City of Lino Lakes
Environmental Board Meeting

January 28, 2015
6:30 p.m.

AGENDA

1. Call to Order

   Election of Chair and Co-Chair

2. Approval of Minutes

   November 19, 2014

3. Approval of Agenda

4. Open Mike

5. Action Items (No Action Items)

6. Discussion/Information Items

   A. Lino Lakes Fire Station
   B. Environmental Board Goals, Final List
   C. Recycling Updates and Anoka County 2015 Score Contact

7. Adjourn

CITY OF LINO LAKES
ENVIRONMENTAL BOARD MINUTES

DATE	: November 19, 2014
TIME STARTED	: 6:34 P. M.
TIME ENDED	: 7:58 P. M.
MEMBERS PRESENT	: Steve Heiskary, Paula Andrzejewski, Martha DeHaven, Nancie Klebba, Kelly Jo McDonnell
MEMBERS ABSENT	: Barbara Bor
STAFF PRESENT	: Marty Asleson, KC Kye

DRAFT

1. CALL TO ORDER

Acting Chair Mr. Heiskary called the Environmental Board meeting to order at 6:34 p.m. on November 19, 2014.

2. APPROVAL OF MINUTES

September 24, 2014

Ms. Andrzejewski made a motion to approve the September 24, 2014 Meeting Minutes. Ms. Klebba seconded the motion to approve the minutes. Motion carried unanimously.

3. APPROVAL OF AGENDA

Add: Heron Rookery

Ms. Klebba made a motion to approve the amended agenda. Ms. McDonnell seconded the motion to approve the amended agenda. Motion carried unanimously.

4. OPEN MIKE

Open Mike was called at 6:37p.m.and was closed at 6:38 p.m.

5. ACTION ITEMS

No Action Items

6. DISCUSSION ITEMS

A. Clearwater Creek Cleanup / Michelle Sylvander

Michelle Sylvander was not in attendance.

Mr. KC Kye was involved in helping clean up the Clearwater Creek neighborhood with the help of Boy Scout Troop #494. The clean-up group removed 10 yds. of yard waste, grass clippings, and brush that had been deposited by neighbors along the walking trail.

The Clearwater Creek neighborhood was given a handout when they bought their homes about the nature areas. Some owners have planted or made screening to mark their property which is great. May have to go back to the neighborhood and re-educate about the proper way to dispose of yard waste.

B. Minnesota's 2012 National Lakes Assessment: National, State, and Ecoregion-based Approach. Steve Heiskary

Mr. Heiskary presented a power point presentation program that was given at the Minnesota 2012 National Lake Assessment.

Mr. Heiskary explained the way water samples are taken, what they are testing for and the comparison of the results through the years.

C. Recycling Updates

KC presented a recycling commercial that will be aired by North Metro and will be showing at White Bear Lake Movie Theater.

October Recycling Saturday went very well. There were over 70 mattresses brought in plus 1 ton of paper for shedding. About 130 cars came through the parking lot.

Received a grant for getting a sea container for collecting furniture for recycling. Hope to have the container ready in December.

D. Project Updates

Heron Rookery- Maintenance will be done by Wayne LeBlanc and Marty. Marty mentioned that flashing needs to be redone on about one dozen trees and hopefully this task will be done by the end of the year.

Wollan's Park- Marty stated that most of the fallen trees have been shredded, burn will happen next spring.

Preserve of Lino Lakes- Signage is posted.

E. Goal Setting for 2015

Mr. Asleson read through the goals for 2014 and observed that some of the goals had been reached. There is still work to be done on Storm Water maintenance, getting volunteers to help with Earth Day clean up and enhance the communication to get more people out to participant in Earth Day activities.

Add- investigates solar energy gardens.

And continue to fund the recycling intern with grant money

7. ADJOURNMENT

It was noted that the next meeting of the Environmental Board will be on Wednesday December 17, 2014 at 6:30p.m.

Ms. Andrzejewski made a motion to adjourn the meeting at 7:58 p.m. Ms. Klebba seconded the motion. Motion carried unanimously.

Respectfully submitted by
Mary Fogarty
Office Tech 1

DRAFT

ENVIRONMENTAL BOARD
AGENDA ITEM 6A

STAFF ORIGINATOR:	Marty Asleson, Environmental Coordinator
MEETING DATE:	January 28, 2015
REQUEST:	Fire Station 2, Update/Administrative Review
APPLICANT:	City of Lino Lakes
OWNER:	City of Lino Lakes

PROPOSED DEVELOPMENT

The City is proposing to build a new fire station on the south west corner of Centerville Road and Birch Street. The land is owned by the City and has been known at the Athletic Complex park area.

The general site plan (C2.0) is included as attachment 1. This map shows proposed new construction. The second Map (C3.0) lays out concept ideas for surface water.

SITE CHARACTERISTICS

Soils

Soils on most of the building site are Type a "Not Hydric" with good infiltration rates. See Soils Map Attachment. The site is located in a 2014 Drinking Water Service Management Area (DWSMA). The DWSMA on this site is rated with a "moderate sensitivity" description. The ratings go from Very High to High Vulnerability, to Moderate and then Low Vulnerability. Design of infiltration ponds should meet a 2 foot separation standard. That is there should be 2 feet of sand between the bottom of the pond and the ordinary high water table.

Land Cover including Significant Trees

The site vegetation for the most part is low quality non-native types. A row of significant trees lines the property line on the north. These trees are Red pine and White Spruce. There are groves of non significant, impacted woody vegetation as depicted on the map attachment.

Rare and Unique Resources

The only significant resources on the site are the wetlands since they are in a Wetland Management Corridor. These wetlands could be restored to higher quality if hydrologic modifications would not affect adjacent drainage. This site is on the boarder of areas where the rare plant communities start to disappear because of soil changes. There is an area on this site though that would have the potential for rare plant communities. The area is indicated on "T and E" Map. Because of the vegetation and hydrologic changes that have occurred to the site wetlands, the plants would not be found today. If the wetlands were restored, particular attention should be given to managing this area for seed bank plants that might resurface.

Tree Preservation

Tree Areas in wetland areas and out of the County road right of way will be protected by wetland protection practices. Trees in the County Road ROW will be removed.

Surface Water Management

The Rice Creek Watershed District Rules for storm water are divided on linear and "other" impervious areas. The County Road design modifications must meet a .75 inch rainfall event standard for infiltration. The "other" impervious areas such as buildings and parking lots, and interior roads must meet a 1.1 inch rainfall event standard for infiltration. At this time there appears to be no wetland impacts on the interior project planning. Rain garden concepts to meet the stormwater management requirements are shown on C3.0. Also shown on both maps are the wetland boundaries.

The site wetlands are within a Wetland Management Corridor (WMC) See WMC map. A Minnesota Routine Assessment Method (MnRAM) evaluation will have to be done to determine wetland vegetation quality. This determines whether replacement of impacted wetlands is given at a higher or lower rate. The vegetation quality assessment for this site will come in low, or highly impacted. Impacts within a WMC must be mitigated at a higher rate than outside the preservation corridor. Any impacts to these wetlands will be at the lower rate for wetlands within the WMC because of the lower quality. There are at this time no wetland impacts for the interior building project. There are wetland impacts for the County Road improvements. The replacement ratio of impacted wetlands within this part of the corridor based on the integrity of the wetlands is 2:1. See "Delineated Wetland Boundaries" on attached map. WSB is working on the wetland mitigation plan. See Paragraph for threatened and endangered for site assessment of same.

Besides buying wetland credits for replacement wetlands, the city could rebuild wetlands. Wetland restoration credit is also a possibility; since the vegetation quality is very low and the supporting water system impacted (the wetland was ditched). This credit can be as high as 75%. Credit is also given for required buffers and native restoration of those buffers. Buffers must be an average of 50 feet and a minimum of 25 feet within the wetland management corridors. Replacement credit for wetland protection and

preservation requires a perpetual Conservation Easement be conveyed and held by the District.

Water from this site is on a "divide" line that transects, and segments the actual construction site. Water to the east and south east of the line goes to Clearwater Creek. Water to the west and south west goes to Sherman Lake. See attached Map "Resource Management Areas.

Landscape Plan

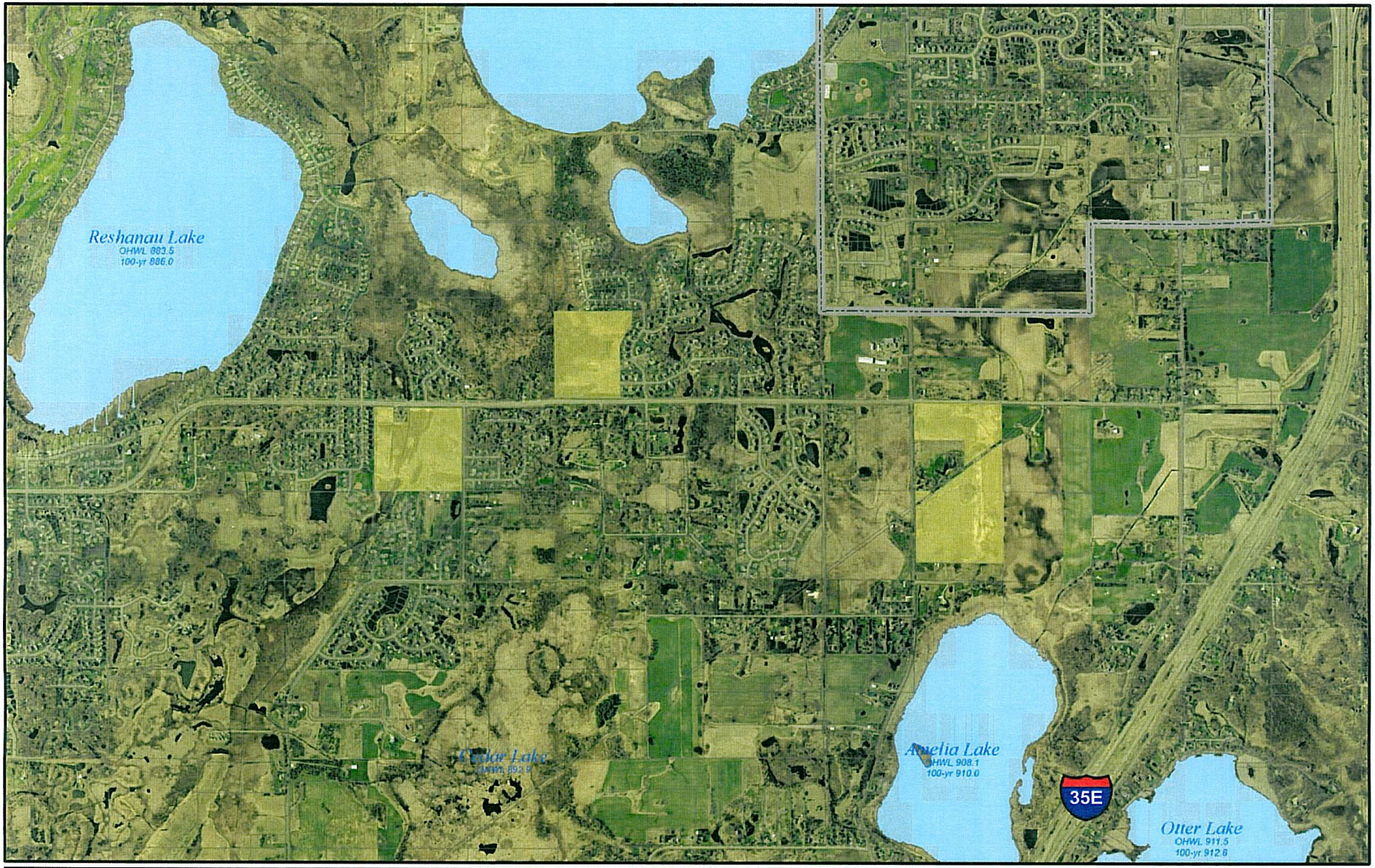
A Concept Landscape Plan has been submitted and includes Bicolor oaks, Freeman Maples, Spring Snow crab (fruitless variety), Cool Splash honeysuckle, Carl Forester Grass, Alpine current, Little Lyme Hydrangea, and Arctic Fire dogwood, (see attachment L1.0 and L1.1). The ground cover includes irrigated sod around the building and native plants along the drive and raingarden areas.

Lighting

Light fixtures are the downward focused, cut-off type. See Lighting cut sheet.

ATTACHMENTS

1. Lino Lakes Fire Station
2. Grading Plan with Rain Gardens
3. Soils Map
4. Significant Trees and Wooded Areas
5. Wetlands Overlay on to Wetland Preservation Zone
6. Surface Water Flow
7. Unique Habitat Area
8. Lighting



CITY OF LINCOLN LAKES

Fire Station #2
Aerial Map

N
W E
S

2,000 1,000 0 2,000
Feet

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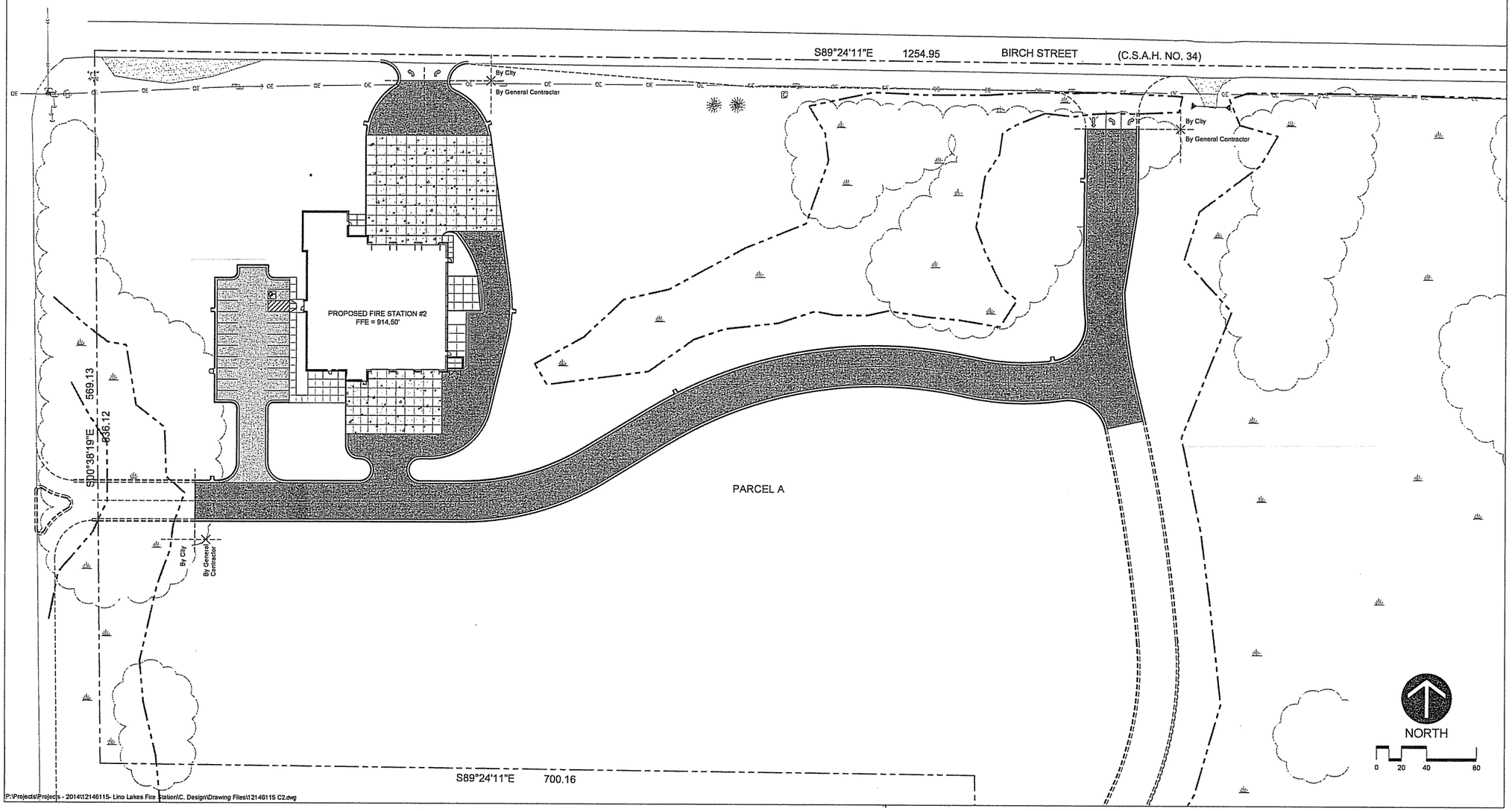
SYMBOL LEGEND

- NEW 3" BITUMINOUS PAVEMENT OVER NEW 8" CRUSHED AGGREGATE BASE SEE DETAIL
- NEW 6" BITUMINOUS PAVEMENT OVER NEW 8" CRUSHED AGGREGATE BASE SEE DETAIL
- NEW 4" CONCRETE PAVEMENT OVER NEW 6" CRUSHED AGGREGATE BASE SEE DETAIL
- NEW 10" CONCRETE PAVEMENT OVER NEW 6" CRUSHED AGGREGATE BASE SEE DETAIL

WHERE APPLICABLE, DIMENSIONS ARE FROM BACK OF CURB TO BACK OF CURB OR BACK OF CURB TO END OF STALL LINE.



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CNH ARCHITECTS

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DATE _____ REG. NO. _____

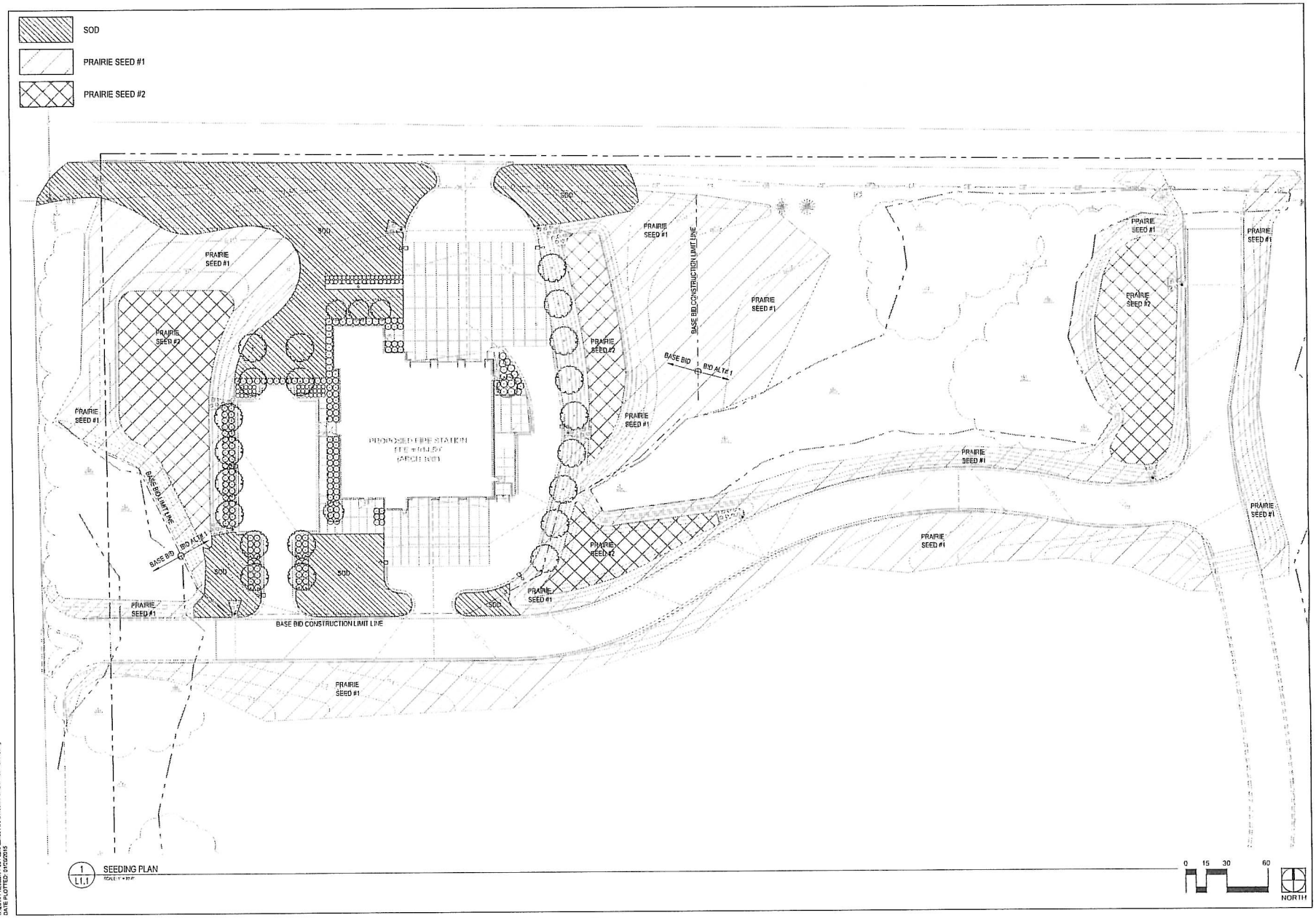
COMM:

REVISIONS:

Lino Lakes Fire Station
1710 Birch Street
Lino Lakes, Minnesota

Paving and Dimension Plan

C2.0



1 / L1.1 SEEDING PLAN

SCALE: 1" = 30'-0"

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DATE 1/19/15

REVISIONS:

Lino Lakes Fire Station
1710 Birch Street
Lino Lakes, Minnesota

Seeding Plan

L1.1

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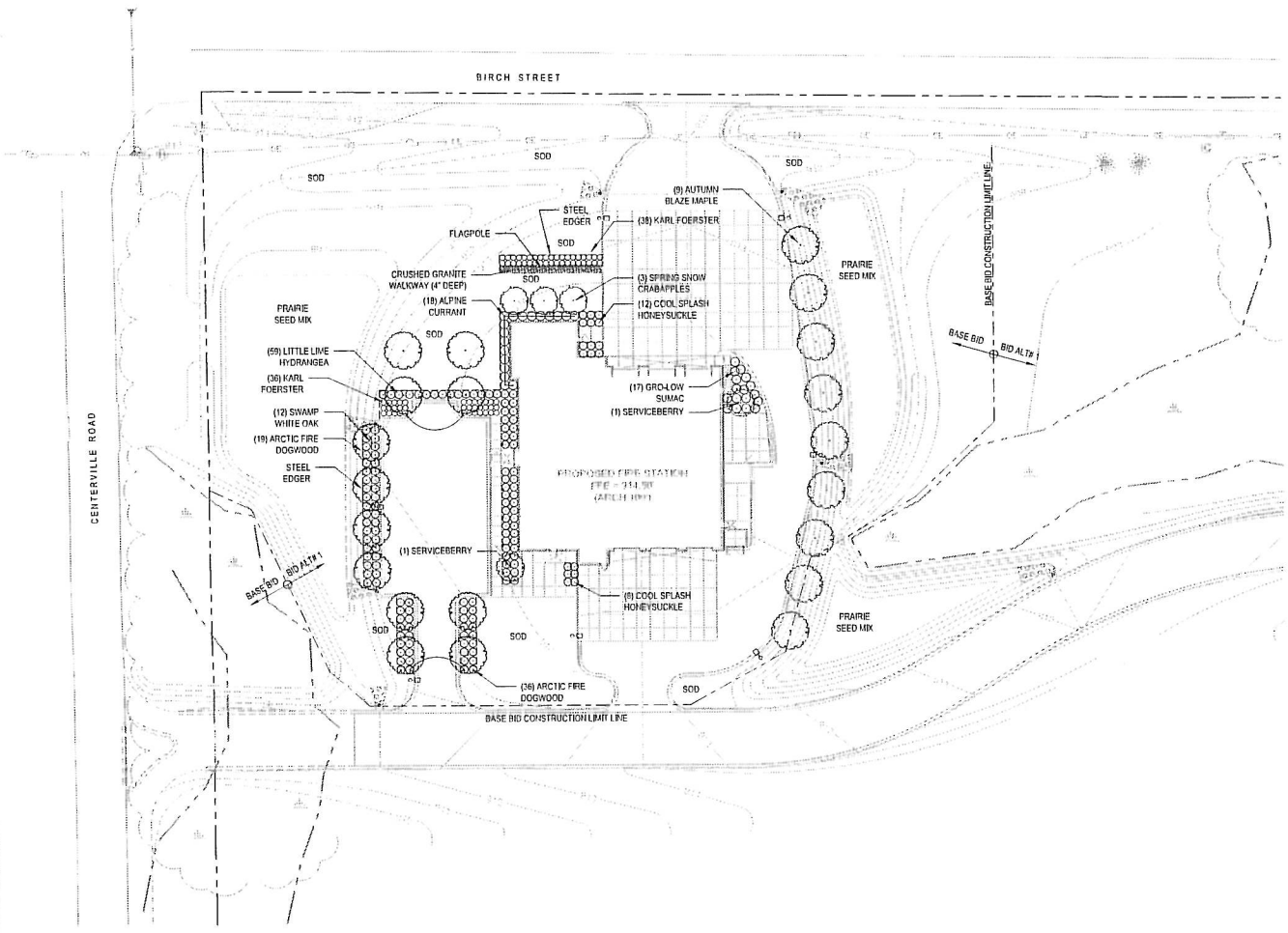
DATE PLOTTED: 01/19/2015

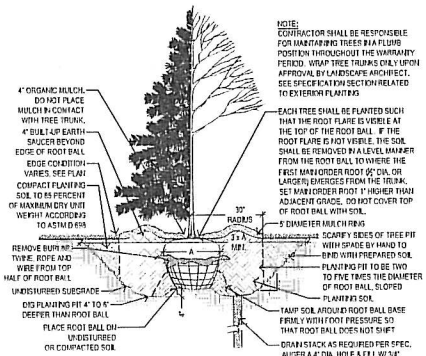
SYM	QTY.	VERIFY	COMMON NAME	SCIENTIFIC NAME	SIZE	CONT.
DECIDUOUS TREES						
	9		AUTUMN BLAZE MAPLE	Acer x freemanii 'Jeffersred'	2.5" CAL.	B & B
	2		A. B. SERVICEBERRY	Amelanchier x grandiflora 'Autumn Brilliance'	10-12' HT.	B & B
	12		SWAMP WHITE OAK	Quercus bicolor	2.5" CAL.	B & B
	3		SPRING SNOW CRABAPPLE	Malus 'Spring Snow'	2.5" CAL.	B & B
DECIDUOUS SHRUBS						
	16		COOL SPLASH BUSH HONEYSUCKLE	Diervilla sessilifolia 'LRDC Podzaks'		#2 CONT.
	59		LIMELIGHT HYDRANGEA	Hydrangea paniculata 'Jane'		#3 CONT.
	55		ARCTIC FIRE DOGWOOD	Cornus sibirica'eg 'Arctic Fire'		#2 CONT.
	17		GRO-LOW SUMAC	Rhus aromatica 'Gro-Low'		#5 CONT.
	18		ALPINE CURRANT	Ribes alpinum		#2 CONT.
PERENNIALS AND ORNAMENTAL GRASSES						
	74		FEATHER REED GRASS	Calamagrostis x aquitiflora 'Karl Foerster'		#1 CONT.

1. CONTRACTOR SHALL CONTACT PUBLIC UTILITIES FOR LOCATION OF UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. LANDSCAPE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE IF DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
2. PROPOSED PLANT MATERIAL SHALL COMPLY WITH THE CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, ANSIZ60.1.
3. ADJUSTMENTS IN LOCATION OF PROPOSED PLANT MATERIALS MAY BE NEEDED IN FIELD. LANDSCAPE ARCHITECT MUST BE NOTIFIED PRIOR TO ADJUSTMENT OF PLANTS.
4. PLANT MATERIAL SHALL BE FERTILIZED UPON INSTALLATION WITH DRIED BONE MEAL, OTHER APPROVED FERTILIZER MIXED IN WITH THE PLANTING SOIL PER THE MANUFACTURER'S INSTRUCTIONS OR MAY BE TREATED FOR SUMMER AND FALL INSTALLATION WITH AN APPLICATION OF GRANULAR 10-6-6 OF 12 OZ. PER 2.5" CALIPER TREE AND 8 OZ. PER SHRUB WITH AN ADDITIONAL APPLICATION OF 10-6-10 THE FOLLOWING SPRING IN THE TREE SAUCER.
5. TREE WRAPPING MATERIAL SHALL BE TWO-WALLED PLASTIC SHEETING AFFIXED FROM TRUNK FLARE TO FIRST BRANCH. WRAP SMOOTH-BARKED DECIDUOUS TREES PLANTED IN THE FALL PRIOR TO DECEMBER 1 AND REMOVE WRAPPING AFTER MAY 1.
6. 3/16" (BLACK) THICK STEEL EDGER TO BE USED TO CONTAIN SHRUBS, PERENNIALS AND ANNUALS WHERE PLANTING BED MEETS SOD.
7. ANNUAL, PERENNIAL AND SHRUB BEDS ARE TO RECEIVE APPLICATION OF PRE-EMERGENT HERBICIDE (PREEN OR APPROVED EQUAL) FOLLOWED BY 3" GREY TRAP ROCK MULCH (1 1/2" DIA.) AND WEED BARRIER FABRIC.
8. CONIFEROUS & DECIDUOUS TREES ARE TO RECEIVE 4" DEEP SHREDDED HARDWOOD MULCH AND SHALL HAVE NO MULCH IN DIRECT CONTACT WITH THE TREE TRUNK.
9. CONTRACTOR SHALL WARRANTY NEW PLANT MATERIAL THROUGH ONE CALENDAR YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. NO PARTIAL ACCEPTANCE WILL BE CONSIDERED.
10. IRRIGATION IS TO BE DESIGN/BUILT BY THE CONTRACTOR. ALL SOD AND PLANTING BEDS TO RECEIVE IRRIGATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN IRRIGATION LAYOUT PLAN AND FINAL SPECIFICATION AS PART OF THE SCOPE OF WORK. SUBMIT LAYOUT PLAN AND SPECIFICATIONS FOR APPROVAL BY THE LANDSCAPE ARCHITECT.
11. SOD/SEED AREAS DISTURBED DUE TO GRADING UNLESS NOTED OTHERWISE (REFER TO SHEET L1.1).

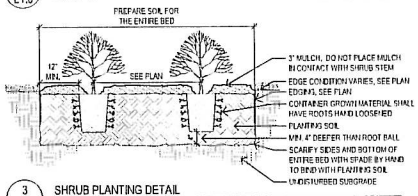


1 L1.0 LANDSCAPE PLAN

0 15 30 60 NORTH



2 L1.0 TREE PLANTING DETAIL



3 L1.0 SHRUB PLANTING DETAIL

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REVISIONS:

Lino Lakes Fire Station
1710 Birch Street
Lino Lakes, Minnesota

Landscape Plan

L1.0

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DATE PLOTTED: 01/02/2015

EROSION CONTROL NOTES

1. Owner and Contractor shall obtain MPCA-NPDES permit. Contractor shall be responsible for all fees pertaining to this permit. The SWPPP shall be kept onsite at all times.
2. Install temporary erosion control measures (inlet protection, silt fence, and rock construction entrances) prior to beginning any excavation or demolition work at the site.
3. Erosion control measures shown on the erosion control plan are the absolute minimum. The contractor shall install temporary earth dikes, sediment traps or basins, additional siltation fencing, and/or disk the soil parallel to the contours as deemed necessary to further control erosion. All changes shall be recorded in the SWPPP.
4. All construction site entrances shall be surfaced with crushed rock across the entire width of the entrance and from the entrance to a point 50' into the construction zone.
5. The toe of the silt fence shall be trenched in a minimum of 6". The trench backfill shall be compacted with a vibratory plate compactor.
6. All grading operations shall be conducted in a manner to minimize the potential for site erosion. Sediment control practices must be established on all down gradient perimeters before any up gradient land disturbing activities begin.
7. All exposed soil areas must be stabilized as soon as possible to limit soil erosion but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Temporary stockpiles without significant silt, clay or organic components (e.g., clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) and the constructed base components of roads, parking lots and similar surfaces are exempt from this requirement.
8. The normal wetted perimeter of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts water around the site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge into any surface water. Stabilization of the last 200 lineal feet must be completed within 24 hours after connecting to a surface water. Stabilization of the remaining portions of any temporary or permanent ditches or swales must be complete within 14 days after connecting to a surface water and construction in that portion of the ditch has temporarily or permanently ceased.
9. Pipe outlets must be provided with energy dissipation within 24 hours of connection to surface water.
10. All riprap shall be installed with a filter material or soil separation fabric and comply with the Minnesota Department of Transportation Standard Specifications.
11. All storm sewers discharging into wetlands or water bodies shall outlet at or below the normal water level of the respective wetland or water body at an elevation where the downstream slope is 1 percent or flatter. The normal water level shall be the invert elevation of the outlet of the wetland or water body.
12. All storm sewer catch basins not needed for site drainage during construction shall be covered to prevent runoff from entering the storm sewer system. Catch basins necessary for site drainage during construction shall be provided with inlet protection.
13. In areas where concentrated flows occur (such as swales and areas in front of storm catch basins and intakes) the erosion control facilities shall be backed by stabilization structure to protect those facilities from the concentrated flows.
14. Inspect the construction site once every seven days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours. All inspections shall be recorded in the SWPPP.
15. All silt fences must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the height of the fence. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access. All repairs shall be recorded in the SWPPP.
16. If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts.
17. All soils tracked onto pavement shall be removed daily.
18. All infiltration areas must be inspected to ensure that no sediment from ongoing construction activity is reaching the infiltration area and these areas are protected from compaction due to construction equipment driving across the infiltration area.
19. Temporary soil stockpiles must have silt fence or other effective sediment controls, and cannot be placed in surface waters, including stormwater conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the stormwater.
20. Collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with MPCA disposal requirements.
21. Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.
22. External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed onsite.
23. All liquid and solid wastes generated by concrete washout operations must be contained in a leak-proof containment facility or impermeable liner. A compacted clay liner that does not allow washout liquids to enter ground water is considered an impermeable liner. The liquid and solid wastes must not contact the ground, and there must not be runoff from the concrete washout operations. Liquid and solid wastes must be disposed of properly and in compliance with MPCA regulations. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
24. Upon completion of the project and stabilization of all grated areas, all temporary erosion control facilities (silt fences, haybales, etc.) shall be removed from the site.
25. All permanent sedimentation basins must be restored to design condition immediately following stabilization of the site.
26. Contractor shall submit Notice of Termination for MPCA NPDES permit within 30 days after Final Stabilization.

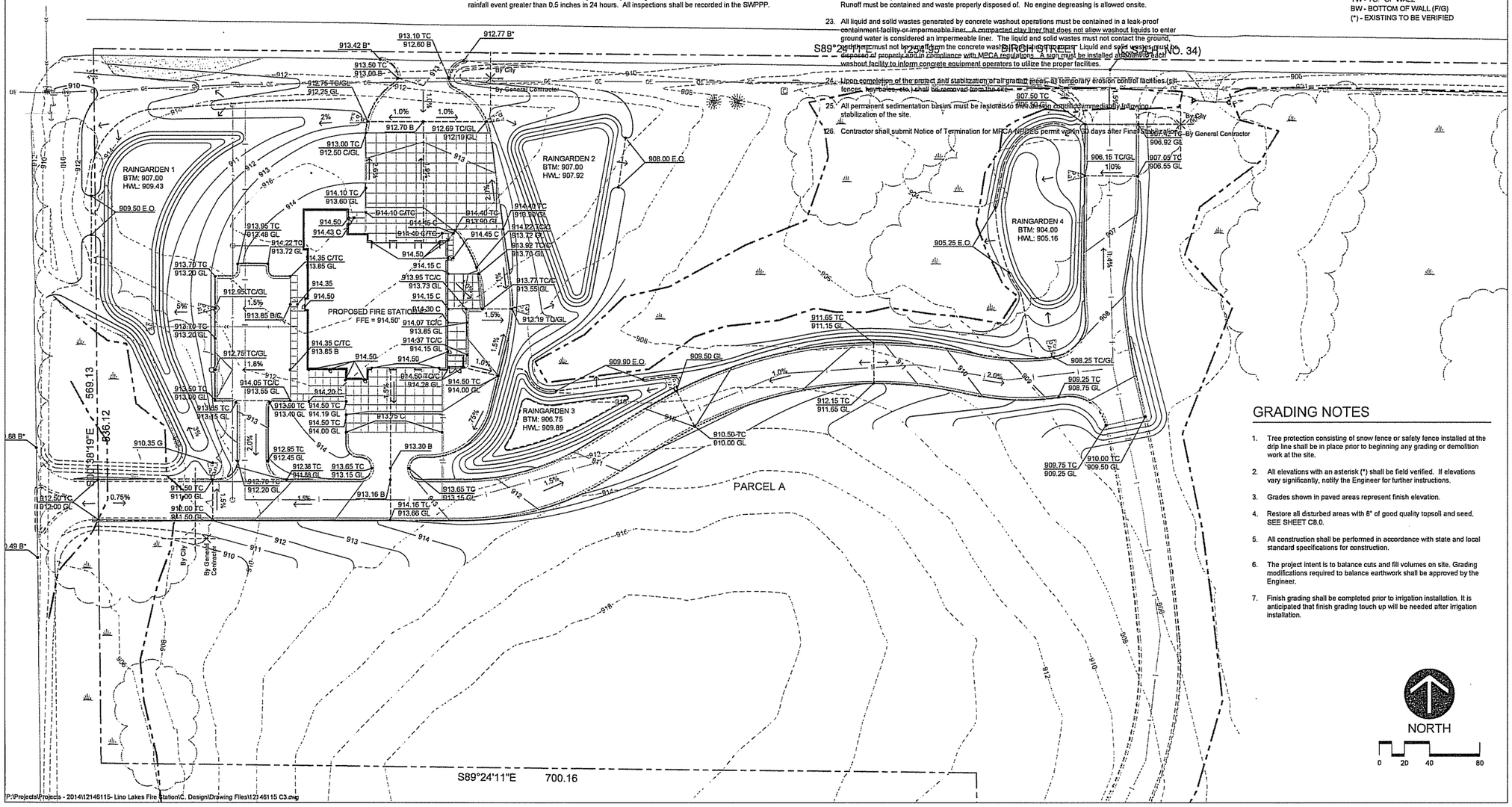
LEGEND

- 950 — EXISTING CONTOURS
- 950 — PROPOSED CONTOURS - MAJOR INTERVAL
- 949 — PROPOSED CONTOURS - MINOR INTERVAL
- GRADE BREAK LINE
- 2.0% GRADE SLOPE
- SILT FENCE
- RIP-RAP / ROCK CONST. ENTRANCE
- INLET PROTECTION
- CONCRETE WASHOUT STATION

SPOT ABBREVIATIONS:

950.00 TC / 949.50 GL

- TC - TOP OF CURB
- GL - GUTTER LINE
- B - BITUMINOUS
- C - CONCRETE
- EO - EMERGENCY OVERFLOW
- TW - TOP OF WALL
- BW - BOTTOM OF WALL (F/G)
- (*) - EXISTING TO BE VERIFIED



GRADING NOTES

1. Tree protection consisting of snow fence or safety fence installed at the drip line shall be in place prior to beginning any grading or demolition work at the site.
2. All elevations with an asterisk (*) shall be field verified. If elevations vary significantly, notify the Engineer for further instructions.
3. Grades shown in paved areas represent finish elevation.
4. Restore all disturbed areas with 8" of good quality topsoil and seed, SEE SHEET C8.0.
5. All construction shall be performed in accordance with state and local standard specifications for construction.
6. The project intent is to balance cuts and fill volumes on site. Grading modifications required to balance earthwork shall be approved by the Engineer.
7. Finish grading shall be completed prior to irrigation installation. It is anticipated that finish grading touch up will be needed after irrigation installation.

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NOT FOR CONSTRUCTION

CNH ARCHITECTS

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I HEREBY CERTIFY THAT I WAS PREPARED OR DIRECTLY SUPERVISED THIS PLAN, SPECIFICATION OR REPORT AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE: REG. NO.

COMM:

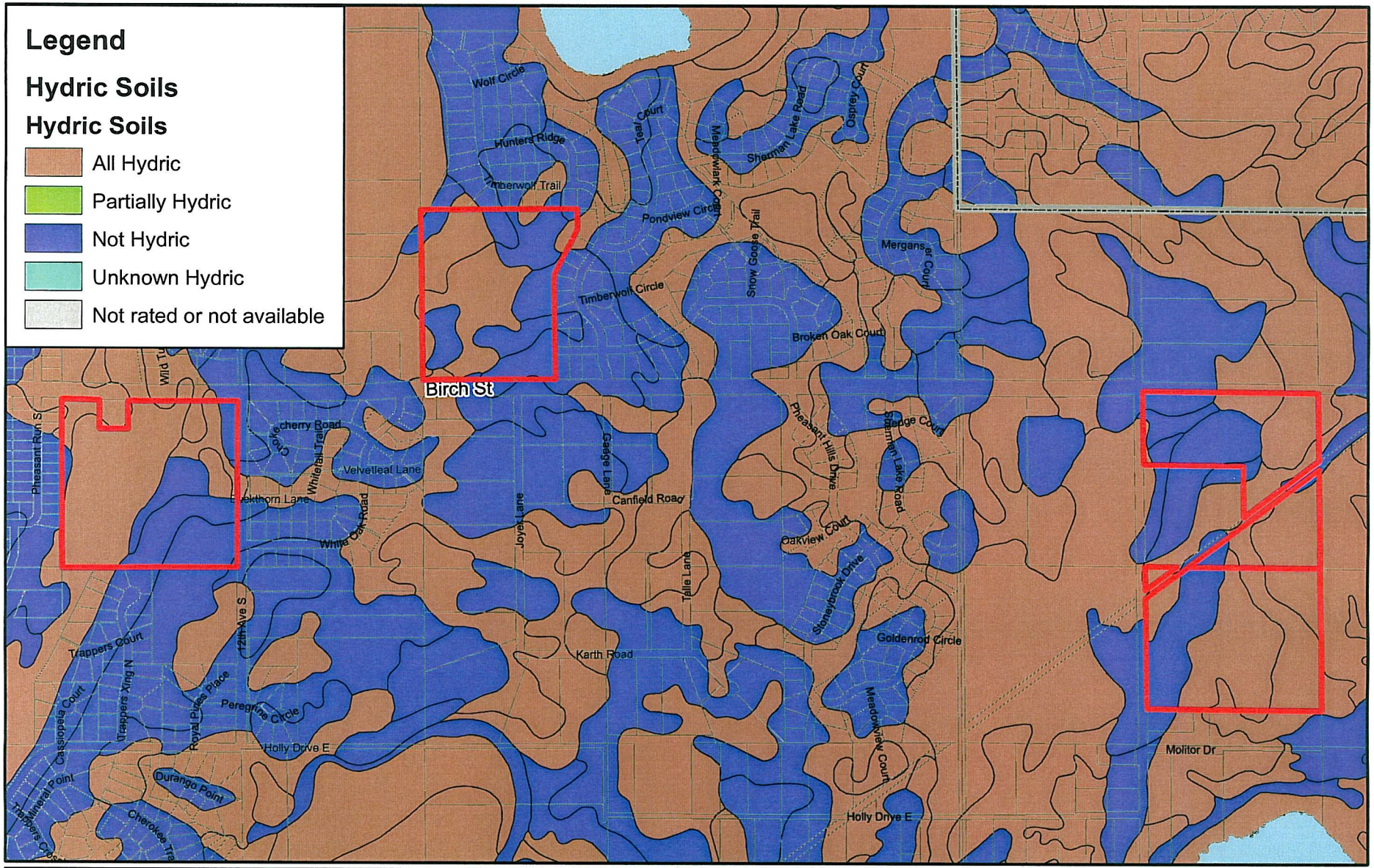
REVISIONS:

Lino Lakes Fire Station

1710 Birch Street
Lino Lakes, Minnesota

Grading and Erosion Control Plan

C3.0



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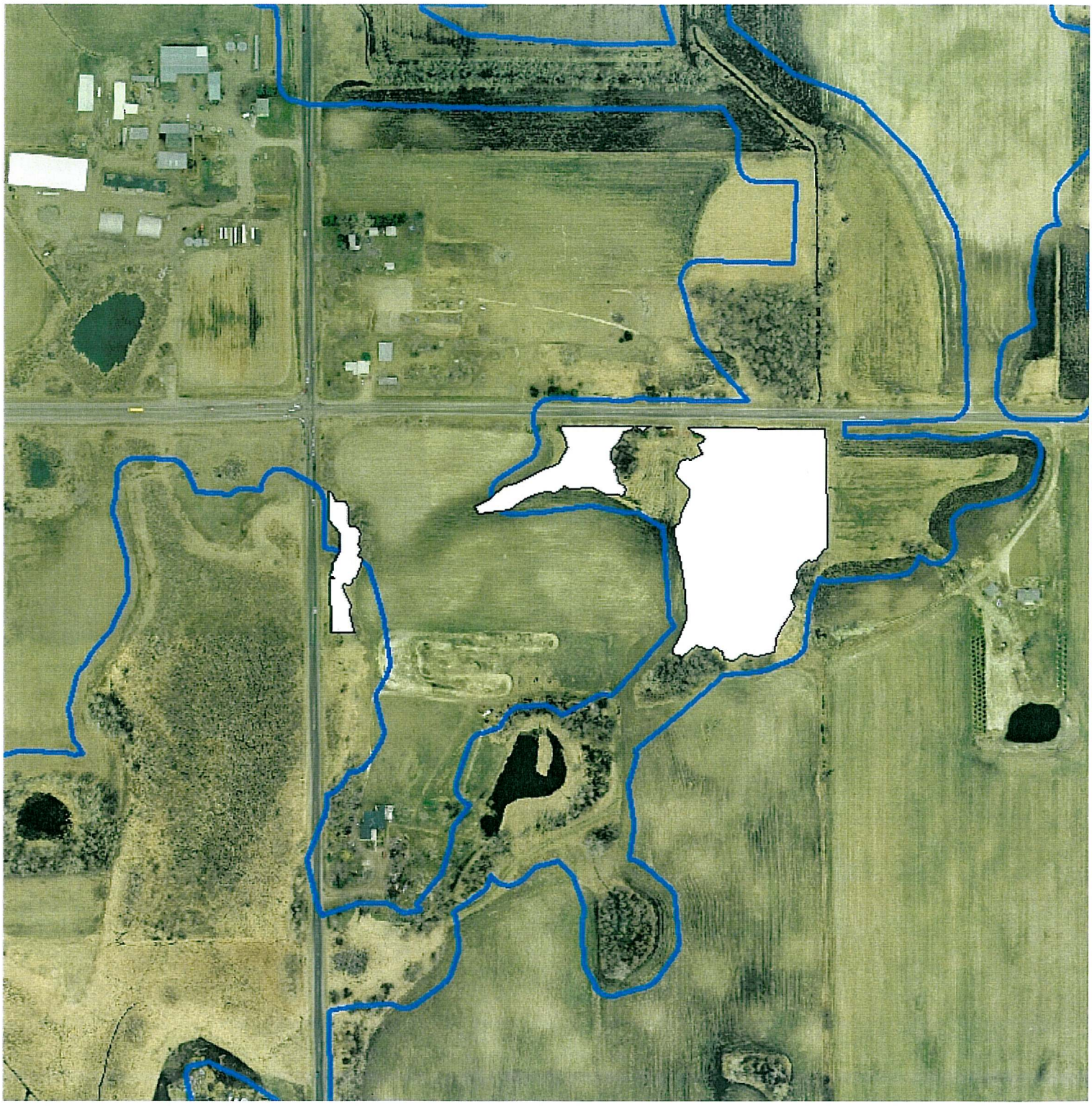
City of Lino Lakes

Firestation 2 Site
Significant Trees
and Wooded Areas

City of Lino Lakes



Firestation 2 Site
Wetlands Overlay on to Wetland Preservation Zone

City of Lino Lakes

Firestation 2 Site
Surface Water Flow

City of Lino Lakes

Firestation 2 Site
Unique Habitat Area

McGRAW-EDISON®

energy solutions

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.

Catalog #		Type	AA, BB & CC
Project	Lino Lakes FS #2		
Comments		Date	11/18/2014
Prepared by	Lukas Anderson		

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. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Choice of 16 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 6000K CCT and 3000K CCT. For the ultimate level of spill light control, an optional house side shield accessory can be field or factory installed. The house side shield is designed to seamlessly integrate with the SL2, SL3, SL4 or AFL optics.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Standard with 0-10V dimming. Shipped standard with Cooper Lighting proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation 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 530mA and 700mA drive currents.

Mounting
Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during assembly. Designed for pole or wall mounting. When mounting two or more luminaires at 90° or 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table on page 3. Round pole top adapter included. For wall mounting, specify wall mount bracket option. 3G vibration rated.

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 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.

GLEON
GALLEON LED

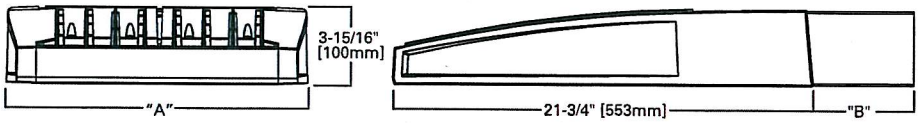
1-10 Light Squares

Solid State LED

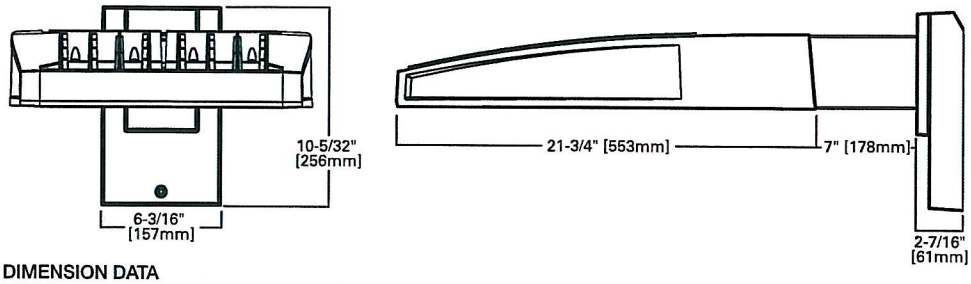
AREA/SITE LUMINAIRE

DIMENSIONS

POLE MOUNT



WALL MOUNT



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 Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table. **2** EPA calculated with optional arm length.

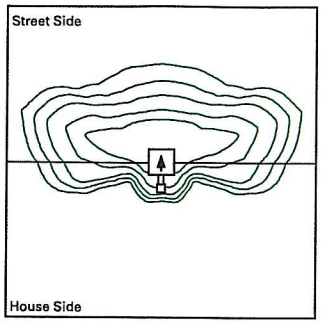
DLC QPL LISTED

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

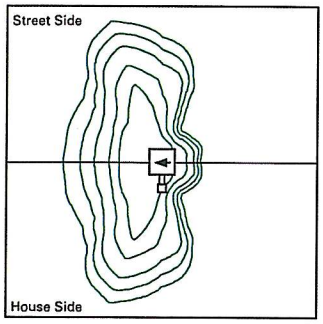
ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

ISO 9001 SYSTEMS CERTIFIED

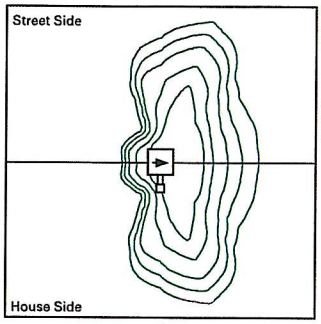
OPTIC ORIENTATION



Standard



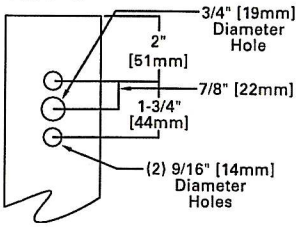
Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

DRILLING PATTERN

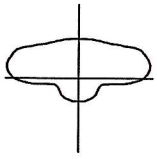
TYPE "N"



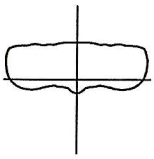
OPTICAL DISTRIBUTIONS

Asymmetric Area Distributions

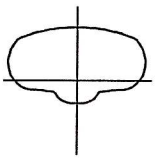
T2 (Type II)



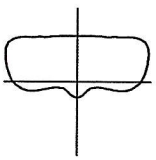
SL2 (Type II with Spill Control)



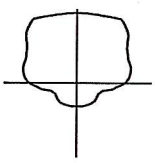
T3 (Type III)



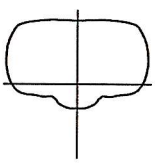
SL3 (Type III with Spill Control)



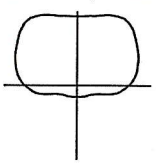
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

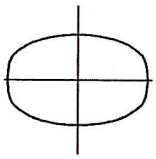


SL4 (Type IV with Spill Control)

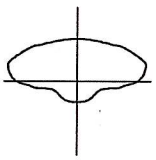


Asymmetric Roadway Distributions

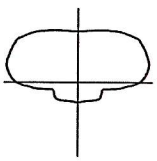
RW (Rectangular Wide Type I)



T2R (Type II Roadway)

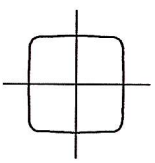


T3R (Type III Roadway)

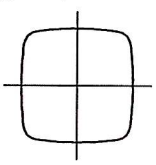


Symmetric Distributions

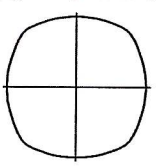
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

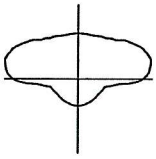


5WQ (Type V Square Wide)

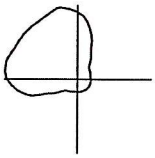


Specialized Distributions

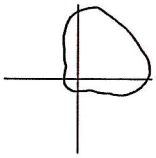
AFL (Automotive Frontline)



SLL (90° Spill Light Eliminator Left)



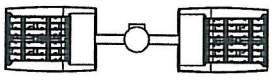
SLR (90° Spill Light Eliminator Right)



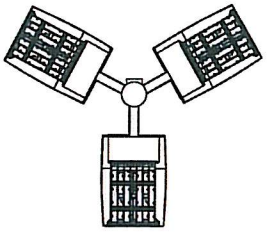
ARM MOUNTING REQUIREMENTS

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

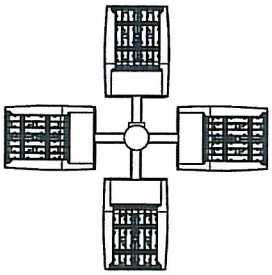
2 @ 180°



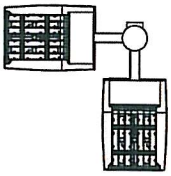
Triple[1]



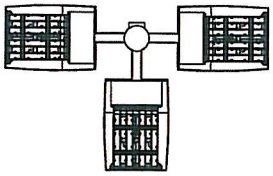
4 @ 90°



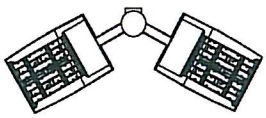
2 @ 90°



Triple[2]



2 @ 120°



NOMINAL POWER AND LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Drive Current		1A	1A	1A	1A	1A	1A	1A	1A	1A	1A
Nominal Power (Watts)		56	107	157	213	264	315	370	421	475	528
Input Current @ 120V (A)		0.47	0.90	1.31	1.79	2.21	2.64	3.09	3.51	3.96	4.41
Input Current @ 208V (A)		0.28	0.51	0.74	1.02	1.25	1.48	1.76	1.99	2.22	2.50
Input Current @ 240V (A)		0.25	0.45	0.65	0.90	1.10	1.30	1.55	1.75	1.95	2.20
Input Current @ 277V (A)		0.23	0.41	0.59	0.82	1.00	1.18	1.41	1.59	1.77	2.00
Optics											
T2	Lumens	5,272	10,303	15,373	20,313	25,168	30,118	35,618	40,357	45,018	49,842
	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
T2R	Lumens	5,597	10,938	16,321	21,565	26,719	31,974	37,813	42,844	47,792	52,914
	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-G4	B4-U0-G5
T3	Lumens	5,374	10,501	15,669	20,704	25,652	30,697	36,303	41,134	45,884	50,802
	BUG Rating	B1-U0-G2	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
T3R	Lumens	5,493	10,735	16,017	21,164	26,222	31,379	37,110	42,048	46,904	51,930
	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
T4FT	Lumens	5,405	10,562	15,760	20,824	25,801	30,875	36,514	41,372	46,150	51,096
	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	B3-U0-G5
T4W	Lumens	5,335	10,426	15,556	20,555	25,468	30,476	36,042	40,838	45,554	50,436
	BUG Rating	B1-U0-G2	B2-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
SL2	Lumens	5,263	10,285	15,347	20,278	25,124	30,066	35,556	40,288	44,940	49,756
	BUG Rating	B1-U0-G2	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
SL3	Lumens	5,373	10,500	15,667	20,701	25,649	30,693	36,298	41,128	45,878	50,794
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	Lumens	5,105	9,976	14,886	19,669	24,370	29,163	34,488	39,078	43,591	48,262
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	Lumens	5,542	10,830	16,160	21,352	26,455	31,658	37,439	42,421	47,320	52,392
	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-G4
5MQ	Lumens	5,644	11,029	16,457	21,745	26,942	32,241	38,128	43,202	48,191	53,356
	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-G4	B5-U0-G5
5WQ	Lumens	5,659	11,059	16,501	21,803	27,014	32,327	38,230	43,317	48,320	53,498
	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
SLL/SLR	Lumens	4,722	9,227	13,767	18,191	22,539	26,971	31,897	36,141	40,315	44,635
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	Lumens	5,492	10,732	16,014	21,159	26,216	31,372	37,101	42,038	46,893	51,918
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
AFL	Lumens	5,512	10,771	16,072	21,236	26,311	31,486	37,236	42,191	47,063	52,107
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4

* Nominal data for 4000K CCT.

NOMINAL POWER AND LUMENS (700MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Drive Current		700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA
Nominal Power (Watts)		38	72	105	138	176	210	243	276	314	348
Input Current @ 120V (A)		0.32	0.59	0.86	1.14	1.45	1.72	2	2.28	2.58	2.86
Input Current @ 208V (A)		0.21	0.36	0.51	0.67	0.87	1.02	1.18	1.34	1.53	1.69
Input Current @ 240V (A)		0.19	0.32	0.45	0.59	0.77	0.90	1.04	1.18	1.35	1.49
Input Current @ 277V (A)		0.20	0.29	0.40	0.51	0.69	0.80	0.91	1.02	1.20	1.31
Optics											
T2	Lumens	3,854	7,531	11,237	14,847	18,395	22,013	26,033	29,497	32,904	36,430
	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	Lumens	4,091	7,995	11,929	15,762	19,529	23,370	27,638	31,316	34,932	38,676
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3	Lumens	3,928	7,676	11,453	15,133	18,750	22,437	26,534	30,065	33,537	37,132
	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
T3R	Lumens	4,015	7,846	11,707	15,469	19,166	22,936	27,124	30,733	34,283	37,957
	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	Lumens	3,951	7,720	11,519	15,221	18,858	22,567	26,688	30,240	33,732	37,347
	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	Lumens	3,900	7,620	11,370	15,024	18,615	22,276	26,343	29,849	33,296	36,864
	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	Lumens	3,847	7,518	11,217	14,821	18,364	21,975	25,988	29,447	32,847	36,368
	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-G4	B3-U0-G5
SL3	Lumens	3,927	7,675	11,451	15,131	18,747	22,434	26,531	30,061	33,533	37,126
	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	Lumens	3,731	7,292	10,880	14,376	17,812	21,315	25,208	28,562	31,861	35,275
	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	B2-U0-G5	B3-U0-G5
5NQ	Lumens	4,051	7,916	11,811	15,606	19,336	23,139	27,365	31,006	34,587	38,294
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
5MQ	Lumens	4,125	8,062	12,029	15,894	19,692	23,565	27,869	31,577	35,224	38,999
	BUG Rating	B2-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	B5-U0-G4
5WQ	Lumens	4,136	8,083	12,061	15,936	19,745	23,628	27,943	31,661	35,318	39,103
	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	Lumens	3,451	6,744	10,063	13,296	16,474	19,714	23,314	26,416	29,467	32,625
	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	Lumens	4,014	7,844	11,704	15,465	19,162	22,930	27,118	30,726	34,274	37,948
	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	Lumens	4,029	7,873	11,747	15,522	19,231	23,014	27,216	30,838	34,399	38,086
	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 4000K CCT.

NOMINAL POWER AND LUMENS (530MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Drive Current		530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA
Nominal Power (Watts)		30	54	80	105	130	159	184	209	234	259
Input Current @ 120V (A)		0.25	0.45	0.66	0.86	1.07	1.32	1.52	1.72	1.93	2.14
Input Current @ 208V (A)		0.17	0.28	0.39	0.51	0.63	0.78	0.9	1.02	1.14	1.26
Input Current @ 240V (A)		0.17	0.25	0.35	0.45	0.55	0.70	0.80	0.90	1.00	1.10
Input Current @ 277V (A)		0.19	0.24	0.32	0.40	0.49	0.64	0.72	0.80	0.89	0.98
Optics											
T2	Lumens	3,079	6,017	8,978	11,862	14,697	17,588	20,800	23,567	26,289	29,106
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4
T2R	Lumens	3,269	6,388	9,531	12,593	15,603	18,672	22,082	25,020	27,909	30,900
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4
T3	Lumens	3,138	6,133	9,150	12,091	14,980	17,926	21,200	24,021	26,795	29,667
	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
T3R	Lumens	3,208	6,269	9,354	12,359	15,313	18,325	21,671	24,555	27,390	30,326
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T4FT	Lumens	3,156	6,168	9,203	12,161	15,067	18,030	21,323	24,160	26,950	29,839
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T4W	Lumens	3,116	6,088	9,084	12,004	14,872	17,797	21,047	23,848	26,602	29,453
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL2	Lumens	3,074	6,006	8,962	11,842	14,672	17,558	20,764	23,527	26,244	29,056
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	3,138	6,132	9,149	12,089	14,978	17,924	21,197	24,018	26,791	29,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	2,981	5,826	8,693	11,486	14,231	17,030	20,140	22,820	25,456	28,184
	BUG Rating	B0-U0-G1	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5
5NQ	Lumens	3,236	6,324	9,437	12,469	15,449	18,487	21,863	24,773	27,634	30,595
	BUG Rating	B1-U0-G0	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2
5MQ	Lumens	3,296	6,441	9,610	12,698	15,733	18,828	22,266	25,229	28,142	31,158
	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-G3
5WQ	Lumens	3,305	6,458	9,636	12,732	15,775	18,878	22,325	25,296	28,217	31,241
	BUG Rating	B2-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	B5-U0-G4
SLL/SLR	Lumens	2,757	5,388	8,040	10,623	13,162	15,751	18,627	21,105	23,543	26,066
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	3,207	6,267	9,351	12,356	15,309	18,320	21,666	24,549	27,384	30,319
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
AFL	Lumens	3,219	6,290	9,385	12,401	15,365	18,387	21,745	24,638	27,484	30,429
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3

* Nominal data for 4000K CCT.

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

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C	> 90%	> 170,000

Type AA SL4 HHS
Type BB SL3 HHS
Type CC SL2 HHS

ORDERING INFORMATION

Sample Number: GLEON-AE-04-LED-E1-T3-GM-700

Product Family [1]	Light Engine	Number of Light Squares [2]	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	**AE**=1A Drive Current	**01**=1 **02**=2 **03**=3 **04**=4 **05**=5 **06**=6 **07**=7 **08**=8 **09**=9 **10**=10	**LED**=Solid State Light Emitting Diodes	**E1**=120-277V **347**=347V [3] **480**=480V [3,4]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square 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 **AFL**=Automotive Frontline	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [5] **MA**=Mast Arm Adapter [6] **WM**=Wall Mount

Options (Add as Suffix)

2L=Two Circuits [7,8]
7030=70 CRI 3000K [9]
7060=70 CRI 6000K [9]
530=Drive Current Factory Set to 530mA [10]
700=Drive Current Factory Set to 700mA [10]
F=Single Fuse (120, 277 or 347V. Must Specify Voltage)
FF=Double Fuse (208, 240 or 480V. Must Specify Voltage)
P=Button Type Photocontrol (120, 208, 240 or 277V)
PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle
R=NEMA Twistlock Photocontrol Receptacle
HA=50°C High Ambient [8]
MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [11,12,13,14]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [11,12,13,14]
MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [11,12,13,14]
MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height [11,12,13,14,15]
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height [11,12,13,14,15]
MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height [11,12,13,14,15]
MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height [11,12,13,14]
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [11,12,13,14]
MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [11,12,13,14]
DIMRF-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [16]
DIMRF-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [16]
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 [17]
HSS=Factory Installed House Side Shield [18]

Accessories (Order Separately)

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 Adapter 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 Adapter 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 [19]
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
LS/HSS=Field Installed House Side Shield [18,20]

Notes:
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Standard 4000K CCT and minimum 70 CRI.
3. Requires the use of a step down transformer when combined with MS/DIM, MS/X or DIMRF.
4. Not to be used with un-grounded systems.
5. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
6. Factory installed.
7. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AE-02 through AE-04 requires a larger housing, normally used for AE-05 or AE-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.
8. Not available with LumaWatt wireless sensors.
9. Extended lead times apply. Use dedicated IES files for 3000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
10. 1 Amp standard. Use dedicated IES files for 530mA and 700mA when performing layouts. These files are published on the Galleon luminaire product page on the website.
11. Consult factory for more information.
12. Utilizes internal step down transformer when 347V or 480V is selected.
13. The FSIR-100 accessory is required to adjust parameters.
14. Not available with HA option.
15. Replace X with number of Light Squares operating in low output mode.
16. LumaWatt wireless sensors are factory installed only requiring network components RF-EM1, RF-GW1 and RF-ROUT1 in appropriate quantities. See www.cooperlighting.com for LumaWatt application information.
17. Not available with house side shield (HSS).
18. Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.
19. This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your Eaton's Cooper Lighting business representative for additional details.
20. One required for each Light Square.

INVUE® energy solutions

DESCRIPTION

The cylindrical form of the Vision Flood Small LED luminaire blends effortlessly to architectural and landscape environments. The Vision Flood Small LED luminaire offers optical, energy and maintenance solutions for the full breadth of floodlighting applications.

Catalog #		Type	
Project	Lino Lakes FS #2		DD
Comments		Date	
Prepared by	Lukas Anderson		11/18/14

SPECIFICATION FEATURES

Construction
HOUSING: One-piece, die-cast aluminum housing maintains a nominal .125" thickness to endure the toughest environments while maintaining precise tolerance control. DOOR: Die-cast aluminum door maintains a nominal .125" thickness and features concealed hinging to the housing. Door is secured with four tamper-resistant recessed stainless steel allen head fasteners. Door frame features an integral accessory channel for the mounting of optional light control accessories. Doorframe seals to housing with a continuous extruded silicone gasket. Lens is impact-resistant .180" thick tempered clear flat glass, sealed to the door with a one-piece silicone gasket. IP66 rated.

Optics
DISTRIBUTION: State-of-the-art optical designs offer the choice of high efficiency floodlighting optical distributions including symmetric round, symmetric rectangular, asymmetric rectangular and tight spot beam patterns. Optic module is injection molded thermo plastic with highly reflective, metalized specular finish. LEDs: High output LEDs, 60,000+ hours life at >90% lumen maintenance per IESNA TM-21 Standards, offered standard in 4000K (+/- 275K) and nominal 70 CRI.

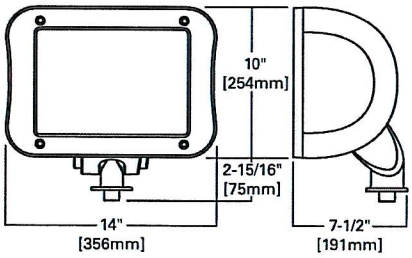
Electrical
DRIVER: LED drivers feature electronic universal voltage 120-277V (50/60Hz), 347V (60Hz) or 480V (60Hz) > 0.9 power factor, < 20% harmonic distortion. Features ambient temperature rating range of +40°C (104°F) down to minimum starting temperature of -40°C (-40°F). Shipped standard with our proprietary circuit module designed to withstand 10kV of transient line surge. LEDs and drivers mounted to assembly trays and equipped with quick disconnects for ease of maintenance.

Mounting
KNUCKLE: Heavy-duty die-cast aluminum knuckle utilizes a taper-lock adjustment mechanism for both solid engagement and infinite aiming adjustment. Knuckle adjustment is made via one captive stainless steel allen head fastener consistent with doorframe fasteners. Tested to sustain 2G of vibration without loosing aiming position. VFS knuckle features a 3/4" NPT nipple on bottom surface for rigid attachment to available mounting accessories. Optional slipfitter mount available for VFS.

Finish
Housing is finished in five-stage, super premium 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 Outdoor Architectural Colors brochure for a complete selection.

Warranty
Five-year warranty.

DIMENSIONS



VFS
VISION FLOOD SMALL LED

ARCHITECTURAL FLOOD LUMINAIRE

CERTIFICATION DATA
40°C Ambient Temperature Rating
UL and cUL Listed
ISO 9001
IP66 Luminaire
LM79 / LM80 Compliant
2G Vibration Tested
DesignLights Consortium® Qualified*

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

EPA
Effective Projected Area:
1.19 Sq. Ft.

SHIPPING DATA
Approximate Net Weight: 18 lbs. (8 kgs)

Cooper Lighting by EATON

*www.designlights.org

DELIVERED LUMENS BY DISTRIBUTION, LED QUANTITY AND DRIVE CURRENT

Voltage	Drive Current / LED Quantity						IES NEMA Type (H x V)
	350mA		525mA		700mA		
	20 LEDs	40 LEDs	20 LEDs	40 LEDs	20 LEDs	40 LEDs	
TS (Tight Spot)	2,082	3,877	2,877	5,421	3,399	6,070	3 x 3
TBS (Tight Spot Baffle)	1,260	2,347	--	--	--	--	1 x 1
WST (Wide Symmetric Rectangular)	2,219	4,132	3,066	5,774	3,264	6,470	7 x 6
MST (Medium Symmetric Rectangular)	2,261	4,210	3,123	5,885	3,692	6,590	6 x 5
VAT (Vertical Asymmetric Rectangular)	2,243	4,177	3,100	5,840	3,663	6,540	6 x 6
NSR (Narrow Symmetric Round)	2,112	3,943	2,918	5,496	3,450	6,158	3 x 3
MSR (Medium Symmetric Round)	2,183	4,065	3,016	5,880	3,565	6,361	4 x 4

NOTE: Lumens values based upon 4000K CCT and 25°C ambient operating temperatures.

INPUT WATTS BY VOLTAGE, LED QUANTITY AND DRIVE CURRENT

Voltage	Input by Drive Current / LED Quantity					
	350mA		525mA		700mA	
	20 LEDs	40 LEDs	20 LEDs	40 LEDs	20 LEDs	40 LEDs
Input Watts @ 120-277V	24W	46W	35W	67W	49W	94W
Input Watts @ 347V	27W	48W	38W	70W	52W	97W
Input Watts @ 480V	31W	52W	42W	73W	55W	100W

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.04
15°C	1.03
25°C	1.00
40°C	0.96
50°C	0.92

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000

ORDERING INFORMATION

Sample Number: VFS-K-B40-5-LED-E1-MST-GM

Product Family [1]	Mounting Type	Number of LEDs / Driver Current [2]	Lamp Type	Voltage	Distribution	Color
VFS=Vision Flood Small	**K**=Knuckle Mount	**B20-3**=20 LEDS at 350mA **B20-5**=20 LEDS at 525mA **B20-7**=20 LEDS at 700mA **B40-3**=40 LEDS at 350mA **B40-5**=40 LEDS at 525mA **B40-7**=40 LEDS at 700mA [3,4]	**LED**=Light Emitting Diodes	**E1**=Electronic (120-277V) **D1**=Electronic Dimming [5] **347**=347V **480**=480V [6]	**TS**=Tight Spot **TSB**=Tight Spot Baffle [4,7,8] **WST**=Wide Symmetrical Rectangular **MST**=Medium Symmetrical Rectangular **VAT**=Vertical Asymmetric Rectangular **NSR**=Narrow Symmetrical Round **MSR**=Medium Symmetrical Round	**AP**=Grey **BK**=Black **BZ**=Bronze **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White

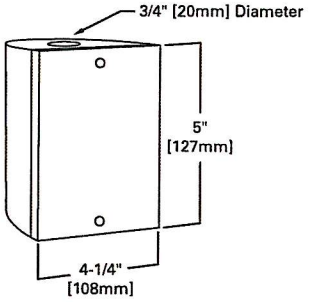
Options (Add as Suffix)	Accessories (Order Separately)	
PC=Button Photocontrol (Specify Voltage) **SG**=Softening Glass [9] **7060**=70 CRI / 6000 CCT **8030**=80 CRI / 3000 CCT	**JB-XX**=Architectural Junction-box with Two 3/4" NPT Entries **SM-XX**=Stanchion Mount **ST-XX**=Stanchion Mount Tenon [10] **WM-XX**=Wall Mount **WMA-XX**=Wall Mount Arm **WMT-XX**=Wall Mount Tenon Mount [10] **TMA-XX**=Twin Mount Arm - EPA 0.35 **TMT-XX**=Twin Mount Arm Tenon Mount - EPA 0.42 [10] **SMT-XX**=Surface Mount Tenon [10] **SF-XX**=Slipfitter	**PM1-XX**=Post Mount Extension Single - EPA 0.12 **PM2-XX**=Post Mount Extension Double - EPA 0.12 **VFS-CFR-XX**=Color Filter Adapter with Red Gel [11] **VFS-CFB-XX**=Color Filter Adapter with Bright Blue Gel [11] **VFS-CFG-XX**=Color Filter Adapter with Deep Green Gel [11] **VFS-CFO-XX**=Color Filter Adapter with Warm Orange Gel [11] **VFS-BD-XX**=Barn Doors - EPA 1.01 **VFS-TV-XX**=Top Visor - EPA 0.6 **VFS-4S-XX**=Four Sided Visor **VA6174**=Tamper-proof Driver Bit CPR Cap Screw

NOTES:

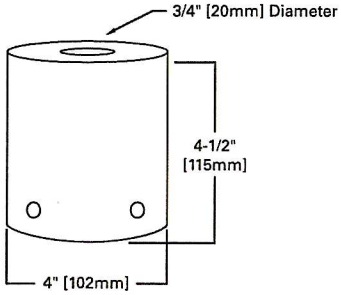
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Standard 4000K CCT, nominal 70 CRI.
3. 40 LEDs at 700mA (B40-7) limited to 25°C ambient conditions.
4. Not available with color filters or external shielding.
5. Not available with 20 LEDs at 700mA (B20-7). Provides 0-10V DC low voltage leads used in dimming control.
6. Only available with normal power factor and <30 THD.
7. Not available with 347V or 480V.
8. Available with 20 or 40 LEDs at 350mA (B20-3 or B40-3) only.
9. Standard on WST distribution.
10. Must order SF Slipfitter.
11. Not available with B40-5 or B40-7.

ACCESSORIES

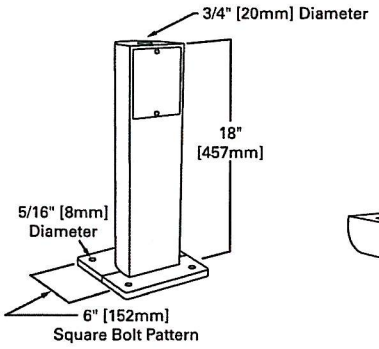
The Vision Flood Small (VFS) knuckle features a 3/4" NPT threaded nipple on its bottom surface for direct mounting to the following accessories: Junction Box (JB), Slipfitter (SF), Stanchion Mount (SM), Twin Arm Mount (TMA), Wall Mount Arm (WMA), Wall Mount (WM) and Post Mount Extensions (PM1, PM2). When coupled with the available slipfitter (SF), the VFS can be mounted to the following accessories: Surface Mount Tenon (SMT), Stanchion Mount Tenon (ST), Twin Mount Arm Tenon (TMT) and Wall Mount Arm Tenon (WMT).



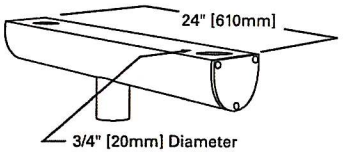
JUNCTION BOX (JB)
U.L. and CSA listed for wet locations, the Vision J-Box is supplied with a 3/4" clearance hole on the top surface and two 3/4" NPT openings on the bottom surface. An optional drilling consisting of one 1/2" NPT opening on the bottom surface can be specified.



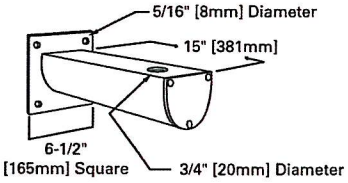
SLIPFITTER (SF)
Die-cast aluminum slipfitter features a 3/4" NPT entry point on top surface to mate to standard VFS knuckle. Allows fixture assembly to be mounted to standard 2" pipe size (2-3/8" O.D.) tenons and tenon equipped accessories.



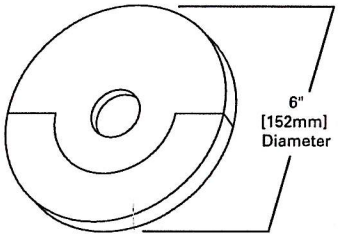
STANCHION MOUNT (SM)
Used to mount fixture above grade to solid surface, or partially buried when secured to concrete pad. Cast aluminum housing and mounting plate is 18" tall and is supplied with a single 3/4" clearance hole entry point.



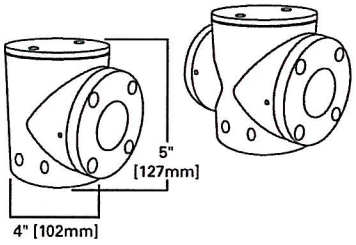
TWIN ARM MOUNT (TMA)
Soft form extruded aluminum arm is 24" in length and features two 3/4" clearance holes for twin fixture mount. Other lengths and drilling patterns available upon request. Twin arm base slip fits over standard 2" pipe size (2-3/8" O.D.) tenon. End caps are removable for wiring access. Useful in ground mount and pole mount applications.



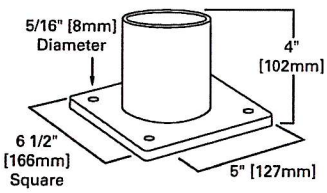
WALL MOUNT ARM (WMA)
Extruded aluminum arm with cast mounting plate is 15" in length and is supplied with a 3/4" clearance hole entry point.



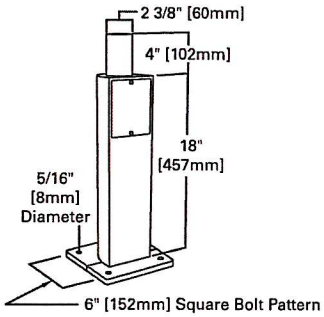
WALL MOUNT (WM)
Cast aluminum mounting plate adapts around 4" square or octagonal J-box by others. Additional stud mounting is required beyond J-box attachment. Consists of mounting bracket and cast aluminum splice access cover providing a clean transition to the wall surface. Hanger mount integral to mounting plate allows for ease of installation.



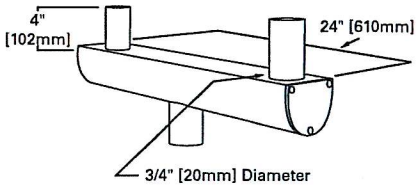
POST MOUNT EXTENSION (PM1/PM2)
Cast aluminum assembly slip fits over standard 2" pipe size (2-3/8" O.D.) tenons and allows for single (PM1), or double (PM2) mount configurations. Assembly allows for 360° of fixture rotation. Top cap provides splice access. Useful for single or twin, pole mounted downward aiming applications.



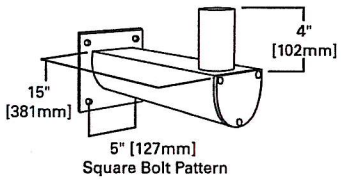
SURFACE MOUNT TENON (SMT)
For above-grade surface mount placement, the SMT is supplied with a 4" tall standard 2" pipe size (2-3/8" O.D.) tenon. Requires SF Slipfitter.



STANCHION MOUNT TENON (ST)
Used to mount fixture above grade to solid surface, or partially buried when secured to concrete pad. Cast luminum housing and mounting plate is 18" tall and is supplied with a standard 2" pipe size (2-3/8" O.D.) tenon. Requires SF Slipfitter.

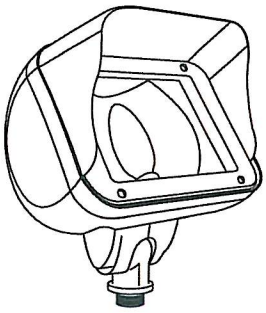


TWIN ARM MOUNT TENON (TMT)
Soft form extruded aluminum arm is 24" in length and features two standard 2" pipe size (2-3/8" O.D.) tenons for twin fixture mount. Other lengths and drilling patterns available upon request. Twin arm base slip fits over standard 2" pipe size (2-3/8" O.D.) tenon. End caps are removable for wiring access. Useful in ground mount and pole mount applications. For extended downward aiming, utilize PM1 or PM2 in conjunction with TMT. Requires SF Slipfitter.

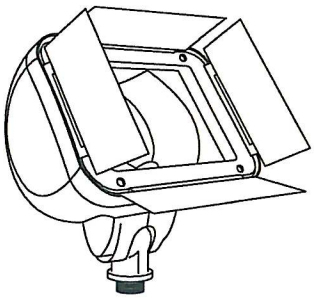


WALL MOUNT ARM TENON (WMT)
Extruded aluminum arm with cast mounting plate is 15" in length and is supplied with a standard 2" pipe size (2-3/8" O.D.) tenon. Also useful as an arm extension off square area lightpole. Requires SF Slipfitter.

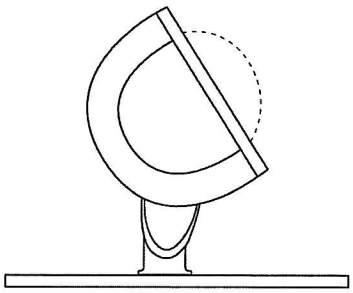
ACCESSORIES



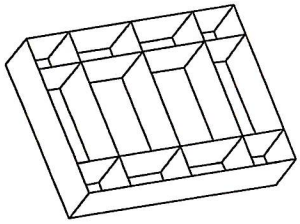
TOP VISOR (VFS-TV)
Controls excess spill and glare on top portion of distribution. Especially useful in uplighting applications to limit light travel above intended wall surface or sign. Mounts to accessory channel in doorframe. Compatible with all distributions.



BARN DOORS (VFS-BD)
Four independently mounted and adjustable doors control cutoff angles in all directions, allowing custom distribution control for any application. Compatible with all distributions.

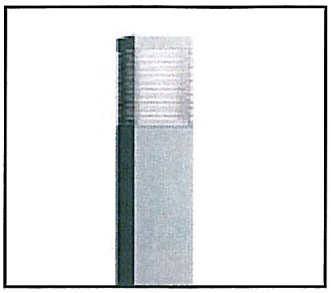


VANDAL SHIELD (VFS-VS)
3/16" thick molded polycarbonate convex lens. Treated with UV inhibitor to discourage the gradual discoloration that results from exposure to sunlight and metal halide lamps.



EXTERNAL GRID LOUVERS
(VFS-GL1/VFS-GL2)
Designed to control lamp glare and spill light while maintaining beam efficiency. Useful when aiming direction or intended target lies in close proximity to pedestrian and/or motor vehicle activity. Mounts to accessory channel in doorframe. Finished in black powder coat paint. GL1 for NS and NF optics only. GL2 for MF, WF, VF and HS optics only.

MTR Square Bollard LED selux



Project: Lino Lakes FS #2

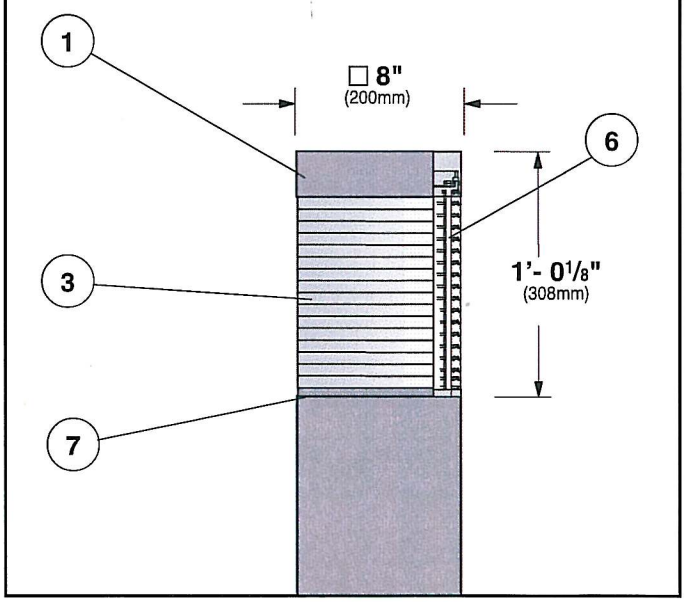
Type: EE **Qty:** _____

BSMFL	–	_____	–	4L35	–	35	–	_____	–	_____	–	REC
Series		Height		Light Engine		CCT		Finish		Voltage		Options

Series	Height	Light Engine	CCT	Finish	Voltage	Options
BSMFL MTR Square Bollard LED Flat Top	**2.5** 2½ feet **3** 3 feet **3.5** 3½ feet **4** 4 feet	**1L35** **2L35** **3L35** **4L35**	**27** 2700 K **30** 3000 K **35** 3500 K **40** 4000 K Consult factory for other CCTs	**WH** White **BK** Black **BZ** Bronze **SV** Silver **SP** Specify Premium Color	**120** **208** **240** **277** **347**[1] **480**[1]	**DM** Dimming (0-10V) **HL50**[2] Hi-Lo Switching (see p. 4) **REC**[3] GFCI Receptacle

[1] Requires step down transformer [2] 120V, 240V, and 277V only [3] Only available in 3.5 and 4 ft. heights, 120V only

BSMFL



1. Luminaire Cover - Die-cast, aluminum cover, with smooth crisp form to reflect and complement the column design. Thick-walled, aluminum cover is painted white on the interior for maximum luminaire efficiency. Removes by loosening three vandal-resistant, stainless steel screws for easy access to lamp chamber.

2. Gasketing - (not shown) Continuous gaskets provide weather-proofing, dust, and insect control at shielding base, fixture cover and between MTR rings.

3. Shielding - Consists of 8" (200mm) diameter injection-molded acrylic multi-prisms for total reflection (MTR). MTR rings have a wall thickness of .591" and are patterned after the light-bending characteristics of a prism.

4. LED Light Engine - (not shown) High efficiency LED light engine equipped with brand-name LEDs, available in 2700K, 3000K, 3500K, or 4000K CCT tolerance within a 3-step MacAdams ellipse.

5. Drivers - (not shown) Electronic universal 120-277V, PFC > 0.95

6. Diffuser - (not shown) LED optimized UV resistant material ensures evenly lit MTR rings at high transmittance.

7. Column Fitter - Die-cast aluminum fitter, with built-in gasketing ridges, for smooth transition to column.

8. Surge Protector - (not shown) Designed to protect luminaire from electical surge (10kA).

9. Hi-Lo Switching - (not shown) For details, please see page 4.

Exterior Luminaire Finish - Selux utilizes a high quality Polyester Powder Coating. All Selux luminaires and poles are finished in our Tiger Drylac certified facility and undergo a five stage intensive pretreatment process where product is thoroughly cleaned, phosphated and sealed. Selux powder coated products provide excellent salt and humidity resistance as well as ultraviolet resistance for color retention. All products are tested in accordance with test specifications for coatings from ASTM and PCI.

Standard exterior colors are White (WH), Black (BK), Bronze (BZ), and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide.

5 Year Limited LED Luminaire Warranty - Selux offers a 5 Year Limited Warranty to the original purchaser that the MTR Bollard LED luminaire shall be free from defects in material and workmanship for up to five (5) years from date of shipment. This limited warranty covers the LED driver and LED array when installed and operated according to Selux instructions. For MTR Square Bollard LED luminaire suitable for ambient temperature of 45°C (113°F). For details, see "Selux Terms and Condition of Sale."

Listings and Ratings: Tested to INRTL Wet Location and IESNA LM-79-08 standards. LED tested to LM-80 standards. Luminaire and LED tested at 25°C (77°F) ambient temperature.

Selux Corp. © 2013
TEL (845) 834-1400
FAX (845) 834-1401
www.selux.us
MTRQBL-0713-01 (ss-v1.2)

NRTL Listed for Wet Location (i.e. UL, CSA)

Union Made Affiliated with **IBEW** *Local 363*

In a continuing effort to offer the best product possible, we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product. Specification sheets found at www.selux.us are the most recent versions and supercede all other printed or electronic versions.

MTR Square Bollard LED

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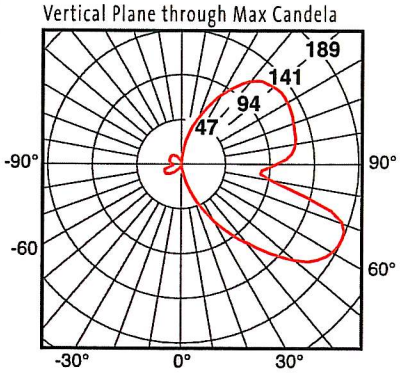
Photometry

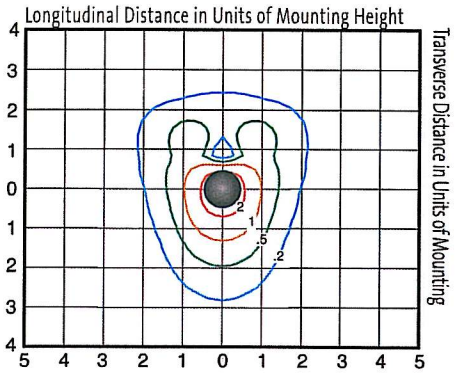
BSMFL / 4 FT / 1L35 / 4000K CCT

Catalog # BSMFL-4-1L35-40-120
Report # LM-63-2002

- Ideal for applications requiring linear distributions.
- Maximum candela of 189 at 65° from vertical.
- IES classification - B0-U3-G1
- Mounting Height = 4' (1.22 M)
- 515 Delivered Lumens
- 61 Lumens per Watt

DOWNLOAD IES FILE:
http://www.selux.us/fileadmin/us/exterior/ies_file/BSMFL_IES.zip



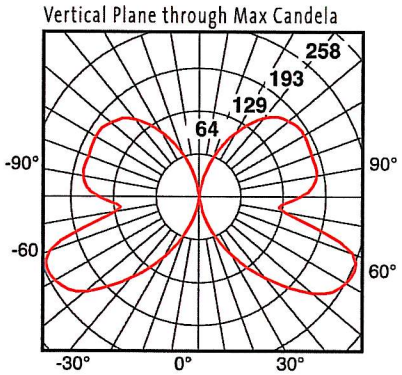


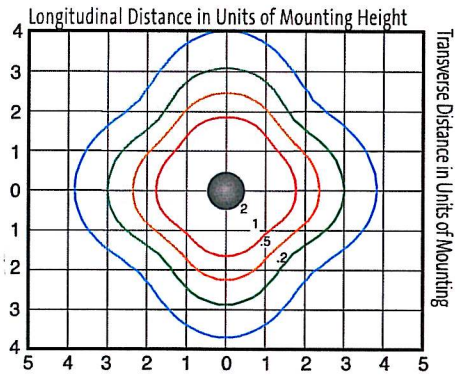
BSMFL / 4 FT / 4L35 / 4000K CCT

Catalog # BSMFL-4-4L35-40-120
Report # LM-63-2002

- Ideal for applications requiring linear distributions.
- Maximum candela of 258 at 65° from vertical.
- IES classification - B1-U4-G1
- Mounting Height = 4' (1.22 M)
- 1939 Delivered Lumens
- 64 Lumens per Watt

DOWNLOAD IES FILE:
http://www.selux.us/fileadmin/us/exterior/ies_file/BSMFL_IES.zip

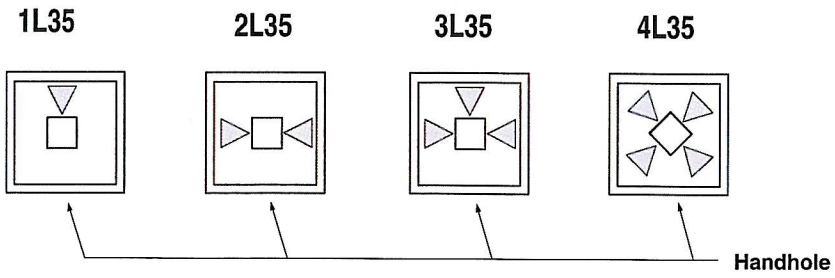




Conversion Chart (Values based on 4000K)	
CCT	Multiply
2700K	0.94
3000K	0.95
3500K	0.98
4000K	1.00

Energy Consumption

Light Engine	1L35	2L35	3L35	4L35
Power Input	8W	16W	23W	31W



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MTR Square Bollard LED

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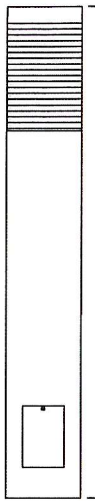
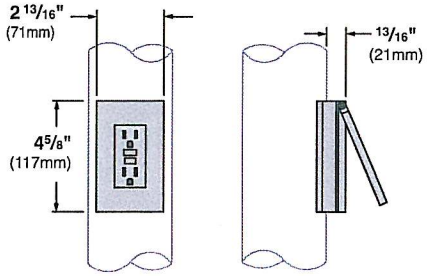
Profiles



Height	
2.5	30"
3	36"
3.5	40"
4	48"

Option Details

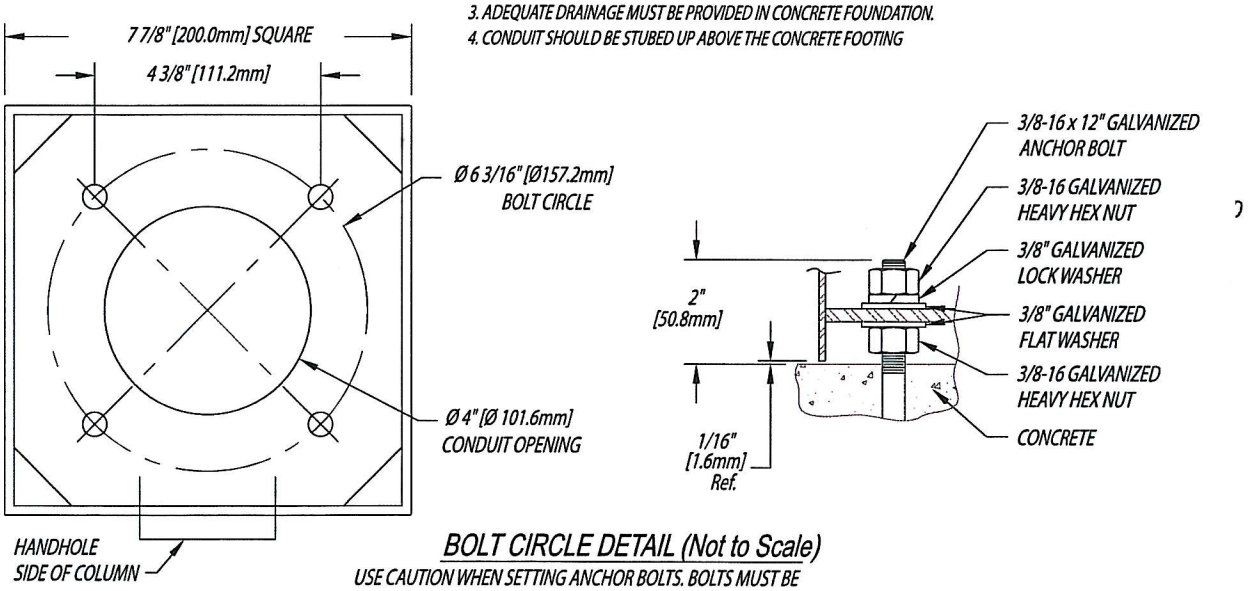
GFCI Receptacle (REC) - GFCI duplex receptacle with cast base welded to pole and gasketed, provided with weather-proof, self-closing cover; located 36" (915mm) from base of pole, inline with handhole. Receptacle is intended only for portable tools or other portable equipment to be connected to outlet only when attended by operating personnel. For use with 120V applications only. For other fixture voltages, please consult factory for wire segregation requirements.



Anchorage Information

NOTES:

1. BOLLARD ORIENTATION IS CRITICAL, ROD & HANDHOLE LOCATIONS ARE CRITICAL.
2. LOCATE SINGLE BOLT AT HANDHOLE LOCATION.
3. ADEQUATE DRAINAGE MUST BE PROVIDED IN CONCRETE FOUNDATION.
4. CONDUIT SHOULD BE STUBED UP ABOVE THE CONCRETE FOOTING



BOLT CIRCLE DETAIL (Not to Scale)

USE CAUTION WHEN SETTING ANCHOR BOLTS. BOLTS MUST BE VERTICALLY STRAIGHT AND CENTERED ON DIMENSIONS SHOWN.

Selux Corp. © 2013

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MTR Square Bollard LED

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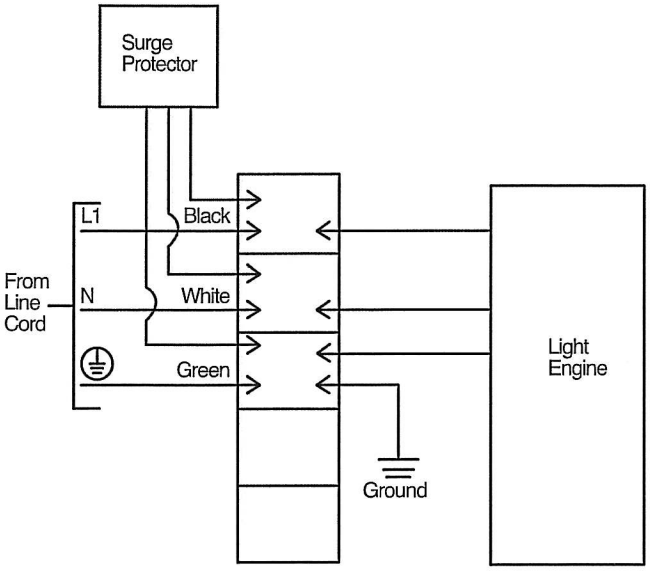
Wiring Diagrams

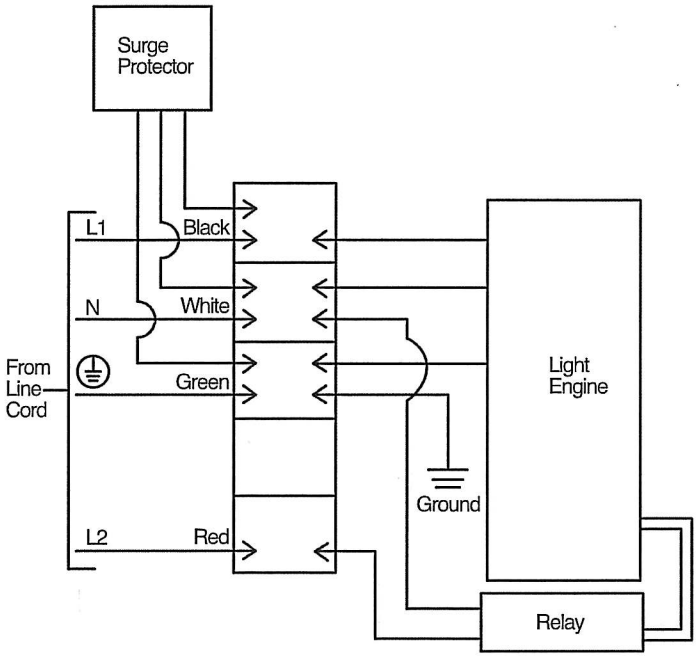
Standard Single Wiring

For 120-277V



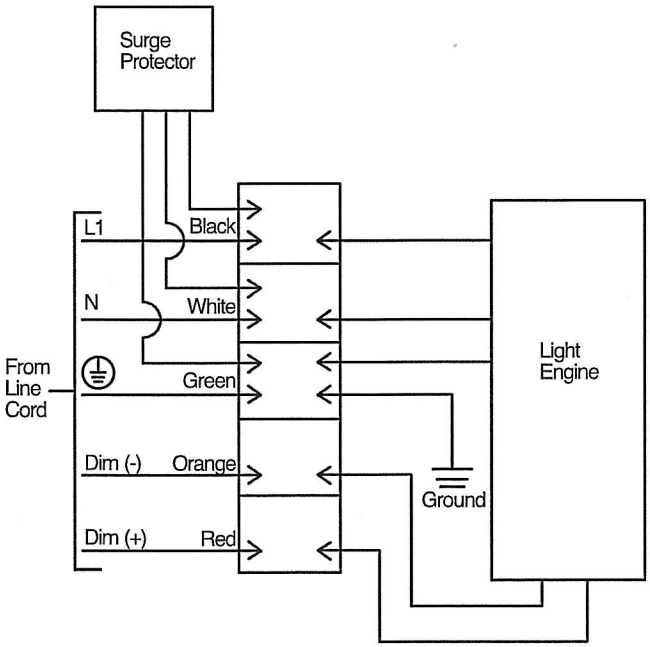
Hi-Lo Switching Option (HL) Wiring

For 120-277V. When red is energized, light output will be at "Lo" level. Standard HL level: HL50 = low output, 50%. For other combinations, consult factory.



0-10V Dimming Option (DM) Wiring

For 120-277V



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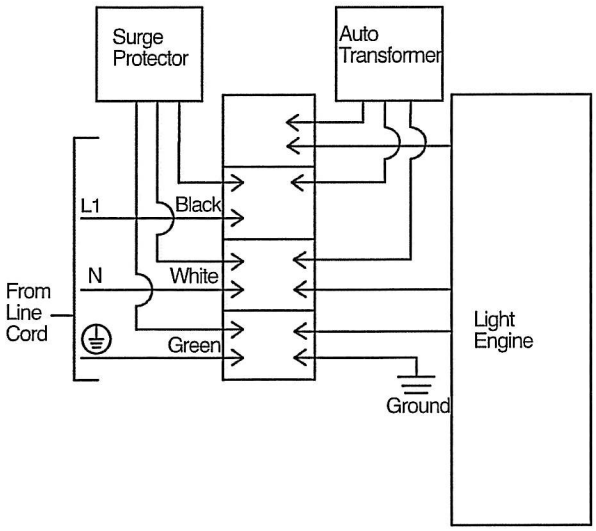
In a continuing effort to offer the best product possible, we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product. Specification sheets found at www.selux.us are the most recent versions and supercede all other printed or electronic versions.

MTR Square Bollard LED

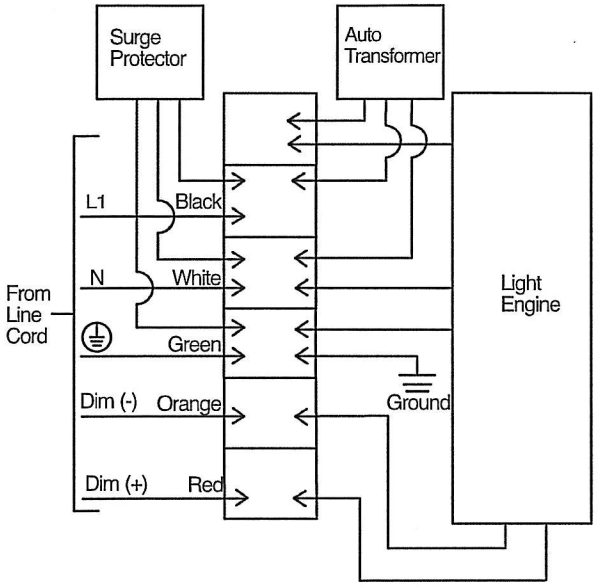
selux

Wiring Diagrams

347/480V (Standard)



347/480V with 0-10V Dimming Option



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2015 Environmental Goals

- Promote environmental stewardship with the citizens of Lino Lakes by communicating environmental initiatives in the city using various means of communication such as:
    - City Web Pages
    - Newsletter
        - Spring
        - Summer
        - Fall
        - Winter
    - Power Point Presentation
    - Earth Day
    - Arbor Day
    - Recycling Days
    - Partner with Anoka County Integrated Waste and the School District with a focus on recycling

- Participate in Blue Heron Days (August), providing public service educational material if the opportunity presents itself

- Participate in Earth Day (April) activities in the community, promoting environmental awareness and collaboration with other environmental focused organizations. Enhance communication and promotion for this event.

- Communicate with our residents about conservation workshops offered in our area. Coordinate with RCWD outreach and education coordinator. Add a link to Anoka County RCWD.

- Monitor any activity in the AUAR as well as other proposed development areas, focusing on the values that Lino Lake's citizens have expressed in the vision for our city and the unique ecological aspects of our wetlands, lakes and streams and subsurface waters. Apply mitigation plan as defined for that area. Be involved in any review/updates of the AUAR and other environmental regulatory documents.

- Perform an evaluation of past Environmental Board recommendations for development projects. Review a sampling of a variety of projects by site visits, discussion with city staff, and landowners, neighbors, on the outcomes of the Board's recommendations. If necessary, submit a summary of significant findings resulting from the review in writing to the Community Development Director.

- Promote conservation development within the City incorporating the Open Space/Trail Plan and Handbook for Environmental Planning and Conservation Development within the scope of the new Resource Management Plan, and the RCWS rules. Review rule changes, SAMP documents and Surface Water Management Plan updates as they occur.
- To meet or exceed our City recycling goal of 50 (1836 tons) percent or greater of our Municipal solid waste. Find innovative ways to promote and encourage recycling as

a city. Inventory city facilities for recycling and look into ways for school facilities to reduce waste and increase recycling. Apply for recycle grants.

- Maintain the Community Garden site and establish a preparatory gardening group. Continue to monitor the soil quality at the Community Garden site.

- Implement the Lino Lakes Preparedness Plan for EAB as needed.

- Work on Wollan's Park Wetland bank.

- Continue to monitor the Heron rookery and water quality in the northern one third of Peltier Lake and to support the protection of resources in that area. Update Council on these matters. Recruit new volunteers to help with rookery maintenance and monitoring.

- Investigate and possibly promote the alternative energy idea of solar gardens in Lino Lakes, and/or participation in solar gardens in other cities.

- Continue to enhance recycling efforts through grants from Anoka County Integrated Waste

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LINO LAKES, MINNESOTA:

1. That the 2015 goals of the Lino Lakes Environmental Board be adopted.

Adopted by the Lino Lakes City Council this __ Day of _____, 2015

_____
Jeff Reinert, Mayor

The motion for adoption of the foregoing resolution was duly seconded by Council Member _____ and upon vote being taken thereon, the following voted in favor thereof:

The following voted against same:

Whereupon said resolution was duly passed and adopted.

CERTIFICATION

I hereby certify that the above is a correct copy of a resolution duly passed, adopted and approved by the City Council on date.

Environmental Board Mtg
KC Kye
01/28/15

Our **Recycling Saturdays** were a success for the remainder of 2014, and have been growing in its services and special events. For the months of November, December, as well as, January of this year, we have surpassed our previous year's tonnage for electronics, TVs, scrap metal, and appliances recycled with more than 2.25 tons more per month! For the holidays we had special holiday lights recycling at ACE Frattalone's from December to January. We also collected 70 Christmas trees and chipped them with the help of Public Works staff.

For upcoming spring and summer months, we are planning exciting events Lino Lakes' residents have been requesting. The following are special events: **paper-shredding** in February and May, **bicycles** for reuse and recycling in May, and carpet recycling. Please look for a postcard or pamphlet detailing these events. For the second year in a row, we are planning to participate in organic recycling for our summer events: **Corn Roast** (July) and **Blue Heron Day Festival** (August). Please mark your calendars for these green and fun events as details come out.

Our newest addition to Recycling Saturdays is **Furniture & Mattress Recycling**. From a grant from Anoka County, we received a 20 ft. sea container to load, store, and deliver our unusable furniture and mattresses. Once full, our vendor delivers the container with our materials to Great River Energy in Elk River. Parts of the furniture and mattresses that can be recycled are put aside, and materials that cannot be recycled are disposed of and turned into electricity. For more information about GRE: http://www.greatriverenergy.com/.

With allotted funds from the county, we are also expanding our pilot **organic recycling** program by including Public Works. The LLPD and City Hall have done such a great job diverting food and paper waste into organic recycling containers in their lunch rooms, we will add another organics dumpster at the Public Works facility. The organics materials are collected, transported, then composted into good soil (instead of creating methane, a harmful greenhouse gas). We are currently in discussion with public and private organizations who are interested in organic recycling. For more information about composting: http://www.sanimax.com/.

We are still collecting **aluminum cans** at our Recycling Saturdays, and are waiting for our first Lino Lakes' business who would like to become an Environmental Partner. We will be sending out an email with more info about business recycling and the aluminum can collection opportunity in February. Please consider this amazing opportunity to be a green business.

Environmental Board Mtg
KC Kye
01/28/15

Furniture & Mattress Recycling Sea Container

Organics Recycling Dumpster (blue)

Recycling Tonnage 2008-2014

Year	Goal	.	Actual	lbs Per Person	,	% of Goal
2014	1819		2044.82	198.29		112
2013	1894		2142.89	209.01		113
2012	1819		2032.25	203.36		112
2011	1777		1877.11	184.89		106
2010	1749		1888.72	188.99		108
2009	1737		1900.87	191.51		109
2008	1727		1946.55	197.26		112

Year	Goal	Actual	% of Goal
2012	1819	2032.25	112
2011	1777	1877.11	106
2010	1749	1888.72	108
2009	1737	1900.87	109
2008	1727	1946.55	112

Environmental

Memo

To: Lino lakes Environmental Board

From: KC Kye

Date: January 28, 2015

Re: Recycling Updates; Recycling Goals

I have attached updates on our Recycling Saturdays, as well as, additions to our city's recycling services.

As we look to 2015, we look forward to more participation from our residents as we provide more services. We are also looking to partner with nearby cities to collaborate for a bigger event.

Also, attached are our recycling goals from 2008-2014. For 2014, we have surpassed our Anoka County goal with 2044.82 tons (112%).

KC Kye