CITY OF DULUTH
Planning Division

411 W 1st St, Rm 208 * Duluth, Minnesota 55802-1197
Phone: 218/730.5580 Fax: 218/723-3559

STAFF REPORT

File Number	PL 15-081		**Contact**	Jenn Reed Moses, jmoses@duluthmn.gov	
Application Type	Planning Review		**Planning Commission Date**	June 9, 2015	
Deadline for Action	**Application Date**	May 5, 2015	**60 Days**	July 4, 2015	
	Date Extension Letter Mailed	May 26, 2015	**120 Days**	September 2, 2015	
Location of Subject	southwest of Kenwood Ave and Arrowhead Rd				
Applicant	Kenwood Village LLC		**Contact**		
Agent	Rick McKelvey		**Contact**	952-893-8271, rick.mckelvey@uproperties.com	
Legal Description	N/A				
Site Visit Date	June 2, 2015		**Sign Notice Date**	May 26, 2015	
Neighbor Letter Date	May 27, 2015		**Number of Letters Sent**	52	

Proposal

Applicant proposes a mixed-use development containing 83 residential units and 14,000 sq ft of commercial space.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	MU-N	Undeveloped, Residential	Neighborhood Mixed Use
North	MU-N, R-2	Commercial, Residential	Neighborhood Mixed Use
South	R-1	Residential	N'hood Mixed Use, Traditional Neighborhood
East	MU-N	Commercial	Neighborhood Mixed Use
West	R-1	Residential	Traditional Neighborhood

Summary of Code Requirements (reference section with a brief description):

50-18.5 Higher Education Overlay - Planning review by the Planning Commission is required for development or redevelopment in areas zoned R-2 and MU-N.
50-18.1E Storm Water Management - Addresses water runoff quality and quantity pre- and post-construction.
50-23 Connectivity and Circulation - Focuses on pedestrian and bicycle accommodations.
50-24 Parking and Loading - Addresses required minimum and maximum parking spaces and loading docks, dimensional standards, snow storage and pedestrian circulation.
50-25 Landscaping and Tree Preservation - Landscaping standards such as materials, plant size, location, and tree preservation
50-26 Screening, Walls, and Fences - Screening of mechanical equipment, loading areas, and commercial containers, plus regulations regarding fences and retaining walls.
50-30 Design Standards - Building standards for multi-family, commercial, institutional, and industrial buildings.
50-31 Exterior Lighting - Directs the minimum and maximum illumination values and lighting fixtures for a site.
50-37.11 Planning Review - Planning Commission shall approve the Planning Review or approve it with modifications, if it is determined that the application complies with all applicable provisions of this Chapter.

Comprehensive Plan Findings (Governing Principle and/or Policies) and Current History (if applicable):

Governing Principle #5: Strengthen neighborhoods. Support neighborhood scale commercial areas.
Governing Principle #6: Reinforce the place-specific. This includes commercial areas providing neighborhood goods and services.
Governing Principle #8: Encourage mix of activities, uses, and densities.

Future Land Use - Neighborhood Mixed Use: A transitional use between more intensive commercial uses and purely residential neighborhoods. Includes conversions of houses to office or live-work spaces. May include limited commercial-only space oriented to neighborhood or specialty retail markets.

Discussion (use numbered or bullet points; summarize and attach department, agency and citizen comments):

Staff finds that:

1.) 50-18.5 (Higher Education Overlay) - Development meets the build-to zone. Commercial development is concentrated on major roads, and no residential balcony, patio, or deck faces the adjacent R-1 districts. Drive-through meets use-specific standards.
2.) Conditions at the Kenwood Ave/Arrowhead Rd intersection have generated concerns about congestion and safety. Applicant has completed traffic modeling and is working with City Planning and City Engineering on traffic solutions for the intersection.
3.) 50-23 (Connectivity) - Sidewalks connect main entries to existing sidewalks along Kenwood Ave and Arrowhead Rd. Location of building with main entrances close to main streets provides a pedestrian-friendly development.
4.) 50-24 (Parking) - Parking summary provided with site plan shows that development meets all parking requirements. Parking will be provided in a parking structure with a majority of it underground. Eighteen (18) bike parking spaces are provided on the top of the parking structure, close to commercial and residential entrances. The UDC will require 38 bike parking spaces; applicant will need to provide an additional 20 spaces within the parking garage or elsewhere on the site.
5.) 50-25 (Landscaping) - All street frontage, parking lot, and buffer landscaping requirements are met.
6.) 50-26 (Screening) - A loading area is indicated on top of the parking structure and will not negatively impact adjacent properties or streets. All garbage and recycling containers will be located inside the building. Fences and retaining walls meet UDC standards.
7.) 50-27 (Signs) - Any signs will need to apply for and receive a sign permit prior to installation.
8.) 50-30 (Building Design Standards) - Building elevations show design features that comply with the mixed use design standards in 50-30.3.
9.) 50-31 (Exterior Lighting) - Photometric plan and lighting specs demonstrate compliance with all lighting requirements.
10.) A neighboring business asked questions about traffic improvements at the intersection of Kenwood and Arrowhead. No other public, City or agency comments were received.
11.) Per UDC 50-37.1.N, an approved Planning Review will expire if the project or activity authorized is not begun within 1 year.

Staff Recommendation (include Planning Commission findings, i.e., recommend to approve):

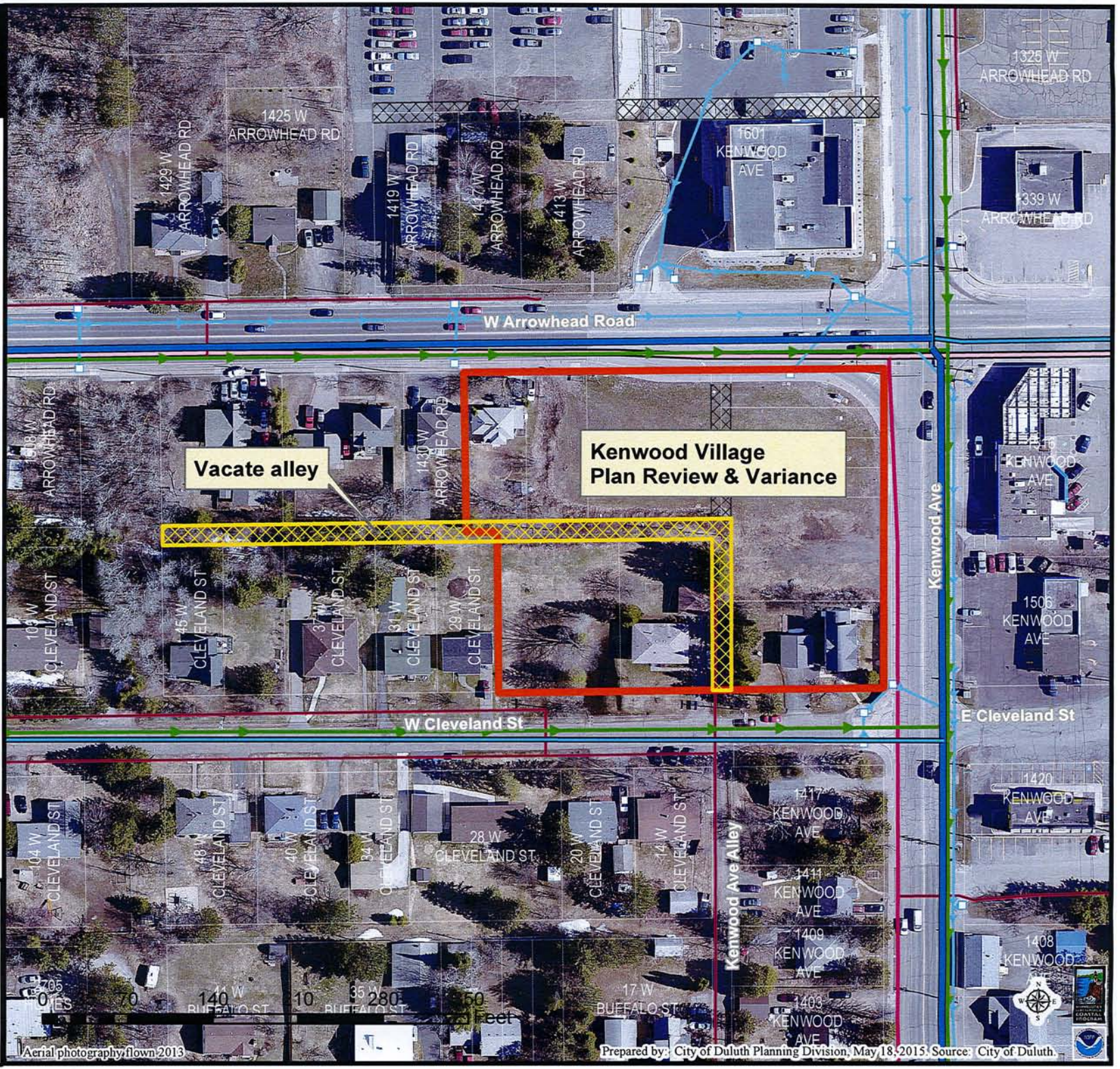
Based on the above findings, Staff recommends that Planning Commission approve the Kenwood Village Planning Review, subject to the following conditions:
1.) The project be limited to, constructed, and maintained according to Layout and Surfacing Site Plan, Grading and Drainage Plan, Landscape and Seeding Plan, and Eletrical Site Lighting Photometric Plan, all dated 5/5/15; and the Building Elevations and Lighting Spec Sheets submitted with this application.
2.) The project shall accommodate additional bike parking as required by the UDC.
3.) Any mechanicals be screened per UDC standards.
4.) Applicant will conduct a survey of existing trees and comply with any applicable tree preservation requirements.
5.) Any alterations to the approved plans that do not alter major elements of the plan may be approved by the Land Use Supervisor without further Planning Commission approval; however, no such administrative approval shall constitute a variance from the provisions of Chapter 50.

F-3

Attachments (aerial photo with zoning; future land use map; site plan; copies of correspondence)

City Planning

PL 15-078, 15-079, & 15-081
Kenwood Village



Legend

Water Distribution System
- 30 - 60" Water Pipe
- 16 - 24" Water Pipe
- 4 - 6" Water Pipe

Sanitary Sewer Collection System
- Sanitary Sewer Collector
- Sanitary Sewer Interceptor
- Sanitary Sewer Forced Main
- Storage Basin
- Pump Station (PS)

Gas Distribution Main
- 8" - 16" Gas Pipes
- 4" - 6" Gas Pipes
- 0" - 4" Gas Pipes

Storm Sewer Collection System
- Storm Sewer Pipe
- Storm Sewer Catch Basin
- Vacated ROW

F-3

DULUTH UDC REQUIREMENTS
FULL CUT OFF FIXTURE
MAXIMUM POLE HEIGHT (RESIDENTIAL) - 20 FT
MAX ILLUMINATION ON PROPERTY - 5fc
MAX ILLUMINATION AT PROPERTY LINE - .5fc
MAX ILLUMINATION AT RIGHT OF WAY - 1.0fc
MAX/MIN RATIO IN AN ILLUMINATED AREA - 10:1

Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
DRIVE AISLES	Fc	1.64	3.0	0.3	5.47	10.00
DRIVE AISLES2	Fc	0.71	1.8	0.2	3.55	9.00
PARKING LOT	Fc	0.75	1.7	0.2	3.75	8.50
SIDEWALK	Fc	0.87	2.0	0.2	4.35	10.00
SIDEWALK2	Fc	0.63	1.8	0.2	3.15	9.00
TO PROPERTY LINE	Fc	0.38	3.6	0.0	N.A.	N.A.

Luminaire Location Summary	
Label	Mounting Height (ft)
GLEON-AE-01-LED-E1-SL3	19
LDWP-FC-2A-ED	12
GLEON-AE-02-LED-E1-SL4	19
GLEON-AE-02-LED-E1-5WQ	19
GLEON-AE-01-LED-E1-5MQ	19
GLEON-AE-01-LED-E1-SL3	19
GLEON-AE-01-LED-E1-5MQ	19
LDWP-FC-2A-ED	12
GLEON-AE-01-LED-E1-SL3	19
GLEON-AE-01-LED-E1-SLR	19
LDWP-FC-2A-ED	12

F-4

LHB
PERFORMANCE DRIVEN DESIGN.
LHBcorp.com
701 Washington Ave. N, Ste 200 | Minneapolis, MN 55401 | 612.338.2029

CLIENT:
UNITED PROPERTIES

3600 American Blvd. W, Ste. 750
Minneapolis, MN 55431

THIS SQUARE APPEARS 1/2" x 1/2" ON FULL SIZE SHEETS.

NO	DATE	ISSUED FOR
	05/05/15	CITY UDC PLAN REVIEW SUBMITTAL

NO	DATE	REVISION

PRELIMINARY
NOT FOR CONSTRUCTION
05.05.15

PROJECT NAME:
KENWOOD VILLAGE

Arrowhead Road & Kenwood Avenue
Duluth, Minnesota

DRAWING TITLE:
ELECTRICAL SITE LIGHTING PHOTOMETRIC PLAN

FILE: J:\140719\000 Drawings\E\140719 E1.01 Site Lighting.dwg
DRAWN BY: ECH
CHECKED BY: HSB
PROJ. NO: 140719
DRAWING NO: E1.02

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 #	GLEON AE LED E1	Type	POLE MOUNT
Project	140719		
Comments	17' POLE ON 2' POLE BASE	Date	05/05/15
Prepared by	ECM		

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.

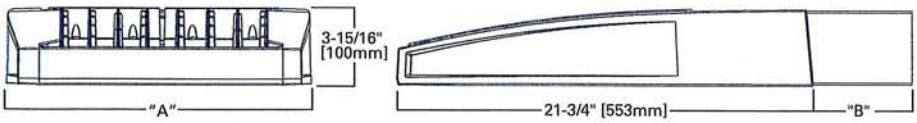
GLEON
GALLEON LED

1-10 Light Squares
Solid State LED

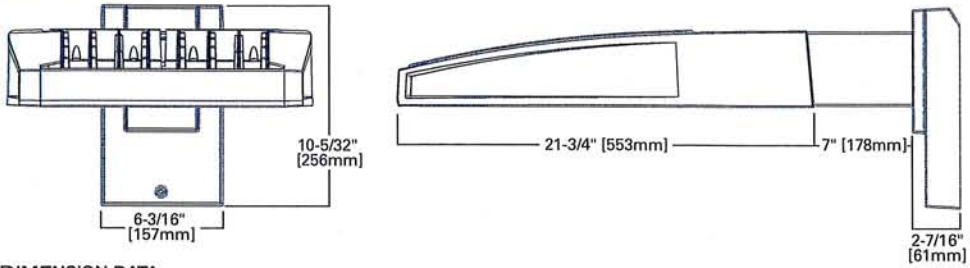
AREA/SITE LUMINAIRE

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.

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)

Cooper Lighting
by EATON

*www.designlights.org

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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 VARIES	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]
8030=80 CRI 3000K[10]
7050=70 CRI 5000K[10]
7060=70 CRI 6000K[9]
530=Drive Current Factory Set to 530mA[11]
700=Drive Current Factory Set to 700mA[11]
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[8,12]
MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height[13,14,15,16,17]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height[13,14,15,16,17]
MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height[13,14,15,16,19]
MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range)[13,14,15,16,20]
MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height[13,14,15,16,17,21]
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height[13,14,15,16,18,21]
MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height[13,14,15,16,19,21]
MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range)[13,14,15,16,20,21]
MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height[13,14,15,16,17]
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height[13,14,15,16,18]
MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height[13,14,15,16,19]
MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range)[13,14,15,16,20]
DIMRF-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height[22]
DIMRF-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height[22]
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[23]
HSS=Factory Installed House Side Shield[24]

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[25]
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[24,26]

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 recommended for use with ungrounded, delta configured 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. Extended lead times apply. For 8030, factor 7030 IES files x .92 (8% lumen loss). For 7050, use 7060 IES files.
11. 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.
12. 50°C lumen maintenance data applies to 530mA and 700mA drive currents.
13. Consult factory for more information.
14. Utilizes internal step down transformer when 347V or 480V is selected.
15. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your Eaton's Cooper Lighting business representative for more information.
16. Not available with HA option.
17. Approximately 22' detection diameter at 8' mounting height.
18. Approximately 40' detection diameter at 20' mounting height.
19. Approximately 60' detection diameter at 40' mounting height.
20. Approximately 100' detection diameter at 40' mounting height.
21. Replace X with number of Light Squares operating in low output mode.
22. 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.
23. Not available with house side shield (HSS).
24. Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.
25. 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 more information.
26. One required for each Light Square.

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COOPER LIGHTING - LUMARK®

DESCRIPTION

The Lumark Wal-Pak Series of wall luminaires provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware along with a sealed and gasketed optical compartment make the Wal-Pak virtually impenetrable to contaminants. IP65 Rated. Six available lamp sources including patent pending energy efficient LED, pulse start metal halide, compact fluorescent, ceramic metal halide, standard metal halide and high pressure sodium. UL/cUL wet location listed. The Wal-Pak wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways and loading docks.

Catalog #	LD WP FC 2A	Type	WALL MOUNT
Project	140719		
Comments	MOUNTED AT 12'	Date	05/05/15
Prepared by	ECM		

SPECIFICATION FEATURES

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

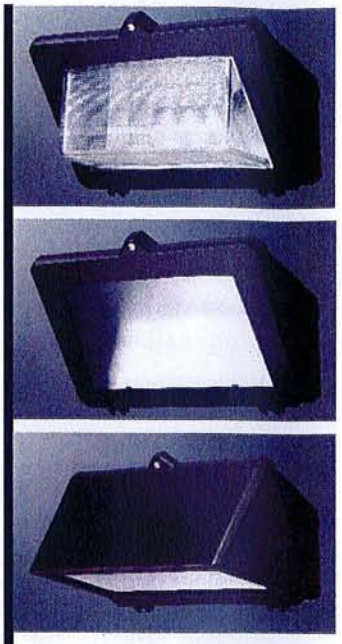
Electrical
Ballasts, LED driver and related electrical components are hard mounted to the die-cast housing for optimal heat sinking and operating efficiency. Wiring is extended through a silicone gasket at the back of the housing. Three ½" threaded conduit entry points allow for thru-branch wiring. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from LED source. Integral LED electronic driver incorporates internal fusing designed to withstand a 3kV surge test and is Class 2 rated for 120-277V with an operating temperature of -30° to 60°C.

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

Optical
Highly reflective anodized aluminum reflectors provide high efficiency illumination. Optical assemblies include impact resistant borosilicate refractive glass, Solite™ flat diamond patterned glass and full cutoff IESNA compliant configurations. Patent pending, solid state LED luminaires are thermally optimized with 2400 or 4000 sourced lumen package modules. HID models are offered in horizontal medium or mogul-based metal halide [MH / MP] or high pressure sodium [HP] lamps. T6 ceramic metal halide [CM] and 4-pin compact fluorescent [CF] lamp models offer high efficiency energy saving illumination.

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

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

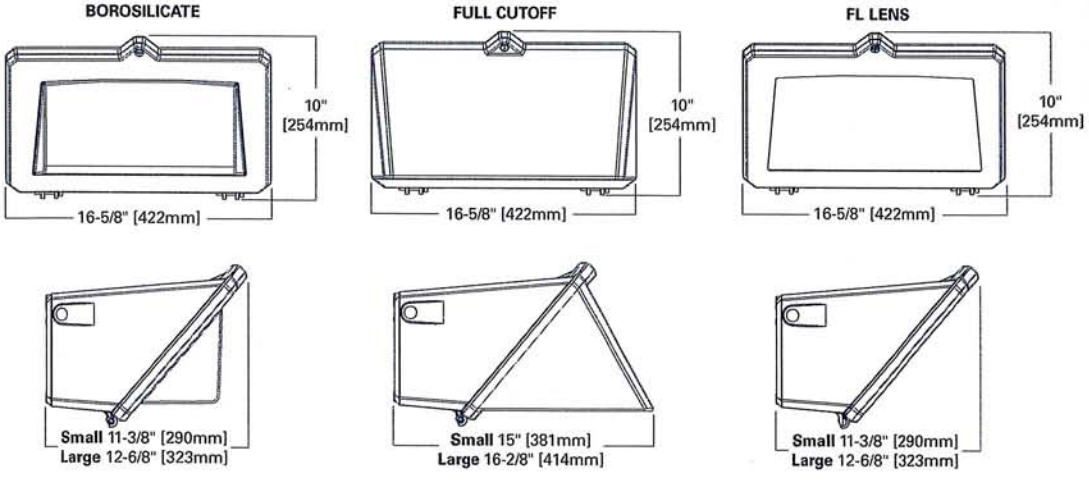


WP WAL-PAK

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

DARK SKY COMPLIANT FCO Full Cutoff

DIMENSIONS



WALL MOUNT LUMINAIRE

TECHNICAL DATA
UL/cUL Wet Location Listed
IP65 Rated
40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
EISA ®, ARRA, Title 20 Compliant
LM79 / LM80 Compliant

ENERGY DATA
Reactor Ballast Input Watts
50W HPS NPF (58 Watts)
70W HPS NPF (82 Watts)
100W HPS NPF (118 Watts)
150W HPS NPF (175 Watts)
High Reactance Ballast Input Watts
50W MP HPF (69 Watts)
70W MP HPF (94 Watts)
100W MP HPF (129 Watts)
150W MP HPF (185 Watts)
CWA Ballast Input Watts
200W HPS HPF (250 Watts)
200W MP HPF (227 Watts) ®
250W MP HPF (283 Watts) ®
320W MP HPF (365 Watts) ®
350W MP HPF (400 Watts) ®
400W HPS HPF (465 Watts)
400W MP HPF (452 Watts) ®

SHIPPING DATA
Approximate Net Weight:
32-42 lbs. (15-19 kgs.)

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COOPER Lighting
www.cooperlighting.com

ORDERING INFORMATION

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

Lamp Type
- **MP**=Pulse Start Metal Halide
- **HP**=High Pressure Sodium
- **LD**=Solid State Light-Emitting Diodes (LED)
- **CF**=Compact Fluorescent [1]
- **CM**=Ceramic Metal Halide [2]
- **MH**=Metal Halide [3]

Series
- **WP**=Wal-Pak

Door Type [4]
- **GL**=Borosilicate Glass Door
- **FC**=Full Cutoff Door
- **FL**=Flat Solite Glass Door
- **PL**=Polycarb Refractor Door

Lamp Wattage [5]

LED
- **2A**=(2 Package), 28W
- **4A**=(4 Package), 40W

MP
- **50**=50W
- **70**=70W
- **100**=100W
- **150**=150W
- **200**=200W
- **250**=250W
- **320**=320W
- **350**=350W
- **400**=400W

MH
- **175**=175W
- **250**=250W
- **400**=400W

HP
- **50**=50W
- **70**=70W
- **100**=100W
- **150**=150W
- **250**=250W
- **400**=400W

CM
- **39**=39W
- **70**=70W
- **100**=100W
- **150**=150W

CF
- **32**=32W
- **42**=42W
- **57**=57W
- **70**=70W
- **64**=(2-32)
- **84**=(2-42)
- **114**=(2-57)
- **140**=(2-70)

Voltage [6]
- **120V**=120V
- **208V**=208V
- **240V**=240V
- **277V**=277V
- **347V**=347V [7]
- **480V**=480V
- **DT**=Dual-Tap
- **MT**=Multi-Tap
- **TT**=Tri-Tap
- **5T**=5-Tap
- **E**=Electronic Ballast [8]
- **ED**=Electronic LED Driver

Options [9]
- **F1**=Single fuse [10]
- **F2**=Double fuse [10]
- **PE**=Photocontrol button [10]
- **LL**=Includes lamp [2]
- **BK**=Black housing
- **WH**=White housing
- **GM**=Graphite Metallic housing
- **AP**=Grey housing
- **DP**=Dark Platinum housing
- **DIMA**=CF Dimming Ballast [11]
- **DIMB**=CF Dimming Ballast [11]
- **SGL**=Solite Glass Lens [12]
- **Q**=Quartz Restrike T4 Lamp [13]
- **EM**=Emergency Quartz Restrike T4 Lamp with Time Delay Relay [13]
- **EM/SC**=Emergency Separate Circuit T4 Lamp [13]
- **QMR**=Emergency Back-Up 1-MR16 Lamp [14,15]
- **2QMR**=Emergency Back-Up 2-MR16 Lamps [14,15]
- **2QMR/SC**=Emergency Back-Up MR16 and EM separate circuit 2-MR16 Lamp [14,16]
- **EMMR**=Emergency Back-Up 1-MR16 Lamp with Time Delay Relay [14,15]
- **2EMMR**=Emergency Back-Up 2-MR16 Lamps with Time Delay Relay [14,15]
- **2EMMR/SC**=Emergency Back-Up 1-MR16 Lamp with Time Delay Relay and EM Separate Circuit [14, 15, 16]
- **EM/SC/MR**=Emergency Back-Up Separate Circuit 1-MR16 Lamp [14, 15, 16]
- **2EM/SC/MR**=Emergency Back-Up Separate Circuit 2-MR16 Lamps [14, 15, 16]
- **EM/SC/12V**=Emergency Separate Circuit 12V 1-MR16 Lamp [14, 16, 17]
- **2EM/SC/12V**=Emergency Separate Circuit 12V 2-MR16 Lamps [14, 16, 17]
- **EMI40**=Emergency Cold Temperature UL 924 CF Power Pack 1 Lamp [18]
- **EMI40/2L**=Emergency Cold Temperature UL 924 CF Power Pack 2 Lamp [18]
- **CF-EM**=Emergency UL924 CF Power Pack 1 Lamp [19]
- **CF-EM/2L**=Emergency UL924 CF Power Pack 2 Lamp [19]
- **EMLED-CD**=LED Battery Back-Up Cold Temperature [20]

Accessories [21]
- **WG/WPGL**=Wire Guard Borosilicate Glass Lens Door
- **WG/WPFC**=Wire Guard Full Cutoff Door
- **WG/WPFL**=Wire Guard FL Lens Door
- **TR/WP**=Tamper Resistant Screw and Bit
- **VS/WPGL**=Polycarbonate Vandal Shield for Borosilicate Glass Lens Door

STOCK SAMPLE NUMBER - LAMP INCLUDED

SAMPLE NUMBER: WPP40C

Series
- **WP**=Wal-Pak

Lamp Type
- **L**=LED
- **P**=Pulse Start Metal Halide
- **S**=High Pressure Sodium

Lamp Wattage
- **2A**=28W
- **4A**=40W
- **10**=100W
- **15**=150W
- **25**=250W
- **32**=320W
- **40**=400W

Door/Glass Type
- **Blank**=Standard
- **C**=Full Cutoff Door

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

LED LUMEN TABLE

BUG RATING	B	U	G	Delivered Lumens [22]		B	U	G	Delivered Lumens [22]
Borosilicate Glass Door (GL)					Flat Lens Door (FL)				
LDWP-GL-2A-ED	0	3	2	1836	LDWP-FL-2A-ED	0	2	1	1454
LDWP-GL-4A-ED	1	3	2	2795	LDWP-FL-4A-ED	0	3	1	2084
Polycarbonate Lens (PL)					Full Cutoff Door (FC)				
LDWP-PL-2A-ED	0	3	2	1508	LDWP-FC-2A-ED	0	1	1	1090
LDWP-PL-4A-ED	1	3	2	2297	LDWP-FC-4A-ED	0	1	1	1313

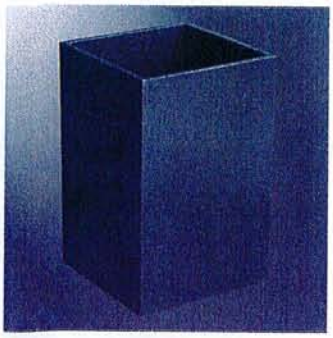
For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-07BugRatingsAddendum.pdf

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

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

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

COOPER LIGHTING



Catalog #	SSA-6-	Type
Project	140719	
Comments	CUSTOM 17' POLE HEIGHT	Date
Prepared by	ECM	05/05/15

SSA SQUARE STRAIGHT ALUMINUM

FEATURES
- Straight square shaft 6005-T6 aluminum alloy polished
- 356-T6 cast aluminum alloy base with aluminum knock-in bolt covers
- 8'-35' mounting heights
- Drilled or tenon (specify)

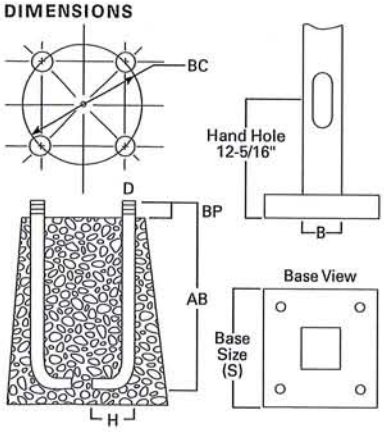
ORDERING INFORMATION

SAMPLE NUMBER: SSA4T08WXM1G

Product Family	Shaft Size (Inches)[1]	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Options (Add as Suffix)
SSA=Square Straight Aluminum	**4**=4" **5**=5" **6**=6" **9**=9" Steel; 6-3/4" Aluminum	**T**=0.125" **M**=0.188" **X**=0.250"	**08**=8' **10**=10' **12**=12' **15**=15' **18**=18' **20**=20' **25**=25' **30**=30' **35**=35' 17'	**W**=Aluminum	**A**=Satin Brushed Aluminum **B**=Clear Anodized **C**=Dark Bronze Anodized **D**=Black Anodized **E**=Medium Bronze Anodized **F**=Dark Bronze **J**=Summit White **K**=Carbon Bronze **L**=Dark Platinum **P**=Primer Powder Coat **R**=Hartford Green **S**=Silver **T**=Graphite Metallic **V**=Grey **W**=White **X**=Custom Color **Y**=Black	**2**=2-3/8" O.D. Tenon (4" Long) **3**=3-1/2" O.D. Tenon (5" Long) **4**=4" O.D. Tenon (6" Long) **5**=3" O.D. Tenon (4" Long) **6**=2-3/8" O.D. Tenon (6" Long) **7**=4" O.D. Tenon (10" Long) **A**=Type A Drilling **C**=Type C Drilling **E**=Type E Drilling **F**=Type F Drilling **G**=Type G Drilling **J**=Type J Drilling **K**=Type K Drilling **M**=Type M Drilling **R**=Type R Drilling	**1**=Single **2**=2 at 180° **3**=Triple[2] **4**=4 at 90° **5**=2 at 90° **X**=None	**A**=1/2" Tapped Hub (Specify location desired) **B**=3/4" Tapped Hub (Specify location desired) **C**=Convenience Outlet[3] **E**=GFCI Convenience Outlet[3] **F**=Vibration Pad **G**=Ground Lug **H**=Additional Hand Hole[4] **L**=Drilled for Bumper Glitter (Specify location desired) **V**=Vibration Dampener

NOTES: 1. All shaft sizes nominal. **2.** Square poles are 3 at 90°, round poles are 3 at 120°. **3.** Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. **4.** Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS

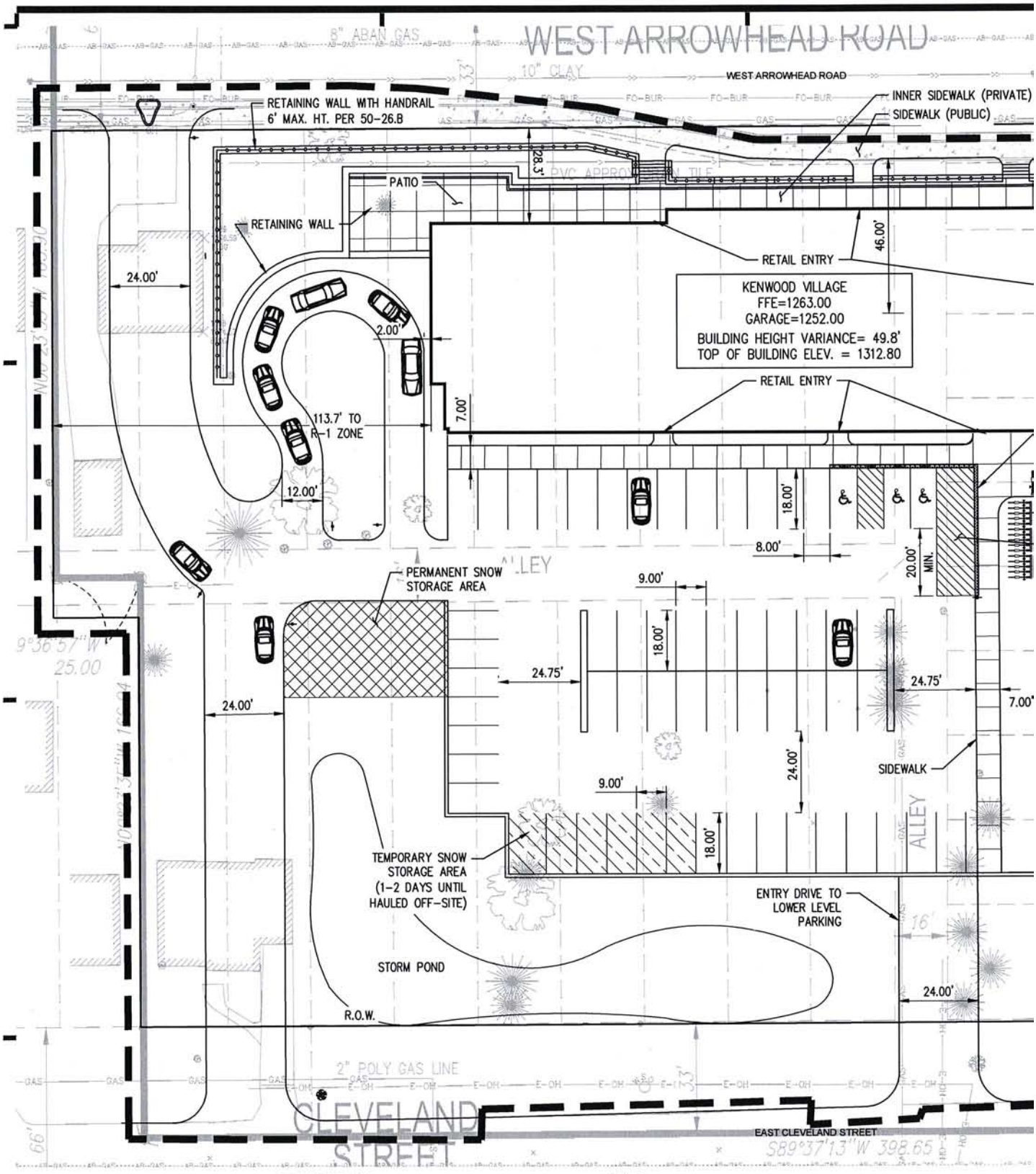


F-9

WARNING: The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty from Eaton's Cooper Lighting business and may result in pole failure causing serious injury or property damage. Upon request, Eaton's Cooper Lighting business will supply information regarding total loading capacity. The pole warranty from Eaton's Cooper Lighting business is void unless poles are used and installed as a complete pole/luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your Eaton's Cooper Lighting business representative or visit www.cooperlighting.com for available options, accessories and ordering information.

Cooper Lighting
by EATON



GENERAL NOTES:

1. SEE SHEET C0.01 FOR CIVIL STANDARD NOTES.
2. PAVEMENT MARKING & STRIPING IN PARKING AREAS SHALL BE 4" WIDE WHITE ALKYD OR CHLORINATED RUBBER YELLOW PAINT. COMPLY WITH MMUTCD STANDARDS. THERE SHALL BE NO PAINT ON CONCRETE SURFACES.

PARKING SUMMARY:

PARKING SPACES PROVIDED:	
UNDERGROUND GARAGE:	134 SPACES
PARKING LOT:	58 SPACES
	192 SPACES TOTAL

LEGEND:

- CONSTRUCTION LIMITS
- PROP. 4" CONCRETE WALK
- PROP. BITUMINOUS
- PROP. SOD & 6" TOPSOIL
- PROP. WOODEN PRIVACY FENCE
- PROP. BXXX CONCRETE CURB & GUTTER

LEGEND:

- 1250
- 1251
- 1250
- 1251

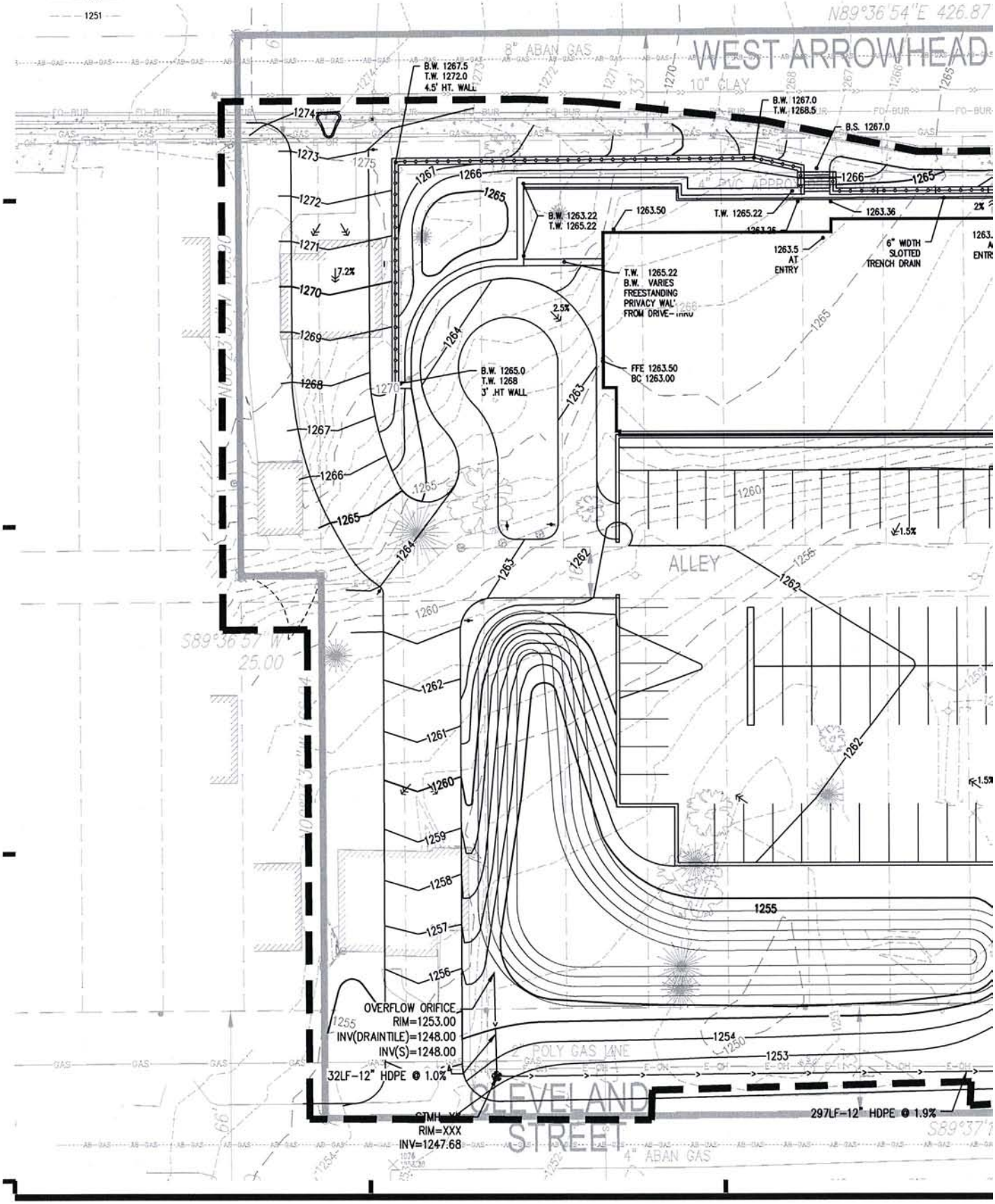
GENERAL NOTES:

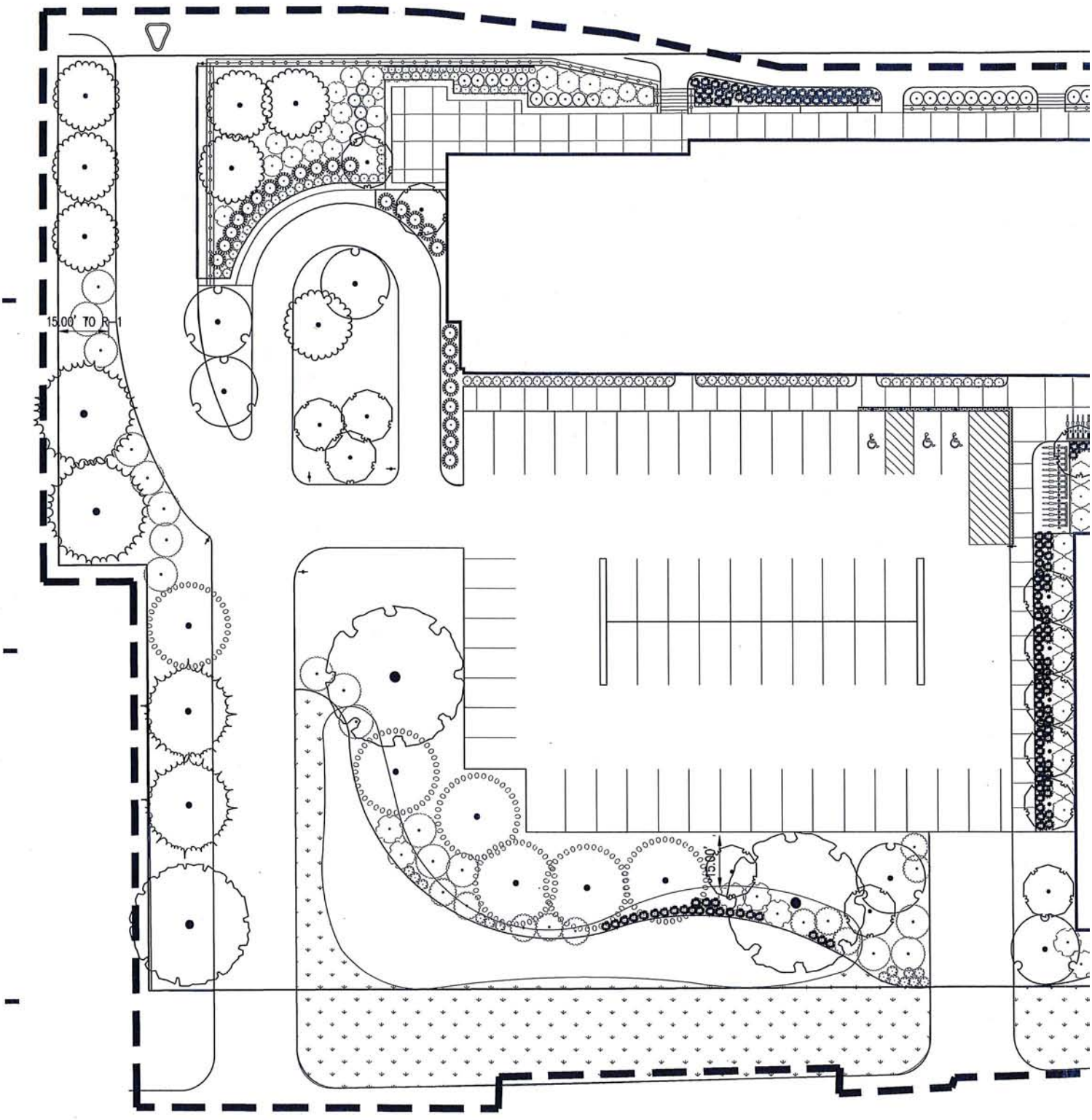
1. SEE SHEET C0.01 FOR CIVIL STANDARD NOTES.
2. PAVEMENT MARKING & STRIPING IN PARKING AREAS SHALL BE 4" WIDE WHITE ALKYD OR CHLORINATED RUBBER YELLOW PAINT. COMPLY WITH MMUTCD STANDARDS. THERE SHALL BE NO PAINT ON CONCRETE SURFACES.

PARKING SUMMARY:

PARKING SPACES REQUIRED:
XXX SPACES/UNIT * XX UNITS = XXX SPACES

PARKING SPACES PROVIDED:
UNDERGROUND GARAGE: XXX SPACES
PARKING LOT: XXX SPACES
PROOF OF PARKING: XXX SPACES





GENERAL NOTES:

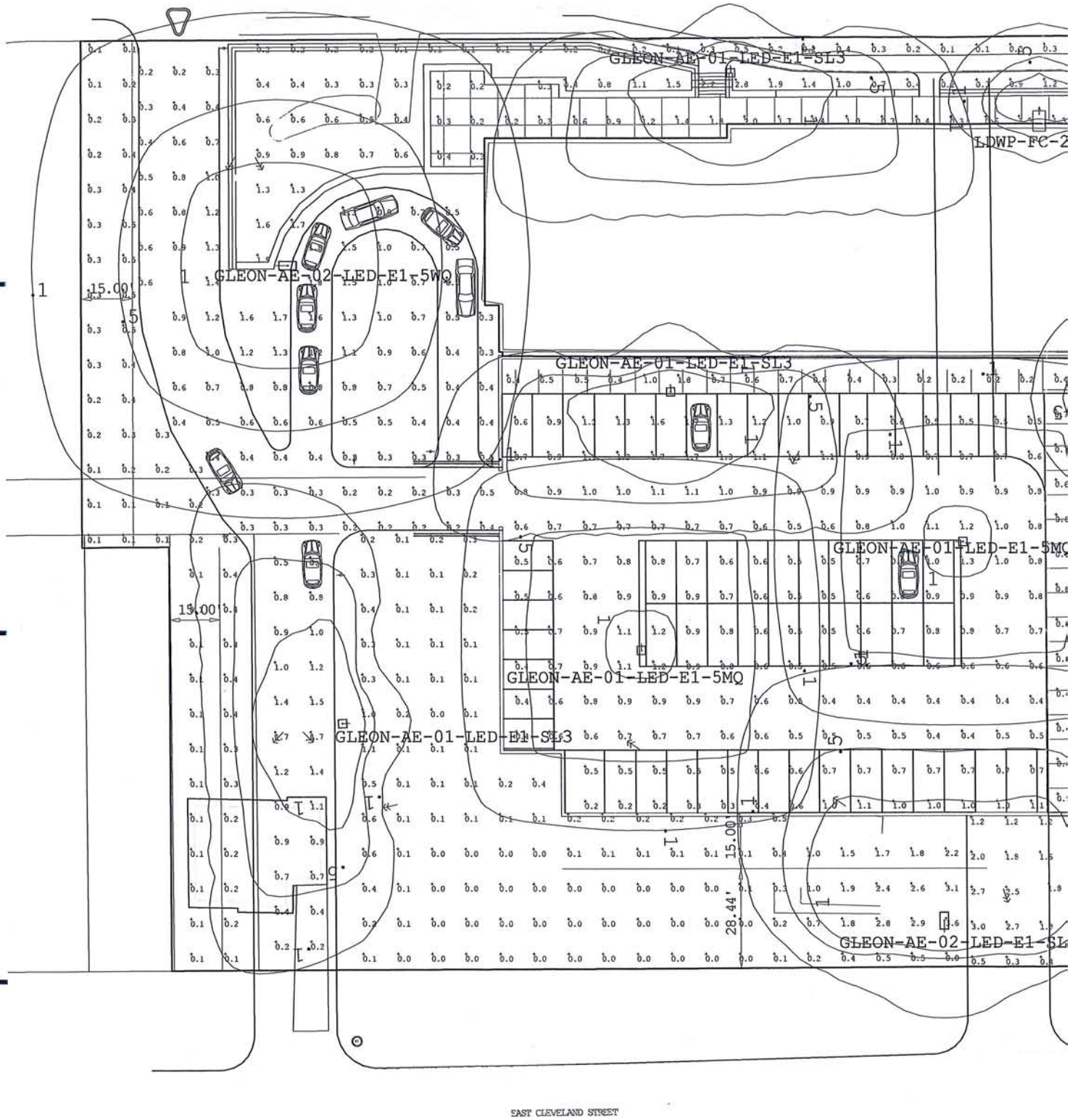
1. SEE SHEET C0.01 FOR CIVIL STANDARD NOTES.

LEGEND:

- CONSTRUCTION LIMITS
- SITE BOUNDARY
- PROP. SOD
- STOP SIGN

50-30 DESIGN STANDARDS			
REF. #	REF. NAME	COMPLIANCE EXPLANATION	KEYNOTE
50-30.1.B	FACADE LENGTH AND ARTICULATION	NO FACADE EXCEEDS 200FT., ALL WALLS > THAN 80 FT. INCLUDE 6' DEEP PATIO RECESSES AT REGULAR INTERVALS, AT FACADE PLANE TRANSITIONS.WALLS JOG 4'	A
50-30.1.C	ROOF DESIGN	WHERE ROOFLINES EXCEED 100 HORIZONTAL FT., PARAPET HT. CHANGES MORE THAN 2'	B
50-30.1.F	DESIGN FEATURES	DESIGN INCLUDES: COVERED PORCHES, EAVES OF AT LEAST 12 IN., RECESSES/SHADOW LINES	C
50-30.2.B	FACADES AND ARTICULATION	A MIN. OF 10% OF EACH COMMERCIAL FACADE AREA THAT FACES A STREET IS GLASS, THE LOWEST EDGE OF MORE THAN 1/2 OF THE GLASS IS WITHIN 4' OF THE STREET/WALKWAY LEVEL.	D

50-30 DESIGN STANDARDS			
REF. #	REF. NAME	COMPLIANCE EXPLANATION	KEYNOTE
50-30.1.B	FACADE LENGTH AND ARTICULATION	NO FACADE EXCEEDS 200FT., ALL WALLS > THAN 60 FT. INCLUDE 8' DEEP PATIO RECESSES AT REGULAR INTERVALS, AT FACADE PLANE TRANSITIONS WALLS JOG 4'	A
50-30.1.C	ROOF DESIGN	WHERE ROOFLINES EXCEED 100 HORIZONTAL FT., PARAPET HT. CHANGES MORE THAN 2'	B
50-30.1.F	DESIGN FEATURES	DESIGN INCLUDES, COVERED PORCHES, EAVES OF AT LEAST 12 IN., RECESSES/SHADOW LINES	C
50-30.2.B	FACADES AND ARTICULATION	A MIN. OF 10% OF EACH COMMERCIAL FACADE AREA THAT FACES A STREET IS GLASS, THE LOWEST EDGE OF MORE THAN 1/2 OF THE GLASS IS WITHIN 4' OF THE STREET/WALKWAY LEVEL	D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LDWP-FC-2
GLEON-AE-02-LED-E1-5WQ
GLEON-AE-01-LED-E1-SL3
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GLEON-AE-01-LED-E1-5MQ
GLEON-AE-01-LED-E1-SL3
GLEON-AE-02-LED-E1-SL
15.00'
15.00'
15.00'
28.44'
EAST CLEVELAND STREET