LEE'S SUMMIT
MISSOURI

FINAL DEVELOPMENT PLAN APPLICATION

1. PROJECT NAME: Lee's Summit Municipal Airport - General Aviation Terminal
2. PROPERTY ADDRESS: 2751 Northeast Douglass Street, Lee's Summit, Missouri 64064
3. ZONING OF PROPERTY: Airport Zone
4. LEGAL DESCRIPTION (attach if description is metes and bounds description):
   Lee's Summit Municipal Airport
5. Size of Building(s) (sq. ft): 11,200 sf Lot Area: 2.92 acres

6. APPLICANT Wellner Architects + Engineers PHONE 816-381-9055
   CONTACT PERSON Emily Marsh FAX
   ADDRESS 1627 Main Street, #100 CITY/STATE/ZIP Kansas City, MO 64108
   E-MAIL emarsh@wellner.com
7. PROPERTY OWNER City of Lee's Summit PHONE 816-969-1800
   CONTACT PERSON Mike Anderson FAX
   ADDRESS 220 SE Green Street CITY/STATE/ZIP Lee's Summit, MO 64063
   E-MAIL mike.anderson@cityofls.net
8. ENGINEER/SURVEYOR CMT PHONE 720-547-5432
   CONTACT PERSON Phill Nguyen FAX
   ADDRESS 390 Interlocken Crescent, #485 CITY/STATE/ZIP Broomfield, CO 80021
   E-MAIL pnguyen@cmtengr.com
9. OTHER CONTACTS PHONE
   CONTACT PERSON FAX
   ADDRESS CITY/STATE/ZIP
   E-MAIL

All applications require the signature of the owner on the application and on the ownership affidavit. Applications without the proper signatures will be deemed incomplete and will not be processed.

PROPERTY OWNER

Print name: Mike Anderson

APPLICANT

Emily Marsh

Receipt #: Date Filed: Processed by: Application#:

REVISED JULY 2021

LEE'S SUMMIT MISSOURI

OWNERSHIP AFFIDAVIT

STATE OF MISSOURI)
ss.
COUNTY OF JACKSON)

Comes now City of Lee's Summit (owner) who being duly sworn upon his/her oath, does state that he/she is the owner of the property legally described as Lee's Summit Municipal Airport

in the application for Final Development Plan
(type of application, e.g., rezoning, preliminary or final development plan, etc.).

Owner acknowledges the submission of said application and understands that upon approval of the application the proposed use specified in the application will be a permitted use upon the subject property under the City of Lee's Summit Unified Development Ordinance.

Dated this 8 day of NOVEMBER, 2024

Signature of Owner

MICHAEL ANDERSON

Printed Name

Subscribed and sworn to before me this 8th day of NOV, 2024

CARRIE CRAVER
Notary Public - Notary Seal
Jackson County - State of Missouri
Commission Number 19475752
My Commission Expires May 27, 2027

Notary Public

May 27, 2027

My Commission Expires

Final Development Plan Report

For: The LXT Terminal at

LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MO

Prepared By:

Wellner Architects + Engineers
1627 Main St., # 100
Kansas City, MO 64108

November 25, 2024

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Associated Documents (Submitted separately due to size)

Plan Set – Sealed, Dated 10/21/24
Titled: 17932172 LXT Terminal Plan Set_R0_102124

Project Manual – Sealed, Dated 10/21/24
Titled: 17932172 LXT Terminal Project Manual_R0_102124

1 – INTRODUCTION

1.1 PURPOSE OF FINAL DEVELOPMENT PLAN

The purpose of the final development plan is to provide a structured document detailing the Lee's Summit Municipal Airport's General Aviation Terminal.

The goal is to follow Lee's Summit's final development checklist as close as possible, however due to the unique setting of the airport, many of the standard items listed on the checklist do not apply and the implementation of some standards can be challenging.

1.2 PREVIOUS REPORTS

The Final Development Plan for Eastside Development and Hangar 2 at Lee's Summit Municipal Airport was submitted originally on September 29, 2023 and with comment responses on November 13, 2023.

The airfield improvements shown and referenced in the Eastside Development and Hangar 2 preliminary development plan was based upon the Airport's Approved Master Plan completed in 2021.

1.3 OWNERSHIP/MAINTENANCE RESPONSIBLITIES

The entire areas encompassed within the Final Development Plan will be under the ownership and control of Lee's Summit Municipal Airport. The Airport will be responsible for the maintenance of all facilities referred to in this report.

1 – FDP Development Components

2.1 GENERAL

The following items include written descriptions, or references, in response to all checklist items designated in the Final Development Plan.

2.2 General Application Plan Submission Requirements

A digital copy of the engineering plan set is also provided as an Associated Document in addition to this report.

2.3 Final Development Plan Checklist: Table 3.

C.1. Legal Description: The property designated for this FDP is the Lee's Summit Municipal Airport.

C.2 Land Area: The area of development for this project encompasses 2.92 Acres of land within the boundaries of the Lee's Summit Municipal Airport property.

C.3 Floodplain: Location and limits of the 1% Annual Chance Flood as set forth on current FEMA maps are included as an attachment to this report in Appendix A4. The project location lies outside of special flood hazard areas subject to inundation by the 1% annual chance flood.

C.4 Lot Area: Layout, number and approximate dimensions of lots and approximate lot areas: the layout of the 2.92 acre development area at the airport is established in the engineering drawings. The entirety of this development is within the property limits of the Lee's Summit Municipal Airport.

C.5 Streets: Names and locations of proposed streets are shown in the Site Plan. The width, radii, centerline and grade of streets are detailed in the Plan and Profile sheets.

C.6 Sidewalks: Location of all sidewalks are shown in the Site Plan, width and limits are shown in the Plan and Profile sheets.

C.7 Easements: No easements are necessary for this development

C.8 Building setback: The LXT Terminal building being developed is within airport property and is not within close proximity to any streets. The Terminal has been developed to be set back 57ft from the East Apron Taxilane. This ensures the building is clear of the 55ft Taxilane Object Free Area.

C.9 Culverts: No culverts or bridges are associated with this development.

C.10 Driveways: No existing driveways, curb cuts, median breaks or turn lanes are affected by this development.

C.11 Utilities: This development includes the installation of water, storm water, and sanitary sewers, all depicted in the Utility Plan and detailed with individual profile sheets.

C.12 Sanitary Sewer:

The entire Eastside Development (proposed and future development) has been prepared for an ultimate capacity of 670 people during peak-period within the 20-year eastside development:

- Attached hangars = 49
- Hangar 2 LXT = 20 staff + visitors
- Hangar 2 LSR7 = 49 staff + students
- Restraurant = 220 guests and staff
- GA Terminal = 332
    - = Peak capacity = 670 people/day

During peak period design requiring 75 gpd/pp this amounts to 50,250 gpd.
Final analysis of the capacity of the existing sanitary sewer receiving system: the 8" sanitary line at a minimum slope of 0.4% is capable to receive 278 GPM (0.621 cfs) which exceeds the proposed peak hourly flow and therefore, is sufficient for design purposes. The calculations for both peak daily flow and peak hourly flow are summarized as follows:

Lee's Summit Airport Eastside Development Ultimate Sewer Capacity Calculations

IV. POPULATION & LOADING CALCULATIONS

Population Equivalent, PE = (No. of units)*(PE factor)

		No. of condos	Factor	PE (persons)	Gallons of waste / person	Proposed ADF (gpd)
Hangars				49		
Hangar 2 LXT				20		
Hangar 2 LSR7				49		
Restaurant				220		
GA Terminal				332		
Equiavalent =				670	75	50,250
	Total =			338		50,250

Peak Daily Flow, PDF = PDFF*ADF

PDFF	ADF (gpd)	PDF (gpd)	PDF (cfs)
2	50,250.0	100,500.0	**0.1555**

$$\text{Peak Flow Factor (PFF)} = \frac{18 + (PE/1000)^{.5}}{4 + (PE/1000)^{.5}}$$

Population Equivalent (PE)	PFF
338	4.1

Peak Hourly Flow, PHF = PFF*ADF

PFF	ADF (gpd)	PHF (gpd)	PHF (cfs)
4.1	50,250.0	203,806.4	**0.3153**

8 in. dia. gravity sewer at a minimum slope of 0.4% will carry **0.621** cfs which exceeds the proposed peak hourly flow, and, therefore, is sufficient for design purposes.

C.13 Water and Sanitary plans: Water and sanitary plans are depicted on the Utility Plan sheets and the Utility Profile sheets.

C.14 Water Demand: Water Service Demand Data
Planned Land Usage: Commercial

Density of Prop Development: Est. Peak Capacity of 670 ppl/day (Ultimate) Total
GA Terminal: 332
Hangars: 49 Tenant Users
Hangar 2 LXT: 20 Staff + Visitors
Hangar 2 LSR7: 49 Staff + Visitors
Restaurant: 220

Commercial Avg. Demand = C = 621p x 100 Gal/pp = 62,100 gpd
School Avg. Demand = S = 49p x 100 Gal/pp = 4,900 gpd
Average Daily Water Demand (gpd) = 62,100 gpd + 4,900 gpd = 67,000 gpd

Maximum Daily Water Demand = 67,000 gpd x 2.1 = 140,700 gpd
Peak Hour Demand = P = 2 * 140,700 gpd = 281,400 gpp = 195.41 gpm

Commercial Fire Flows Minimum: 1,500 gpm
Pipe Sizes: 6" waterline, 2" Fire Sprinkler Line (See Utility Plan)
Fire Hydrant: 2 existing fire hydrants

C.15 Storm Water: Site grading, storm sewer, and erosion control plans are depicted on the grading and erosion control drawings.

C.16 Storm Water Management: A complete stormwater report was provided for the Eastside Development and Hangar 2 Final Development Plan and has been attached as Appendix 5 for this FDP. The stormwater system was designed to provide detention for all proposes and future development.

C.17 Open Space: There is no open space designated for public use associated with this development.

C.18 Parking: Number of spaces and outline location of parking spaces are provided on the Site Plan, sheet number C105 of the associated Plan Set. Location and dimensions of parking spaces and accessible routes are detailed in the Signage and Marking plan, sheet number C130.

C.19 Contours: A final contour plan associated with this development is depicted on the Grading Plan, sheet number C110 of the associated Plan Set.

C.20 Right-of-Way: The only public street right-of-way within the vicinity of or associated with this development is City of Lee's Summit right-of-way along Hagan Road.

C.21 Streets: This project ties a new parking lot to the new roadways on the Eastside Development and Hangar 2 project, tie-ins are presented on the Site Plan, sheet number C105 of the associated Plan Set, and details are provided in the Plan and Profile Sheets.

C.22 Dimensions: Dimensions indicating the relationship between pavements, parking areas and buildings are presented in the details shown on the Plan and Profile sheets. All improvements are located within the Lee's Summit Airport property line.

C.23 Setbacks: The proposed location of the Terminal building is well away from Hagan Road and provides no conflicts with setbacks. The terminal spacing from the apron has been designed to meet FAA "taxilane to fixed object "separation criteria for Group 2 aircraft and the offset-from-centerline dimension is spaced to provide 57' of clearance to the Hangar. (FAA requires 55')

C.24 Building Dimensions: The location and dimensions of the proposed building is depicted in great detail in the architectural sections of the associated Plan Set. Much of

this information is specifically provided in the Codes Information and Plans, sheet number G-007 and 1st Floor Plan, sheet number A-101.

C.25 Oil & Gas Wells: There are no oil or gas wells located within the vicinity of this development.

C.26 Retaining Walls: There are no retaining walls associated with this development.

C.27 Driveways: There are no driveways associated with this development.

C.28 Lighting: The exterior lighting system will consist of light poles as depicted on the Lighting Site Photometric Plan, sheet number ME003 of the associated Plan Set.

C.29 Photometric Diagram: Photometrics were analyzed during the development of the lighting plan, and the results are summarized on the Lighting Site Photometric Plan, sheet number ME003 of the associated Plan Set.

C.30 Lighting Spec Sheets: Specification sheets for exterior lighting fixtures can be found attached to this report in Appendix A6.

C.31 Mechanical Screening: Mechanical screening is provided, see Exterior Elevations, sheet number A-201 of the associated Plan Set.

C.32 Equipment Spec Sheets: Mechanical equipment associated with this development is detailed on the Mechanical sheets, numbers M-100 – M-500 of the associated Plan Set.

C.33 Signs: Building signs are depicted on Exterior Signage, sheet number A-623 of the associated Plan Set. Roadway signage is shown on the Marking and Signage Details, sheet numbers C131 – C133.

C.34 Adjacent Developments: This development is located within the property limits of the Lee's Summit Municipal Airport. Currently the only nearby building is the Eastside Development Hangar 2 building currently under construction which is shown grayed out on the corresponding sheets within the associated Plan Set.

C.35 Fire Hydrants: Locations of existing and proposed fire hydrants are shown on the Utility Plan, sheet number C119 of the associated Plan Set.

C.36 Sight triangles are not applicable. Proposed parking lot connects to existing low-volume, low-speed site roadways that have been checked for sight distance in a previous project (Eastside Development).

D.1 Building Elevations: Building Elevations are provided on Exterior Elevations, sheet number A-201 of the associated Plan Set.

D.2 Screening Materials: Screening is provided, see Exterior Elevations, sheet number A-201 of the associated Plan Set, and extents shown on Mezzanine and Low Roof Plan, sheet number A-102.

D.3 Roof Line: The roof line of the proposed Terminal building is depicted on Exterior Elevations, sheet number A-201 of the associated Plan Set.

E. Floor Plan: The overall floor plans are shown on sheet numbers A-101 and A-102 of the associated Plan Set and Enlarged Plans are shown on sheet numbers A-401 – A-403.

F. Landscape Plan: Landscaping plans are provided, see Landscape Plan and Landscape Details, sheet numbers L100 – L101 of the associated Plan Set.

G. Land Use Schedule:

G.1 Total Floor Area: 11,200 SF
G.2 Number of Dwelling Units: not-applicable
G.3 Land Area: the area of disturbance is 2.92 AC
G.4 Parking Spaces: (See Site Plan, Sheet Number C105)
Standard Spaces: 103 Spaces
ADA Spaces: 5 Spaces
Total Spaces: 108 Spaces
G.5 Impervious Coverage: 51.64% of area of proposed improvements
G.6 Floor Area Ratio: 9.27%

H.1 Deeds: there are no rights-of-way or easements required as part of this development.

H.2 Covenants: There are no covenants applicable to this development.

H.3 POA Bylaws: There is no property owner's association associated with this development.

H.4 Conditions: No preliminary development plan was required.

H.5 Engineering Plans: A digital copy of the engineering plan set is provided in addition to this report.

2.4 Final Development Plan Checklist: Table 4. Other Requirements

UDO Art. 8, Div. III Landscaping, Buffers & Tree Protection: Landscaping plans are provided as L100 of the associated Plan Set. It is the intention of the airport to meet as many landscaping requirements as possible, but due to the nature of the airport, plants are largely avoided due to being wildlife attractants. No areas inside the fence were used in the calculations of required plants since trees are unwanted wildlife attractants as well as quickly becoming airspace hazards that the airport then must spend time and effort to remove.

The type seed intended for use for the reestablishment of turf on disturbed areas adheres to the City of Lee's Summit, Missouri Standard Specifications which adopts the Section 2400 Kansas City Metropolitan Chapter of APWA Construction and Material Specifications.

UDO Art. 8, Div. II Vehicle Parking: Parking plan information and details are located on the following sheet numbers of the associated Plan Set: C105 – Site Plan, C107 – Site Details 2 of 2, C108 – Paving Plan, and C130 – Marking and Signage.

UDO Art. 9 Signs: All roadway signage shall comply with the sign requirements outlined in the ordinance. Vehicle signage and Roadway signage are shown on the Marking and Signage Details, sheet numbers C131 – C133, provided as Lee's Summit Standard sign details.

UDO Art. 5. Div. I - Airport Overlay: All proposed improvements have been planned specifically outside of the airport Building Restriction Line as part of the Master Plan Update – reviewed and approved by the FAA and the City of Lee's Summit, the proposed

Terminal structure and all associated improvements associated with this development. See attached Appendix A7.

UDO Art. 5. Div. II Flood Hazard and Zoning: The proposed project location lies outside of the 1% Annual Chance Flood as set forth on current FEMA maps included as an attachment to this report in Appendix A4.

UDO Art. 5. Div. III Historic Preservation: The development is not located within a local historic district and there are no properties or structures listed in the National Register of Historic Places.

UDO Article 7. Platting: The property limits at the Lee's Summit Municipal Airport were platted as a unified airport zone in 2019, the legal documents are attached in Appendix A1.

APPENDIX A1 – LEGAL DESCRIPTION

17, 18, 19, 20, 29, 30–48–31
18–10–42364–1
42364–Final Plat.dwg

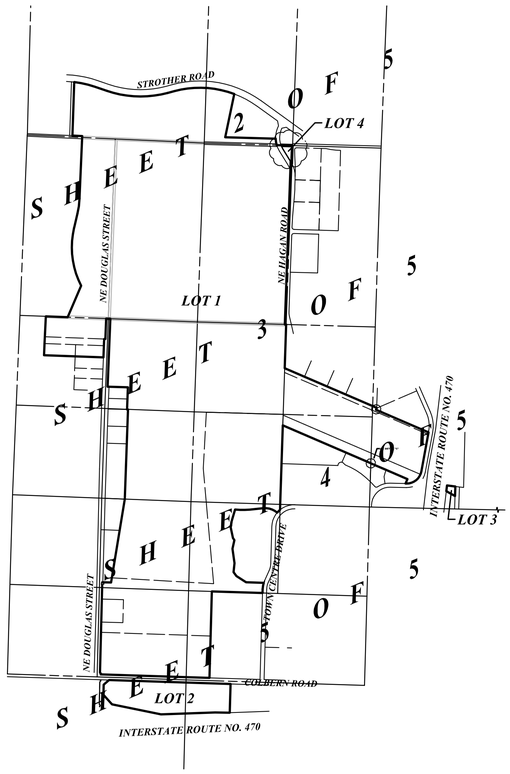
FINAL PLAT OF
LEE'S SUMMIT AIRPORT

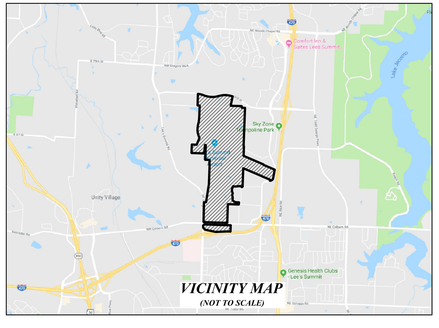
A MAJOR SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
PART OF SECTIONS 17, 18, 19, 20, 29, AND 30, TOWNSHIP 48 NORTH, RANGE 31 WEST

DESCRIPTION:

LOTS 1 AND 4

DESCRIPTION: ALL OF LOT 2, CROSSROADS OF LEE'S SUMMIT, LOTS 1 AND 2; ALL OF LOTS 1 AND 2, HAGAN HEIGHTS; ALL OF TRACT A, LAKEWOOD BUSINESS CENTER ON I-470 PLAT N; ALL OF LOT 45B5, LAKEWOOD BUSINESS CENTER ON I-470, LOTS 45B5, 45B6 AND 45B7; ALL OF LOT 10B, REPLAT NO. 1 OF LAKEWOOD BUSINESS CENTER ON I-470 PLAT G; ALL OF LOT 45B3-1, REPLAT NO. 1 OF LAKEWOOD BUSINESS CENTER ON I-470 PLAT H; THAT PART OF LOTS 4, 5, 6, 7, AND 12, FIELDS FARM; AND THAT PART OF SECTIONS 17, 18, 19, 20, 29, AND 30, ALL IN TOWNSHIP 48 NORTH, RANGE 31 WEST IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI BEING MORE PARTICULARLY DESCRIBED AS FOLLOW: COMMENCING AT THE SOUTHWEST CORNER OF THE SOUTHEAST 1/4 OF SAID SECTION 19; THENCE SOUTH 87°-20'-26" EAST ALONG THE SOUTH LINE OF SAID SOUTHEAST 1/4, A DISTANCE OF 667.98 FEET; THENCE NORTH 1°-55'-36" EAST, A DISTANCE OF 20.00 FEET TO THE NORTH RIGHT OF WAY LINE OF OLD STROTHER ROAD, AS NOW ESTABLISHED, AND THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE CONTINUING NORTH 1°-55'-36" EAST, A DISTANCE OF 793.16 FEET TO THE SOUTH RIGHT OF WAY LINE OF STROTHER ROAD AS ESTABLISHED BY DOCUMENT NO. 2014E0018251; THENCE ALONG A CURVE TO THE RIGHT, THIS AND THE FOLLOWING COURSES ALONG SAID SOUTH RIGHT OF WAY LINE OF STROTHER ROAD, HAVING AN INITIAL TANGENT BEARING OF SOUTH 83°-27'-02" EAST, A RADIUS OF 1450.00 FEET, A CENTRAL ANGLE OF 12°-21'-37", AND AN ARC LENGTH OF 312.81 FEET; THENCE SOUTH 71°-05'-25" EAST, A DISTANCE OF 186.12 FEET; THENCE ALONG A CURVE TO THE LEFT TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 1550.00 FEET, A CENTRAL ANGLE OF 33°-59'-41", AND AN ARC LENGTH OF 919.65 FEET; THENCE NORTH 74°-54'-54" EAST, A DISTANCE OF 100.00 FEET; THENCE ALONG A CURVE TO THE RIGHT TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 1450.00 FEET, A CENTRAL ANGLE OF 35°-40'-59", AND AN ARC LENGTH OF 903.04 FEET; THENCE, DEPARTING SAID SOUTH RIGHT OF WAY LINE, SOUTH 11°-50'-08" WEST, A DISTANCE OF 655.09 FEET; THENCE SOUTH 88°-21'-43" EAST, A DISTANCE OF 746.97 FEET TO THE WEST RIGHT OF WAY LINE OF HAGAN ROAD AS ESTABLISHED BY INSTRUMENT NO. 2014E0018251; THENCE ALONG A CURVE TO THE LEFT HAVING AN INITIAL TANGENT BEARING OF SOUTH 2°-18'-55" EAST, A RADIUS OF 380.00 FEET, A CENTRAL ANGLE OF 14°-38'-14", AND AN ARC LENGTH OF 97.10 FEET TO THE NORTH LINE OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION 20; THENCE SOUTH 88°-21'-47" EAST ALONG SAID NORTH LINE, A DISTANCE OF 235.63 FEET TO THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION 20; THENCE SOUTH 2°-03'-41" WEST ALONG THE EAST LINE OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION 20, A DISTANCE OF 269.08 FEET; THENCE NORTH 30°-56'-03" WEST, A DISTANCE OF 36.66 FEET TO THE WEST RIGHT OF WAY LINE OF HAGAN ROAD, AS ESTABLISHED BY JACKSON COUNTY ROAD RECORD BOOK 5, PAGE 489; THENCE SOUTH 2°-03'-20" WEST ALONG LAST SAID WEST RIGHT OF WAY LINE, A DISTANCE OF 2412.44 FEET TO THE SOUTH LINE OF THE NORTHWEST 1/4 OF SAID SECTION 20; THENCE SOUTH 88°-22'-06" EAST ALONG SAID SOUTH LINE, A DISTANCE OF 19.71 FEET TO THE EAST LINE OF THE WEST 1/2 OF THE SOUTHWEST 1/4 OF SAID SECTION 20; THENCE SOUTH 1°-54'-01" WEST ALONG SAID EAST LINE, A DISTANCE OF 647.65 FEET TO THE NORTHWEST CORNER OF TRACT A, LAKEWOOD BUSINESS CENTER ON I-470 PLAT N; THENCE SOUTH 66°-41'-55" EAST ALONG THE NORTHEAST LINE OF SAID TRACT A, A DISTANCE OF 1482.21 FEET (PLAT=1482.34 FEET) TO THE NORTHEAST CORNER THEREOF; THENCE SOUTH 1°-58'-05" WEST ALONG THE EAST LINE OF SAID TRACT A, A DISTANCE OF 5.13 FEET TO THE NORTHWEST CORNER OF LOT 10A, REPLAT NO. 1 OF LAKEWOOD BUSINESS CENTER ON I-470 PLAT G; THENCE SOUTH 23°-10'-00" WEST ALONG THE EAST LINE OF SAID TRACT A AND THE WEST LINE OF SAID LOT 10A, A DISTANCE OF 25.86 FEET (PLAT=26.43 FEET) TO THE SOUTHWEST CORNER OF SAID LOT 10A; THENCE SOUTH 66°-39'-26" EAST ALONG THE SOUTH LINE OF SAID LOT 10A, A DISTANCE OF 847.58 FEET (PLAT=847.49 FEET) TO THE SOUTHEAST CORNER THEREOF, SAID POINT BEING ON THE WEST RIGHT OF WAY LINE OF INDEPENDENCE AVENUE AS ESTABLISHED BY DOCUMENT NO. I-884792 IN BOOK I-1868 AT PAGE 812; THENCE SOUTH 10°-26'-35" WEST ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 586.68 FEET; THENCE, CONTINUING ALONG SAID RIGHT OF WAY LINE AND THE EASTERLY LINE OF LOT 45B5, LAKEWOOD BUSINESS CENTER ON I-470, LOTS 45B5, 45B6 AND 45B7, ALONG A CURVE TO THE RIGHT TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 220.00 FEET, A CENTRAL ANGLE OF 80°-49'-00", AND AN ARC LENGTH OF 310.31 FEET; THENCE NORTH 89°-16'-45" WEST CONTINUING ALONG SAID RIGHT OF WAY LINE AND THE SOUTH LINE OF SAID LOT 45B5, A DISTANCE OF 12.88 FEET (PLAT=11.53 FEET) TO THE SOUTHERNMOST CORNER OF SAID LOT 45B5; THENCE NORTH 23°-30'-30" EAST ALONG THE SOUTHWESTERLY LINE OF SAID LOT 45B5, A DISTANCE OF 70.98 FEET (PLAT=70.85 FEET) TO THE EASTERLY CORNER OF THE SOUTHWEST LINE THEREOF; THENCE NORTH 66°-29'-41" WEST ALONG THE SOUTHWEST LINE OF SAID LOT 45B5, A DISTANCE OF 346.79 FEET TO THE NORTHWEST CORNER OF LOT 45B6; THENCE NORTH 66°-52'-36" WEST, CONTINUING ALONG THE SOUTHWEST LINE OF SAID LOT 45B5, A DISTANCE OF 243.77 FEET (PLAT=244.37 FEET) TO THE SOUTHWEST CORNER OF SAID LOT 45B5 AND THE EAST LINE OF LOT 45B3-3, REPLAT NO. 1 OF LAKEWOOD BUSINESS CENTER ON I-470 PLAT H; THENCE NORTH 1°-51'-13" EAST ALONG THE EAST LINE OF 45B3-3, A DISTANCE OF 0.57 FEET TO THE NORTHEAST CORNER OF SAID LOT 45B3-3; THENCE NORTH 66°-41'-28" WEST ALONG THE SOUTHWEST LINE OF SAID LOT 45B3-1, A DISTANCE OF 1418.82 FEET (PLAT=1418.71 FEET) TO THE SOUTHWEST CORNER THEREOF AND THE EAST LINE OF LOT 2, CROSSROADS OF LEE'S SUMMIT, LOTS 1 AND 2; THENCE SOUTH 1°-54'-01" WEST, THIS AND THE FOLLOWING COURSES ALONG THE EASTERLY LINES OF SAID LOT 2, A DISTANCE OF 1170.00 FEET; THENCE SOUTH 1°-36'-04" WEST, A DISTANCE OF 80.36 FEET (PLAT=80.21 FEET); THENCE ALONG A CURVE TO THE LEFT HAVING AN INITIAL TANGENT BEARING OF SOUTH 51°-00'-28" WEST, A RADIUS OF 330.00 FEET, A CENTRAL ANGLE OF 10°-21'-40", AND AN ARC LENGTH OF 59.68 FEET (PLAT=59.75 FEET); THENCE ALONG A CURVE TO THE LEFT HAVING AN INITIAL TANGENT BEARING OF NORTH 49°-29'-14" WEST, A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 46°-25'-53", AND AN ARC LENGTH OF 222.86 FEET; THENCE SOUTH 84°-05'-34" WEST, A DISTANCE OF 200.00 FEET; THENCE ALONG A CURVE TO THE RIGHT TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 997.62 FEET (PLAT=1000.00 FEET), A CENTRAL ANGLE OF 12°-27'-57", AND AN ARC LENGTH OF 217.05 FEET (PLAT=217.14 FEET); THENCE SOUTH 16°-39'-09" WEST, A DISTANCE OF 192.99 FEET; THENCE SOUTH 8°-10'-52" WEST, A DISTANCE OF 80.33 FEET; THENCE SOUTH 11°-58'-56" EAST, A DISTANCE OF 161.93 FEET; THENCE SOUTH 34°-27'-36" EAST, A DISTANCE OF 38.50 FEET; THENCE SOUTH 13°-00'-28" WEST, A DISTANCE OF 128.94 FEET; THENCE SOUTH 8°-15'-23" EAST, A DISTANCE OF 216.99 FEET; THENCE SOUTH 6°-27'-45" WEST, A DISTANCE OF 132.45 FEET; THENCE SOUTH 35°-55'-21" EAST, A DISTANCE OF 72.72 FEET; THENCE SOUTH 57°-06'-52" EAST, A DISTANCE OF 169.55 FEET; THENCE SOUTH 88°-14'-48" EAST, A DISTANCE OF 262.71 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING AN INITIAL TANGENT BEARING OF SOUTH 18°-08'-10" WEST, A RADIUS OF 330.00 FEET, A CENTRAL ANGLE OF 16°-29'-43", AND AN ARC LENGTH OF 95.01 FEET; THENCE SOUTH 1°-37'-33" WEST, A DISTANCE OF 57.53 FEET (PLAT=57.99 FEET) TO THE SOUTHEAST CORNER OF SAID LOT 2; THENCE NORTH 88°-15'-22" WEST ALONG THE SOUTH LINE OF SAID LOT 2, A DISTANCE OF 751.45 FEET; THENCE SOUTH 1°-36'-01" WEST, A DISTANCE OF 1280.64 FEET TO THE NORTH RIGHT OF WAY LINE OF COLBERN ROAD AS ESTABLISHED BY DOCUMENT NO. 271760 IN BOOK 556 AT PAGE 43; THENCE NORTH 88°-13'-18" WEST ALONG SAID NORTH RIGHT OF WAY LINE, A DISTANCE OF 344.87 FEET TO THE SOUTHEAST CORNER OF LOT 6, FIELDS FARM; THENCE NORTH 88°-06'-45" WEST ALONG THE SOUTH LINE OF SAID LOT 6 AND SAID NORTH RIGHT OF WAY LINE, A DISTANCE OF 1252.54 FEET; THENCE NORTH 43°-19'-35" WEST, A DISTANCE OF 35.38 FEET TO THE EAST RIGHT OF WAY LINE OF NORTHEAST DOUGLAS STREET AS ESTABLISHED BY DOCUMENT NO. 271761, BOOK 555, PAGE 66; THENCE NORTH 1°-27'-43" EAST ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 1259.84 FEET TO THE SOUTH LINE OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 30; THENCE NORTH 1°-29'-12" EAST CONTINUING ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 80.00 FEET TO THE SOUTHWEST CORNER OF DOUGLAS CORPORATE CENTER - LOT 5, A SUBDIVISION IN SAID CITY, COUNTY, AND STATE; THENCE SOUTH 87°-55-08" EAST ALONG THE SOUTH LINE OF SAID SUBDIVISION, A DISTANCE OF 131.20 FEET TO THE SOUTHEAST CORNER THEREOF; THENCE NORTH 9°-19'-31" EAST ALONG THE EAST LINE OF LAST SAID SUBDIVISION AND THE EAST LINE OF DOUGLAS CORPORATE CENTER - LOT 4, A SUBDIVISION IN SAID CITY, COUNTY, AND STATE, A DISTANCE OF 1252.04 FEET TO THE SOUTHEAST CORNER OF DOUGLAS CORPORATE CENTER - LOT 3, A SUBDIVISION IN SAID CITY, SAID STATE; THENCE NORTH 2°-00'-51" EAST ALONG THE EAST LINE OF LAST SAID SUBDIVISION, DOUGLAS CORPORATE CENTER - LOT 2, AND DOUGLAS CORPORATE CENTER - LOT 1, BOTH SUBDIVISIONS IN SAID CITY, COUNTY, AND STATE, A DISTANCE OF 1327.29 FEET TO THE NORTHEAST CORNER OF DOUGLAS CORPORATE CENTER - LOT 1; THENCE NORTH 88°-19'-19" WEST ALONG THE NORTH LINE OF LAST SAID SUBDIVISION, A DISTANCE OF 14.10 FEET TO THE SOUTHEAST CORNER OF HAGAN FARM, LOTS 1 AND 2, A SUBDIVISION IN SAID CITY, COUNTY, AND STATE; THENCE NORTH 2°-15'-47" EAST ALONG THE EAST LINE OF LAST SAID SUBDIVISION, A DISTANCE OF 329.47 FEET (PLAT=330.00 FEET) TO THE NORTHEAST CORNER THEREOF; THENCE NORTH 88°-19'-18" WEST ALONG THE NORTH LINE OF LAST SAID SUBDIVISION, A DISTANCE OF 299.71 FEET TO SAID EAST RIGHT OF WAY LINE OF NORTHEAST DOUGLAS STREET; THENCE NORTH 2°-18'-47" EAST ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 1007.11 FEET TO THE SOUTH LINE OF THE NORTHEAST 1/4 OF SAID SECTION 19; THENCE NORTH 87°-52'-27" WEST ALONG SAID 1/4 SECTION LINE, A DISTANCE OF 63.00 FEET TO THE WEST RIGHT OF WAY LINE OF SAID NORTHEAST DOUGLAS STREET; THENCE SOUTH 2°-18'-47" WEST ALONG SAID WEST RIGHT OF WAY LINE, A DISTANCE OF 303.38 FEET; THENCE NORTH 87°-52'-23" WEST, A DISTANCE OF 17.00 FEET TO THE NORTHEAST CORNER OF LOT 1, HAGAN HEIGHTS; THENCE SOUTH 2°-18'-47" WEST ALONG THE EAST LINE OF LOTS 1 AND 2, HAGAN HEIGHTS, A DISTANCE OF 273.00 FEET TO THE SOUTHEAST CORNER OF SAID LOT 2; THENCE NORTH 87°-52'-23" WEST ALONG THE SOUTH LINE OF SAID LOT 2 AND ITS WESTERLY PROJECTION, A DISTANCE OF 879.35 FEET; THENCE NORTH 2°-18'-47" EAST, A DISTANCE OF 173.00 FEET TO THE SOUTHWEST CORNER OF LOT 1, HAGAN HEIGHTS; THENCE NORTH 2°-43'-55" EAST ALONG THE WEST LINE OF SAID LOT 1 AND ITS NORTHERLY PROJECTION, A DISTANCE OF 403.38 FEET TO THE SOUTH LINE OF THE NORTHEAST 1/4 OF SAID SECTION 19; THENCE SOUTH 87°-52'-27" EAST ALONG SAID 1/4 SECTION LINE, A DISTANCE OF 322.61 FEET; THENCE NORTH 23°-18'-03" EAST, A DISTANCE OF 506.53 FEET; THENCE ALONG A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF NORTH 27°-10'-29" WEST, A RADIUS OF 1250.00 FEET, A CENTRAL ANGLE OF 40°-33'-01", AND AN ARC LENGTH OF 884.67 FEET; THENCE NORTH 13°-22'-56" EAST, A DISTANCE OF 214.78 FEET; THENCE ALONG A CURVE TO THE LEFT TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 1150.00 FEET, A CENTRAL ANGLE OF 10°-54'-30", AND AN ARC LENGTH OF 218.94 FEET; THENCE NORTH 2°-28'-26" EAST, A DISTANCE OF 931.55 FEET TO SAID NORTH RIGHT OF WAY LINE OF OLD STROTHER ROAD; THENCE NORTH 87°-20'-30" WEST ALONG SAID NORTH RIGHT OF WAY LINE, A DISTANCE OF 145.74 FEET TO THE POINT OF BEGINNING .





LOT 2

THAT PART OF LOTS 7 AND 12, FIELDS FARM, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS; COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 48 NORTH, RANGE 31 WEST; THENCE SOUTH 1°-27'-56" WEST ALONG THE EAST LINE OF SAID 1/4 SECTION, A DISTANCE OF 40.00 FEET TO THE SOUTH RIGHT OF WAY LINE OF COLBERN ROAD AS ESTABLISHED BY DOCUMENT NO. 271760 IN BOOK 556 AT PAGE 43; THENCE NORTH 88°-06'-51" WEST ALONG SAID SOUTH RIGHT OF WAY LINE, A DISTANCE OF 1140.16 FEET TO THE EAST RIGHT OF WAY LINE OF DOUGLAS ROAD AS NOW ESTABLISHED; THENCE SOUTH 48°-45'-47" WEST ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 105.25 FEET; THENCE SOUTH 1°-37'-49" WEST ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 150.00 FEET TO THE NORTH RIGHT OF WAY LINE OF INTERSTATE 470 HIGHWAY AS ESTABLISHED BY DOCUMENT NO. I-53740 IN BOOK I-158 AT PAGE 1988; THENCE SOUTH 42°-16'-29" EAST, THIS AND THE FOLLOWING COURSES ALONG SAID NORTH RIGHT OF WAY LINE, A DISTANCE OF 189.09 FEET; THENCE SOUTH 78°-20'-53" EAST, A DISTANCE OF 741.78 FEET; THENCE NORTH 87°-57'-41" EAST, A DISTANCE OF 800.00 FEET; THENCE SOUTH 89°-10'-34" EAST, A DISTANCE OF 200.25 FEET; THENCE NORTH 87°-57'-41" EAST, A DISTANCE OF 17.62 FEET; THENCE NORTH 1°-41'-13" EAST DEPARTING SAID NORTH RIGHT OF WAY LINE, A DISTANCE OF 424.95 FEET TO SAID SOUTH RIGHT OF WAY LINE OF COLBERN ROAD; THENCE NORTH 88°-13'-03" WEST ALONG SAID SOUTH RIGHT OF WAY LINE, A DISTANCE OF 660.89 FEET TO THE POINT OF BEGINNING ..

LOT 3

THAT PART OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 48 NORTH, RANGE 31 WEST IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS; COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHEAST 1/4; THENCE SOUTH 88°-42'-12" EAST ALONG THE SOUTH LINE OF SAID 1/4 SECTION, A DISTANCE OF 1107.27 FEET TO THE EAST RIGHT OF WAY LINE OF INTERSTATE 470 HIGHWAY AS ESTABLISHED BY DOCUMENT NO. I-26482; THENCE NORTH 6°-44'-47" EAST ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 260.82 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING NORTH 6°-44'-47" EAST ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 84.78 FEET; THENCE SOUTH 83°-14'-59" EAST, CONTINUING ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 124.35 FEET TO THE WEST RIGHT OF WAY LINE OF RICE ROAD AS ESTABLISHED BY DOCUMENT NO. 653842; THENCE SOUTH 1°-35'-02" WEST ALONG SAID WEST RIGHT OF WAY LINE, A DISTANCE OF 141.52 FEET; THENCE NORTH 60°-58'-17" WEST, A DISTANCE OF 148.15 FEET TO THE POINT OF BEGINNING. .

THE DESCRIPTION OF LOTS 1, 2, 3, AND 4 WAS PREPARED BY ANDERSON SURVEY COMPANY AND DESCRIBES THE PROPERTIES IN THE FOLLOWING DOCUMENTS:

JACKSON COUNTY CIRCUIT COURT CASES:

CASE NO. 0616-CV06306 - RECORDED AS DOCUMENT NO. 2006E0072849
CASE NO. 1316-CV-01238 - RECORDED AS DOCUMENT NO. 2014E0018251
CASE NO. CV89-11610 - RECORDED AS DOCUMENT NO. I-926295 IN BOOK I-1938 AT PAGE 1853
CASE NO. 0616-CV-34998 - RECORDED AS DOCUMENT NO. 2007E0094223
CASE NO. 96-5065 - RECORDED AS DOCUMENT NO. I-0034432 IN BOOK I-2850 AT PAGE 125
CASE NO. 0616-CV02368 - RECORDED AS DOCUMENT NO. 2007E0010748
CASE NO. 0616-CV02368 - RECORDED AS DOCUMENT NO. 2009E0059783

DEEDS:

CORPORATE WARRANTY DEED RECORDED AS DOCUMENT NO. I-1127110 IN BOOK I-2279 AT PAGE 842
GENERAL WARRANTY DEED RECORDED AS DOCUMENT NO. 2007E0093804
GENERAL WARRANTY DEED RECORDED AS DOCUMENT NO. 2005I0106522
GENERAL WARRANTY DEED RECORDED AS DOCUMENT NO. 2006E0117142
MISSOURI WARRANTY DEED RECORDED AS DOCUMENT NO. I-304990 IN BOOK I-794 AT PAGE 575
MISSOURI WARRANTY DEED RECORDED AS DOCUMENT NO. I-383862 IN BOOK I-934 AT PAGE 2301
MISSOURI WARRANTY DEED RECORDED AS DOCUMENT NO. I-800622 IN BOOK I-1725 AT PAGE 1686
MISSOURI WARRANTY DEED RECORDED AS DOCUMENT NO. I-771754 IN BOOK I-1678 AT PAGE 899
MISSOURI DEED OF TRUST RECORDED AS DOCUMENT NO. 2002I0000971
PERSONAL REPRESENTATIVE'S DEED RECORDED AS DOCUMENT NO. 2005I0091245
SPECIAL WARRANTY DEED RECORDED AS DOCUMENT NO. I-569220 IN BOOK I-1311 AT PAGE 1818
SPECIAL WARRANTY DEED RECORDED AS DOCUMENT NO. 1998I0101147
WARRANTY DEED RECORDED AS DOCUMENT NO. 2000I0077784
WARRANTY DEED RECORDED AS DOCUMENT NO. I-304400 IN BOOK I-793 AT PAGE 454

AREA:
THE SUBJECT PROPERTY CONTAINS 24,072,973 SQUARE FEET OR 552.639 ACRES, MORE OR LESS.

PLAT DEDICATION:
THE UNDERSIGNED OWNER(S) OF THE PROPERTY DESCRIBED HEREIN HAS/HAVE CAUSED THE SAME TO BE SUBDIVIDED IN THE MANNER SHOWN ON THIS PLAT AND THE PROPERTY SHALL HEREAFTER BE KNOWN AS : "LEE'S SUMMIT AIRPORT"

EASEMENTS:
THE EASEMENT INFORMATION SHOWN HEREON HAS BEEN TAKEN FROM OWNERSHIP AND ENCUMBRANCE REPORTS WITH EASEMENTS PREPARED BY ASSURED QUALITY TITLE COMPANY WITH THE FOLLOWING FILE NUMBERS:
OE112913 T1, OE112913 T3, OE112913 T4, OE112913 T6, OE112913 T8, OE112913 T10, OE112913 T11, OE112913 T13, OE112913 T14, OE112913 T16, OE112913 T17, OE112913 T18, OE112913 T19, OE112913 T20, OE112913 T21, OE112913 T22, OE112913 T23, OE112913 T24, OE112913 T25, OE112913 T26, OE112913 T27, OE112913 T28, OE112913 T30, OE112913 T31, OE112913 T32, OE112913 T33, OE112913 T35, OE112913 T36, OE112913 T37, AND OE112913 T38

FLOOD INFORMATION:
ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAPS, COMMUNITY PANEL NO. 29095C0409G, DATED JANUARY 20, 2017 AND COMMUNITY PANEL NO. 29095C0430G, DATED JANUARY 20, 2017, THIS PROPERTY LIES WITHIN ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN THEREON .

DRAINAGE:
THE INDIVIDUAL LOT OWNER(S) SHALL NOT CHANGE OR OBSTRUCT THE DRAINAGE FLOW PATHS ON THE LOTS, UNLESS SPECIFIC APPLICATION IS MADE AND APPROVED BY THE CITY ENGINEER.

OIL/GAS WELLS:
ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, STATE OIL AND GAS COUNCIL - WELLS SPREADSHEET, DATED FEBRUARY 2, 2018, THE SUBJECT PROPERTY CONTAINS NO ACTIVE OR ABANDONED GAS OIL OR WELLS.

APPROVED:
THIS IS TO CERTIFY THAT THE FINAL PLAT OF "LEE'S SUMMIT AIRPORT" WAS SUBMITTED TO AND DULY APPROVED BY THE CITY OF LEE'S SUMMIT, PURSUANT TO THE UNIFIED DEVELOPMENT ORDINANCE NO. _____:

TRISHA FOWLER ARCURI CITY CLERK	DATE	WILLIAM A. BAIRD - MAYOR	DATE
GEORGE M. BINGER III, P.E. CITY ENGINEER	DATE	DANA ARTH PLANNING COMMISSION SECRETARY	DATE
RYAN A. ELAM, P.E. DIRECTOR OF DEVELOPMENT SERVICES	DATE	JACKSON COUNTY ASSESSOR / GIS DEPARTMENT	DATE

DRN. RMC	P.C. KIRK	CK. RJA	APP.

IN WITNESS WHEREOF:
_____, HAS CAUSED THESE PRESENTS TO BE SIGNED THIS ____ DAY OF _____, 2019.

_____ _____

NOTARY CERTIFICATION:
STATE OF _____)
) S.S.
COUNTY OF _____)

ON THIS ____ DAY OF _____, 2019, BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, PERSONALLY APPEARED _____, TO ME PERSONALLY KNOWN, WHO, BEING BY ME DULY SWORN DID SAY THAT THEY ARE THE OWNERS OF THE PREMISES HEREON, AND THAT SAID _____ ACKNOWLEDGED SAID INSTRUMENT TO BE THEIR FREE ACT AND DEED.

I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL IN MY OFFICE THE DAY AND YEAR LAST WRITTEN ABOVE.

MY COMMISSION EXPIRES: _____

_____ _____
NOTARY PUBLIC PRINTED NAME

SURVEYOR'S CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAT OF ***LEE'S SUMMIT AIRPORT*** IS BASED ON AN ACTUAL SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT SAID SURVEY MEETS OR EXCEEDS THE CURRENT STANDARDS FOR PROPERTY BOUNDARY SURVEYS, AS ESTABLISHED BY THE MISSOURI BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, PROFESSIONAL LAND SURVEYORS, AND LANDSCAPE ARCHITECTS, AND I FURTHER CERTIFY THAT I HAVE COMPLIED WITH ALL STATUTES, ORDINANCES, AND REGULATIONS GOVERNING THE PRACTICE OF SURVEYING AND PLATTING OF SUBDIVISIONS, TO THE BEST OF MY PROFESSIONAL INFORMATION, KNOWLEDGE AND BELIEF.

DATE PREPARED: APRIL 15, 2019

17, 18, 19, 20, 29, 30–48–31
18–10–42364–1
42364–Final Plat.dwg

SURVEYOR:
JAMES S. ANDERSON, PLS
ANDERSON SURVEY COMPANY
1270 N.E. DELTA SCHOOL ROAD
LEE'S SUMMIT, MISSOURI 64064
(816) 246-5050

OWNER:
CITY OF LEE'S SUMMIT
220 SOUTHEAST GREEN STREET
LEE'S SUMMIT, MISSOURI 64063

SHEET 1 OF 5

ANDERSON
SURVEY COMPANY
1270 N. E. DELTA SCHOOL ROAD,
LEE'S SUMMIT, MISSOURI 64064
(816) 246-5050
MISSOURI STATE CERTIFICATE OF AUTHORITY, 000076

JAMES S. ANDERSON,
PLS #1726

17, 18, 19, 20, 29, 30-48-31
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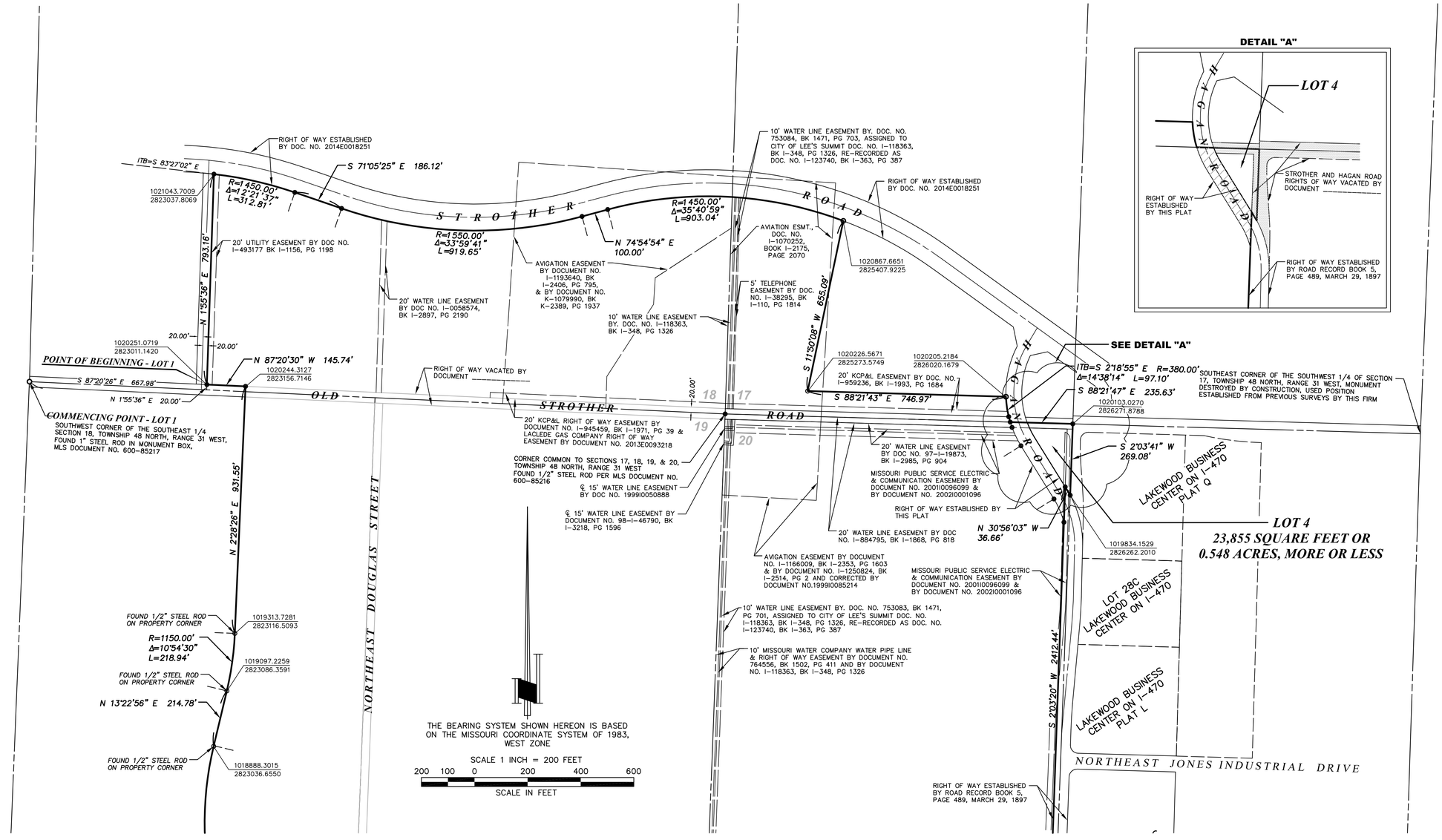
FINAL PLAT OF

LEE'S SUMMIT AIRPORT

A MAJOR SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
PART OF SECTIONS 17, 18, 19, 20, 29, AND 30, TOWNSHIP 48 NORTH, RANGE 31 WEST



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RYAN A. ELAM, P.E. DIRECTOR OF DEVELOPMENT SERVICES	DATE	JACKSON COUNTY ASSESSOR / GIS DEPARTMENT	DATE

DRN. RMC	P.C. KIRK	CK. RJA	APP.

IN WITNESS WHEREOF:
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NOTARY CERTIFICATION:
STATE OF _____)
) S.S.
COUNTY OF _____)

ON THIS ____ DAY OF _____, 2019, BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, PERSONALLY APPEARED _____, TO ME PERSONALLY KNOWN, WHO, BEING BY ME DULY SWORN DID SAY THAT THEY ARE THE OWNERS OF THE PREMISES HEREON, AND THAT SAID _____ ACKNOWLEDGED SAID INSTRUMENT TO BE THEIR FREE ACT AND DEED.

I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL IN MY OFFICE THE DAY AND YEAR LAST WRITTEN ABOVE.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC _____ PRINTED NAME _____

NOTE:
● = SET 1/2" STEEL ROD & CAP STAMPED "ASC KLS3 MLS76D" ON PROPERTY CORNER.

O = FOUND 1/2" STEEL ROD & CAP STAMPED "ASC KLS3 MLS76D" ON PROPERTY CORNER (UNLESS NOTED OTHERWISE)

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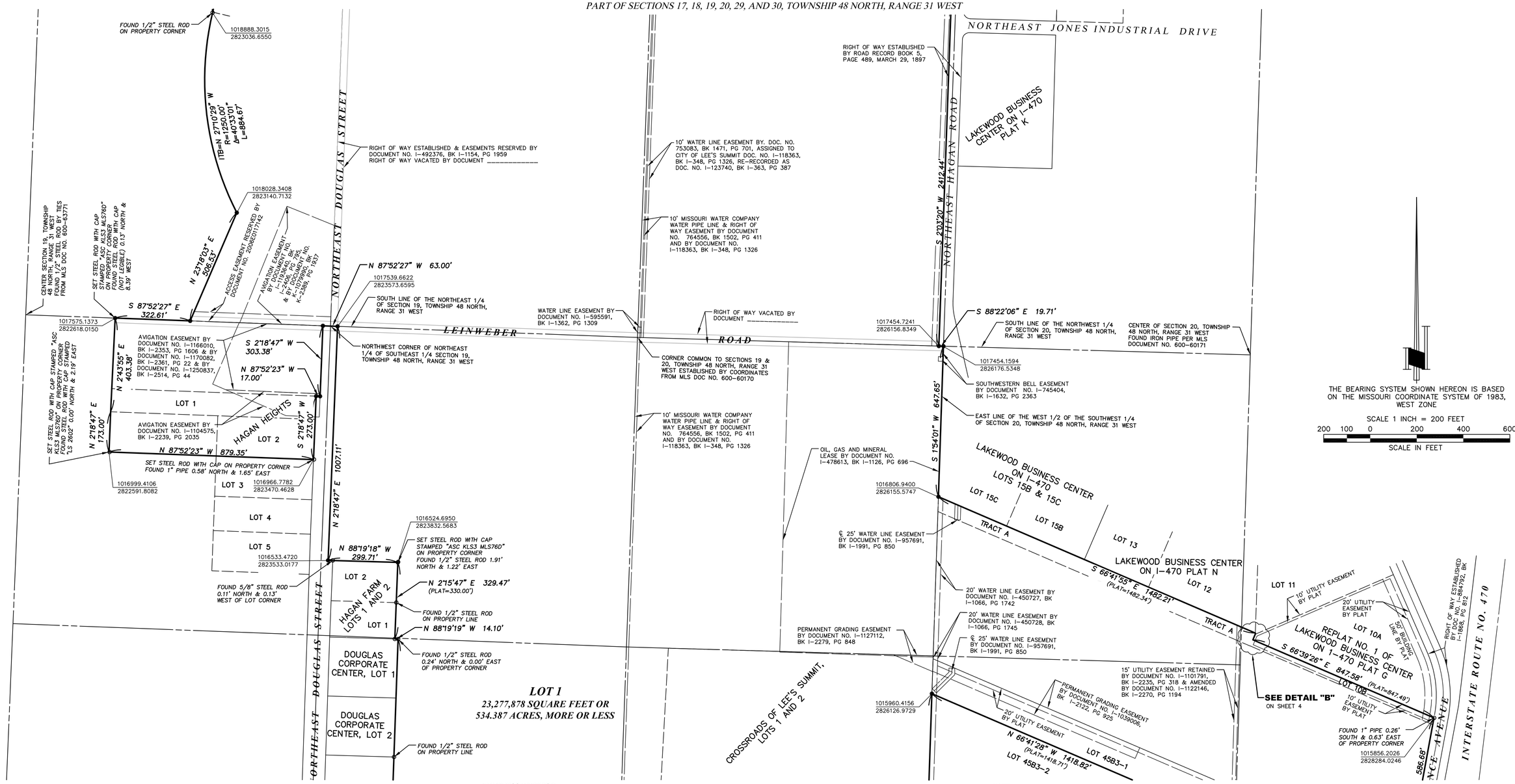

THE BEARING SYSTEM SHOWN HEREON IS BASED ON THE MISSOURI COORDINATE SYSTEM OF 1983, WEST ZONE

SCALE 1 INCH = 200 FEET

200 100 0 200 400 600

SCALE IN FEET

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MY COMMISSION EXPIRES: _____

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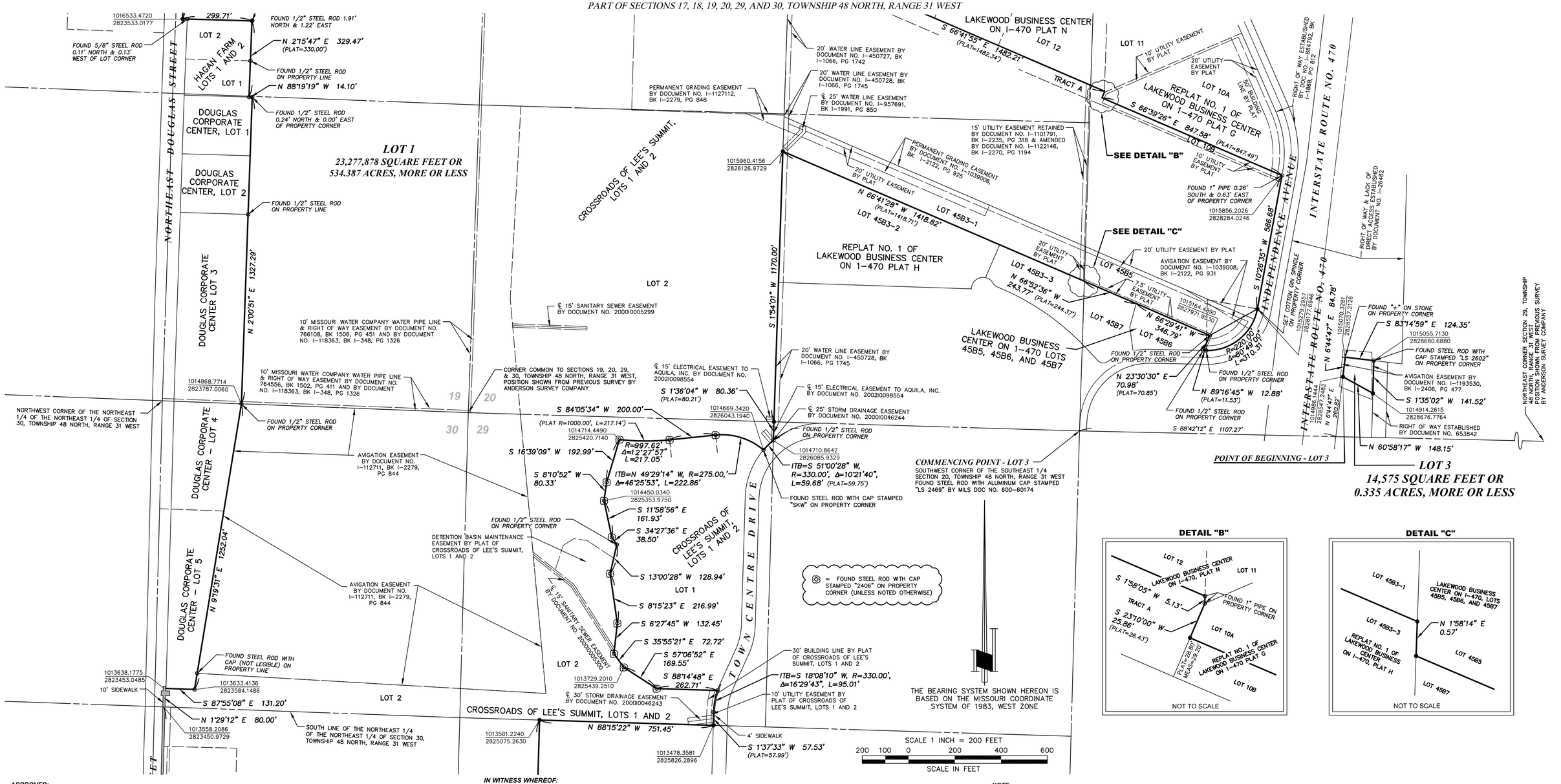


DETAIL "B"

DETAIL "C"

APPROVED:
THIS IS TO CERTIFY THAT THE FINAL PLAT OF "LEE'S SUMMIT AIRPORT" WAS SUBMITTED TO AND DULY APPROVED BY THE CITY OF LEE'S SUMMIT, PURSUANT TO THE UNIFIED DEVELOPMENT ORDINANCE NO. ____:

TRISHA FOWLER ARCURI CITY CLERK	DATE	WILLIAM A. BAIRD - MAYOR	DATE
GEORGE M. BINGER III, P.E. CITY ENGINEER	DATE	DANA ARTH PLANNING COMMISSION SECRETARY	DATE
RYAN A. ELAM, P.E. DIRECTOR OF DEVELOPMENT SERVICES	DATE	JACKSON COUNTY ASSESSOR / GIS DEPARTMENT	DATE

IN WITNESS WHEREOF:
_____, HAS CAUSED THESE PRESENTS TO BE SIGNED THIS ____ DAY OF _____, 2019.

NOTARY CERTIFICATION:
STATE OF _____)
) S.S.
COUNTY OF _____)

ON THIS ____ DAY OF _____, 2019, BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, PERSONALLY APPEARED _____ TO ME PERSONALLY KNOWN, WHO, BEING BY ME DULY SWORN DID SAY THAT THEY ARE THE OWNERS OF THE PREMISES HEREON, AND THAT SAID _____ ACKNOWLEDGED SAID INSTRUMENT TO BE THEIR FREE ACT AND DEED.

I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL IN MY OFFICE THE DAY AND YEAR LAST WRITTEN ABOVE.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC _____ PRINTED NAME _____

NOTE:
● = SET 1/2" STEEL ROD & CAP STAMPED "ASC KLS3 MLS76D" ON PROPERTY CORNER.

O = FOUND 1/2" STEEL ROD & CAP STAMPED "ASC KLS3 MLS76D" ON PROPERTY CORNER (UNLESS NOTED OTHERWISE)

SURVEYOR'S CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAT OF ***LEE'S SUMMIT AIRPORT*** IS BASED ON AN ACTUAL SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT SAID SURVEY MEETS OR EXCEEDS THE CURRENT STANDARDS FOR PROPERTY BOUNDARY SURVEYS, AS ESTABLISHED BY THE MISSOURI BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, PROFESSIONAL LAND SURVEYORS, AND LANDSCAPE ARCHITECTS, AND I FURTHER CERTIFY THAT I HAVE COMPLIED WITH ALL STATUTES, ORDINANCES, AND REGULATIONS GOVERNING THE PRACTICE OF SURVEYING AND PLATTING OF SUBDIVISIONS, TO THE BEST OF MY PROFESSIONAL INFORMATION, KNOWLEDGE AND BELIEF.

DATE PREPARED: APRIL 15, 2019

17, 18, 19, 20, 29, 30-48-31
18-10-42364-1
42364-Final Plat.dwg

SURVEYOR:
JAMES S. ANDERSON, PLS
ANDERSON SURVEY COMPANY
1270 N.E. DELTA SCHOOL ROAD
LEE'S SUMMIT, MISSOURI 64064
(816) 246-5050

OWNER:
CITY OF LEE'S SUMMIT
220 SOUTHEAST GREEN STREET
LEE'S SUMMIT, MISSOURI 64063

ANDERSON
SURVEY COMPANY
1270 N. E. DELTA SCHOOL ROAD,
LEE'S SUMMIT, MISSOURI 64064
(816) 246-5050
MISSOURI STATE CERTIFICATE OF AUTHORITY, 000076

JAMES S. ANDERSON, PLS #1726

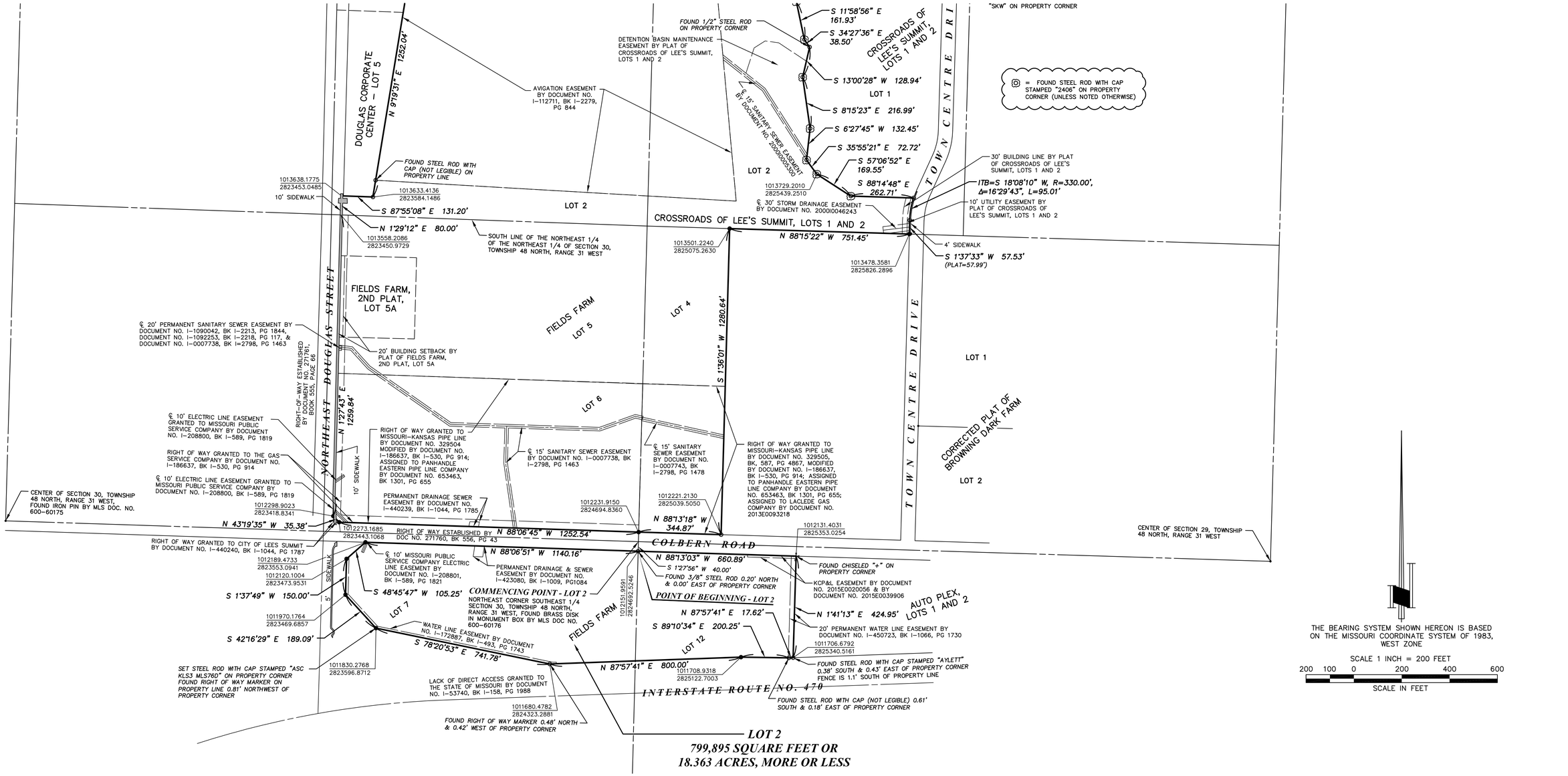
DRN. RMC	P.C. KIRK	CK. RJA	APP.

17, 18, 19, 20, 29, 30-48-31
18-10-42364-1
42364-Final Plat.dwg

FINAL PLAT OF

LEE'S SUMMIT AIRPORT

A MAJOR SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
PART OF SECTIONS 17, 18, 19, 20, 29, AND 30, TOWNSHIP 48 NORTH, RANGE 31 WEST



LOT 2
799,895 SQUARE FEET OR
18.363 ACRES, MORE OR LESS

APPROVED:
THIS IS TO CERTIFY THAT THE FINAL PLAT OF "LEE'S SUMMIT AIRPORT" WAS SUBMITTED TO AND DULY APPROVED BY THE CITY OF LEE'S SUMMIT, PURSUANT TO THE UNIFIED DEVELOPMENT ORDINANCE NO. ____:

TRISHA FOWLER ARCURI CITY CLERK	DATE	WILLIAM A. BAIRD - MAYOR	DATE
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RYAN A. ELAM, P.E. DIRECTOR OF DEVELOPMENT SERVICES	DATE	JACKSON COUNTY ASSESSOR / GIS DEPARTMENT	DATE

DRN. RMC | P.C. KIRK | CK. RJA | APP.

IN WITNESS WHEREOF:
_____, HAS CAUSED THESE PRESENTS TO BE SIGNED THIS ____ DAY OF _____, 2019.

NOTARY CERTIFICATION:
STATE OF _____)
) S.S.
COUNTY OF _____)

ON THIS ____ DAY OF _____, 2019, BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, PERSONALLY APPEARED _____, TO ME PERSONALLY KNOWN, WHO, BEING BY ME DULY SWORN DID SAY THAT THEY ARE THE OWNERS OF THE PREMISES HEREON, AND THAT SAID _____ ACKNOWLEDGED SAID INSTRUMENT TO BE THEIR FREE ACT AND DEED.

I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL IN MY OFFICE THE DAY AND YEAR LAST WRITTEN ABOVE.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC _____ PRINTED NAME _____

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17, 18, 19, 20, 29, 30-48-31
18-10-42364-1
42364-Final Plat.dwg

DATE PREPARED: APRIL 15, 2019

SURVEYOR:
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JAMES S. ANDERSON,
PLS #1726

APPENDIX A2 – REQUIRED CHECKLISTS

LEE'S SUMMIT MISSOURI

FINAL DEVELOPMENT PLAN CHECKLIST

Submittal Requirements	Yes	No*
Completed application form with signatures		
Ownership affidavit form		
Legal description		
Technical Studies, if required (2) sets of Structural Analysis Report		
Filing fee – See Development Services Fees under the Schedule of Fees and Charges found at www.cityofls.net. **Please note that fees differ based on project land area.**		
Final Development Plans – 1 digital multi-page PDF plan sets, studies, letter and applications shall be separate files		
File Naming Conventions- All uploaded files should be named as follows DOCUMENT NAME_REVISION NUMBER_DATE OF PLAN STAMP		
Checklist for Plan Submission Requirements		
Checklist for Final Development Plan		
Checklist for Zoning District Regulations – **Separate document**		
Checklist for Design Standards (See Article 8) – **Separate document**		
Checklist for Other Ordinance Requirements		

*** Applications missing any required item above will be deemed incomplete.**

Table 1. General Application Requirements Plan Submission Requirements				
UDO Article 2., Sec. 2.040	**Ordinance Requirement**	**Met**	**Not Met**	**N/A**
B.1. Date Prepared	Date prepared			
B.2. Name & address	Name, address and telephone number of the person who prepared, or person responsible for preparing, the plan;			
B.3. Scale	Graphic, engineering scale not to exceed 1:100. All plans shall be drawn to a standard engineer's scale of 1:50 or 1:100', unless a different scale is specifically approved by the Director.			
B.4. Plan Size	Plan size maximum of 24 X 36 inches with one (1) inch border			
B.5. North Arrow	North Arrow; plan shall be oriented so north is to the top or to the right side of the sheet.			
B.6. Vicinity Map	Vicinity map with north arrow indicating the location of the property within the City.			

LEE'S SUMMIT
MISSOURI

FINAL DEVELOPMENT PLAN CHECKLIST

Table 3. Final Development Plan				
UDO Article 2, Sec. 2.360.	**Ordinance Requirement**	**Met**	**Not Met**	**N/A**
C.1. Legal Description	A legal description which accurately describes the limits of the property.			
C.2. Land Area	Area of land in square feet and acres.			
C.3. Floodplain	Location and limits of the 1% Annual Chance Flood, as set forth on the current FEMA maps with reference to the panel number. Elevations shall be provided if shown on the FEMA map.			
C.4. Lot Area	Layout, number and approximate dimensions of lots and approximate lot areas.			
C.5. Streets	Name, location, width, radii, centerline, and grade of streets and alleys, both public and private;			
C.6. Sidewalks	Location, width and limits of all existing and proposed sidewalks and public walkways;			
C.7. Easements	Location and width of proposed easements;			
C.8. Building Setback	Building setback lines from streets with dimensions.			
C.9. Culverts	Location and approximate dimensions of culverts and bridges;			
C.10. Driveways	Location of existing and proposed driveways, curb cuts, median breaks and turn lanes;			
C.11. Utilities	The location and size of all utility lines, including water, storm water, and sanitary sewers.			
C.12. Sanitary Sewer	Final analysis of the capacity of the existing sanitary sewer receiving system.			
C.13. Water & Sanitary Plans	Final water and sanitary sewer plans.			
C.14. Water Demand	Appropriate water service demand data (including, but not limited to, planned land usage, densities of proposed development, pipe sizes, contours and fire hydrant layout) to allow for the preliminary analysis of the demand for water service if required by the City Engineer.			
C.15. Storm Water	Final storm water collection, detention and erosion control plans.			
C.16. Storm Water Management	Information (proposed size, nature and general location) on all proposed storm water management facilities and detention facilities. A final storm water report shall be submitted unless the stormwater report requirement was waived by the City Engineer or there are no required revisions to the preliminary storm water report. All storm water reports shall include:			
C.16.a.	Current and proposed land use assumptions,			
C.16.b.	Identification of the watershed in which the project is located,			

LEE'S SUMMIT
MISSOURI

FINAL DEVELOPMENT PLAN CHECKLIST

Table 3. Final Development Plan				
UDO Article 2, Sec. 2.360.	**Ordinance Requirement**	**Met**	**Not Met**	**N/A**
C.16.c.	Identification of offsite drainage areas,			
C.16.d.	Surrounding property information,			
C.16.e.	Any other pertinent information about the site which may influence storm water runoff,			
C.16.f.	Proposed storm water facilities,			
C.16.g.	The downstream effects of the development			
C.16.h.	Calculations for the 100%, 10%, and 1% storms. All calculations must be submitted with the report; a summary table is not acceptable.			
C.16.i.	If the storm water report indicates that detention is not required, supporting calculations evaluating the downstream effects must be provided.			
C.16.j.	All reports shall be signed and sealed by a Professional Engineer registered in the State of Missouri.			
C.17. Open Space	Location and size of proposed open space for public use proposed to be dedicated or reserved and any conditions of such dedication or reservation; parks, playgrounds, churches, or school sites or other special uses of land to be considered for public use, or to be reserved by deed or covenant for the use of all property owners in the subdivision.			
C.18. Parking	Location and dimensions of all parking spaces, accessible spaces, accessible routes, drive aisles, driveways, and curbs.			
C.19. Contours	Finished grades showing 1-foot contours for the entire site (2-foot contour intervals may be allowed by the Director, depending on the site).			
C.20. Right-of-Way	All proposed and existing adjacent public street rights-of-way with centerline location.			
C.21. Streets	All proposed and existing adjacent public street and public drive locations, widths, curb cuts and radii.			
C.22. Dimensions	Sufficient dimensions to indicate relationship between buildings, property lines, parking areas and other elements of the plan.			
C.23. Setbacks	Location of all required building and parking setbacks.			
C.24. Building Dimensions	Location, dimensions, number of stories and area in square feet of all proposed buildings.			
C.25. Oil & Gas Wells	The location of all oil and/or gas wells within the subject property.			
C.26. Retaining Walls	Limits, location, size and material to be used in all proposed retaining walls.			

LEE'S SUMMIT
MISSOURI

FINAL DEVELOPMENT PLAN CHECKLIST

Table 3. Final Development Plan				
UDO Article 2, Sec. 2.360.	**Ordinance Requirement**	**Met**	**Not Met**	**N/A**
C.27. Driveways	Location and dimensions of all driveways, parking lots, parking stalls, aisles, loading and service areas and docks.			
C.28. Lighting	Location, height, intensity and type of outside lighting fixtures for buildings and parking lots.			
C.29. Photometric Diagram	Photometric diagram indicating the foot candle levels throughout the site and at the property lines.			
C.30. Lighting Spec Sheets	The manufacturer's specification sheets for proposed exterior lighting to include both parking lot pole mounted and wall mounted fixtures. The specification sheets shall indicate the exact fixture to be used.			
C.31. Mechanical Screening	Location, size, and type of material to be used in all screening of ground mounted mechanical equipment.			
C.32. Equipment Spec Sheets	The manufacturer's specification sheets for proposed mechanical equipment to be used.			
C.33. Signs	Location, size, and type of material of all proposed monument or freestanding signs.			
C.34. Adjacent Developments	The location of adjacent developments, alignment and location of existing public and private driveways and streets, medians, and public and semi-public easements.			
C.35. Fire Hydrants	Locations of existing and proposed fire hydrants.			
C.36. Sight Triangles	Sight triangles (See Article 8)			
D.1. Building Elevations	Elevations of all sides of proposed buildings including notation indicating building materials to be used on exteriors and roofs.			
D.2. Screening Materials	Location, size and materials to be used in all screening of rooftop mechanical equipment.			
D.3. Roof Line	A dashed line indicating the roof line and rooftop mechanical equipment.			
E. Floor Plan	Floor plan showing dimensions and areas of all floors within proposed buildings and structures.			
F. Landscape Plan	Landscaping plans shall be submitted in accordance with Article 8.			
G. Land Use Schedule	A land use schedule shall include the following:			
G.1.	Total floor area			
G.2.	Number of dwelling units			
G.3.	Land area			

LEE'S SUMMIT
MISSOURI

FINAL DEVELOPMENT PLAN CHECKLIST

Table 3. Final Development Plan				
UDO Article 2, Sec. 2.360.	**Ordinance Requirement**	**Met**	**Not Met**	**N/A**
G.4.	Number of required and proposed parking spaces			
G.5.	Impervious coverage			
G.6.	Floor Area Ratio (FAR)			
H.	The following shall be submitted in support of the application for final development plan approval:			
H.1. Deeds	Deeds of dedication for all rights-of-way or easements required as a result of preliminary development plan approval, if conveyance thereof is not to be made by plat.			
H.2. Covenants	A copy of all proposed covenants and restrictions applicable to the development.			
H.3. POA Bylaws	A copy of the property owners association bylaws as evidence of the establishment of the agency for the ownership and maintenance of any common open space and all assurances of the financial and administrative ability of such agency.			
H.4. Conditions	Evidence of satisfaction of any conditions of the preliminary development plan approval that were conditions precedent to consideration of the final development plan.			
H.5. Engineering Plans	An application for engineering approval pursuant to the Design and Construction Manual. All applications for engineering approval shall be accompanied by the number of copies of the following as required by the City Engineer:			
H.5.a.	Engineering drawings with the information required in the Design and Construction Manual			
H.5.b.	Plans, profiles and details for streets, curb and gutters, sidewalks, storm and sanitary sewers, and water lines			
H.5.c.	A written benchmark description and elevation			
H.5.d.	A storm water Master Drainage Plan that contains detailed plans for storm drainage, storm water detention, and grading plans, as specified in the Design and Construction Manual.			

LEE'S SUMMIT
MISSOURI

FINAL DEVELOPMENT PLAN CHECKLIST

Table 4. Other Requirements				
	Ordinance Requirement	**Met**	**Not Met**	**N/A**
UDO Art. 8, Div. III Landscaping, Buffers & Tree Protection				
Sec. 8.720. Landscaping & buffer plans	Landscaping and buffer plans shall be submitted, and shall include information as listed in the ordinance.			
Sec. 8.750. Acceptable plant material	Acceptable plant materials and sizes for landscaping, buffers and tree replacement shall meet the ordinance requirements.			
Sec. 8.790.A.1. Street frontage trees	1 tree shall be planted for each 30 feet of street frontage. Such trees may be clustered or arranged within the setback if approved as part of the landscape plan. A minimum 20-foot landscape strip shall be provided along the full length of any street frontage, except where the building setback is less than 20 feet.			
Sec. 8.790.A.2. Front parking setback	In commercial and industrial districts, any parking or loading area visible from a street shall be separated from the street right-of way with a landscape strip at least 20 feet wide.			
Sec. 8.790.A.3. Street frontage shrubs	1 shrub shall be provided for each 20 feet of street frontage, or portion thereof, with in the landscaped setback abutting such frontage. Such shrubs may be clustered or arranged within the setback.			
Sec. 8.790.B.1 Open yard shrub reqt.	The minimum of 2 shrubs per 5,000 square feet of total lot area, excludes single family and duplex developments. For schools, large sports/play fields and other areas specifically open to the public for use, i.e., tennis courts, paved play areas, paved parking lots etc. may be excluded in the calculation of this requirement.			
Sec. 8.790.B.2. Ground cover	Open areas not covered with other materials shall be covered with sod.			
Sec. 8.790.B.3. Open yard tree reqt.	In addition to the trees required based upon street frontage, additional trees shall be required at a ratio of 1 tree for every 5,000 square feet of total landscaped open space. For schools, large open sports/play fields may be excluded in the calculation of total landscaped open space. The remaining open space shall be applied to the ratio for tree planting as stated herein.			
Sec. 8.790.C. Trash enclosures	A detailed drawing of enclosure and screening methods to be used in connection with trash storage containers on the property shall be included with the landscaping plan. ***(See Section 8.180.G for requirements)***			
Sec. 8.810.A. Parking lot landscape islands	Landscape islands, strips or other planting areas shall be located within the parking lot and shall constitute at least 5% of the entire area devoted to parking spaces, aisles and driveways. *Every four rows of parking shall include a landscape island of at least ten feet in width.* Industrial zoned properties, PI and CS, shall be exempt from this requirement.			

LEE'S SUMMIT MISSOURI

FINAL DEVELOPMENT PLAN CHECKLIST

Table 4. Other Requirements				
	Ordinance Requirement	**Met**	**Not Met**	**N/A**
Sec. 8.810.B. Landscape island placement	A landscaping island shall be located at the end of every parking bay between the last parking space and an adjacent travel aisle or driveway. The island shall be no less than 9 feet wide for at least one-half the length of the adjacent parking space. The island shall be planted in trees, shrubs, grass, or ground cover, except for those areas that are mulched.			
Sec. 8.810.C. Island width	Tree planting areas shall be no less than 10 feet in width. No tree shall be located less than 4 feet from the back of curb. All parking lot landscape islands, strips or other planting areas shall be curbed with minimum 6 inch high curbs.			
Sec. 8.820 Parking lot screening	Screening to a height of 2.5 feet must be provided along the edge of the parking lot or loading area closest to and parallel to the street. (See Sec. 8.820 for full requirements).			
Sec. 8.870. Buffer/screen requirements	Buffer/screen between developments of differing land uses adjoining one another or separated from one another by only a street or alley shall comply with ***Table 8.890*** Typical buffers.			
UDO Art. 8, Div. II Vehicle Parking				
Sec. 8.530 Number of Parking spaces	See Table 8-1 for minimum required.			
Sec. 8.620.A. Head-in parking	All areas devoted to vehicle parking shall be so designed and be of such size that no vehicle is required to back into a public street to obtain access.			
Sec. 8.620.B.1. Parking setback	Parking lots shall be set back a minimum 20 feet from any public right-of-way or private street edge of pavement.			
Sec. 8.620.B.2. Parking setback	Parking lots shall be set back a minimum 20 feet from any residential use or district.			
Sec. 8.620.B.3. Parking setback	Parking lots shall be set back a minimum 6 feet from the side or rear property line when not part of shared parking and/or cross access.			
Sec. 8.620.C. Parking Dimensions	9' wide x 19' deep, placed at the prescribed angle so that it lies between the curb and aisle. 9 feet by 17 feet parking spaces shall be permitted when the parking space abuts a 6 feet wide sidewalk or when abutting a curbed open green/landscaped space. Parallel parking spaces shall not be less than 9' wide x 23' long.			
Sec. 8.620.F.2.b Curb blocks	The use of curb blocks in parking areas shall be prohibited, except at the head of accessible parking spaces when they are adjacent to a pedestrian walkway with no raised curb.			
Sec. 8.620.E.1. Aisle Width	Adequate aisle width (per Table 8-4) for maneuvering into and out of each space.			
Sec. 8.620.E.4. Drive width	Minimum width (not including curb and gutter) is the same as aisle width (see Table 8-4).			
Sec. 8.620.E.5. Curb cut spacing	Distance of driveways from intersections and from other driveways shall conform to the Access Management Code.			

LEE'S SUMMIT
MISSOURI

FINAL DEVELOPMENT PLAN CHECKLIST

Table 4. Other Requirements				
	Ordinance Requirement	**Met**	**Not Met**	**N/A**
Sec. 8.250. Parking Lot Lighting	Any lights used to illuminate the parking area shall be arranged, located or screened so that light is directed away from and no light source is visible from a public street, a residentially-zoned area, or a residential use. (See Article 8).			
Sec. 8.620.F.1.a & b Improvement of Parking Area	Permanent surface, consisting of asphalt or concrete, per specifications.			
Sec. 8.620.F.2.a & c. Curbing	CG-1 concrete curbing required around all parking areas and access drives in all zoning districts, except for driveways serving single-, two-, three- and four-family residences. Temporary asphalt curbs may be used in areas to be expanded only as shown and approved on the development plan.			
Sec. 8.580. Accessible Parking Space Size	Accessible parking spaces shall have an adjacent aisle 5 feet wide, and one in every 8 accessible spaces (but no less than one) shall be adjacent to an aisle 8 feet wide and the space shall be clearly marked with a sign indicating that the space is "van accessible." Accessible parking space aisles shall be clearly demarcated by lines painted on or otherwise applied to the parking lot surface. Access aisles shall be on the same level as the vehicle pull-up space they serve.			
Sec. 8.580.E. Accessible Parking Space Slope	Accessible parking spaces shall be located on a surface with a slope not exceeding 1 vertical foot in 50 horizontal feet.			
Sec. 8.580.H. Accessible Parking Space Clearance	Parking spaces for vans shall have a vertical clearance of 98 inches minimum at the space and along the vehicular route thereto. In cases of a loading zone, the vertical clearance of 114 inches minimum shall be provided at passenger loading zones and along vehicle access routes to such areas from site entrances.			
Sec. 8.580.C. No. of Accessible Parking Spaces	See Table 8-3			
Sec. 8.580.F. Accessible Parking Space Location	Accessible spaces shall be located at the nearest point to the front building entry and/or accessible ramp. Such spaces separated by a drive aisle shall have clearly discernable cross walks.			
Sec. 8.580.J. Accessible Parking Standards	All accessible parking shall comply with the requirements of the federal Americans with Disabilities Act.			
Sec. 8.580.I. Accessible Parking Sign	Every parking space required by this section shall be identified by a sign, mounted on a pole or other structure, located between 36 inches (3 feet) and 60 inches (5 feet) above the ground measured from the bottom of the sign, at the head of the parking space. The sign shall be at least 12" by 18" in area and meet the requirements set forth in the Manual on Uniform Traffic Control Devices, as referenced in Section 29-381 of the Lee's Summit General Code of Ordinances.			

LEE'S SUMMIT
MISSOURI

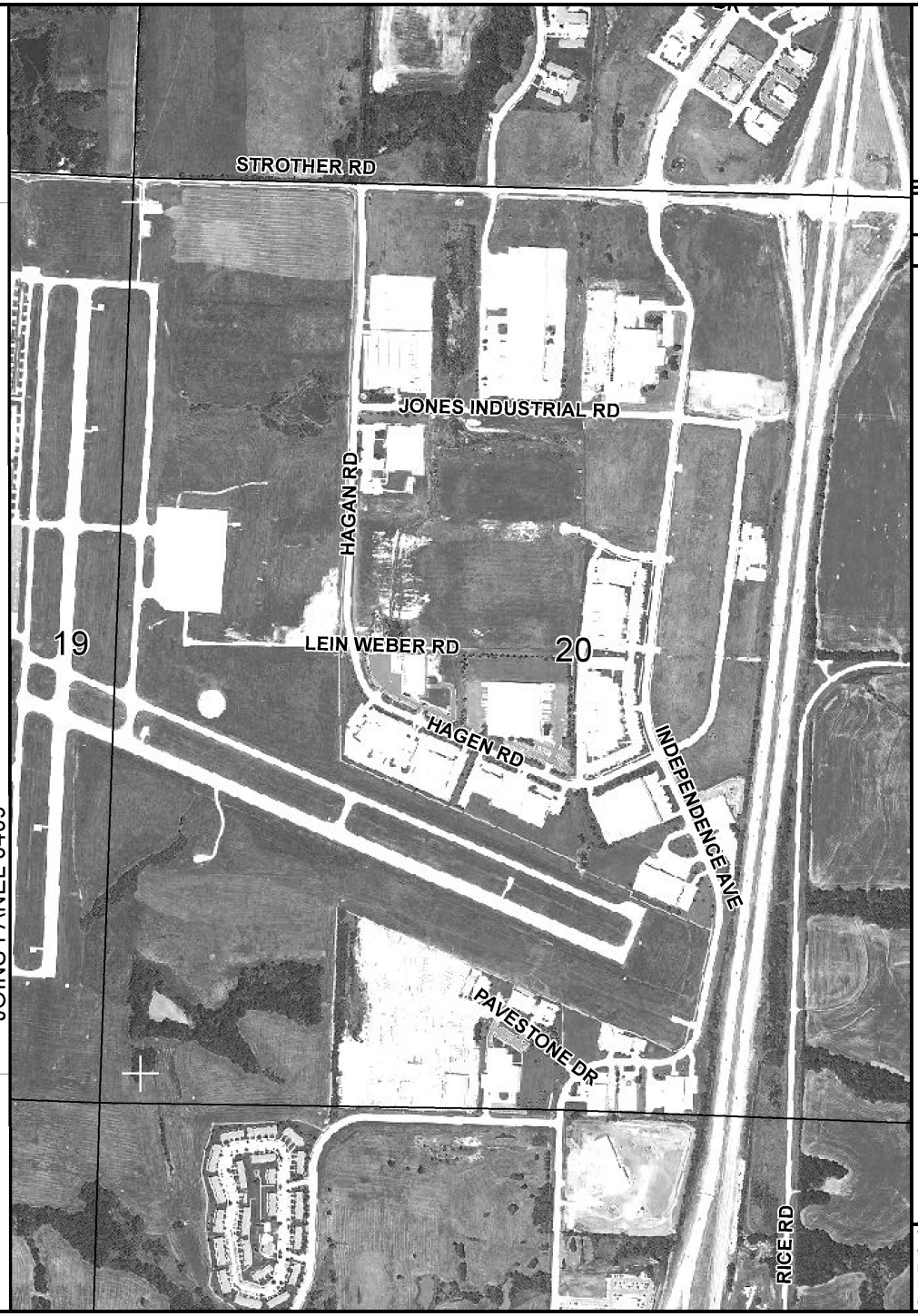
FINAL DEVELOPMENT PLAN CHECKLIST

Table 4. Other Requirements				
	Ordinance Requirement	**Met**	**Not Met**	**N/A**
UDO Art. 9 Signs				
Sec. 9.030.B Signs	All signs must comply with the sign requirements as outlined in the sign section of the ordinance			
UDO Art. 5. Div. I - Airport Overlay				
Sec. 5.030. Airport Zones	No structure shall be erected, altered, or maintained, and no tree shall be allowed to grow in any zone created by this District to a height in excess of the applicable height limit herein established for such zone. See Article 5			
Sec. 5.040 Use Restrictions	No use may be made of land or water within any zone established by this Article in such a manner as to create electrical interference with navigational signals or radio communication between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and others, result in glare in the eyes of pilots using the airport, impair visibility in the vicinity of the airport, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport.			
	For any property within two miles of the airport, a Form 7460 shall be completed and submitted to the FAA, and comments received back prior to any construction.			
UDO Art. 5. Div. II - Flood Hazard and Zoning				
Misc.	Floodplain boundaries shall be shown, along with base flood elevations.			
Misc.	Any lots which contain floodplain shall have a note establishing the minimum floor elevation and/or minimum low opening for structures.			
UDO Art. 5. Div. III - Historic Preservation				
Misc.	Is the property in a local historic district?			
Misc.	Is the property or structure listed in the National Register of Historic Places?			
UDO Article 7. Platting				
Sec. 7.020.G	Any division of land or unplatted piece of property requires platting prior to the issuance of building permits			

APPENDIX A3 – PRE-APPLICATION MEETING NOTES

(Not included, confirmed not required)

APPENDIX A4 – FEMA 1% ANNUAL CHANCE FLOOD MAP



MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

0 300 600 METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0430G

FIRM

FLOOD INSURANCE RATE MAP

JACKSON COUNTY, MISSOURI AND INCORPORATED AREAS

PANEL 430 OF 625

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JACKSON COUNTY	290492	0430	G
LEE'S SUMMIT, CITY OF	290174	0430	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
29095C0430G

MAP REVISED
JANUARY 20, 2017

Federal Emergency Management Agency

APPENDIX A5 – STORM WATER POLLUTION PREVENTION PLAN

City of Lee's Summit, Missouri
Lee's Summit Municipal Airport

Storm Water Pollution Prevention Plan for Storm Water Discharge Associated with

LXT EASTSIDE DEVELOPMENT

Originally Prepared: November 01, 2023

Prepared by
Crawford, Murphy & Tilly, Inc.
1627 Main St. Suite 600
Kansas City, MO 64108

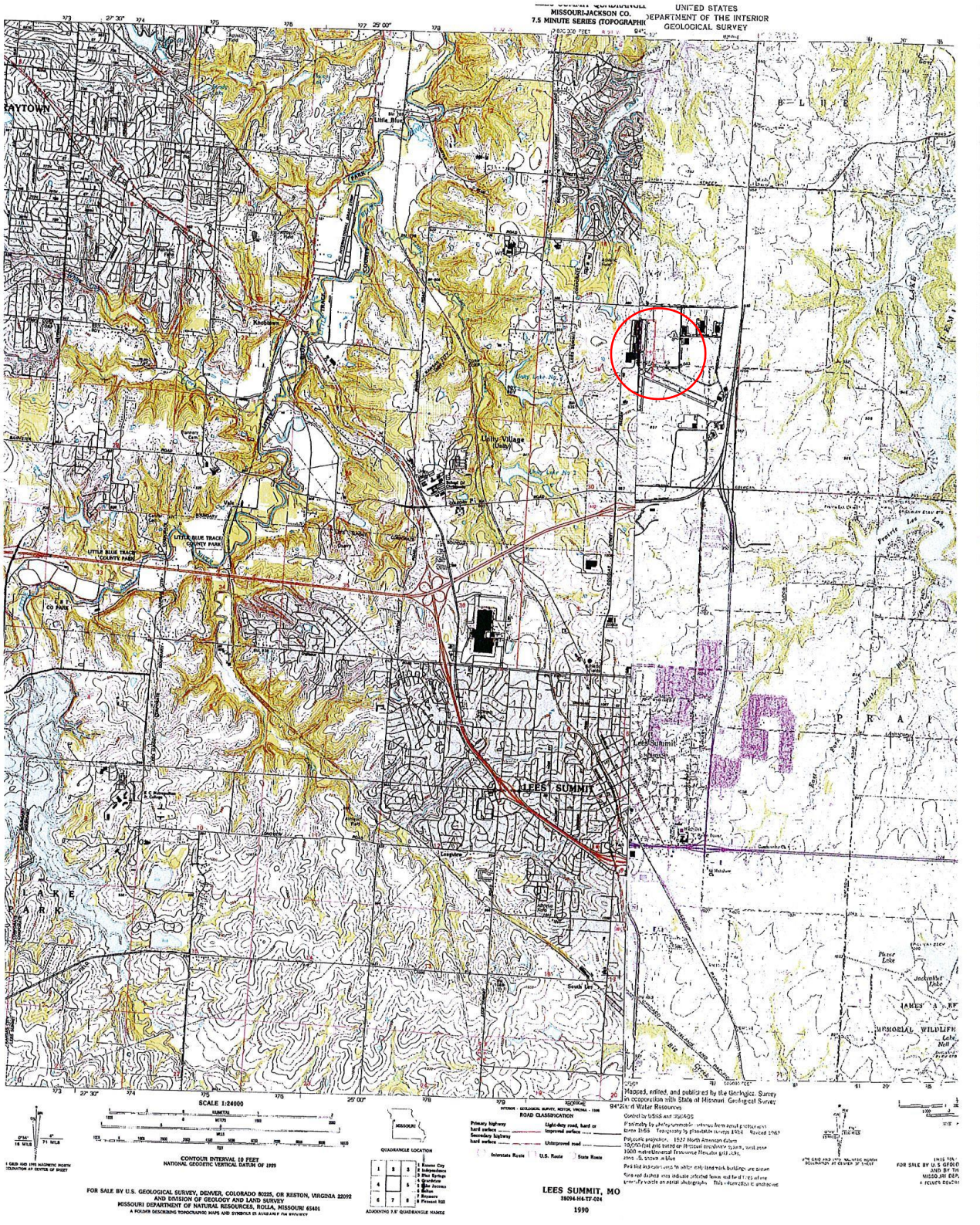
Table of Contents

1. Site Description

The facility to be affected by construction activities is the Lee's Summit Municipal Airport located at 2751 NE Douglas; Lee's Summit, Missouri 64064. This is in Section 20, Township 48 north, Range 31 west, Jackson County, Missouri. The project site drains to an existing low area to the north witch then is received by an unnamed tributary to Lakewood Lakes. Figure 1-1 shows the airport's location on a combined USGS map.

Construction activities at the site will include the construction of a new hangar building, site grading, drainage improvements, paving, utilities, pavement marking, and other associated improvements east of the airport along NE Hagan Rd.

Figure 1-1


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
MISSOURI-JACKSON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
LEES SUMMIT
Lees Summit Airport
LITTLE BLUE TRACE COUNTY PARK
Unity Village
SCALE 1:24000
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
AND DIVISION OF GEOLOGY AND LAND SURVEY
MISSOURI DEPARTMENT OF NATURAL RESOURCES, ROLLA, MISSOURI 65401
ROAD CLASSIFICATION
QUADRANGLE LOCATION
LEES SUMMIT, MO
38094-H6-TF-024
1990

2. Drainage Areas

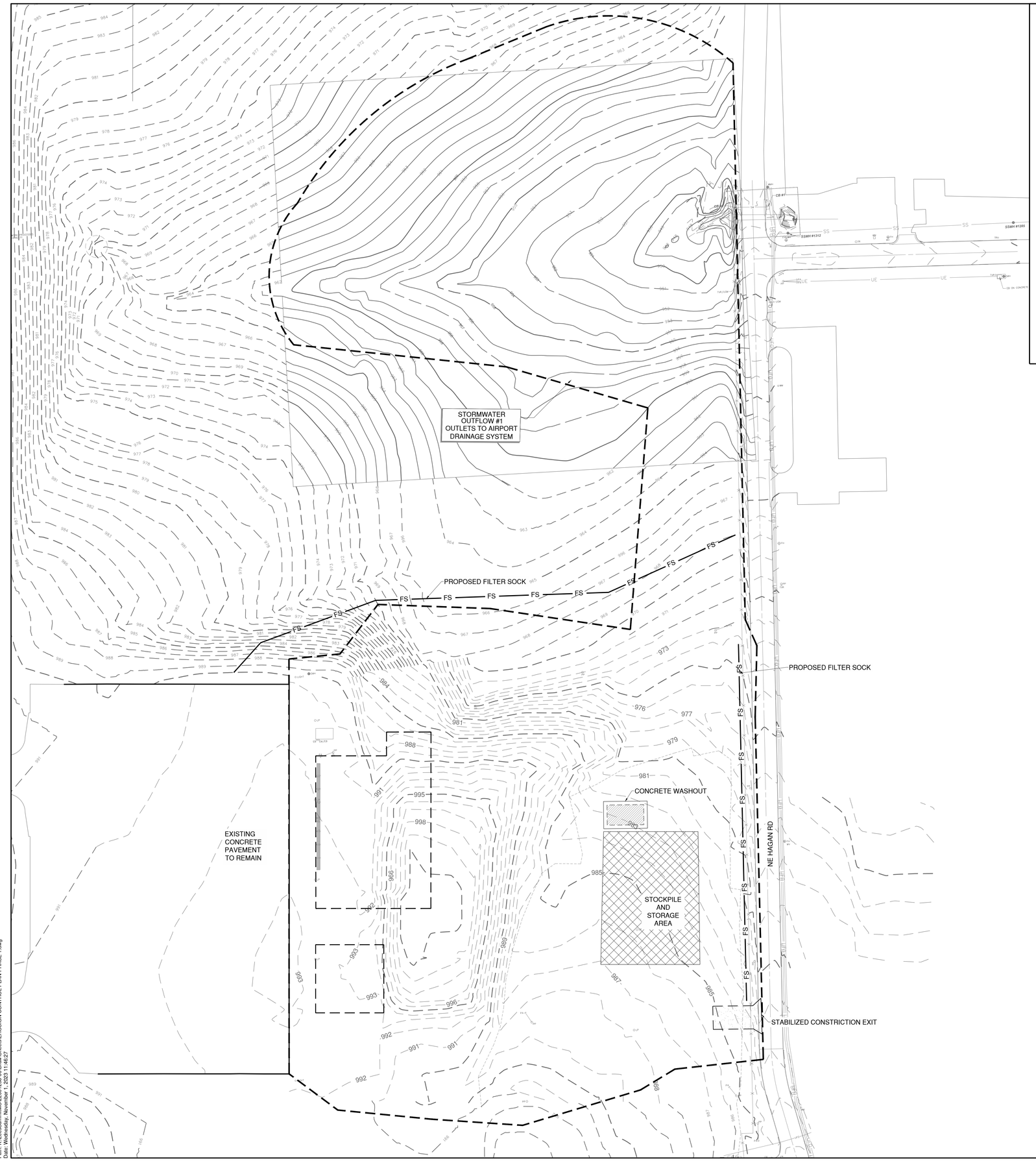
Any areas where changes to a defined drainage area are to occur, shall not be disturbed until all materials and equipment necessary to protect and complete the drainage change are on site. Changes to defined drainage areas shall be completed as quickly as possible once the work has been initiated. Any areas impacted by the land disturbance of a drainage course change are to be protected from erosion as soon as possible. This shall include installation of BMPs prior to the start of disturbance activity at the downstream end and within 14 days of completion of disturbance activities within the disturbance area.

3. Description of Best Management Practices

The following Best Management Practices (BMPs) shall be used as methods to control the storm water runoff during the construction of this project. Specifications Item P-156 – Erosion and Sediment Control, Item T-901 – Seeding, and Item T-908 – Mulching provide additional information and are included in Appendix A. Figure 3-1 thru 3-2 shows the locations of the BMPs and Figure 3-3 shows the installation details.

A. Stabilized Construction Entrance
B. Silt Sock
C. Silt Dike Ditch Check
D. Concrete Washout Pit
E. Temporary Seeding and Mulching
F. Erosion Control Blanket
G. Rip Rap
H. Inlet Protection
I. Permanent Seeding and Mulching

Insert Figure 3-1



LEGEND

- LIMITS OF DISTURBANCE
- 1400 EXISTING CONTOUR
- 1400 PROPOSED CONTOURS
- FS PROPOSED FILTER SOCK
- FLOW ARROW
- TEMPORARY CONCRETE WASHOUT AS REQUIRED FOR PCC CONSTRUCTION
- AREA TO RECEIVE SEEDING / FERTILIZING PER SPECIFICATIONS AND NORTH AMERICAN GREEN EroNet SC150 EROSION CONTROL BLANKET SEE EROSION CONTROL DETAILS
- AREA TO BE SEEDED
- RIP-RAP AT END SECTION SEE EROSION CONTROL DETAILS
- STABILIZED CONSTRICTION ENTRANCE (COORDINATE LOCATION WITH OWNER) SEE EROSION CONTROL DETAILS
- STOCKPILE AND STORAGE AREA

N TRUE

0 60 120 FEET

SEQUENCE OF CONSTRUCTION:

1. CONTRACTOR MUST INSTALL PERIMETER SILT SOCK CONTROLS PRIOR TO GRADING OPERATIONS.
2. WHEN NEW INLETS ARE INSTALLED, CONTRACTOR TO PUT IN PLACE INLET PROTECTION ON NEW INLETS AS SOON AS POSSIBLE AS INDICATED ON THE PLANS.
3. AFTER GRADING OF DITCHES, DITCH CHECKS TO BE PUT IT PLACE AS SOON AS POSSIBLE.
4. ALL INLET PROTECTION, SILT SOCKS, AND DITCH CHECKS TO REMAIN IN PLACE AND BE MAINTAINED THROUGHOUT CONSTRUCTION AS REQUIRED UNTIL FULL VEGETATION IS ESTABLISHED. CONTRACTOR TO USE SEEDING AND EROSION CONTROL BLANKETS ACCORDING TO REQUIREMENTS OF THIS SHEET AND LANDSCAPE PLANS.

ACREAGE SUMMARY

DISTURBED AREA = 13.71 AC
IMPERVIOUS AREA = 5.17 AC
PERVIOUS AREA = 8.54 AC

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
SEPTEMBER 29, 2023

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: EROSION CONTROL PLAN-PHASE 1
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH
COPYRIGHT

SHEET TITLE

EROSION CONTROL PLAN-PHASE 1

C123

SHEET 030 OF 126

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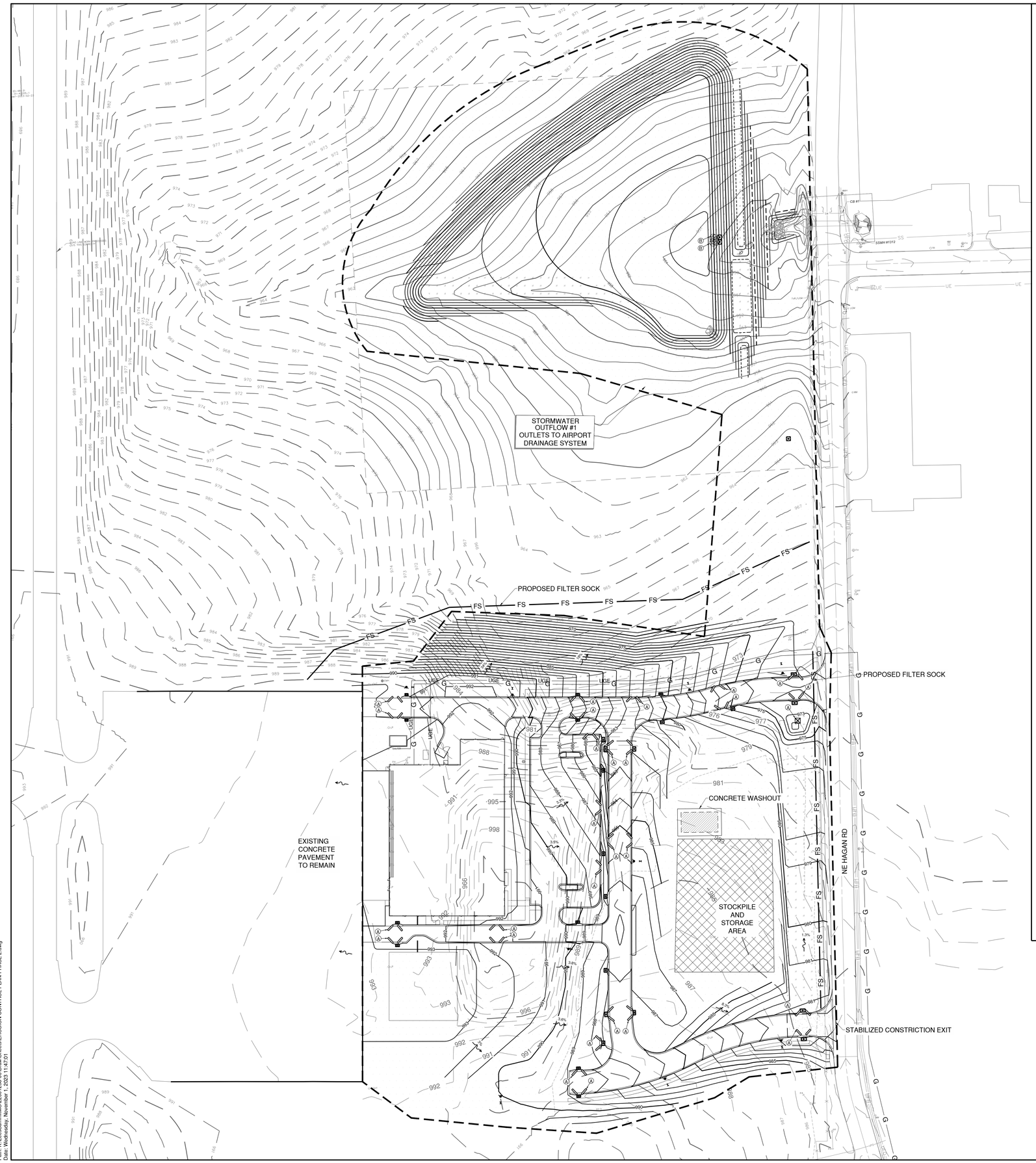
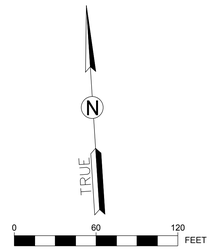
Insert Figure 3-2





LEGEND

- AREA TO RECEIVE SEEDING / FERTILIZING PER SPECIFICATIONS AND NORTH AMERICAN GREEN EroNet SC150 EROSION CONTROL BLANKET SEE EROSION CONTROL DETAILS
- AREA TO BE SEEDED
- RIP-RAP AT END SECTION SEE EROSION CONTROL DETAILS
- STABILIZED CONSTRICTION ENTRANCE (COORDINATE LOCATION WITH OWNER) SEE EROSION CONTROL DETAILS
- STOCKPILE AND STORAGE AREA
- LIMITS OF DISTURBANCE
- 1400 EXISTING CONTOUR
- 1400 PROPOSED CONTOURS
- FS FS PROPOSED FILTER SOCK
- FLOW ARROW
- INLET PROTECTION
- BASIN OUTFALL PROTECTION
- TEMPORARY CONCRETE WASHOUT AS REQUIRED FOR PCC CONSTRUCTION

SEQUENCE OF CONSTRUCTION:

1. CONTRACTOR MUST INSTALL PERIMETER FILTER SOCK CONTROLS PRIOR TO GRADING OPERATIONS.
2. WHEN NEW INLETS ARE INSTALLED, CONTRACTOR TO PUT IN PLACE INLET PROTECTION ON NEW INLETS AS SOON AS POSSIBLE AS INDICATED ON THE PLANS.
3. AFTER GRADING OF DITCHES, DITCH CHECKS TO BE PUT IT PLACE AS SOON AS POSSIBLE.
4. ALL INLET PROTECTION, SILT SOCKS, AND DITCH CHECKS TO REMAIN IN PLACE AND BE MAINTAINED THROUGHOUT CONSTRUCTION AS REQUIRED UNTIL FULL VEGETATION IS ESTABLISHED. CONTRACTOR TO USE SEEDING AND EROSION CONTROL BLANKETS ACCORDING TO REQUIREMENTS OF THIS SHEET AND LANDSCAPE PLANS.

KEYNOTE

- (A) INLET PROTECTION
- (B) BASIN OUTFALL PROTECTION

ACREAGE SUMMARY

DISTURBED AREA =	13.71 AC
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SEPTEMBER 29, 2023

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

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DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
APPROVED BY:	TGH
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SHEET TITLE

EROSION CONTROL PLAN-PHASE 2

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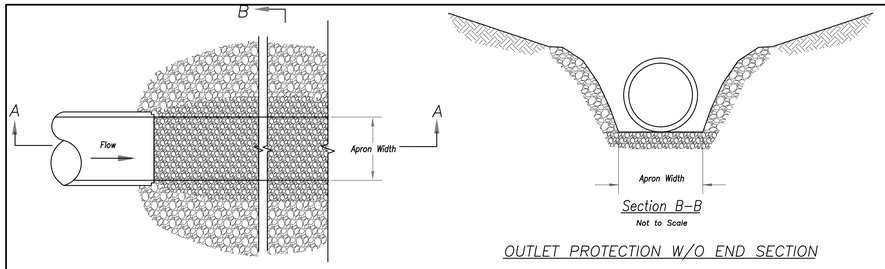
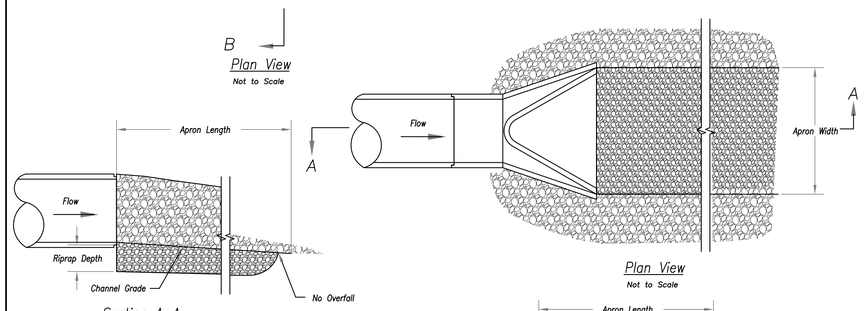
Insert Figure 3-3



OUTLET PROTECTION W/O END SECTION



OUTLET PROTECTION WITH END SECTION

Notes:

1. *Rock all sides steeper than 3:1.*
2. *Stabilize all disturbed areas downstream of outlet to the limits of disturbance.*
3. *Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.*
4. *Install riprap apron so that it is no higher than flowline of pipe*
5. *Reference APWA Specification 2650 for rock type, size, and placement.*

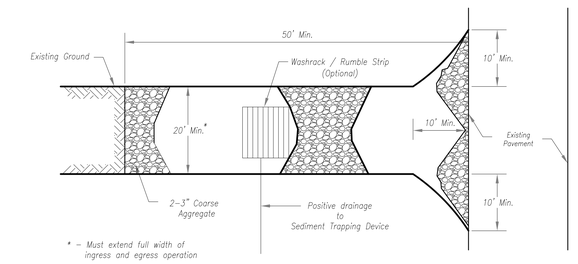
OUTLET PROTECTION E1
N.T.S.

Maintenance for Construction Entrance:

1. *Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.*

Notes for Construction Entrance:

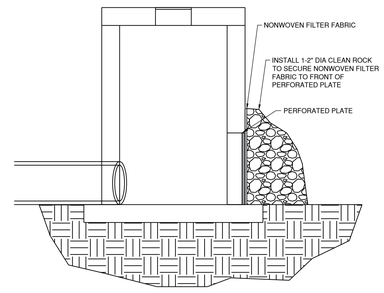
1. *Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.*
2. *Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage*
3. *If slope towards the public road exceeds 2%, construct a 6– to 8–inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.*
4. *Install pipe under the entrance if needed to maintain drainage ditches along public roads.*
5. *Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.*
6. *Divert all surface runoff and drainage from the entrance to a sediment control device.*
7. *If conditions warrant, place geotextile fabric on the graded foundation to improve stability.*



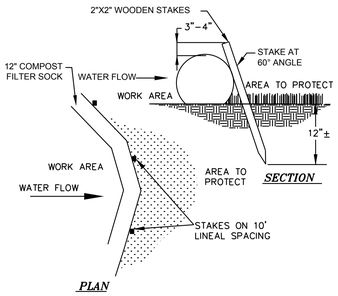
CONSTRUCTION ENTRANCE

STABILIZED CONSTRUCTION ENTRANCE E2
N.T.S.

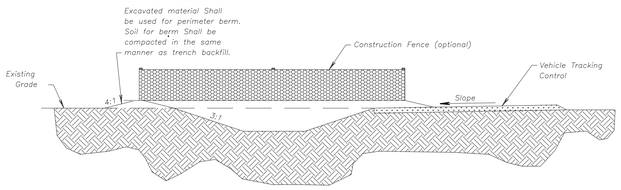
NOTES:
1. REFER TO DEWATERING DETAIL FOR REMOVAL OF WATER.
2. REMOVAL OF WATER VIA TRENCHED RELEASE IS A VIOLATION.
3. SEDIMENT SHALL BE REMOVED PRIOR TO SEEDING THE BASIN.
4. DAM STRUCTURE SHALL BE REMOVED WHEN UPSTREAM AREAS HAVE BEEN STABILIZED.



BASIN OUTFALL PROTECTION E3
N.T.S.



12" FILTER SOCK E4
N.T.S.



CONCRETE WASHOUT

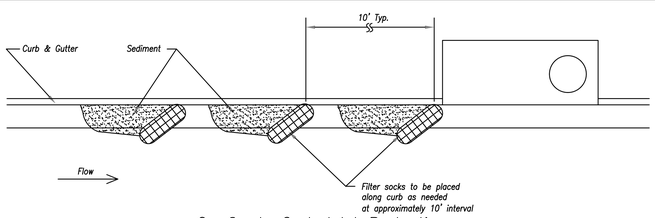
Notes for Concrete Washout:

1. *Concrete washout areas shall be installed prior to any concrete placement on site.*
2. *Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.*
3. *Vehicle tracking control is required at the access point to all concrete washout areas.*
4. *Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.*
5. *A one–piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.*

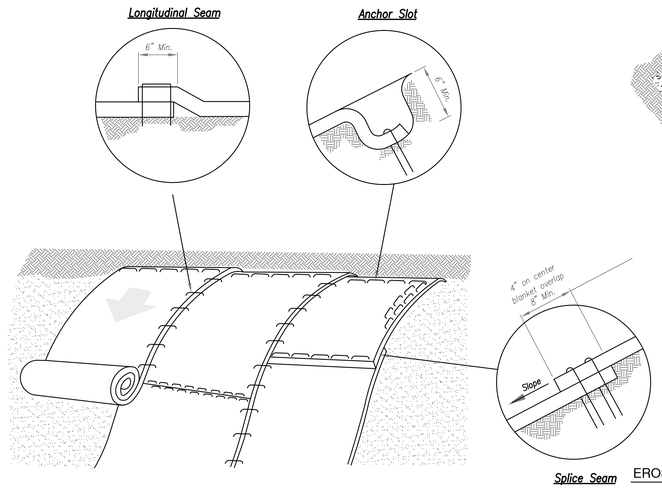
Maintenance for Concrete Washout:

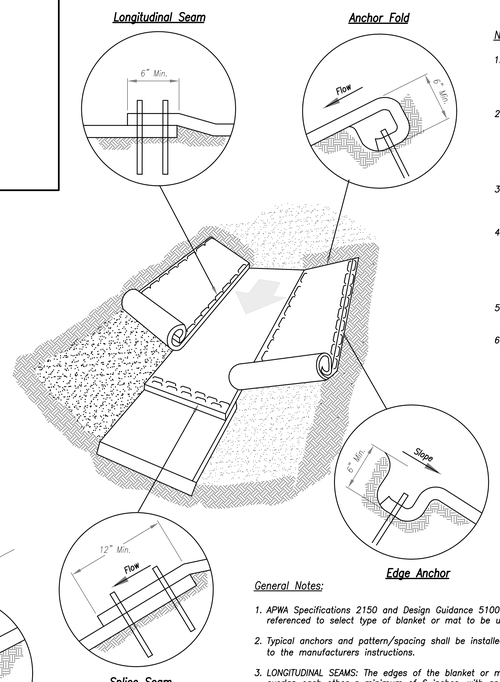
1. *Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.*
2. *Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.*
3. *Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water–tight container and disposed of property.*
4. *Concrete washout areas shall remain in place until all concrete for the project is placed.*
5. *When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.*

CONCRETE WASHOUT E5
N.T.S.



CURB INLET PROTECTION E6
N.T.S.





EROSION CONTROL BLANKETS E7
N.T.S.

Notes for Installation in Channels:

1. *Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.*
2. *ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.*
3. *SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.*
4. *CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.*
5. *EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.*
6. *TERMINUS: The bottom edge of the mat shall be anchored.*

General Notes:

1. *APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.*
2. *Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.*
3. *LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.*

Maintenance:

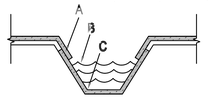
1. *Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.*
2. *Edges or seams that are loose or frayed shall be secured.*

Critical Points:

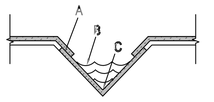
A – *Overlaps and seams;*

B – *Projected water line;*

C – *Channel bottom / side slope vertices;*



Trapezoidal Channel



V Channel

Installation in Channels

CMT
1627 MAIN STREET, SUITE 600
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olsson
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
SEPTEMBER 29, 2023

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	EROSION CONTROL DETAILS
DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
APPROVED BY:	TGH
COPYRIGHT	

SHEET TITLE

EROSION CONTROL DETAILS

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SHEET 032 OF 126

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4. Disturbed Areas

The contractor shall apply temporary seeding and mulching in any disturbed area where grading activities will remain idle for more than 14 days but will require additional grading. For areas where final grading has been achieved, permanent seeding and mulching shall be applied within 14 days of the completion of the grading operations.

5. Installation

All BMPs shall be installed in accordance with the specifications in Appendix A and the details shown on Figure 3-3.

6. Temporary and Permanent Non-Structural BMPs

The non-structural BMPs to be used on this project are temporary and permanent seeding and mulching. They shall be installed within 14 days of the completion or stoppage of grading activities. A temporary stabilized construction entrance shall be installed as specified to reduce material from public roadways. However, the contractor shall still monitor the entrance and exit points of the public roads, keep the area as clean as practical and route the construction traffic in a way that will reduce trackout. A water truck will be available to clean the pavement.

7. Temporary and Permanent Structural BMPs

The structural BMPs to be used on this project are silt filter socks, silt ditch checks, sedimentation basin, rip rap, inlet protect and erosion control blanket. The silt filter sock shall be installed at the locations specified by the engineer within 48 hours of completing clearing and grubbing operations in that area. Where practical, silt sock will be installed prior to initial disturbance of the ground.

Structural BMPs shall be maintained in proper working condition until final acceptance of the project for permanent BMPs and establishment of turf for temporary BMPs.

8. Routine Monitoring and Reporting of Site Conditions

The contractor shall be responsible for performing routine inspections of the project site in order to evaluate, document, and report the effectiveness of the erosion control measures that are in place at the project site. The purpose of these inspections is to monitor the site in order to facilitate implementation of appropriate modifications and maintenance activities in order to minimize and/or eliminate loss of sediment from the site.

The contractor shall make routine inspections at least once every seven (7) calendar days. If a rainfall causes storm water runoff to occur on site, the BMPs must be inspected within a reasonable time period (not to exceed 48 hours).

The contractor shall provide the Engineer a record of each site inspection using the form provided in this SWPPP. The contractor shall indicate on the form the name of the individual performing the inspection and the date that the inspection occurred. The individual performing the inspection shall sign the form. The contractor shall provide four copies of each report to the Engineer within 3 days of the inspection.

The contractor shall notify the Engineer immediately of any indications of loss of sediment from the project site.

9. Additional Site Management BMPs

The contractor shall exercise best management practices throughout the life of the project to control water pollution. Pollutants such as chemicals, fuels, lubricants, bitumen, raw sewage or other harmful material shall not be discharged from the project. Temporary pollution control measures shall be coordinated with permanent erosion control features specified in the contract to ensure economical, effective and continuous erosion control.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Trash containers and portable toilets shall be provided by the contractor for his/her employees. The trash containers and portable toilets shall be maintained by the contractor as needed in accordance with all local, state, and federal laws.

10. Permanent Storm Water Management

The contractor shall maintain all permanent seeding and mulching areas until final acceptance of the project. Upon final acceptance of the project, the City of Lee's Summit will inspect the area once a month and will take action as needed.

Stormwater Construction Site Inspection Report

General Information			
Project Name	LXT Eastside Development		
Permit No.		**Location**	Lee's Summit Municipal Airport
Date of Inspection		**Start/End Time**	
Inspector's Name(s)			
Inspector's Title(s)			
Inspector's Contact Information			
Inspector's Qualifications			
Describe present phase of construction			
Type of Inspection: ❑ Regular ❑ Pre-storm event ❑ During storm event ❑ Post-storm event			
Weather Information			
Has there been a storm event since the last inspection? ❑Yes ❑No **If yes, provide:** Storm Start Date & Time: Storm Duration (hrs): Approximate Amount of Precipitation (in):			
Weather at time of this inspection? ❑ Clear ❑Cloudy ❑ Rain ❑ Sleet ❑ Fog ❑ Snowing ❑ High Winds ❑ Other: Temperature:			
Have any discharges occurred since the last inspection? ❑Yes ❑No **If yes, describe:**			
Are there any discharges at the time of inspection? ❑Yes ❑No **If yes, describe:**			

Site-specific BMPs

- *Number the structural and non-structural BMPs identified in your SWPPP on your site map and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required BMPs at your site.*
- *Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.*

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1		❑Yes ❑No	❑Yes ❑No	
2		❑Yes ❑No	❑Yes ❑No	
3		❑Yes ❑No	❑Yes ❑No	
4		❑Yes ❑No	❑Yes ❑No	
5		❑Yes ❑No	❑Yes ❑No	
6		❑Yes ❑No	❑Yes ❑No	
7		❑Yes ❑No	❑Yes ❑No	
8		❑Yes ❑No	❑Yes ❑No	
9		❑Yes ❑No	❑Yes ❑No	

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
10		❑Yes ❑No	❑Yes ❑No	
11		❑Yes ❑No	❑Yes ❑No	
12		❑Yes ❑No	❑Yes ❑No	
13		❑Yes ❑No	❑Yes ❑No	
14		❑Yes ❑No	❑Yes ❑No	
15		❑Yes ❑No	❑Yes ❑No	
16		❑Yes ❑No	❑Yes ❑No	
17		❑Yes ❑No	❑Yes ❑No	
18		❑Yes ❑No	❑Yes ❑No	
19		❑Yes ❑No	❑Yes ❑No	
20		❑Yes ❑No	❑Yes ❑No	

Overall Site Issues

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	❑Yes ❑No ❑N/A	❑Yes ❑No	
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	❑Yes ❑No ❑N/A	❑Yes ❑No	
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	❑Yes ❑No ❑N/A	❑Yes ❑No	
4	Are discharge points and receiving waters free of any sediment deposits?	❑Yes ❑No ❑N/A	❑Yes ❑No	
5	Are storm drain inlets properly protected?	❑Yes ❑No ❑N/A	❑Yes ❑No	
6	Is the construction exit preventing sediment from being tracked into the street?	❑Yes ❑No ❑N/A	❑Yes ❑No	
7	Is trash/litter from work areas collected and placed in covered dumpsters?	❑Yes ❑No ❑N/A	❑Yes ❑No	

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
8	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	❑Yes ❑No ❑N/A	❑Yes ❑No	
9	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	❑Yes ❑No ❑N/A	❑Yes ❑No	
10	Are materials that are potential stormwater contaminants stored inside or under cover?	❑Yes ❑No ❑N/A	❑Yes ❑No	
11	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	❑Yes ❑No ❑N/A	❑Yes ❑No	
12	(Other)	❑Yes ❑No ❑N/A	❑Yes ❑No	

Non-Compliance

Describe any incidents of non-compliance not described above:

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print name and title: _____

Signature:_____ Date:_____

Appendix A: Specifications

ITEM P-156 TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL

DESCRIPTION

156-1.1 This item shall consist of temporary and permanent control measures as shown on the plans or as ordered by the Engineer during the life of a contract to control water pollution, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period. As a minimum the contractor shall erect and maintain silt fence along existing ditches and around drainage structures in the grading areas or in the vicinity of grading areas that receive runoff from graded areas. The contractor shall exercise best management practices throughout the life of the project to control water pollution. Pollutants such as chemicals, fuels, lubricants, bitumen, raw sewage or other harmful material shall not be discharged from the project.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be designed, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

Inlet Protection shall consist of constructing inlet protection basins in accordance with the details in the plans for the purpose of preventing infiltration of silt into the inlets.

The Contractor shall follow the requirements of the Storm Water Pollution Prevention Plan (SWPPP) and **shall perform erosion control inspections as outlined in the SWPPP until final acceptance of the project**. Erosion control inspection shall not be measured for payment but shall be considered incidental to the contract. The SWPPP is included in the appendix and is considered part of the contract. Any requirements of the SWPPP that do not have a specified pay item are considered incidental to the contract and shall be performed by the Contractor at no additional cost to the Contract. The Contractor shall update the SWPPP during construction as needed to comply with Missouri Department of Natural Resources (MoDNR) requirements.

The Contractor shall be responsible for meeting the requirements of the City's Missouri State Operating Permit, Permit No. MOR 100089 from the time of the issuance of the Notice to Proceed (NTP) until final project acceptance. Any fines issued by MoDNR for noncompliance of the permit related to the Construction of this project between the NTP and final project acceptance shall be paid by the Contractor

MATERIALS

PROOF OF BUY AMERICAN NOTICE: All tier contractors and subcontractors shall provide proof of Buy American compliance for all manufactured products in accordance with statues established under Title 49 U.S.C. Section 50101. The AIP Buy American preference does not recognize US trade agreements such as NAFTCA. If, upon submittal sufficient information to confirm compliance is not included, the submittal will be returned with no action.

156-2.1 Grass. Grass that will not compete with the grasses sown later for permanent cover per Item T-901shall be a quick-growing species (such as ryegrass or Italian ryegrass) suitable to the area providing a temporary cover. Selected grass species shall not create a wildlife attractant.

156-2.2 Mulches. Mulches shall be reasonably clean and free of noxious weeds and deleterious materials per ItemT-908. Mulches shall not create a wildlife attractant.

156-2.3 Fertilizer. Fertilizer shall be a standard commercial grade and shall conform to all Federal and state regulations and to the standards of the Association of Official Agricultural Chemists.

156-2.4 Slope drains. NOT USED.

156-2.5 Silt fence. The silt fence shall consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life. Silt fence shall meet the requirements of ASTM D6461.

156-2.6 Other. All other materials shall meet commercial grade standards and shall be approved by the Engineer before being incorporated into the project.

CONSTRUCTION REQUIREMENTS

156-3.1 General. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The Engineer shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

156-3.2 Schedule. Prior to the start of construction, the Contractor shall submit schedules for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the Engineer.

During construction operations, dust shall be controlled to the satisfaction of the Engineer.

156-3.3 Construction details. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the accepted schedule. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available, but no later than 14 days after the completion of final grading activities unless temporary seeding is applied.. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, clearing and grubbing operations should be scheduled and performed so that grading operations and permanent erosion control features can follow immediately if project conditions permit; otherwise, temporary erosion control measures may be required.

The Engineer shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted

schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the Engineer.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the Engineer. If temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the Engineer, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The Engineer may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The erosion control features installed by the Contractor shall be acceptably maintained by the Contractor during the construction period.

Whenever construction equipment must cross watercourses at frequent intervals, temporary structures should be provided.

Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

156-3.4 Installation, maintenance and removal of silt fences. Silt fences shall extend a minimum of 16 inches (41 cm) and a maximum of 34 inches (86 cm) above the ground surface. Posts shall be set no more than 10 feet (3 m) on center. Filter fabric shall be cut from a continuous roll to the length required minimizing joints where possible. When joints are necessary, the fabric shall be spliced at a support post with a minimum 12-inch (300-mm) overlap and securely sealed. A trench shall be excavated approximately 4 inches (100 mm) deep by 4 inches (100 mm) wide on the upslope side of the silt fence. The trench shall be backfilled and the soil compacted over the silt fence fabric. The Contractor shall remove and dispose of silt that accumulates during construction and prior to establishment of permanent erosion control. The fence shall be maintained in good working condition until permanent erosion control is established. Silt fence shall be removed upon approval of the Engineer.

156-3.5 Erosion Control Maintenance. The temporary erosion control systems installed by the Contractor shall be properly repaired and maintained as directed by the Engineer to control siltation at all times during the life of the contract. If the Contractor fails to maintain the temporary erosion control systems as required to limit the erosion from the site, payment for the noted pay items in this section can be withheld or fines assessed

156-3.6 Removal Of Erosion Control. The Contractor shall remove and dispose of any of the sediment control items installed at the direction of the Engineer. The cost of this removal shall be incidental to this item.

156-3.7 Inlet Protection. The contractor shall construct inlet protection reservoirs around inlets on the project in accordance with the details shown in the plans. The contractor shall inspect, clean and properly maintain the excavated inlet protection basin after every storm until the contributing drainage basin has been permanently stabilized. The Contractor shall remove sediment when the volume of the basin has been reduced by one-half. The excavated material shall be spread evenly over the surrounding ground or placed in an area which still needs stabilized. Once the drainage basin has been stabilized, the basin shall be backfilled in accordance with Item P-152 and stabilized.

156-3.8 STABILIZED CONSTRUCTION ENTRANCE. A temporary, stabilized construction entrance shall be constructed at all entrance/exit to the project site for heavy construction traffic to/from public roads. The entrance shall serve as a durable entrance, as well as a dirt and sediment trap for

vehicles leaving the project site. The entrance shall consist of 12" of an ASTM C33, Size 2 or 3 crushed coarse aggregate on a geotextile separation fabric. The entrance shall be of a width adequate to accommodate full ingress and egress operations.

ASTM Size No.	Amounts finer than each laboratory sieve, mass percent passing						
	3 in.	2-1/2 in.	2 in.	1-1/2 in.	1 in.	¾ in.	½ in.
2	100	90 to 100	35 to 70	0 to 15	--	0 to 5	--
3	--	100	90 to 100	35 to 70	0 to 15	--	0 to 5

The stabilized construction entrance shall be removed at project completion, and the disturbed area returned to its original condition or better.

The construction and removal of the stabilized construction entrance including all labor, materials, equipment, tools, and other effort necessary to meet the requirements of this section shall be considered incidental to the cost of the project and no separate measurement or payment will be made for this work.

156-3.6 PERMITS. The project is being constructed under a U.S. Army Corps of Engineers, Kansas City District, 404 Permit and Missouri Department of Natural Resources 401 Water Quality Certification. The contractor shall adhere to requirements regarding erosion and sediment control specified in the permit. A copy of the permit is available upon request.

TEMPORARY EROSION CONTROL (SILT FENCE/STRAW BALES/ SILT DIKE DITCH CHECK)

156-4.1 DESCRIPTION. This work shall consist of furnishing, installing, maintaining and removing erosion controls for temporary ditch checks and at other temporary locations shown on the plans for controlling pollution and erosion, and removing sediment deposits at these locations and disposing of the sediment deposits at a location approved by the engineer. The quantities of temporary erosion control shown on the plans may be increased or decreased at the direction of the engineer. At the engineer's discretion, the location may be field modified to fit field conditions. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the work.

156-4.2 MATERIAL. Geotextile Fabric shall meet the physical and chemical requirements of AASHTO M 288.

Posts for silt fence may be wood, steel or synthetic. Posts shall be sufficient length, not less than 4 feet, to ensure adequate embedment while fully supporting the silt fence and shall have sufficient strength to resist damage during installation and to support applied loads while in service.

All geotextile silt fence shall be **supported either externally by wire or other approved mesh** to a height of at least 24 inches or by a suitable designed-in support system capable of keeping the material erect. Either method shall be strong enough to withstand applied loads. The support system shall be installed at all silt fence locations and shall be securely attached to the geotextile fabric.

Prefabricated fence systems may be used provided they meet all of the above requirements.

Straw bales shall meet the requirements of MO-908.

Posts for straw bales shall be wood. Posts shall be 2 inch by 2 inch and sufficient length, not less than 3 feet, to ensure adequate embedment.

Silt dike ditch checks shall be triangular in shape with a minimum height of 10 inches and shall consist of urethane foam and geotextile fabric with a protective apron.

156-4.3 CONSTRUCTION REQUIREMENTS. The contractor shall install the temporary erosion control as shown on the plans or at other locations as directed by the engineer. Silt fence construction shall be adequate to handle the stress from hydraulic and sediment loading. Fabric at the bottom of the silt fence shall be buried a minimum 6 inches so that no flow can pass under the barrier. The trench shall be backfilled and the soil compacted over the fabric. The fabric shall be spliced together only at a support post with a minimum 6-inch overlap. Any installation method acceptable to the engineer will be allowed as long as the effectiveness and intent of the silt fence is achieved.

Post spacing shall not exceed 5 feet. Posts shall be driven a sufficient depth into the ground or placed on closer spacing as necessary to ensure adequate resistance to applied loads.

The silt fence shall be fastened securely to the upslope side of the post. When wire support is used, the wire shall extend into the trench a minimum of 2 inches.

Straw bale construction shall be adequate to handle the stress from hydraulic and sediment loading. Geotextile fabric shall be fastened securely to the bale on the side of flow and on top and then embedded a minimum of 6 inches so that no flow can pass under the barrier.

Post spacing shall not exceed 2 feet. Posts shall be driven a sufficient depth into the ground or placed on closer spacing as necessary to ensure adequate resistance to applied loads.

The contractor shall maintain the integrity of the erosion control as long as they are necessary to contain sediment runoff. **The contractor shall inspect all erosion control** within 48 hours of a rain event exceeding 0.5 inches and at least daily during prolonged rainfall. Any deficiencies shall be immediately corrected by the contractor. In addition, the contractor shall make a **daily review** of the location of erosion control in areas where construction activities have changed the natural contour and drainage runoff to ensure the erosion control is properly located for effectiveness. Where deficiencies exist, additional erosion control shall be installed as approved or directed by the engineer.

The contractor shall remove and dispose of sediment deposits when the deposit approaches one-half the height of the original height or sooner when directed by the engineer. Periodic sediment removal shall include removal and disposal of sediment in a location where it will not erode into construction areas or watercourses.

The erosion control shall remain in place until the engineer directs it to be removed. Upon removal, the contractor shall remove and dispose of any excess silt accumulations, grade and dress the area to the satisfaction of the engineer, and establish vegetation on all bare areas in accordance with the contract requirements. The erosion control material shall remain the property of the contractor and may be used at other locations, provided the material continues to meet the requirements of this specification, is sound and not weakened by exposure to the elements.

Upon completion of the work and removal of the silt fence and silt dike ditch checks the contractor shall replace the area disturbed by the removal of the silt fence and silt dike ditch checks with sod in accordance with the details in the plans, matching the lines grades and elevations of the surrounding turf creating a smooth transition between the disturbed area and the surrounding turf. Installation of the sod shall be considered incidental to the silt fence and silt dike ditch check pay items.

156-4.4 METHOD OF MEASUREMENT. Measurement of temporary silt fence erosion control will be made to the nearest linear foot. The temporary erosion control will be measured in place from end to end of each separate installation completed and approved in place. The measurement of silt dike ditch check will be made per each installation location regardless of the total length needed at each location.

The removal of accumulated sediment shall not be measured for payment but shall be considered incidental to the silt fence and silt dike pay items.

156-4.5 BASIS OF PAYMENT. The accepted quantities of temporary site fence erosion control completed, accepted and in-place will be paid for at the contract unit price per linear foot. The accepted quantities of silt dike ditch check completed, accepted and in-place will be paid for at the contract unit price per each. Both items shall be full compensation for all labor, equipment and material to complete the described work. This includes maintaining and repairing the original structure and the removal and disposal of the erosion control after completion of the work. The contractor will be compensated if the engineer determines unusual conditions warrant a repair or replacement of the erosion control.

The removal of accumulated quantity of sediment is considered incidental to the silt fence and silt dike ditch check line items and will not be paid for.

There will be no payment for the construction of the temporary stabilized construction entrance, nor its removal, fine grading, seeding, and mulching upon project completion. It shall be considered incidental to the project.

Payment will be made under:

Item P-156-.5.1	Silt Fence--per linear foot
Item P-156-5.2	Silt Dike Ditch Check--per linear foot

TEMPORARY SEEDING AND MULCHING

156-5.1 DESCRIPTION. This work shall consist of fertilizing, furnishing and sowing of seed, mulching or other acceptable cover authorized by the engineer. This work shall produce a quick ground cover to reduce erosion in disturbed areas expected to be redisturbed at a later date. Finish grading of areas will not be required. Hydraulic seeding and fertilizing in accordance with P-901 will be allowed.

156-5.2 CONSTRUCTION REQUIREMENTS. Seeding and mulching shall be a continuous operation on all cut and fill slopes, excess material sites and borrow pits during the construction process. All disturbed areas shall be seeded and mulched as necessary to eliminate erosion. The contractor shall provide permanent seeding and mulching as shown on the plans following temporary seeding.

Temporary seeding mixtures of oats, cereal rye or wheat shall be applied at a rate of 100 pounds per acre. Temporary seeding mixtures of oats shall be applied only during the months of December through May.

Temporary mulch placed over temporary seed mixtures shall be applied in accordance with P-908.

Fertilizer shall be applied at a rate of 40 pounds nitrogen per acre. Lime will not be required for temporary seeding.

156-5.3 METHOD OF MEASUREMENT. Temporary Seeding and mulching will not be measured for payment but will be considered incidental to the grading and erosion control.

TEMPORARY ROLLED EROSION CONTROL PRODUCTS (RECP)

156-6.1 DESCRIPTION. This work shall consist of furnishing and installation of RECP acceptable and authorized by the engineer. Net-less or single-net blankets, as specified on the detail plan sheets, shall maintain a functional longevity between 3 and 12 months. The RECP must be composed of curled wood fibers with 80 percent of the fibers six-inch or greater in length, and of consistent thickness and fiber distribution throughout the entire area of the blanket. Single-net products shall be covered with photodegradable or biodegradable netting. Single-net products must provide protection from shear stress up to 1.75 lb/ft^2; net-less products must provide protection from shear stress up to 1.0 lb/ft^2.

RECP shall be used as erosion control blanket on the embankment slopes as shown on the plans and in the areas shown for Wood Fiber Erosion Control Blanket on the stream stabilization plan sheets.

156-6.2 CONSTRUCTION REQUIREMENTS. Installation of RECP shall follow manufacturer's instructions. Within the areas shown on the plan sheets to be covered in RECP, the RECP shall not be installed prior to final grading and permanent seeding, and shall be installed within seven days of the permanent seeding, as approved by the engineer.

156-6.3 METHOD OF MEASUREMENT. Measurement of all RECP will be made to the nearest square yard.

156-6.4 BASIS OF PAYMENT. The accepted quantities of all RECP will be paid for at the contract unit price per square yard.

Payment will be made under:

P-156-5.3	Erosion Control Blanket—per square yard

RIPRAP

156-7.1 DESCRIPTION. This item shall include the construction of permanent erosion control features through the use of a rock bed (riprap) placed on bedding material on geotextile fabric.

156-7.2 MATERIAL. The material for riprap shall consist of a predominantly one-sized, durable stone, shot rock, or broken concrete. Acceptance by the engineer may be made by visual inspection. The size of the riprap shall meet the requirements of the 2004 Missouri Standard Specification for Highway Construction (MSSHC), Section 609.60 – Rock Ditch Liner for Type 3 Rock Ditch Liner.

The riprap shall be placed on a bedding material that shall conform to the requirements of MSSHC, Section 609.60.2.5. Bedding shall consist of crushed stone or gravel with a gradation consisting of 100 percent passing the 3-inch sieve, 30 to 70 percent passing the 1-1/2-inch sieve and 0 to 15 percent passing the No. 4 sieve.

The geotextile fabric to be placed below the bedding material shall conform to the requirement of the MSSHC, Section 1011.3.3, Permanent Erosion Control Geotextile. The fabric shall meet the requirements of AASHTO Class 1 of Class 2 geotextiles, have a minimum permittivity of 1.0 sec^{-1} and shall be suitable for use as permanent erosion control

156-7.3 CONSTRUCTION REQUIREMENTS. A trench at the toe of the pipe outlet shall be excavated to the dimensions shown on the plans or as indicated by the resident engineer in the field. The slopes shall conform to the proper cross section and be compacted to a uniform density as required for

adjacent material. The rock or broken concrete to be placed on the slope, to the specified thickness, elevation, and extent, and manipulated so that most of the flat sides are in contact, thereby eliminating large voids. The finished surface of the blanket shall present an appearance free from segregation and with a proportionate quantity of the larger pieces showing.

156-7.4 METHOD OF MEASUREMENT. Measurement of permanent rip rap erosion control shall be made by the square yard of rock bed (riprap), including the bedding material and geotextile fabric, in place installed and maintained by the Contractor and accepted by the Engineer.

156-7.5 BASIS OF PAYMENT. The accepted quantities of riprap will be paid for at the contract unit price per square yard and will be full compensation for all labor, equipment and material to complete the described work.

Payment will be made under:

Item P-156-5.4 Rip Rap--per square yard

INLET PROTECTION

156-8.1 DESCRIPTION. This work shall consist of constructing inlet protection basins in accordance with the details in the plans for the purpose of preventing infiltration of silt into the inlets.

156-8.2 CONSTRUCTION REQUIREMENTS. The contractor shall construct inlet protection reservoirs around inlets on the project in accordance with the details shown in the plans. The contractor shall inspect, clean and properly maintain the excavated inlet protection basin after every storm until the contributing drainage basin has been permanently stabilized. The Contractor shall remove sediment when the volume of the basin has been reduced by one-half. The excavated material shall be spread evenly over the surrounding ground or placed in an area which still needs stabilized. Once the drainage basin has been stabilized, the basin shall be backfilled in accordance with Item MO-152 and stabilized.

Posts for straw bales shall be wood. Posts shall be 2 inch by 2 inch and sufficient length, not less than 3 feet, to ensure adequate embedment.

156-8.3 METHOD OF MEASUREMENT. The quantity of inlet protection to be paid for shall be the number of inlet protection systems installed.

156-8.4 BASIS OF PAYMENT. The accepted quantity of inlet protection will be paid for at the contract unit price per each. This price shall be full compensation for all materials, equipment, labor and incidentals necessary to complete and maintain this work to the satisfaction of the Engineer.

Payment will be made under:

Item P 156-5.5 Inlet Protection--per each

END OF ITEM P-156

ITEM T-901 SEEDING

DESCRIPTION

901-1.1 This item shall consist of soil preparation, seeding, application of lime and commercial fertilizer on the areas shown on the plans or as directed by the Engineer in accordance with these specifications.

MATERIALS

901-2.1 Seed. The species and application rates of grass, legume, and cover-crop seed furnished shall be those stipulated herein. Seed shall conform to the requirements of Federal Specification JJJ-S-181, Federal Specification, Seeds, Agricultural.

Seed shall be furnished separately or in mixtures in standard containers labeled in conformance with the Agricultural Marketing Service (AMS) Seed Act and applicable state seed laws with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. The Contractor shall furnish the Engineer duplicate signed copies of a statement by the vendor certifying that each lot of seed has been tested by a recognized laboratory for seed testing within six (6) months of date of delivery. This statement shall include: name and address of laboratory, date of test, lot number for each kind of seed, and the results of tests as to name, percentages of purity and of germination, and percentage of weed content for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed. Wet, moldy, or otherwise damaged seed will be rejected.

Seeds shall be applied as follows:

Seed Mixture – Type A (Upland Turf Mix)*

Seed Species *Scientific Name*	Common Name	**Rate of Application lb./acre**
Festuca arundinacea	Tall Fescue	200
Trifolium repens	White Clover	2
	Total	**202**

***no cover crop necessary unless seeded as a dormant crop (post August 1)**

Seed Mixture – Cover Crops, Type A*

Seed Species *Scientific Name*	Common Name	**Rate of Application lb./acre**
August 1-September 15		
Avena sativa	Oats	50
September 16-October 10		
Triticum aestivum	Winter Wheat	50

***Only necessary if dormant seeding; seeding prior to March 1 or past October 10 not permissible**

***Seeding prior to March 1 or past October 10 not permissible**

The following percentages for purity and germination or pure live seed will be the minimum requirements in the acceptance of seed, unless otherwise permitted by the engineer. For species not shown on the table, PLS listed for each vendor must be supplied to the engineer to determine if adjustments to the seeding rates is required.

SEED REQUIREMENTS				
Non-native Grasses	**Scientific Name**	**Purity**	**Germination[1]**	**Pure Live Seed**
Tall Fescue	Festuca arundinacea	97	85	
Cereal or Cover Crop	**Scientific Name**	**Purity**	**Germination**	**Pure Live Seed**
Oat Grain	Avena sativia	98	85	
Wheat Grain	Triticum aestivum	97	85	
Legumes	**Scientific Name**	**Purity**	**Germination**	**Pure Live Seed**
White Clover	Trifolium repens	98	85	
Native Grasses	**Scientific Name**	**Purity**	**Variety(s)**	**Pure Live Seed**
Blue Grama	Bouteloua gracilis			40
Buffalograss	Buchloe dactyloides		Mo. Ecotype Sharp's Improved Texoka	65
Little Bluestem	Schizachyrium scoparium		Mo. Ecotype Aldous Cimmaron	40
Wildrye, Canada	Elymus canadensis			60
Rough Dropseed	Sporobolus compositus[2]		Mo. Ecotype	40

[1] Will not apply if unhulled or unscarified seed is specified.

[2] *S. asper* synonym

If the specified quantity is in pounds of seed, no reduction will be permitted in the specified quantity of seed if the purity or germination, or both, are higher than the minimum required by the specifications. If the specified quantity is in pounds of pure live seed, the pure live seed quantity shall be determined from the actual percentage shown by the supplier for native grasses or by multiplying the actual percentages of purity times the actual percentage of germination including hard seed for other seed.

All leguminous seed shall be inoculated or treated with the proper quantity of cultures approved for the particular legume to be sown. Leguminous seed include alsike clover, Korean lespedeza, red clover, white clover, hairy vetch, partride pea and slender bush clover. The inoculant for treating leguminous seed shall be a nitrogen-fixing bacteria culture. The inoculant containers shall be plainly marked with the expiration date for use. The manufacturer's recommendations for inoculating seed shall be followed.

901-2.2 Lime. Lime shall be ground limestone containing not less than 85% of total carbonates, and shall be ground to such fineness that 90% will pass through a No. 20 mesh sieve and 50% will pass through a No. 100 mesh sieve. Coarser material will be acceptable, providing the rates of application are increased to provide not less than the minimum quantities and depth specified in the special provisions on the basis of the two sieve requirements above. Dolomitic lime or a high magnesium lime shall contain at least 10% of magnesium oxide. Lime shall be applied at the rate of **1,000 lbs per acre**. All liming materials shall conform to the requirements of ASTM C602.

The Contractor may test the in-place topsoil in order to reduce the required rate of application of lime to provide at least the quantity of effective neutralizing material (E.N.M.) in pounds per acre subsequent to grading activities, prior to seeding application. Surface soil pH will be supplied to the engineer by the contractor and the Engineer shall determine if a reducing in lime is acceptable.

901-2.3 Fertilizer. Fertilizer shall be a standard commercial product which, when applied at the proper rate, will supply the quantity of total nitrogen (N), available phosphoric acid (P_2O_5) and soluble potash (K_2O) as specified below. Material may be accepted on the basis of bag label analysis or supplier's certification, and shall be in accordance with all applicable Missouri fertilizer laws.

Fertilizer	lbs/acre
Nitrogen (N)	40
Phosphoric Acid (P_2O_5)	10
Potash (K_2O)	20

901-2.4 Soil for repairs. The soil for fill and topsoiling of areas to be repaired shall be at least of equal quality to that which exists in areas adjacent to the area to be repaired. The soil shall be relatively free from large stones, roots, stumps, or other materials that will interfere with subsequent sowing of seed, compacting, and establishing turf, and shall be approved by the Engineer before being placed.

CONSTRUCTION METHODS

901-3.1 Advance preparation and cleanup. After grading of areas has been completed and before applying fertilizer and ground limestone, areas to be seeded shall be raked or otherwise cleared of stones larger than 2 inches (50 mm) in any diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading and before beginning the application of fertilizer and ground limestone, the Contractor shall repair such damage include filling gullies, smoothing irregularities, and repairing other incidental damage.

An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches (125 mm) as a result of grading operations and, if immediately prior to seeding, the top 3 inches (75 mm) of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade.

When the area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches (125 mm). Clods shall be broken and the top 3 inches (75 mm) of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

901-3.2 Dry application method.

a. Liming. Lime shall be applied separately and prior to the application of any fertilizer or seed and only on seedbeds that have previously been prepared as described above. The lime shall then be worked into the top 3 inches (75 mm) of soil after which the seedbed shall again be properly graded and dressed to a smooth finish.

b. Fertilizing. Following advance preparations and cleanup fertilizer shall be uniformly spread at the rate that will provide not less than the minimum quantity stated in paragraph 901-2.3.

c. Seeding. Grass seed shall be sown at the rate specified in paragraph 901-2.1 immediately after fertilizing. The fertilizer and seed shall be raked within the depth range stated in the special provisions. Seeds of legumes, either alone or in mixtures, shall be inoculated before mixing or sowing, in accordance with the instructions of the manufacturer of the inoculant. When seeding is required at other than the seasons shown on the plans or in the special provisions, a cover crop shall be sown by the same methods required for grass and legume seeding.

d. Rolling. After the seed has been properly covered, the seedbed shall be immediately compacted by means of an approved lawn roller, weighing 40 to 65 pounds per foot (60 to 97 kg per meter) of width for clay soil (or any soil having a tendency to pack), and weighing 150 to 200 pounds per foot (223 to 298 kg per meter) of width for sandy or light soils.

901-3.3 Wet application method.

a. General. The Contractor may elect to apply seed and fertilizer (and lime, if required) by spraying them on the previously prepared seedbed in the form of an aqueous mixture and by using the methods and equipment described herein. The rates of application shall be as specified in the special provisions.

b. Spraying equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge calibrated to read in increments not larger than 50 gallons (190 liters) over the entire range of the tank capacity, mounted so as to be visible to the nozzle operator. The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.

The unit shall also be equipped with a pressure pump capable of delivering 100 gallons (380 liters) per minute at a pressure of 100 lb / sq inches (690 kPa). The pump shall be mounted in a line that will recirculate the mixture through the tank whenever it is not being sprayed from the nozzle. All pump passages and pipe lines shall be capable of providing clearance for 5/8 inch (16 mm) solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. There shall be an indicating pressure gauge connected and mounted immediately at the back of the nozzle.

The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting, three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operator can control and regulate the amount of flow of mixture delivered to the nozzle. At least three different types of nozzles shall be supplied so that mixtures may be properly sprayed over distance varying from 20 to 100 feet (6 to 30 m). One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet

nozzle. For case of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings.

In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet (15 m) in length shall be provided to which the nozzles may be connected.

c. Mixtures. Lime, if required, shall be applied separately, in the quantity specified, prior to the fertilizing and seeding operations. Not more than 220 pounds (100 kg) of lime shall be added to and mixed with each 100 gallons (380 liters) of water. Seed and fertilizer shall be mixed together in the relative proportions specified, but not more than a total of 220 pounds (100 kg) of these combined solids shall be added to and mixed with each 100 gallons (380 liters) of water.

All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. Brackish water shall not be used at any time. The Contractor shall identify to the Engineer all sources of water at least two (2) weeks prior to use. The Engineer may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water from any source that is disapproved by the Engineer following such tests.

All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within two (2) hours from the time they were mixed or they shall be wasted and disposed of at approved locations.

d. Spraying. Lime, if required, shall be sprayed only upon previously prepared seedbeds. After the applied lime mixture has dried, the lime shall be worked into the top 3 inches (75 mm), after which the seedbed shall again be properly graded and dressed to a smooth finish.

Mixtures of seed and fertilizer shall only be sprayed upon previously prepared seedbeds on which the lime, if required, shall already have been worked in. The mixtures shall be applied by means of a high-pressure spray that shall always be directed upward into the air so that the mixtures will fall to the ground like rain in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner as might produce erosion or runoff.

Particular care shall be exercised to ensure that the application is made uniformly and at the prescribed rate and to guard against misses and overlapped areas. Proper predetermined quantities of the mixture in accordance with specifications shall be used to cover specified sections of known area.

Checks on the rate and uniformity of application may be made by observing the degree of wetting of the ground or by distributing test sheets of paper or pans over the area at intervals and observing the quantity of material deposited thereon.

On surfaces that are to be mulched as indicated by the plans or designated by the Engineer, seed and fertilizer applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried.

901-3.4 Maintenance of seeded areas. The Contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the Engineer. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work.

When either the dry or wet application method outlined above is used for work done out of season, it will be required that the Contractor establish a good stand of grass of uniform color and density to the satisfaction of the Engineer. A grass stand shall be considered adequate when bare spots are one square foot (0.01 sq m) or less, randomly dispersed, and do not exceed 3% of the area seeded.

METHOD OF MEASUREMENT

901-4.1 The quantity of seeding to be paid for shall be the number of units **to the nearest 1/10 acre** measured on the ground surface, completed and accepted.

BASIS OF PAYMENT

901-5.1 Payment shall be made at the contract unit price per **acre** or fraction thereof, which price and payment shall be full compensation for furnishing and placing all material and for all labor, equipment, tools, and incidentals necessary to complete the work prescribed in this item.

Payment will be made under:

Item 901-5.1	Seeding - per acre

MATERIAL REQUIREMENTS

ASTM C602	Standard Specification for Agricultural Liming Materials
ASTM D977	Standard Specification for Emulsified Asphalt
FED SPEC	JJJ-S-181, Federal Specification, Seeds, Agricultural

END OF ITEM T-901

ITEM T-908 MULCHING

DESCRIPTION

908-1.1 This work shall consist of furnishing, hauling, placing, and securing hydraulically applied mulch on surfaces indicated on the plans or as designated by the engineer. Disturbed areas outside of authorized construction limits shall be mulched at the contractor's expense. This work may be combined with the seeding described in Item MO-901 in areas other than are not to receive erosion control blanket.

MATERIALS

908-2.0 BUY AMERICAN. All materials used for this work shall meet the requirements of Buy American in accordance with Title 49 U.S.C. Section 50101. A certification statement or waiver request shall be submitted by the supplier for each proposed material. All waiver requests shall be submitted prior to issuance of the Notice to Proceed.

908-2.1 HYDRALICALLY APPLIED MULCH MATERIALS. No vegetative mulch will be allowed on this project. In lieu of the vegetative mulch, a hydraulically applied mulch material shall be applied. The mulch material shall be North American Green HydraCM or approved equal and shall be green in color.

The contractor shall furnish a manufacturer's certification in triplicate certifying that the overspray mulch materials comply with these specifications. The engineer may sample and test these materials prior to approval and use. Acceptance will be based upon a satisfactory certification and results of any test deemed necessary by the engineer.

CONSTRUCTION METHODS

908-3.1 MULCHING. Before spreading mulch, all stones larger than 2 inches in any diameter, sticks, stumps, and other debris shall be removed from the area to be mulched. All mulch shall be distributed evenly over the area to be mulched within 24 hours following the seeding operation.

Special care shall be taken to prevent any of the slurry from being sprayed onto any hardscape areas including concrete walks, pavements, fences, buildings, runway and taxiway edge lights, etc. Any slurry sprayed onto surfaces other than those to be seeded shall be washed immediately before the slurry dries.

The hydraulically applied mulch shall be mixed and applied according to the manufacturers recommendations. The Contractor shall provide the Engineer a copy of the manufacturer's installation procedures a minimum of seven (7) calendar days prior to the start of the work.

The mulch material shall be mixed with water in a manner to provide a homogenous slurry as recommended by the manufacturer. Equipment for mixing and applying the slurry shall be capable of applying it uniformly over the seeded ground surface. The slurry mixture shall be agitated during application to keep the ingredients thoroughly mixed.

The mulch material shall be applied at a rate of **2,500 pounds per acre**. All empty packaging shall be kept onsite until the Engineer authorizes the removal of the packaging. The empty packaging will be used by the Engineer for yield check calculations for the application rate.

Mulch shall provide uniform coverage and thickness such that rill erosion is prevented from sheet flow during precipitation events. Bare soil should not be exposed. Mulch layer shall be applied to engineer's satisfaction. Mulching shall not occur prior to seeding.

908-3.2 CARE AND REPAIR.

Following the overspray operation, precautions shall be taken to prohibit foot or vehicular traffic over the mulched area. The contractor shall be required to repair or replace any mulching that is defective or becomes damaged until the project is finally accepted. When, in the judgment of the engineer, such defects or damages are the result of poor workmanship or failure to meet the requirements of the specifications, the cost of the necessary repairs or replacement shall be borne by the contractor.

However, once the contractor has completed the mulching of any area in accordance with the provisions of the specifications and to the satisfaction of the engineer, no additional work at his/her expense will be required, but subsequent repairs and replacements deemed necessary by the engineer shall be made by the contractor and will be paid for as additional or extra work in accordance with Section 40-04 of the General Provisions.

METHOD OF MEASUREMENT

908-4.1 Measurement of mulch will be made to the nearest 1/10 acre of the area mulched. Temporary mulching as required under MO-156 and the SWPPP will not be measured for payment and shall be considered incidental to the contract. Mulching required for pond removal shall not be measured for payment and shall be considered incidental to the pond removal.

BASIS OF PAYMENT

908-5.1 Payment shall be made at the contract unit price per acre or fraction thereof, for the accepted quantity of mulching. The price shall be full compensation for furnishing and placing all material and for all labor, equipment, tools, and incidentals necessary to complete the work prescribed in this item.

Payment will be made under:

Item T-908-5.1 Mulching--per acre

END ITEM T-908

APPENDIX A6 – LIGHTING EQUIPMENT SPECIFICATION SHEETS

KIM LIGHTING®

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

ALT2

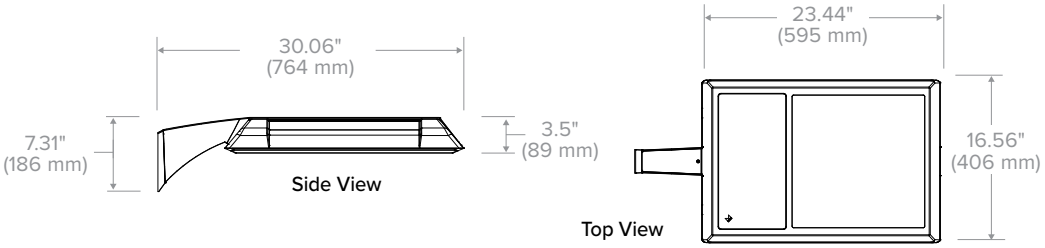
ARCHITECTURAL AREA/SITE

Altitude®

FEATURES

- Elegant form factor
- High performance optics up to 35,387 delivered lumens
- Diffusion lens for low glare comfort
- NX lighting controls options
- IP66 Rated

3000K and warmer CCTs only



CONTROL TECHNOLOGY

NX WIRELESS LIGHTGRID+

	Weight	EPA- Front	EPA- Side
ALT2	34.65 lbs / 15.69 kg	0.44ft.^{2}	0.85ft.^{2}

SPECIFICATIONS

CONSTRUCTION

- One piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 with vents and .100" minimum wall thickness..
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat.
- Optional lens is impact resistant 1/8" tempered glass with anti-reflective coating.
- Optional lens has a one-piece extruded vulcanized silicone gasket.
- Optional lens frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness.
- Lens frame has a one-piece O-ring extruded vulcanized silicone gasket.
- Mid-frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness.
- Mid-frame secures to Lens Frame and housing by stainless steel recessed Allen-head screws.
- Silicone gaskets throughout.
- All external fasteners are stainless steel.

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB.)
- Optical lenses are clear injection molded PMMA acrylic.
- Optional Backlight Control on each LED module to completely control unwanted backlight.
- Optional fixture finish optical surfaces will not exceed BUG ratings of the standard white finish and will be greater than or equal to the delivered lumens of the optional matte black optical surface finish.

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed.
- High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories listed.

ELECTRICAL (CONTINUED)

- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components.
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments.
- Luminaire are capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
- Modular wiring harness in the service area provides user access to the dimming circuitry.
- Optional factory programmed dimming profile.
- Surge protection: 20,000kA in series.
- SF for 120, 277, 347 Line volts.
  DF for 208, 240, 480 Line volts.
- Wiring: No. 18AWM rated 105°C, wet rating.

(Specifications continued on page 5)

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT2

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: ALT2-100L-200-3K7-3-UNV-A34-GTT-CLR

CATALOG #

HOUSING

ALT2 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

Housing		LED Engine		CCT / CRI [14]		Distribution		Rotation		Voltage	
ALT2	Architectural Area/Site	**100L-160**	160W, 20,000 lm	**AM**	Monochromatic Amber	**FR**	Type I/Front Row	**(Blank)**	Blank for no rotation	**UNV**	120–277V
		100L-200	200W, 25,000 lm	**27K8** [14]	2700K, 80 CRI	**2**	Type II	**L** [3]	Optic rotation left	**347**	347V
		100L-240	240W, 30,000 lm	**27K9** [14]	2700K, 90 CRI	**3**	Type III	**R** [3]	Optic rotation right	**480**	480V
		100L-285	285W, 35,000 lm	**3K7**	3000K, 70 CRI	**4**	Type IV				
				3K8	3000K, 80 CRI	**4W**	Type IV Wide				
		Equivalent		**3K9**	3000K, 90 CRI	**5QM**	Type V Square Medium				
		ALT96-P70 = 100L-160		**35K8** [14]	3500K, 80 CRI	**5QN**	Type V Square Narrow				
		ALT120-P35 = 100L-160		**35K9** [14]	3500K, 90 CRI	**5R**	Type V Rectangular				
		ALT120-P70- = 100L-240		**4K7**	4000K, 70 CRI	**5W**	Type V Wide (Round)				
		ALT180-P35 = 100L-200		**4K8**	4000K, 80 CRI	**CL**	Corner Left				
				4K9 [14]	4000K, 90 CRI	**CR**	Corner Right				
				5K7	5000K, 70 CRI						
				5K8 [14]	5000K, 80 CRI						
				5K9 [14]	5000K, 90 CRI						

[ ] – [ ] – [ ] – [ ] – [ ]

Mounting		Fixture Finish		Control Options		Options		Control Accessories	
ASQ	Arm Square pole	**BLS**	Black Gloss Smooth	**7PR**	7 pin PCR, wireless control enabled	**BC** [10]	Backlight Control	**SCPREMOTE**	Remote control for SCP option. Order at least one per project to program and control the occupancy sensor
A34	Arm mt 3.3–4.2" OD pole	**BLT**	Black Matte Textured	**7PR-TL**	7 pin PCR with twist lock photocontrol	**SF**	Single Fuse	**WIR-RME-L**	LightGRID+™ External Fixture Module
A46	Arm mt 4.5–6.0" OD pole	**DBS**	Dark Bronze Gloss Smooth	**7PR-SC**	7 pin PCR with shorting cap	**DF**	Double Fuse	**NXOFM-1R1D-UNV**	NX 7-Pin Twist-Lock® with NX Networked Wireless Radio, Integral Automatic Dimming Photocell, Integral Single Pole Relay with Dimming, and Bluetooth Programming
MAF	Horizontal Slipfitter 2.375" OD arm	**DBT**	Dark Bronze Matte Textured	**AD-01** [5]	AstroDIM: 50% output at midnight	**TB**	Terminal Block		
SVSF	Vertical Slipfitter Mount square for 2" pipe tenon, (2.375" OD)	**GTT**	Graphite Matte Textured	**AD-02** [5]	AstroDIM: 50% output midnight to 4 AM	**CLR**	Clear Lens		
VSF	Vertical Slipfitter Mount for 2" pipe tenon, (2.375" OD)	**LGS**	Light Grey Gloss Smooth	**AD-03**	AstroDIM: 50% output 10PM	**HDL** [11]	Diffuse Lens		
WB	Wall Bracket for area wall mount	**LGT**	Light Grey Matte Textured	**AD-04** [5]	AstroDIM: 50% output 10PM to 4AM	**CP** [15]	Clear Polycarbonate Lens		
		PSS	Platinum Silver Gloss Smooth	**NXW** [6,7]	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor				
		VGT	Verde Green Matte Textured	**SCL-8F** [8]	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights up to 8'				
		WHS	White Gloss Smooth	**SCL-40F** [8]	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights 9' to 40'				
		WHT	White Matte Textured	**SCP-8F**	Remote control programable line voltage sensor, use with SCPREMOTE				
		Color Option		**SCP-40F**	Remote control programable line voltage sensor, use with SCPREMOTE				
		CC [4]	Custom Color	**NXWS16F** [6,7]	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming				
				NXWS40F [6,7]	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming				

Notes:

1 Turtle friendly
2 See Lumen Multiplier chart on Page 16 for lumen scaling factor.
3 Not available with 5QM, 5W, CL, and CR distributions.
4 Consult factory for custom color, marine and corrosive finish options.
5 Not available with 28L-20 configuration of the LED Engine
6 Not available with other sensor or wireless control options.
7 Not available in 480V.
8 UNV only.
10 Not available with Type 5 distributions, CLR, CP, or HDL option.
11 Only available in Type 3 or Type 5W.
13 IK10 rated. Consult factory for details
14 See Lumen Multiplier chart on Page 12 for lumen scaling factor

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT2

ARCHITECTURAL AREA/SITE

OUTDOOR LIGHTING CONTROLS OPTIONS

CONTROLS FUNCTIONALITY

LIGHTGRID+ NX LIGHTING CONTROLS MOBILE APP

	Control Option Ordering Logic & Description		Control Option Functionality									Control Option Components	
			Networkable	Grouping	Scheduling	Occupancy/ Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming	Sensor Height		
NX Wireless	NXOFM1R1D-UNV	NX 7-Pin Twist-Lock® with NX Networked Wireless Radio, Integral Automatic Dimming Photocell, Integral Single Pole Relay with Dimming, and Bluetooth Programming	✓	✓	✓	Paired with external control	✓	✓	✓	✓	–		NXOFM-1R1D-UV
	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor	✓	✓	✓	–	–	✓	✓	✓	–		NXRM2-H
	NXWS16F	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming	✓	✓	✓	✓	✓	✓	✓	✓	16ft		NXSMP2-LMO
	NXWS40F	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming	✓	✓	✓	✓	✓	✓	✓	✓	40ft		NXSMP2-HMO

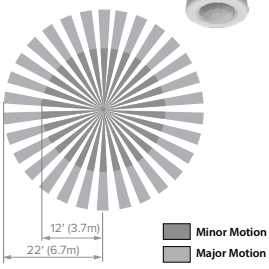
DEFAULT SETTINGS

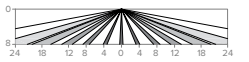
NX Wireless	
Occupancy Sensor	Enabled
Occupancy Sensor Sensitivity	7
Occupancy Sensor Timeout	15 Minutes
Occupied Dim Level	100%
Unoccupied Dim Level	0%
Daylight Sensor	Disabled
Bluetooth	Enabled
2.4GHz Wireless Mesh	On
"Passcode Factory Passcode: HubbN3T!"	Enabled

Stand Alone	
Occupancy Sensor	Enabled
Occupancy Sensor Sensitivity	7
Occupancy Sensor Timeout	8 Minutes
Occupied Dim Level	100%
Unoccupied Dim Level	50%
Daylight Sensor	Disabled

NX WIRELESS COVERAGE PATTERNS

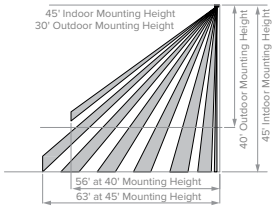
NXSMP2-OMNI





Sensor Lens Coverage and Detection Patterns
When Mounted at 8ft with Low Mount Lens

NXSMP2-HMO



Sensor Lens Coverage and Detection Patterns
When Mounted at 40ft and 45ft with Standard Lens

NX LIGHTING CONTROLS FREE APP

The NX Lighting Controls App is free to use mobile application for programming both NX Lighting Controls System or Standalone Bluetooth Sensors. The mobile app allows you to configure devices, discover and setup wireless enable luminiares and program NX system settings.

Apple App: https://apps.apple.com/us/app/nx-lighting-controls/id962112904

Google Play: https://play.google.com/store/apps/details?id=io.cordova.NXBTR&hl=en_US&gl=US

Apple App

Google Play

CONTROLS TECH SUPPORT 800-888-8006 (7:00 AM - 7:00 PM)

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT2

ARCHITECTURAL AREA/SITE

OUTDOOR LIGHTING CONTROLS OPTIONS

CONTROLS FUNCTIONALITY

	Control Option Ordering Logic & Description		Control Option Functionality									Control Option Components
			Networkable	Grouping	Scheduling	Occupancy/ Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming	Sensor Height	
Independent	AD	AutoDIM Time of Day Dimming	–	–	✓	–	–	–	✓	–	–	ADT
	7PR	7-Pin Receptacle	–	–	Paired with external control	–	Paired with external control	–	Paired with external control	–	–	7PR
	7PR-SC	7-Pin Receptacle with shorting cap	–	–	–	–	–	–	–	–	–	 7PR-SC
	7PR-TL	7-Pin with photocontrol	–	–	–	–	✓	–	✓	–	–	 7PR-TL

ALT2

ARCHITECTURAL AREA/SITE

SPECIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org

WARRANTY

- 5 year warranty

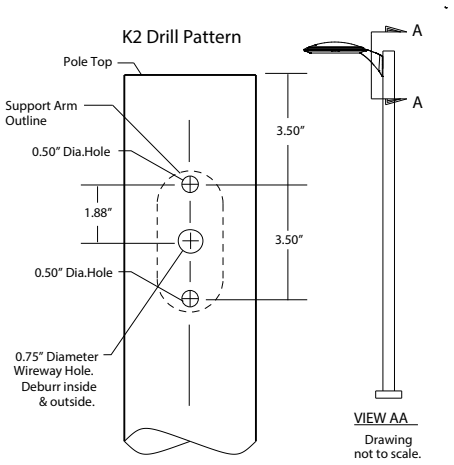
Optional Wall Mount:

- Optional, cast aluminum mounting plate attaches to a wall over a junction box and the speed mount is bolted to the cover plate. To complete the wiring, the luminaire assembly slides over the mounting plate.

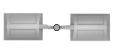
Mounting:

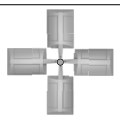
Support Arm:

- Die-cast, low copper aluminum alloy, with splice access cover.
- Die-cast pole adapter and an internal reinforcing plate are provided with a wire strain relief.
- The arm adapter is square or circular cut for specified pole size and shape.
- For field wire connections, a terminal block is mounted in the arm cavity and accessible behind the splice access cover. The block accepts #14 to #8 wire sizes and is factory prewired to the electrical module's quick-disconnect plug inside the electrical compartment.



PRODUCT EXCEPTIONS & DETAILS

Configuration			EPA
	1SA	1 Arm Side Mount	0.85
	2SL	2 Arm Side Mount	1.29
	2SB	2 Arm Side Mount	1.70
	3SY	3 Arm Side Mount	1.91

Configuration			EPA
	3ST*	3 Arm Side Mount	2.14
	4SC	4 Arm Side Mount	2.14
	1W	Single Wall Mount	n/a
	MAF	Horizontal Slipfitter	n/a

ALT2

ARCHITECTURAL AREA/SITE

SPECIFICATIONS (CONTINUED)

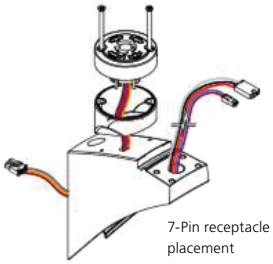
CONTROLS:

7PR

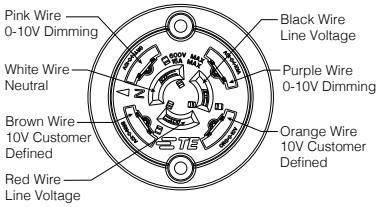
Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by-others.

Standard customer operation modes:

1. Traditional on/off photoelectric control.
2. 5-pin wireless photoelectric control for added dimming feature.
3. 7-pin wireless photoelectric control for dimming and additional I/O connections for customer use.



7-Pin receptacle placement



Dimming:

- Dimming range from 100% to 10% through the use of the standard 0-10V interface on the programmable driver.

- Modular wiring harness in the service area provides user access to the dimming circuitry.
- Dimming circuitry compatible with 0-10V, user-defined control devices.
- Optional factory programmed dimming profile.

WIRELESS CONTROLS

LightGRID+™

LightGRID+™ wireless control modules allow an individual fixture to managed, monitored and measured. The modules communicate securely over a robust certified meshed radio signal. The LightGRID+™ modules provide on/off/dim control, external device input, alerts and metering.

WIR-RME-L

LightGRID+™ External Module,120-480V, 1000ft range (LOS), Internal Photocell, 1 Digital Input, Compatible with the A-25-7H option

NX Lighting Controls

NX Lighting Controls platform utilizes a Distributed Network Architecture (DNA) that connects intelligent devices including luminaires, controllers, panels, occupancy sensors, photocells, wall switches and dimmers, creating a system with an unmatched level of reliability, scalability and simplicity

Round Pole-Mounted Occupancy Sensor up to 30'. Select voltage and finish color.

SCH-R

Round Pole-Mounted Occupancy Sensor: 16' to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCH-R4[4]/277[2]/BL[3]

Square Pole-Mounted Occupancy Sensor up to 30'. Select voltage and finish color.

SCH-S

Square Pole-Mounted Occupancy Sensor: up to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCH-S/277[2]/BL[3]

AstroDIM

AstroDIM provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on/off times.

Optional Fusing:

SF for 120, 277, and 347 Line volts

DF for 208, 240, and 480 Line volts

Hight temperature fuse holders factory installed inside the fixture housing.

Fuse is included.

CAUTION:

Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

Certifications and Listings:

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40˚C ambient temperatures.
- ANSI C136.31-2010 Vibration tested and compliant 1.5G and 4G reference page 12
- RoHS compliant.
- IP66 Rated
- IEC 66262 Mechanical Impact Code IK08 and IK10.
- IDA approved, 3000K and warmer CCTs only.
- This product meets federal procurement law requirements under the Buy American Act (FAR 52.225-9) and Trade Agreements Act (FAR 52.225-11). See Buy America(n) Solutions (link to https://www.currentlighting.com/resources/america-solutions)

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT2

ARCHITECTURAL AREA/SITE

DELIVERED LUMENS

	NW	NL (Nominal Lumens)	LO (Lens	Dist.	Amber					3000K 70CRI					4000K 70CRI					5000K 70CRI				
						BUG Rating			lm/w		BUG Rating			lm/w		BUG Rating			lm/w		BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G			B	U	G	
100L	160	20,000	No Lens	FR	3840	1	0	0	24	20843	2	0	2	130	21939	2	0	2	137	22233	2	0	2	139
				FR-BC	2300	0	0	0	14	12486	1	0	1	78	13142	1	0	1	82	13318	1	0	1	84
				2	3535	1	0	1	22	19189	3	0	3	120	20198	3	0	3	126	20469	3	0	3	129
				2-BC	1958	0	0	0	12	10631	1	0	2	66	11190	1	0	2	70	11340	1	0	2	72
				3	3634	1	0	1	23	19729	2	0	4	123	20766	2	0	4	130	21044	2	0	4	132
				3-BC	1793	0	0	1	11	9732	1	0	2	61	10244	1	0	2	64	10381	1	0	2	66
				4	3600	0	0	1	23	19545	2	0	4	122	20573	2	0	4	129	20848	2	0	4	131
				4-BC	2130	0	0	1	13	11562	1	0	2	72	12170	1	0	2	76	12333	1	0	2	78
				4W	3605	1	0	2	23	19567	2	0	4	122	20596	2	0	4	129	20872	2	0	4	130
				4W-BC	1511	0	0	1	9	8203	1	0	2	51	8634	1	0	2	54	8750	1	0	2	56
				5R	3742	2	0	2	23	20311	4	0	4	127	21379	4	0	4	134	21665	4	0	4	135
				5QM	3813	2	0	0	24	20697	4	0	2	129	21785	4	0	2	136	22077	4	0	2	137
				5QN	3733	2	0	0	23	20265	4	0	1	127	21330	4	0	1	133	21616	4	0	1	136
				5W	3706	3	0	1	23	20116	5	0	3	126	21174	5	0	3	132	21457	5	0	3	134
				CL	3667	1	0	1	23	19909	3	0	3	124	20956	3	0	4	131	21236	3	0	4	133
				CR	3667	1	0	1	23	19909	3	0	3	124	20956	3	0	4	131	21236	3	0	4	133
			Clear Lens	FR	3591	0	0	0	23	19495	2	0	2	123	20520	2	0	2	130	20795	2	0	2	132
				2	3306	1	0	1	21	17948	2	0	3	114	18892	3	0	3	120	19145	3	0	3	121
				3	3324	1	0	1	21	18045	2	0	3	114	18994	2	0	3	120	19248	2	0	3	122
				4	3368	0	0	1	21	18281	1	0	4	116	19242	2	0	4	122	19500	2	0	4	123
				4W	3371	1	0	1	21	18302	2	0	4	116	19264	2	0	4	122	19522	2	0	4	124
				5R	3500	2	0	2	22	18997	4	0	4	120	19996	4	0	4	127	20264	4	0	4	128
				5QM	3566	2	0	0	23	19359	4	0	2	123	20376	4	0	2	129	20649	4	0	2	131
				5QN	3492	2	0	0	22	18954	4	0	1	120	19951	4	0	1	126	20218	4	0	1	128
				5W	3466	2	0	1	22	18815	5	0	3	119	19804	5	0	3	125	20069	5	0	3	127
				CL	3430	1	0	1	22	18621	3	0	3	118	19600	3	0	3	124	19863	3	0	3	126
				CR	3430	1	0	1	22	18621	3	0	3	118	19600	3	0	3	124	19863	3	0	3	126
			HDL Lens	3	2850	1	0	1	18	15474	3	0	3	97	16287	3	0	3	102	16505	3	0	3	104
				5W	2989	1	0	1	19	16224	3	0	2	102	17076	3	0	2	107	17305	3	0	2	108

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ARCHITECTURAL AREA/SITE

DELIVERED LUMENS (CONTINUED)

	NW	NL (Nominal Lumens)	LO (Lens	Dist.	Amber					3000K 70CRI					4000K 70CRI					5000K 70CRI				
						BUG Rating			lm/w		BUG Rating			lm/w		BUG Rating			lm/w		BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G			B	U	G	
100L	200	25,000	No Lens	FR	4439	1	0	0	22	24095	2	0	2	122	25362	2	0	2	128	25702	2	0	2	130
				FR-BC	2659	0	0	0	13	14434	1	0	1	73	15193	1	0	1	77	15396	1	0	1	78
				2	4086	1	0	1	21	22183	3	0	3	112	23349	3	0	3	118	23662	3	0	3	120
				2-BC	2264	0	0	0	11	12290	1	0	2	62	12936	1	0	2	65	13109	1	0	2	66
				3	4201	1	0	1	21	22807	2	0	4	115	24006	3	0	4	121	24327	3	0	4	123
				3-BC	2073	0	0	1	10	11251	1	0	2	57	11842	1	0	2	60	12001	1	0	2	61
				4	4162	1	0	2	21	22595	2	0	4	114	23782	2	0	4	120	24101	2	0	4	122
				4-BC	2462	0	0	1	12	13366	1	0	2	68	14069	1	0	3	71	14257	1	0	3	72
				4W	4167	1	0	2	21	22620	3	0	4	114	23809	3	0	5	120	24128	3	0	5	122
				4W-BC	1747	0	0	1	9	9483	1	0	2	48	9982	1	0	2	50	10115	1	0	2	51
				5R	4325	2	0	2	22	23480	4	0	4	119	24714	4	0	4	125	25045	4	0	4	126
				5QM	4408	2	0	1	22	23927	4	0	2	121	25184	4	0	2	127	25522	4	0	2	129
				5QN	4316	2	0	0	22	23427	5	0	1	118	24658	5	0	1	125	24988	5	0	1	126
				5W	4284	3	0	1	22	23255	5	0	3	117	24477	5	0	3	124	24805	5	0	3	125
				CL	4240	1	0	1	21	23015	3	0	4	116	24225	3	0	4	122	24550	3	0	4	124
				CR	4240	1	0	1	21	23015	3	0	4	116	24225	3	0	4	122	24550	3	0	4	124
			Clear Lens	FR	4152	1	0	0	21	22537	2	0	2	114	23722	2	0	2	120	24039	2	0	2	121
				2	3822	1	0	1	19	20749	3	0	3	105	21839	3	0	3	110	22132	3	0	3	112
				3	3930	1	0	1	20	21332	2	0	4	108	22453	2	0	4	113	22754	2	0	4	115
				4	3893	0	0	1	20	21133	2	0	4	107	22244	2	0	4	112	22542	2	0	4	114
				4W	3897	1	0	2	20	21157	2	0	4	107	22270	2	0	4	112	22568	3	0	4	114
				5R	4046	2	0	2	20	21961	4	0	4	111	23116	4	0	4	117	23425	4	0	4	118
				5QM	4123	2	0	1	21	22379	4	0	2	113	23556	4	0	2	119	23871	4	0	2	121
				5QN	4036	2	0	0	20	21912	4	0	1	111	23063	5	0	1	116	23372	5	0	1	118
				5W	4007	3	0	1	20	21751	5	0	3	110	22894	5	0	3	116	23201	5	0	3	117
				CL	3966	1	0	1	20	21527	3	0	4	109	22659	3	0	4	114	22962	3	0	4	116
				CR	3966	1	0	1	20	21527	3	0	4	109	22659	3	0	4	114	22962	3	0	4	116
			HDL Lens	3	3341	1	0	1	17	18236	3	0	3	92	19195	3	0	3	97	19452	3	0	3	98
				5W	3406	1	0	1	17	18403	3	0	2	93	19371	4	0	2	98	19630	4	0	2	99

ALT2

ARCHITECTURAL AREA/SITE

DELIVERED LUMENS (CONTINUED)

	NW	NL (Nominal Lumens)	LO (Lens	Dist.	Amber					3000K 70CRI					4000K 70CRI					5000K 70CRI				
						BUG Rating			lm/w		BUG Rating			lm/w		BUG Rating			lm/w		BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G			B	U	G	
100L	240	30,000	No Lens	FR	Configuration Not Available					28520	2	0	2	118	30020	2	0	2	125	30422	2	0	2	126
				FR-BC						17085	1	0	1	71	17983	1	0	1	75	18223	1	0	1	76
				2						26257	3	0	4	109	27638	3	0	4	115	28008	3	0	4	116
				2-BC						14547	1	0	2	60	15312	1	0	2	64	15517	1	0	2	64
				3						26995	3	0	4	112	28415	3	0	4	118	28795	3	0	4	119
				3-BC						13317	1	0	2	55	14017	1	0	2	58	14205	1	0	2	59
				4						26744	2	0	4	111	28150	2	0	5	117	28527	2	0	5	118
				4-BC						15821	1	0	3	66	16653	1	0	3	69	16876	1	0	3	70
				4W						26775	3	0	5	111	28182	3	0	5	117	28559	3	0	5	119
				4W-BC						11225	1	0	2	47	11815	1	0	2	49	11973	1	0	2	50
				5R						27792	5	0	5	115	29253	5	0	5	121	29645	5	0	5	123
				5QM						28321	4	0	2	118	29809	5	0	3	124	30209	5	0	3	125
				5QN						27729	5	0	1	115	29187	5	0	1	121	29578	5	0	1	123
				5W						27525	5	0	4	114	28972	5	0	4	120	29360	5	0	4	122
				CL						27242	3	0	4	113	28674	3	0	4	119	29058	3	0	4	121
				CR						27242	3	0	4	113	28674	3	0	4	119	29058	3	0	4	121
			Clear Lens	FR						26676	2	0	2	111	28078	2	0	2	117	28454	2	0	2	118
				2						24559	3	0	3	102	25850	3	0	3	107	26196	3	0	4	109
				3						25249	3	0	4	105	26577	3	0	4	110	26933	3	0	4	112
				4						25014	2	0	4	104	26329	2	0	4	109	26682	2	0	4	111
				4W						25043	3	0	5	104	26359	3	0	5	109	26712	3	0	5	111
				5R						25995	5	0	5	108	27361	5	0	5	114	27728	5	0	5	115
				5QM						26489	4	0	2	110	27882	4	0	2	116	28255	4	0	2	117
				5QN						25936	5	0	1	108	27299	5	0	1	113	27665	5	0	1	115
				5W						25745	5	0	3	107	27099	5	0	3	112	27461	5	0	3	114
				CL						25480	3	0	4	106	26820	3	0	4	111	27179	3	0	4	113
				CR						25480	3	0	4	106	26820	3	0	4	111	27179	3	0	4	113
			HDL Lens	3						21586	3	0	3	90	22720	3	0	3	94	23025	3	0	3	96
				5W						21783	4	0	2	90	22928	4	0	2	95	23235	4	0	2	96

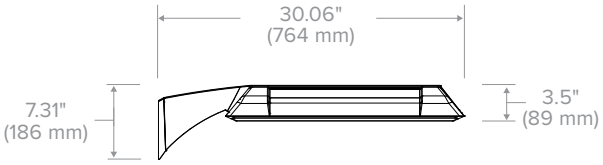
ALT2

ARCHITECTURAL AREA/SITE

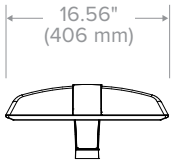
DELIVERED LUMENS (CONTINUED)

	NW	NL (Nominal Lumens)	LO (Lens	Dist.	Amber					3000K 70CRI					4000K 70CRI					5000K 70CRI				
						BUG Rating			lm/w		BUG Rating			lm/w		BUG Rating			lm/w		BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G			B	U	G	
100L	285	35,000	No Lens	FR	Configuration Not Available					33175	2	0	2	116	34919	2	0	2	123	35387	2	0	2	124
				FR-BC						19873	1	0	1	70	20918	1	0	1	73	21198	1	0	1	74
				2						30543	3	0	4	107	32149	3	0	4	113	32579	3	0	4	114
				2-BC						16921	1	0	2	59	17811	1	0	2	62	18049	1	0	2	63
				3						31402	3	0	5	110	33052	3	0	5	116	33495	3	0	5	118
				3-BC						15490	1	0	3	54	16305	1	0	3	57	16523	1	0	3	58
				4						31109	2	0	5	109	32745	2	0	5	115	33183	2	0	5	116
				4-BC						18403	1	0	3	65	19371	1	0	3	68	19630	1	0	3	69
				4W						31145	3	0	5	109	32782	3	0	5	115	33221	3	0	5	117
				4W-BC						13057	1	0	2	46	13743	1	0	3	48	13927	1	0	3	49
				5R						32328	5	0	5	113	34028	5	0	5	119	34483	5	0	5	121
				5QM						32943	5	0	3	116	34675	5	0	3	122	35139	5	0	3	123
				5QN						32255	5	0	1	113	33951	5	0	1	119	34405	5	0	1	121
				5W						32018	5	0	4	112	33701	5	0	4	118	34152	5	0	4	120
				CL						31689	3	0	4	111	33354	3	0	4	117	33801	3	0	5	119
				CR						31689	3	0	4	111	33354	3	0	4	117	33801	3	0	5	119
			Clear Lens	FR						31030	2	0	2	109	32661	2	0	2	115	33098	2	0	2	116
				2						28568	3	0	4	100	30069	3	0	4	106	30472	3	0	4	107
				3						29371	3	0	4	103	30915	3	0	5	108	31329	3	0	5	110
				4						29097	2	0	5	102	30627	2	0	5	107	31037	2	0	5	109
				4W						29130	3	0	5	102	30662	3	0	5	108	31072	3	0	5	109
				5R						30237	5	0	5	106	31827	5	0	5	112	32253	5	0	5	113
				5QM						30813	5	0	3	108	32432	5	0	3	114	32867	5	0	3	115
				5QN						30169	5	0	1	106	31755	5	0	1	111	32180	5	0	1	113
				5W						29947	5	0	4	105	31521	5	0	4	111	31944	5	0	4	112
				CL						29639	3	0	4	104	31197	3	0	4	109	31615	3	0	4	111
				CR						29639	3	0	4	104	31197	3	0	4	109	31615	3	0	4	111
			HDL Lens	3						25109	3	0	3	88	26429	3	0	3	93	26783	3	0	3	94
				5W						25338	4	0	3	89	26670	4	0	3	94	27027	4	0	3	95

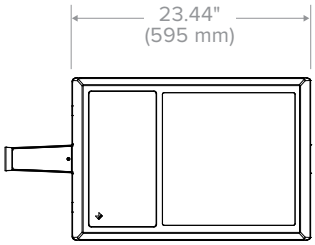
DIMENSIONS



Side View



Front View



Top View

ALT2

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT2-100L-285-4K7-FR

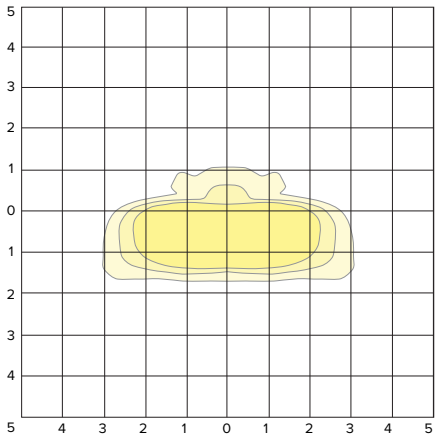
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**34919**
Watts	**285**
Efficacy	**122.5**
IES Type	**II**
BUG Rating	**B2-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	31150	89.2%
Downward House Side	3769	10.8%
Downward Total	34919	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	34919	100%

ISOFOOTCANDLE PLOT



ALT2-100L-285-4K7-2

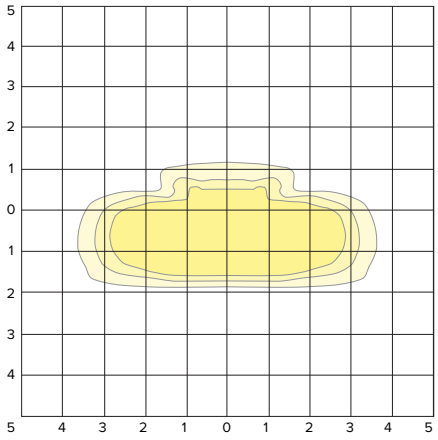
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**32148**
Watts	**285**
Efficacy	**112.8**
IES Type	**II**
BUG Rating	**B3-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	26654	82.9%
Downward House Side	5494	17.1%
Downward Total	32148	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	32148	100%

ISOFOOTCANDLE PLOT



ALT2-100L-285-4K7-3

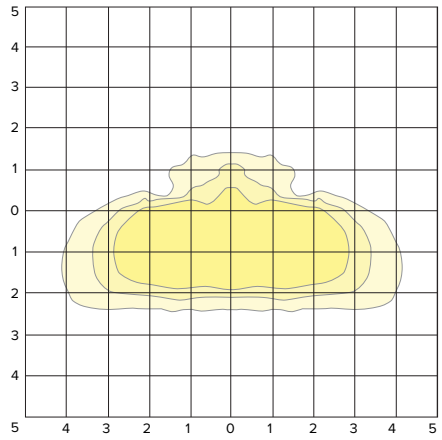
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**33052**
Watts	**285**
Efficacy	**116.0**
IES Type	**III**
BUG Rating	**B3-U0-G5**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	28601	86.5%
Downward House Side	4451	13.5%
Downward Total	33052	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	33052	100%

ISOFOOTCANDLE PLOT



[1] All Isofootcandle plots are similar for all CCT/CRI including Amber.

ALT2

ARCHITECTURAL AREA/SITE

PHOTOMETRY CONTINUED

ALT2-100L-285-4K7-4

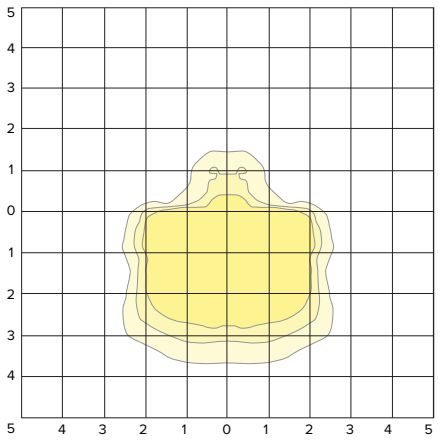
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**32745**
Watts	**285**
Efficacy	**114.9**
IES Type	**IV**
BUG Rating	**B2-U0-G5**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	29689	90.7%
Downward House Side	3056	9.3%
Downward Total	32745	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	32745	100%

ISOFOOTCANDLE PLOT



ALT2-100L-285-4K7-4W

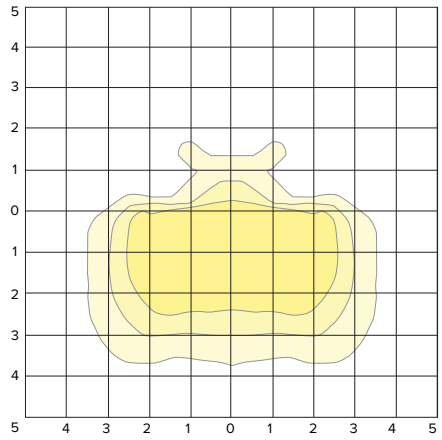
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**32782**
Watts	**285**
Efficacy	**115.0**
IES Type	**IV**
BUG Rating	**B3-U0-G5**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	29219	89.1%
Downward House Side	3563	10.9%
Downward Total	32782	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	32782	100%

ISOFOOTCANDLE PLOT



ALT2-100L-285-4K7-5R

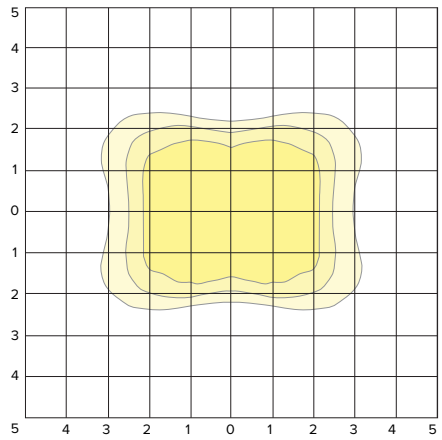
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**34028**
Watts	**285**
Efficacy	**119.4**
IES Type	**III**
BUG Rating	**B5-U0-G5**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	17014	50.0%
Downward House Side	17014	50.0%
Downward Total	34028	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	34028	100%

ISOFOOTCANDLE PLOT



[1] All Isofootcandle plots are similar for all CCT/CRI including Amber.

ALT2

ARCHITECTURAL AREA/SITE

PHOTOMETRY CONTINUED

ALT2-100L-285-4K7-5QM

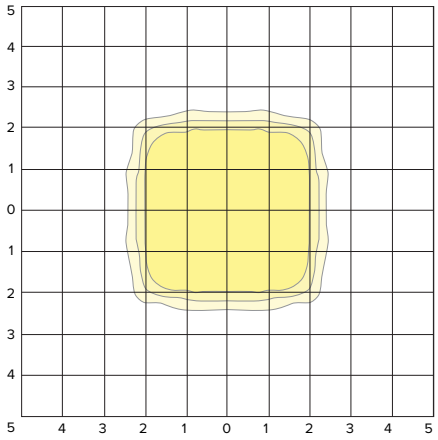
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**34674**
Watts	**285**
Efficacy	**121.7**
IES Type	**V**
BUG Rating	**B5-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	17337	50.0%
Downward House Side	17337	50.0%
Downward Total	34674	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	34674	100%

ISOFOOT CANDLE PLOT



ALT2-100L-285-4K7-5QN

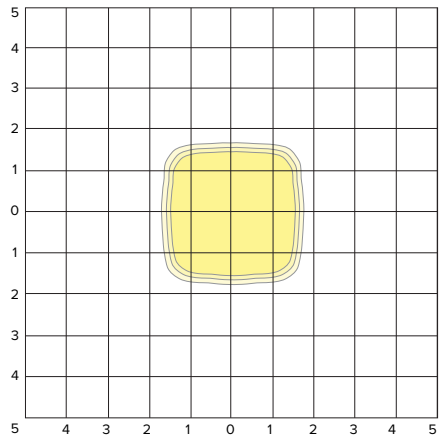
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**33951**
Watts	**285**
Efficacy	**119.1**
IES Type	**V**
BUG Rating	**B5-U0-G1**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	16976	50.0%
Downward House Side	16976	50.0%
Downward Total	33951	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	33951	100%

ISOFOOT CANDLE PLOT



ALT2-100L-285-4K7-5W

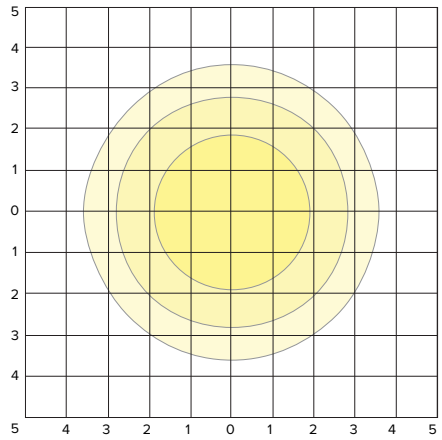
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**33701**
Watts	**285**
Efficacy	**118.2**
IES Type	**V**
BUG Rating	**B5-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	16851	50.0%
Downward House Side	16851	50.0%
Downward Total	33701	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	33701	100%

ISOFOOT CANDLE PLOT



[1] All Isofootcandle plots are similar for all CCT/CRI including Amber.

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

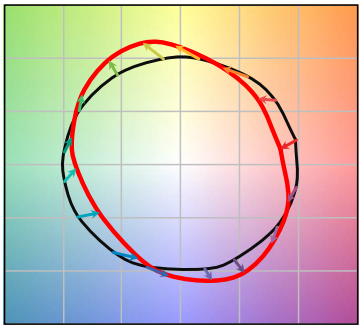
CATALOG #:

ALT2

ARCHITECTURAL AREA/SITE

TM-30 DATA

COLOR VECTOR GRAPHIC

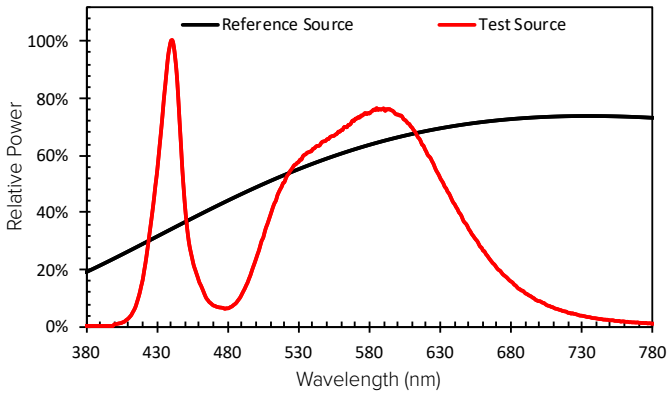


Reference Illuminant — Test Source

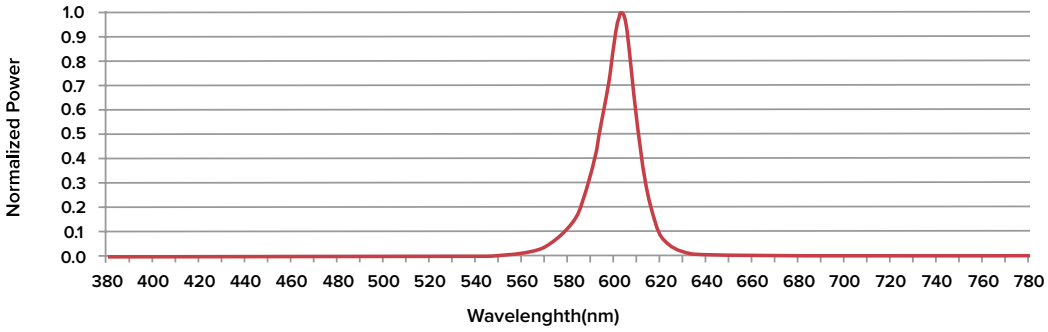
TEST SOURCE

R_f	68
R_g	99
CCT(K)	3947
D_{UV}	0.0004
x	0.3831
y	0.3793
CIE R_a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



Amber Spectral Power Distribution



ELECTRICAL DATA

Electrical													Dimming			
# LED	System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
100	160	500 mA	120-480	50/60	1.33	0.77	0.67	0.58	0.46	0.33	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	198	600 mA			1.65	0.95	0.83	0.71	0.57	0.41							
	241	750 mA			2.01	1.16	1.00	0.87	0.69	0.50							
	285	875 mA			2.38	1.37	1.19	1.03	0.82	0.59							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C)						
Hours	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	96.9%	95.3%	93.3%	86.6%	> 60,000

TM-21 Data is calculated for white LEDs. For Amber and other Lumen Maintenance values, contact factory.

Lumen Multiplier for 80 and 90 CRI		
CCT	80 CRI	90 CRI
2700K	0.859	0.655
3000K	0.9119	0.7033
3500K	0.906	0.732
4000K	0.8941	0.734
5000K	0.879	0.7712

Scaling factor of 5000K 70CRI lumen packages

VIBRATION RATINGS

ALT 1		ALT 2		ALT 3	
Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating
WM	1.5G	WM	1.5G	WM	1.5G
VSF	1.5G	VSF	1.5G	VSF	1.5G
SVSF	1.5G	SVSF	1.5G	SVSF	1.5G
A34	4G	A34	1.5G	A34	1.5
MAF	4G	MAF	4G	MAF	3G

KIM LIGHTING®

DATE: LOCATION:

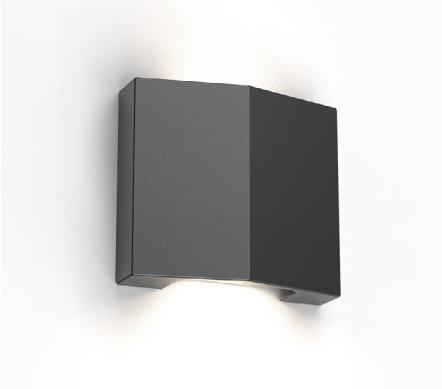
TYPE: PROJECT:

CATALOG #:

CY2

ARCHITECTURAL AREA/SITE

CYPHER™



Cypher 14"

FEATURES

- Integral Battery Backup Option
- 360° Light Distribution
- RGBW or Static White Luminous Front Option
- Multiple Fascia Options and Finishes
- 4G Vibration Tested

3000K and warmer CCTs only

CONTROL TECHNOLOGY

SPECIFICATIONS

CONSTRUCTION

- Main housing shroud is made of fabricated 5052-H32 aluminum alloy
- Housing mounting interface has a stamped silicone gasket
- Luminaire housing is free of any visible heat fins, hardware or fasteners
- Bracketry and hardware is stainless steel
- Luminaire finish consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish
- Luminaire finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance

LED/OPTICS

- LEDs are mounted to a metal printed circuit board assembly (MCPCB) with a uniform conformal coating over the panel surface and electrical features
- Optical lenses is clear injection molded PMMA acrylic
- Optical array is recessed in order to shield each LED optic across the length of the aperture
- Optical array is sealed for IP66 rating
- Secondary lens is impact resistant 5/32" tempered glass

INSTALLATION

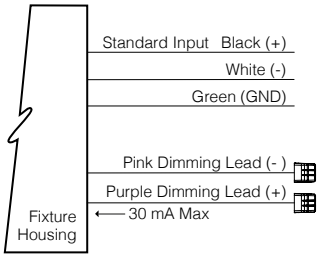
- JUNCTION BOX: Standard with zinc-plated, quick-mount junction box plate that mounts directly to 4" J-Box
- Mounting plate features a one-piece EPDM gasket on back side of plate to firmly seal fixture to wall surface, forbidding entry of moisture and particulates

INSTALLATION (CONTINUED)

- Fixture attaches by two Allen-head hidden fasteners for tamper resistance
- Optional mounting arrangements utilize a die-cast mounting adaptor to allow for surface conduit and through branch wiring
- Housing is able to hang freely in an open service position for inspection of internal wire connections. Once in service position, the housing shall be able to be removed for service by lifting the assembly up off the rear mounting plate and disconnecting the wiring plugs
- Driver assembly is mounted to a prewired internal tray with quick disconnects for removal

ELECTRICAL

- Drivers are in direct contact with the die-cast aluminum housing across the entire surface area of the widest face for maximum thermal transfer
- "Thermal Shield", primary side, thermister provides protection for the sustainable life of LED module and electronic components
- Drivers have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaires have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J. Surge protection device shall be wired in series
- Drivers are 0-10V dimming control with a dimming range of 100%-10%. Drivers are U.L. listed. All luminaires shall accept 120-277 volt input and have integral surge protection."Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components



ELECTRICAL (CONTINUED)

- Integral battery backup provides emergency path of egress lighting for the required 90 minutes for -20°C ambient environments
- Luminaire are capable of operating at 100% brightness in a 40°C environment. Both driver and optical array shall have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C

CONTROLS

- Button photocontrol for dusk to dawn energy savings
- Photocell is factory installed inside the housing with a fully gasketed sensor on the side wall. For multiple fixture mountings, one fixture is supplied with a photocell to operate the others. Photocell adapter shall include an internal twist lock receptacle. Photocell by others

continued on page 3

KEY DATA	
LUMEN RANGE	1,906–5,083
WATTAGE RANGE	26–52
EFFICACY RANGE (LPW)	67–109
WEIGHT	Refer to page 7

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

CY2

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: CY2-35-3K7-1-2D-UNV-BLS-F-RGBW-FPP-PCU-SF

CATALOG #

Series-Output (Base)		CCT-CRI		Model (Light Engine) [1]		Main Distribution (Down)		Secondary Distribution (Up, Sides)		Voltage	
CY2-25	25W, 2500 nominal lumens	**27K8**	2700K, 80CRI	**1**	DownLight Only	**1**	IES Type I	**1**	IES Type I	**UNV**	120-277V
CY2-35	40W, 3500 nominal lumens	**3K7**	3000K, 70CRI	**2**	50/50 Down/Up, **Down/Up distributions must match**	**2**	IES Type II	**2**	IES Type II	**347**	347V
CY2-45	50W, 4500 nominal lumens	**3K8**	3000K, 80CRI	**3**	90/10 Down/Up	**3**	IES Type III	**3**	IES Type III	**480**	480V
		4K7	4000K, 70CRI	**4**	25/25/25/25 Split, **Down/Up/ Side Distributions must match**	**4**	IES Type IV	**4**	IES Type IV		
		4K8	4000K, 80CRI			**SP**	15° Spot/Column	**SP**	15° Spot/Column		
		5K7	5000K, 70CRI	**5**	70/10/10/10 Spit, **Top/Side distributions must match**	**WG**	60° Wall Graze	**WG**	60° Wall Graze		
						1D	Type 1 Diffused	**PB**	Pencil Beam [2]		
						2D	Type 2 Diffused	**1D**	Type 1 Diffused		
						3D	Type 3 Diffused	**2D**	Type 2 Diffused		
						4D	Type 4 Diffused	**3D**	Type 3 Diffused		
								4D	Type 4 Diffused		

Base Housing Finish		Fascia Form [1]		Luminous Front [4]		Fascia Panel [5]		Control Options [6]		Options	
BLS	Black Gloss Smooth	**F**	Flat	**Blank**	Standard None	**FPP**	Full Panel Painted	**PCU**	Universal Button Photocell (120-277V)	**EM**	Battery Backup Unit -20° C [8]
BLT	Black Matte Textured	**R**	Radius/Curved	**RGBW**	RGBW Luminous Front	**FPS**	Full Panel Stainless Steel	**SCP**	Programmable Occupancy Sensor	**SF**	Single Fuse (120, 277, 347)
DBS	Dark Bronze Gloss Smooth	**T**	Triangle/Wedge	**LFSW**	Static White Luminous Front	**FPC**	Full Panel Copper	**WIR**	LightGRID+™	**DF**	Double Fuse (208, 240, 480)
DBT	Dark Bronze Matte Textured	**E**	Rounded/Edge			**OPP**	Open Panel Painted [7]	**WiRC**	LightGRID+™ w/ Occupancy Sensor	**SCB**	Surface Conduit Box
GTT	Graphite Matte Textured	**C**	Circle/Curved			**OPS**	Open Panel Stainless Steel [7]				
LGS	Light Gray Gloss Smooth	**CB**	Cylinder Balanced			**OPC**	Open Panel Copper [7]				
LGT	Light Gray Matte Textured	**CT**	Cylinder Tall			**4PP**	4-Square Panel Painted [7]				
PSS	Platinum Silver Gloss Smooth	**CBM**	Custom Building Material Mount Ghost Fascia [9]			**4PS**	4-Square Panel Stainless Steel [7]				
VGT	Verde Green Matte Textured					**4PC**	4-Square Panel Copper [7]				
WHS	White Gloss Smooth					**PPP**	Perforated Panel Painted [7]				
WHT	White Matte Textured					**PPS**	Perforated Panel Stainless Steel				
Color Options						**PPC**	Perforated Panel Copper				
CC	Custom Color [3]										

Notes:

1 Consult factory for custom distributions. See Distribution Matrix on page 4 restrictions

2 PB distribution is available for 90/10 and 70/10/10/10 models only. Not all combinations are recommended. See Distribution Matrix on page 2 for restrictions.

3 Consult factory for custom color, marine and corrosive finish

4 RGBW and LFSW luminous fronts are only available with open, four square and perforated fascia panels

5 Flat and Radius Fascia forms only. Painted panels by default match base housing finish/color. Consult factory for custom panel finishes.

6 Occupancy sensors not available with CB, T, E or C fascia forms

7 Luminous front is required to select the Open Panel and 4-Square Panel fascia panels.

8 Consult factory for information on specific configurations with different fascia forms.

9 Custom Building Material Mount Ghost Fascia option allows the Cypher to blend seamlessly into the building architecture by matching the finish of the architectural background. See page 7 for dimensions and contact factory for additional information. Custom material provided by others.

CY2

ARCHITECTURAL AREA/SITE

SPECIFICATIONS (CONTINUED)

CONTROL (CONTINUED)

- Each fixture comes equipment with a dual control driver that supports Bluetooth® operation of individual fixtures or DMX control of an entire system of fixtures.

BLUETOOTH®:

- Free Bluetooth® Apps are available for Apple iOS and Google Android mobile devices and are downloadable via the Internet at Apple App Store or Google Play.
- Modular wiring harness in the service area provides user access to the dimming circuitry via DMX.

DMX:

- Fully DMX/RDM Compatible
- Utilizes 4 DMX Channels per fixture

DMX MAP

- Start Address – Red
- Start Address +1 – Green
- Start Address +2 – Blue
- Start Address +3 – White

DMX Addressing is performed by using a compatible RDM handheld unit or via the Bluetooth® App.

- Performed by using a compatible RDM handheld unit or via the Bluetooth® App

DMX WIRING COLOR CODE

- Red Wire – DMX +
- Brown Wire – DMX-
- Yellow Wire – Shield/Ground
- DMX termination must be achieved by adding a DMX terminator to the last fixture in a Daisy-Chain. Fixture does not auto terminate.
- Kim Lighting is proud to offer the Pharos Architectural Controls DMX Controllers and Touch screens. See Pharos Spec Sheet for more details.
  See the Pharos® Spec Sheet for more details.

MOBILE APP:

- Mobile App specification in additional information section.
- Mobile App. dimming range from 0% to 100% through the use of Current RGBW app (available on IOS and Android).
- Color selection and adjustment.
- Camera function for color matching.
- Intensity slider for dimming/ramping up.
- Save and rename up to 10 presets.
- Group and rename fixtures.
- Fixture is password protected, refer to instructions to set unique password.

DMX 512 pharos

CERTIFICATIONS

- Luminaire is listed with UL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250
- IP66 rated assembly
- IDA approved, 3000K and warmer CCTs only
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations listed in this document are DLC® qualified. Refer to http://www.designlights.org for the most up-to-date list.
- ANSI C136.31-2010 4G Vibration tested and compliant
- Complies with “Americans with Disabilities Act” or "ADA" on select versions for low mounting height applications (fixtures extend maximum of 4 inches from wall for mounting heights of 80 inches or less)
- Emergency battery back options are California Energy Commission (CEC) Title 20 Compliant

WARRANTY

- 5 year warranty

Bluetooth®

ANDROID APP ON Google play Available on the App Store

CY2

ARCHITECTURAL AREA/SITE

DELIVERED LUMENS

Nominal Output (Lm)	System Watts	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
			Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)	Lumen	Bug Rating			Efficancy (Lm/W)
				B	U	G			B	U	G			B	U	G	
2,500	26	Type 1	2499	0	0	0	96	2596	0	0	0	100	2836	0	0	0	109
		Type 2	2265	1	0	1	87	2353	1	0	1	90	2570	1	0	1	99
		Type 3	2413	1	0	1	93	2507	1	0	1	96	2739	1	0	1	107
		Type 4	2213	0	0	1	85	2299	0	0	1	88	2512	0	0	1	97
		Wall Graze	2462	2	0	0	95	2558	2	0	0	98	2795	2	0	0	107
		Spot/Column	2089	2	0	0	80	2171	2	0	0	83	2371	2	0	0	91
		Type 1 Diffused	2193	1	0	1	84	2278	1	0	1	88	2488	1	0	1	96
		Type 2 Diffused	2004	1	0	1	77	2082	1	0	1	80	2274	1	0	1	87
		Type 3 Diffused	1906	1	0	1	73	1980	1	0	1	76	2163	1	0	1	83
		Type 4 Diffused	1936	1	0	1	74	2011	1	0	1	77	2197	1	0	1	84
3,500	40	Type 1	3534	1	0	0	88	3672	1	0	0	92	4011	88	1	0	100
		Type 2	3203	1	0	0	80	3328	1	0	1	83	3635	80	1	0	91
		Type 3	3413	1	0	1	85	3546	1	0	1	89	3874	85	1	0	97
		Type 4	3131	1	0	1	78	3252	1	0	1	81	3553	78	1	0	89
		Wall Graze	3483	2	0	0	87	3618	2	0	0	90	3953	87	2	0	99
		Spot/Column	2955	3	0	0	74	3070	3	0	0	77	3354	74	3	0	84
		Type 1 Diffused	3101	1	0	1	78	3222	1	0	1	81	3519	78	1	0	88
		Type 2 Diffused	2835	1	0	1	71	2945	1	0	1	74	3217	71	1	0	80
		Type 3 Diffused	2695	1	0	1	67	2800	1	0	1	70	3059	67	1	0	76
		Type 4 Diffused	2738	1	0	1	68	2844	1	0	1	71	3107	68	1	0	78
4,500	52	Type 1	4390	1	0	0	84	4561	1	0	0	88	4982	1	0	1	97
		Type 2	4119	1	0	1	79	4280	1	0	1	82	4675	1	0	1	90
		Type 3	4240	1	0	1	82	4405	1	0	1	86	4812	1	0	1	95
		Type 4	4026	1	0	1	77	4183	1	0	1	80	4569	1	0	1	88
		Wall Graze	4479	3	0	0	86	4653	3	0	0	89	5083	3	0	0	99
		Spot/Column	3800	3	0	0	73	3948	3	0	0	76	4313	3	0	0	84
		Type 1 Diffused	3988	1	0	1	77	4143	1	0	1	80	4526	2	0	1	88
		Type 2 Diffused	3645	1	0	1	70	3787	1	0	1	73	4137	1	0	1	80
		Type 3 Diffused	3466	1	0	1	67	3601	1	0	1	69	3934	1	0	1	76
		Type 4 Diffused	3521	1	0	1	68	3658	1	0	1	70	3996	1	0	1	77

ELECTRICAL CHARACTERISTICS

LUMEN PACKAGE	SYSTEM WATTAGE (W)	LINE VOLTAGE		INPUT				MIN. POWER FACTOR	MAX THD (%)	DIMMING RANGE	SOURCE/SINK CURRENT (MA)		ABSOLUTE VOLTAGE RANGE ON 0-10V (+) PURPLE	
		VAC	HZ	120	277	347	480				MIN.	MAX.	MIN.	MAX.
2,500	26	120	50/60	0.2	0.1	0.1	0.1	>0.9	20	10% to 100%	0 mA	1 mA	0V	10V
3,500	40			0.3	0.1	0.1	0.1							
4,500	52			0.4	0.2	0.1	0.1							

TM-21 LIFETIME CALCULATION (500mA)

LUMEN PACKAGE	AMBIENT ENVIRONMENT °C	PROJECTED LUMEN MAINTENANCE (KHRS)					REPORTED L70
		15	25	50	60 (TM-21)	100	
4,500	25	95%	94%	90%	89%	83%	>60Khrs.
	40	93%	91%	84%	82%	73%	

DATE: LOCATION:

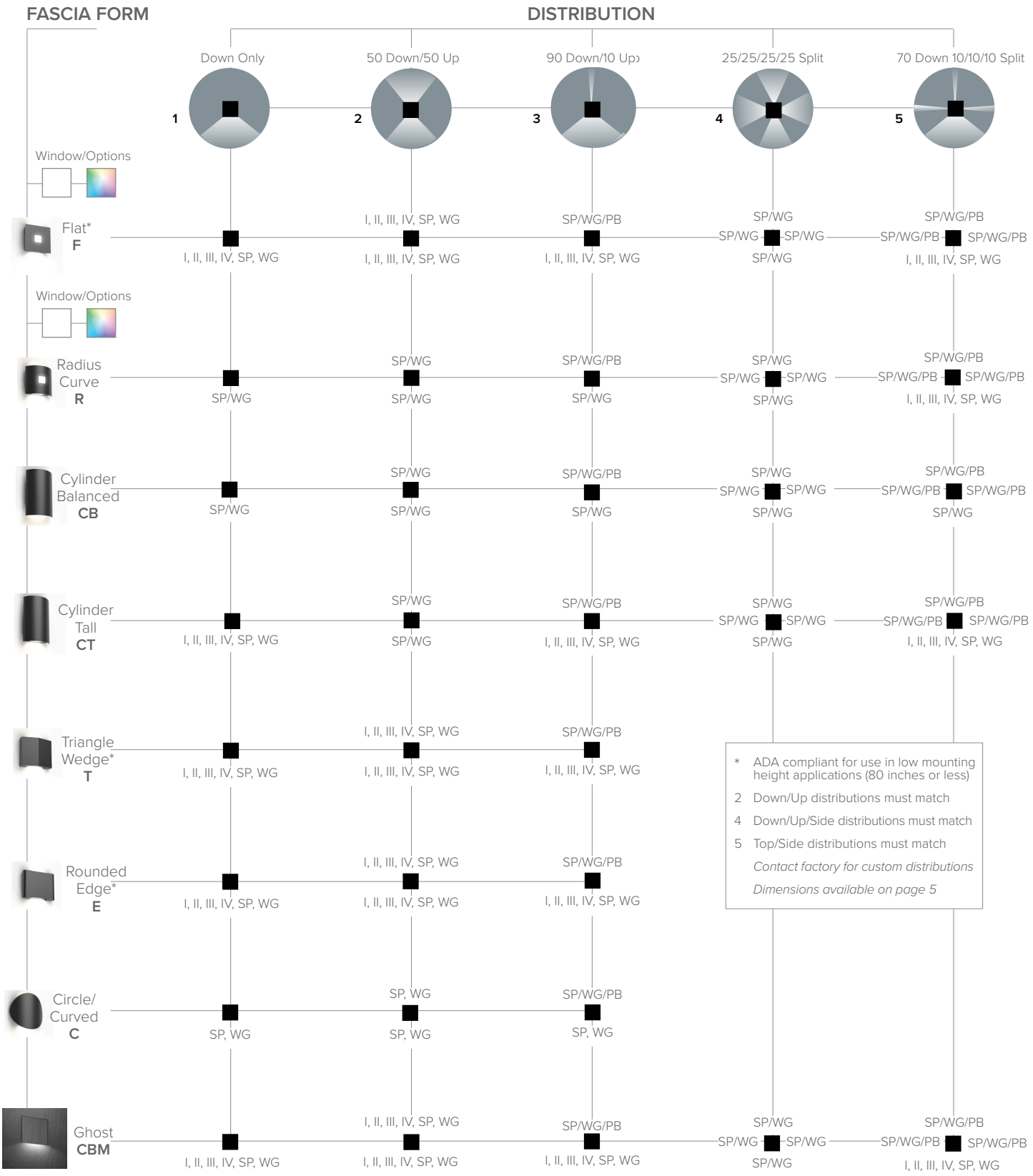
TYPE: PROJECT:

CATALOG #:

CY2

ARCHITECTURAL AREA/SITE

DISTRIBUTION MATRIX



DATE: LOCATION:

TYPE: PROJECT:

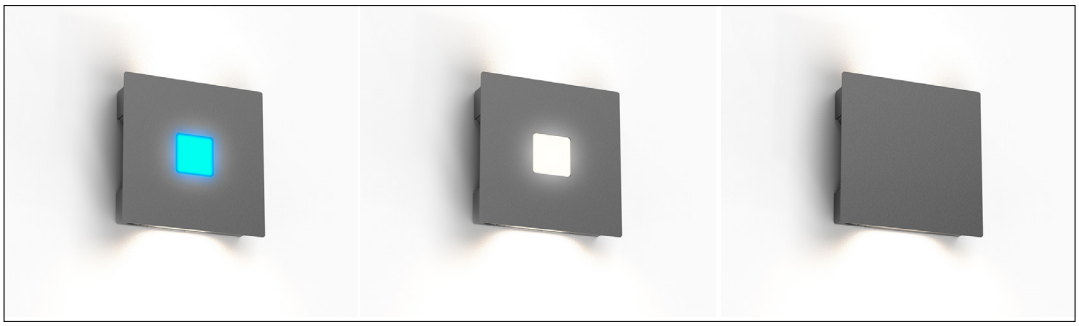
CATALOG #:

CY2

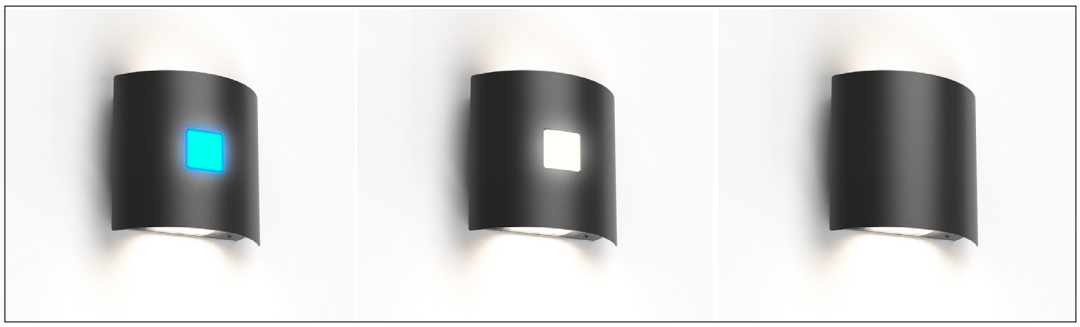
ARCHITECTURAL AREA/SITE

FASCIA

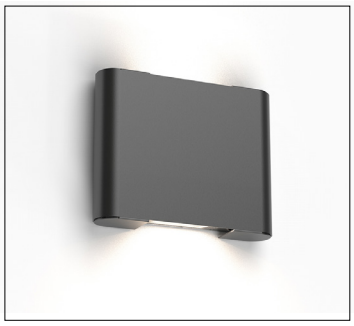
FLAT



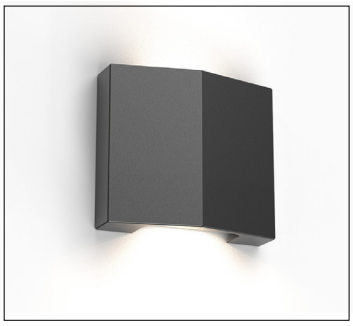
CURVE



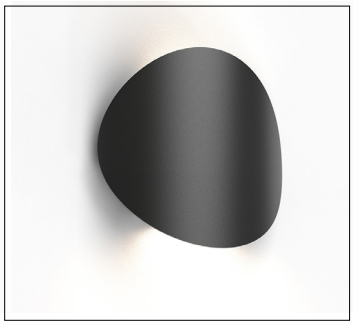
ROUNDED EDGE



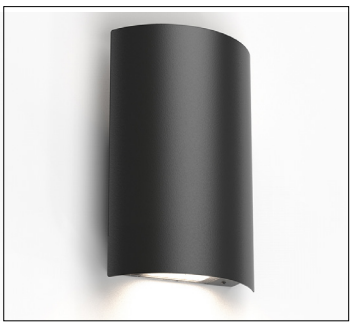
TRIANGLE



CIRCLE



CYLINDER TALL



CYLINDER BALANCED

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

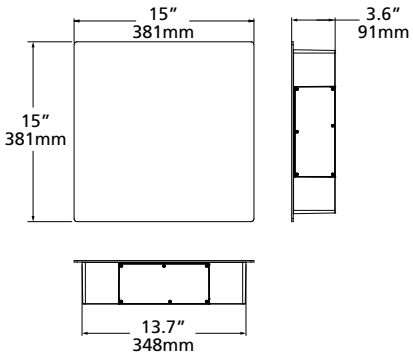
CY2

ARCHITECTURAL AREA/SITE

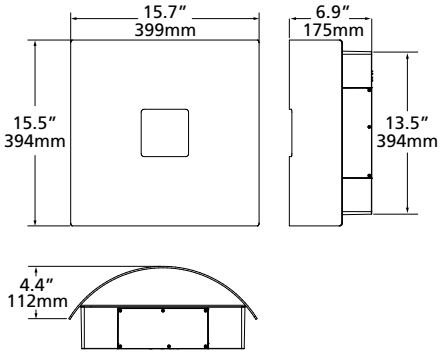
DIMENSIONS

F - FLAT

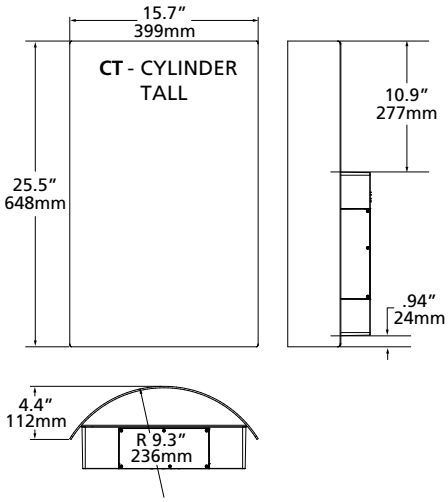
ADA approved.



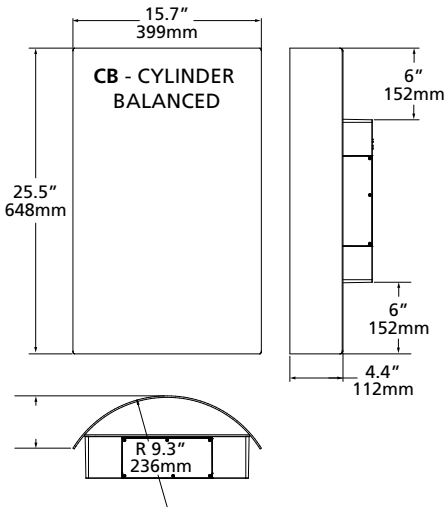
R - RADIUS/CURVED



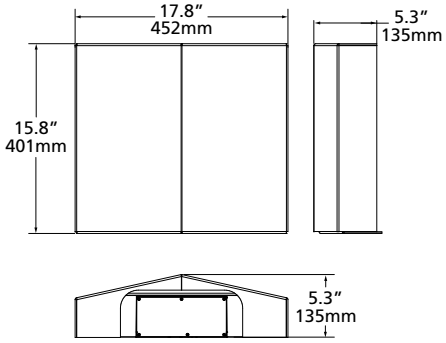
CT - CYLINDER TALL



CB - CYLINDER BALANCED

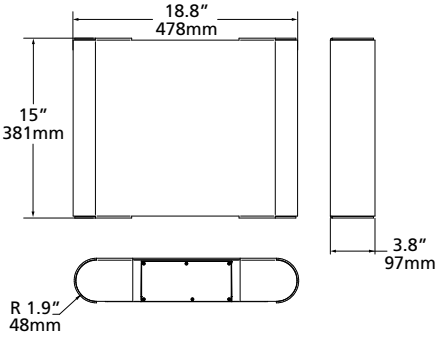


T - TRIANGLE/WEDGE

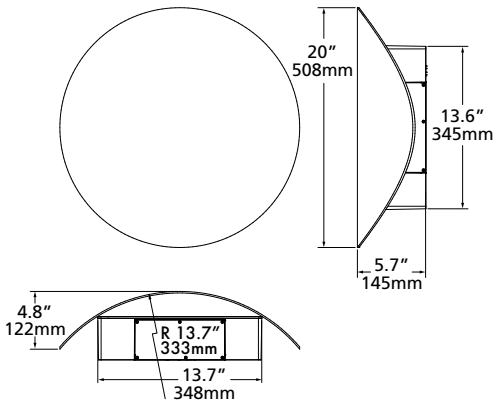


E - ROUNDED EDGE

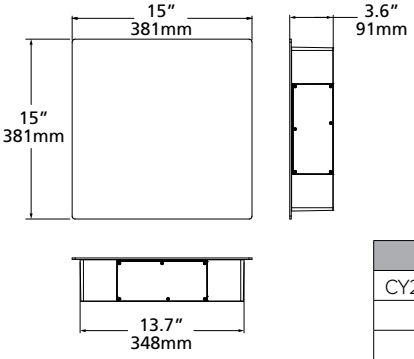
ADA approved.



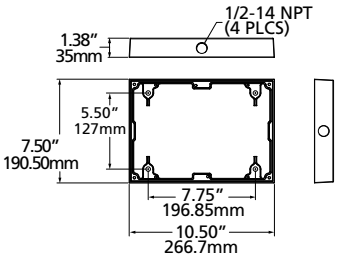
C - CIRCLE/CURVED



CBM - CUSTOM BUILD MATERIAL MOUNT GHOST FASCIA



SCB - SURFACE CONDUIT BOX



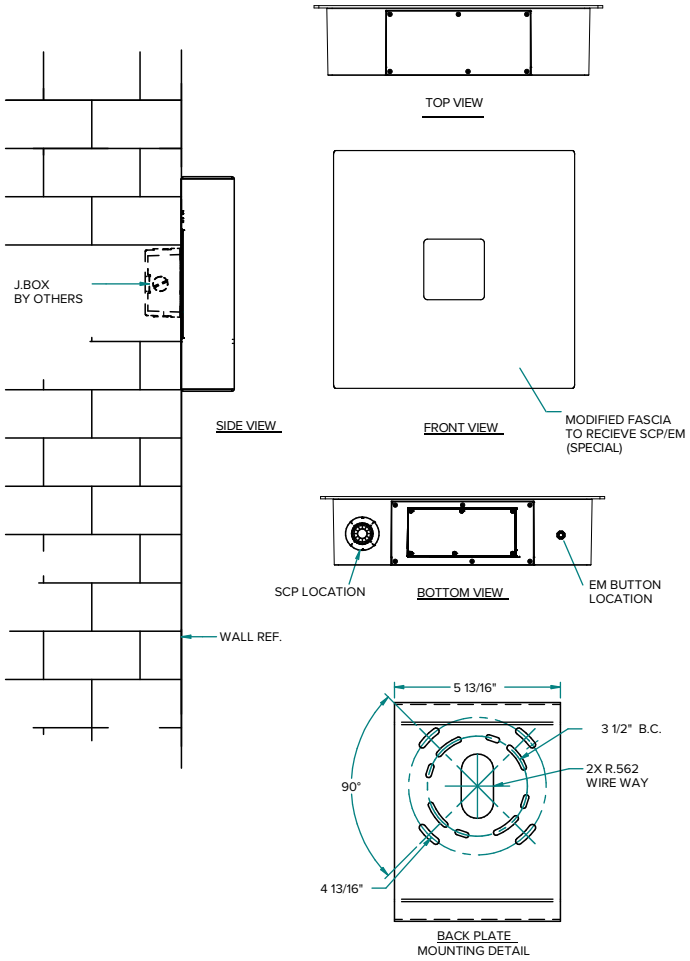
CY2 WEIGHT		FIXTURE + FASCIA WEIGHT	
CY2 base fixture	20 lb		
F	2.5 lb	CY2 + F	22.5 lb
R	2.5 lb	CY2 + R	22.5 lb
CB	3.5 lb	CY2 + CB	23.5 lb
CT	3.5 lb	CY2 + CT	23.5 lb
T	3.5 lb	CY2 + T	23.5 lb
E	3.5 lb	CY2 + E	23.5 lb
C	2.5 lb	CY2 + C	22.5 lb

CY2

ARCHITECTURAL AREA/SITE

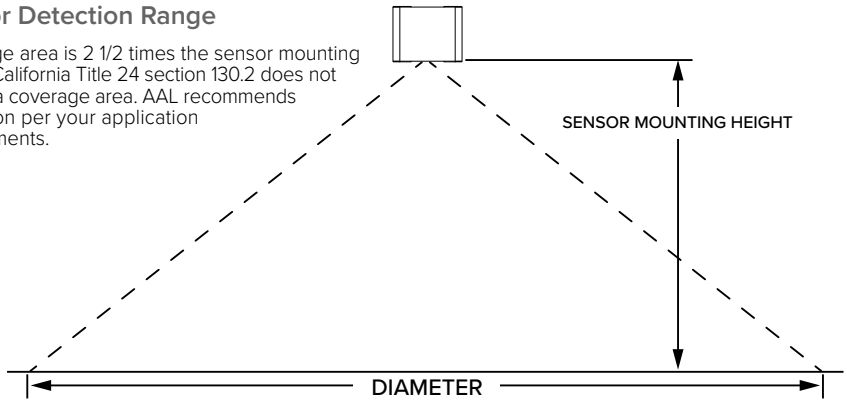
DIMENSIONS (CONTINUED)

Flat Sensor Location



Sensor Detection Range

Coverage area is 2 1/2 times the sensor mounting height. California Title 24 section 130.2 does not specify a coverage area. AAL recommends discretion per your application requirements.



KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R IMPACT RATED

BOLLARD

Pavilion™ impact

FEATURES

- ASTM F3016 S20 Impact Rated
- Elegant form factor blended with Performance Optics
- 44" OAH S20 Impact Rated Illuminated and Non-Illuminated Bollards
- IDA Dark Sky Compliant, No Up-light configuration
- Bluetooth enabled RGBW accent

c UL us LISTED

ida DARK SKY APPROVED 2016

IK10

S20

BAA

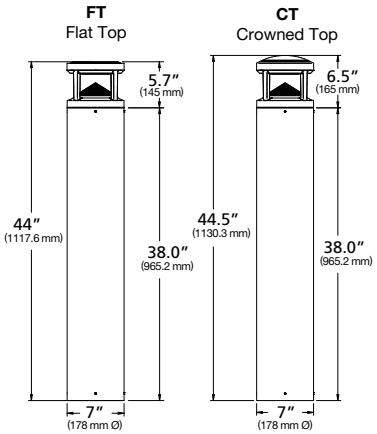
TAA

NU configurations in 3000K and warmer CCTs only

CONTROL TECHNOLOGY

Bluetooth® DMX

pharos



	Weight
PA7R	34 lbs / 15.4 kg

SPECIFICATIONS

CONSTRUCTION

HOUSING:

- Castings are low copper aluminum alloy die-cast
- Gaskets are molded silicone to prevent harmful ingress to the lamp and driver compartments
- Aluminum shaft to slide over 60” steel post that provides strength to resist impact. Steel post is centered utilizing a stress bracket, that allows for even distribution of concrete around the post, and further reinforced by a rebar cage
- Steel Post is a schedule 40 galvanized steel pipe with 6.625" OD
- IP65 rated

SHAFT:

- Aluminum shaft(s) is .125” thick extruded aluminum 6061 alloy
- American Society of Testing and Materials (ASTM) F3016 "Standard Test Method for Surrogate Testing of Vehicle Impact Protective Devices at Low Speeds" S20 Rated, which safely stops a 5,000-lb vehicle impacting the system at up to 20 mph

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB)
- Optical lenses are clear injection molded PMMA acrylic

OPTICS (CONTINUED)

- U0 configurations have an optically clear flat tempered glass lens, all other configurations have either an optically clear or high transmission diffused acrylic lens

INSTALLATION

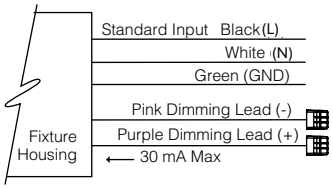
- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed
- High voltage configurations, 347/480. Driver is Underwriters Laboratories listed
- "Thermal Shield”, secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers are greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaire is capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C

CONTROLS

- Standard fixtures dimming range is from 10% to 100% and be compatible with 0-10V, user-defined, control devices



(Specifications continued on page 3)

KIM LIGHTING®

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

PA7R IMPACT RATED

BOLLARD

ORDERING GUIDE

Example: PA7R-FT-NU-1-12L-010-5K7-44IRB-S20-BLS-UNV-EM

CATALOG #

HOUSING

PA7R

Model		Top		Optics		Distribution		Light Engine [5]	
PA7R	Pavilion 7" Ø Round	**FT**	Flat Top	**NU**	No Up-light	**1**	Type I	**12L-010-AMB**	14W, Monochromatic Amber
		CT	**Crowned Top** [1]	**CH**	Clear Horizontal Lens	**2**	Type II	**12L-010-3K7**	14W (1000 nominal lm), 3000K, 70 CRI
				CL [2]	Clear Vertical Lens	**3**	Type III	**12L-010-4K7**	14W (1000 nominal lm), 4000K, 70 CRI
				DL [2, 3]	Diffuse Vertical Lens	**3HS**	Type III + House side shield	**12L-010-5K7**	14W (1000 nominal lm), 5000K, 70 CRI
				LV	Louvers	**4**	Type IV	**12L-010-AMB** [6]	22W, Monochromatic Amber
				GC	Grille with clear vertical lens	**5**	Type V	**12L-020-3K7**	22W (2000 nominal lm), 3000K, 70 CRI
				GD [3]	Grille with diffuse vertical lens			**12L-020-4K7**	22W (2000 nominal lm), 4000K, 70 CRI
				ULB [4]	Non-Illuminated Bollard (No distribution, no light engine)			**12L-020-5K7**	22W (2000 nominal lm), 5000K, 70 CRI
								Consult factory for other CCTs (2700K - 6500K) and CRIs (80, 90 CRI)	

Body		Fixture Finish		Voltage		Options	
44IRB-S20	44" OAH Impact Resistant Base, ASTM F3016 S20 Rated, Aluminum	**BLS**	Black Gloss Smooth	**UNV**	120-277V	**EM** [9]	Battery Backup
44IRB-B	44" OAH Impact Resistant Blind Bollard (Non-Illuminated), Aluminum	**BLT**	Black Matte Textured	**120** [8]	120V	**LR** [10,11]	Luminous Accent
For Non-Impact Rated 44" OAH Round Pavilion		**DBS**	Dark Bronze Gloss Smooth	**277** [8]	208-277V	**SF** [12]	Single Fuse
		DBT	Dark Bronze Matte Textured	**347** [8]	347V	**DF** [12]	Double Fuse
		GTT	Graphite Matte Textured	**480** [8]	480V		
		LGS	Light Grey Gloss Smooth				
		LGT	Light Grey Matte Textured				
		PSS	Platinum Silver Gloss Smooth				
		VGT	Verde Green Matte Textured				
		WHS	White Gloss Smooth				
		WHT	White Matte Textured				
		Color Option					
		CC [7]	Custom Color				

1 Adds .6 / 15mm to OAH (over all height)
2 CL and DL configurations shall be IK04
3 Only Available with 1 Type I or 5 Type V distributions only
4 If selecting ULB, must select 44IRB-B and vice versa
5 5-step MacAdam Ellipse Binning standard. Consult factory for 3-step MacAdam Ellipse Binning
6 Wild life friendly
7 Consult factory for custom color, marine and corrosive finish options
8 Dedicated input voltage, required for MW Motions sensing
9 0°C min starting temperature, 90+ minute run time, output equivalent to 12L-010-#K7
10 Adds +5 watts and 1" / 254mm to overall height
11 Not available in Blind Bollard (Non-Illuminated)
12 SF for 120, 277 and 347 input voltage, DF for 208, 240 and 480 input voltage

PA7R IMPACT RATED

BOLLARD

SPECIFICATIONS CONT'D

WIRELESS CONTROLS

BLUETOOTH:

- The Integral module will enable the adjustment of the Luminous Accent to dim or change color to the desired setting when paired with Current Lighting RGBW Remote App via celluar/tablet device
- The integral module is compatible with Bluetood Low Energy (BLE) or Bluetooth Smart mobile devices operating on iOS8 or Android Gingerbread operating systems or newer
- Mobile App. dimming range from 0% to 100% through the use of RGBW app (available on IOS and Android)
- Color selection and adjustment
- Camera function for color matching
- Intensity slider for dimming/ramping up
- Save and rename up to 10 presets
- Group and rename fixtures
- Fixture is password protected, refer to instructions to set unique password

DMX:

- 6 wires: Red (DMX+), Brown (DMX-), Yellow (DMX Ground), Black (Line Voltage), White (common), and Green (Ground)
- Single DMX universe with six slots/addresses of virtual control which are pre-programmed at the factory:
- DMX slot/address 1 = red
- DMX slot/address 2 = green
- DMX slot/address 3 = blue
- DMX slot/address 4 = white
- Fully DMX RDM compatible
- Mobile App specification in additional information section

OPTIONAL BACKUP BATTERY

- Integral battery backup provides emergency path of egress lighting for the required 90 minutes for 0°C ambient environments

CAUTION:

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

CERTIFICATIONS AND LISTINGS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- ASTM Standard F3016/F3016M for Surrogate Testing of Protective Device at Low Speed - S20 Crash Rated
- IP65 Rated
- IEC 66262 Mechanical Impact Code IK10
- IDA approved, 3000K and warmer CCTs only
- RoHS compliant
- This product meets federal procurement law requirements under the Buy American Act (FAR 52.225-9) and Trade Agreements Act (FAR 52.225-11). See Buy America(n) Solutions (link to https://www.currentlighting.com/resources/america-solutions)

WARRANTY

- 5 year warranty

KIM LIGHTING®

DATE: LOCATION:

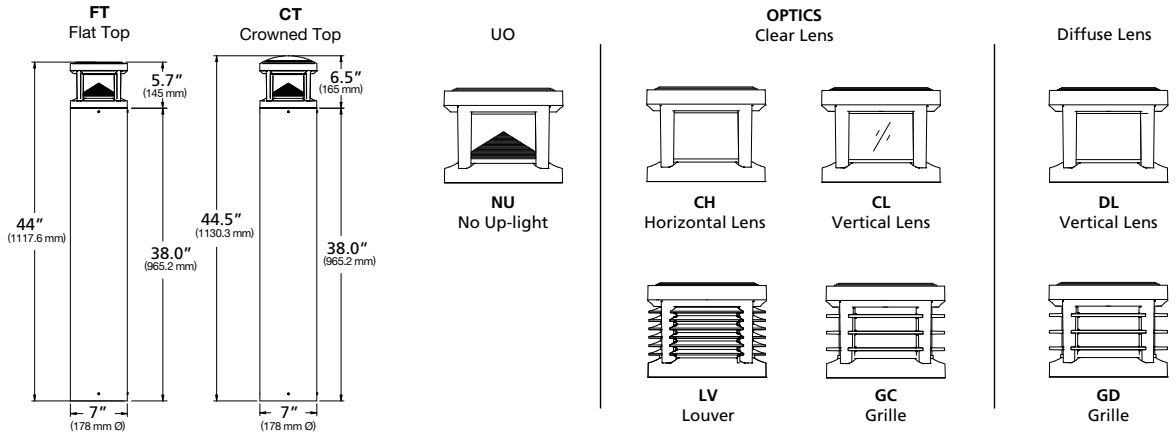
TYPE: PROJECT:

CATALOG #:

PA7R IMPACT RATED

BOLLARD

DIMENSIONS



DELIVERED LUMENS

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
550mA	12L	22	2,000	NU U0 Optics	1	1044	0	0	0	48	1136	0	0	0	52	1164	0	0	0	54
					2	1199	0	0	0	55	1305	0	0	0	60	1336	0	0	0	62
					3	1128	0	0	1	52	1228	0	0	1	57	1257	0	0	1	58
					3HS	953	0	0	0	44	1037	0	0	0	48	1062	0	0	1	49
					4	1362	0	0	0	63	1482	0	0	1	68	1518	0	0	1	70
					5	1265	1	0	0	58	1377	1	0	0	63	1410	1	0	0	65
				CH Clear Horizontal Lens	1	1778	0	3	1	82	1935	0	3	1	89	1981	0	3	1	91
					2	1711	1	3	1	79	1862	1	3	1	86	1906	1	3	1	88
					3	1643	1	3	1	76	1788	1	3	1	82	1831	1	3	1	84
					3HS	1443	0	3	1	66	1570	0	3	1	72	1608	0	3	1	74
					4	1731	0	3	1	80	1884	0	3	1	87	1929	0	3	1	89
					5	1841	1	3	1	85	2003	1	3	1	92	2051	1	3	1	95
				CL Clear Vertical Lens	1	1852	0	4	1	85	2016	1	4	1	93	2064	1	4	1	95
					2	1984	1	3	1	91	2159	1	3	1	99	2211	1	3	1	102
					3	2062	1	3	1	95	2244	1	3	1	103	2298	1	3	1	106
					3HS	1665	0	3	1	77	1811	0	3	1	83	1855	0	3	1	85
					4	2055	0	3	1	95	2236	1	3	1	103	2290	1	3	1	106
					5	2109	1	3	1	97	2295	1	3	1	106	2350	1	3	1	108

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R IMPACT RATED

BOLLARD

DELIVERED LUMENS (CONTINUED)

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
550mA	12L	22	2,000	DL Diffused Vertical Lens	1	1639	1	3	2	76	1783	1	3	2	82	1826	1	3	2	84
					5	1721	1	3	2	79	1873	1	3	2	86	1918	1	3	2	88
				LV External Louvers	1	746	0	3	1	34	811	1	3	1	37	831	1	3	1	38
					2	814	1	3	1	37	885	1	3	1	41	907	1	3	1	42
					3	838	1	3	1	39	912	1	3	1	42	934	1	3	1	43
					3HS	605	0	3	1	28	658	0	3	1	30	674	0	3	1	31
					4	879	0	3	1	41	956	1	3	1	44	979	1	3	1	45
					5	888	1	3	1	41	966	1	3	1	45	989	1	3	1	46
				GC Grill with Clear Lens	1	1038	0	3	1	48	1130	0	3	1	52	1157	0	3	1	53
					2	1021	0	3	1	47	1111	1	3	1	51	1138	1	3	1	52
					3	1024	0	3	1	47	1114	1	3	1	51	1141	1	3	1	53
					3HS	854	0	3	1	39	930	0	3	1	43	952	0	3	1	44
					4	1109	0	3	1	51	1207	0	3	1	56	1236	0	3	1	57
					5	1037	1	3	1	48	1128	1	3	1	52	1155	1	3	1	53
				GD Grill with Diffused Lens	1	1036	0	3	1	48	1127	1	3	2	52	1154	1	3	2	53
					5	953	1	3	1	44	1037	1	3	1	48	1062	1	3	1	49

DATE: LOCATION:

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PA7R IMPACT RATED

BOLLARD

DELIVERED LUMENS (CONTINUED)

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
350mA	12L	14	1,000	NU U0 Optics	1	749	0	0	0	54	815	0	0	0	59	835	0	0	0	60
					2	860	0	0	0	62	936	0	0	0	67	958	0	0	0	69
					3	809	0	0	0	58	881	0	0	0	63	902	0	0	0	65
					3HS	684	0	0	0	49	744	0	0	0	53	762	0	0	0	55
					4	977	0	0	0	70	1063	0	0	0	76	1089	0	0	0	78
					5	908	1	0	0	65	988	1	0	0	71	1011	1	0	0	73
				CH Clear Horizontal Lens	1	1184	0	3	1	85	1288	0	3	1	92	1319	0	3	1	95
					2	1139	0	3	1	82	1239	0	3	1	89	1269	0	3	1	91
					3	1094	0	3	1	79	1190	0	3	1	85	1219	0	3	1	87
					3HS	960	0	3	1	69	1045	0	3	1	75	1070	0	3	1	77
					4	1152	0	3	1	83	1254	0	3	1	90	1284	0	3	1	92
					5	1225	1	3	1	88	1333	1	3	1	96	1365	1	3	1	98
				CL Clear Vertical Lens	1	1146	0	3	1	82	1247	0	3	1	90	1277	0	3	1	92
					2	1228	0	3	1	88	1336	1	3	1	96	1368	1	3	1	98
					3	1276	0	3	1	92	1389	1	3	1	100	1422	1	3	1	102
					3HS	1030	0	3	1	74	1121	0	3	1	80	1148	0	3	1	82
					4	1272	0	3	1	91	1384	0	3	1	99	1417	0	3	1	102
					5	1305	1	3	1	94	1420	1	3	1	102	1454	1	3	1	104
				DL Diffused Vertical Lens	1	1086	0	3	1	78	1182	0	3	1	85	1210	0	3	1	87
					5	1141	1	3	1	82	1241	1	3	1	89	1271	1	3	1	91

DATE: LOCATION:

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PA7R IMPACT RATED

BOLLARD

DELIVERED LUMENS (CONTINUED)

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
350mA	12L	14	1,000	LV External Louvers	1	489	0	3	1	35	533	0	3	1	38	545	0	3	1	39
					2	534	0	3	1	38	581	0	3	1	42	595	0	3	1	43
					3	550	0	3	1	40	599	0	3	1	43	613	0	3	1	44
					3HS	397	0	3	1	29	432	0	3	1	31	442	0	3	1	32
					4	577	0	3	1	41	628	0	3	1	45	643	0	3	1	46
					5	583	1	3	1	42	634	1	3	1	46	649	1	3	1	47
				GC Grill with Clear Lens	1	843	0	3	1	61	917	0	3	1	66	939	0	3	1	67
					2	829	0	3	1	60	903	0	3	1	65	924	0	3	1	66
					3	831	0	3	1	60	905	0	3	1	65	926	0	3	1	67
					3HS	694	0	3	1	50	755	0	3	1	54	773	0	3	1	56
					4	901	0	3	1	65	980	0	3	1	70	1004	0	3	1	72
					5	842	1	3	1	60	916	1	3	1	66	938	1	3	1	67
				GD Grill with Diffused Lens	1	728	0	3	1	52	792	0	3	1	57	811	0	3	1	58
					5	782	1	3	1	56	851	1	3	1	61	872	1	3	1	63

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PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-CH1-12L-020-4K7

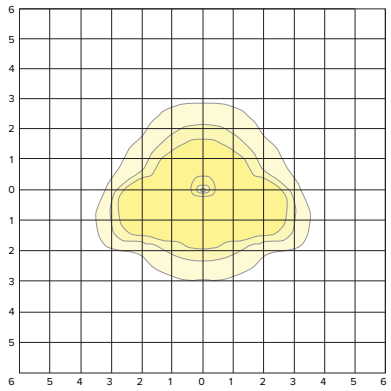
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1935**
Watts	**22**
Efficacy	**88.0**
IES Type	**II**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1132	81.8%
Downward House Side	251	18.1%
Downward Total	1384	71%
Upward Street Side	348	63%
Upward House Side	205	37%
Upward Total	553	29%
Total Flux	1937	100%

ISOFOOT CANDLE PLOT



PA7R-CH2-12L-020-4K7

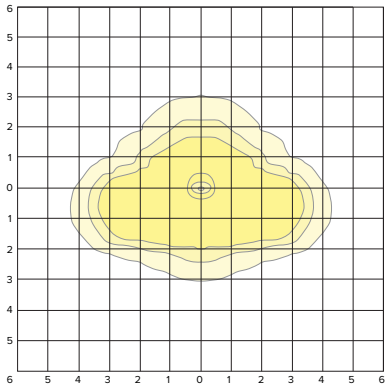
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1862**
Watts	**22**
Efficacy	**85.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1176	78.7%
Downward House Side	319	21.3%
Downward Total	1494	80%
Upward Street Side	220	60%
Upward House Side	149	40%
Upward Total	369	20%
Total Flux	1863	100%

ISOFOOT CANDLE PLOT



PA7R-CH3-12L-020-4K7

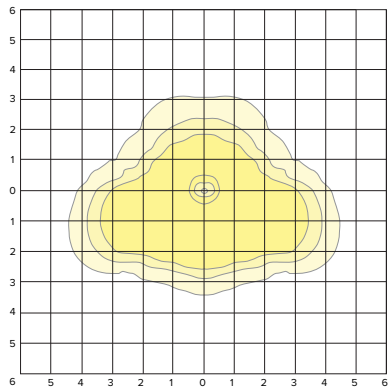
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1788**
Watts	**21.76**
Efficacy	**82.0**
IES Type	**III**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1184	80.3%
Downward House Side	290	19.7%
Downward Total	1474	82%
Upward Street Side	185	59%
Upward House Side	130	41%
Upward Total	315	18%
Total Flux	1789	100%

ISOFOOT CANDLE PLOT



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PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-CH3HS-12L-020-4K7

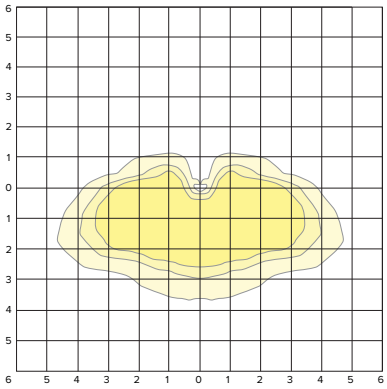
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1570**
Watts	**21.64**
Efficacy	**73.0**
IES Type	**III**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1187	92.0%
Downward House Side	103	8.0%
Downward Total	1290	82%
Upward Street Side	230	82%
Upward House Side	51	18%
Upward Total	282	18%
Total Flux	1571	100%

ISOFOOT CANDLE PLOT



PA7R-CH4-12L-020-4K7

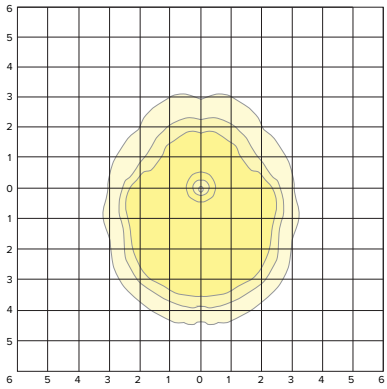
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1884**
Watts	**21.73**
Efficacy	**87.0**
IES Type	**IV**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1316	84.0%
Downward House Side	250	16.0%
Downward Total	1566	83%
Upward Street Side	184	58%
Upward House Side	136	42%
Upward Total	319	17%
Total Flux	1885	100%

ISOFOOT CANDLE PLOT



PA7R-CH5-12L-020-4K7

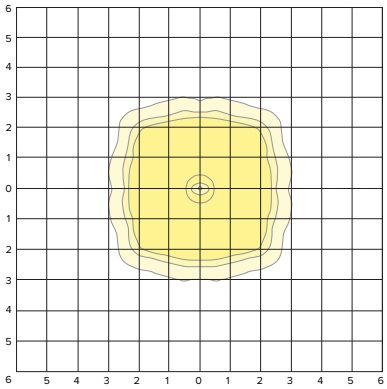
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2003**
Watts	**21.73**
Efficacy	**92.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	825	50.0%
Downward House Side	825	50.0%
Downward Total	1650	82%
Upward Street Side	177	50%
Upward House Side	177	50%
Upward Total	354	18%
Total Flux	2004	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

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PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-CL1-12L-020-4K7

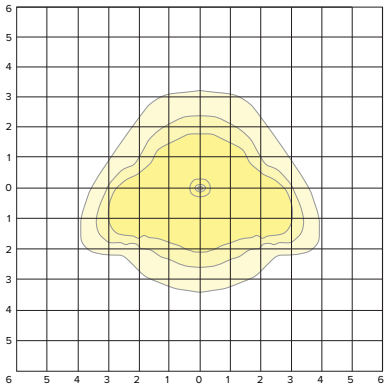
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2016**
Watts	**21.7**
Efficacy	**93.0**
IES Type	**II**
BUG Rating	**B1-U4-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1078	77.5%
Downward House Side	312	22.5%
Downward Total	1390	69%
Upward Street Side	373	59%
Upward House Side	254	41%
Upward Total	627	31%
Total Flux	2017	100%

ISOFOOT CANDLE PLOT



PA7R-CL2-12L-020-4K7

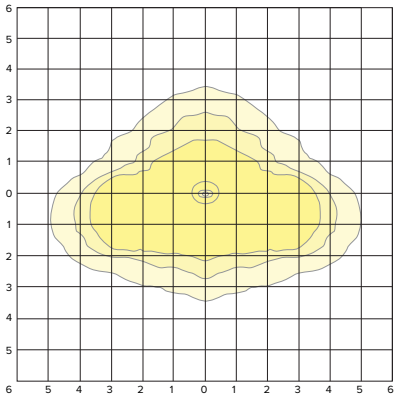
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2159**
Watts	**21.69**
Efficacy	**100.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1325	77.5%
Downward House Side	384	22.5%
Downward Total	1709	79%
Upward Street Side	258	57%
Upward House Side	193	43%
Upward Total	451	21%
Total Flux	2160	100%

ISOFOOT CANDLE PLOT



PA7R-CL3-12L-020-4K7

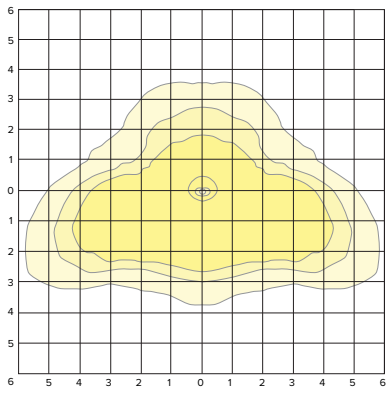
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2244**
Watts	**21.72**
Efficacy	**103.0**
IES Type	**III**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1472	80.0%
Downward House Side	367	20.0%
Downward Total	1839	82%
Upward Street Side	231	57%
Upward House Side	175	43%
Upward Total	406	18%
Total Flux	2245	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

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PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-CL3HS-12L-020-4K7

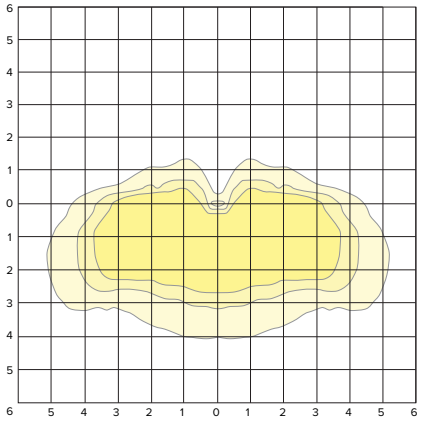
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1811**
Watts	**21.7**
Efficacy	**83.0**
IES Type	**III**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1361	92.0%
Downward House Side	118	8.0%
Downward Total	1479	82%
Upward Street Side	277	83%
Upward House Side	56	17%
Upward Total	334	18%
Total Flux	1812	100%

ISOFOOT CANDLE PLOT



PA7R-CL4-12L-020-4K7

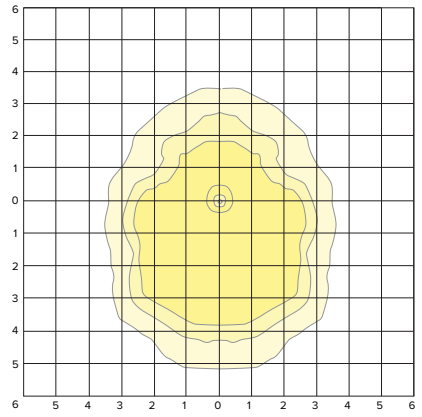
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2236**
Watts	**21.71**
Efficacy	**103.0**
IES Type	**IV**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1552	84.9%
Downward House Side	275	15.0%
Downward Total	1827	82%
Upward Street Side	230	56%
Upward House Side	180	44%
Upward Total	410	18%
Total Flux	2237	100%

ISOFOOT CANDLE PLOT



PA7R-CL5-12L-020-4K7

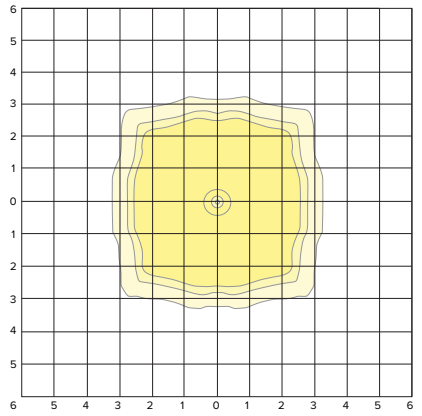
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2296**
Watts	**21.75**
Efficacy	**106.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	937	50.0%
Downward House Side	937	50.0%
Downward Total	1874	82%
Upward Street Side	211	50%
Upward House Side	211	50%
Upward Total	422	18%
Total Flux	2296	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-DL1-12L-020-4K7

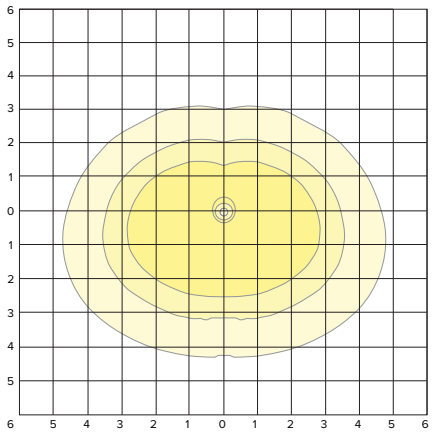
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1783**
Watts	**21.74**
Efficacy	**82.0**
IES Type	**IV**
BUG Rating	**B1-U3-G2**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	746	66.2%
Downward House Side	381	33.8%
Downward Total	1127	63%
Upward Street Side	408	62%
Upward House Side	248	38%
Upward Total	657	37%
Total Flux	1784	100%

ISOFOOT CANDLE PLOT



PA7R-DL5-12L-020-4K7

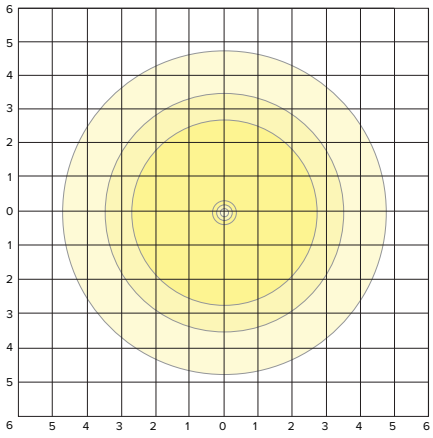
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1873**
Watts	**21.75**
Efficacy	**86.0**
IES Type	**VS**
BUG Rating	**B1-U3-G2**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	656	50.0%
Downward House Side	656	50.0%
Downward Total	1313	70%
Upward Street Side	281	50%
Upward House Side	281	50%
Upward Total	561	30%
Total Flux	1874	100%

ISOFOOT CANDLE PLOT



PA7R-GC1-12L-020-4K7

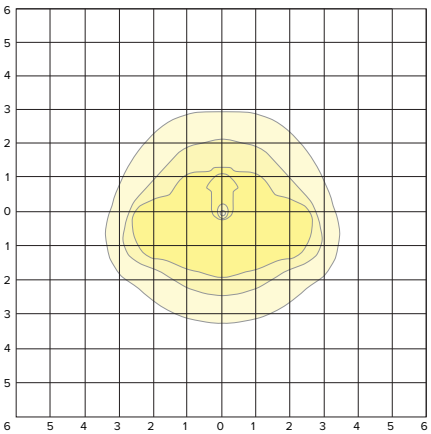
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1130**
Watts	**21.73**
Efficacy	**52.0**
IES Type	**II**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	434	67.6%
Downward House Side	208	32.4%
Downward Total	642	57%
Upward Street Side	298	61%
Upward House Side	191	39%
Upward Total	489	43%
Total Flux	1131	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

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PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-GC2-12L-020-4K7

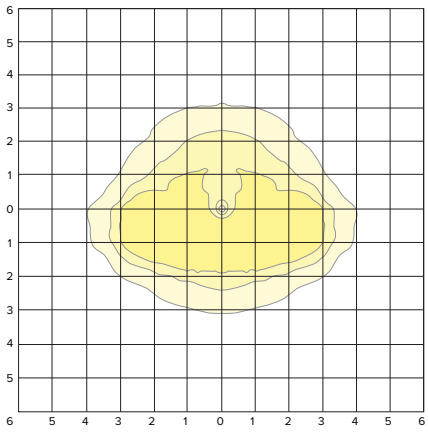
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1111**
Watts	**21.59**
Efficacy	**51.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	488	68.3%
Downward House Side	227	31.7%
Downward Total	715	64%
Upward Street Side	238	60%
Upward House Side	159	40%
Upward Total	397	36%
Total Flux	1112	100%

ISOFOOT CANDLE PLOT



PA7R-GC3-12L-020-4K7

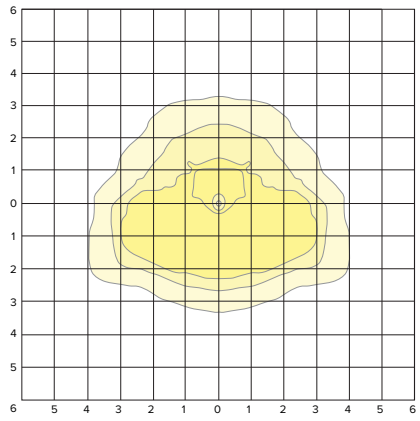
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1114**
Watts	**21.7**
Efficacy	**51.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	513	69.8%
Downward House Side	221	30.1%
Downward Total	735	66%
Upward Street Side	234	62%
Upward House Side	146	38%
Upward Total	380	34%
Total Flux	1114	100%

ISOFOOT CANDLE PLOT



PA7R-GC3HS-12L-020-4K7

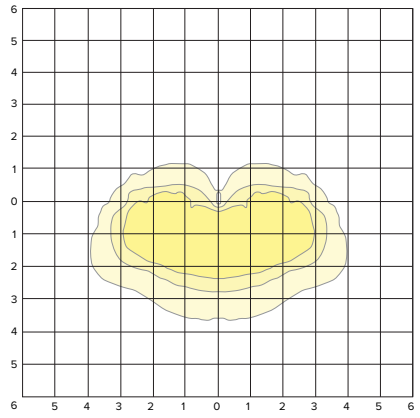
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**930**
Watts	**21.59**
Efficacy	**43.0**
IES Type	**III**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	533	87.1%
Downward House Side	79	12.8%
Downward Total	612	66%
Upward Street Side	265	83%
Upward House Side	54	17%
Upward Total	319	34%
Total Flux	931	100%

ISOFOOT CANDLE PLOT



PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-GC4-12L-020-4K7

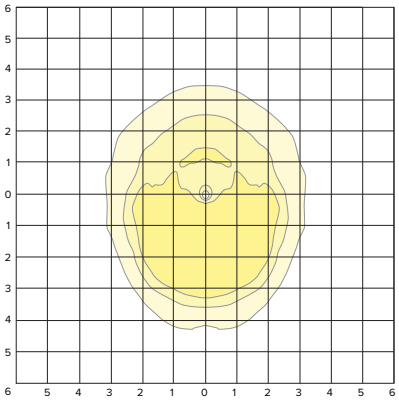
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1207**
Watts	**21.59**
Efficacy	**56.0**
IES Type	**IV**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	591	74.2%
Downward House Side	205	25.8%
Downward Total	796	66%
Upward Street Side	267	65%
Upward House Side	146	35%
Upward Total	412	34%
Total Flux	1208	100%

ISOFOOT CANDLE PLOT



PA7R-GC5-12L-020-4K7

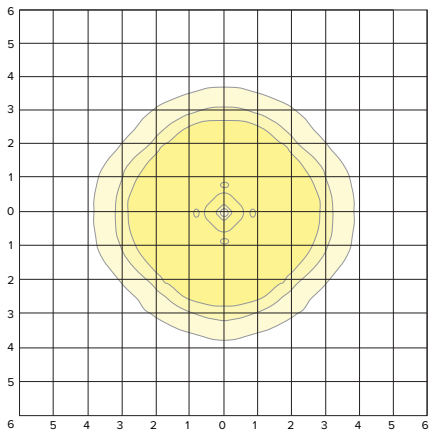
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1128**
Watts	**21.59**
Efficacy	**52.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	382	50.0%
Downward House Side	382	50.0%
Downward Total	764	68%
Upward Street Side	183	50%
Upward House Side	183	50%
Upward Total	365	32%
Total Flux	1129	100%

ISOFOOT CANDLE PLOT



PA7R-GD1-12L-020-4K7

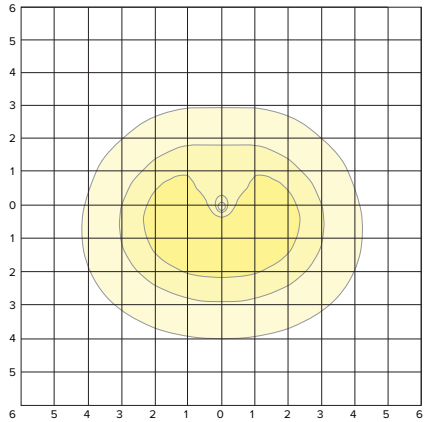
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1127**
Watts	**21.71**
Efficacy	**51.9**
IES Type	**IV**
BUG Rating	**B1-U3-G2**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	407	62.8%
Downward House Side	241	37.2%
Downward Total	648	57%
Upward Street Side	287	60%
Upward House Side	193	40%
Upward Total	479	43%
Total Flux	1127	100%

ISOFOOT CANDLE PLOT



PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-GD5-12L-020-4K7

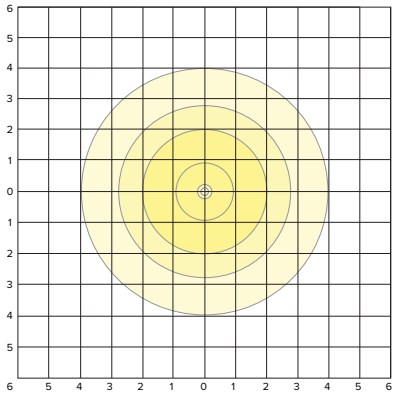
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1037**
Watts	**21.6**
Efficacy	**48.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	309	50.0%
Downward House Side	309	50.0%
Downward Total	618	60%
Upward Street Side	210	50%
Upward House Side	210	50%
Upward Total	420	40%
Total Flux	1038	100%

ISOFOOT CANDLE PLOT



PA7R-LV1-12L-020-4K7

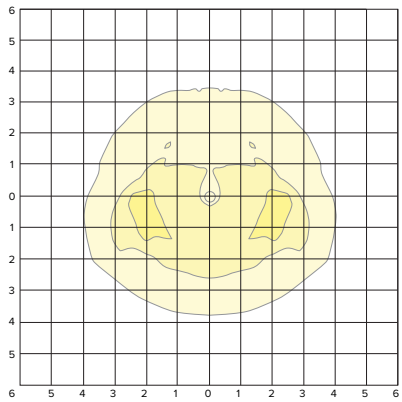
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**811**
Watts	**21.73**
Efficacy	**37.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	303	57.7%
Downward House Side	222	42.2%
Downward Total	526	65%
Upward Street Side	160	56%
Upward House Side	126	44%
Upward Total	286	35%
Total Flux	812	100%

ISOFOOT CANDLE PLOT



PA7R-LV2-12L-020-4K7

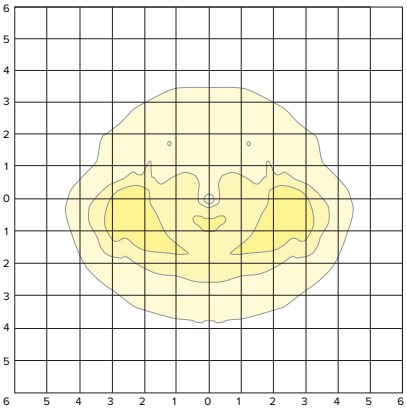
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**885**
Watts	**21.68**
Efficacy	**41.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	378	61.9%
Downward House Side	233	38.1%
Downward Total	611	69%
Upward Street Side	158	58%
Upward House Side	116	42%
Upward Total	274	31%
Total Flux	885	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-LV3-12L-020-4K7

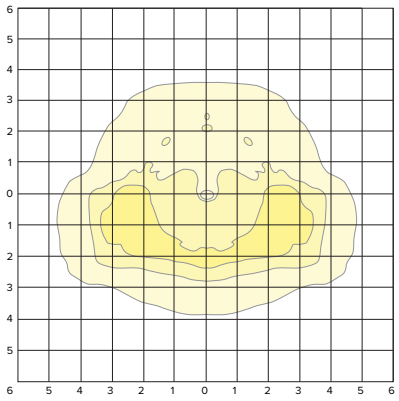
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**912**
Watts	**21.69**
Efficacy	**42.0**
IES Type	**III**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	414	63.7%
Downward House Side	233	35.8%
Downward Total	650	71%
Upward Street Side	154	59%
Upward House Side	109	41%
Upward Total	263	29%
Total Flux	913	100%

ISOFOOT CANDLE PLOT



PA7R-LV3HS-12L-020-4K7

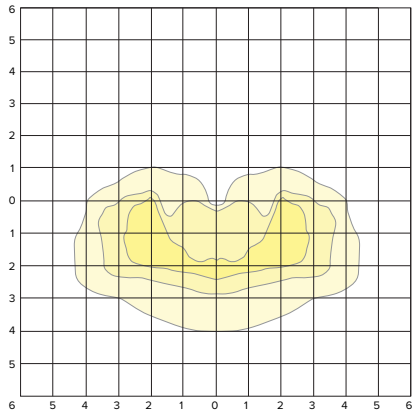
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**658**
Watts	**21.69**
Efficacy	**30.0**
IES Type	**III**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	383	82.5%
Downward House Side	81	17.5%
Downward Total	464	71%
Upward Street Side	155	80%
Upward House Side	39	20%
Upward Total	194	29%
Total Flux	658	100%

ISOFOOT CANDLE PLOT



PA7R-LV4-12L-020-4K7

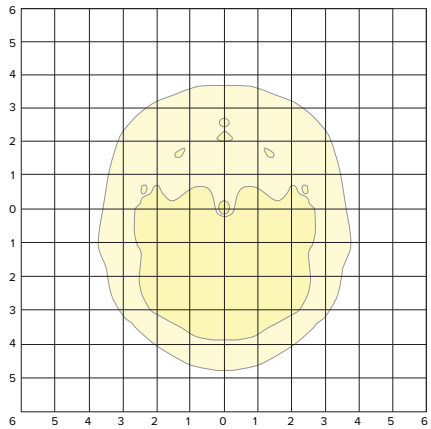
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**956**
Watts	**21.69**
Efficacy	**44.0**
IES Type	**IV**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	454	67.5%
Downward House Side	219	32.5%
Downward Total	673	70%
Upward Street Side	176	62%
Upward House Side	107	38%
Upward Total	283	30%
Total Flux	956	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-LV5-12L-020-4K7

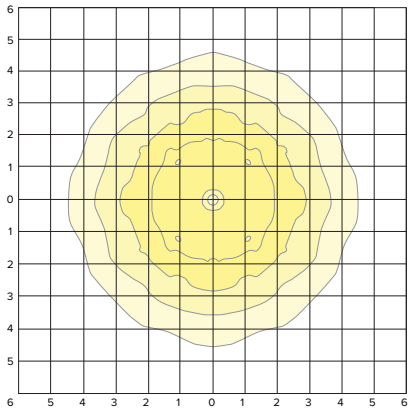
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**966**
Watts	**21.7**
Efficacy	**45.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	354	50.0%
Downward House Side	354	50.0%
Downward Total	708	73%
Upward Street Side	129	50%
Upward House Side	129	50%
Upward Total	259	27%
Total Flux	967	100%

ISOFOOT CANDLE PLOT



PA7R-NU1-12L-020-4K7

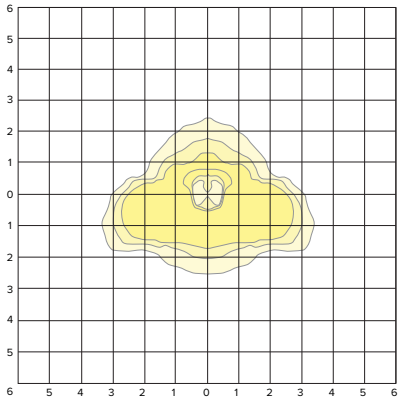
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1136**
Watts	**21.75**
Efficacy	**52.0**
IES Type	**I**
BUG Rating	**B0-U0-G0**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	986	86.7%
Downward House Side	151	13.3%
Downward Total	1137	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1137	100%

ISOFOOT CANDLE PLOT



PA7R-NU2-12L-020-4K7

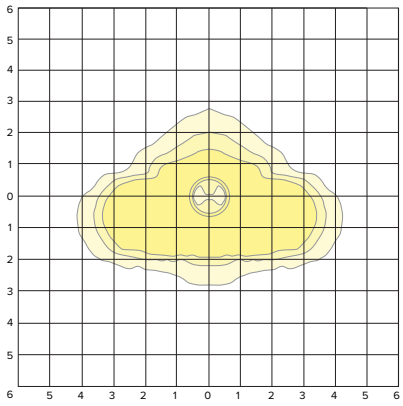
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1305**
Watts	**21.74**
Efficacy	**60.0**
IES Type	**II**
BUG Rating	**B0-U0-G0**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1073	82.2%
Downward House Side	233	17.8%
Downward Total	1306	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1306	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R IMPACT RATED

BOLLARD

PHOTOMETRY

PA7R-NU3-12L-020-4K7

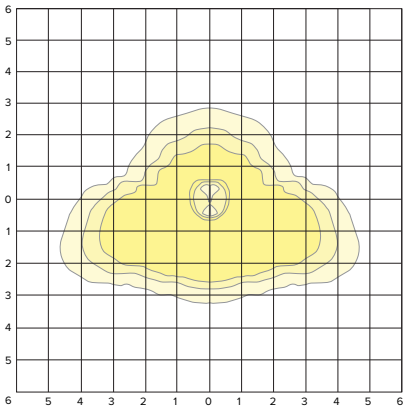
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1228**
Watts	**21.76**
Efficacy	**56.0**
IES Type	**III**
BUG Rating	**B0-U0-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1035	84.3%
Downward House Side	194	15.8%
Downward Total	1228	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1228	100%

ISOFOOT CANDLE PLOT



PA7R-NU3HS-12L-020-4K7

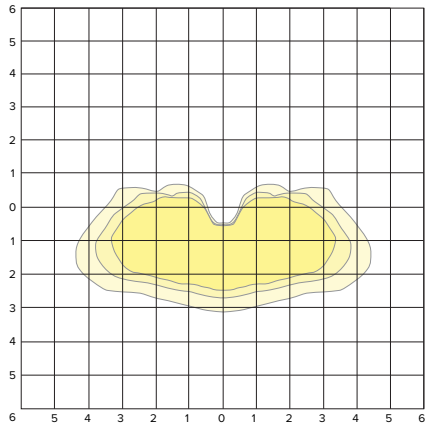
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1037**
Watts	**21.74**
Efficacy	**48.0**
IES Type	**III**
BUG Rating	**B0-U0-G0**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	987	95.1%
Downward House Side	51	4.9%
Downward Total	1038	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1038	100%

ISOFOOT CANDLE PLOT



PA7R-NU4-12L-020-4K7

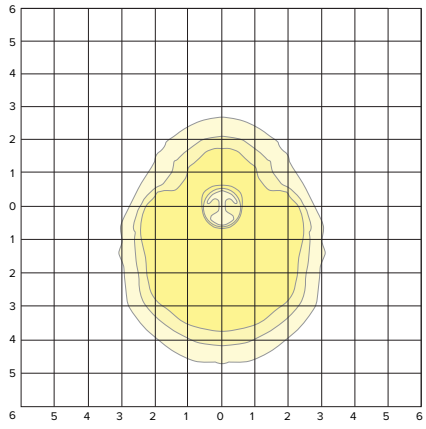
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1482**
Watts	**21.67**
Efficacy	**68.0**
IES Type	**IV**
BUG Rating	**B0-U0-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1318	88.9%
Downward House Side	164	11.1%
Downward Total	1483	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1483	100%

ISOFOOT CANDLE PLOT



PA7R IMPACT RATED

BOLLARD

PHOTOMETRY(CONTINUED)

PA7R-NU5-12L-020-4K7

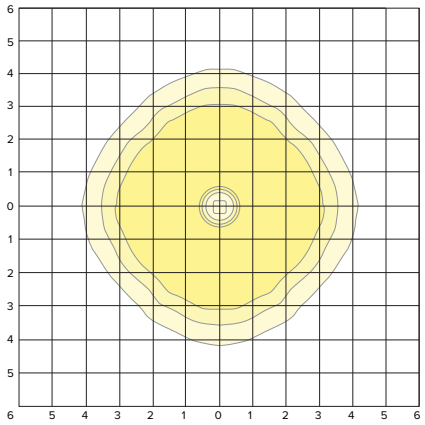
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1377**
Watts	**21.68**
Efficacy	**63.0**
IES Type	**VS**
BUG Rating	**B1-U0-G0**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	689	50.0%
Downward House Side	689	50.0%
Downward Total	1377	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1377	100%

ISOFOOT CANDLE PLOT



KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

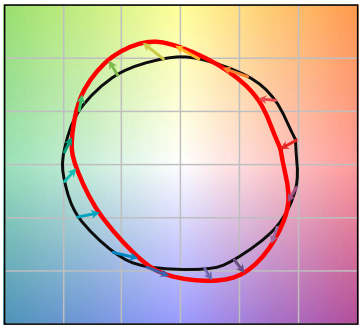
CATALOG #:

PA7R IMPACT RATED

BOLLARD

TM-30 DATA

COLOR VECTOR GRAPHIC

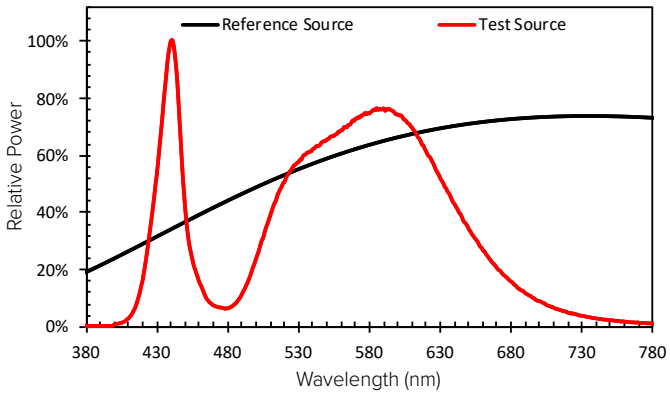


Reference Illuminant — Test Source

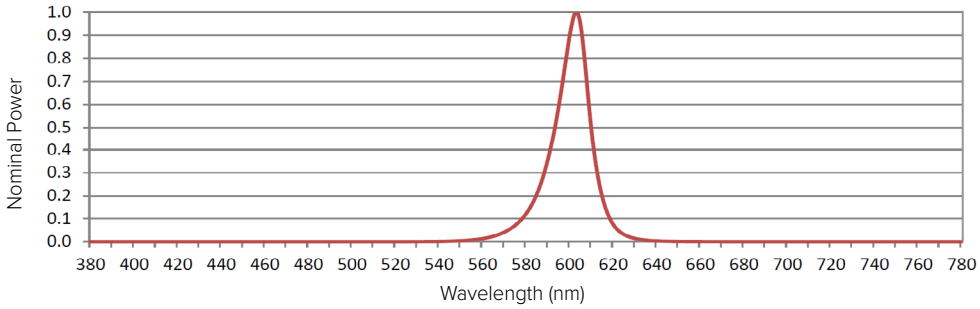
TEST SOURCE

R_f	68
R_g	99
CCT(K)	3947
D_{UV}	0.0004
x	0.3831
y	0.3793
CIE R_a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



AMBER SPECTRAL POWER DISTRIBUTION



ELECTRICAL DATA

Electrical													Dimming				
# LED	System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
12	22	550mA	120-480	50/60	0.18	0.11	0.09	0.08	0.06	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	14	350mA			0.12	0.07	0.06	0.05	0.04	0.03							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C) & (40°C / 104°C)						
Hours	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	98%	97%	95%	90%	60khrs

CRI Lumen Multiplier 80 and 90 CRI		
CCT	80 CRI	90 CRI
2700K	0.859	0.655
3000K	0.9119	0.7033
3500K	0.906	0.732
4000K	0.8941	0.734
5000K	0.879	0.7712
Scailing factor of 5000K 70CRI lumen packages		

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

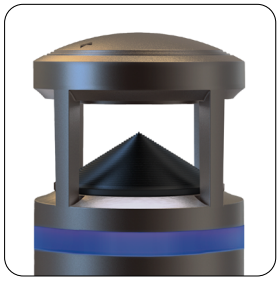
PA7R IMPACT RATED

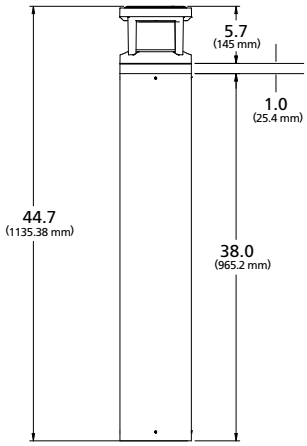
BOLLARD

ADDITIONAL INFORMATION

LUMINOUS ACCENT:

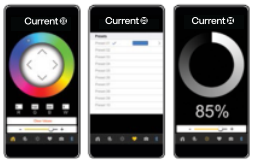
- The Luminous Accent option adds an additional 1" / 25.4mm to the overall fixture height and may be controlled via wired DMX RDM or Bluetooth wireless. The Luminous Accent shall be IK08.





HUBBELL LIGHTING RGBW REMOTE APP

- The Hubbell Lighting RGBW Remote application may be downloaded free of charge from the Apple App Store or Google Play.
- Color selection and adjustment.
- Camera function for color matching.
- Intensity slider for dimming/ramping up.
- Save and rename up to 10 presets.
- Group and rename fixtures.
- Fixture is password protected, refer to instructions to set unique password.

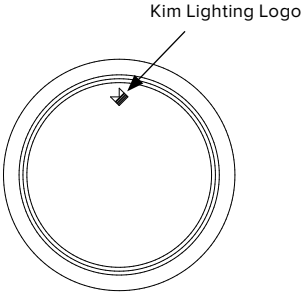


MOUNTING

ALUMINUM BODY

- Once attached to base mounting plate, fixture may be rotated 20° in either direction and secured with set screws at base of the bollard body. KIM Lighting logo indicates 'street side' output. Once installed on the impact post, fixture may be rotated 360 degrees and secured with set screw

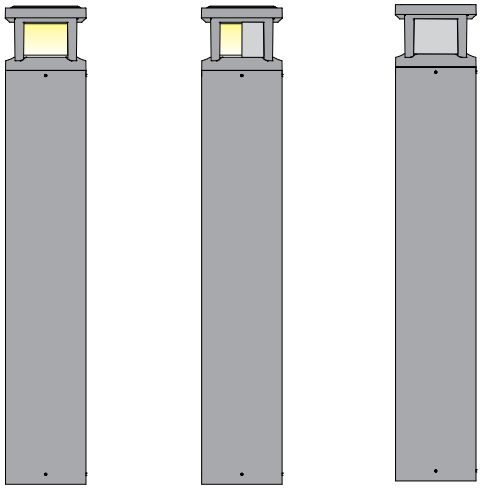
Street Side



Top View

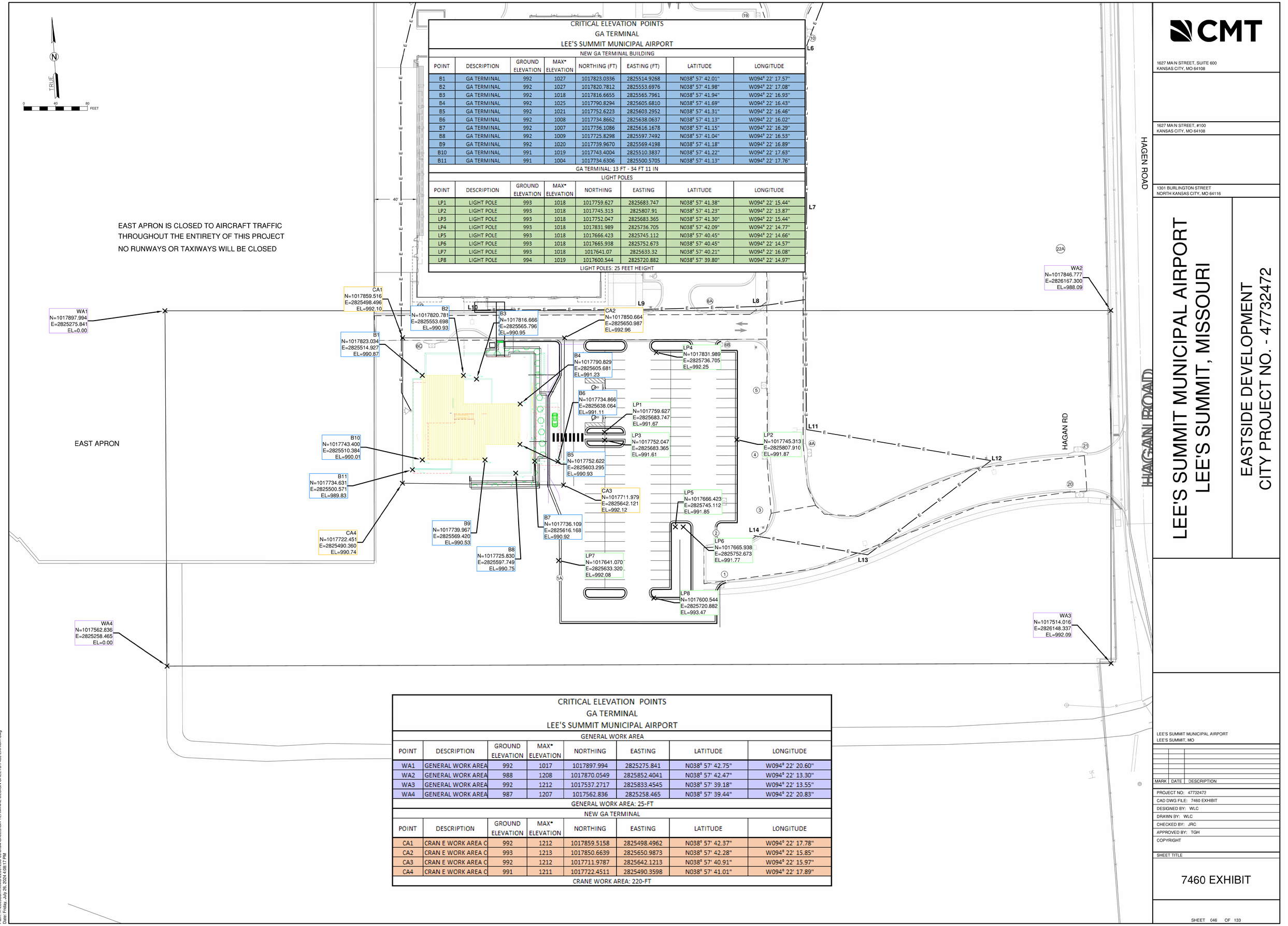
SHIELDING

- HS configurations feature factory installed 180° shield(s) that may also be installed in the field for any Optic configuration.



HS Front View HS Side View HS Back View

APPENDIX A7 – 7460 EXHIBIT



CRITICAL ELEVATION POINTS
GA TERMINAL
LEE'S SUMMIT MUNICIPAL AIRPORT

NEW GA TERMINAL BUILDING

POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING (FT)	EASTING (FT)	LATITUDE	LONGITUDE
B1	GA TERMINAL	992	1027	1017823.0336	2825514.9268	N038° 57' 42.01"	W094° 22' 17.57"
B2	GA TERMINAL	992	1027	1017820.7812	2825553.6976	N038° 57' 41.98"	W094° 22' 17.08"
B3	GA TERMINAL	992	1018	1017816.6655	2825565.7961	N038° 57' 41.94"	W094° 22' 16.93"
B4	GA TERMINAL	992	1025	1017790.8294	2825605.6810	N038° 57' 41.69"	W094° 22' 16.43"
B5	GA TERMINAL	992	1021	1017752.6223	2825603.2952	N038° 57' 41.31"	W094° 22' 16.46"
B6	GA TERMINAL	992	1008	1017734.8662	2825638.0637	N038° 57' 41.13"	W094° 22' 16.02"
B7	GA TERMINAL	992	1007	1017736.1086	2825616.1678	N038° 57' 41.15"	W094° 22' 16.29"
B8	GA TERMINAL	992	1009	1017725.8298	2825597.7492	N038° 57' 41.04"	W094° 22' 16.53"
B9	GA TERMINAL	992	1020	1017739.9670	2825569.4198	N038° 57' 41.18"	W094° 22' 16.89"
B10	GA TERMINAL	991	1019	1017743.4004	2825510.3837	N038° 57' 41.22"	W094° 22' 17.63"
B11	GA TERMINAL	991	1004	1017734.6306	2825500.5705	N038° 57' 41.13"	W094° 22' 17.76"

GA TERMINAL: 13 FT - 34 FT 11 IN

LIGHT POLES

POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING	LATITUDE	LONGITUDE
LP1	LIGHT POLE	993	1018	1017759.627	2825683.747	N038° 57' 41.38"	W094° 22' 15.44"
LP2	LIGHT POLE	993	1018	1017745.313	2825807.91	N038° 57' 41.23"	W094° 22' 13.87"
LP3	LIGHT POLE	993	1018	1017752.047	2825683.365	N038° 57' 41.30"	W094° 22' 15.44"
LP4	LIGHT POLE	993	1018	1017831.989	2825736.705	N038° 57' 42.09"	W094° 22' 14.77"
LP5	LIGHT POLE	993	1018	1017666.423	2825745.112	N038° 57' 40.45"	W094° 22' 14.66"
LP6	LIGHT POLE	993	1018	1017665.938	2825752.673	N038° 57' 40.45"	W094° 22' 14.57"
LP7	LIGHT POLE	993	1018	1017641.07	2825633.32	N038° 57' 40.21"	W094° 22' 16.08"
LP8	LIGHT POLE	994	1019	1017600.544	2825720.882	N038° 57' 39.80"	W094° 22' 14.97"

LIGHT POLES: 25 FEET HEIGHT

CRITICAL ELEVATION POINTS
GA TERMINAL
LEE'S SUMMIT MUNICIPAL AIRPORT

GENERAL WORK AREA

POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING	LATITUDE	LONGITUDE
WA1	GENERAL WORK AREA	992	1017	1017897.994	2825275.841	N038° 57' 42.75"	W094° 22' 20.60"
WA2	GENERAL WORK AREA	988	1208	1017870.0549	2825852.4041	N038° 57' 42.47"	W094° 22' 13.30"
WA3	GENERAL WORK AREA	992	1212	1017537.2717	2825833.4545	N038° 57' 39.18"	W094° 22' 13.55"
WA4	GENERAL WORK AREA	987	1207	1017562.836	2825258.465	N038° 57' 39.44"	W094° 22' 20.83"

GENERAL WORK AREA: 25-FT

NEW GA TERMINAL

POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING	LATITUDE	LONGITUDE
CA1	CRAN E WORK AREA C	992	1212	1017859.5158	2825498.4962	N038° 57' 42.37"	W094° 22' 17.78"
CA2	CRAN E WORK AREA C	993	1213	1017850.6639	2825650.9873	N038° 57' 42.28"	W094° 22' 15.85"
CA3	CRAN E WORK AREA C	992	1212	1017711.9787	2825642.1213	N038° 57' 40.91"	W094° 22' 15.97"
CA4	CRAN E WORK AREA C	991	1211	1017722.4511	2825490.3598	N038° 57' 41.01"	W094° 22' 17.89"

CRANE WORK AREA: 220-FT

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108
1627 MAIN STREET, #100
KANSAS CITY, MO 64108
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: 7460 EXHIBIT
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH
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SHEET TITLE

7460 EXHIBIT

SHEET 046 OF 133

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Date: Friday, July 05, 2024 4:06:17 PM