III. A.

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

Architectural Review Board Staff Report

Project Type: Site Development Section Plan

Meeting Date: June 14, 2018

From: Jessica Henry, AICP *jh*
Senior Planner

Location: North of Chesterfield Airport Road and northeast of its intersection with Olive Street Road and northwest of its intersection with Wings of Hope Boulevard.

Applicant: Chiodini Architects

Description: **18385 Chesterfield Airport Road, Lot A (Chesterfield Hockey):** A Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for a 10.12 acre tract of land zoned "PC" Planned Commercial District located north of Chesterfield Airport Road and northeast of its intersection with Olive Street Road and northwest of its intersection with Wings of Hope Boulevard.

PROPOSAL SUMMARY

The request is for an 84,144 square foot ice and multi-sport facility located on the north side of North Outer 40 Road and northeast of its intersection with Olive Street Road. The proposed facility will contain two ice rinks for local recreation as well as regional sporting events. The subject site is zoned "PC" Planned Commercial District and is governed under the terms and conditions of City of Chesterfield Ordinance Number 2974. The exterior building materials will primarily consist of concrete panels, thin brick, and dark anodized aluminum. Rooftop mechanical equipment will be screened by a perforated metal panel.

HISTORY OF SUBJECT SITE

The subject site was blanket zoned "M-3" Planned Industrial by St. Louis County in 1965 with no site specific ordinance or development plan filed for this property after this zoning designation. In October of 2017, the City Council approved Ordinance 2974 which changed the zoning of the subject property from an "M-3" Planned Industrial District to a "PC" Planned Commercial District. The subject site is currently vacant.

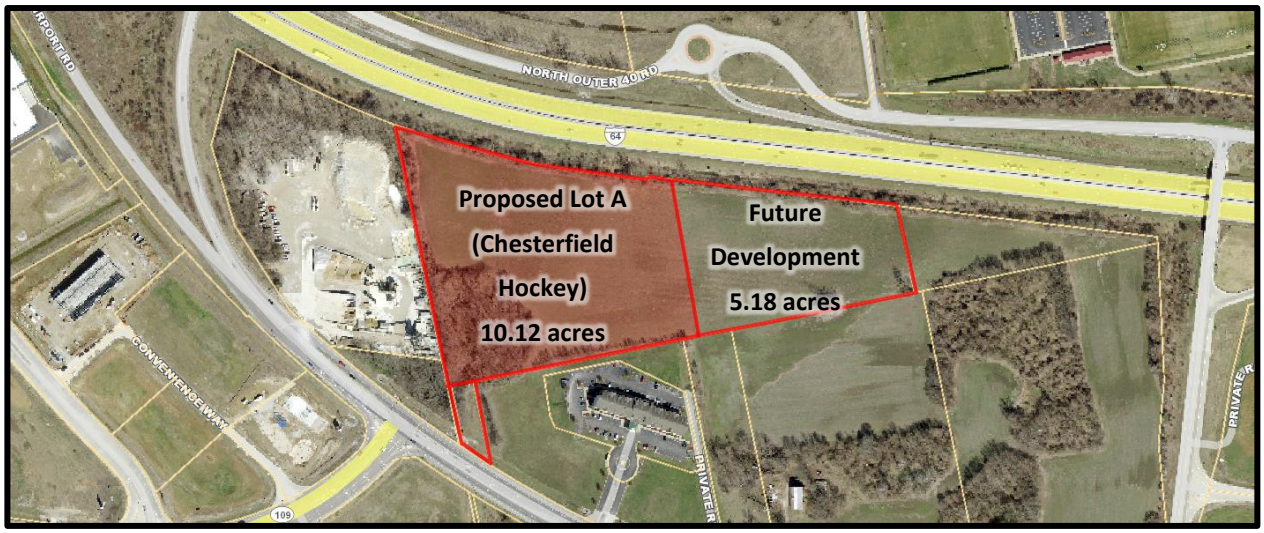


Figure 1: Aerial Site Photo (lots not drawn to scale/approximated)

STAFF ANALYSIS

General Requirements for Site Design:

The subject site is located along Chesterfield Airport Road and is oriented in a perpendicular fashion to the adjacent arterial roadways. Given this orientation, the north and south elevations of the building will be highly visible to motorists traveling from both the east and west.

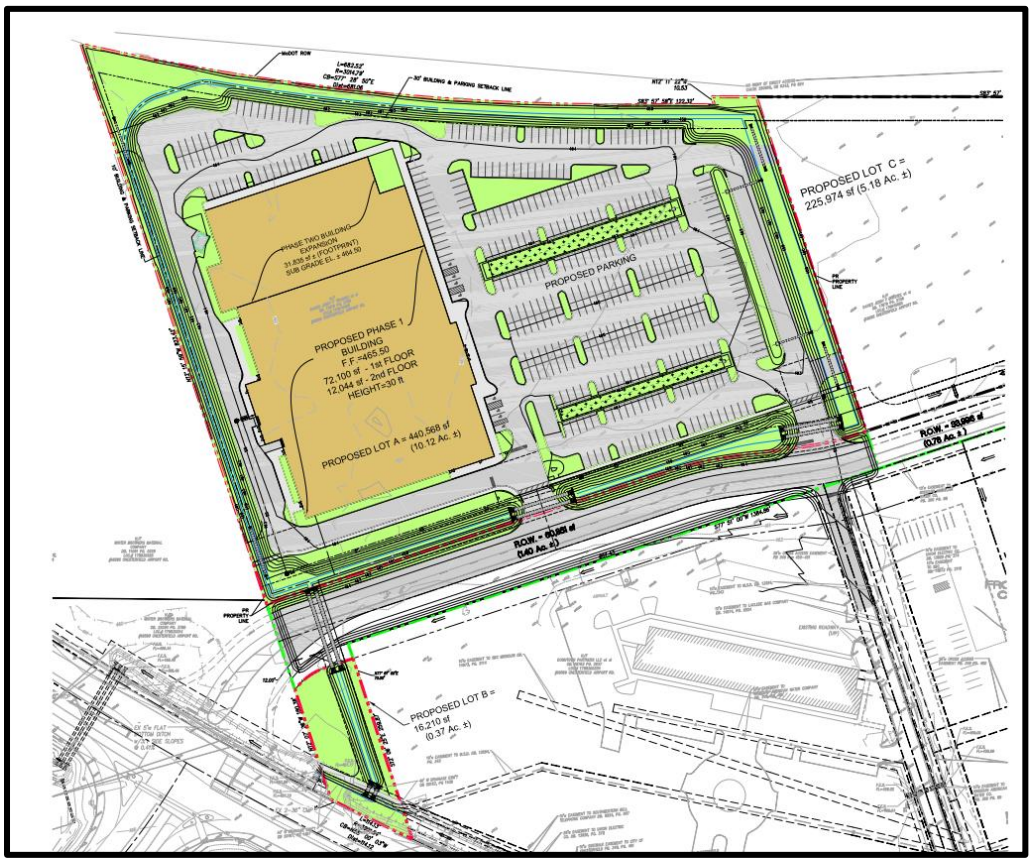


Figure 2: Color Site Development Section Plan excerpt

Circulation System and Access

The subject site will be served by two dedicated entrances from the future Olive Street Road extension. Until such time as the extension is constructed, the development will be served from an existing private drive off of Chesterfield Airport Road.

Two proposed cross access easements are provided for future development of the remaining portion of the development to the east as well as to the vacant land to the west of the subject site.

Topography and Parking

The site is generally flat, with approximately 1' of grade change across the property. Areas of the site will be both cut and filled to accommodate the building area. In accordance with the Chesterfield Valley Design Requirements, parking should be located "primarily to the side or rear of any building facade facing I-64/US 40 or along North Outer 40." Parking is predominately located within the eastern half of the site at the front of the building, with a small section of parking located in the northwest portion of the site. Accessible parking is located near the front entrance.

General Requirements for Building Design:

This request is to allow for the development of an 84,144 square foot ice and multi-sport facility on the property. The facility will be 30 feet in height and will contain two ice rinks with an associated refrigeration room, along with locker rooms, concessions, and seating areas.

A. Scale

The proposed building is 30 feet in height, and the center portion of the building consists of two floors. The building's parapets vary in height, with the tallest point on the structure being the front entry parapet at a height of 36 feet. The scale of the facility is conducive to functioning as an ice rink, with interior height restrictions that must be met for the sport of hockey; additionally, there are no windows in the rink portion of the building due to how the natural light may impact the ice. The subject property is adjacent to a concrete plant to the west, a hotel to the south, and green space to the east.

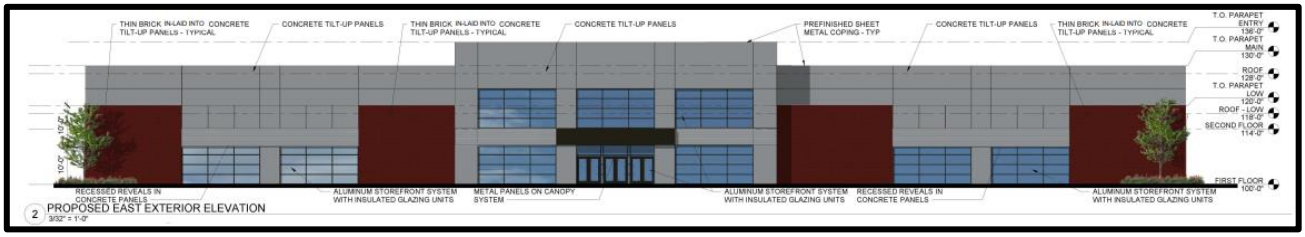


Figure 3: East exterior elevation

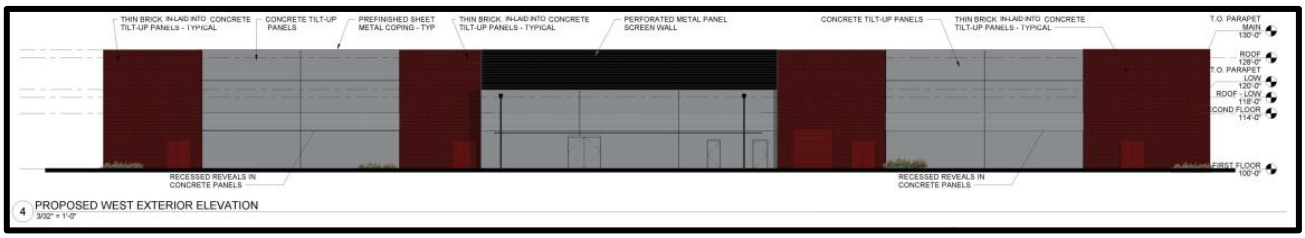


Figure 4: West exterior elevation

B. Design

The main envelope structure of the building is a 14" insulated tilt-up concrete panel, along with an R-30 insulated roof, for maximum energy efficiency. The building includes a four-sided design with similar materials and treatments on each façade, as required by the Chesterfield Valley Design Requirements. Facing east, the front façade consists of an architectural metal panel canopy system to accentuate and protect the entry area. This is surrounded by scored and painted exposed concrete tilt-up panels. The storefront system will be a dark anodized aluminum with clear tinted Low-e glass. The horizontal detail between the first and second story storefront will be recessed reveals in the concrete panel created by a form-liner. The brick shown on the front elevation is a thin brick that will be poured in place into the concrete panels.

Facing north and south, the side façades will also consist of the tilt up concrete panels with thin brick poured in place and painted tilt up panels with horizontal decorative recessed reveals to split up the panel. The rear façade facing west consists of the same material as the other three sides and contains the step-down portion of the building, where the ammonia equipment room will be located. The condenser for the ammonia system will be located on top of the ammonia equipment room. The condenser will be screened by a perforated architectural metal panel, similar to the architectural metal panel that will screen the HVAC units on the roof of the facility.

Figure 5: Proposed rendering view with perforated metal panel screening shown.

C. Materials and Color

The exterior building materials will primarily consist of concrete panels, thin brick, and dark anodized aluminum. The color palette consists of neutral tones.

D. Landscape Design and Screening

Several different areas of landscaping are proposed in accordance with City Code requirements, including parking lot landscaping, a 30 foot landscape buffer, and street trees along the site's frontage. The 30 foot landscape buffer provided along the proposed Olive Street Road extension will be planted with a mix of canopy, ornamental, and evergreen trees. The landscape design provides an additional mix of canopy trees, ornamental trees, evergreen trees, deciduous shrubs and flowering plants to ensure for seasonal color and texture.

Rooftop mechanical equipment is included on the building, and it will be screened by a perforated architectural metal panel. A trash enclosure to screen trash receptacles from public view is planned for this proposed construction. The enclosure will be constructed of concrete tilt-up panel with brick inlaid on the exterior side to match the building.

Finally, a space is provided for public art at the entrance to the site.

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

F. Lighting
Lighting is planned in association with the proposed development as required by the City of Chesterfield. The proposed lighting plan primarily consists of utilitarian lighting, including forty seven (47) parking and street light fixtures, six (6) wall-mounted light fixtures, and nine (9) bollard light fixtures. Lights that are not fully shielded flat lensed fixtures will require separate approval from the Planning Commission.

DEPARTMENT INPUT
Be advised, this project is still going through development review by City Staff and will not proceed to the Planning Commission until all outstanding items have been addressed. All recommendations made by the ARB will be included in Staff's report to the Planning Commission.

Staff requests review and recommendation on this submittal for 18385 Chesterfield Airport Road, Lot A (Chesterfield Hockey).

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

1) "I move to forward the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations, and Architect's Statement of Design for 18385 Chesterfield Airport Road, Lot A (Chesterfield Hockey), as presented, with a recommendation for approval (or denial) to the Planning Commission."

2) "I move to forward the Site Development Section Plan, Landscape Plan, Lighting Plan, and Architectural Elevations for 18385 Chesterfield Airport Road, Lot A (Chesterfield Hockey) to the Planning Commission with the following recommendations…"

Attachments
1. Architectural Review Packet Submittal

City of Chesterfield

ARCHITECTURAL REVIEW BOARD
Project Statistics and Checklist

Date of First Comment Letter Received from the City of Chesterfield 03/18/18

Project Title: Chesterfield SportsComplex **Location:** Chesterfield Airport rd & Olive Street

Developer: Chesterfield SportsComple **Architect:** Chiodini Architects **Engineer:** Stock & Associates

PROJECT STATISTICS:

Size of site (in acres): 10.12 acres **Total Square Footage:** 83,000 **Building Height:** 36'-0"

Proposed Usage: Ice Rink complex with (2) sheets of Ice for competition and recreation

Exterior Building Materials: Concrete Tilt-up, brick, architectural metal panels and aluminum storefront

Roof Material & Design: TPO roof system (white)

Screening Material & Design: Combination of Concrete tilt-up panels and perforated metal panels (see elevations)

Description of art or architecturally significant features (if any): We are planning a well lighted and landscaped Art feature in the entrance island.

ADDITIONAL PROJECT INFORMATION:

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

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

ARCHITECTURAL REVIEW DESIGN STANDARDS

Please refer to Section 04-01 of the Unified Development Code for the Architectural Review Design Standards.

ARCHITECTURAL TERMS

Please refer to Section 10-06 of the Unified Development Code for definitions of Architectural Terms.

Chiodini ARCHITECTS

Architectural Statement of Design

Chesterfield SportsComplex

Chesterfield, Missouri

Project Overview:

Our goal is to create the premier hockey destination in Missouri and in the Midwest, located adjacent to the premium Outlet Mall, on approximately 12 acres of land between Chesterfield Airport Road and US 64/40. Our proposed facility's design and its location will eventually combine retail, entertainment and sports. The new facility differentiates itself from others in the St. Louis area, many of which are older and in need of renovation.

The Chesterfield SportsComplex, a state-of-the-art ice and multi-sport facility, is being developed in the Chesterfield Valley to replace the Hardees IcePlex, which was recently sold and demolished to make way for the new Top Golf facility. The complex will provide much needed ice time and recreational facilities for the St. Louis youth and adults. Attract local and regional sporting events and tournaments, generating jobs and tourism dollars for local businesses. It will also help St. Louis maintain and build upon its reputation as a first-tier hockey and sports town. The new complex is a public-private partnership and will be owned and operated by the Chesterfield Hockey Association, a non-profit organization.

Statement of Design:

Building:

The scale of our facility is conducive to functioning as an ice rink There are certain interior clear height restrictions that need to be met for the game of hockey; as well as no windows in the ice portion due to natural light affecting the ice and the game in a negative way. This building is a perfect example for form following function.

Adjacent to our site, to the west, is a concrete plant, to the south is an outdated three-story hotel. To the east of our building is all undeveloped green space. There is nothing around our building with which to correlate design.

Design:

The main envelope structure of the building is a 14" insulated tilt-up concrete panel (R- value 13), along with an R-30 insulated roof, for maximum energy efficiency. Facing east, the front facade consists of an architectural metal panel canopy system to both accentuate and protect the entry area. This is surrounded by scored and painted exposed concrete tilt-up panels. The storefront system will be a very dark anodized aluminum (black) with clear tinted Low-e glass. The horizontal detail between the first and second story storefront will be recessed reveals in the concrete panel created by a form-liner. The brick shown on the front elevation is a thin brick that will be poured in place into the concrete panels.

chiodiniarchitects STUDIO
Programming | Planning | Architecture | Interior | Graphics
1401 South Brentwood Blvd. | Studio 575 | Saint Louis, Missouri 63144
314.725.5588 | FAX 314.733.9999 | arch@chiodini.com

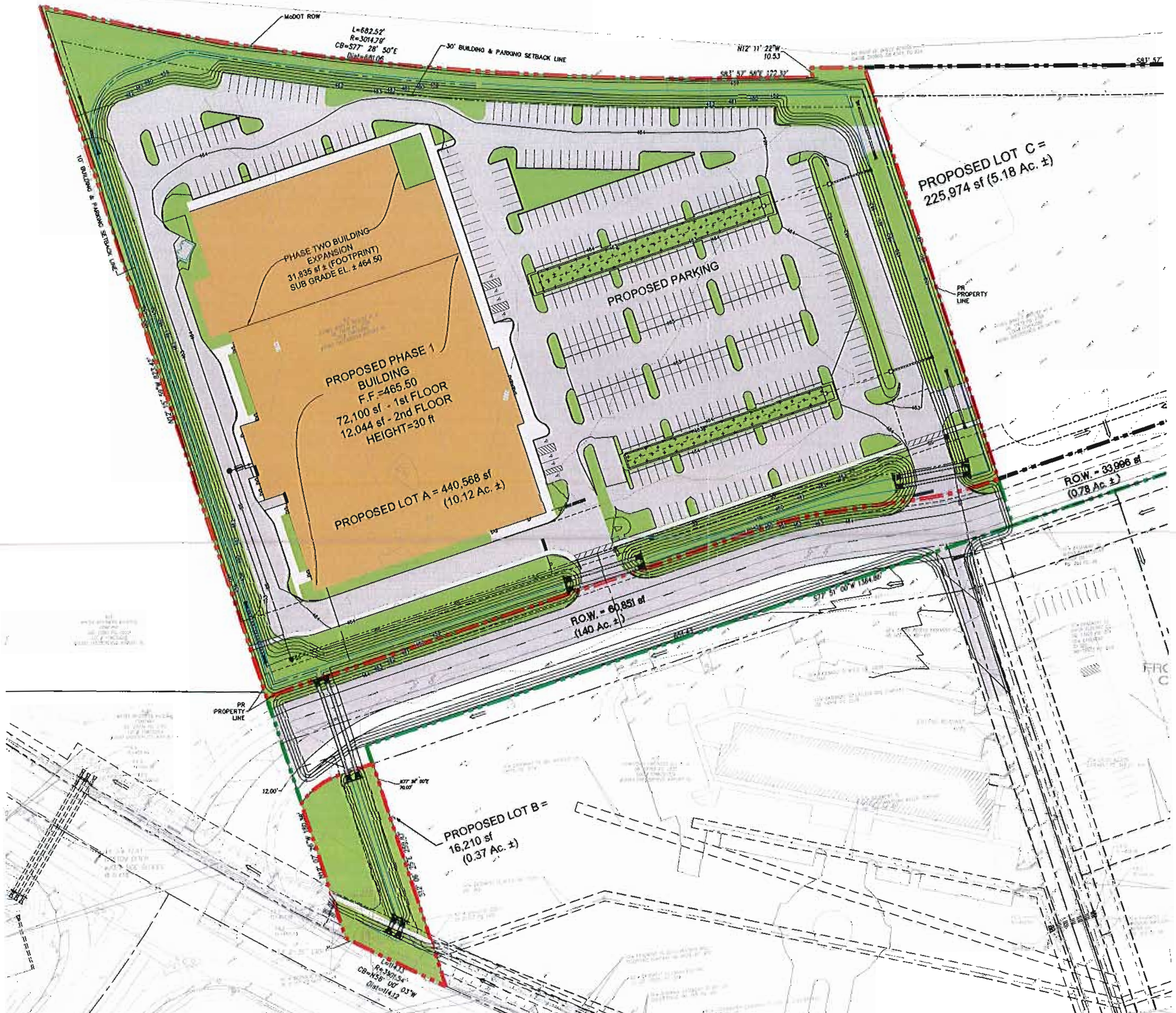
The two side elevations (facing north & south) will consist of the tilt up concrete panels with thin brick poured in place and painted tilt up panels with horizontal decorative recessed reveals to split up the panel. The back (west elevation) consists of the same material as the other three sides and contains the step-down portion of the building. This is where the ammonia equipment room will be located. On top of the ammonia equipment room will the condenser for the ammonia system. The condenser will be screened by a perforated architectural metal panel; this is the same architectural metal panel which will screen the HVAC units on the roof of the facility.

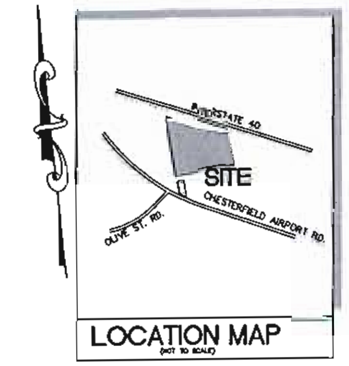
Landscape:

The landscaping has been planned in association with the proposed development as required by the City of Chesterfield. A 30' landscape buffer is provided along I-64 and Olive Street Road Extension and is planted with a mix of canopy, ornamental and evergreen trees. Additionally, a mix of canopy, ornamental trees, evergreen and deciduous shrubs and flowering plants have been provided on site to ensure for seasonal color and interest. The islands in the parking lot serve as bioretention and will be planted with native grasses and forbes to meet MSD requirements.

Michael **Chiodini**

Chiodini Architects
Programming | Planning | Architecture | Interiors I Graphics





PREPARED BY:
STOCK & ASSOCIATES Consulting Engineers, Inc.

SITE DEVELOPMENT SECTION PLAN FOR:
CHESTERFIELD ICE AND SPORTS COMPLEX
ORD. 2974, ZONED: PC
CHESTERFIELD, MISSOURI

DATE:

GEORGE M. STOCK E-25116
CIVIL ENGINEER
CERTIFICATE OF AUTHORITY

REVISIONS:

1	04-11-18 MEETING WITH CITY
2	04-23-18 CITY COMMENTS
3	05-21-18 CITY COMMENTS

A.L.W. — C.M.S.
03/01/2018 — 215-5542.2
MO-00

SHEET TITLE:
COLOR SITE PLAN

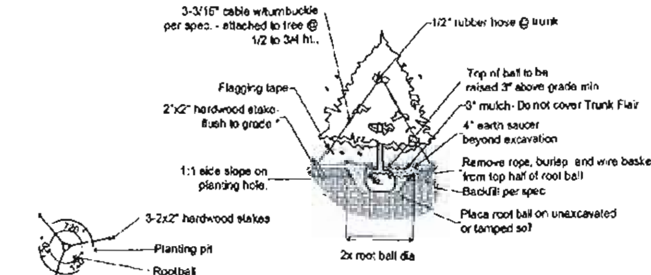
SHEET NO.:
1.0

PREPARED FOR:
CHESTERFIELD HOCKEY ASSOCIATION, INC.
2199 INNERBELT BUSINESS CENTER
OVERLAND, MO 63114

THE STAENBERG GROUP
2127 INNERBELT BUSINESS CENTER DR.
SUITE 310
ST. LOUIS, MO 63114

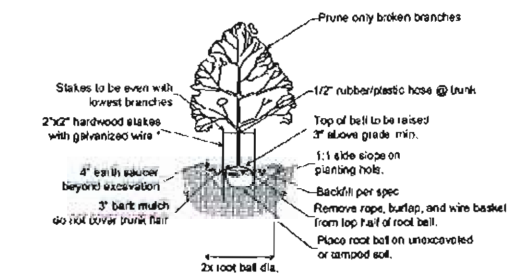
Landscape Plan

SCALE 1"=40'0"

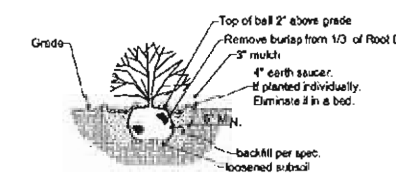


TYPICAL EVERGREEN PLANTING

* Staking should be done only when:
  - Planting in soft, loose soils
  - Root balls with sandy soil, or wet clay
  - Trees located in an extremely windy location

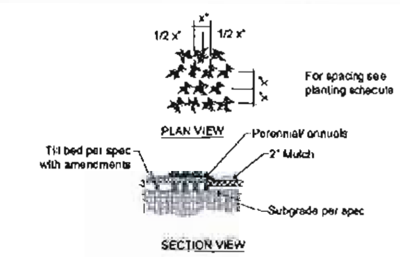


DECIDUOUS TREE PLANTING



SCARIFY ROOT BALL OF ALL CONTAINER STOCK

TYPICAL SHRUB PLANTING



TYPICAL PERENNIAL PLANTING

GENERAL NOTES LOT A & B:

1) Openspace ratio Phase 1 is 51.1% Total Site 456,776 SF/Openspace 233,263 SF
   Openspace ratio Phase 2 is 44.1% Total Site 456,776 sf/Openspace 201,428 SF.
2) Street trees-I-64 804.6 lf/50 = 16.09 or 17 Street Trees
3) Street Trees-Olive Street Road Extension Lot A - 769.1 lf/50 = 15.6 or 16 Street Trees
4) Street Trees-Olive Street Road Extension Lot B - 82.85 lf/50 = 1.65 or 2 Street Trees
5) All street trees will be located at least 3' from proposed curb.
6) All street trees will be located at least 10' from all storm sewer structures
7) All street trees will be located at least 25' from all Street lights, Signs, and intersections.
8) Mitigation landscape or contribution to Chesterfield Tree Fund will be required to meet preservation requirements of 25,623 sq. ft. of tree canopy.

STREET TREE SCHEDULE LOT A & B

Symbol	Quantity	Botanical Name	Common Name	Size	Mature Height	[illegible]	Category
A	3	Zelkova serrata	Zelkova	2 1/2"	45'+	Fast Growing	Deciduous
B	6	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	2 1/2"	45'+	Fast Growing	Deciduous
C	4	Gleditsia triacanthos 'Shademaster'	Shademaster Honeylocust	2 1/2"	45'+	Fast Growing	Deciduous
D	9	Tillia cordata 'Greenspire'	Little-leaf Linden	2 1/2"	45'+	Medium Growing	Deciduous
E	10	Quercus bicolor	Swamp White Oak	2 1/2"	45'+	Medium Growing	Deciduous

PLANTING SCHEDULE

Symbol	Quantity	Botanical Name	Common Name	Size	Mature Height	[illegible]	Category
B	11	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	2 1/2"	45'+	Fast Growing	Deciduous
C	9	Gleditsia triacanthos 'Shademaster'	Shademaster Honeylocust	2 1/2"	45'+	Fast Growing	Deciduous
D	14	Tillia Cordata 'Greenspire'	Little-leaf Linden	2 1/2"	45'+	Slow Growing	Deciduous
M	4	Gymnocladus dioicus	Kentucky Coffeetree	2 1/2"	45'+	Medium Growing	Deciduous
F	19	Taxodium distichum	Bald Cypress	8-10'	45'+	Medium Growing	Deciduous
G	14	Crataegis laevigata 'Superba'	Crimson cloud Hawthorn	2 1/2"	25'+	Medium Growing	Ornamental
H	12	Carpinus caroliniana	American Hornbeam	2 1/2"	20'+	Medium Growing	Ornamental
J	28	Juniperus virginiana 'Taylor'	Taylor Juniper	6-8'	20'+	Medium Growing	Evergreen
K	19	Acer saccharinum 'Fall Fiesta'	Fall Fiesta Sugar Maple	2 1/2"	45'+	Slow Growing	Deciduous
L	5	Picea pungens	Colorado Spruce	8-10'	30'+	Medium Growing	Evergreen
a	42	Ilex verticillata 'Sprawy'	Berry Heavy Winterberry	24-30"		4' O.C.	
b	42	Viburnum x juddii	Judd Viburnum	24-30"		4' O.C.	
c	91	Rhus aromatica 'Gro-Low'	Gro Low Sumac	18-24"		3' O.C.	
d	78	Juniperus sabina 'Broadmoor'	Broadmoor Juniper	18-24"		4' O.C.	
e	38	Ceanothus americanus	New Jersey Tea	18-24"		3' O.C.	
f	45	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetspire	18-24"		3' O.C.	
		Water quality Plantings per MSD					

Consultants:

Chesterfield Ice and Sports Complex
Ord. 2974, Zoned: PC
Chesterfield, Missouri

Revisions:

Date	Description	No.
4/16/18	Site Revisions	1
5/18/18	City Comments	2

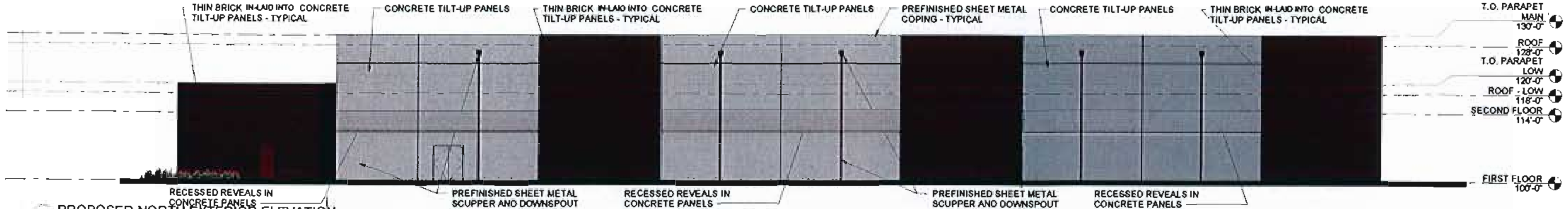
Drawn: DAD
Checked: BAD

DeLong Landscape Architecture, LLC
7620 West Bruno Ave
St. Louis, MO. 63117
(314) 346-4856
delong.la@gmail.com

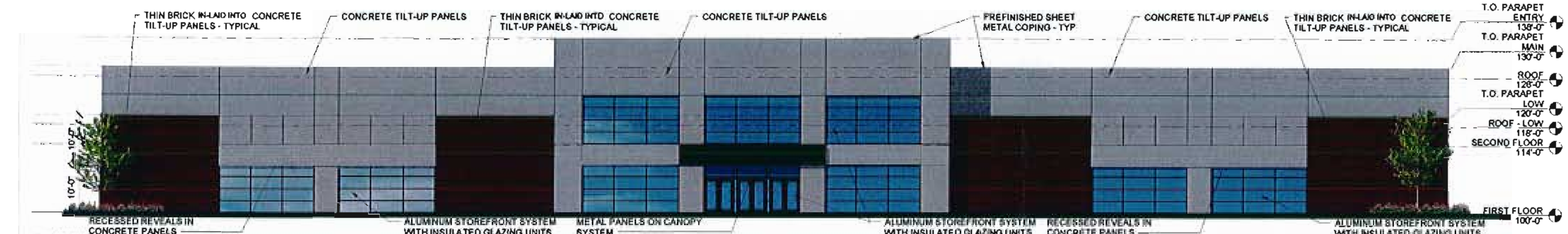
Sheet Title: Landscape Plan

Sheet No: L-2

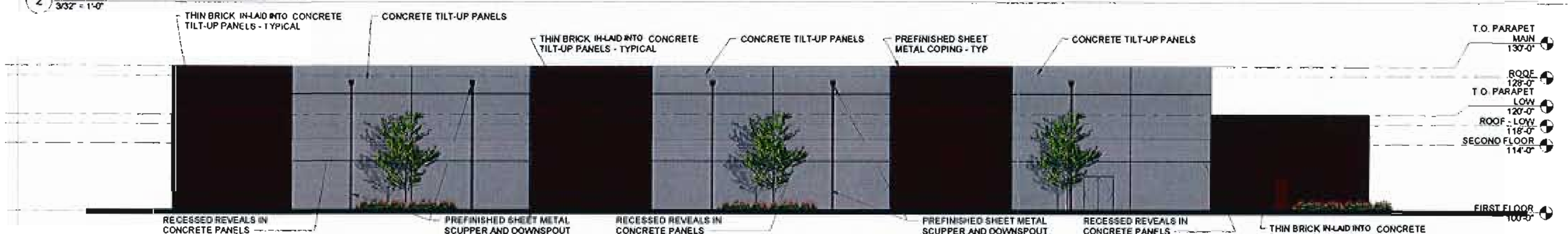
Date: 3/1/2018
Job #: 176.002



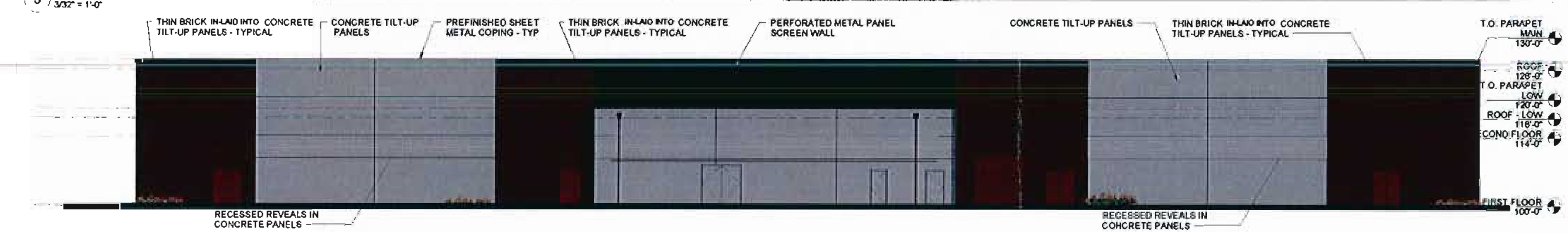
1 PROPOSED NORTH EXTERIOR ELEVATION
3/32" = 1'-0"



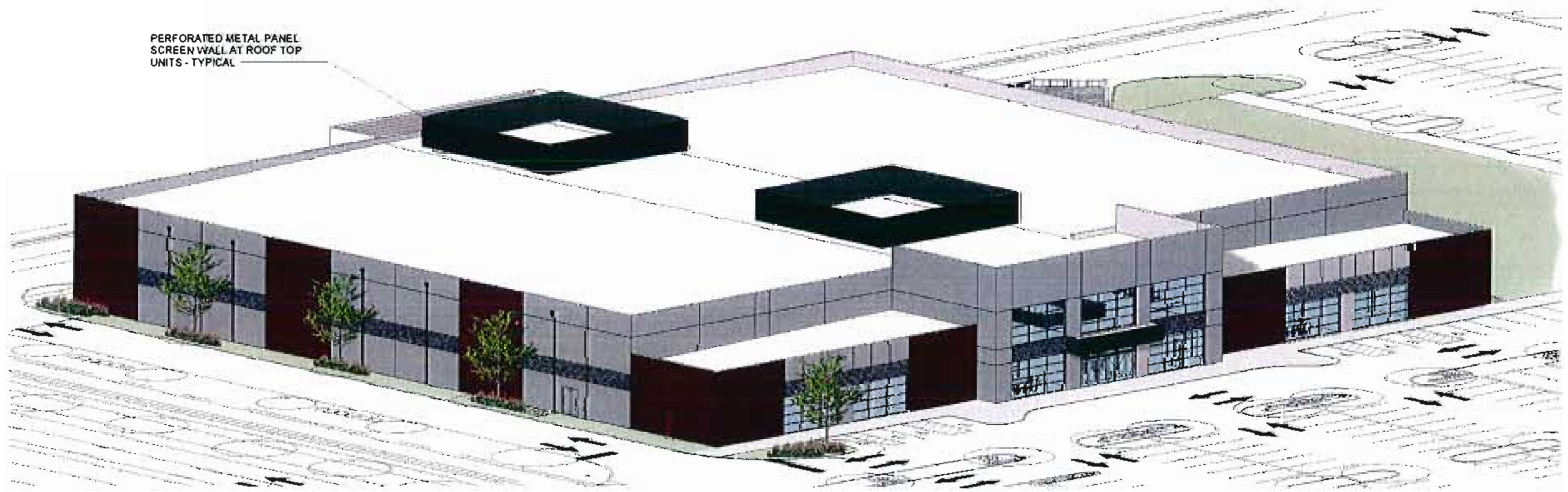
2 PROPOSED EAST EXTERIOR ELEVATION
3/32" = 1'-0"



3 PROPOSED SOUTH EXTERIOR ELEVATION
3/32" = 1'-0"



4 PROPOSED WEST EXTERIOR ELEVATION
3/32" = 1'-0"



5 PROPOSED RENDERING VIEW

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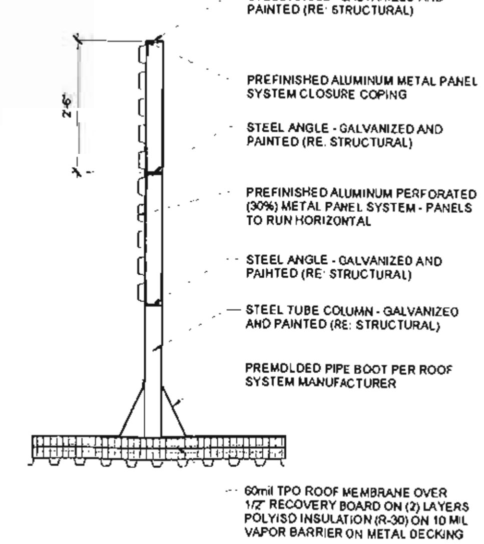
EXTERIOR FINISH MATERIAL

CONCRETE TILT-UP PANELS	INSULATED CONCRETE TILT-UP PANELS WITH SMOOTH FACE
THIN BRICK	THIN MASONRY BRICK UNIT INLAID IN CONCRETE PANEL - ENDICOTT RED IRONSPOT UTILITY SIZE THIN BRICK
ACM METAL PANEL CANOPY	ACM METAL PANELS ON CANOPY - ALUCOBOND BLACK ANODIZED ALUMINUM
STOREFRONT SYSTEM	BLACK ALUMINUM STOREFRONT SYSTEM 2" X 4 1/2" - THERMAL BROKEN - OLD CASTLE
GLAZING UNITS	1" INSULATED GLASS UNITS - GREY TINTED - GUARDIAN GLASS
PAINT	EXPOSED CONCRETE PANELS SHERWIN WILLIAMS #7018 DOVETAIL
MECH SCREEN WALL	PERFORATED METAL PANELS FOR MECHANICAL EQUIPMENT SCREENING - BLACK ANODIZED ALUMINUM WITH 30% PERFORATION
COPINGS / DOWNSPOUTS	SHEET METAL COPINGS AND DOWNSPOUTS - BLACK ALUMINUM



6 PROPOSED MECHANICAL EQUIPMENT SCREEN WALL
3/4" = 1'-0"

Chiodini ARCHITECTS
Architecture / Interior Design / Graphics

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ARB SUBMITTAL PACKAGE (REVISED) - MAY 21, 2018

CHESTERFIELD SPORTSCOMPLEX
CHESTERFIELD, MISSOURI

REVISIONS:

PROPOSED EXTERIOR ELEVATIONS

Project Number:	2016.007
Date:	2018.05.21
Drawn By:	SMM

A020

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ARB SUBMITTAL PACKAGE (REVISED) - MAY 21, 2018

PROPOSED EXTERIOR RENDERING

Project Number: 2018.007
Date: 2018.05.21
Drawn By: MWS

REVISIONS

CHESTERFIELD SPORTSCOMPLEX

CHESTERFIELD, MISSOURI

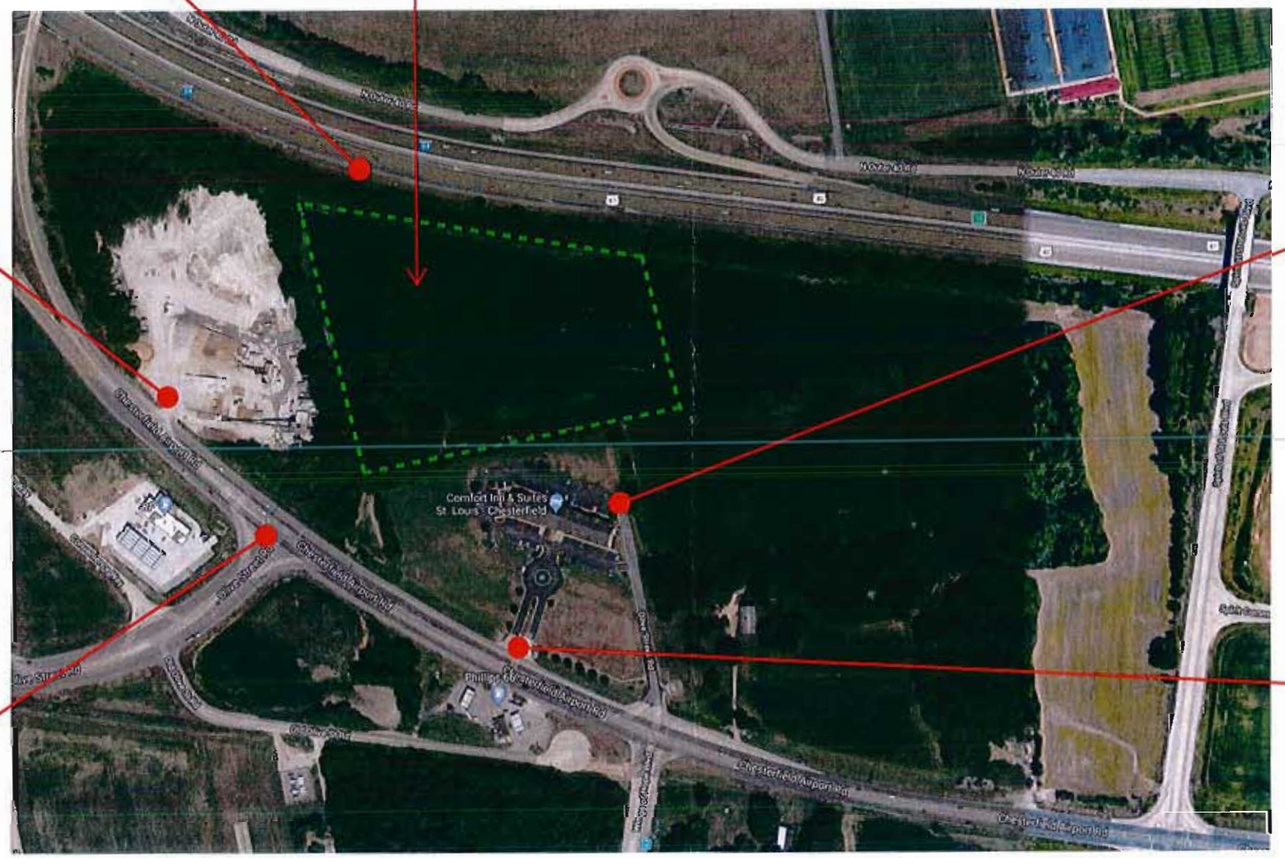
Chiodini ARCHITECTS
Architecture / Interior Design / Graphics

PHOTOGRAPHS OF ADJACENT PROPOERTIES TO THE PROPOSED CHESTERFIELD SPORTSCOMPLEX

VIEW FROM INTERSTATE I-64

PROPSED SITE FOR CHESTERFIELD SPORTSCOMPLEX

ADJACENT PROPERTY TO THE WEST

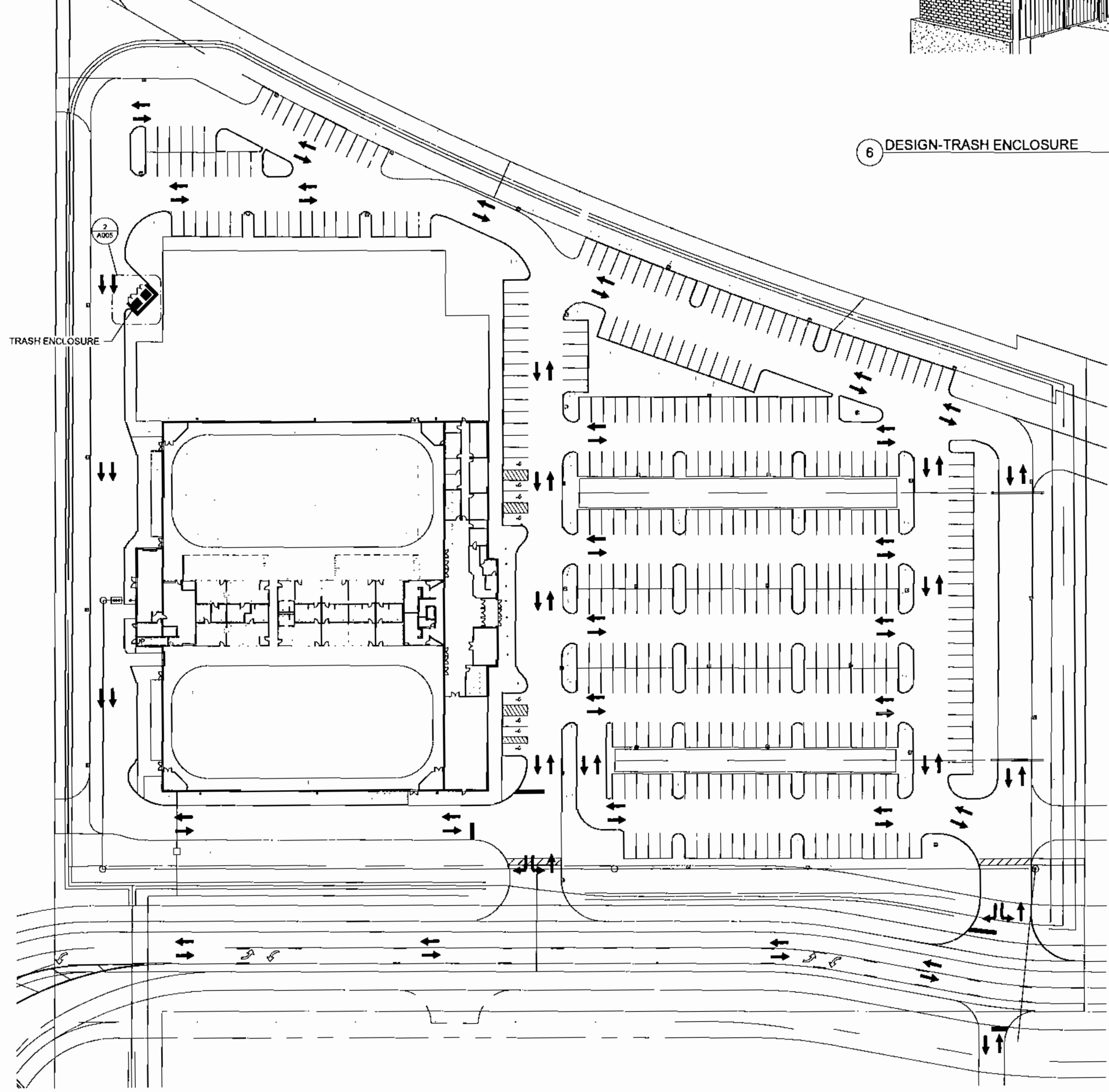


AERIAL PHOTO OF PROPOSED SITE

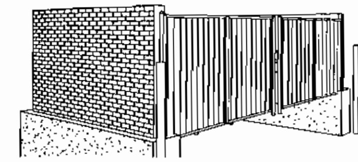
VIEW FROM ADJACENT PROPERTY TO THE SOUTH

VIEW AT INTERSTECTION OF CHESTERFIELD AIRPORT ROAD AND OLIVE STREET

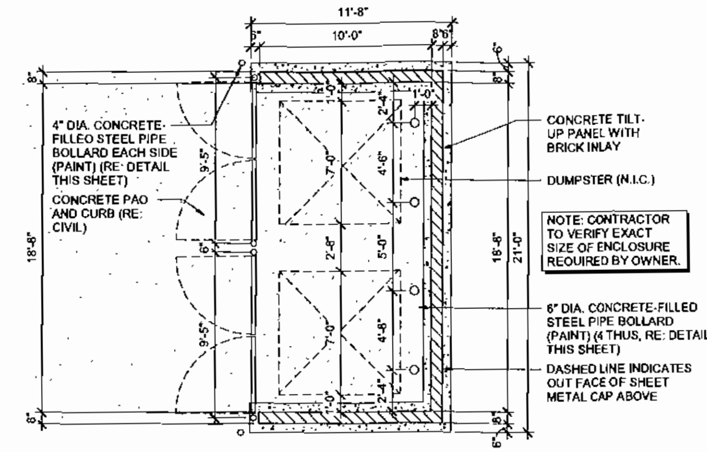
ADJACENT PROPERTY TO THE SOUTH



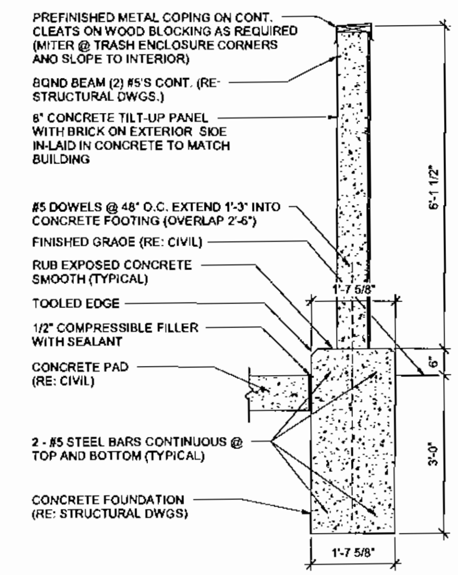
1 PROPOSED ARCHITECTURAL SITE PLAN
1" = 40'-0"



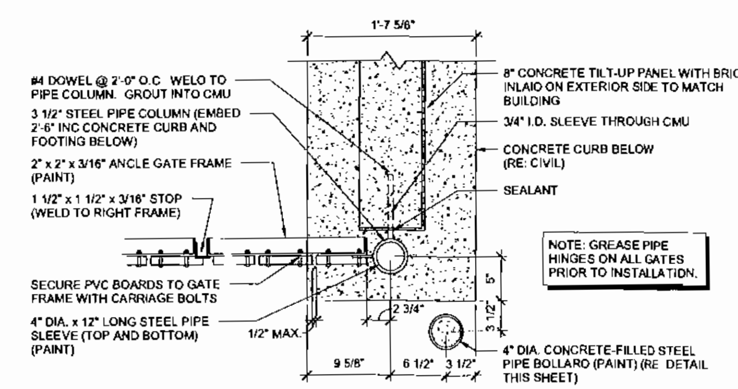
6 DESIGN-TRASH ENCLOSURE



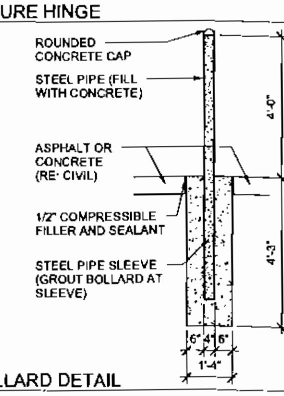
2 TRASH ENCLOSURE PLAN
1/4" = 1'-0"



3 TRASH ENCLOSURE SECTION
3/4" = 1'-0"



4 TRASH ENCLOSURE HINGE
1 1/2" = 1'-0"



5 STEEL PIPE BOLLARD DETAIL
1/2" = 1'-0"

Chiodini ARCHITECTS
Architecture / Interior Design / Graphics

ARB SUBMITTAL PACKAGE (REVISED) - MAY 21, 2018

CHESTERFIELD SPORTSCOMPLEX

CHESTERFIELD, MISSOURI

REVISIONS:

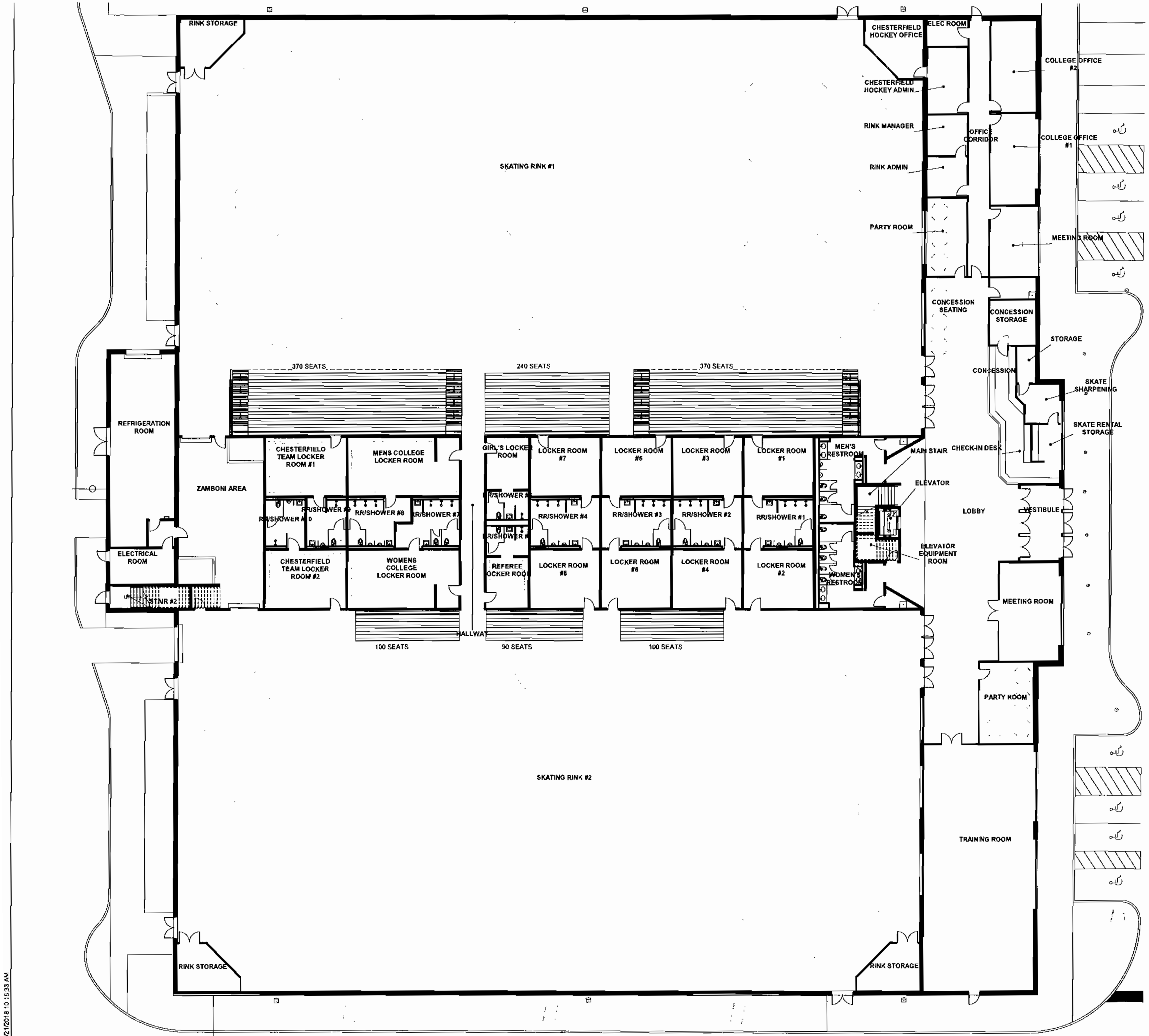
L. G. CHIODINI
ARCHITECT

PROPOSED ARCHITECTURAL SITE PLAN

Project Number: 2018.007
Date: 2018 05 21
Drawn By: SMM

A005

PRINTED: 5/21/2018 10:15:29 AM



1 PROPOSED FIRST FLOOR PLAN
3/32" = 1'-0"

PRINTED: 5/21/2018 10:16:33 AM

ARB SUBMITTAL PACKAGE (REVISED) - MAY 21, 2018

Chiodini ARCHITECTS
Architecture / Interior Design / Graphics

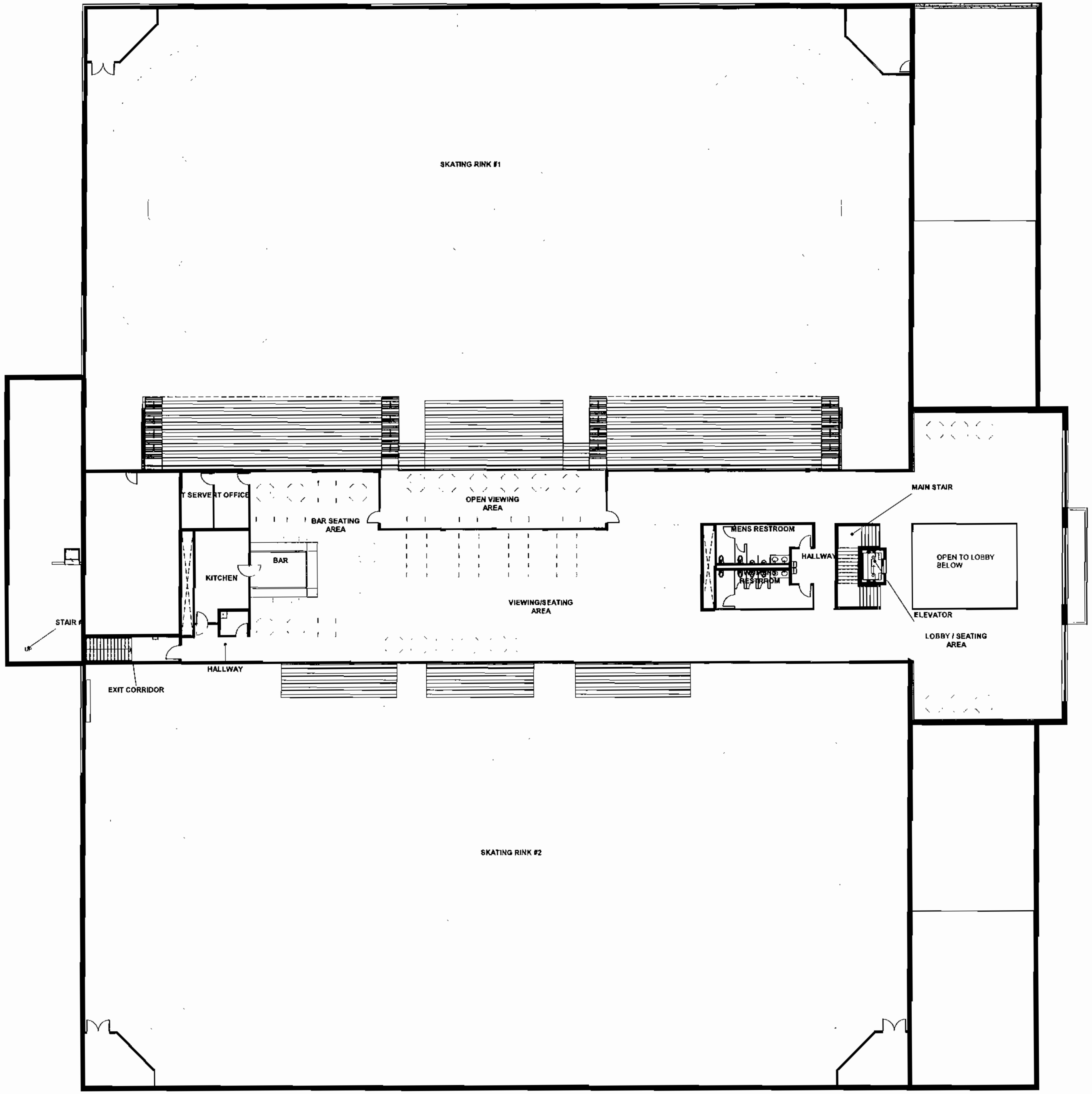
CHESTERFIELD SPORTSCOMPLEX
CHESTERFIELD, MISSOURI

REVISIONS:

PROPOSED FIRST FLOOR PLAN

Project Number:	2018.007
Date:	2018.05.21
Drawn By:	SMM

A010



1 PROPOSED SECOND FLOOR PLAN
3/32" = 1'-0"

PRINTED: 5/21/2018 10:16:35 AM

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CHESTERFIELD SPORTSCOMPLEX

CHESTERFIELD, MISSOURI

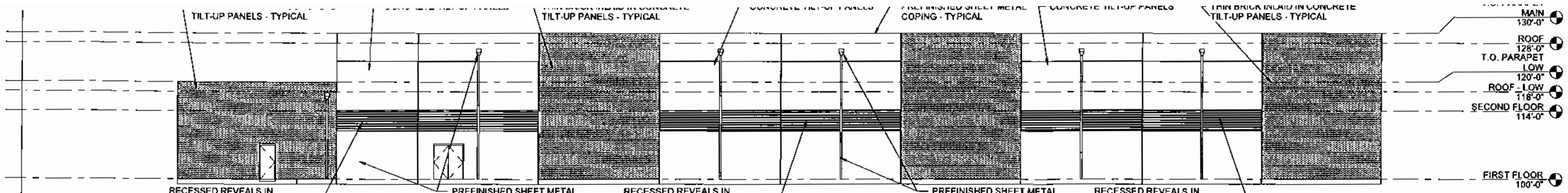
REVISIONS:

L. G. CHIODINI
NUMBER
ARCHITECT

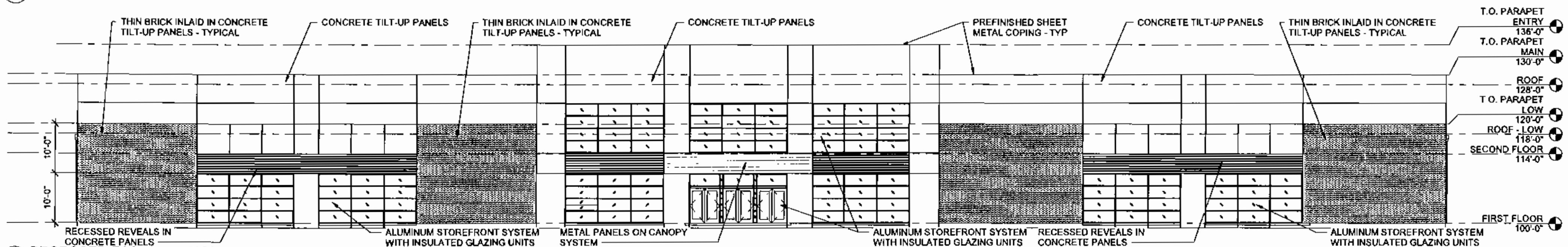
PROPOSED SECOND FLOOR PLAN

Project Number:	2018 007
Date:	2018.05.21
Drawn By:	SMM

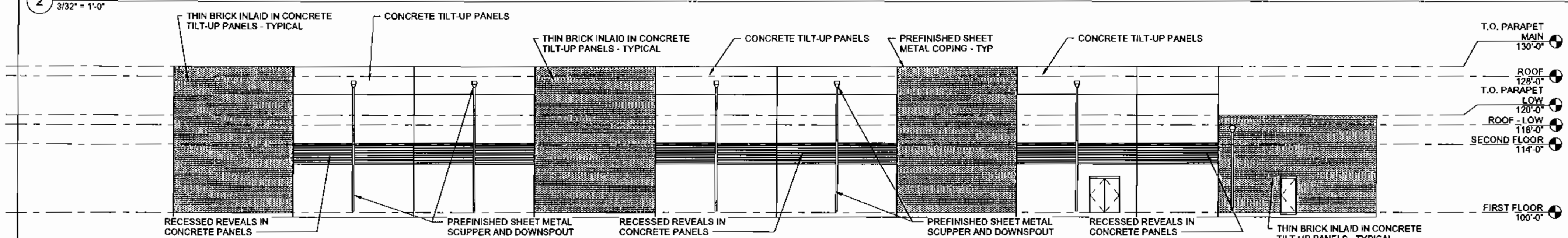
A011



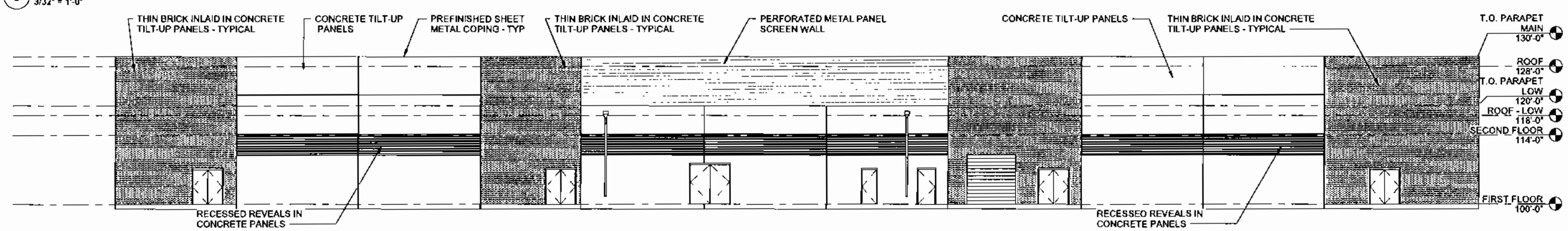
1 PROPOSED NORTH EXTERIOR ELEVATION
3/32" = 1'-0"



2 PROPOSED EAST EXTERIOR ELEVATION
3/32" = 1'-0"



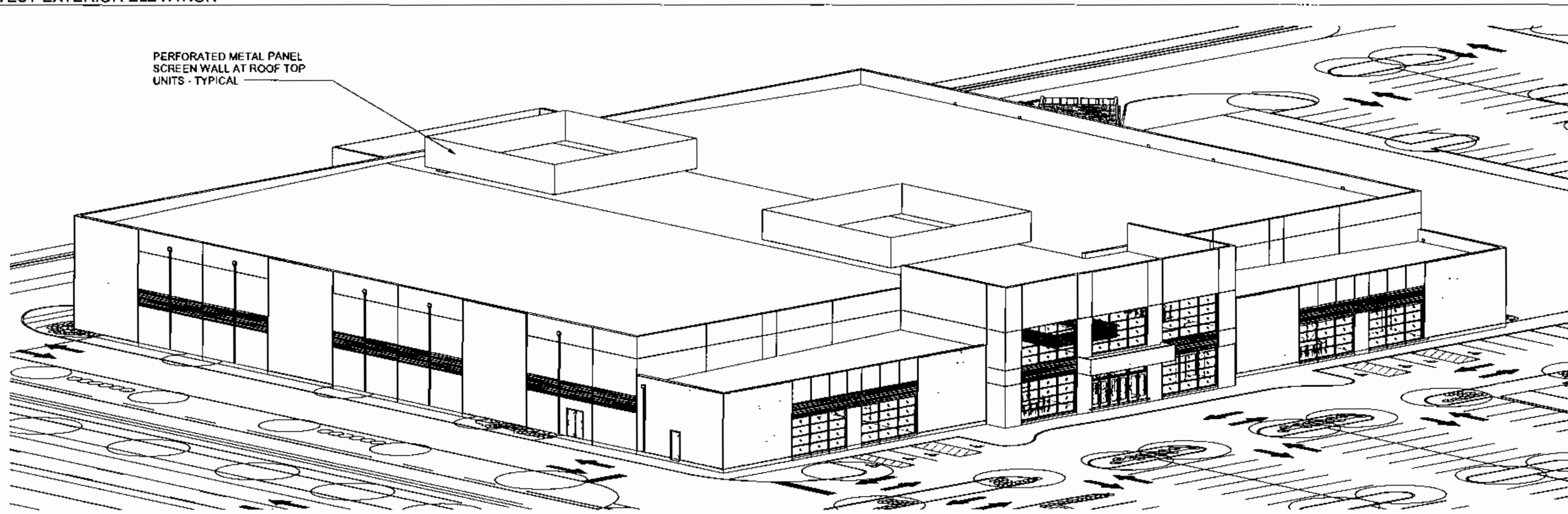
3 PROPOSED SOUTH EXTERIOR ELEVATION
3/32" = 1'-0"



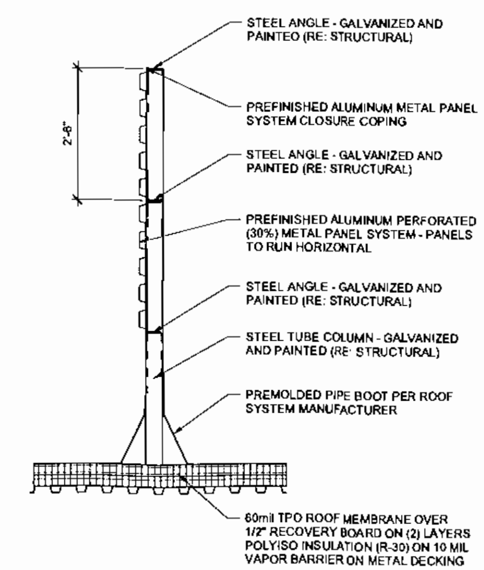
4 PROPOSED WEST EXTERIOR ELEVATION
3/32" = 1'-0"

EXTERIOR FINISH MATERIAL

CONCRETE TILT-UP PANELS	INSULATED CONCRETE TILT-UP PANELS WITH SMOOTH FACE
THIN BRICK	THIN MASONRY BRICK UNIT INLAID IN CONCRETE PANEL - ENOICOTT RED IRONSPOT UTILITY SIZE THIN BRICK
ACM METAL PANEL CANOPY	ACM METAL PANELS ON CANOPY - ALUCOBOND BLACK ANODIZED ALUMINUM
STOREFRONT SYSTEM	BLACK ALUMINUM STOREFRONT SYSTEM 2" X 4 1/2" - THERMAL BROKEN - OLO CASTLE
GLAZING UNITS	1" INSULATED CLASS UNITS - GREY TINTED - GUARDIAN GLASS
PAINT	EXPOSED CONCRETE PANELS SHERWIN WILLIAMS #7018 DOVETAIL
MECH SCREEN WALL	PERFORATEO METAL PANELS FOR MECHANICAL EOUIPMENT SCREENING - BLACK ANODIZED ALUMINUM WITH 30% PERFORATION
COPINGS / DOWNSPOUTS	SHEET METAL COPINGS AND ODWNSPOUTS - BLACK ALUMINUM



5 PROPOSED RENDERING VIEW



6 PROPOSED MECHANICAL EQUIPMENT SCREEN WALL
3/4" = 1'-0"

PRINTED: 5/22/2018 6:25:50 AM

ARB SUBMITTAL PACKAGE (REVISED) - MAY 21, 2018

Chiodini ARCHITECTS
Architecture / Interior Design / Graphics

CHESTERFIELD SPORTSCOMPLEX

CHESTERFIELD, MISSOURI

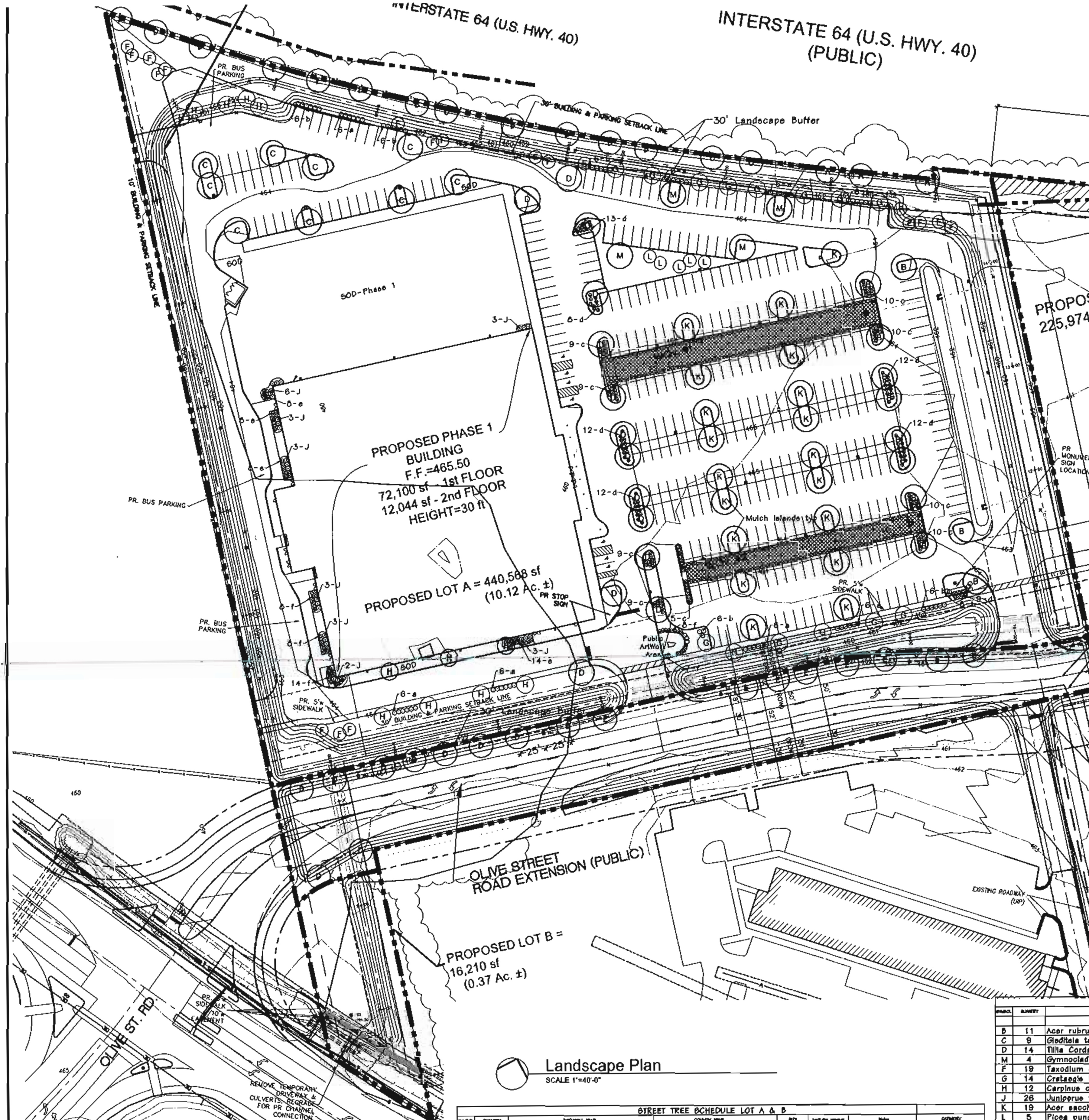
REVISIONS:

STATE OF MISSOURI — L. G. CHIODINI — NUMBER A-2006... — ARCHITECT

PROPOSED EXTERIOR ELEVATIONS

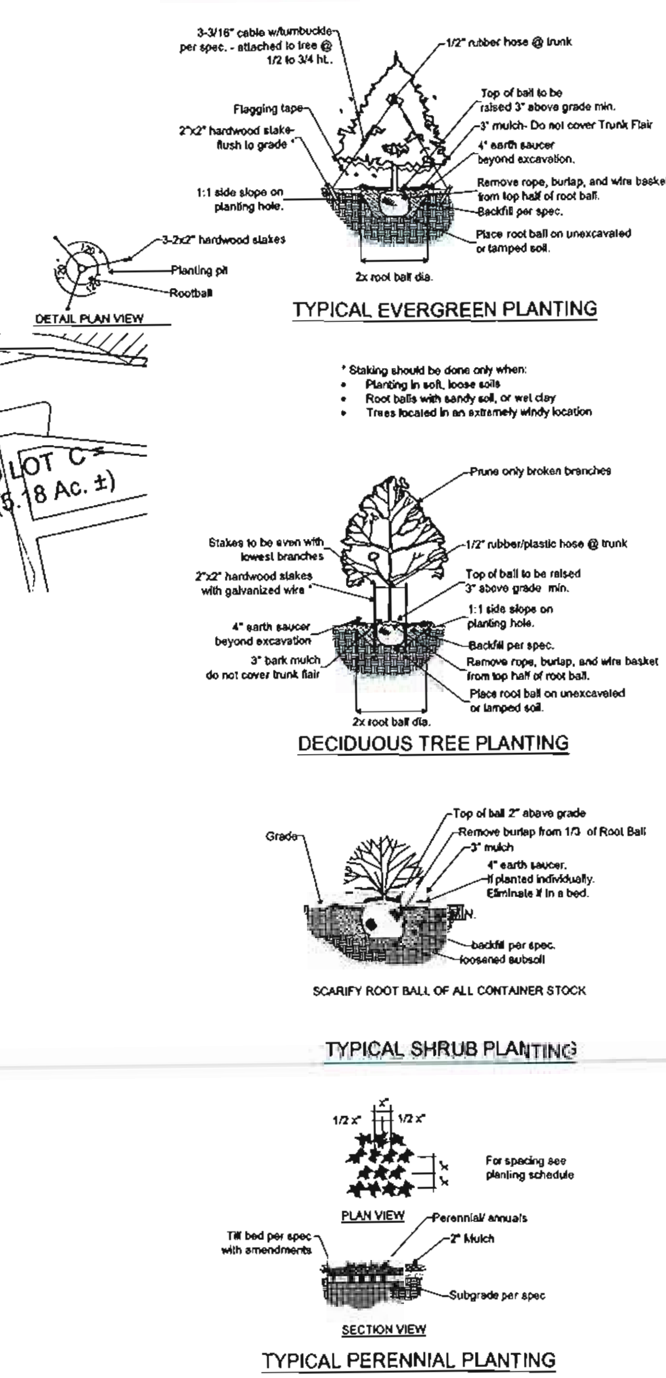
Project Number:	2018.007
Date:	2018.05.21
Drawn By:	SMM

A020



Landscape Plan

SCALE 1"=40'-0"



GENERAL NOTES LOT A & B:

1) Openspace ratio Phase 1 is 61.1% Total Site 456,776 SF/Openspace 253,263 SF
Openspace ratio Phase 2 is 44.1% Total Site 456,776 sf/Openspace 201,426 SF.
2) Street trees-I-64 604.6 lf/50 = 16.09 or 17 Street Trees
3) Street Trees-Olive Street Road Extension Lot A - 769.1 lf/50 = 15.6 or 16 Street Trees
4) Street Trees-Olive Street Road Extension Lot B - 82.65 lf/50 = 1.65 or 2 Street Trees
5) All street trees will be located at least 3' from proposed curb.
6) All street trees will be located at least 10' from all storm sewer structures.
7) All street trees will be located at least 25' from all Street lights, Signs, and Intersections.
8) Mitigation landscape or contribution to Chesterfield Tree Fund will be required to meet preservation requirements of 25,623 sq. ft. of tree canopy.

STREET TREE SCHEDULE LOT A & B

Symbol	Quantity	Botanical Name	Common Name	Size	Mature Height	Notes	Category
A	3	Zelkova serrata	Zelkova	2 1/2"	45'+	Fast Growing	Deciduous
B	6	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	2 1/2"	45'+	Fast Growing	Deciduous
C	4	Gleditsia triacanthos 'Shademaster'	Shademaster Honeylocust	2 1/2"	45'+	Fast Growing	Deciduous
D	9	Tilia cordata 'Greenspire'	Little-leaf Linden	2 1/2"	45'+	Medium Growing	Deciduous
E	10	Quercus bicolor	Swamp White Oak	2 1/2"	45'+	Medium Growing	Deciduous

PLANTING SCHEDULE

Symbol	Quantity	Botanical Name	Common Name	Size	Mature Height	Notes	Category
B	11	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	2 1/2"	45'+	Fast Growing	Deciduous
C	9	Gleditsia triacanthos 'Shademaster'	Shademaster Honeylocust	2 1/2"	45'+	Fast Growing	Deciduous
D	14	Tilia Cordata 'Greenspire'	Little-leaf Linden	2 1/2"	45'+	Slow Growing	Deciduous
M	4	Gymnocladus dioicus	Kentucky Coffeetree	2 1/2"	45'+	Medium Growing	Deciduous
F	19	Taxodium distichum	Bald Cypress	8-10'	45'+	Medium Growing	Deciduous
G	14	Crataegis leavigata 'Superba'	Crimson cloud Hawthorn	2 1/2"	25'+	Medium Growing	Ornamental
H	12	Carpinus caroliniana	American Hornbeam	2 1/2"	20'+	Medium Growing	Ornamental
J	26	Juniperus virginiana 'Taylor'	Taylor Juniper	6-8'	20'+	Medium Growing	Evergreen
K	19	Acer saccharinum 'Fall Fiesta'	Fall Fiesta Sugar Maple	2 1/2"	45'+	Slow Growing	Deciduous
L	5	Picea pungens	Colorado Spruce	8-10'	30'+	Medium Growing	Evergreen
a	42	Ilex verticillata 'Spravy'	Berry Heavy Winterberry	24-30"		4' O.C.	
b	42	Viburnum x juddii	Judd Viburnum	24-30"		4' O.C.	
c	91	Rhus aromatica 'Gro-Low'	Gro Low Sumac	18-24"		3' O.C.	
d	78	Juniperus sabina 'Broadmoor'	Broadmoor Juniper	18-24"		4' O.C.	
e	38	Ceanothus americanus	New Jersey Tea	18-24"		3' O.C.	
f	45	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetspire	18-24"		3' O.C.	
(hatch)		Water quality Plantings per MSD					

Douglas A. DeLong, Landscape Architect LA 81
5/18/2018

Consultants:

Chesterfield Ice and Sports Complex
Ord. 2974, Zoned: PC

Chesterfield, Missouri

Revisions:

Date	Description	No.
4/16/18	Site Revisions	1
5/18/18	City Comments	2

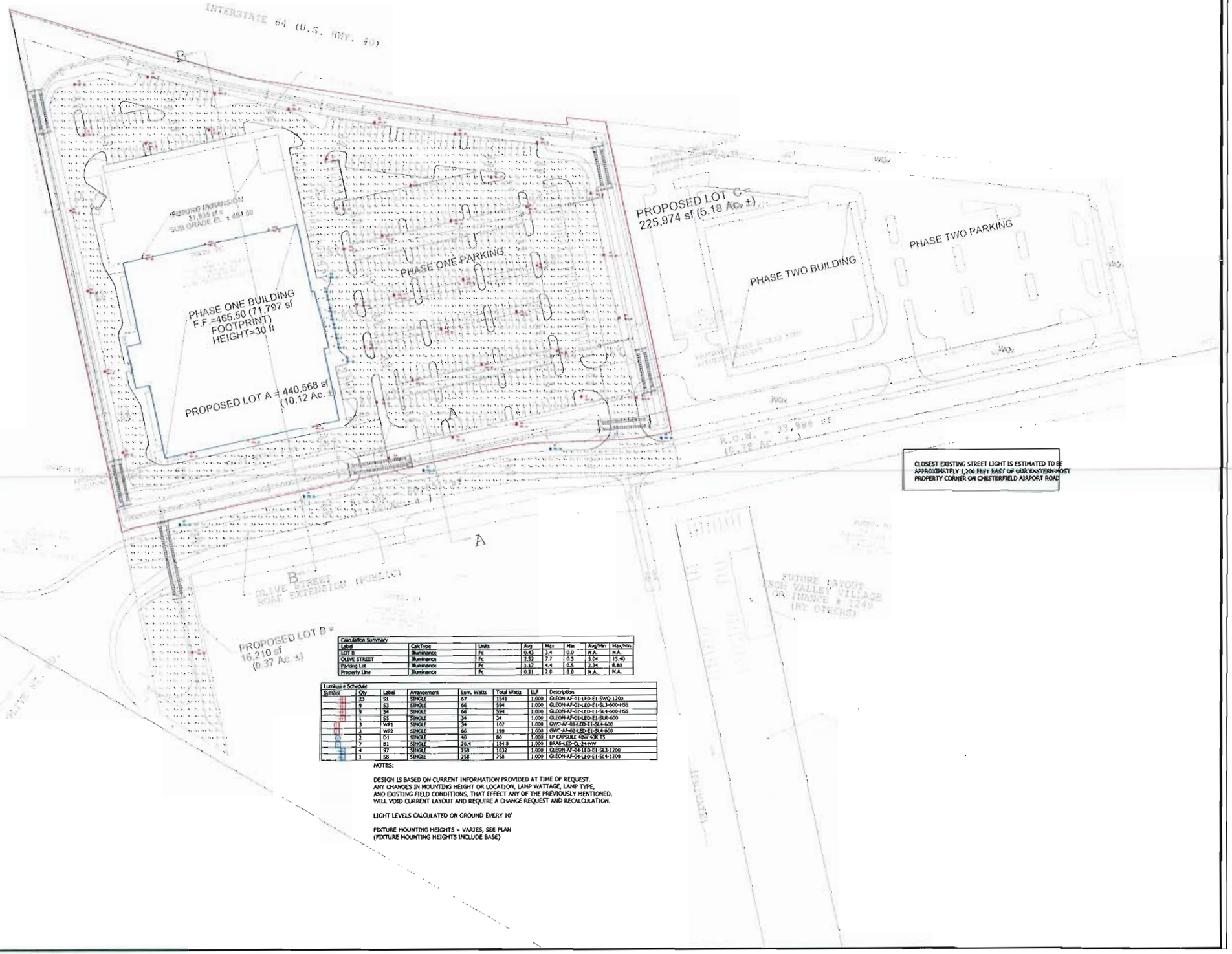
Drawn: DAD
Checked: BAD

DeLong Landscape Architecture, LLC
7620 West Bruno Ave
St. Louis, MO. 63117
(314) 346-4856
delong.la@gmail.com

Sheet Title: Landscape Plan

Sheet No: L-2

Date: 3/1/2018
Job #: 176.002



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
LOT B	Illuminance	Fc	0.43	3.4	0.0	N.A.	N.A.
OLIVE STREET	Illuminance	Fc	2.52	7.7	0.5	5.04	15.40
Parking Lot	Illuminance	Fc	3.17	4.4	0.5	2.34	8.80
Property Line	Illuminance	Fc	0.21	2.0	0.0	N.A.	N.A.

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Lum. Watts	Total Watts	LLF	Description
	23	S1	SINGLE	67	1543	1.000	GLEON-AF-01-LED-E1-SWQ-1200
	9	S3	SINGLE	66	594	1.000	GLEON-AF-02-LED-E1-SL3-600-HSS
	9	S4	SINGLE	66	594	1.000	GLEON-AF-02-LED-E1-SL4-600-HSS
	1	S5	SINGLE	34	34	1.000	GLEON-AF-01-LED-E1-SLR-600
	3	WP1	SINGLE	34	102	1.000	GWC-AF-01-LED-E1-SL4-600
	3	WP2	SINGLE	66	198	1.000	GWC-AF-02-LED-E1-SL4-600
	2	D1	SINGLE	40	80	1.000	LP CAPSULE 40W 40K T5
	7	B1	SINGLE	26.4	184.8	1.000	BRAS-LED-CL-24-NW
	4	S7	SINGLE	258	1032	1.000	GLEON-AF-04-LED-E1-SL3-1200
	1	S8	SINGLE	258	258	1.000	GLEON-AF-04-LED-E1-SL4-1200

NOTES:

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

LIGHT LEVELS CALCULATED ON GROUND EVERY 10'

FIXTURE MOUNTING HEIGHTS = VARIES, SEE PLAN
(FIXTURE MOUNTING HEIGHTS INCLUDE BASE)

LIGHTING ASSOCIATES

#	Date	Comments

Revisions

Drawn By: LU
Checked By:
Date:5/18/2018
Scale: None

Lighting Study

Chesterfield Ice and Sports Complex

Chesterfield, MO

SOLID STATE BOLLARDS

BRA SERIES-LED

SPECIFICATIONS

PROJECT NAME: Chesterfield Sports Complex

FIXTURE TYPE: B1

BRA

BRA8 SHOWN WITH -TR OPTICS

PATENT PENDING

BOLLARD
Durable corrosion resistant extruded and cast aluminum construction. ¼" wall thickness.

LED POWER ARRAY
Three-dimensional array consisting of 6 individual LED tubes for the BDA8 model and 4 individual LED tubes for the BDA6 model, which are fastened to a retaining plate equally spaced to provide 360° of even illumination output. Each LED tube consists of a circuit board populated with a multiple of LED's which is fastened to a radial aluminum heat sink. A white polycarbonate lens and end caps protect each LED tube's internal components and provides diffusion to prevent shadowing and striations.

INTERNAL LOUVER (IL) - A specular louver stack conceals the inner LED Power Array Module and provides uplight and glare control through the external clear polycarbonate lens.

CAST LOUVER (CL) - External cast aluminum louver stack protects the internal LED Power Array Module and provides uplight and glare control. An internal clear polycarbonate lens is integrated with the LED Power Array Module.

OPAL LENS (WP) - Exterior white polycarbonate lens protects the internal LED Power Array Module and provides a uniform white glow.

RADIAL LED MODULE
LED'S are mounted to a circular heatsink in a radial array. The radial LED module is concealed in the cap of the bollard. LED's are not directly visible from angles above 90°.

PARABOLIC REFLECTOR (TR) - A specular Parabolic Reflector reflects a portion of the distribution from the radial LED module and provides a uniform wide angle throw through the outer clear polycorbonate lens.

LED EMITTERS
High Output LED's are driven at 350mA for nominal 1 Watt output each. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

LED DRIVER
UL and CUL recognized Constant Current LED drivers operate on input voltages from 120-277VAC, 50/60hz. Consult Factory for (347-480VAC). Driver is mechanically fastened to a retoining bracket. Driver has a minimum 4KV of internal surge protection, 10KV & 20KV Surge Protector optional. Dimmable and High-Low Driver options available.

FINISH
Polyester powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durobility.

BOLLARD	A	B	C	D
BRA8	42" 1067mm	8" 203mm	6" 152mm	8" 203mm
BRA6	42" 1067mm	6" 152mm	4" 102mm	6" 152mm

UL Listed for wet location

MADE IN THE USA

2015239

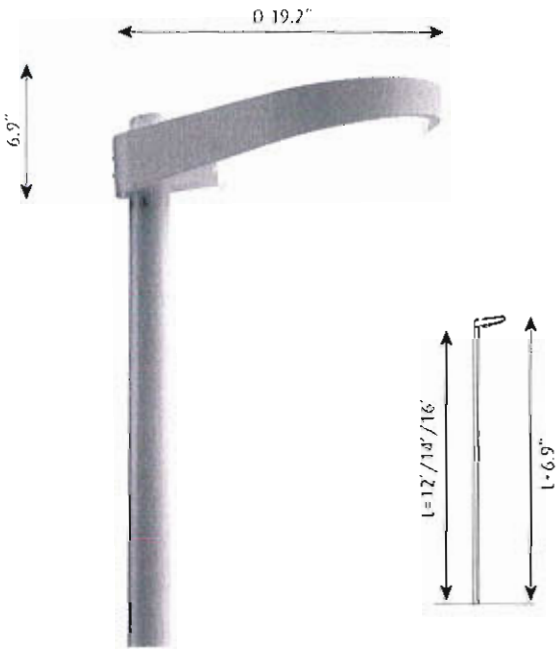
U.S. Architectural Lighting

660 West Avenue O, Palmdale, CA 93551
Phone (661) 233-2000 Fax (661) 233-2001
www.usalg.com

U.S. ARCHITECTURAL LIGHTING

louis poulsen

Type D1



LP CAPSULE

Design:
Carsten Fischer/Henning Larsen

Concept:
The fixture emits light directed mainly downwards. The fixture has an upward tilt with a compact profile. Variants include 3000K and 4000K options as well as high and low output options.

Finish:
Natural painted aluminum, powder coated.

Material:
Housing: die-cast aluminum. Top and bottom covers: UV-stabilized acrylic.

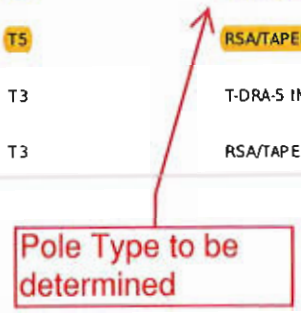
Mounting:
Post top: Mounted directly on top of either dual round aluminum (DRA-5"-3") or Taper-5"-2.4"poles, or onto a round straight aluminum (RSA-4.5") pole with provided tenon.

Weight:
Min: 18 lbs. Max: 18 lbs.

Compliance:
cULus, Wet location.

PRODUCT OVERVIEW

Product Code	Light source	Voltage	Finish	Distribution/Trim	Transition to pole	Features	Item number
LP CAPSULE	20W LED/3000K	120-277V/60HZ	NAT PAINT ALU	T5	T-DRA-5 IN-3 IN	DIM 0-10V	5747919352
LP CAPSULE	20W LED/3000K	120-277V/60HZ	NAT PAINT ALU	T5	RSA/TAPER	DIM 0-10V	5747919365
LP CAPSULE	20W LED/3000K	120-277V/60HZ	NAT PAINT ALU	T3	T-DRA-5 IN-3 IN	DIM 0-10V	5747919433
LP CAPSULE	20W LED/3000K	120-277V/60HZ	NAT PAINT ALU	T3	RSA/TAPER	DIM 0-10V	5747919446
LP CAPSULE	20W LED/4000K	120-277V/60HZ	NAT PAINT ALU	T5	T-DRA-5 IN-3 IN	DIM 0-10V	5747919394
LP CAPSULE	20W LED/4000K	120-277V/60HZ	NAT PAINT ALU	T5	RSA/TAPER	DIM 0-10V	5747919404
LP CAPSULE	20W LED/4000K	120-277V/60HZ	NAT PAINT ALU	T3	T-DRA-5 IN-3 IN	DIM 0-10V	5747919475
LP CAPSULE	20W LED/4000K	120-277V/60HZ	NAT PAINT ALU	T3	RSA/TAPER	DIM 0-10V	5747919488
LP CAPSULE	40W LED/3000K	120-277V/60HZ	NAT PAINT ALU	T5	T-DRA-5 IN-3 IN	DIM 0-10V	5747919378
LP CAPSULE	40W LED/3000K	120-277V/60HZ	NAT PAINT ALU	T5	RSA/TAPER	DIM 0-10V	5747919381
LP CAPSULE	40W LED/3000K	120-277V/60HZ	NAT PAINT ALU	T3	T-DRA-5 IN-3 IN	DIM 0-10V	5747919459
LP CAPSULE	40W LED/3000K	120-277V/60HZ	NAT PAINT ALU	T3	RSA/TAPER	DIM 0-10V	5747919462
LP CAPSULE	40W LED/4000K	120-277V/60HZ	NAT PAINT ALU	T5	T-DRA-5 IN-3 IN	DIM 0-10V	5747919417
LP CAPSULE	40W LED/4000K	120-277V/60HZ	NAT PAINT ALU	T5	RSA/TAPER	DIM 0-10V	5747919420
LP CAPSULE	40W LED/4000K	120-277V/60HZ	NAT PAINT ALU	T3	T-DRA-5 IN-3 IN	DIM 0-10V	5747919491
LP CAPSULE	40W LED/4000K	120-277V/60HZ	NAT PAINT ALU	T3	RSA/TAPER	DIM 0-10V	5747919501



DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #		Type
Project	Chesterfield Sports Complex	S1 thru S5
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operetion in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting
STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. QUICK MOUNT ARM: Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

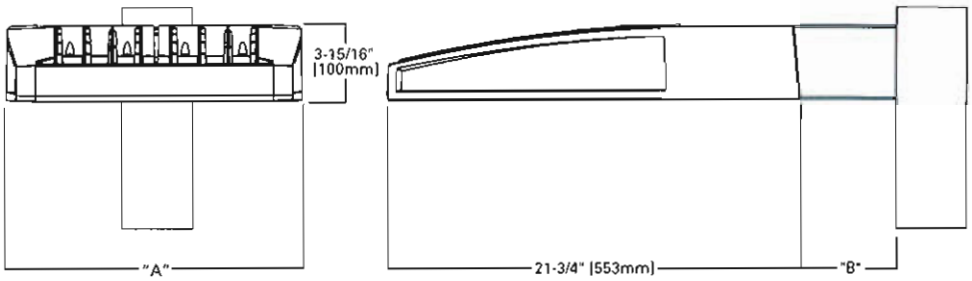
Warranty
Five-year warranty.

GLEON
GALLEON LED

1-10 Light Squares
Solid State LED

AREA/SITE LUMINAIRE

DIMENSIONS



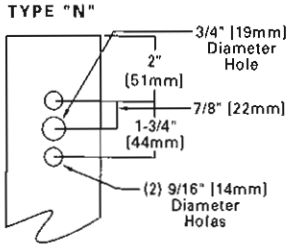
DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length [1]	Weight with Arm (lbs.)	EPA with Arm [2] (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

DRILLING PATTERN

TYPE "N"



CERTIFICATION DATA

UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
IP66 Rated
DesignLights Consortium™ Qualified*

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

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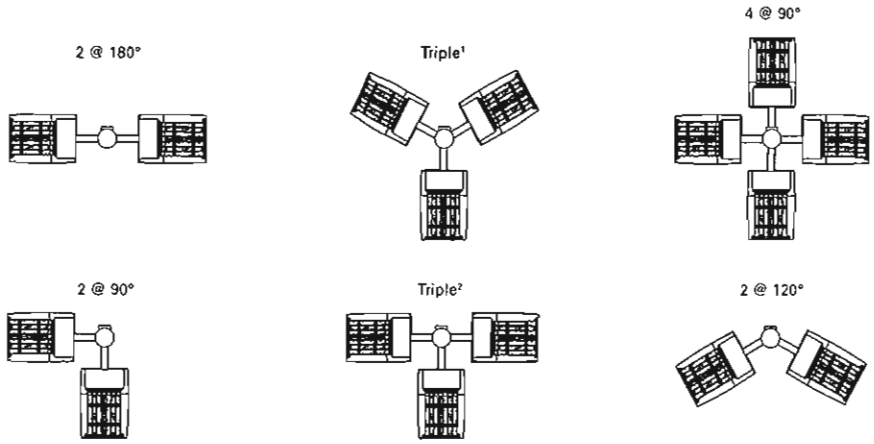
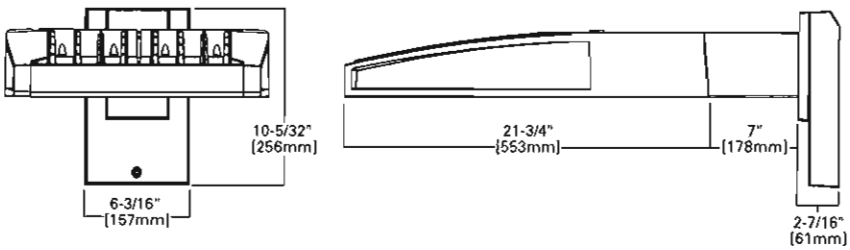
ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)

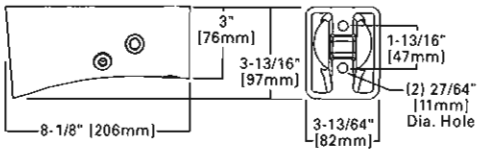


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90° 2 Round poles are 3 @ 90°.

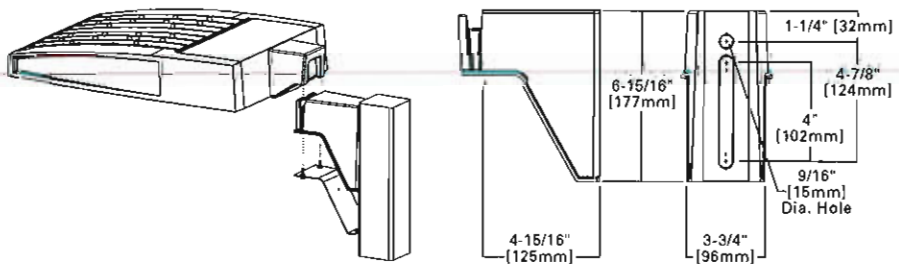
STANDARD WALL MOUNT

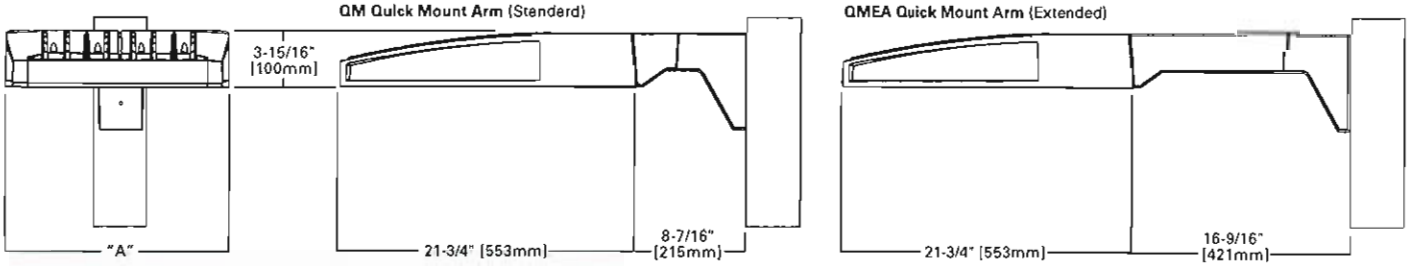


MAST ARM MOUNT



QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)





QUICK MOUNT ARM DATA

Number of Light Squares [1,2]	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 [3]	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

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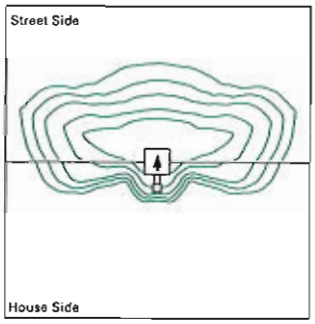
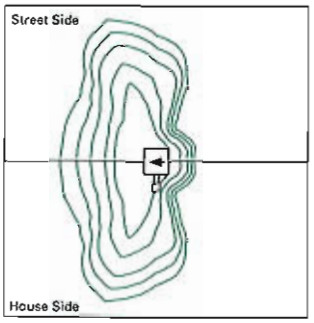
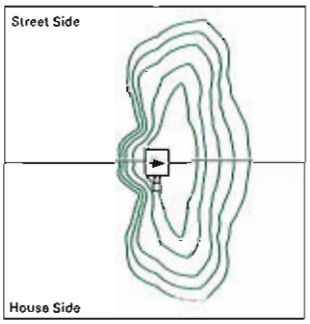
OPTIC ORIENTATION



Standard



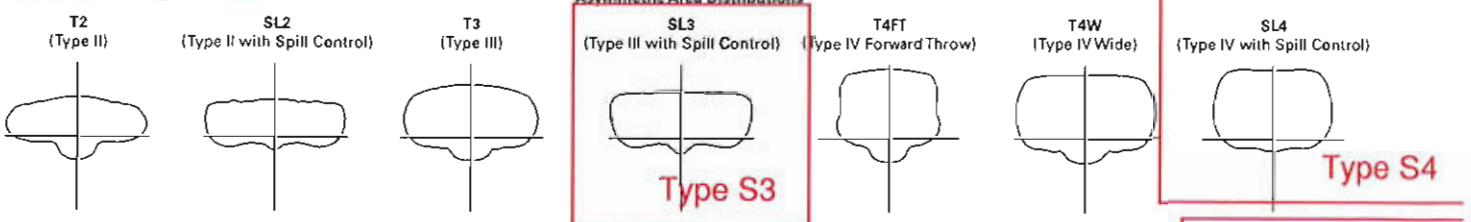
Optics Rotated Left @ 90° (L90)



Optics Rotated Right @ 90° (R90)

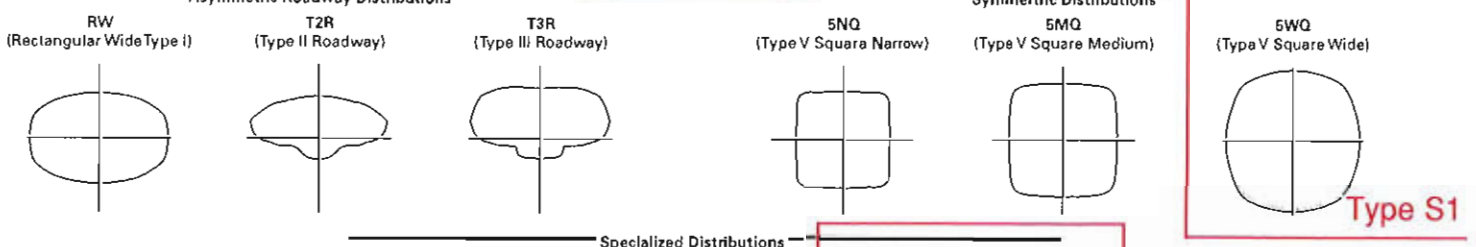
OPTICAL DISTRIBUTIONS

Asymmetric Area Distributions

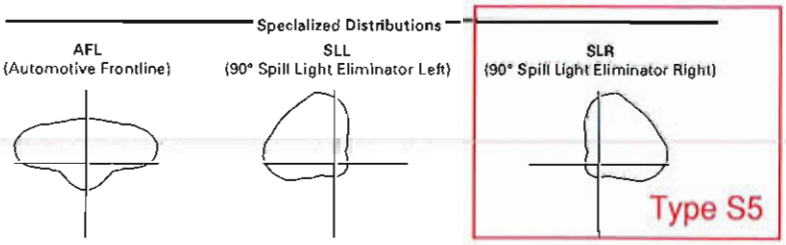


Asymmetric Roadway Distributions

Symmetric Distributions

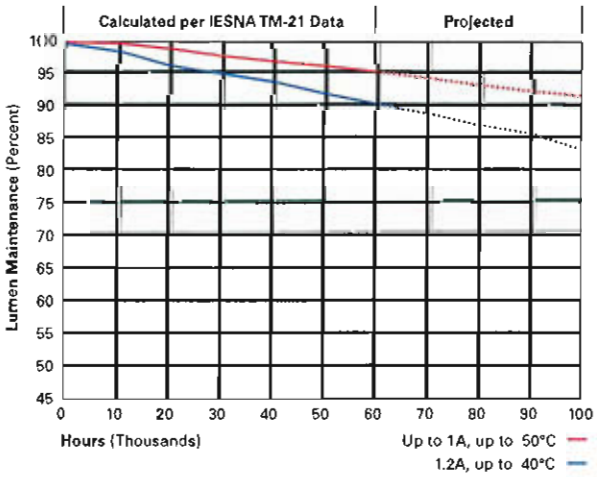


Specialized Distributions



LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

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NOMINAL POWER LUMENS (1.2A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.38	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K/5000K Lumens	6,709	13,111	19,562	25,848	32,026	38,325	45,324	51,355	57,286	63,424
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/6000K Lumens	7,122	13,919	20,769	27,442	34,000	40,687	48,117	54,519	60,816	67,333
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,838	13,363	19,939	26,346	32,642	39,062	46,196	52,343	58,388	64,646
	3000K Lumens	6,053	11,829	17,650	23,321	28,895	34,578	40,893	46,334	51,685	57,225
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,090	13,660	20,382	26,931	33,368	39,930	47,223	53,506	59,686	66,081
	3000K Lumens	6,188	12,092	18,042	23,839	29,537	35,346	41,602	47,364	52,834	58,495
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,878	13,440	20,055	26,499	32,832	39,289	46,464	52,646	58,726	65,020
	3000K Lumens	6,088	11,897	17,753	23,457	29,063	34,779	41,130	46,602	51,984	57,556
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,789	13,267	19,795	26,156	32,406	38,781	45,864	51,967	57,968	64,180
	3000K Lumens	6,010	11,744	17,523	23,153	28,668	34,329	40,599	46,001	51,313	56,812
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,697	13,088	19,529	25,804	31,970	38,259	45,245	51,267	57,186	63,315
	3000K Lumens	5,926	11,585	17,287	22,842	28,300	33,867	40,051	45,382	50,621	56,046
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,637	13,361	19,936	26,342	32,639	39,057	46,189	52,336	58,380	64,636
	3000K Lumens	6,052	11,827	17,647	23,318	28,892	34,573	40,887	46,328	51,676	57,216
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G6	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,496	12,695	18,943	25,029	31,011	37,110	43,886	49,727	55,470	61,414
	3000K Lumens	5,750	11,238	16,768	22,156	27,451	32,850	38,848	44,018	49,102	54,364
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G6	B3-U0-G5
6NQ	4000K/5000K Lumens	7,052	13,781	20,564	27,171	33,664	40,285	47,641	53,961	60,215	66,669
	3000K Lumens	6,242	12,199	18,203	24,052	29,799	35,660	42,172	47,784	53,302	59,015
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
6MQ	4000K/5000K Lumens	7,182	14,034	20,942	27,671	34,284	41,027	48,518	54,975	61,323	67,896
	3000K Lumens	6,358	12,423	18,538	24,494	30,348	36,317	42,948	48,664	54,283	60,102
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	7,201	14,073	20,998	27,744	34,375	41,136	48,648	56,121	61,487	68,077
	3000K Lumens	6,374	12,457	18,587	24,559	30,429	36,414	43,063	46,793	54,428	60,262
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G6	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	6,009	11,741	17,519	23,148	28,681	34,321	40,589	45,990	51,301	56,798
	3000K Lumens	5,319	10,393	15,508	20,491	25,388	30,381	35,929	40,710	45,412	50,278
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
RW	4000K/5000K Lumens	6,989	13,857	20,378	26,925	33,360	39,921	47,211	53,494	59,672	66,066
	3000K Lumens	6,187	12,089	18,039	23,834	29,530	35,338	41,791	47,353	52,822	58,482
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	7,014	13,706	20,452	27,023	33,481	40,066	47,383	53,688	59,888	66,308
	3000K Lumens	6,209	12,133	18,104	23,921	29,837	35,468	41,943	47,525	53,013	58,894
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

NOMINAL POWER LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.6	5.07
Input Current @ 208V (A)		0.29	0.66	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	1.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.46	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.76	0.91	0.99	1.12	1.28
Optics											
T2	4000K/5000K Lumens	6,116	11,951	17,833	23,563	29,196	34,937	41,317	46,814	52,221	57,817
	3000K Lumens	5,414	10,579	15,786	20,858	25,843	30,926	36,574	41,440	46,226	51,180
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G6	B4-U0-G6	B4-U0-G6
T2R	4000K/5000K Lumens	6,493	12,688	18,932	25,015	30,994	37,090	43,863	49,699	55,439	61,380
	3000K Lumens	5,748	11,231	16,759	22,143	27,436	32,832	38,828	43,994	49,075	54,334
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,234	12,181	18,176	24,017	29,758	35,609	42,111	47,715	53,225	58,930
	3000K Lumens	5,518	10,783	16,089	21,260	26,340	31,521	37,277	42,237	47,115	52,165
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G6
T3R	4000K/5000K Lumens	6,372	12,463	18,580	24,560	30,418	36,400	43,048	48,776	54,409	60,239
	3000K Lumens	5,640	11,023	16,447	21,732	26,926	32,221	38,106	43,177	48,163	53,324
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G6
T4FT	4000K/5000K Lumens	6,270	12,252	18,282	24,156	29,929	35,815	42,356	47,992	53,534	59,271
	3000K Lumens	5,550	10,845	16,183	21,383	26,493	31,703	37,494	42,483	47,388	52,467
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,189	12,094	18,045	23,644	29,543	35,352	41,609	47,372	52,843	58,506
	3000K Lumens	5,479	10,706	15,973	21,107	26,151	31,294	37,009	41,934	46,777	51,790
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,105	11,931	17,803	23,522	29,144	34,877	41,246	46,734	52,130	57,717
	3000K Lumens	5,404	10,561	15,759	20,822	25,798	30,873	36,510	41,369	46,145	51,091
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,233	12,180	18,174	24,013	29,753	35,604	42,106	47,708	53,218	58,921
	3000K Lumens	5,517	10,782	16,088	21,256	26,337	31,517	37,272	42,231	47,109	52,157
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,922	11,672	17,268	22,816	28,269	33,829	40,006	45,330	50,566	66,984
	3000K Lumens	5,242	10,244	15,288	20,197	25,024	29,945	35,413	40,126	44,781	49,557
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5MQ	4000K/5000K Lumens	6,429	12,563	18,746	24,768	30,688	36,723	43,429	49,208	54,891	60,775
	3000K Lumens	5,891	11,121	16,594	21,925	27,165	32,507	38,443	43,559	48,590	53,798
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
6MQ	4000K/5000K Lumens	6,547	12,794	19,090	25,224	31,253	37,400	44,228	50,114	55,902	61,893
	3000K Lumens	5,795	11,326	16,898	22,328	27,665	33,106	39,151	44,361	49,484	54,788
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G6
5WQ	4000K/5000K Lumens	6,564	12,828	19,141	25,291	31,336	37,499	44,347	50,248	66,051	62,058
	3000K Lumens	5,810	11,355	16,944	22,388	27,739	33,194	39,256	44,480	49,616	54,934
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	5,478	10,703	15,970	21,102	26,145	31,286	37,001	41,924	46,785	51,777
	3000K Lumens	4,649	9,474	14,137	18,679	23,144	27,694	32,753	37,111	41,396	45,833
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	6,371	12,449	18,576	24,544	30,411	36,392	43,037	48,764	54,396	60,225
	3000K Lumens	5,640	11,020	16,443	21,726	26,920	32,214	38,096	43,188	48,151	53,311
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B6-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	6,394	12,494	18,644	24,634	30,521	36,524	43,194	49,942	54,593	60,444
	3000K Lumens	5,660	11,080	18,504	21,808	27,017	32,331	38,235	43,323	48,328	53,505
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

NOMINAL POWER LUMENS (800MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K/5000K Lumens	4,941	9,656	14,408	19,038	23,588	28,227	33,382	37,823	42,191	46,713
	3000K Lumens	4,374	8,547	12,754	16,852	20,880	24,987	29,550	33,481	37,347	41,350
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	5,248	10,261	15,296	20,211	26,041	29,986	35,439	40,154	44,791	49,592
	3000K Lumens	4,644	9,074	13,540	17,891	22,188	26,526	31,371	35,544	39,649	43,899
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3	4000K/5000K Lumens	5,037	9,842	14,685	19,404	24,041	28,770	34,024	38,551	43,003	47,612
	3000K Lumens	4,459	8,712	12,999	17,176	21,281	25,467	30,118	34,125	38,066	42,146
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	5,148	10,061	15,011	19,835	24,576	29,409	34,780	39,408	43,959	48,669
	3000K Lumens	4,567	8,906	13,288	17,568	21,766	28,033	30,787	34,884	38,913	43,082
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	5,066	9,899	14,770	19,516	24,181	28,936	34,221	38,774	43,252	47,888
	3000K Lumens	4,484	8,763	13,074	17,276	21,405	25,614	30,292	34,323	38,287	42,390
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	5,000	9,771	14,579	19,284	23,889	28,562	33,779	38,274	42,694	47,269
	3000K Lumens	4,426	8,649	12,905	17,052	21,129	25,283	29,901	33,880	37,793	41,843
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/6000K Lumens	4,933	9,839	14,383	19,005	23,647	28,178	33,324	37,768	42,118	48,632
	3000K Lumens	4,367	8,532	12,732	16,823	20,844	24,943	29,498	33,423	37,283	41,279
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	5,036	9,841	14,683	19,401	24,039	28,766	34,019	38,546	42,997	47,805
	3000K Lumens	4,458	8,711	12,997	17,174	21,279	25,464	30,114	34,121	38,061	42,140
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	4,784	9,350	13,951	18,434	22,840	27,332	32,323	36,624	40,854	45,232
	3000K Lumens	4,235	8,277	12,349	16,318	20,218	24,194	28,612	32,420	36,164	40,039
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	5,194	10,160	15,145	20,011	24,794	29,670	35,088	39,757	44,349	49,102
	3000K Lumens	4,598	8,985	13,406	17,714	21,948	26,264	31,060	35,193	39,258	43,465
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
6MQ	4000K/5000K Lumens	5,290	10,337	15,424	20,380	25,250	30,217	35,734	40,489	45,165	50,006
	3000K Lumens	4,883	9,150	13,653	16,040	22,351	26,748	31,632	35,841	39,980	44,265
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	5,304	10,366	15,466	20,434	26,318	30,297	35,830	40,697	45,286	50,139
	3000K Lumens	4,895	9,175	13,690	18,088	22,411	26,819	31,717	35,936	40,087	44,383
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	4,426	8,648	12,903	17,049	21,124	25,278	29,894	33,872	37,784	41,832
	3000K Lumens	3,918	7,655	11,422	15,092	18,899	22,378	26,462	29,983	33,446	37,030
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	5,147	10,058	15,009	19,830	24,570	29,402	34,771	39,399	43,949	48,658
	3000K Lumens	4,666	8,903	13,286	17,664	21,749	26,027	30,779	34,876	38,904	43,072
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
AFL	4000K/5000K Lumens	5,166	10,095	15,063	19,903	24,659	29,509	34,898	39,542	44,108	48,835
	3000K Lumens	4,573	8,936	13,334	17,618	21,828	26,121	30,892	35,003	39,044	43,229
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.

NOMINAL POWER LUMENS (600MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.16	0.30	0.43	0.66	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K/5000K Lumens	4,029	7,874	11,748	15,525	19,235	23,019	27,222	30,844	34,406	38,093
	3000K Lumens	3,566	6,970	10,400	13,743	17,027	20,376	24,097	27,303	30,456	33,720
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T2R	4000K/6000K Lumens	4,278	8,360	12,474	16,482	20,421	24,437	28,900	32,745	36,527	40,441
	3000K Lumens	3,787	7,400	11,042	14,590	18,077	21,632	25,582	28,986	32,334	35,798
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3	4000K/5000K Lumens	4,107	8,026	11,976	15,824	19,605	23,481	27,746	31,438	35,068	38,827
	3000K Lumens	3,636	7,105	10,601	14,007	17,354	20,768	24,561	27,829	31,042	34,370
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T3R	4000K/5000K Lumens	4,198	8,205	12,242	16,175	20,041	23,982	28,363	32,137	35,848	39,689
	3000K Lumens	3,716	7,263	10,637	14,318	17,740	21,229	25,107	28,448	31,733	35,133
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	4,131	8,072	12,045	15,915	19,719	23,597	27,907	31,620	35,272	39,052
	3000K Lumens	3,657	7,145	10,662	14,088	17,455	20,888	24,703	27,990	31,223	34,569
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	4,077	7,968	11,889	15,710	19,465	23,292	27,546	31,212	34,816	38,547
	3000K Lumens	3,609	7,053	10,524	13,906	17,230	20,618	24,384	27,629	30,819	34,122
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL2	4000K/5000K Lumens	4,022	7,861	11,729	15,498	19,202	22,979	27,176	30,781	34,347	38,028
	3000K Lumens	3,560	6,959	10,383	13,719	16,998	20,341	24,055	27,256	30,404	33,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL3	4000K/5000K Lumens	4,106	8,025	11,974	15,821	19,603	23,458	27,742	31,433	35,064	38,821
	3000K Lumens	3,635	7,104	10,599	14,005	17,353	20,765	24,557	27,824	31,039	34,364
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	3,902	7,624	11,377	15,033	18,626	22,289	26,359	29,867	33,316	36,886
	3000K Lumens	3,454	6,749	10,071	13,307	16,488	19,730	23,333	26,438	29,491	32,651
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	4,236	8,277	12,351	16,319	20,219	24,196	28,614	32,422	36,166	40,042
	3000K Lumens	3,750	7,327	10,933	14,446	17,898	21,418	25,329	28,700	32,014	35,445
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	4,314	8,429	12,576	16,619	20,591	24,641	29,141	33,019	36,632	40,779
	3000K Lumens	3,819	7,461	11,134	14,711	18,227	21,812	25,796	29,228	32,604	36,098
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B6-U0-G3	B5-U0-G4	B5-U0-G4	B6-U0-G4
5WQ	4000K/5000K Lumens	4,325	8,462	12,611	16,664	20,646	24,707	29,219	33,106	36,930	40,888
	3000K Lumens	3,828	7,462	11,163	14,751	18,276	21,871	25,865	29,305	32,690	36,194
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
SLL/SLR	4000K/5000K Lumens	3,609	7,052	10,522	13,903	17,226	20,613	24,378	27,622	30,812	34,114
	3000K Lumens	3,195	6,242	9,314	12,307	15,249	18,247	21,579	24,451	27,275	30,198
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	4,197	8,202	12,239	16,171	20,036	23,977	28,356	32,129	35,839	39,680
	3000K Lumens	3,715	7,260	10,834	14,315	17,736	21,224	25,101	28,441	31,725	35,125
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
AFL	4000K/5000K Lumens	4,213	8,232	12,284	16,230	20,109	24,064	28,459	32,246	35,969	39,824
	3000K Lumens	3,729	7,287	10,874	14,367	17,800	21,301	25,192	28,544	31,640	35,252
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.

CONTROL OPTIONS

0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

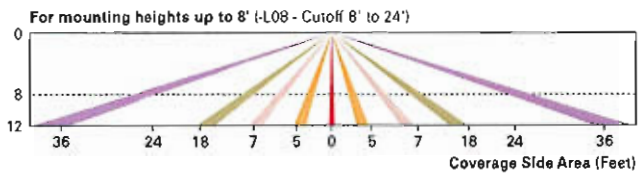
Photocontrol (P, R and PER7)
Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

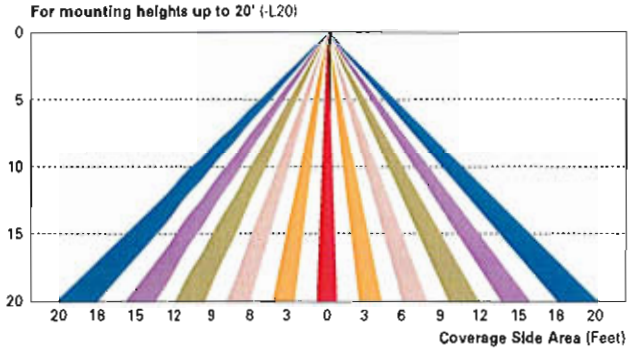
After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

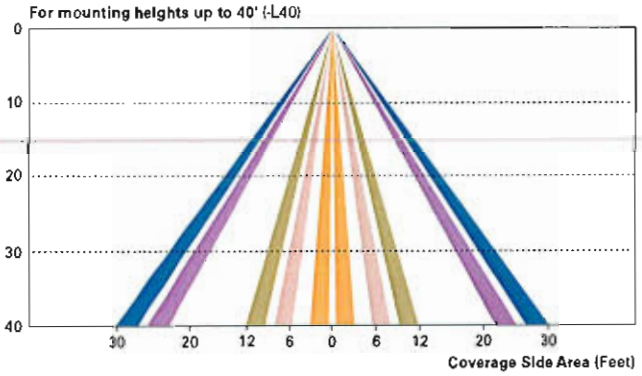
Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

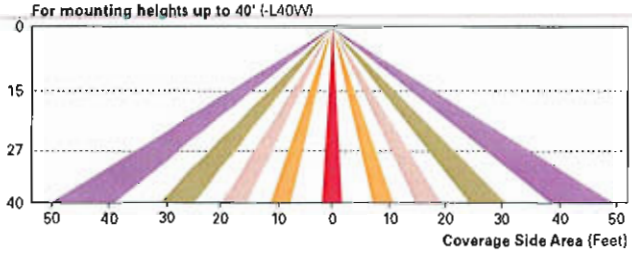
These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



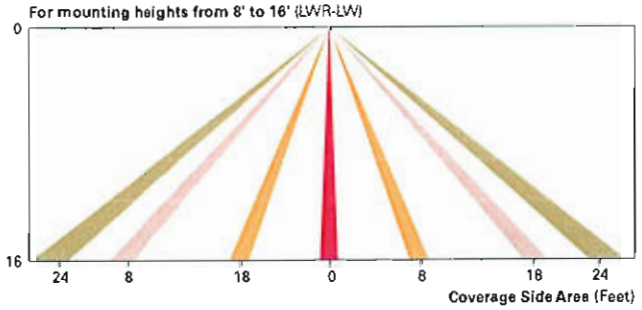


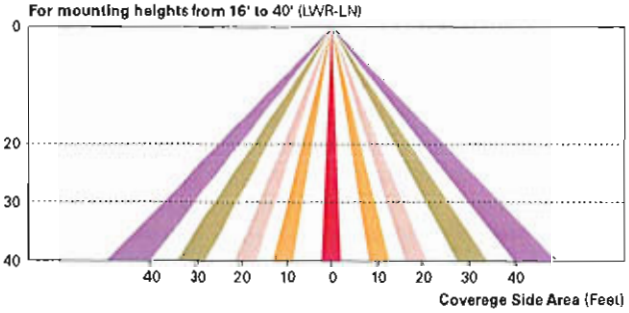




LumaWatt Wireless Control and Monitoring System (LWR-LW and LWR-LN)
The LumaWatt system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt product guides.





ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family [1, 2]	Light Engine	Number of Light Squares [3]	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	AF=1A Drive Current	01=1 02=2 03=3 04=4 05=5 06=6 07=7 [4] 08=8 [4] 09=9 [5] 10=10 [5]	LED=Solid State Light Emitting Diodes	E1=120-277V 347=347V [6] 480=480V [6, 7]	T2=Type II T2R=Type II Roadway T3=Type III T3R=Type III Roadway T4FT=Type IV Forwerd Throw T4W=Type IV Wide 5NQ=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide Type S1 SL2=Type II w/Spill Control SL3=Type III w/Spill Control Type S3 SL4=Type IV w/Spill Control Type S4 SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right Type S5 RW=Rectengular Wide Type I AFL=Automotive Frontline	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Grephite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm [8] MA=Mast Arm Adapter [9] WM=Wall Mount QM=Quick Mount Arm (Standard Length) [10] QMEA=Quick Mount Arm (Extended Length) [11]

02 - Types S3, S4

Options (Add es Suffix)	Accessories (Order Separately)
7030=70 CRI 3000K [12] 8030=80 CRI 3000K [13] 7050=70 CRI 5000K [12] 7060=70 CRI 6000K [12] 600=Drive Current Factory Set to Nominal 600mA [14] 800=Drive Current Factory Set to Nominal 800mA [14] 1200=Drive Current Factory Set to Nominal 1200mA [14, 15] F=Single Fuse (120, 277 or 347V. Must Specify Voltage) FF=Double Fuse (208, 240 or 480V. Must Specify Voltage) 2L=Two Circuits [16, 17] DIM=External 0-10V Dimming Leads P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Volatage) PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle R=NEMA Twistlock Photocontrol Receptacle AHD145=After Hours Dim, 5 Hours [18] AHD245=After Hours Dim, 6 Hours [18] AHD255=After Hours Dim, 7 Hours [18] AHD355=After Hours Dim, 8 Hours [18] HA=50°C High Ambient [19] MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [20, 21] MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [20, 22] MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [20, 23] MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) [20, 24] MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height [20, 21, 25] MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height [20, 22, 25] MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height [20, 23, 25] MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) [20, 24, 25] MS-L08=Motion Sensor for ON/OFF Operetion, Maximum 8' Mounting Height [20, 21] MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [20, 22] MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [20, 23] MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) [20, 24] LWR-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 18' Mounting Height [26] LWR-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [26] L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right MT=Factory Installed Mesh Top TH=Tool-less Door Hardware LCF=Light Square Trim Plate Painted to Match Housing [27] HSS=Factory Installed House Side Shield [28] CE=CE Marking [29]	OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V OA/RA1013=Photocontrol Shorting Cap OA/RA1014=120V Photocontrol MA1252=10kV Surge Module Replacement MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1037-XX=2@180° Tenon Adepter for 2-3/8" O.D. Tenon MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1190-XX=3@90° Tenon Adepter for 2-3/8" O.D. Tenon MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor [20] GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares GLEON-QM=Quick Mount Arm Kit GLEON-QMEA=Quick Mount Extended Arm Kit LS/HSS=Field Installed House Side Shield [28, 30]

NOTES:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Standard 4000K CCT and minimum 70 CRI.
4. Not compatible with extended quick mount arm (QMEA).
5. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
6. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
7. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
8. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
9. Factory installed.
10. Maximum 8 light squares.
11. Maximum 6 light squares.
12. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
13. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
14. 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website.
15. Not available with HA option.
16. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
17. Not available with LumaWatt wireless sensors.
18. Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information
19. 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents.
20. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
21. Approximately 22' detection diameter at 8' mounting height.
22. Approximately 40' detection diameter at 20' mounting height.
23. Approximately 60' detection diameter at 40' mounting height.
24. Approximately 100' detection diameter at 40' mounting height.
25. Replace X with number of Light Squares operating in low output mode.
26. LumaWatt wireless sensors are factory installed only requiring network components RF-EM-1, RF-GW-1 and RF-RQUT-1 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
27. Not available with house side shield (HSS).
28. Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.
29. CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only.
30. One required for each Light Square.

DESCRIPTION

The Galleon™ wall LED luminaire's appearance is complementary with the Galleon area and site luminaire bringing a modern architectural style to lighting applications. Flexible mounting options accommodate wall surfaces in both an upward and downward configuration. The Galleon family of LED products deliver exceptional performance with patented, high-efficiency AccuLED Optics™, providing uniform and energy conscious lighting for parking lots, building and security lighting applications.

McGraw-Edison

Catalog #		Type
Project	Chesterfield Sports Complex	WP1 & WP2
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Driver enclosure thermally isolated from optics for optimal thermal performance. Heavy wall aluminum housing die-cast with integral external heat sinks to provide superior structural rigidity and an IP66 rated housing. Overall construction passes a 1.5G vibration test to ensure mechanical integrity. UPLIGHTING: Specify with the UPL option for inverted mount uplight housing with additional protections to maintain IP rating.

Optics
Choice of thirteen patented, high-efficiency AccuLED Optics. The optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K, 5000K and 6000K CCT. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 1200mA, 800mA, and 600mA drive currents.

Electrical
LED drivers are mounted for ease of maintenance. 120-277V 50/60Hz, 347V or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Drivers are provided standard with 0-10V dimming. An optional Eaton proprietary surge protection module is available and designed to withstand 10kV of transient line surge. The Galleon Wall LED luminaire is suitable for operation in -30°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Emergency egress options for -20°C ambient environments and occupancy sensor available.

Mounting
Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Galleon Wall "Hook-N-Lock" mechanism for quick installation. Secured with two captive corrosion resistant black oxide coated allen head set screws which are concealed but accessible from bottom of fixture.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

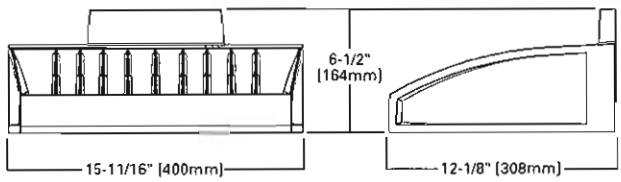
Warranty
Five-year warranty.

GWC GALLEON WALL LUMINAIRE

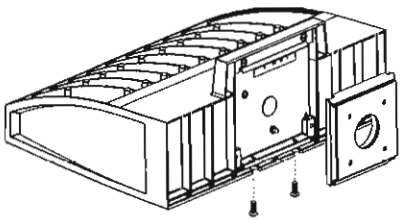
1-2 Light Squares
Solid State LED

WALL MOUNT LUMINAIRE

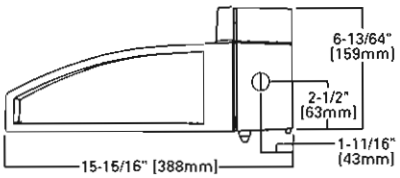
DIMENSIONS



HOOK-N-LOCK MOUNTING



BATTERY BACKUP AND THRU-BRANCH BACK BOX



CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 Housing
ISO 9001
DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60Hz, 347V/60Hz, 480V/60Hz
-30°C Minimum Temperature
40°C Ambient Temperature Rating

SHIPPING DATA

Approximate Net Weight:
27 lbs. (12.2 kgs.)

Powering Business Worldwide

*www.designlights.org

POWER AND LUMENS

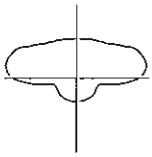
Number of Light Squares		1				2			
Drive Current		600mA	800mA	1.0A	1.2A	600mA	800mA	1.0A	1.2A
Nominal Power (Watts)		34	44	59	67	66	85	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.56	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.26	0.36	0.42	0.48
Input Current @ 347V (mA)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (mA)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	4000K/5000K Lumens	4,110	5,040	6,238	6,843	8,031	9,849	12,190	13,373
	3000K Lumens	3,638	4,461	5,522	6,057	7,109	8,718	10,791	11,838
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
T3	4000K/5000K Lumens	4,189	5,138	6,359	6,975	8,187	10,039	12,425	13,630
	3000K Lumens	3,708	4,548	5,629	6,174	7,247	8,887	10,999	12,065
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
T4FT	4000K/5000K Lumens	4,214	5,167	6,395	7,016	8,233	10,097	12,497	13,709
	3000K Lumens	3,730	4,574	5,661	6,211	7,288	8,938	11,062	12,135
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3
T4W	4000K/5000K Lumens	4,159	5,100	6,313	6,925	8,127	9,966	12,336	13,532
	3000K Lumens	3,682	4,515	5,588	6,130	7,194	8,822	10,920	11,979
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
SL2	4000K/5000K Lumens	4,102	5,032	6,227	6,831	8,016	9,832	12,170	13,350
	3000K Lumens	3,631	4,454	5,512	6,047	7,096	8,703	10,773	11,817
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
SL3	4000K/5000K Lumens	4,188	5,137	6,358	6,974	8,166	10,036	12,424	13,628
	3000K Lumens	3,707	4,547	5,628	6,173	7,246	6,886	10,998	12,064
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3
SL4	4000K/5000K Lumens	3,980	4,880	6,040	6,626	7,776	9,537	11,803	12,949
	3000K Lumens	3,523	4,320	5,347	5,865	6,883	8,442	10,448	11,462
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3
6NO	4000K/5000K Lumens	4,321	5,298	6,558	7,193	8,443	10,353	12,814	14,057
	3000K Lumens	3,825	4,690	5,805	6,367	7,474	9,164	11,343	12,443
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
5MQ	4000K/5000K Lumens	4,400	5,396	6,676	7,326	8,596	10,544	13,050	14,315
	3000K Lumens	3,895	4,777	5,911	6,485	7,611	9,334	11,552	12,672
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WO	4000K/5000K Lumens	4,412	5,410	6,695	7,345	8,621	10,572	13,085	14,354
	3000K Lumens	3,906	4,789	5,926	6,502	7,631	9,358	11,583	12,706
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
SLL/SLR	4000K/5000K Lumens	3,681	4,515	5,588	6,129	7,193	8,821	10,917	11,976
	3000K Lumens	3,258	3,997	4,946	5,425	6,367	7,808	9,664	10,601
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3
RW	4000K/5000K Lumens	4,281	5,250	6,498	7,129	8,366	10,259	12,698	13,930
	3000K Lumens	3,790	4,647	5,752	6,311	7,406	9,081	11,240	12,331
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2

* Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.

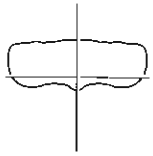
OPTICAL DISTRIBUTIONS

Asymmetric Area Distributions

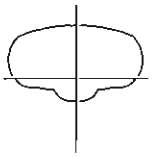
T2
(Type II)



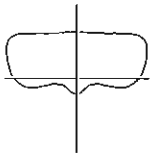
SL2
(Type II with Spill Control)



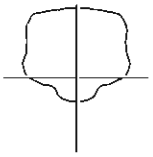
T3
(Type III)



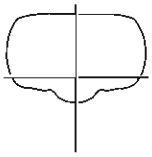
SL3
(Type III with Spill Control)



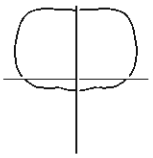
T4FT
(Type IV Forward Throw)



T4W
(Type IV Wide)

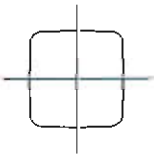


SL4
(Type IV with Spill Control)

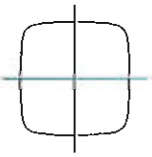


Symmertric Distributions

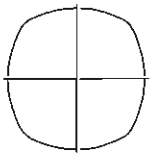
5NQ
(Type V Square Narrow)



5MQ
(Type V Square Medium)

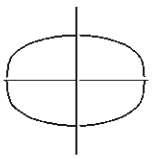


5WQ
(Type V Square Wide)

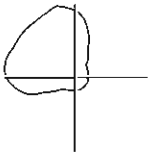


Specialized Distributions

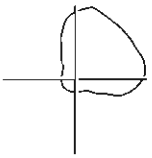
RW
(Rectangular Wide Type I)



SLL
(90° Spill Light Eliminator Left)

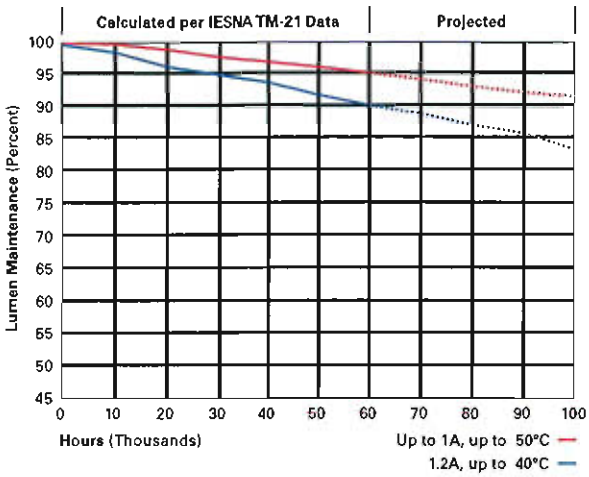


SLR
(90° Spill Light Eliminator Right)



LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	> 416,000
1.2A	Up to 40°C	> 90%	> 205,000



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0 C	1.02
10 C	1.01
25 C	1.00
40 C	0.99
50 C	0.97

CONTROL OPTIONS

0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

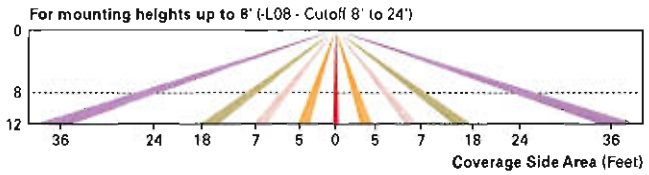
Photocontrol (P, R and PER7)
Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

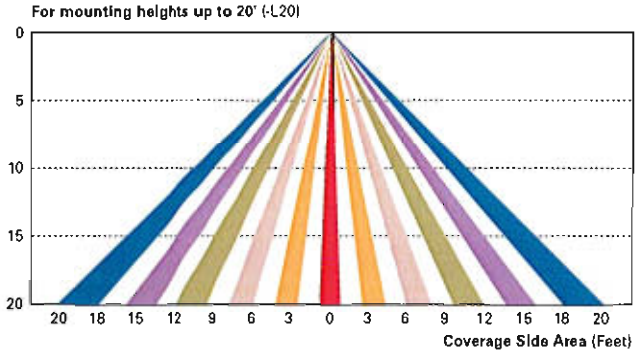
After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

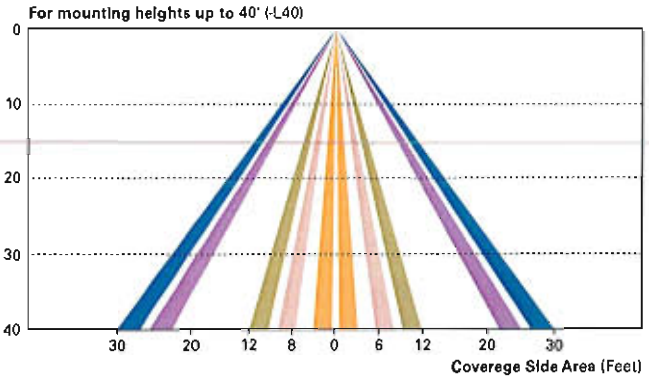
Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

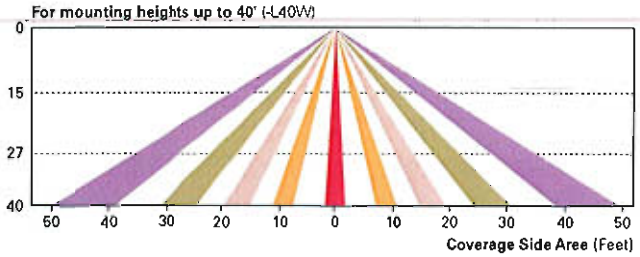
These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



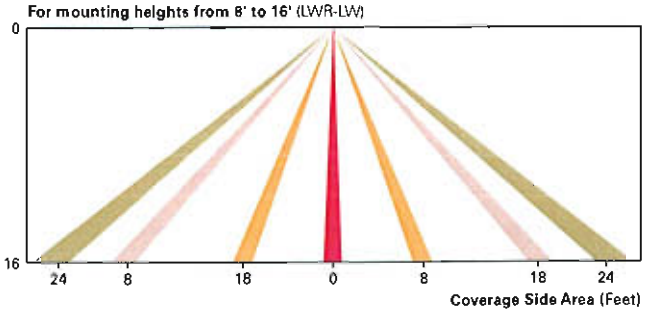


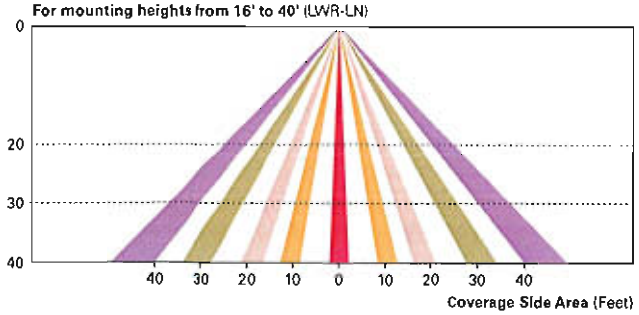




LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)
The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.





Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

ORDERING INFORMATION

Sample Number: GWC-AF-02-LED-E1-T3-GM

Product Family [1]	Light Engine	Number of Light Squares [2]	Lamp Type	Voltage	Distribution	Color	Mounting Options
GWC=Galleon Wall	**AF**=1A Drive Current	01=1 02=2 [3]	**LED**=Solid State Light Emitting Diodes	E1=120-277V 347=347V [4] 480=480V [4,5]	T2=Type II T3=Type III T4FT=Type IV Forward Throw T4W=Type IV Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I 5NQ=Type V Square Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metellic WH=White CC=Custom Color [6]	[BLANK]=Surface Mount

Type WP2

Options (Add es Suffix)	Accessories (Order Separately)
7030=70 CRI / 3000K [7] 8030=80 CRI / 3000K [7] 7050=70 CRI / 5000K [7] 7060=70 CRI / 6000K [7] 600=Drive Current Factory Set to 600mA 800=Drive Current Factory Set to 800mA 1200=Drive Current Factory Set to 1200mA [8] F=Single Fused (120, 277 or 347V. Must Specify Voltage) FF=Double Fused (208, 240 or 480V. Must Specify Voltage) 10K=10kV Surge Module DIM=0-10V Dimming Leads [9,10] DALI=DALI Driver [11] HA=50°C High Ambient [12] UPL=Uplight Housing [13] BBB=Bettery Pack with Back Box [3,8,9,14] CWB=Cold Weather Bettery Pack with Back Box [3,8,9,14] P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle [15] AHD145=After Hours Dim, 5 Hours [16] AHD245=After Hours Dim, 6 Hours [16] AHD255=After Hours Dim, 7 Hours [16] AHD355=After Hours Dim, 8 Hours [16] MS-LXX=Motion Sensor for On/Off Operation [17,18,19] MS/DIM-LXX=Motion Sensor for Dimming Operetion [17,18,19] LWR-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [19,20,21] LWR-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 20' Mounting Height [19,20,21] L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right MT=Factory Installed Mesh Top LCF=Light Square Trim Plate Painted to Match Housing [22] HSS=Factory Installed Housa Sida Shield [23] CE=CE Marking and Small Terminal Block [24]	OA/RA1013=Photocontrol Shorting Cap OA/RA1016=NEMA Photocontrol - Multi-Tap 105-285V OA/RA1201=NEMA Photocontrol - 347V OA/RA1027=NEMA Photocontrol - 480V MA1252=10kV Circuit Module Replacement MA1059XX=Thru-brench Back Box (Must Specify Color) FSIR-100=Wireless Configuration Tool for Occupancy Sensor [17] LS/HSS=Field Installed House Side Shield [23,25]

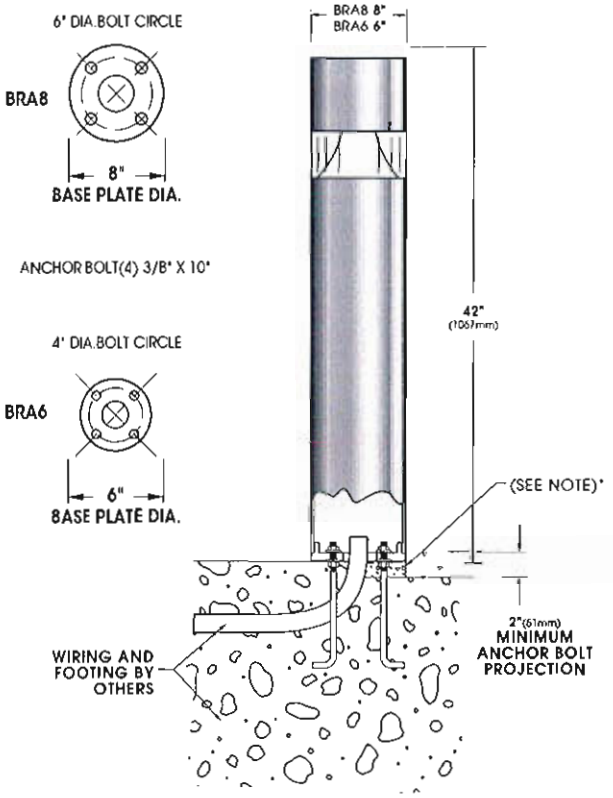
NOTES:

1. DesignLight Consortium® Qualied. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Standard 4000K CCT and minimum 70 CRI.
3. Two light squares with BBB or CWB options limited to 25°C, 120-277V only.
4. Requires the use of a step down transformer. Not available in combination with sensor options at 1200mA.
5. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
6. Custom colors are available. Setup charges apply. Paint chip samples required. Extended Lead times apply.
7. Extended lead times apply. Use dedicated IES files when performing layouts.
8. Not available with HA option.
9. Cannot be used with other control options.
10. Low voltage control lead brought out 18" outside fixture.
11. Only availble with BBB or CWB in single light square. HA option available for single light square only. Limited to 1A and below.
12. Not available with 1200, UPL, BBB and CWB options. Available for single light square only.
13. Not available with SL2, SL3, SL4, HA, BBB, CWB, R, or PER7 options.
14. Operates a single light square only. Cold weather option operates -20°C to +40°C, standard 0°C to +40°C. Backbox is non-IP rated.
15. Compatible with standard 3-PIN photocontrols, 5-PIN or 7-PIN ANSI controls.
16. Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
17. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
18. Replace LXX with the available mounting height options: L08, L20, L40 or L40W are the only choices.
19. Includes integral photosensor.
20. LumaWatt wireless sensors are factory installed requiring network components in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
21. Bronze sensor is shipped with Bronze fixtures. White sensor shipped on all other housing color options.
22. Not available with HSS option.
23. Only for use with SL2, SL3 and SL4 distributions. The light square trim plate is painted black when the HSS option is selected.
24. CE is not available with the 1200, DALI, LWR, MS, MS/DIM, P, R or PER7 options. Available in 120-277V only.
25. One required for each light square.

BRA SERIES-LED

SPECIFICATIONS

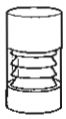
INSTALLATION



*When mounting in soil, anchor bolt fasteners and other hardware must be protected from soil by grouting.

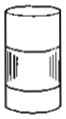
OPTICS

INTERNAL LOUVER
SUPPLIED WITH CLEAR POLYCARBONATE LENS — IL



CAST LOUVER — CL

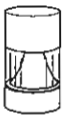
OPAL POLYCARBONATE — WA



VPA - Vertical Array
BRA8 Available in:
36 LED Max

BRA6 Available in:
24LED Max

PARABOLIC REFLECTOR — TR



RADIAL LED Module
BRA8 Available in:
18 LED Module

BRA6 Available in:
12 LED Module

Spec/Order Example: BRA6-TR/12LED120WW/RAL-8019-T/HLSW

ORDERING INFORMATION

BOLLARD	OPTICS	# of LED's	COLOR	VOLTAGE	MOUNTING	FINISH	OPTIONS

BOLLARD

- ☐ BRA8-LED
- ☒ BRA6-LED

OPTICS

VERTICAL POWER ARRAY

- ☐ INTERNAL LOUVER IL
- ☒ CAST LOUVER CL
- ☐ OPAL POLYCARBONATE ..... WP*

RADIAL LED MODULE

- ☐ PARABOLIC REFLECTOR ..... TR

*-WP OPTICS USE OPAL POLYCARBONATE LENS

LED

of LEDs

- ☐ 36LED[1] (42 Watts)
- ☒ 24LED (28 Watts)
- ☐ 18LED[1] (21 Watts)
- ☐ 12LED[2] (15 Watts)

COLOR

- ☒ NW (4000K) Standard
- ☐ CW (5000K)
- ☐ WW (3000K)

OTHER LED COLORS AVAILABLE CONSULT FACTORY

VOLTAGE

- ☐ 120
- ☐ 208
- ☐ 240
- ☐ 277
- ☐ 347
- ☐ 480

NOTES:
1 - AVAILABLE IN BRA8 ONLY.
2 - AVAILABLE IN BRA6 ONLY.

MOUNTING

- ☒ GROUND INSTALLATION .... (STANDARD)
- ☐ WALL MOUNT WM .....

FINISH

STANDARD TEXTURED FINISH

- ☐ BLACK RAL-9005-T
- ☐ WHITE RAL-9003-T
- ☐ GREY RAL-7004-T
- ☐ DARK BRONZE RAL-8019-T
- ☐ GREEN RAL-6005-T

FOR SMOOTH FINISH REPLACE SUFFIX "T" WITH SUFFIX "S" (EXAMPLE: RAL-9500-S)

SEE USALTG.COM FOR ADDITIONAL COLORS

OPTIONS

- ☐ DIMMABLE DRIVER (0-10V PROVIDED) ..... DIM
- ☐ HIGH-LOW DIMMING FOR HARDWIRED SWITCHING OR NONINTEGRATED MOTION SENSOR ..... HLSW
- ☐ INTERNAL HOUSE SIDE SHIELD. .... HS
- ☐ DUPLEX RECEPTACLE ..... DUP
- ☐ GROUND FAULT RECEPTACLE ..... GFI
- ☐ 10KV SURGE PROTECTOR 10SP
- ☐ 20KV SURGE PROTECTOR (277V & 480V Only) 20SP

OPTIONAL HEIGHTS:

- ☐ 30"
- ☐ 36"

U.S. Architecturol Lighting

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www.usaltg.com

U.S. ARCHITECTURAL LIGHTING