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690 Chesterfield Pkwy W • Chesterfield MO 63017-0760
Phone: 636-537-4000 • Fax 636-537-4798 • www.chesterfield.mo.us

Architectural Review Board Staff Report

Project Type: Amended Site Development Plan

Meeting Date: December 12, 2013

From: Purvi Patel
Project Planner

Cc: Aimee Nassif, Planning & Development Services Director

Location: 18500 Edison Avenue

Applicant: Farnsworth Group, on behalf of Monsanto Company

Description: **Spirit of St. Louis Airpark, Monsanto Hangar:** An Amended Site Development Plan, Amended Lighting Plan, Amended Architectural Elevations and an Architect's Statement of Design for an 11 acre tract of land zoned "M3" Planned Industrial District located on the south side of Edison Avenue, east of Spirit of St. Louis Boulevard.

PROPOSAL SUMMARY

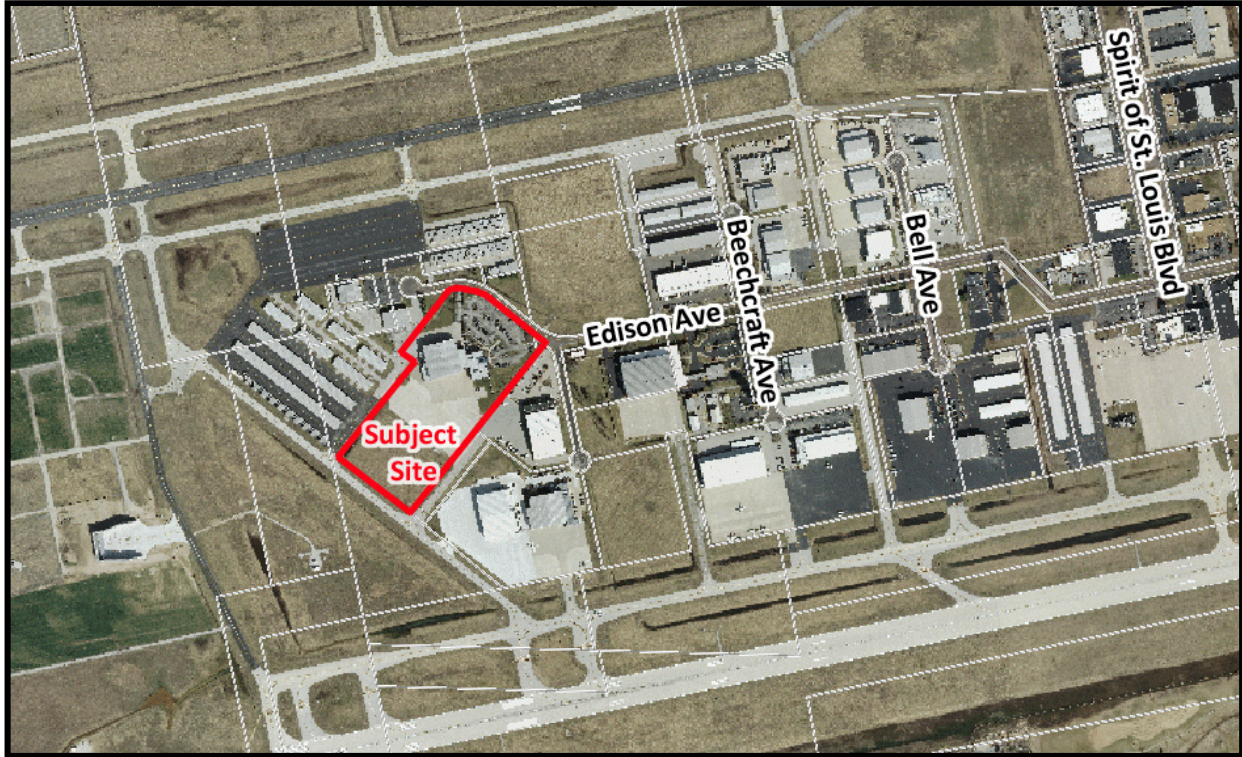
The request is for a 28,460 square foot aircraft storage and light maintenance hangar building located within the Spirit of St. Louis Airpark development. The subject site is zoned "M3" Planned Industrial District and is governed under the terms and conditions of City of Chesterfield Ordinance 1430. The exterior building materials will be comprised of painted metal panel siding. The proposal includes a flat painted metal panel roof.

HISTORY OF SUBJECT SITE

St. Louis County approved a rezoning from an "NU" Non-Urban District to an "M-3" Planned Industrial District for Spirit of St. Louis Airport via Ordinance 2212 prior to the incorporation of the City of Chesterfield. The ordinance was subsequently amended by St. Louis County Ordinance 9642, 11,768, 13,838, and 13,935 and City of Chesterfield Ordinance 656, 870, 1156, and 1312.

The ordinance amendments were to allow for additional uses, amend setbacks, and amend the boundaries of the "M3" Planned Industrial District. The current ordinance governing the site is City of Chesterfield Ordinance 1430.

The existing building was constructed in 1999 and since that time, there have been no alterations to the subject site. The proposed hangar addition is a stand-alone building and will not be physically attached to the existing building; additionally, there are no changes proposed to the existing building.



STAFF ANALYSIS

General Requirements for Site Design:

A. Site Relationships

The subject site is located near the terminus of Edison Avenue and is surrounded by other similar uses within the airport context. Additionally, the proposed building uses similar materials and design as other buildings constructed in the area.

The location of the proposed building is directly adjacent to the airport runways and does not have frontage along Edison Avenue or face the existing parking on site.

B. Circulation System and Access

There are two existing entrances to the site off of Edison Avenue on the northern portion of the site and no changes are proposed to these entrances. A taxiway is proposed on the southern portion of the site with the circulation being governed by the Spirit of St. Louis Airport. Additionally, the access to the taxiway will be restricted to the public.

Similar to vehicular traffic, the pedestrian traffic near the proposed building will be strictly controlled and monitored due to the proximity of the building to the proposed taxiway.

C. Topography

The existing grade of the property is nearly flat. Minimal changes to the existing topography are planned.

D. Retaining Walls

No retaining walls are proposed on the site.

General Requirements for Building Design:

A. Scale

The applicant is proposing a building of similar height and size as the adjacent structures. The tallest point on the building is approximately 37 feet 11 inches; this height is required to ensure that the building can shelter a variety of aircrafts and perform the necessary maintenance to the aircrafts.

There is an ancillary addition to the main hangar, as seen on the East and West Elevations. As noted in the Architect's Statement of Design, the addition is designed to the human scale and by scale provides a strong visual cue for entry. This portion of the addition is set back from the main hangar to avoid potential gusts of air from the engines being directed towards people exiting the proposed hangar.

B. Design

The proposed hangar is similar to other nearby hangars, as well as the existing hangar on the site, in both materials and design. The existing hangar on site is connected to the building associated with the use; however, the proposed hangar is not physically connected to any structures on site. As discussed above, the proposed building is located directly adjacent to the taxiway and does not have direct access to the parking area.

There are no roof parapets included in the design of the hangar and the applicant has confirmed that no rooftop equipment is proposed for this facility.

The two large green areas shown on the colored Amended Site Development Plan on the southern portion of the site will serve as the MSD Stormwater BMP areas.

C. Materials and Color

The building will be primarily comprised of painted metal siding—more specifically pre-engineered steel—which is typical for this building type. The design also includes expansive windows to allow natural light into the space. Additionally, large door openings are proposed in order to promote cross-ventilation. The proposed materials and colors are chosen to match the existing Monsanto Hangar on the site and other buildings within the airport complex.

D. Landscape Design and Screening

There is no additional landscaping planned for the site. The proposal includes grassy areas in locations not occupied by taxiway, runways, and aircraft staging areas.

E. Signage

Signage is not part of the proposal before Architectural Review Board and will be reviewed by Staff.

F. Lighting

The plan proposes two different light fixtures attached to the proposed building. The first fixture, noted as SA on the plan, is a fully-shielded metal halide flood light with a cut-off shield. The purpose of this fixture is to illuminate the tarmac and will be mounted at approximately thirty (30) feet on the building. The applicant is adding a cut-off shield in order ensure there is no light trespass. The second fixture type proposed, noted as SB on the plan, is a fully enclosed metal halide wall pack. This fixture will be mounted at approximately eleven (11) feet on the building. Cut-sheets for both fixture types are included in the packet, as well as a letter from the Project Designer explaining the proposed lighting.

DEPARTMENTAL INPUT

Staff has reviewed the Amended Site Development Plan, Amended Lighting Plan, Amended Architectural Elevations and Architect's Statement of Design. A comment letter has been sent to the applicant regarding the outstanding issues pertaining to Staff's initial review of the Site Development Section Plan.

Staff requests action on the Amended Site Development Plan, Amended Lighting Plan, Amended Architectural Elevations and Architect's Statement of Design for the Spirit of St. Louis Airpark, Monsanto Hangar.

MOTION

The following options are provided to the Architectural Review Board for consideration relative to this application:

- 1) "I move to forward the Amended Site Development Plan, Amended Lighting Plan, Amended Architectural Elevations and Architect's Statement of Design for the Spirit of St. Louis Airpark, Monsanto Hangar, as presented, with a recommendation for approval (or denial) to the Planning Commission."

- 2) "I move to forward the Amended Site Development Plan, Amended Lighting Plan, Amended Architectural Elevations and Architect's Statement of Design for the Spirit of St. Louis Airpark, Monsanto Hangar, to the Planning Commission with the following recommendations..."

Attachments

1. Architectural Review Packet Submittal



**ARCHITECTURAL REVIEW BOARD
Project Statistics and Checklist**

Date of First Comment Letter Received from the City of Chesterfield 11/13/13

Project Title: Monsanto Spirit of St. Louis Hangar **Location:** Chesterfield, MO

Developer: Monsanto Company **Architect:** Farnsworth Group, Inc **Engineer:** Farnsworth Group, Inc

PROJECT STATISTICS:

Size of site (in acres): 11.2 acres **Total Square Footage:** 28,460 **Building Height:** 38'-0"

Proposed Usage: Aircraft Storage & Light Maintenance

Exterior Building Materials: Painted metal panel siding

Roof Material & Design: Painted metal roof panel roofing

Screening Material & Design: None

Description of art or architecturally significant features (if any): The project is intended to fit within the context of the adjacent building structures.

ADDITIONAL PROJECT INFORMATION: N/A

Checklist: Items to be provided in an 11" x 17" format

- Color Site Plan with contours, site location map, and identification of adjacent uses.
- Color elevations for all building faces.
- Color rendering or model reflecting proposed topography.
- Photos reflecting all views of adjacent uses and sites.
- Details of screening, retaining walls, etc.
- Section plans highlighting any building off-sets, etc. (as applicable)
- Architect's Statement of Design which clearly identifies how each section in the Standards has been addressed and the intent of the project.
- Landscape Plan.
- Lighting cut sheets for any proposed building lighting fixtures. (as applicable)
- Large exterior material samples. (to be brought to the ARB meeting)
- Any other exhibits which would aid understanding of the design proposal. (as applicable)
- Pdf files of each document required.

October 31, 2013

City of Chesterfield Architectural Review Board
690 Chesterfield Parkway West
Chesterfield, MO 63017-0760

Re: **Architect's Statement of Design – Monsanto Spirit of St. Louis Hangar**

Dear Architectural Review Board,

This document shall serve as the Architect's Statement of Design, which will identify how each section of the City of Chesterfield's design standards have been addressed for the above referenced project.

1. General Requirements for Site Design

a) Site Relationships

The proposed building will match the architectural components of other buildings adjacent to the proposed site. The building is a stand-alone structure that will not be physically attached to any existing structures. The building is intended to fit into the existing airport context, and will be part of an overall campus of airport structures. It does not sit directly adjacent to the vehicular street, but sits directly adjacent to the airport runways. For the safety of the public and the airport, the building will be off-limits to the public and pedestrian traffic. The public side of the airport and the off-limits side is separated by a fence. Since the building and grounds are not accessible to the public, the following site elements have not been provided: plazas, courtyards, assembly areas, scenic views, fountains, or artwork.

The Federal Aviation Administration (FAA) dictates the orientation of the building. The building is required to be positioned in such a way to not impede visual inspection of the runways from the air traffic control tower. As a result, almost all of the passive building orientation could not be considered. The building does contain a significant amount of glazing to provide natural daylighting. The building doors have large door openings on the long axis to promote cross ventilation.

b) Circulation System and Access

Circulation System is governed by the Spirit of Saint Louis Airport. Pedestrian traffic shall remain within close proximity of the building and the ramp. Pedestrian traffic is strictly controlled and monitored on taxiways. Pedestrian traffic is deemed normal on nearby Edison Ave. Most pedestrian traffic will be from the neighboring building and it will fulfill two roles: maintenance of aircraft and boarding / deplaning aircraft. For the safety of the public and the airport, the building will be off-limits to the public and pedestrian traffic.

All utilities for the site are below grade.

Service and loading areas are not within main circulation. Access for trash shall utilize the existing system. Trash generated by the hangar shall be staged and transported as necessary to the existing building.

Bicycle Traffic is not allowed on working surfaces of the airport. Cyclists shall be served by the existing building.

Vehicular traffic is restricted to aircraft support services. All public vehicular parking will be served by existing areas. Landscaping is limited to grassy areas in locations not occupied by taxiway, runways, and aircraft staging zones.

Public transportation will utilize existing amenities in the surrounding area.

c) Topography

All grading and surface improvements are dictated by water shedding capability of the hangar and the surrounding area. Grading is also designed for aircraft maneuverability. All surrounding areas of the hangar are improved surfaces. Therefore, a trench drain shall be installed between the existing hangar and the new hangar to drain surface runoff from precipitation. The site is nearly flat, minor cut and fill will be used to gain additional elevation under the building footprint to allow proper drainage. The cut and fill shall present a smooth appearance and shall be rounded to the extent as to appear flat.

d) Retaining Walls

There are no new retaining walls in the project.

2. General Requirements for Building Design

a) Scale

Hangar design is dictated by the sheltering and maintenance of the aircraft. The proposed hangar is designed to be visually neutral for pilots on approach. The hangar pattern shall match existing buildings and give a cohesive sightline. Hangars dominate the area and they use light color schemes. The proposed hangar shall visually meld in the existing fabric. The ancillary addition portion of the hangar design shall be designed to the human scale and by scale provides a strong visual cue for entry. The ancillary addition shall also be setback from the main West elevation of the building to avoid potential gusts of air from engines affecting people exiting the hangar.

b) Design

The design shall incorporate colors from existing cues and are intended to match the existing Monsanto building colors.

The proposed hangar shall not incorporate any overt signage of ownership, nor shall it impinge on the existing area with a stylized exterior of corporate branding.

The proposed hangar is designed in accordance with the International Energy Conservation Code of 2009 with an insulated envelope. The design also incorporates extensive windows. This character encourages energy efficiency with natural daylight. The building has large door openings on the long axis to promote cross-ventilation.

The entry is noted by the ancillary addition and its recessed position. Overt protection from elements is not necessary, but geometrically the position offers significant protection from the environment by being a recessed alcove on the Northwest side. Prevailing winds are from the South.

Painting and trim of temporary barriers shall be in accordance with the guidelines as set forth by the Spirit of Saint Louis Airport.

An emergency generator will be present on-site. This will be screened with natural vegetation. All other exterior equipment will be screened naturally.

c) Materials and Colors

The materials and colors of the building will match the existing Monsanto hangar and other buildings within the airport context. Finish is a durable and high-performance paint. Color shall be coordinated with the existing hangar and shall blend in with other hangars on-site.

The design incorporates a pre-engineered steel building, which is typical solution for this building type. It is a highly durable hangar material and structure.

Aircraft needs shall dictate the paving surface construction. Pedestrian traffic areas in public zones already in place are designated by different pavements to clearly delineate pedestrian areas.

Landscaping is limited to grassy areas in locations not occupied by taxiway, runways, and aircraft staging zones. The exterior equipment and emergency generator shall be screened with natural landscaping.

Additional fencing is not proposed.

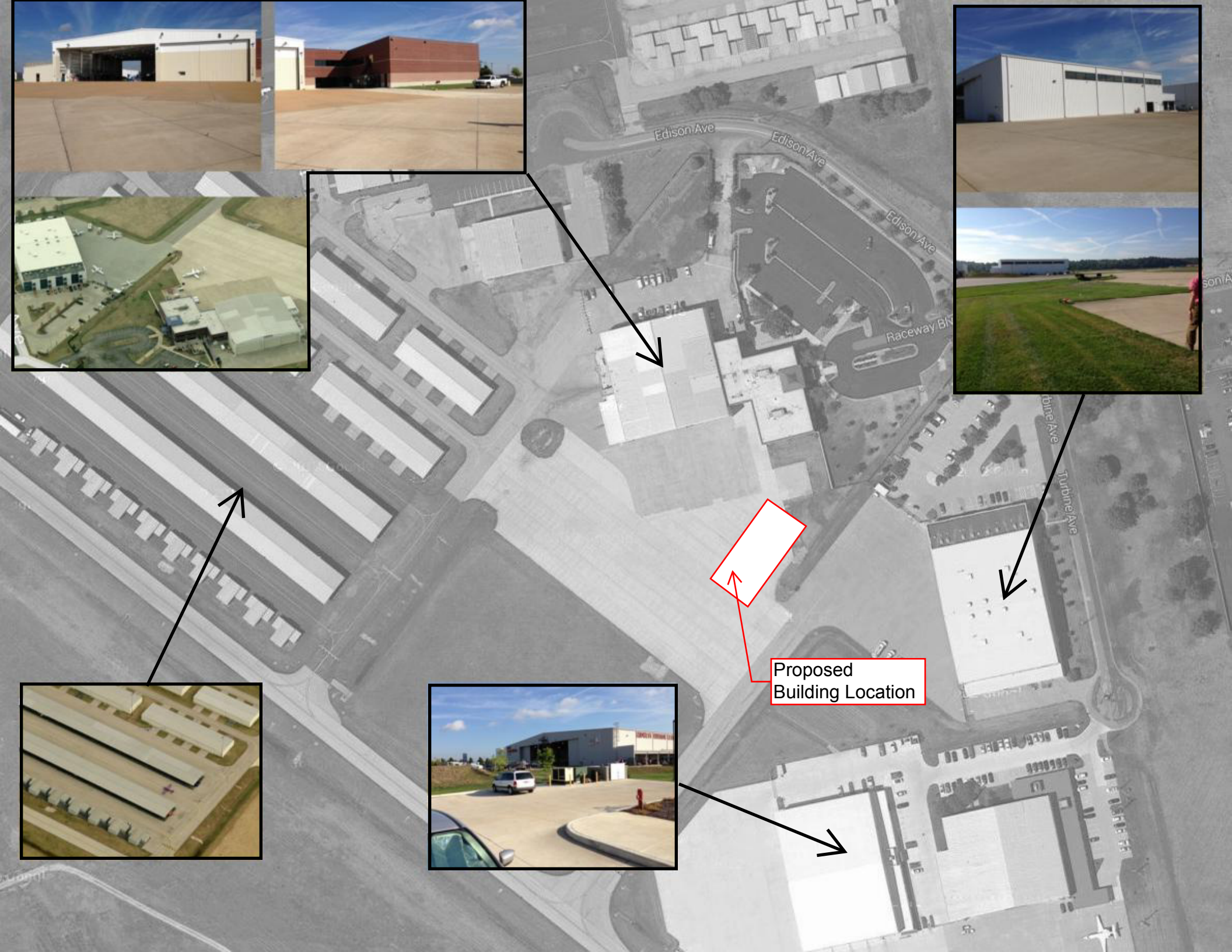
d) Signage

Signage is minimized to areas where it is required by local code. As mentioned above, the building shall not utilize any corporate branding or signage.

e) Lighting

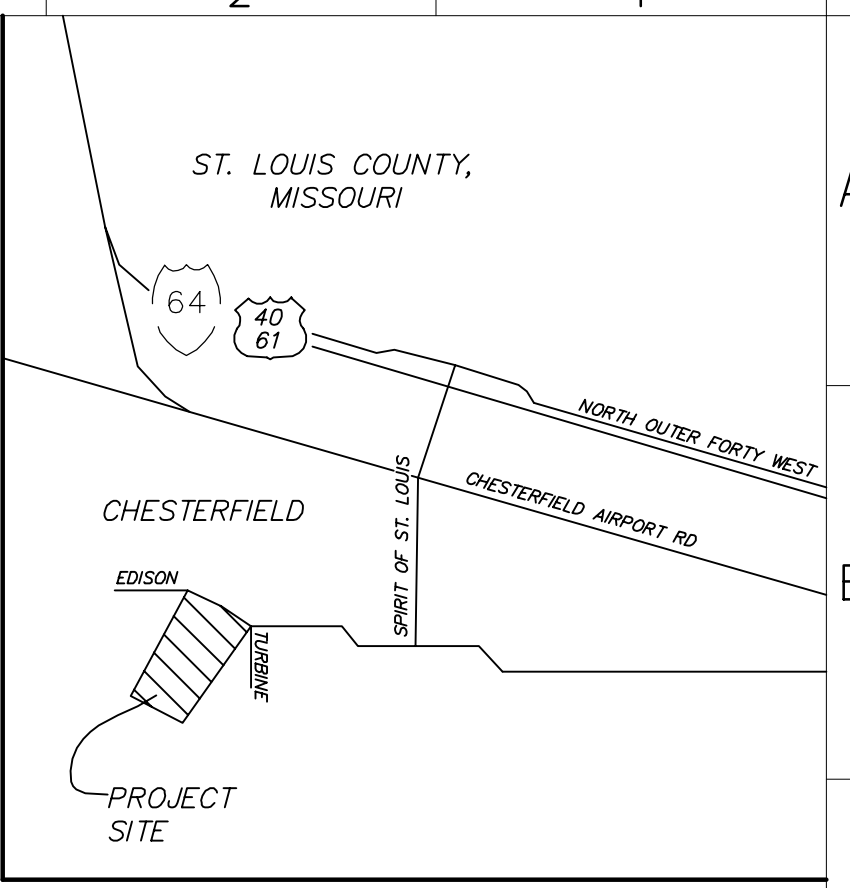
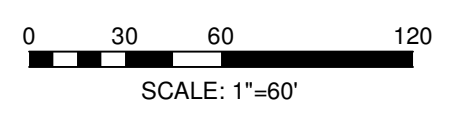
Lighting is used for safety and security. The exterior lighting will adhere to the local code as governed within the limits of the City of Chesterfield. Exterior lighting will be utilized and selected in such a way to eliminate or reduce light pollution.

End of Statement

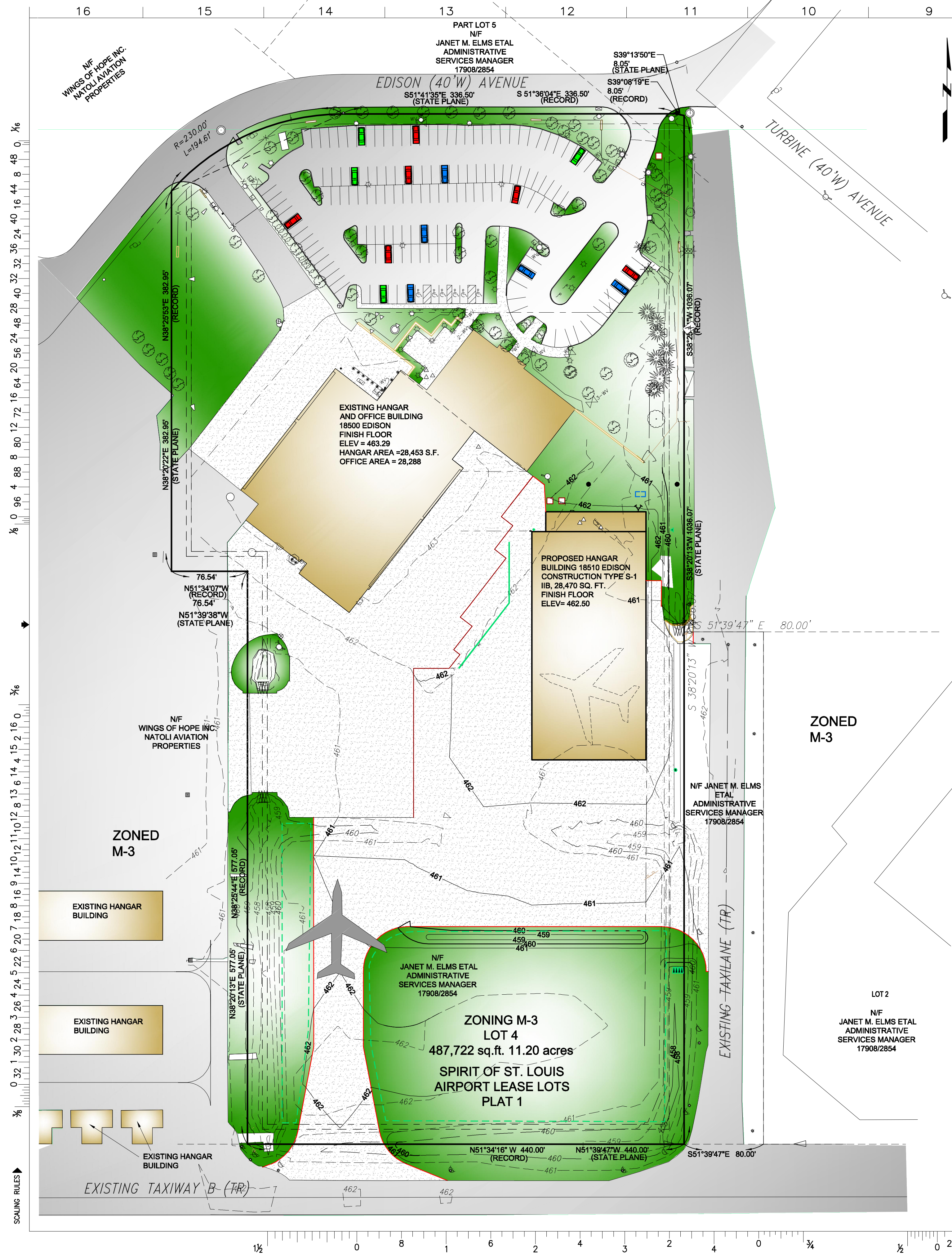


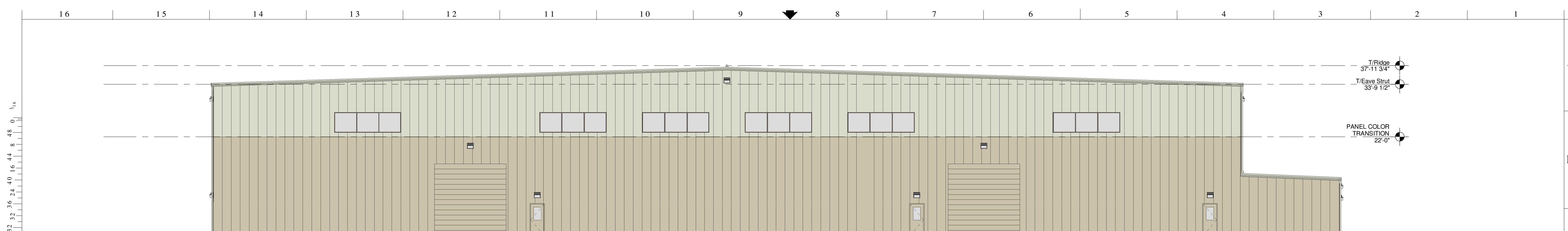
Proposed Building Location

AMENDED SITE DEVELOPMENT PLAN MONSANTO SPIRIT OF ST. LOUIS HANGAR

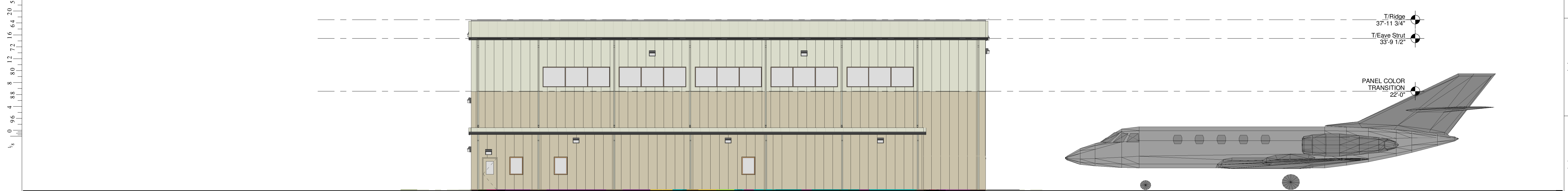


Location Plan
Scale: Not To Scale

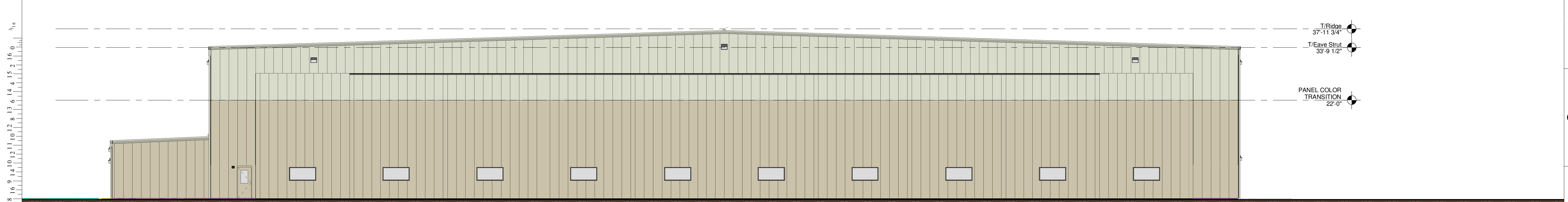




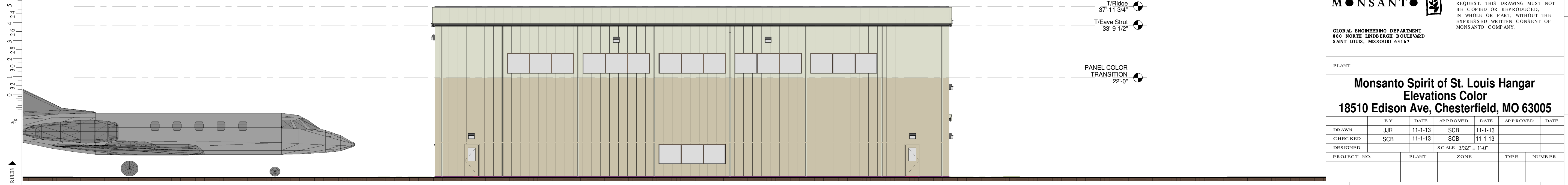
East Elevation
Scale: 3/32" = 1'-0"



North Elevation
Scale: 3/32" = 1'-0"



West Elevation
Scale: 3/32" = 1'-0"



South Elevation
Scale: 3/32" = 1'-0"

SCALING RULES

11/18/2013 1:30:30 PM



CAD FILE NAME

PRINTS ISSUED TO FIELD BY

DATE

REV

REV	PROJ.	BY	DATE	DESCRIPTION	CHKD	APPD

MONSANTO

GLOBAL ENGINEERING DEPARTMENT
800 NORTH LINDBERGH BOULEVARD
SAINT LOUIS, MISSOURI 63167

PLANT

**Monsanto Spirit of St. Louis Hangar
Elevations Color
18510 Edison Ave, Chesterfield, MO 63005**

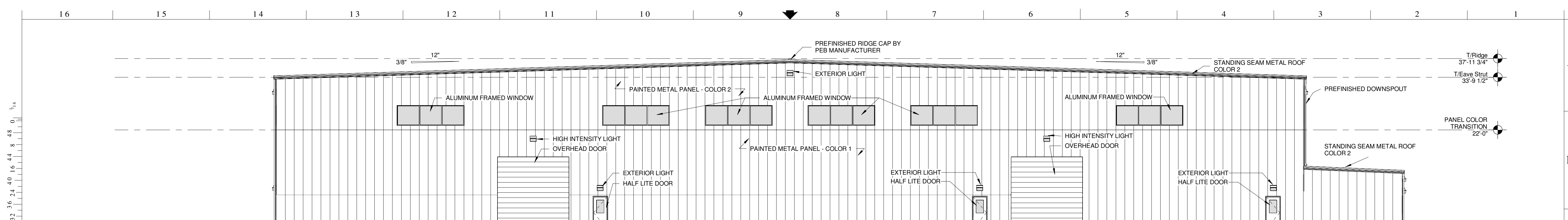
BY	DATE	APPROVED	DATE	APPROVED	DATE

DRAWN	CHECKED	DESIGNED	SCALE
JUR	SCB	SCB	3/32" = 1'-0"

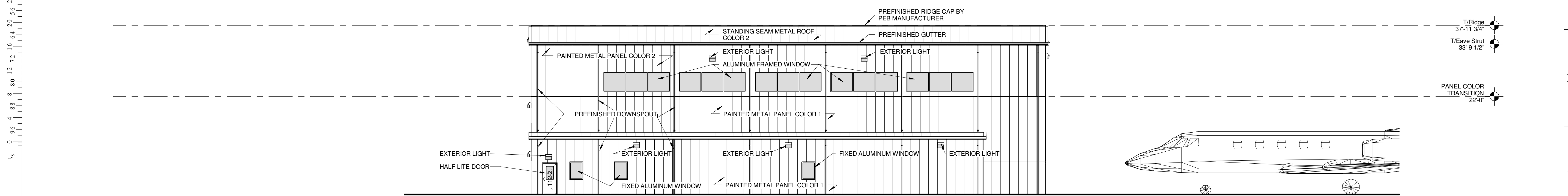
PROJECT NO.	PLANT	ZONE	TYPE	NUMBER

SIZE	PLANT DRAWING NO.	REV
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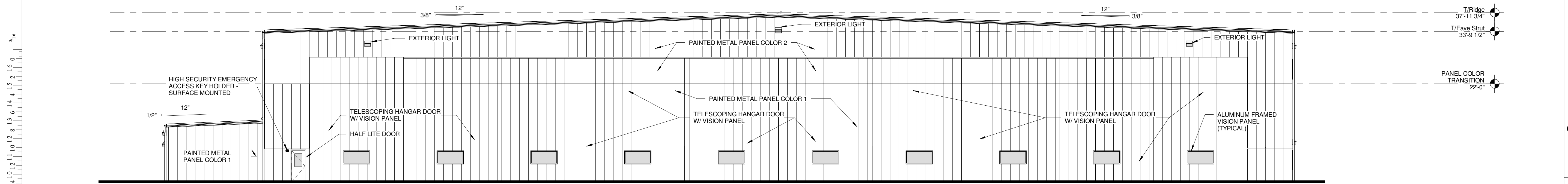
THIS DRAWING IS THE PRIVATE PROPERTY OF MONSANTO COMPANY AND MUST BE RETURNED UPON REQUEST. THIS DRAWING MUST NOT BE COPIED OR REPRODUCED, IN WHOLE OR PART, WITHOUT THE EXPRESSED WRITTEN CONSENT OF MONSANTO COMPANY.



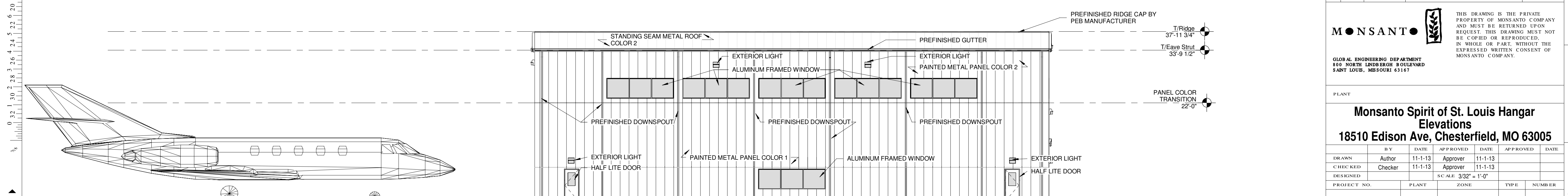
4 East Elevation
Scale: 3/32" = 1'-0"



3 North Elevation
Scale: 3/32" = 1'-0"



2 West Elevation
Scale: 3/32" = 1'-0"



1 South Elevation
Scale: 3/32" = 1'-0"

REV	PROJ.	BY	DATE	DESCRIPTION	CHKD	APPD

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GLOBAL ENGINEERING DEPARTMENT
 800 NORTH LINDBERGH BOULEVARD
 SAINT LOUIS, MISSOURI 63167

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Monsanto Spirit of St. Louis Hangar Elevations
18510 Edison Ave, Chesterfield, MO 63005

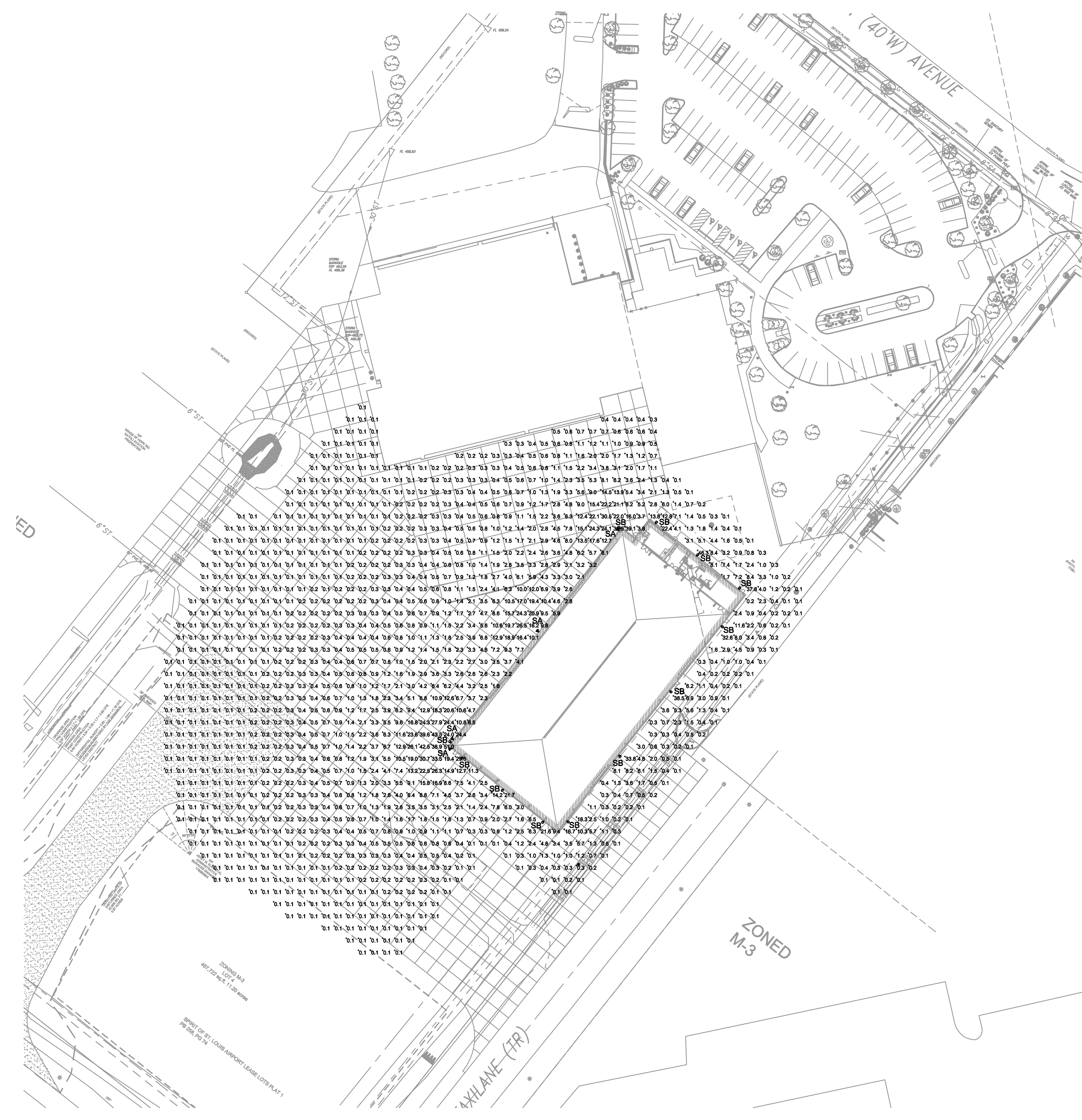
DRAWN	CHECKED	DESIGNED	PROJECT NO.	PLANT	ZONE	TYPE	NUMBER
Author	Checker						

DATE	APPROVED	DATE	APPROVED
11-1-13		11-1-13	

SCALE: 3/32" = 1'-0"
 SIZE: PLANT DRAWING NO. **A3.1b**



Ave



LUMINAIRE SCHEDULE

FIXTURE NUMBER	MANUFACTURER	CATALOG NUMBER	NO. OF LAMPS	LAMP TYPE	VOLTAGE	MOUNTING HEIGHT	DESCRIPTION
SA	WIDELITE	FM-1500 C 277 TDB WB-1-(F) ALF-10-F-L-LENS-(F) SK-100-(F)	1	1500W METAL HALIDE	277	VARIES	INDUSTRIAL FLOODLIGHT
SB	COOPER LIGHTING	WKP 40 M CWI 7 FC BZ	1	400W METAL HALIDE	277	VARIES	WALL MOUNTED LUMINAIRE

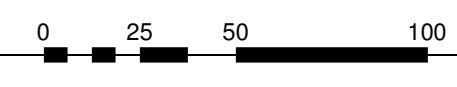
LIGHT FIXTURE SCHEDULE NOTES:

- COORDINATE WITH SUPPLIER ON LENGTH AND REQUIRED FITTINGS FOR CONTINUOUS FIXTURE AS SHOWN ON DRAWINGS WITH UNIFORM ILLUMINATION ALONG FIXTURE INCLUDING CORNERS.
- CONTRACTOR SHALL REMOVE ALL FINGER PRINTS FROM LENSES, REFLECTORS, AND LOUVERS FOLLOWING LIGHT FIXTURE INSTALLATION.
- FOR APPROVAL OF FIXTURES FROM MANUFACTURERS OTHER THAN THOSE LISTED, PROPOSED FIXTURE CUTS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER TEN (10) BUSINESS DAYS PRIOR TO BID FOR REVIEW. FINAL DETERMINATION OF 'EQUAL' STATUS FOR BIDDING SHALL BE THE SOLE DETERMINATION OF THE ARCHITECT/ENGINEER.

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #3	+	2.4 fc	51.0 fc	0.1 fc	510.0:1	24.0:1

FC = Foot candles (unit of luminance)

Site Photometrics
Scale: 1"=50'



REV	PROJ.	BY	DATE	DESCRIPTION	CHKD
					APPD

MONSANTO

GLOBAL ENGINEERING DEPARTMENT
800 NORTH LINDBERGH BOULEVARD
SAINT LOUIS, MISSOURI 63167

PLANT

Monsanto Spirit of St. Louis Hangar
Site Photometrics
18510 Edison Ave, Chesterfield, Mo 63005

DRAWN	BY	DATE	APPROVED	DATE	APPROVED	DATE
CHECKED	BPH	11-27-13				
DESIGNED	BAS	11-27-13				

PROJECT NO. 0130858.00 PLANT ZONE TYPE NUMBER

SIZE PLANT DRAWING NO. **ES1.1P** REV

CAD FILE NAME 0130858.00-ES1P SITE PHOTOMETRICS.DWG FIELD BY DATE REV

To,
Purvi Patel
Project Planner
City of Chesterfield
690 Chesterfield Parkway West
Chesterfield, MO 63017

Subject : Monsanto Hangar at Spirit of Chesterfield Airport in Chesterfield, Missouri

Basis of Design for Exterior Lighting

We intend to use a fully enclosed 1500 watts Metal Halide flood light fixture with a cut-off shield for illuminating the tarmac (labeled as type 'SA'), mounted at +30'-0, for illumination of the tarmac/apron area. This is going to suffice the City of Chesterfield ordinance requirements for a fully enclosed metal halide fixture and shielding (to fulfill 'Dark Sky' environment).

Also, intend to use a fully enclosed 400 watts Metal Halide wall pack light fixture with full cut-off for general illumination around the exterior of the new hangar (labeled as type 'SB'), mounted at +11'-0".

Please feel free to give me a call with any questions.

Thank you,

Sincerely,



Basit A. Syed
Senior Project Designer
Farnsworth Group, Inc.

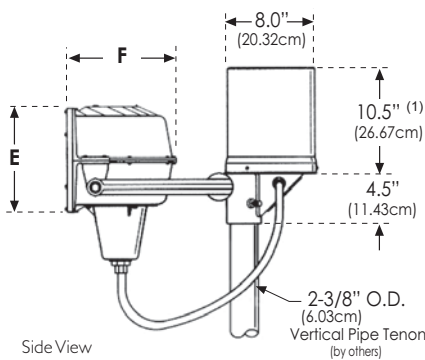
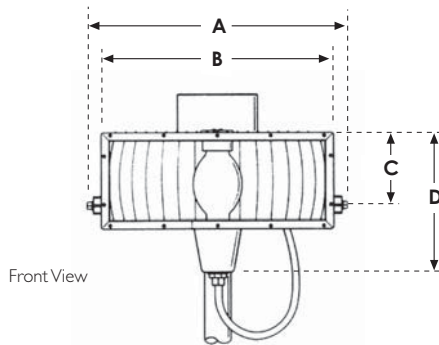
F Series (available MF Series: Marine Listed with optional hazardous location listing)

Industrial Floodlight - 250-1500 watt HID

Type: SA	Job: Monsanto Hangar	Approvals:				
Catalog Number:		WB-1, ALF-10-F-L/LENS, SK-100				
FM-1500	C - 277					
Series/Source - Wattage (Include M prefix to designate Marine Listed series)	Optics (Reflector / Distribution)	Voltage	Options (Factory Installed)	Finish	Accessories (Field Installed)	Date: 11/27/13
						Page 1 of 6

Overall Dimensions

For Reference Only



1) With certain dimming options, height of ballast container increases to 14.5" (36.83 cm).

Weight: 66 lbs (29.9 kg)

400 Watt (max) and 1000W PS unit - 23" housing

Note: 23" housing is standard for F series 1000W PS units with BB7 lamp for best lamp stability. 26" housing is required on MF series 1000W PS units with HAZ option (hazardous location listed).

A	B	C	D	E	F
25.5" (64.77cm)	23.0" (58.42cm)	7.3" (18.42cm)	13.8" (34.93cm)	9.5" (24.13cm)	10.0" (25.40cm)

1000-1500 Watt - 26" housing

Exception: Standard F series 1000W PS unit with BB7 lamp requires 23" housing for socket stability. See note above.

A	B	C	D	E	F
27.5" (69.85cm)	26.0" (66.04cm)	9.3" (23.50cm)	18.0" (45.72cm)	13.3" (33.66cm)	11.5" (29.21cm)

EPA data shown on page 3.

Specifications



Housing

Die-cast aluminum housing shall be of marine-grade alloy with integrally cast, heat dissipating fins and a built-in aiming device. Dust-Tite housing shall be totally sealed from particulate entry. Standard unit constructed to IP65. MF Series, with Marine Listing, constructed to IP66.

Optical Assembly

High purity, 94% minimum reflectivity anodized aluminum reflectors, assembled without machine forming to assure maximum efficiency.

Lamp Access

A gasketed and removable socket assembly provides lamp access from below. Allows re-lamping without re-aiming. High temperature gasket provides positive, weatherproof seal.

Lens

Lens shall be 7/32" clear tempered glass to withstand thermal and physical shock, held in place by an aluminum (extruded: 400W, die-cast: 1000/1500W) lens frame and sealed to housing flange by one extruded, high temperature gasket and stainless steel screws to provide a sealed optical assembly.

Socket

Pre-wired grip-type mogul base socket. Glass end of the lamp is held in precise photometric alignment and protected from breakage by a Stabilux socket.

Ballast

SilentGuard high power factor ballast with reliable starting down to -29°C (-20°F) for Metal Halide, -34°C (-30°F) for Pulse Start Metal Halide, and -40°C (-40°F) for High Pressure Sodium. Ballast has Class H, 180°C (356°F) rated insulation. Crest factor does not exceed 1.8. Core and coil are encapsulated in a polyester resin compound (standard SilentGuard feature) with the capacitor located outside the encapsulation for ease of maintenance. Ballast components are enclosed in a drawn aluminum container. The fixture and ballast are arranged as separate but integral components.

Mounting

Standard cast aluminum ballast base provides integral mastfitter; suitable for mounting to a 2-3/8" O.D. vertical tenon. Alternate mounting accessories available.

Finish

Standard finish shall be textured gray UltraClad polyester powder coating, 2.5 mil nominal thickness, electrostatically applied and oven cured. All components shall be thoroughly cleaned by a 5 stage pre-treatment process including iron phosphate bath and non-chromic acid etching stages, ensuring optimum performance characteristics. Other colors may be specified.

Listings

Standard unit is ETL/cETL listed to the UL 1598 standard, suitable for Wet Locations. Available ETL/cETL listed to the UL 1598A standard - Marine Listing option (MF Series). Available ETL/cETL listed to the UL 844 standard - Hazardous Location Listing (HAZ option for MF Series).

The quality systems of this facility have been registered by UL to the ISO 9001 Series Standards.

Warranty / Terms and Conditions

7 Year Limited Warranty

The current Philips Wide-Lite's Warranty may be found at www.wide-lite.com (keyword: warranty) as well as current Standard Terms and Conditions of Sale (keyword: terms).

All sales of items in this catalogue shall be subject to the Philips Wide-Lite Standard Terms and Conditions of Sale current at the time of shipment. If you do not have a copy of the Philips Wide-Lite Warranty and Standard Terms, please contact the factory for same prior to ordering.



Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled 'Contain Mercury' and/or with the symbol 'Hg'. Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycle and disposal can be found at www.lamprecycle.org.

F Series (available MF Series: Marine Listed with optional hazardous location listing)

Industrial Floodlight - 250-1500 watt HID

Type: **SA** Job: **Monsanto Hangar** Page 2 of 6



Series/Source-Wattage	Optics (Reflector/Distribution) ⁵	Voltage
<input type="checkbox"/> M Marine Type UL1598A Floodlight ¹ <i>Metal Halide</i> ² <input type="checkbox"/> EM-1000 <input checked="" type="checkbox"/> EM-1500 <i>Pulse Start Metal Halide</i> ³ <input type="checkbox"/> FP-250 <input type="checkbox"/> FP-350 <input type="checkbox"/> FP-400 <input type="checkbox"/> FP-1000 Standard unit with BB7 lamp uses 23" ho using. HAZ unit requires 26" ho using. <i>High Pressure Sodium</i> <input type="checkbox"/> FS-400 <input type="checkbox"/> FS-1000 ⁴	<input type="checkbox"/> A Specular Reflector Wide <input type="checkbox"/> B Specular Reflector Medium <input checked="" type="checkbox"/> C Diffused Reflector Very Wide <input type="checkbox"/> D Diffused Reflector Wide	<input type="checkbox"/> 120 <input type="checkbox"/> 208 <input type="checkbox"/> 240 <input checked="" type="checkbox"/> 277 <input type="checkbox"/> 480 <input type="checkbox"/> QV ⁶



Options (Factory Installed)	Finish	Accessories (Ordered Separately)
<input type="checkbox"/> BL ⁷ Be-Level <input type="checkbox"/> IQ Hot/Cold Quartz Restrike <input type="checkbox"/> IQ40 Hot/Cold Quartz Restrike for Cold Weather starts to -40°C (-40°F) <input type="checkbox"/> F-F1 ⁸ Single Fuse (120/277V) <input type="checkbox"/> F-F2 ⁸ Double Fuse (208/240/480V) <input type="checkbox"/> IB ⁹ Less Ballast (remote mount ballast) <input type="checkbox"/> CO ¹⁰ Cutoff optic <input type="checkbox"/> HAZ ¹¹ Hazardous Location listed <input type="checkbox"/> 50HZ 50 Hz Ballast operation (consult factory) <input type="checkbox"/> TG Teflon bonded to glass lens <input type="checkbox"/> PBX Pre-wired ballast (X) = SO cord length in feet: 3, 6 or 10 <input type="checkbox"/> EPXY-C/D-WHT White Epoxy coated <input type="checkbox"/> EPXY-C/D-GR Gray Epoxy coated	<input type="checkbox"/> TGR Textured Gray <input type="checkbox"/> TBK Textured Black <input checked="" type="checkbox"/> TDB Textured Dark Bronze <input type="checkbox"/> TSA Textured Satin Aluminum <input type="checkbox"/> TWHT Textured White <input type="checkbox"/> TGN Textured Green <input type="checkbox"/> M(F) Marine Grade finish; Two-part epoxy primer and a polyurethane top coat especially suited for marine environments and coastal applications. (F) = Specify color. Example: MWHT = Marine Grade White finish Consult factory for color availability.	<input type="checkbox"/> F-F1-KIT (F) Single Fuse Kit (120/277V) <input type="checkbox"/> F-F2-KIT (F) Double Fuse Kit (208/240/480V) <input type="checkbox"/> MF-1-(F) ⁹ Mastfitter <input type="checkbox"/> TH-1-(F) ⁹ Lowering Adapter (Tie-on Hanger) <input type="checkbox"/> HV-1-(F) ⁹ Tuning Base <input checked="" type="checkbox"/> WB-1-(F) Wall Bracket <input type="checkbox"/> WB-5-(F) Wiring Box (used with WB-1 & surface mounted conduit feed) <input type="checkbox"/> PX-1-(F) Cross-Arm Bracket <input type="checkbox"/> AL-4-F Auxiliary Polymer Lens (23" ho using) <input type="checkbox"/> AL-10-F Auxiliary Polymer Lens (26" ho using) <input type="checkbox"/> AIF-4-F/L/IENS-(F) Auxiliary Lens Frame (23" ho using) <input checked="" type="checkbox"/> AIF-10-F/L/IENS-(F) Auxiliary Lens Frame (26" ho using) <input type="checkbox"/> AIF-10-F/L/GLASS-IV8-(F) 26" Lens Frame with lower, <input type="checkbox"/> IENS-AIF-F-4-GLASS-(color) Colored Lens (23" ho using); (color) = lens color <input type="checkbox"/> IENS-AIF-F-10-GLASS-(color) Colored Lens (26" ho using); (color) = lens color <input type="checkbox"/> PM-1 Wood Pole Mounting Kit (with one U-ams) <input type="checkbox"/> PM-2 Wood Pole Mounting Kit (with two U-ams) <input type="checkbox"/> PM-3 Wood Pole Mounting Kit (with three U-ams) <input type="checkbox"/> PM-4 Wood Pole Mounting Kit (with four U-ams) <input type="checkbox"/> SMB-400 ⁹ Shock Mounting Bracket (23" ho using) <input type="checkbox"/> SMB-1000 ⁹ Shock Mounting Bracket (26" ho using) <input type="checkbox"/> FB-1 Flat Base Mount <input type="checkbox"/> PCM-1 Photo cell Receptacle Mounting Bracket <input type="checkbox"/> SK-40-(F) Cutoff Shield (23" ho using) <input checked="" type="checkbox"/> SK-100-(F) Cutoff Shield (26" ho using) (F) = specify finish

- "M" prefix along with series designates UL1598A Marine Listed option which includes additional Marine Grade gasketing. Unit is specially constructed with low copper content alloy (less than 0.4%) for corrosion control in harsh coastal and industrial environments or wherever marine type units are required. Meets U.S. Coast Guard specifications for marine type applications.
- Wattages listed assume the use of clear lamps. Coated lamps also available for 1000W metal halide.
- For acceptable performance, no tie position orientation specific nature of Pulse Start Lamps. Operation of Pulse Start lamps in other than recommended burning positions may result in significantly reduced performance. Consult factory to determine if a suitable Pulse Start lamp is available for the intended application.
- In 1000W HPS units, the standard SO cord from ballast to optic head is replaced with flex conduit. Less ballast options and accessories are not available.
- A and B reflectors are of Specular Miro 4 aluminum; C and D reflectors are of Hammer Tone Miro 9 aluminum. Curves reflect coated lamp performance.
- Allows field selection of 120/208/240/277V. (No 480V). Certain options may require voltage selection as well.
- Suitable for HPS in any aiming position.
- Fusing not available on MF series (marine listed) units.
- Remote mount ballast options and accessories are not available with 1000W HPS or on MF series (marine listed) units.
- Available with Band D reflectors only.
- HAZ listing available on MF units only, 400W and 1000W only.

F Series (available MF Series: Marine Listed with optional hazardous location listing)

Industrial Floodlight - 250-1500 watt HID

Type: SA	Job: Monsanto Hangar	Page 3 of 6
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Beam Spread Data

Reflector Type	Source	Wattage	Max Candle Power	Hx V NEMA	Horizontal X Vertical		
					10% Field Angle	50% Beam Angle	
A	Specular Wide	MHcoated	1000W	43,000	7 x 7	147° x 140°	90° x 49°
			1500W	351,000	3 x 4	38° x 62°	14° x 34°
B	Specular Medium	MHclear	1000W	249,000	3 x 4	38° x 62°	14° x 34°
			1500W	351,000	3 x 4	38° x 62°	14° x 34°
		MHcoated	1000W	79,000	6 x 7	127° x 133°	36° x 44°
			1500W	351,000	3 x 4	38° x 62°	14° x 34°
		PSclear	250W	52,000	3 x 4	38° x 62°	14° x 34°
			400W	90,000	3 x 4	38° x 62°	14° x 34°
			1000W	260,000	3 x 4	38° x 62°	14° x 34°
		HPSclear	400W	117,000	3 x 4	39° x 53°	15° x 26°
			1000W	236,000	5 x 5	88° x 87°	13° x 41°
		C	Diffused Very Wide	MHclear	1000W	58,000	7 x 6
1500W	82,000				7 x 6	137° x 129°	83° x 37°
MHcoated	1000W			37,000	7 x 7	150° x 144°	93° x 55°
	1500W			351,000	3 x 4	38° x 62°	14° x 34°
PSclear	250W			52,000	7 x 6	137° x 129°	83° x 37°
	400W			90,000	7 x 6	137° x 129°	83° x 37°
	1000W			260,000	7 x 6	137° x 129°	83° x 37°
HPSclear	400W			26,000	7 x 6	137° x 125°	105° x 35°
	1000W			50,000	7 x 7	138° x 135°	85° x 58°
D	Diffused Wide			MHclear	1000W	133,000	5 x 5
		1500W	187,000		5 x 5	93° x 76°	28° x 36°
		MHcoated	1000W	37,000	7 x 7	150° x 144°	93° x 55°
			1500W	351,000	3 x 4	38° x 62°	14° x 34°
		PSclear	250W	52,000	5 x 5	93° x 76°	28° x 36°
			400W	90,000	5 x 5	93° x 76°	28° x 36°
			1000W	260,000	5 x 5	93° x 76°	28° x 36°
		HPSclear	400W	26,000	7 x 6	137° x 125°	105° x 35°
			1000W	50,000	7 x 7	138° x 135°	85° x 58°

Distribution Guide & Ballast Data^{1,4,5}

Source Type ⁽¹⁾	Catalog Number	Reflector Type	Lamp Envelope	ies File Name	ANSI Code	Line Current				Line Wats
						120 / 208 / 240 / 277 / 480				
MH Clear Lamps	FM-1000	B	B156	fm100bss.ies	M47 / H36	9.2 / 5.6 / 4.7 / 4.1 / 2.4				1080
	FM-1000	C	B156	fm100css.ies	M47 / H36	9.2 / 5.6 / 4.7 / 4.1 / 2.4				1080
	FM-1000	D	B156	fm100dss.ies	M47 / H36	9.2 / 5.6 / 4.7 / 4.1 / 2.4				1080
	FM-1500	B	B156	fm150bss.ies	M48	14.0 / 8.0 / 7.1 / 6.1 / 3.5				1625
	FM-1500	C	B156	fm150css.ies	M48	14.0 / 8.0 / 7.1 / 6.1 / 3.5				1625
	FM-1500	D	B156	fm150dss.ies	M48	14.0 / 8.0 / 7.1 / 6.1 / 3.5				1625
MH Coated Lamps	FM-1000	A	B156	fmc10ass.ies	M47 / H36	9.2 / 5.6 / 4.7 / 4.1 / 2.4				1080
	FM-1000	B	B156	fmc10bss.ies	M47 / H36	9.2 / 5.6 / 4.7 / 4.1 / 2.4				1080
	FM-1000	C	B156	fmc10css.ies	M47 / H36	9.2 / 5.6 / 4.7 / 4.1 / 2.4				1080
	FM-1000	D	B156	fmc10dss.ies	M47 / H36	9.2 / 5.6 / 4.7 / 4.1 / 2.4				1080
FS Clear Lamps	FP-400	B	B137	fp40bss.ies	M135 / M155	4.0 / 2.2 / 1.9 / 1.8 / 1.0				456
	FP-400	C	B137	fp40css.ies	M135 / M155	4.0 / 2.2 / 1.9 / 1.8 / 1.0				456
	FP-400	D	B137	fp40dss.ies	M135 / M155	4.0 / 2.2 / 1.9 / 1.8 / 1.0				456
	FP-1000	B	B137	fp100bss.ies	M141	9.0 / 5.2 / 4.5 / 3.9 / 2.4				1080
	FP-1000	C	B137	fp100css.ies	M141	9.0 / 5.2 / 4.5 / 3.9 / 2.4				1080
	FP-1000	D	B137	fp100dss.ies	M141	9.0 / 5.2 / 4.5 / 3.9 / 2.4				1080
HPS Clear Lamps	FS-400	B	ED18	fs40bss.ies	S51	4.1 / 2.5 / 2.1 / 1.9 / 1.1				467
	FS-400	C	ED18	fs40css.ies	S51	4.1 / 2.5 / 2.1 / 1.9 / 1.1				467
	FS-400	D	ED18	fs40dss.ies	S51	4.1 / 2.5 / 2.1 / 1.9 / 1.1				467
	FS-1000	B	E25	fs100bss.ies	S52	9.5 / 5.5 / 4.8 / 4.2 / 2.5				1100
	FS-1000	C	E25	fs100css.ies	S52	9.5 / 5.5 / 4.8 / 4.2 / 2.5				1100
	FS-1000	D	E25	fs100dss.ies	S52	9.5 / 5.5 / 4.8 / 4.2 / 2.5				1100

- The F Series can accommodate a variety of other wattages and lamps. Consult factory.
- MH = Metal Halide, PS = Pulse Start Metal Halide, HPS = High Pressure Sodium.
- All ballasts are CWA (Constant Wattage Autotransformer).
- LER values and efficiencies are not published. See NEMA Standard IE5B.
- Intended aiming and possible lamp orientation restrictions should be considered when selecting floodlight.

EPA Effective Projected Area in Ft ²	
23" housing	1.85
26" housing	2.93

F Series (available MF Series: Marine Listed with optional hazardous location listing)

Industrial Floodlight - 250-1500 watt HID

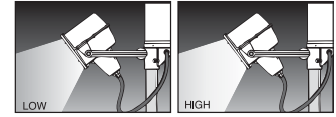
Type: SA	Job: Monsanto Hangar	Page 4 of 6
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Option Details (Factory Installed)

BL Bi-Level

Note: Suitable for HPS in any aiming position. Consult factory when specifying dimming with Metal Halide.

Bi-Level provides high / low level of lamp output with up to 50% power consumption. Zero cross-over network avoids strobing and lamp dropout.



IQ Hot/Cold Quartz Restrike

Note: Standard 150 watt (120V) double contact bayonet base socket.

Combine Quartz wattage may not exceed HID lamp wattage.

IQ - Provides LiteMatic operation for fixtures with 120V or multi-tap ballasts.

LiteMatic Operation



Normal Start: Main and Quartz lamps both energized.

Main Lamp Reaches Approximately 40% of Rated Output: Quartz lamp automatically extinguishes (combined lamp currents never exceed that of main lamp at 100% output).

When Arc Extinguished: Auxiliary quartz lamp automatically energized when power is restored.

Main Lamp Reaches 40% of Rated Output: Quartz lamp automatically extinguishes.

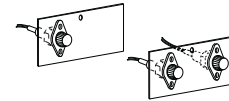
IQ40 Hot/Cold Quartz Restrike for Cold Weather Starts to -40°C (-40°F)

F-F1 Single Fuse (120V/277V)

F-F2 Double Fuse (208V/240V/480V)

Note: Fusing not available on MF series (marine listed) units. If ordering QV ballast, voltage must be specified.

Fuses are KIK/KIK30 amp unless otherwise specified.



IB Remote Ballast (remote mount ballast)

Note: Remote mount ballast options and accessories are not available with 1000W HPS or on MF series (marine listed) units.

Optic unit with mounting arms shipped without standard integral mastfitter and ballast assembly. Requires mounting accessory MF-1, TH-1, HV-1, SMB-400 or SMB-1000 (shipped separately).

CO Cutoff Optics

Note: Available with Band Deflectors only.

For applications where glare control is needed.

Requires use of proper cutoff shield accessory: SK-40-(F) or SK-100-(F) (shipped separately).

HAZ Hazardous Location Listed

Limited to 400W and 1000W units only.

Available on MF (marine listed) units only. (See Listing on page 1.)

Class I, Division 2, Groups A, B, C and D.

Class I Division 2, Groups A, B, C, D

Catalog No.	Measured Max. Internal Operating Temperature	Measured Max. External Operating Temperature	TRating
MFM-1000	339°C	163°C	T1
MFP-400	316°C	131°C	T1
MFP-1000*	339°C	163°C	T1
MFS-400	374°C	110°C	T1
MFS-1000	373°C	123°C	T1

*The max limits require 26" housing for MF Series 1000W PS unit with UL844 listed HAZ option rating. Data supplied by Texas Research Institute, Inc., connected to 23°C. Note: The classification of an area as to class, division and groups and the use of UL844 listed luminaires in such areas is solely the judgement of the owner, insurance carrier and the authority having jurisdiction.

50HZ 50 Hz Ballast Operation (consult factory)

Specified for applications (outside the US) where 50 Hertz operation is standard.

TG Teflon Bonded to Glass Lens

5 MIL Teflon® bonded to standard glass lens.

PBX Pre-wired ballast, specify length of SO cord in ft: (X = 3, 6 or 10)

Allows wiring connections to be made in remote mounted junction box. Useful with various mounting accessories such as WB1 wall bracket.

EPXY-CID-WHT White Epoxy Coated

EPXY-CID-GR Gray Epoxy Coated

Durable coating offers protection against mildly acidic or alkaline conditions.

Accessory Details (Field Installed - Shipped Separately)

F-F1-KIT-(F) Single Fuse Kit (120V/277V)

F-F2-KIT-(F) Double Fuse Kit (208V/240V/480V)

Consists of 1 or 2 fuse holders and 1 or 2 KIK30 amp fuses. Field installed on wiring access plate. **Fusing not available with MF series (marine listed) units.** (F) = specify finish

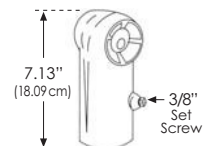
MF-1-(F) Mastfitter

Note: Remote mount ballast options and accessories are not available with 1000W HPS or on MF series (marine listed) units.

Cast aluminum mastfitter for 2-3/8" O.D. pipe tenon. For use with remote mounted ballast on all F Series models.

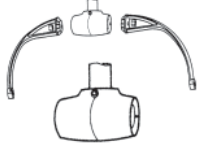
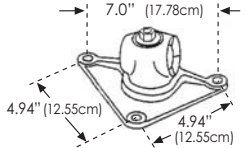
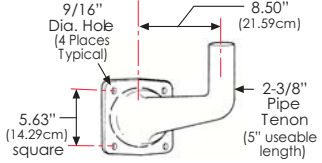
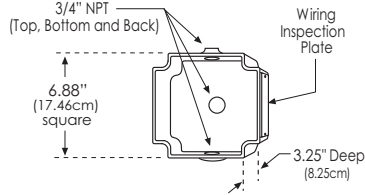
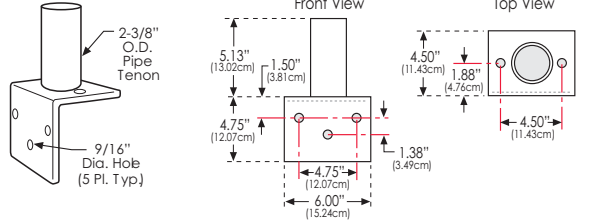
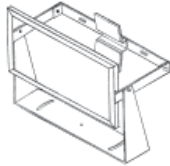
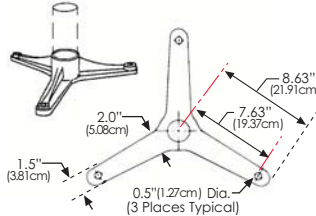
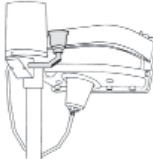
(Require a vertical tenon height of 4-5/8" minimum)

(F) = specify finish



F Series (available MF Series: Marine Listed with optional hazardous location listing)

Industrial Floodlight - 250-1500 watt HID

Type:	SA	Job:	Monsanto Hangar	Page 5 of 6
TH-1-(F)	Lowering Adapter (<i>Tenon Hanger</i>) <i>Note:</i> Remote mount ballast options and accessories are not available with 1000W HPS or on MF series (marine listed) units. (F) = specify finish	Cast aluminum hanger tapped for 1-1/4" NPT conduit or pipe. Equips floodlights with remote mounted ballasts for use on standard lowering devices. Mounting arms provided with fixture. <i>(Require a vertical tenon length of 4-5/8" minimum)</i>		
HV-1-(F)	Trunion Base <i>Note:</i> Remote mount ballast options and accessories are not available with 1000W HPS or on MF series (marine listed) units. (F) = specify finish	Cast aluminum trunion base bracket calibrated for horizontal adjustment. For use with remote mounted ballast.		
WB-1-(F)	Wall Bracket (F) = specify finish	Cast aluminum wall bracket for vertical surfaces only. Designed to permit mounting of floodlights on flat vertical surfaces. Use in conjunction with WB-5 for surface mounted wiring.		
WB-5-(F)	Wiring Box for WB-1 and surface mounted conduit feed (F) = specify finish	Used in conjunction with WB1 for surface mounted wiring. Tapped top, back and bottom for 3/4" conduit or pipe. Gasket provided for sealing surface wiring box to WB-1 (wall mounting bracket).		
PX-1-(F)	Cross-arm Bracket For installing floodlights on wooden or steel cross-arms. (F) = specify finish	Cast aluminum angle bracket with 2" pipe stub. "L" base.		
SMB-400	Shock Mounting Bracket <i>(23" ho using)</i>	Shock Mounting Bracket for use in applications where severe vibration may be present. Secures floodlight with a remote mounted ballast less mounting arms or mastfitter. Constructed of hot-dip galvanized steel with neoprene pads to absorb shock. Common resistant assembly hardware is furnished. <i>Note: Not available with 1000W HPS or on MF series (marine listed) units.</i>		
SMB-1000	Shock Mounting Bracket <i>(26" ho using)</i>			
FB-1	Flat Base Mount	Cast aluminum mounting bracket for installing floodlights on flat horizontal surfaces. For use with 2-3/8" OD pipe tenon (by others). Limit tenon height to 8.0" (20.32cm).		
PCM-1	Photo Cell Receptacle Mounting Bracket	Bracket with standard twist-lock receptacle for models with integral ballasts. Threads into 1/2" NPT hole in ballast base or mastfitter. <i>(Photo Cell not included.)</i>		

F Series (available MF Series: Marine Listed with optional hazardous location listing)

Industrial Floodlight - 250-1500 watt HID

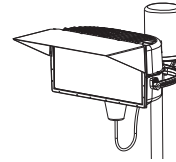
Type: SA	Job: Monsanto Hangar	Page 6 of 6
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SK 40- (F) Cutoff Shield for 23" housing

SK 100- (F) Cutoff Shield for 26" housing

Cutoff shield provides precise vertical cutoff without distortion of lateral pattern.

(F) = Specify finish.



AL 4-F Auxiliary Polymer Lens for 23" housing

AL 10-F Auxiliary Polymer Lens for 26" housing

1/4" thick impact-resistant polymer lens provides additional protection of the glass lens.

Furnished with mounting hardware and standoffs.



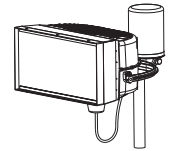
AL 4-F/L/ IENS- (F) Auxiliary Lens Frame for 23" housing

AL 10-F/L/ IENS- (F) Auxiliary Lens Frame for 26" housing

Designed for use with colored lenses. Formed aluminum frame isolates the auxiliary lens from heat source for longer life.

Gasketed to minimize particulate and moisture entry. May be used as a snoot when installed without a lens. Mounting hardware included.

(F) = Specify finish.



AIF 10-F/L/ GLASS- IV8- (F) Auxiliary Lens Frame with 8-lite internal louver

For additional narrow beam glare control, specify the auxiliary lens frame with the 8-lite internal louver. Available for 26" housing only. (F) = Specify finish.

IENS-AIF-F-4- GLASS- (color) Colored Auxiliary Lens for 23" housing

Colored auxiliary lens (fully tempered glass). Requires the use of the auxiliary lens frame.

IENS-AIF-F-10- GLASS- (color) Colored Auxiliary Lens for 26" housing

(color) = Lens color. (Consult factory to specify color of glass lens.)
Note: Colored lenses reduce efficiency.

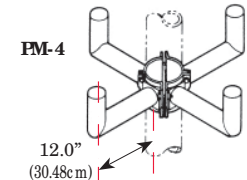
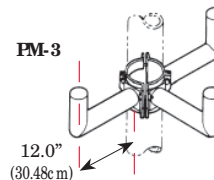
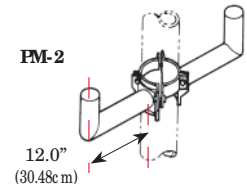
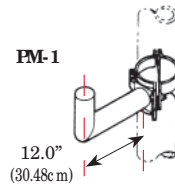
PM-1 Wood Pole Mounting Kit with one U-arm
Shipping wt.: 6 lbs (2.7 kg)

PM-2 Wood Pole Mounting Kit with two U-arms
Shipping wt.: 9 lbs (4.05 kg)

PM-3 Wood Pole Mounting Kit with three U-arms
Shipping wt.: 12 lbs (5.4 kg)

PM-4 Wood Pole Mounting Kit with four U-arms
Shipping wt.: 15 lbs (6.8 kg)

For mounting luminaires with mast fittings to 6.0" to 12.0" O.D. wood poles.



Notes



DESCRIPTION

The Streetworks Wal-Pak Series of wall luminaires provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware along with a sealed and gasketed optical compartment make the Wal-Pak virtually impenetrable to contaminants. IP65 Rated. UL and cUL wet location listed. The Wal-Pak wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways and loading docks.

Catalog #	WKP-40-M-CWI-7-FC-BZ	Type	SB
Project	MONSANTO HANGAR	Date	11/18/13
Comments			
Prepared by	BASIT SYED		

SPECIFICATION FEATURES

Housing

Rugged one-piece die-cast aluminum housing and hinged, removable die-cast aluminum door. One-piece silicone gasket seals the optical chamber. UL 1598 wet location listed and IP65 ingress protection rated. Not recommended for car wash applications.

Electrical

Ballasts, LED driver and related electrical components are hard mounted to the die-cast housing for optimal heat sinking and operating efficiency. Wiring is extended through a silicone gasket at the back of the housing. Three 1/2" threaded conduit entry points allow for thru-branch wiring. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from LED source. Integral LED electronic driver incorporates internal fusing designed to withstand a 3kV surge test and is Class 2 rated for 120-

277V with an operating temperature of -30° to 60°C. Wal-Pak LED systems maintain greater than 70% of the initial light output after 50,000 hours of operation. UL listed HID high power factor ballasts are Class H insulation rated (metal halide: 150, 175, 200, 250, 320, 350, 400W [-30°C / -20°F], (high pressure sodium: 50, 70, 100, 150, 250, 400W [-40°C / -40°F]). High efficiency HID ballasts are available in 120V, 208V, 240V, 277V, 347V and 480V. Compact fluorescent high power factor ballasts are Class P insulation rated for 120-277V and have a starting temperature of -18°C / 0°F.

Optical

Highly reflective anodized aluminum reflectors provide high efficiency illumination. Optical assemblies include impact resistant borosilicate refractive glass, Solite™ flat diamond patterned glass and full cutoff IESNA compliant configurations. Patent pending, solid state LED luminaires

are thermally optimized with 2400 or 4000 lumen package modules. HID models are offered in horizontal medium or mogul-based metal halide or high pressure sodium lamps. T6 ceramic metal halide and 4-pin compact fluorescent lamp models offer high efficiency energy-saving illumination.

Door Assembly

Single point, captive stainless steel hardware secures the removable hinged door allowing for ease of installation and maintenance. Door assembly is hinged at the bottom for easy removal, installation and re-lamping.

Finish

Housing and door are protected with 5-stage TGIC dark bronze polyester powder coat paint. Premium TGIC power coat finishes withstand extreme climate changes while providing optimal color and gloss retention. Optional premium colors are available.



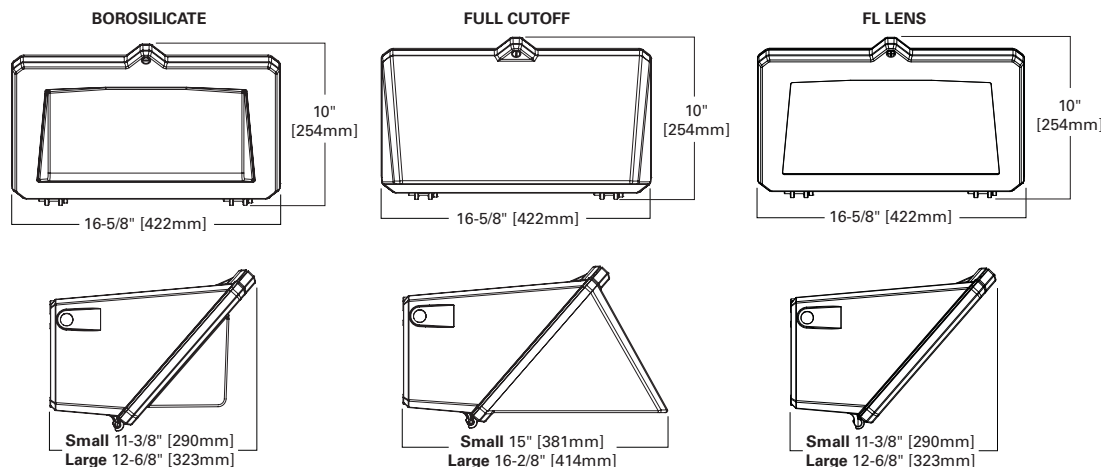
WKP WAL-PAK

- 2400 - 4000 Lumen LED**
- 39 - 400W**
- High Pressure Sodium**
- Pulse Start Metal Halide**
- Metal Halide**
- Ceramic Metal Halide**
- 32 - 140W**
- Compact Fluorescent**



WALL MOUNT LUMINAIRE

DIMENSIONS



TECHNICAL DATA

UL and cUL Wet Location Listed
 IP65 Rated
 40°C Maximum Ambient Temperature
 External Supply Wiring 90°C Minimum
 EISA ©, ARRA, Title 20 Compliant

ENERGY DATA

Reactor Ballast Input Watts

- 50W HPS NPF (58 Watts)
- 70W HPS NPF (82 Watts)
- 100W HPS NPF (118 Watts)
- 150W HPS NPF (175 Watts)

High Reactance Ballast Input Watts

- 50W MP HPF (69 Watts)
- 70W MP HPF (94 Watts)
- 100W MP HPF (129 Watts)
- 150W MP HPF (185 Watts)

CWA Ballast Input Watts

- 200W HPS HPF (250 Watts)
- 200W MP HPF (227 Watts) ©
- 250W MP HPF (283 Watts) ©
- 320W MP HPF (365 Watts) ©
- 350W MP HPF (400 Watts) ©
- 400W HPS HPF (465 Watts)
- 400W MP HPF (452 Watts) ©

SHIPPING DATA

Approximate Net Weight: 32-42 lbs. (15-19 kgs.) ADW100024
 2012-05-23 13:21:15

ORDERING INFORMATION

Sample Number: WKP10PC2GL

WKP Product Family WKP= Wal-Pak	40 Lamp Wattage LED ¹ 2A=2 Package 28W 4A=4 Package 40W Metal Halide ^{2,3} 17=175W 25=250W 40=400W Pulse Start Metal Halide 39=39W 50=50W 70=70W 10=100W 20=200W 15=150W 25=250W 32=320W 35=350W 40=400W High Pressure Sodium 50=50W 70=70W 10=100W 15=150W 20=200W 25=250W 40=400W Ceramic Metal Halide 39=39W 70=70W 100=100W 150=150W Compact Fluorescent ⁴ 32=32W 42=42W 57=57W 70=70W 64=(2-32W) 84=(2-42W) 114=(2-57W) 140=(2-70W)	M Lamp Type M = Metal Halide P = Pulse Start Metal Halide S =High Pressure Sodium LED =Solid State Light Emmitting Diodes CM = Ceramic Metal Halide CF = Compact Fluorescent	CWI Ballast Type C =CWI H =Reac./HPF N =Hi Reac./NPF P =Hi Reac./HPF R =Reac./NPS W =CWA E =Electronic ⁵	7 Voltage 2=120V 0=208V 4=240V 7=277V 8=480V W =Multi-tap wired 120V N =Multi-tap wired 277V V =Multi-tap wired 240V U =Universal (120-277V)	FC Door/Lens Type ⁶ GL =Borosilicate Glass Door FL =Flat Solite Glass Door (150-175W max) FC = Full Cutoff Door PL = Polycarb Refractor Door (175W max)	BZ Color AP =Gray BK =Black BZ =Bronze WH =White	Options 1 =Single Fuse (120, 277 or 347V) ⁷ 2 =Double Fuse, (208, 240, 480V) ⁷ 5 =Non NEMA Photocontrol ⁷ B =Two Position Terminal Block SGL =Solite Glass Lens - for HID and CF Models ⁸ CGL =Clear Glass Lens ⁹ L =Lamp Included
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- NOTES:** 1 LED Packages are 67 CRI/5000K
 2 MH products available for non-US markets only.
 3 MH and MP 175W and below are medium base all others are mogul base. 250 and 350W MP are not Title 20 Compliant. 400W MP must be ordered with Lamp option to be Title 20 Compliant.
 4 Electronic Ballast Standard with CF.
 5 Available with 70-150W Pulse Start or CM Lamps.
 6 Small housing offered for 175W and below, CF and LED Models. Large Housing for 200-400W. FL Door not available with CF or 200-400W Models.
 Polycarbonate lens available in models up to 175W max including LED. Polycarbonate lens not available with full cutoff door or FL models. Solite stipple glass is standard for FL lens. Clear glass is standard for full cutoff door types except for LED. LED full cutoff door is standard with solite glass.
 7 Specify voltage. 1 - 120, 277 or 347V, 2 - 208 or 240V
 8 SGL optional on HID and CF models only.
 9 Clear Glass not available with LED.

LAMP TYPE	WATTAGE
Pulse Start Metal Halide	50, 70, 100, 150, 200, 250, 320, 350, 400W
Metal Halide	175, 250, 400W
High Pressure Sodium	50, 70, 100, 150, 250, 400W
T6 Ceramic Metal Halide	39, 70, 100, 150W
Compact Fluorescent	(1) 32, (1) 42, (1) 57, (1) 70, (2) 32, (2) 42, (2) 57, (2) 70
LED	2A=28W, 4A=40W