

Item IV.F.

“ _____ ” DEVELOPMENT

SITE DEVELOPMENT PHASE

PUBLIC IMPROVEMENT AGREEMENT

This Agreement, made this ___ day of _____, 2022, by and between the VILLAGE OF BAYSIDE, a municipal corporation, with principal offices located at 9075 North Regent Road, Bayside, WI 53217, hereinafter called "VILLAGE" and BAYSIDE DEVELOPMENT PARTNERS II, LLC, a Wisconsin limited liability company, with principal offices at 8909 N. Port Washington Road, Suite 100, Bayside, WI 53217 hereinafter called "DEVELOPER".

RECITALS

A. DEVELOPER has proposed the demolition of existing public and private improvements, the installation of new public and private infrastructure and site preparation for redevelopment of a mixed-use project containing professional services, health/fitness, general commercial, medical office, retail, restaurant, civic/recreational, public library, multi-family housing, hospitality and office components on approximately 26.5288 acres, located at the northwest corner of Brown Deer Road and Port Washington Road and bound by Interstate Highway 43 on the West and White Oak Lane on the North, hereinafter called "DEVELOPMENT".

B. DEVELOPMENT is currently zoned, per Ordinance 21-726 (September 29, 2021), as a Planned Development District Number One ("PUDD1") (hereinafter, the "Ordinance") and meets the criteria of its zoning as established in Section 125-109 of the Bayside Municipal Code.

C. DEVELOPER plans to construct DEVELOPMENT and certain site work and Required Construction / Improvements must be installed.

D. VILLAGE and DEVELOPER are executing this Agreement to confirm the way construction of site work and Required Construction / Improvements for the DEVELOPMENT will be performed in compliance with the Ordinance.

NOW, THEREFORE and in consideration of the approval of DEVELOPMENT by VILLAGE, DEVELOPER promises, covenants and agrees as follows:

SECTION 1. PARTIES BOUND

This Agreement is supplementary to and in conjunction with the Ordinance and relating to DEVELOPMENT which is made a part hereof and incorporated herein as part of this Agreement. This Agreement shall be binding upon DEVELOPER, its successors and assigns.

A "Notice of Public Improvements Agreement" shall be recorded at the Register of Deeds Office, Milwaukee County, Wisconsin, which shall be legal notice of this Agreement.

SECTION 2. PROJECT PHASING

DEVELOPER has proposed a multi-phased approach for the overall construction of DEVELOPMENT. A copy of the approved Master Site Plan and Master Site Phasing Plan is attached hereto as Exhibit No. 1. This Agreement relates only to the “Initial Site Infrastructure” as defined in the Development Agreement by and between VILLAGE and DEVELOPER dated as of December 20, 2021 (the “Development Agreement”).

DEVELOPER acknowledges that this Agreement pertains to the site development phase of DEVELOPMENT and that certain public and private improvements (sanitary sewer, water main, storm sewer/stormwater management, roadways, traffic signals, street lighting, site grading, erosion control, gas, electric, landscaping, etc.) are required to be installed to provide the necessary infrastructure base and site measures for DEVELOPMENT to allow DEVELOPER to continue with the desired phased development approach.

DEVELOPER acknowledges that separate VILLAGE approvals, DEVELOPER Agreements, and Public Improvement Agreements for Building Development may be needed for the approval and construction of future Phases within DEVELOPMENT, as DEVELOPER proceeds with development.

SECTION 3. LAND DIVISION / RIGHT-OF-WAY VACATION / RIGHT-OF-WAY DEDICATION

DEVELOPER acknowledges that prior to VILLAGE ‘Acceptance’ of, or use of any new public infrastructure by the general public, the necessary public right-of-way and/or public utility easements containing said public infrastructure must be dedicated and/or legally conveyed at the VILLAGE’S sole discretion and at no cost to the VILLAGE. See Section 12 of this Agreement for VILLAGE approval and acceptance procedures for public improvements.

SECTION 4. PLAN REVIEW / APPROVALS

DEVELOPER acknowledges that DEVELOPMENT plans and specifications are subject to review and approval by the VILLAGE and other outside agencies. DEVELOPER agrees to obtain the necessary agency approvals for all plans and specifications that may be required as part of DEVELOPMENT.

DEVELOPER acknowledges that any material alterations to the approved Master Site Plan or any proposals to construct future phases of DEVELOPMENT (from that contained in this AGREEMENT) may require a separate review and approval by the VILLAGE. Said review and approval may include the execution of a separate DEVELOPER Agreement specific to the proposal to identify potential conflicts with, or alteration to prior approvals granted as part of this AGREEMENT, or other Agreements related to DEVELOPMENT.

SECTION 5. REQUIRED CONSTRUCTION / IMPROVEMENTS

In order to construct DEVELOPMENT, DEVELOPER acknowledges it must prepare the necessary civil construction plans and to obtain and comply with all required VILLAGE and non-VILLAGE approvals (plan review, specifications, permits, etc.) associated with said approvals. Unless otherwise specified in this Agreement or specified on the approved civil construction plans, all

improvements that are outside of the current limits of public right-of-way shall be considered private and all improvements that are within the current limits of public right-of-way shall be considered public.

Required Construction / Improvements shall include, but are not limited to:

- | | |
|-------------------------------------|---|
| Demolition | Sidewalks |
| Erosion Control | TIA Alterations |
| Grading | Traffic Signals |
| Sanitary Sewer | Street Lighting System |
| Storm Sewer / Stormwater Management | Pavement Marking / Street Signage |
| Water Main | Forestry / VILLAGE Street Trees |
| Service Laterals | System Streetscaping |
| Roadway | Private Utilities (Gas, Electric,
Telecommunication) |

A list of approving agencies may include, but is not limited to:

- | | |
|--|---|
| Wisconsin Department of Natural Resources (WDNR) | Milwaukee Metropolitan Sewerage District |
| Wisconsin Department of Administration (WDOA) | Southeastern Wisconsin Regional Planning Commission |
| Wisconsin Department of Commerce (WDOC) | We Energies |
| Wisconsin Department of Transportation (WDOT) | Telecommunications (ATT, Spectrum, etc.) |
| Milwaukee County (Including Transit System) | Village of Bayside |
| Village of Bayside Sewer Utility | City of Mequon Water Utility |
| Village of Bayside Stormwater Utility | North Shore Fire Department |
| | North Shore Health Department |

Required Construction / Improvements and required agency approvals and specifications are subject to change during DEVELOPMENT review, approval and construction processes. DEVELOPER acknowledges that all costs related to the creation of the required construction plans, review costs, agency approvals and permits shall be at DEVELOPER expense.

A list of the required civil construction plans and related Exhibit numbers has been provided below in Section 16, subject to change.

SECTION 6. SPECIAL PROVISIONS FOR REQUIRED CONSTRUCTION/IMPROVEMENTS

A. DEMOLITION OF EXISTING BUILDINGS AND INFRASTRUCTURE. Demolition of DEVELOPER owned buildings shall be subject to the issuance of a demolition permit by VILLAGE. Terms and conditions associated with said demolition shall be contained in the permit. This may include the need for erosion control measures/permits or inspection by VILLAGE staff depending on the nature, size and scope of the requested demolition. Demolition activities may be permitted to take place with the installation of new roadway and utility infrastructure as these items have cause to be modified.

B. STORM SEWER / STORMWATER MANAGEMENT. DEVELOPER acknowledges its responsibility to provide stormwater management for DEVELOPMENT, including all of PUDD1. The approved stormwater management plan shall be placed on file in the office of the VILLAGE Engineer

and has not been attached. DEVELOPER hereby subjects DEVELOPMENT to, and agrees to the following stormwater management terms, conditions and obligations:

1. DEVELOPER agrees to install and maintain stormwater management system, basin(s) and practices in accordance with Section 107 of the VILLAGE Municipal Code, Milwaukee Metropolitan Sewerage District Chapter 13, the Wisconsin Administrative Code NR 151 and per the approved plans and permit(s) conditions on file in the VILLAGE Engineer.

2. DEVELOPER agrees to perform and provide information and/or test as may be required to meet VILLAGE, MMSD and WDNR regulations pertaining to DEVELOPMENT stormwater management plan, stormwater management system, basin(s) and practices.

3. Upon completion of construction, DEVELOPER agrees to provide VILLAGE with the certification of a Professional Engineer licensed in the State of Wisconsin verifying that the stormwater management system, basin(s) and practices have been constructed as designed. In addition, DEVELOPER agrees to promptly take all necessary, corrective actions to properly remedy and construct stormwater management system, basin(s) and practices as designed if deficiencies are found during the certification process. VILLAGE will provide certification requirements upon request.

4. DEVELOPER agrees to be solely responsible for the operation, maintenance, upkeep, and repair of the stormwater management system, basin(s) and practices for DEVELOPMENT and other responsibilities and liability as set forth in this Agreement ("Obligations"). Upon sale of DEVELOPMENT, or portions of DEVELOPMENT to another party, DEVELOPER shall ensure that the necessary documents are executed between parties to properly convey and transfer the applicable stormwater management Obligations as set forth in Section 6.C of this Agreement to ensure that the stormwater management Obligations are maintained in perpetuity. At no time shall VILLAGE be responsible for the operation, maintenance, upkeep and repair of the stormwater management system, basin(s) or practices, except for public storm sewer improvements once formally accepted by VILLAGE, or to the extent that any repair is necessitated as a result of the direct negligence or willful misconduct of the VILLAGE, its employees, agents or contractors. Neither the VILLAGE or its insurer shall be responsible or liable for any amount subject to statutory or common law immunity or any amount greater than the limits of liability for municipal claims against municipalities established by Wisconsin Law.

5. DEVELOPER grants and authorizes VILLAGE, in the event DEVELOPER does not comply with the VILLAGE-approved stormwater management plan for the DEVELOPMENT (within ten (10) business days of written notification) relating to said stormwater management system, basins(s) and practices, to access DEVELOPMENT stormwater management system, basin(s) and practices and proceed to do any work reasonably ordered and charge same to DEVELOPER. Said charges may be collected through a VILLAGE invoice or in the same manner as special charge pursuant to Section 66.0627 Wis. Stats. on the property tax bill for all or part of the DEVELOPMENT (DEVELOPER HEREBY SPECIFICALLY CONSENTS TO SUCH SPECIAL CHARGE AND WAIVES ANY OBJECTIONS THERETO TO THE FULLEST EXTENT OF THE LAW).

6. By execution of this document, DEVELOPER grants the VILLAGE a permanent Stormwater Management Maintenance Easement, which includes a suitable ingress and egress

route. The boundary of said Easement will be included on the certified survey map prepared by DEVELOPER and shall contain language clearly conveying said Easement interest to VILLAGE.

7. The term ‘basin(s)’ as used in this Section can refer to an above ground or below ground stormwater management basin, structure or facility.

C. WATER MAIN/SYSTEM. Subject to City of Mequon Water Utility standards.

D. PUBLIC ROADWAY/SIDEWALKS. DEVELOPER shall install, own, and maintain all roadways and sidewalks not located in the current public right-of-way and, at DEVELOPER’S option, may install all such roadways and sidewalks in the public right-of-way. For bituminous asphalt roadways, the concrete curb and gutter, crushed aggregate base course, asphalt binder and asphalt curb wedges must be installed as part of the initial construction. The installation of surface asphalt may be phased in conjunction with construction coordination, however the placement of any surface asphalt must be agreed to by VILLAGE and DEVELOPER before installation. Sufficient surface asphalt (i.e. first lift) must be installed before the issuance of the first occupancy permit with final lift applied within six (6) months of the issuance of such permit, subject to reasonable adjustment based on weather conditions. In addition, DEVELOPER agrees to accept ownership of that portion of the Glencoe Place right-of-way that is located within PUDD1 if and when VILLAGE initiates such transfer pursuant to Section 66.1003 Wis. Stats. In the event of such transfer, the sanitary sewer located under Glencoe Place shall remain VILLAGE sewer utility property and shall be granted an easement by DEVELOPER at no cost to the VILLAGE sewer utility.

E. ALTERATIONS TO EXISTING PUBLIC ROADWAYS / SIDEWALK / UTILITIES. Given DEVELOPMENT proximity to major public roadways, DEVELOPER has caused the creation of a Traffic Impact Analysis study, dated August 4, 2022 (hereinafter ‘TIA’), for DEVELOPMENT. DEVELOPER, as part of construction of DEVELOPMENT, agrees to comply with the requirements of the TIA and subsequent review comments by the VILLAGE, WDOT and Milwaukee County as part of the approval of the TIA. A copy of the approved TIA is on file in the office of the VILLAGE Engineer and has not been attached.

F. TRAFFIC SIGNALS. DEVELOPER acknowledges that the inclusion of new traffic signal facilities and adjustment to existing traffic signal facilities and related traffic inter-connect requirement are included in the approved TIA. Some of these facilities may physically lie outside of the limits of DEVELOPMENT.

DEVELOPER, as part of construction of DEVELOPMENT, agrees to comply with all traffic signal requirements of the TIA. Traffic signal facilities shall be maintained and operated by the VILLAGE (COUNTY if North Port Washington, STATE if West Brown Deer), at its cost, on West Brown Deer Road and North Port Washington Road. DEVELOPER shall maintain all other traffic signals within the DEVELOPMENT.

G. STREET LIGHTING SYSTEM. Any street lighting systems installed by DEVELOPER along private streets must be approved and permitted by VILLAGE prior to installation. Street lights shall be maintained and operated by DEVELOPER, at its cost, on abutting portions of West Brown Deer Road, North Port Washington Road and all other streets within the DEVELOPMENT.

H. PAVEMENT MARKING & STREET SIGNAGE PLAN. Any DEVELOPMENT ‘wayfinding’ signage installed by DEVELOPER in public right-of-way must be approved and permitted by VILLAGE prior to installation. DEVELOPER is responsible for all costs associated with the

installation, operation and maintenance of said 'wayfinding' signage installed by DEVELOPER for DEVELOPMENT and for all signage within the DEVELOPMENT.

I. STREETSCAPING. Streetscaping shall include but not be limited to roadway pavers, colored concrete / asphalt, decorative street lighting, banners, decorative signage/way finding signs, flower beds, shrubs and some types of trees. If questions arise on streetscaping, VILLAGE shall make the final determination on the approval of a given streetscaping feature. DEVELOPER shall install and maintain all streetscaping features.

J. PRIVATE UTILITIES (Electric, Water, Sewer, Gas, Telephone, CATV, etc.). DEVELOPER acknowledges its responsibility, as part of this Agreement and the approval of DEVELOPMENT, to provide a plan for private utilities that shows the proposed location of private utilities that are needed to facilitate DEVELOPMENT. DEVELOPER will install all such utilities in the DEVELOPMENT, which utilities shall be, and remain, privately owned and which shall be properly connected to public utilities located outside of the DEVELOPMENT.

DEVELOPER acknowledges that all new private utilities shall be installed as underground utilities, and once installed, shall conform to the proposed plans approved by the VILLAGE. DEVELOPER remains responsible to remedy any deficiencies if any private utilities are not installed consistent with the plans approved by the VILLAGE.

DEVELOPER agrees to be responsible for any and all liability and hold VILLAGE harmless from any and all claims arising out of the existence of those items not within the public right of way and, to the extent maintenance is the obligation of the DEVELOPER, maintenance of said stormwater system, water main and system roadways and sidewalks, traffic signals, private utilities, street lighting, pavement marking street signage, and streetscaping practices and appurtenances, except for such claims as may be the result of the direct negligence or willful misconduct of the VILLAGE, its employees, agents or contractors. Neither the VILLAGE nor its insurer shall be responsible or liable for any amount subject to statutory or Common Law immunity or any amount greater than the limits of liability for municipal claims established by Wisconsin Law.

K. PERIMETER SURVEILLANCE SYSTEM. DEVELOPER agrees to install a perimeter surveillance system and to implement a Perimeter Surveillance Plan acceptable to VILLAGE. Such Plan is attached hereto as Exhibit 13. The Plan shall be administered, and in VILLAGE's discretion, amended by DEVELOPER as necessary based on the nature of the DEVELOPMENT and current and future appropriate policies and technology.

SECTION 7. OTHER SITE CONSIDERATIONS

A. FENCING. DEVELOPER may propose for the VILLAGE'S approval the placement of a temporary construction fence around DEVELOPMENT during construction as a means to shield the site and to increase security in DEVELOPMENT. DEVELOPER agrees that said fencing shall not unreasonably impede VILLAGE ingress and egress to DEVELOPMENT.

SECTION 8. EASEMENTS

DEVELOPER acknowledges its responsibility to ensure that the necessary easements to facilitate public utilities, private utilities, and other DEVELOPMENT related needs are contained on the certified survey map and noted accordingly, or created through the use of other standalone documents.

Upon completion of DEVELOPMENT, DEVELOPER acknowledges that it shall cause the release or extinguishment of any un-needed public or private easements.

SECTION 9. CONSTRUCTION ACTIVITIES OF REQUIRED CONSTRUCTION / IMPROVEMENTS

A. TIME OF COMPLETION. DEVELOPER shall, entirely at its expense, on or before December 31, 2023, but subject to a Force Majeure Event as defined in the Development Agreement, construct, install, furnish and provide the ‘Required Construction / Improvements.’

B. VILLAGE INSPECTION.

1. For VILLAGE public improvements, utilities, utility connections, oversight of all construction and maintenance shall be performed under the direction of the VILLAGE, or its designee, at DEVELOPER expense. VILLAGE shall decide all questions which arise as to the amount, quality and acceptability of materials furnished, work performed, specifications and regulations and acceptable fulfillment of Required Construction / Improvements associated with the DEVELOPMENT.

2. If any work is covered up without approval or consent of VILLAGE, it will, if required by VILLAGE, be uncovered for examination at DEVELOPER expense. Re-examination of questioned work may be ordered by VILLAGE and if so ordered, the work will be uncovered by DEVELOPER at DEVELOPER expense. If such work is found not in accordance with the approved plans, specification and regulations, DEVELOPER shall replace or repair work as required by VILLAGE at DEVELOPER expense.

C. RESTORATION. DEVELOPER acknowledges responsibility to (at VILLAGE’s reasonable discretion) restore the areas affected by any construction associated with DEVELOPMENT to the condition it was prior to construction, including but not limited to, grading to blend with existing topography to ensure proper drainage, sodding disturbed area, replacement of all disrupted driveways, restoration of any damaged street pavement/shoulders, and replacement of any private trees/bushes/plantings which were removed/damaged in right-of-way and/or on a 3rd party’s private property.

D. NOISE. DEVELOPER agrees to make every reasonable effort to minimize noise, dust and similar disturbances. In accordance with Section 35-176 of the VILLAGE Municipal Code, construction activities, including idling of trucks in the VILLAGE, shall not begin before 7:00 am or continue after 7:00 pm during weekdays and Saturdays. Construction activities are not allowed on Sundays and Holidays. All other noise criteria shall be in conformance with VILLAGE codes. DEVELOPER reserves the right to request adjusted work hours for times other than as stated above if construction factors, and other circumstances warrant said request. Said request will be made to the office of the VILLAGE Engineer. DEVELOPER acknowledges that VILLAGE must first approve said request prior to DEVELOPER commencing work during adjusted work hours.

E. PRE-CONSTRUCTION MEETING. DEVELOPER acknowledges that a pre-construction meeting shall be held prior to the commencement of construction activities in DEVELOPMENT. Due to demolition and other phased construction activity, there may be a need for one, or several pre-construction meeting(s). VILLAGE shall decide whether pre-construction meetings are warranted.

F. CONSTRUCTION TRAFFIC. Specific details regarding construction traffic and routing will be discussed during pre-construction meetings.

G. PLAN MODIFICATION / PLAN REVIEW STATUS. DEVELOPER requests for material modifications of the approved plans during construction are to be submitted by DEVELOPER in a manner similar to the application for Plan Commission review. DEVELOPER shall provide such detailed drawings and/or other information as VILLAGE requires and reimburse VILLAGE for the review related expenses incurred by VILLAGE and any retained consultants. VILLAGE shall decide the extent of review required and determine if VILLAGE action is warranted.

SECTION 10. INTENTIONALLY OMITTED

SECTION 11. PAYMENT OF VILLAGE COSTS AND FEES

DEVELOPER, pursuant to Section 125-34 of the Municipal Code, shall pay and reimburse the VILLAGE promptly upon billing for all fees, expenses, costs and disbursements which shall be incurred by the VILLAGE in connection with the development, amendment, administration and enforcement of this Agreement, relative to the construction, installation, inspection, dedication (as applicable), and acceptance (as applicable) of all aspects of the DEVELOPMENT, including without limitation planning, design, engineering, review, accounting, supervision, inspection and legal fees, administrative, and financial consulting. Any such charge not paid by DEVELOPER within thirty (30) days of being invoiced may be assessed against the Property and each Lot as a special charge pursuant to Section 66.0627 of the Wisconsin Statutes (DEVELOPER HEREBY SPECIFICALLY CONSENTS TO SUCH SPECIAL CHARGE AND WAIVES ANY OBJECTIONS THERETO TO THE FULLEST EXTENT OF THE LAW).

SECTION 12. APPROVAL AND ACCEPTANCE OF PUBLIC IMPROVEMENTS

DEVELOPER shall comply with the following language related to VILLAGE approval and acceptance of public improvements prior to any public improvement dedication taking place:

All Required Construction / Improvements shall be and remain the property of DEVELOPER until final acceptance by VILLAGE of those items to be dedicated in accordance with the Master Site Plan and thereupon shall be turned over to and delivered to VILLAGE without cost and shall become VILLAGE property.

Upon completion of the Required Construction / Improvements in DEVELOPMENT as covered by this Agreement and in accordance with the terms, conditions, plans and specifications incorporated herein, DEVELOPER shall request final VILLAGE acceptance of said Required Construction / Improvements. At time of request, DEVELOPER may certify to VILLAGE that it has followed all designs, plans and specifications, materials and any alterations and modifications, as approved by VILLAGE and also as contained in this Agreement. Said certification shall enumerate, in written form, any changes, alterations or modifications from previous VILLAGE approvals and/or the terms of this Agreement. Upon certification by DEVELOPER, VILLAGE shall make an inspection of the work. VILLAGE will provide DEVELOPER, within thirty (30) days of completed VILLAGE inspection, either:

- a. A notice of rejection from VILLAGE indicating that the Required Construction / Improvements are not in sufficient condition for inspection by VILLAGE,

b. A notice of specific requirements that VILLAGE requires prior to issuance of a certificate of acceptance of installation for Required Construction / Improvements, or

c. A certificate of acceptance of installation for Required Construction / Improvements.

In the event that no certificate of acceptance, specific requirements, or denial of acceptance are provided to DEVELOPER within said thirty (30) days, then acceptance shall be deemed to have occurred. Said 30-day time period will start upon VILLAGE receipt of the notification with certification from DEVELOPER. Final acceptance by VILLAGE shall effectuate transfer of title. Due to the nature of construction, in the event that any VILLAGE accepted Required Construction / Improvements are damaged by DEVELOPER after VILLAGE acceptance due to, but not limited to additional utility and pavement installations or other work by DEVELOPER, VILLAGE reserves the right to order DEVELOPER to remedy said defect at DEVELOPER's expense. Failure by DEVELOPER to remedy said defect will result in the denial of a notice of compliance, Occupancy Permit, or other action by VILLAGE until said defect is repaired.

SECTION 13. BUILDING AND OCCUPANCY PERMITS

A. **BUILDING PERMITS.** VILLAGE may withhold or suspend building permits for individual buildings constructed within the DEVELOPMENT in case of any default pertaining to this Agreement on the part of DEVELOPER.

B. **OCCUPANCY PERMITS.**

1. VILLAGE may withhold occupancy permits for individual buildings constructed within the DEVELOPMENT in case of any default pertaining to this Agreement on the part of DEVELOPER.

2. DEVELOPER agrees that said land division identified in Section 3 of this Agreement must be approved by VILLAGE and recorded prior to the issuance of an occupancy permit for any building constructed within the DEVELOPMENT.

SECTION 14. PLAN REPRODUCTION / RECORD DRAWINGS

DEVELOPER agrees to provide VILLAGE with a) a full sized, paper set of the Civil Site Construction Plans, b) electronic PDF images of the Civil Site Construction Plans and c) electronic CAD files of the Civil Site Construction Plans Microstation V8i, or VILLAGE acceptable compatible software format. DEVELOPER hereby grants the VILLAGE the right to utilize these materials as needed for VILLAGE mapping and record keeping needs.

Upon completion of construction activities, VILLAGE will complete the necessary as-built construction records for Public Improvements installed, or modified as a result of DEVELOPMENT, at DEVELOPER expense.

Upon completion of construction activities, DEVELOPER will complete the necessary as-built construction records for Private Improvements installed, or modified as a result of DEVELOPMENT.

SECTION 15. PRIOR VILLAGE CONDITIONS

It is mutually agreed that all terms and conditions pertaining to DEVELOPER as imposed by VILLAGE Plan Commission and VILLAGE Board as set forth in their official minutes, are made a part hereof by reference as though fully set forth herein.

SECTION 16. EXHIBITS

It is mutually agreed that all exhibits referred to and/or attached hereto are made a part of this Agreement. Any conditions contained in any approvals as called for therein are also incorporated within this Agreement and made a part hereof. Exhibits incorporated into this Agreement include the following, as applicable:

- Exhibit 1 Master Site / Phasing Plan
- Exhibit 2 Grading Plans
- Exhibit 3 Sanitary Sewer Plans
- Exhibit 4 Storm Sewer Plans
- Exhibit 5 Water Main Plans
- Exhibit 6 Street / Sidewalk Plans
- Exhibit 7 Brown Deer Road and Port Washington Road Alteration Plans (T.I.A. plans)
- Exhibit 8 Traffic Signal Plans
- Exhibit 9 Street Lighting Plans
- Exhibit 10 Pavement Marking / Street Signage Plans
- Exhibit 11 Street Tree / Landscaping Plan
- Exhibit 12 Private Streetscaping Plan
- Exhibit 13 Perimeter Surveillance Plan

SECTION 17. EMERGENCY ACCESS

DEVELOPER shall allow VILLAGE right of entry in all areas of DEVELOPMENT for the purposes of fire, police and other emergency response situations.

SECTION 18. DEVELOPER CONTROLS

The work shall be under the full charge and care of DEVELOPER until accepted by VILLAGE. DEVELOPER shall be responsible for the work of its contractors and every part thereof, for all materials, tools, appliances and property of every description used in connection therewith. DEVELOPER shall

specifically and distinctly assume and does so assume all risks of damage or injury to property or persons used or employed on or in connection with the work, and of all damage or injury to any persons or property wherever located, resulting from any action or operation under this Agreement or in connection with the work, and undertakes and promises to protect and defend VILLAGE against all claims on account of any such damage or injury.

DEVELOPER shall, in the performance of this Agreement, comply with and give all stipulations and representations required by applicable federal, state and local laws, ordinances and regulations. DEVELOPER shall also require such compliance, stipulations and representations with respect to any contract entered into by DEVELOPER with others (pertaining to the work covered by this Agreement) as may be required by all applicable federal, state and local laws, ordinances and regulations. Should DEVELOPER fail with respect to any of these provisions, it shall indemnify and hold harmless, VILLAGE and all of its officers, agents, and employees from any liability or damage on account of such failure.

SECTION 19. GUARANTY PERIOD

DEVELOPER shall remedy or cause to be remedied any defects in materials or workmanship which shall appear within a period of one year from the date of VILLAGE'S acceptance of any Required Construction / Improvements.

SECTION 20. UNAUTHORIZED COMMENCEMENT OF WORK

In the event DEVELOPER proceeds to make improvements without first having received the approval of VILLAGE or, in the event that DEVELOPER proceeds in a manner which does not comply with the plans and specifications as approved by VILLAGE, VILLAGE may take action to stop construction of the improvements. Action by VILLAGE shall consist of a notice to DEVELOPER who is proceeding in violation of, or without approval, which notice shall be in writing, addressed to the last known post office address of DEVELOPER and which notice shall be sent by postage prepaid United States certified mail or by hand delivery or confirmed email. The notice shall advise DEVELOPER of the nature of the violation and shall order immediate cessation of work on the improvements, which order DEVELOPER must comply with. DEVELOPER may request a meeting with VILLAGE which shall be granted within two (2) workdays of the request. If DEVELOPER can demonstrate compliance with approved plans and specifications to the satisfaction of VILLAGE, VILLAGE shall rescind its order stopping construction.

SECTION 21. DEVELOPER DEFAULT; VILLAGE REMEDIES

If DEVELOPER is adjudged bankrupt, or if it makes a general assignment for the benefit of its creditors, or if it or its contractors disregard statutes, ordinances, regulations, orders, or the instruction of VILLAGE, or if it fails to perform any provisions of this Agreement, then VILLAGE, upon determination that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy of VILLAGE, including the right to damages, and after giving DEVELOPER and its surety ten (10) days' written notice and opportunity to cure the alleged deficiency or failure to perform, take possession for the sole purpose of completing said work of the premises and of all materials, tools, equipment and plant thereon and finish the work by whatever method it may deem expedient; provided that, if it will reasonably take more than ten (10) days to cure such default, Developer shall be afforded additional time reasonably

required to cure such default, provided, further, that Developer commences to cure such default within ten (10) days after receipt of notice of default and thereafter diligently pursues curing such default. DEVELOPER in the event of its default shall pay VILLAGE the cost of so administering and completing the work.

In addition, in the event that performance has not been commenced within ten (10) days from the date of notice to DEVELOPER of suspension of the work, then VILLAGE has the right to continue in possession of and utilize, for the completion of the work, any and all materials, tools, and equipment which DEVELOPER or its contractors have had delivered upon the site of the work and to prosecute the work to completion as it may deem expedient and at the expense of DEVELOPER.

Whether or not VILLAGE elects to take charge of the work, DEVELOPER shall be liable to VILLAGE for its damages sustained by failure to complete the work on time, in addition to the cost of completion of the work.

Written Notice shall be deemed given if delivered by certified or registered mail to DEVELOPER at:

If to the Developer:

Bayside Development Partners II, LLC
c/o Cobalt Partners, LLC
400 N. Broadway Street
Suite 100
Milwaukee, WI 53202
Attn: Scott J. Yauck

With a copy to:

Godfrey & Kahn, S.C.
833 E. Michigan Street, Suite 1800
Milwaukee, WI 53202
Attn: Michael J. Dwyer

SECTION 22. DEVELOPERS INDEMNITY

In addition to, and not to the exclusion or prejudice of, any other provisions of this Agreement, DEVELOPER shall indemnify and hold VILLAGE, its officers, agents and employees harmless, and shall defend the same, from and against any and all liability, claims, loss damages, interest, actions, suits, judgments, costs, expenses, attorneys' fees and the like, to whomsoever owned and whomsoever and whensoever brought or obtained, which may in any manner result from or arise in the course of or out of the performance of the work and this Agreement, expressly including, though not limited to: negligence and the breach of any duty whether imposed by statute, ordinance, regulation, order, decree of law, or by contract, on the part of DEVELOPER or its officers, employees, agents, workmen, or independent contractors, in carrying out the work and in supervising and safeguarding the same in any respect whatever, the infringement of any patent, trademark, trade name, or copyrights claims arising under any law including Workmen's Compensation Law.

In every such case where judgment is recovered against VILLAGE, if notice has been given to DEVELOPER of the pendency of suit within thirty (30) days after its commencement, the judgment shall

be conclusive upon DEVELOPER, not only as to the amount of damages, but also as to its liability to VILLAGE.

SECTION 23. VILLAGE APPROVALS

Throughout this Agreement, whenever the approval of the VILLAGE is required, the approval of the VILLAGE Board (or designee), confirmed by the VILLAGE Clerk, shall constitute VILLAGE approval; and whenever the approval of VILLAGE staff shall be required, the approval by the VILLAGE Manager shall constitute VILLAGE staff approval.

SECTION 24. VILLAGE IMMUNITIES AND LIMITATIONS ON LIABILITY

Nothing in this Agreement shall be construed to in any way act as a waiver or limitation on the VILLAGE's constitutional, statutory, or common law immunities or limitations on liability.

[signatures on following pages]

IN WITNESS WHEREOF, the parties hereto have set their hands and seals this ____ day of _____, 2022.

DEVELOPER

BAYSIDE DEVELOPMENT PARTNERS II, LLC

By: Cobalt Investment Holdings LLC, Manager

By: Cobalt Partners, LLC, Manager

By: _____
Scott J. Yauck, Sole Member and Manager

By: La Macchia Real Estate V LLC, Manager

By: _____
William E. La Macchia, Manager

STATE OF WISCONSIN)

_____) ss.
_____ COUNTY)

Personally appeared before me this ____ day of _____, 2022, the above-named Scott J. Yauck, the Sole Member and Manager of Cobalt Partners, LLC, a manager of Cobalt Investment Holdings LLC, manager of Bayside Development Partners II, LLC, to me known to be the person who executed the foregoing agreement on behalf of said limited liability company and by its authority.

Name: _____
Notary Public, State of Wisconsin
My Commission expires: _____

STATE OF WISCONSIN)
_____) ss.
_____ COUNTY)

Personally appeared before me this ____ day of _____, 2022, the above-named William E. La Macchia, the Manager of La Macchia Real Estate V LLC, a manager of Bayside Development Partners, LLC, to me known to be the person who executed the foregoing agreement on behalf of said limited liability company and by its authority.

Name: _____
Notary Public, State of Wisconsin
My Commission expires: _____

APPROVED AS TO FORM:

Print Name _____
Counsel for Developer

**MASTER SITE/
PHASING PLAN**

Exhibit 1

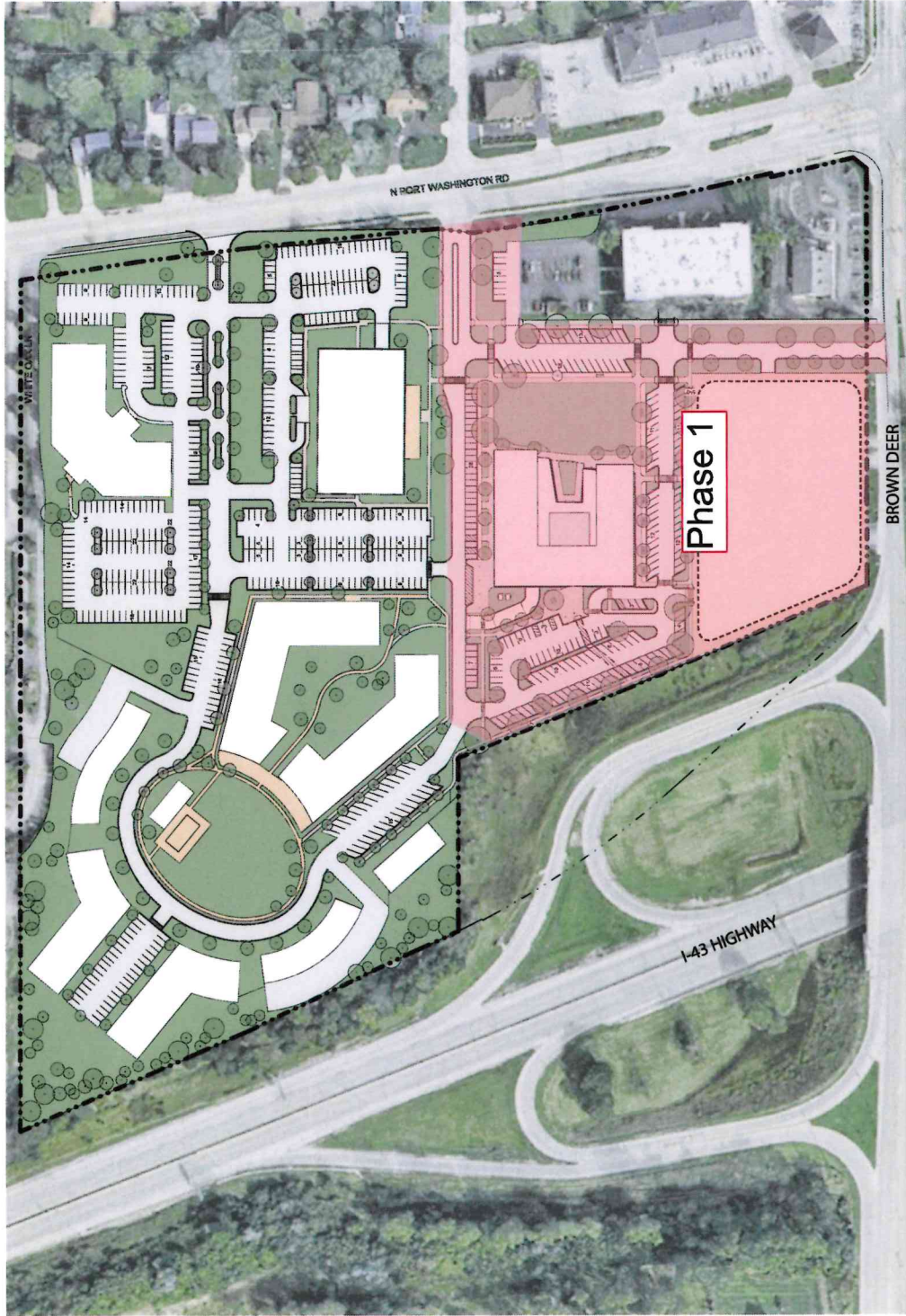
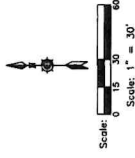


Exhibit 3 Sanitary Sewer Plan



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UTILITY NOTES

- PROJECT LIMITS**
 NONE. UTILITY AND POTENTIAL CONTACT DEPT WITH
 INSTALLATION, CONTRACTOR TO CONTACT AND OBTAIN
 AND OBTAIN PERMISSIONS FOR ALL UTILITIES TO BE
 UTILITIES.
- 1. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. THE POINT OF CONTACT SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.**
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- 5. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. THE POINT OF CONTACT SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.**
- 6. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. THE POINT OF CONTACT SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.**
- 7. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. THE POINT OF CONTACT SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.**

KEY INDEX

PROJECT LIMITS	
	STREET ENTRANCE
	STORM SEWER
	SANITARY SEWER
	WATER MAIN
	GAS
	ELECTRIC
	TELEPHONE
	CABLE TV
	SEWER MANHOLE
	STORM MANHOLE
	WATER MANHOLE
	GAS VALVE
	ELECTRIC VALVE
	TELEPHONE VALVE
	CABLE TV VALVE
	SEWER MANHOLE VALVE
	STORM MANHOLE VALVE
	WATER MANHOLE VALVE
	GAS VALVE
	ELECTRIC VALVE
	TELEPHONE VALVE
	CABLE TV VALVE
	SEWER MANHOLE VALVE
	STORM MANHOLE VALVE
	WATER MANHOLE VALVE

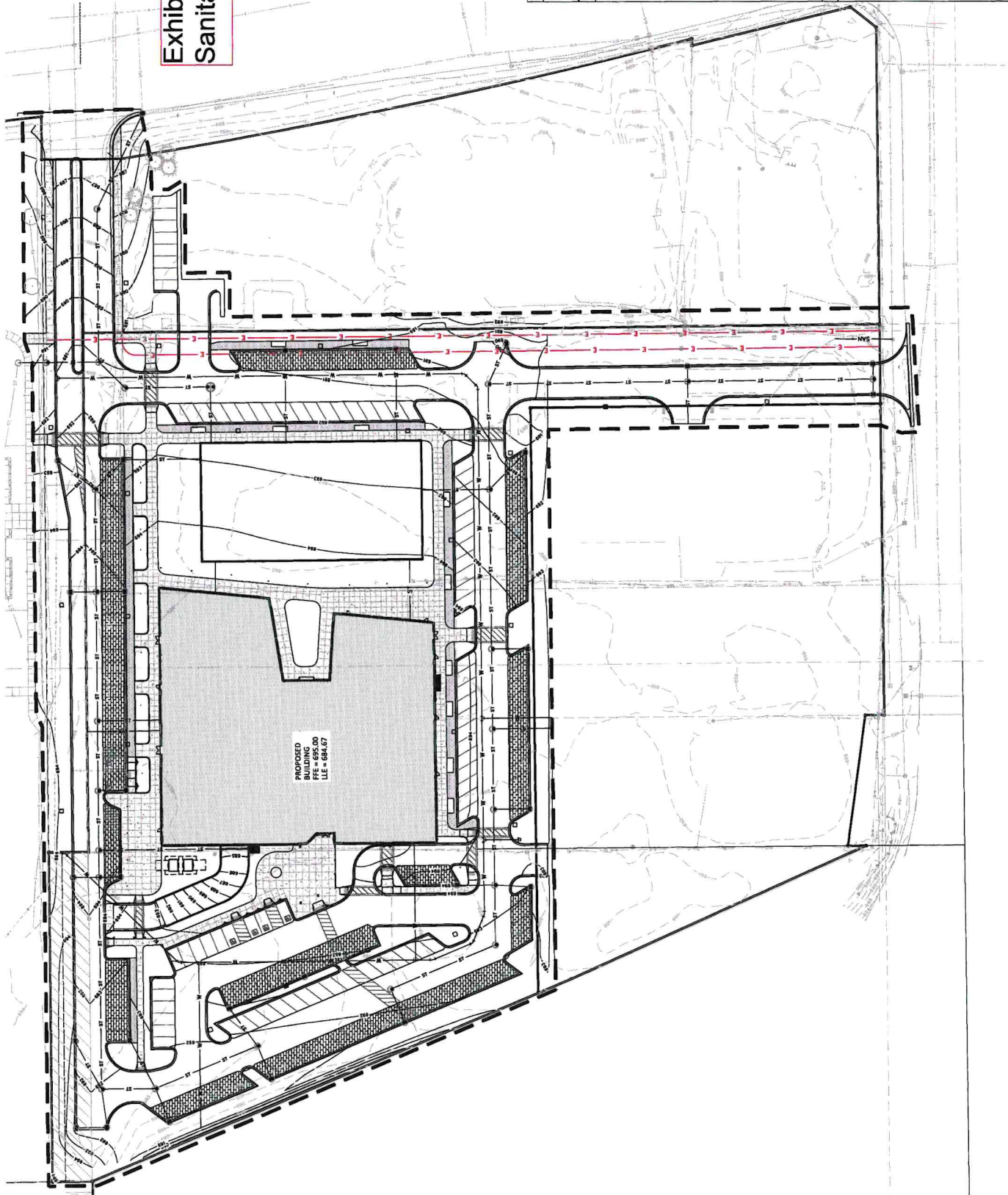
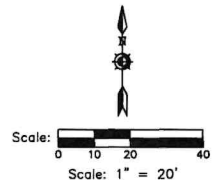
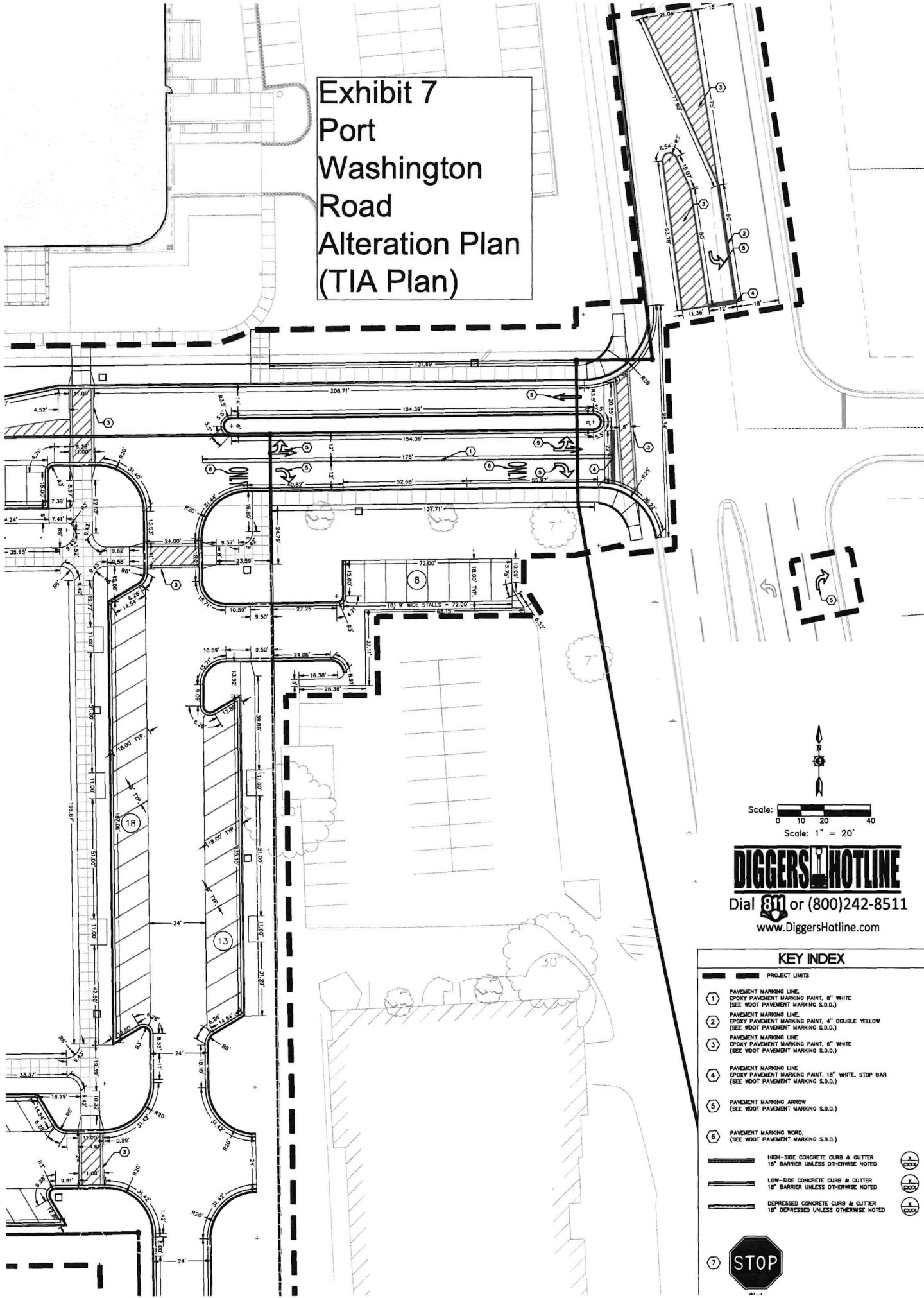


Exhibit 7 Port Washington Road Alteration Plan (TIA Plan)



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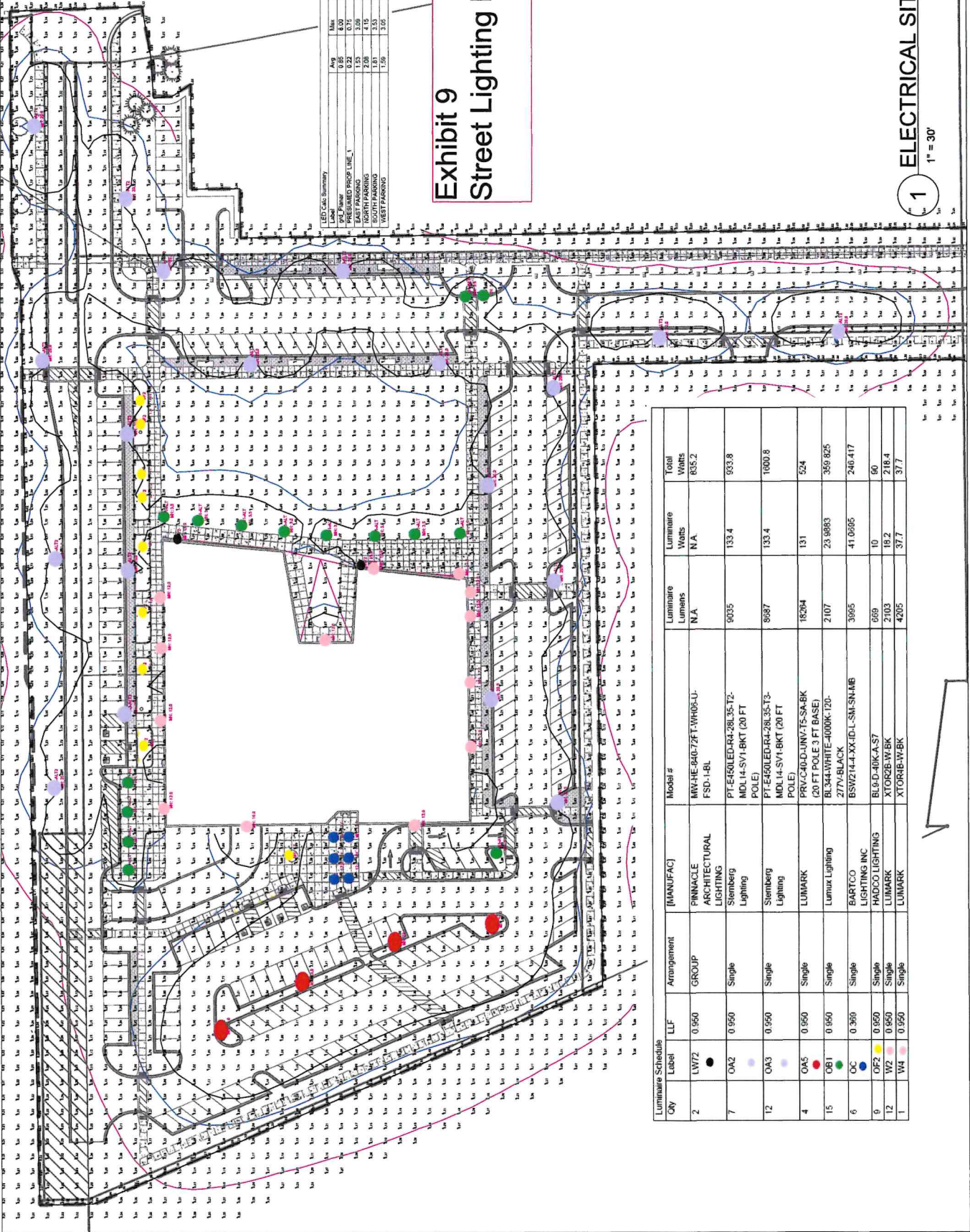
KEY INDEX	
	PROJECT LIMITS
①	PAVEMENT MARKING LINE, EPOXY PAVEMENT MARKING PAINT, 8" WHITE (SEE WDOT PAVEMENT MARKING S.D.D.)
②	PAVEMENT MARKING LINE, EPOXY PAVEMENT MARKING PAINT, 4" DOUBLE YELLOW (SEE WDOT PAVEMENT MARKING S.D.D.)
③	PAVEMENT MARKING LINE, EPOXY PAVEMENT MARKING PAINT, 8" WHITE (SEE WDOT PAVEMENT MARKING S.D.D.)
④	PAVEMENT MARKING LINE, EPOXY PAVEMENT MARKING PAINT, 18" WHITE, STOP BAR (SEE WDOT PAVEMENT MARKING S.D.D.)
⑤	PAVEMENT MARKING ARROW (SEE WDOT PAVEMENT MARKING S.D.D.)
⑥	PAVEMENT MARKING WORD (SEE WDOT PAVEMENT MARKING S.D.D.)
	HIGH-SIDE CONCRETE CURB & GUTTER 18" BARRIER UNLESS OTHERWISE NOTED
	LOW-SIDE CONCRETE CURB & GUTTER 18" BARRIER UNLESS OTHERWISE NOTED
	DEPRESSED CONCRETE CURB & GUTTER 16" DEPRESSED UNLESS OTHERWISE NOTED
⑨	STOP

Exhibit 9 Street Lighting Plan

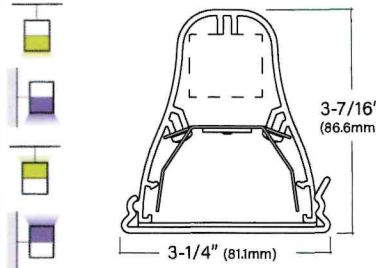
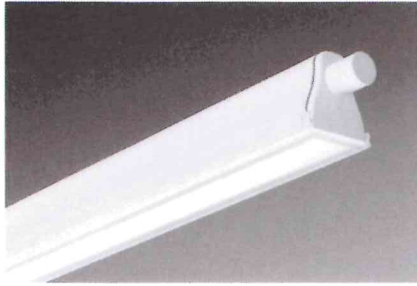
LEED Calc Summary

Label	Avg	Max	Min	Avg/Min	Max/Min
PREVIOUS PROP LINE 1	0.22	0.30	0.10	22.00	75.00
EAST PARKING	1.55	3.05	0.54	2.83	5.72
NORTH PARKING	2.05	4.15	0.85	3.01	6.01
WEST PARKING	1.55	3.05	0.27	5.89	11.50

1
ELECTRICAL SITE PLAN
1" = 30'



Qty	Label	LLF	Arrangement	[MANUFAC]	Model #	Luminaire Lumens	Luminaire Watts	Total Watts
2	LW72	0.950	GROUP	PINNACLE ARCHITECTURAL LIGHTING	MW4HE-840L7FT-WH08-LI-FSD-148L	N/A	N/A	835.2
7	OA2	0.950	Single	Stemberg Lighting	PT-E60LED-R4-28L-35-T2-MDL14-SV1-BKT (20 FT POLE)	9095	133.4	933.8
12	OA3	0.950	Single	Stemberg Lighting	PT-E60LED-R4-28L-35-T3-MDL14-SV1-BKT (20 FT POLE)	9087	133.4	1000.8
4	OA5	0.950	Single	LUMARK	PRV-C40-D-UNV-TS-SA-BK (20 FT POLE 3 FT BASE)	18204	131	524
15	OB1	0.950	Single	Lumax Lighting	BL344-WHITE-4000K-120-277V-BLACK	2107	23.9883	356.825
6	OC	0.360	Single	BARTCO LIGHTING INC	BSNV214-4-XX-ID-L-SM-SN4MB	3095	41.0585	246.417
9	DF2	0.950	Single	HADCO LIGHTING	BL6-D-RK-A-S7	659	10	60
12	W2	0.950	Single	LUMARK	XTOR2B-W-BK	2103	19.2	218.4
1	W4	0.950	Single	LUMARK	XTOR1B-W-BK	4205	37.7	37.7



MOFFAT MW

Outdoor Linear Luminaire

Key Features

- 6063-T6 Extruded aluminum housing
- Highly reflective die-formed white painted aluminum reflector
- Die-cast aluminum end caps
- MOFFAT offered with a 5-year limited warranty that covers LED, driver and fixture
- ETL listed conforming to UL 1598 in US and CSA 250 in Canada
- Approved for wet location, IP65 Rated, fully gasketed lens and endcaps
- Maximum fixture weight is 20 lbs per standard 4' fixture
- Fixture head rotation provides asymmetric and general illumination
- Buy American Act compliant



Example Part #: MW-HE-835HO-26'-FL-U-OL2-1-0-W

MW - HE - - - - -
SHIELDING CRI, CCT & OUTPUT LENGTH MOUNTING VOLTAGE DRIVER CIRCUITING BATTERY & EMERGENCY FINISH FIXTURE OPTIONS CONTROLS

M_	HE	-----	-----
HOUSING	SHIELDING	CRI, CCT & OUTPUT ¹	LENGTH ²
MW - Moffat Wet MN - Moffat Natatorium (FL mounting only)	HE - High Efficiency Lens WHE - Asymmetric Lens <i>Shielding pg. 2</i>	_27__ - 2700K _30__ - 3000K _35__ - 3500K _40__ - 4000K _CL_ - Custom Lumens _CW_ - Custom Watts <i>Lumen Output pg. 2</i>	__ - Individual Fixture ___ - Continuous Row <i>Length pg. 3</i>
-----	-----	-----	-----
MOUNTING	VOLTAGE	DRIVER	CIRCUITING
FL - Flush Mount PH __ - Pendant Hub (specify 12", 18", 24") WH __ - Wall Hub (specify 6", 12", 18", 24") <i>Mounting pg. 3</i>	U - Universal (120 thru 277V) 1 - 120V 2 - 277V 3 - 347V <i>Voltage pg. 4</i>	FSD - Factory Select Driver (1%, 0-10v) PL2 - Advance Xitanium (1%, 0-10v) OL4 - Osram 347v (1%, 0-10v) EE1 - eldoLED ECOdrive (1%, 0-10v) ES1 - eldoLED SOLOdrive (0%, 0-10v) LH1 - Lutron Hi-lume (1%, EcoSystem) PS1 - Advance Xitanium (50%/100%) OL2 - Osram (1%, 0-10v) <i>Driver pg. 4</i>	1 - Single Circuit M - Multi Circuit E - Emergency (entire fixture) N - Night Light (entire fixture) <i>Circuiting pg. 4</i>
-----	---	---	---
BATTERY & EMERGENCY ³	FINISH	FIXTURE OPTIONS	CONTROLS
0 - None _FSG - Factory Select ALCR _GI - Iota ETS DR _GB - Bodine GTD _PLL - Bodine 10W (low profile) _ILL - Iota 10W Integral _E - Emergency circuit section _N - Night Light circuit section _L - Life Safety circuit section <i>Battery and Emergency pg. 4-5</i>	W - White S - Metallic Silver BL - Textured Black BR - Bronze GR - Graphite CC - Custom Color <i>Finish pg. 5</i>	V - Visor DSP - Customer Supplied Battery/Driver/ Sensor <i>Fixture Options pg. 5</i>	<i>Pinnacle is able to accommodate different control solutions from different manufacturers. Consult Factory for more information.</i>

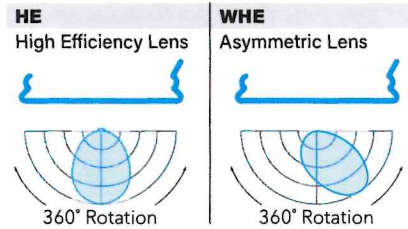
¹When specifying CRI, CCT, & OUTPUT the first _ is for specifying either 8 - 80CRI, 9 - 90CRI. The ending __ are for specifying output, example **HO** - High Output. See output charts for more information. ²Individual fixtures come in 2', 3', 4', 6' & 8' lengths. Continuous rows available in 1' increments, starting at 2' ³Enter quantity for Battery and Emergency, Example 2PL.

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.



Shielding

- The distributions for each shielding option below are shown in a direct orientation. See Mounting for all rotating head options.



CRI, CCT & Output

- Specify either 80 or 90 CRI
- Longer lead-time may apply for 90 CRI. Consult factory
- 80 CRI = R9≥19 and 90 CRI = R9≥61

Custom Output- Lumens OR Wattage

CL _____ Specify CRI, CCT and desired lumens (i.e. CL835950) *Specify lumens between standard offering listed below. Lumens are specified per color temp*

CW _____ Specify CRI, CCT and desired wattage (i.e. CW9409.5) *Specify watts between standard offering listed below*

80 CRI

	Color	Output	Lumens per foot	Shielding HE High Efficiency		WHE Asymmetric Lens	
				LPW	Watts/ft	LPW	Watts/ft
830LO	3000K	Low	350	122	2.9	103	3.4
830	3000K	Standard	750	126	5.9	109	6.9
830HO	3000K	High	1000	127	7.9	111	9.0
830VHO	3000K	Very High	1250	129	9.7	109	11.4
835LO	3500K	Low	350	125	2.8	106	3.3
835	3500K	Standard	750	128	5.8	111	6.8
835HO	3500K	High	1000	131	7.7	111	9.0
835VHO	3500K	Very High	1250	133	9.4	112	11.1
840LO	4000K	Low	350	127	2.8	108	3.3
840	4000K	Standard	750	130	5.8	112	6.7
840HO	4000K	High	1000	132	7.6	112	8.9
840VHO	4000K	Very High	1250	135	9.3	114	11.0

90 CRI

927LO	2700K	Low	350	101	3.5	88	4.0
927	2700K	Standard	750	107	7.0	91	8.3
927HO	2700K	High	1000	109	9.2	92	10.8
930LO	3000K	Low	350	105	3.3	91	3.9
930	3000K	Standard	750	109	6.9	94	8.0
930HO	3000K	High	1000	109	9.1	96	10.5
935LO	3500K	Low	350	107	3.3	93	3.8
935	3500K	Standard	750	112	6.7	96	7.8
935HO	3500K	High	1000	112	8.9	98	10.2
940LO	4000K	Low	350	106	3.3	92	3.8
940	4000K	Standard	750	111	6.8	95	7.9
940HO	4000K	High	1000	111	9.0	97	10.3

¹LPW and watts/ft based off 48" fixture size.

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.



Length

- All individual units cannot be joined
- The PH and WH mounting options have a 1-3/8" hub on each side of the fixture, the FL mounting option has 1/2" hub at each end of the fixture, see installation instructions for more details and chart.

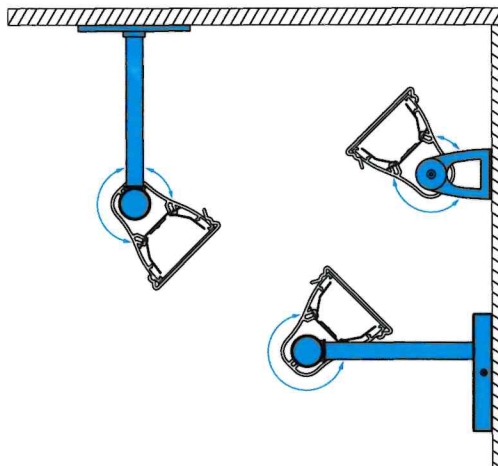
2	3	4	6	8	-
Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Cont. Run
24-5/8" (610.2mm)					Specify nominal overall row length to the 1'
	36-5/8" (930.3mm)				
		48-5/8" (1235.1mm)			
			72-5/8" (1844.7mm)		
				96-5/8" (2454.3mm)	
					Specify to the 1' >>>

Mounting

- Pendant lengths are 12", 18", and 24"
- Wall Hub lengths are 6", 12", 18", and 24"
- End caps and standard white power cord attached at factory
- Canopies, hubs, and pendants match fixture finish, power cords are white, grey, or black depending on fixture finish. See Finish section for additional details
- Approved for wet location, IP65 rated, unless otherwise noted

- Refer to installation instructions during installation at the job site
- Maximum fixture weight is 20 lbs. per 4' fixture
- Fixture head rotation provides asymmetric output
- The PH and WH mounting options have a 1-3/8" hub on each side of the fixture, the FL mounting option has 1/2" hub at each end of the fixture, see installation instructions for more details and chart.

FL	Flush Mount (360° rotating head)
PH	Pendant Hub (360° rotating head)
WH	Wall Hub (360° rotating head)



Voltage

- Some MOFFAT configurations will not accommodate all voltage options; consult with factory

U	Universal
1	120 volt
2	277 volt
3	347 volt

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MW_LED_SPEC_JUNE2022



Driver

- Standard Driver Option = FSD
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more driver options see Pinnacle Resource Guide
- Some MOFFAT configurations will not accommodate all driver options; consult with factory

0-10V Drivers	
FSD	Factory Select Driver 1%, 0-10v
PL2	Signify Advance Xitanium 1%, 0-10v
PL4	Advance Xitanium 347v 1%, 0-10v, requires 347v
OL2	Osram Optotronic, 1%, 0-10v
OL4	Osram Optotronic 347v, 1% 0-10v, requires 347v option
EE1	eldoLED ECOdrive 1%, 0-10v Logarithmic
EE2	eldoLED ECOdrive 1%, 0-10v Linear
ES1	eldoLED SOLOdrive 0-10v, 0% Logarithmic
ES2	eldoLED SOLOdrive 0-10v, 0% Linear
DALI Drivers	
EE3	eldoLED SOLOdrive .1%, DALI (logarithmic)
EE4	eldoLED SOLOdrive .1%, DALI (linear)
OD1	Osram Optotronic 1%, DEXAL
OD2	Osram Optotronic 1%, DALI 2 Channel
Lutron Drivers	
LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
LH4	Lutron Hi-Lume 1%, 2-wire, Lutron-LTEA2W, 120v only
Alternate Drivers	
PS1	Signify Advance Xitanium Step Dimming 50%/100%
EH1	ELV 120v only, 0-10v universal

How to specify Circuiting, Battery and Emergency

- 1**
- Select fixture circuiting from options below
 - Some MOFFAT configurations will not accommodate all circuiting options, consult with factory

Circuiting

1	Single Circuit
M	Multi Circuit
E	Emergency Circuit only
N	Night Light Circuit only

- 2** + **3**
- Battery and emergency section options are available in addition to fixture circuit
 - Select battery and emergency section options below; factory shop drawing required
 - Some MOFFAT configurations will not accommodate all circuiting options, consult with factory

Battery and/or Emergency If Required

0 No battery or specific emergency section required

Battery

- Select battery section type if required, indicate total QTY. *Example 2PL*
- 90 minute battery runtime; test button is integral to fixture
- For more battery options available, see Pinnacle Resource Guide

0	No Battery
_ILL	Iota 10w Integral Lithium, Self Testing
_IRH	Iota 20w Remote
_PLL	Bodine 10w Integral Lithium, Self Testing
_PRH	Bodine 20w Remote

For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 92.3 (LPW) x 10 (watts) = 923 battery lumen output

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

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Emergency

- Select emergency section type if required, indicate total QTY. *Example 1E*
- Combine battery and emergency section ordering codes if both options are selected

_FSG	Factory Select ALCR, Automatic Load Control Relay
_GI	Iota ETS DR, Emergency Lighting Control Device
_GB	Bodine GTD, Emergency Lighting Control Device
_E	Emergency circuit section
_N	Night Light circuit section
_L	Life Safety circuit section NO THROUGH WIRE

Combination Section Ordering Examples

- Single circuit, (1) 10w battery, (1) emergency section Ordering Code: 1-1PL1E
- Multi circuit, (2) 10w battery, (2) emergency sections Ordering Code: M-2PL2E
- Single circuit, (1) night light section Ordering Code: 1-1N

Battery OR Emergency Ordering Examples

- Single circuit, 10w Integral Battery Ordering Code: 1-1PL
- Emergency only, 10w Integral Battery Ordering Code: E-1PL
- Single circuit, GTD required Ordering Code: 1-1GB

Finish

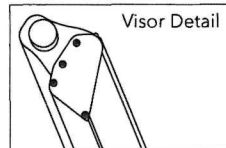
- Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes
- Selecting a fixture finish other than white may impact lumen output; consult factory for more information

W	White (<i>white cord/white canopy</i>)
S	Metallic Silver (<i>grey cord/silver canopy</i>)
BL	Textured Black (<i>black cord/black canopy</i>)
BR	Bronze (<i>white cord/bronze canopy</i>)
GR	Graphite (<i>white cord/graphite canopy</i>)
CC	Custom Color (<i>white cord/color match canopy</i>)

Fixture Options

- Additional options to enhance the fixture and finish of the product

V	Visor
DSP	Customer Supplied Battery/Driver/Sensor



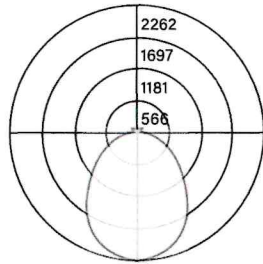
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Photometrics

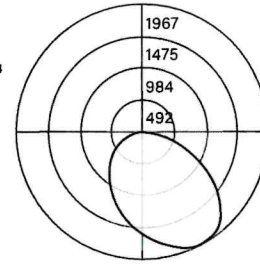
Satine Lens

Test # ITL91824
Catalog # MW-HE-840VHO-4
Lumens 5401 lm
Watts 39.1 W
Efficacy 138 LPW



Asymmetric Lens

Test # ITL92383
Catalog # MW-HE-840VHO-4
Lumens 4536 lm
Watts 41.2 W
Efficacy 110 LPW



Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	2262	2262	2262	2262	2262
5	2251	2249	2248	2245	2246
10	2216	2207	2204	2196	2192
15	2160	2136	2132	2115	2104
20	2072	2041	2025	1996	1974
25	1959	1921	1894	1846	1819
30	1828	1781	1732	1666	1633
35	1669	1622	1554	1470	1434
40	1497	1445	1362	1269	1232
45	1310	1261	1170	1074	1037
50	1121	1075	985	896	865
55	938	890	809	731	706
60	753	718	648	588	565
65	587	558	502	457	443
70	425	409	372	341	330
75	279	271	252	236	233
80	149	152	148	145	144
85	49	57	68	75	78
90	3	15	32	44	48

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	17878	14124	12022
55	15696	11420	9438
65	13212	8855	7254
75	10055	6174	5122
85	4793	2869	2735

Bug Rating
B2-U3-G1

Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	1613	1613	1613	1613	1613
5	1717	1711	1686	1649	1607
10	1813	1797	1744	1668	1586
15	1897	1869	1789	1669	1550
20	1949	1915	1811	1652	1502
25	1967	1929	1809	1617	1434
30	1939	1900	1774	1557	1352
35	1863	1827	1698	1474	1252
40	1736	1705	1591	1368	1141
45	1570	1542	1442	1239	1015
50	1366	1349	1272	1091	880
55	1149	1143	1078	931	749
60	941	927	886	767	611
65	732	726	689	600	479
70	537	532	512	446	353
75	367	361	344	296	233
80	214	211	198	167	124
85	94	92	81	62	40
90	39	35	26	12	1

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	18201	17407	13852
55	15361	15217	12534
65	11986	12154	10781
75	8068	8428	8397
85	3296	3418	3912

Bug Rating
B2-U3-G1

Fixture tested in direct orientation. Fixture head is rotatable for asymmetric aiming as needed. For all available IES files, please visit our website at pinnacle-ltg.com. Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions

Approvals & Certifications

Construction: 6063-T6 Extruded aluminum housing. Fixtures can be joined to create continuous runs. Standard high reflectance die-formed reflector. Fully gasketed lens and endcaps.

Shielding: Diffuse snap-in acrylic lens, removable for maintenance.

Mounting: Pendant mount, wall mount, and flush mounts available. Fixture head rotation provides asymmetric output. Refer to installation instructions for appropriate ceiling detail. Maximum fixture weight is 20 lbs. per 4' fixture.

LED: 25°C test environment. Lumen output/wattage has a margin of +/- 5%. All luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Lifetime calculated using IES TM-21. Minimum lifetime greater than 60,000 hours. Lifetime Projection: L70 lifetime - 146,500 hours and L90 lifetime - 45,000 hours. MacAdam 3-Step Ellipses. Not all products are Lighting Facts listed. For all available IES files, please visit our website at pinnacle-ltg.com.

CRI, CCT & Lumen Output: Four lumen packages available. Low (LO), Standard, High (HO), and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 80 CRI = R9≥19 and 90 CRI = R9≥21. Fixture performance and photometric data based on 4' configuration. Published lumen or wattage data based on OLI configuration.

Voltage: Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL4 in Driver section when 347 volt (3) is selected. Some MOFFAT configurations will not accommodate all voltage options; consult with factory.

Driver: Standard Driver Option is Advance Xitanium 0-10V, 1% = PL2. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -4F/-20C to 122F/50C For more driver options, see Pinnacle Resource Guide. Some MOFFAT configurations will not accommodate all driver options.

Circuiting: Select from single circuit (1), Multi circuit (M), Emergency circuit (E), Night Light circuit (N) or Life Safety (L). For emergency circuiting situations that require no through wire or circuit separation, Life Safety Circuit should be selected. This will provide a separate power feed and only the Life Safety Circuit in that section. Some MOFFAT configurations will not accommodate all circuiting options; consult with factory.

Battery & Emergency: Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is integral to fixture, fixture length increases by 1". For more Battery options, see Pinnacle Resource Guide.

Finish: Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish, consult factory for chip of standard paint finishes. Canopies, hubs, and pendants painted white unless specified differently in the options section of the part number. Contact factory for additional custom color and finish options.

Controls: Pinnacle is able to accommodate different control solutions from different manufacturers. Consult Factory for more information.

Labels: ETL listed conforming to UL1598 and CSA 250. Approved for Wet location unless otherwise noted. IP65 rated.

Fixture Weight: Maximum fixture weight is 20 lbs (per 4' fixture).

Buy American Act Compliant

Warranty: MOFFAT LED offered with a 5-year limited warranty. Covers LED, driver and fixture.

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.



E450LED / E460LED EURO SERIES

LED

EPA
E450LED 1.66 (ft²)
E460LED 2.2 (ft²)
WEIGHT
E450LED 52 LBS
E460LED 52 LBS

7 YEAR
WARRANTY

LUMEN
RANGE
3,285 -
10,780

LIFE
SPAN
L70
UP TO
100,000
HOURS

UL
LISTED

CLICK
FOR FAQ'S

RATED
IP65

JOB NAME

FIXTURE TYPE O A2/OA3 ALT

MEMO

BUILD A PART NUMBER

ORDERING EXAMPLE: 2A-E450LED-R3-16L45T5-MDL10-SV1-PEC-FHD/EUIPM/33I2P5/SCC/BKT

Mounting Config.	Fixture	Fitter	LED	CCT	Type	Driver	Lens	Option Photocontrol	Option Fuse	Option House Side Shield	Arm See Arm Spec Sheets	Pole See Pole Spec Sheets	Finish

Mounting Configuration

(Click here to view mounting configuration sheet)

- 1W • 2A • 3A90 • 1AM
- PT • 2A90 • 3APT • 2AM
- 1A • 2APT • 4A • 550PB
- 1APT • 3A • 4APT

W = Wall Mount PT = Post Top A = Arm Mount AM = Arm Mid-Mount PB = Pier Base

Fixture

- E450LED • E460LED

Fitter

- R3 • R4

LED

- 16L • 21L • 28L

CCT - Color Temperature (K)

- 27(00) • 35(00) • 45(00)

Type

- T2 • T3 • T4 • T5

Driver

- MDL10¹ (120V-277V, 1000mA)
- MDL14² (120V-277V, 1400mA)
- MDH10¹ (347V-480V, 1000mA)
- MDH14² (347V-480V, 1400mA)

¹ For use with 16L and 21L only.

² For use with 21L and 28L only.

Lens

- CA³ (Clear Acrylic)
- FA³ (Frosted Acrylic)
- FL⁴ (Flat Acrylic Lens)
- SG⁴ (Sag Glass)
- FSG⁴ (Frosted Sag Glass)
- SV1⁴ (Flat Soft Vue Light Diffuse Acrylic)
- SV2⁴ (Flat Soft Vue Moderate Diffuse Acrylic)

³ For use with E460LED only.

⁴ For use with E450LED only.

Options (Click here to view accessories sheet)

- PEC Electronic Photocontrol (120V-277V)
- PEC4 Electronic Photocontrol (480V)
- FHD⁵ Dual Fuse and Holder
- HSS House Side Shield (external)

⁵ Ships loose for installation in base

Arm (Click here to view arm website page)

See Arms & Wall Brackets specification sheets.

- HM • OL • OM • VC • VF • VL

Pole (Click here to view pole website page)

See Pole specification sheets.

Finish (Click here to view paint finish sheet)

Standard Finishes⁶

- BKT Black Textured
- WHT White Textured
- PGT Park Green Textured
- ABZT Architectural Medium Bronze Textured
- DBT Dark Bronze Textured

⁶ Smooth finishes are available upon request.

Custom Finishes⁷

- CM Custom Match
- OI Old Iron
- RT Rust
- WBR Weathered Brown
- CD Cedar
- WBK Weathered Black
- TT Two Tone

⁷ Custom colors require upcharge.

Sternberg Select Finishes

- VG Verde Green
- SI Swedish Iron
- OWGT Old World Gray Textured

Specifications

Fixture

This large scale contemporary fixture includes a cast aluminum roof, fitter and (4) sweeping support legs. The unit is provided with an acrylic tapered cylindrical molded lens matching the profile of the support legs (E460LED), or a flat acrylic lens allowing for an open body

(E450LED). The top mounted ballast mounting plate shall be cast aluminum and provide tool-less removal from the housing. The Luminaire shall be UL listed in US and Canada.

Fitter

Standard cast aluminum fitter (R3) slips a 3" OD x 3" tall tenon or pole. Optional cast aluminum fitter (R4) slips a 4" OD x 3" tall tenon or pole.

LED's

The luminaire shall use high output, high brightness LED's. They shall be mounted in arrays, on printed circuit boards designed to maximize heat transfer to the heat sink surface. The arrays shall be roof mounted to minimize up-light. The LED's and printed circuit boards shall be 100% recyclable; they shall also be protected from moisture and corrosion by a conformal coating of 1 to 3 mils. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IESNA LM-80. The High Performance white LED's will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C. The High Brightness, High Output LED's shall be 4500K (3500K or 2700K option) color temperature with a minimum CRI of 70. Consult factory for custom color CCT. The luminaire shall have a minimum _____ (see table) delivered initial lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

Optics

The luminaire shall be provided with individual, refractor type optics applied to each LED. The luminaire shall provide Type ____ (2, 3, 4 or 5) light distribution per the IESNA classifications. Testing shall be done in accordance with IESNA LM-79.

See next page



SternbergLighting

ESTABLISHED 1923 / EMPLOYEE OWNED

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info@sternberglighting.com
www.sternberglighting.com

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E450LED / E460LED EURO SERIES



Electronic Driver

The LED driver shall be U.L. Recognized. It shall be securely mounted inside the fixture, for optimized performance and longevity. It shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation. It shall have overload as well as short circuit protection, and have a DC voltage output, constant current design, 50/60HZ. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guide-

lines. It shall be dimmable using a 0-10v signal. The driver shall have a minimum efficiency of 90%. The driver shall be rated at full load with THD<20% and a power factor of greater than 0.90. The driver shall contain over-heat protection.

Photocontrols

Button Style: On a single assembly the photocontrol shall be mounted on the fixture and pre-wired to driver. On multiple head assembly's the photocontrol shall be mounted in the pole shaft on an access plate. The electronic

button type photocontrol is instant on with a 5-10 second turn off, and shall turn on at 1.5 footcandles with a turn-off at 2-3 footcandles. Photocontrol is 120-277 volt and warranted for 6 years.

Warranty

Seven-year limited warranty. See product and finish warranty guide for details.

Finish

Refer to website for details.

Performance - E450

MODEL #	T2 LUMENS	BUG	EFFICACY (LPW)	T3 LUMENS	BUG	EFFICACY (LPW)	T4 LUMENS	BUG	EFFICACY (LPW)	T5 LUMENS	BUG	EFFICACY (LPW)	WATTS
28L45T_-MDL14	9050	B3U0G3	68.0	8815	B2U0G2	66.3	8840	B2U0G2	66.5	9530	B4U0G2	71.7	133
28L35T_-MDL14	8500	B3U0G3	63.9	8280	B2U0G2	62.3	8300	B2U0G2	62.4	8950	B3U0G2	67.3	133
28L27T_-MDL14	7460	B3U0G3	56.1	7265	B2U0G2	54.6	7285	B2U0G2	54.8	7855	B3U0G2	59.1	133
21L45T_-MDL14	7005	B3U0G3	65.5	6980	B2U0G2	65.2	6890	B2U0G2	64.4	7620	B3U0G2	71.2	107
21L35T_-MDL14	6580	B3U0G3	61.5	6555	B2U0G2	61.3	6470	B2U0G2	60.5	7155	B3U0G2	66.9	107
21L27T_-MDL14	5775	B2U0G2	54.0	5755	B2U0G2	53.8	5680	B2U0G2	53.1	6280	B3U0G1	58.7	107
21L45T_-MDL10	5365	B2U0G2	73.5	5230	B2U0G2	71.6	5130	B1U0G1	70.3	5675	B3U0G1	77.7	73
21L35T_-MDL10	5040	B2U0G2	69.0	4910	B1U0G1	67.3	4820	B1U0G1	66.0	5330	B3U0G1	73.0	73
21L27T_-MDL10	4425	B2U0G2	60.6	4310	B1U0G1	59.0	4230	B1U0G1	57.9	4680	B3U0G1	64.1	73
16L45T_-MDL10	4275	B2U0G2	77.7	4045	B1U0G1	73.5	3985	B1U0G1	72.5	4455	B3U0G1	81.0	55
16L35T_-MDL10	4015	B2U0G2	73.0	3800	B1U0G1	69.1	3745	B1U0G1	68.1	4185	B2U0G1	76.1	55
16L27T_-MDL10	3525	B1U0G1	64.1	3335	B1U0G1	60.6	3285	B1U0G1	59.7	3670	B2U0G1	66.7	55

Performance - E460

MODEL #	T2 LUMENS	BUG	EFFICACY (LPW)	T3 LUMENS	BUG	EFFICACY (LPW)	T4 LUMENS	BUG	EFFICACY (LPW)	T5 LUMENS	BUG	EFFICACY (LPW)	WATTS
28L45T_-MDL14	9910	B3U2G3	74.5	9925	B3U2G3	74.6	9870	B2U0G2	74.2	10780	B4U3G4	81.1	133
28L35T_-MDL14	9305	B3U2G3	70.0	9320	B3U2G3	70.1	9270	B2U0G2	69.7	10125	B4U3G4	76.1	133
28L27T_-MDL14	8170	B3U2G3	61.4	8180	B3U2G3	61.5	8135	B2U0G2	61.2	8885	B4U3G4	66.8	133
21L45T_-MDL14	7575	B3U2G3	70.8	7805	B2U2G3	72.9	7475	B2U0G2	69.9	8640	B4U3G2	80.7	107
21L35T_-MDL14	7115	B3U2G3	66.5	7330	B2U2G3	68.5	7020	B2U0G2	65.6	8115	B4U3G2	75.8	107
21L27T_-MDL14	6245	B3U2G3	58.4	6435	B2U2G3	60.1	6160	B2U0G2	57.6	7120	B4U3G2	66.5	107
21L45T_-MDL10	5950	B2U2G2	81.5	5875	B2U2G3	80.5	5750	B1U0G1	78.8	6320	B3U2G2	86.6	73
21L35T_-MDL10	5590	B2U2G2	76.6	5520	B2U2G3	75.6	5400	B1U0G1	74.0	5935	B3U2G2	81.3	73
21L27T_-MDL10	4905	B2U2G2	67.2	4845	B2U2G3	66.4	4740	B1U0G1	64.9	5210	B3U2G2	71.4	73
16L45T_-MDL10	4675	B2U2G2	85.0	4530	B2U2G2	82.4	4445	B1U0G1	80.8	4955	B3U2G1	90.1	55
16L35T_-MDL10	4390	B2U2G2	79.8	4255	B2U2G2	77.4	4175	B1U0G1	75.9	4655	B3U2G1	84.6	55
16L27T_-MDL10	3855	B2U2G2	70.1	3735	B2U2G2	67.9	3665	B1U0G1	66.6	4085	B3U2G1	74.3	55



SternbergLighting

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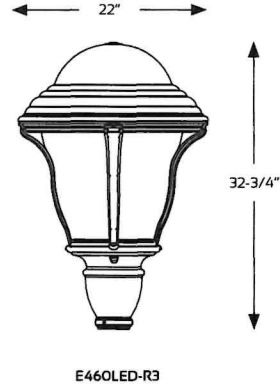
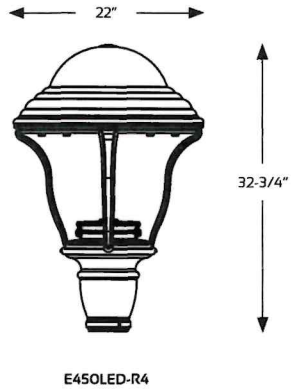
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E450LED / E460LED EURO SERIES

LED

Fixtures



SternbergLighting
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LUMUX

BOLLARD

BL344

The Lumux Bollard ("BL") series is a family of precision engineered, architectural LED bollards offered in a wide variety of form factors. Intended to illuminate a variety of outdoor spaces, whether public or private, the Lumux Bollard line offers multiple light distributions, including 360-degree shielded or unshielded, symmetric, and downward facing light.

The body is constructed from heavy-duty die-cast aluminum or grade 316 stainless-steel, seamlessly integrated with its light source in a sleek, symmetrical design with no visible hardware. The Lumux Bollard combines form and function, offering architectural grade design while utilizing the highest quality of materials and components, providing long-lasting stability and durability that meets the most rigorous standards.

Housing: Heavy-duty construction of corrosion resistant, low copper extruded aluminum. All fasteners are vandal resistant stainless-steel screws.

Lens: Sealed one-piece, shatter proof, UV-rated polycarbonate lens.

Mounting: Secures with galvanized anchor bolts.

Installation: Mounting footplate (refer to diagram).

Finish: Zinc polyester powder coat finish in black, white, silver, bronze, or any custom RAL color. Consult factory for marine grade or anti-microbial finish.

Driver: Constant current and universal input voltage 120-277v, starting temperature rated at -20°F. Dimmable option available (0-10v).

Gasket: Closed cell silicon foam gasket that seals out moisture, dust, and insects for weather tight operation.

Protection Class: IP65, ETL Listed for wet locations.

Wattage: 24W

Color Temperature: 2700K / 3000K / 3500K / 4000K

Delivered Lumens:	2700K	3000K	3500K	4000K
	2100 lm	2100 lm	2100 lm	2100 lm

CRI: 80

Warranty: 5 year limited warranty

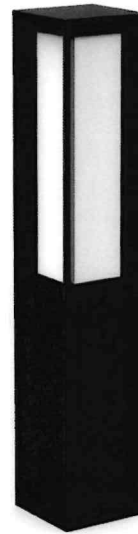
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PROJECT:

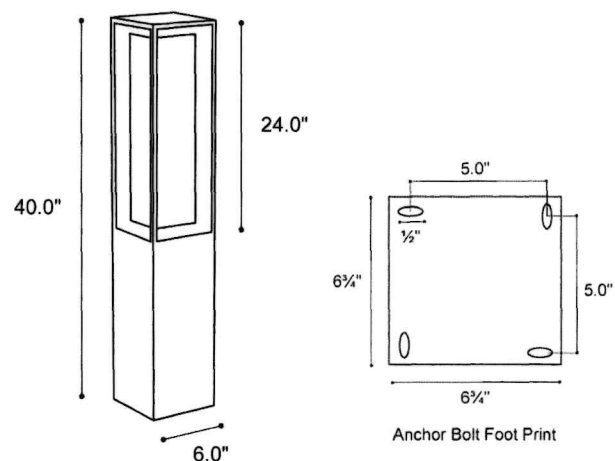
FIRM:

CATALOG NO.: BL344 / White / / 120-277v /

COMMENTS: OB1 ALT



Dimensions:



Content of specification sheet subject to change

LUMUX LIGHTING

7803 Industry Ave, Pico Rivera, CA 90660

sales@lumux.com | 562-801-5100

LUMUX

BOLLARD BL344

DATE: _____

PROJECT: _____

FIRM: _____

CATALOG NO.: BL344 / White / / 120-277v /

COMMENTS: OB1 ALT

Ordering Guide:

Catalog No.	LED Color	Color Temp ¹	Voltage	Finish	Options ²
BL344	White		120-277v		<input type="checkbox"/> Dimmable driver (0-10v) <input type="checkbox"/> GFCI Dual Recepticle <input type="checkbox"/> Occupancy Sensor
BL344	White	2700K	120-277v	Black	
		3000K		White	
		3500K		Silver	
		4000K		Bronze Custom RAL ²	

¹Consult factory for additional options

²Consult factory for additional pricing

Catalog No.: BL344 / White / / 120-277v /

Performance Specifications	
Flux 2,100 lm (27 - 40K)	LER 88 lm/W
Power 24W	120-277v input voltage
Starting temp. rated to -20°F	GFCI dual recepticle option
Dimmable driver (0-10v) option	Occupancy sensor option
Lumen Maintenance*: L70 >60K hrs; L90 >50K hrs	

Environmental Specifications	
BUG rating B1-U4-G2	
CRI 80	Color temperature options
IP65	ETL listed for wet-locations
Effective Projected Area 2.4 ft2	Marine Grade option
5-year limited warranty	Made in the USA



Luminaires in this series



*Lumen Maintenance Report (CREE CXA2530):
https://cree-led.com/media/documents/LM80_Results.pdf

Content of specification sheet subject to change

LUMUX

BOLLARD BL344

DATE:

PROJECT:

FIRM:

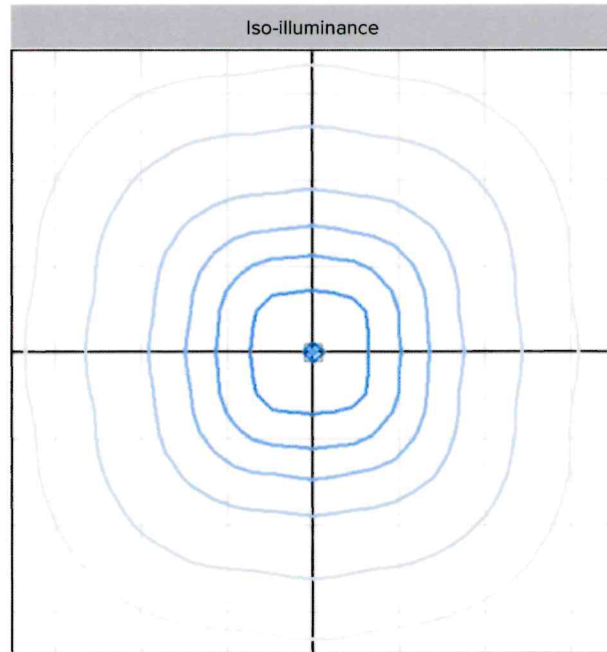
CATALOG NO.: BL344 / White / / 120-277v /

COMMENTS: OB1 ALT

Photometry	IESNA: LM-63-2002
TEST: 14446401.02	TEST LAB: UL LLC
LUMINAIRE: BL344	DATE: 2022-08-19
IES Classification: N.A.	Long. Class: N.A.
Luminaire Lumens	2,107 (4000K)
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	23.99W
Upward Waste Light Ratio	0.51
Max. Candela	276.4
Max. Cd. < 90° Vertical	275.6 (100%)
Max. Cd. (At 90 Deg. Vert.)	276 (13.1% Luminaire lumens)
Max. Cd. (80 to <90 Deg. Vert.)	275.6 (13.1% Luminaire lumens)
Cutoff Classification	N.A.
BUG Rating	B1-U4-G2

Technical aspects may change without notice.

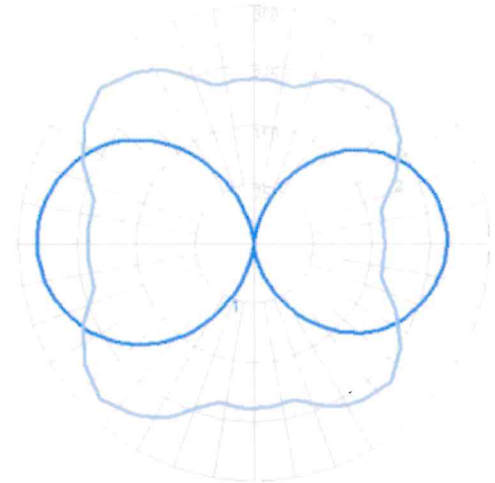
IES Mounting Height for photometry plans: 28" / 2.3'



Foot-candles: 0.1 0.2 0.5 1 2 5 | Grid spacing 5'

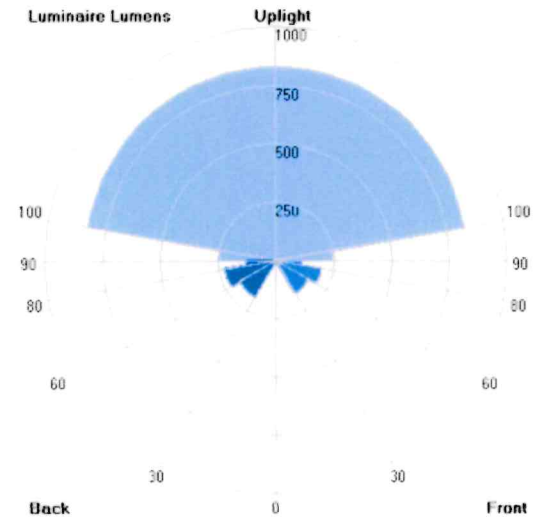
Sample isoilluminance plot. For actual values, use Lumux IES file with photometry software and correct surface reflectances.

Candela



Zonal Lumens

LCS	Zone	Lumens	%Lum.
FL	(0-30)	20.5	1.0
FM	(30-60)	158.1	7.5
FH	(60-80)	197.0	9.3
FVH	(80-90)	113.5	5.4
BL	(0-30)	23.4	1.1
BM	(30-60)	178.5	8.5
BH	(60-80)	221.5	10.5
BVH	(80-90)	127.3	6.0
UL	(90-100)	242.2	11.5
UH	(100-180)	824.7	39.1
Total		2107	100



Content of specification sheet subject to change

LUMUX LIGHTING

7803 Industry Ave, Pico Rivera, CA 90660

sales@lumux.com | 562-801-5100

Project		Catalog #		Type	OAS
Prepared by		Notes		Date	



Lumark

Prevail LED

Area / Site Luminaire

Product Features



Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Configurations page 4
- Product Specifications page 4
- Energy and Performance Data page 5
- Control Options page 6

Product Certifications



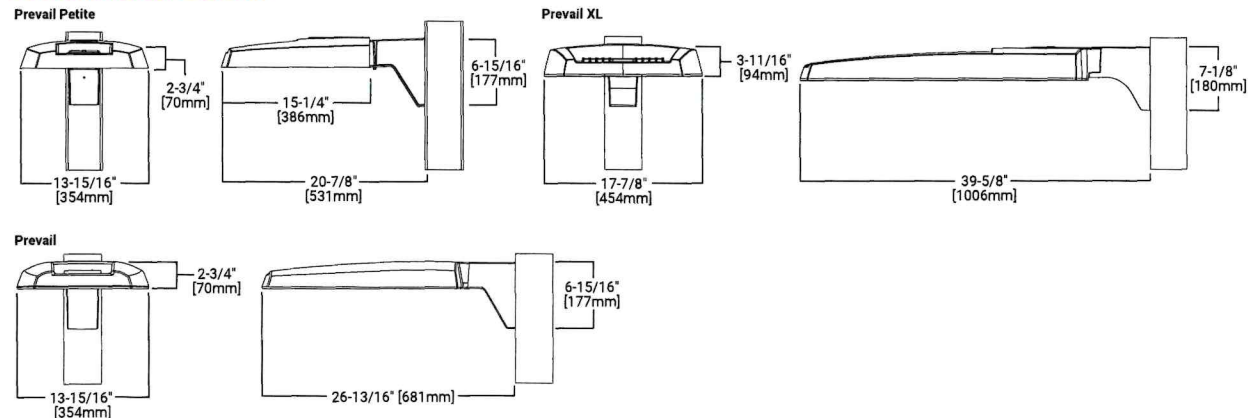
Quick Facts

- Lumen packages range from 4,800 - 52,300 lumens (35W - 350W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 160 lumens per watt
- Energy and maintenance savings up to 85% versus HID solutions
- Standard universal quick mount arm with universal drill pattern

Connected Systems

- WaveLinX

Dimensional Details



NOTES:
 1. Visit <https://www.designlights.org/search/> to confirm qualification. Not all product variations are DLC qualified.
 2. IDA Certified for 3000K CCT and warmer only

Ordering Information

SAMPLE NUMBER: PRV-XL-C75-D-UNV-T4-SA-BZ

Product Family ^{1,2}	Light Engine ⁴	Driver	Voltage	Distribution	Mounting	Color
PRV-P=Prevail Petite BAA-PRV-P=Prevail Petite BAA Compliant ³ TAA-PRV-P=Prevail Petite TAA Compliant ³	C10=(1 LED) 4,900 Nominal Lumens C15=(1 LED) 6,900 Nominal Lumens C20=(1 LED) 9,800 Nominal Lumens C25=(1 LED) 11,800 Nominal Lumens	D=Dimming (0-10V)	UNV=Universal (120-277V) 347-347V 480-480V ⁵ DV=DuraVolt (277-480V) ^{5,4}	T2=Type II T3=Type III T4=Type IV T5=Type V	SA=Standard Versatile Arm MA=Mast Arm WM=Wall Mount Arm ADJA=Adjustable Arm - Pole Mount ADJS=Adjustable Arm - Slipfitter, 3in vertical tenon ADJA-WM=Adjustable Arm - Wall Mount	BZ=Bronze AP=Grey BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
PRV=Prevail BAA-PRV=Prevail BAA Compliant ³ TAA-PRV=Prevail TAA Compliant ³	C15=(1 LED) 7,100 Nominal Lumens C25=(2 LEDs) 13,100 Nominal Lumens C40=(2 LEDs) 17,100 Nominal Lumens C60=(2 LEDs) 20,000 Nominal Lumens					
PRV-XL=Prevail XL BAA-PRV-XL=Prevail XL BAA Compliant ³ TAA-PRV-XL=Prevail XL TAA Compliant ³	C75=(4 LED) 26,100 Nominal Lumens C100=(4 LED) 31,000 Nominal Lumens C125=(4 LED) 36,000 Nominal Lumens C150=(6 LED) 41,100 Nominal Lumens C175=(6 LED) 48,600 Nominal Lumens					

Options (Add as Suffix)		Accessories (Order Separately) ^{20,21}	
7030=70 CRI / 3000K CCT ⁷ 7050=70 CRI / 5000K CCT ⁷ HSS=House Side Shield ⁴ L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right 10K=10kV UL 1449 Fused Surge Protective Device 20MSP=20kV MOV Surge Protective Device 20K=Series 20kV UL 1449 Surge Protective Device HA=50°C High Ambient Temperature ⁹ CC=Coastal Construction ¹⁰ PER=NEMA 3-PIN Twistlock Photocontrol Receptacle ¹¹ PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle ¹¹ MS/DIM-L08=Dimming Motion and Daylight Sensor, IR Remote Programmable, < 8' Mounting ^{12,13} MS/DIM-L20=Dimming Motion and Daylight Sensor, IR Remote Programmable, 8' - 20' Mounting ^{12,13} MS/DIM-L40=Dimming Motion and Daylight Sensor, IR Remote Programmable, 21' - 40' Mounting ^{12,13}	SPB1=Dimming Motion and Daylight Sensor, Bluetooth Programmable, < 8' Mounting ^{12,14} SPB2=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 8' - 20' Mounting ^{12,14} SPB4=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 21' - 40' Mounting ^{12,14} ZW=Wavelinx-enabled 4-PIN Twistlock Receptacle ¹⁷ ZD=SR Driver-enabled 4-PIN Twistlock Receptacle ¹² ZW-SWP4XX=WaveLinx, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting ^{12,15,16,17} ZW-SWP5XX=WaveLinx, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting ^{12,15,16,17} ZD-SWP4XX=WaveLinx, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting ^{12,15,16,17} ZD-SWP5XX=WaveLinx, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting ^{12,15,16,17} (See Table Below)=LumenSafe Integrated Network Security Camera ^{14,19}	PRVSA-XX=Standard Arm Mounting Kit ²² PRVMA-XX=Mast Arm Mounting Kit ²² PRVWM-XX=Wall Mount Kit ²² PRV-ADJA-XX=Adjustable Arm - Pole Mount Kit ²² PRV-ADJS-XX=Adjustable Arm - Slipfitter Kit ²² PRV-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit ²² PRVXLSA-XX=Standard Arm Mounting Kit ¹⁸ PRVXLMA-XX=Mast Arm Mounting Kit ¹⁸ PRVXLWM-XX=Wall Mount Kit ¹⁸ PRV-XL-ADJA-XX=Adjustable Arm - Pole Mount Kit ¹⁸ PRV-XL-ADJS-XX=Adjustable Arm - Slipfitter Kit ¹⁸ PRV-XL-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit ¹⁸ MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon	SRA238=Tenon Adapter from 2-3/8" to 3" PRV/COB-FDV=Full Drop Visor ²³ PRVXL/COB-FDV=Full Drop Visor ¹⁸ HS/VERD=House Side Shield ^{4,44} VGS-F/B=Vertical Glare Shield, Front/Back ²⁴ VGS-SIDE=Vertical Glare Shield, Side ²⁴ OA/RA1013=Photocontrol Shorting Cap OA/RA1014=NEMA Photocontrol - 120V OA/RA1016=NEMA Photocontrol - Multi-Tap 105-285V OA/RA1201=NEMA Photocontrol - 347V OA/RA1027=NEMA Photocontrol - 480V FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²⁵ SWPD4-XX=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting ^{15,16,17,26} SWPD5-XX=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting ^{15,16,17,26} WOLC-7P-10A=WaveLinx Outdoor Control Module (7-PIN) ²⁷

NOTES:

- DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to installation instructions IS50002EN and pole white paper WPS13001EN for additional support information.
- Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC.PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
- Standard 4000K CCT and 70CRI.
- 480V not to be used with ungrounded or impedance grounded systems.
- DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
- Use dedicated IES files on product website for non-standard CCTs.
- House Side Shield not suitable with T5 distribution. Not available with PRV-C60 lumen package.
- Not available with PRV-C60 lumen package. Not available with PRV-P-C25 lumen package.
- Salt spray tested to over 5,000-hours per ASTM B117 with a scribe rating of 9 per ASTM D1654. Also achieves 7,000-hour rating per ASTM B117 with a scribe rating of 4 per ASTM D1654. Extended lead times may apply.
- If DuraVolt (DV) is specified, use a photocontrol that matches the input voltage used.
- Controls system is not available in combination with a photocontrol receptacle (PER or PER7) or another controls system (MS, SPB, ZD, or ZW). Option not available with DuraVolt (DV) voltage option.
- Utilizes the Wattstopper sensor FSP-211. Sensor color white unless specified otherwise via PDR. To field-configure, order FSIR-100 accessory separately.
- Utilizes the Wattstopper sensor FSP-3XX series. Sensor color determined by product finish. See Sensor Color Reference Table. Field-configures via mobile application. See Controls section for details.

- Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F).
- For the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more WaveLinx application information.
- Replace XX with sensor color (WH, BZ, or BK).
- Only available in PRV-XL configurations C75, C100, C125, C150, or C175.
- Not available with 347V, 480V, DV, or HA options. Consult LumenSafe system product pages for additional details and compatibility information.
- Replace XX with paint color.
- For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
- Only for use with PRV and PRV-P.
- Only for use with PRV. Not available for use with PRV-P or PRV-XL configurations.
- Must order one per optic/LED when ordering as a field-installable accessory (1, 2, 4, or 6).
- This tool enables adjustment to Motion Sensor (MS) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
- Requires 7-PIN NEMA twistlock receptacle (ZD or ZW) option.
- Requires 7-PIN NEMA twistlock photocontrol receptacle (PER7) option. The WOLC-7 cannot be used in conjunction with other controls systems (MS, ZD, ZW or LWR). Operates on 120-347V input voltages.

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul		
L=LumenSafe Technology	H=Dome Camera, High Res Z=Dome Camera, Remote PTZ	C=Cellular, Customer Installed SIM Card A=Cellular, Factory Installed AT&T SIM Card	V=Cellular, Factory Installed Verizon SIM Card S=Cellular, Factory Installed Sprint SIM Card	E=Ethernet Networking

Stock Ordering Information

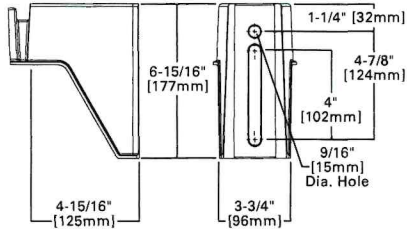
Product Family ¹	Light Engine	Voltage	Distribution
PRVS=Prevail	C15=(1 LED) 7,100 Nominal Lumens C25=(2 LEDs) 13,100 Nominal Lumens C40=(2 LEDs) 17,100 Nominal Lumens C60=(2 LEDs) 20,000 Nominal Lumens	UNV=Universal (120-277V) 347=347V ²	T3=Type III T4=Type IV
PRVS-XL=Prevail XL	C75=(4 LED) 26,100 Nominal Lumens C100=(4 LED) 31,000 Nominal Lumens C125=(4 LED) 36,000 Nominal Lumens C150=(6 LED) 41,100 Nominal Lumens C175=(6 LED) 48,600 Nominal Lumens		

NOTES:

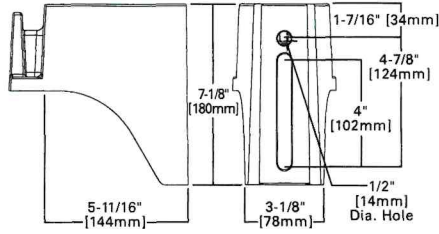
- All stock configurations are standard 4000K/70CRI, bronze finish, and include the standard versatile mounting arm.
- Only available in PRVS configurations C15, C25, C40 or C60.

Mounting Details

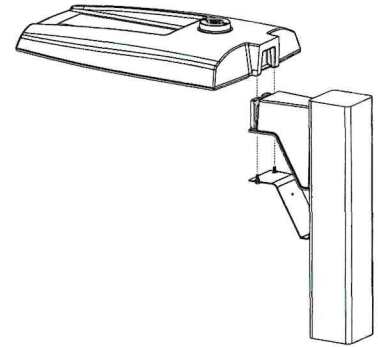
Pole Mount Arm (PRV & PRV-P)



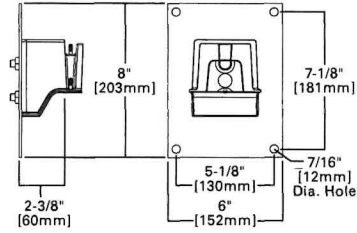
Pole Mount Arm (PRV-XL)



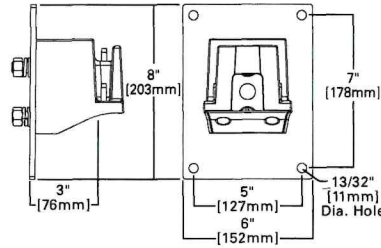
Versatile Mount System



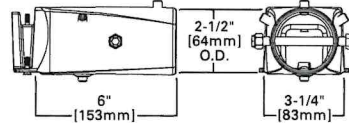
Wall Mount (PRV & PRV-P)



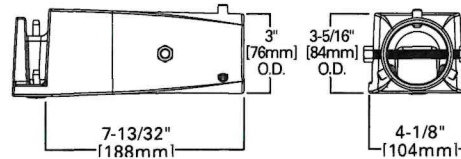
Wall Mount (PRV-XL)



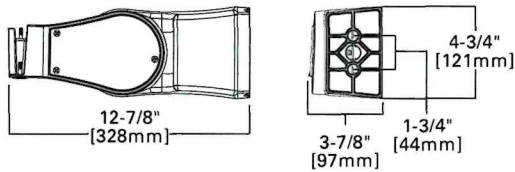
Mast Arm Mount (PRV & PRV-P)



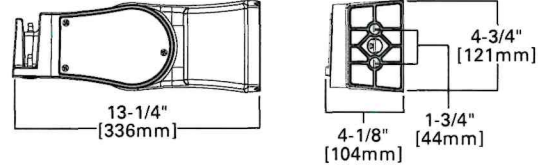
Mast Arm Mount (PRV-XL)



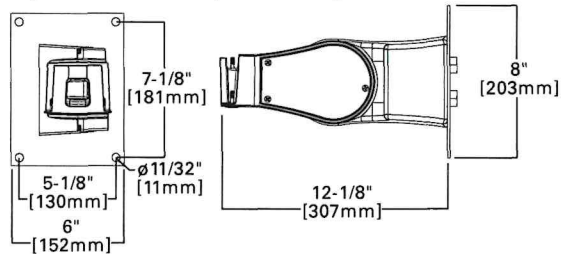
Adjustable Pole Mount Arm (PRV & PRV-P)



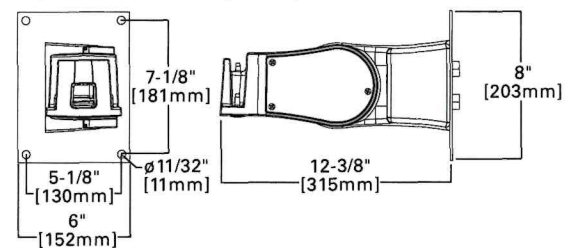
Adjustable Pole Mount Arm (PRV-XL)



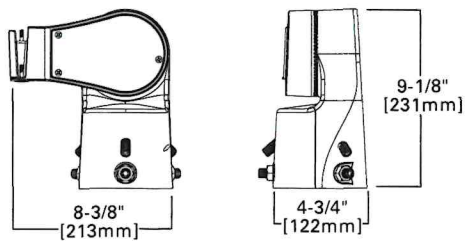
Adjustable Wall Mount (PRV & PRV-P)



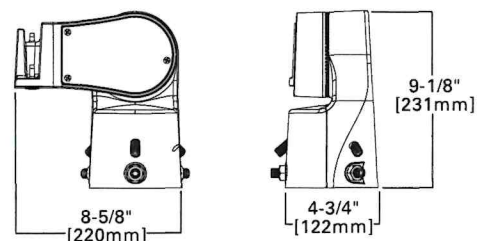
Adjustable Wall Mount (PRV-XL)



Adjustable Slipfitter (PRV & PRV-P)



Adjustable Slipfitter (PRV-XL)



Mounting Details

Mounting Configurations and EPAs

NOTE: For 2 PRV's mounted at 90°, requires minimum 3" square or 4" round pole for fixture clearance. For 2 PRV-XL's mounted at 90°, requires minimum 4" square or round pole for fixture clearance. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for applications.

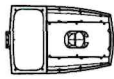
Housing Size	Tilt Angle (Degrees)	Arm Mount Single	Arm Mount 2 @ 180°	Arm Mount 2 @ 90°	Arm Mount 3 @ 90°	Arm Mount 4 @ 90°
Prevail Petite	0°	0.54	1.08	0.84	1.38	1.38
	60°	1.68	1.85	2.42	3.15	3.30
Prevail	0°	0.92	1.35	1.42	1.63	1.63
	60°	2.20	2.40	3.05	3.88	4.07
	60° + Full Drop Visor	2.20	2.40	3.25	4.28	4.47
Prevail XL	0°	1.12	2.25	2.13	2.52	2.52
	60°	3.99	4.30	5.26	6.51	6.79
	60° + Full Drop Visor	3.99	4.30	5.59	7.17	7.49

Optical Configurations

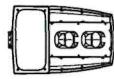
PRV-P-C10/C15/C20/C25
(4,900/6,900/9,800/11,800
Nominal Lumens)



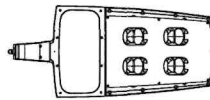
PRV-C15
(7,100 Nominal Lumens)



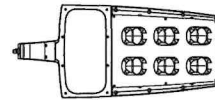
PRV-C25/C40/C60
(13,100/17,100/20,000
Nominal Lumens)



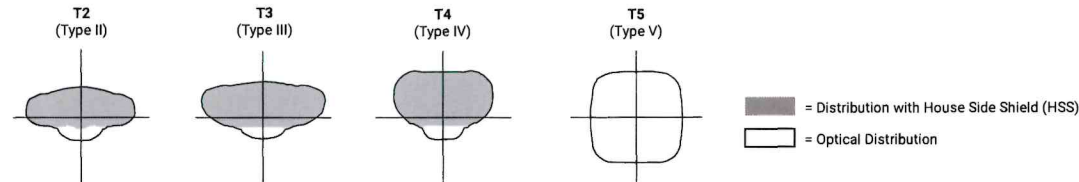
PRV-XL-C75/C100/C125
(26,100/31,000/36,300 Nominal Lumens)



PRV-XL-C150/C175
(41,100/48,600 Nominal Lumens)



Optical Distributions



Product Specifications

Construction

- Single-piece die-cast aluminum housing
- Tethered die-cast aluminum door

Optics

- Dark Sky Approved (3000K CCT and warmer only)
- Precision molded polycarbonate optics

Electrical

- -40°C minimum operating temperature
- 40°C maximum operating temperature
- >.9 power factor
- <20% total harmonic distortion
- Class 1 electronic drivers have expected life of 100,000 hours with <1% failure rate
- 0-10V dimming driver is standard with leads external to the fixture
- Standard MOV surge protective device designed to withstand 10kV of transient line surge

Mounting

- Versatile, patented, standard mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8" (Type M drilling recommended for new installations)
- A knock-out on the standard mounting arm enables round pole mounting
- Adjustable pole and wall mount arms adjust in 5° increments from 0° to 60°; Downward facing orientation only (Type N drilling required for ADJA mount)
- Adjustable slipfitter arm adjusts in 5° increments from -5° to 85°; Downward facing orientation only
- Adjustable Arms: 1.5G vibration rated
- Prevail and Prevail Petite: 3G vibration rated
- Prevail XL Mast Arm: 3G vibration rated
- Prevail XL Standard Arm: 1.5G vibration rated

Typical Applications

- Parking lots, Walkways, Roadways and Building Areas

Finish

- Five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Finish is compliant to 3,000 hour salt spray standard (per ASTM B117)

Shipping Data

- Prevail Petite: 18 lbs. (7.94 kgs.)
- Prevail: 20 lbs. (9.09 kgs.)
- Prevail XL: 45 lbs. (20.41 kgs.)

Warranty

- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

View PRV-P IES files

View PRV IES files

View PRV-XL IES files

Power and Lumens

Product Family		Prevail Petite				Prevail				Prevail XL				
Light Engine		C10	C15	C20	C25	C15	C25	C40	C60	C75	C100	C125	C150	C175
Power (Watts)		35	49	73	94	52	96	131	153	176	217	264	285	346
Input Current @ 120V (A)		0.29	0.41	0.61	0.79	0.43	0.80	1.09	1.32	1.50	1.84	2.21	2.38	2.92
Input Current @ 277V (A)		0.13	0.18	0.27	0.35	0.19	0.35	0.48	0.57	0.66	0.82	0.97	1.04	1.25
Input Current @ 347V (A)		0.11	0.16	0.23	0.29	0.17	0.30	0.41	0.48	0.54	0.66	0.79	0.84	1.02
Input Current @ 480V (A)		0.08	0.12	0.17	0.22	0.12	0.22	0.30	0.35	0.40	0.48	0.57	0.62	0.74
Distribution¹														
Type II	4000K Lumens	4,775	6,717	9,542	11,521	7,123	13,205	17,172	20,083	26,263	31,231	36,503	41,349	48,876
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	138	137	131	122	137	138	131	131	149	144	138	145	141
	3000K Lumens ¹	4,869	6,595	9,369	11,312	6,994	12,965	16,860	19,718	25,786	30,664	35,840	40,598	47,989
Type III	4000K Lumens	4,782	6,727	9,556	11,538	7,111	13,183	17,144	20,050	26,120	31,061	36,304	41,124	48,610
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	138	137	131	123	137	137	131	131	148	143	138	144	140
	3000K Lumens ¹	4,695	6,605	9,383	11,329	6,982	12,944	16,832	19,686	25,646	30,497	35,645	40,377	47,727
Type IV	4000K Lumens	4,880	6,865	9,752	11,774	7,088	13,140	17,087	19,984	26,098	31,035	36,274	41,089	48,569
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	141	140	134	125	136	137	130	131	148	143	137	144	140
	3000K Lumens ¹	4,792	6,740	9,575	11,561	6,959	12,901	16,777	19,621	25,624	30,471	35,615	40,343	47,687
Type V	4000K Lumens	5,067	7,128	10,126	12,226	7,576	14,045	18,264	21,360	28,129	33,450	39,097	44,287	52,349
	BUG Rating	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	146	145	139	130	146	146	139	140	160	154	148	155	151
	3000K Lumens ¹	4,975	6,999	9,942	12,004	7,438	13,790	17,932	20,972	27,618	32,843	38,387	43,483	51,398

NOTES:
1. For 3000K, 5000K or HSS data, refer to published IES files.

Lumen Maintenance

Configuration	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
Prevail and Prevail Petite at 25°C	91.30%	> 194,000
Prevail and Prevail Petite at 40°C	87.59%	> 134,000
Prevail XL at 25°C	91.40%	> 204,000
Prevail XL at 40°C	89.41%	> 158,000

Sensor Color Reference Table (SPBx)

Housing Finish	Sensor Color
AP=Grey	Grey
BZ=Bronze	Bronze
BK=Black	Black
DP=Dark Platinum	Grey
GM=Graphite Metallic	Black
WH=White	White

Lumen Multiplier

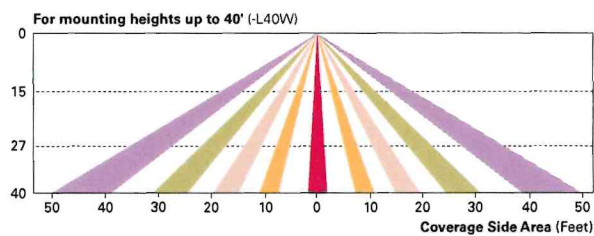
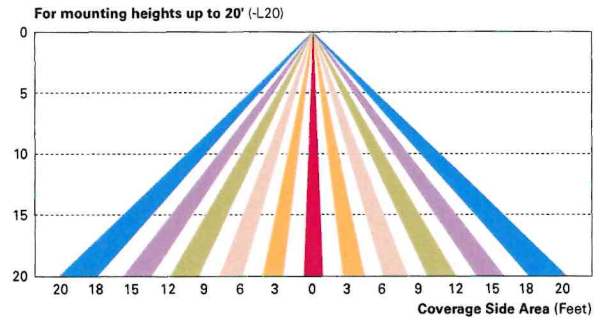
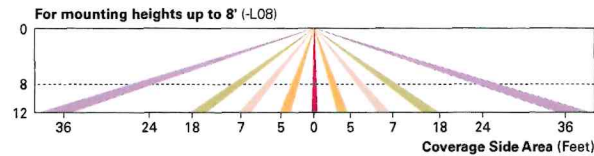
Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99

Control Options

0-10V This fixture provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PER and PER7) Photocontrol receptacles provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-PIN standards can be utilized with the PER7 receptacle.

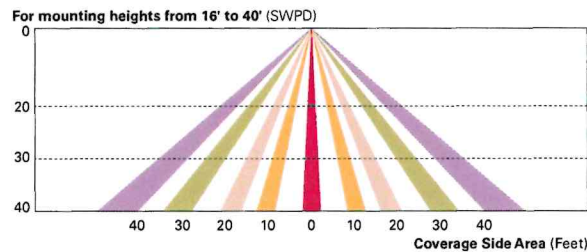
Dimming Occupancy Sensor (SPB, MS/DIM-LXX and MS-LXX) These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the luminaire will dim down after five minutes of no activity detected. When activity is detected, the luminaire returns to full light output. When a sensor for ON/OFF operation (MS-LXX) is selected, the luminaire will turn off after five minutes of no activity. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or "daylight harvesting." Factory default is enabled for the MS sensors and disabled for the SPB. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes.



WaveLinx Wireless Control and Monitoring System Available in 7-PIN or 4-PIN configurations, the WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

WaveLinx Outdoor Control Module (WOLC-7P-10A) A photocontrol that enables astronomical or time-based schedules to provide ON, OFF and dimming control of fixtures utilizing a 7-PIN receptacle. The out-of-box functionality is ON at dusk and OFF at dawn.

WaveLinx Wireless Sensor (SWPD4 and SWPD5) These outdoor sensors offer passive infrared (PIR) occupancy sensing and a photocell for closed-loop daylight sensing. These sensors can be factory installed or field-installed via simple, tool-less integration into luminaires equipped with the Zhaga Book 18 compliant 4-PIN receptacle (ZD or ZW). These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected, and the photocell for "dusk-to-dawn" control is default enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.



LumenSafe (LD) The LumenSafe integrated network camera is a streamlined, outdoor-ready camera that provides high definition video surveillance. This IP camera solution is optimally designed to integrate into virtually any video management system or security software platform of choice. No additional wiring is needed beyond providing line power to the luminaire. LumenSafe features factory-installed power and networking gear in a variety of networking options allowing security integrators to design the optimal solution for active surveillance.

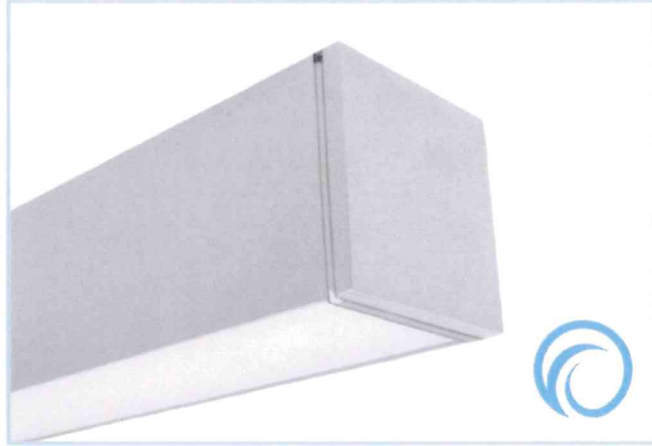
BSW214 | FATHOM

3" wide LED luminaire with flush lens, outdoor locations



Project: _____

Type: **OC-ALT**



FEATURES

The BSW214 is a linear LED luminaire for outdoor lighting applications. The 3" square extrusion is fitted with a flush, frosted lens and machined aluminum end caps.

SPECIFICATIONS

Fixture constructed of an extruded aluminum housing, extruded, frosted acrylic lens and machined aluminum end caps

Standard finishes as shown below

Available for surface or wall mounting in nominal lengths of 2'-8' single fixtures and continuous runs

Housing provided with a Ø7/8 hole for back feeding

Standard integral 120-277V wet location driver offered with 0-10V dimming or non-dim

Standard outputs are 390, 775 and 1000 lumens per foot

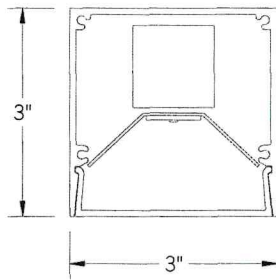
LEDs available in 2700K, 3000K, 3500K and 4000K, within a 3 step MacAdam ellipse, all with 80+ CRI typical

Life: 50,000 hours L₇₀

Limited five year warranty

UL and C-UL listed for wet locations

SECTION



PERFORMANCE

Note: All data reflects fixtures with 3500K LEDs

NOMINAL LENGTH	OUTPUT	LUMENS/ft.	WATTS/ft.	LUMINAIRE LUMENS	EFFICACY (LPW)
4'	L: low	390	4.0	1554	98
	R: regular	775	8.0	3104	97
	H: high	1000	10.3	3995	97



BSW214 -

NOMINAL FIXTURE LENGTH*

2: 24-5/8"
3: 36-5/8"
4: 48-5/8"
5: 60-5/8"
6: 72-5/8"
7: 84-5/8"
8: 96-5/8"

CORRELATED COLOR TEMPERATURE

27: 2700K-80+ CRI
30: 3000K-80+ CRI
35: 3500K-80+ CRI
40: 4000K-80+ CRI

DRIVER

IN: non-dimming
ID: 0-10V dimming, 5%

LIGHT OUTPUT (lumens per foot)

L: low - 390
R: regular - 775
H: high - 1000

MOUNT

SM: surface mount
WD: wall mount - direct
WI: wall mount - indirect

RUN CONFIGURATION

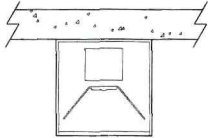
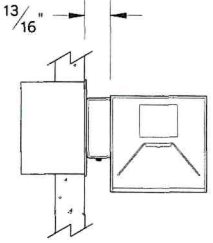
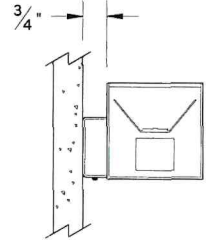
SN: single
ST: starter
AD: adder
TR: terminator

FINISH

AW: architectural white (semi-matte)
WH: white (semi-gloss)
BL: black (semi-matte)
MB: matte black
ESS: environmental satin silver
BZ: bronze
PR: primer
CF: consult factory for custom finish

* Actual dimension dependent on run configuration

MOUNTING

	ORDERING CODE	DESCRIPTION
	SM	<p>SURFACE MOUNT</p> <ul style="list-style-type: none"> • Use appropriate fastener through $\varnothing 3/16"$ holes in housing • Power entry through $\varnothing 7/8"$ hole on the back at an end
 <p>Power feed end shown</p>	WD	<p>WALL MOUNT – DIRECT ORIENTATION</p> <p>Mounting option includes:</p> <ul style="list-style-type: none"> • 1-7/8" H x 4-1/2" W aluminum bracket projects the fixture housing 3/4" from the wall surface • Power feed mounting point includes a 1/16" aluminum plate for interfacing with a single gang outdoor electrical box
 <p>Non-power feed end shown</p>	WI	<p>WALL MOUNT – INDIRECT ORIENTATION</p> <p>Mounting option includes:</p> <ul style="list-style-type: none"> • 1-7/8" H x 4-1/2" W aluminum bracket projects the fixture housing 3/4" from the wall surface • Power feed mounting point includes a 1/16" aluminum plate for interfacing with a single gang outdoor electrical box

EPA CALCULATIONS

LENGTH ORDERING CODE	EPA
2	0.99 ft ²
3	1.46 ft ²
4	1.94 ft ²
5	2.42 ft ²
6	2.89 ft ²
7	3.36 ft ²
8	3.84 ft ²

LENGTH/MOUNTING DIMENSIONS

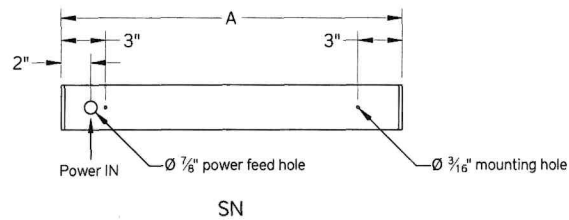
ORDERING CODE	LENGTH A	LENGTH B	LENGTH C
2	24-5/8"	24-5/16"	24"
3	36-5/8"	36-5/16"	36"
4	48-5/8"	48-5/16"	48"
5	60-5/8"	60-5/16"	60"
6	72-5/8"	72-5/16"	72"
7	84-5/8"	84-5/16"	84"
8	96-5/8"	96-5/16"	96"

RUN CONFIGURATION INFORMATION

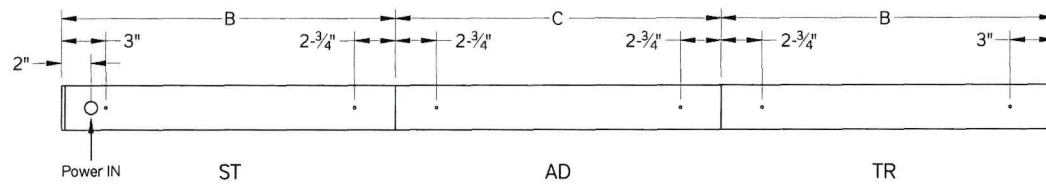
ORDERING CODE	DESCRIPTION
SN	Single
ST	Starter
AD	Adder
TR	Terminator

RUN INFORMATION

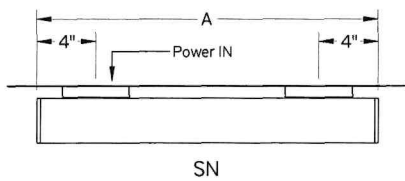
Back Plan - Surface Mount Single Fixture Option



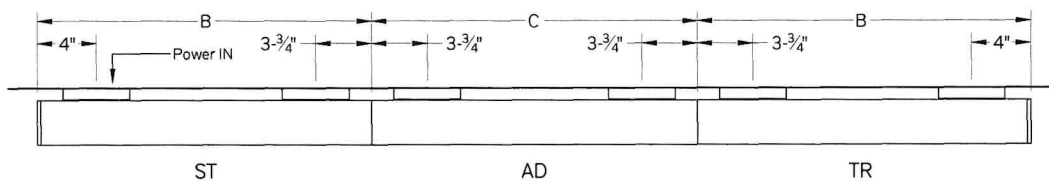
Back Plan - Surface Mount Continuous Run Option



Plan - Wall Mount Single Fixture Option



Plan - Wall Mount Continuous Fixture Option





Breaking new ground with optimal versatility, the **FlexScope BL9** has zoomable optics (15° to 35°) & 60° by switching optic element. This adjustable luminaire also has the ability to switch light output in 4 steps.

Project _____
 Location _____
 Cat. No. _____
 Type: **OF2-ALT** _____
 Lamps: _____ Qty _____
 Notes _____

Ordering guide

example: BL9DW-AS7

Series	Lamping	CCT	Finish	Mount
BL9	D	<input type="checkbox"/> -	<input type="checkbox"/>	S7
BL9 Low Voltage 9W Bullet Lighting	D LED	W Warm (3000K) C Cool (4000K)	A Black H Bronze	S7 Stake

Features

- Housing/Construction:** A360° die-cast aluminum, tool-less twist off/on shroud. Teeth to lock aim the knuckle arm for accurate aiming secured by black oxide Phillips-head stainless steel screw and metal locking nut to provide durable mounting of the accent. A 360° die-cast aluminum housing for driver with thermal management creates continuity with housing by repeating similar shape. All gaskets are 100% molded silicone.
- Electrical:** 10W (on high setting) Input voltage range (VAC): 10-14. Pre-wired with a 3-ft. pigtail for easy hookup to the low voltage supply cable. Driver housed in injected molded case with electronics encapsulated. 12V class 2 driver with integral switch for 4 preset light levels.
- LED Board and Array:** Single Luxeon M LED.
- Controls:** 12 Volt Class 2 driver with integral switch provides simple customer access to the adjustment between 4 present light levels.
- Optical Systems:** Flat glass, low iron tempered clear glass, c-channel gasket

slips onto lens without tools or RTV. Zoomable optic / Injection molded acrylic (PMMA) clear, highly polished molded with select surfaces textured. Zoomable lens provides Narrow 15° to Medium 35° beam pattern depending on the position, Inter-changeable lens provides Wide 60 flood output.

- Mounting:** 1/2"-14 NPSM male threads to screw onto mounting stake, or other mounting accessory, sold separately.

Finish

Thermoset polyester powder coat is electrostatically applied after a five-stage conversion cleaning process and bonded by heat fusion thermosetting.

Lamps

Integral LED module

Watts Consumed / Needed to Drive	2.0W	4.5W	8.6W	10.7W
mA	230	600	1100	1500
3K 15°	113	241	429	567
3K 35°	132	284	505	669
3K 60°	111	241	428	561
4K 15°	131	269	477	602
4K 35°	155	316	562	710

Power Supply

Fixtures can be used with the HADCO Low Voltage Transformers series TC152, TSS, TC. Power supplies are available in 150W / 300W / 600W and 900W. Ask your Philips representative for a full list of options.

IP66 Rating

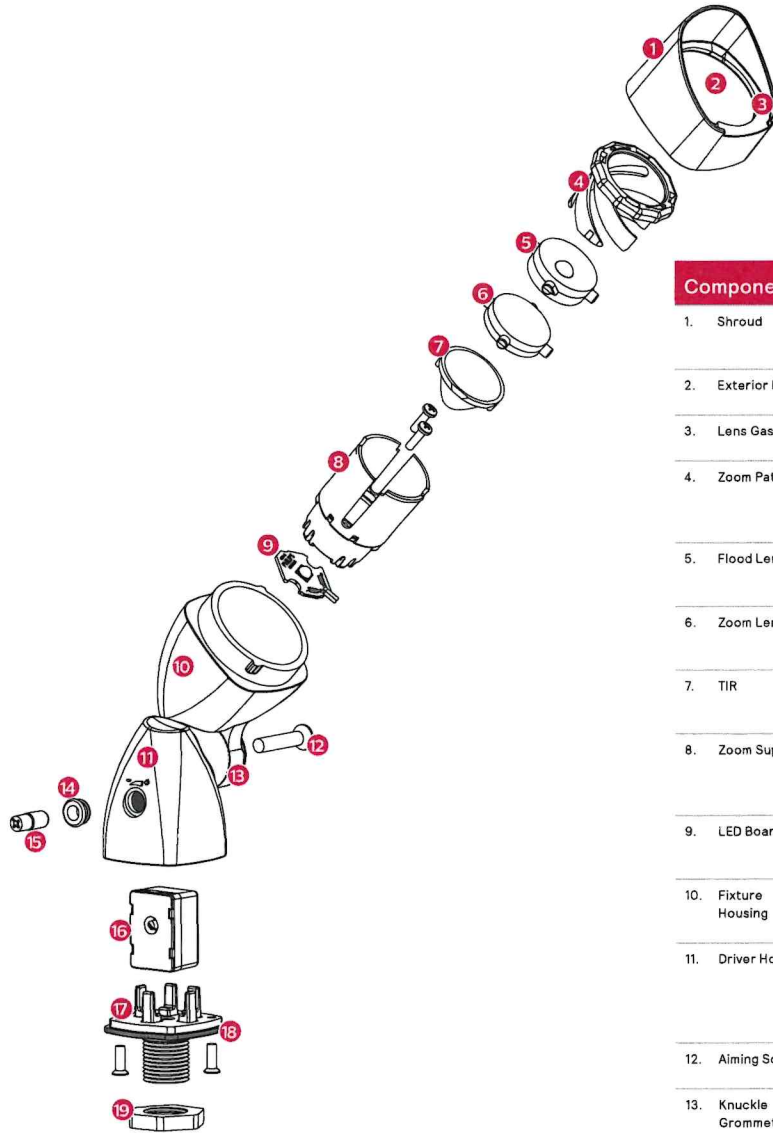
Dust tight and sealed against direct jets of water.

Labels

ETL Listed to U.S. safety standards for wet locations. cETL listed to Canadian safety standards for wet locations. Manufactured to ISO 9001:2008 Standards. 5-year limited warranty.

BL9 FlexScape LED

Accent aluminum



Component	Material	Finish	Feature /Function
1. Shroud	360° die-cast aluminum	Textured bronze or black, powder-coated aluminum	Tool-less, twist-off/on attachment to housing.
2. Exterior Lens	flat glass (low-iron)	Clear (tempered glass)	Environmental barrier (sealing).
3. Lens Gasket	100% molded-silicone	Black	Molded gasket slips onto lens without tools or RTV.
4. Zoom Path	Injection-molded, UV-resistance polycarbonate	White ¹	Tool-less adjustable/removable path for Zoom Lens and Flood Lens, high brightness white for maximum light output.
5. Flood Lens ³	Injection-molded acrylic (PMMA)	Clear ²	Interchangeable lens provides 60° flood output.
6. Zoom Lens ³	Injection-molded acrylic (PMMA)	Clear ²	Interchangeable lens provides 15° to 35° beam depending on position.
7. TIR	Injection-molded acrylic (PMMA)	Clear ²	Snap-in optic shapes beam for zoom and flood lenses.
8. Zoom Support	Injection-molded, UV-resistance polycarbonate	White ¹	Support for TIR and Zoom Path, locates optics precisely relative to LED, high brightness white for maximum light output.
9. LED Board	Philips Lumileds Luxeon M	White solder mask, silk screen printing	Custom PCB with Philips Lumileds Luxeon M, 3000K/4000K.
10. Fixture Housing	360° die-cast aluminum	Textured bronze or black, powder-coated aluminum	Tool-less attachment to shroud, teeth to lock aiming angle.
11. Driver Housing	360° die-cast aluminum	Textured bronze or black, powder-coated aluminum	Separate housing for driver helps with thermal management and creates continuity with housing by repeating similar shape.
12. Aiming Screw	Stainless steel	Black (coating for appearance)	Phillips-head screw, loosen slightly to adjust aiming.
13. Knuckle Grommet	100% molded-silicone	Black	Molded gasket presses into knuckle and provides environmental barrier and sealing between optical and driver compartments.
14. Switch Grommet	100% molded-silicone	Black	Molded gasket provides seal around dimming switch.
15. Switch Knob	Injection molded polycarbonate	Black	Switch knob provides simple customer access to dimming switch for easy adjustment between 4 preset light levels.
16. Driver	Injection molded case, electronics, encapsulant	Black	12VAC Class 2 driver with integral switch for multiple light levels.
17. Driver Housing Gasket	100% molded-silicone	Black	Molded gasket provides seal for driver housing. (also acts as strain-relief)
18. Driver Base	360° die-cast aluminum	Textured bronze or black, powder-coated aluminum	Positions driver inside driver housing and provides durable mounting for luminaire.
19. Locking Nut			Metal nut allows orientation of Accent to be locked.

1. Highly polished molded.
 2. Highly polished molded, select surfaces textured.
 3. Select from either a Zoom or Flood lens optics for customized lighting effects.

Plant Schedule

Code	Scientific Name	Common Name	Quantity	Spacing	Install Size	Mature Size (Height/Spread)
Canopy Trees: (Install in accordance with detail 3/L201)						
ACFAF	Acer x freemanii 'Autumn Fantasy'	Autumn Fantasy Maple	5	Per Plan	3" caliper B&B	50'/30'
ACMSS	Acer miyabei 'Morton'	State Street Miyabei Maple	6	Per Plan	3" caliper B&B	50'/40'
AEGEG	Aesculus glabra 'JN Select'	Early Glow Buckeye	1	Per Plan	3" caliper B&B	35'/35'
CEOC	Celtis occidentalis	Common Hackberry (Native)	4	Per Plan	3" caliper B&B	40'-50'/40'-60'
GIBPS	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	6	Per Plan	3" caliper B&B	40'/15'
GLTDR	Gleditsia triacanthos 'Draves'	Street Keeper Honeylocust	12	Per Plan	3" caliper B&B	45'/20'
GLTIS	Gleditsia triacanthos 'Shademaster' PP1,515	Shademaster Honeylocust	5	Per Plan	3" caliper B&B	60'/35'
GYDIE	Gymnocladus dioicus 'Espresso	Espresso Kentucky Coffee Tree	5	Per Plan	3" caliper B&B	50'/35'
POTR	Populus tremeloides	Quaking Aspen (Native)	3	Per Plan	3" caliper B&B	40'-50'/20'-30'
QUBI	Quercus bicolor	Swamp White Oak (Native)	5	Per Plan	3" caliper B&B	50'/40'
QUAMA	Quercus macrocarpa	Bur Oak	2	Per Plan	3" caliper B&B	70'-90'/60'-80'
QURU	Quercus rubra	Red Oak (Native)	2	Per Plan	3" caliper B&B	60'-75'/60'-75'
ULAMP	Ulmus americana 'Princeton'	Princeton Elm	4	Per Plan	3" caliper B&B	70'/50'
Ornamental Trees: (Install in accordance with detail 3/L201)						
AMGAB	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	4	Per Plan	8" multi-stem B&B	20'-25'/20'-25'
AMGR	Amelanchier x grandiflora	Apple Serviceberry	4	Per Plan	8" multi-stem B&B	25'-30'/25'-30'
SYRIS	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	2	Per Plan	2.5" caliper B&B	25'/15'
Evergreen Trees: (Install in accordance with detail 4/L201)						
PIGLD	Picea glauca var. densata	Black Hills Spruce	2	Per Plan	6' tall B&B	25'-45'/15'-25'
Deciduous Shrubs: (Install in accordance with detail 5/L201)						
HYPAL	Hydrangea paniculata 'ILVOBO' PP22,782	Bobo Hydrangea	5	Per Plan	18" tall pot	3'/3'-4'
RHARG	Rhus aromatica 'Gro-Low'	Gro-Low Sumac	62	Per Plan	18" spread pot	2'-3'/6'-8'
RORDP	Rosa rugosa 'Dwarf Pavement'	Dwarf Pavement Rugosa Rose	19	Per Plan	15" tall pot	2'-3'/5'
SPBAW	Spirea x bumalda 'Anthony Waterer'	Anthony Waterer Spirea	55	Per Plan	18" tall pot	2'-3'/3'-4'
SPBET	Spirea betulifolia 'Tor'	Tor Birchleaf Spirea	22	Per Plan	18" tall pot	2'-3'/3'
SYMEP	Syringa meyeri 'Palibin'	Meyer Lilac (Dwarf Korean Lilac)	5	Per Plan	24" tall pot	4'-5'/5'-7'
SYPUJ	Syringa patula 'JN Upright Select' PPAF	Violet Uprising Lilac	1	Per Plan	24" tall pot	4'-6'/4'-5'
Evergreen Shrubs: (Install in accordance with detail 5/L201)						
JUHWI	Juniperus horizontalis 'Wisconsin'	Wisconsin Juniper	4	Per Plan	18" spread pot	8'/5'+
Perennials: (Install in accordance with detail 6/L201)						
ALSPB	Allium x 'Summer Peek-a-Boo'	Summer Peek-a-Boo Globe Lily	196	Per Plan	#1 cont.	8"-12"/18"-24"
CAAC	Calamagrostis x acutiflora Karl Foerster	Karl Foerster Reed Grass	164	Per Plan	#1 cont.	5'-6'/18"-24"
ECPWB	Echinacea purpurea 'PowWow Wild Berry'	PowWow Wild Berry Coneflower	76	Per Plan	#1 cont.	18"-24"/12"-16"
HEHR	Hemerocallis 'Happy Returns'	Happy Returns Daylily	8	Per Plan	#1 cont.	12"-18"/16"-24"
IRSCB	Iris siberica 'Caesar's Brother'	Caesar's Brother Siberian Iris	33	Per Plan	#1 cont.	30"-36"/18"-24"
LESDM	Leucanthemum x superbum 'Daisy May' (Daisy Duke)	Daisy May Shasta Daisy	63	Per Plan	#1 cont.	12"-24"/12"-18"
MODPW	Monarda didyma 'Petite Wonder'	Petite Wonder Bee Balm	49	Per Plan	#1 cont.	9"-12"/12"-18"
NEWL	Nepeta x 'Walker's Low'	Walker's Low Catmint	75	Per Plan	#1 cont.	24"-36"/18"-36"
PANO	Panicum virgatum 'Northwinds'	Northwinds Switch Grass	26	Per Plan	#1 cont.	4'-5'/24"-30"
PEALS	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	117	Per Plan	#1 cont.	24"-30"/18"-24"
SANEC	Salvia nemorosa 'Caradonna'	Caradonna Meadow Sage	29	Per Plan	#1 cont.	24"-30"/12"-18"
SPHET	Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	15	Per Plan	#1 cont.	18"-24"/18"-24"
Native Forbs and Grasses (Salt Tolerant - full sun): (Install in accordance with detail 6/L201)						
ALCE	Allium cernuum	Nodding Pink Onion	170	Per Plan	Half gallon	18"-24"/6"-8"
ASER	Aster ericoides	Heath Aster	46	Per Plan	Half gallon	18"-24"/12"-18"
DAPU	Dalea purpurea	Purple Prairie Clover	61	Per Plan	Half gallon	24"-36"/15"-18"
LIPY	Liatris pycnostachya	Prairie Blazingstar	71	Per Plan	Half gallon	3'-5'/12"-15"
LOSI	Lobelia siphilitica	Great Blue Lobelia	68	Per Plan	Half gallon	24"-36"/12"-18"
PAVI	Panicum virgatum	Switch Grass	65	Per Plan	Half gallon	4'-5'/24"-30"
PEDI	Penstemon digitalis	Foxglove Beard Tongue	59	Per Plan	Half gallon	30"-36"/12"-15"
SCSC	Schizachyrium scoparium	Little Bluestem	97	Per Plan	Half gallon	24"-48"/12"-18"
SPHE	Sporobolus heterolepis	Prairie Dropseed	184	Per Plan	Half gallon	30"-36"/12"-15"
Native Forbs and Grasses (Partially Salt Tolerant - part shade/shade): (Install in accordance with detail 6/L201)						
AQCA	Aquilegia canadensis	Wild Columbine	24	12" o.c.	Half gallon	24"-30"/12"-15"
ASCO	Aster cordifolius	Heartleaf Aster	13	18" o.c.	Half gallon	18"-24"/18"-24"
ASMA	Aster macrophyllus	Bigleaf Aster	14	18" o.c.	Half gallon	36"-48"/20"-30"
CAAM	Campanula americana	Tall Bellflower	31	12" o.c.	Half gallon	36"-48"/12"-18"
CAEB	Carex eburnea	Ivory Sedge	168	12" o.c.	Half gallon	6"-10'/6"-10"
CAPE	Carex pennsylvanica	Pennsylvania Sedge	33	12" o.c.	Half gallon	8"-12"/12"-15"
CAPL	Carex plantaginea	Seersucker Sedge	193	12" o.c.	Half gallon	8"-10"/10"-12"
CHLA	Chasmanthium latifolium	Northern Sea Oats	18	24" o.c.	Half gallon	36"-48"/24"-36"
ECPU	Echinacea purpurea	Purple Coneflower	13	15" o.c.	Half gallon	36"-60"/15"-18"
ELVI	Elymus virginicus	Virginia Wild Rye	53	18" o.c.	Half gallon	24"-48"/18"-24"
HEAM	Heuchera americana	Alum Root	16	12" o.c.	Half gallon	12"-15"/12"-18"
MEVI	Mertensia virginica	Virginia Blue Bells	10	12" o.c.	Half gallon	24"-36"/12"-15"
MOFI	Monarda fistulosa	Bergamot	6	24" o.c.	Half gallon	36"-48"/24"-36"
ZIAU	Zizia aurea	Golden Alexanders	3	36" o.c.	Half gallon	24"-30"/36"-48"

NOTE: Plant quantities indicated in the plant schedule are for convenience only. Installation contractor is responsible for verifying plant count on the landscape plan. When discrepancies between the plant schedule, labels and the landscape plan occur, the quantity drawn on the landscape plan shall be the official quantity.

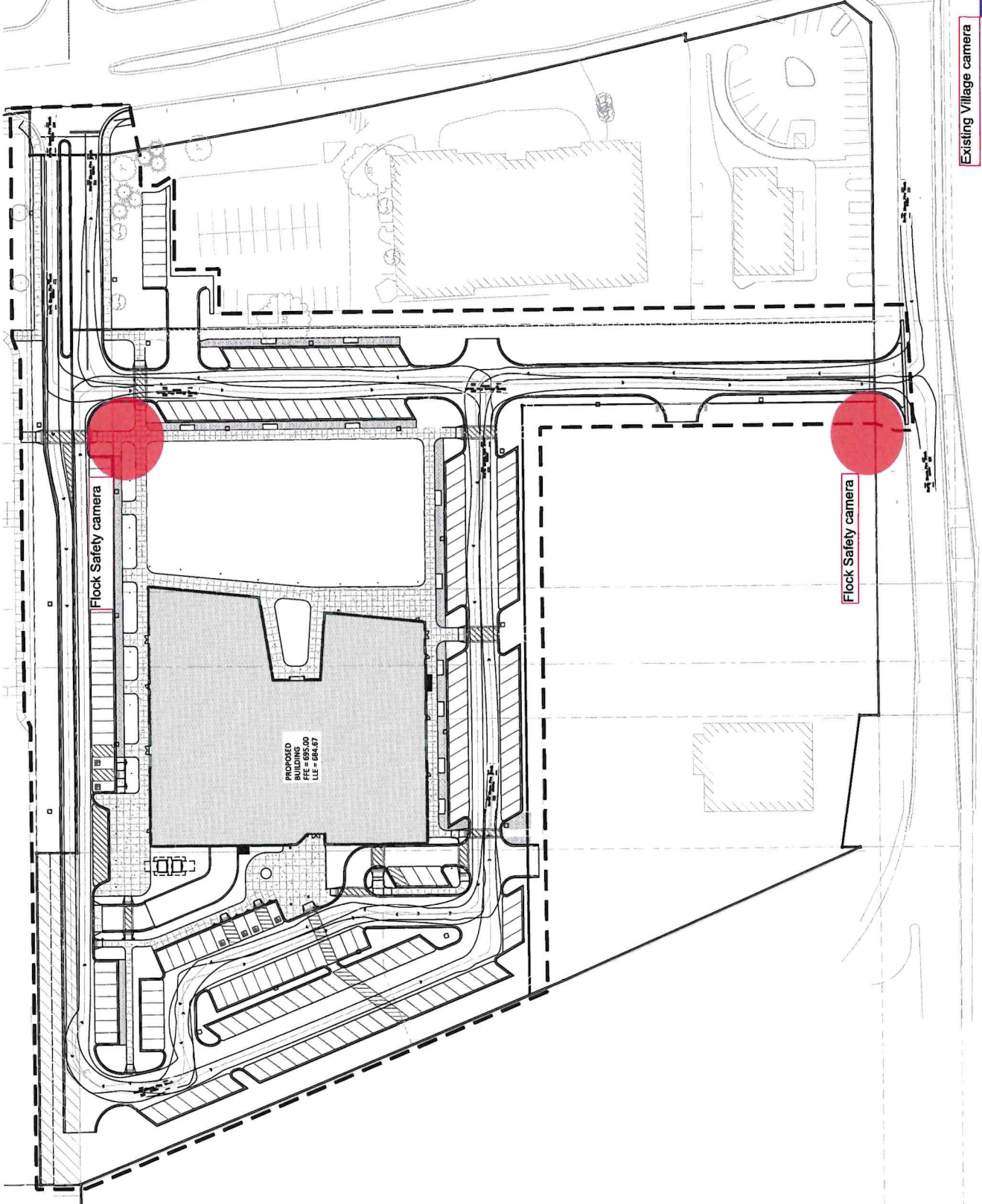
Exhibit 11A Landscaping Details

Plant Schedule						
Code	Scientific Name	Common Name	Quantity	Spacing	Install Size	Mature Size (Height/Spread)
Canopy Trees: (Install in accordance with detail 3/L201)						
ACFAF	Acer x freemanii 'Autumn Fantasy'	Autumn Fantasy Maple	5	Per Plan	3" caliper B&B	50'/30'
ACMSS	Acer miyabei 'Morton'	State Street Miyabei Maple	6	Per Plan	3" caliper B&B	50'/40'
AEGEG	Aesculus glabra 'JN Select'	Early Glow Buckeye	1	Per Plan	3" caliper B&B	35'/35'
CEOC	Cellis occidentalis	Common Hackberry (Native)	4	Per Plan	3" caliper B&B	40'-60'/40'-60'
GIBPS	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	6	Per Plan	3" caliper B&B	40'/15'
GLTDR	Gleditsia triacanthos 'Draves'	Street Keeper Honeylocust	12	Per Plan	3" caliper B&B	45'/20'
GLTIS	Gleditsia triacanthos 'Shademaster' PP1,515	Shademaster Honeylocust	5	Per Plan	3" caliper B&B	60'/35'
GYDIE	Gymnocladus dioicus 'Espresso	Espresso Kentucky Coffee Tree	5	Per Plan	3" caliper B&B	50'/35'
POTR	Populus tremuloides	Quaking Aspen (Native)	3	Per Plan	3" caliper B&B	40'-50'/20'-30'
QUBI	Quercus bicolor	Swamp White Oak (Native)	5	Per Plan	3" caliper B&B	50'/40'
QUMA	Quercus macrocarpa	Bur Oak	2	Per Plan	3" caliper B&B	70'-90'/60'-80'
QURU	Quercus rubra	Red Oak (Native)	2	Per Plan	3" caliper B&B	60'-75'/60'-75'
ULAMP	Ulmus americana 'Princeton'	Princeton Elm	4	Per Plan	3" caliper B&B	70'/50'
Ornamental Trees: (Install in accordance with detail 3/L201)						
AMGAB	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	4	Per Plan	8' multi-stem B&B	20'-25'/20'-25'
AMGR	Amelanchier x grandiflora	Apple Serviceberry	4	Per Plan	8' multi-stem B&B	25'-30'/25'-30'
SYRIS	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	2	Per Plan	2.5" caliper B&B	25'/15'
Evergreen Trees: (Install in accordance with detail 4/L201)						
PIGLD	Picea glauca var. densata	Black Hills Spruce	2	Per Plan	6' tall B&B	25'-45'/15'-25'
Deciduous Shrubs: (Install in accordance with detail 5/L201)						
HYPAI	Hydrangea paniculata 'LVOBO' PP22,782	Bobo Hydrangea	5	Per Plan	18" tall pot	3'/3'-4'
RHARG	Rhus aromatica 'Gro-Low'	Gro-Low Sumac	62	Per Plan	18" spread pot	2'-3'/6'-8'
RORDP	Rosa rugosa 'Dwarf Pavement'	Dwarf Pavement Rugosa Rose	19	Per Plan	15" tall pot	2'-3'/5'
SPBAW	Spirea x burmalda 'Anthony Waterer'	Anthony Waterer Spirea	55	Per Plan	18" tall pot	2'-3'/3'-4'
SPBET	Spirea betulifolia 'Tor'	Tor Birchleaf Spirea	22	Per Plan	18" tall pot	2'-3'/3'
SYMEP	Syringa meyeri 'Palibin'	Meyer Lilac (Dwarf Korean Lilac)	5	Per Plan	24" tall pot	4'-5'/5'-7'
SYPJU	Syringa patula 'JN Upright Select' PPAF	Violet Uprising Lilac	1	Per Plan	24" tall pot	4'-6'/4'-5'
Evergreen Shrubs: (Install in accordance with detail 5/L201)						
JUHWI	Juniperus horizontalis 'Wisconsin'	Wisconsin Juniper	4	Per Plan	18" spread pot	8'/5'+
Perennials: (Install in accordance with detail 6/L201)						
ALSPB	Allium x 'Summer Peek-a-Boo'	Summer Peek-a-Boo Globe Lily	196	Per Plan	#1 cont.	8"-12"/18"-24"
CAAC	Calamagrostis x acutiflora Karl Foerster	Karl Foerster Reed Grass	164	Per Plan	#1 cont.	5'-6"/18"-24"
ECPWB	Echinacea purpurea 'PowWow Wild Berry'	PowWow Wild Berry Coneflower	76	Per Plan	#1 cont.	18"-24"/12"-16"
HEHR	Hemerocallis 'Happy Returns'	Happy Returns Daylily	8	Per Plan	#1 cont.	12"-18"/16"-24"
IRSCB	Iris siberica 'Caesar's Brother'	Caesar's Brother Siberian Iris	33	Per Plan	#1 cont.	30"-36"/18"-24"
LESDM	Leucanthemum x superbum 'Daisy May' (Daisy Duke)	Daisy May Shasta Daisy	63	Per Plan	#1 cont.	12"-24"/12"-18"
MODPW	Monarda didyma 'Petite Wonder'	Petite Wonder Bee Balm	49	Per Plan	#1 cont.	9"-12"/12"-18"
NEWL	Nepeta x 'Walker's Low'	Walker's Low Catmint	75	Per Plan	#1 cont.	24"-36"/18"-36"
PANO	Panicum virgatum 'Northwinds'	Northwinds Switch Grass	26	Per Plan	#1 cont.	4'-5"/24"-30"
PEALS	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	117	Per Plan	#1 cont.	24"-30"/18"-24"
SANEC	Salvia nemorosa 'Caradonna'	Caradonna Meadow Sage	29	Per Plan	#1 cont.	24"-30"/12"-18"
SPHET	Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	15	Per Plan	#1 cont.	18"-24"/18"-24"
Native Forbs and Grasses (Salt Tolerant - full sun): (Install in accordance with detail 6/L201)						
ALCE	Allium cernuum	Nodding Pink Onion	170	Per Plan	Half gallon	18"-24"/6"-8"
ASER	Aster ericoides	Heath Aster	46	Per Plan	Half gallon	18"-24"/12"-18"
DAPU	Dalea purpurea	Purple Prairie Clover	61	Per Plan	Half gallon	24"-36"/15"-18"
LIPY	Liatris pycnostachya	Prairie Blazingstar	71	Per Plan	Half gallon	3'-5"/12"-15"
LOSI	Lobelia siphilitica	Great Blue Lobelia	68	Per Plan	Half gallon	24"-36"/12"-18"
PAVI	Panicum virgatum	Switch Grass	65	Per Plan	Half gallon	4'-5"/24"-30"
PEDI	Penstemon digitalis	Foxglove Beard Tongue	59	Per Plan	Half gallon	30"-36"/12"-15"
SCSC	Schizachyrium scoparium	Little Bluestem	97	Per Plan	Half gallon	24"-48"/12"-18"
SPHE	Sporobolus heterolepis	Prairie Dropseed	184	Per Plan	Half gallon	30"-36"/12"-15"
Native Forbs and Grasses (Partially Salt Tolerant - part shade/shade): (Install in accordance with detail 6/L201)						
AQCA	Aquilegia canadensis	Wild Columbine	24	12" o.c.	Half gallon	24"-30"/12"-15"
ASCO	Aster cordifolius	Heartleaf Aster	13	18" o.c.	Half gallon	18"-24"/18"-24"
ASMA	Aster macrophyllus	Bigleaf Aster	14	18" o.c.	Half gallon	36"-48"/20"-30"
CAAM	Campanula americana	Tall Bellflower	31	12" o.c.	Half gallon	36"-48"/12"-18"
CAEB	Carex eburnea	Ivory Sedge	168	12" o.c.	Half gallon	6"-10"/6"-10"
CAPE	Carex pennsylvanica	Pennsylvania Sedge	33	12" o.c.	Half gallon	8"-12"/12"-15"
CAPL	Carex plantaginea	Seersucker Sedge	193	12" o.c.	Half gallon	8"-10"/10"-12"
CHLA	Chasmanthium latifolium	Northern Sea Oats	18	24" o.c.	Half gallon	36"-48"/24"-36"
ECPU	Echinacea purpurea	Purple Coneflower	13	15" o.c.	Half gallon	36"-60"/15"-18"
ELVI	Elymus virginicus	Virginia Wild Rye	53	18" o.c.	Half gallon	24"-48"/18"-24"
HEAM	Heuchera americana	Alum Root	16	12" o.c.	Half gallon	12"-15"/12"-18"
MEVI	Mertensia virginica	Virginia Blue Bells	10	12" o.c.	Half gallon	24"-36"/12"-15"
MOFI	Monarda fistulosa	Bergamot	6	24" o.c.	Half gallon	36"-48"/24"-36"
ZIAU	Zizia aurea	Golden Alexanders	3	36" o.c.	Half gallon	24"-30"/36"-48"
NOTE: Plant quantities indicated in the plant schedule are for convenience only. Installation contractor is responsible for verifying plant count on the landscape plan. When discrepancies between the plant schedule, labels and the landscape plan occur, the quantity drawn on the landscape plan shall be the official quantity.						

Exhibit 12A

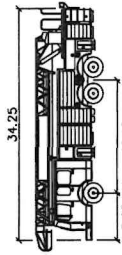
Landscaping Details

Exhibit 13 Perimeter Surveillance Plan



Scale: 0 15 30 60
Scale: 1" = 30'

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feet
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Track : 6.83
Lock to Lock Time : 6.0
Steering Angle : 45.0