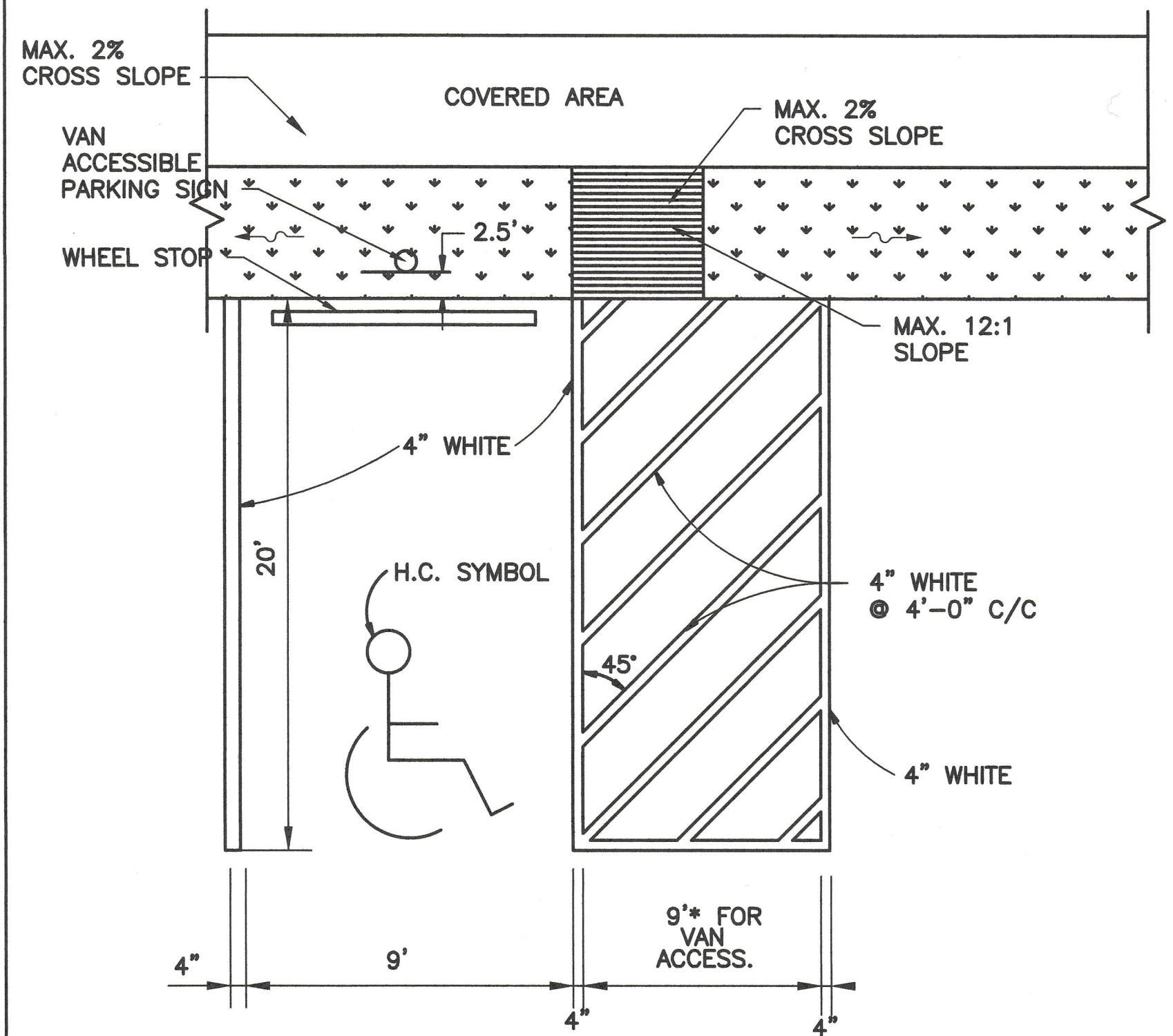
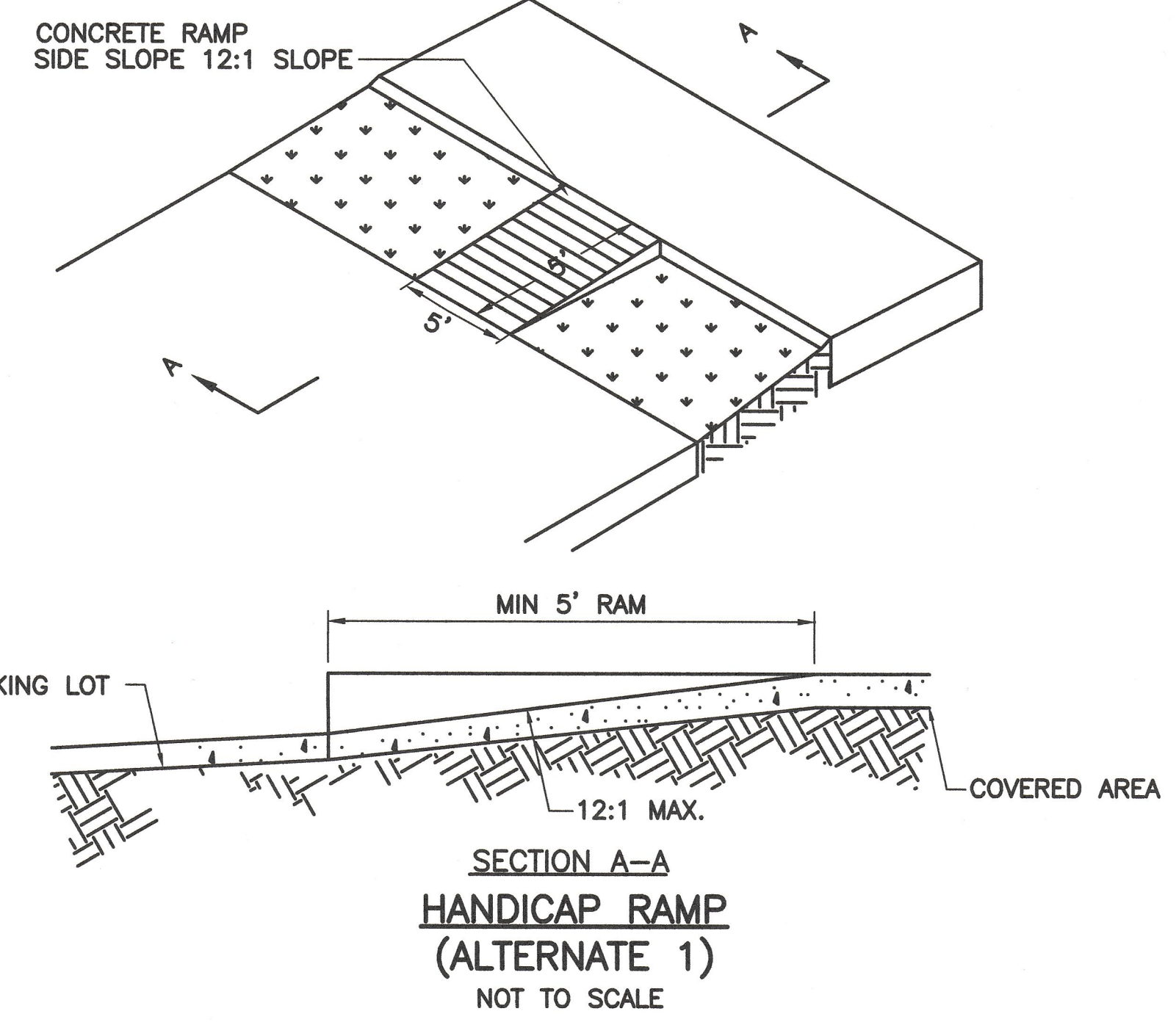


ST. TAMMANY REGIONAL AIRPORT
SITE PLAN
AIRPORT CORPORATE HANGAR FACILITIES

VOLKERT INC.

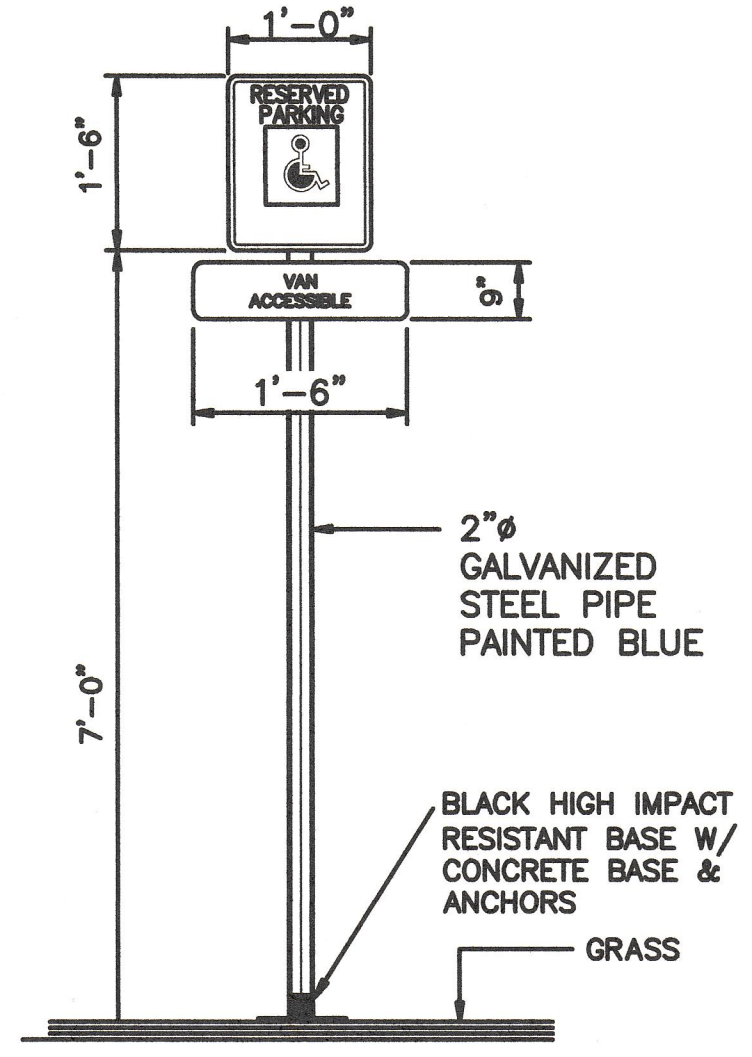
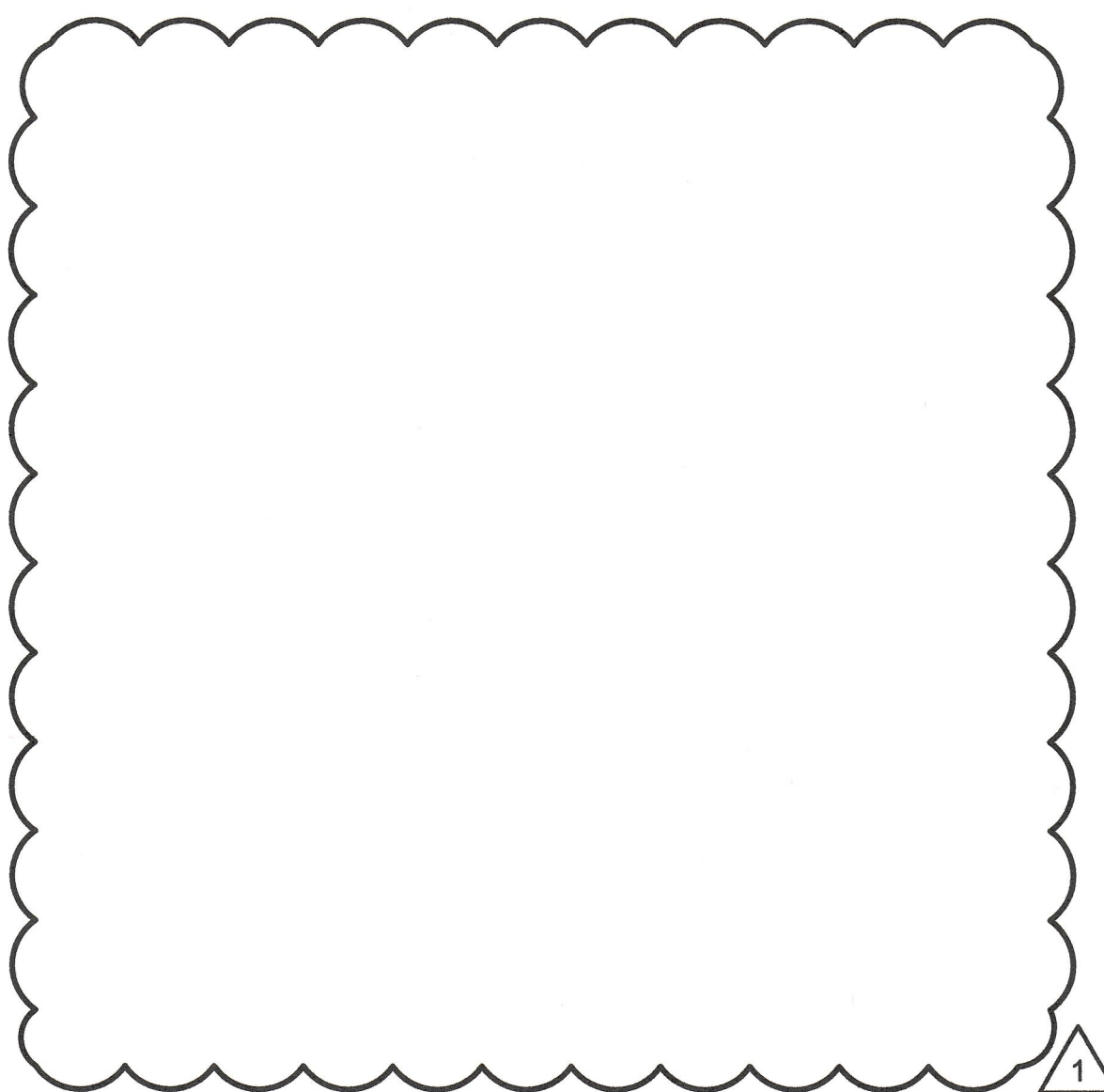


FINAL PLANS



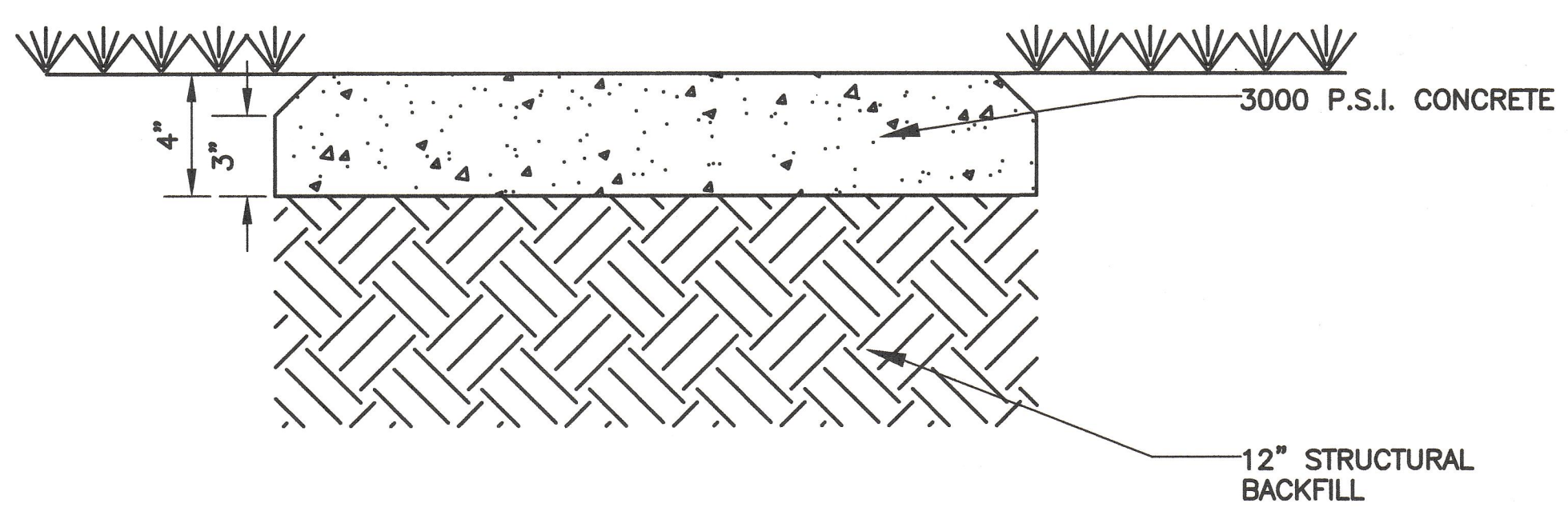
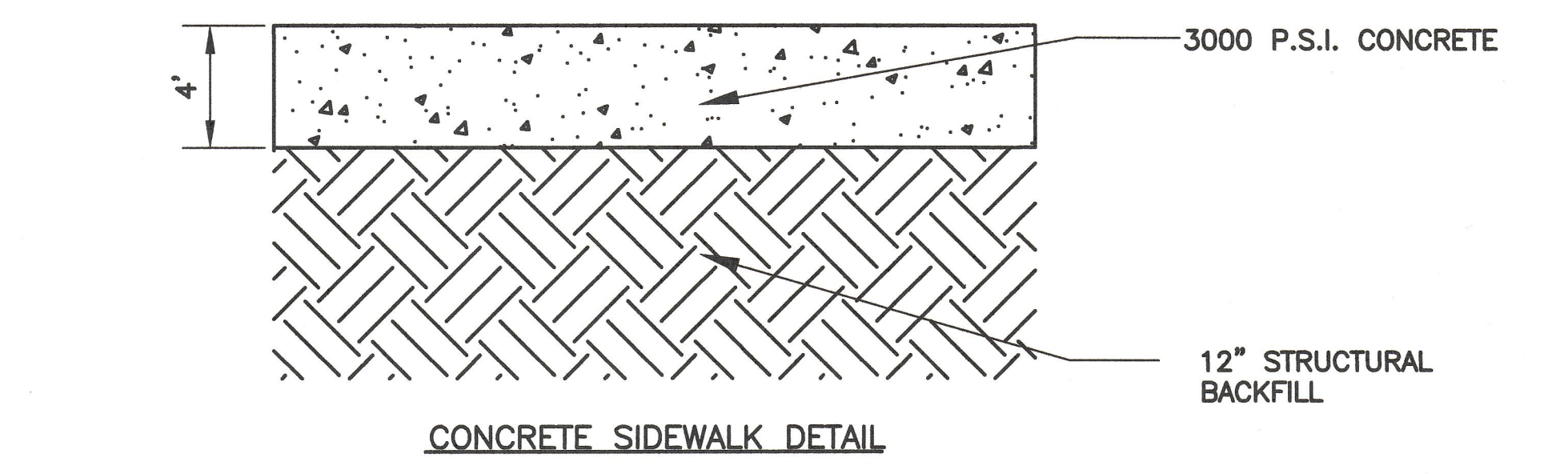
* PARKING SPACE DIMENSIONS SHOWN ARE MINIMUM STANDARDS REFER TO GEOMETRIC LAYOUT FOR EXACT DIMENSIONS

NOTES:
ALL HANDICAP CURB RAMPS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADA STANDARDS & ST. TAMMANY PARISH CODE OF ORDINANCES.
DETECTABLE WARNINGS SHALL BE PROVIDED ON HANDICAP RAMPS EXTENDING THE FULL WIDTH OF THE RAMP FOR 24" IN LENGTH. DETECTABLE WARNINGS ARE RAISED PATTERNS THAT WARN THE VISUALLY IMPAIRED OF APPROACHING VEHICULAR CIRCULATION AREA. THE ONLY ACCEPTABLE FORM OF DETECTABLE WARNING IS THE "RAISED TRUNCATED DOME". THE DOMES SHALL BE 0.9" NOMINAL DIAMETER, 0.2 INCHES NOMINAL HEIGHT, AND CENTERED 2.35 INCHES APART.
THE AREA REQUIRED TO HAVE A DETECTABLE WARNING SHALL VISUALLY CONTRAST IN COLOR WITH THE ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE THE CONTRASTING COLOR SHALL BE AN INTEGRAL PART OF THE SURFACE.



VAN ACCESSIBLE PARKING SIGN DETAIL
N.T.S.

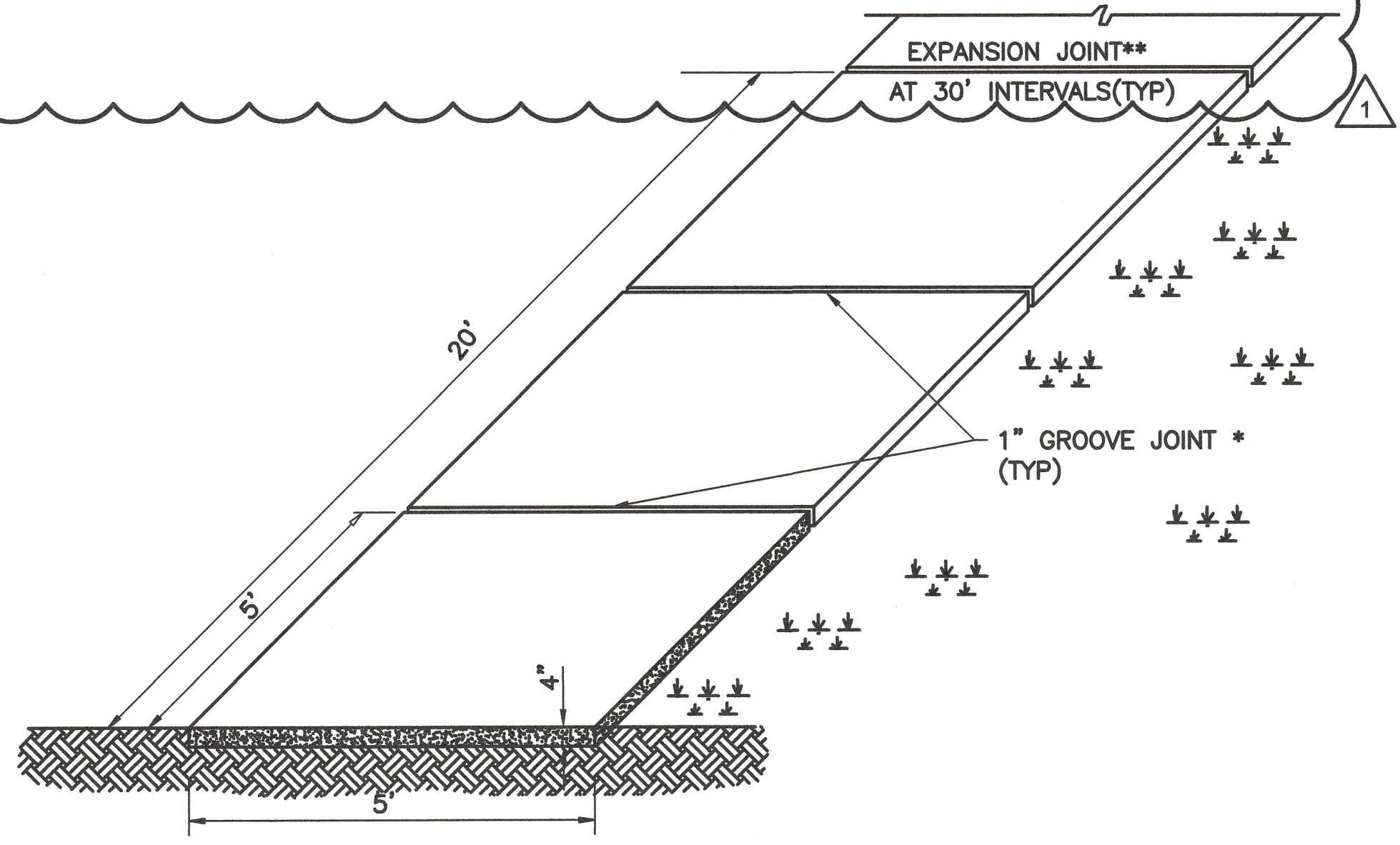
- NOTES:
- ALL SIGNS SHOWN SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - ALL SIGNS SHOWN SHALL BE REFLECTED TO SHOW THE SAME COLOR BY NIGHT AS BY DAY.
 - ALL SIGNS SHALL BE SECURELY MOUNTED ON GALVANIZED STEEL PIPE.
 - INSTALL QUANTITY AND AT LOCATIONS REQUIRED BY CODE AND/OR AS INDICATED ON DRAWINGS.
 - PROVIDE VAN ACCESSIBLE SIGN AT LOCATION SHOWN ON THE PLANS.
 - ALL HANDICAP PAINT AND SIGNAGE TO BE IN ACCORDANCE WITH THE A.D.A.G.



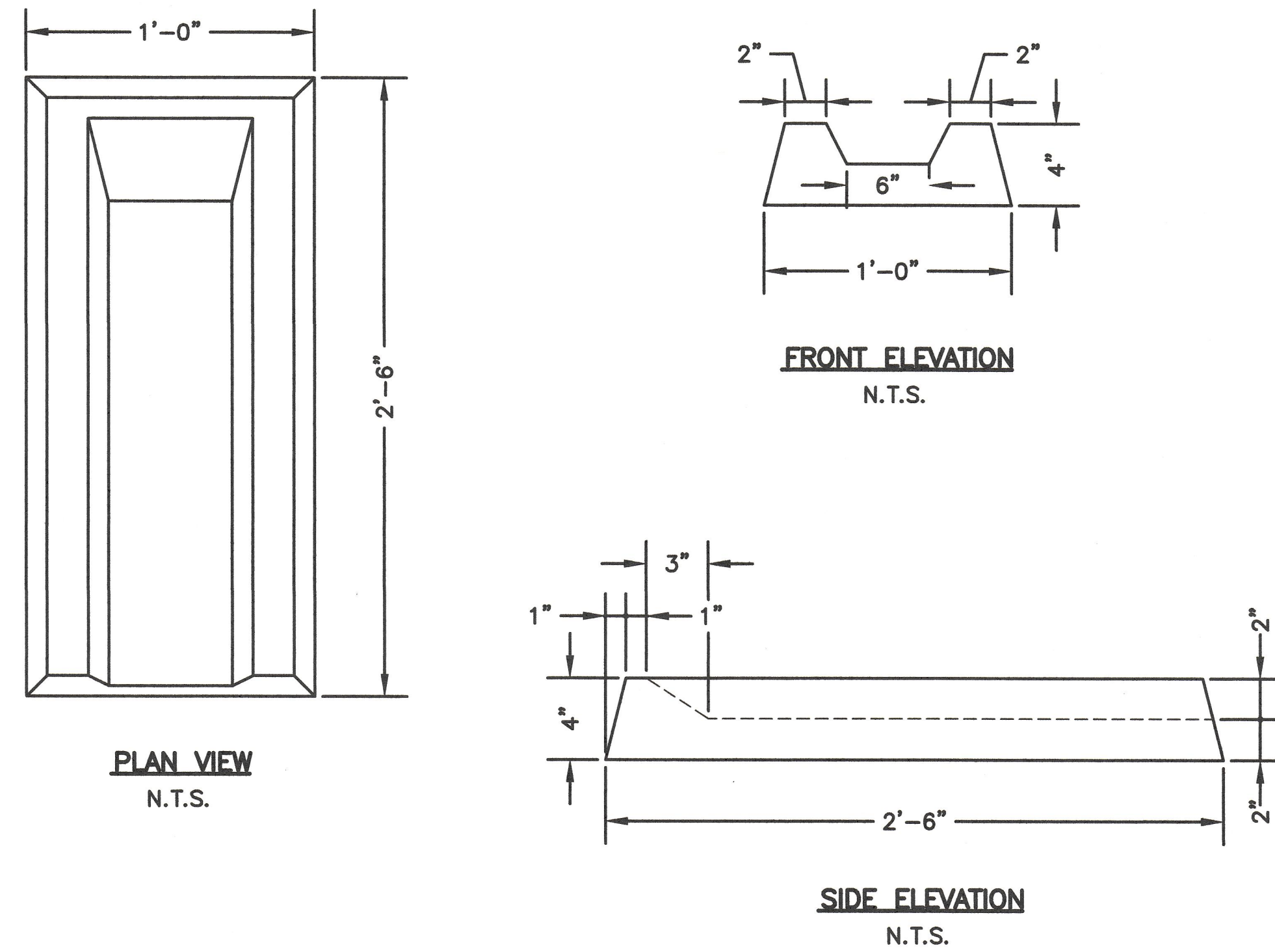
CONCRETE SIDEWALK
NOT TO SCALE

GENERAL NOTES:

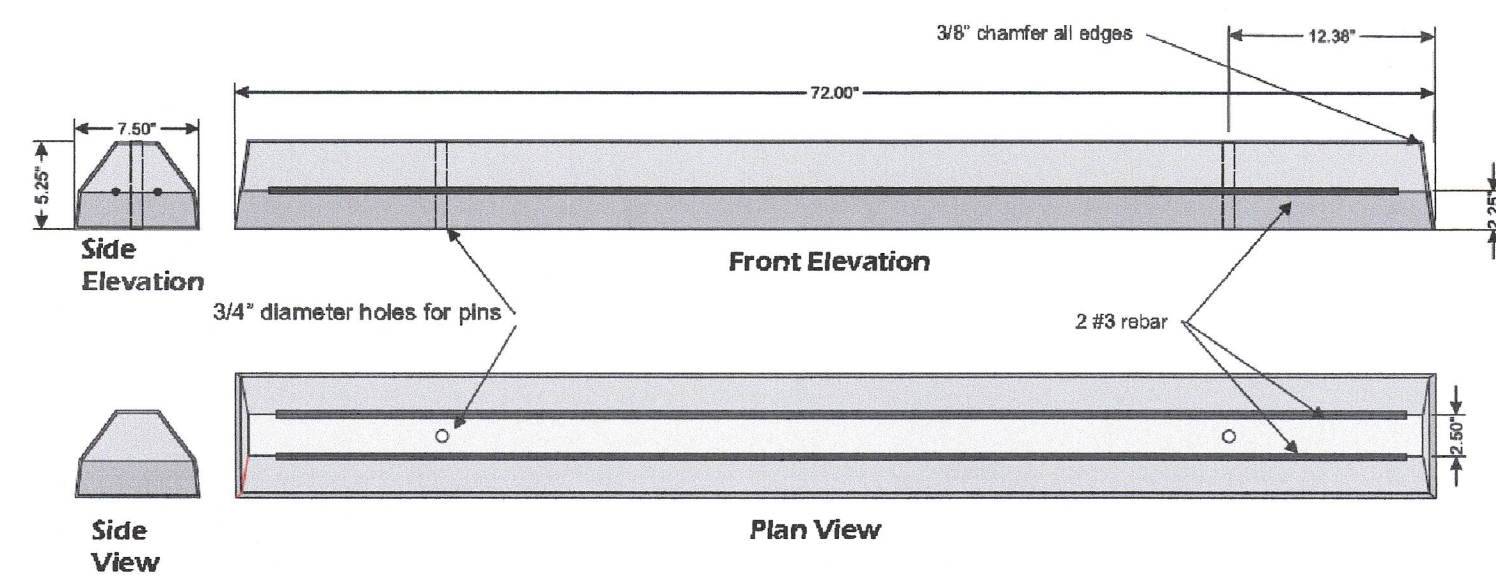
- * A GROOVE JOINT 1" DEEP WITH 1/8" WIDTH AND 1/4" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS.
 - ** ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 30' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK ABUTS ANY CURB & GUTTER AND ANY RIGID STRUCTURES. THE EXPANSION JOINT SHALL BE AT 1/4" RADII WITH PREFORMED EXPANSION JOINT FILLER THROUGH THE ENTIRE DEPTH OF SIDEWALK.
- CONCRETE SHALL BE 3000 PSI. IN 28 DAYS.



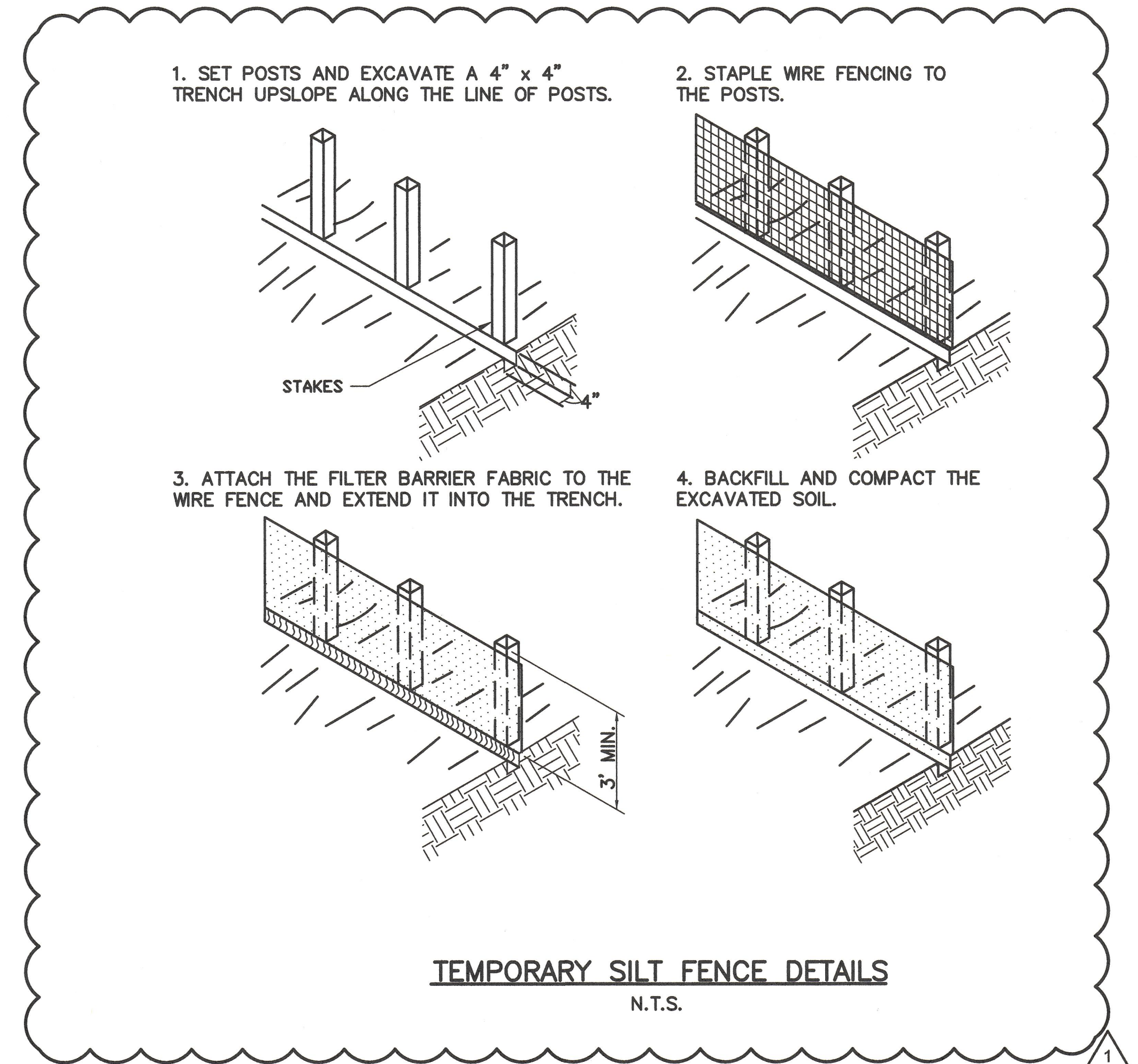
STANDARD SIDEWALK
NOT TO SCALE



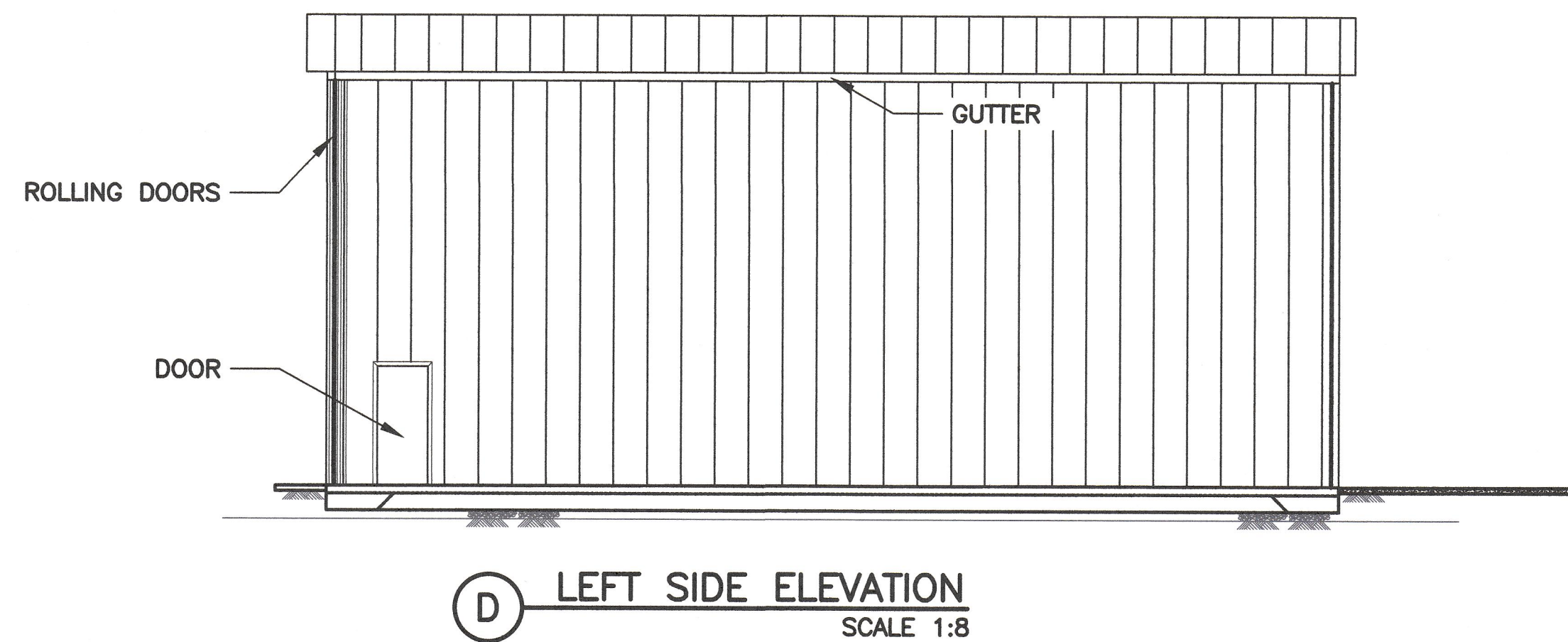
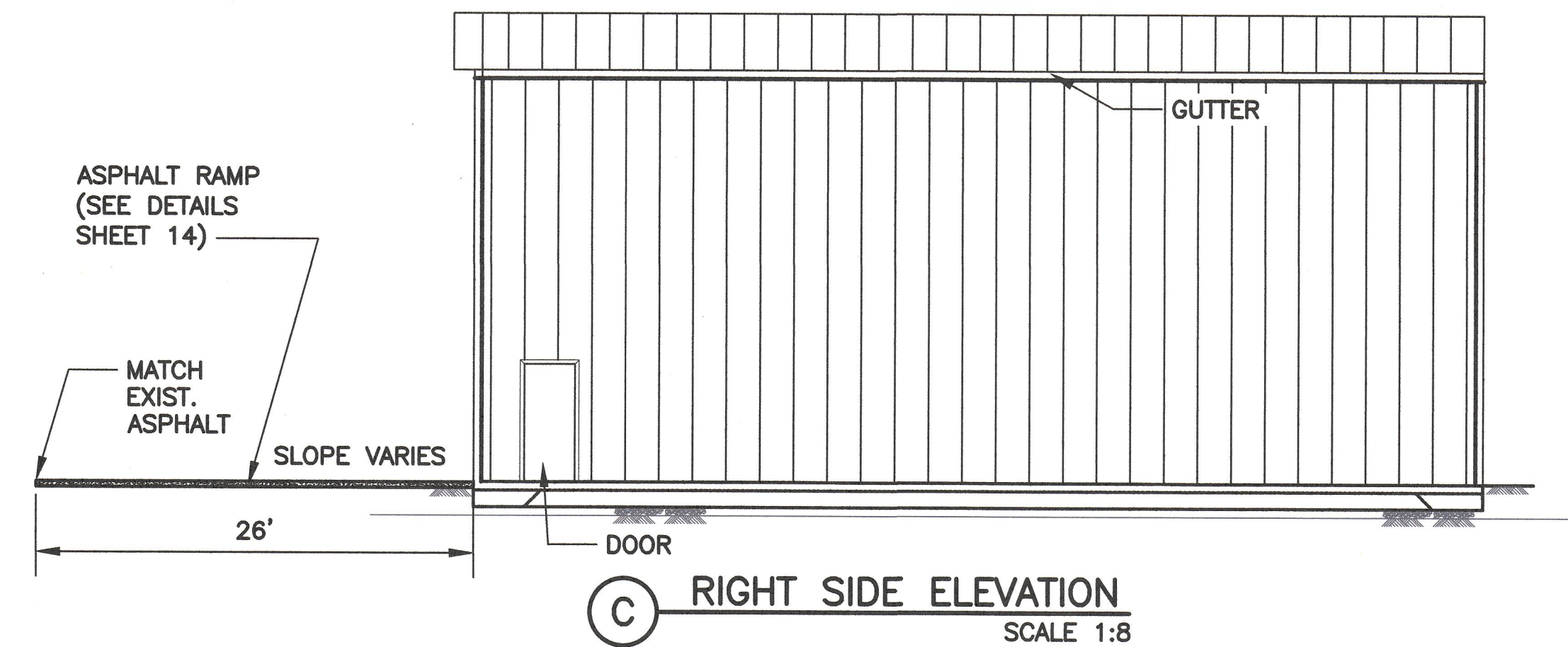
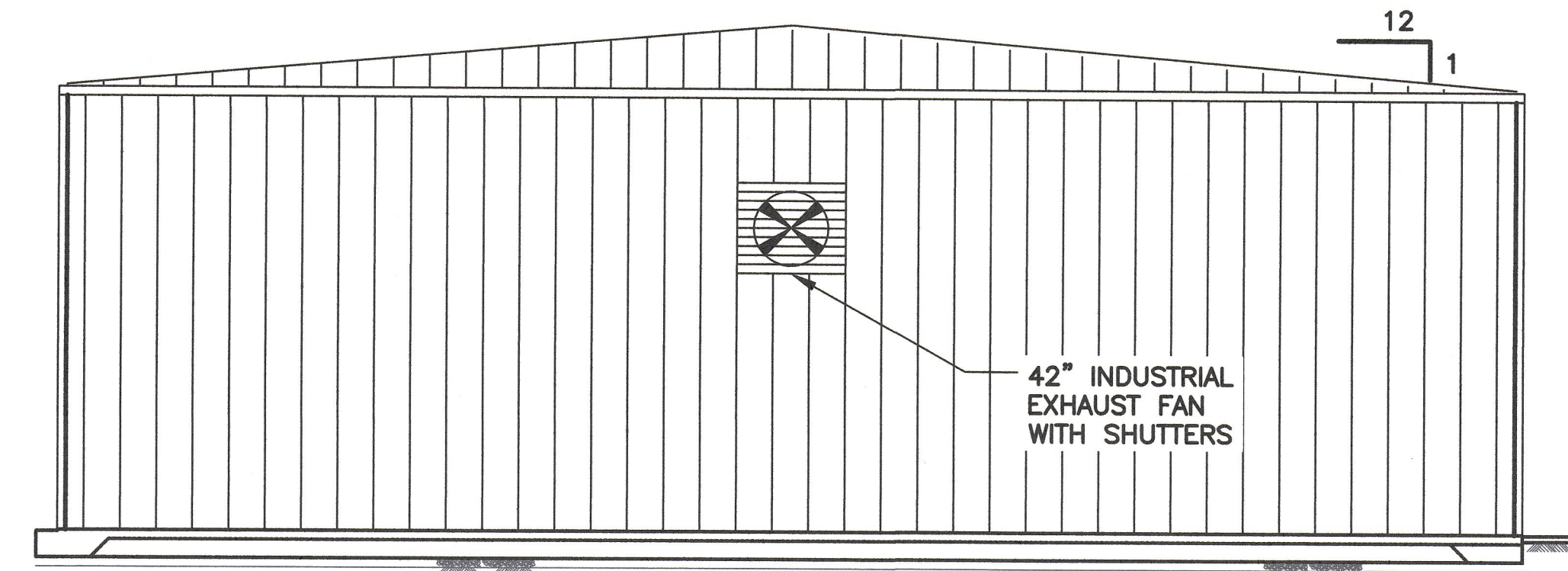
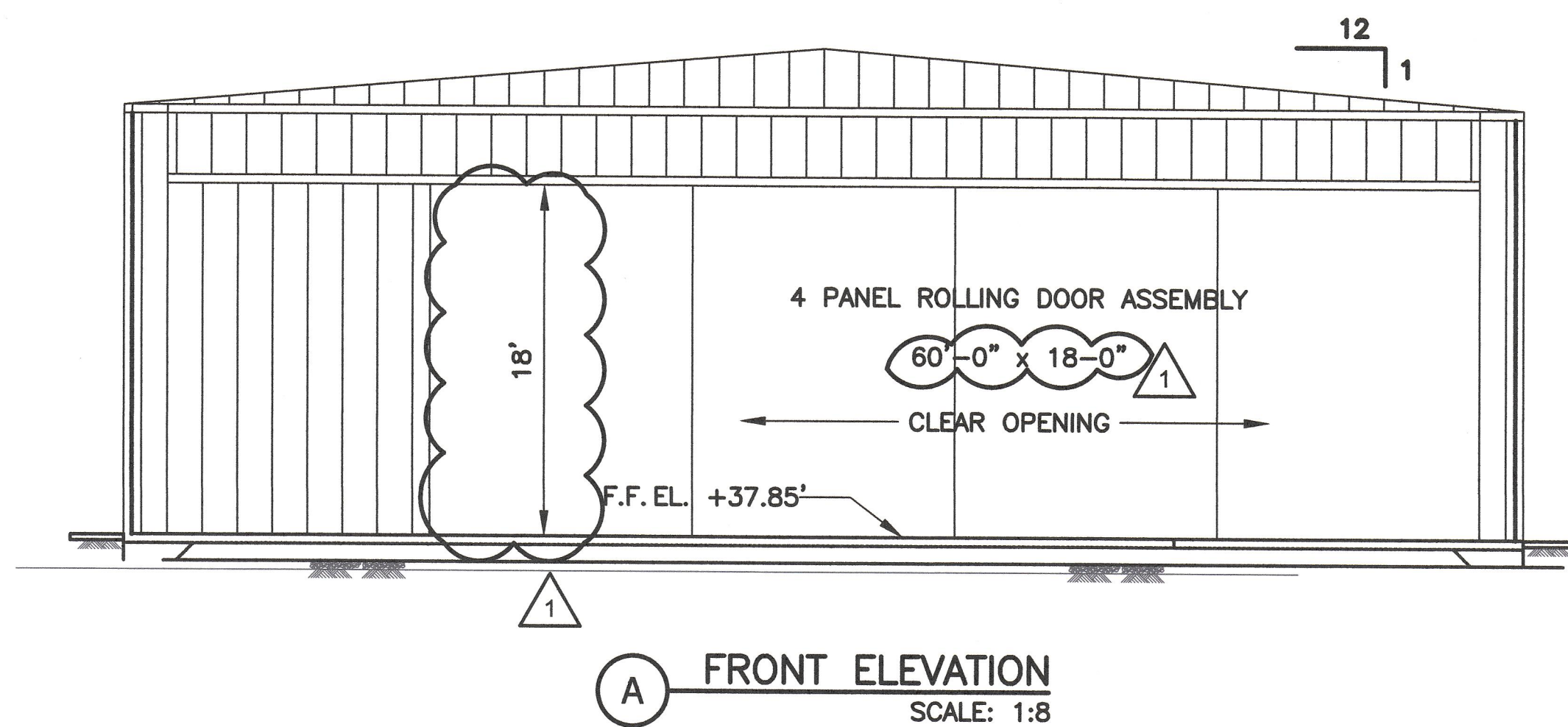
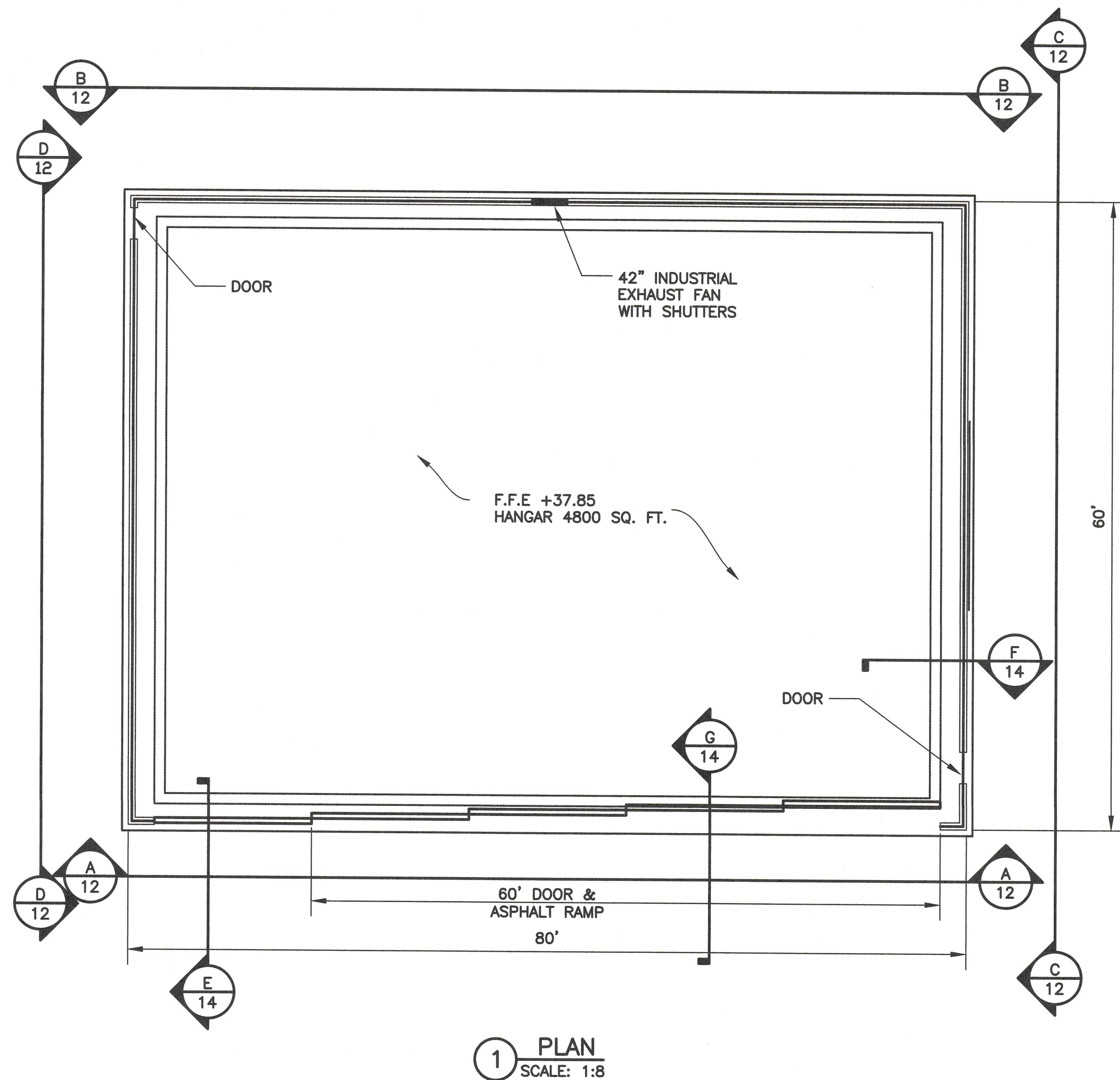
CONCRETE SPLASH BLOCK
N.T.S.



WHEEL STOP DETAIL
N.T.S.



FINAL PLANS



ROOM FINISH AND MATERIALS

HANGAR BAY
TRACK/ROLLING HANGAR DOORS

60'-0" x 18'-0" CLEAR; FRAME BY DOOR MANUFACTURER
LOCKING MECHANISM TO BE APPROVED BY OWNER

ROOF INSULATION (SEE SPECIFICATIONS)

CONCRETE FLOOR SEALANT

INDUSTRIAL EXHAUST FAN WITH SHUTTERS & HOOD
(SEE SPECIFICATIONS)

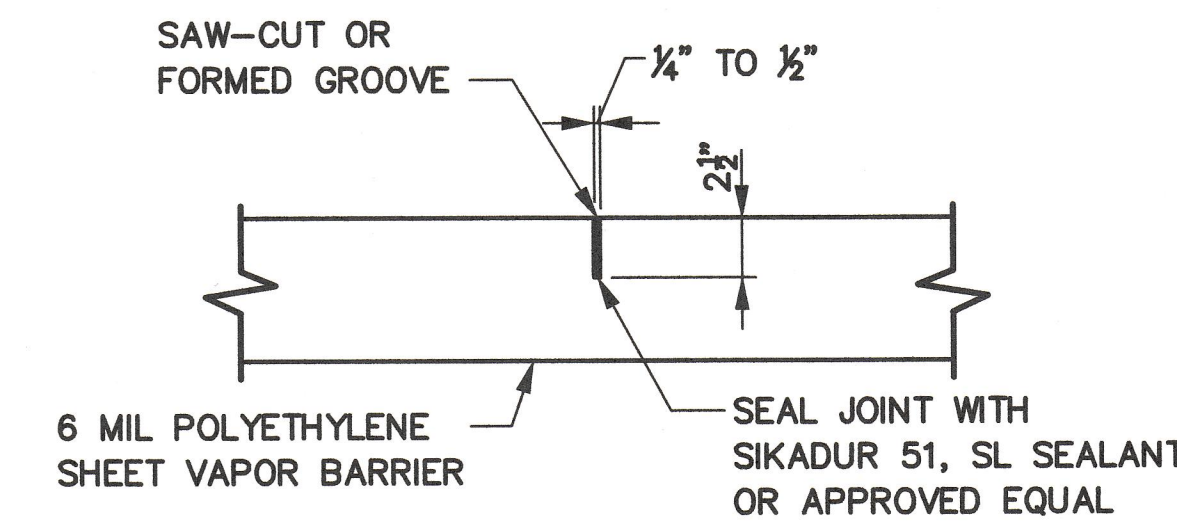
NOTES:

1. THE BUILDING SHOWN IS REPRESENTATIVE. THE CONTRACTOR SHALL SELECT A BUILDING AND BUILDING MANUFACTURER THAT MEETS THE "CLEAR" DIMENSIONS AS SHOWN IN THE PLANS AND MINIMUM DESIGN REQUIREMENTS DETAILED IN THE SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BUILDING DESIGN AND CONSTRUCTION OF THE FOUNDATION BASED ON THE BUILDING MANUFACTURER SELECTED. THE FOUNDATION WILL NOT BE PAID FOR SEPARATELY.
3. HANGAR IS TO BE USED FOR UNFUELED AIRCRAFT ONLY.

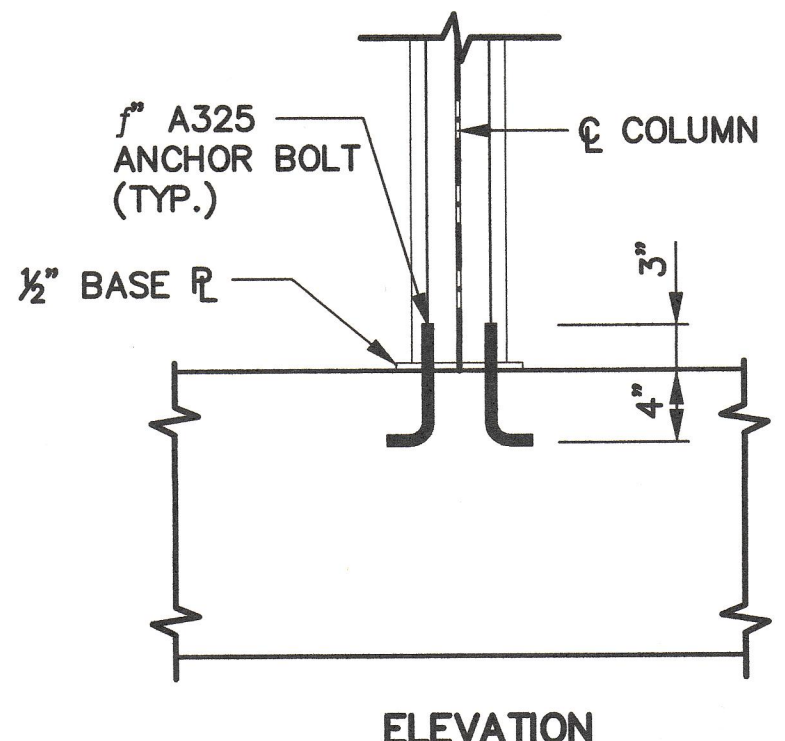
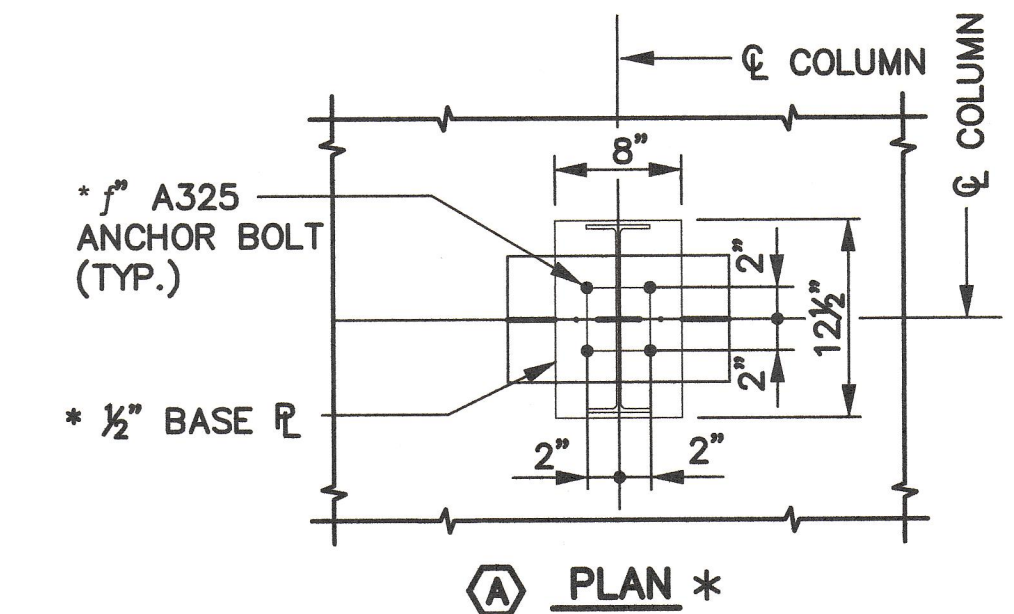
SHEET	12
PARISH	ST. TAMMANY
STATE PROJECT	H-011701
DESIGNED	A.B.
CHECKED	E.L.
DATE	01/31/19
REVISION	DESCRIPTION
NO.	DATE
1	06/08/2019
ST. TAMMANY REGIONAL AIRPORT HANGAR LAYOUT AIRPORT CORPORATE HANGAR FACILITIES	
VOLKERT INC.	



* DESIGN, DIMENSIONS, ETC. TO BE DETERMINED BASED UPON MANUFACTURE REQUIREMENTS.

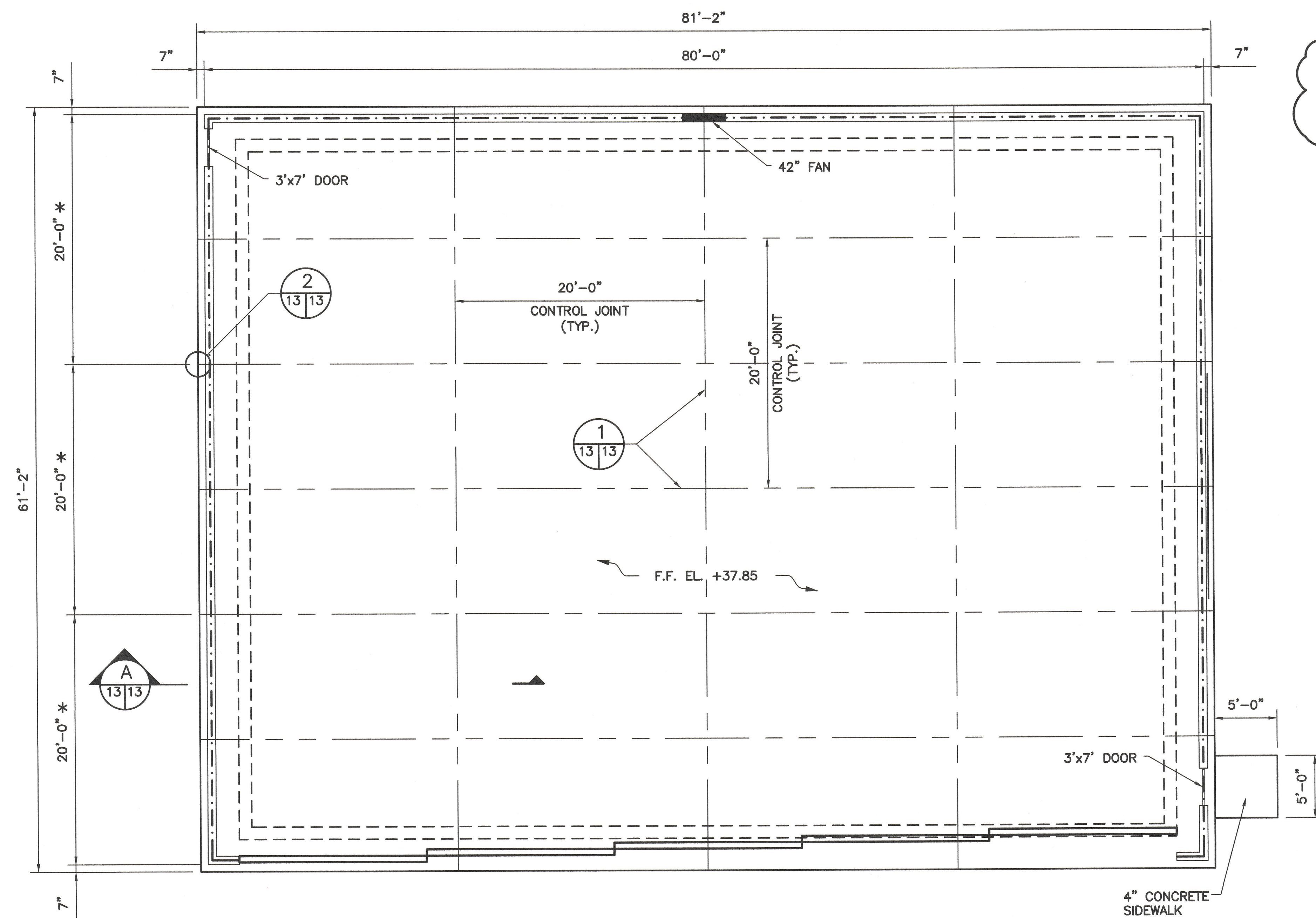


1 TYPICAL CONTROL JOINT
SCALE: 1 1/2" = 1'-0"

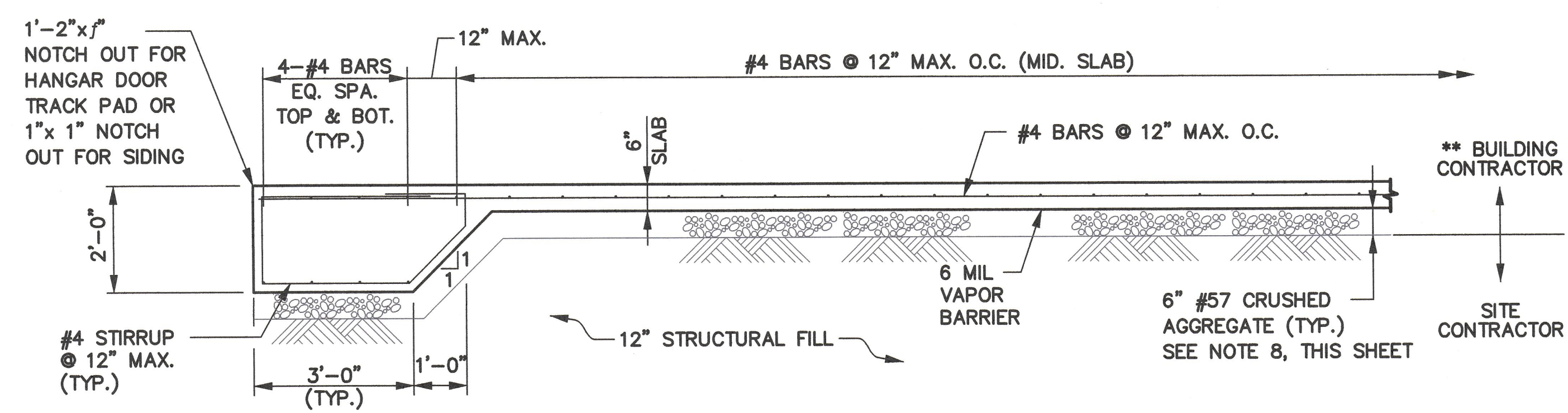


2 ANCHOR BOLT DETAIL *
SCALE: 1" = 1'-0"

FINAL PLANS



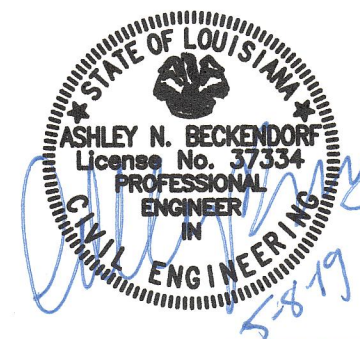
PLAN
SCALE: 1/8" = 1'-0"



A SLAB REINFORCEMENT *
SCALE: 1/2" = 1'-0"

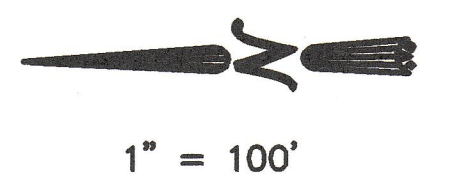
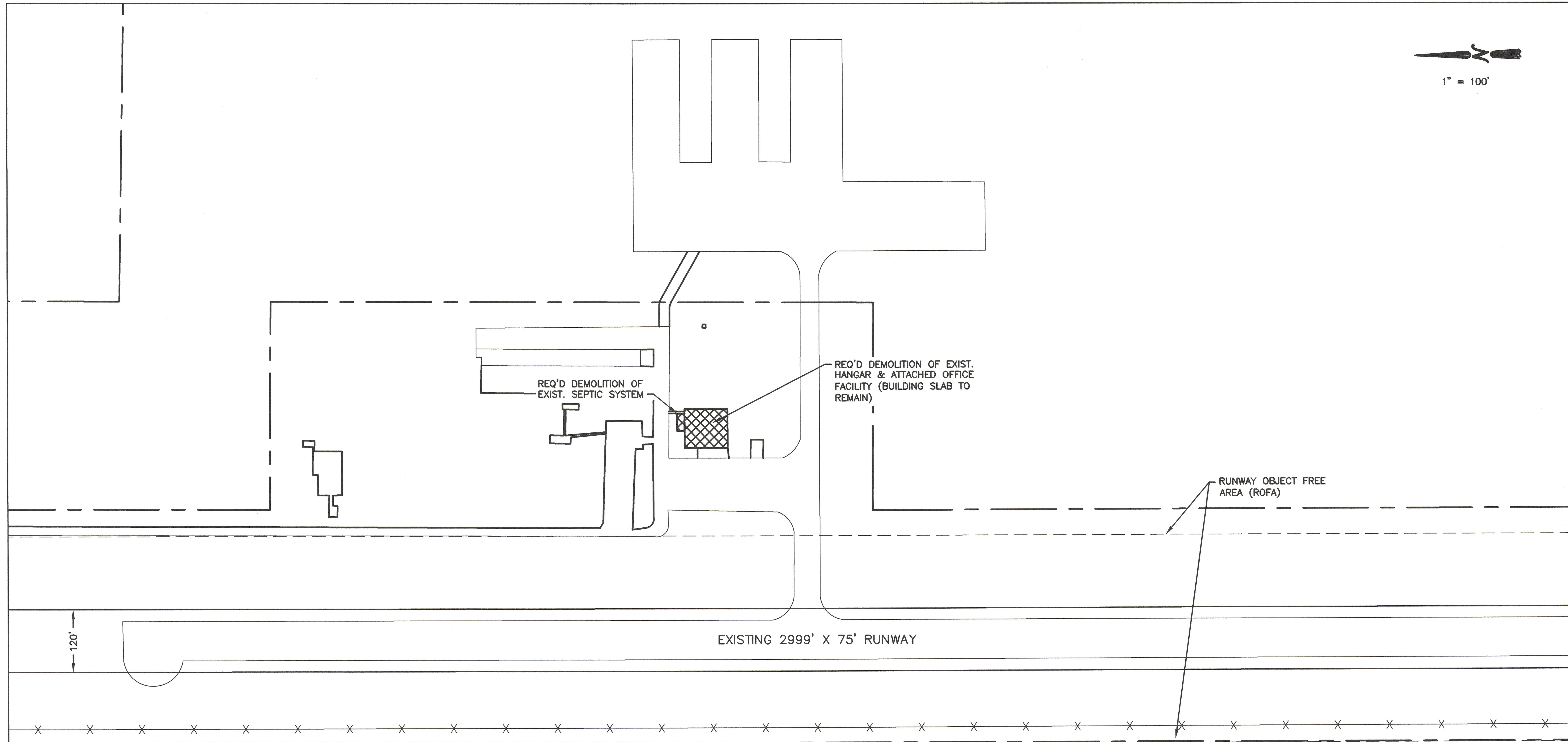
GENERAL CONCRETE NOTES:

1. ALL CONCRETE SHALL BE NORMAL WEIGHT AND DEVELOP 3,000 PSI ALL REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS INDICATED OTHERWISE.
2. CONTINUOUS BARS IN FOUNDATIONS SHALL HAVE SPLICES STAGGERED A MINIMUM OF 4'-0".
3. DETAIL BARS IN ACCORDANCE WITH A.C.I. DETAILING MANUAL AND A.C.I. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST EDITIONS.
4. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOWN ON THE DRAWINGS.
5. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185 MIN. (GRADE 60). PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT W.W.F. AT POSITIONS INDICATED ON THE DRAWINGS. WIRE FABRIC MUST LAP ONE FULL MESH PLUS 6" AT ALL SIDE AND END LAPS, AND SHALL BE TIED TOGETHER.
6. CONSTRUCTION JOINTS NOT REQUIRED WHEN SLAB IS POURED IN ONE CONTINUOUS POUR, OTHERWISE CONTRACTOR SHALL SUBMIT PROPOSED POURING SEQUENCE WITH CONSTRUCTION JOINT LOCATIONS TO THE ENGINEER FOR APPROVAL. METAL S.I.P. FORMS MAY BE SUBSTITUTED FOR SAWCUT JOINTS AT NO ADDITIONAL COST.
7. THE BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE FOUNDATION AND SLAB.
8. SEE APPENDIX C FOR GEOTECHNICAL REPORT AND RECOMMENDATIONS.
9. THE TRACK SYSTEM FOR THE SLIDING DOORS SHALL BE DESIGNED TO DRAIN.



DESIGNED	A.B.	ST. TAMMANY
CHECKED	E.L.	PARISH
DATE	01/31/19	STATE PROJECT
NO.	1	H.011701
DATE	05/09/2018	
REVISION DESCRIPTION		
ST. TAMMANY REGIONAL AIRPORT HANGAR FOUNDATION PLAN (SAMPLE)		
AIRPORT CORPORATE HANGAR FACILITIES		
VOLKERT INC.		

FINAL PLANS



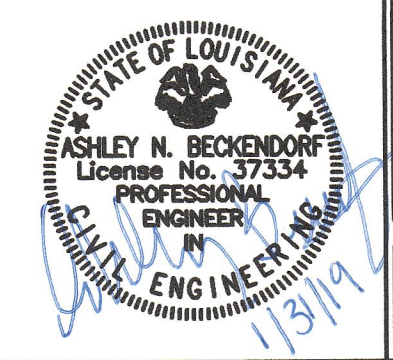
NOTES:

1. ALL DEMOLITION AND ABANDONMENT ACTIVITIES SHALL OCCUR ONLY AFTER THE NEW TERMINAL AND HANGAR FACILITIES ARE COMPLETE AND ALL REMAINING ITEMS HAVE BEEN REMOVED FROM THE BUILDINGS.
2. PHASE II OF THIS PROJECT WILL REQUIRE AN ADDITIONAL NOTICE TO PROCEED TO BEGIN WORK.
3. ALL UNATTACHED ITEMS IN THE EXISTING HANGAR AND TERMINAL FACILITIES WILL BE REMOVED BY THE FBO AFTER THE COMPLETION OF THE NEW TERMINAL AND HANGAR FACILITIES. WHEN THE NOTICE TO PROCEED IS GIVEN FOR PHASE II ALL REMAINING ITEMS MAY BE SALVAGED BY THE CONTRACTOR OR OTHERWISE DEMOLISHED.
4. ISSUANCE OF A NOTICE TO AIRMEN (NOTAM) REQUIRES 48 HOURS PRIOR NOTICE TO THE OWNER. THE CONTRACTOR SHALL COORDINATE HIS WORK SCHEDULE WITH THE ENGINEER, AND REQUEST ISSUANCE OF A NOTAM TO THE OWNER THROUGH THE ENGINEER.

LEGEND:

DEMOLITION

SHEET		17	
DESIGNED		A.B.	
CHECKED		E.L.	
DATE		01/31/19	
DESIGNED		P.L.	
CHECKED		E.L.	
DATE		01/31/19	
BY		ST. TAMMANY	
PROJECT		H-011701	
DESCRIPTION		AIRPORT CORPORATE HANGAR FACILITIES	
TITLE		DEMOLITION PLAN	
FIRM		VOLKERT INC.	



00

St. Tammany Regional Airport
 25048 Highway 36
 Abita Springs, La 70420

Mandatory Pre-Bid Sign-In Sheet
Airport Corporate Hangar Facilities
Bid# 19-13-2

Thursday, May 2, 2019
 10:00 AM CST/CDT

	Name	Company	Email	Phone	Time In	Time Out
1	SUSANNA KORTZ	BARNES ELECTRIC	estimating@wjbe.com SKortz@wjbe.com	504.382.3695	9:35	10:25
2	Manus Canal	McDonald Const	Manus.mcdonald construction@yaho.com	985-641-8621 985 960.0010 (C)	9:39	10:23
3	Wynn Ward	W.H. WARD, LLC.	Wynn.E.WardBuilders.net	(504) 362-0532 (985) 789-0125	9:40	10:25
4	Dan Alexis	MAGEE BUILDERS	dan@mageebuilders.net	(985) 249-4526	9:42	10:25
5	Eric Denhart	Gibbs Const.	bid@gibbsconstruction.com	(504)-733-4336	9:44	10:25
6	Desiree Harman	Magee Builders	desiree@mageexcavation.net	251-3216695	9:45	10:25
7	Ken Decker	Excilibur	kjdecke@excint.com	985-707-7448	9:45	10:25
8	DANNY BROWN	MCMATH CONST	DANNY@MCMATHCONSTRUCTION	985-624-9010	9:50	10:25
9	Megan McClure	Hernandez Consulting	bid@hernandezconsulting.com	504-305-8571	9:51	10:25
10	Tracy Goldman	BEI General Contractors	tgoldman@beigc.com	504-712-0234	9:52	10:25
11	J. H. J.	CUZAW	Cuzawgeel.ckes@gmail.com	504 723 9791	9:55	10:25
12	Mike Johnson	Combs Construction	combs@combsconstruction.com	985 264 7125	9:55	10:25

	Name	Company	Email	Phone	Time In	Time Out
13	Steele M'Daniel	Steele -R Development LLC	Steele@S-vel.com	985 234-0621	9:55 am	10:23
14	Randy Helm	Spartan	randy@spartanbuilding.com	985 215 0597	10:00	10:24
15	Bruce Crouch	STP gov	BruceC@stpgov.org	985-898-2792	9:45	10:27
16	Ashley Beckendorf	Volkert	ashley.beckendorf@volker.com	225-405-1244	9:45	10:27
17						
18						
19						
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24						
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26						



SUBSTITUTION REQUEST



Project: _____ **Substitution Request #:** _____
To: _____ **From:** _____
Firm: _____ **Date:** _____
Re: _____ **A/E Project #** _____
Contract For: _____

Specification Title: _____ **Description:** _____
Section: _____ **Page:** _____ **Article/Paragraph:** _____

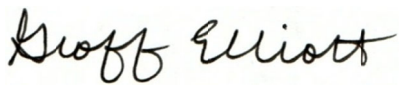
Proposed Substitution: Union Corrugating ML200 2 Inch Standing Seam Metal Roof Panel
Manufacturer: Union Corrugating 401 S King Street
Trade Name: _____ **City, St, Zip:** Fayetteville, NC 28301

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.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

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.
- 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.

Submitted by: Geoff Elliott **Signed:** 
Firm: Union Corrugating
Address: 401 S King Street **City, St, Zip:** Fayetteville, NC 28301
Telephone: 404 394-5397 **Fax:** _____ **Email:** gelliott@unioncorrugating.com

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 Photos

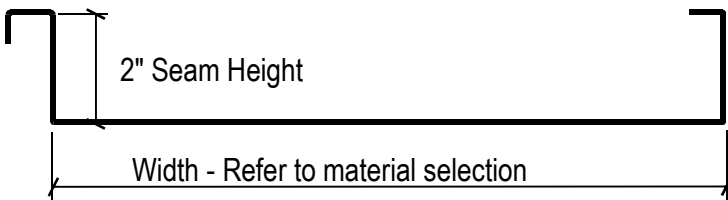
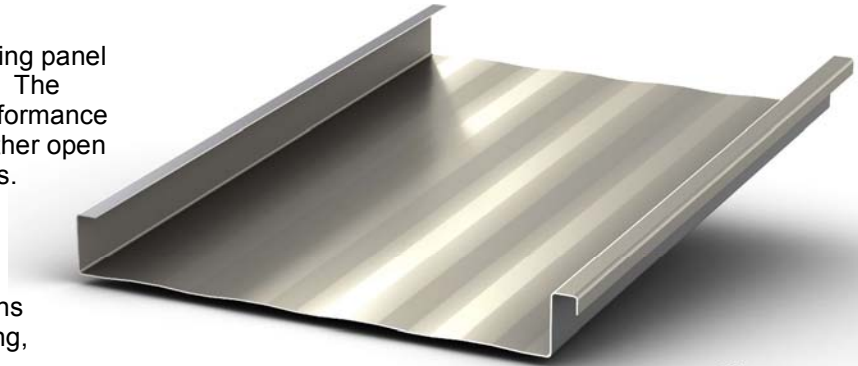
ML200 Panel

Description

ML200 is a mechanically seamed standing seam roofing panel used on low to steep sloped commercial applications. The double-lock seam profile option provides superior performance in high wind applications. The panel is attached to either open framing or solid substrate with a variety of hidden clips.

Application

ML200 panel can be applied to open framing (up to 5'-0" on center) and various solid substrate applications such as wood sheathing, wood planking, metal decking, and rigid insulation applied over metal decking.



Material

- 24 gauge AZ-50 Galvalume® steel (standard)
- 22 gauge AZ-50 Galvalume® steel (min. quantities apply)
- 0.032" Aluminum

Widths

- 16" (standard), 18.25", 14.625", and 12"
- Custom widths available. Please inquire.

Finishes

- Bare Galvalume® (with protective clear acrylic coating)
- PVDF Fluoropolymer (Kynar 500®) finish for 24 gauge, 22 gauge, and 0.032" aluminum

Profile Choices

- Striated (standard), smooth, 2 pencil ribs, or 2 bead ribs

Sealant

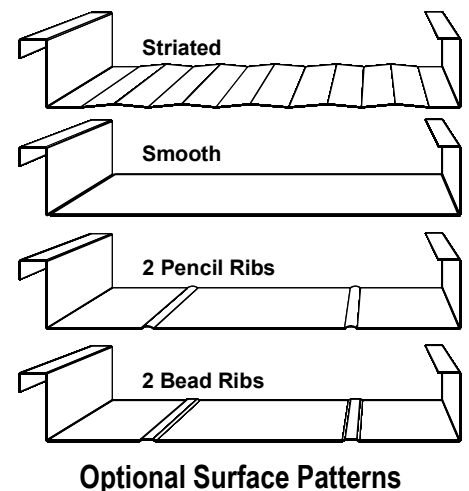
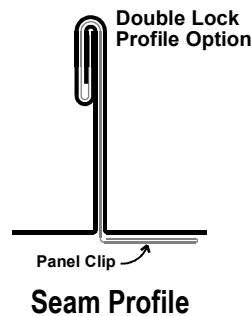
- Optional continuous butyl in-seam sealant (required for Weathertight warranty applications)

Testing

- UL90 uplift resistance classified assemblies
- UL1897 uplift resistance
- UL790 fire, class A rating
- UL2218 impact resistance, class 4
- ASTM E-1592 tested for structural performance
- ASTM E-1680-95 air infiltration tested
- ASTM E-1646-95 water penetration tested
- ASTM E-2140 Hydrostatic water tested
- Florida Product Approval (FL#7271.12)

Warranties

- 25 Year Galvalume® Substrate Warranty
- 30 Year PVDF (Kynar 500®) Warranty
- Weathertightness Warranties available





Your Roof. For Life.™

Commercial Color Chart

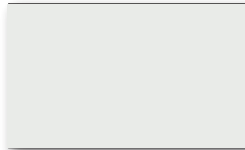
- PVDF Paint System (KYNAR 500® or HYLAR 5000®)
- 24 & 22* Gauge Galvalume® Steel Substrate
- 0.032" Aluminum

Standard Colors

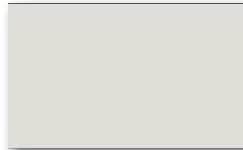
▲ Denotes Aluminum Stock Colors



REGAL WHITE ▲



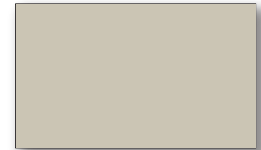
BONE WHITE



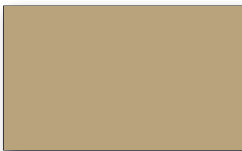
STONE WHITE



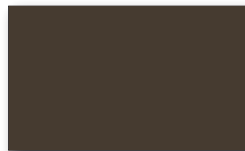
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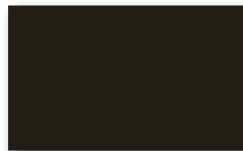
SANDSTONE ▲



SIERRA TAN



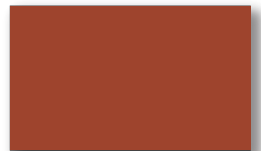
MEDIUM BRONZE ▲



MANSARD BROWN



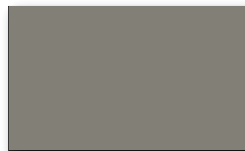
DARK BRONZE ▲



TERRA COTTA



ASH GRAY



SLATE GRAY ▲



CHARCOAL GRAY



MATTE BLACK



REGAL RED



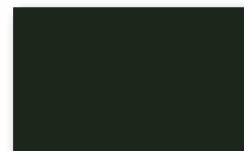
AGED COPPER



HEMLOCK GREEN



EVERGREEN ▲



HARTFORD GREEN



COLONIAL RED ▲

Premium Colors*



SLATE BLUE



PACIFIC BLUE



REGAL BLUE

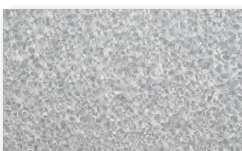


PATINA GREEN



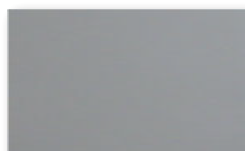
BURGUNDY

Non-Painted

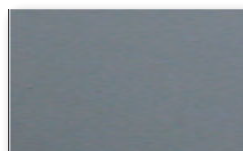


ACRYLIC COATED GALVALUME

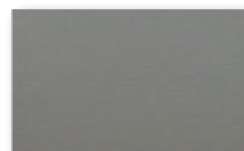
Metallic Premium Colors*



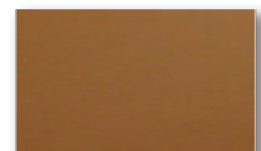
SILVER METALLIC ▲



PRE-WEATHERED GALVALUME



CHAMPAGNE METALLIC



COPPER METALLIC

NOTES:

- * 22 gauge and premium colors require nominal surcharge and minimum order quantities.
- PVDF colors on this chart do not match colors on the Union SMP color chart.
- Colors shown have been matched as accurately as possible to actual finish. For exact color match, please request a metal color sample. Availability of colors and materials are subject to change.
- Custom colors are available. Minimum quantities will apply.

PERFORMANCE DATA

COLOR	INITIAL SOLAR REFLECTANCE	3 YR. SOLAR REFLECTANCE	INITIAL THERMAL EMITTANCE	SOLAR REFLECTANCE INDEX
Aged Copper	0.49	0.49	0.87	56
Almond	0.63	0.61	0.87	75
Ash Gray	0.52	0.53	0.89	60
● Bone White	0.66	n/a	0.86	79
Burgundy	0.25	0.23	0.85	23
Champagne Metallic	0.37	0.35	0.80	37
Charcoal Gray	0.29	0.30	0.88	29
Colonial Red	0.30	0.30	0.88	30
Copper Metallic	0.49	0.47	0.86	56
Dark Bronze	0.31	0.32	0.87	32
Evergreen	0.31	0.31	0.87	32
Hartford Green	0.31	0.31	0.87	32
Hemlock Green	0.32	0.32	0.87	33
Mansard Brown	0.31	0.32	0.87	32
Matte Black	0.30	0.30	0.87	30
Medium Bronze	0.31	0.32	0.87	32
Pacific Blue	0.26	0.25	0.85	24
Patina Green	0.28	0.28	0.87	28
Pre-Weathered Galvalume	0.30	n/a	0.79	27
Regal Blue	0.26	n/a	0.85	24
Regal Red	0.44	0.44	0.87	49
● Regal White	0.72	0.70	0.87	87
Sandstone	0.62	0.60	0.87	73
Sierra Tan	0.52	0.50	0.87	60
Silver Metallic	0.60	0.60	0.76	69
Slate Blue	0.36	0.36	0.87	38
Slate Gray	0.43	0.44	0.87	48
Stone White	0.63	0.61	0.87	75
Terra Cotta	0.40	0.40	0.87	44
Acrylic Coated Galvalume	0.67	0.55	0.14	56

CERTIFIED LABORATORY TEST REPORT SUMMARY

Specular Gloss at a glossmeter angle of 60° (ASTM D 523)

20 - 35%

Pencil Hardness (ASTM D 3363)

Minimum pencil hardness is "HB"

Solvent Resistance (ASTM D 5402)

Passes minimum of 100 double rubs of a MEK soaked cloth

Cross-Hatch Adhesion (ASTM D 3359)

No paint removal with Scotch #610 cellophane tape after cross-scoring with eleven horizontal and eleven vertical lines 1mm apart

Impact Resistance (ASTM D 2794)

No visible paint removal with Scotch #610 cellophane tape after direct and reverse impact of 80-inch pounds, using 5/8" steel ball on a Gardner Impact Tester

T-Bend Adhesion (ASTM D 4145)

0T to 3T, no loss of adhesion

Humidity Resistance (ASTM D 2247)

No blistering, cracking, peeling, loss of gloss or softening of the finish after 1,500 hours of exposure to 100% humidity at 100°F ± 5°F

Cleveland Condensing (ASTM D 4585)

After 240 hours, there will be no blistering or white rust

Water Immersion Resistance (ASTM D 870)

Samples immersed in distilled water at 100°F will exhibit no loss of gloss, blistering, cracking or color change after 500 hours

Salt Spray Resistance (ASTM B 117)

Samples diagonally scored and subjected to 5% neutral salt spray for 1000 hours, then taped 1 hour after removal from the test cabinet with Scotch #610 cellophane tape, exhibit no blistering, no loss of adhesion and scribe creep no greater than 1/8"

Chemical Resistance (ASTM D 1308)

No significant color change after 24 hours exposure to 10% solutions of hydrochloric and sulfuric acids, Procedure 7.2 (spot test)

Kesternich Test (ASTM G 87)

No significant color change after 10 cycles in a SO₂ chamber

Accelerated Weathering (ASTM D 822, G 151, and G 153)

After 3,000 hours, no checking, blistering, or loss of adhesion of coating system

Exterior Weathering (ASTM D 2244 and ASTM D 4214)

Color: No more than 5 Hunter units at 20 years Chalk: Rating no less than 8 at 20 years
Film Integrity: 25 years

1/8" Mandrel Bend (ASTM D 522)

No loss of adhesion

Abrasion Resistance (ASTM D 968 Method A)

Passes 60 ± 5 liters/mil of falling sand

Flame Spread Rating (ASTM E 84)

Displays a flame spread classification of A (Class 1)

LEED 2009 GREEN BUILDING RATING SYSTEM CREDIT INFORMATION

- SS Credit 7.2 Heat Island Affect: Roof
 - All colors above meet Steep-Sloped Roof (>2:12) with Solar Reflectance Index (SRI) ≥ 29
 - ● = Meets Low-Sloped Roof (≤2:12) with Solar Reflectance Index (SRI) ≥ 78
- MR Credit 4.1 Recycled Content 10% = All Union steel coil products meet this requirement
- MR Credit 4.2 Recycled Content 20% = All Union steel coil products meet this requirement
- MR Credit 5.1 Regional Materials = Consult Union for location of manufacture from one of ten regionally located manufacturing facilities

PLANT LOCATIONS

Corporate Headquarters

701 S. King St.
Fayetteville, NC 28301
(888) 685-7663

Spencer, NC

101 Lexington Ave.
Spencer, NC 28159
(800) 526-8156

Anderson, SC

200 Coe Rd.
Anderson, SC 29624
(800) 544-5169

Tifton, GA

3365 US Hwy 41 South
Tifton, GA 31794
(800) 962-9131

Orange, VA

12435 James Madison Hwy
Orange, VA 22690
(800) 762-6785

Ocala, FL

490 Oak Road
Ocala, FL 34472
(800) 331-3584

Vicksburg, MS

1463 Interplex Circle
Ceres Industrial Complex
Vicksburg, MS 39183
(888) 661-0577

Dayton, OH

1801 West High Street
Piqua, OH 45356
(877) 615-9812

Oklahoma City, OK

600 N. Sara Road
Suite B
Yukon, OK 73099
(866) 373-5286

Scranton, PA

1019 Underwood Rd.
Olyphant, PA 18447
(866) 695-6455

ML200 Panel

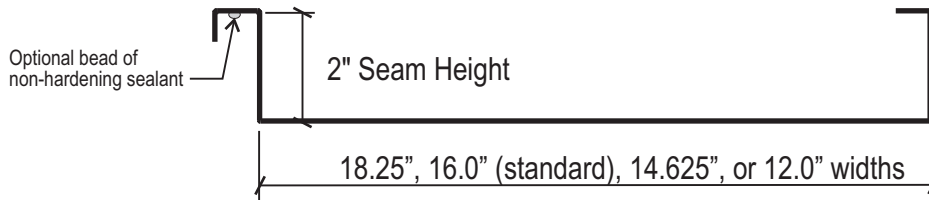
Technical Data Guide

Description

ML200 is a mechanical seamed standing seam roofing panel used on low to steep sloped commercial applications. The panel is factory formed in continuous lengths up to 60'-0" long. Attachment to either open framing or solid substrate with galvanized steel clips at specific intervals. Refer to product test results for clip spacing requirements.

Application

Product can be applied to open framing (up to 5'-0" on center) and various solid substrate applications such as wood sheathing, wood planking, metal decking, and rigid insulation applied over metal decking. Minimum recommended slope is 1/2:12. The ML200 panel is applicable for projects requiring manufacturer's weathertightness warranty.



Test Results

ASTM E-1680-95 Air Infiltration

Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel System

Static Pressure Differential	Air Infiltration Rate
1.57 psf	0.001 cfm/ft ²
6.24 psf	0.006 cfm/ft ²

ASTM E-1646-95 Water Infiltration

Standard Test Method for Water Penetration of Exterior Metal Roof Panel System by Uniform Static Air Pressure Differential

Static Pressure Differential	Water Infiltration
6.24 psf	No Water Leakage

ASTM E-1592 Structural Performance - for 16" wide, 24 gauge ML200 Panel

Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference

Clip Spacing	Ultimate Load	Design Load
12" on center	223.6 psf	111.8 psf
60" on center	88.4 psf	44.2 psf

Notes:

1. The design load is calculated by dividing the ultimate load by the factor of safety of 2.0
2. Panel seam is 180 degree (double lock) profile

UL 1897 Wind Uplift Resistance - for 16" wide, 24 gauge ML200 Panel over 22 gauge steel deck

Standard test method to provide uplift resistance data for the evaluation of the attachment of roof covering to roof decks

Clip Spacing	Ultimate Load	Design Load
12" on center	232 psf	116 psf
36" on center	142 psf	71 psf

Notes:

1. The design load is calculated by dividing the ultimate load by the factor of safety of 2.0
2. Panel seam is 180 degree (double lock) profile
3. Panel clip: ML150 #32 Expansion Clip (22 gauge)

Florida Approval Listings - Florida Bldg. Code 5th Addition (2014)

FL7271.12 ML200 Panel up to 16" wide x 24 gauge over 22 gauge steel decking



Your Roof. For Life.™

ML200 Panel Technical Data Guide

Approval Listings

UL790 Fire Resistance of Roof Covering Materials & UL2218 Impact Resistance of Roof Covering Materials

TGFU.R20494 Roofing Systems

Class A

Coated steel panels (surfacing) identified as "R Panel", "PBR Panel", "MasterRib", "5V Panel", "Advantage-Lok", "Advantage-Lok II", "Performa Steel Shingle", "Relia-Clad", "CSL Standing Seam" (SL150), "ML150", "ML200" and "SL175"

1. Deck: C-15/32 **Incline:** Unlimited **Impact:** Class 4
Barrier Board: — 1/4 in. (min) G-P Gypsum DensDeck® with all joints staggered a min of 6 in. from the plywood joints.
Ply Sheet (Optional): — Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

2. Deck: C-15/32 or spaced sheathing **Incline:** Unlimited **Impact:** Class 4
Underlayment: — One layer Elk Corp. "VersaShield Underlayment", mechanically fastened.
Ply Sheet (Optional): — One layer Type 30 base sheet or Elk Corp. "VersaShield", mechanically fastened.
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

3. Deck: C-15/32 or spaced sheathing **Incline:** Unlimited **Impact:** Class 4
Underlayment: — One or more layer Elk Corp. "VersaShield Underlayment", mechanically fastened.
Batten: — 2" x 2" wood battens
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

4. Deck: NC **Incline:** Unlimited **Impact:** Class 4
Barrier Board: — 1/4 in. min. G-P Gypsum DensDeck®.
Ply Sheet (Optional): — Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

5. Deck: NC **Incline:** Unlimited **Impact:** Class 4
Barrier Board: — 7/16 OBS or 5/8 in. plywood over polyisocyanurate insulation board or polyisocyanurate composite board, any thickness.
Ply Sheet (Optional): — Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

6. Deck: NC **Incline:** Unlimited **Impact:** Class 4
Insulation: — Polyisocyanurate, glass fiber, perlite or wood fiber, any thickness.
Ply Sheet (Optional): — Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

7. Deck: NC **Incline:** Unlimited **Impact:** Class 4
Insulation: — None required, however any UL Classified insulations may be used over open purlin spans. Any combination and any total thickness of insulation may be used.
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

Class C

Coated steel panels (surfacing) identified as "R Panel", "PBR Panel", "MasterRib", "5V Panel", "Advantage-Lok", "Advantage-Lok II", "Performa Steel Shingle", "Relia-Clad", "CSL Standing Seam" (SL150).

1. Deck: C-15/32 **Incline:** Unlimited **Impact:** Class 4
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

Maintenance and Repair Class A

Coated steel panels (surfacing) identified as "R Panel", "PBR Panel", "MasterRib", "5V Panel", "Advantage-Lok", "Advantage-Lok II", "Performa Steel Shingle", "Relia-Clad", "CSL Standing Seam", "ML150", "ML200" and "SL175".

1. Deck: C-15/32 or spaced sheathing **Incline:** Unlimited **Impact:** Class 4
Existing Roof System: — Any class A, B, or C shingle
Underlayment: — One layer Elk Corp. "VersaShield Underlayment", mechanically fastened.
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.



Your Roof. For Life.™

ML200 Panel

Technical Data Guide

Approval Listings

UL580 Class 90 Wind Uplift Resistance

Construction No. 90 - ML200 Panel over Open Framing with Batt Insulation

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Purlins: No. Z-shaped, 16 MSG minimum thickness steel (40,000 psi min. yield strength) or "H" series open web steel joist. Maximum spacing 60-1/4 inches on center
3. Panel Clips: No. 22 MSG minimum coated steel (ML200 fixed or expansion clip) at each purlin location
4. Fasteners: No. 12-14 x 1" long (min.) self-drilling hex head plated steel screw. Two screws per clip.
5. Insulation (optional): Any compressible blanket type 6 inches maximum before compression. Additional 2 inch maximum thickness of compressible blanket insulation may be used between purlins

Construction No. 176 - ML200 Panel over Open Framing with Batt Insulation

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Purlins: No. Z-shaped, 16 MSG minimum thickness steel (40,000 psi min. yield strength). Maximum spacing 60-1/4 inches on center
3. Fasteners: For panel to purlin to be 12-14 x 1" long self-drilling hex head plated steel screw with 1/2 inch washer. Spacing to be 16 inches on center with one fastener located 2 inches from the female sided of each panel.
4. Insulation (optional): Any compressible blanket type 6 inches maximum before compression. Additional 2 inch maximum thickness of compressible blanket insulation may be used between purlins

Construction No. 180 - ML200 Panel over Open Framing with Rigid Insulation

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Purlins: No. Z-shaped, 16 MSG minimum thickness steel (40,000 psi min. yield strength) or "H" series open web steel joist. Maximum spacing 60-1/4 inches on center
3. Panel Clips: No. 22 MSG minimum coated steel (ML200 fixed or expansion clip) at each purlin location
4. Bearing Plate: Minimum No. 18 MSG thickness steel, 4-1/2 inch wide x 6 inch long located at each clip
5. Fasteners: No. 12-14 self-drilling hex head plated steel screw. Length sufficient to penetrate purlin minimum 3/4 inches. Two screws per clip.
6. Insulation: Rigid type foamed plastic supplied in 4 foot sheets. Minimum thickness 1 inch, maximum thickness 3 inches
7. Liner Panel (optional): No. 29 MSG minimum coated steel; 9/16 inch depth with ribs having 3/4 inch wide crest and spaced 2.667 inches on center. (Minimum yield strength to be 80,000 psi)

Construction No. 238 - ML200 Panel over Rigid Insulation over Metal Decking

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Liner Panel (decking): 3 inch deep and fabricated of No. 22 MSG steel (yield strength to be 33,000 psi)
3. Panel Clips: No. 22 MSG minimum coated steel (ML200 fixed or expansion clip)
4. Bearing Plate: Minimum No. 18 MSG thickness steel, 4-1/2 inch wide x 6 inch long
5. Fasteners: No. 12 flat head screw to attach bearing plate to liner panel. Three fasteners per bearing plate. Screws to attached panel clip to bearing plate to be No. 18 by 1 inch long self-drilling hex washer head plated steel screw. Two screws per clip.
6. Rigid Insulation: Rigid type foamed plastic supplied in 4 foot sheets. Minimum thickness 1 inch (density min. 2 PCF)

Construction No. 238A - ML200 Panel over Rigid Insulation over Metal Decking

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Liner Panel (decking): 1-1/2 inch deep type A, B, F, or N deck fabricated of No. 22 MSG minimum gauge steel (yield strength to be 33,000 psi)
3. Panel Clips: No. 22 MSG minimum coated steel (ML200 fixed or expansion clip). Space 30 inches on center max.
4. Bearing Plate: Minimum No. 18 MSG thickness steel, 4-1/2 inch wide x 6 inch long
5. Fasteners: No. 12 x minimum 3-3/4 inch long self drilling plated steel screw. Two screws per clip
6. Rigid Insulation: Rigid type foamed plastic supplied in 4 foot sheets. Minimum thickness 1 inch (density min. 2 PCF)

Complete UL assembly information for each construction number can be referenced online at Underwriters Laboratories Online Certifications Directory (UL.com).



ML200 Panel

Technical Data Guide

Your Roof. For Life.™

Sectional Properties and Load Tables for ML200 Panel - 12" wide

12" Wide ML200 Panel - Sectional Properties

Gauge	Thickness (inches)	Weight (psf)	Yield Stress (ksi)	Allowable Shear (kips/ft)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
					I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft
24	0.0225	1.383	50	1.06	0.1833	0.1149	3.4400	0.0900	0.0809	2.4230
22	0.0285	1.747	50	1.70	0.2522	0.1619	4.7670	0.1218	0.1138	3.4070

Notes on Section Properties:

1. Section properties and allowables are calculated in accordance with North American Specification for the Design of Cold-Formed Steel Structural Members (2007 Edition)
2. I +/- is for deflection determination and S +/- is for bending determination.
3. M_a is allowable bending moment and V_a is allowable shear.
4. All values are for one foot of panel width.
5. Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

12" Wide ML200 Panel - Allowable Live and Wind Loads (psf)

Gauge	Span	Load	Span (ft)							
			2	2.25	2.5	3	3.5	4	4.5	5
24	Single	LL	573.3	453.0	366.9	254.8	187.2	143.3	113.3	91.7
		WL	403.8	319.1	258.5	179.5	131.9	92.2	64.7	47.2
	2 Span	LL	364.5	293.8	241.5	171.0	127.2	98.2	78.0	63.5
		WL	474.7	388.1	322.6	232.2	174.6	135.8	108.4	88.5
	3 Span	LL	414.6	335.6	276.8	197.1	147.0	113.7	90.5	73.7
		WL	530.8	436.7	364.9	264.7	200.1	156.2	122.2	89.1
22	Single	LL	794.5	627.8	508.5	353.1	259.4	198.6	156.9	127.1
		WL	567.8	448.7	363.4	252.4	185.4	124.8	87.6	63.9
	2 Span	LL	523.9	420.6	344.7	243.1	180.3	139.0	110.3	89.6
		WL	685.8	557.0	460.6	329.0	246.1	190.6	151.9	123.8
	3 Span	LL	598.9	482.6	396.6	280.9	208.9	161.2	128.1	104.2
		WL	772.9	631.2	524.3	377.0	283.1	220.0	165.4	120.5

Notes on Load Table:

1. Allowable live or wind load is the smallest load due to bending, shear, combined bending and shear and deflection limitation of span/240.
2. These loads are for panel strength. Panel sidelaps, clips, fasteners, and all supports must be designed or tested to resist all loads imposed on the panel.
3. Allowable wind loads based on stress have not been increased by 33.33% for wind uplift.
4. For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual 'live load' carrying of the panel.
5. LL= Live Load, WL= Wind Load.



ML200 Panel

Technical Data Guide

Your Roof. For Life.™

Sectional Properties and Load Tables for ML200 Panel - 16" wide

16" Wide ML200 Panel - Sectional Properties

Gauge	Thickness (inches)	Weight (psf)	Yield Stress (ksi)	Allowable Shear (kips/ft)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
					I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft
24	0.0225	1.267	50	0.79	0.1421	0.0846	2.5330	0.0677	0.0608	1.8220
22	0.0285	1.601	50	1.27	0.2018	0.1233	3.6920	0.0915	0.0857	2.5640

Notes on Section Properties:

- Section properties and allowables are calculated in accordance with North American Specification for the Design of Cold-Formed Steel Structural Members (2007 Edition)
- I +/- is for deflection determination and S +/- is for bending determination.
- M_a is allowable bending moment and V_a is allowable shear.
- All values are for one foot of panel width.
- Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

16" Wide ML200 Panel - Allowable Live and Wind Loads (psf)

Gauge	Span	Load	Span (ft)							
			2	2.25	2.5	3	3.5	4	4.5	5
24	Single	LL	422.1	333.5	270.2	187.6	137.8	105.5	83.4	67.5
		WL	303.6	239.9	194.3	134.9	99.1	69.3	48.7	35.5
	2 Span	LL	273.9	220.8	181.5	128.6	95.6	73.8	58.7	47.7
		WL	351.5	287.1	238.5	171.5	128.8	100.1	80.0	65.3
	3 Span	LL	311.5	252.2	208.1	148.1	110.5	85.5	68.1	55.4
		WL	393.4	323.4	270.0	195.7	147.8	115.3	91.8	67.0
22	Single	LL	615.4	486.2	393.8	273.5	200.9	153.8	121.6	98.5
		WL	427.3	337.6	273.4	189.9	139.5	93.7	65.8	48.0
	2 Span	LL	394.0	316.3	259.2	182.9	135.7	104.5	83.0	67.4
		WL	526.7	428.4	354.6	253.7	189.9	147.3	117.4	95.7
	3 Span	LL	450.4	362.9	298.3	211.3	157.1	121.3	96.4	78.4
		WL	592.6	484.8	403.1	290.4	218.4	169.9	124.2	90.6

Notes on Load Table:

- Allowable live or wind load is the smallest load due to bending, shear, combined bending and shear and deflection limitation of span/240.
- These loads are for panel strength. Panel sidelaps, clips, fasteners, and all supports must be designed or tested to resist all loads imposed on the panel.
- Allowable wind loads based on stress have not been increased by 33.33% for wind uplift.
- For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual 'live load' carrying of the panel.
- LL= Live Load, WL= Wind Load.



ML200 Panel

Technical Data Guide

Your Roof. For Life.™

Sectional Properties and Load Tables for ML200 Panel - 18" wide

18" Wide ML200 Panel - Sectional Properties

Gauge	Thickness (inches)	Weight (psf)	Yield Stress (ksi)	Allowable Shear (kips/ft)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
					I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft
24	0.0225	1.228	50	0.71	0.1280	0.0748	2.2390	0.0600	0.0541	1.6200
22	0.0285	1.553	50	1.13	0.1833	0.1099	3.2910	0.0813	0.0762	2.2810

Notes on Section Properties:

- Section properties and allowables are calculated in accordance with North American Specification for the Design of Cold-Formed Steel Structural Members (2007 Edition)
- I +/- is for deflection determination and S +/- is for bending determination.
- M_a is allowable bending moment and V_a is allowable shear.
- All values are for one foot of panel width.
- Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

18" Wide ML200 Panel - Allowable Live and Wind Loads (psf)

Gauge	Span	Load	Span (ft)							
			2	2.25	2.5	3	3.5	4	4.5	5
24	Single	LL	373.1	294.8	238.8	165.8	121.8	93.3	73.7	59.7
		WL	270.0	213.3	172.8	120.0	88.2	61.5	43.2	31.5
	2 Span	LL	243.6	196.3	161.4	114.3	85.0	65.6	52.2	42.4
		WL	311.2	254.2	211.1	151.7	114.0	88.6	70.7	57.7
	3 Span	LL	277.0	224.3	185.0	131.7	98.3	76.0	60.5	49.3
		WL	348.5	286.3	239.0	173.1	130.7	101.9	81.5	59.4
22	Single	LL	548.4	433.3	351.0	243.8	179.1	137.1	108.3	87.8
		WL	380.2	300.4	243.3	169.0	124.2	83.3	58.5	42.7
	2 Span	LL	350.6	281.5	230.7	162.7	120.7	93.0	73.8	60.0
		WL	469.1	381.6	315.9	226.0	169.2	131.2	104.6	85.3
	3 Span	LL	400.7	322.9	265.4	188.0	139.8	107.9	85.8	69.8
		WL	527.7	431.7	359.1	258.7	194.6	151.4	110.4	80.5

Notes on Load Table:

- Allowable live or wind load is the smallest load due to bending, shear, combined bending and shear and deflection limitation of span/240.
- These loads are for panel strength. Panel sidelaps, clips, fasteners, and all supports must be designed or tested to resist all loads imposed on the panel.
- Allowable wind loads based on stress have not been increased by 33.33% for wind uplift.
- For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual 'live load' carrying of the panel.
- LL= Live Load, WL= Wind Load.



30 YEAR LIMITED PAINT FINISH WARRANTY PVDF (Kynar[®] 500 or Hylar[®] 5000)

Your Roof. For Life.™

EXCLUSIVE WARRANTY

This Warranty (collectively, the "Warranty") is issued by Union Corrugating Company (hereinafter referred to as "Union"), to the customer identified in this Certificate (hereinafter referred to as "Customer") and applies to the finish on AZ50 Galvalume®, G90 Galvanized or Aluminum flat sheet and coil products (hereinafter referred to as the "Product") with PVDF based coating consisting of KYNAR 500[®] or Hylar 5000[®] resin (hereinafter referred to as the "Coating") if erected anywhere within the United States including Alaska and Hawaii.

1. Subject to the provisions contained herein, Union warrants that during the Thirty (30) Year Warranty Period, Union's Coatings will not chip, crack, peel, flake or check (except for such slight crazing or cracking as may occur on tightly roll-formed edges or break bends at the time of roll forming or other fabrication of pre-painted sheet or coil and which is accepted in the industry as standard). Subject to the provisions contained herein, Union warrants that for thirty (30) years, when installed vertically or not more than eighty-six (86E) from the vertical, the Coating will not chalk in excess of ASTM D-4214-89 method D659 number eight (8) rating. Notwithstanding the foregoing, Union makes no warranty against chalking for any embossed Products that are installed 46E or more from the vertical. Subject to the provisions contained herein, Union warrants that for thirty years (30) years, when installed vertically or not more than eighty-six (86E) from the vertical, the Coating will not fade or change color in excess of five (5) Hunter E units when measured according to ASTM D-2244-93. Color change shall be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed surface. It is understood that fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and elements. Notwithstanding the foregoing, Union makes no warranty against fading or color change for any embossed products that are installed 46E or more from the vertical.

2. This warranty does not apply to circumstances beyond Union's control, including:

- Fire or other casualty or physical damage;
- Unusual harmful fumes, foreign substances in the atmosphere, standing water, or direct salt spray;
- Any improper treatment of or defects in the metal or in the fabrication;
- Intermittent or continual submersion in water or any other liquid or solid material;
- Damage from wind, deliberate damage, improper handling by erectors; and
- Mishandled Products, e.g. ANY PRODUCT WHICH HAS BEEN ABUSED, ALTERED, MODIFIED, USED IN A MANNER NOT ORIGINALLY INTENDED, OR STORED CONTRARY TO OUR INSTRUCTIONS.

3. This Warranty will apply to product on a surface less than 1,500 feet from salt water (coast or canal), only if maintenance was performed by the building owner including a semi-annual 'sweet water' (fresh tap water) rinse in accordance with AAMA 610.02 (2002). The product must not be cleaned with abrasive or chemical cleaners.

4. This Warranty does not cover damage or deterioration resulting from moisture contamination or entrapment or any other contamination detrimental to the coating that occurs prior to installation of the Products, including, without limitation, contamination occurring during shipment of the Product to the jobsite or during storage at the jobsite. This Warranty does not cover failure due to corrosion of substrate. Other Union warranties address corrosion issues.

5. Uniform fading and color change of the Products are excluded from this Warranty, since exposure to sunlight and extremes of weather and temperature will cause any colored surface to gradually fade, darken, chalk, or acquire surface accumulation of dirt or stains. The severity of these conditions depends on the air quality, the geographic location of the property, and other local conditions over which Union has no control. Non-uniform fading and color changes are not covered by this Warranty if they result from the coated surfaces being unequally exposed to sunlight and the elements.

6. All Warranty work will be performed by Union or a company, dealer, contractor, applicator or distributor selected by Union. Since there may be a color variance between the replacement or repainted Product and the originally installed Product due to normal weathering (i.e. exposure to sunlight and extremes of temperature and weather) of the originally installed Products, this condition shall not be indicative of a defect.

7. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, UNION'S LIABILITY SHALL NOT EXCEED THE LESSER OF THE FOLLOWING: (I) THE CUSTOMER'S LIABILITY DIRECTLY ATTRIBUTABLE TO A BREACH OF THIS WARRANTY, OR (II) THE REFINISHING OR REPLACEMENT OF THE FAILED COATED MATERIAL OR AT UNION'S OPTION, REFUND OF THE PURCHASE OF THE DEFECTIVE PRODUCT. UNION SHALL NOT BE LIABLE FOR INJURY TO PROPERTY OTHER THAN THE FLAT SHEET AND/OR COIL PRODUCTS COATED WITH FLUOROCARBON PAINT SYSTEMS, IN THE CONDITION AND AS PURCHASED BY CUSTOMER FROM UNION. UNION, IN ALL INSTANCES, SHALL HAVE THE SOLE AND EXCLUSIVE RIGHT TO DETERMINE WHETHER OR NOT REFINISHING OR REPLACEMENT OF THE FAILED AREAS IS REQUIRED, AND TO FULFILL ITS OBLIGATION UNDER THE WARRANTY, UNION

RESERVES THE RIGHT TO NEGOTIATE AND APPROVE ANY FINAL CONTRACT LEFT FOR REFINISHING AND REPLACEMENT AS THE CASE MAY BE.

8. All claims under this Warranty must be presented by the Customer to Union in writing during the warranty period and within thirty (30) days after Customer becomes aware that any warranted condition has occurred. Time is of the essence and failure to give notice within the specified time shall discharge Union from any obligations under this Warranty. Union must be given a reasonable opportunity to do an on-site inspection to determine if there is a coating failure.

9. The laws of the state of North Carolina shall exclusively govern the rights and duties of the parties to this Warranty. Any controversy or claim arising out of or related to this Warranty, or the breach thereof shall be brought before a court of competent jurisdiction in North Carolina under the substantive and procedural laws of the State of North Carolina.

10. Customer acknowledges the Union is not the manufacturer or applicator of the coating warranted herein and agrees that all issues arising from or related to the exceptions set forth herein shall be determined finally and conclusively as to Customer, by the original manufacturer.

11. Due to pigment limitations, Regal Red and Matte Black are covered by a ten (10) year, eight (8) Hunter A units for fade and eight (8) rating for chalk. Copper Metallic and other metallic paints, due to instrumentation limits, have no rating available for color change.

12. THIS WARRANTY IS GIVEN AS THE SOLE AND EXCLUSIVE REMEDY BY OR AGAINST UNION, AND NO OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR PURPOSES, ARE MADE, AND ANY SUCH OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION CONTAINED IN THIS INSTRUMENT. CUSTOMER WAIVES THE BENEFIT OF ANY RULE THAT THE DISCLAIMERS OF WARRANTY SHALL BE CONSTRUED AGAINST THE SELLER, AND AGREES THAT THE DISCLAIMERS IN THIS INSTRUMENT SHALL BE CONSTRUED LIBERALLY IN FAVOR OF UNION. UNION SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. UNION HEREBY DISCLAIMS ALL LIABILITIES FOR DAMAGES BASED ON THEORIES OF NEGLIGENCE AND STRICT PRODUCT LIABILITY. THIS WARRANTY IS EXTENDED TO CUSTOMER ALONE AND NO OTHERS, IS NON-TRANSFERABLE AND NON-ASSIGNABLE, AND MAY NOT BE ENLARGED IN ITS SCOPE BY ANY REPRESENTATIVE, SALES PERSON, AGENT OR OTHER EMPLOYEE OF UNION. THE CUSTOMER SHALL NOT PERMIT ANYONE TO CLAIM OR IMPLY THAT THIS WARRANTY EXTENDS OR CAN BE "PASSED THROUGH" TO ANYONE OTHER THAN THE CUSTOMER. THIS PROVISION IS A MATERIAL TERM OF THIS WARRANTY AND ITS VIOLATION OR BREACH BY CUSTOMER OR ANY OF CUSTOMER'S AGENTS OR REPRESENTATIVES, SHALL VOID AND CANCEL THIS WARRANTY FOR ALL PURPOSES.

THE LIABILITY OF SELLER UNION SHALL NOT EXTEND TO PERSONAL INJURY, PROPERTY DAMAGE, LOSS OF PROFIT, DELAY OR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE FAILURE OF ANY PRODUCT OR COATING TO CONFORM WITH THE PROVISIONS OF THIS LIMITED WARRANTY.

UNION SHALL NOT IN ANY OTHER EVENT BE LIABLE TO THE CUSTOMER OR ANY OTHER PERSON OR ENTITY FOR ANY ACTIONS, CLAIMS, CAUSES OR ACTION, DAMAGES, EXPENSES AND/OR LIABILITIES ARISING FROM OR RELATED TO THE DESIGN, USE OR FAILURE OF THE PRODUCT OR COATING, FOR TH INTERUPTION OF THE CUSTOMER'S OPERATIONS OR BUSINESS, FOR THE COST OF LABOR EXPENDED BY OTHERS ON ANY DEFECTIVE PRODUCT OR COATING OR FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER OR LOSS OF PROFIT OR OTHER FINANCIAL LOSS ARISING OUT OF THE USE OR FAILURE OF THE PRODUCT OR COATING, EVEN IF UNION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH ACTIONS, CLAIMS, CAUSES OF ACTION, DAMAGES, EXPENSE, LOSS AND/OR LIABILITIES, WHETHER ARISING FROM BREACH OF CONTRACT, BREACH OF WARRANTY, TORT, INCLUDING NEGLIGENCE, STRICT LIABILITY OR OTHERWISE TO ANYONE BY REASON OF THE FACT THAT SUCH PRODUCT OR COATING SHALL HAVE BEEN DEFECTIVE.

Material Description: **(generic description i.e.: SL175 panels, trim, flashings, and flat sheets)**

Issued to: **(customer name)**
Address, City, State, Zip

Owner: **(owner name)**
Address, City, State, Zip

Project Info.: **(project name)**
Address, City, State, Zip

Invoice No.: **(invoice numbers w/ date)**

Effective Date: **00/00/2010**

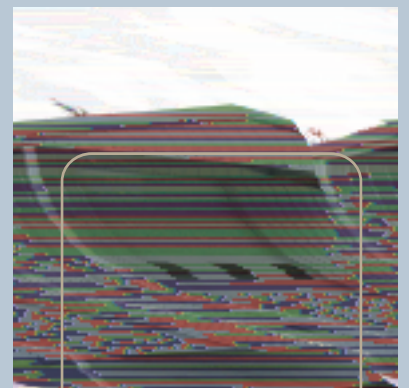
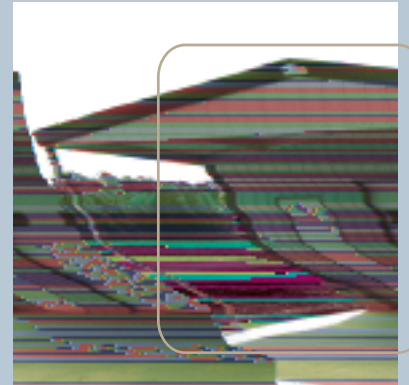
Date of Issue: **00/00/2010**

THE RIGHT SPACE DESIGNED TO FIT YOUR NEEDS.
AFFORDABLE, MAINTENANCE FREE, ENGINEERED TO LAST.

Bayou Building Kits are manufactured with the same commercial grade material used in all Ideal Steel Buildings. They are designed in accordance with your local building codes and constructed using structural beams, bolts, clips, zac fasteners, etc. Bayou Buildings are engineered and built to last.

BUILT TO FIT YOUR NEEDS:

- Extra Garage
- Home Office
- Recreation Room
- Outdoor Kitchen
- Storage for Lawn Equipment
- Hobby Room
- Repair Shop
- Storage for Boat or Tractor
- Hunting or Fishing Camp
- Extra Space for a Growing Family
- Skid Packages Available
- Temporary Housing



EASY INSTALLATION

CUSTOMIZE YOUR BAYOU BUILDING

STANDARD FEATURES:

Easy to assemble with standard tools such as socket wrenches, stepladders, screw gun, etc.

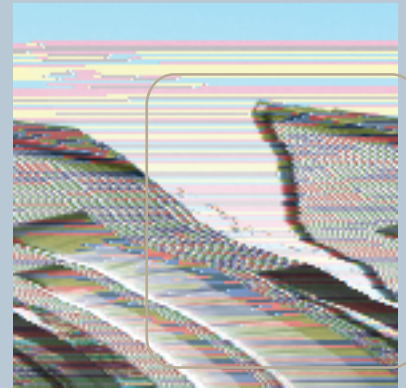
Anchor Bolt Plan furnished at time of purchase.

26 gauge, all-steel panel construction – same as found in commercial metal buildings.

Baked-on factory finish – chip, peel and rust free with 20-YEAR limited paint warranty.

OPTIONAL FEATURES include insulation, windows, roll-up doors and skylights.

Ask about our CANOPY & FENCE KITS.

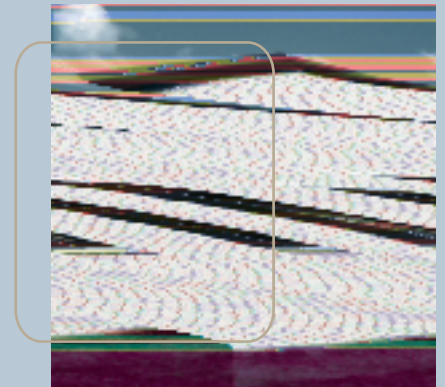


AVAILABLE SIZES:

15' x 24' x 10'	15' x 24' x 12'
21' x 24' x 10'	21' x 24' x 12'
24' x 24' x 10'	24' x 24' x 12'
24' x 30' x 10'	24' x 30' x 12'
30' x 24' x 10'	30' x 24' x 12'
30' x 30' x 10'	30' x 30' x 12'
30' x 40' x 10'	30' x 40' x 12'
30' x 50' x 10'	30' x 50' x 12'

AVAILABLE COLORS:

*Colors may not be exact



Ideal solutions for the
metal building industry

ENGINEERED TO LAST

IDEAL  **STEEL**

BUILDINGS & COMPONENTS



MISSION

Ideal Steel was founded in 2002 with a goal of offering ideal building solutions that meet and exceed industry standards and customer needs. We have the capability to design and create custom buildings and steel components using mass-customization techniques for the commercial, industrial, retail and agricultural markets. The benefits are clear. Our customers receive a building specifically suited for their needs at the price of a standard building.

Buildings are designed as systems. Each component is fabricated to work with every other component for mutual support and strength. We guarantee that your completed building will meet or exceed all design and code requirements in the most practical and cost-effective way possible.

Ideal Steel began with quality and customer service as its top priorities. Our commitment to our customers has helped our business grow while maintaining our focus on building strong relationships. From the initial contact through project completion, we emphasize clear communication, attention to detail and rapid response. We approach each project as an opportunity to earn trust, respect and future business.



EXPERIENCE

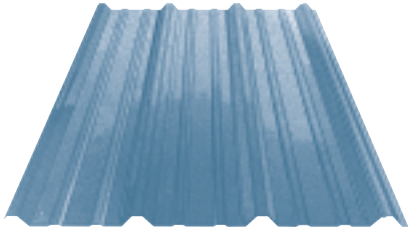
Ideal Steel's highly experienced team combines over six hundred years of experience in the metal building industry. Our engineering and detailing team offers 142 years of pre-engineered steel experience. Sales and customer service boast 200 years and our pre-engineered shop personnel have dedicated a combined 327 years.

The company is an associate member of The American Institute of Steel Construction (AISC). Our fabrication tolerances are in accordance with the recommended standards of The American Iron and Steel Institute (AISI), The American Institute of Steel Construction (AISC), The American Welding Society (AWS) and the Metal Building Manufacturers Association (MBMA).

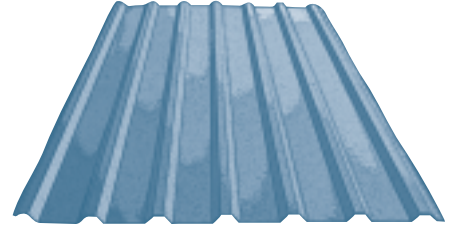
Ideal Steel also backs its buildings with product warranties. Our product warranty covers the durability and safety of our design. In addition, exterior roof and wall materials are covered by material manufacturer warranties ranging up to 30 years.



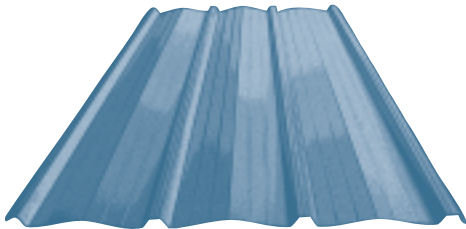
PANEL PROFILES



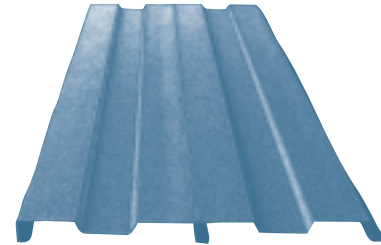
The standard **PBR & R** panels are 26 gauge Galvalume® material, roll-formed into a high-strength, structured shape. Both offer a shoulder support side top feature, for added stability. The exterior finish is available in an unpainted panel with a 20-year warrantied aluminum/zinc coating. Fasteners are color coated to match the exterior finish.



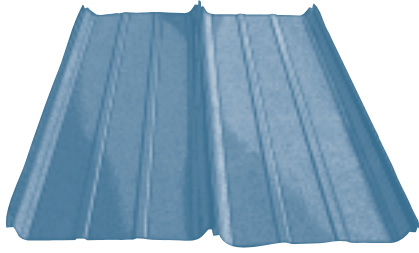
The **PBU** panel features a fluted face with distinctive shadow lines. For long spans and aggressive wind load applications, this panel requires through-bolt connections. Less-demanding applications can use concealed fastener-type connections. This panel can be applied as walls and fascias over light gauge framing, purlins, girts, structural steel and joists.



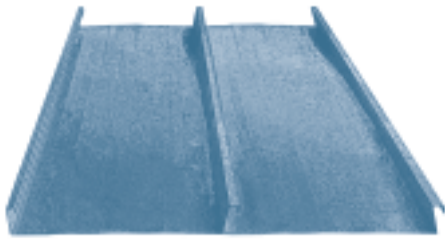
The **PBA** panel is manufactured with 26 gauge Galvalume® material and is available with a warranty on the aluminum/zinc coating. This wall panel uses recessed screws to provide the architectural effect of an uninterrupted exterior appearance.



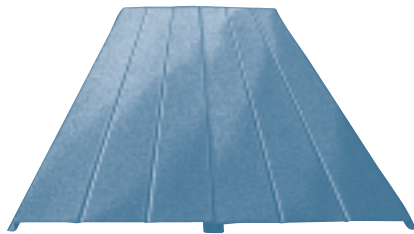
The **Shadow Rib** serves as an attractive and cost effective architectural wall panel. The higher rib provides the extra strength that is needed for longer spans and the deeper shadow line provides a unique architectural appearance. This panel can be used for walls, fascias and equipment screens.



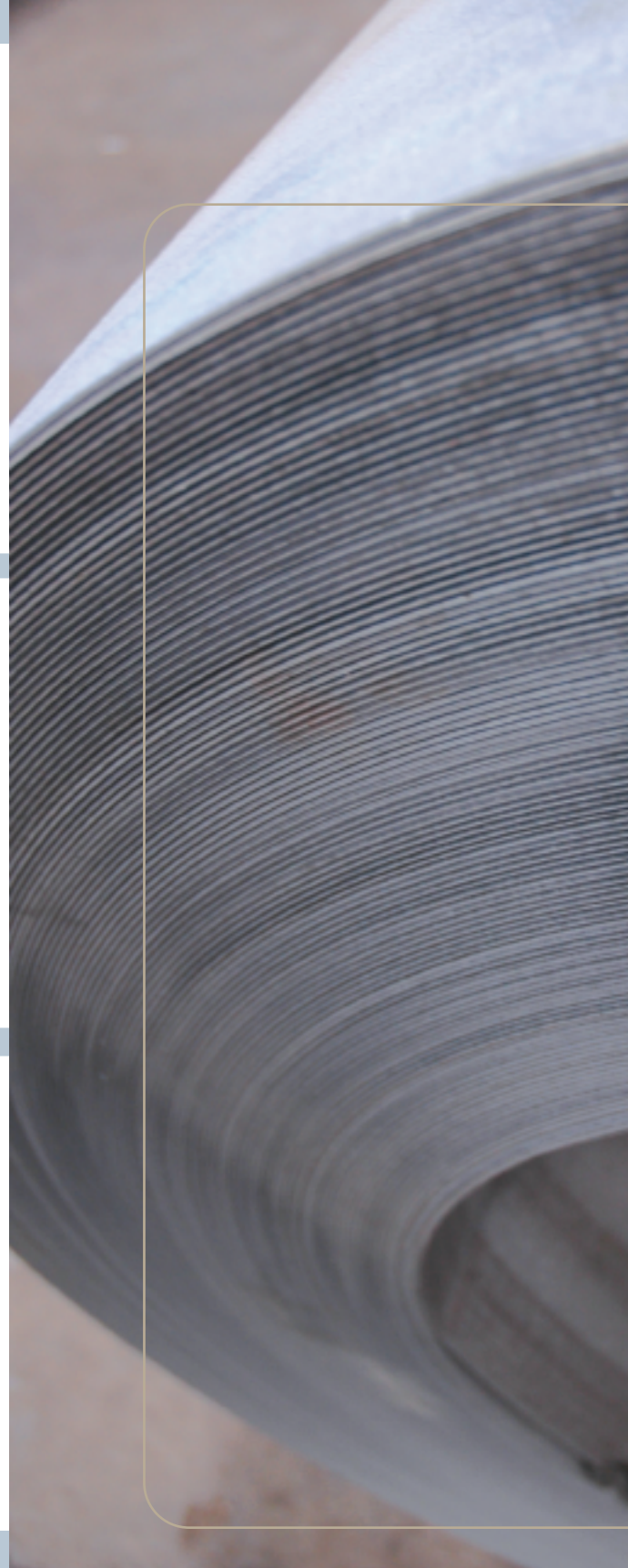
The **Ultra-Dek 124®** & **Double-Lok 124®** Standing Seam panels have a unique factory-applied mastic standing seam that rises three inches above the lowest part of the panel. Simple to install, this panel is UL90 approved for strength, durability and weather resistance.



The **BattenLok®** is a field-seamed system offering clean lines and slim rib aesthetics. This system utilizes factory-applied mastic to insure weather-tight seams. Striated option available.









The simplicity of the **Artisan Series** is its best design feature. Uniform dimensions and clean appearance allow the designer to plan modules, eliminate complicated pieces and follow wall curvatures. This panel has a factory-applied sidelap sealant for watertight connection.



PRODUCT DESIGN

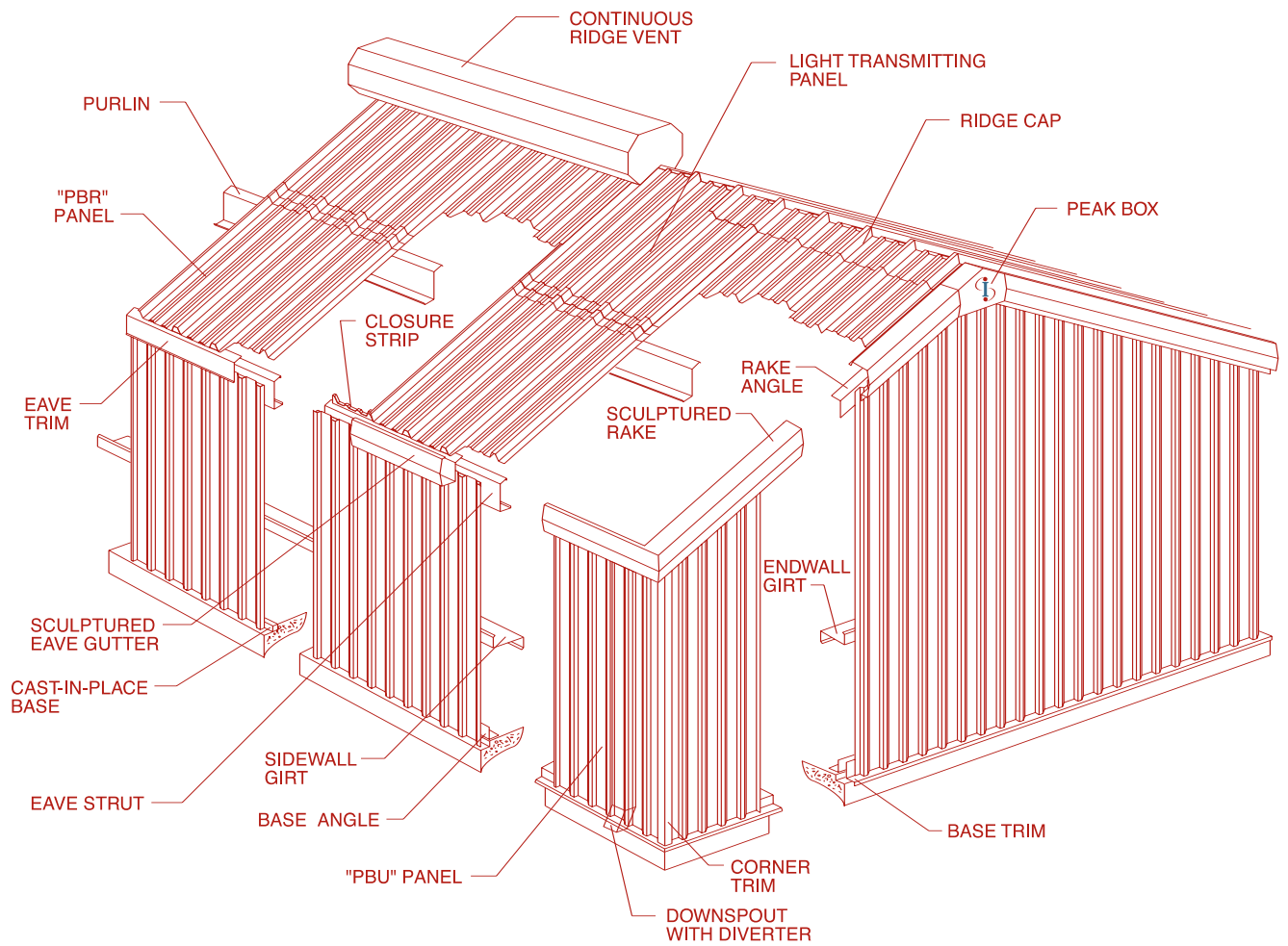
Ideal Steel's pre-engineered steel buildings are created from customized manufactured parts that are then assembled using a modular method of construction. By combining the strength of the individual components, we can custom design building systems to fit a wide range of needs.

BUILDING TYPE	ECONOMICAL SPAN
SS SINGLE SLOPE	
CS CLEAR SPAN	
M1 1 INTERIOR COLUMN	
M2 2 INTERIOR COLUMNS	
M3 3 INTERIOR COLUMNS	
LT LEAN TO	

For application and design flexibility, we offer:

- **Clearspan widths from 20-200 feet.** Widths within this range do not require interior columns, allowing the design to have large areas of unbroken space.
- **Modular widths from 80-400 feet.** Widths through 400 feet are available with interior column supports. These long spans give full use of space with the freedom to change floor layouts as needs evolve.
- **Building expansion.** When additional room is needed, buildings are ideally suited for expansion without demolishing block walls or destroying costly wall materials.
- **Adaptation of buildings.** Our design flexibility improves resale and investment value because a new owner can easily adapt our steel building to his/her needs.
- **Erector-friendly buildings that go up fast.** From blueprint to finished building, your customers can be in business faster, realizing profits sooner.





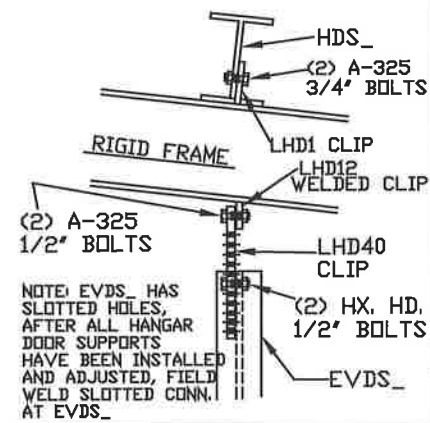
Ideal Steel's catalog of metal buildings includes a wide variety of accessory or collateral products and material options. Many accessory items are available in the standard color selection of your choice, while some are available only in one color. All accessory parts and colors are designed to complement each other, ensuring satisfaction with the finished building system. Ideal Steel custom buildings are engineered to last.

AVAILABLE ACCESSORIES

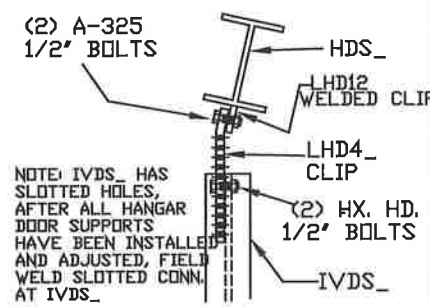
Vents • Doors • Fasteners • Ridge Caps • Closures • Windows • Sealants
 Insulation • Bracing • Bolts • Louvers • Hat Channel • Translucent Panels

109 Burgess Drive • Broussard LA 70518 • p 337.837.4051 • f 337.837.2650 • www.idealsteel.net

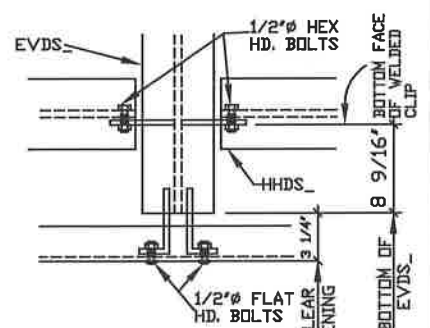




HDSD-A

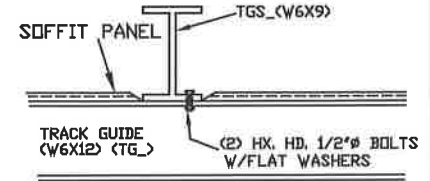


HDSD-A1



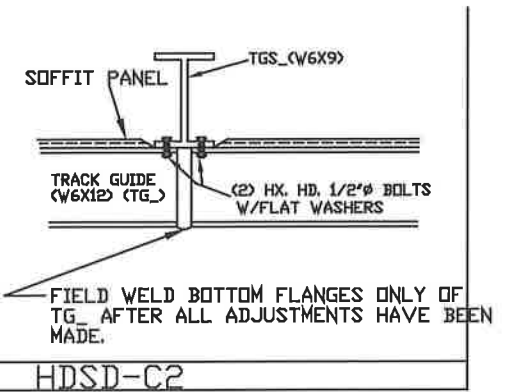
NOTE: INSTALL EVDS (AND IVDS) AT ELEVATION SHOWN ON HANGAR DOOR SUPPORT FRAMING SECTION.

HDSD-B

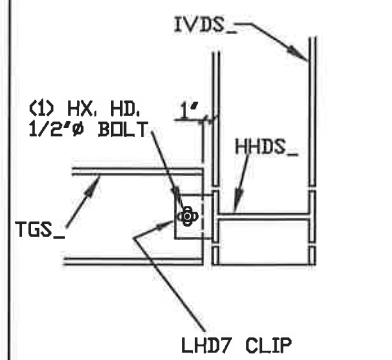
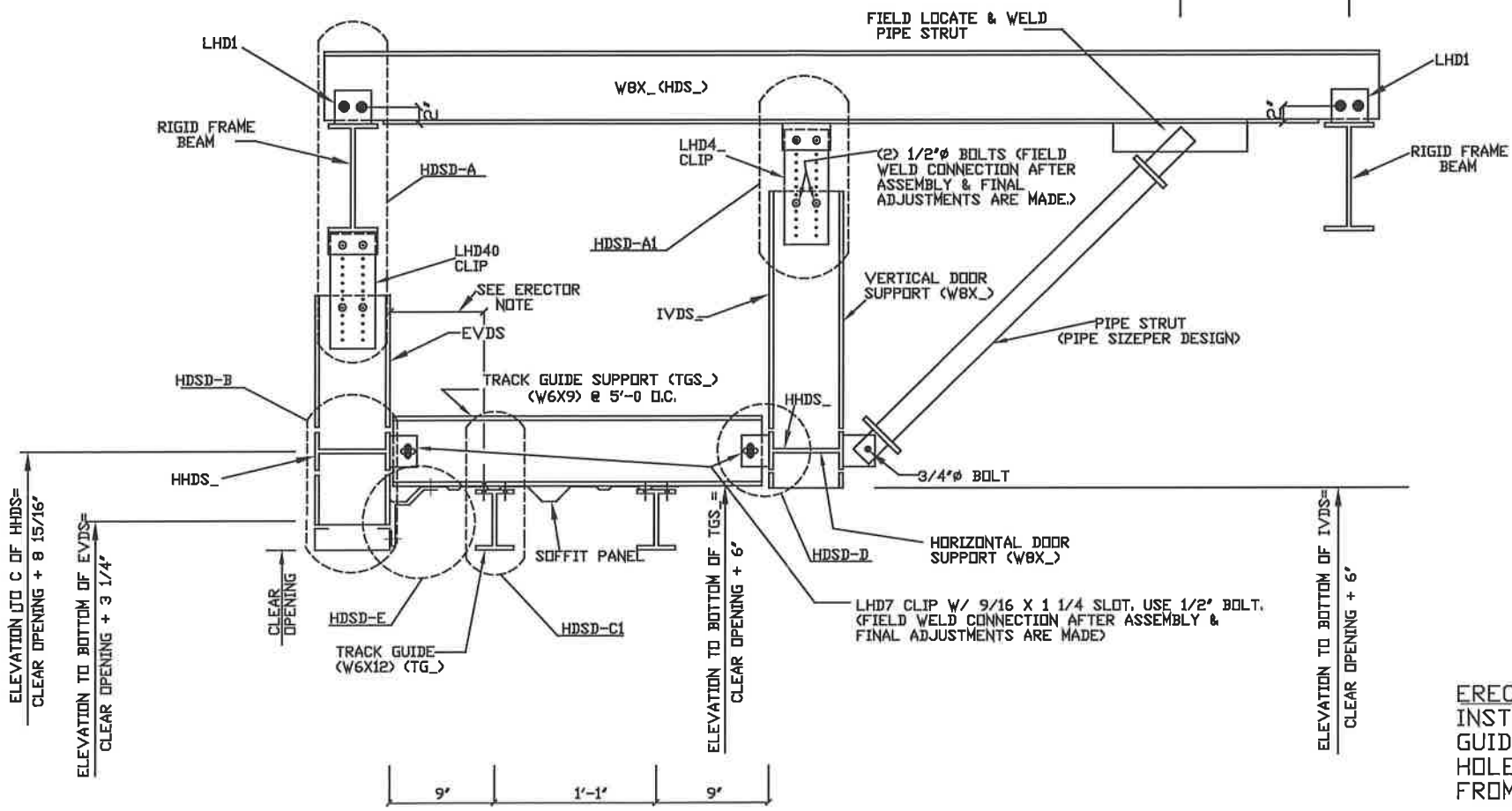


NOTE: AFTER PANELS ARE INSTALLED FIELD DRILL HOLES THRU PANELS AT TG_ TO TGS_ CONNECTION. HOLES IN TG_ ARE 13/16\"/>

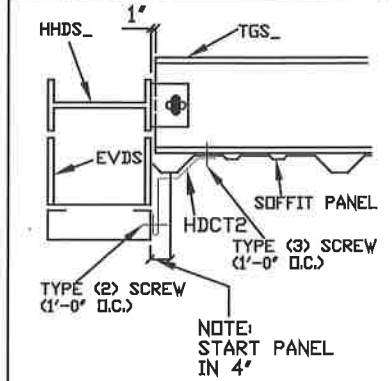
HDSD-C1



HDSD-C2



HDSD-D



HDSD-E

ERECTOR NOTE: INSTALL (TGS_) TRACK GUIDE SUPPORT W/FIRST HOLE IN FLANGE 6 7/8\"/>

HANGAR DOOR SUPPORT FRAMING SECTION
(4 LEAF DOOR-W/ DOOR LINER & W/ POCKET LINER)



Information Packet

Pinnacle Structures, Inc.
2665 Highway 321 Bypass
Cabot, Arkansas 72023

PH 800 201 1534
FX 501 941 1804

www.pinnaclestructures.com
info@pinnaclestructures.com



Background

Pinnacle Structures Inc., began in 1994, with the belief that the industry did not need just one more pre-engineered metal building manufacturer. Pinnacle's management team and investment group set forth a mission to offer deliveries consistently in a 4 - 6 week range, at competitive pricing, and with an extra commitment to builder service.

Timeline:

- **1995:** Pinnacle Structures opens a larger facility on 21 acres in Cabot, Arkansas, to house administrative, estimating, engineering and operations.
- **1996:** Pinnacle demonstrates commitment to their industry by joining the Metal Building Manufacturers of America (MBMA)
- **1996:** Opting to offer complimentary services to builders, Pinnacle Structures opens The Metal Store - offering components and custom trim.
- **1999:** Pinnacle begins roll-forming panels in-house.
- **1999:** Pinnacle becomes one of the youngest companies to achieve AISC-MB certification. Pinnacle continues as the only AISC-MS certified supplier headquartered in Arkansas. The American Institute of Steel Construction (AISC) performs a rigorous audit of both engineering and manufacturing every year.
- **2000:** Pinnacle initiates the ESOP program. Although Pinnacle employees have historically displayed a personal interest in providing the highest levels of quality in their product, the ESOP program provides formal ownership, and reward, for the successes of the company, and also successes of their builders.
- **2005:** Pinnacle begins roll-forming purlins in-house.
- **2008:** Pinnacle begins roll-forming standing seam roofs, trim and 29 gauge panels in house.
- **1999-2008:** Pinnacle maintains their AISC-MB certification as the only Arkansas based certified metal building manufacturer.
- **2008 - Present:** Pinnacle received International Accreditation Service (IAS) certificate and becomes IAS certified (AC472).

Pinnacle Team:

- **Engineering/technical:** Pinnacle employs an impressive depth of engineering support. Serving as a point of reference over the phone and in the field, 2 civil engineers, 11 draftsmen and 5 inside sales staff support the builder, the architect, and operations. These people are dedicated to delivering the highest quality product and level of service.
 - **Production:** Pinnacle operates its plant with quality control programs and full-time quality control personnel. All welders are fully certified and receive supervision by a certified welding inspector with significant industry experience. Plant management is evaluated on the quality of product and the efficiency of production.
 - **Shipping:** Shipments are on Pinnacle's own fleet of trucks with courteous drivers, committed to delivery on the date and the hour. Operating a dedicated trucking fleet allows for more than dependable delivery. Unlike commercial trucking lines that often carry many different products, Pinnacle only ships components and metal building systems. Therefore, Pinnacle knows how to load these systems in ways that minimize damage, reduce time spent unloading and allows the builder greater certainty that everything they paid for is at the site.
 - **Sales:** In addition to outside sales staff, Pinnacle's in-house estimating team is encouraged to create relationships with builders, allowing reliable and responsive pricing.
 - **Administration:** Pinnacle places a very high standard for its financial stewardship that has resulted in excellent banking and supplier relationships, often utilizing discounts. A chief account oversees monthly financial statements and generates accurate job costing for every building produced.
 - **Customer base:** Pinnacle manufactures a builder's building - detailed drawings supplied in a timely manner, all welded clips, smart loading on our own trucks, shipping on builder's schedules, and delivering a building that goes up easily and quickly. The majority of Pinnacle's business comes from repeat customers who have been pleased by the quality of building and service since Pinnacle started manufacturing. Pinnacle's doors are open for visitors, either to discuss projects with estimators, or to purchase components from the Metal Store. However, our core has always been the professional builder: general contractors and erectors. We are proud to contribute to their many projects involving education, religious, retail, private and commercial development. Pinnacle is also happy to work with architects, land developers, and committees incorporating metal building and roofing systems into their projects. In these instances, Pinnacle often recommends contractors and erectors who are familiar with our buildings to assist these individuals or groups.
-

Goals:

Pinnacle Structures, Inc. is committed to maintaining a high energy level with sustained, managed growth, manufacturing pre-engineered metal buildings on faster-than-normal delivery schedules, competitive pricing structures, and a level of service unparalleled in this industry.

In the process of achieving its goals, Pinnacle is very much involved in expanding our manufacturing capacity and constantly reviewing quality control with an attitude of “zero tolerance” toward errors. This “Pinnacle Pride”, seeking to be the very best in this industry and coming to work excited about the challenges presented by each new day, drives every element of Pinnacle Structures, Inc.



INTERNATIONAL
ACCREDITATION
SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

PINNACLE STRUCTURES, INC.

2665 BILL FOSTER MEMORIAL HIGHWAY
CABOT, ARKANSAS 72023

Inspection Program for Manufacture of Metal Building Systems MB-103

has met the requirements of AC472, *IAS Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems, Part A-Fabrication of Structural Weldments and Cold-formed Products Requiring Welding, Part B- Fabrication of Cold-formed Products Not Requiring Welding, Part C-Design of Metal Building Systems*, and the in-plant inspection program is in compliance with Section 1704.2.5.1 of the 2015 *International Building Code*®, Section 1704.2.5.2 of the 2012 *International Building Code*®, and Section 1704.2.2 of earlier code editions. Periodic plant inspections are conducted by Benchmark Holdings L.L.C. (AA-660) to monitor compliance with the requirements of AC472.

This certificate is valid up to July 1, 2019.

(Accreditation does not cover the product or the specific design or performance characteristic of the manufactured products)



This accreditation certificate supersedes any IAS accreditation bearing an earlier effective date. The certificate becomes invalid upon suspension, cancellation or revocation of accreditation. See www.iasonline.org for current accreditation information, or contact IAS at 562-364-8201.



Raj Nathan
President



SUBSTITUTION REQUEST



Project: _____ **Substitution Request #:** _____
To: _____ **From:** _____
Firm: _____ **Date:** _____
Re: _____ **A/E Project #** _____
Contract For: _____

Specification Title: _____ **Description:** _____
Section: _____ **Page:** _____ **Article/Paragraph:** _____

Proposed Substitution: Union Corrugating ML200 2 Inch Standing Seam Metal Roof Panel
Manufacturer: Union Corrugating 401 S King Street
Trade Name: _____ **City, St, Zip:** Fayetteville, NC 28301

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.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

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.
- 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.

Submitted by: Geoff Elliott **Signed:** *Geoff Elliott*
Firm: Union Corrugating
Address: 401 S King Street **City, St, Zip:** Fayetteville, NC 28301
Telephone: 404 394-5397 **Fax:** _____ **Email:** gelliott@unioncorrugating.com

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 Photos

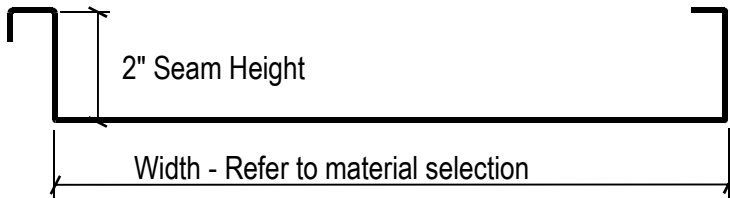
ML200 Panel

Description

ML200 is a mechanically seamed standing seam roofing panel used on low to steep sloped commercial applications. The double-lock seam profile option provides superior performance in high wind applications. The panel is attached to either open framing or solid substrate with a variety of hidden clips.

Application

ML200 panel can be applied to open framing (up to 5'-0" on center) and various solid substrate applications such as wood sheathing, wood planking, metal decking, and rigid insulation applied over metal decking.



Material

- 24 gauge AZ-50 Galvalume® steel (standard)
- 22 gauge AZ-50 Galvalume® steel (min. quantities apply)
- 0.032" Aluminum

Widths

- 16" (standard), 18.25", 14.625", and 12"
- Custom widths available. Please inquire.

Finishes

- Bare Galvalume® (with protective clear acrylic coating)
- PVDF Fluoropolymer (Kynar 500®) finish for 24 gauge, 22 gauge, and 0.032" aluminum

Profile Choices

- Striated (standard), smooth, 2 pencil ribs, or 2 bead ribs

Sealant

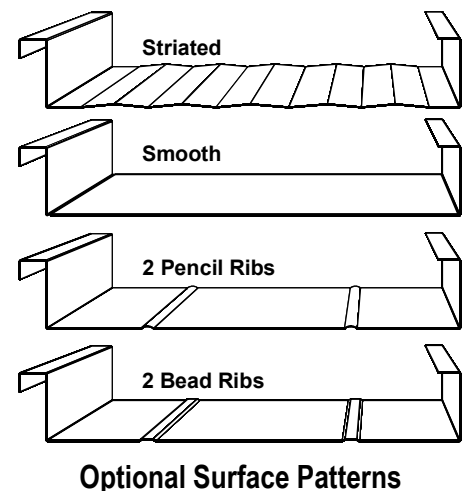
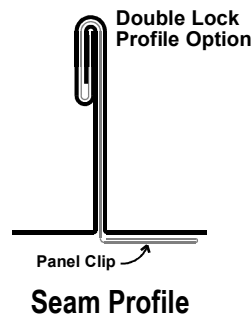
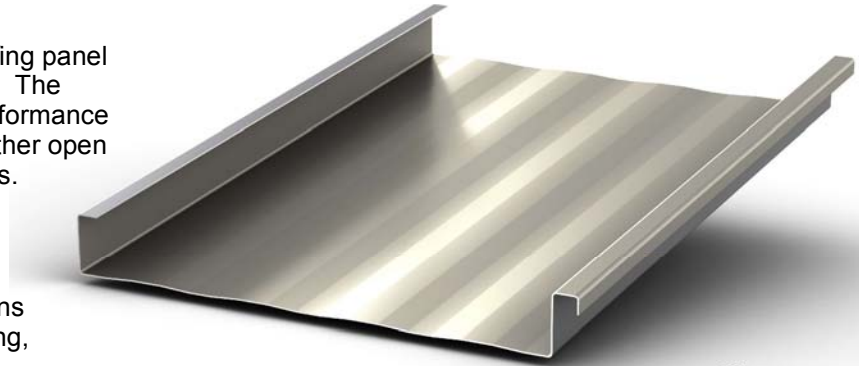
- Optional continuous butyl in-seam sealant (required for Weathertight warranty applications)

Testing

- UL90 uplift resistance classified assemblies
- UL1897 uplift resistance
- UL790 fire, class A rating
- UL2218 impact resistance, class 4
- ASTM E-1592 tested for structural performance
- ASTM E-1680-95 air infiltration tested
- ASTM E-1646-95 water penetration tested
- ASTM E-2140 Hydrostatic water tested
- Florida Product Approval (FL#7271.12)

Warranties

- 25 Year Galvalume® Substrate Warranty
- 30 Year PVDF (Kynar 500®) Warranty
- Weathertightness Warranties available





Your Roof. For Life.™

Commercial Color Chart

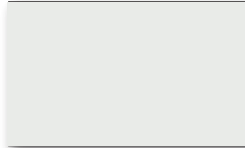
- PVDF Paint System (KYNAR 500® or HYLAR 5000®)
- 24 & 22* Gauge Galvalume® Steel Substrate
- 0.032" Aluminum

Standard Colors

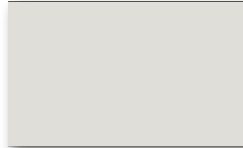
▲ Denotes Aluminum Stock Colors



REGAL WHITE ▲



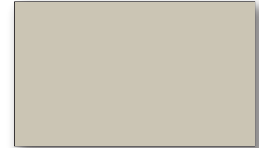
BONE WHITE



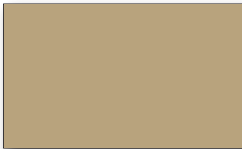
STONE WHITE



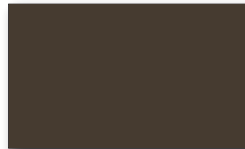
ALMOND



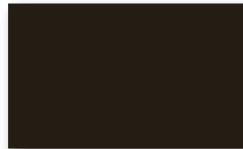
SANDSTONE ▲



SIERRA TAN



MEDIUM BRONZE ▲



MANSARD BROWN



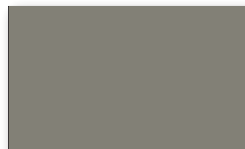
DARK BRONZE ▲



TERRA COTTA



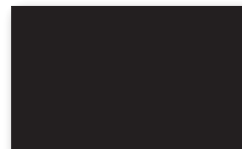
ASH GRAY



SLATE GRAY ▲



CHARCOAL GRAY



MATTE BLACK



REGAL RED



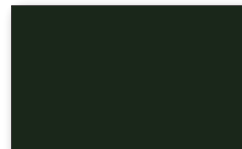
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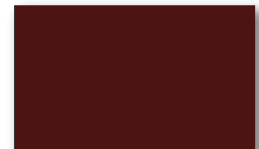
HEMLOCK GREEN



EVERGREEN ▲



HARTFORD GREEN



COLONIAL RED ▲

Premium Colors*



SLATE BLUE



PACIFIC BLUE



REGAL BLUE

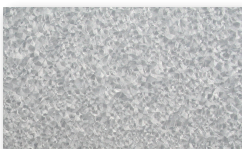


PATINA GREEN



BURGUNDY

Non-Painted



ACRYLIC COATED GALVALUME

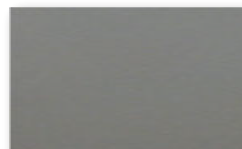
Metallic Premium Colors*



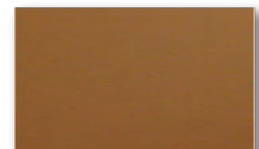
SILVER METALLIC ▲



PRE-WEATHERED GALVALUME



CHAMPAGNE METALLIC



COPPER METALLIC

NOTES:

- * 22 gauge and premium colors require nominal surcharge and minimum order quantities.
- PVDF colors on this chart do not match colors on the Union SMP color chart.
- Colors shown have been matched as accurately as possible to actual finish. For exact color match, please request a metal color sample. Availability of colors and materials are subject to change.
- Custom colors are available. Minimum quantities will apply.

PERFORMANCE DATA

COLOR	INITIAL SOLAR REFLECTANCE	3 YR. SOLAR REFLECTANCE	INITIAL THERMAL EMITTANCE	SOLAR REFLECTANCE INDEX
Aged Copper	0.49	0.49	0.87	56
Almond	0.63	0.61	0.87	75
Ash Gray	0.52	0.53	0.89	60
● Bone White	0.66	n/a	0.86	79
Burgundy	0.25	0.23	0.85	23
Champagne Metallic	0.37	0.35	0.80	37
Charcoal Gray	0.29	0.30	0.88	29
Colonial Red	0.30	0.30	0.88	30
Copper Metallic	0.49	0.47	0.86	56
Dark Bronze	0.31	0.32	0.87	32
Evergreen	0.31	0.31	0.87	32
Hartford Green	0.31	0.31	0.87	32
Hemlock Green	0.32	0.32	0.87	33
Mansard Brown	0.31	0.32	0.87	32
Matte Black	0.30	0.30	0.87	30
Medium Bronze	0.31	0.32	0.87	32
Pacific Blue	0.26	0.25	0.85	24
Patina Green	0.28	0.28	0.87	28
Pre-Weathered Galvalume	0.30	n/a	0.79	27
Regal Blue	0.26	n/a	0.85	24
Regal Red	0.44	0.44	0.87	49
● Regal White	0.72	0.70	0.87	87
Sandstone	0.62	0.60	0.87	73
Sierra Tan	0.52	0.50	0.87	60
Silver Metallic	0.60	0.60	0.76	69
Slate Blue	0.36	0.36	0.87	38
Slate Gray	0.43	0.44	0.87	48
Stone White	0.63	0.61	0.87	75
Terra Cotta	0.40	0.40	0.87	44
Acrylic Coated Galvalume	0.67	0.55	0.14	56

CERTIFIED LABORATORY TEST REPORT SUMMARY

Specular Gloss at a glossmeter angle of 60° (ASTM D 523)

20 - 35%

Pencil Hardness (ASTM D 3363)

Minimum pencil hardness is "HB"

Solvent Resistance (ASTM D 5402)

Passes minimum of 100 double rubs of a MEK soaked cloth

Cross-Hatch Adhesion (ASTM D 3359)

No paint removal with Scotch #610 cellophane tape after cross-scoring with eleven horizontal and eleven vertical lines 1mm apart

Impact Resistance (ASTM D 2794)

No visible paint removal with Scotch #610 cellophane tape after direct and reverse impact of 80-inch pounds, using 5/8" steel ball on a Gardner Impact Tester

T-Bend Adhesion (ASTM D 4145)

0T to 3T, no loss of adhesion

Humidity Resistance (ASTM D 2247)

No blistering, cracking, peeling, loss of gloss or softening of the finish after 1,500 hours of exposure to 100% humidity at 100°F ± 5°F

Cleveland Condensing (ASTM D 4585)

After 240 hours, there will be no blistering or white rust

Water Immersion Resistance (ASTM D 870)

Samples immersed in distilled water at 100°F will exhibit no loss of gloss, blistering, cracking or color change after 500 hours

Salt Spray Resistance (ASTM B 117)

Samples diagonally scored and subjected to 5% neutral salt spray for 1000 hours, then taped 1 hour after removal from the test cabinet with Scotch #610 cellophane tape, exhibit no blistering, no loss of adhesion and scribe creep no greater than 1/8"

Chemical Resistance (ASTM D 1308)

No significant color change after 24 hours exposure to 10% solutions of hydrochloric and sulfuric acids, Procedure 7.2 (spot test)

Kesternich Test (ASTM G 87)

No significant color change after 10 cycles in a SO₂ chamber

Accelerated Weathering (ASTM D 822, G 151, and G 153)

After 3,000 hours, no checking, blistering, or loss of adhesion of coating system

Exterior Weathering (ASTM D 2244 and ASTM D 4214)

Color: No more than 5 Hunter units at 20 years Chalk: Rating no less than 8 at 20 years
Film Integrity: 25 years

1/8" Mandrel Bend (ASTM D 522)

No loss of adhesion

Abrasion Resistance (ASTM D 968 Method A)

Passes 60 ± 5 liters/mil of falling sand

Flame Spread Rating (ASTM E 84)

Displays a flame spread classification of A (Class 1)

LEED 2009 GREEN BUILDING RATING SYSTEM CREDIT INFORMATION

- SS Credit 7.2 Heat Island Affect: Roof
 - All colors above meet Steep-Sloped Roof (>2:12) with Solar Reflectance Index (SRI) ≥ 29
 - ● = Meets Low-Sloped Roof (≤2:12) with Solar Reflectance Index (SRI) ≥ 78
- MR Credit 4.1 Recycled Content 10% = All Union steel coil products meet this requirement
- MR Credit 4.2 Recycled Content 20% = All Union steel coil products meet this requirement
- MR Credit 5.1 Regional Materials = Consult Union for location of manufacture from one of ten regionally located manufacturing facilities

PLANT LOCATIONS

Corporate Headquarters

701 S. King St.
Fayetteville, NC 28301
(888) 685-7663

Spencer, NC

101 Lexington Ave.
Spencer, NC 28159
(800) 526-8156

Anderson, SC

200 Coe Rd.
Anderson, SC 29624
(800) 544-5169

Tifton, GA

3365 US Hwy 41 South
Tifton, GA 31794
(800) 962-9131

Orange, VA

12435 James Madison Hwy
Orange, VA 22690
(800) 762-6785

Ocala, FL

490 Oak Road
Ocala, FL 34472
(800) 331-3584

Vicksburg, MS

1463 Interplex Circle
Ceres Industrial Complex
Vicksburg, MS 39183
(888) 661-0577

Dayton, OH

1801 West High Street
Piqua, OH 45356
(877) 615-9812

Oklahoma City, OK

600 N. Sara Road
Suite B
Yukon, OK 73099
(866) 373-5286

Scranton, PA

1019 Underwood Rd.
Olyphant, PA 18447
(866) 695-6455

ML200 Panel

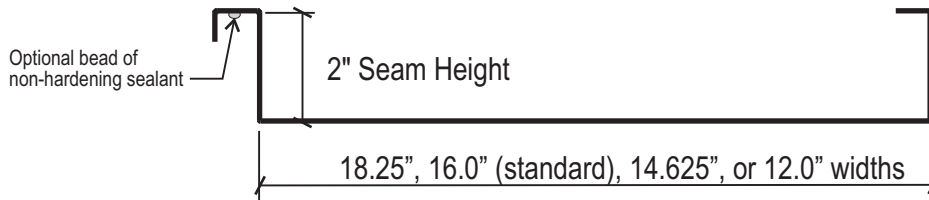
Technical Data Guide

Description

ML200 is a mechanical seamed standing seam roofing panel used on low to steep sloped commercial applications. The panel is factory formed in continuous lengths up to 60'-0" long. Attachment to either open framing or solid substrate with galvanized steel clips at specific intervals. Refer to product test results for clip spacing requirements.

Application

Product can be applied to open framing (up to 5'-0" on center) and various solid substrate applications such as wood sheathing, wood planking, metal decking, and rigid insulation applied over metal decking. Minimum recommended slope is 1/2:12. The ML200 panel is applicable for projects requiring manufacturer's weathertightness warranty.



Test Results

ASTM E-1680-95 Air Infiltration

Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel System

Static Pressure Differential	Air Infiltration Rate
1.57 psf	0.001 cfm/ft ²
6.24 psf	0.006 cfm/ft ²

ASTM E-1646-95 Water Infiltration

Standard Test Method for Water Penetration of Exterior Metal Roof Panel System by Uniform Static Air Pressure Differential

Static Pressure Differential	Water Infiltration
6.24 psf	No Water Leakage

ASTM E-1592 Structural Performance - for 16" wide, 24 gauge ML200 Panel

Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference

Clip Spacing	Ultimate Load	Design Load
12" on center	223.6 psf	111.8 psf
60" on center	88.4 psf	44.2 psf

Notes:

1. The design load is calculated by dividing the ultimate load by the factor of safety of 2.0
2. Panel seam is 180 degree (double lock) profile

UL 1897 Wind Uplift Resistance - for 16" wide, 24 gauge ML200 Panel over 22 gauge steel deck

Standard test method to provide uplift resistance data for the evaluation of the attachment of roof covering to roof decks

Clip Spacing	Ultimate Load	Design Load
12" on center	232 psf	116 psf
36" on center	142 psf	71 psf

Notes:

1. The design load is calculated by dividing the ultimate load by the factor of safety of 2.0
2. Panel seam is 180 degree (double lock) profile
3. Panel clip: ML150 #32 Expansion Clip (22 gauge)

Florida Approval Listings - Florida Bldg. Code 5th Addition (2014)

FL7271.12 ML200 Panel up to 16" wide x 24 gauge over 22 gauge steel decking



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ML200 Panel Technical Data Guide

Approval Listings

UL790 Fire Resistance of Roof Covering Materials & UL2218 Impact Resistance of Roof Covering Materials

TGFU.R20494 Roofing Systems

Class A

Coated steel panels (surfacing) identified as "R Panel", "PBR Panel", "MasterRib", "5V Panel", "Advantage-Lok", "Advantage-Lok II", "Performa Steel Shingle", "Relia-Clad", "CSL Standing Seam" (SL150), "ML150", "ML200" and "SL175"

1. Deck: C-15/32 **Incline:** Unlimited **Impact:** Class 4
Barrier Board: — 1/4 in. (min) G-P Gypsum DensDeck® with all joints staggered a min of 6 in. from the plywood joints.
Ply Sheet (Optional): — Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

2. Deck: C-15/32 or spaced sheathing **Incline:** Unlimited **Impact:** Class 4
Underlayment: — One layer Elk Corp. "VersaShield Underlayment", mechanically fastened.
Ply Sheet (Optional): — One layer Type 30 base sheet or Elk Corp. "VersaShield", mechanically fastened.
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

3. Deck: C-15/32 or spaced sheathing **Incline:** Unlimited **Impact:** Class 4
Underlayment: — One or more layer Elk Corp. "VersaShield Underlayment", mechanically fastened.
Batten: — 2" x 2" wood battens
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

4. Deck: NC **Incline:** Unlimited **Impact:** Class 4
Barrier Board: — 1/4 in. min. G-P Gypsum DensDeck®.
Ply Sheet (Optional): — Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

5. Deck: NC **Incline:** Unlimited **Impact:** Class 4
Barrier Board: — 7/16 OBS or 5/8 in. plywood over polyisocyanurate insulation board or polyisocyanurate composite board, any thickness.
Ply Sheet (Optional): — Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

6. Deck: NC **Incline:** Unlimited **Impact:** Class 4
Insulation: — Polyisocyanurate, glass fiber, perlite or wood fiber, any thickness.
Ply Sheet (Optional): — Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

7. Deck: NC **Incline:** Unlimited **Impact:** Class 4
Insulation: — None required, however any UL Classified insulations may be used over open purlin spans. Any combination and any total thickness of insulation may be used.
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

Class C

Coated steel panels (surfacing) identified as "R Panel", "PBR Panel", "MasterRib", "5V Panel", "Advantage-Lok", "Advantage-Lok II", "Performa Steel Shingle", "Relia-Clad", "CSL Standing Seam" (SL150).

1. Deck: C-15/32 **Incline:** Unlimited **Impact:** Class 4
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

Maintenance and Repair Class A

Coated steel panels (surfacing) identified as "R Panel", "PBR Panel", "MasterRib", "5V Panel", "Advantage-Lok", "Advantage-Lok II", "Performa Steel Shingle", "Relia-Clad", "CSL Standing Seam", "ML150", "ML200" and "SL175".

1. Deck: C-15/32 or spaced sheathing **Incline:** Unlimited **Impact:** Class 4
Existing Roof System: — Any class A, B, or C shingle
Underlayment: — One layer Elk Corp. "VersaShield Underlayment", mechanically fastened.
Surfacing: — Coated Steel roofing panels, mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.



Your Roof. For Life.™

ML200 Panel

Technical Data Guide

Approval Listings

UL580 Class 90 Wind Uplift Resistance

Construction No. 90 - ML200 Panel over Open Framing with Batt Insulation

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Purlins: No. Z-shaped, 16 MSG minimum thickness steel (40,000 psi min. yield strength) or "H" series open web steel joist. Maximum spacing 60-1/4 inches on center
3. Panel Clips: No. 22 MSG minimum coated steel (ML200 fixed or expansion clip) at each purlin location
4. Fasteners: No. 12-14 x 1" long (min.) self-drilling hex head plated steel screw. Two screws per clip.
5. Insulation (optional): Any compressible blanket type 6 inches maximum before compression. Additional 2 inch maximum thickness of compressible blanket insulation may be used between purlins

Construction No. 176 - ML200 Panel over Open Framing with Batt Insulation

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Purlins: No. Z-shaped, 16 MSG minimum thickness steel (40,000 psi min. yield strength). Maximum spacing 60-1/4 inches on center
3. Fasteners: For panel to purlin to be 12-14 x 1" long self-drilling hex head plated steel screw with 1/2 inch washer. Spacing to be 16 inches on center with one fastener located 2 inches from the female sided of each panel.
4. Insulation (optional): Any compressible blanket type 6 inches maximum before compression. Additional 2 inch maximum thickness of compressible blanket insulation may be used between purlins

Construction No. 180 - ML200 Panel over Open Framing with Rigid Insulation

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Purlins: No. Z-shaped, 16 MSG minimum thickness steel (40,000 psi min. yield strength) or "H" series open web steel joist. Maximum spacing 60-1/4 inches on center
3. Panel Clips: No. 22 MSG minimum coated steel (ML200 fixed or expansion clip) at each purlin location
4. Bearing Plate: Minimum No. 18 MSG thickness steel, 4-1/2 inch wide x 6 inch long located at each clip
5. Fasteners: No. 12-14 self-drilling hex head plated steel screw. Length sufficient to penetrate purlin minimum 3/4 inches. Two screws per clip.
6. Insulation: Rigid type foamed plastic supplied in 4 foot sheets. Minimum thickness 1 inch, maximum thickness 3 inches
7. Liner Panel (optional): No. 29 MSG minimum coated steel; 9/16 inch depth with ribs having 3/4 inch wide crest and spaced 2.667 inches on center. (Minimum yield strength to be 80,000 psi)

Construction No. 238 - ML200 Panel over Rigid Insulation over Metal Decking

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Liner Panel (decking): 3 inch deep and fabricated of No. 22 MSG steel (yield strength to be 33,000 psi)
3. Panel Clips: No. 22 MSG minimum coated steel (ML200 fixed or expansion clip)
4. Bearing Plate: Minimum No. 18 MSG thickness steel, 4-1/2 inch wide x 6 inch long
5. Fasteners: No. 12 flat head screw to attach bearing plate to liner panel. Three fasteners per bearing plate. Screws to attached panel clip to bearing plate to be No. 18 by 1 inch long self-drilling hex washer head plated steel screw. Two screws per clip.
6. Rigid Insulation: Rigid type foamed plastic supplied in 4 foot sheets. Minimum thickness 1 inch (density min. 2 PCF)

Construction No. 238A - ML200 Panel over Rigid Insulation over Metal Decking

1. Metal Panels: No. 24 MSG minimum thickness coated steel. Panel width 16 inches maximum
2. Liner Panel (decking): 1-1/2 inch deep type A, B, F, or N deck fabricated of No. 22 MSG minimum gauge steel (yield strength to be 33,000 psi)
3. Panel Clips: No. 22 MSG minimum coated steel (ML200 fixed or expansion clip). Space 30 inches on center max.
4. Bearing Plate: Minimum No. 18 MSG thickness steel, 4-1/2 inch wide x 6 inch long
5. Fasteners: No. 12 x minimum 3-3/4 inch long self drilling plated steel screw. Two screws per clip
6. Rigid Insulation: Rigid type foamed plastic supplied in 4 foot sheets. Minimum thickness 1 inch (density min. 2 PCF)

Complete UL assembly information for each construction number can be referenced online at Underwriters Laboratories Online Certifications Directory (UL.com).



ML200 Panel

Technical Data Guide

Your Roof. For Life.™

Sectional Properties and Load Tables for ML200 Panel - 12" wide

12" Wide ML200 Panel - Sectional Properties

Gauge	Thickness (inches)	Weight (psf)	Yield Stress (ksi)	Allowable Shear (kips/ft)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
					I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft
24	0.0225	1.383	50	1.06	0.1833	0.1149	3.4400	0.0900	0.0809	2.4230
22	0.0285	1.747	50	1.70	0.2522	0.1619	4.7670	0.1218	0.1138	3.4070

Notes on Section Properties:

1. Section properties and allowables are calculated in accordance with North American Specification for the Design of Cold-Formed Steel Structural Members (2007 Edition)
2. I +/- is for deflection determination and S +/- is for bending determination.
3. M_a is allowable bending moment and V_a is allowable shear.
4. All values are for one foot of panel width.
5. Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

12" Wide ML200 Panel - Allowable Live and Wind Loads (psf)

Gauge	Span	Load	Span (ft)							
			2	2.25	2.5	3	3.5	4	4.5	5
24	Single	LL	573.3	453.0	366.9	254.8	187.2	143.3	113.3	91.7
		WL	403.8	319.1	258.5	179.5	131.9	92.2	64.7	47.2
	2 Span	LL	364.5	293.8	241.5	171.0	127.2	98.2	78.0	63.5
		WL	474.7	388.1	322.6	232.2	174.6	135.8	108.4	88.5
	3 Span	LL	414.6	335.6	276.8	197.1	147.0	113.7	90.5	73.7
		WL	530.8	436.7	364.9	264.7	200.1	156.2	122.2	89.1
22	Single	LL	794.5	627.8	508.5	353.1	259.4	198.6	156.9	127.1
		WL	567.8	448.7	363.4	252.4	185.4	124.8	87.6	63.9
	2 Span	LL	523.9	420.6	344.7	243.1	180.3	139.0	110.3	89.6
		WL	685.8	557.0	460.6	329.0	246.1	190.6	151.9	123.8
	3 Span	LL	598.9	482.6	396.6	280.9	208.9	161.2	128.1	104.2
		WL	772.9	631.2	524.3	377.0	283.1	220.0	165.4	120.5

Notes on Load Table:

1. Allowable live or wind load is the smallest load due to bending, shear, combined bending and shear and deflection limitation of span/240.
2. These loads are for panel strength. Panel sidelaps, clips, fasteners, and all supports must be designed or tested to resist all loads imposed on the panel.
3. Allowable wind loads based on stress have not been increased by 33.33% for wind uplift.
4. For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual 'live load' carrying of the panel.
5. LL= Live Load, WL= Wind Load.



ML200 Panel

Technical Data Guide

Your Roof. For Life.™

Sectional Properties and Load Tables for ML200 Panel - 16" wide

16" Wide ML200 Panel - Sectional Properties

Gauge	Thickness (inches)	Weight (psf)	Yield Stress (ksi)	Allowable Shear (kips/ft)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
					I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft
24	0.0225	1.267	50	0.79	0.1421	0.0846	2.5330	0.0677	0.0608	1.8220
22	0.0285	1.601	50	1.27	0.2018	0.1233	3.6920	0.0915	0.0857	2.5640

Notes on Section Properties:

- Section properties and allowables are calculated in accordance with North American Specification for the Design of Cold-Formed Steel Structural Members (2007 Edition)
- I +/- is for deflection determination and S +/- is for bending determination.
- Ma is allowable bending moment and Va is allowable shear.
- All values are for one foot of panel width.
- Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

16" Wide ML200 Panel - Allowable Live and Wind Loads (psf)

Gauge	Span	Load	Span (ft)							
			2	2.25	2.5	3	3.5	4	4.5	5
24	Single	LL	422.1	333.5	270.2	187.6	137.8	105.5	83.4	67.5
		WL	303.6	239.9	194.3	134.9	99.1	69.3	48.7	35.5
	2 Span	LL	273.9	220.8	181.5	128.6	95.6	73.8	58.7	47.7
		WL	351.5	287.1	238.5	171.5	128.8	100.1	80.0	65.3
	3 Span	LL	311.5	252.2	208.1	148.1	110.5	85.5	68.1	55.4
		WL	393.4	323.4	270.0	195.7	147.8	115.3	91.8	67.0
22	Single	LL	615.4	486.2	393.8	273.5	200.9	153.8	121.6	98.5
		WL	427.3	337.6	273.4	189.9	139.5	93.7	65.8	48.0
	2 Span	LL	394.0	316.3	259.2	182.9	135.7	104.5	83.0	67.4
		WL	526.7	428.4	354.6	253.7	189.9	147.3	117.4	95.7
	3 Span	LL	450.4	362.9	298.3	211.3	157.1	121.3	96.4	78.4
		WL	592.6	484.8	403.1	290.4	218.4	169.9	124.2	90.6

Notes on Load Table:

- Allowable live or wind load is the smallest load due to bending, shear, combined bending and shear and deflection limitation of span/240.
- These loads are for panel strength. Panel sidelaps, clips, fasteners, and all supports must be designed or tested to resist all loads imposed on the panel.
- Allowable wind loads based on stress have not been increased by 33.33% for wind uplift.
- For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual 'live load' carrying of the panel.
- LL= Live Load, WL= Wind Load.



ML200 Panel

Technical Data Guide

Your Roof. For Life.™

Sectional Properties and Load Tables for ML200 Panel - 18" wide

18" Wide ML200 Panel - Sectional Properties

Gauge	Thickness (inches)	Weight (psf)	Yield Stress (ksi)	Allowable Shear (kips/ft)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
					I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft
24	0.0225	1.228	50	0.71	0.1280	0.0748	2.2390	0.0600	0.0541	1.6200
22	0.0285	1.553	50	1.13	0.1833	0.1099	3.2910	0.0813	0.0762	2.2810

Notes on Section Properties:

1. Section properties and allowables are calculated in accordance with North American Specification for the Design of Cold-Formed Steel Structural Members (2007 Edition)
2. I +/- is for deflection determination and S +/- is for bending determination.
3. M_a is allowable bending moment and V_a is allowable shear.
4. All values are for one foot of panel width.
5. Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

18" Wide ML200 Panel - Allowable Live and Wind Loads (psf)

Gauge	Span	Load	Span (ft)							
			2	2.25	2.5	3	3.5	4	4.5	5
24	Single	LL	373.1	294.8	238.8	165.8	121.8	93.3	73.7	59.7
		WL	270.0	213.3	172.8	120.0	88.2	61.5	43.2	31.5
	2 Span	LL	243.6	196.3	161.4	114.3	85.0	65.6	52.2	42.4
		WL	311.2	254.2	211.1	151.7	114.0	88.6	70.7	57.7
	3 Span	LL	277.0	224.3	185.0	131.7	98.3	76.0	60.5	49.3
		WL	348.5	286.3	239.0	173.1	130.7	101.9	81.5	59.4
22	Single	LL	548.4	433.3	351.0	243.8	179.1	137.1	108.3	87.8
		WL	380.2	300.4	243.3	169.0	124.2	83.3	58.5	42.7
	2 Span	LL	350.6	281.5	230.7	162.7	120.7	93.0	73.8	60.0
		WL	469.1	381.6	315.9	226.0	169.2	131.2	104.6	85.3
	3 Span	LL	400.7	322.9	265.4	188.0	139.8	107.9	85.8	69.8
		WL	527.7	431.7	359.1	258.7	194.6	151.4	110.4	80.5

Notes on Load Table:

1. Allowable live or wind load is the smallest load due to bending, shear, combined bending and shear and deflection limitation of span/240.
2. These loads are for panel strength. Panel sidelaps, clips, fasteners, and all supports must be designed or tested to resist all loads imposed on the panel.
3. Allowable wind loads based on stress have not been increased by 33.33% for wind uplift.
4. For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual 'live load' carrying of the panel.
5. LL= Live Load, WL= Wind Load.



30 YEAR LIMITED PAINT FINISH WARRANTY PVDF (Kynar[®] 500 or Hylar[®] 5000)

Your Roof. For Life.™

EXCLUSIVE WARRANTY

This Warranty (collectively, the "Warranty") is issued by Union Corrugating Company (hereinafter referred to as "Union"), to the customer identified in this Certificate (hereinafter referred to as "Customer") and applies to the finish on AZ50 Galvalume®, G90 Galvanized or Aluminum flat sheet and coil products (hereinafter referred to as the "Product") with PVDF based coating consisting of KYNAR 500[®] or Hylar 5000[®] resin (hereinafter referred to as the "Coating") if erected anywhere within the United States including Alaska and Hawaii.

1. Subject to the provisions contained herein, Union warrants that during the Thirty (30) Year Warranty Period, Union's Coatings will not chip, crack, peel, flake or check (except for such slight crazing or cracking as may occur on tightly roll-formed edges or break bends at the time of roll forming or other fabrication of pre-painted sheet or coil and which is accepted in the industry as standard). Subject to the provisions contained herein, Union warrants that for thirty (30) years, when installed vertically or not more than eighty-six (86E) from the vertical, the Coating will not chalk in excess of ASTM D-4214-89 method D659 number eight (8) rating. Notwithstanding the foregoing, Union makes no warranty against chalking for any embossed Products that are installed 46E or more from the vertical. Subject to the provisions contained herein, Union warrants that for thirty years (30) years, when installed vertically or not more than eighty-six (86E) from the vertical, the Coating will not fade or change color in excess of five (5) Hunter E units when measured according to ASTM D-2244-93. Color change shall be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed surface. It is understood that fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and elements. Notwithstanding the foregoing, Union makes no warranty against fading or color change for any embossed products that are installed 46E or more from the vertical.

2. This warranty does not apply to circumstances beyond Union's control, including:

- Fire or other casualty or physical damage;
- Unusual harmful fumes, foreign substances in the atmosphere, standing water, or direct salt spray;
- Any improper treatment of or defects in the metal or in the fabrication;
- Intermittent or continual submersion in water or any other liquid or solid material;
- Damage from wind, deliberate damage, improper handling by erectors; and
- Mishandled Products, e.g. ANY PRODUCT WHICH HAS BEEN ABUSED, ALTERED, MODIFIED, USED IN A MANNER NOT ORIGINALLY INTENDED, OR STORED CONTRARY TO OUR INSTRUCTIONS.

3. This Warranty will apply to product on a surface less than 1,500 feet from salt water (coast or canal), only if maintenance was performed by the building owner including a semi-annual 'sweet water' (fresh tap water) rinse in accordance with AAMA 610.02 (2002). The product must not be cleaned with abrasive or chemical cleaners.

4. This Warranty does not cover damage or deterioration resulting from moisture contamination or entrapment or any other contamination detrimental to the coating that occurs prior to installation of the Products, including, without limitation, contamination occurring during shipment of the Product to the jobsite or during storage at the jobsite. This Warranty does not cover failure due to corrosion of substrate. Other Union warranties address corrosion issues.

5. Uniform fading and color change of the Products are excluded from this Warranty, since exposure to sunlight and extremes of weather and temperature will cause any colored surface to gradually fade, darken, chalk, or acquire surface accumulation of dirt or stains. The severity of these conditions depends on the air quality, the geographic location of the property, and other local conditions over which Union has no control. Non-uniform fading and color changes are not covered by this Warranty if they result from the coated surfaces being unequally exposed to sunlight and the elements.

6. All Warranty work will be performed by Union or a company, dealer, contractor, applicator or distributor selected by Union. Since there may be a color variance between the replacement or repainted Product and the originally installed Product due to normal weathering (i.e. exposure to sunlight and extremes of temperature and weather) of the originally installed Products, this condition shall not be indicative of a defect.

7. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, UNION'S LIABILITY SHALL NOT EXCEED THE LESSER OF THE FOLLOWING: (I) THE CUSTOMER'S LIABILITY DIRECTLY ATTRIBUTABLE TO A BREACH OF THIS WARRANTY, OR (II) THE REFINISHING OR REPLACEMENT OF THE FAILED COATED MATERIAL OR AT UNION'S OPTION, REFUND OF THE PURCHASE OF THE DEFECTIVE PRODUCT. UNION SHALL NOT BE LIABLE FOR INJURY TO PROPERTY OTHER THAN THE FLAT SHEET AND/OR COIL PRODUCTS COATED WITH FLUOROCARBON PAINT SYSTEMS, IN THE CONDITION AND AS PURCHASED BY CUSTOMER FROM UNION. UNION, IN ALL INSTANCES, SHALL HAVE THE SOLE AND EXCLUSIVE RIGHT TO DETERMINE WHETHER OR NOT REFINISHING OR REPLACEMENT OF THE FAILED AREAS IS REQUIRED, AND TO FULFILL ITS OBLIGATION UNDER THE WARRANTY, UNION

RESERVES THE RIGHT TO NEGOTIATE AND APPROVE ANY FINAL CONTRACT LEFT FOR REFINISHING AND REPLACEMENT AS THE CASE MAY BE.

8. All claims under this Warranty must be presented by the Customer to Union in writing during the warranty period and within thirty (30) days after Customer becomes aware that any warranted condition has occurred. Time is of the essence and failure to give notice within the specified time shall discharge Union from any obligations under this Warranty. Union must be given a reasonable opportunity to do an on-site inspection to determine if there is a coating failure.

9. The laws of the state of North Carolina shall exclusively govern the rights and duties of the parties to this Warranty. Any controversy or claim arising out of or related to this Warranty, or the breach thereof shall be brought before a court of competent jurisdiction in North Carolina under the substantive and procedural laws of the State of North Carolina.

10. Customer acknowledges the Union is not the manufacturer or applicator of the coating warranted herein and agrees that all issues arising from or related to the exceptions set forth herein shall be determined finally and conclusively as to Customer, by the original manufacturer.

11. Due to pigment limitations, Regal Red and Matte Black are covered by a ten (10) year, eight (8) Hunter A units for fade and eight (8) rating for chalk. Copper Metallic and other metallic paints, due to instrumentation limits, have no rating available for color change.

12. THIS WARRANTY IS GIVEN AS THE SOLE AND EXCLUSIVE REMEDY BY OR AGAINST UNION, AND NO OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR PURPOSES, ARE MADE, AND ANY SUCH OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION CONTAINED IN THIS INSTRUMENT. CUSTOMER WAIVES THE BENEFIT OF ANY RULE THAT THE DISCLAIMERS OF WARRANTY SHALL BE CONSTRUED AGAINST THE SELLER, AND AGREES THAT THE DISCLAIMERS IN THIS INSTRUMENT SHALL BE CONSTRUED LIBERALLY IN FAVOR OF UNION. UNION SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. UNION HEREBY DISCLAIMS ALL LIABILITIES FOR DAMAGES BASED ON THEORIES OF NEGLIGENCE AND STRICT PRODUCT LIABILITY. THIS WARRANTY IS EXTENDED TO CUSTOMER ALONE AND NO OTHERS, IS NON-TRANSFERABLE AND NON-ASSIGNABLE, AND MAY NOT BE ENLARGED IN ITS SCOPE BY ANY REPRESENTATIVE, SALES PERSON, AGENT OR OTHER EMPLOYEE OF UNION. THE CUSTOMER SHALL NOT PERMIT ANYONE TO CLAIM OR IMPLY THAT THIS WARRANTY EXTENDS OR CAN BE "PASSED THROUGH" TO ANYONE OTHER THAN THE CUSTOMER. THIS PROVISION IS A MATERIAL TERM OF THIS WARRANTY AND ITS VIOLATION OR BREACH BY CUSTOMER OR ANY OF CUSTOMER'S AGENTS OR REPRESENTATIVES, SHALL VOID AND CANCEL THIS WARRANTY FOR ALL PURPOSES.

THE LIABILITY OF SELLER UNION SHALL NOT EXTEND TO PERSONAL INJURY, PROPERTY DAMAGE, LOSS OF PROFIT, DELAY OR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE FAILURE OF ANY PRODUCT OR COATING TO CONFORM WITH THE PROVISIONS OF THIS LIMITED WARRANTY.

UNION SHALL NOT IN ANY OTHER EVENT BE LIABLE TO THE CUSTOMER OR ANY OTHER PERSON OR ENTITY FOR ANY ACTIONS, CLAIMS, CAUSES OR ACTION, DAMAGES, EXPENSES AND/OR LIABILITIES ARISING FROM OR RELATED TO THE DESIGN, USE OR FAILURE OF THE PRODUCT OR COATING, FOR TH INTERUPTION OF THE CUSTOMER'S OPERATIONS OR BUSINESS, FOR THE COST OF LABOR EXPENDED BY OTHERS ON ANY DEFECTIVE PRODUCT OR COATING OR FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER OR LOSS OF PROFIT OR OTHER FINANCIAL LOSS ARISING OUT OF THE USE OR FAILURE OF THE PRODUCT OR COATING, EVEN IF UNION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH ACTIONS, CLAIMS, CAUSES OF ACTION, DAMAGES, EXPENSE, LOSS AND/OR LIABILITIES, WHETHER ARISING FROM BREACH OF CONTRACT, BREACH OF WARRANTY, TORT, INCLUDING NEGLIGENCE, STRICT LIABILITY OR OTHERWISE TO ANYONE BY REASON OF THE FACT THAT SUCH PRODUCT OR COATING SHALL HAVE BEEN DEFECTIVE.

Material Description: **(generic description i.e.: SL175 panels, trim, flashings, and flat sheets)**

Issued to: **(customer name)**
Address, City, State, Zip

Owner: **(owner name)**
Address, City, State, Zip

Project Info.: **(project name)**
Address, City, State, Zip

Invoice No.: **(invoice numbers w/ date)**

Effective Date: **00/00/2010**

Date of Issue: **00/00/2010**



Date: May 1, 2019

LPS, Inc.
182 W. Third Street
Kenner LA 70062
Phone: (504) 739-1454
Fax:

Job Name
Airport Corporate Hangar Facilities
LPS-SLA19-49539
ABITA SPRINGS LA

Bid Date
May 16, 2019

Submittal Date
Apr 30, 2019

Architect:
Richard C Lambert
900 W Causeway Approach
Mandeville LA 70471-3034

Engineer:
Creative Engineering Group
201 Highland Park Plaza
Covington LA 70433



Transmittal

LPS, Inc.
 182 W. Third Street
 Kenner LA 70062
 Phone: (504) 739-1454
From: Carolyn Gamble

Project Airport Corporate Hangar Facilities
Quote# LPS-SLA19-49539
Location ABITA SPRINGS LA
 Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|--|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input checked="" type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|--|---------------------------------|
| <input checked="" type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input checked="" type="checkbox"/> Review and Comment | |

Type	MFG	Part
F1	ELITE LIGHTING	REQUEST FOR INFORMATION
	ELITE LIGHTING	H6-LED-1200L-DIM10-?VOLTAGE-MD- ?CCT-85+-?TRIM/BAFFLE/ REFLECTORCOLOR-WH
F2	ELITE LIGHTING	H6-LED-1200L-DIM10-?VOLTAGE-MD- ?CCT-85+-L606-?BAFFLE/ REFLECTORCOLOR-WH
F3	Columbia Lighting	CFP24-5540
F4	Columbia Lighting	CFP22-3340
F5	Columbia Lighting	CFP24-5540-FK24
F6	Columbia Lighting	MPS4-40HL-CW-EU
F7	Columbia Lighting	MPS2-40ML-CW-EU
F8	COMPASS	CCRRC
F8A	COMPASS	CCRRC-CIRD
F9	ELITE LIGHTING	H6-LED-1200L-DIM10-?VOLTAGE-MD- ?CCT-85+-?TRIM/BAFFLE/ REFLECTORCOLOR-WH
F10	BROWNLEE LIGHTING	5178-24-? STD. FINISH-H16-35K
F11	Hubbell Outdoor Lighting	SG2-50-5K7-FT-UNV-DB-PCU
	HUBBELL CONTROL SOLUTIONS	UVPP
	HUBBELL CONTROL SOLUTIONS	OMNIIRL
	HUBBELL CONTROL SOLUTIONS	OMNIUS2000
	HUBBELL CONTROL SOLUTIONS	LHIRS1-G-?STD. COLOR
	HUBBELL CONTROL SOLUTIONS	TD300W

**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

REQUEST FOR INFORMATION

Type:

LPS-SLA19-49539

REQUEST FOR INFORMATION

The below information must be provided before the order can be processed for this job:

BOM:

TYPE F1, F2, F9 - ELITE LIGHTING

THE FOLLOWING OPTIONS MUST BE SPECIFIED
 BEFORE ORDER CAN BE ENTERED ON THE BELOW TYPES

****F1, F2 - VOLTAGE****

120
 277
 347

****F1, F2 - CCT****

27K
 30K
 35K
 40K
 50K

****F1, F9 - TRIM, BAFFLE, REFLECTOR****
 SEE ATTACHED TWO PAGES FOR OPTIONS
****F2 - BAFFLE, REFLECTOR****
 SEE ATTACHED TWO PAGES FOR OPTIONS

TYPE F10 - BROWNLEE LIGHTING

FINISH OPTION MUST BE SPECIFIED
 BEFORE ORDER CAN BE ENTERED

BN - BRUSHED NICKEL
 BL - BLACK
 BZ - BRONZE
 GM - GUN METAL
 MB - METALLIC BRONZE
 MG - METALLIC GOLD
 NT - NICKEL TONE
 PL - PLATINUM
 WH - WHITE

PART LHIRS1 - HUBBELL CONTROL SOLUTIONS

COLOR OPTION MUST BE SPECIFIED
 BEFORE ORDER CAN BE ENTERED

WH - WHITE
 IV - IVORY
 LA - LIGHT ALMOND
 GY - GRAY
 BK - BLACK

**Job Name:**

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

REQUEST FOR INFORMATION

Notes:

Type:

LPS-SLA19-49539

REQUEST FOR INFORMATION

The below information must be provided before the order can be processed for this job:

BOM:**PART LHIRS1 - HUBBELL CONTROL SOLUTIONS**

**COLOR OPTION MUST BE SPECIFIED
BEFORE ORDER CAN BE ENTERED**

WH - WHITE
IV - IVORY
LA - LIGHT ALMOND
GY - GRAY
BK - BLACK



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-85+-?TRIM/BAFFLE/REFLECTORCOLOR-WH

Notes:

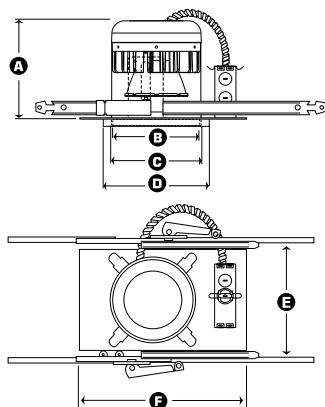
Type:

F1

LPS-SLA19-49539

H6-LED

6" ARCHITECTURAL NEW CONSTRUCTION NON-IC LED DOWNLIGHT



- A** Height = 7-1/4"
- B** Trim Aperture = 6"
- C** Cut-out = 6-1/2"
- D** Trim Outside Dia. = 7-1/4"
- E** Width = 7"
- F** Length = 10"



SAME DAY SHIPPING AVAILABLE

2000 LUMENS

INPUT VOLT.	INPUT FREQ.	INPUT CUR.	THD	POWER FACTOR	INPUT POWER	LUMENS
120/277	50/60Hz	150mA/65mA	<20%	>0.9	32W(+/-5%)	2000
120/277	50/60Hz	116mA/50mA	<20%	>0.9	24W(+/-5%)	1200

DESCRIPTION - 6" LED dedicated New Construction NON-IC housing with integral LED heat management casting and driver (installed on junction box). Designed for new construction installations and suitable for use in non-insulation covered ceilings. Available in 1200 lumens & 2000 lumens. Lighting is smooth and comfortable while using 75% less energy than the equivalent 100W PAR38 and 50% less than the common 32W CFL. Plus, the eco-friendly MAXILUME LED system features 70% lumen maintenance at 50,000hrs of life, with Energy Star and California Title-24 (compliances pending).

FEATURES - Greater light output than an 32W CFL or a 100WPAR38. Elite LED luminaires are ideally suited for use in hospitality, health care, commercial, retail and residential applications.



OPTICS - Gather the light scattered by the LED chip, shape it into a functional beam with state of the art reflectors, integrate the light through a smooth lens to minimize brightness, then top it all off with a glare reducing cone that has a 55-degree cut-off. Now you have the Elite engineered, superior quality, light engine; producing over 1200 & 2000 lumens.

DURABILITY - Die-cast aluminum housing and heat management system are engineered for extremely long life and service period. Heat sink is attached to top of housing. The LED light engine is attached to the die-cast heat sink and is easily replaceable and upgradable. Life tests have shown the Elite light engine output will be maintained at 70% of initial at 50,000hrs of operation. Our superior design allows for installation in construction that requires Elite Air-Shut™ system. Our LED driver is rated for 50 to 60 Hz at 120V/277V input, produces less than 10% THD, has a power factor between 0.90 and 1.00 and is thermally protected for additional safety. Elite's driver is installed on the junction box cover so it may be serviced from below the ceiling.

REPEATABLE - Repeatability means quality. From our chip selection process, to our driver, to the thermal management, the Elite LED Module is engineered for quality. All Elite LED luminaires are rated at 85+, 90+ and 98+ CRI as rated and tested to LM-79 and LM-80 standards by a certified laboratory. California Title 24-2013 and Energy Star compliance are standard.

DIMMABLE - The MAXILUME LED system is shipped standard with a 0-10V driver which can be dimmed down to 1% of initial light output with a 0-10V dimmer when ordered with the following options (DIM10-120, DIM10-277). Fixtures can also be shipped with a Lutron Hi-Lume A series driver which can be dimmed with Lutron Dimming Systems when ordered with the following options (LUTH-120, LUTH-277), Lutron® Hi-Lume A-Series (LUT2W-120) 2-Wire Forward Phase Control 1% Dimming in 120V only, or EldoLed 0-10V 1% Dimming, consult factory for other EldoLed driver and other driver options. Triac & Electronic Low Voltage dimming driver also available when ordered with the following options (DIMTR-120). All fixtures with 3000L and below are dimmable down to 1% and the fixtures with 4000L and above can be dimmed down to 10%.

THERMAL PROTECTION - Standard thermal protection device guards against improper installation and misuse of insulation material.

MOUNTING BRACKET - Constructed from 16 gauge steel and is supplied with C-channels that are adjustable up to 28". Mounting brackets may be adjusted up to 2-3/4" vertically from inside the housing.

HOUSING - Die-formed aluminum and galvanized steel for maximum heat dissipation and rust protection. Housing adjusts vertically in plaster frame to accommodate 1/2" to 1-3/8" thick ceiling. Housing is NON-IC rated and insulation must be pulled 3" from housing. May be installed in 2" x 8" joist construction.

JUNCTION BOX - UL Listed for through-branch circuit wiring, provided with four 1/2" knockouts, one 3/4" knockout and four Romex knockouts with true pry-out slots and strain clamps. Designed for straight through conduit runs. Driver is installed on the junction box cover so it may be serviced from below the ceiling.

OUR WORD - The MAXILUME LED lighting system carries a five-year carefree warranty for parts and components. (Labor not included.)

DIMMING INFORMATION

DIM10 (0-10V 1% Dimming)

LUTH (Lutron® Hi-Lume A-Series 3-Wire or Eco System 1% Dimming up to 4000 lumens only)

LUT2W (Lutron® Hi-Lume A-Series 2-Wire Forward Phase Control 1% Dimming in 120V only and up to 3000 lumens only)

ELD010 (EldoLed 0-10V 1% Dimming up to 3000 lumens only, consult factory for the EldoLed driver options)

DIMTR (Triac & Electronic Low Voltage Dimming)

Covered by U.S. Patent Numbers: D642317S, D621089S, D615239S

LISTING

c-UL-us - listed for Damp location.

c-UL-us - listed for feed Through Wiring.

LM79 / LM80

TRIM, BAFFLE REFLECTOR OPTION MUST BE SPECIFIED

Example: H6-LED-2000L-DIM10-120-MD-30K-AT-L631-W-WH

TYPE	1200L SERIES	2000L SERIES	VOLTAGE	OPTICS	CCT	CRI	AIR-SHUT	EMERGENCY	TRIM	BAFFLE	REFLECTOR	TRIM/RING		
H6-LED	<input type="checkbox"/> 1200L-DIMTR* <input type="checkbox"/> 1200L-LUTH <input checked="" type="checkbox"/> 1200L-DIM10 <input type="checkbox"/> 1200L-LUT2W* <input type="checkbox"/> 1200L-ELD010	<input type="checkbox"/> 2000L-LUTH <input type="checkbox"/> 2000L-DIM10 <input type="checkbox"/> 2000L-LUT2W* <input type="checkbox"/> 2000L-ELD010	<input type="checkbox"/> 120 <input type="checkbox"/> 277 <input type="checkbox"/> 347	<input type="checkbox"/> MD (Medium) Standard <input type="checkbox"/> ND (Narrow)	<input type="checkbox"/> 27K <input type="checkbox"/> 30K <input type="checkbox"/> 35K <input type="checkbox"/> 40K <input type="checkbox"/> 50K (85+CRI only)	<input checked="" type="checkbox"/> 85+ <input type="checkbox"/> 90+ <input type="checkbox"/> 98+**	<input type="checkbox"/> AT	<input type="checkbox"/> EMG	<input type="checkbox"/> L631 <input type="checkbox"/> L607 <input type="checkbox"/> L611 <input type="checkbox"/> L676 <input type="checkbox"/> L635 <input type="checkbox"/> L636 <input type="checkbox"/> L656 <input type="checkbox"/> L675 <input type="checkbox"/> L657 <input type="checkbox"/> L659	<input type="checkbox"/> L642 <input type="checkbox"/> L658 <input type="checkbox"/> L641 <input type="checkbox"/> L655 <input type="checkbox"/> L652 <input type="checkbox"/> L612 <input type="checkbox"/> L605 <input type="checkbox"/> L605L <input type="checkbox"/> L606 <input type="checkbox"/> L606L	<input type="checkbox"/> L696 <input type="checkbox"/> L601 <input type="checkbox"/> L601L <input type="checkbox"/> L687 <input type="checkbox"/> L688 <input type="checkbox"/> L685 <input type="checkbox"/> L681 <input type="checkbox"/> L680	<input type="checkbox"/> W <input type="checkbox"/> P <input type="checkbox"/> SN <input type="checkbox"/> CP <input type="checkbox"/> BZ	<input type="checkbox"/> BZ <input type="checkbox"/> CL <input type="checkbox"/> CP <input type="checkbox"/> RG <input type="checkbox"/> MB <input type="checkbox"/> W <input type="checkbox"/> SN <input type="checkbox"/> SHZ	<input type="checkbox"/> BK <input checked="" type="checkbox"/> WH <input type="checkbox"/> CH <input type="checkbox"/> PB <input type="checkbox"/> SN <input type="checkbox"/> CP <input type="checkbox"/> BZ

* DIMTR and LUT2W options only available in 120 Volt. ** 98+ CRI is available in 27K, 30K and 40K only



LED

6"

6 INCH ARCHITECTURAL LED NON-IC DOWNLIGHT



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-85+-?TRIM/BAFFLE/REFLECTORCOLOR-WH

Notes:

Type:

F1

LPS-SLA19-49539

6" LED OPTICS

L631W-WH - PHENOLIC STEPPED BAFFLE



BAFFLE FINISH:

W - WHITE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631P-BK - PHENOLIC STEPPED BAFFLE



BAFFLE FINISH:

P - BLACK

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631SN-SN - METAL STEPPED BAFFLE



BAFFLE FINISH:

SN - SATIN NICKEL

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631CP-CP - METAL STEPPED BAFFLE



BAFFLE FINISH:

CP - COPPER

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631BZ-BZ - METAL STEPPED BAFFLE



BAFFLE FINISH:

BZ - BRONZE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607CL-WH - REFLECTOR



REFLECTOR FINISH:

CL - CLEAR (CHROME)

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607MB-WH - REFLECTOR



REFLECTOR FINISH:

MB - BLACK

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607RG-WH - REFLECTOR



REFLECTOR FINISH:

RG - GOLD

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607W-WH - REFLECTOR



REFLECTOR FINISH:

W - WHITE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607CP-CP - REFLECTOR



REFLECTOR FINISH:

CP - COPPER

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607SN-SN - REFLECTOR



REFLECTOR FINISH:

SN - STAIN NICKEL

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607BZ-BZ - REFLECTOR



REFLECTOR FINISH:

BZ - BRONZE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607SHZ-WH - REFLECTOR



REFLECTOR FINISH:

SHZ - SATIN HAZE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L611W-WH - BAFFLE WALL WASH



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

WH

L676W-WH - BAFFLE W/ FROSTED LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



L635W-WH - BAFFLE W/ ALBALITE LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



L636W-WH - BAFFLE W/ FRESNEL LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



L656W-WH - BAFFLE W/ FROSTED DOME LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



LED
6"

6 INCH ARCHITECTURAL LED OPTICS



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-85+-?TRIM/BAFFLE/REFLECTORCOLOR-WH

Notes:

Type:

F1

LPS-SLA19-49539

6" LED OPTICS

L675W-WH - BAFFLE W/ PRISMATIC LENS



BAFFLE FINISH:
 BZ, CP, SN, WH, P
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L657CL-WH - REFLECTOR W/ FROSTED DOME LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L659CL-WH - REFLECTOR W/ FROSTED LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L642CL-WH - REFLECTOR W/ FRESNEL LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L658CL-WH - REFLECTOR W/ PRISMATIC LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L641CL-WH - REFLECTOR W/ ALBALITE LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L645WH - DESIGNER POINT LENS



LENS FINISH:
 DESIGNER POINT
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L652WH - SMOOTH FROSTED LENS



LENS FINISH:
 SMOOTH FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L612WH - SMOOTH FROSTED DOME LENS



LENS FINISH:
 SMOOTH FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L605WH - METAL FRESNEL LENS



LENS FINISH:
 FRESNEL - CLEAR
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L606WH - METAL DROP OPAL LENS



LENS FINISH:
 DROP OPAL - FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L601WH - METAL ALBALITE LENS



LENS FINISH:
 ALBALITE - WHITE
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L605L - WHITE PLASTIC FRESNEL LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L606L - WHITE PLASTIC DROP OPAL LENS



LENS FINISH:
 ALBALITE - WHITE
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L601L - WHITE PLASTIC ALBALITE LENS



LENS FINISH:
 FRESNEL - CLEAR
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L687CL-WH - SQUARE REFLECTOR



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L688WH - SQUARE ALBALITE LENS



LENS FINISH:
 ALBALITE - WHITE
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L685WH - SQUARE FRESNEL LENS



LENS FINISH:
 FRESNEL - CLEAR
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L681BZ-WH - SQUARE BAFFLE



BAFFLE FINISH:
 BZ, CP, SN, WH, P
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L680WH - SQUARE DESIGNER POINT LENS



LENS FINISH:
 FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L696WH - SQUARE DESIGNER FROSTED LENS



LENS FINISH:
 FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-
85+-?TRIM/BAFFLE/REFLECTORCOLOR-WH

Notes:

Type:

F1

LPS-SLA19-49539



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-85+-L606-?BAFFLE/REFLECTORCOLOR-WH

Notes:

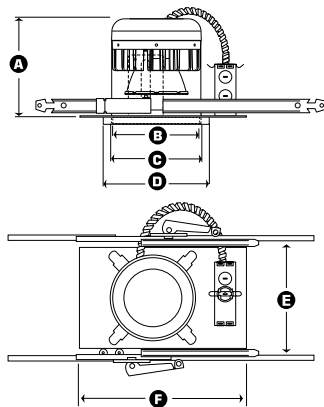
Type:

F2

LPS-SLA19-49539

H6-LED

6" ARCHITECTURAL NEW CONSTRUCTION NON-IC LED DOWNLIGHT



- A** Height = 7-1/4"
- B** Trim Aperture = 6"
- C** Cut-out = 6-1/2"
- D** Trim Outside Dia. = 7-1/4"
- E** Width = 7"
- F** Length = 10"



SAME DAY SHIPPING AVAILABLE

2000 LUMENS

INPUT VOLT.	INPUT FREQ.	INPUT CUR.	THD	POWER FACTOR	INPUT POWER	LUMENS
120/277	50/60Hz	150mA/65mA	<20%	>0.9	32W(+/-5%)	2000
120/277	50/60Hz	116mA/50mA	<20%	>0.9	24W(+/-5%)	1200

DESCRIPTION - 6" LED dedicated New Construction NON-IC housing with integral LED heat management casting and driver (installed on junction box). Designed for new construction installations and suitable for use in non-insulation covered ceilings. Available in 1200 lumens & 2000 lumens. Lighting is smooth and comfortable while using 75% less energy than the equivalent 100W PAR38 and 50% less than the common 32W CFL. Plus, the eco-friendly MAXILUME LED system features 70% lumen maintenance at 50,000hrs of life, with Energy Star and California Title-24 (compliances pending).

FEATURES - Greater light output than an 32W CFL or a 100WPAR38. Elite LED luminaires are ideally suited for use in hospitality, health care, commercial, retail and residential applications.



OPTICS - Gather the light scattered by the LED chip, shape it into a functional beam with state of the art reflectors, integrate the light through a smooth lens to minimize brightness, then top it all off with a glare reducing cone that has a 55-degree cut-off. Now you have the Elite engineered, superior quality, light engine; producing over 1200 & 2000 lumens.

THERMAL PROTECTION - Standard thermal protection device guards against improper installation and misuse of insulation material.

DURABILITY - Die-cast aluminum housing and heat management system are engineered for extremely long life and service period. Heat sink is attached to top of housing. The LED light engine is attached to the die-cast heat sink and is easily replaceable and upgradable. Life tests have shown the Elite light engine output will be maintained at 70% of initial at 50,000hrs of operation. Our superior design allows for installation in construction that requires Elite Air-Shut™ system. Our LED driver is rated for 50 to 60 Hz at 120V/277V input, produces less than 10% THD, has a power factor between 0.90 and 1.00 and is thermally protected for additional safety. Elite's driver is installed on the junction box cover so it may be serviced from below the ceiling.

MOUNTING BRACKET - Constructed from 16 gauge steel and is supplied with C-channels that are adjustable up to 28". Mounting brackets may be adjusted up to 2-3/4" vertically from inside the housing.

HOUSING - Die-formed aluminum and galvanized steel for maximum heat dissipation and rust protection. Housing adjusts vertically in plaster frame to accommodate 1/2" to 1-3/8" thick ceiling. Housing is NON-IC rated and insulation must be pulled 3" from housing. May be installed in 2" x 8" joist construction.

REPEATABLE - Repeatability means quality. From our chip selection process, to our driver, to the thermal management, the Elite LED Module is engineered for quality. All Elite LED luminaires are rated at 85+, 90+ and 98+ CRI as rated and tested to LM-79 and LM-80 standards by a certified laboratory. California Title 24-2013 and Energy Star compliance are standard.

JUNCTION BOX - UL Listed for through-branch circuit wiring, provided with four 1/2" knockouts, one 3/4" knockout and four Romex knockouts with true pry-out slots and strain clamps. Designed for straight through conduit runs. Driver is installed on the junction box cover so it may be serviced from below the ceiling.

OUR WORD - The MAXILUME LED lighting system carries a five-year carefree warranty for parts and components. (Labor not included.)

DIMMABLE - The MAXILUME LED system is shipped standard with a 0-10V driver which can be dimmed down to 1% of initial light output with a 0-10V dimmer when ordered with the following options (DIM10-120, DIM10-277). Fixtures can also be shipped with a Lutron Hi-Lume A series driver which can be dimmed with Lutron Dimming Systems when ordered with the following options (LUTH-120, LUTH-277), Lutron® Hi-Lume A-Series (LUT2W-120) 2-Wire Forward Phase Control 1% Dimming in 120V only, or EldoLed 0-10V 1% Dimming, consult factory for other EldoLed driver and other driver options. Triac & Electronic Low Voltage dimming driver also available when ordered with the following options (DIMTR-120). All fixtures with 3000L and below are dimmable down to 1% and the fixtures with 4000L and above can be dimmed down to 10%.

DIMMING INFORMATION

DIM10 (0-10V 1% Dimming)

LUTH (Lutron® Hi-Lume A-Series 3-Wire or Eco System 1% Dimming up to 4000 lumens only)

LUT2W (Lutron® Hi-Lume A-Series 2-Wire Forward Phase Control 1% Dimming in 120V only and up to 3000 lumens only)

ELD010 (EldoLed 0-10V 1% Dimming up to 3000 lumens only, consult factory for the EldoLed driver options)

DIMTR (Triac & Electronic Low Voltage Dimming)

Covered by U.S. Patent Numbers: D642317S, D621089S, D615239S

LISTING

c-UL-us - listed for Damp location.

c-UL-us - listed for feed Through Wiring.

LM79 / LM80

BAFFLE, REFLECTOR OPTION MUST BE SPECIFIED

VOLTAGE OPTION MUST BE SPECIFIED

CCT OPTION MUST BE SPECIFIED

Example: H6-LED-2000L-DIM10-120-MD-30K-AT-L631-W-WH

TYPE	1200L SERIES	2000L SERIES	VOLTAGE	OPTICS	CCT	CRI	AIR-SHUT	EMERGENCY	TRIM	BAFFLE	REFLECTOR	TRIM/RING
H6-LED	<input type="checkbox"/> 1200L-DIMTR*	<input type="checkbox"/> 2000L-LUTH	<input type="checkbox"/> 120	<input type="checkbox"/> MD (Medium)	<input type="checkbox"/> 27K	<input type="checkbox"/> 85+	<input type="checkbox"/> AT	<input type="checkbox"/> EMG	<input type="checkbox"/> L631	<input type="checkbox"/> L642	<input type="checkbox"/> L696	<input type="checkbox"/> W
	<input type="checkbox"/> 1200L-LUTH	<input type="checkbox"/> 2000L-DIM10	<input type="checkbox"/> 277	<input type="checkbox"/> Standard	<input type="checkbox"/> 30K	<input type="checkbox"/> 90+			<input type="checkbox"/> L607	<input type="checkbox"/> L658	<input type="checkbox"/> L601	<input type="checkbox"/> BZ
	<input type="checkbox"/> 1200L-DIM10	<input type="checkbox"/> 2000L-LUT2W*	<input type="checkbox"/> 347	<input type="checkbox"/> ND (Narrow)	<input type="checkbox"/> 35K	<input type="checkbox"/> 98+**			<input type="checkbox"/> L611	<input type="checkbox"/> L641	<input type="checkbox"/> L601L	<input type="checkbox"/> CL
	<input type="checkbox"/> 1200L-LUT2W*	<input type="checkbox"/> 2000L-ELD010			<input type="checkbox"/> 40K				<input type="checkbox"/> L676	<input type="checkbox"/> L655	<input type="checkbox"/> L687	<input type="checkbox"/> CP
	<input type="checkbox"/> 1200L-ELD010				<input type="checkbox"/> 50K (85+CRI only)				<input type="checkbox"/> L635	<input type="checkbox"/> L652	<input type="checkbox"/> L688	<input type="checkbox"/> CP
									<input type="checkbox"/> L636	<input type="checkbox"/> L612	<input type="checkbox"/> L685	<input type="checkbox"/> MB
									<input type="checkbox"/> L656	<input type="checkbox"/> L605	<input type="checkbox"/> L681	<input type="checkbox"/> W
									<input type="checkbox"/> L675	<input type="checkbox"/> L605L	<input type="checkbox"/> L680	<input type="checkbox"/> SN
									<input type="checkbox"/> L657	<input type="checkbox"/> L606L		<input type="checkbox"/> SHZ
									<input type="checkbox"/> L659			<input type="checkbox"/> BK
												<input type="checkbox"/> WH
												<input type="checkbox"/> CH
												<input type="checkbox"/> PB
												<input type="checkbox"/> SN
												<input type="checkbox"/> CP
												<input type="checkbox"/> BZ

* DIMTR and LUT2W options only available in 120 Volt. ** 98+ CRI is available in 27K, 30K and 40K only



LED

6"

6 INCH ARCHITECTURAL LED NON-IC DOWNLIGHT



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-85+-L606-?BAFFLE/REFLECTORCOLOR-WH

Notes:

Type:

F2

LPS-SLA19-49539

6" LED OPTICS

L631W-WH - PHENOLIC STEPPED BAFFLE



BAFFLE FINISH:

W - WHITE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631P-BK - PHENOLIC STEPPED BAFFLE



BAFFLE FINISH:

P - BLACK

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631SN-SN - METAL STEPPED BAFFLE



BAFFLE FINISH:

SN - SATIN NICKEL

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631CP-CP - METAL STEPPED BAFFLE



BAFFLE FINISH:

CP - COPPER

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631BZ-BZ - METAL STEPPED BAFFLE



BAFFLE FINISH:

BZ - BRONZE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607CL-WH - REFLECTOR



REFLECTOR FINISH:

CL - CLEAR (CHROME)

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607MB-WH - REFLECTOR



REFLECTOR FINISH:

MB - BLACK

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607RG-WH - REFLECTOR



REFLECTOR FINISH:

RG - GOLD

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607W-WH - REFLECTOR



REFLECTOR FINISH:

W - WHITE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607CP-CP - REFLECTOR



REFLECTOR FINISH:

CP - COPPER

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607SN-SN - REFLECTOR



REFLECTOR FINISH:

SN - STAIN NICKEL

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607BZ-BZ - REFLECTOR



REFLECTOR FINISH:

BZ - BRONZE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607SHZ-WH - REFLECTOR



REFLECTOR FINISH:

SHZ - SATIN HAZE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L611W-WH - BAFFLE WALL WASH



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

WH

L676W-WH - BAFFLE W/ FROSTED LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



L635W-WH - BAFFLE W/ ALBALITE LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



L636W-WH - BAFFLE W/ FRESNEL LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



L656W-WH - BAFFLE W/ FROSTED DOME LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



LED
6"

6 INCH ARCHITECTURAL LED OPTICS

MAXILUME

Due to the changes of constant improvement in LED technology, all details are subject to change without notice. Consult factory for up to date information.



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-85+-L606-?BAFFLE/REFLECTORCOLOR-WH

Notes:

Type:

F2

LPS-SLA19-49539

6" LED OPTICS

L675W-WH - BAFFLE W/ PRISMATIC LENS



BAFFLE FINISH:
 BZ, CP, SN, WH, P
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L657CL-WH - REFLECTOR W/ FROSTED DOME LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L659CL-WH - REFLECTOR W/ FROSTED LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L642CL-WH - REFLECTOR W/ FRESNEL LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L658CL-WH - REFLECTOR W/ PRISMATIC LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L641CL-WH - REFLECTOR W/ ALBALITE LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L645WH - DESIGNER POINT LENS



LENS FINISH:
 DESIGNER POINT
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L652WH - SMOOTH FROSTED LENS



LENS FINISH:
 SMOOTH FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L612WH - SMOOTH FROSTED DOME LENS



LENS FINISH:
 SMOOTH FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L605WH - METAL FRESNEL LENS



LENS FINISH:
 FRESNEL - CLEAR
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L606WH - METAL DROP OPAL LENS



LENS FINISH:
 DROP OPAL - FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L601WH - METAL ALBALITE LENS



LENS FINISH:
 ALBALITE - WHITE
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L605L - WHITE PLASTIC FRESNEL LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L606L - WHITE PLASTIC DROP OPAL LENS



LENS FINISH:
 ALBALITE - WHITE
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L601L - WHITE PLASTIC ALBALITE LENS



LENS FINISH:
 FRESNEL - CLEAR
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L687CL-WH - SQUARE REFLECTOR



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L688WH - SQUARE ALBALITE LENS



LENS FINISH:
 ALBALITE - WHITE
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L685WH - SQUARE FRESNEL LENS



LENS FINISH:
 FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L681BZ-WH - SQUARE BAFFLE



BAFFLE FINISH:
 BZ, CP, SN, WH, P
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L680WH - SQUARE DESIGNER POINT LENS



LENS FINISH:
 FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L696WH - SQUARE DESIGNER FROSTED LENS



LENS FINISH:
 FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



MAXILUME

Due to the changes of constant improvement in LED technology, all details are subject to change without notice. Consult factory for up to date information.

LED
6"

6 INCH ARCHITECTURAL LED OPTICS

Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-
85+-L606-?BAFFLE/REFLECTORCOLOR-WH

Notes:

Type:

F2

LPS-SLA19-49539

**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

CFP24-5540

Notes:

Type:**F3**

LPS-SLA19-49539

Columbia

LIGHTING

CFP

Edge Lit Flat Panel

DESCRIPTION

The CFP offers edge lit LED technology in a sleek, modern, flat panel design. Light classrooms, offices, medical facilities, cleanrooms and general public spaces using edge-to-edge illumination, without pixelation or bright spots.

**CONSTRUCTION**

Extruded aluminum frame has a matte white finish and smooth frame-to-lens transition.

tradeSELECT™

**FEATURES**

- 1x4, 2x2, and 2x4 sizes
- 80 CRI
- **0-10V dimming**
- Recessed, Surface, or Cable Mount
- T-bar clips for secure mounting
- **Universal voltage (120-277V)**
- IC rated
- 60,000 hour LEDs at L70 (up to 180,000 projected life) for reduced maintenance
- Unique curved 1⅝" frame
- Suitable for ISO Class 5-9 positive pressure cleanrooms

STANDARDS, CERTIFICATION AND COMPLIANCE

All luminaires are built to UL1598 standards and bear appropriate ETL labels. **Damp location label standard.** Tested in accordance with ISO 14644-1; suitable for ISO Class 5-9 positive pressure cleanrooms. DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org.

WARRANTY

Five year warranty. Terms and conditions apply.

ORDERING GUIDE

Catalog Number	Description	Lumens	Watts	LPW	Qty on Pallet
CFP14-4035 ¹	1x4 Edge Lit Flat Panel, 4000lm, 3500K	3951	39	101	48
CFP14-4040 ¹	1x4 Edge Lit Flat Panel, 4000lm, 4000K	4102	39	105	48
CFP22-3335 ¹	2x2 Edge Lit Flat Panel, 3300lm, 3500K	3382	32	106	36
CFP22-3335-HE ²	2x2 Edge Lit Flat Panel, 3300lm, 3500K, High Efficacy	3299	26	125	36
CFP22-3340 ¹	2x2 Edge Lit Flat Panel, 3300lm, 4000K	3475	32	109	36
CFP22-3340-HE ²	2x2 Edge Lit Flat Panel, 3300lm, 4000K, High Efficacy	3430	27	127	36
CFP22-4035 ¹	2x2 Edge Lit Flat Panel, 4000lm, 3500K	4302	41	105	36
CFP22-4040 ¹	2x2 Edge Lit Flat Panel, 4000lm, 4000K	4074	40	102	36
CFP24-4135 ¹	2x4 Edge Lit Flat Panel, 4100lm, 3500K	4307	40	107	24
CFP24-4135-HE ²	2x4 Edge Lit Flat Panel, 4100lm, 3500K, High Efficacy	4229	34	124	24
CFP24-4140 ¹	2x4 Edge Lit Flat Panel, 4100lm, 4000K	4123	40	103	24
CFP24-4140-HE ²	2x4 Edge Lit Flat Panel, 4100lm, 4000K, High Efficacy	4334	34	127	24
CFP24-5535 ¹	2x4 Edge Lit Flat Panel, 5500lm, 3500K	5447	49	110	24
CFP24-5540 ¹	2x4 Edge Lit Flat Panel, 5500lm, 4000K	5608	50	112	24

Accessories (Order Separately)

PLD10M	Dual-Lite® Emergency LED Battery Pack, field installed
FK14	1' x 4' Single Flange Kit
FK22	2' x 2' Single Flange Kit
FK24	2' x 4' Single Flange Kit
CFPSMK-14	1' x 4' CFP Surface Mount Kit
CFPSMK-22	2' x 2' CFP Surface Mount Kit
CFPSMK-24	2' x 4' CFP Surface Mount Kit
CFPCM36YSC5F-KIT	36" Cable Mount Kit for 1' or 2' wide Cable Mount fixtures, 5 Wire

¹ DLC® (DesignLights Consortium) Qualified
 - see www.designlights.org

² DLC® (DesignLights Consortium) Premium Qualified
 - see www.designlights.org

**Job Name:**Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)**Catalog Number:**
CFP24-5540**Notes:****Type:****F3**

LPS-SLA19-49539

Columbia
LIGHTING**CFP**
Edge Lit Flat Panel**PHOTOMETRIC DATA**

Test #17.01571 Test Date 5/25/2017

LUMINAIRE DATA

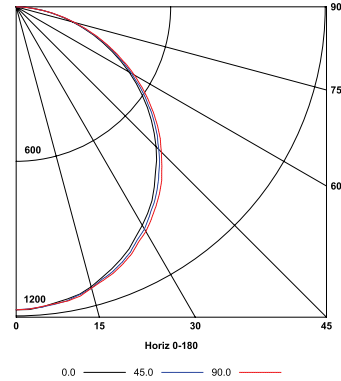
Luminaire	CFP22-3335
	CFP, Recessed 2' x 2' Flat Panel LED
Ballast	WPC-40U-40-MT-0950
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3384
Watts	32.03
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.27
Luminous Opening in Feet	Length: 1.80 Width: 1.80 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	914	27.0	27.0
0-40	1497	44.2	44.2
0-60	2649	78.3	78.3
0-90	3384	100.0	100.0
0-180	3384	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	106
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.26 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**LUMINAIRE DATA**

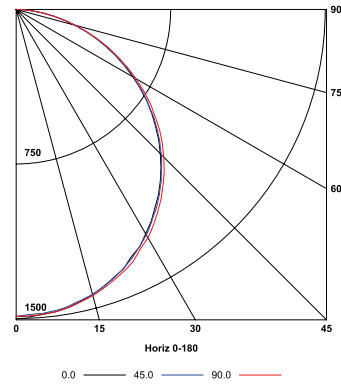
Luminaire	CFP24-4135
	CFP, Recessed 2' x 4' Flat Panel LED
Ballast	WPC-40U-40-MT-1000
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4309
Watts	40.43
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.27
Luminous Opening in Feet	Length: 3.80 Width: 1.79 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1160	26.9	26.9
0-40	1901	44.1	44.1
0-60	3369	78.2	78.2
0-90	4309	100.0	100.0
0-180	4309	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	107
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.22 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #17.01569 Test Date 5/25/2017

LUMINAIRE DATA

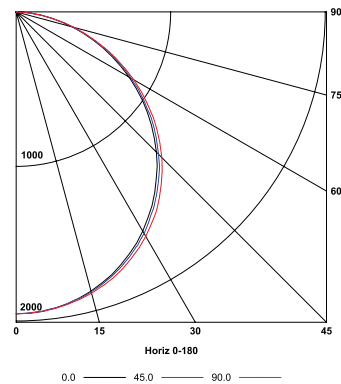
Luminaire	CFP24-5540
	CFP, Recessed 2' x 4' Flat Panel LED
Ballast	WPC-60U-40-MT-1200
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5611
Watts	49.90
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.27
Luminous Opening in Feet	Length: 3.79 Width: 0.96 Height: 0.04

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1518	27.1	27.1
0-40	2489	44.4	44.4
0-60	4404	78.5	78.5
0-90	5611	100.0	100.0
0-180	5611	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	112
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.14 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #17.02370 Test Date 8/25/2017



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

CFP24-5540

Notes:

Type:

F3

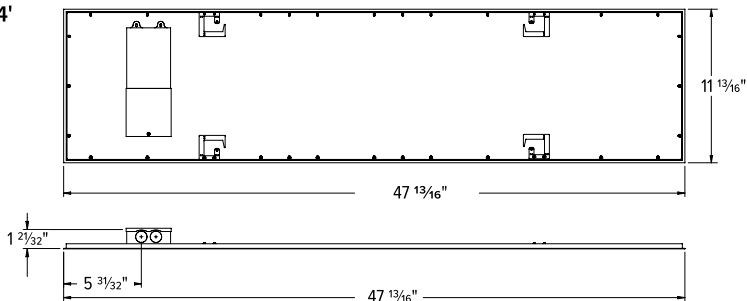
LPS-SLA19-49539

Columbia
 LIGHTING

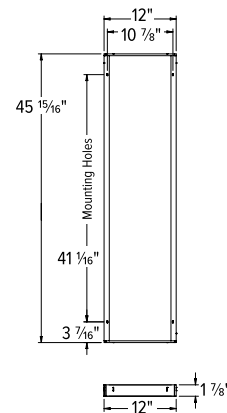
CFP
 Edge Lit Flat Panel

DIMENSIONAL DATA

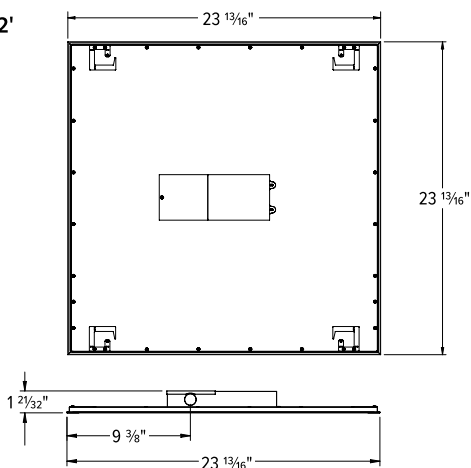
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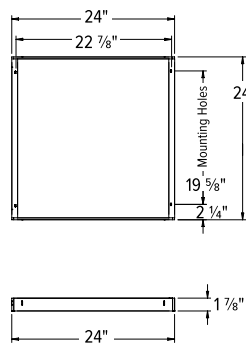
SURFACE MOUNT



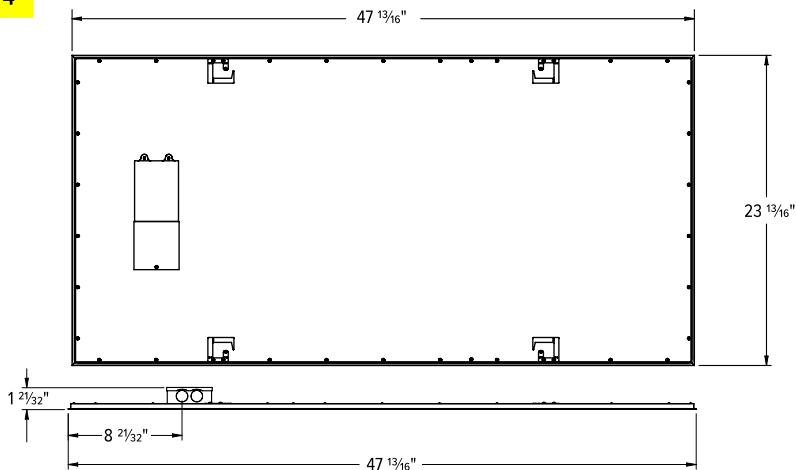
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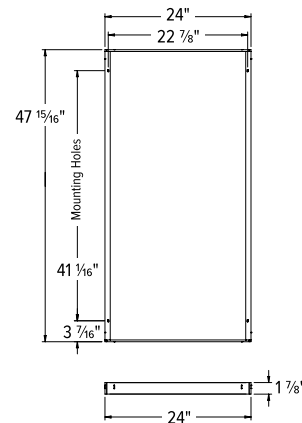
SURFACE MOUNT



2' X 4'



SURFACE MOUNT



Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

CFP24-5540

Notes:

Type:

F3

LPS-SLA19-49539

**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

CFP22-3340

Type:**F4**

Notes:

LPS-SLA19-49539

Columbia

LIGHTING

CFP**Edge Lit Flat Panel****DESCRIPTION**

The CFP offers edge lit LED technology in a sleek, modern, flat panel design. Light classrooms, offices, medical facilities, cleanrooms and general public spaces using edge-to-edge illumination, without pixelation or bright spots.

**CONSTRUCTION**

Extruded aluminum frame has a matte white finish and smooth frame-to-lens transition.

tradeSELECT™

**FEATURES**

- 1x4, 2x2, and 2x4 sizes
- 80 CRI
- **0-10V dimming**
- Recessed, Surface, or Cable Mount
- T-bar clips for secure mounting
- **Universal voltage (120-277V)**
- IC rated
- 60,000 hour LEDs at L70 (up to 180,000 projected life) for reduced maintenance
- Unique curved 1⅞" frame
- Suitable for ISO Class 5-9 positive pressure cleanrooms

STANDARDS, CERTIFICATION AND COMPLIANCE

All luminaires are built to UL1598 standards and bear appropriate ETL labels. **Damp location label standard.** Tested in accordance with ISO 14644-1; suitable for ISO Class 5-9 positive pressure cleanrooms. DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org.

WARRANTY

Five year warranty. Terms and conditions apply.

ORDERING GUIDE

Catalog Number	Description	Lumens	Watts	LPW	Qty on Pallet
CFP14-4035 ¹	1x4 Edge Lit Flat Panel, 4000lm, 3500K	3951	39	101	48
CFP14-4040 ¹	1x4 Edge Lit Flat Panel, 4000lm, 4000K	4102	39	105	48
CFP22-3335 ¹	2x2 Edge Lit Flat Panel, 3300lm, 3500K	3382	32	106	36
CFP22-3335-HE ²	2x2 Edge Lit Flat Panel, 3300lm, 3500K, High Efficacy	3299	26	125	36
CFP22-3340 ¹	2x2 Edge Lit Flat Panel, 3300lm, 4000K	3475	32	109	36
CFP22-3340-HE ²	2x2 Edge Lit Flat Panel, 3300lm, 4000K, High Efficacy	3430	27	127	36
CFP22-4035 ¹	2x2 Edge Lit Flat Panel, 4000lm, 3500K	4302	41	105	36
CFP22-4040 ¹	2x2 Edge Lit Flat Panel, 4000lm, 4000K	4074	40	102	36
CFP24-4135 ¹	2x4 Edge Lit Flat Panel, 4100lm, 3500K	4307	40	107	24
CFP24-4135-HE ²	2x4 Edge Lit Flat Panel, 4100lm, 3500K, High Efficacy	4229	34	124	24
CFP24-4140 ¹	2x4 Edge Lit Flat Panel, 4100lm, 4000K	4123	40	103	24
CFP24-4140-HE ²	2x4 Edge Lit Flat Panel, 4100lm, 4000K, High Efficacy	4334	34	127	24
CFP24-5535 ¹	2x4 Edge Lit Flat Panel, 5500lm, 3500K	5447	49	110	24
CFP24-5540 ¹	2x4 Edge Lit Flat Panel, 5500lm, 4000K	5608	50	112	24

Accessories (Order Separately)

PLD10M	Dual-Lite® Emergency LED Battery Pack, field installed
FK14	1' x 4' Single Flange Kit
FK22	2' x 2' Single Flange Kit
FK24	2' x 4' Single Flange Kit
CFPSMK-14	1' x 4' CFP Surface Mount Kit
CFPSMK-22	2' x 2' CFP Surface Mount Kit
CFPSMK-24	2' x 4' CFP Surface Mount Kit
CFPCM36YSC5F-KIT	36" Cable Mount Kit for 1' or 2' wide Cable Mount fixtures, 5 Wire

¹ DLC® (DesignLights Consortium) Qualified
 - see www.designlights.org

² DLC® (DesignLights Consortium) Premium Qualified
 - see www.designlights.org

**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 CFP22-3340

Notes:

Type:

F4

LPS-SLA19-49539

Columbia
 LIGHTING

CFP
 Edge Lit Flat Panel

PHOTOMETRIC DATA

Test #17.01571 Test Date 5/25/2017

LUMINAIRE DATA

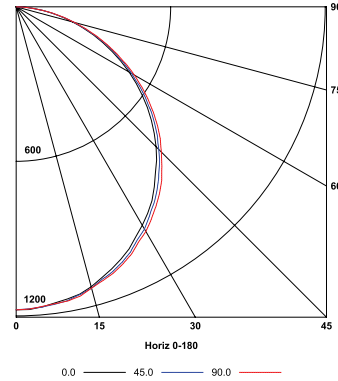
Luminaire	CFP22-3335 CFP, Recessed 2' x 2' Flat Panel LED
Ballast	WPC-40U-40-MT-0950
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3384
Watts	32.03
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.27
Luminous Opening in Feet	Length: 1.80 Width: 1.80 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	914	27.0	27.0
0-40	1497	44.2	44.2
0-60	2649	78.3	78.3
0-90	3384	100.0	100.0
0-180	3384	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	106
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.26 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**LUMINAIRE DATA**

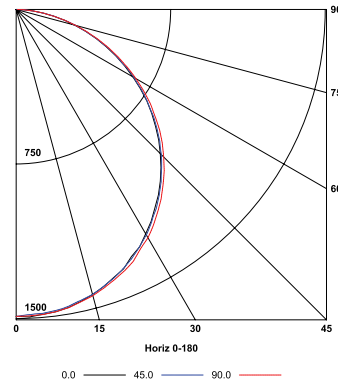
Luminaire	CFP24-4135 CFP, Recessed 2' x 4' Flat Panel LED
Ballast	WPC-40U-40-MT-1000
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4309
Watts	40.43
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.27
Luminous Opening in Feet	Length: 3.80 Width: 1.79 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1160	26.9	26.9
0-40	1901	44.1	44.1
0-60	3369	78.2	78.2
0-90	4309	100.0	100.0
0-180	4309	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	107
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.22 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #17.01569 Test Date 5/25/2017

LUMINAIRE DATA

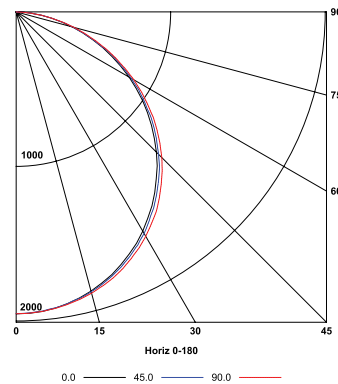
Luminaire	CFP24-5540 CFP, Recessed 2' x 4' Flat Panel LED
Ballast	WPC-60U-40-MT-1200
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5611
Watts	49.90
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.27
Luminous Opening in Feet	Length: 3.79 Width: 0.96 Height: 0.04

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1518	27.1	27.1
0-40	2489	44.4	44.4
0-60	4404	78.5	78.5
0-90	5611	100.0	100.0
0-180	5611	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	112
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.14 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #17.02370 Test Date 8/25/2017



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

CFP22-3340

Notes:

Type:

F4

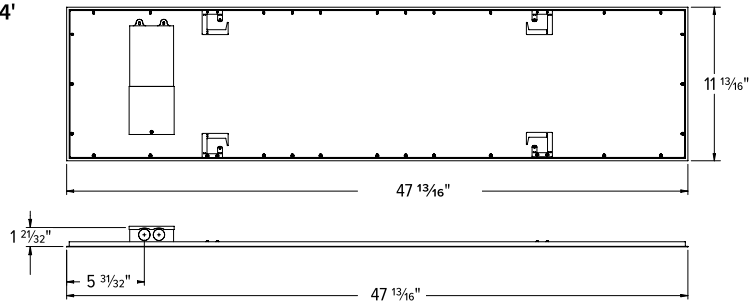
LPS-SLA19-49539

Columbia
 LIGHTING

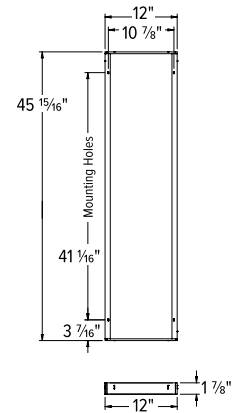
CFP
 Edge Lit Flat Panel

DIMENSIONAL DATA

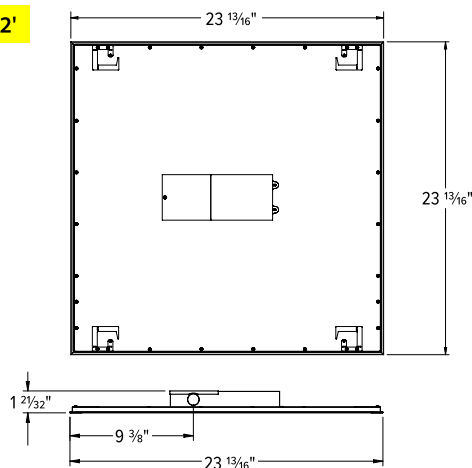
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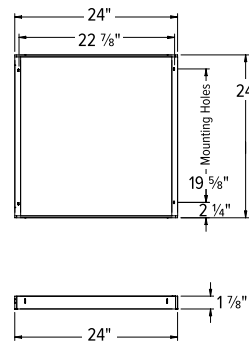
SURFACE MOUNT



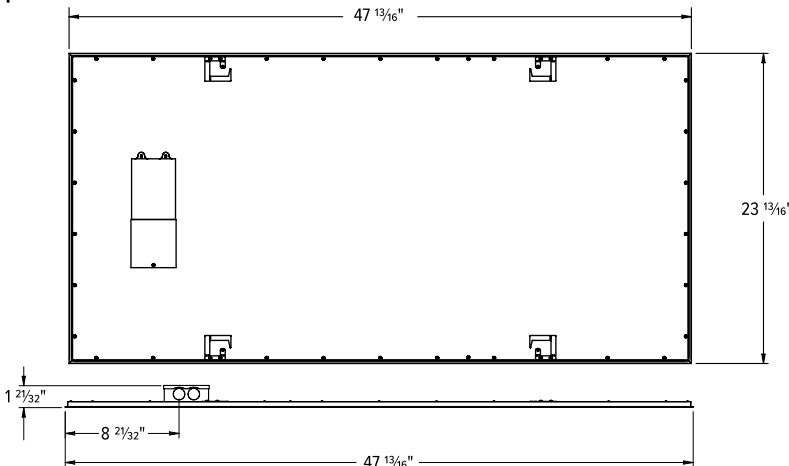
2' X 2'



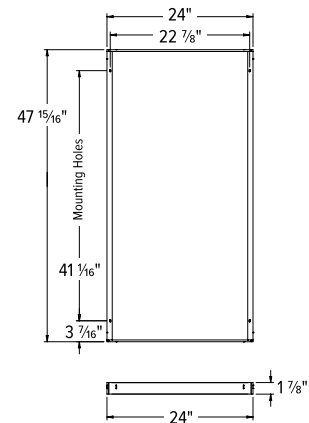
SURFACE MOUNT



2' X 4'



SURFACE MOUNT



Rev. 04/15/19

LED / CFP

© 2019 Columbia Lighting, a division of Hubbell Lighting, Inc. Please refer to on-line specification sheet for most up-to-date content as specifications are subject to change without notice.
 701 Millennium Blvd. Greenville, SC 29607 / Tel 864.678.1000 / Website www.columbialighting.com



Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

CFP22-3340

Notes:

Type:

F4

LPS-SLA19-49539

**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 CFP24-5540-FK24

Notes:

Type:**F5**

LPS-SLA19-49539

Columbia
 LIGHTING

CFP
 Edge Lit Flat Panel

DESCRIPTION

The CFP offers edge lit LED technology in a sleek, modern, flat panel design. Light classrooms, offices, medical facilities, cleanrooms and general public spaces using edge-to-edge illumination, without pixelation or bright spots.

**CONSTRUCTION**

Extruded aluminum frame has a matte white finish and smooth frame-to-lens transition.

tradeSELECT™

**FEATURES**

- 1x4, 2x2, and 2x4 sizes
- 80 CRI
- **0-10V dimming**
- Recessed, Surface, or Cable Mount
- T-bar clips for secure mounting
- **Universal voltage (120-277V)**
- IC rated
- 60,000 hour LEDs at L70 (up to 180,000 projected life) for reduced maintenance
- Unique curved 1⅝" frame
- Suitable for ISO Class 5-9 positive pressure cleanrooms

STANDARDS, CERTIFICATION AND COMPLIANCE

All luminaires are built to UL1598 standards and bear appropriate ETL labels. **Damp location label standard.** Tested in accordance with ISO 14644-1; suitable for ISO Class 5-9 positive pressure cleanrooms. DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org.

WARRANTY

Five year warranty. Terms and conditions apply.

ORDERING GUIDE

Catalog Number	Description	Lumens	Watts	LPW	Qty on Pallet
CFP14-4035¹	1x4 Edge Lit Flat Panel, 4000lm, 3500K	3951	39	101	48
CFP14-4040¹	1x4 Edge Lit Flat Panel, 4000lm, 4000K	4102	39	105	48
CFP22-3335¹	2x2 Edge Lit Flat Panel, 3300lm, 3500K	3382	32	106	36
CFP22-3335-HE²	2x2 Edge Lit Flat Panel, 3300lm, 3500K, High Efficacy	3299	26	125	36
CFP22-3340¹	2x2 Edge Lit Flat Panel, 3300lm, 4000K	3475	32	109	36
CFP22-3340-HE²	2x2 Edge Lit Flat Panel, 3300lm, 4000K, High Efficacy	3430	27	127	36
CFP22-4035¹	2x2 Edge Lit Flat Panel, 4000lm, 3500K	4302	41	105	36
CFP22-4040¹	2x2 Edge Lit Flat Panel, 4000lm, 4000K	4074	40	102	36
CFP24-4135¹	2x4 Edge Lit Flat Panel, 4100lm, 3500K	4307	40	107	24
CFP24-4135-HE²	2x4 Edge Lit Flat Panel, 4100lm, 3500K, High Efficacy	4229	34	124	24
CFP24-4140¹	2x4 Edge Lit Flat Panel, 4100lm, 4000K	4123	40	103	24
CFP24-4140-HE²	2x4 Edge Lit Flat Panel, 4100lm, 4000K, High Efficacy	4334	34	127	24
CFP24-5535¹	2x4 Edge Lit Flat Panel, 5500lm, 3500K	5447	49	110	24
CFP24-5540¹	2x4 Edge Lit Flat Panel, 5500lm, 4000K	5608	50	112	24

Accessories (Order Separately)

PLD10M	Dual-Lite® Emergency LED Battery Pack, field installed
FK14	1' x 4' Single Flange Kit
FK22	2' x 2' Single Flange Kit
FK24	2' x 4' Single Flange Kit
CFPSMK-14	1' x 4' CFP Surface Mount Kit
CFPSMK-22	2' x 2' CFP Surface Mount Kit
CFPSMK-24	2' x 4' CFP Surface Mount Kit
CFPCM36YSC5F-KIT	36" Cable Mount Kit for 1' or 2' wide Cable Mount fixtures, 5 Wire

¹ DLC® (DesignLights Consortium) Qualified
 - see www.designlights.org

² DLC® (DesignLights Consortium) Premium Qualified
 - see www.designlights.org

**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 CFP24-5540-FK24

Notes:

Type:

F5

LPS-SLA19-49539

Columbia
 LIGHTING

CFP
 Edge Lit Flat Panel

PHOTOMETRIC DATA

Test #17.01571 Test Date 5/25/2017

LUMINAIRE DATA

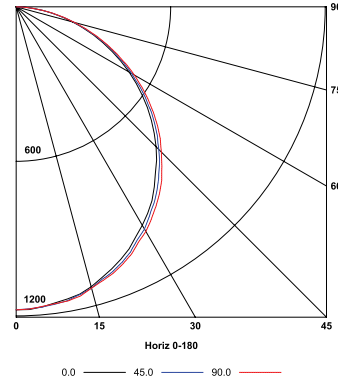
Luminaire	CFP22-3335 CFP, Recessed 2' x 2' Flat Panel LED
Ballast	WPC-40U-40-MT-0950
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	3384
Watts	32.03
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.27
Luminous Opening in Feet	Length: 1.80 Width: 1.80 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	914	27.0	27.0
0-40	1497	44.2	44.2
0-60	2649	78.3	78.3
0-90	3384	100.0	100.0
0-180	3384	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	106
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.26 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT**LUMINAIRE DATA**

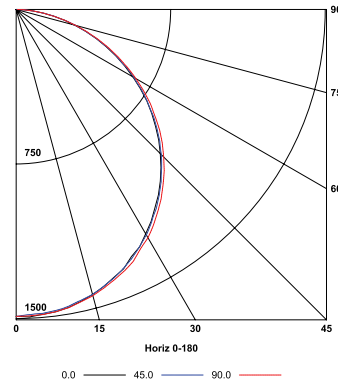
Luminaire	CFP24-4135 CFP, Recessed 2' x 4' Flat Panel LED
Ballast	WPC-40U-40-MT-1000
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4309
Watts	40.43
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.27
Luminous Opening in Feet	Length: 3.80 Width: 1.79 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1160	26.9	26.9
0-40	1901	44.1	44.1
0-60	3369	78.2	78.2
0-90	4309	100.0	100.0
0-180	4309	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	107
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.22 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #17.01569 Test Date 5/25/2017

LUMINAIRE DATA

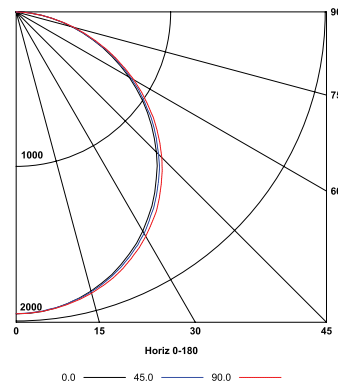
Luminaire	CFP24-5540 CFP, Recessed 2' x 4' Flat Panel LED
Ballast	WPC-60U-40-MT-1200
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5611
Watts	49.90
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.27
Luminous Opening in Feet	Length: 3.79 Width: 0.96 Height: 0.04

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1518	27.1	27.1
0-40	2489	44.4	44.4
0-60	4404	78.5	78.5
0-90	5611	100.0	100.0
0-180	5611	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	112
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.14 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test #17.02370 Test Date 8/25/2017



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group (Covington)

Catalog Number:
CFP24-5540-FK24

Notes:

Type:

F5

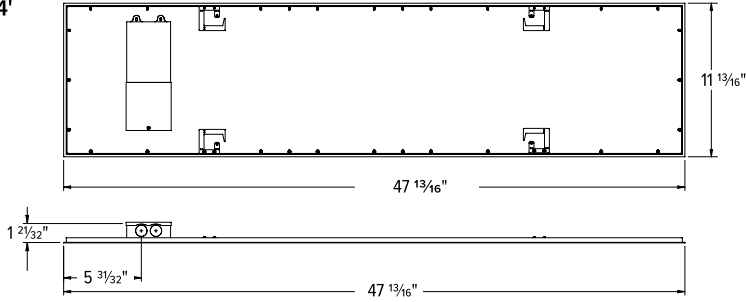
LPS-SLA19-49539

Columbia
LIGHTING

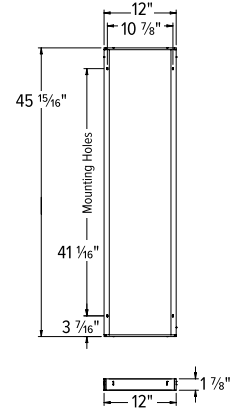
CFP
Edge Lit Flat Panel

DIMENSIONAL DATA

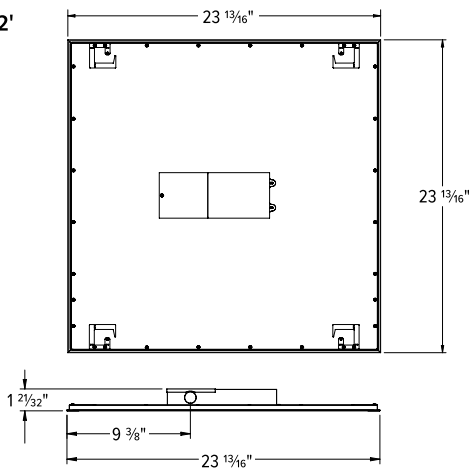
1' X 4'



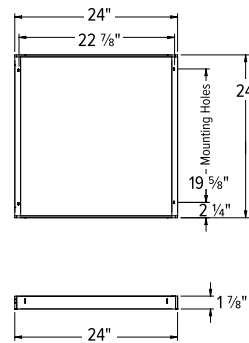
SURFACE MOUNT



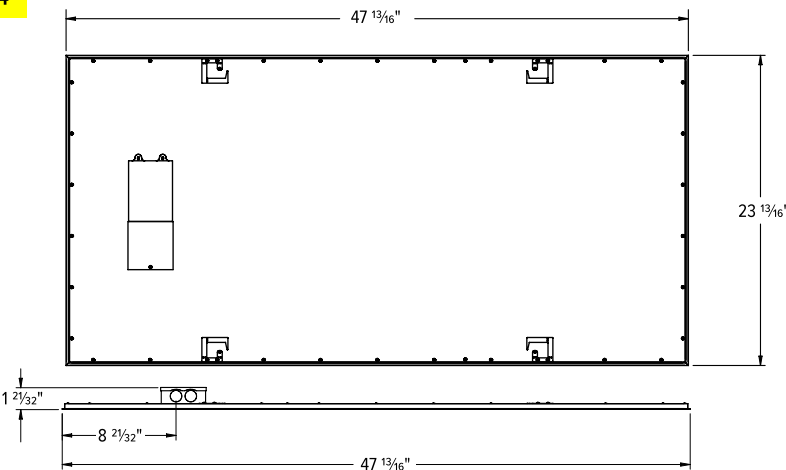
2' X 2'



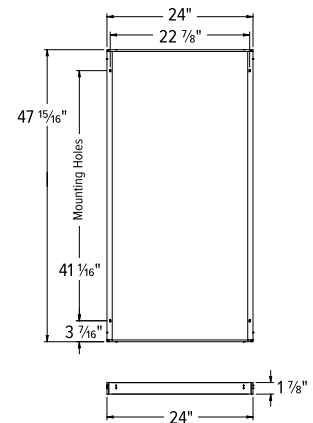
SURFACE MOUNT



2' X 4'



SURFACE MOUNT



Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:
CFP24-5540-FK24

Notes:

Type:

F5

LPS-SLA19-49539

**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 MPS4-40HL-CW-EU

Notes:

Type:**F6**

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

**PROJECT INFORMATION**

Project Name _____

Type _____

Catalog No. _____

Date _____

COMPATIBLE WITH:

SpectraSync™

NX DISTRIBUTED™
INTELLIGENCE**FEATURES**

- Uninterrupted ribbon of light; row mounting optional
- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 2', 4' or 8' lengths
- Optional integral emergency battery pack
- Three lens options as well as less lens (NL)
- Modular replaceable LED boards and driver accessible for future maintenance or upgrades
- Surface mount, wall mount or suspended
- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations - see www.designlights.org
- Optional SpectraSync™ offers three modes of tunable white solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments
- Five year warranty

INTERACTIVE MENU

- Ordering Guide
- Photometric Data
- Dimensional Data

EXTERNAL LINKS

- NX Distributed Intelligence™ Brochure
- SpectraSync™ Brochure

**MULTIPURPOSE LINEAR****CONSTRUCTION**

Housing, wireway, and ends are formed from code-gauge steel. Housing components act as heat sink for LED heat dissipation. Knockouts are provided for electrical access and mounting. Available with or without frosted acrylic lens.

FINISH

White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel.

ELECTRICAL

Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance. Driver options include **fixed output for on/off function**, step dimming (high/low/ off), or continuous 0-10V dimming. Superior drivers and long-life LEDs provide quality illumination for prolonged service life. Drivers < 10% THD at 120V, power factor >0.95.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA c/US labels. **Damp location labeling is standard**. Emergency equipped fixtures are listed to UL924 standards for emergency situations. Adheres to LM79, LM80, and TM21 industry standards.

WARRANTY

Five year warranty (Terms and Conditions apply).

**HUBBELL**
Lighting



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:
 MPS4-40HL-CW-EU

Notes:

Type:

F6

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

ORDERING INFORMATION

EXAMPLE MPS4-40ML-CW-EDU

YOUR ORDER **MPS** - - -

MPS		4		-		40		-		HL		-		C	
MODEL	SIZE	CRI	COLOR TEMPERATURE		LUMEN OUTPUT		LENS								
MPS MultiPurpose Linear	2' 2" 4' 4" 8' 8"	Blank 80 9 90 ⁹	30 3000K 35 3500K 40 4000K 50 5000K	2750T 2700K-5000K SpectraSync™ Tunable White 2765T 2700K-6500K SpectraSync™ Tunable White	XW 4' (2700), 8' (5400) XWHE 4' (2500), 8' (5000) VW 2' (1700), 4' (3400), 8' (6900) VWHE 4' (3300), 8' (6600) MW 2' (2300), 4' (3800), 8' (7700) MWHE 2' (2100), 4' (3700), 8' (7400) LW 2' (2500), 4' (4200), 8' (8400) LWHE 2' (2600), 4' (4100), 8' (8200) ML 2' (3600), 4' (4800), 8' (9500) MLHE 4' (4700), 8' (9400) HL 2' (3800), 4' (6000), 8' (12,000) HLHE 4' (5700), 8' (11,500) VL 4' (7100), 8' (14,200) XL 4' (8400), 8' (17,000)	C Curve, Frosted Acrylic F Flat, Frosted Acrylic NL Less Lens CP Curve, Frosted Polycarbonate									

W		-		E		-		U		-		-	
DISTRIBUTION ⁶	DRIVER	VOLTAGE		OPTIONS		CONTROL OPTIONS ⁸							
N Narrow Distribution ¹ W Wide Distribution	E Fixed Output ED 0-10V Dimming ED1 0-10V 1% Dimming EDD Dim-to-Dark ESD Step Dimming LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ² LUT5 5-Series EcoSystem LED driver ²	U 120V-277V 347 347V (E,ED,ED1 only)	ELLT4 Emergency Battery Pack, 10W ^{4,5,7} GLR Fast Blow Fuse GTD Generator Transfer Device MPSCE Injection Molded ABS Material Curve Endcap MPSCE-MB Injection Molded ABS Material Curve Endcap, Matte Black MPSFE Injection Molded ABS Material Flat Endcap MPSFE-MB Injection Molded ABS Material Flat Endcap, Matte Black MB Matte Black ZT ZET Metallic Silver	NXS NX, PIR Occupancy Sensor, Dimming Daylight Harvesting NXSW NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting NXWE NX Wireless Enabled NXE NX Enabled, Dual SmartPorts NXES NX Enabled, PIR Occupancy Sensor, Dimming Daylight Harvesting ODPG Occupancy and Daylight Sensors w/Grouping, Philips SNS200									

ACCESSORIES (ORDER SEPARATELY)

- S18 18" Stem, Canopy
- SS18 18" Swivel Stem—45° Swivel
- CM24SCF3-KIT 24" Adjustable Cable Mounting Kit, 3 wire feed
- CM48SCF3-KIT 48" Adjustable Cable Mounting Kit, 3 wire feed
- CSHC Chain Hanger Assembly
- MPSZT Zip Tee Hanger - 1 1/2" Spacer on T-Bar Ceiling
- MPSTH Slide Tong Hanger
- MPSCRK-C Continuous Row Kit, Curve
- MPSCRK-F Continuous Row Kit, Flat
- MPSWG2 2' Wire Guard
- MPSWG4 4' Wire Guard, 2 Required for 8' Fixture
- MPSCE Injection Molded ABS Material Curve Endcap
- MPSCE-MB Injection Molded ABS Material Curve Endcap, Matte Black
- MPSFE Injection Molded ABS Material Flat Endcap
- MPSFE-MB Injection Molded ABS Material Flat Endcap, Matte Black

¹ Only available in curve lens.
² Not available in VL, XL, HE packages.
³ Delivered Emergency Lumens = ELLT4 = 1210 lms.
⁴ Not available in 2 ft size.
⁵ Not available with thru wire on XL.
⁶ Applicable to lens only.
⁷ Emergency battery pack max ambient temperature: -25°C.
⁸ Control Options include Injection Molded ABS End Cap.
⁹ Not available with HE lumen packages.

DRIVER AVAILABILITY TABLE

2'

	VW	MW	MWHE	LW	LWHE	ML	HL
E	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X
EDD	X	X		X		X	X
ESD	X	X		X		X	X
LUT5	X	X		X		X	X
LUTH	X	X		X		X	X
347	X	X		X		X	X

2ft with ODP/ODPG not available for VW,MW,LW

DRIVER AVAILABILITY TABLE

4/8'

	XW	XWHE	VW	VWHE	MW	MWHE	LW	LWHE	ML	MLHE	HL	HLHE	VL	XL
E	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EDD	X		X		X		X		X		X		X	X
ESD	X		X		X		X		X		X		X	X
347	X		X		X		X		X		X		X	X
LUT5	X		X		X		X		X		X			
LUTH	X		X		X		X		X		X			

XL not available with thru wire





Job Name:
 Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 MPS4-40HL-CW-EU

Notes:

Type:

F6

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

STANDARD EFFICACY PERFORMANCE TABLE							
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	WATTS	LPW	
MPS2-VW	3500K	CURVE	WIDE	1659	13.8	120	
			NARROW	1597	13.5	118	
		FLAT	WIDE	1584	13.5	117	
	4000K	CURVE	NO LENS	WIDE	1724	13.8	125
			WIDE	1681	13.8	122	
				NARROW	1618	13.5	120
FLAT		WIDE	1604	13.5	119		
		NO LENS	WIDE	1746	13.8	127	
		NARROW	2201	18.2	121		
MPS2-MW	3500K	CURVE	NARROW	2092	17.8	118	
			FLAT	WIDE	2076	17.8	117
		NO LENS	WIDE	2287	18.2	126	
	4000K	CURVE	WIDE	2229	18.2	122	
			NARROW	2119	17.8	119	
			FLAT	WIDE	2102	17.8	118
NO LENS		WIDE	2316	18.2	127		
		NARROW	2444	20.4	120		
		FLAT	WIDE	2328	19.9	117	
MPS2-LW	3500K	CURVE	NARROW	2309	19.9	116	
			FLAT	WIDE	2540	20.4	124
		NO LENS	WIDE	2475	20.4	121	
	4000K	CURVE	NARROW	2358	19.9	118	
			FLAT	WIDE	2338	19.9	118
			NO LENS	WIDE	2572	20.4	126
MPS2-ML		3500K	CURVE	WIDE	3452	29.0	119
				NARROW	3447	28.8	120
			FLAT	WIDE	3414	28.8	119
	4000K	CURVE	NO LENS	WIDE	3587	29.0	124
			WIDE	3496	29.0	121	
				NARROW	3491	28.8	121
FLAT		WIDE	3458	28.8	120		
		NO LENS	WIDE	3632	29.0	125	
		NARROW	3655	31.7	115		
MPS2-HL	3500K	CURVE	NARROW	3707	31.5	118	
			FLAT	WIDE	3678	31.5	117
		NO LENS	WIDE	3797	31.7	120	
	4000K	CURVE	WIDE	3701	31.7	117	
			NARROW	3754	31.5	119	
			FLAT	WIDE	3725	31.5	118
NO LENS		WIDE	3846	31.7	121		
		NARROW	2574	20.0	129		
		FLAT	WIDE	2574	20.0	129	
MPS4-XW	3500K	CURVE	NARROW	2463	20.0	123	
			FLAT	WIDE	2674	20.0	134
		NO LENS	WIDE	2674	20.0	134	
	4000K	CURVE	WIDE	2606	20.0	130	
			NARROW	2574	20.0	129	
			FLAT	WIDE	2494	20.0	125
NO LENS		WIDE	2708	20.0	135		
		NARROW	3279	26.7	123		
		FLAT	WIDE	3152	26.5	119	
MPS4-VW	3500K	CURVE	NARROW	3134	26.5	118	
			FLAT	WIDE	3450	26.7	129
		NO LENS	WIDE	3450	26.7	129	
	4000K	CURVE	WIDE	3321	26.7	124	
			NARROW	3192	26.5	120	
			FLAT	WIDE	3174	26.5	120
NO LENS		WIDE	3564	26.7	133		
		NARROW	3656	30.4	120		
		FLAT	WIDE	3511	30.1	117	
MPS4-MW	3500K	CURVE	NARROW	3491	30.1	116	
			FLAT	WIDE	3847	30.4	127
		NO LENS	WIDE	3847	30.4	127	
	4000K	CURVE	WIDE	3702	30.4	122	
			NARROW	3556	30.1	118	
			FLAT	WIDE	3535	30.1	117
NO LENS		WIDE	3974	30.4	131		

**Job Name:**Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)**Catalog Number:**
MPS4-40HL-CW-EU

Notes:

Type:**F6**

LPS-SLA19-49539

Columbia
LIGHTING**MPS**
MultiPurpose Linear

STANDARD EFFICACY PERFORMANCE TABLE

FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	WATTS	LPW	
MPS4-LW	3500K	CURVE	WIDE	4043	34.4	118	
			NARROW	4094	32.5	126	
		FLAT	WIDE	4072	32.5	125	
	4000K	CURVE	WIDE	NO LENS	4255	34.4	124
				NARROW	4095	34.4	119
			FLAT	WIDE	4147	32.5	128
MPS4-ML		3500K	CURVE	WIDE	4124	32.5	127
				NARROW	4395	34.4	128
			FLAT	WIDE	4556	40.1	114
	4000K	CURVE	WIDE	NO LENS	4649	37.7	123
				NARROW	4625	37.8	122
			FLAT	WIDE	4794	40.1	120
MPS4-HL		3500K	CURVE	WIDE	4614	40.1	115
				NARROW	4709	37.7	125
			FLAT	WIDE	4684	37.8	124
	4000K	CURVE	WIDE	NO LENS	4952	40.1	123
				NARROW	5760	49.5	116
			FLAT	WIDE	5781	49.4	117
MPS4-VL		3500K	CURVE	WIDE	5741	49.4	116
				NARROW	6061	49.5	122
			FLAT	WIDE	5833	49.5	118
	4000K	CURVE	WIDE	NO LENS	5855	49.4	119
				NARROW	5814	49.4	118
			FLAT	WIDE	6261	49.5	126
MPS4-VL		3500K	CURVE	WIDE	6769	54.1	125
				NARROW	6675	54.1	123
			FLAT	WIDE	6637	54.1	123
	4000K	CURVE	WIDE	NO LENS	7122	54.1	132
				NARROW	6855	54.1	127
			FLAT	WIDE	6760	54.1	125
MPS4-XL		3500K	CURVE	WIDE	6722	54.1	124
				NARROW	7357	54.1	136
			FLAT	WIDE	8045	66.5	121
	4000K	CURVE	WIDE	NO LENS	7878	66.8	118
				NARROW	7813	66.9	117
			FLAT	WIDE	8466	66.5	127
MPS8-XW		3500K	CURVE	WIDE	8148	66.5	123
				NARROW	7979	66.8	119
			FLAT	WIDE	7913	66.9	118
	4000K	CURVE	WIDE	NO LENS	8745	66.5	132
				NARROW	5147	40.0	129
			FLAT	WIDE	4939	39.8	124
MPS8-VW		3500K	CURVE	NO LENS	4925	40.0	123
				FLAT	WIDE	5348	40.0
			NO LENS	WIDE	5213	40.0	130
	4000K	CURVE	WIDE	NO LENS	5002	39.8	126
				NARROW	4988	40.0	125
			FLAT	WIDE	5416	40.0	135
MPS8-MW		3500K	CURVE	WIDE	6558	53.4	123
				NARROW	6303	53.0	119
			FLAT	WIDE	6269	53.0	118
	4000K	CURVE	WIDE	NO LENS	6814	53.4	128
				NARROW	6642	53.4	124
			FLAT	WIDE	6384	53.0	120
MPS8-MW		3500K	CURVE	WIDE	6349	53.0	120
				NARROW	6901	53.4	129
			FLAT	WIDE	7311	60.8	120
	4000K	CURVE	WIDE	NO LENS	7022	60.2	117
				NARROW	6981	60.2	116
			FLAT	WIDE	7596	60.8	125
MPS8-MW		3500K	CURVE	WIDE	7405	60.8	122
				NARROW	7112	60.2	118
			FLAT	WIDE	7071	60.2	117
	4000K	CURVE	WIDE	NO LENS	7693	60.8	127
				NARROW			
			FLAT	WIDE			



**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 MPS4-40HL-CW-EU

Notes:

Type:

F6

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

STANDARD EFFICACY PERFORMANCE TABLE						
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	WATTS	LPW
MPS8-LW	3500K	CURVE	WIDE	8087	68.8	118
			NARROW	8189	65.0	126
		FLAT	WIDE	8144	65.0	125
	4000K	CURVE	NO LENS	8402	68.8	122
			WIDE	8190	68.8	119
		NARROW	8293	65.0	128	
MPS8-ML	3500K	CURVE	WIDE	9111	80.2	114
			NARROW	9298	75.4	123
		FLAT	WIDE	9250	75.6	122
	4000K	CURVE	NO LENS	9466	80.2	118
			WIDE	9227	80.2	115
		NARROW	9417	75.4	125	
MPS8-HL	3500K	CURVE	WIDE	9368	75.6	124
			NARROW	9587	80.2	120
		FLAT	WIDE	11481	98.8	116
	4000K	CURVE	NO LENS	11969	99.0	121
			WIDE	11667	99.0	118
		NARROW	11710	98.8	119	
MPS8-VL	3500K	CURVE	WIDE	11628	98.8	118
			NARROW	11562	98.8	117
		FLAT	WIDE	11481	98.8	116
	4000K	CURVE	NO LENS	11969	99.0	121
			WIDE	11667	99.0	118
		NARROW	11710	98.8	119	
MPS8-XL	3500K	CURVE	WIDE	12122	99.0	122
			NARROW	13537	108.2	125
		FLAT	WIDE	13350	108.2	123
	4000K	CURVE	NO LENS	13275	108.2	123
			WIDE	14065	108.2	130
		NARROW	13710	108.2	127	
MPS8-XL	3500K	CURVE	WIDE	13521	108.2	125
			NARROW	13521	108.2	125
		FLAT	WIDE	13444	108.2	124
	4000K	CURVE	NO LENS	14245	108.2	132
			WIDE	16091	133.0	121
		NARROW	15757	133.6	118	
MPS8-XL	3500K	CURVE	WIDE	15626	133.8	117
			NARROW	16718	133.0	126
		FLAT	WIDE	16296	133.0	123
	4000K	CURVE	NO LENS	15958	133.6	119
			NARROW	15826	133.8	118
		FLAT	WIDE	16932	133.0	127





Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:
 MPS4-40HL-CW-EU

Notes:

Type:

F6

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

SpectraSync and NX Availability Table									
PRODUCT	SIZE	LUMEN PACKAGE	Only With 80 CRI			Only With 80 CRI			
			No Battery Pack			With Battery Pack			
			CTC	NX	CTC+NX	CTC	NX	CTC+NX	
MPS	2ft	VW	Y	Y	N	—	—	—	
		MW	Y	Y	N	—	—	—	
		LW	Y	Y	N	—	—	—	
		ML	N	Y	N	—	—	—	
		HL	N	Y	N	—	—	—	
	4ft	XW	Y	Y	Y	Y	Y	Y	
		VW	Y	Y	Y	Y	Y	Y	
		MW	Y	Y	Y	Y	Y	Y	
		LW	Y	Y	Y	Y	Y	Y	
		ML	Y	Y	Y	Y	Y	Y	
		HL	Y	Y	Y	Y	Y	Y	
		VL	N	Y	N	N	Y	N	
		XL	N	Y	N	N	Y	N	
		8ft	XW	Y	Y	Y	Y	Y	Y
			VW	Y	Y	Y	Y	Y	Y
	MW		N	Y	N	N	Y	N	
	LW		N	Y	N	N	Y	N	
	ML		N	Y	N	N	Y	N	
	HL		N	Y	N	N	Y	N	
			VL	N	Y	N	N	Y	N
			XL	N	Y	N	N	Y	N

MAX AMBIENT BY DRIVER (MIN. -25°C)											
SIZE	LUMEN PACKAGE	80 CRI									
		E/ED/ED1		ESDU		ED347		EDD		LUT	
		CEILING/SURFACE MOUNT	PENDANT/TH MOUNT	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount
2'	VW	35	40	35	40	35	40	35	40	35	40
	MW	35	40	35	40	35	40	35	40	35	40
	LW	35	40	35	40	35	40	35	40	35	40
	ML	35	40	35	40	35	40	35	40	35	40
	HL	30	35	30	35	30	35	30	35	30	35
4'	XW	35	45	35	45	35	45	30	35	30	35
	VW	35	45	35	45	35	45	30	35	30	35
	MW	35	45	35	45	35	45	30	35	30	35
	LW	35	45	35	45	35	45	30	35	30	35
	ML	35	45	35	45	35	45	30	35	30	35
	HL	35	40	35	40	35	40	25	30	30	35
	VL	30	30	30	30	30	30	30	30	—	—
XL*	25	25	25	25	25	25	25	25	—	—	
8'	XW	35	45	35	45	35	45	30	35	30	35
	VW	35	45	35	45	35	45	30	35	30	35
	MW	35	45	35	45	35	45	30	35	30	35
	LW	35	45	35	45	35	45	30	35	30	35
	ML	35	45	35	45	35	45	30	35	30	35
	VL	30	30	30	30	30	30	30	30	—	—
XL*	25	25	25	25	25	25	25	25	—	—	

*No Thru Wire

Note: Standard and HE lumen packages have equal ambient temperatures.
Note: Emergency battery pack max ambient temperature: -25°C.



**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 MPS4-40HL-CW-EU

Notes:

Type:

F6

LPS-SLA19-49539

Columbia

LIGHTING

MPS

MultiPurpose Linear

Test 19735 Test Date 9/25/2017

LUMINAIRE DATA

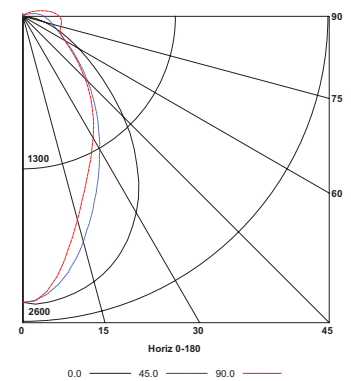
Luminaire	MPS4-40ML-CN-EDU MPS MultiPurpose Linear, Narrow LED 4ft, Frosted Linear Prisms Lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4742
Watts	37.70
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.18 90° = 1.77
Luminous Opening in Feet	Length: 4.00 Width: 0.25 Height: 0.12

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1542	32.5	32.5
0-40	2326	49.1	49.1
0-60	3518	74.2	74.2
0-90	4385	92.5	92.5
0-180	4742	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	126
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.92 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test 19600 Test Date 4/19/2017

LUMINAIRE DATA

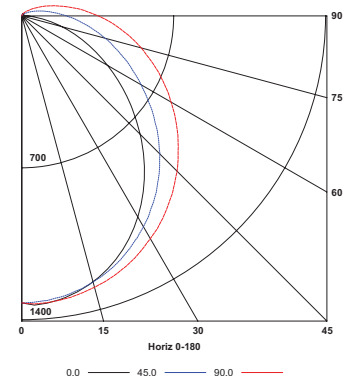
Luminaire	MPS4-40ML-CW-EDU MPS MultiPurpose Linear, Wide LED 4ft, Frosted Linear Prisms Lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4615
Watts	40.10
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.20 90° = 1.33
Luminous Opening in Feet	Length: 4.00 Width: 0.25 Height: 0.13

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1029	22.3	22.3
0-40	1688	36.6	36.6
0-60	3019	65.4	65.4
0-90	4248	92.0	92.0
0-180	4615	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	115
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.09 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

Test 19652 Test Date 9/25/2017

LUMINAIRE DATA

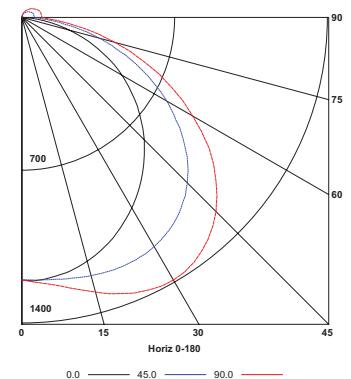
Luminaire	MPS4-40ML-FW-EDU MPS MultiPurpose Linear, Wid LED 4ft, Frosted Linear Prisms Lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4685
Watts	37.80
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.67
Luminous Opening in Feet	Length: 4.00 Width: 0.25 Height: 0.05

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1026	21.9	21.9
0-40	1756	37.5	37.5
0-60	3324	70.9	70.9
0-90	4435	94.7	94.7
0-180	4685	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	124
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.95 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group (Covington)

Catalog Number:
MPS4-40HL-CW-EU

Notes:

Type:

F6

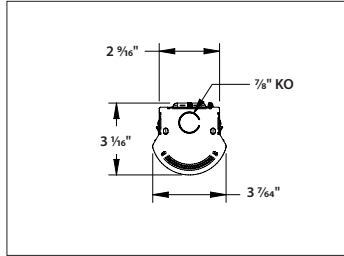
LPS-SLA19-49539

Columbia
LIGHTING

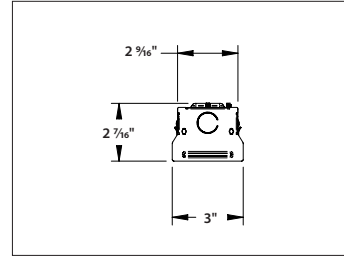
MPS
MultiPurpose Linear

DIMENSIONAL DATA

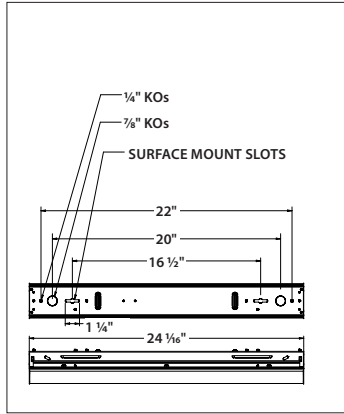
MPS END VIEW - CURVE LENS



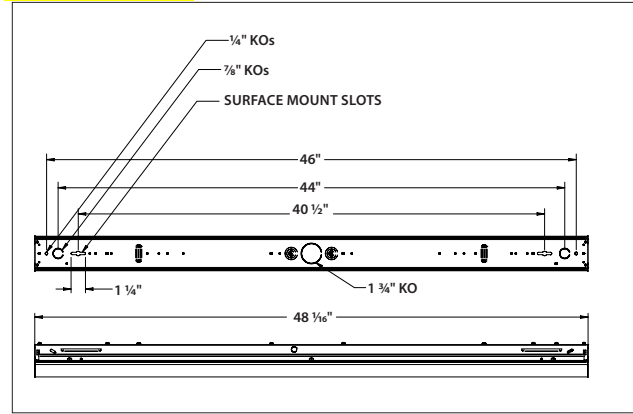
MPS END VIEW - FLAT LENS



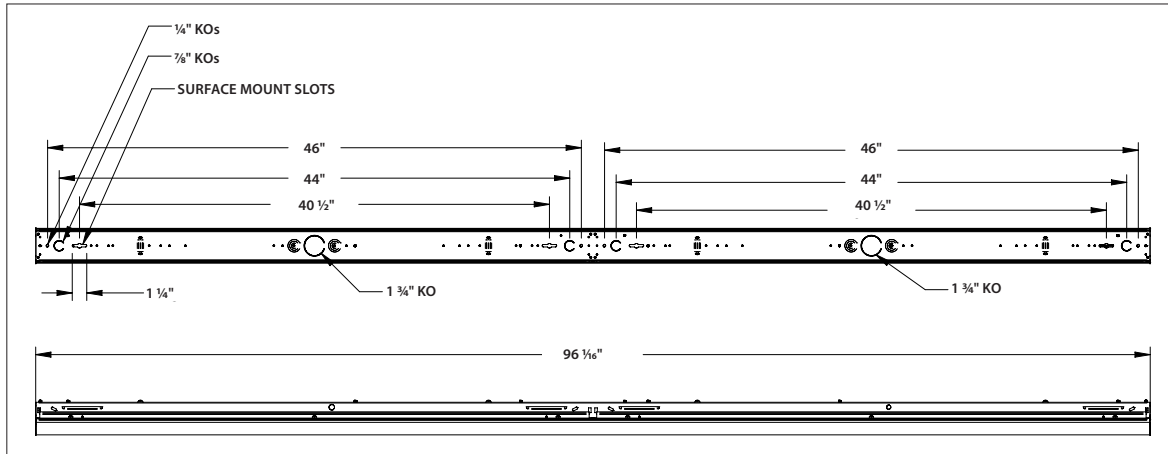
MPS 2' DIMENSIONS



MPS 4' DIMENSIONS



MPS 8' DIMENSIONS





Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 MPS4-40HL-CW-EU

Notes:

Type:

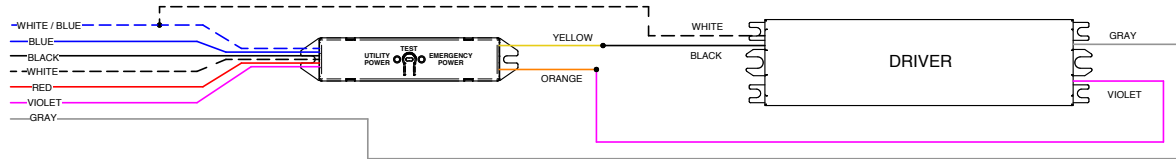
F6

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

DTS WIRING DIAGRAM



WHITE / BLUE	→	EMERGENCY NEUTRAL
BLUE	→	EMERGENCY LINE
BLACK	→	UTILITY LINE
WHITE	→	UTILITY NEUTRAL
RED	→	SWITCHED HOT
VIOLET	→	DIMMING
GRAY	→	DIMMING

Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

MPS4-40HL-CW-EU

Notes:

Type:

F6

LPS-SLA19-49539

**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 MPS2-40ML-CW-EU

Notes:

Type:**F7**

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

**PROJECT INFORMATION**

Project Name _____

Type _____

Catalog No. _____

Date _____

COMPATIBLE WITH:

SpectraSync™

NX DISTRIBUTED™
INTELLIGENCE**FEATURES**

- Uninterrupted ribbon of light; row mounting optional
- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 2', 4' or 8' lengths
- Optional integral emergency battery pack
- Three lens options as well as less lens (NL)
- Modular replaceable LED boards and driver accessible for future maintenance or upgrades
- Surface mount, wall mount or suspended
- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations - see www.designlights.org
- Optional SpectraSync™ offers three modes of tunable white solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments
- Five year warranty

INTERACTIVE MENU

- Ordering Guide
- Photometric Data
- Dimensional Data

EXTERNAL LINKS

- NX Distributed Intelligence™ Brochure
- SpectraSync™ Brochure

**MULTIPURPOSE LINEAR****CONSTRUCTION**

Housing, wireway, and ends are formed from code-gauge steel. Housing components act as heat sink for LED heat dissipation. Knockouts are provided for electrical access and mounting. Available with or without frosted acrylic lens.

FINISH

White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel.

ELECTRICAL

Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance. Driver options include **fixed output for on/off function**, step dimming (high/low/ off), or continuous 0-10V dimming. Superior drivers and long-life LEDs provide quality illumination for prolonged service life. Drivers < 10% THD at 120V, power factor >0.95.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA c/US labels. **Damp location labeling is standard**. Emergency equipped fixtures are listed to UL924 standards for emergency situations. Adheres to LM79, LM80, and TM21 industry standards.

WARRANTY

Five year warranty (Terms and Conditions apply).

**HUBBELL**
Lighting



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
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Catalog Number:
 MPS2-40ML-CW-EU

Notes:

Type:

F7

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

ORDERING INFORMATION

EXAMPLE MPS4-40ML-CW-EDU

YOUR ORDER **MPS** - - -

MPS		2		-		40		-		ML		-		C	
MODEL	SIZE	CRI	COLOR TEMPERATURE		LUMEN OUTPUT		LENS								
MPS MultiPurpose Linear	2 2'	Blank 80	30 3000K	XW 4' (2700), 8' (5400)	C Curve, Frosted Acrylic										
	4 4'	9 90 ⁹	35 3500K	XWHE 4' (2500), 8' (5000)	F Flat, Frosted Acrylic										
	8 8'		40 4000K	VW 2' (1700), 4' (3400), 8' (6900)	NL Less Lens										
			50 5000K	VWHE 4' (3300), 8' (6600)	CP Curve, Frosted Polycarbonate										
			2750T 2700K-5000K SpectraSync™ Tunable White	MW 2' (2300), 4' (3800), 8' (7700)											
			2765T 2700K-6500K SpectraSync™ Tunable White	MWHE 2' (2100), 4' (3700), 8' (7400)											
				LW 2' (2500), 4' (4200), 8' (8400)											
				LWHE 2' (2600), 4' (4100), 8' (8200)											
				ML 2' (3600), 4' (4800), 8' (9500)											
				MLHE 4' (4700), 8' (9400)											
				HL 2' (3800), 4' (6000), 8' (12,000)											
				HLHE 4' (5700), 8' (11,500)											
				VL 4' (7100), 8' (14,200)											
				XL 4' (8400), 8' (17,000)											

W		-		E		-		U		-		-	
DISTRIBUTION ⁶	DRIVER	VOLTAGE		OPTIONS		CONTROL OPTIONS ⁸							
N Narrow Distribution ¹	E Fixed Output	U 120V-277V		ELL14 Emergency Battery Pack, 10W ^{4,5,7}		NXS NX, PIR Occupancy Sensor, Dimming Daylight Harvesting							
W Wide Distribution	ED 0-10V Dimming	347 347V (E,ED,ED1 only)		GLR Fast Blow Fuse		NXSW NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting							
	ED1 0-10V 1% Dimming			GTD Generator Transfer Device		NXWE NX Wireless Enabled							
	EDD Dim-to-Dark			MPSCE Injection Molded ABS Material Curve Endcap		NXE NX Enabled, Dual SmartPorts							
	ESD Step Dimming			MPSCE-MB Injection Molded ABS Material Curve Endcap, Matte Black		NXES NX Enabled, PIR Occupancy Sensor, Dimming Daylight Harvesting							
	LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ²			MPSFE Injection Molded ABS Material Flat Endcap		ODPG Occupancy and Daylight Sensors w/Grouping, Philips SNS200							
	LUT5 5-Series EcoSystem LED driver ²			MPSFE-MB Injection Molded ABS Material Flat Endcap, Matte Black									
				MB Matte Black									
				ZT ZET Metallic Silver									

ACCESSORIES (ORDER SEPARATELY)

- S18 18" Stem, Canopy
- SS18 18" Swivel Stem—45° Swivel
- CM24SCF3-KIT 24" Adjustable Cable Mounting Kit, 3 wire feed
- CM48SCF3-KIT 48" Adjustable Cable Mounting Kit, 3 wire feed
- CSHC Chain Hanger Assembly
- MPSZT Zip Tee Hanger - 1 1/2" Spacer on T-Bar Ceiling
- MPSTH Slide Tong Hanger
- MPSCRK-C Continuous Row Kit, Curve
- MPSCRK-F Continuous Row Kit, Flat
- MPSWG2 2' Wire Guard
- MPSWG4 4' Wire Guard, 2 Required for 8' Fixture
- MPSCE Injection Molded ABS Material Curve Endcap
- MPSCE-MB Injection Molded ABS Material Curve Endcap, Matte Black
- MPSFE Injection Molded ABS Material Flat Endcap
- MPSFE-MB Injection Molded ABS Material Flat Endcap, Matte Black

¹ Only available in curve lens.
² Not available in VL, XL, HE packages.
³ Delivered Emergency Lumens = ELL14 = 1210 lms.
⁴ Not available in 2 ft size.
⁵ Not available with thru wire on XL.
⁶ Applicable to lens only.
⁷ Emergency battery pack max ambient temperature: -25°C.
⁸ Control Options include Injection Molded ABS End Cap.
⁹ Not available with HE lumen packages.

DRIVER AVAILABILITY TABLE

	2'						
	VW	MW	MWHE	LW	LWHE	ML	HL
E	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X
EDD	X	X		X		X	X
ESD	X	X		X		X	X
LUT5	X	X		X		X	X
LUTH	X	X		X		X	X
347	X	X		X		X	X

2ft with ODP/ODPG not available for VW,MW,LW

DRIVER AVAILABILITY TABLE

	4/8'													
	XW	XWHE	VW	VWHE	MW	MWHE	LW	LWHE	ML	MLHE	HL	HLHE	VL	XL
E	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EDD	X		X		X		X		X		X		X	X
ESD	X		X		X		X		X		X		X	X
347	X		X		X		X		X		X		X	X
LUT5	X		X		X		X		X		X			
LUTH	X		X		X		X		X		X			

XL not available with thru wire





Job Name:
 Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:
 MPS2-40ML-CW-EU

Notes:

Type:

F7

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

STANDARD EFFICACY PERFORMANCE TABLE							
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	WATTS	LPW	
MPS2-VW	3500K	CURVE	WIDE	1659	13.8	120	
			NARROW	1597	13.5	118	
		FLAT	WIDE	1584	13.5	117	
	4000K	CURVE	NO LENS	WIDE	1724	13.8	125
			WIDE	1681	13.8	122	
			NARROW	1618	13.5	120	
FLAT		WIDE	1604	13.5	119		
		NO LENS	WIDE	1746	13.8	127	
		NARROW	2201	18.2	121		
MPS2-MW	3500K	CURVE	NARROW	2092	17.8	118	
			FLAT	WIDE	2076	17.8	117
		NO LENS	WIDE	2287	18.2	126	
	4000K	CURVE	WIDE	2229	18.2	122	
			NARROW	2119	17.8	119	
		FLAT	WIDE	2102	17.8	118	
MPS2-LW	3500K	CURVE	NO LENS	2316	18.2	127	
			WIDE	2444	20.4	120	
		NARROW	2328	19.9	117		
	4000K	CURVE	FLAT	WIDE	2309	19.9	116
			NO LENS	WIDE	2540	20.4	124
		WIDE	2475	20.4	121		
MPS2-ML	3500K	CURVE	NARROW	2358	19.9	118	
			FLAT	WIDE	2338	19.9	118
		NO LENS	WIDE	2572	20.4	126	
	4000K	CURVE	WIDE	3452	29.0	119	
			NARROW	3447	28.8	120	
		FLAT	WIDE	3414	28.8	119	
MPS2-HL	3500K	CURVE	NO LENS	3587	29.0	124	
			WIDE	3496	29.0	121	
		NARROW	3491	28.8	121		
	4000K	CURVE	FLAT	WIDE	3458	28.8	120
			NO LENS	WIDE	3632	29.0	125
		WIDE	3655	31.7	115		
MPS4-XW	3500K	CURVE	NARROW	3707	31.5	118	
			FLAT	WIDE	3678	31.5	117
		NO LENS	WIDE	3797	31.7	120	
	4000K	CURVE	WIDE	3701	31.7	117	
			NARROW	3754	31.5	119	
		FLAT	WIDE	3725	31.5	118	
MPS4-VW	3500K	CURVE	NO LENS	3846	31.7	121	
			WIDE	2574	20.0	129	
		NARROW	2574	20.0	129		
	4000K	CURVE	FLAT	WIDE	2463	20.0	123
			NO LENS	WIDE	2674	20.0	134
		WIDE	2606	20.0	130		
MPS4-MW	3500K	CURVE	NARROW	2574	20.0	129	
			FLAT	WIDE	2494	20.0	125
		NO LENS	WIDE	2708	20.0	135	
	4000K	CURVE	WIDE	3279	26.7	123	
			NARROW	3152	26.5	119	
		FLAT	WIDE	3134	26.5	118	
MPS4-VW	3500K	CURVE	NO LENS	3450	26.7	129	
			WIDE	3321	26.7	124	
		NARROW	3192	26.5	120		
	4000K	CURVE	FLAT	WIDE	3174	26.5	120
			NO LENS	WIDE	3564	26.7	133
		WIDE	3656	30.4	120		
MPS4-XW	3500K	CURVE	NARROW	3511	30.1	117	
			FLAT	WIDE	3491	30.1	116
		NO LENS	WIDE	3847	30.4	127	
	4000K	CURVE	WIDE	3702	30.4	122	
			NARROW	3556	30.1	118	
		FLAT	WIDE	3535	30.1	117	
MPS4-MW	3500K	CURVE	NO LENS	3974	30.4	131	
			WIDE	3702	30.4	122	
		NARROW	3556	30.1	118		
	4000K	CURVE	FLAT	WIDE	3535	30.1	117
			NO LENS	WIDE	3974	30.4	131



**Job Name:**Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)**Catalog Number:**
MPS2-40ML-CW-EU

Notes:

Type:**F7**

LPS-SLA19-49539

Columbia
LIGHTING**MPS**
MultiPurpose Linear

STANDARD EFFICACY PERFORMANCE TABLE

FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	WATTS	LPW	
MPS4-LW	3500K	CURVE	WIDE	4043	34.4	118	
			NARROW	4094	32.5	126	
		FLAT	WIDE	4072	32.5	125	
	4000K	CURVE	WIDE	NO LENS	4255	34.4	124
				NARROW	4095	34.4	119
			FLAT	WIDE	4147	32.5	128
MPS4-ML		3500K	CURVE	WIDE	4124	32.5	127
				NARROW	4395	34.4	128
			FLAT	WIDE	4556	40.1	114
	4000K	CURVE	WIDE	NO LENS	4649	37.7	123
				NARROW	4625	37.8	122
			FLAT	WIDE	4794	40.1	120
MPS4-HL		3500K	CURVE	WIDE	4614	40.1	115
				NARROW	4709	37.7	125
			FLAT	WIDE	4684	37.8	124
	4000K	CURVE	WIDE	NO LENS	4952	40.1	123
				NARROW	5760	49.5	116
			FLAT	WIDE	5781	49.4	117
MPS4-VL		3500K	CURVE	WIDE	5741	49.4	116
				NARROW	6061	49.5	122
			FLAT	WIDE	5833	49.5	118
	4000K	CURVE	WIDE	NO LENS	5855	49.4	119
				NARROW	5814	49.4	118
			FLAT	WIDE	6261	49.5	126
MPS4-XL		3500K	CURVE	WIDE	6769	54.1	125
				NARROW	6675	54.1	123
			FLAT	WIDE	6637	54.1	123
	4000K	CURVE	WIDE	NO LENS	7122	54.1	132
				NARROW	6855	54.1	127
			FLAT	WIDE	6760	54.1	125
MPS4-XW		3500K	CURVE	WIDE	6722	54.1	124
				NARROW	7357	54.1	136
			FLAT	WIDE	8045	66.5	121
	4000K	CURVE	WIDE	NO LENS	7878	66.8	118
				NARROW	7813	66.9	117
			FLAT	WIDE	8466	66.5	127
MPS4-VW		3500K	CURVE	WIDE	8148	66.5	123
				NARROW	7979	66.8	119
			FLAT	WIDE	7913	66.9	118
	4000K	CURVE	WIDE	NO LENS	8745	66.5	132
				NARROW	5147	40.0	129
			FLAT	WIDE	4939	39.8	124
MPS8-MW		3500K	CURVE	NO LENS	4925	40.0	123
				FLAT	WIDE	5348	40.0
			NO LENS	WIDE	5213	40.0	130
	4000K	CURVE	WIDE	NO LENS	5002	39.8	126
				NARROW	4988	40.0	125
			FLAT	WIDE	5416	40.0	135
MPS8-XW		3500K	CURVE	WIDE	6558	53.4	123
				NARROW	6303	53.0	119
			FLAT	WIDE	6269	53.0	118
	4000K	CURVE	WIDE	NO LENS	6814	53.4	128
				NARROW	6642	53.4	124
			FLAT	WIDE	6384	53.0	120
MPS8-VW		3500K	CURVE	WIDE	6349	53.0	120
				NARROW	6901	53.4	129
			FLAT	WIDE	7311	60.8	120
	4000K	CURVE	WIDE	NO LENS	7022	60.2	117
				NARROW	6981	60.2	116
			FLAT	WIDE	7596	60.8	125
MPS8-XV		3500K	CURVE	WIDE	7405	60.8	122
				NARROW	7112	60.2	118
			FLAT	WIDE	7071	60.2	117
	4000K	CURVE	WIDE	NO LENS	7693	60.8	127
				NARROW			
			FLAT	WIDE			



**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 MPS2-40ML-CW-EU

Notes:

Type:

F7

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

STANDARD EFFICACY PERFORMANCE TABLE							
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	WATTS	LPW	
MPS8-LW	3500K	CURVE	WIDE	8087	68.8	118	
			NARROW	8189	65.0	126	
		FLAT	WIDE	8144	65.0	125	
	4000K	CURVE	WIDE	NO LENS	8402	68.8	122
				NARROW	8190	68.8	119
			FLAT	WIDE	8293	65.0	128
4000K		CURVE	WIDE	NO LENS	8248	65.0	127
				NARROW	8510	68.8	124
		FLAT	WIDE	9111	80.2	114	
MPS8-ML	3500K	CURVE	WIDE	9298	75.4	123	
			NARROW	9250	75.6	122	
		FLAT	WIDE	9466	80.2	118	
	4000K	CURVE	WIDE	NO LENS	9227	80.2	115
				NARROW	9417	75.4	125
			FLAT	WIDE	9368	75.6	124
4000K		CURVE	WIDE	NO LENS	9587	80.2	120
				NARROW	11520	99.0	116
		FLAT	WIDE	11562	98.8	117	
MPS8-HL	3500K	CURVE	WIDE	11481	98.8	116	
			NARROW	11969	99.0	121	
		FLAT	WIDE	11667	99.0	118	
	4000K	CURVE	WIDE	NO LENS	11710	98.8	119
				NARROW	11628	98.8	118
			FLAT	WIDE	12122	99.0	122
MPS8-VL		3500K	CURVE	WIDE	13537	108.2	125
				NARROW	13350	108.2	123
			FLAT	WIDE	13275	108.2	123
	4000K	CURVE	WIDE	NO LENS	14065	108.2	130
				NARROW	13710	108.2	127
			FLAT	WIDE	13521	108.2	125
MPS8-XL		3500K	CURVE	WIDE	13444	108.2	124
				NARROW	14245	108.2	132
			FLAT	WIDE	16091	133.0	121
	4000K	CURVE	WIDE	NO LENS	15757	133.6	118
				NARROW	15626	133.8	117
			FLAT	WIDE	16718	133.0	126
4000K		CURVE	WIDE	NO LENS	16296	133.0	123
				NARROW	15958	133.6	119
		FLAT	WIDE	15826	133.8	118	
		NO LENS	WIDE	16932	133.0	127	





Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:
 MPS2-40ML-CW-EU

Notes:

Type:

F7

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

SpectraSync and NX Availability Table									
PRODUCT	SIZE	LUMEN PACKAGE	Only With 80 CRI			Only With 80 CRI			
			No Battery Pack			With Battery Pack			
			CTC	NX	CTC+NX	CTC	NX	CTC+NX	
MPS	2ft	VW	Y	Y	N	—	—	—	
		MW	Y	Y	N	—	—	—	
		LW	Y	Y	N	—	—	—	
		ML	N	Y	N	—	—	—	
		HL	N	Y	N	—	—	—	
	4ft	XW	Y	Y	Y	Y	Y	Y	
		VW	Y	Y	Y	Y	Y	Y	
		MW	Y	Y	Y	Y	Y	Y	
		LW	Y	Y	Y	Y	Y	Y	
		ML	Y	Y	Y	Y	Y	Y	
		HL	Y	Y	Y	Y	Y	Y	
		VL	N	Y	N	N	Y	N	
		XL	N	Y	N	N	Y	N	
		8ft	XW	Y	Y	Y	Y	Y	Y
			VW	Y	Y	Y	Y	Y	Y
	MW		N	Y	N	N	Y	N	
	LW		N	Y	N	N	Y	N	
	ML		N	Y	N	N	Y	N	
	HL		N	Y	N	N	Y	N	
	VL		N	Y	N	N	Y	N	
	XL		N	Y	N	N	Y	N	

MAX AMBIENT BY DRIVER (MIN. -25°C)											
SIZE	LUMEN PACKAGE	80 CRI									
		E/ED/ED1		ESDU		ED347		EDD		LUT	
		CEILING/SURFACE MOUNT	PENDANT/TH MOUNT	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount
2'	VW	35	40	35	40	35	40	35	40	35	40
	MW	35	40	35	40	35	40	35	40	35	40
	LW	35	40	35	40	35	40	35	40	35	40
	ML	35	40	35	40	35	40	35	40	35	40
	HL	30	35	30	35	30	35	30	35	30	35
4'	XW	35	45	35	45	35	45	30	35	30	35
	VW	35	45	35	45	35	45	30	35	30	35
	MW	35	45	35	45	35	45	30	35	30	35
	LW	35	45	35	45	35	45	30	35	30	35
	ML	35	45	35	45	35	45	30	35	30	35
	HL	35	40	35	40	35	40	25	30	30	35
	VL	30	30	30	30	30	30	30	30	—	—
XL*	25	25	25	25	25	25	25	25	—	—	
8'	XW	35	45	35	45	35	45	30	35	30	35
	VW	35	45	35	45	35	45	30	35	30	35
	MW	35	45	35	45	35	45	30	35	30	35
	LW	35	45	35	45	35	45	30	35	30	35
	ML	35	45	35	45	35	45	30	35	30	35
	VL	30	30	30	30	30	30	30	30	—	—
	XL*	25	25	25	25	25	25	25	25	—	—

*No Thru Wire

Note: Standard and HE lumen packages have equal ambient temperatures.
Note: Emergency battery pack max ambient temperature: -25°C.





Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:
 MPS2-40ML-CW-EU

Notes:

Type:

F7

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

Test 19735 Test Date 9/25/2017

LUMINAIRE DATA

Luminaire	MPS4-40ML-CN-EDU MPS MultiPurpose Linear, Narrow LED 4ft, Frosted Linear Prisms Lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4742
Watts	37.70
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.18 90° = 1.77
Luminous Opening in Feet	Length: 4.00 Width: 0.25 Height: 0.12

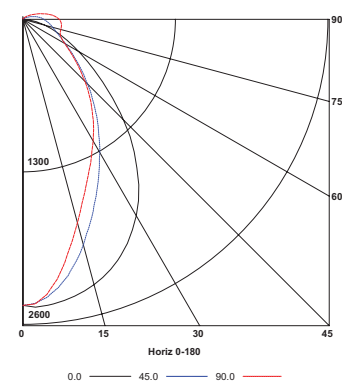
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1542	32.5	32.5
0-40	2326	49.1	49.1
0-60	3518	74.2	74.2
0-90	4385	92.5	92.5
0-180	4742	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	126
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.92 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



Test 19600 Test Date 4/19/2017

LUMINAIRE DATA

Luminaire	MPS4-40ML-CW-EDU MPS MultiPurpose Linear, Wide LED 4ft, Frosted Linear Prisms Lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4615
Watts	40.10
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.20 90° = 1.33
Luminous Opening in Feet	Length: 4.00 Width: 0.25 Height: 0.13

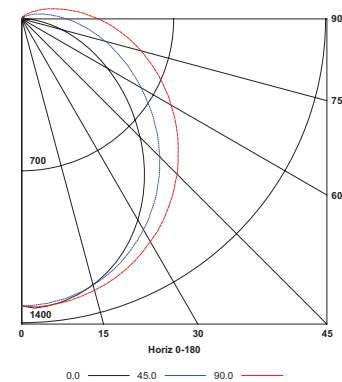
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1029	22.3	22.3
0-40	1688	36.6	36.6
0-60	3019	65.4	65.4
0-90	4248	92.0	92.0
0-180	4615	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	115
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.09 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



Test 19652 Test Date 9/25/2017

LUMINAIRE DATA

Luminaire	MPS4-40ML-FW-EDU MPS MultiPurpose Linear, Wid LED 4ft, Frosted Linear Prisms Lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4685
Watts	37.80
Mounting	Surface
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.24 90° = 1.67
Luminous Opening in Feet	Length: 4.00 Width: 0.25 Height: 0.05

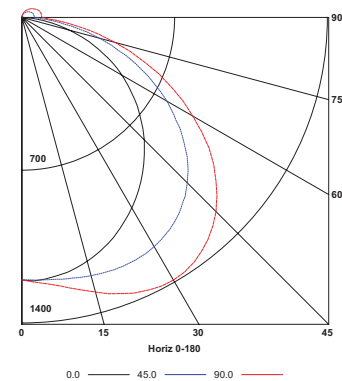
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1026	21.9	21.9
0-40	1756	37.5	37.5
0-60	3324	70.9	70.9
0-90	4435	94.7	94.7
0-180	4685	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	124
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.95 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT





Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:
MPS2-40ML-CW-EU

Notes:

Type:

F7

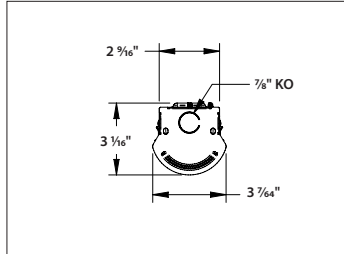
LPS-SLA19-49539

Columbia
LIGHTING

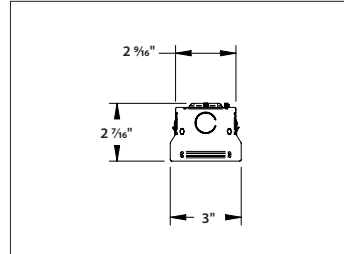
MPS
MultiPurpose Linear

DIMENSIONAL DATA

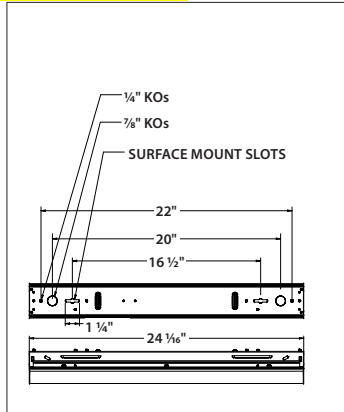
MPS END VIEW - CURVE LENS



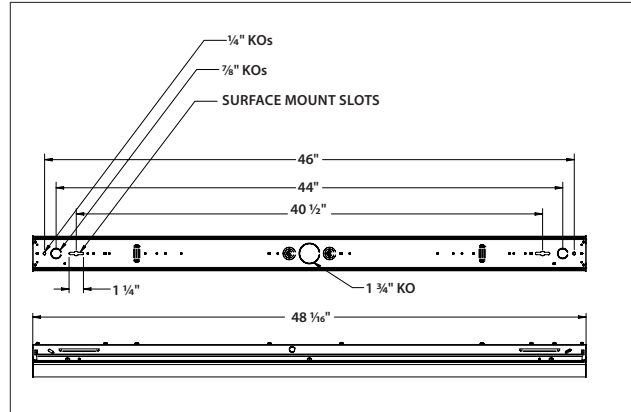
MPS END VIEW - FLAT LENS



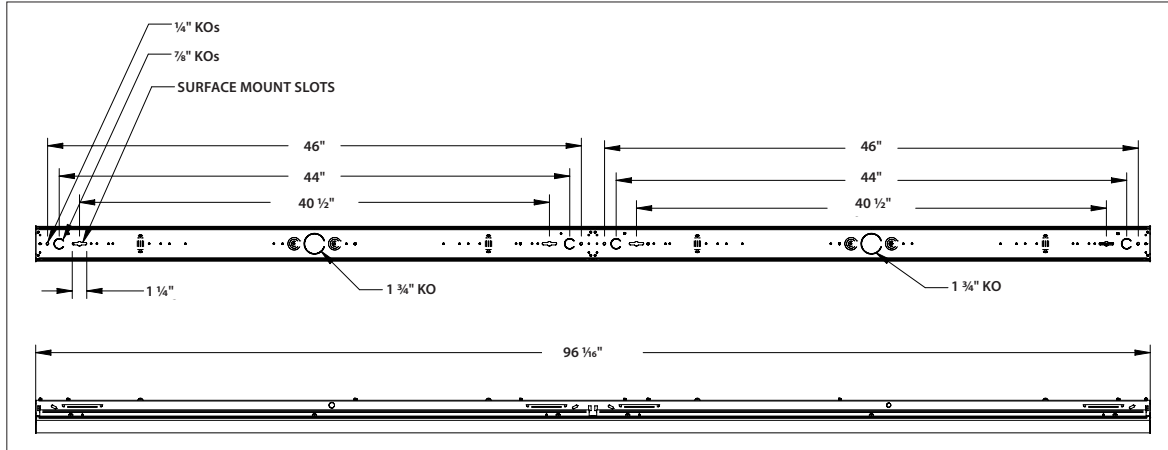
MPS 2' DIMENSIONS



MPS 4' DIMENSIONS



MPS 8' DIMENSIONS





Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 MPS2-40ML-CW-EU

Notes:

Type:

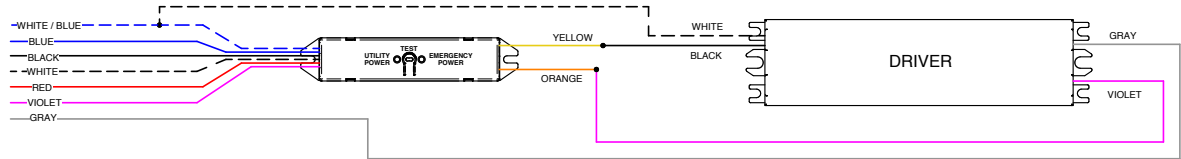
F7

LPS-SLA19-49539

Columbia
 LIGHTING

MPS
 MultiPurpose Linear

DTS WIRING DIAGRAM



WHITE / BLUE	→	EMERGENCY NEUTRAL
BLUE	→	EMERGENCY LINE
BLACK	→	UTILITY LINE
WHITE	→	UTILITY NEUTRAL
RED	→	SWITCHED HOT
VIOLET	→	DIMMING
GRAY	→	DIMMING



Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

MPS2-40ML-CW-EU

Notes:

Type:

F7

LPS-SLA19-49539

Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 CCRRC

Notes:

Type:**F8**

LPS-SLA19-49539



CC Series
 LED Combination Exit/Emergency Light

DESCRIPTION

The CC Series offers quality and value with a compact and attractive LED based combination emergency exit. The white or black housing and lamp-heads are made of high impact UL flame rated thermoplastic. Snap together canopy, housing and removable chevrons for quick and easy installation. Universal single or double-face. Remote capacity unit will run a double-head remote or 2 single-head remotes of either the Compass CIR or COR Series.

**APPLICATION**

The CC Series can be applied in stair-wells, hallways, offices and other commercial applications.

FEATURES

- LED life-cycle of more than 10 years
- Molded-in template for Quick installation
- **Dual-voltage 120 or 277V AC input**
- Includes long-life Nickel Cadmium (NiCad) or Nickel Metal Hydride (NiMh) battery for UL recognized 90 minute emergency lighting
- Remote capacity or extended runtime option
- Damp Location Listed 20°C to 30°C (68°F to 86°F)
- Provided with test switch and AC-On indicator
- Lamp-heads are fully adjustable
- Canopy included
- Remote Capacity (RC) models have a minimum runtime of 120 minutes when no remotes are installed

STANDARDS, CERTIFICATION, AND COMPLIANCE

- **UL924 Listed for Damp Location**
- NFPA 101 and NFPA 70
- OSHA

SELF-DIAGNOSTIC FEATURES

- Fault identification for battery, charger, LED integral lamps and remotes
- Self-Testing monthly and annual for 90 minutes
- Manual testing for 30 second, 15 minute and 90 minutes

ENERGY CONSUMPTION

	120 VAC	277 VAC
CCR	4.12 W	3.20 W
CCG	3.22 W	3.18 W
CCRRC	4.00 W	4.06 W
CCGRC	4.10 W	4.28 W

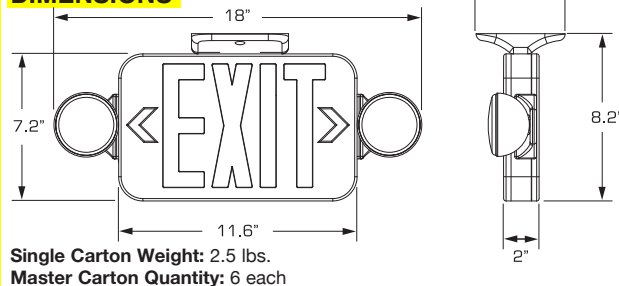
WARRANTY

2 year full unit warranty

ORDERING GUIDE

Catalog Number	Description
CCR	White Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, NiCad Battery, CEC T20 Compliant
CCRB	Black Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, NiCad Battery, CEC T20 Compliant
CCG	White Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, NiCad Battery, CEC T20 Compliant
CCGB	Black Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, NiCad Battery, CEC T20 Compliant
CCRRC	White Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, Remote Capacity, NiMh Batt., CEC T20 Compliant
CCRRCB	Black Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, Remote Capacity, NiMh Batt., CEC T20 Compliant
CCGRC	White Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, Remote Capacity, NiMh Batt., CEC T20 Compliant
CCGRS	White Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, Self-Test/Self-Diagnostics, NiCad Battery, CEC T20 Compliant
CCGSD	White Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, Self-Test/Self-Diagnostics, NiCad Battery, CEC T20 Compliant
CCRRCSD	White Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, Self-Test/Self-Diagnostics, NiMh Batt., Remote Capacity, CEC T20 Compliant
CCGRCSD	White Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, Self-Test/Self-Diagnostics, NiMh Batt., Remote Capacity, CEC T20 Compliant

Note: Remote Capacity Unit will only power the Compass Indoor and Outdoor Remote(CIR and COR Series)

DIMENSIONS**ACCESSORIES**

WGEL Wireguard - 8" H X 20" W X 8" D
 CIR Series - Matching LED Indoor Remote Heads
 COR Series - Matching LED Outdoor Remote Heads



Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

CCRRC

Type:

F8

Notes:

LPS-SLA19-49539

Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 CCRRC-CIRD

Notes:

Type:

F8A

LPS-SLA19-49539



CC Series
 LED Combination Exit/Emergency Light

DESCRIPTION

The CC Series offers quality and value with a compact and attractive LED based combination emergency exit. The white or black housing and lamp-heads are made of high impact UL flame rated thermoplastic. Snap together canopy, housing and removable chevrons for quick and easy installation. Universal single or double-face. Remote capacity unit will run a double-head remote or 2 single-head remotes of either the Compass CIR or COR Series.

**APPLICATION**

The CC Series can be applied in stair-wells, hallways, offices and other commercial applications.

FEATURES

- LED life-cycle of more than 10 years
- Molded-in template for Quick installation
- Dual-voltage 120 or 277V AC input
- Includes long-life Nickel Cadmium (NiCad) or Nickel Metal Hydride (NiMh) battery for UL recognized 90 minute emergency lighting
- Remote capacity or extended runtime option
- Damp Location Listed 20°C to 30°C (68°F to 86°F)
- Provided with test switch and AC-On indicator
- Lamp-heads are fully adjustable
- Canopy included
- Remote Capacity (RC) models have a minimum runtime of 120 minutes when no remotes are installed

STANDARDS, CERTIFICATION, AND COMPLIANCE

- UL924 Listed for Damp Location
- NFPA 101 and NFPA 70
- OSHA

SELF-DIAGNOSTIC FEATURES

- Fault identification for battery, charger, LED integral lamps and remotes
- Self-Testing monthly and annual for 90 minutes
- Manual testing for 30 second, 15 minute and 90 minutes

ENERGY CONSUMPTION

	120 VAC	277 VAC
CCR	4.12 W	3.20 W
CCG	3.22 W	3.18 W
CCRRC	4.00 W	4.06 W
CCGRC	4.10 W	4.28 W

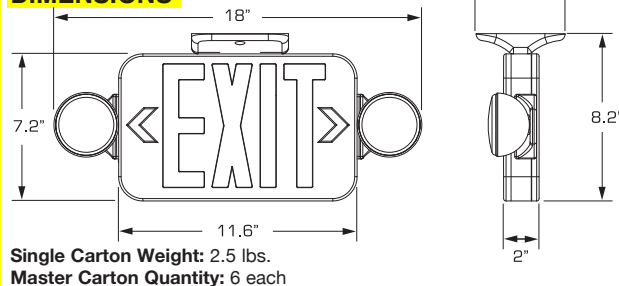
WARRANTY

2 year full unit warranty

ORDERING GUIDE

Catalog Number	Description
CCR	White Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, NiCad Battery, CEC T20 Compliant
CCRB	Black Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, NiCad Battery, CEC T20 Compliant
CCG	White Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, NiCad Battery, CEC T20 Compliant
CCGB	Black Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, NiCad Battery, CEC T20 Compliant
CCRRC	White Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, Remote Capacity, NiMh Batt., CEC T20 Compliant
CCRRCB	Black Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, Remote Capacity, NiMh Batt., CEC T20 Compliant
CCGRC	White Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, Remote Capacity, NiMh Batt., CEC T20 Compliant
CCGRCD	White Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, Self-Test/Self-Diagnostics, NiCad Battery, CEC T20 Compliant
CCGSD	White Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, Self-Test/Self-Diagnostics, NiCad Battery, CEC T20 Compliant
CCRRCS	White Finish, Combination Exit/Emergency Light, Universal Face, Red Letters, Self-Test/Self-Diagnostics, NiMh Batt., Remote Capacity, CEC T20 Compliant
CCGRCS	White Finish, Combination Exit/Emergency Light, Universal Face, Green Letters, Self-Test/Self-Diagnostics, NiMh Batt., Remote Capacity, CEC T20 Compliant

Note: Remote Capacity Unit will only power the Compass Indoor and Outdoor Remote(CIR and COR Series)

DIMENSIONS**ACCESSORIES**

WGEL Wireguard - 8" H X 20" W X 8" D
 CIR Series - Matching LED Indoor Remote Heads
 COR Series - Matching LED Outdoor Remote Heads



Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

CCRRC-CIRD

Notes:

Type:

F8A

LPS-SLA19-49539



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-85+-?TRIM/BAFFLE/REFLECTORCOLOR-WH

Notes:

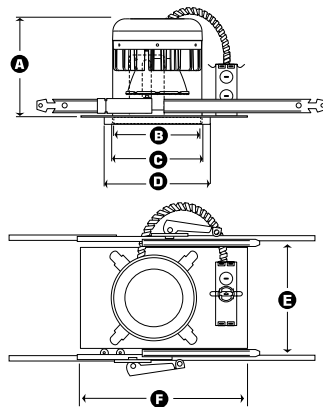
Type:

F9

LPS-SLA19-49539

H6-LED

6" ARCHITECTURAL NEW CONSTRUCTION NON-IC LED DOWNLIGHT



- A** Height = 7-1/4"
- B** Trim Aperture = 6"
- C** Cut-out = 6-1/2"
- D** Trim Outside Dia. = 7-1/4"
- E** Width = 7"
- F** Length = 10"



SAME DAY SHIPPING AVAILABLE

2000 LUMENS

INPUT VOLT.	INPUT FREQ.	INPUT CUR.	THD	POWER FACTOR	INPUT POWER	LUMENS
120/277	50/60Hz	150mA/65mA	<20%	>0.9	32W(+/-5%)	2000
120/277	50/60Hz	116mA/50mA	<20%	>0.9	24W(+/-5%)	1200

DESCRIPTION - 6" LED dedicated New Construction NON-IC housing with integral LED heat management casting and driver (installed on junction box). Designed for new construction installations and suitable for use in non-insulation covered ceilings. Available in 1200 lumens & 2000 lumens. Lighting is smooth and comfortable while using 75% less energy than the equivalent 100W PAR38 and 50% less than the common 32W CFL. Plus, the eco-friendly MAXILUME LED system features 70% lumen maintenance at 50,000hrs of life, with Energy Star and California Title-24 (compliances pending).

FEATURES - Greater light output than an 32W CFL or a 100WPAR38. Elite LED luminaires are ideally suited for use in hospitality, health care, commercial, retail and residential applications.



OPTICS - Gather the light scattered by the LED chip, shape it into a functional beam with state of the art reflectors, integrate the light through a smooth lens to minimize brightness, then top it all off with a glare reducing cone that has a 55-degree cut-off. Now you have the Elite engineered, superior quality, light engine; producing over 1200 & 2000 lumens.

THERMAL PROTECTION - Standard thermal protection device guards against improper installation and misuse of insulation material.

DURABILITY - Die-cast aluminum housing and heat management system are engineered for extremely long life and service period. Heat sink is attached to top of housing. The LED light engine is attached to the die-cast heat sink and is easily replaceable and upgradable. Life tests have shown the Elite light engine output will be maintained at 70% of initial at 50,000hrs of operation. Our superior design allows for installation in construction that requires Elite Air-Shut™ system. Our LED driver is rated for 50 to 60 Hz at 120V/277V input, produces less than 10% THD, has a power factor between 0.90 and 1.00 and is thermally protected for additional safety. Elite's driver is installed on the junction box cover so it may be serviced from below the ceiling.

MOUNTING BRACKET - Constructed from 16 gauge steel and is supplied with C-channels that are adjustable up to 28". Mounting brackets may be adjusted up to 2-3/4" vertically from inside the housing.

HOUSING - Die-formed aluminum and galvanized steel for maximum heat dissipation and rust protection. Housing adjusts vertically in plaster frame to accommodate 1/2" to 1-3/8" thick ceiling. Housing is NON-IC rated and insulation must be pulled 3" from housing. May be installed in 2" x 8" joist construction.

REPEATABLE - Repeatability means quality. From our chip selection process, to our driver, to the thermal management, the Elite LED Module is engineered for quality. All Elite LED luminaires are rated at 85+, 90+ and 98+ CRI as rated and tested to LM-79 and LM-80 standards by a certified laboratory. California Title 24-2013 and Energy Star compliance are standard.

JUNCTION BOX - UL Listed for through-branch circuit wiring, provided with four 1/2" knockouts, one 3/4" knockout and four Romex knockouts with true pry-out slots and strain clamps. Designed for straight through conduit runs. Driver is installed on the junction box cover so it may be serviced from below the ceiling.

OUR WORD - The MAXILUME LED lighting system carries a five-year carefree warranty for parts and components. (Labor not included.)

DIMMABLE - The MAXILUME LED system is shipped standard with a 0-10V driver which can be dimmed down to 1% of initial light output with a 0-10V dimmer when ordered with the following options (DIM10-120, DIM10-277). Fixtures can also be shipped with a Lutron Hi-Lume A series driver which can be dimmed with Lutron Dimming Systems when ordered with the following options (LUTH-120, LUTH-277), Lutron® Hi-Lume A-Series (LUT2W-120) 2-Wire Forward Phase Control 1% Dimming in 120V only, or EldoLed 0-10V 1% Dimming, consult factory for other EldoLed driver and other driver options. Triac & Electronic Low Voltage dimming driver also available when ordered with the following options (DIMTR-120). All fixtures with 3000L and below are dimmable down to 1% and the fixtures with 4000L and above can be dimmed down to 10%.

DIMMING INFORMATION

DIM10 (0-10V 1% Dimming)

LUTH (Lutron® Hi-Lume A-Series 3-Wire or Eco System 1% Dimming up to 4000 lumens only)

LUT2W (Lutron® Hi-Lume A-Series 2-Wire Forward Phase Control 1% Dimming in 120V only and up to 3000 lumens only)

ELD010 (EldoLed 0-10V 1% Dimming up to 3000 lumens only, consult factory for the EldoLed driver options)

DIMTR (Triac & Electronic Low Voltage Dimming)

Covered by U.S. Patent Numbers: D642317S, D621089S, D615239S

LISTING

c-UL-us - listed for Damp location.

c-UL-us - listed for feed Through Wiring.

LM79 / LM80

TRIM, BAFFLE REFLECTOR OPTION MUST BE SPECIFIED

Example: H6-LED-2000L-DIM10-120-MD-30K-AT-L631-W-WH

TYPE	1200L SERIES	2000L SERIES	VOLTAGE	OPTICS	CCT	CRI	AIR-SHUT	EMERGENCY	TRIM	BAFFLE	REFLECTOR	TRIM/RING		
H6-LED	<input type="checkbox"/> 1200L-DIMTR* <input type="checkbox"/> 1200L-LUTH <input checked="" type="checkbox"/> 1200L-DIM10 <input type="checkbox"/> 1200L-LUT2W* <input type="checkbox"/> 1200L-ELD010	<input type="checkbox"/> 2000L-LUTH <input type="checkbox"/> 2000L-DIM10 <input type="checkbox"/> 2000L-LUT2W* <input type="checkbox"/> 2000L-ELD010	<input type="checkbox"/> 120 <input type="checkbox"/> 277 <input type="checkbox"/> 347	<input type="checkbox"/> MD (Medium) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> ND (Narrow)	<input type="checkbox"/> 27K <input type="checkbox"/> 30K <input type="checkbox"/> 35K <input type="checkbox"/> 40K <input type="checkbox"/> 50K (85+CRI only)	<input checked="" type="checkbox"/> 85+ <input type="checkbox"/> 90+ <input type="checkbox"/> 98+**	<input type="checkbox"/> AT	<input type="checkbox"/> EMG	<input type="checkbox"/> L631 <input type="checkbox"/> L607 <input type="checkbox"/> L611 <input type="checkbox"/> L676 <input type="checkbox"/> L635 <input type="checkbox"/> L636 <input type="checkbox"/> L656 <input type="checkbox"/> L675 <input type="checkbox"/> L657 <input type="checkbox"/> L659	<input type="checkbox"/> L642 <input type="checkbox"/> L658 <input type="checkbox"/> L641 <input type="checkbox"/> L655 <input type="checkbox"/> L652 <input type="checkbox"/> L612 <input type="checkbox"/> L605 <input type="checkbox"/> L605L <input type="checkbox"/> L606 <input type="checkbox"/> L606L	<input type="checkbox"/> L696 <input type="checkbox"/> L601 <input type="checkbox"/> L601L <input type="checkbox"/> L687 <input type="checkbox"/> L688 <input type="checkbox"/> L685 <input type="checkbox"/> L681 <input type="checkbox"/> L680	<input type="checkbox"/> W <input type="checkbox"/> P <input type="checkbox"/> SN <input type="checkbox"/> CP <input type="checkbox"/> BZ	<input type="checkbox"/> BZ <input type="checkbox"/> CL <input type="checkbox"/> CP <input type="checkbox"/> RG <input type="checkbox"/> MB <input type="checkbox"/> W <input type="checkbox"/> SN <input type="checkbox"/> SHZ	<input type="checkbox"/> BK <input checked="" type="checkbox"/> WH <input type="checkbox"/> CH <input type="checkbox"/> PB <input type="checkbox"/> SN <input type="checkbox"/> CP <input type="checkbox"/> BZ

* DIMTR and LUT2W options only available in 120 Volt. ** 98+ CRI is available in 27K, 30K and 40K only



6 INCH ARCHITECTURAL LED NON-IC DOWNLIGHT



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-85+-?TRIM/BAFFLE/REFLECTORCOLOR-WH

Notes:

Type:

F9

LPS-SLA19-49539

6" LED OPTICS

L631W-WH - PHENOLIC STEPPED BAFFLE



BAFFLE FINISH:

W - WHITE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631P-BK - PHENOLIC STEPPED BAFFLE



BAFFLE FINISH:

P - BLACK

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631SN-SN - METAL STEPPED BAFFLE



BAFFLE FINISH:

SN - SATIN NICKEL

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631CP-CP - METAL STEPPED BAFFLE



BAFFLE FINISH:

CP - COPPER

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L631BZ-BZ - METAL STEPPED BAFFLE



BAFFLE FINISH:

BZ - BRONZE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607CL-WH - REFLECTOR



REFLECTOR FINISH:

CL - CLEAR (CHROME)

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607MB-WH - REFLECTOR



REFLECTOR FINISH:

MB - BLACK

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607RG-WH - REFLECTOR



REFLECTOR FINISH:

RG - GOLD

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607W-WH - REFLECTOR



REFLECTOR FINISH:

W - WHITE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607CP-CP - REFLECTOR



REFLECTOR FINISH:

CP - COPPER

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607SN-SN - REFLECTOR



REFLECTOR FINISH:

SN - STAIN NICKEL

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607BZ-BZ - REFLECTOR



REFLECTOR FINISH:

BZ - BRONZE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L607SHZ-WH - REFLECTOR



REFLECTOR FINISH:

SHZ - SATIN HAZE

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ

L611W-WH - BAFFLE WALL WASH



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

WH

L676W-WH - BAFFLE W/ FROSTED LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



L635W-WH - BAFFLE W/ ALBALITE LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



L636W-WH - BAFFLE W/ FRESNEL LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



L656W-WH - BAFFLE W/ FROSTED DOME LENS



BAFFLE FINISH:

BZ, CP, SN, WH, P

RING FINISH:

BK, WH, CH, PB, SN, CP, BZ



LED
6"

6 INCH ARCHITECTURAL LED OPTICS



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-85+-?TRIM/BAFFLE/REFLECTORCOLOR-WH

Notes:

Type:

F9

LPS-SLA19-49539

6" LED OPTICS

L675W-WH - BAFFLE W/ PRISMATIC LENS



BAFFLE FINISH:
 BZ, CP, SN, WH, P
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L657CL-WH - REFLECTOR W/ FROSTED DOME LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L659CL-WH - REFLECTOR W/ FROSTED LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L642CL-WH - REFLECTOR W/ FRESNEL LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L658CL-WH - REFLECTOR W/ PRISMATIC LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L641CL-WH - REFLECTOR W/ ALBALITE LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L645WH - DESIGNER POINT LENS



LENS FINISH:
 DESIGNER POINT
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L652WH - SMOOTH FROSTED LENS



LENS FINISH:
 SMOOTH FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L612WH - SMOOTH FROSTED DOME LENS



LENS FINISH:
 SMOOTH FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L605WH - METAL FRESNEL LENS



LENS FINISH:
 FRESNEL - CLEAR
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L606WH - METAL DROP OPAL LENS



LENS FINISH:
 DROP OPAL - FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L601WH - METAL ALBALITE LENS



LENS FINISH:
 ALBALITE - WHITE
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L605L - WHITE PLASTIC FRESNEL LENS



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L606L - WHITE PLASTIC DROP OPAL LENS



LENS FINISH:
 ALBALITE - WHITE
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L601L - WHITE PLASTIC ALBALITE LENS



LENS FINISH:
 FRESNEL - CLEAR
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L687CL-WH - SQUARE REFLECTOR



REFLECTOR FINISH:
 CL, MB, RG, W, CP, SN
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L688WH - SQUARE ALBALITE LENS



LENS FINISH:
 ALBALITE - WHITE
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L685WH - SQUARE FRESNEL LENS



LENS FINISH:
 FRESNEL - CLEAR
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L681BZ-WH - SQUARE BAFFLE



BAFFLE FINISH:
 BZ, CP, SN, WH, P
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L680WH - SQUARE DESIGNER POINT LENS



LENS FINISH:
 FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



L696WH - SQUARE DESIGNER FROSTED LENS



LENS FINISH:
 FROSTED
RING FINISH:
 BK, WH, CH, PB, SN, CP, BZ



Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

H6-LED-1200L-DIM10-?VOLTAGE-MD-?CCT-
85+-?TRIM/BAFFLE/REFLECTORCOLOR-WH

Notes:

Type:

F9

LPS-SLA19-49539



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group (Covington)

Catalog Number:

5178-24-? STD. FINISH-H16-35K

Notes:

Type:

F10

LPS-SLA19-49539

5178 LED

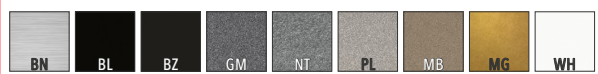


Brushed Nickel (BN) finish

5178 LED

The 5178 features a slim, minimalist design and can be mounted horizontally over a mirror or vertically as a sconce. Diffuser is constructed of stout, matte-white acrylic with three sizes to choose from. Housing and decorative ends are standard in Brushed Nickel with optional finishes available.

FINISHES





Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

5178-24-? STD. FINISH-H16-35K

Type:

F10

Notes:

LPS-SLA19-49539

5178 LED

STANDARD SPECIFICATIONS

HOUSING

Cold rolled steel, die-formed, and assembled with hardware and welds. The housing can be mounted horizontal or vertical.

DIFFUSER

Translucent, UV stabilized white acrylic. The extruded material can withstand minor impact without breaking. The decorative end caps are attached with hardware.

LED PERFORMANCE - 3500K STANDARD

120-277V - 3500K, 82 CRI - L80 rating - 60,000 hrs - L70 rating (projected) - 100,000 hrs
 Amperage rated @ 110V input
 Operating ambient temperature: -20°C / -4°F - 40°C / 104°F

Standard 3500K source lumens noted. Consult Brownlee.com for performance of all CCTs.

H16 - 16W nominal, .14 A input - 2076 lm - 126 lm/W. Dimmable (0-10V).

H25 - 25W nominal, .20 A input - 3200 lm - 132 lm/W. Dimmable (0-10V).

H32 - 32W nominal, .26 A input - 4119 lm - 130 lm/W. Dimmable (0-10V).

F23 - 23W nominal, .30 A input - 2762 lm - 122 lm/W. Dimmable (0-10V).

F45 - 45W nominal, .60 A input - 5500 lm - 124 lm/W. Dimmable (0-10V).

MOUNTING

Fixture mounts directly to a 2x4 j-box (by others) with a 4x4 j-box cover plate included, matched to the specified finish.

FINISH

The 5178 series is finished in brushed nickel as a standard. It is available in all Brownlee paint finishes as an optional offering. Plated finishes such as Brushed Nickel are suitable for indoor applications only. Installation outdoors voids the Brownlee Limited Warranty.

WARRANTY

5 year limited warranty on this LED product. Consult factory for details.

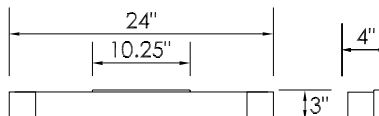
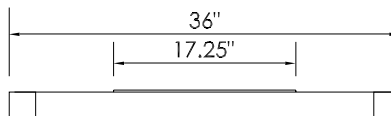
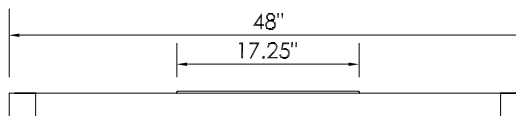
PROJECT:

MODEL #:

FIXTURE TYPE:



BN finish



ORDERING INFORMATION

5178 - **24** - **?** - **H16** - **35K** - _____
 Model 2. 3. 4. 5. 6. (if required)

2. SIZE

- 24** L: 24"
- 36** L: 36"
- 48** L: 48"

3. FINISH

STANDARD
BN Brushed Nickel

- OPTIONAL**
- BL** Black
 - BZ** Bronze
 - GM** Gun Metal
 - MB** Metallic Bronze
 - MG** Metallic Gold
 - NT** Nickel Tone
 - PL** Platinum
 - WH** White

CUSTOM
 Provide color sample or RAL code to match

4. WATTAGE

- 24 SIZE**
- H16** 16W H Series LED
 - F23** 23W F Series LED

- 36 SIZE**
- H25** 25W H Series LED

- 48 SIZE**
- H32** 32W H Series LED
 - F45** 45W F Series LED

5. COLOR TEMPERATURE

- 35K** 3500K standard color temperature
- 30K** 3000K color temperature
- 40K** 4000K color temperature

6. AVAILABLE OPTIONS

- 90R⁰** 90 CRI (3000K only) (H Series only)
- BAC¹** Buy American Compliant
- DTR⁴** Triac (Line Voltage) Dimming (120V) (H Series Only)
- ES⁶** ENERGY STAR[®] (Not available in 90 CRI)
- FCL⁷** French Canadian Labels

FINISH OPTION MUST BE SPECIFIED

Notes: (0) **90R** - cannot be combined with ES or T24 (1) **BAC** - cannot be combined with FCL (2) **BBI/BBS/BBC** - cannot be combined with DTR, ECW, EXT, or T24 (3) **BLD** - cannot be combined with DTR, OCC, or T24 (4) **DTR** - cannot be combined with BBI, BBC, BBS, BLD or T24 (5) **ECW** - cannot be combined with BBI, BBC, or DTR (6) **ES** - cannot be combined with 90R, DTR, FCL, or T24 (7) **FCL** - cannot be combined with BAC, ES, or T24 (8) **OCC** - cannot be combined with BLD (9) **T24** - cannot be combined with 90R, BBI, BBC, BBS, BLD, DTR, ES, or FCL (10) **BBS** - cannot be combined with BLD, DTR, ECW, EXT, OCC, or T24 (11) **PCH/PC4** cannot be combined with BLD or OCC

Add'l Notes: ***BBI/BBS/BBC** - standard BBI (and BBS) option has a minimum operating temperature of 10C/50F. BBC option has a minimum operating temperature of -20C/-4F. ****BLD** - Bi-Level Dimming is field adjustable from 100% to a dimmed light level of 10, 20, 30, or 50%. All units are factory set at 50%.

Specifications and dimensions subject to change without notice.

Consult your Brownlee Lighting representative for availability and ordering information.



REVISED
2019.01.04



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

SG2-50-5K7-FT-UNV-DB-PCU

Notes:

Type:

F11

LPS-SLA19-49539

SLING SERIES SG	Cat.#	
	Job	
Approvals		

SPECIFICATIONS

Intended Use:

Slender wallpack/floodlight available in two sizes for a variety of applications including building perimeter/security lighting, entrances, stairways, loading docks or facades for schools, apartments or commercial buildings.

Construction:

Rugged die-cast aluminum housing with corrosion resistant powder coat finish both protects and provides architectural appearance. Heat dissipating fins provide superior thermal performance extending the life of the electronic components.

Electrical:

- 120-277V, 50/60Hz electronic drivers
- 347V and 480V available in larger SG2 housing
- 10KA surge protection included

LED(s) Optics, CCT:

- 3000K, 4000K and 5000K CCT nominal with 70 CRI
- Smaller SG1 housing has 2 LEDs, larger SG2 housing has 3 LEDs, see page 2 for electrical and photometric data

Lenses:

- Impact resistant tempered glass offers zero uplight
- Comfort lens available as an option or accessory to reduce glare (7-10% lumen reduction) and provide better uniformity

Installation:

- Side hinge allows for easy installation and wiring.
- Side movement avoids damage to the lens and helps prevent injury common in drop down hinge designs.
- Mounts to 4" junction box and includes a gasket to help seal electrical connections.
- Four 1/2" threaded conduit hubs for surface conduit provided

Options/Controls

- Button photocontrol for dusk to dawn energy savings. Stock versions include 120V-277V PC with a cover which provides a choice to engage photocontrol or not. PC is installed in top hub.
- Occupancy sensor available for on/off and dimming control in larger SG2 housing.
- SiteSync™ wireless lighting control delivers flexible control strategies for reducing power consumption and minimizing maintenance costs while delivering the right light levels with a simple and affordable wireless solution. See ordering information or visit www.hubbellighting.com/sitesync for more details.
- Battery backup options available in larger SG2 housing rated for either 0° C or -30° C. Performance exceeds NEC requirement providing 1 fc minimum over 10'x10' at 11' mounting height
- Diffused comfort lens provides glare control and improved uniformity. Available as an option or accessory

Listings

- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Listed to UL1598 for use in wet location, listed for -40C to 40C applications
- IDA approved with zero uplight for 3000K and warmer CCTs
- IP65

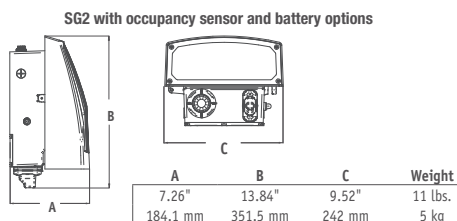
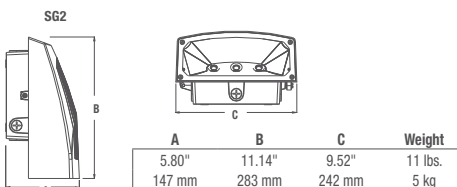
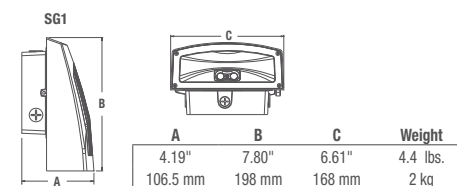
Warranty:

Five year limited warranty (for more information visit: <http://www.hubbellighting.com/resources/warranty/>)

PRODUCT IMAGE(S)



DIMENSIONS



CERTIFICATIONS/LISTINGS



tradeSELECT®

SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions			Carton Qty. per Master Pack	Pallet Qty.
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)		
SG1	4.35lbs (2 kg)	9.5 (24)	8.25 (21)	5.25 (13.32)	6	98
SG2	11lbs (5 kg)	14 (35.5)	11.5 (29.2)	8 (20.3)	2	64

ORDERING INFORMATION – ORDERING EXAMPLE: SG1-20-4K7-FT-UNV-DB



FAMILY	CCT/CRI	DISTRIBUTION	VOLTAGE	COLOR/FINISH	CONTROL OPTIONS	OPTIONS
SG1-20 Size 1, 20w	3K7 3000K, 70 CRI	FT Fwd Throw	UNV 120V-277V	DB Textured Dark Bronze	PCU Button Photocontrol 120-277V	CS Comfort lens
SG1-30 Size 1, 30w	4K7 4000K, 70 CRI		120' 120V	BL Textured Black	SCP ^{1,2,3} Sensor Control, Programmable	E ^{1,2} Battery 0°C
SG2-50 Size 2, 50w	5K7 5000K, 70 CRI		277' 277V	WH Textured White	SWP ^{1,2} SiteSync, Precommission	EH ^{1,2} Battery w/ heater -20°C
SG2-80 Size 2, 80w			UHV ¹ 347V-480V	GYS Smooth Gray	SWPM ^{1,2} SiteSync, Precommission, Motion	
				PS Smooth Plat. Silver	Specify MTG HT for SCO/SCP & SWPM	
				CC Custom Color	8F Up to 8'	
					20F Up to 20'	

¹ Available in SG2 only, UHV available in SG2-50 only
² Sensor controls & battery backup can not be used with flood accessory or kit or for inverted/up mounting, 120-277V only for SCO/SCP, 120 or 277 only for SWP, SWPM, E & EH
³ Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming or on/off with automatic daylight calibration and different time delay settings, 120-277V only, PCU option not applicable



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**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

SG2-50-5K7-FT-UNV-DB-PCU

Type:**F11****Notes:**

LPS-SLA19-49539

ORDERING INFORMATION - Stock Versions

Catalog Number	CCT/CRI	Wattage	Mounting Height	Voltage	Color	Lumens	LPW	Weight lbs. (kg)
SG1-20-PCU	5000K/70	21w	8-12ft	120-277V	Dark Bronze	2263	108	4.3 (2)
SG1-20-4K-PCU	4000K/70					2310	110	
SG1-30-PCU	5000K/70	29w	10-15ft			3270	113	
SG1-30-4K-PCU	4000K/70					3060	105	
Catalog Number	CCT/CRI	Wattage	Mounting Height	Voltage	Color	Lumens	LPW	Weight lbs. (kg)
SG2-50-PCU	5000K/70	51w	12-18ft	120-277V	Dark Bronze	5548	110	11 (5)
SG2-50-4K-PCU	4000K/70					5526	109	
SG2-80-PCU	5000K/70	80w	15-25ft			8061	101	
SG2-80-4K-PCU	4000K/70					8079	101	

PERFORMANCE DATA

Catalog number	# of LEDs	Drive Current	System Watts	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 80 CRI)				
				Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G
SG1-20	2	250mA	21	2449	115	1	0	0	2310	110	1	0	0	2054	95	1	0	0
SG1-30		350mA	29	3332	117	2	0	0	3060	106	1	0	0	2913	100	1	0	0
SG2-50-UHV	3	350mA	44	4633	106	2	0	0	4609	105	2	0	0	3895	90	2	0	0
SG2-50	3	415mA	51	5548	109	2	0	0	5526	107	2	0	0	4700	92	2	0	0
SG2-80		650mA	80	7851	98	2	0	1	8079	103	2	0	1	6721	86	2	0	1

1. Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

ELECTRICAL DATA**Configurable Versions**

Catalog number	# of Drivers	Input Voltage	Current (Amps)	System Power
SG1-20	1	120	0.18	21.0
		277	0.08	21.0
SG1-30	1	120	0.24	28.9
		277	0.10	28.9
SG2-50-UHV	1	347	0.13	43.5
		480	0.18	43.5
SG2-50	1	120	0.42	50.6
		277	0.18	50.6
SG2-80	1	120	0.68	79.8
		277	0.29	79.8

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	OPERATING HOURS					
	0	25,000	50,000	TM-21-11 ¹ L96 60,000	100,000	L70 (hours)
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>791,000
40°C / 104°F	0.99	0.98	0.96	0.96	0.94	>635,000

1. Projected per IESNA TM-21-11¹ (Nichia 219B, 700mA, 85°C Ts, 10,000hrs) Data references the extrapolated performance projections for the LNC-12LU-5K base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE	LUMEN MULTIPLIER	
0° C	32° F	1.02
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	1.00
40° C	104° F	0.99
50° C	122° F	0.96

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Wireless and Occupancy Controls

SiteSync™ Lighting Control delivers flexible control strategies for reducing power consumption and minimizing maintenance costs while delivering the right light levels with a simple and affordable wireless solution.



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Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:

SG2-50-5K7-FT-UNV-DB-PCU

Notes:

Type:

F11

LPS-SLA19-49539

OPTIONS AND ACCESSORIES

Catalog Number	Description	Weight lbs. (kg)
SG1-CS	Acrylic comfort lens for SG1	1 (.45)
SG2-CS	Acrylic comfort lens for SG2	1 (.45)
SG1-YOKE	SG1 Series Yoke/Floodlight mount kit, includes visor	2.0 (1.0)
SG1-KNUCKLE	SG1 Series Knuckle/Floodlight mount kit, includes visor	2.0 (1.0)
SG2-YOKE	SG2 Series Yoke/Floodlight mount kit, includes visor	2.0 (1.0)
SG2-KNUCKLE	SG2 Series Knuckle/Floodlight mount kit, includes visor	2.0 (1.0)
SCP-REMOTE*	Remote control for SCP option. Order at least one per project to program and control fixtures	1 (.45)
SG2-PMA-3-XX	3" Pole Mount adapter for SG2, both square and round, XX= finish	7 (3.5)
SG2-PMA-4-XX	4" Pole Mount adapter for SG2, both square and round, XX= finish	7 (3.5)
SG2-PMA-5-XX	5" Pole Mount adapter for SG2, both square and round, XX= finish	7 (3.5)
SG2-PMA-6-XX	6" Pole Mount adapter for SG2, both square and round, XX= finish	7 (3.5)
SG1-SPC	Vandal Resistant Lens (shield polycarbonate), SG1	3 (1.5)
SG2-SPC	Vandal Resistant Lens (shield polycarbonate), SG2	3 (1.5)
SG1-WCP	Universal Wall Cover Plate, Dark Bronze, SG1	10 (5)
SG2-WCP-H	Horizontal Mount Wall Cover Plate, Dark Bronze, SG2	10 (5)
SG2-WCP-V	Vertical Mount Wall Cover Plate, Dark Bronze, SG2	10 (5)
SG2XL-WCP-H	Horizontal Mount Wall Cover Plate, DB, SG2 with battery or sensor	10 (5)
SG2XL-WCP-V	Vertical Mount Wall Cover Plate, DB, SG2 with battery or sensor	10 (5)

*Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V or 277V only

Accessories and Services (Ordered Separately)

Catalog Number	Description
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG+	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.

*When ordering SiteSync at least one of these two interface options must be ordered per project.

+ If needed, an additional Bridge Node can be ordered.

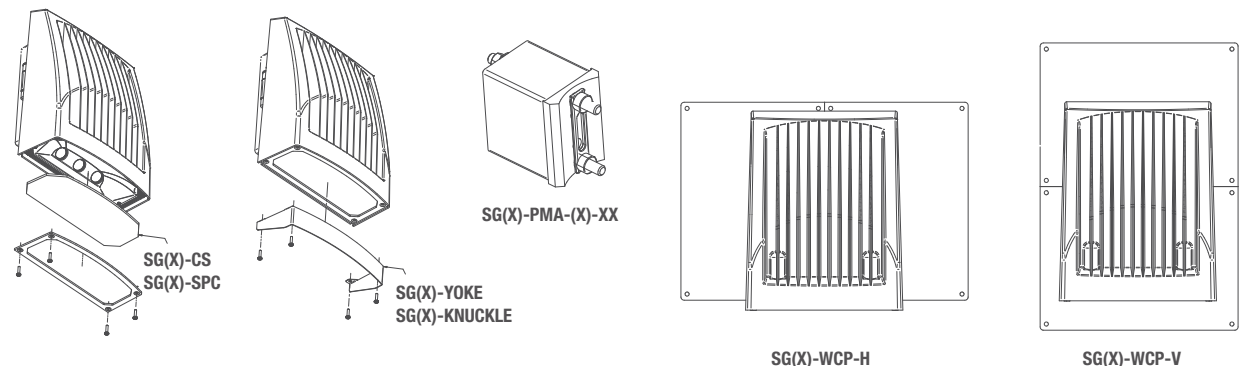


Acrylic comfort lens provides glare control, improved visual comfort and better uniformity

Visor accessory included Flood mounting accessories - 1/2" threaded knuckle with mounting accessory or yoke (includes grommet and 3' SO cord) kits

Photocontrol option available for energy-saving dusk-to-dawn operation

Side hinged for easy installation and wiring access, single screw secures housing closure



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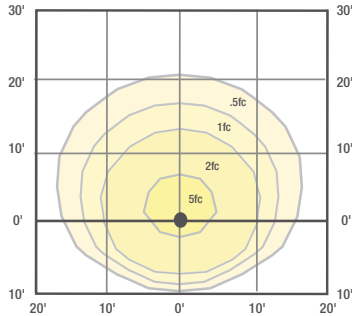
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Type:

F11

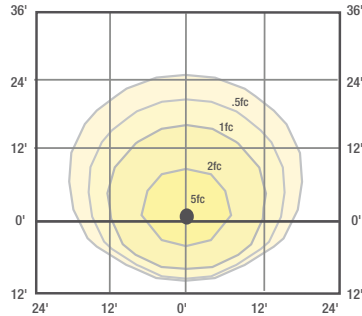
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PHOTOMETRICS



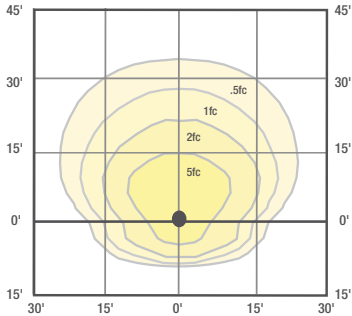
SG1-20

Mounting Height 10ft



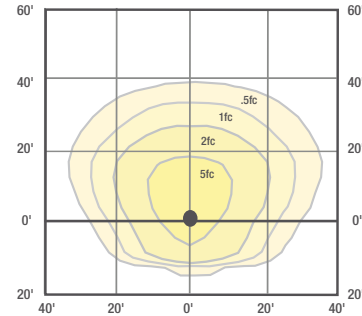
SG1-30

Mounting Height 12ft



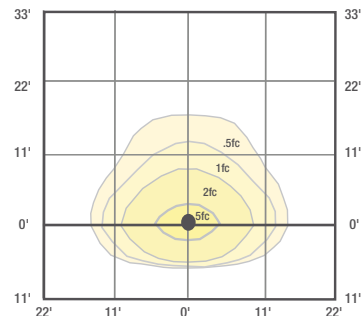
SG2-50

Mounting Height 15ft



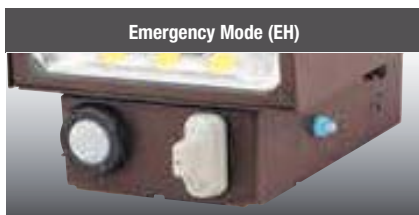
SG2-80

Mounting Height 20ft



SG2 in E or EH Emergency mode

Mounting Height 11ft



Emergency Mode (EH)

Battery back up feature with side indicator.

Exceeds Life Safety Code average illuminance of 1.0 fc. at 12ft mounting height. Assumes open space with no obstructions.

Diagrams for illustration purposes only, please consult factory for application layout.

Battery backup units consume 6 watts when charging a dead battery and 2 watts during maintenance charging. EH (units with a heater) consume up to an additional 8 watts when charging if the battery temp is lower than 10°C



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Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

UVPP

Notes:

Type:

LPS-SLA19-49539

Universal Voltage Power Packs

Power Packs and Relays



UVPP

PROJECT INFORMATION

Project Name _____

Catalog No. _____

Date _____

The Universal Voltage Power Pack (UVPP) is a self-contained transformer and relay designed for low-voltage 24VDC occupancy sensors. The power pack supports and automatically detects the line-voltage input within the 100–277VAC range. This eliminates the need for voltage-specific power packs. The Universal Voltage Power Pack with Manual ON/OFF control (UVPPM) provides a unique solution for lighting applications where users require both manual ON/OFF control as well as automatic OFF control.

Both power packs are capable of switching 20A loads and feature Zero Arc Point Switching, minimizing relay-contact wear from high inrush loads. A single power pack can power either 4 sensors or 3 sensors and the MPSA auxiliary relay for multiple circuits. The power packs are plenum rated and easily mount inside or outside of a junction box or inside a fixture.

PRODUCT FEATURES

- **Universal voltage: 100–277VAC; 50/60Hz**
- Automatic voltage detection
- Electrical load switching capability: maximum of 20 Amps
- Regulated 24VDC current; 150mA output
- Zero Arc Point Switching
- Plenum rated
- Mounts: inside or outside a junction box; inside a fixture
- Available with exclusive Quick-to-Install (QTI) connector
- Companion auxiliary relay device available (MPSA)
- UL and cUL listed
- Five-year limited warranty
- Low voltage device: 24 VDC

3.49"
(88.7mm)

2.33" [59.18]

3.69" [93.73]

1.36"
[34.54]



UVPPM

HUBBELL®
Control Solutions

701 Millennium Blvd. | Greenville, SC 29607 | 864-678-1000 | 866-898-0131 fax | www.hubbellcontrolsolutions.com



1601A 3.30.17

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Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

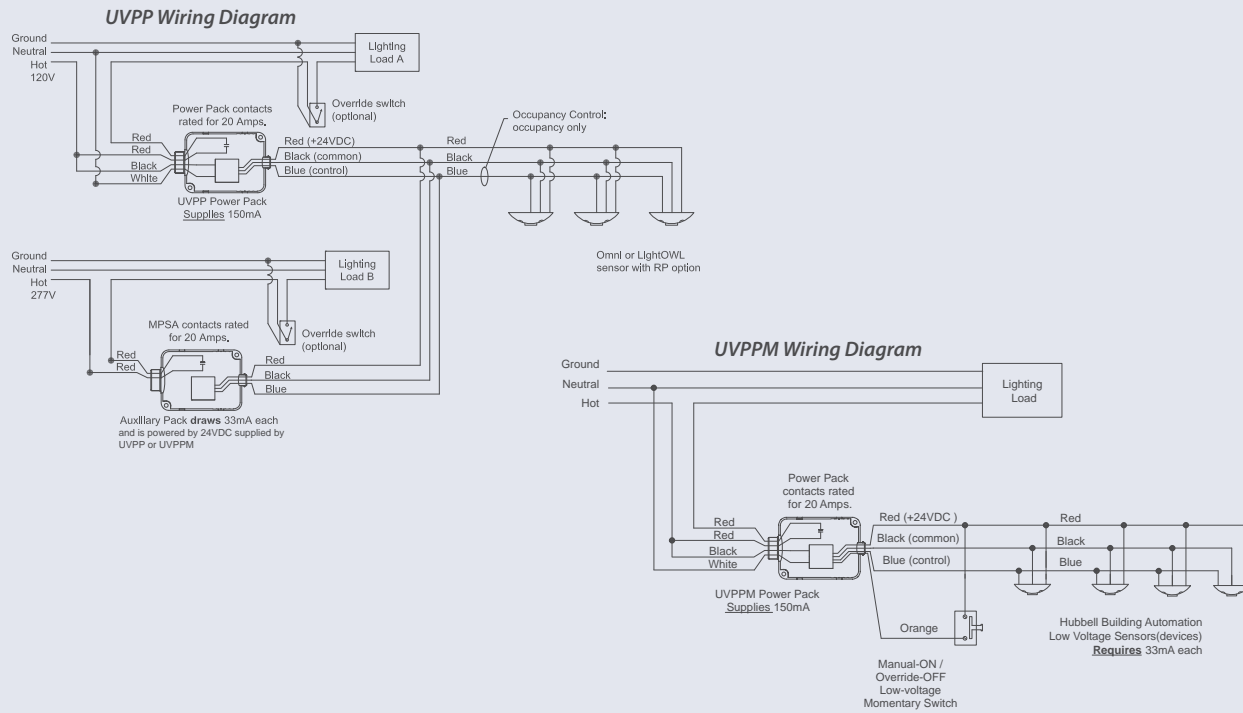
Catalog Number:

UVPP

Type:

LPS-SLA19-49539

Notes:



General Specification

Power requirements	100-277VAC; 50/60Hz
Output (UVPP/UPPM)	24VDC; 150mA nominal, isolated, and regulated
Relay contact rating	20A: 120VAC Incandescent 20A: 120 or 277VAC Ballast 1HP: 120 or 277VAC Motor Load
Plenum rated	Complies with requirements for use in a plenum area Plenum rated for external junction box mounting
Operating environment	Indoor use only Operating temperature: 32° to 104°F (0° to 40°C) Relative humidity (non-condensing): 0% to 95%
Dimensions	3.69" H x 2.33" W x 1.36" D (93.73mm H x 59.18mm W x 34.54mm D)
Weight	15 oz. (425.24 g)
Color	Black
Certifications	UL and cUL listed
Warranty	Five-year limited

Ordering Information

UVPP	
MODEL	
UVPP	Universal Voltage Power Pack
UVPPQTI	Universal Voltage Power Pack with QTI Connector
UVPPM	Universal Voltage Power Pack with Manual ON/OFF Control



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

OMNIIRL

Type:

LPS-SLA19-49539

OMNI® Low Voltage Passive Infrared Ceiling Sensor

CEILING MOUNT OCCUPANCY SENSORS



OMNIIR

PROJECT INFORMATION

Project Name _____

Catalog No. _____

Date _____

The *OMNIIR* uses passive infrared (PIR) technology to turn lighting on and off based on occupancy. Designed specifically for areas with long-range major-motion activity, this sensor features Hubbell Controls' patented IntelliDAPT® technology, which makes all the sensor adjustments automatically.

Throughout the product's lifespan, *IntelliDAPT* software analyzes the controlled area and makes digital adjustments to sensitivity and timer settings.

Occupancy sensors with *IntelliDAPT* technology provide a maintenance-free install-and-forget operation.

PRODUCT FEATURES

- *IntelliDAPT* self-adaptive technology—no manual adjustment required
- All-digital passive infrared (PIR) sensor
- Non-volatile memory for sensor settings
- 450 - 1,500 square-foot coverage area (depending on model)
- Optional relay and photocell control
- Optional Quick to Install (QTI) connector
- UL and cUL listed
- California Title 24 compliant
- Five-year limited warranty
- Low voltage device: 24 Vdc





Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

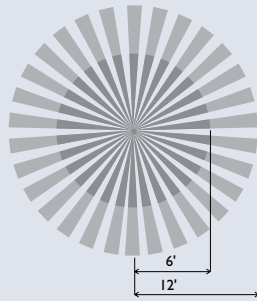
Catalog Number:

OMNIIRL

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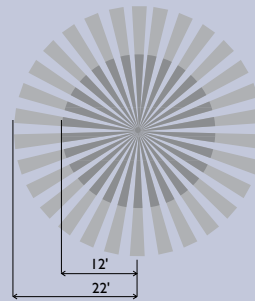
Type:

LPS-SLA19-49539



Minor Motion
 Major Motion

OMNI® IR Range



Minor Motion
 Major Motion

OMNI IRL Range

General Specifications

IntelliDAPT® Technology	Auto reset from test setting Self-adjusting timer Self-adjusting passive infrared thresholds Automatic false-on/false-off corrections
LED lamp	Red - infrared motion
Timer timeout	Automatic mode: 8–30 min. (self-adjusts based on occupancy) Test mode: 8 seconds (for an easy check at installation)
Passive infrared (PIR)	Dual-element pyrometer and 12-element cylindrical rugged lens
RP option	Relay and photocell included Relay: N/O + N/C contacts; SPDT; 500 mA rated @ 24VDC; three-wire isolated relay Photocell: adjustable natural-light override ranges from 0 to 100 foot-candles (0–1,000 lux)
Coverage	450 - 1,500 square feet
Power requirements	24VDC, 33mA (uses UVPP and MP- Series power pack- not included)
Output	24 VDC active high-logic control signal with short circuit protection and optional dry contact (see RP options)
Operating environment	Indoor use only Operating temperature: 32° to 104°F (0° to 40°C) Relative humidity (non-condensing): 0% to 95%
Construction	Casing - rugged, high-impact, injection-molded plastic KJB ABS Cyclac (UL-945VA) flame class rating, UV inhibitors Color-coded leads are 6" long
Dimensions	4.5" diameter, 1.5" height (114 mm diameter, 38mm height)
Weight	5.0 oz (142g)
Color	Off-white
Mounting	Mounting base provided Recommended mounting height: 8ft with a max mounting height of 12ft.
Certifications	UL and cUL listed
Warranty	Five years

Ordering Information

OMNI	IR	L		
MODEL	TECHNOLOGY	COVERAGE	RELAY / PHOTOCELL OPTION	QTI
OMNI	IR Passive Infrared	L Long Range IR, 1,500 sq. ft. Blank 450 sq. ft.	RP Relay & Photocell Blank No Option	QTI Quick to Install Blank No QTI



HUBBELL
Control Solutions

Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

OMNIUS2000

Type:

LPS-SLA19-49539

OMNI® Low Voltage Ultrasonic Ceiling Sensor

CEILING MOUNT OCCUPANCY SENSORS

**PROJECT INFORMATION**

Project Name _____

Catalog No. _____

Date _____



OMNIUS500

The *OMNIUS* uses ultrasonic (US) technology to turn lighting on and off based on occupancy. Designed specifically for both areas with obstructions (e.g. columns, cubicles, stalls, and filing cabinets) and areas with long periods of minor-motion activity (e.g. typing), this sensor features Hubbell Controls' patented IntelliDAPT® technology, which makes all the sensor adjustments automatically.

Throughout the product's lifespan, *IntelliDAPT* software analyzes the controlled area and makes digital adjustments to sensitivity and timer settings. Occupancy sensors with *IntelliDAPT* technology provide a maintenance-free install-and-forget operation.

PRODUCT FEATURES

- *IntelliDAPT* self-adaptive technology - no manual adjustment required
- Superior all-digital ultrasonic (US) minor motion detection
- Non-volatile memory for sensor settings
- 500–2,000 square-foot coverage area (depending on model)
- Optional relay and photocell control
- Optional Quick to Install (QTI) connector
- UL and cUL listed
- California Title 24 compliant
- Five-year limited warranty
- Low Voltage 24 Vdc



**Job Name:**

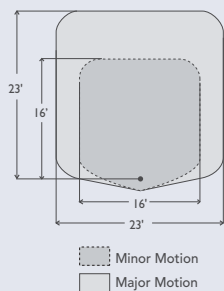
Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:
 OMNIUS2000

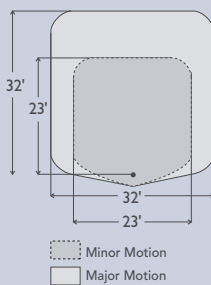
Notes:

Type:

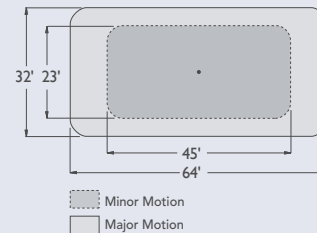
LPS-SLA19-49539



US 500 Range



US 1000 Range



US 2000 Range

General Specifications

IntelliDAPT® Technology	Auto reset from test setting Self-adjusting timer Self-adjusting ultrasonic thresholds Automatic false-on/false-off corrections
LED lamp	Green - ultrasonic motion
Timer timeout	Automatic mode: 8–30 min. (self-adjusts based on occupancy) Test mode: 8 seconds (for an easy check at installation)
Ultrasonic (US) output	OMNIUS500: 40kHz output OMNIUS1000 and OMNIUS2000: 32kHz output
RP option	Relay and photocell included Relay: N/O + N/C contacts; SPDT; 500 mA rated @ 24VDC; three-wire isolated relay Photocell: adjustable natural-light override ranges from 0 to 100 foot-candles (0–1,000 lux)
Coverage	500–2,000 square feet (depending on model)
Power requirements	24VDC, 33mA (uses UVPP and MP- Series power pack- not included)
Output	24VDC active high-logic control signal with short circuit protection and optional dry contact (see RP options) 24 VDC active high-logic control signal with short circuit protection
Operating environment	Indoor use only Operating temperature: 32° to 104°F (0° to 40°C) Relative humidity (non-condensing): 0% to 95%
Construction	Casing - rugged, high-impact, injection-molded plastic KJB ABS Cyclac (UL-945VA) flame class rating, UV inhibitors Color-coded leads are 6" long
Dimensions	4.5" diameter, 1.5" height (114 mm diameter, 38mm height)
Weight	8.2 oz (232g)
Color	Off-white
Mounting	Mounting base provided Recommended mounting height: 8ft with a max mounting height of 12ft.
Certifications	UL and cUL listed
Warranty	Five-year limited

Ordering Information

MODEL	TECHNOLOGY	COVERAGE	RELAY / PHOTOCELL OPTION	QTI
OMNI	US Ultrasonic	500 500 sq. ft. 1000 1,000 sq. ft. 2000 2,000 sq. ft.	RP Relay & Photocell Blank No Option	QTI Quick to Install Blank No QTI



HUBBELL
 Control Solutions

9601 Dessau Road | Building One | Austin, Texas 78754 | 512-450-1100 | 512-450-1215 fax | www.hubbell-automation.com

1302 2.3.2016



Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:
 LHIRS1-G-?STD. COLOR

Notes:

Type:

LPS-SLA19-49539

HUBBELL
 Control Solutions

LightHAWK®2 Passive Infrared Wall Switch Sensor

Wall Switch Occupancy Sensors



Project Name _____

Catalog No. _____ Date _____

The LightHAWK2 Passive Infrared Wall Switch Sensor uses passive infrared (PIR) technology to detect motion. The most affordable of the motion detecting technologies, this sensor type is ideal for detecting large motion in areas with an unobstructed view of the sensor. This sensor has a coverage area of up to 1,000 square feet and 180° of detection.

LHIR sensors feature Hubbell Controls' patented IntelliDAPT™ technology, which makes all the sensor adjustment decisions automatically. Throughout the product's lifespan, smart software analyzes the controlled area and makes digital adjustments to sensitivity and timer settings. Occupancy sensors with IntelliDAPT technology provide a maintenance-free install-and-forget operation. With selectable operating modes — automatic ON/OFF or manual ON/automatic OFF — and a built-in photosensor for automatic daylight harvesting, LHIR sensors are the best choice in today's market place.

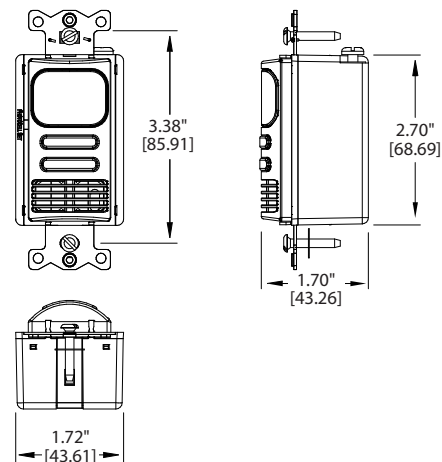
Product Features

- Digital passive infrared (PIR) sensor
- IntelliDAPT self-adaptive technology—no manual adjustment required
- Dual circuit has isolated relays
- Occupancy (auto-on) and Vacancy (manual-on) operating modes
- Available with or without Neutral
- 1,000 square-foot, 180° coverage area
- RhinoTuff™ vandal resistant lens
- 120/277VAC operation
- No minimum load requirement
- Zero Arc Point Switching
- Five-year limited warranty
- 120-277 Vac and 347 Vac models
- Low voltage device: 24 VDC

Compliance and Certification



Dimensional Data



COLOR OPTION MUST BE SPECIFIED

Ordering Information

LHIRS1	G	?	
MODEL	WIRING	COLOR	MODE
LHIRS0 Passive Infrared, Single Relay, No Button	G Ground (120/277V)	WH White	(Blank) Switchable Vacancy or Occupancy Mode
LHIRS1 Passive Infrared, Single Relay, One Button	N Neutral (120/277V)	IV Ivory	M Vacancy Mode Only
LHIRD0 Passive Infrared Technology, Dual Relay (One Input / Two Outputs), No Buttons	24V* Low Voltage	LA Light Almond	
LHIRD2 Passive Infrared Technology, Dual Relay (One Input / Two Outputs), Two Buttons	G347 Ground (347V)	GY Gray	
LHDCIRD0 Passive Infrared Technology, Dual Circuit (Two Inputs / Two Outputs), No Buttons	N347 Neutral (347V)	BK Black	
LHDCIRD2 Passive Infrared Technology, Dual Circuit (Two Inputs / Two Outputs), Two Buttons			

*Not available with LHDCIRD versions
 -Low voltage sensors require a power pack that is sold separately





Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group (Covington)

Catalog Number:

LHIRS1-G-?STD. COLOR

Type:

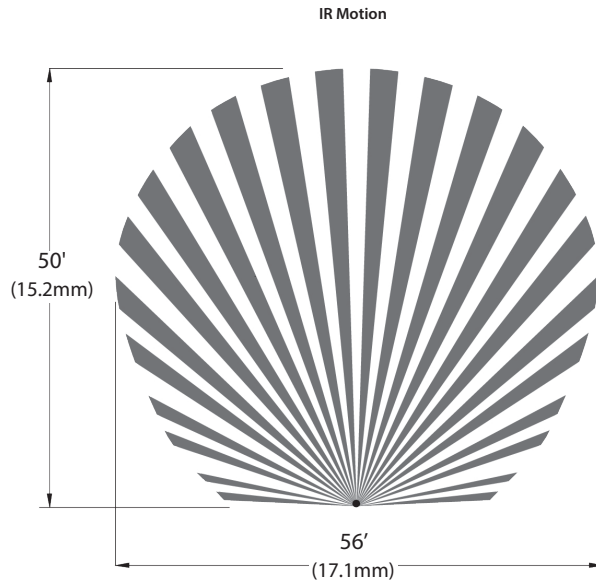
LPS-SLA19-49539

Notes:

LightHAWK®2

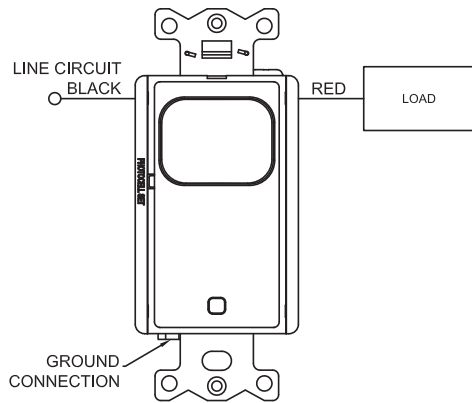
Wall Switch Occupancy Sensors

Coverage Pattern

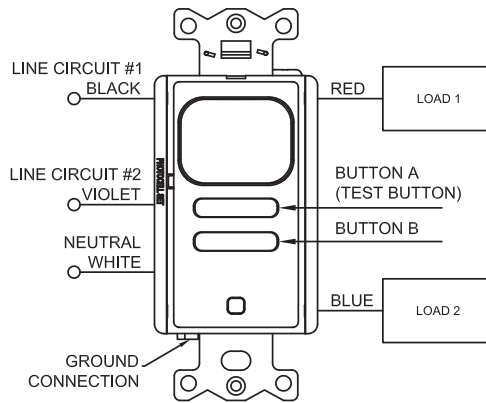


Wiring Diagram

Single Load Wiring Without Neutral



Dual Load Wiring With Neutral





Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group (Covington)

Catalog Number:
 LHIRS1-G-?STD. COLOR

Notes:

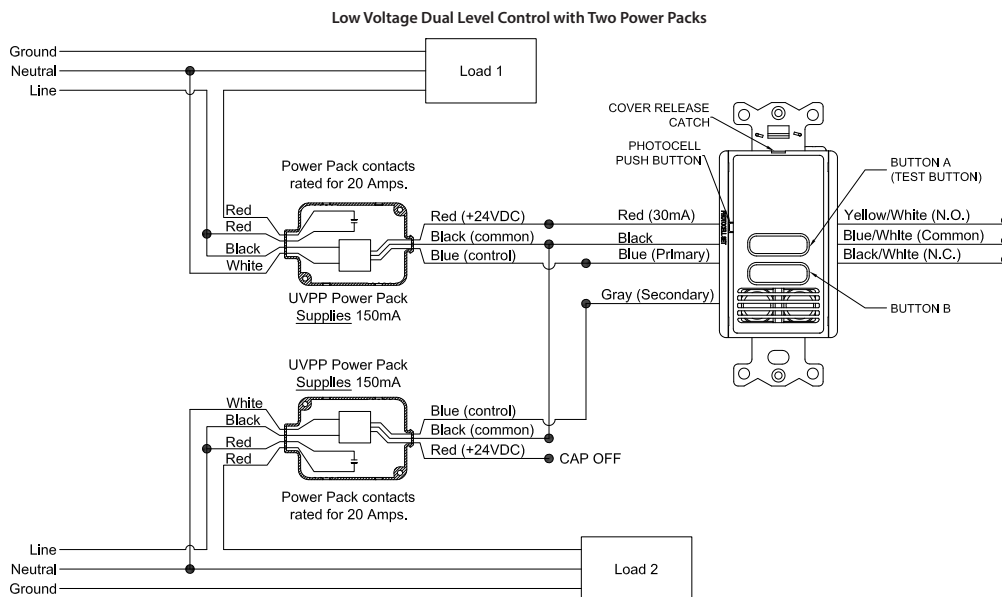
Type:

LPS-SLA19-49539

LightHAWK®2

Wall Switch Occupancy Sensors

Wiring Diagrams



General Specifications

IntelliDAPT Technology	Self-adjusting timer Self-adjusting passive infrared (PIR) sensitivity Automatic false-on/ false-off corrections No manual adjustments required
Time Delay	Auto mode: 4-30 minutes; self-adjusts based on occupancy Fixed mode: 4, 8, 15, and 30 minutes Test mode: 5 seconds
Passive Infrared (PIR)	Dual-element pyrometer and 12-element cylindrical RhinoTuff lens
Photocell	Natural light override range: 10-500 foot-candles
Coverage	1,000 square-foot, 180° coverage area
Power Requirements	120/277VAC; 50/60Hz 347VAC; 50/60Hz 24VDC (requires UVPP)
Electrical Ratings	120VAC: 800W Incandescent/ Electronic Ballast/ LED Driver: 1,000W Magentic Ballast 1/6 HP Motor 277VAC: 1,800W Magnetic Ballast/ Electronic Ballast/ LED Driver: 1/6 HP Motor 347VAC: 1,500W Magnetic Ballast/ Electronic Ballast/ LED Driver: 1/6 HP Motor
Minimum Load Requirement	None
Operating Environment	Indoor use only Operating temperature: 32° to 104°F (0° to 40°C) Relative humidity (non-condensing): 0% to 95%
Construction	Casing- high- Impact injection-molded plastic (UL-94-5V) Impact-resistant lens Color- coded leads are 6" (152.4mm) long Wrap-around galvanized steel mounting strap
Dimensions	4.2" H x 1.8"W x 1.75"D; .37" extension (106.69mm H x 44.45mm D; 9.40mm ext.)
Weight	2.9 oz (82.21g)
Color	White; Ivory; Light Almond; Gray; Black
Mounting	Single-gang NEMA-style switch box (standard switch box) Decorator-style wall plate sold separately
Certifications	Listed UL and cUL
Warranty	Five-year limited

Submitted by LPS, Inc.



Job Name:

Airport Corporate Hangar Facilities
Architect: Richard C Lambert (Mandeville)
Engineer: Creative Engineering Group
(Covington)

Catalog Number:

LHIRS1-G-?STD. COLOR

Notes:

Type:

LPS-SLA19-49539

Job Name:

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

TD300W

Notes:

Type:

LPS-SLA19-49539

Digital Programmable Timer

POWER PACKS AND RELAYS



TD300

PROJECT INFORMATION

Project Name _____

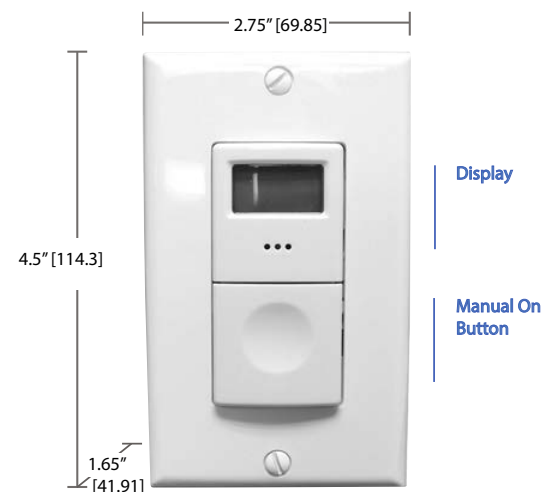
Catalog No. _____

Date _____

With its aesthetically pleasing features, the TD300 combines style with functionality as it provides energy saving control of incandescent and fluorescent lighting, as well as certain motor loads such as fans, hot tub heaters and circulating pumps. The timer offers two presets for energy code compliance – two hour timing for Title 24 and IECC and 4 hour timing for ASHRAE 90.1. A timed override allows lights and HVAC (heating, ventilating and air conditioning) to remain on for a specified amount of time for after-hours cleaning crews. The TD300 is easy to install and can replace any wall switch.

PRODUCT FEATURES

- Zero Arc Point Switching
- No minimum load requirement
- Adjustable time delay and sensitivity
- Walk test indicator
- Dual 120/277 VAC operation
- UL and cUL listed
- Title 24 compliant
- **Five-year limited warranty**
- 120-277 Vac



**Job Name:**

Airport Corporate Hangar Facilities
 Architect: Richard C Lambert (Mandeville)
 Engineer: Creative Engineering Group
 (Covington)

Catalog Number:

TD300W

Notes:

Type:

LPS-SLA19-49539

General Specifications

Power requirements	120/230/277VAC; 50/60Hz
Electrical Ratings	120VAC - 15A Resistive - 10A Ballast - 1200W LED Lamp Driver - 8A Tungsten - 1/4HP Motor - 360VA Pilot Duty 277VAC - 15A Resistive - 15A Resistive - 10A Ballast
Load Requirements	None
Operating Environment	Indoor use only Operating environment: 32° - 122°F (0°-50°C) Relative humidity (non-condensing): 0%-95%
Construction	Casing – high impact injection-molded plastic Wall plate locks access to dipswitches for tamper resistance
Display	Backlit LED
Dimensions	4.5" [114.3mm] H x 2.75" [69.85mm] W x 1.625" [41.91mm] D
Weight	2.9 oz [82.21 g]
Color	White
Mounting	Single-gang NEMA-style switch box (average switch box) Decorator wall plate included
Certifications	UL and cUL listed
Warranty	Five-year limited

Ordering Information

TD300	W
MODEL	CONTROL
TD300	W White



HUBBELL
 Control Solutions

9601 Dessau Road | Building One | Austin, Texas 78754 | 512-450-1100 | 512-450-1215 fax | www.hubbell-automation.com

1801A 2.25.2016



Date: May 13, 2019

Wells Keown Associates
301 Plauche St
Harahan LA 70123
Phone: (504) 733-0301
Fax: (504) 733-3675

Job Name
St. Tammany Regional Airport Corporate Hangar Facilities - New Phase
WK19-26156
Mandeville LA

Bid Date
May 16, 2019

Submittal Date
May 6, 2019

Engineer:
Creative Engineering Group, LLC
201 Highland Park Plaza
Covington LA 70433



Transmittal

Wells Keown Associates
 301 Plauche St
 Harahan LA 70123
 Phone: (504) 733-0301
From: Aaron Keown

Project St. Tammany Regional Airport Corporate Hangar Facilities - New Phase

Quote# WK19-26156

Location Mandeville LA

To Creative Engineering Group
 201 Highland Park Plaza
 Covington LA 70433
 Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|--|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input checked="" type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| <input checked="" type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

Type	MFG	Part
F1	Halo Commercial	PD6V120 60VCWF
F2	Halo Commercial	PD6V120 60V5GDF
F3	Metalux	24FP4740C
F4	Metalux	22FP3240C
F5	Metalux	24FP4740C FPSURF24
F6	Metalux	4SNLED-LD5-56SL-LW-UNV-L840-CD1-U
F7	Metalux	2SNLED-LD5-30HL-LW-UNV-L840-CD1-U
F8	Exitronix	VLEDC-51-WH
F8A	Exitronix	VLEDC-51-WH-R4 REN1-WH-WP MP2
F9	Halo Commercial	PD6V120 60V3GCWF
F10	OXYGEN Lighting	3-582-2724
F11	Lumark	XTOR4B
A	Metalux	HBLED-LD5-24SE-W-UNV-L840-CD2-U-Y-TOGGLE-10
AE	Metalux	HBLED-LD5-24SE-W-UNV-EL14W-L840-CD2-U-Y-TOGGLE-10
B	MCGRAW-EDISON	IST-AF-600-LED-E1-[DIST]-BK-P120
BE	MCGRAW-EDISON	IST-AF-600-LED-E1-[DIST]-BK-P120-BBB120
C	Exitronix	VLEDC-51-WH



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:
PD6V120 60VCWF

Notes:

Type:

F1

WK19-26156

HALO Commercial

DESCRIPTION

Recessed 6 inch aperture open downlight for vertical 100W maximum A19, PAR20, PAR30L, PAR38 or BR40 lamp. Fixture is suitable for commercial construction. Insulation must be kept 3" from top and sides of housing. Specify housing and trim separately to complete luminaire.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

MECHANICAL Frame

Boat shaped galvanized steel frame with 1/2" plaster lip accommodates ceilings up to 2" thick. May be used for new construction or remodeling installations. Provided with (2) remodel clips to secure frame when installed from below the ceiling.

Mounting Brackets

Bar hanger receivers adjust 2" vertically from above the ceiling or thru the aperture. Use with No Fuss™ bar hangers or with 1/2" EMT. Removable to facilitate installation from below the ceiling.

No Fuss™ Bar Hangers

Pre-installed and centered bar hanger locks to tee grid with a screwdriver or pliers. Centering marks on the bar hanger mechanism allows consistent positioning of fixtures.

OPTICAL Reflector

Highly efficient one piece aluminum reflector provides for equal lamp and lamp image cutoff for a visually comfortable optic. Self flanged standard.

- **Specular Reflectors** - Polished flange standard with white painted flange option.
- **Baffles and White Reflector** - White painted flange standard.

Trim Retention

Reflector is retained with two torsion springs and held tightly to the finished ceiling surface.

ELECTRICAL Junction Box

(6) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (12) #12 AWG (six in, six out) 90°C conductors and feed thru branch wiring.

Lamp Socket

E26 medium base porcelain socket with nickel plated brass screw shell.

Socket Cap

One piece metal cap attached securely to reflector with turn and lock mechanism.

Insulation Detector

Self heating insulation detector opens circuit if insulation is improperly installed.

Code Compliance

- Thermally protected and cULus listed for damp locations.
- IP20 rated for open trims.



**PD6V120
60V**

**Incandescent
Tungsten-Halogen (IR)**

**100W Max A19,
PAR20, PAR30L,
PAR38, BR40**

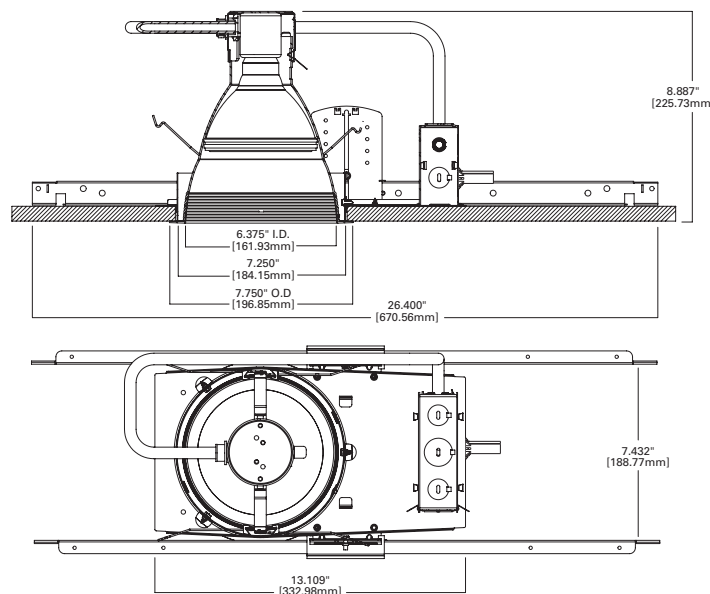
**LEDi Integrated
(Self-ballasted)**

**16W Max PAR38LED
11W Max PAR30LED
7W Max PAR20LED
7W Max A19LED**

**6-Inch Aperture
Open Downlight**

**New Construction or
Remodel
Non-IC**

DIMENSIONS



ADV111739
January 2, 2013 3:33 PM



Job Name:
St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:
PD6V120 60VCWF

Notes:

Type:

F1

WK19-26156

HALO Commercial

PD6V120
60V

ORDERING INFORMATION

SAMPLE NUMBER: PD6V120 60VC

Order housing, reflector and lamp separately for a complete luminaire.

PD6V120	60C	C	WF	
----------------	------------	----------	-----------	--

Housing
PD6V120 = 6 Inch vertical, E26, 120V

Reflector
60V = 6" vertical

Finish Option
C=Specular Clear
G=Specular Gold
H=Semi Specular Clear
W=White (White Flange)
BB=Black Baffle (White Flange)
WB=White Baffle (White Flange)

Flange Option
Blank=Polished Flange (C, G, H)
Blank=White flange (W, BB, WB)
WF=White Flange (C, G, H)

Accessories
HB128APK = L channel hanger bar, 26", 'No-Fuss', pair (replacement)
RMB22 = 22" long wood joist mounting bars
H277 = 277V step down transformer, 300VA
H347 = 347V step down transformer, 75VA
H347200 = 347V step down transformer, 200VA

PHOTOMETRY

PD6V120-60VC_100A21INC

Spacing Criteria = 1.76
Lumens per Watt = 13 LpW
Test No. P21692
Test Model: PD6V120-60VC_100A21INC

Candlepower Distribution Curve

Candela Distribution	
Degrees Vertical	Candela
0°	563
5	568
15	663
25	821
35	821
45	550
55	296
65	17
75	3
85	1
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	31548
55	19307
65	1332
75	306
85	153

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	21	9.3	9.3
7'	13	11.8	11.8
8'	10	13.5	13.5
9'	8	15.2	15.2
10'	6	16.9	16.9
12'	4	20.3	20.3
14'	3	23.7	23.7

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	626.68	22.50	33.80
0-40	1130.82	40.70	61.10
0-60	1809.63	65.10	97.70
0-90	1851.45	66.60	100.00

PD6V120-60VC_16PAR38LED

Spacing Criteria = 0.38
Lumens per Watt = 45 LpW
Test No. P21688
Test Model: PD6V120-60VC_16PAR38LED

Candlepower Distribution Curve

Candela Distribution	
Degrees Vertical	Candela
0°	2980
5	2550
15	911
25	231
35	69
45	48
55	12
65	0
75	0
85	0
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	2753
55	783
65	0
75	0
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	21	9.3	9.3
7'	13	11.8	11.8
8'	10	13.5	13.5
9'	8	15.2	15.2
10'	6	16.9	16.9
12'	4	20.3	20.3
14'	3	23.7	23.7

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	585.65	N.A.	85.80
0-40	631.67	N.A.	92.50
0-60	682.50	N.A.	99.90
0-90	682.87	N.A.	100.00



Note: Specifications and Dimensions subject to change without notice.

Visit our web site at www.cooperlighting.com

Customer First Center 1121 Highway 74 South Peachtree City, GA 30269 770.486.4800 FAX 770.486.4801
Cooper Lighting 5925 McLaughlin Rd. Mississauga, Ontario, Canada L5R 1B8 905.507.4000 FAX 905.568.7049

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:
PD6V120 60V5GDF

Notes:

Type:

F2

WK19-26156

HALO Commercial**DESCRIPTION**

Recessed 6 inch aperture lens downlight for vertical 100W maximum A19, PAR20, PAR30L, PAR38 or BR40 lamp. Fixture is suitable for commercial construction and wet location listed. Insulation must be kept 3" from top and sides of housing. Specify housing and trim separately to complete luminaire.

Catalog #	Type
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES**MECHANICAL****Frame**

Boat shaped galvanized steel frame with 1/2" plaster lip accommodates ceilings up to 2" thick. May be used for new construction or remodeling installations. Provided with (2) remodel clips to secure frame when installed from below the ceiling.

Mounting Brackets

Bar hanger receivers adjusts 2" vertically from above the ceiling or thru the aperture. Use with No Fuss™ bar hangers or with 1/2" EMT. Removable to facilitate installation from below the ceiling.

No Fuss™ Bar Hangers

Pre-installed and centered bar hanger locks to tee grid with a screwdriver or pliers. Centering marks on the bar hanger mechanism allows consistent positioning of fixtures.

OPTICAL**Reflector**

One piece aluminum reflector secures lens in place with integrated spring clips for a visually comfortable optic and allows for tool-less lens exchange from below the ceiling. Available with clear, diffuse, prismatic, fresnel or drop opal glass lens. Self flanged standard.

- **Specular Reflectors** - Polished flange standard with white painted flange option.
- **Baffles and White Reflector** - White painted flange standard.

Trim Retention

Reflector is retained with two torsion springs and held tightly to the finished ceiling surface.

ELECTRICAL**Junction Box**

(6) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (12) #12 AWG (six in, six out) 90°C conductors and feed thru branch wiring.

Lamp Socket

E26 medium base porcelain socket with nickel plated brass screw shell.

Socket Cap

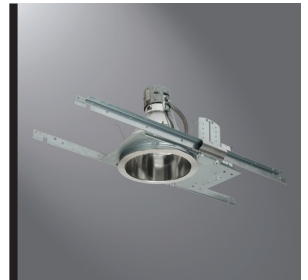
One piece metal cap attached securely to reflector with turn and lock mechanism.

Insulation Detector

Self heating insulation detector opens circuit if insulation is improperly installed.

Code Compliance

- Thermally protected and cULus listed for wet locations.
- IP44 rated for lens trims.



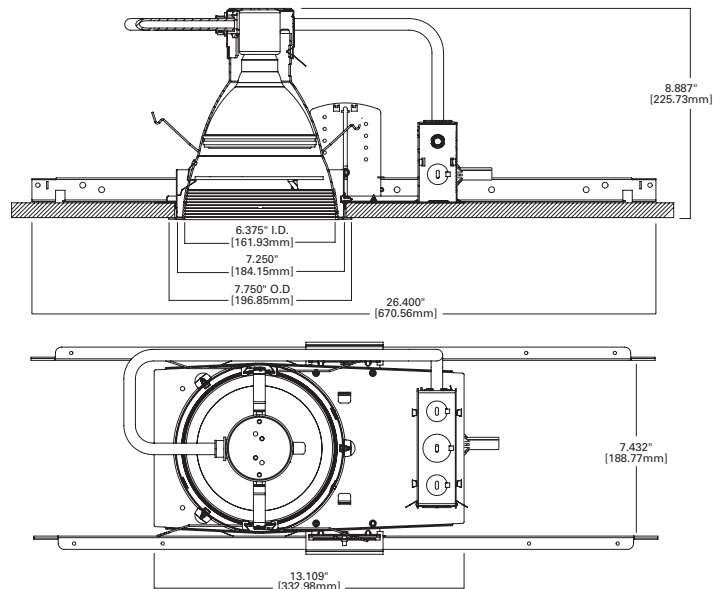
**PD6V120
60V**

**Incandescent
Tungsten-Halogen (IR)**

**100W Max A19,
PAR20, PAR30L,
PAR38, BR40**

**6-Inch Aperture
Lens Downlight**

**New Construction or
Remodel
Non-IC**

DIMENSIONS



Job Name:
St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:
PD6V120 60V5GDF

Type:
F2

Notes:

WK19-26156

HALO Commercial

PD6V120
60V

ORDERING INFORMATION

SAMPLE NUMBER: PD6V120 60V1GC

Order housing, reflector and lamp separately for a complete luminaire.

PD6V120

60V

5GDF

Housing
PD6V120 = 6 Inch vertical,
E26, 120V

Reflector
60V = 6" Vertical

Lens Option
1G= Prismatic glass
2G= Diffuse glass
3G= Clear glass
4G= Fresnel glass

Finish Option
C=Specular Clear
G=Specular Gold
H=Semi Specular Clear
W=White (White Flange)
BB=Black Baffle (White Flange)
WB=White Baffle (White Flange)

Flange Option
Blank=Polished Flange
(C, G, H)
Blank=White flange
(W, BB, WB)
WF=White Flange
(C, G, H)

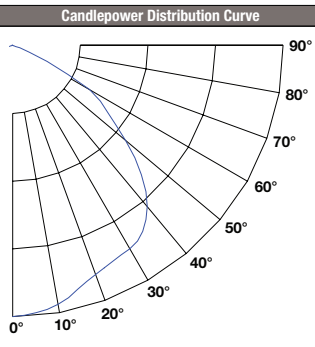
Accessories
HB128APK = L channel hanger bar, 26", "No-Fuss", pair (replacement)
RMB22 = 22" long wood joist mounting bars
H277 = 277V step down transformer, 300VA
H347 = 347V step down transformer, 75VA
H347200 = 347V step down transformer, 200VA

Polymer "Dead Front" Trim¹
1GDF=Prismatic Glass with "Dead Front" Trim
2GDF=Diffuse Glass with "Dead Front" Trim
3GDF=Clear Glass with "Dead Front" Trim
4GDF=Fresnel Glass with "Dead Front" Trim
5GDF=Drop Opal Glass with "Dead Front" Trim

Note:
¹"DF" trim option includes Specular Clear (C) reflector and white polymer flange only.
No other finish or flange options apply.

PHOTOMETRY

PD6V120-60V1GC_100A21INC
Spacing Criteria = 1.32
Lumens per Watt = 11 LpW
Test No. P21693
Test Model: PD6V120-60V1GC_100A21INC



Candela Distribution	
Degrees Vertical	Candela
0°	692
5	684
15	644
25	608
35	579
45	467
55	296
65	97
75	4
85	1
90	0

*CBCP

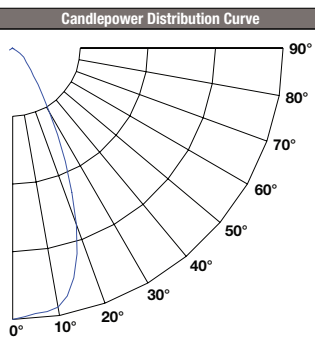
Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	26787
55	19307
65	7601
75	408
85	153

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	23	7.2	7.2
7'	14	9.1	9.1
8'	11	10.4	10.4
9'	9	11.7	11.7
10'	7	13.1	13.1
12'	5	15.7	15.7
14'	4	18.3	18.3

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	528.72	19.00	32.50
0-40	889.14	32.00	54.70
0-60	1513.88	54.50	93.10
0-90	1626.4	58.50	100.00

PD6V120-60V1GC_16PAR38LED
Spacing Criteria = 0.80
Lumens per Watt = 41 LpW
Test No. P21689
Test Model: PD6V120-60V1GC_16PAR38LED



Candela Distribution	
Degrees Vertical	Candela
0°	815
5	800
15	715
25	375
35	134
45	59
55	27
65	4
75	0
85	0
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	3384
55	1761
65	313
75	0
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	27	4.3	4.3
7'	17	5.5	5.5
8'	13	6.3	6.3
9'	10	7.1	7.1
10'	8	7.9	7.9
12'	6	9.5	9.5
14'	4	11	11

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	444.00	N.A.	73.20
0-40	531.42	N.A.	87.70
0-60	601.61	N.A.	99.20
0-90	606.29	N.A.	100.00



Note: Specifications and Dimensions subject to change without notice.

Visit our web site at www.cooperlighting.com

Customer First Center 1121 Highway 74 South Peachtree City, GA 30269 770.486.4800 FAX 770.486.4801
Cooper Lighting 5925 McLaughlin Rd. Mississauga, Ontario, Canada L5R 1B8 905.507.4000 FAX 905.568.7049



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Notes:

WK19-26156

Metalux

DESCRIPTION

FPanel LED panel series provide premium performance and pleasing aesthetics. It is optimized for shallow plenum grid ceilings or surface mounting. Developed with Eaton's latest generation of solid state components and electronic driver technologies, these panels are ideal for new construction. Its refined visual optics and integrated grid retention clips provide the features needed for speed and installation flexibility. LED FPanels are an excellent lighting solution for commercial office spaces, schools, healthcare and retail merchandising areas.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction/Mounting

Narrow aluminum bezel is tightly held to code gauge steel back plate to protect the LEDs and optical area. Corners are seamless and separate suspension clips are included on the panel to ensure installation flexibility in ceiling systems and to meet code when additional retention is required. Junction box is constructed of code gage galvanized steel with an easy access hinged door for high voltage and low voltage wiring access and includes trade size knockouts. The stock luminaire is less than 2 inches in depth making it an ideal choice for shallow plenums and low ceilings. May also be surface mounted using the optional kit. Options available to meet IP5X ratings as well as factory installed flexible cable.

Controls

The FPanel is standard with a 0-10V continuous dimming driver which dims to 10% and works with most standard 0-10V control/dimmers. Combine with energy-saving products like wall dimmers, Room Controller, occupancy and daylight sensors, and lighting relay panels. Or, go wireless with optional field installed controls for either WaveLinX or LumaWatt Pro.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K, 4000K and 5000K with a minimum of 80 CRI and a 90 CRI option that is 3000K. Projected lumen maintenance based on TM21 is L73 > 60,000 hours. Electronic drivers are cULus recognized and available for 120-277V. Emergency battery pack options are available in 7 watts and 14 watts. These emergency battery packs can be factory installed as an

option or field installed for remote mounting.

Optical Shielding

Light guide is constructed of acrylic with specialized features to optimize light extraction providing excellent efficiency. White frost lens with smooth pattern provides uniform illumination as well as scratch and impact resistance.

Compliance

Indoor luminaires are cULus listed for 25°C ambient environments, IC rated for direct insulation contact, RoHS compliant, damp location listed, and comply with IESNA LM-79 and LM-80 standards. NEMA 410 Compliant. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details. Can be used for State of California Title 24 high efficacy luminaire.

Warranty

Five year warranty.



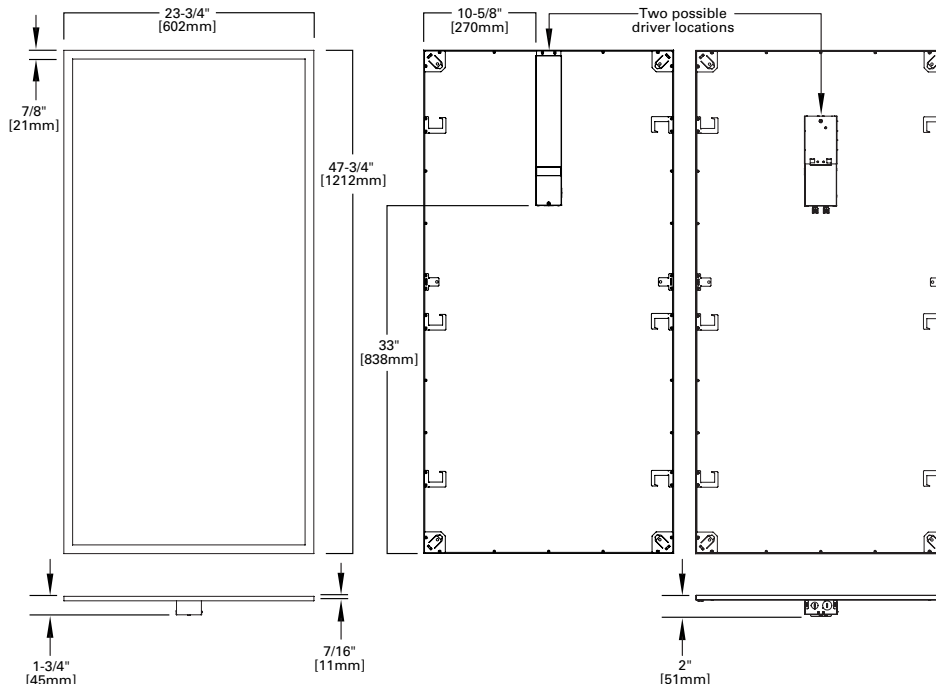
**24FP
LED**

2' X 4' LED PANEL

General LED Panel.
Recessed in Insulated
Ceilings or Surface Mount



DIMENSIONS



PS519169EN
September 14, 2018 11:51 AM

LOAD DATA (STOCK PRODUCT)

Thd	13%
Power Factor	0.96
Weight	18.5
Low Temp. Start	-20°C



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:
24FP4740C

Notes:

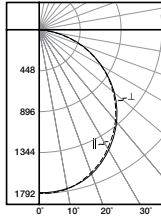
Type:

F3

WK19-26156

24FP LED

PHOTOMETRICS



24FP4735C

Electronic Driver
Linear LED 3500K
Spacing criterion:
(II) 1.24 x mounting
height, (⊥) 1.26 x
mounting height
Lumens: 5073
Input Watts: 40W
Efficacy: 126 lm/W
Test Report:
24FP4735C.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1785	1785	1785
5	1786	1774	1785
10	1761	1751	1764
15	1718	1711	1726
20	1657	1655	1670
25	1582	1582	1598
30	1495	1497	1516
35	1396	1400	1418
40	1284	1290	1311
45	1167	1173	1191
50	1040	1046	1060
55	906	912	926
60	768	772	784
65	626	628	637
70	481	483	491
75	340	340	348
80	206	206	212
85	92	90	94
90	0	0	0

Coefficients of Utilization

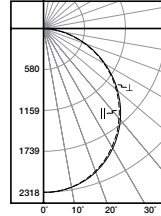
rc	Effective floor cavity reflectance																							
	80%				70%				50%				30%				10%				0%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100
1	109	104	99	96	106	101	98	94	97	94	91	93	91	88	90	88	86	83	83	83	83	83	83	83
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69	69	69	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58	58	58	58	58	58	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50	50	50	50	50	50	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43	43	43	43	43	43	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38	38	38	38	38	38	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33	33	33	33	33	33	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30	30	30	30	30	30	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27	27	27	27	27	27	27
10	53	39	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24	24	24	24	24	24	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1384	27.3
0-40	2261	44.6
0-60	3983	78.5
0-90	5073	100.0
0-180	5073	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2221	2232	2266
55	2125	2139	2172
65	1993	1999	2028
75	1768	1768	1809
85	1420	1389	1451



24FP6440C

Electronic Driver
Linear LED 4000K
Spacing criterion:
(II) 1.25 x mounting
height, (⊥) 1.26 x
mounting height
Lumens: 6611.3
Input Watts: 59.4W
Efficacy: 111.3 lm/W
Test Report:
24FP6440C.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2316	2316	2316
5	2312	2309	2308
10	2279	2279	2282
15	2225	2229	2233
20	2150	2156	2163
25	2056	2062	2072
30	1939	1951	1963
35	1814	1824	1836
40	1668	1683	1696
45	1516	1530	1544
50	1351	1364	1376
55	1182	1191	1202
60	998	1007	1014
65	812	820	827
70	622	629	642
75	438	445	456
80	266	274	282
85	116	121	126
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																							
	80%				70%				50%				30%				10%				0%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	88	86	83	83	83	83	83	83	83
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	79	75	72	69	69	69	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58	58	58	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50	50	50	50	50	50	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	56	50	45	43	43	43	43	43	43	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37	37	37	37	37	37	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33	33	33	33	33	33	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30	30	30	30	30	30	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27	27	27	27	27	27	27
10	53	39	32	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24	24	24	24	24	24	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1798.9	27.2
0-40	2940.9	44.5
0-60	5186.4	78.4
0-90	6611.3	100.0
0-180	6611.3	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2885	2911	2938
55	2773	2794	2820
65	2585	2611	2633
75	2277	2313	2371
85	1791	1868	1945

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

24FP4740C

Notes:

Type:**F3**

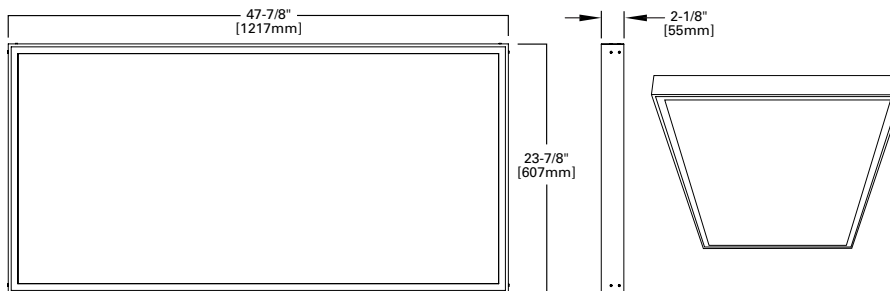
WK19-26156

24FP LED**ORDERING INFORMATION/PERFORMANCE**

Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							120V	277V
24FP4735C	080083833641	3500K	80	4990	40.4	124	.36	.15
24FP4740C	080083833665	4000K	80	4858	40.3	121		
24FP4750C	080083833689	5000K	80	5005	40.3	124		
24FP6435C	080083833702	3500K	80	6602	58.8	112	.51	.22
24FP6440C	080083833726	4000K	80	6611	59.4	111		
24FP6450C	080083833740	5000K	80	6746	59.4	114		
24FP3830C9 ⁽¹⁾	080083833825	3000K	90	3886	40.3	96	.36	.15
24FP5830C9 ⁽¹⁾	080083833849	3000K	90	5282	58.2	91	.51	.22

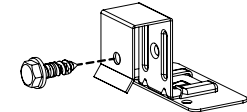
OPTIONS/ORDERING INFORMATION**IP5X=IP5X rating****Example catalog number=24FP4740C-IP5X****EL14W=EBPLED14W battery installed⁽²⁾****EL7W=EBPLED7W battery installed⁽²⁾****Example catalog number=24FP4740C-EL14W****A3/8-5D/18G=6' 3/8" flex with dimming leads installed****Example catalog number=24FP4740C-A3/8-5D/18G****ACCESSORIES/ORDERING INFORMATION****SURFACE MOUNT KIT⁽³⁾**

Catalog	UPC
FPSURF24	080083802746

**CEILING RETENTION⁽²⁾**

Catalog	UPC
FPEQ	080083802685

Required by some local codes
Order one set for each fixture
(Four clips per kit)

**DRYWALL FRAME KIT**

Catalog	UPC
DF-24W-U	662401232970

Notes:⁽¹⁾ May have extended lead-times.⁽²⁾ Indicator/test switch to be installed separately. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens).⁽³⁾ May not be used with EL7W or EL14W options**SHIPPING DATA**

Size	Wt.	Pallet (30" x 56")
2' x 4'	22 lbs.	17



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and
dimensions subject to
change without notice.

PS519169EN
September 14, 2018 11:51 AM



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:
22FP3240C

Notes:

Type:

F4

WK19-26156

Metalux

DESCRIPTION

FPanel LED panel series provides premium performance and pleasing aesthetics while being optimized for shallow plenum grid ceilings or surface mounting. These panels are ideal for new construction as they were developed with Eaton's latest generation of solid state components and electronic driver technologies. Its refined visual optics and integrated grid retention clips provide the features needed for speed and installation flexibility. LED FPanels are an excellent lighting solution for commercial office spaces, schools, healthcare and retail merchandising areas.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction

- Narrow aluminum bezel is tightly held to code gauge steel back plate
- Seamless corners to maximize the light emitting surface with a refined finish

Mounting

- Integral grid locking clips and separate suspension clips provided for installation flexibility when additional retention is required
- Junction box constructed of code gauge galvanized steel with and easy access hinged door
- Trade size knockouts provided
- Stock luminaire is less than 2" for use in shallow plenum or low ceiling spaces
- Surface or suspension mounting kits available
- IP5X rating options available
- Factory installed flexible cable with dimming leads options available

Controls

- Standard UNV 120 - 277V driver with 0-10V dimming to 10% standard
- Compatible with field installed wireless controls available for either Wavelinx or LumaWatt Pro

Electrical

- Standard and High Efficacy models available
- LED's available in 3000K, 3500K, 4000K, and 5000K with a minimum of 80 CRI
- 90 CRI available with 3000K
- Projected lumen maintenance based on TM21 testing standards is L73 > 60,000 hours
- Emergency battery pack options available in 7w and 14w options
- Battery pack options available as factory installed or field installed for remote mounting

Optical Shielding

- Acrylic light guide with specialized features to optimize light extraction
- White frost lens with smooth pattern for uniform illumination
- Scratch and impact resistant

Compliance

- Indoor luminaires are cULus listed for 25C ambient environments
- IC rated for direct insulation contact
- RoHS compliant
- Damp location listed
- IESNA LM-79 and LM-80 standards compliant
- DesignLights Consortium® Qualified and classified for DLC Standard
- Can be used for State of California Title 24 high efficacy luminaire

Warranty

- Five year warranty.



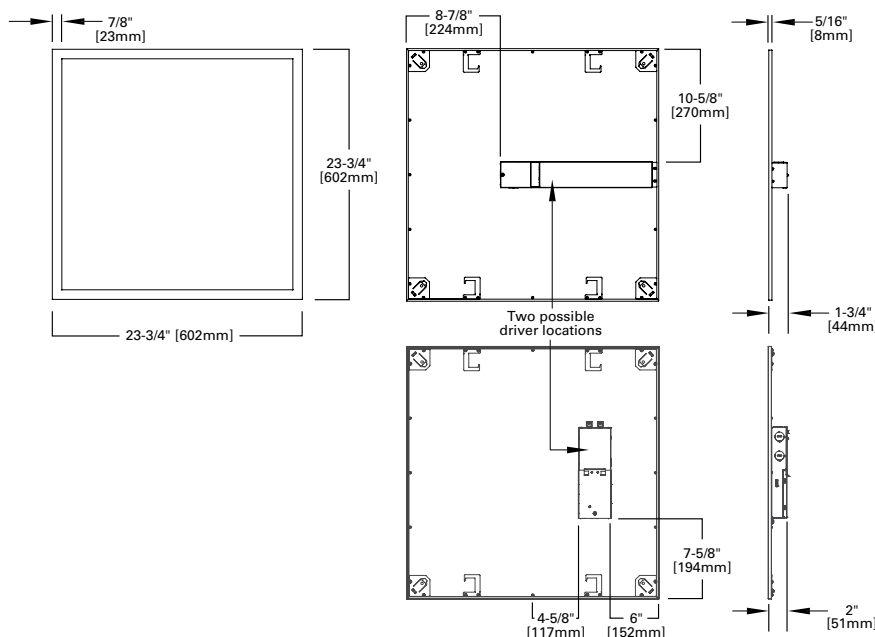
**22FP
LED**

2' X 2' LED PANEL

General Recessed LED Panel for use in Insulated Ceilings or Suspended/Surface Mount



DIMENSIONS



LOAD DATA (STOCK PRODUCT)

Thd	14%
Power Factor	0.96
Weight	9.4 lbs.
Low Temp. Start	-20°C



PS519163EN
January 28, 2019 8:32 AM



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:
22FP3240C

Notes:

Type:

F4

WK19-26156

22FP LED

ORDERING INFORMATION/PERFORMANCE

Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							120V	277V
22FP4235C	080083833580	3500K	80	4641	38.9	119	.34	.15
22FP4240C	080083833603	4000K	80	4567	39.3	116		
22FP4250C	080083833627	5000K	80	4704	39.3	120		
22FP3235C	080083833528	3500K	80	3417	29.4	116	.26	.11
22FP3240C	080083833542	4000K	80	3560	30.0	119		
22FP3250C	080083833566	5000K	80	3150	29.5	107	.34	.15
22FP3830C9 ⁽¹⁾	080083833801	3000K	90	3654	39.1	93		
22FP2830C9 ⁽¹⁾	080083833788	3000K	90	2734	29.5	93		
22FP2535HE	080083824090	3500K	80	2610	20.1	130	.17	.07
22FP2540HE	080083824113	4000K	80	2551	19.6	130		
22FP2130C	080083823994	3000K	80	2318	20.7	112	.18	.08
22FP2135C	080083824014	3500K	80	2205	20.7	107		
22FP2140C	080083824038	4000K	80	2494	20.7	121		

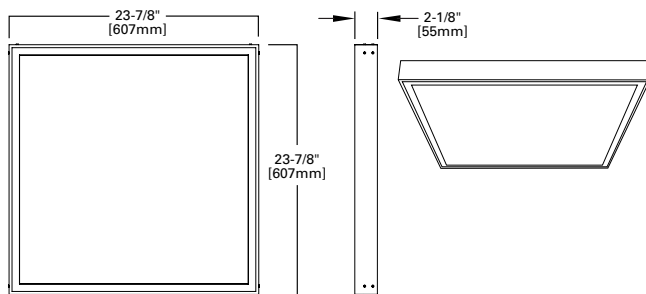
OPTIONS/ORDERING INFORMATION

<p>IP5X=IP5X rating Example catalog number=22FP3240C-IP5X</p>
<p>EL14W=EBPLED14W battery installed EL7W=EBPLED7W battery installed Example catalog number=22FP3240C-EL14W</p>
<p>A3/8-5D/18G=6' 3/8" flex with dimming leads installed ⁽³⁾ Example catalog number=22FP3240C-A3/8-5D/18G</p>

ACCESSORIES/ORDERING INFORMATION

SURFACE MOUNT KIT ⁽³⁾

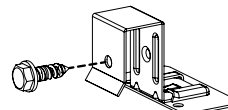
Catalog	UPC
FPSURF22	080083802722



CEILING RETENTION ⁽²⁾

Catalog	UPC
FPEQ	080083802685

Required by some local codes
Order one set for each fixture
(Four clips per kit)



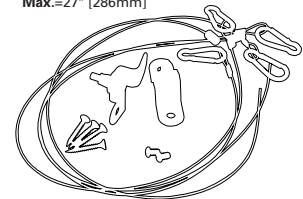
DRYWALL FRAME KIT

Catalog	UPC
DF-22W-U	662401232963

SUSPENSION KIT

Catalog	UPC
FPSUS2	080083802784

Mounting height from ceiling
Min.=7-1/4" [184mm]
Max.=27" [286mm]



Notes:

- ⁽¹⁾ May have extended lead-times.
- ⁽²⁾ Indicator/test switch to be installed separately. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens).
- ⁽³⁾ May not be used with EL7W or EL14W options

SHIPPING DATA

Size	Wt.	Pallet (30" x 56")
2' x 2'	12 lbs.	34



Eaton
1121 Highway 74 South
Peschetree City, GA 30269
P: 770-486-4800
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Specifications and dimensions subject to change without notice.

PS519163EN
January 28, 2019 8:32 AM



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

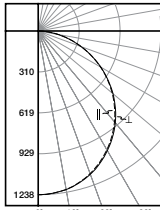
Notes:

F4

WK19-26156

PHOTOMETRICS

22FP LED

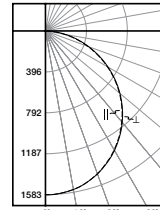


22FP3240C

Electronic Driver
Linear LED 4000K
Spacing criterion:
(||) 1.25 x mounting
height, (⊥) 1.26 x
mounting height
Lumens: 3560.1
Input Watts: 30.1W
Efficacy: 118.3 lm/W
Test Report:
22FP3240C.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1238	1238	1238
5	1233	1230	1232
10	1217	1214	1218
15	1187	1187	1190
20	1148	1148	1153
25	1097	1097	1104
30	1038	1039	1045
35	971	973	980
40	898	900	907
45	816	821	826
50	731	735	739
55	639	644	644
60	544	547	548
65	446	448	446
70	348	349	346
75	348	349	346
80	161	156	154
85	75	71	70
90	0	0	0



22FP4240C

Electronic Driver
Linear LED 4000K
Spacing criterion:
(||) 1.25 x mounting
height, (⊥) 1.25 x
mounting height
Lumens: 4567.1
Input Watts: 39.3W
Efficacy: 116.2 lm/W
Test Report:
22FP4240C.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1582	1582	1582
5	1576	1576	1576
10	1556	1556	1556
15	1520	1521	1521
20	1469	1472	1472
25	1403	1408	1408
30	1329	1333	1336
35	1245	1250	1251
40	1149	1155	1157
45	1048	1053	1054
50	936	943	944
55	819	826	826
60	695	703	703
65	568	575	577
70	440	448	450
75	314	323	326
80	194	200	205
85	88	93	94
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance						0%											
	80%		70%		50%													
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0			
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

Coefficients of Utilization

rc	Effective floor cavity reflectance						0%											
	80%		70%		50%													
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0			
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	958.3	26.9
0-40	1567.3	44.0
0-60	2773.3	77.9
0-90	3560.1	100.0
0-180	3560.1	100.0

Luminance Data

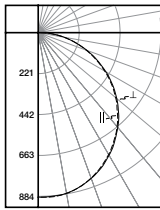
Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3105	3124	3143
55	2998	3021	3021
65	2840	2853	2840
75	2620	2610	2589
85	2316	2192	2161

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1226.4	26.9
0-40	2007.1	43.9
0-60	3555.3	77.8
0-90	4567.1	100.0
0-180	4567.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3988	4007	4011
55	3842	3875	3875
65	3617	3661	3674
75	3265	3358	3389
85	2717	2871	2902



22FP2540HE

Electronic Driver
Linear LED 4000K
Spacing criterion:
(||) 1.25 x mounting
height, (⊥) 1.26 x
mounting height
Lumens: 2551
Input Watts: 19.6W
Efficacy: 130.2 LPW
Test Report:
22FP2540HE.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	887	887	887
5	887	883	883
10	876	872	874
15	854	851	855
20	824	822	827
25	787	788	792
30	745	746	750
35	695	696	700
40	643	645	649
45	581	586	592
50	522	525	530
55	457	458	464
60	388	391	395
65	318	320	325
70	248	249	252
75	180	178	180
80	112	111	114
85	49	50	49
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance						0%											
	80%		70%		50%													
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0			
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	688	27.0
0-40	1124	44.1
0-60	1988	77.9
0-90	2551	100.0
0-180	2551	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2213	2230	2251
55	2144	2152	2179
65	2022	2040	2070
75	1874	1854	1874
85	1519	1550	1519



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4300
www.eaton.com/lighting

Specifications and
dimensions subject to
change without notice.



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

24FP4740C FPSURF24

Notes:

Type:

F5

WK19-26156

Metalux

DESCRIPTION

FPanel LED panel series provide premium performance and pleasing aesthetics. It is optimized for shallow plenum grid ceilings or surface mounting. Developed with Eaton's latest generation of solid state components and electronic driver technologies, these panels are ideal for new construction. Its refined visual optics and integrated grid retention clips provide the features needed for speed and installation flexibility. LED FPanels are an excellent lighting solution for commercial office spaces, schools, healthcare and retail merchandising areas.

SPECIFICATION FEATURES

Construction/Mounting
Narrow aluminum bezel is tightly held to code gauge steel back plate to protect the LEDs and optical area. Corners are seamless and separate suspension clips are included on the panel to ensure installation flexibility in ceiling systems and to meet code when additional retention is required. Junction box is constructed of code gage galvanized steel with an easy access hinged door for high voltage and low voltage wiring access and includes trade size knockouts. The stock luminaire is less than 2 inches in depth making it an ideal choice for shallow plenums and low ceilings. May also be surface mounted using the optional kit. Options available to meet IP5X ratings as well as factory installed flexible cable.

Controls
The FPanel is standard with a 0-10V continuous dimming driver which dims to 10% and works with most standard 0-10V control/dimmers. Combine with energy-saving products like wall dimmers, Room Controller, occupancy and daylight sensors, and lighting relay panels. Or, go wireless with optional field installed controls for either WaveLinX or LumaWatt Pro.

Electrical
Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K, 4000K and 5000K with a minimum of 80 CRI and a 90 CRI option that is 3000K. Projected lumen maintenance based on TM21 is L73 > 60,000 hours. Electronic drivers are cULus recognized and available for 120-277V. Emergency battery pack options are available in 7 watts and 14 watts. These emergency battery packs can be factory installed as an

option or field installed for remote mounting.

Optical Shielding
Light guide is constructed of acrylic with specialized features to optimize light extraction providing excellent efficiency. White frost lens with smooth pattern provides uniform illumination as well as scratch and impact resistance.

Compliance
Indoor luminaires are cULus listed for 25°C ambient environments, IC rated for direct insulation contact, RoHS compliant, damp location listed, and comply with IESNA LM-79 and LM-80 standards. NEMA 410 Compliant. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details. Can be used for State of California Title 24 high efficacy luminaire.

Warranty
Five year warranty.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			



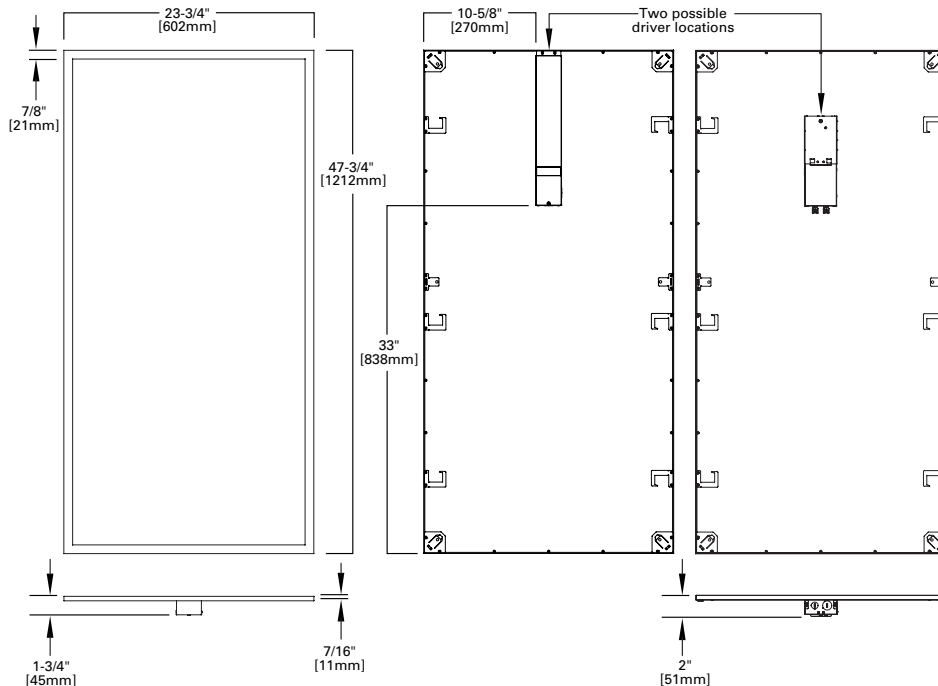
24FP LED

2' X 4' LED PANEL

General LED Panel.
Recessed in Insulated
Ceilings or Surface Mount



DIMENSIONS



PS519169EN
September 14, 2018 11:51 AM

LOAD DATA (STOCK PRODUCT)

Thd	13%
Power Factor	0.96
Weight	18.5
Low Temp. Start	-20°C



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

24FP4740C FPSURF24

Notes:

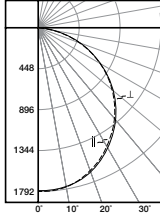
Type:

F5

WK19-26156

24FP LED

PHOTOMETRICS



24FP4735C

Electronic Driver
Linear LED 3500K
Spacing criterion:
(II) 1.24 x mounting
height, (⊥) 1.26 x
mounting height
Lumens: 5073
Input Watts: 40W
Efficacy: 126 lm/W
Test Report:
24FP4735C.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1785	1785	1785
5	1786	1774	1785
10	1761	1751	1764
15	1718	1711	1726
20	1657	1655	1670
25	1582	1582	1598
30	1495	1497	1516
35	1396	1400	1418
40	1284	1290	1311
45	1167	1173	1191
50	1040	1046	1060
55	906	912	926
60	768	772	784
65	626	628	637
70	481	483	491
75	340	340	348
80	206	206	212
85	92	90	94
90	0	0	0

Coefficients of Utilization

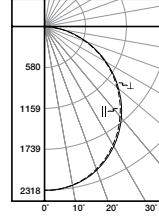
rc rw RCR	Effective floor cavity reflectance																	
	80%					70%					20%							
	70	50	30	10	0	70	50	30	10	0	50	30	10	50	30	10		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	96	106	101	98	94	97	94	91	93	91	88	90	88	86	83
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	39	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1384	27.3
0-40	2261	44.6
0-60	3983	78.5
0-90	5073	100.0
0-180	5073	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2221	2232	2266
55	2125	2139	2172
65	1993	1999	2028
75	1768	1768	1809
85	1420	1389	1451



24FP6440C

Electronic Driver
Linear LED 4000K
Spacing criterion:
(II) 1.25 x mounting
height, (⊥) 1.26 x
mounting height
Lumens: 6611.3
Input Watts: 59.4W
Efficacy: 111.3 lm/W
Test Report:
24FP6440C.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	2316	2316	2316
5	2312	2309	2308
10	2279	2279	2282
15	2225	2229	2233
20	2150	2156	2163
25	2056	2062	2072
30	1939	1951	1963
35	1814	1824	1836
40	1668	1683	1698
45	1516	1530	1544
50	1351	1364	1376
55	1182	1191	1202
60	998	1007	1014
65	812	820	827
70	622	629	642
75	438	445	456
80	266	274	282
85	116	121	126
90	0	0	0

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																	
	80%					70%					20%							
	70	50	30	10	0	70	50	30	10	0	50	30	10	50	30	10		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	88	86	83
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	39	32	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1798.9	27.2
0-40	2940.9	44.5
0-60	5186.4	78.4
0-90	6611.3	100.0
0-180	6611.3	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2885	2911	2938
55	2773	2794	2820
65	2585	2611	2633
75	2277	2313	2371
85	1791	1868	1945

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

24FP4740C FPSURF24

Type:**F5**

Notes:

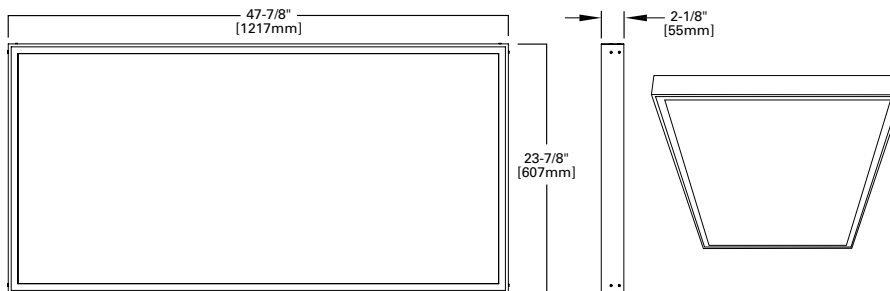
WK19-26156

24FP LED**ORDERING INFORMATION/PERFORMANCE**

Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							120V	277V
24FP4735C	080083833641	3500K	80	4990	40.4	124	.36	.15
24FP4740C	080083833665	4000K	80	4858	40.3	121		
24FP4750C	080083833689	5000K	80	5005	40.3	124	.51	.22
24FP6435C	080083833702	3500K	80	6602	58.8	112		
24FP6440C	080083833726	4000K	80	6611	59.4	111		
24FP6450C	080083833740	5000K	80	6746	59.4	114		
24FP3830C9 ⁽¹⁾	080083833825	3000K	90	3886	40.3	96	.36	.15
24FP5830C9 ⁽¹⁾	080083833849	3000K	90	5282	58.2	91	.51	.22

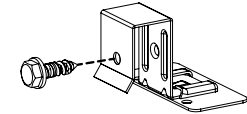
OPTIONS/ORDERING INFORMATION**IP5X=IP5X rating****Example catalog number=24FP4740C-IP5X****EL14W=EBPLED14W battery installed⁽²⁾****EL7W=EBPLED7W battery installed⁽²⁾****Example catalog number=24FP4740C-EL14W****A3/8-5D/18G=6' 3/8" flex with dimming leads installed****Example catalog number=24FP4740C-A3/8-5D/18G****ACCESSORIES/ORDERING INFORMATION****SURFACE MOUNT KIT⁽³⁾**

Catalog	UPC
FPSURF24	080083802746

**CEILING RETENTION⁽²⁾**

Catalog	UPC
FPEQ	080083802685

Required by some local codes
Order one set for each fixture
(Four clips per kit)

**DRYWALL FRAME KIT**

Catalog	UPC
DF-24W-U	662401232970

Notes:⁽¹⁾ May have extended lead-times.⁽²⁾ Indicator/test switch to be installed separately. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens).⁽³⁾ May not be used with EL7W or EL14W options**SHIPPING DATA**

Size	Wt.	Pallet (30" x 56")
2' x 4'	22 lbs.	17



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and
dimensions subject to
change without notice.

PS519169EN
September 14, 2018 11:51 AM



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

4SNLED-LD5-56SL-LW-UNV-L840-
CD1-U

Notes:

Type:

F6

WK19-26156

Metalux

DESCRIPTION

The SNLED series is a high output, DLC premium compliant LED strip light. It is available in CCT from 3000K to 5000K as well as 80 CRI or 90 CRI. Driver options are compatible with 10% or 1% dimming, step dimming or Dali. It's die formed housing and convertible end plate enable continuous row alignment and create a sleek look. It is available in 2', 4' or 8' lengths. Lens options include clear semi-frost and full-frost along with a round or square form factor. Installation capability includes surface, pendant or stem mounting. The series offers an emergency battery option and come standard with a 5 year warranty. The sleek form factor (less than 3" width) and outstanding light output make this fixture ideal for general area lighting, storage/utility areas, coves or display cases.

SPECIFICATION FEATURES

Construction

- Die formed, cold rolled steel channel with KOs
- Groove for Tong Hanger
- Convertible end plate for continuous row alignment
- Channel/wireway cover secured with sheet metal screws

Controls

- CD: 0-10V; 10%
- HCD: 0-10V; 1%
- SD: Step-dim
- 5LTD: Dali

Electrical

- Available in 3000K, 3500K, 4000K, or 5000K
- 80 CRI standard with optional 90 CRI available
- TM21 rating of L87>60,000 hours
- Electronic drivers are cULus recognized
- Voltage options:120-277V, 347V, and 480V

Emergency Battery Pack Option

- Optional 120V-277V integral battery pack available with 7 watts or 14 watts of output
- 7 watt battery provides approximately 900 lumens; 14 watt battery approximately 1800 lumens depending on efficacy
- Batteries provide 90 minutes of backup power

- Test switch can be tested via laser pointer safely from the ground
- EZ Key prevents battery cycling during the construction phase
- Emergency/generator options available for use with UL 1008 devices

Finish

- Pre-treated with multi-stage iron phosphate
- Highly reflective paint after fabrication
- Standard baked white enamel finish

Shielding

- Three round lensed optical distributions available
 - LC, clear with linear ribs
 - LN, semi-frost for narrow distribution
 - LW, full frost for wide distribution
- Three square lensed optical distributions available
 - SLC, clear with linear ribs
 - SLN, semi-frost for narrow distribution
 - SLW, full frost for wide distribution

Installation

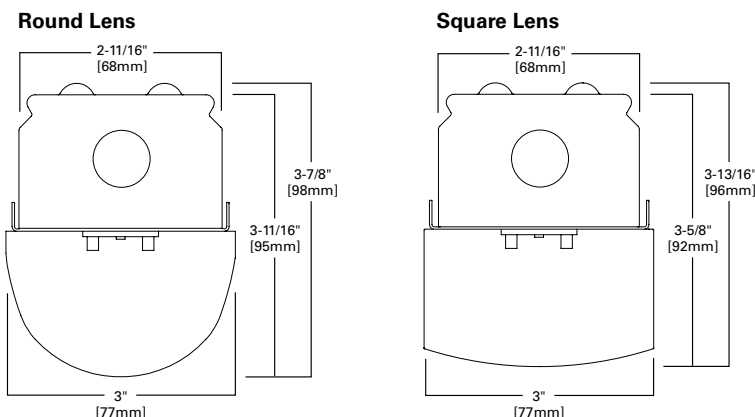
- Available for surface, pendant, or stem mounting

Catalog #		Type	
Project		Date	
Comments			
Prepared by			



Round Lens

Square Lens



SHIPPING DATA

Length.	Wt.
2 ft.	4.3 lbs.
4 ft.	8.2 lbs.
8 ft.	15.1 lbs.

LINEAR DISCONNECT

Safe and convenient means of disconnecting power



PS519154EN

October 18, 2018 2:04 PM





Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

4SNLED-LD5-56SL-LW-UNV-L840-CD1-U

Notes:

Type:

F6

WK19-26156

ORDERING INFORMATION

SNLED LENSED

Sample Numbers: 4SNLED-LD5-46SL-LN-UNV-L835-CD1-U
8TSNLED-LD5-200HL-SLN-UNV-EL7W-L840-CD2-U

Length	Series	Lamp Type
2=2 ft. 4=4 ft. 8T=8 ft.	SNLED=Commercial LED Striplight *	LD5=LED 5.0

LED Lumen Packages ¹

2 ft. Round Lens			4 ft. Round Lens			8 ft. Round Lens			2 ft. Square Lens			4 ft. Square Lens			8 ft. Square Lens		
LC	LN	LW	LC	LN	LW	LC	LN	LW	SLC	SLN	SLW	SLC	SLN	SLW	SLC	SLN	SLW
18SL	18SL	16SL	18SL	18SL	16SL	60SL	60SL	54SL	19SL	19SL	16SL	19SL	19SL	15SL	60SL	64SL	50SL
22SL	22SL	20SL	22SL	22SL	20SL	68SL	68SL	61SL	24SL	24SL	20SL	23SL	23SL	19SL	70SL	70SL	58SL
26SL	26SL	23SL	26SL	26SL	23SL	75SL	75SL	67SL	27SL	27SL	22SL	27SL	27SL	22SL	78SL	77SL	64SL
34HL	32HL	30HL	30SL	30SL	27SL	83SL	83SL	74SL	37HL	37HL	30HL	30SL	30SL	25SL	84SL	84SL	70SL
Clear	Semi-frost narrow	Full frost wide	34SL	34SL	30SL	90SL	91SL	81SL	48HL	48HL	41HL	35SL	35SL	29SL	93SL	93SL	77SL
			37SL	37SL	33SL	98SL	98SL	88SL	Clear	Semi-frost narrow	Full frost wide	39SL	39SL	32SL	100SL	100SL	83SL
			41SL	41SL	37SL	105SL ¹⁰	106SL	95SL				42SL	42SL	35SL	108SL	108SL	90SL
			46SL	46SL	41SL	130HL ¹⁰	130HL ¹⁰	110HL				47SL	46SL	39SL	116SL	116SL	96SL
			49SL	53SL	44SL	170HL ¹⁰	170HL ¹⁰	150HL				50SL	50SL	41SL	125SL	125SL	104SL
			52SL	56SL	47SL	Clear	Semi-frost narrow	Full frost wide				54SL	54SL	45SL	131SL	130SL	108SL
			56SL	61SL	50SL							58SL	58SL	48SL	130HL	130HL	130HL
			63SL	64SL	56SL							63SL	63SL	52SL	170HL ¹⁰	170HL ¹⁰	170HL ¹⁰
			66SL	50HL	58SL							65SL	65SL	54SL	200HL	200HL	200HL
			52HL	54HL	44HL							77SL	78SL	64SL	Clear	Semi-frost narrow	Full frost wide
			55HL	60HL	48HL							85SL	85SL	70SL			
			60HL	74HL	54HL							54HL	54HL	46HL			
			76HL		65HL							57HL	57HL	48HL			
			Clear	Semi-frost narrow	Full frost wide							62HL	62HL	52HL			
												68HL	68HL	57HL			
												82HL	82HL	69HL			
												97HL	97HL	81HL			
												Clear	Semi-frost narrow	Full frost wide			

Notes:
SL denotes standard lumen output. HL denotes high lumen output. Additional LEDs to obtain lumen package.
For comparable lumen packages, HL efficacy is greater than SL efficacy.
26SL: 2600 delivered lumens, standard lumen output
170HL: 17000 delivered lumens, high output

Notes:
Same notes apply as round (column on left)

Lens	Voltage	Options	Wiring	Motion Sensors ¹¹	Color Temp / CCT
Round LC=Clear Lens LN=Semi-Frost Lens - Narrow LW=Full Frost Lens - Wide	UNV=Universal Voltage 120-277 34T=347V ^{12, 13, 14} 480=480V ²	Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ^{2, 5} EL14W=14-watt 120V-277V emergency battery pack installed ^{2, 5} GTR2=Bodine Generator Transfer Relay ⁶ ETRD=Iota Emergency Transfer Relay with dimming control ⁵	PI/CPI= Plug in and cross over plug in options ⁸ PC6/515P= (NEMA 5-15P) 6 ft. Cord with NEMA Straight Plug ^{2, 8} PC6/L715= (NEMA L7-15P) 6 ft. Cord with NEMA Twist Plug ^{2, 8}	LB-ERMS360= 360° Low Bay Motion Sensor - End of Row LB-MRMS360= 360° Low Bay Motion Sensor - Middle of Row HB-ERMS360= 360° High Bay Motion Sensor - End of Row ³ HB-MRMS360= 360° High Bay Motion Sensor - Middle of Row ³	CCT/CRI L830=3000K, 80 CRI L835=3500K, 80 CRI L840=4000K, 80 CRI L850=5000K, 80 CRI L930=3000K, 90 CRI L935=3500K, 90 CRI L940=4000K, 90 CRI L950=5000K, 90 CRI

Driver Type	Number of Drivers	Packaging
CD=0-10V Dimming Driver (10%-100% Dimming) HCD=0-10V Dimming Driver (1%-100% Dimming) SD=Step-dim (Bi Level) ² 5LTD=Fiith Light DALI Driver ^{2, 4}	1=1 Driver 2=2 Drivers	U=Unit Pack

Accessories (Order Separately)	Round Replacement Lenses	Square Replacement Lenses
A/C-Chain/Set=36" Chain Hanger (Use 1 set per fixture) SCF=Fixed Stem Set (Specify Length) SCS=Swivel Stem Set (Specify Length) SCA=Adjustable 48" Stem Set EYE CHAIN SET/3FT=Eye Bolt Chain (Use 1 set per fixture) WG/SNF-2FT=2 ft Wire Guard WG/SNF-4FT=4 ft Wire Guard A1B/Spacer-U=Spacer 1-1/2" to 2-1/2" from ceiling (Use 2 per fixture) TOGGLE=Single Toggle No. 2 (Specify Length) Y-TOGGLE=Y Toggle No. 2 (Specify Length)	SNLED-LENS-LW-2FT-U=Replacement Lens 2 ft, Full Frost SNLED-LENS-LN-2FT-U=Replacement Lens 2 ft, Semi Frost SNLED-LENS-LC-2FT-U=Replacement Lens 2 ft, Clear SNLED-LENS-LW-4FT-U=Replacement Lens 4 ft, Full Frost SNLED-LENS-LN-4FT-U=Replacement Lens 4 ft, Semi Frost SNLED-LENS-LC-4FT-U=Replacement Lens 4 ft, Clear	SNLED-SQLENS-SLW-2FT-U=Replacement Lens 2 ft, Full Frost SNLED-SQLENS-SLN-2FT-U=Replacement Lens 2 ft, Semi Frost SNLED-SQLENS-SLC-2FT-U=Replacement Lens 2 ft, Clear SNLED-SQLENS-SLW-4FT-U=Replacement Lens 4 ft, Full Frost SNLED-SQLENS-SLN-4FT-U=Replacement Lens 4 ft, Semi Frost SNLED-SQLENS-SLC-4FT-U=Replacement Lens 4 ft, Clear

- NOTES:**
- Nominal lumen values. See table for value and fixture length.
 - 4 ft. and 8 ft. only.
 - Motion Sensor offers dimmability.
 - For a complete listing of Fifth Light products, visit www.eaton.com/lightingsystems
 - With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaires under emergency operation available.
 - Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). GTR2 and ETR2 options include 2 relays on fixtures with dimming drivers. ETRD option only requires one relay when used on a dimming fixture. Must specify voltage as 120V or 277V when ordering these devices.
 - Most common C&P shown. Must specify location for cord. All "end" locations will be on the end with sensor installed.
 - Consult tech support on numerous options for this feature.
 - DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
 - DALI and Step-dim versions require two drivers.
 - Sensors provided in separate externally mounted enclosure. See SRL spec sheet for fully integrated/connected sensors.
 - 347V CD driver is limited to 50W max output before requiring 2 drivers (no 85W 347V solution).
 - 347 SD Driver require qty 2 transformers for Dual switch legs can not offer with EBP due to space requirements for 3 ed transformer for EBP charge circuit.
 - All other drivers at 347V requires single transformer for Driver. If EBP is included, would require second transformer THD an PF affected by transformer (no DLC)



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

4SNLED-LD5-56SL-LW-UNV-L840-
CD1-U

Notes:

Type:**F6**

WK19-26156

SNLED LENSED**WATTAGE****Round Full-frost Lens, Wide**

SNLED Type	Lumen Type	Length	Catalog Number**	Nominal 3500K Lumens	Wattage	lm/W
Full Frost Lens (LW)	Standard	2 ft.	2SNLED-LD5-16SL-LW-UNV-L8XX-CD1-U	1750	14	122.7
Full Frost Lens (LW)	Standard	2 ft.	2SNLED-LD5-20SL-LW-UNV-L8XX-CD1-U	2162	18	119.4
Full Frost Lens (LW)	Standard	2 ft.	2SNLED-LD5-23SL-LW-UNV-L8XX-CD1-U	2453	21	117.1
Full Frost Lens (LW)	High	2 ft.	2SNLED-LD5-30HL-LW-UNV-L8XX-CD1-U	2975	27	112.0

Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-16SL-LW-UNV-L8XX-CD1-U	1688	13	129.5
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-20SL-LW-UNV-L8XX-CD1-U	2093	16	130.8
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-23SL-LW-UNV-L8XX-CD1-U	2410	18	130.7
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-27SL-LW-UNV-L8XX-CD1-U	2748	21	129.8
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-30SL-LW-UNV-L8XX-CD1-U	3186	25	128.0
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-33SL-LW-UNV-L8XX-CD1-U	3504	28	126.5
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-37SL-LW-UNV-L8XX-CD1-U	3812	31	124.7
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-41SL-LW-UNV-L8XX-CD1-U	4214	35	122.1
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-44SL-LW-UNV-L8XX-CD1-U	4511	38	120.0
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-47SL-LW-UNV-L8XX-CD1-U	4892	41	119.1
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-50SL-LW-UNV-L8XX-CD1-U	5251	46	113.8
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-56SL-LW-UNV-L8XX-CD1-U	5678	52	109.9
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-58SL-LW-UNV-L8XX-CD1-U	5920	55	107.3
Full Frost Lens (LW)	High	4 ft.	4SNLED-LD5-44HL-LW-UNV-L8XX-CD1-U	4412	37	119.0
Full Frost Lens (LW)	High	4 ft.	4SNLED-LD5-48HL-LW-UNV-L8XX-CD1-U	4615	39	118.2
Full Frost Lens (LW)	High	4 ft.	4SNLED-LD5-54HL-LW-UNV-L8XX-CD1-U	5028	43	116.6
Full Frost Lens (LW)	High	4 ft.	4SNLED-LD5-65HL-LW-UNV-L8XX-CD1-U	6633	62	106.7

Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-54SL-LW-UNV-L8XX-CD1-U	5496	42	129.8
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-61SL-LW-UNV-L8XX-CD1-U	6371	50	128.0
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-67SL-LW-UNV-L8XX-CD1-U	6371	50	128.0
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-74SL-LW-UNV-L8XX-CD1-U	7625	61	124.7
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-81SL-LW-UNV-L8XX-CD1-U	8428	69	122.1
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-88SL-LW-UNV-L8XX-CD1-U	9022	75	120.0
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-95SL-LW-UNV-L8XX-CD1-U	9785	82	119.1
Full Frost Lens (LW)	High	8 ft.	8TSNLED-LD5-110HL-LW-UNV-L8XX-CD1-U	11356	103	109.9
Full Frost Lens (LW)	High	8 ft.	8TSNLED-LD5-150HL-LW-UNV-L8XX-CD2-U	15739	158	99.5

* Consult factory for stock availability.

** Lumen portion of catalog number may not match actual lumens.



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

2SNLED-LD5-30HL-LW-UNV-L840-
CD1-U

Notes:

Type:

F7

WK19-26156

Metalux

DESCRIPTION

The SNLED series is a high output, DLC premium compliant LED strip light. It is available in CCT from 3000K to 5000K as well as 80 CRI or 90 CRI. Driver options are compatible with 10% or 1% dimming, step dimming or Dali. It's die formed housing and convertible end plate enable continuous row alignment and create a sleek look. It is available in 2', 4' or 8' lengths. Lens options include clear semi-frost and full-frost along with a round or square form factor. Installation capability includes surface, pendant or stem mounting. The series offers an emergency battery option and come standard with a 5 year warranty. The sleek form factor (less than 3" width) and outstanding light output make this fixture ideal for general area lighting, storage/utility areas, coves or display cases.

SPECIFICATION FEATURES

Construction

- Die formed, cold rolled steel channel with KOs
- Groove for Tong Hanger
- Convertible end plate for continuous row alignment
- Channel/wireway cover secured with sheet metal screws

Controls

- CD: 0-10V; 10%
- HCD: 0-10V; 1%
- SD: Step-dim
- 5LTD: Dali

Electrical

- Available in 3000K, 3500K, 4000K, or 5000K
- 80 CRI standard with optional 90 CRI available
- TM21 rating of L87>60,000 hours
- Electronic drivers are cULus recognized
- Voltage options: 120-277V, 347V, and 480V

Emergency Battery Pack Option

- Optional 120V-277V integral battery pack available with 7 watts or 14 watts of output
- 7 watt battery provides approximately 900 lumens; 14 watt battery approximately 1800 lumens depending on efficacy
- Batteries provide 90 minutes of backup power

- Test switch can be tested via laser pointer safely from the ground
- EZ Key prevents battery cycling during the construction phase
- Emergency/generator options available for use with UL 1008 devices

Finish

- Pre-treated with multi-stage iron phosphate
- Highly reflective paint after fabrication
- Standard baked white enamel finish

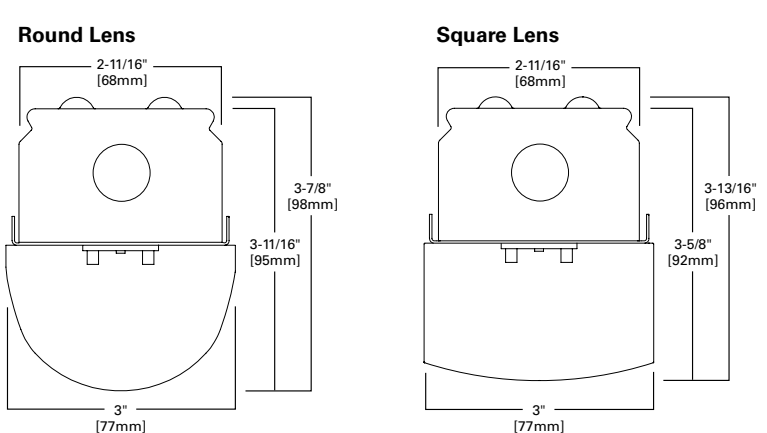
Shielding

- Three round lensed optical distributions available
 - LC, clear with linear ribs
 - LN, semi-frost for narrow distribution
 - LW, full frost for wide distribution
- Three square lensed optical distributions available
 - SLC, clear with linear ribs
 - SLN, semi-frost for narrow distribution
 - SLW, full frost for wide distribution

Installation

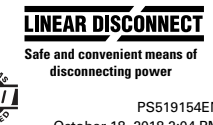
- Available for surface, pendant, or stem mounting

Catalog #		Type	
Project		Date	
Comments			
Prepared by			



SHIPPING DATA

Length.	Wt.
2 ft.	4.3 lbs.
4 ft.	8.2 lbs.
8 ft.	15.1 lbs.





Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

2SNLED-LD5-30HL-LW-UNV-L840-CD1-U

Notes:

Type:

F7

WK19-26156

ORDERING INFORMATION

SNLED LENSED

Sample Numbers: 4SNLED-LD5-46SL-LN-UNV-L835-CD1-U
8TSNLED-LD5-200HL-SLN-UNV-EL7W-L840-CD2-U

Length	Series	Lamp Type
2=2 ft. 4=4 ft. 8T=8 ft.	SNLED=Commercial LED Striplight *	LD5=LED 5.0

LED Lumen Packages ¹

2 ft. Round Lens			4 ft. Round Lens			8 ft. Round Lens			2 ft. Square Lens			4 ft. Square Lens			8 ft. Square Lens		
LC	LN	LW	LC	LN	LW	LC	LN	LW	SLC	SLN	SLW	SLC	SLN	SLW	SLC	SLN	SLW
18SL	18SL	16SL	18SL	18SL	16SL	60SL	60SL	54SL	19SL	19SL	16SL	19SL	19SL	15SL	60SL	64SL	50SL
22SL	22SL	20SL	22SL	22SL	20SL	68SL	68SL	61SL	24SL	24SL	20SL	23SL	23SL	19SL	70SL	70SL	58SL
26SL	26SL	23SL	26SL	26SL	23SL	75SL	75SL	67SL	27SL	27SL	22SL	27SL	27SL	22SL	78SL	77SL	64SL
34HL	32HL	30HL	30SL	30SL	27SL	83SL	83SL	74SL	37HL	37HL	30HL	30SL	30SL	25SL	84SL	84SL	70SL
Clear	Semi-frost narrow	Full frost wide	34SL	34SL	30SL	90SL	91SL	81SL	48HL	48HL	41HL	35SL	35SL	29SL	93SL	93SL	77SL
			37SL	37SL	33SL	98SL	98SL	88SL	Clear	Semi-frost narrow	Full frost wide	39SL	39SL	32SL	100SL	100SL	83SL
			41SL	41SL	37SL	105SL ¹⁰	106SL	95SL				42SL	42SL	35SL	108SL	108SL	90SL
			46SL	46SL	41SL	130HL ¹⁰	130HL ¹⁰	110HL				47SL	46SL	39SL	116SL	116SL	96SL
			49SL	53SL	44SL	170HL ¹⁰	170HL ¹⁰	150HL				50SL	50SL	41SL	125SL	125SL	104SL
			52SL	56SL	47SL	Clear	Semi-frost narrow	Full frost wide				54SL	54SL	45SL	131SL	130SL	108SL
			56SL	61SL	50SL							58SL	58SL	48SL	130HL	130HL	130HL
			63SL	64SL	56SL							63SL	63SL	52SL	170HL ¹⁰	170HL ¹⁰	170HL ¹⁰
			66SL	50HL	58SL							65SL	65SL	54SL	200HL	200HL	200HL
			52HL	54HL	44HL							77SL	78SL	64SL	Clear	Semi-frost narrow	Full frost wide
			55HL	60HL	48HL							85SL	85SL	70SL			
			60HL	74HL	54HL							54HL	54HL	46HL			
			76HL		65HL							57HL	57HL	48HL			
			Clear	Semi-frost narrow	Full frost wide							62HL	62HL	52HL			
												68HL	68HL	57HL			
												82HL	82HL	69HL			
												97HL	97HL	81HL			
												Clear	Semi-frost narrow	Full frost wide			

Notes:
SL denotes standard lumen output. HL denotes high lumen output. Additional LEDs to obtain lumen package.
For comparable lumen packages, HL efficacy is greater than SL efficacy.
26SL: 2600 delivered lumens, standard lumen output
170HL: 17000 delivered lumens, high output

Notes:
Same notes apply as round (column on left)

Lens	Voltage	Options	Color Temp / CCT
Round LC=Clear Lens LN=Semi-Frost Lens - Narrow LW=Full Frost Lens - Wide Square SLC=Square / Flat Clear Lens SLN=Square / Flat Semi-Frost Lens - Narrow SLW=Square / Flat Full Frost Lens - Wide	UNV=Universal Voltage 120-277 347=347V ^{12, 13, 14} 480=480V ²	Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ^{2, 5} EL14W=14-watt 120V-277V emergency battery pack installed ^{2, 5} GTR2=Bodine Generator Transfer Relay ⁶ ETRD=Iota Emergency Transfer Relay with dimming control ⁵	CCT/CRI L830=3000K, 80 CRI L835=3500K, 80 CRI L840=4000K, 80 CRI L850=5000K, 80 CRI L930=3000K, 90 CRI L935=3500K, 90 CRI L940=4000K, 90 CRI L950=5000K, 90 CRI
		Wiring PI/CPI=Plug in and cross over plug in options ⁸ PC6/515P=(NEMA 5-15P) 6 ft. Cord with NEMA Straight Plug ^{2, 8} PC6/L715=(NEMA L7-15P) 6 ft. Cord with NEMA Twist Plug ^{2, 8}	Motion Sensors ¹¹ LB-ERMS360=360° Low Bay Motion Sensor - End of Row LB-MRMS360=360° Low Bay Motion Sensor - Middle of Row HB-ERMS360=360° High Bay Motion Sensor - End of Row ³ HB-MRMS360=360° High Bay Motion Sensor - Middle of Row ³

Driver Type	Number of Drivers	Packaging
CD=0-10V Dimming Driver (10%-100% Dimming) HCD=0-10V Dimming Driver (1%-100% Dimming) SD=Step-dim (Bi Level) ² 5LTD=Fifth Light DALI Driver ^{2, 4}	1=1 Driver 2=2 Drivers	U=Unit Pack

Accessories (Order Separately)	Round Replacement Lenses	Square Replacement Lenses
AYC=Chain/Set=36" Chain Hanger (Use 1 set per fixture) SCF=Fixed Stem Set (Specify Length) SCS=Swivel Stem Set (Specify Length) SCA=Adjustable 48" Stem Set EYE CHAIN SET/3FT=Eye Bolt Chain (Use 1 set per fixture) WG/SNF-2FT=2 ft Wire Guard WG/SNF-4FT=4 ft Wire Guard A1B/Spacer-U=Spacer 1-1/2" to 2-1/2" from ceiling (Use 2 per fixture) TOGGLE=Single Toggle No. 2 (Specify Length) Y-TOGGLE=Y Toggle No. 2 (Specify Length)	SNLED-LENS-LW-2FT-U=Replacement Lens 2 ft, Full Frost SNLED-LENS-LN-2FT-U=Replacement Lens 2 ft, Semi Frost SNLED-LENS-LC-2FT-U=Replacement Lens 2 ft, Clear SNLED-LENS-LW-4FT-U=Replacement Lens 4 ft, Full Frost SNLED-LENS-LN-4FT-U=Replacement Lens 4 ft, Semi Frost SNLED-LENS-LC-4FT-U=Replacement Lens 4 ft, Clear	SNLED-SQLENS-SLW-2FT-U=Replacement Lens 2 ft, Full Frost SNLED-SQLENS-SLN-2FT-U=Replacement Lens 2 ft, Semi Frost SNLED-SQLENS-SLC-2FT-U=Replacement Lens 2 ft, Clear SNLED-SQLENS-SLW-4FT-U=Replacement Lens 4 ft, Full Frost SNLED-SQLENS-SLN-4FT-U=Replacement Lens 4 ft, Semi Frost SNLED-SQLENS-SLC-4FT-U=Replacement Lens 4 ft, Clear

- NOTES:**
- Nominal lumen values. See table for value and fixture length.
 - 4 ft. and 8 ft. only.
 - Motion Sensor offers dimmability.
 - For a complete listing of Fifth Light products, visit www.eaton.com/lightingsystems
 - With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaires under emergency operation available.
 - Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). GTR2 and ETR2 options include 2 relays on fixtures with dimming drivers. ETRD option only requires one relay when used on a dimming fixture. Must specify voltage as 120V or 277V when ordering these devices.
 - Most common C&P shown. Must specify location for cord. All "end" locations will be on the end with sensor installed.
 - Consult tech support on numerous options for this feature.
 - DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
 - DALI and Step-dim versions require two drivers.
 - Sensors provided in separate externally mounted enclosure. See SRL spec sheet for fully integrated/connected sensors.
 - 347V CD driver is limited to 50W max output before requiring 2 drivers (no 85W 347V solution).
 - 347 SD Driver require qty 2 transformers for Dual switch legs can not offer with EBP due to space requirements for 3 ed transformer for EBP charge circuit.
 - All other drivers at 347V requires single transformer for Driver. If EBP is included, would require second transformer THD an PF affected by transformer (no DLC)



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

2SNLED-LD5-30HL-LW-UNV-L840-
CD1-U

Notes:

Type:**F7**

WK19-26156

SNLED LENSED**WATTAGE****Round Full-frost Lens, Wide**

SNLED Type	Lumen Type	Length	Catalog Number**	Nominal 3500K Lumens	Wattage	lm/W
Full Frost Lens (LW)	Standard	2 ft.	2SNLED-LD5-16SL-LW-UNV-L8XX-CD1-U	1750	14	122.7
Full Frost Lens (LW)	Standard	2 ft.	2SNLED-LD5-20SL-LW-UNV-L8XX-CD1-U	2162	18	119.4
Full Frost Lens (LW)	Standard	2 ft.	2SNLED-LD5-23SL-LW-UNV-L8XX-CD1-U	2453	21	117.1
Full Frost Lens (LW)	High	2 ft.	2SNLED-LD5-30HL-LW-UNV-L8XX-CD1-U	2975	27	112.0
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-16SL-LW-UNV-L8XX-CD1-U	1688	13	129.5
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-20SL-LW-UNV-L8XX-CD1-U	2093	16	130.8
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-23SL-LW-UNV-L8XX-CD1-U	2410	18	130.7
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-27SL-LW-UNV-L8XX-CD1-U	2748	21	129.8
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-30SL-LW-UNV-L8XX-CD1-U	3186	25	128.0
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-33SL-LW-UNV-L8XX-CD1-U	3504	28	126.5
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-37SL-LW-UNV-L8XX-CD1-U	3812	31	124.7
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-41SL-LW-UNV-L8XX-CD1-U	4214	35	122.1
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-44SL-LW-UNV-L8XX-CD1-U	4511	38	120.0
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-47SL-LW-UNV-L8XX-CD1-U	4892	41	119.1
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-50SL-LW-UNV-L8XX-CD1-U	5251	46	113.8
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-56SL-LW-UNV-L8XX-CD1-U	5678	52	109.9
Full Frost Lens (LW)	Standard	4 ft.	4SNLED-LD5-58SL-LW-UNV-L8XX-CD1-U	5920	55	107.3
Full Frost Lens (LW)	High	4 ft.	4SNLED-LD5-44HL-LW-UNV-L8XX-CD1-U	4412	37	119.0
Full Frost Lens (LW)	High	4 ft.	4SNLED-LD5-48HL-LW-UNV-L8XX-CD1-U	4615	39	118.2
Full Frost Lens (LW)	High	4 ft.	4SNLED-LD5-54HL-LW-UNV-L8XX-CD1-U	5028	43	116.6
Full Frost Lens (LW)	High	4 ft.	4SNLED-LD5-65HL-LW-UNV-L8XX-CD1-U	6633	62	106.7
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-54SL-LW-UNV-L8XX-CD1-U	5496	42	129.8
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-61SL-LW-UNV-L8XX-CD1-U	6371	50	128.0
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-67SL-LW-UNV-L8XX-CD1-U	6371	50	128.0
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-74SL-LW-UNV-L8XX-CD1-U	7625	61	124.7
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-81SL-LW-UNV-L8XX-CD1-U	8428	69	122.1
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-88SL-LW-UNV-L8XX-CD1-U	9022	75	120.0
Full Frost Lens (LW)	Standard	8 ft.	8TSNLED-LD5-95SL-LW-UNV-L8XX-CD1-U	9785	82	119.1
Full Frost Lens (LW)	High	8 ft.	8TSNLED-LD5-110HL-LW-UNV-L8XX-CD1-U	11356	103	109.9
Full Frost Lens (LW)	High	8 ft.	8TSNLED-LD5-150HL-LW-UNV-L8XX-CD2-U	15739	158	99.5

* Consult factory for stock availability.

** Lumen portion of catalog number may not match actual lumens.



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

VLEDC-51-WH

Notes:

Type:

F8

WK19-26156



VLEDC-51 Series

Tempo Pro Ultra Compact LED Combo EXIT Sign

The all new Exitronix Tempo Pro family of LED Combo EXIT sign provides a more complete, compact, powerful light offering with a higher performance than most currently on the market.

FEATURES

- Ultra compact, injection-molded UL 94 5VA flame rated thermoplastic housing
- Universal style includes 2 face plates, back plate and mounting canopy and can be ceiling, wall or end mounted
- Optional red or green LEDs with color matched lens for exit
- Standard 1 watt high power LED lamps
- Ultra bright 6000K SMD LEDs
- Fully adjustable lamps for top, side and forward, or back light distribution
- Toolless design allows for fast and easy installation
- Optional Guardian Self-Test/ Self-Diagnostics (G2) available
- Remote option provides 4 watts of remote capability for use with RL52, 2RL52, RL1-WP or 2RL1-WP Series Remotes
- UL 924 certified
- 120/277VAC, 60Hz
- Universal mounting; top, back, side
- Field selectable directional chevrons included for all configurations
- Main-free Ni-Cd or Ni-MH battery depending on configuration
- Standard finishes: Black or White
- Suitable for damp locations

Model: _____ Date: _____

Accessories: _____

Job Name: _____ Type: _____



WARRANTY

Any component that fails due to manufacturer's defect is guaranteed for 3 years with a separate 3 year pro-rated warranty on the battery. The warranty does not cover physical damage, abuse or instances of uncontrollable natural forces. See the full Exitronix warranty document for detailed information.



ORDERING INFORMATION Example: VLEDC-51-WH-G2

Series	Finish	Options (Factory Installed)	Accessories ¹ (Field Installed)
VLEDC-51 = Red	WH = White	G2 = Self-Test/Self-Diagnostics	WG-1 = Wire Guard (Back Mount)
GVLEDC-51 = Green	BL = Black	R4 ² = Remote Capable (4 watts)	XG-6 = Polycarbonate Guard (Back Mount)

Notes

¹ Order as separate line item

² R4 option supplied with Ni-MH battery

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

VLEDC-51-WH

Type:**F8****Notes:**

WK19-26156

CONSTRUCTION

Precision molded unit and lamp housings constructed of UL 94 5VA flame retardant, corrosion resistant thermoplastic. Maintains compact size in packaging; lamps are packaged inside the exit housing and easily snap in place for use. Units resist denting, peeling, scratching and corrosion. Toolless access and snap-together design provided for easy maintenance.

ILLUMINATION

Exit is backlit with optically true red or green LEDs with color matched lens providing bright even illumination. Two fully adjustable, attractive lamp heads allow for maximum light to be delivered to the path of egress. Lamps can be set into a top or side mount position as well as aimed front or back for maximized directional light for egress path. Fixtures are supplied with high powered SMD 1W LED lamps providing 150 total lumens, in a pure white color temperature of 6000K. The LEDs have an estimated life over 50,000 hours with normal use. The high performance LEDs offer up to 25 foot on center spacing.

ELECTRICAL**Input**

Dual-voltage input 120 or 277VAC @ 60Hz.

Nickel Cadmium Battery (Ni-Cd)

Nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. Nickel cadmium batteries offer high discharge rates and continue to perform in a vast temperature range from 0°C to 40°C (32°F to 104°F).

Nickel Metal Hydride Battery (Ni-MH) Standard with R4 option

Nickel metal hydride batteries are maintenance-free with a life expectancy of 15 years. Ni-MH batteries perform optimally in temperatures ranging from 0°C to 40°C (32°F to 104°F). Ni-MH batteries are more environmentally-friendly than traditional Ni-Cd or lead acid alternatives as they contain no cadmium or lead.

Emergency

The VLEDC-51 will operate for a minimum of 90 minutes during a loss of power with a 24 hour maximum recharge time for the battery.

Remote Capable (Option: R4)

The R4 option provides an additional 4 watts of remote capability. For use with RL52, 2RL52, RL1-WP or 2RL1-WP remote lamps.

Solid-State Transfer

The unit features a solid-state switching transistor which eliminates damaged contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC power and automatically energizes the lamps. Upon restoration of the AC voltage, the emergency lamps will switch off and the charger will automatically recharge the battery.

Test Button

Our test button is easy to locate and allows for manual verification of proper operation of the transfer circuit and emergency lamps.

INSTALLATION

A universal J-box mounting pattern and rear keyhole slots are provided for wall mounting.

Guardian Self-Test/Self-Diagnostics (Option: G2)

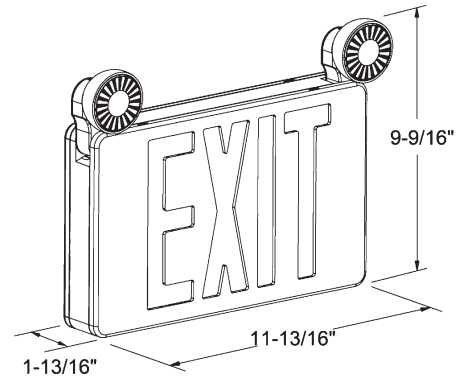
The Guardian circuit continuously monitors the operating condition of the AC power, battery supply voltage, emergency lamp continuity and charging circuit.

The purpose of this option is to provide visual signaling in response to a fault. If a failure is detected, visual status will occur immediately via the CHARGER LED and/or the BATTERY FAULT LED. The LEDs will stay illuminated until the fault is corrected.

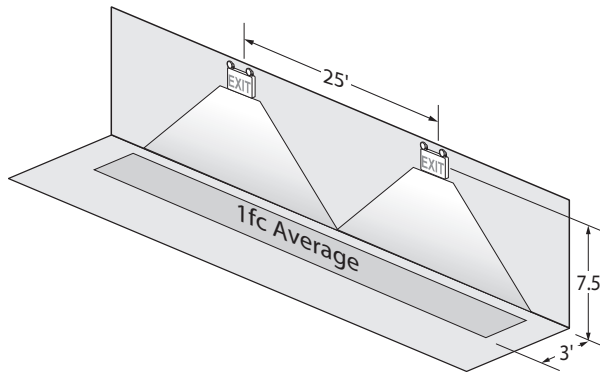
The Guardian circuit monitors the transfer circuit and performs automatic code compliant testing. The Guardian circuit will perform a 30 second discharge and self-test every 28-30 days and a 90 minute discharge and self-test every 6 months.

CONFORMANCE TO CODES & STANDARDS

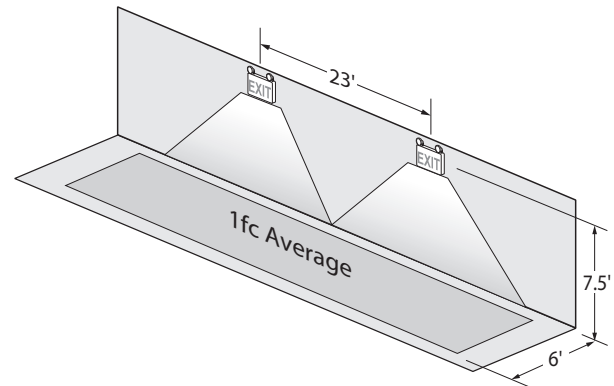
The VLEDC-51 Series is UL listed and meets or exceeds the following: UL 924, NEC requirements and NFPA 101.

DIMENSIONS**SAMPLE PHOTOMETRICS**

Using multiple units mounted at a typical 7.5" foot height delivers 25 foot on center spacing with a 3 foot wide path of egress.



Using multiple units mounted at a typical 7.5" foot height delivers 23 foot on center spacing with a 6 foot wide path of egress.



Specifications are subject to change without notice.
Installation must be performed in accordance with
Barron Lighting Group installation instructions.

10800270 09/17

BARRON
lighting group
800.533.3948 • www.barrontlg.com



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

VLEDC-51-WH-R4 REN1-WH-WP
MP2
Notes:

Type:

F8A

WK19-26156



VLEDC-51 Series

Tempo Pro Ultra Compact LED Combo EXIT Sign

The all new Exitronix Tempo Pro family of LED Combo EXIT sign provides a more complete, compact, powerful light offering with a higher performance than most currently on the market.

FEATURES

- Ultra compact, injection-molded UL 94 5VA flame rated thermoplastic housing
- Universal style includes 2 face plates, back plate and mounting canopy and can be ceiling, wall or end mounted
- Optional red or green LEDs with color matched lens for exit
- Standard 1 watt high power LED lamps
- Ultra bright 6000K SMD LEDs
- Fully adjustable lamps for top, side and forward, or back light distribution
- Toolless design allows for fast and easy installation
- Optional Guardian Self-Test/ Self-Diagnostics (G2) available
- Remote option provides 4 watts of remote capability for use with RL52, 2RL52, RL1-WP or 2RL1-WP Series Remotes
- UL 924 certified
- 120/277VAC, 60Hz
- Universal mounting; top, back, side
- Field selectable directional chevrons included for all configurations
- Main-free Ni-Cd or Ni-MH battery depending on configuration
- Standard finishes: Black or White
- Suitable for damp locations

Model: _____ Date: _____
Accessories: _____
Job Name: _____ Type: _____



WARRANTY

Any component that fails due to manufacturer's defect is guaranteed for 3 years with a separate 3 year pro-rated warranty on the battery. The warranty does not cover physical damage, abuse or instances of uncontrollable natural forces. See the full Exitronix warranty document for detailed information.



ORDERING INFORMATION Example: VLEDC-51-WH-G2

Series	Finish	Options (Factory Installed)	Accessories ¹ (Field Installed)
VLEDC-51 = Red	WH = White	G2 = Self-Test/Self-Diagnostics	WG-1 = Wire Guard (Back Mount)
GVLEDC-51 = Green	BL = Black	R4 ² = Remote Capable (4 watts)	XG-6 = Polycarbonate Guard (Back Mount)

Notes

¹ Order as separate line item

² R4 option supplied with Ni-MH battery

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

VLEDC-51-WH-R4 REN1-WH-WP
MP2

Notes:

Type:**F8A**

WK19-26156

CONSTRUCTION

Precision molded unit and lamp housings constructed of UL 94 5VA flame retardant, corrosion resistant thermoplastic. Maintains compact size in packaging; lamps are packaged inside the exit housing and easily snap in place for use. Units resist denting, peeling, scratching and corrosion. Toolless access and snap-together design provided for easy maintenance.

ILLUMINATION

Exit is backlit with optically true red or green LEDs with color matched lens providing bright even illumination. Two fully adjustable, attractive lamp heads allow for maximum light to be delivered to the path of egress. Lamps can be set into a top or side mount position as well as aimed front or back for maximized directional light for egress path. Fixtures are supplied with high powered SMD 1W LED lamps providing 150 total lumens, in a pure white color temperature of 6000K. The LEDs have an estimated life over 50,000 hours with normal use. The high performance LEDs offer up to 25 foot on center spacing.

ELECTRICAL**Input**

Dual-voltage input 120 or 277VAC @ 60Hz.

Nickel Cadmium Battery (Ni-Cd)

Nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. Nickel cadmium batteries offer high discharge rates and continue to perform in a vast temperature range from 0°C to 40°C (32°F to 104°F).

Nickel Metal Hydride Battery (Ni-MH) Standard with R4 option

Nickel metal hydride batteries are maintenance-free with a life expectancy of 15 years. Ni-MH batteries perform optimally in temperatures ranging from 0°C to 40°C (32°F to 104°F). Ni-MH batteries are more environmentally-friendly than traditional Ni-Cd or lead acid alternatives as they contain no cadmium or lead.

Emergency

The VLEDC-51 will operate for a minimum of 90 minutes during a loss of power with a 24 hour maximum recharge time for the battery.

Remote Capable (Option: R4)

The R4 option provides an additional 4 watts of remote capability. For use with RL52, 2RL52, RL1-WP or 2RL1-WP remote lamps.

Solid-State Transfer

The unit features a solid-state switching transistor which eliminates damaged contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC power and automatically energizes the lamps. Upon restoration of the AC voltage, the emergency lamps will switch off and the charger will automatically recharge the battery.

Test Button

Our test button is easy to locate and allows for manual verification of proper operation of the transfer circuit and emergency lamps.

INSTALLATION

A universal J-box mounting pattern and rear keyhole slots are provided for wall mounting.

Guardian Self-Test/Self-Diagnostics (Option: G2)

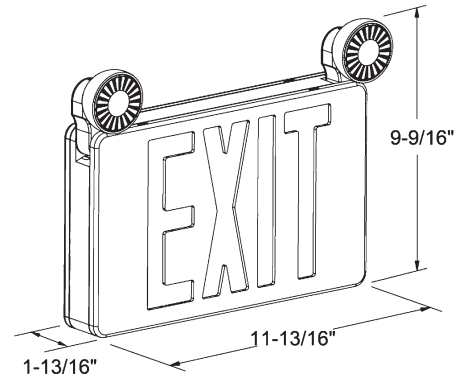
The Guardian circuit continuously monitors the operating condition of the AC power, battery supply voltage, emergency lamp continuity and charging circuit.

The purpose of this option is to provide visual signaling in response to a fault. If a failure is detected, visual status will occur immediately via the CHARGER LED and/or the BATTERY FAULT LED. The LEDs will stay illuminated until the fault is corrected.

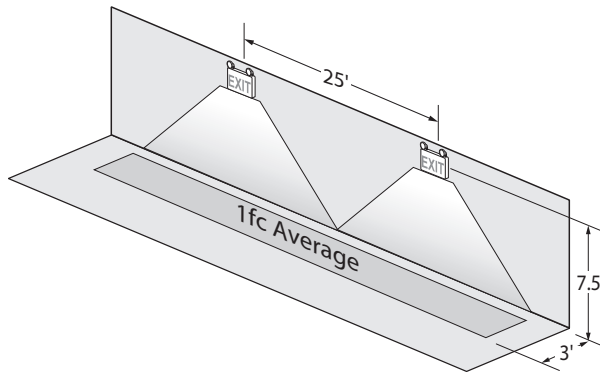
The Guardian circuit monitors the transfer circuit and performs automatic code compliant testing. The Guardian circuit will perform a 30 second discharge and self-test every 28-30 days and a 90 minute discharge and self-test every 6 months.

CONFORMANCE TO CODES & STANDARDS

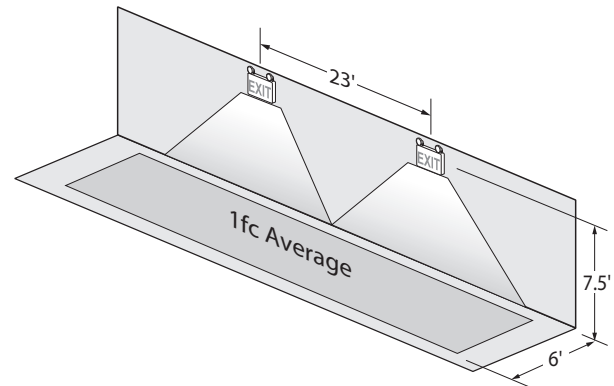
The VLEDC-51 Series is UL listed and meets or exceeds the following: UL 924, NEC requirements and NFPA 101.

DIMENSIONS**SAMPLE PHOTOMETRICS**

Using multiple units mounted at a typical 7.5" foot height delivers 25 foot on center spacing with a 3 foot wide path of egress.



Using multiple units mounted at a typical 7.5" foot height delivers 23 foot on center spacing with a 6 foot wide path of egress.



Specifications are subject to change without notice.
Installation must be performed in accordance with
Barron Lighting Group installation instructions.

10800270 09/17

BARRON
lighting group
800.533.3948 • www.barrontlg.com

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:
PD6V120 60V3GCWF

Notes:

Type:

F9

WK19-26156

HALO Commercial**DESCRIPTION**

Recessed 6 inch aperture lens downlight for vertical 100W maximum A19, PAR20, PAR30L, PAR38 or BR40 lamp. Fixture is suitable for commercial construction and wet location listed. Insulation must be kept 3" from top and sides of housing. Specify housing and trim separately to complete luminaire.

Catalog #	Type
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES**MECHANICAL****Frame**

Boat shaped galvanized steel frame with 1/2" plaster lip accommodates ceilings up to 2" thick. May be used for new construction or remodeling installations. Provided with (2) remodel clips to secure frame when installed from below the ceiling.

Mounting Brackets

Bar hanger receivers adjust 2" vertically from above the ceiling or thru the aperture. Use with No Fuss™ bar hangers or with 1/2" EMT. Removable to facilitate installation from below the ceiling.

No Fuss™ Bar Hangers

Pre-installed and centered bar hanger locks to tee grid with a screwdriver or pliers. Centering marks on the bar hanger mechanism allows consistent positioning of fixtures.

OPTICAL**Reflector**

One piece aluminum reflector secures lens in place with integrated spring clips for a visually comfortable optic and allows for tool-less lens exchange from below the ceiling. Available with clear, diffuse, prismatic, fresnel or drop opal glass lens. Self flanged standard.

- **Specular Reflectors** - Polished flange standard with white painted flange option.
- **Baffles and White Reflector** - White painted flange standard.

Trim Retention

Reflector is retained with two torsion springs and held tightly to the finished ceiling surface.

ELECTRICAL**Junction Box**

(6) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (12) #12 AWG (six in, six out) 90°C conductors and feed thru branch wiring.

Lamp Socket

E26 medium base porcelain socket with nickel plated brass screw shell.

Socket Cap

One piece metal cap attached securely to reflector with turn and lock mechanism.

Insulation Detector

Self heating insulation detector opens circuit if insulation is improperly installed.

Code Compliance

- Thermally protected and cULus listed for wet locations.
- IP44 rated for lens trims.



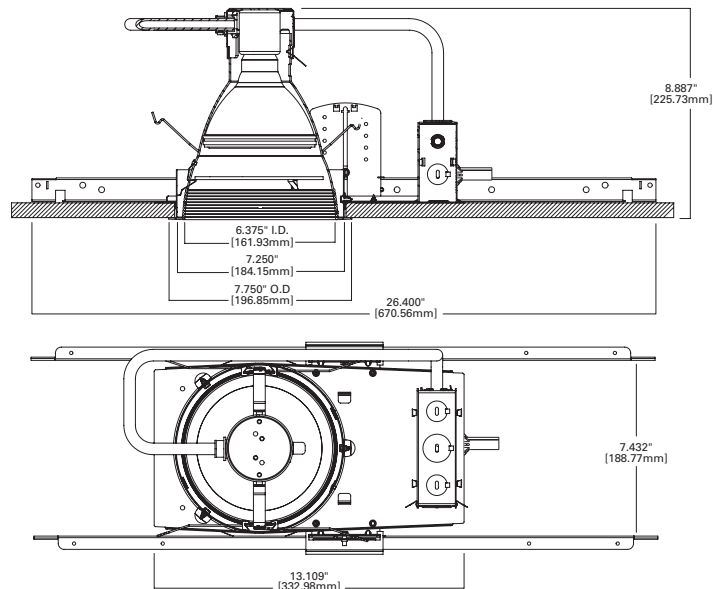
**PD6V120
60V**

**Incandescent
Tungsten-Halogen (IR)**

**100W Max A19,
PAR20, PAR30L,
PAR38, BR40**

**6-Inch Aperture
Lens Downlight**

**New Construction or
Remodel
Non-IC**

DIMENSIONS



Job Name:
St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:
PD6V120 60V3GCWF

Type:
F9

Notes:

WK19-26156

HALO Commercial

PD6V120
60V

ORDERING INFORMATION

SAMPLE NUMBER: PD6V120 60V1GC

Order housing, reflector and lamp separately for a complete luminaire.

PD6V120 **60V** **3G** **C** **WF**

Housing
PD6V120 = 6 Inch vertical,
E26, 120V

Reflector
60V = 6" Vertical

Lens Option
1G= Prismatic glass
2G= Diffuse glass
3G= Clear glass
4G= Fresnel glass

Finish Option
C=Specular Clear
G=Specular Gold
H=Semi Specular Clear
W=White (White Flange)
BB=Black Baffle (White Flange)
WB=White Baffle (White Flange)

Flange Option
Blank=Polished Flange
(C, G, H)
Blank=White flange
(W, BB, WB)
WF=White Flange
(C, G, H)

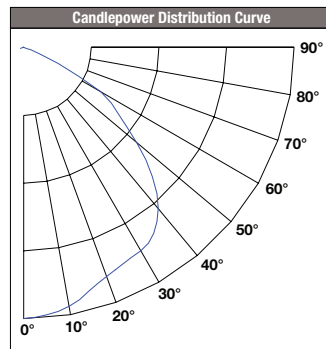
Accessories
HB128APK = L channel hanger bar, 26", "No-Fuss", pair (replacement)
RMB22 = 22" long wood joist mounting bars
H277 = 277V step down transformer, 300VA
H347 = 347V step down transformer, 75VA
H347200 = 347V step down transformer, 200VA

Polymer "Dead Front" Trim¹
1GDF=Prismatic Glass with "Dead Front" Trim
2GDF=Diffuse Glass with "Dead Front" Trim
3GDF=Clear Glass with "Dead Front" Trim
4GDF=Fresnel Glass with "Dead Front" Trim
5GDF=Drop Opal Glass with "Dead Front" Trim

Note:
1"DF" trim option includes Specular Clear (C) reflector and white polymer flange only.
No other finish or flange options apply.

PHOTOMETRY

PD6V120-60V1GC_100A21INC
Spacing Criteria = 1.32
Lumens per Watt = 11 LpW
Test No. P21693
Test Model: PD6V120-60V1GC_100A21INC



Candela Distribution	
Degrees Vertical	Candela
0°	692
5	684
15	644
25	608
35	579
45	467
55	296
65	97
75	4
85	1
90	0

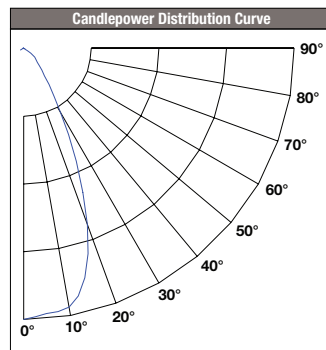
Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	26787
55	19307
65	7601
75	408
85	153

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	23	7.2	7.2
7'	14	9.1	9.1
8'	11	10.4	10.4
9'	9	11.7	11.7
10'	7	13.1	13.1
12'	5	15.7	15.7
14'	4	18.3	18.3

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	528.72	19.00	32.50
0-40	889.14	32.00	54.70
0-60	1513.88	54.50	93.10
0-90	1626.4	58.50	100.00

PD6V120-60V1GC_16PAR38LED
Spacing Criteria = 0.80
Lumens per Watt = 41 LpW
Test No. P21689
Test Model: PD6V120-60V1GC_16PAR38LED



Candela Distribution	
Degrees Vertical	Candela
0°	815
5	800
15	715
25	375
35	134
45	59
55	27
65	4
75	0
85	0
90	0

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	3384
55	1761
65	313
75	0
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	27	4.3	4.3
7'	17	5.5	5.5
8'	13	6.3	6.3
9'	10	7.1	7.1
10'	8	7.9	7.9
12'	6	9.5	9.5
14'	4	11	11

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	444.00	N.A.	73.20
0-40	531.42	N.A.	87.70
0-60	601.61	N.A.	99.20
0-90	606.29	N.A.	100.00



Note: Specifications and Dimensions subject to change without notice.

Visit our web site at www.cooperlighting.com

Customer First Center 1121 Highway 74 South Peachtree City, GA 30269 770.486.4800 FAX 770.486.4801
Cooper Lighting 5925 McLaughlin Rd. Mississauga, Ontario, Canada L5R 1B8 905.507.4000 FAX 905.568.7049

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

3-582-2724

Notes:

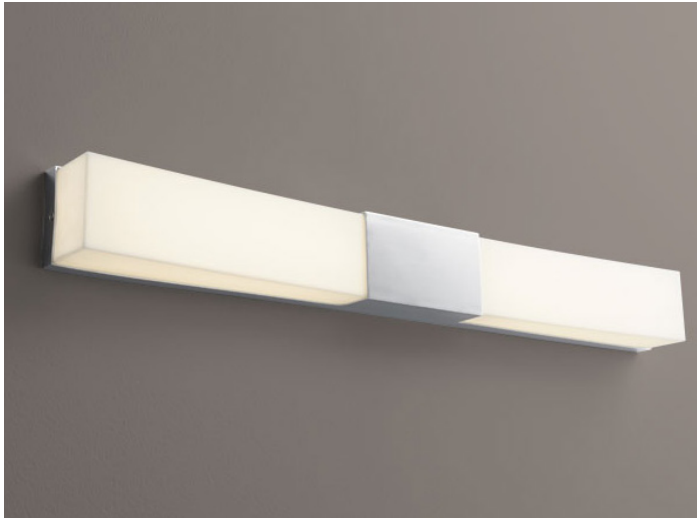
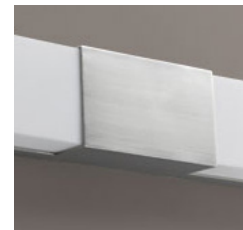
Type:**F10**

WK19-26156

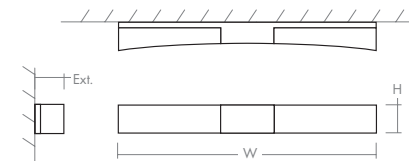
CRESCENT Vanity120v : **3-582-xx**277v : **37-582-xx**

oxygen

FIXTURE TYPE _____ LOCATION _____
PROJECT _____ DATE _____

**-14 Polished Chrome****-24 Satin Nickel**

LIGHT SOURCE	2 x 10.1W LED, 3000K, CRI 90
LUMINAIRE POWER	25.7W at 120V
RATED LIFE	60000 hr RL
OPTIONAL COLOR TEMPERATURES	2700K, 3500K, 4000K
LUMEN OUTPUT	Delivered: 1864 lm (LM-79)
INPUT VOLTAGE	120V or 277V
DRIVER OUTPUT	2 x 350mA, 12W
DIMMING	0-10v & Phase (ELV) Dimming - 50/60Hz 100% to 10% Dimming
CONSTRUCTION	Plated Steel and Acrylic
DIFFUSER	- Matte White Acrylic
FINISHES	Polished Chrome (-14), Satin Nickel (-24)
MOUNTING	4" Octagonal J-Box, 2"x 3" J-Box
STANDARDS	ETL Dry/Damp listed, ADA compliant, Conforms to UL STD 1598, Certified CAN/CSA, STD C22.2 No 250.0.

**DIMENSIONS****W:** 30.50"**H:** 3.50"**Ext:** 3.00"**M.C:** 1.75" From top of fixture

Order example for standard fixture:

3-582-24 (x- Voltage - xxx-Sequence # - xx-Finish)**3:** 120v, **37:** 277vOrder example for optional color temperatures: **3-582-2724****27:** 2700K, **35:** 3500K, **40:** 4000K



Job Name:

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

XTOR4B

Notes:

Type:

F11

WK19-26156

Lumark

DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaires provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

SPECIFICATION FEATURES

Construction

Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and medium design. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 38W model. Patented secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three half-inch, NPT threaded conduit entry points. The universal back box supports both the small and medium forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

Optical

Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Available in seven lumen packages; 5000K, 4000K and 3000K CCT.

Electrical

LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 12W, 18W, 26W and 38W series operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Three half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized

electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

Finish

Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty

Five-year warranty.

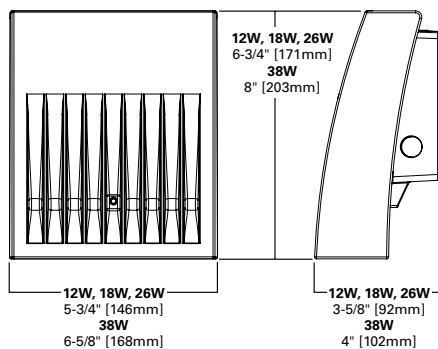
Catalog #		Type	
Project		Date	
Comments			
Prepared by			



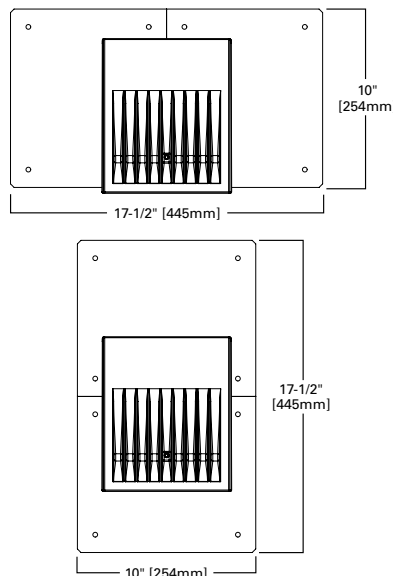
**XTOR
CROSSTOUR LED**

- APPLICATIONS:**
WALL / SURFACE
POST / BOLLARD
LOW LEVEL
FLOODLIGHT
INVERTED
SITE LIGHTING

DIMENSIONS



ESCUTCHEON PLATES



CERTIFICATION DATA

- UL/cUL Wet Location Listed
- LM79 / LM80 Compliant
- ROHS Compliant
- ADA Compliant
- NOM Compliant Models
- IP66 Ingressed Protection Rated
- Title 24 Compliant
- DesignLights Consortium® Qualified*

TECHNICAL DATA

- 40°C Maximum Ambient Temperature
- External Supply Wiring 90°C Minimum

EPA

- Effective Projected Area (Sq. Ft.):
XTOR1B, XTOR2B, XTOR3B=0.34
XTOR4B=0.45

SHIPPING DATA:

- Approximate Net Weight:
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]



**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

XTOR4B

Notes:

Type:**F11**

WK19-26156

page 2

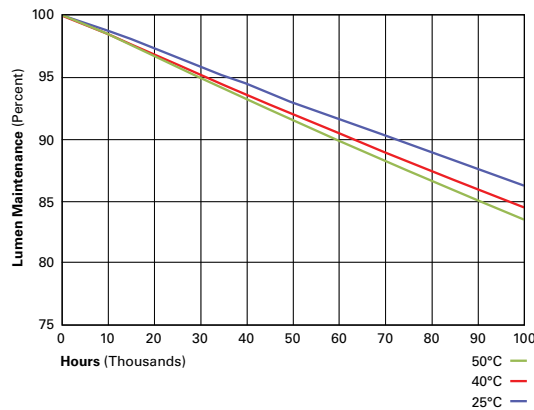
XTOR CROSSTOUR LED**POWER AND LUMENS BY FIXTURE MODEL**

LED Information	XTOR1B	XTOR1B-W	XTOR1B-Y	XTOR2B	XTOR2B-W	XTOR2B-Y	XTOR3B	XTOR3B-W	XTOR3B-Y	XTOR4B	XTOR4B-W	XTOR4B-Y
Delivered Lumens (Wall Mount)	1,418	1,396	1,327	2,135	2,103	1,997	2,751	2,710	2,575	4,269	4,205	3,995
Delivered Lumens (With Flood Accessory Kit) ¹	1,005	990	940	1,495	1,472	1,399	2,099	2,068	1,965	3,168	3,121	2,965
B.U.G. Rating ²	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0
CCT (Kelvin)	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70	70	70	70	70
Power Consumption (Watts)	12W	12W	12W	18W	18W	18W	26W	26W	26W	38W	38W	38W

NOTES: 1 Includes shield and visor. 2 B.U.G. Rating does not apply to floodlighting.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR1B Model		
25°C	> 90%	255,000
40°C	> 89%	234,000
50°C	> 88%	215,000
XTOR2B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR3B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR4B Model		
25°C	> 89%	222,000
40°C	> 87%	198,000
50°C	> 87%	184,000

**CURRENT DRAW**

Voltage	Model Series			
	XTOR1B	XTOR2B	XTOR3B	XTOR4B
120V	0.103A	0.15A	0.22A	0.34A
208V	0.060A	0.09A	0.13A	0.17A
240V	0.053A	0.08A	0.11A	0.17A
277V	0.048A	0.07A	0.10A	0.15A
347V	0.039A	0.06A	0.082A	0.12A

**Job Name:**

St. Tammany Regional Airport Corporate Hangar
Facilities - New Phase
Engineer: Creative Engineering Group, LLC
(Covington)

Catalog Number:

XTOR4B

Notes:

Type:**F11**

WK19-26156

page 3

XTOR CROSSTOUR LED**ORDERING INFORMATION**

Sample Number: XTOR2B-W-WT-PC1

Series ¹	LED Kelvin Color	Housing Color	Options (Add as Suffix)	Accessories (Order Separately)
XTOR1B =Small Door, 12W XTOR2B =Small Door, 18W XTOR3B =Small Door, 26W XTOR4B =Medium Door, 38W	[Blank] =Bright White (Standard), 5000K W =Neutral White, 4000K Y =Warm White, 3000K	[Blank] =Carbon Bronze (Standard) WT =Summit White BK =Black BZ =Bronze AP =Grey GM =Graphite Metallic DP =Dark Platinum	PC1 =Photocontrol 120V ² PC2 =Photocontrol 208-277V ^{2,3} 347V =347V ⁴ HA =50°C High Ambient ⁴	WG/XTOR =Wire Guard ⁵ XTORFLD-KNC =Knuckle Floodlight Kit ⁶ XTORFLD-TRN =Trunnion Floodlight Kit ⁶ XTORFLD-KNC-WT =Knuckle Floodlight Kit, Summit White ⁶ XTORFLD-TRN-WT =Trunnion Floodlight Kit, Summit White ⁶ EWP/XTOR =Escutcheon Wall Plate, Carbon Bronze EWP/XTOR-WT =Escutcheon Wall Plate, Summit White

NOTES:

- DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
- Photocontrols are factory installed.
- Order PC2 for 347V models.
- Thru-branch wiring not available with HA option or with 347V. XTOR3B not available with HA and 347V or 120V combination.
- Wire guard for wall/surface mount. Not for use with floodlight kit accessory.
- Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.

STOCK ORDERING INFORMATION

12W Series	18W Series	26W Series	38W Series
XTOR1B =12W, 5000K, Carbon Bronze	XTOR2B =18W, 5000K, Carbon Bronze	XTOR3B =26W, 5000K, Carbon Bronze	XTOR4B =38W, 5000K, Carbon Bronze
XTOR1B-WT =12W, 5000K, Summit White	XTOR2B-W =18W, 4000K, Carbon Bronze	XTOR3B-W =26W, 4000K, Carbon Bronze	XTOR4B-W =38W, 4000K, Carbon Bronze
XTOR1B-PC1 =12W, 5000K, 120V PC, Carbon Bronze	XTOR2B-WT =18W, 5000K, Summit White	XTOR3B-WT =26W, 5000K, Summit White	XTOR4B-WT =38W, 5000K, Summit White
XTOR1B-W =12W, 4000K, Carbon Bronze	XTOR2B-PC1 =18W, 5000K, 120V PC, Carbon Bronze	XTOR3B-PC1 =26W, 5000K, 120V PC, Carbon Bronze	XTOR4B-PC1 =38W, 5000K, 120V PC, Carbon Bronze
	XTOR2B-W-PC1 =18W, 4000K, 120V PC, Carbon Bronze	XTOR3B-W-PC1 =26W, 4000K, 120V PC, Carbon Bronze	XTOR4B-W-PC1 =38W, 4000K, 120V PC, Carbon Bronze
	XTOR2B-347V =18W, 5000K, Carbon Bronze, 347V	XTOR3B-347V =26W, 5000K, Carbon Bronze, 347V	XTOR4B-347V =38W, 5000K, Carbon Bronze, 347V
	XTOR2B-WT-PC1 =18W, 5000K, 120V PC, Summit White	XTOR3B-PC2 =26W, 5000K, 208-277V PC, Carbon Bronze	

PREMIER

HVAC SALES

1521 Kuebel Street, Suite A - Harahan, La. 70121
Phone: (504) 733-7883 Fax: (504) 733-9761

May 8, 2019

R C L Architecture LLC
Attn: Paul F. Dimitrios, A.I.A.
900 West Causeway Approach
Mandeville, La. 70471
Email pdimitrios@rclconsultants.com

Re: St. Tammany Regional Airport Corporate Hangar Facilities
Bid Date: 5/16/19

Dear Sir:

As per plans and specifications on the above referenced project, we are submitting for your approval to allow us to quote the following list:

If you need any further assistance, please feel free to call me.

Scheduled Manufacturer Model		Proposed Substitution Model
	MANUAL DAMPERS	
RUSKIN		POTTORFF
	FIRE DAMPERS	
RUSKIN		POTTORFF
	GRAVITY HOODS	
GREENHECK		PENNBARRY
	FANS	
GREENHECK		PENNBARRY

Sincerely,


Jimbo Palmer
Sales Representative

Cc: Joseph Handlin
3201 Cleary Ave.
Metairie, La. 70002
Email: marygrau@bellsouth.net

Application

MD-41 and MD-42 balancing dampers employ triple-V blades and a rugged hat channel frame for manual air control and balancing in medium pressure and velocity applications.

Standard Construction

Frame: 5" x 1" (127 x 25) galvanized steel hat channel with interlocking corner gusset. Equivalent to 13 gauge (2.4) channel frame. Low profile head and sill are used on sizes less than 13" (330) high.

Blades: 6" x 16 gauge (152 x 1.5) galvanized steel — triple-V. Parallel (model MD-41) or opposed (model MD-42) action.

Axles: 1/2" (13) diameter plated steel hex.

Linkage: Concealed in frame.

Bearings: Synthetic

Control Shaft: 1/2" x 6" (13 x 152) round drive axle with outboard shaft support bracket and bearing supplied on all single section dampers for field installation. Factory installed jackshaft supplied with all multiple section dampers.

Minimum Size: Model MD-41 (one blade): 6" x 5" (152 x 127)
Model MD-41 and MD-42 (two blades):
6" x 10" (152 x 254)

Maximum Size: Single section: 48" x 48" (1219 x 1219)
Multiple sections: 96" x 96" (2438 x 2438)

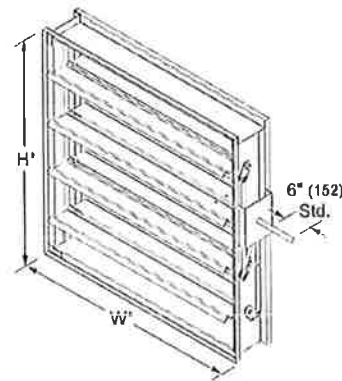
Options

- Manual locking quadrant (supplied loose)
- Flanged frame: One side Both sides
- Actuator/Quadrant standoff bracket — accommodates up to 3" (76) thick insulated duct.
- Stainless steel ollite sleeve-type bearings.
- No Top or Bottom Stops

Ratings

Damper Width	Maximum System Pressure	Maximum System Velocity
12" (305)	5.0 in. wg (1.2 kPa)	2000 fpm (10.2 m/s)
24" (610)	4.0 in. wg (1.0 kPa)	2000 fpm (10.2 m/s)
36" (914)	3.0 in. wg (0.8 kPa)	2000 fpm (10.7 m/s)
48" (1219)	2.5 in. wg (0.6 kPa)	1500 fpm (7.6 m/s)

Temperature: -40°F to 180°F (-40°C to +83°C)



Model MD-42 (standard)

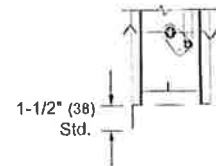
*Damper dimensions furnished approximately 1/4" (6) undersize. (Drive axle supplied loose for field installation)



MD-41

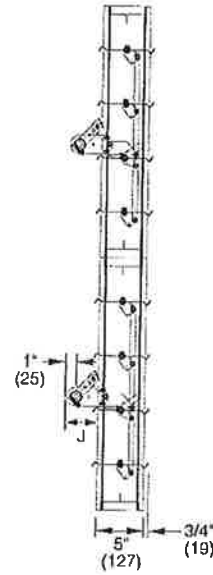
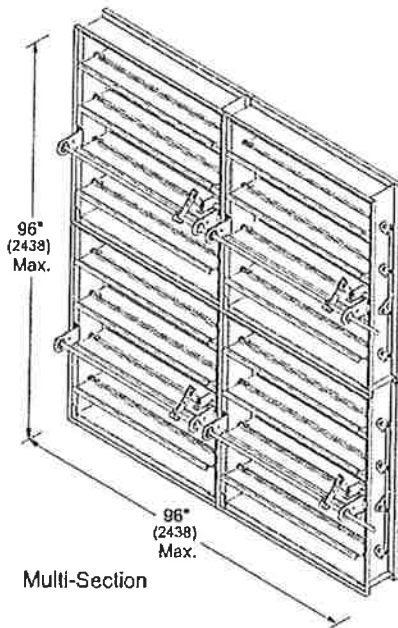


MD-42



Flanged Frame

Typical Damper Dimensional Details



Dampers are designed to be self-supporting in the maximum single section size. When dampers are installed in multiple section assemblies, bracing may be required to support the weight of the dampers and to ensure structural integrity against system pressures. It is recommended that multiple sections be appropriately braced. In horizontal installations, it is recommended that suitable supports be installed every 8 feet of damper width. Dampers installed in vertical multiple assemblies and/or higher system pressures, may require additional bracing.

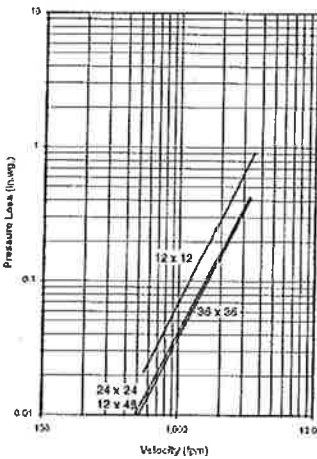
Damper dimensions furnished approximately 1/4" (6) undersize.

Note: J = 2" (51) for H < 8" (203)
J = 3 1/8" (86) for H ≥ 8" (203)

Airflow Performance Data

Pressure Loss vs. Velocity

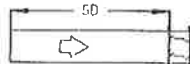
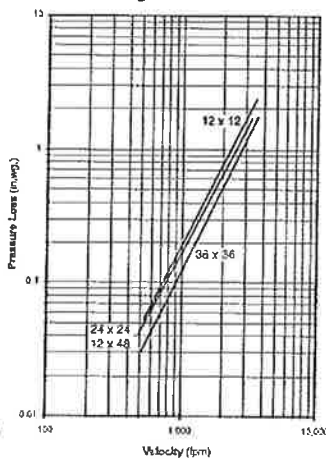
Figure 5.3 — Ducted Inlet and Outlet



Ducted Inlet and Outlet

AMCA Figure 5.3 illustrates a fully ducted damper. This configuration represents the lowest pressure drop of the three test configurations because entrance and exit losses are minimized by straight duct runs upstream and downstream of the damper.

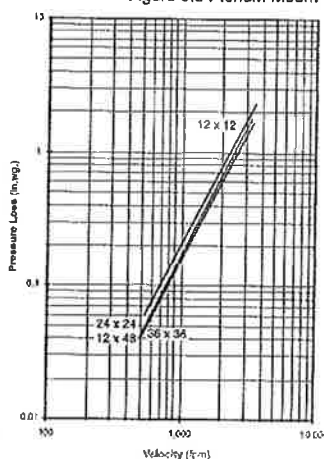
Figure 5.2 — Ducted Inlet



Ducted Inlet

AMCA Figure 5.2 illustrates a ducted damper exhausting air into an open area. This configuration has a lower pressure drop than Figure 5.5 because entrance losses are minimized by a straight duct run upstream of the damper.

Figure 5.5 Plenum Mount



Plenum Mount

AMCA Figure 5.5 illustrates a plenum mounted damper. This configuration has the highest pressure drop because of extremely high entrance and exit losses due to the sudden changes of area in the system.

Pressure drop testing was performed in accordance with AMCA Standard 500-D using the three configurations shown. All data has been corrected to represent air density of 0.075 lb/ft. Actual pressure drop in any ducted HVAC system is a combination of many elements. This information, along with analysis of other system influences, should be used to estimate actual pressure losses for a damper installed in a given HVAC system.

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses () are millimeters.

POTTORFF®

model **VFD-10-C**
1½ hour — static fire damper
curtain style blade

Application

The VFD-10-C fire damper employs out of airstream frame and curtain style blades for point-of-origin control of fire in static HVAC systems. The VFD-10-C may be installed in vertical walls or partitions, or horizontally in floors or assemblies with fire resistance ratings up to 2 hours.

Standard Construction

Frame: 22 gauge (0.85) galvanized steel.

Blades: 24 gauge (0.7) galvanized steel – curtain style.

Fire Closure Device: Fusible link.

Fire Closure Temperature: 165°F (75°C).

Minimum Size: Vertical mount: 4" x 2" (102 x 51)
Horizontal mount: 4" x 3" (102 x 76)

Maximum Size: Single section: Vertical: 46" x 43" (1168 x 1092)
Horizontal: 38" x 35" (965 x 889)
Multiple Section: Vertical: 118" x 75" (2997 x 1905) or
78" x 115" (1981 x 2921)
Horizontal: 78" x 75" (1981 x 1905)

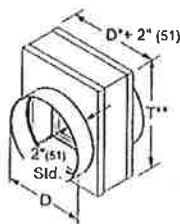
Stainless Steel: Single section: 38" x 35" (965 x 889)
Multiple Section: Vertical: 78" x 35" (1981 x 889) or
38" x 75" (965 x 1905) or
106" x 21" (2692 x 533)
Horizontal: 78" x 35" (1981 x 889) or
38" x 75" (965 x 1905)

Options

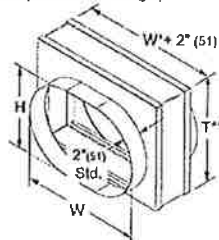
- Factory installed sleeve:
 - Integral (Includes high pressure/low leakage taped joints).
 - Gauge: 20 (1.0) 18 (1.3) 16 (1.6) 14 (2.0) 10 (3.5)
 - Length: 12" (305) 16" (406) 24" (610) Other _____
- Transitions:
 - Round Oval
 - Duct connections (sleeve required):
 - 1" (25) S-clip DM-25 DM-35 WARD
- Retaining angle systems:
 - Gauge: 20 (1.0) 16 (1.6)
 - Picture frame: SSPF (single-side) DSPF (2-side)
 - Individual angle sets: SS (single-side) DS (2-side)
- Alternate fire closure temperature.
 - 212°F (100°C)
- Duct access door factory mounted in common sleeve.
- Generic mullion for oversized masonry or concrete openings.
- Type-304 stainless steel construction (not available with integral sleeve option).

Round Transitions

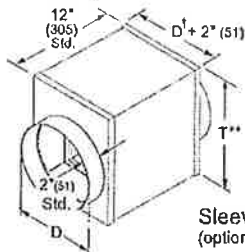
(Standard with D=W=H. Available with D<W and H)



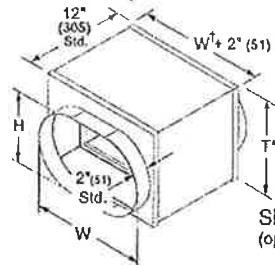
Style CR (optional)



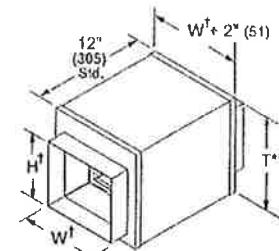
Style CO (optional)



Sleeve Style CR (optional)



Sleeve Style CO (optional)



Sleeve Style C (optional)

Ratings

UL 555 Fire Resistance Rating: 1½ hour (vertical and horizontal)

UL HNLJ.V-5: Ventilation Duct Assemblies

Listings

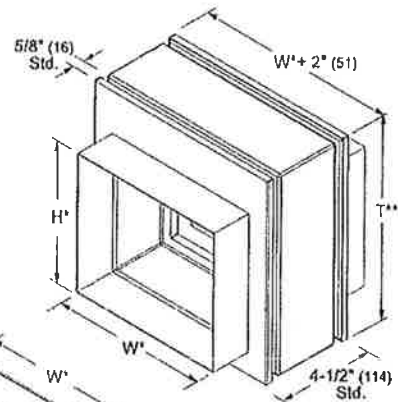
UL 555 listing: R11767

CSFM listing: 3225-0368:101

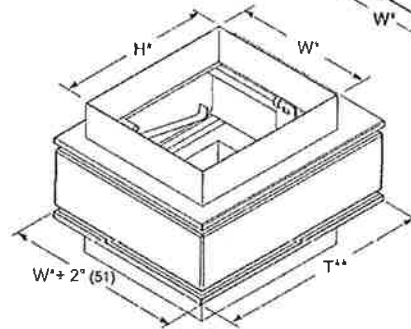
New York City MEA listing: 295-98-E

Meets NFPA Standards: 90A, 92A, 92B and 101

Meets Building Code Standards: IBC, NBC, NFPA, SBC and UBC



Model **VFD-10-C**
(standard-vertical)



Model **VFD-10-C**
(standard-horizontal)

* Damper dimensions furnished approximately 1/4" (6) undersize.
† Damper dimensions furnished approximately 1/8" (3) undersize.

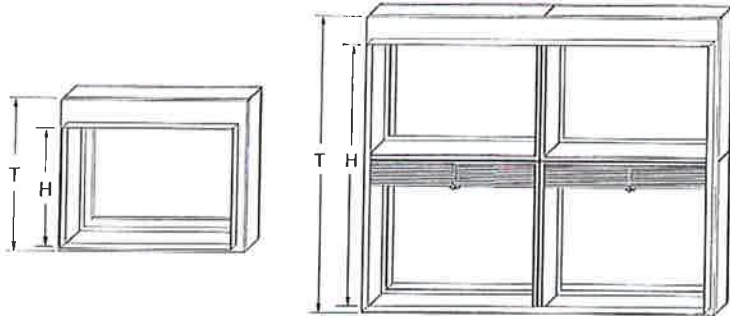
Curtain Dampers VFD10C (1/2) May 2015

Information is subject to change without notice or obligation.

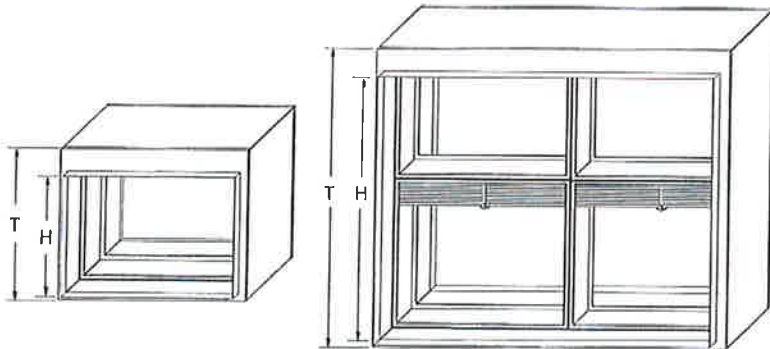
**See table on next page for 'T' dimension

NOTE: Dimensions in parentheses () are millimeters.

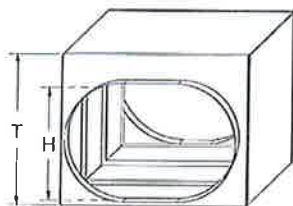
Blade Stack Dimensional Data



Framed Unit — No Sleeve
(Multiple section units supplied as a single assembly)



Sleeve Style S — Common Sleeve
(Multiple section units supplied as a single assembly)



Sleeve Style IS — Integral Sleeve

Single Section		Multiple Section	
Nominal Duct Height 'H'	Damper Height 'T'	Nominal Duct Height 'H'	Damper Height 'T'
2" (51)	5" (127)	36" (914)	39" (991)
3" (76)	6" (152)	37" (940)	40" (1016)
4" (102)	7" (178)	38" (965)	41" (1041)
5" (127)	8" (203)	39" (991)	42" (1067)
6" (152)	9" (229)	40" (1016)	43" (1092)
7" (178)	10" (254)	41" (1041)	44" (1118)
8" (203)	11" (279)	42" (1067)	45" (1143)
9" (229)	12" (305)	43" (1092)	46" (1168)
10" (254)	13" (330)	44" (1118)	47" (1194)
11" (279)	14" (356)	45" (1143)	48" (1219)
12" (305)	15" (381)	46" (1168)	49" (1245)
13" (330)	16" (406)	47" (1194)	50" (1270)
14" (356)	17" (432)	48" (1219)	51" (1295)
15" (381)	18" (457)	49" (1245)	52" (1321)
16" (406)	19" (483)	50" (1270)	53" (1346)
17" (432)	20" (508)	51" (1295)	54" (1372)
18" (457)	21" (533)	52" (1321)	55" (1397)
19" (483)	22" (559)	53" (1346)	56" (1422)
20" (508)	23" (584)	54" (1372)	57" (1448)
21" (533)	24" (610)	55" (1397)	58" (1473)
22" (559)	26" (660)	56" (1422)	59" (1499)
23" (584)	27" (686)	57" (1448)	60" (1524)
24" (610)	28" (711)	58" (1473)	61" (1549)
25" (635)	29" (737)	59" (1499)	62" (1575)
26" (660)	30" (762)	60" (1524)	63" (1600)
27" (686)	31" (787)	61" (1549)	64" (1626)
28" (711)	32" (813)	62" (1575)	65" (1651)
29" (737)	33" (838)	63" (1600)	66" (1676)
30" (762)	34" (864)	64" (1626)	67" (1702)
31" (787)	35" (889)	65" (1651)	68" (1727)
32" (813)	36" (914)	66" (1676)	69" (1753)
33" (838)	37" (940)	67" (1702)	70" (1778)
34" (864)	38" (965)	68" (1727)	71" (1803)
35" (889)	39" (991)	69" (1753)	72" (1829)
36" (914)	41" (1041)	70" (1778)	73" (1854)
37" (940)	42" (1067)	71" (1803)	74" (1880)
38" (965)	43" (1092)	72" (1829)	75" (1905)
39" (991)	44" (1118)	73" (1854)	76" (1930)
40" (1016)	45" (1143)	74" (1880)	77" (1956)
41" (1041)	46" (1168)	75" (1905)	78" (1981)
42" (1067)	47" (1194)	76" (1930)	79" (2007)
43" (1092)	48" (1219)	77" (1956)	80" (2032)
		78" (1981)	81" (2057)
		79" (2007)	82" (2083)
		80" (2032)	83" (2108)
		81" (2057)	84" (2134)
		82" (2083)	85" (2159)
		83" (2108)	86" (2184)
		84" (2134)	87" (2210)
		85" (2159)	88" (2235)
		86" (2184)	89" (2261)
		87" (2210)	90" (2286)
		88" (2235)	91" (2311)
		89" (2261)	92" (2337)
		90" (2286)	93" (2362)
		91" (2311)	94" (2388)
		92" (2337)	95" (2413)
		93" (2362)	96" (2438)
		94" (2388)	97" (2464)
		95" (2413)	98" (2489)
		96" (2438)	99" (2515)
		97" (2464)	100" (2540)
		98" (2489)	101" (2565)
		99" (2515)	102" (2591)
		100" (2540)	103" (2616)
		101" (2565)	104" (2642)
		102" (2591)	105" (2667)
		103" (2616)	106" (2692)
		104" (2642)	107" (2718)
		105" (2667)	108" (2743)
		106" (2692)	109" (2769)
		107" (2718)	110" (2794)
		108" (2743)	111" (2819)
		109" (2769)	112" (2845)
		110" (2794)	113" (2870)
		111" (2819)	114" (2896)
		112" (2845)	115" (2921)
		113" (2870)	116" (2946)
		114" (2896)	117" (2972)
		115" (2921)	118" (2997)
			119" (3023)
			120" (3048)

Note: Vertical dampers exceeding 48" in width or height will be manufactured in sections not exceeding 40" x 40". Vertical dampers exceeding 80" in width will be manufactured in sections not exceeding 36" x 24".

Dampers shown as vertical mount. Horizontal mount supplied in the same orientation.

Vertical Dampers Only

Vertical Dampers Only

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses () are millimeters.

Application

The VFD-30-C fire damper employs curtain style blades for point-of-origin control of fire in static HVAC systems. The VFD-30-C may be installed in vertical walls or partitions or horizontally in floors or assemblies with fire resistance ratings up to 4 hours.

Standard Construction

Frame: 22 gauge (0.85) galvanized steel.

Blades: 24 gauge (0.7) galvanized steel – curtain style.

Fire Closure Device: Fusible link.

Fire Closure Temperature: 165°F (75°C).

Minimum Size: Vertical mount: 4" x 2" (102 x 51)
Horizontal mount: 4" x 7" (102 x 178)

Maximum Size: Single Section: Vertical: 34" x 32" (864 x 813)
Horizontal: 36" x 32" (916 x 813)
Vertical: 106" x 20" (2692 x 508)
Multiple Section: Horizontal: 74" x 91" (1880 x 2311)

Stainless Steel: Single section: Vertical: 34" x 20" (864 x 508)
Multiple Section: Vertical: 106" x 20" (2692 x 508)

Options

- Factory installed sleeve: Integral
Gauge: 20 (1.0) 18 (1.3) 16 (1.6) 14 (2.0) 10 (3.5)
Length: 12" (305) 16" (406) 24" (610) Other _____

- Transitions:
 Round Oval
 Duct connections (sleeve required):
 1" (25) S-clip
 DM-25 DM-35 S & Drive WARD

- 16 ga. (1.6) retaining angle systems:
Picture frame: SSPF (single-side) DSPF (2-sided)
Individual angle sets: SS (single-side) DS (2-sided)

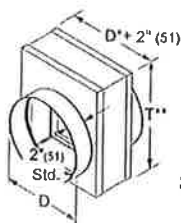
- Alternate fire closure temperature.
 212°F (100°C)

- Duct access door factory mounted in common sleeve.

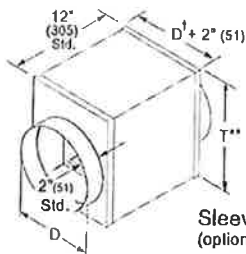
- Type-304 stainless steel construction.

Round Transitions

(Standard with D=W=H. Available with D<W and H)



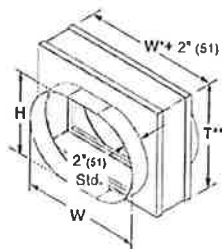
Style CR (optional)



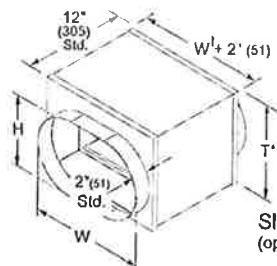
Sleeve Style CR (optional)

Oval Transitions

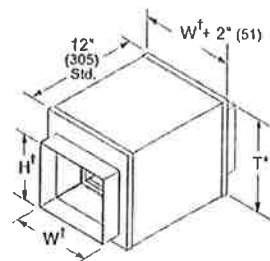
(Standard with W and H equal to damper width and height dimensions. Available with W and H smaller than damper width and height)



Style CO (optional)



Sleeve Style CO (optional)



Sleeve Style C (optional)

Ratings

UL 555 Fire Resistance Rating: 3 hour (vertical and horizontal)

UL HNLJ.V-5: Ventilation Duct Assemblies

Listings

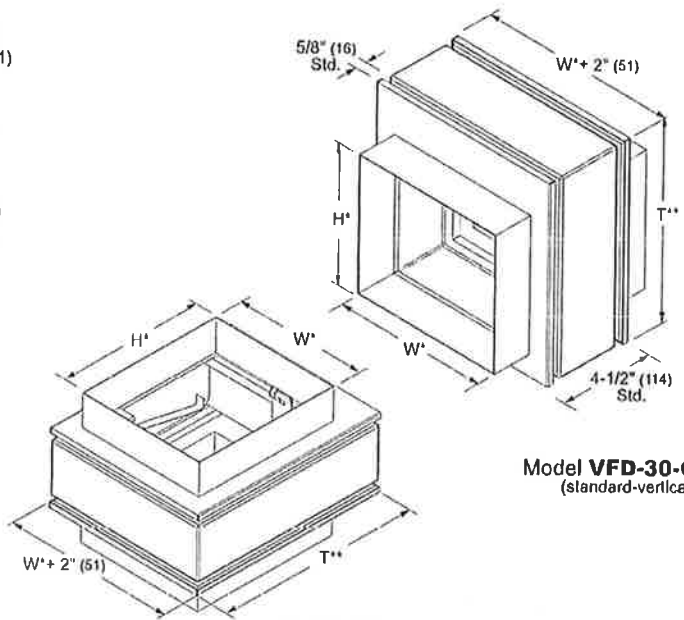
UL 555 Listing: R11767

CSFM Listing: 3225-0368:101

New York City MEA Listing: 295-98-E

Meets NFPA Standards: 90A, 92A, 92B and 101

Meets Building Code Standards: IBC, NBC, NFPA, SBC and UBC

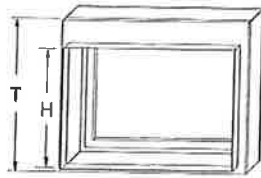
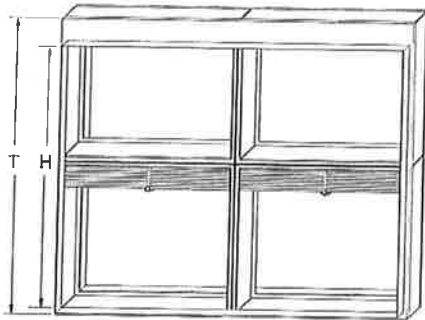


Model **VFD-30-C**
(standard-vertical)

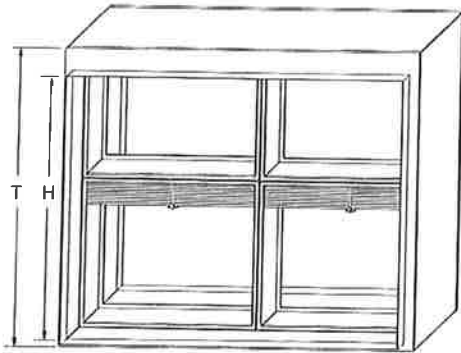
Model **VFD-30-C**
(standard-horizontal)

* Damper dimensions furnished approximately 1/4" (6) undersize.
† Damper dimensions furnished approximately 1/8" (3) undersize.

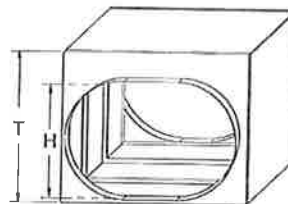
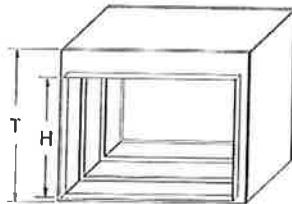
Blade Stack Dimensional Data



Framed Unit — No Sleeve
(Multiple section units supplied as a single assembly)



Sleeve Style S — Common Sleeve
(Multiple section units supplied as a single assembly)



Sleeve Style IS — Integral Sleeve

Nominal Duct Height "H"	Damper Width	
	Damper Height "T"	Damper Height "T"
2" (51)	5" (127)	5" (127)
3" (76)	6" (152)	6" (152)
4" (102)	7" (178)	7" (178)
5" (127)	8" (203)	8" (203)
6" (152)	9" (229)	9" (229)
7" (178)	10" (254)	10" (254)
8" (203)	11" (279)	11" (279)
9" (229)	12" (305)	12" (305)
10" (254)	13" (330)	13" (330)
11" (279)	14" (356)	14" (356)
12" (305)	15" (381)	15" (381)
13" (330)	16" (406)	16" (406)
14" (356)	17" (432)	17" (432)
15" (381)	18" (457)	18" (457)
16" (406)	19" (483)	19" (483)
17" (432)	20" (508)	20" (508)
18" (457)	21" (533)	21" (533)
19" (483)	22" (559)	22" (559)
20" (508)	23" (584)	23" (584)
21" (533)	24" (610)	24" (610)
22" (559)	25" (635)	25" (635)
23" (584)	26" (660)	26" (660)
24" (610)	27" (686)	27" (686)
25" (635)	28" (711)	28" (711)
26" (660)	29" (737)	29" (737)
27" (686)	30" (762)	30" (762)
28" (711)	31" (787)	31" (787)
29" (737)	32" (813)	32" (813)
30" (762)	33" (838)	33" (838)
31" (787)	34" (864)	34" (864)
32" (813)	35" (889)	35" (889)
	36" (914)	36" (914)

NOTES:
Dampers in the shaded area are for Vertical Mount Only.

Dampers shown as vertical mount. Horizontal mount supplied in the same orientation.

Nominal Duct Height "H"	Damper Width	
	Damper Height "T"	Damper Height "T"
33" (838)	35" (889)	35" (889)
34" (864)	36" (914)	36" (914)
35" (889)	37" (939)	37" (939)
36" (914)	38" (964)	38" (964)
37" (939)	39" (989)	39" (989)
38" (964)	40" (1014)	40" (1014)
39" (989)	41" (1039)	41" (1039)
40" (1014)	42" (1064)	42" (1064)
41" (1039)	43" (1089)	43" (1089)
42" (1064)	44" (1114)	44" (1114)
43" (1089)	45" (1139)	45" (1139)
44" (1114)	46" (1164)	46" (1164)
45" (1139)	47" (1189)	47" (1189)
46" (1164)	48" (1214)	48" (1214)
47" (1189)	49" (1239)	49" (1239)
48" (1214)	50" (1264)	50" (1264)
49" (1239)	51" (1289)	51" (1289)
50" (1264)	52" (1314)	52" (1314)
51" (1289)	53" (1339)	53" (1339)
52" (1314)	54" (1364)	54" (1364)
53" (1339)	55" (1389)	55" (1389)
54" (1364)	56" (1414)	56" (1414)
55" (1389)	57" (1439)	57" (1439)
56" (1414)	58" (1464)	58" (1464)
57" (1439)	59" (1489)	59" (1489)
58" (1464)	60" (1514)	60" (1514)
59" (1489)	61" (1539)	61" (1539)
60" (1514)	62" (1564)	62" (1564)
61" (1539)	63" (1589)	63" (1589)
62" (1564)	64" (1614)	64" (1614)
63" (1589)	65" (1639)	65" (1639)
64" (1614)	66" (1664)	66" (1664)
65" (1639)	67" (1689)	67" (1689)
66" (1664)	68" (1714)	68" (1714)
67" (1689)	69" (1739)	69" (1739)
68" (1714)	70" (1764)	70" (1764)
69" (1739)	71" (1789)	71" (1789)
70" (1764)	72" (1814)	72" (1814)
71" (1789)	73" (1839)	73" (1839)
72" (1814)	74" (1864)	74" (1864)
73" (1839)	75" (1889)	75" (1889)
74" (1864)	76" (1914)	76" (1914)
75" (1889)	77" (1939)	77" (1939)
76" (1914)	78" (1964)	78" (1964)
77" (1939)	79" (1989)	79" (1989)
78" (1964)	80" (2014)	80" (2014)
79" (1989)	81" (2039)	81" (2039)
80" (2014)	82" (2064)	82" (2064)
81" (2039)	83" (2089)	83" (2089)
82" (2064)	84" (2114)	84" (2114)
83" (2089)	85" (2139)	85" (2139)
84" (2114)	86" (2164)	86" (2164)
85" (2139)	87" (2189)	87" (2189)
86" (2164)	88" (2214)	88" (2214)
87" (2189)	89" (2239)	89" (2239)
88" (2214)	90" (2264)	90" (2264)
89" (2239)	91" (2289)	91" (2289)
90" (2264)	92" (2314)	92" (2314)
91" (2289)	93" (2339)	93" (2339)
	94" (2364)	94" (2364)
	95" (2389)	95" (2389)
	96" (2414)	96" (2414)

Information is subject to change without notice or obligation.

POTTORFF 5101 Blue Mound Road, Fort Worth, Texas 76106

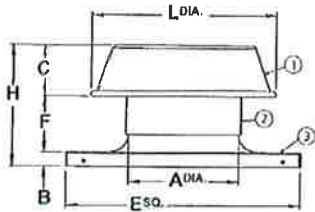
NOTE: Dimensions in parentheses () are millimeters.

www.pottorff.com

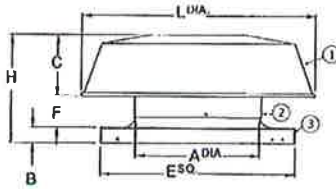
Fire Dampers VFD30C (22) May 2016

Weather Cap - Intake Or Exhaust

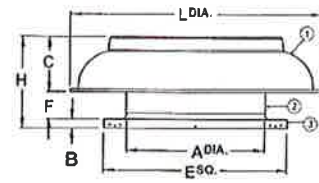
WCC06 - WCC10



WCC12 - WCC20 & 42



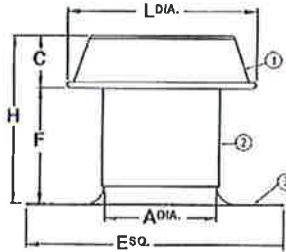
WCC24 - WCC36 & 48



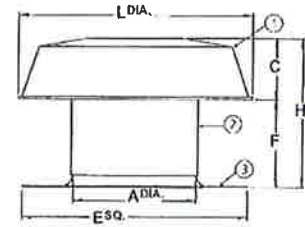
Legend

1. Spun Aluminum Weather Cap
2. Airshaft (built-in birdscreen)
3. Mounting Base

WCF06 - WCF10



WCF12 - WCF20




Dimensional Data

Model	A (Throat) DIA	B	C	E SQ	F	H	L DIA	*Damper SQ
WCF06	7	N/A	3 1/2	16 7/8	8	11 1/2	12	NA
WCF08	9	N/A	5 1/2	21 1/4	8	13 1/2	18 1/2	NA
WCF10	11	N/A	5 1/2	21 1/4	10	15 1/2	21	NA
WCF12	13	N/A	7	24	10	17	25	NA
WCF14	15	N/A	7	28	10	17	28	NA
WCF16	17	N/A	10	28	12	22	30	NA
WCF18	19	N/A	10	32	12	22	32	NA
WCF20	21	N/A	10 1/2	32	12	22 1/2	37	NA
WCC06	7	1	3 1/2	15	4	8 1/2	12	8 3/4
WCC08	9	1 1/2	5 1/2	18 1/2	4	11	18 1/2	11 1/4
WCC10	11	1 1/2	5 1/2	18 1/2	4	11	21	11 1/4
WCC12	13	2	7	20 1/2	4	13	25	15 3/4
WCC14	15	2	7	24 3/4	4	13	28	15 3/4
WCC16	17	2	10	24 3/4	4 1/2	16 1/2	30	15 3/4
WCC18	19	2	10	28 1/2	4 1/2	16 1/2	32	19 3/4
WCC20	21	2	10 1/2	28 1/2	5 1/2	18	37	19 3/4
WCC24	25	2	11	33 1/2	5 1/2	18 1/2	45	24 3/4
WCC30	31	2	11	36 1/2	7	20	52	27 3/4
WCC36	37	2	15	44 1/2	7	24	65	35 1/2
WCC42	43	2	16	52 1/2	7	25	67	43 1/2
WCC48	49	2	16	59	7	25	72	49 1/2

* The recommended clearances for the roof openings for installing the dampers provided is 1/4" (sizes 06-20) or 1/2" (sizes 24-48). Installation of motorized dampers requires 12" high curbs. Installing roof dampers is not recommended for WCF models. WCF roof openings normally match throat diameters. If round duct is used for either the WCF or WCC units, actual round dampers, available from PennBarry, should be specified.

All dimensions in Inches.

Material: Aluminum Cap, Airshaft & Base

 <p>PENNBARRY™</p> <p>1401 North Plano Road, Richardson, TX 75081 Ph: 972.234.3202 Fax: 972.497.0468 www.PennBarry.com</p>	<h2 style="margin: 0;">Submittal Sheet</h2> <h3 style="margin: 0;">Weather Cap</h3> <p style="margin: 0;">Spun Aluminum Roof Mounted for Intake or Exhaust</p>
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This drawing illustrates our understanding of order requirements. When approved, it represents details for fabrication, as such, PennBarry will not be responsible for revisions in the field or other changes after release for fabrication. Published and protected by PennBarry, Richardson, TX. All rights reserved. May not be reproduced partially or in full without permission from the publisher. No rights conveyed to manufacture partially or in full, use or sell either the method of construction represented or any invention in any way related thereto.

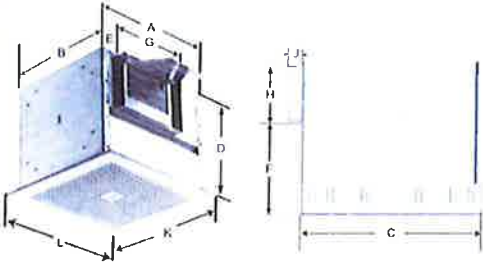
Form ES-WC
Revised March 2005

Z8STDA

Ceiling/Inline Duct Mounted Cabinet Exhaust Fan

Quantity: 1
 Special: None

Dimensions



Unit Size	A	B	C	D
8	13.88	11.38	17.38	11.38

E	F	G	H	J
1.88	5.25	8	6	0.75

K	L	Weight
13.25	14.88	20

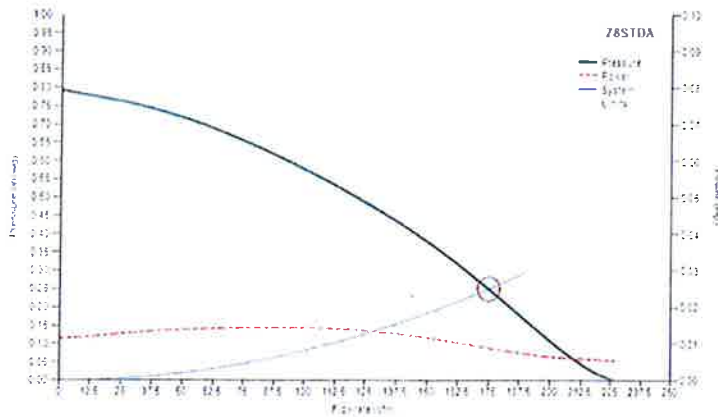
Standard Construction Features

- Galvanized housing lined with acoustical insulation
- Forward curved centrifugal blower
- Integral chatter proof backdraft damper
- Motor continuous duty, with thermal overload protection, positively cooled, & mounted on vibration isolators
- Includes electrical disconnect "plug" to pre-wired junction box
- Fan/motor/wheel "power pack" is removable
- Corrosion resistant fasteners

Accessories

Application: E - Exhaust
 Drive Type: D - Direct
 Efficiency: S - Standard
 Motor Tap: S
 Controllers: 1 - LekTrol SS Speed Ctrlr (Mounted)
 Construction Accessories: 8 - Wall Cap
 Guard/Screen: 0 - None
 Vibration Isolator: 0 - None

Performance



Operating Point

Volume (CFM)	175
Static Pressure (In. wg)	0.25
Fan RPM	929
Horse Power (BHP)	0.009
Elevation (ft)	0
Temperature (°F)	70
Drive Loss (%)	N/A

Motor Information

Motor HP	N/A
Volt/Ph/Hz	120V/1PH/60HZ
Enclosure	3 - ODP w/Overload
NEC FLA*	0
Weight+ (lbs)	N/A

* NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2014. Actual motor FLA may vary depending on motor manufacturer.
 + Motor weight may vary depending on supplier

(continued)

SOUND POWER

OCTAVE POWER CENTER FREQUENCY (hz)							
83	125	250	500	1000	2000	4000	8000
56	55	51	47	42	36	29	25



LWA	DbA	Sones
49	37.3	1.9

LwA - Weighted sound power, based on ANSI S1.4, dBA - Weighted sound pressure, based on 11.5 dB attenuation per Octave band at 5 ft. Sones - calculated using AMCA 301 at 5 ft.