



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

Architectural Review Board

Project Type: Site Development Section Plan

Meeting Date: July 14, 2011

From: Kristian Corbin, Project Planner

Location: Spirit of St. Louis Airpark, 600 & 650 North Bell Avenue

Applicant: Poehlman & Prost, Inc. on behalf of St. Louis County

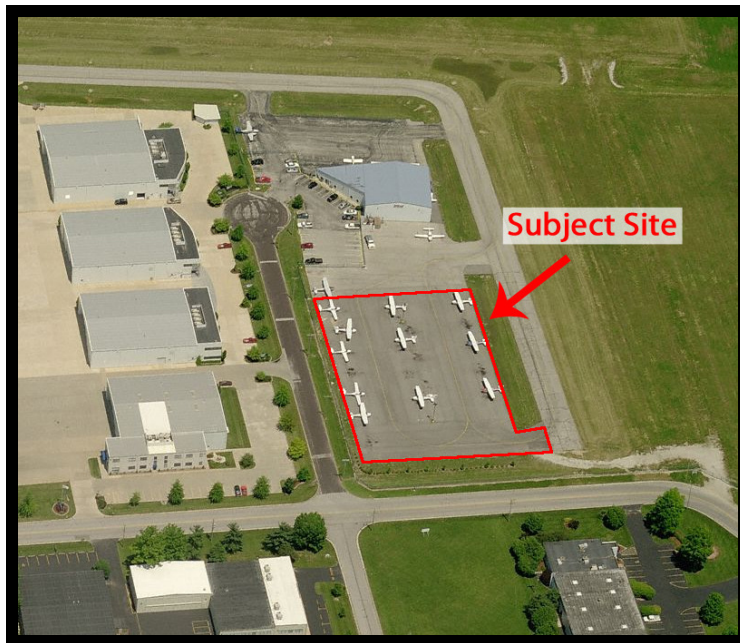
Description: **Spirit of St. Louis Airpark, North Bell Hangars:** A Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for a 1.732 acre tract of land zoned "M3" Planned Industrial District located on the northeast corner of the intersection of Edison Avenue and North Bell Avenue.

PROPOSAL SUMMARY

The request is for a 9,534 square foot office/hangar facility located within Spirit of St. Louis Airpark. The subject site is zoned "M3" Planned Industrial District governed under the terms and conditions of City of Chesterfield Ordinance Number 1430. Currently, the site is a paved parking area. The proposed materials for the office/hangar facility will be comprised of pre-finished metal wall panels and translucent wall panels. The roof will be comprised of pre-finished galvalume metal.

HISTORY OF THE SUBJECT SITE

North Bell Hangars is a 1.732 acre tract of land located northeast of the intersection of Edison Avenue and North Bell Avenue. The subject site is a part of the Spirit of St. Louis Airpark Subdivision. Prior to 2005, the subject site was utilized as a non-paved parking area for vehicles only. In February of 2005, an Amended Site Development Plan was approved to allow for the site to be paved into a parking area for aircrafts. This was done in order to meet FAA and Spirit of St. Louis Airport requirements for aircraft parking areas. Since then, the site has been utilized as aircraft parking.



STAFF ANALYSIS

General Requirements for Site Design:

A. Site Relationship

Addressed as Written Addressed with Modifications Not Applicable

The design allocates the hangar part of the facility on the eastern portion of the site closer to the taxi lanes away from more pedestrian oriented areas. The office portion of the facility is closest to the street and parking area. The applicant is proposing to utilize landscaping to provide a transition point from the street to the structure. This design element mimics adjacent developments on the western side of North Bell Avenue which lends itself to a more symmetrical streetscape.

B. Circulation System and Access

Addressed as Written Addressed with Modifications Not Applicable

Access to the site will be at one point via North Bell Avenue. Vehicular and pedestrian circulations are separated from aircraft circulation that is kept to the western portion of the site near the taxi lanes. The applicant is placing a walkway from the parking lot to the office area.

C. Topography

Addressed as Written Addressed with Modifications Not Applicable

The subject site is relatively flat. The applicant is not proposing to alter the terrain as part of the proposed improvements.

D. Retaining Walls

Addressed as Written Addressed with Modifications Not Applicable

There are no retaining walls proposed for the subject site.

General Requirements for Building Design:

A. Scale

Addressed as Written Addressed with Modifications Not Applicable

The proposed facility is twenty-seven (27) feet six (6) inches in height which is similar in height to the current hangar/office facilities located on the western side of North Bell Avenue.

B. Design

Addressed as Written Addressed with Modifications Not Applicable

The overall form of the building is similar to that of the existing aircraft hangars adjacent to the subject site.

C. Materials and Color

Addressed as Written Addressed with Modifications Not Applicable

The proposed primary materials for the structure are pre-finished metal wall panels and translucent wall panels which mimic the materials of the adjacent

hangar facilities. The wall panels are proposed to use compatible light and dark earth tone colors. Compatible colors and materials are desirable practices as found in the City of Chesterfield Architectural Standards.

D. Landscape Design and Screening

Addressed as Written Addressed with Modifications Not Applicable

Trees will be planted along North Bell Avenue to reflect design elements of trees planted on the west side of the street. The trash enclosure will be screened by a six (6) foot tall sight proof fence as required by the governing ordinance. The selected materials for the enclosure will be vinyl painted a light tan color to match the color scheme on the structure.

E. Signage

Addressed as Written Addressed with Modifications Not Applicable

Signage is not submitted for review/approval at this time.

F. Lighting

Addressed as Written Addressed with Modifications Not Applicable

The proposal utilizes wall mounted fixtures that are fully shielded, cut-off, flat lens luminaries. Lighting will be addressed through site plan review.

Use Type: Commercial and Industrial Architecture

Access: The site will be accessible via North Bell Avenue as previously mentioned in this report. The service and loading area and trash enclosure are located along the eastern portion of the parking lot along the fence line separating the parking area from the tarmac.

Exterior Elements: Addressed above throughout the Requirements for Building Design.

Landscaping and Screening: Building equipment is being located in the rear of the building and will be screened by evergreen shrubbery.

Scale: Addressed above in the Requirements for Building Design.

Site Design: The facility is situated where the office portion is closest to the parking lot area. Windows and the door to the office will be facing North Bell Avenue (please see west elevation) and the entrance to the hangar for aircraft is facing south.

DEPARTMENTAL INPUT

Staff has reviewed the Site Development Section Plan, Landscape Plan, Lighting Plan and Architectural Elevations and has found the application to be in conformance with the City of Chesterfield Ordinance 1430 and all other applicable Zoning Ordinance requirements. Staff request action on the Site Development Section Plan for Spirit of St. Louis Airpark, North Bell Hangars.

MOTION

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

- 1) “I move to forward the Site Development Section Plan, Landscape Plan, Lighting Plan and Architectural Elevations for Spirit of St. Louis Airpark, North Bell Hangars as presented, with a recommendation for approval (or denial) to the Planning Commission.”
- 2) “I move to forward the Site Development Section Plan, Landscape Plan, Lighting Plan and Architectural Elevations for Spirit of St. Louis Airpark, North Bell Hangars 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 June 23, 2011

Project Title: N. Bell Hangers at Spirit of St. Louis Airport **Location:** 18270 Edison Ave. Unit 100

Developer: Spirit Hangers, LLC **Architect:** LePique & Orne Architects **Engineer:** Volz Incorporated

PROJECT STATISTICS:

Size of site (in acres): 1.732 **Total Square Footage:** 9,534 **Building Height:** 27'-6"

Proposed Usage: Aircraft hanger and small administrative office

Exterior Building Materials: Pre-finished metal wall panels, translucent wall panel, commercial windows & doors.

Roof Material & Design: Pre-finished galvalume metal roof panels on a low sloping gabled structure.

Screening Material & Design: Small condensing unit (approx 42"x 42" x 48"h) to be screen with landscape shrubery

Description of art or architecturally significant features (if any): Building is a very straight forward rectilinear structure to be used as an aircraft hanger - the design follows function with subtle architectural features - refer to Architects Statement.

ADDITIONAL PROJECT INFORMATION:

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.**
- N/A **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)**
- N/A **Any other exhibits which would aid understanding of the design proposal. (as applicable)**
- Pdf files of each document required.**

PROJECT & GENERAL NOTES:

LOCATOR NUMBERS:
 17V 11 0403 PT
 650 N BELL AVENUE
 CHESTERFIELD, MISSOURI 63005

17V 11 0412
 600 N BELL AVENUE
 CHESTERFIELD, MISSOURI 63005

AREA OF SITE: 1.732 ACRES - RED PHASE "A" 0.700 AC - RED PHASE "B" 1.032 AC
 PROPOSED USES: 2 - HANGARS (80'x60' - 4800 SF & 60'x60' - 3600 SF)
 PROPOSED ZONING: "M-3" PLANNED INDUSTRIAL DISTRICT (OFFICE 27'x42' - 1134 SF)
 EXISTING ZONING: "M-3" PLANNED INDUSTRIAL DISTRICT
 REQUIRED PARKING: OFFICE - 1134 SF / 1000 SF = 1.134(3.3 SPACES) = 3.74 - 2 SPACES FOR EVERY 3 EMPLOYEES ON THE MAXIMUM SHIFT - 0 EMPLOYEES
 PROPOSED PARKING: 4 SPACES
 OPENSACE: BUILDING SF 9,534 SF / 30,492 SF = 31%

OWNER OF RECORD:
 ST. LOUIS COUNTY
 18270 EDISON AVENUE - UNIT 100
 CHESTERFIELD, MISSOURI 63005

PREPARED FOR:



ADG
 Aviation Development Group LLC
 SPIRIT HANGARS LLC
 2552 S. VENTRESS CT.
 BENNETT, CO. 60102
 303.644.3395 M - BRENDA KENNEY

THIS SITE IS IN THE FOLLOWING UTILITY SERVICE AREAS:
 MISSOURI-AMERICAN WATER COMPANY
 AMEREN UE COMPANY
 SOUTHWESTERN BELL TELEPHONE COMPANY
 CHARTER COMMUNICATIONS (CABLE TV)
 LACLEDE GAS COMPANY

THIS SITE IS IN THE FOLLOWING DISTRICTS:
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 MONARCH FIRE PROTECTION DISTRICT
 ROCKWOOD SCHOOL DISTRICTS
 MISSOURI RIVER WATERSHED

SIDEWALKS ALONG THE ACCESSIBLE ROUTE SHALL NOT HAVE A SLOPE EXCEEDING 1:20. SLOPES GREATER THAN 1:20 MUST BE DESIGNED AS A RAMP.

NO STEP AT ACCESSIBLE ENTRANCE DOORS.

ANY LAND DISTURBANCE ACTIVITY INVOLVING ONE (1) ACRE OR MORE OF LAND IS A MAJOR LAND DISTURBANCE (MLD) AND A LAND DISTURBANCE PERMIT FOR THE MLD MUST BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS. ANY LAND DISTURBANCE ACTIVITY INVOLVING LESS THAN ONE (1) ACRE OF LAND IS AN ORDINARY LAND DISTURBANCE AND THE APPROPRIATE PERMIT(S) MUST BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS.

SANITARY SEWER CONNECTIONS SHALL BE AS APPROVED BY THE METROPOLITAN ST. LOUIS SEWER DISTRICT AND THE CITY OF CHESTERFIELD.

STORMWATER MANAGEMENT SHALL BE DESIGNED PURSUANT TO CITY OF CHESTERFIELD AND METROPOLITAN ST. LOUIS SEWER DISTRICT REQUIREMENTS AND DISCHARGED AT A NATURAL DISCHARGE POINT. SINKHOLES ARE NOT ADEQUATE DISCHARGE POINTS.

THE LOCATION OF STORM AND SANITARY SEWER IMPROVEMENTS ARE APPROXIMATELY ONLY. ACTUAL LOCATION SHALL BE DETERMINED BY FIELD CONDITIONS AND SHALL BE INDICATED ON THE IMPROVEMENT PLANS.

ALL GRADING AND DRAINAGE TO BE IN CONFORMANCE WITH ST. LOUIS COUNTY, CITY OF CHESTERFIELD AND METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARDS.

ALL PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED TO ST. LOUIS COUNTY AND CITY OF CHESTERFIELD STANDARDS.

NO SLOPES WITHIN ST. LOUIS COUNTY RIGHT-OF-WAY SHALL EXCEED 3 (HORIZONTAL) TO 1 (VERTICAL)

ACCESS TO THIS DEVELOPMENT FROM NORTH BELL AVENUE SHALL BE VIA (1) COMMERCIAL ENTRANCE LOCATED TO PROVIDE REQUIRED SIGHT DISTANCE AND CONSTRUCTED TO ST. LOUIS COUNTY STANDARDS AS DIRECTED BY THE DEPARTMENT OF HIGHWAYS AND TRAFFIC.

ALL PROPOSED ACCESS TO ST. LOUIS COUNTY ROADS FOR NEW DEVELOPMENT SHALL MEET MINIMUM ST. LOUIS COUNTY SIGHT DISTANCE REQUIREMENTS.

NO ACCESS TO EDISON AVENUE

LANDSCAPING, STREETLIGHTS AND SIDEWALKS SHALL BE PER CITY OF CHESTERFIELD STANDARDS.

THE UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTANCE, NONEXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD, SHOWN OR NOT SHOWN, PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMO.

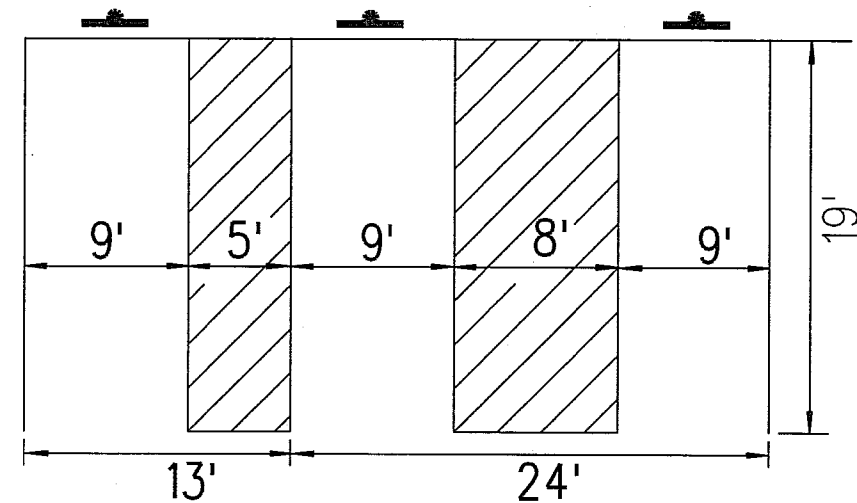
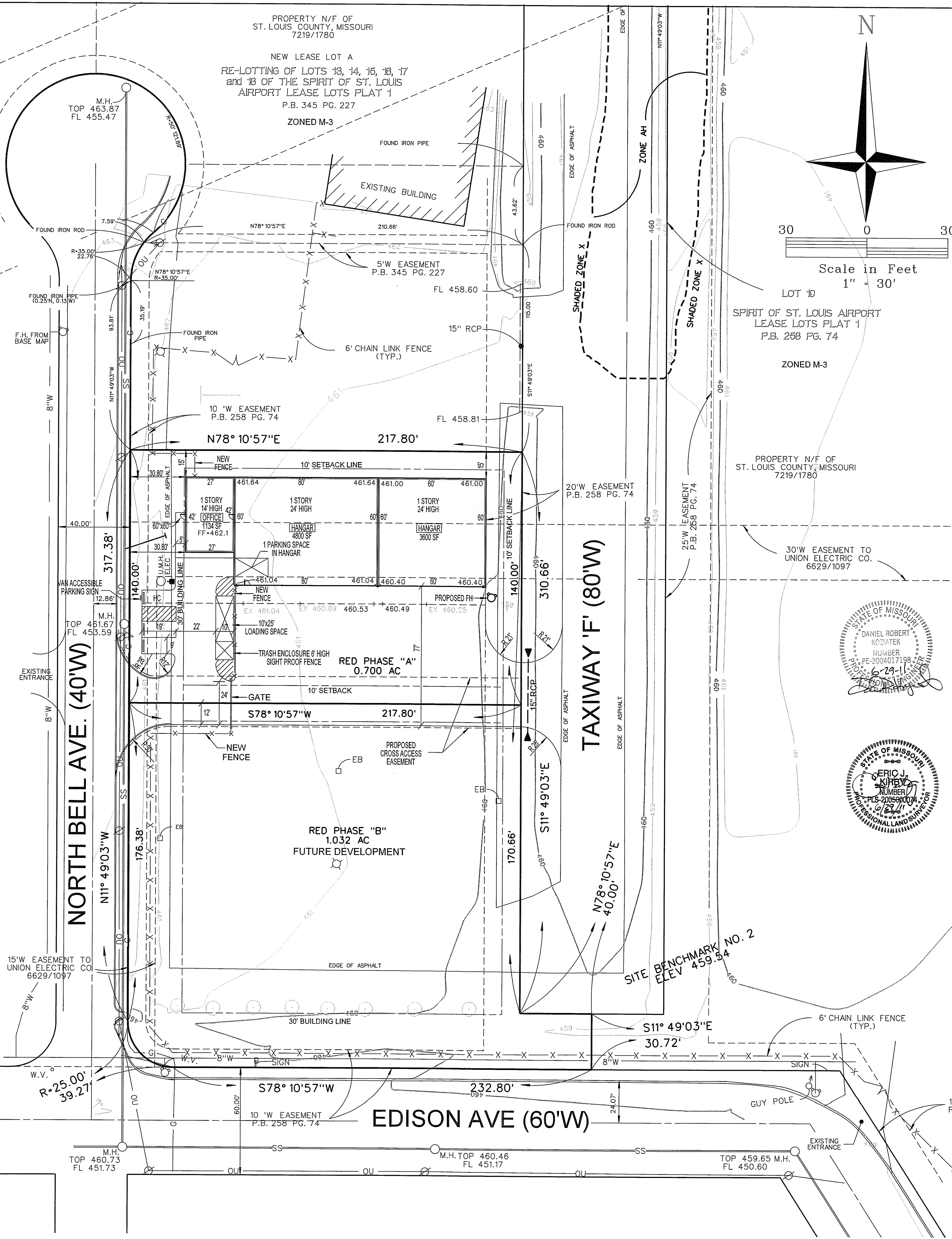
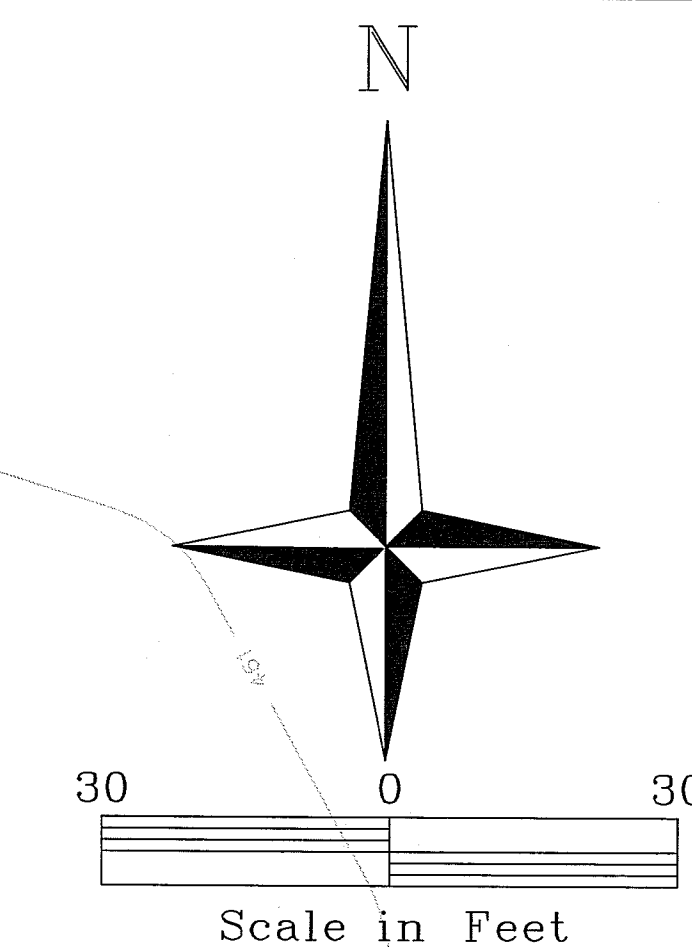
EXISTING CONTOURS		4.00
PROPOSED CONTOURS		4.00
EXISTING SANITARY SEWER		
PROPOSED SANITARY SEWER		
EXISTING STORM SEWERS		
PROPOSED STORM SEWERS		
FIRE HYDRANT		
LIGHT STANDARD		22.5' W/ BASE

LEGEND

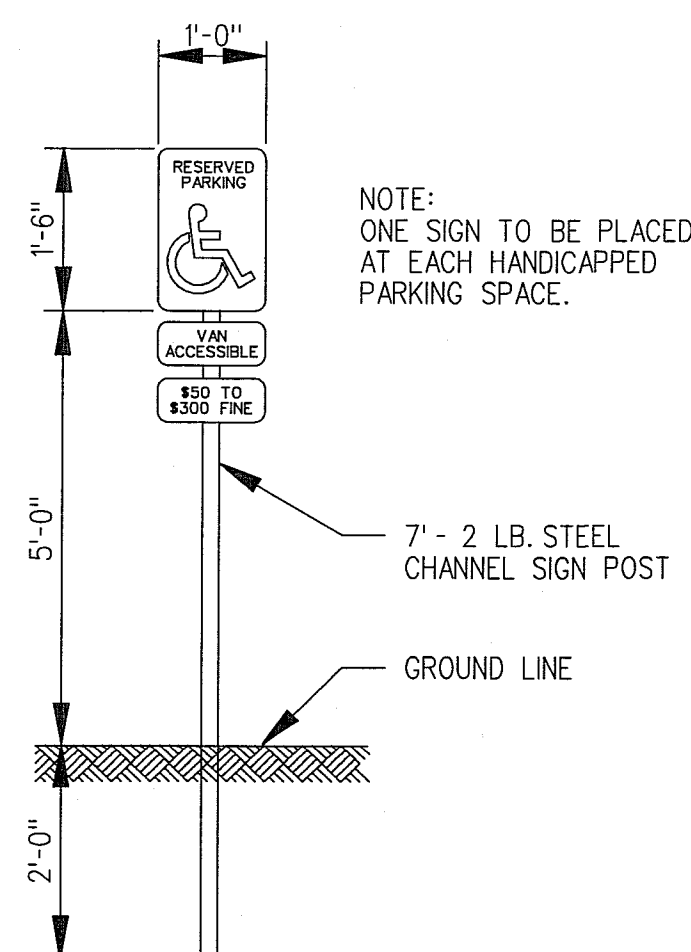
PROPERTY N/F OF
 ST. LOUIS COUNTY, MISSOURI
 7219/1780

NEW LEASE LOT A
 RE-LOTTING OF LOTS 13, 14, 15, 16, 17
 AND 18 OF THE SPIRIT OF ST. LOUIS
 AIRPORT LEASE LOTS PLAT 1
 P.B. 345 PG. 227

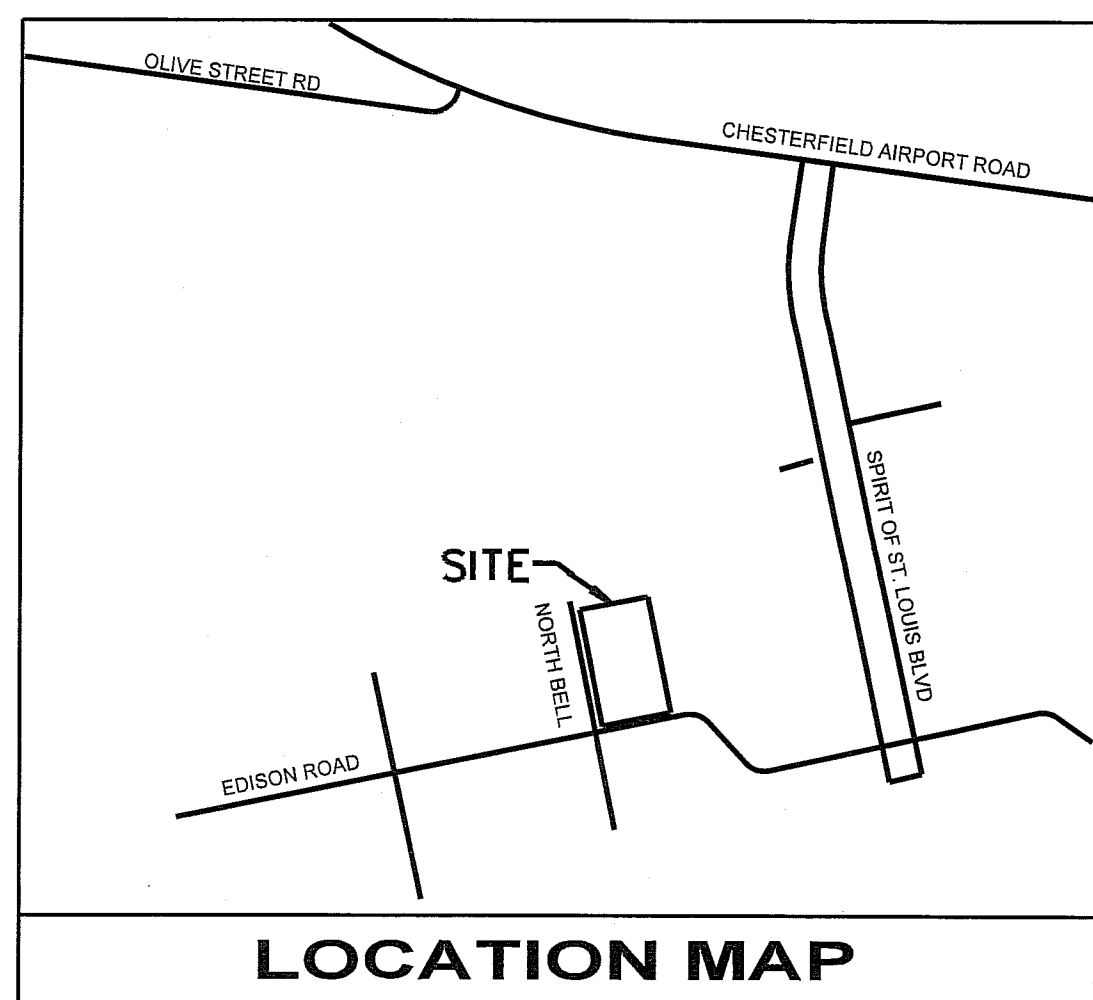
ZONED M-3



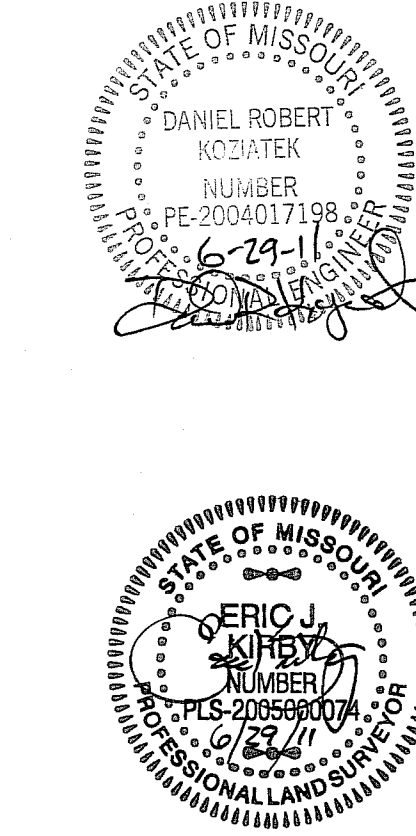
HANICAPPED SPACING DETAIL



VAN ACCESSIBLE HANICAPPED PARKING SIGN DETAIL



LOCATION MAP



**NORTH BELL HANGARS
 AT SPIRIT OF ST. LOUIS AIRPORT**

SITE DEVELOPMENT SECTION PLAN

REVISION: MFD 04/24/2011 PROPOSED F.H.
 REVISED: 04/24/2011 PER CITY

LN 17V 11 0403 PT
 17V 11 0412

VOLZ_JOB# 0835-5
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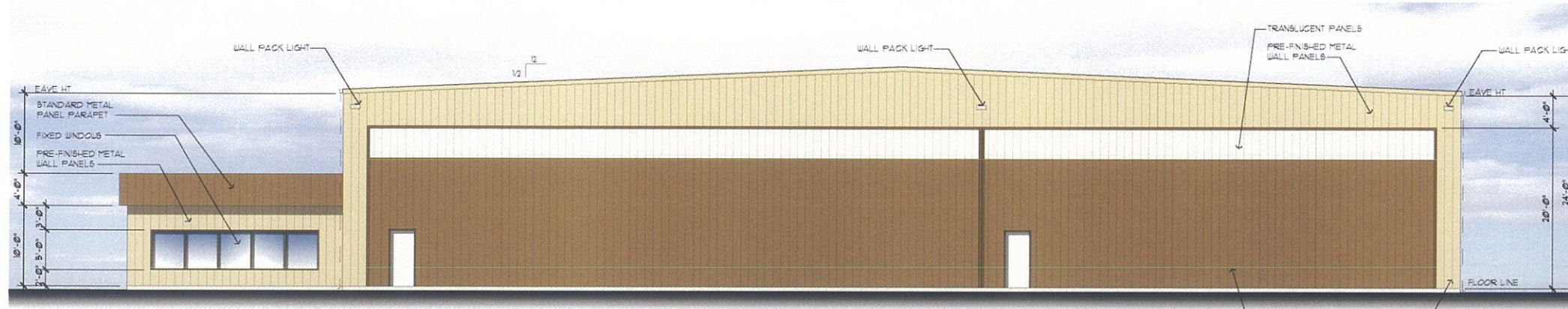
MAY 27, 2011

ADG
 AVIATION DEVELOPMENT GROUP LLC

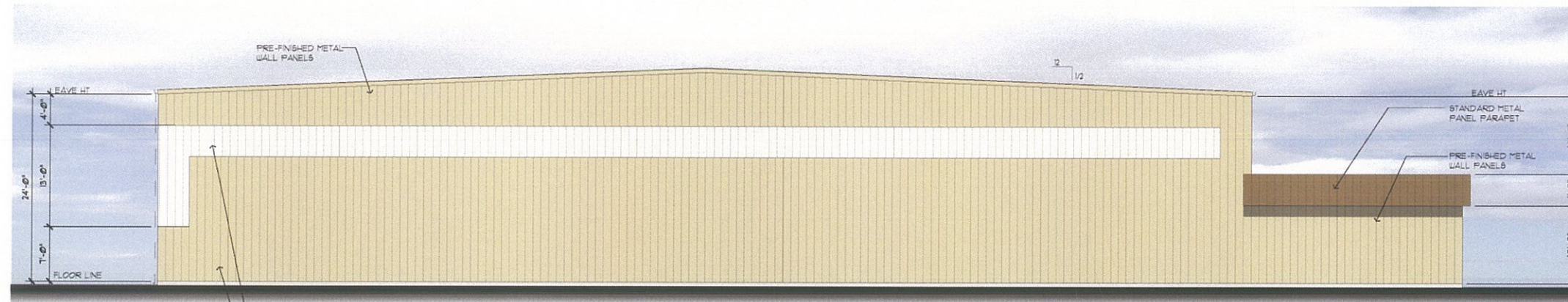
10849 Indian Head (incl. Blvd.)
 St. Louis, Missouri 63132
 314.426.6212 Main
 314.890.1250 Fax
 www.volzinc.com

VOLZ
 Incorporated

ENGINEERS - LAND PLANNING - TRANSPORTATION - CONSTRUCTION MANAGEMENT



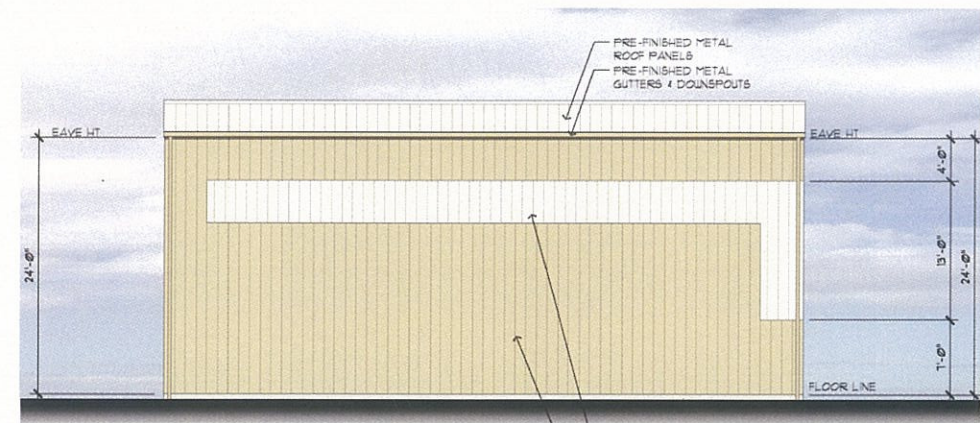
SOUTH ELEVATION



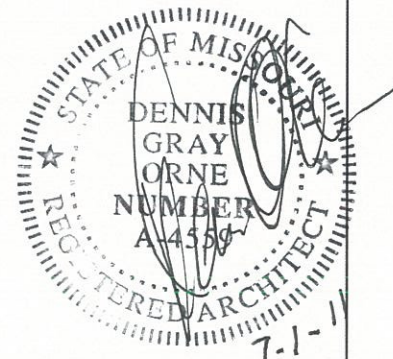
NORTH ELEVATION

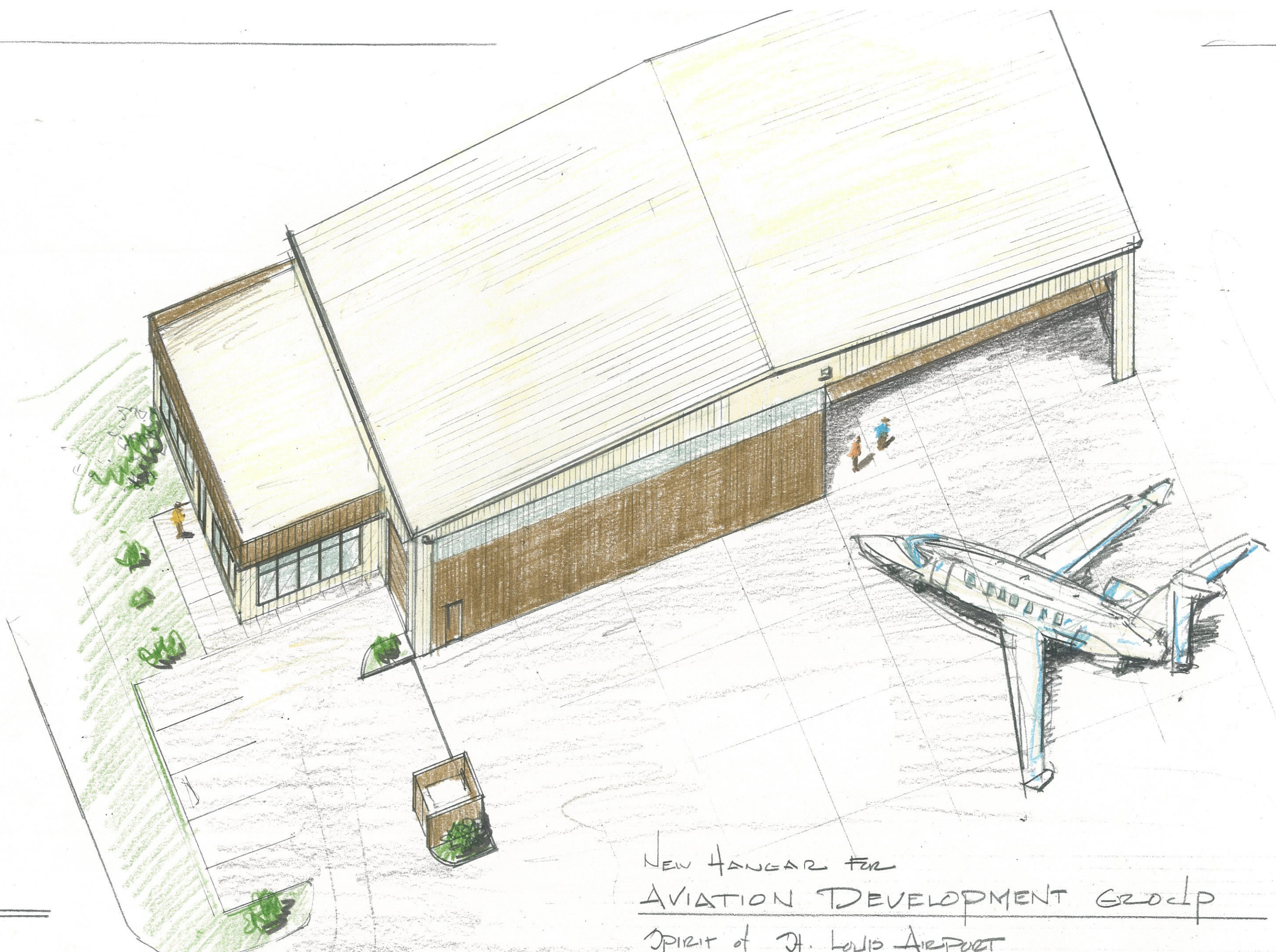


WEST ELEVATION



EAST ELEVATION





NEW HANGAR FOR
AVIATION DEVELOPMENT GROUP
SPIRIT of St. LOUIS AIRPORT

North Bell Hangars - Photo's of Adjacent Sites



View to north of property



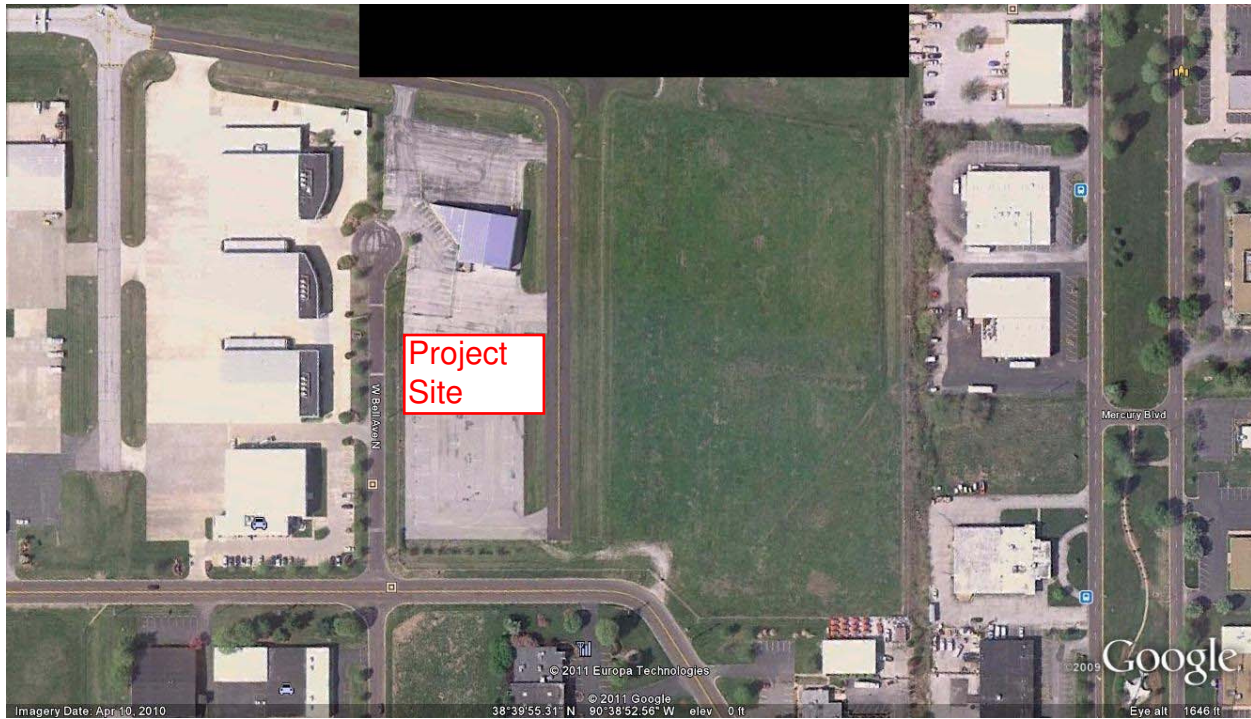
View to the west of property across Bell



View to south of property across Edison Ave



View of property from Edison which includes view of property to the east



Aerial of Proposed Site

Architect's Statement of Design

N. Bell Hangars at Spirit of St. Louis Airport

Site Design

Site Relationships: The site is configured to accommodate a working two bay aircraft hangar and a small administrative office. The low roofed office area is located nearest North Bell Avenue with a landscaping buffer between as to provide a logical transition from street to building structure. The site is a part of a two phase project, were the second phase will make use of common access points and aircraft staging areas. The building design & use is consistent to that of neighboring properties.

Circulation System & Access: The site is organized such that vehicular access and circulation is made from North Belle Avenue to the west; aircraft access and circulation is made from Taxiway F to the east. These two uses are separated by an onsite fence and gate. Additionally there is a well defined & short pedestrian walkway from the vehicular parking lot to the office entrance.

Topography: The existing topography is very flat and will not be significantly altered as a part of the proposed improvements.

Retaining Walls: Not Applicable.

Building Design:

Scale, Design, Material & Colors: The proposed 9,534 square foot aircraft hangar facility is to contain a 3,600 square foot hangar bay, a 4,800 square foot hangar bay, and a 1,134 square foot supporting office area.

The proposed building is to be constructed of a pre-engineered steel structure with pre-finished roof and wall panels. The building consists of two major elements: The high bay structure that contains the aircraft hangar bays, and a low bay structure that houses the administrative office component. The accompanying office component is low in height and contains a metal panel parapet band of a contrasting color which reinforces the horizontal banding of the larger structure. This banding along with introduction of nicely sized exterior windows provides a façade that is very approachable and brings the entire structure into human scale.

The exterior materials are of coordinating light and dark earth-tone colors with integrated translucent wall panel banding. This banding serves to provide natural light to the interior of the hangars while serving as a way to break up the exterior façade and brings visual interest to the building. The large hangar doors are of a contrasting earth-tone color and also contain the translucent panel band. The exterior windows will be solar bronze with medium or dark bronze frames which will coordinate well with the proposed building colors.

Landscape Design & Screening: Landscaping areas are located along the west, north and east property lines. The landscaping along the western property line contains five 2 ½" caliper deciduous trees that are somewhat evenly spaced along its length.

The trash enclosure is screened with a 6' high site proof fence. Note that there will be a relatively small HVAC condensing unit located along the north of the office area which will be screen by evergreen landscape shrubbery.

Signage: Signage has not yet been determined by the owner and will be submitted through the City of Chesterfield under a separate review process.

Lighting: Site lighting will be provided by one 20' high light pole with shoe box type light fixture, and three building mounted wall pacs. All fixtures will have light cut-off shields to prevent glare and excess light spillage outside of proposed property.

DESCRIPTION

The Lumark 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. Six available lamp sources including patent pending energy efficient LED, pulse start metal halide, compact fluorescent, ceramic metal halide, standard metal halide and high pressure sodium. 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.

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

Catalog #	WPP40C	Type	
Project	AVIATION DEVELOPMENT GROUP	Date	
Comments			
Prepared by			

metal halide [MH / MP] or high pressure sodium [HP] lamps. T6 ceramic metal halide [CM] and 4-pin compact fluorescent [CF] 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.



WP WAL-PAK

2400 - 4000 Lumen LED

39 - 400W

High Pressure Sodium

Pulse Start Metal Halide

Metal Halide

Ceramic Metal Halide

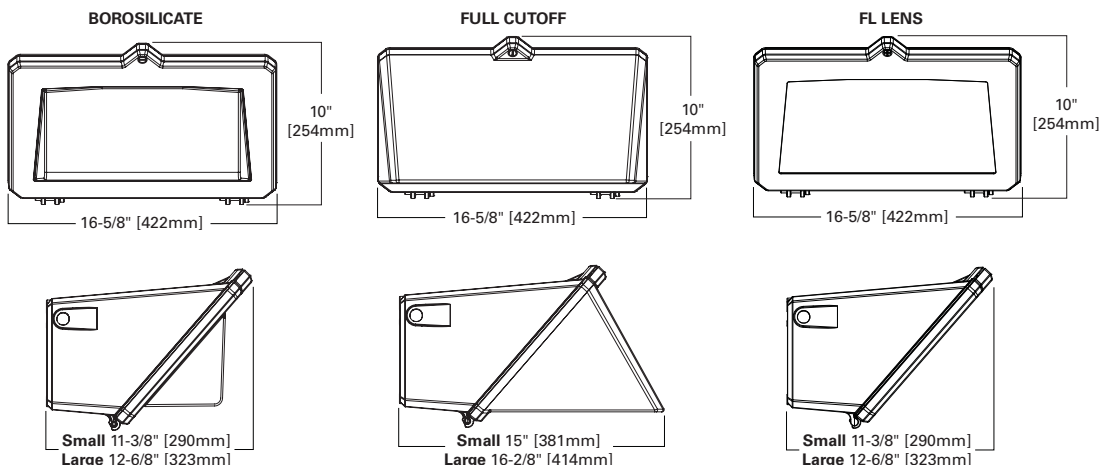
32 - 140W

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
 LM79 / LM80 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.) ADH092103 pc
 2010-11-03 17:10:12

ORDERING INFORMATION

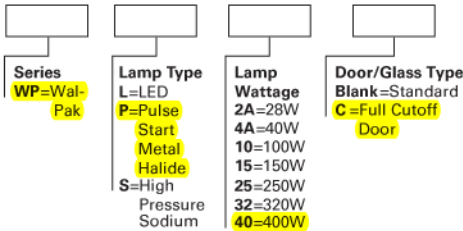
Sample Number: MPWP-GL-250-MT-2EM/SC/MR



- Lamp Type**
MP=Pulse Start Metal Halide
HP=High Pressure Sodium
LD=Solid State Light Emitting Diodes (LED)
CF=Compact Fluorescent ¹
CM=Ceramic Metal Halide ²
MH=Metal Halide ³
- Series**
WP=Wal-Pak
- Door Type ⁴**
GL=Borosilicate Glass Door
FC= Full Cutoff Door
FL=Flat Solite Glass Door
PL=Polycarb Refractor Door
- Lamp Wattage ⁵**
LED
2A=(2400 Initial Lumens)
4A=(4000 Initial Lumens)
MP
50=50W
70=70W
100=100W
150=150W
200=200W
250=250W
320=320W
350=350W
400=400W
MH
175=175W
250=250W
400=400W
HP
50=50W
70=70W
100=100W
150=150W
250=250W
400=400W
CM
39=39W
70=70W
100=100W
150=150W
CF
32=32W
42=42W
57=57W
70=70W
64=(2-32)
84=(2-42)
114=(2-57)
140=(2-70)
- Voltage ⁶**
120V=120V
208V=208V
240V=240V
277V=277V
347V=347V ⁷
480V=480V
DT=Dual-Tap
MT=Multi-Tap
TT=Tri-Tap
5T=5-Tap
E=Electronic Ballast ⁸
ED=Electronic LED Driver
- Options ⁹**
F1=Single fuse ¹⁰
F2=Double fuse ¹⁰
PE=Photocontrol button ¹⁰
LL=Includes lamp ²
BK=Black housing
WH=White housing
GM=Graphite Metallic housing
AP=Grey housing
DP=Dark Platinum housing
DIMA=CF Dimming Ballast ¹¹
DIMB=CF Dimming Ballast ¹¹
SGL=Solite Glass Lens ¹²
Q=Quartz Restrike T4 Lamp ¹³
EM=Emergency Quartz Restrike T4 Lamp with Time Delay Relay ¹³
EM/SC=Emergency Separate Circuit T4 Lamp ¹³
QMR=Emergency Back-Up 1-MR16 Lamp ^{14,15}
2QMR=Emergency Back-Up 2-MR16 Lamps ^{14,15}
2QMR/SC=Emergency Back-Up MR16 and EM separate circuit 2-MR16 Lamp ^{14,15}
EMMR=Emergency Back-Up 1-MR16 Lamp with Time Delay Relay ^{14,15}
2EMMR=Emergency Back-Up 2-MR16 Lamps with Time Delay Relay ^{14,15}
2EMMR/SC=Emergency Back-Up 1-MR16 Lamp with Time Delay Relay and EM Separate Circuit ^{14,15,16}
EM/SC/MR=Emergency Back-Up Separate Circuit 1-MR16 Lamp ^{14,15,16}
2EM/SC/MR=Emergency Back-Up Separate Circuit 2-MR16 Lamps ^{14,15,16}
EM/SC/12V=Emergency Separate Circuit 12V 1-MR16 Lamp ^{14,16,17}
2EM/SC/12V=Emergency Separate Circuit 12V 2-MR16 Lamps ^{14,16,17}
EMI40=Emergency Cold Temperature UL 924 CF Power Pack 1 Lamp ¹⁸
EMI40/2L=Emergency Cold Temperature UL 924 CF Power Pack 2 Lamp ¹⁸
CF-EM=Emergency UL924 CF Power Pack 1 Lamp ¹⁹
CF-EM/2L=Emergency UL924 CF Power Pack 2 Lamp ¹⁹
EMLED-CD=LED Battery Back-Up Cold Temperature ²⁰
- Accessories ²¹**
WG/WPGL=Wire Guard Borosilicate Glass Lens Door
WG/WPFC=Wire Guard Full Cutoff Door
WG/WPFL=Wire Guard FL Lens Door
TR/WP=Tamper Resistant Screw and Bit
VS/WPGL=Polycarbonate Vandal Shield for Borosilicate Glass Lens Door

STOCK SAMPLE NUMBER - LAMP INCLUDED

SAMPLE NUMBER: WPP40C



- Series**
WP=Wal-Pak
- Lamp Type**
L=LED
P=Pulse Start Metal Halide
S=High Pressure Sodium
- Lamp Wattage**
2A=28W
4A=40W
10=100W
15=150W
25=250W
32=320W
40=400W
- Door/Glass Type**
Blank=Standard
C=Full Cutoff Door

NOTES: Options not available with stock products. Refer to standard order information to add options. MT is standard. Lamp Type: MP not available in 100W. HPS not available in 320W. Borosilicate glass door is standard. 2A and 4A models available in LED only. LED models are 120-277V.

BUG RATING	B	U	G	B	U	G
Borosilicate Glass Door (GL)						
LDWP-GL-2A-ED	0	3	2	0	2	1
LDWP-GL-4A-ED	1	3	2	0	3	1
Polycarbonate Lens (PL)						
LDWP-PL-2A-ED	0	3	2	0	1	1
LDWP-PL-4A-ED	1	3	2	0	1	1

For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-07BugRatingsAddendum.pdf

- NOTES:** 1 CF Single lamp offered in all door configurations. CF dual lamp models not offered with FL door type. 70W models not available with EMI40-2L, CF-EM, CF-EM-2L. CF not available in 347V.
- 2 All CM models offered with T6 envelope G12 lamp base. T6 Lamp included with CM models. Order LL with CM models. Ceramic Metal Halide (CM) is available with (MP) pulse start metal halide or E - Electronic Ballast. 400W MP must be ordered with LL option to be Title 20 Compliant.
- 3 MH products available for non-US markets only.
- 4 Small housing offered for 175W and below, CF and LD models. Large housing for 200W-400W. FL door not available with CF or 200-400W models. Polycarbonate lens available in models up to 175W max including LD. 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 LD. LD full cutoff door is standard with solite glass.
- 5 LD nominal initial lumens prior to optical and configuration losses based on 67 CRI/5000K package at 25°C ambient. MH and MP 175W and below are medium base all others are mogul base. CF 64, 84, 114 and 140 models are offered in borosilicate glass and full cutoff doors only. In cold temperatures, compact fluorescent lamps produce lower illumination levels. CF 140 models and 400W HPS rated for 25°C.
- 6 See Voltage Chart for descriptions. ST available in 400W MH models only. 90°C Rated wire required for thru-branch wiring for units 175W and lower. 105°C Rated wire required for thru-branch wiring for units 200W and higher. Thru-branch wiring is rated for 40°C for LD and 175W and below. Higher wattage thru-branch wiring is rated for use in 25°C ambient operating environments.
- 7 347V not available with thru-branch wiring. For 347 or 480V LD specify voltage. ED will be supplied with integral step down transformer. 347V not available with CF lamps.
- 8 Available with 70-150W MP or CM lamps. E is standard for all CF models. All electronic ballasts are universal 120-277V.
- 9 Not all options can be combined. Only one emergency or battery back-up option available within the fixture. CF Models utilize EMI40, EMI40/2L, CF/EM or CF-EM/2L option for emergency egress. LD Models utilize EM-LED or EMLED-CD options only for battery back-up.
- 10 Must specify voltage. F1=120, 277 or 347V. F2=208, 240 or 480V. PE=120, 208, 240 or 277V.
- 11 DIMA dimming ballast, specify number of lamps, available for 1 or 2-26W or 1-32W, 1-42W. DIMB available for 2-42W, 1-57W or 1-70W.
- 12 SGL optional on HID and CF models only. See note number 4.
- 13 Q or EM not available with LD or E electronic ballast. Q or EM Minimum HID wattage is 70 watts. EM/SC available in 120V only, EM/SC not available with LD. Maximum 100W 120V T4 DC Bayonet Quartz lamp. Lamp supplied by others.
- 14 QMR, 2QMR, EMMR, 2EMMR/SC not available with LD or E electronic ballast. Minimum HID wattage is 70 watts.
- 15 1 or 2 GU10 base 50W max - 120V Halogen. Lamps supplied by others. EM/SC/MR, 2EM/SC/MR, EM/SC/12V, 2EM/SC/12V not available with LD.
- 16 Emergency lamp leads out of the back of the unit to auxiliary power. Lamps independently wired to separate circuits.
- 17 Low Voltage 1 or 2 GU5.3 MR16 base, 12V DC, 35W max. Lamps supplied by others.
- 18 For use in 25°C ambient operating temperature environments. EMI40, EMI40/2L used for CF lamps. Specify 120 or 277V. EMI40 supports 1-70W CF max, EMI40/2L supports 2-32W CF max. Minimum -18°C/-4°F.
- 19 For use in 25°C ambient operating temperature environments. Specify 120 or 277V. CF-EM supports up to 1-57W CF. CF-EM/2L supports 2-18W CF. 18W lamps supplied by others. Minimum temperature is 0°F/32°C.
- 20 EMLED-CD available with 4A models only. For use in 25°C ambient operating temperature environments. Specify 120 or 277V. EMLED-CD minimum -20°C/-4°F. Battery pack is a UL recognized component.
- 21 Order separately.

VOLTAGE CHART	
DT=Dual-Tap	120/277 (wired 277V)
MT=Multi-Tap	120/208/240/277 (wired 277V)
TT=Tri-Tap	120/277/347 (wired 347V)
5T=5 Tap	120/208/240/277/480 (wired 480V)
E=Electronic Ballast	120-277V (Universal) (50/60 HZ)
ED=Electronic LED Driver	120-277V (Universal) (50/60 HZ)

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 (2400 Initial Lumens), 4A (4000 Initial Lumens)

SSS SQUARE STRAIGHT STEEL

10'-39' Mounting Height

4-Bolt Anchor Base

Catalog #	SSS4A20SFM1	Type
Project	AVIATION DEVELOPMENT	
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Fixture Mounting

Drilled or Tenon (Must specify. See fixture mounting).

Shaft

ASTM A500 grade "B" steel shaft. Shot blasted and painted with polyester powder coat.

Handhole

Handhole assembly 3" x 5" on 5" and 6" poles; and 2" x 4" on 4" pole.

Base

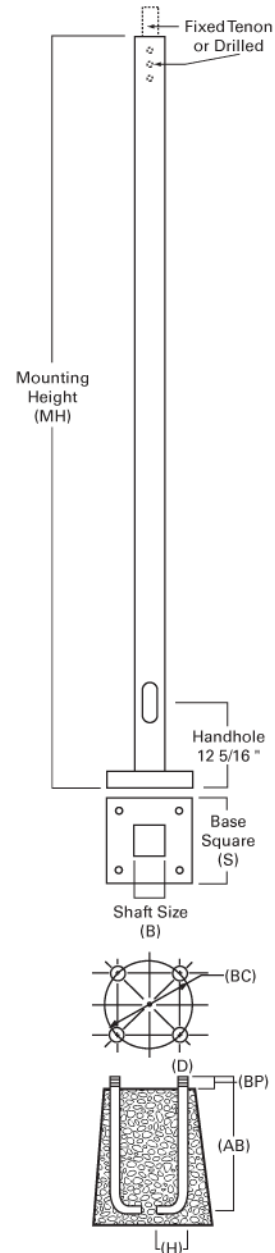
ASTM Grade steel base plate with ASTM A366 base cover.

Anchorage (Four Bolt)

Anchor bolt per ASTM A576 with (2) nuts, (2) flat washer, and (1) lock washer. Nuts, washers and threaded portion of bolt are hot dip galvanized 3" hook for 3/4" bolt, 4" hook for 1" bolt.

POLE COMPATIBILITY MATRIX	DRILL PATTERN	EPA + MOUNTING CONFIGURATIONS					
		Single w/Arm [1]	2 @ 180° [2]	2 @ 90° [5]	3 @ 90° [3]	3 @ 120° [6]	4 @ 90° [4]
PRODUCT	TENON						
TALON MEDIUM (Recessed Door)	M	1.22	2.44	2.44	3.23	3.23	3.63
TALON MEDIUM (Deep Door)	M	1.45	2.90	2.90	3.92	3.92	4.43
TALON LARGE	M	2.51	5.02	5.02	6.85	6.85	7.77
GALLERIA SQUARE SMALL ARM MOUNT ¹	M	1.7	3.4	3.4	4.6	4.6	5.2
GALLERIA SQUARE SMALL SPIDER MOUNT	2 3/8"	1.04	--	--	--	--	--
GALLERIA SQUARE MEDIUM ARM MOUNT ²	M	2.9	5.8	6.8	9.2	9.2	10.4
GALLERIA SQUARE MEDIUM SPIDER MOUNT	3" or 3 1/2"	2.22	--	--	--	--	--
GALLERIA SQUARE LARGE ARM MOUNT ²	M	4.4	8.8	9.8	13.7	13.7	15.65
GALLERIA SQUARE LARGE SPIDER MOUNT	3" or 3 1/2"	3.7	--	--	--	--	--
GALLERIA ROUND MEDIUM ARM MOUNT ²	M	2.2	4.4	5.4	7.1	7.1	7.95
GALLERIA ROUND MEDIUM SPIDER MOUNT	3"	2	--	--	--	--	--
GALLERIA ROUND LARGE ARM MOUNT ²	M	3	6	7	9.5	9.5	10.75
GALLERIA ROUND LARGE SPIDER MOUNT	3"	2.8	--	--	--	--	--
TRIBUTE	M	1.62	3.24	3.24	4.43	4.43	5.03
CLM/CML SQUARE ²	M	3.1	6.2	7.2	9.8	9.8	11.1
LANDAU ³	M	2.7	5.4	6	8.5	8.5	9.75
CIRRUS SMALL ARM MOUNT	Z	1.19	2.38	2.38	3.57	3.57	4.17
CIRRUS SMALL YOKE/SPIDER MOUNT	4" (CIS), 5" (CIG)	1.13	--	--	--	--	--
CIRRUS MEDIUM ARM MOUNT	Z	1.7	3.4	3.4	5.1	5.1	5.95
CIRRUS MEDIUM YOKE/SPIDER MOUNT	5"	1.52	--	--	--	--	--
CIRRUS LARGE ARM MOUNT	Z	2.36	4.72	4.72	7.08	7.08	8.26
CIRRUS LARGE YOKE/SPIDER MOUNT	6"	2.1	--	--	--	--	--
CREDENZA SMALL ARM MOUNT	Z	1.19	2.38	2.38	3.57	3.57	4.17
CREDENZA SMALL YOKE/SPIDER MOUNT	4" (ZDS), 5" (ZDG)	1.13	--	--	--	--	--
CREDENZA MEDIUM ARM MOUNT	Z	1.7	3.4	3.4	5.1	5.1	5.95
CREDENZA MEDIUM YOKE/SPIDER MOUNT	5"	1.52	--	--	--	--	--
CREDENZA LARGE ARM MOUNT	Z	2.36	4.72	4.72	7.08	7.08	8.26
CREDENZA LARGE YOKE/SPIDER MOUNT	6"	2.1	--	--	--	--	--

NOTE: 1 Assumes 9" arm for 90° and 120° mounting configurations. 6" for all else. 2 Assumes 14" arm for 90° and 120° mounting configurations. 6" for all else. 3 Assumes 12" arm for 90° and 120° mounting configurations. 6" for all else. See Fixture Mounting Options.



FOUR BOLT ANCHORAGE (see ordering information)

BC=Bolt Circle
 BP=Bolt Projection
 AB=Anchor Bolt
 D=Bolt Diameter
 H=Bolt Dimensions

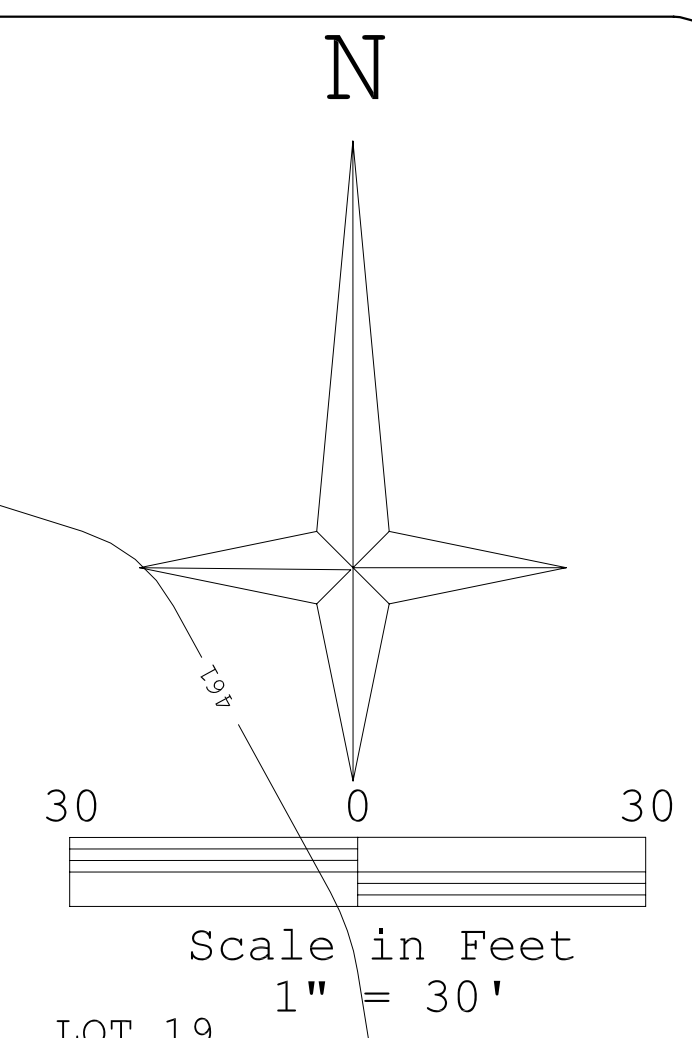
WARNING: THE USE OF UNAUTHORIZED ACCESSORIES SUCH AS BANNERS, SIGNS, CAMERAS OR PENNANTS FOR WHICH THE POLE WAS NOT DESIGNED VOIDS THE COOPER LIGHTING POLE WARRANTY AND MAY RESULT IN POLE FAILURE CAUSING SERIOUS INJURY OR PROPERTY DAMAGE. UPON REQUEST, COOPER LIGHTING WILL SUPPLY INFORMATION REGARDING TOTAL LOADING CAPACITY. COOPER LIGHTING'S POLE WARRANTY IS VOID UNLESS POLES ARE USED AND INSTALLED AS A COMPLETE POLE/LUMINAIRE COMBINATION. THIS WARRANTY SPECIFICALLY EXCLUDES FAILURE AS THE RESULT OF A THIRD PARTY ACT OR OMISSION, MISUSE, UNANTICIPATED USES, FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

Existing Contours		400
Proposed Contours		400
Existing Sanitary Sewer		
Proposed Sanitary Sewer		
Existing Storm Sewers		
Proposed Storm Sewers		
FIRE HYDRANT		

LEGEND

PROPERTY N/F OF
ST. LOUIS COUNTY, MISSOURI
7219/1780

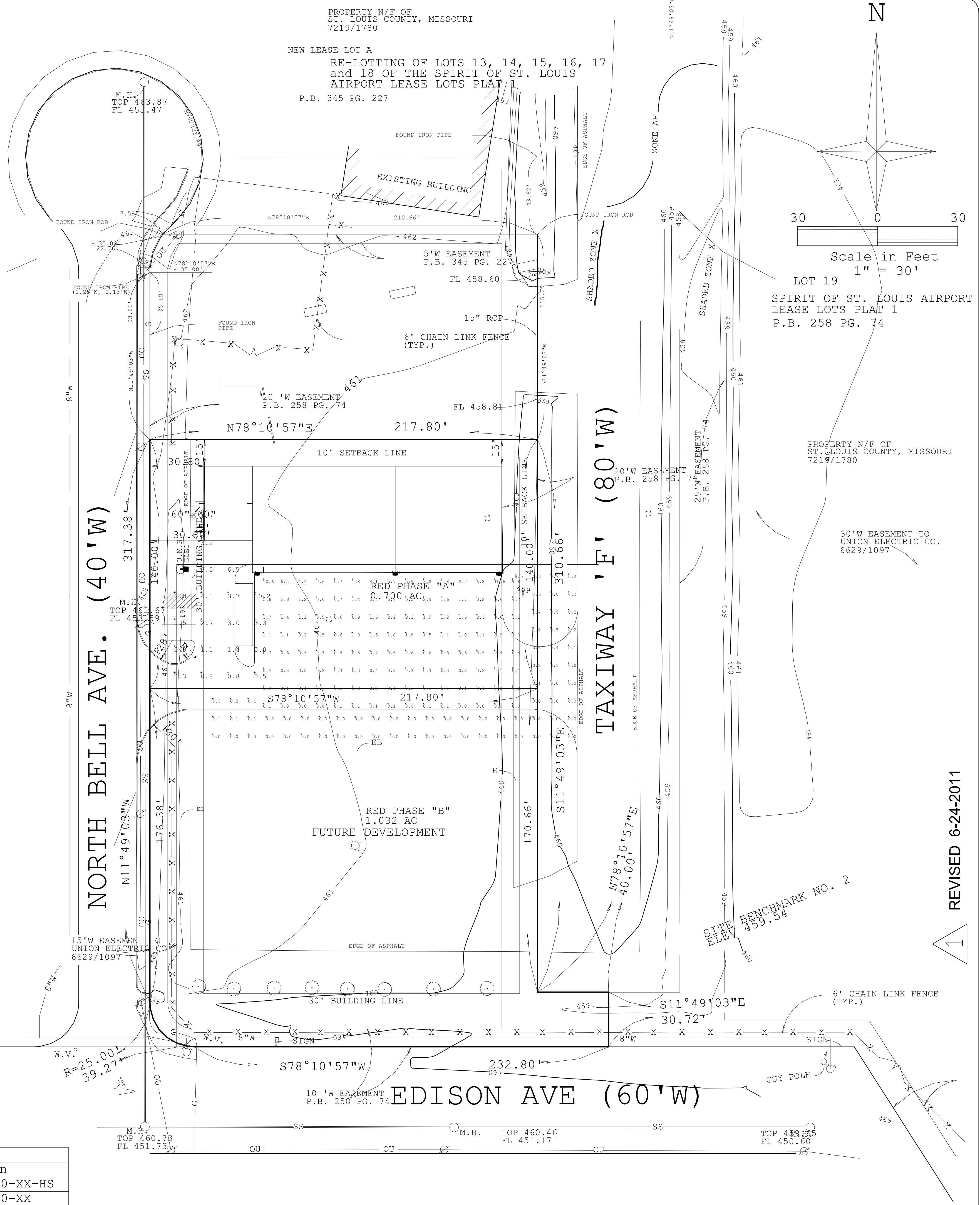
NEW LEASE LOT A
RE-LOTTING OF LOTS 13, 14, 15, 16, 17
and 18 OF THE SPIRIT OF ST. LOUIS
AIRPORT LEASE LOTS PLAT 1
P.B. 345 PG. 227



LOT 19
SPIRIT OF ST. LOUIS AIRPORT
LEASE LOTS PLAT 1
P.B. 258 PG. 74

PROPERTY N/F OF
ST. LOUIS COUNTY, MISSOURI
7219/1780

30' W EASEMENT TO
UNION ELECTRIC CO.
6629/1097



DESIGN IS BASED ON CURRENT INFORMATION PROVIDED AT THE TIME OF REQUEST. ANY CHANGES IN MOUNTING HEIGHT OR LOCATION, LAMP WATTAGE, LAMP TYPE, AND EXISTING FIELD CONDITIONS, THAT EFFECT ANY OF THE PREVIOUSLY MENTIONED, WILL VOID CURRENT LAYOUT AND REQUIRE A CHANGE REQUEST AND RECALCULATION.

1 FIXTURE MOUNTED ON 20' POLE & 2.5' BASE (PROVIDED BY OTHERS)
POLE MOUNTED FIXTURES AT 22.5FT A.F.G.
BUILDING MOUNTED FIXTURES AT 24FT A.F.G.
LIGHT LEVEL CALCULATED AT GRADE

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING LOT	Illuminance	Fc	2.59	10.2	0.3	8.63	34.00
SPELL LIGHT	Illuminance	Fc	0.30	8.5	0.0	N.A.	N.A.
TARMACK	Illuminance	Fc	1.49	10.6	0.0	N.A.	N.A.

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	1	F1	SINGLE	30000	0.650	MPTR-3S-320-XX-HS
	3	F2	SINGLE	44000	0.700	MPWP-FC-400-XX

REVISED 6-24-2011

SITE LIGHTING PLAN

NORTH BELL HANGARS
AT SPIRIT OF ST. LOUIS AIRPORT

VOLZ
Incorporated

JUNE 3, 2011
20