



Land Use Planning Division
1600 SE 190th Ave, Ste 116
Portland OR 97233
Ph: 503-988-3043 Fax: 503-988-3389
multco.us/landuse

**Grading and
Erosion Control
Worksheet**

Associated Active Cases:

PROPERTY

Address 29421 E Woodard Rd Site Size _____
Township 1N Range 4E Section 31 Tax lot(s) _____
Alt. Acct. _____ 358,007 SF Tax Lot: 1N4E31DB00600

Other Properties Involved: _____

APPLICANT

Name Black Rock Consulting/Konrad Hyle on behalf of Verizon Phone 503-522-0634
Mailing Address 22135 SW Cole Court Fax _____
City Tualatin State OR Zipcode 97062 E-mail konrad@blk-rock.com

OWNER

Name Cliff Hegstad Phone 503-484-8927
Mailing Address 29421 E Woodard Rd Fax _____
City Troutdale State OR Zipcode 97060 E-mail cliff1931@aol.com

I authorize the applicant to make this application.

SBS ATTACHED AUTHORIZATION

Property Owner Signature _____ Date _____

(If multiple property owners, please include additional signature sheets)

NOTE: By signing this form, the property owner or property owner's agent is granting permission for Planning Staff to conduct site inspections on the property.

☒ **If no owner signature above, a letter of authorization from the owner(s) is required.**

PROPOSED DEVELOPMENT: Please provide a summary of your proposal. This should, at a minimum, include the size (square feet) and use of any structures you are proposing, a description of any cut/fill you will be doing, and any land clearing, including tree removal. Also, please summarize the number and species of any proposed vegetation that will be planted.

Site improvements for a new wireless facility, including extending a rock access drive and a 20'x30' rock surfaced equipment compound.

Instructions for applicants:

The questionnaire on the following pages asks you to provide information needed to review your proposal under the standards for a Grading and Erosion Control permit. Please answer each question fully, including the 'how' and 'why' each standard is met. The responses and supporting documents you provide will be the basis for determining whether or not your application can be approved.

Note: The planner assigned to your case will need to conduct a site visit prior to the application being deemed complete. The purpose of the visit is to verify the information in the site plan, and to verify that no violations of the zoning code exist.

GEC PERMIT (REQUIRED DRAWINGS).

Please submit two (2) site scaled plans containing all information referenced in the following sections of the Building Permit Checklist.

- ☐ Site Plans
- ☐ Building Plans (floor plans and building elevations)

Helpful Hint - The most common mistake we see is not delineating on the site plan all areas that will be disturbed during construction. Disturbance occurs when tree stumps are pulled, and when land is graded, cut, or filled. Stockpiled soils count as ground disturbance. In addition to the construction of a building, disturbance is also required to construct a driveway, retaining wall, septic system, and to level the yard around a home. Omitting any of this information on your plan will delay your project review and could cause delays during construction, including the need to stop work. Again, please carefully mark and label all proposed ground disturbing activities on your plans.

GEC PERMIT (REQUIRED MISCELLANEOUS INFORMATION)

Please answer the following questions:

QUESTION	ANSWER
How much of the site will be disturbed (in square feet)? Please clearly delineate on your site plan.	10,000 SF +/-
How much soil will be cut (in cubic feet or cubic yards)? Show cut locations on your site plan.	180 CY. Stripping. No substantive cut/fill.
How much soil will be filled (in cubic feet or cubic yards)? Show fill locations on your site plan.	180 CY. Rock Surfacing.
How much soil will be stockpiled on the site (in cubic feet or cubic yards)? Show stockpile locations on your site plan.	20 CY-Temporary
How much soil will be imported to the property, including for soil amendment (in cubic feet or cubic yards)?	180 CY. Rock surfacing
How much soil will be taken off the property (in cubic feet or cubic yards)? Exactly where will this soil be taken? Have you obtained all necessary permits to take the soil to this location?	90 CY. Excess strippings. Location TBD.
How much new impervious surface will be established including new roofing, asphalt, concrete, etc. (in square feet)? Show the different areas on site plan.	4,800 SF. New rock surface.

What is the average ground slope through the proposed development area (in percent)? Show on your site plan the direction and elevation change.	7.5%. See contours
How steep will the steepest disturbed slopes be (in percent)?	11%
Will vegetation be planted? Please show all proposed landscaping on the site plan.	Yes

☒ **If you are establishing more than 500 square feet of new impervious surfaces, have you attached a completed Storm Water Certificate, stamped by an Oregon Registered Professional Engineer?** ☒ Yes ☐ No

☐ **Will you be discharging storm water runoff into a public right-of-way?** ☐ Yes ☒ No

☐ **If you will be discharging stormwater runoff into a public right-of-way, have you applied for a discharge permit from Multnomah County or the Oregon Department of Transportation?** ☐ Yes ☐ No

GEC (REQUIRED APPROVAL STANDARDS)

The text in bold below are the standards for approval. The questions below each standard are intended to help you answer the standards. Staff will use your responses to determine whether or not your proposal meets each specific standard. Please answer these questions as fully as you can. When responding to the questions, remember to address the 'how' and 'why' each standard is met. (Attach additional sheets if necessary.)

Approval of development plans on sites subject to a grading and erosion control permit shall be based on a determination that the proposal adequately addresses the following standards. Conditions of approval may be imposed to assure the design meets the standards.

(A) Design standards for grading and erosion control

(1) Grading standards

(a) Fill materials, compaction methods and density specifications shall be indicated. Fill areas intended to support structures shall be identified on the plan. The director may require additional studies or information or work regarding fill materials and compaction.

Is any soil being imported to the site? ☒ Yes ☐ No

Is any fill being used to support any structures? ☐ Yes ☒ No

What method is being used to compact the soil?

The soil will be compacted using a Vibratory Roller.

Remember to indicate on the site plan those areas that are being filled.

(b) Cut and fill slopes shall not be steeper than 3:1 unless a geological and/or engineering analysis certifies that steep slopes are safe and erosion control measures are specified.

Cut and fill slopes cannot be greater than 33% (3Horizontal:1Vertical) unless a geological and/or engineering analysis certifies that the steep slopes are safe and will not endanger or disturb adjoining property. Does your project contain cut or fill slopes steeper than 33% _____ Yes ☒ No

If you answered yes above, you will need to attach the necessary geological and/or engineering analysis and illustrate on your plan where these cuts and/or fills will occur.

(c) Cuts and fills shall not endanger or disturb adjoining property.

How are adjacent properties, including the right-of-way, protected from the cut and fill that is part of your project? Does the slope or intervening topography help prevent affecting the adjacent properties?

The work area is over 250 feet from adjacent properties. Proposed cuts and fills are very minor (expected to be 1 foot or less) as needed to create a crushed rock drive and equipment compound surface.

(d) The proposed drainage system shall have adequate capacity to handle stormwater attributed to development on-site for a storm of ten-year frequency, and maintain the existing flood carrying capacity of all watercourses on or adjacent to the property.

Water from your roofs, driveways, parking areas, etc., can not be carried directly to the right-of-way or stream. When water is diverted to a stream it can cause flooding and damage downstream from you. Make sure that water resulting from your development is either infiltrated into the ground, or the rate of release is controlled for the 10-year/24-hour storm event.

Is your drainage system shown on your site plan? ☒ Yes _____ No

Have you attached the drainage design details and calculations? ☒ Yes _____ No

What kind of drainage system is proposed? How is the water collected and discharged and where does it go?

Runoff from the new rock surfaced drive will sheet flow to the surrounding wooded area and be dispersed. There are no existing or proposed defined watercourses on the site or adjacent properties.

(e) Fills shall not encroach on natural watercourses or constructed channels unless measures are approved which will adequately handle the existing flood carrying capacity for the altered portion of the stream.

Fill materials cannot be placed in or adjacent to a watercourse (stream, creek, river, etc.) without a Flood Development Permit to ensure the carrying capacity of the watercourse is not adversely impacted. Will you be placing fill in or near a watercourse? _____ Yes ☒ No

If yes, what measures are you using to ensure the flood carrying capacity of the stream or watercourse will not be altered?

(2) Erosion control standards

(a) On sites within the Tualatin River Drainage Basin, erosion and stormwater control plans shall satisfy the requirements of OAR 340. Erosion and stormwater control plans shall be designed to perform as prescribed by the currently adopted edition of the "Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)" and the "City of Portland Stormwater Quality Facilities, A Design Manual (1995)." Ground-disturbing activities within the Tualatin Basin shall provide a 100-foot undisturbed buffer from the top of the bank of a stream, or the ordinary high water-mark (line of vegetation) of a water body, or within 100 feet of a wetland: unless a mitigation plan consistent with OAR 340 is approved for alterations within the buffer area.

Is your project site within the Tualatin River Drainage Basin? _____ Yes ☒ No

If yes, have you provided a 100-foot undisturbed buffer between the stream, water body, or wetland?
_____ Yes _____ No

If no, what mitigation plan have you included with your project? Describe in detail below and on your site plan.

(b) Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction.

How are you going to be stripping vegetation, grading and changing the topography of the site? What methods are you going to use? What specific measures will you take to ensure that soil erosion will be minimized and soil quickly stabilized? How will you ensure that the smallest area of disturbed soil will be exposed at any one time?

A narrow band of vegetation and duff layer will be stripped to expose a firm subgrade for the new rock surfaced drive and equipment compound. There will be no substantive change to the topography other than to create a 2% cross slope across the drive surface. Work will likely be done with dozer and excavator. Rock placement will likely follow directly behind stripping operation to protect subgrade soils. This will keep exposed soils to a minimum and provide quick stabilization. See notes on ESPCP Plan.

(c) Development plans shall minimize cut or fill operations and ensure conformity with topography so as to create the least erosion potential and adequately accommodate the volume and velocity of surface runoff.

How are you minimizing the cut or fill operations and ensuring conformity with the existing topography? How are you dealing with the additional volume of water generated from your project and making sure that the water flow is slowed down and does not cause erosion?

Cuts and fills are minor--expected at 1 foot or less as needed to create a 2% cross slope for the proposed rock access road and equipment compound. The road and equipment compound are outsloped so that runoff will sheet flow in the natural direction to the surrounding wooded area and be dispersed for over 250 feet before leaving the property.

(d) Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development.

Do you have critical areas such as streams, creeks or ponds near your development? _____ Yes ☒ No
How are you protecting those critical areas?

(e) Whenever feasible, natural vegetation shall be retained, protected, and supplemented.

1. A 100-foot undisturbed buffer of natural vegetation shall be retained from the top of the bank of a stream, or from the ordinary high watermark (line of vegetation) of a water body, or within 100 feet of a wetland.

Is there a 100-foot undisturbed buffer of natural vegetation between your project and the stream, creek, wetland or other water body? ☒ Yes _____ No

If no, answer #2 below.

2. The buffer required in subsection (e)1 may only be disturbed upon the approval of a mitigation plan that utilizes erosion and stormwater control features designed to perform as effectively as those prescribed in the currently adopted edition of the "Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)" and the "City of Portland Stormwater Quality Facilities, A Design Manual (1995)", and is consistent with attaining equivalent surface water quality standards as those established for the Tualatin River Drainage Basin in OAR 340.

What is your mitigation plan for disturbing the vegetation within 100-feet of a stream, creek, wetland or other water body? Cite what measures and pages your mitigation plan utilizes from the currently adopted edition of the "Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)" and the "City of Portland Stormwater Quality Facilities, A Design Manual (1995)". Also show your measures on your site plan.

(f) Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical.

Does your project include permanent plantings such as landscaping, grass or new native vegetation?
☒ Yes _____ No

If so, when will they be planted? They will be planted after final grading.

Are the plantings shown on the plan? ☒ Yes _____ No

(g) Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary.

Are you grading the site and altering the topography at all? ☒ Yes ☐ No

Were slopes increased as a result of the grading? ☐ Yes ☒ No

How do you plan to accommodate the increased runoff from the graded topography?

Regrading is very minor at about 1 foot or less for the access drive and equipment compound. The finish cross slope will be in the same direction as the natural topography. Other than the minor cut/fill shoulders of about 1 foot max, no slopes were increased. No perceptable increase in runoff at downstream property edge. See stormwater certificate.

(h) Sediment in the runoff water shall be trapped by use of debris basins, silt traps, or other measures until the disturbed area is stabilized.

Will sediment potentially get in runoff from a rain event? ☒ Yes ☐ No

If not, why not? What measures will you be using to ensure sediment is trapped and kept on site?

Rainfall will likely cause localized erosion in the work area. Runoff will sheet flow into the surrounding wooded area with grass and brush understory where sediment will filter out and runoff will disperse for several hundred feet on-site (vegetated buffer).

Offsite migration of sediment off site is not anticipated.

(i) Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching or seeding.

How will you prevent water runoff from damaging slopes on your site or causing rilling on your exposed soil?

Cut and fill slope heights are minor at about 1 foot or less and about 5 feet wide. Upslope vegetation is mostly forested, producing little run-on to the exposed slopes. These factors combine to present a very minor potential for rilling. After final shaping, exposed soils will be hydroseeded with 2,000 lb/ac wood fiber mulch and tacifier.

(j) All drainage provisions shall be designed to adequately carry existing and potential surface runoff to suitable drainageways such as storm drains, natural watercourses, drainage swales, or an approved drywell system.

What type of drainage system will you have in place to handle stormwater generated from your existing or new development? Explain them in detail and show them on your site plan.

Drainage will consist of sheet flow from the new rock surface in the natural direction to the adjacent wooded area with brush and grass understory where it will disperse for about 250 feet before reaching the downstream property line. There are no existing or proposed storm drains, water courses, swales or other defined drainage features.

(k) Where drainage swales are used to divert surface waters, they shall be vegetated or protected as required to minimize potential erosion.

Will drainage swales be used as part of your project? ☐ Yes ☒ No

How will the swales be protected from erosion? For example, will the swale be vegetated or lined with rock?

(l) Erosion and sediment control devices shall be required where necessary to prevent polluting discharges from occurring. Control devices and measures which may be required include, but are not limited to:

1. Energy absorbing devices to reduce runoff water velocity;
2. Sedimentation controls such as sediment or debris basins. Any trapped materials shall be removed to an approved disposal site on an approved schedule;
3. Dispersal of water runoff from developed areas over large undisturbed areas.

Will you be using any erosion and sediment control devices to prevent polluting into creeks, streams, or ponds? ☒ Yes ☐ No

If so, what devices? (Make sure to show them on your site plan.)

A construction entrance and stabilization of the road subgrade with rock is proposed to minimize off-site transport of sediment to public roads, where there would be potential to enter ditches. Dispersal of runoff to the adjacent large undisturbed area is also a primary measure.

(m) Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; by location at a sufficient distance from streams or drainageways; or by other sediment reduction measures.

Will you be stockpiling soil on your site during the project? ☒ Yes ☐ No

What is the closest distance to a waterbody? >500 feet

How will you prevent the stockpiled soil from eroding to streams, creeks, water bodies, the right-of-way or an adjacent property?

Covering of stockpile in accordance with ESPCP notes.

(n) Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, continuous site monitoring and clean-up activities.

Will any non-erosion pollution items listed above be part of your project? ☐ No ☒ Yes

If yes, how will you properly handle them? Explain in detail.

A sump is proposed for concrete washout. A nominal amount of slow release fertilizer will be incorporated in the hydroseed. Other spill prevention and response notes are included on the ESPCP plan. Construction materials for the tower and telecom equipment are pre-fabricated and pre-finished so there is no painting on-site.

**Owner Consent and Land Use Authorization for Verizon Wireless Land Use
Application for Wireless Communication Facility**

Project: Verizon Wireless Telecommunication Tower Facility – site POR STINGER.

Property Owners: Clifford E. Hegstad & Doreen F. Hegstad - Trustees

Applicant: Verizon Wireless c/o Blackrock LLC, Konrad Hyle as agent.

Property Location: Multnomah County Account # R322458. Map and tax lot: 1N4E31DB 600

Property @ 29421 E WOODARD RD, TROUTDALE, OR 97060-8317

Authorization to proceed with Multnomah County Oregon zoning and building permits and any other required associated permits or governmental approvals for Verizon Wireless's proposal to install a new wireless communication facility, and locate equipment and other improvements inside the existing leased area and or easement areas, on the above referenced property.

We are the owners of the parcel listed above and we are authorized to provide required permission to submit for local government approvals. Please accept this document as the letter of authorization for Verizon Wireless's representative(s), including Konrad Hyle of Blackrock LLC, to proceed with required zoning and building permit applications to gain government approval for the above referenced project, and to act as our agent only as related to filling land use application and associated permits for the Verizon Wireless Communication Facility. We also agree to record with in Multnomah County land records any declaration of covenants, conditions or restrictions required by any conditions of approval relating to said land use.

PROPERTY OWNERS AUTHORIZATION:

Property Owner Signature: Clifford E. Hegstad
Clifford E. Hegstad

Date: 04 April 2017

Property Owner Signature: Doreen F. Hegstad
Doreen F. Hegstad

Date: 04 April 2017

Printed Names / Title: Clifford E. Hegstad and Doreen F. Hegstad, Trustees of the Clifford E. Hegstad Trust dated August 5, 2016, as to an undivided 50% interest and Doreen F. Hegstad and Clifford E. Hegstad, Trustees of the Doreen F. Hegstad Trust dated August 5, 2016, as to an undivided 50% interest, as tenants in common.



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Portland OR 97233
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**STORM WATER CERTIFICATE
FOR \geq 500 SQUARE FEET OF NEW IMPERVIOUS SURFACES**

Please have an Oregon Licensed Professional Engineer fill out this Certificate and attach a stamped and signed site plan, stamped and signed storm water system details (if determined to be required), and stamped and signed storm water calculations used to support the conclusion. Please note that replacement of existing structures does not provide a credit to the square footage threshold.


Property Address or Legal Description: 29421 E Woodard Rd, Troutdale 97060

Description of Project: Site improvements for new wireless telecom site.

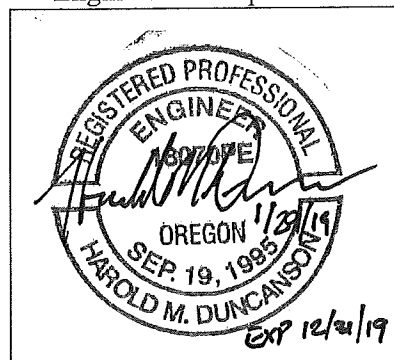
☒ **Construction of an on-site storm water drainage control system is not required.** The rate of storm water runoff attributed to the new/reviewed development (during the 10-year/24-hour storm) will be no greater than that which existed prior to the development as measured from the property line or from the point of discharge into a watercourse [MCC 39.6225(C), or MCC 39.6235]. I certify through the attached stamped and signed site plan and stamped and signed calculations dated 12/13/18 that the proposal will meet the requirements listed above.

☐ **Construction of an on-site storm water drainage control system is required.** After installation of the drainage control system, the rate of storm water runoff attributed to the development (during the 10-year/24-hour storm) will be no greater than that which existed prior to development as measured from the property line or from the point of discharge into a watercourse [MCC 39.6225(C), or MCC 39.6235]. I certify the attached stamped and signed site plan, stamped and signed storm water system design details, and stamped and signed calculations dated _____ will meet the requirements listed above.

NOTE to Engineer: Check one box above. Multnomah County does not use the City of Portland's storm water Ordinance. As part of your review, you must consider all new and existing structures and impervious areas and determine that the generated storm water is in compliance with Oregon law for a 10 year/24 hour storm event.

Signature 
Print Name Harold Duncanson
Business Name Duncanson Co
Address 145 SW 155th St, #102, Seattle, WA 98166
Phone # 206-244-4141
Date 12/13/18

Engineer's Stamp Below:





DUNCANSON
Company, Inc.

DCI 99544.1430

MEMO REPORT

To: Multnomah County Department of Community Services

From: Harold Duncanson

Date: 12/13/18

Subject: Verizon POR Stinger—29421 E Woodard Rd
Runoff Calculation Summary



Attached are calculation results for the predeveloped and postdeveloped conditions for this project for the 10-year, 24-hour storm. The NRCS WinTR-55 computer program was used to perform the calculations, using a Type IA rainfall distribution and a 10-year precipitation of 3.4 inches. The results show the project will have no practical increase (<0.01 CFS) in peak runoff at the downstream property line.

Please call if you have any questions.

SURVEYING

LAND PLANNING

WinTR-55 Current Data Description

--- Identification Data ---

User: HMD Date: 12/13/2018
 Project: POR Stinger Units: English
 SubTitle: Areal Units: Acres
 State: Oregon
 County: Multnomah
 Filename: X:\Projects\1999 Projects\99544\LDT 1400-1499\995441430 POR Stinger\Runoff\Final.w55

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Predev	Predeveloped Site	Outlet	8.22	75	.253
Postdev	Postdeveloped Site	Outlet	8.22	75	.253

Total area: 16.44 (ac)

--- Storm Data ---

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.4	2.9	3.4	3.9	.0	4.4	.0

Storm Data Source: User-provided custom storm data
 Rainfall Distribution Type: Type IA
 Dimensionless Unit Hydrograph: <standard>

HMD

POR Stinger

Multnomah County, Oregon

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Predev	Paved parking lots, roofs, driveways	C	.15	98
	Gravel (w/ right-of-way)	C	.23	89
	Pasture, grassland or range	(poor) C	1.85	86
	Woods	(good) C	5.99	70
	Total Area / Weighted Curve Number		8.22	75
Postdev	Paved parking lots, roofs, driveways	C	.15	98
	Gravel (w/ right-of-way)	C	.34	89
	Pasture, grassland or range	(poor) C	1.85	86
	Woods	(good) C	5.88	70
	Total Area / Weighted Curve Number		8.22	75

HMD

POR Stinger

Multnomah County, Oregon

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 10-Yr (cfs)
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SUBAREAS

Predev	1.96
--------	------

Postdev	1.96
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$\Delta = 0.00 \text{ cfs}$

REACHES

OUTLET	3.91
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**ONSITE SEPTIC**City of Portland – Bureau of Development Services
1900 SW 4th Avenue, Portland, Oregon 97201 – 503-823-6892 – TTY 503-823-6868 – www.portlandoregon.gov/bds**SEPTIC REVIEW CERTIFICATION (Land Use/Planning)**

Land Use/Planning and Zoning approval involving new construction or addition to any building(s), any change in use, and the creation of a new parcel or property line adjustment requires approval by the Sanitarian.

STEP 1- Complete the following:Address of Proposed Work: 29421 E. WOODARD RD. TROUTDALEProperty Map & Tax Lot #: 1N4E31DB 600 Alternate Acct #: R 322458Description of proposed work for this Septic Planning Review CELL TOWER INSTALL
2944310660Change in number of bedrooms? ☐ Yes ☒ No # of existing bedrooms 5 # of bedrooms at completion 5Applicant's Name KONRAD HYLEApplicant E-mail KONRAD @ BLK-ROCK.COMMailing Address 2235 SW COLE CT. Phone 503. 522-0634City TUALATIN State OR ZIP 97062Permit No. 19-114990-SFDate 2/13/19**STEP 2- Submit** with current Septic Evaluation application, for each lot affected along with all required checklist items listed on the application. Refer to the current Septic Evaluation application for current fee for Septic Planning Review "with site visit".Septic Evaluation Application available for download at www.portlandoregon.gov/bds/ Septic Evaluation Application or Multnomah County Land Use Planning Office

Mail or deliver completed Septic Evaluation Submittal package to:
City of Portland, Bureau of Development Services, Trade Permits
1900 SW 4th Ave., First Floor, Portland, OR 97201
For questions please call 503-823-6892

STEP 3- Review: After submittal, allow up to 20 business days for submittal application package review**STEP 4- Site Visit:** Sanitarian will contact you with any questions and/or time of site visit**STEP 5- Sign Off:** Sanitarian Approves Septic Planning Review

Based on present knowledge of the area, and current regulations of the State of Oregon Department of Environmental Quality (DEQ), the Sanitarian hereby finds that the above proposal is:

☒ Approved – it will not impact the existing system☐ Approved – the lot is approved for an onsite septic system SER _____☐ Approval for general layout only* - A septic permit to install the system is required prior to building permit issuance

*Modifications may be required based on specific plans and/or soil conditions impacting the overall site design

☐ Conditions/Comments: Proposed unmanned wireless telecomm facility w/ 15' steel monopole + equipment pad pose no concern to septic. No site visit. proposed development far from septic.

Maubello REHST
Registered Environmental Health Specialist

2/13/19
Date

STEP 6- Return: to Multnomah County Land Use Office with this signed form and site plan (floor plans if applicable)Page 1 of 2

See page 2 for requirements

Sep_Rev_Cert - 6/23/16

No record of septic system. Per property owner/applicant tank + drainfield locations are accurate and were located via probe + staked by surveyor. Appears to be only gravity-fed location for drainfield.

EXHIBIT Z

Catalog
Number

Notes

Type

Full-size photo of the luminaire as shown in the catalog. Do not use for scale.

Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability¹
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background¹

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: [Link to Roam](#); [Link to DTL DLL](#)

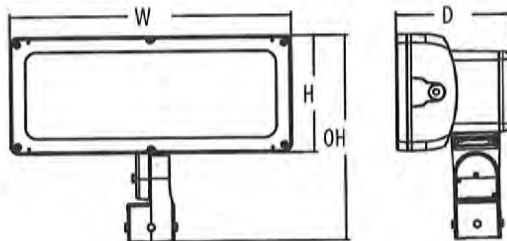


HLF1 High Lumen LED Flood Luminaire



Specifications

EPA:	3.6 ft ² (0.34 m ²)
Depth:	10" (25.4 cm)
Width:	25" (63.5 cm)
Height:	10" (25.4 cm)
Overall Height:	19" (48.3 cm)
Weight:	61 lbs (27.6 kg)



A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: HLF1 LED P1 40K WFL MVOLT IS DDBXD

HLF1 LED

Series	Performance package	Color temperature	Distribution	Voltage	Mounting	Options	Finish (optional)
HLF1 LED	P1	30K 3000 K	VNSP Very narrow spot (7°) ¹	MVOLT ²	Shipped included	Shipped installed	DDBXD Dark bronze
	P2	40K 4000 K	MFL Medium flood (6x6)	120 ³	IS Integral slipfitter (fits 2-7/8" O.D. tenon)	PER NEMA twist-lock receptacle only (controls ordered separately) ^{4,5}	DBLXD Black
	P3	50K 5000 K	WFL Wide flood (6x7)	208 ³	YKC62 Yoke with 16-3 SO cord	PER5 Five-wire receptacle only (controls ordered separately) ^{4,5}	DNAXD Natural aluminum
				240 ³		PER7 Seven-wire receptacle only (controls ordered separately) ^{4,5}	DWHXD White
				277 ³		SF Single fuse (120, 277, 347V) ³	
				347 ³		DF Double fuse (208, 240, 480V) ³	
				480 ³		CFB Black faceplate	
						DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)	
						Shipped separately	
						UBV Upper/bottom visor (universal)	
						FV Full visor	
						WG Wire guard	
						VG Vandal guard (polycarbonate)	



Ordering Information

Accessories

Ordered and shipped separately.

FTS CG6 DDBXD U	Slipfitter for 2-3/8" to 2-7/8" OD tenons; mates with yoke mount (specify finish)
DSHORT SBK U	Shorting cap ⁶
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) ⁶
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) ⁶
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) ⁶

For more mounting options, visit our [Fluorescent Accessories](#) pages.

For more control options, visit [DTL](#) and [ROAM](#) online.

NOTES

1. VNSP includes an external reflector that ships separately. For installation instructions, refer to the instruction sheet provided with the reflector. VNSP is limited to aiming from 0-90° only. VNSP is not available for use with options CFB, UVB, FV, WG or VG.
2. MVOLT driver operates on any line voltage from 120-277V.
3. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4. Specifies a ROAM® enabled luminaire with 0-10V dimming capability. Additional hardware and services required for ROAM® deployment; must be purchased separately. Call 1-800-442-6745 or email: sales@roamservices.net.
5. For units with a photocell receptacle, the mounting must be restricted to ± 45° from horizontal aim per ANSI C136.10-2010.
6. Requires luminaire to be specified with PER, PER5 or PER7 option. Ordered and shipped as a separate line item.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	Field Angle		Beam Angle		10K (10000 K, 70 CRI)			40K (4000 K, 70 CRI)			50K (5000 K, 70 CRI)		
			°	°	°	°	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW
P1	166W	VNPS	30	30	11	10	217,885	15,596	94	225,623	16,150	97	228,686	16,370	99
		MFL	109	114	84	103	9,070	18,706	113	9,410	19,370	117	7,296	19,633	118
		WFL	124	133	107	113	6,936	18,544	112	7,196	19,203	116	8,533	19,464	117
P2	246W	VNPS	30	30	11	10	302,828	21,677	88	313,583	22,446	91	317,840	22,751	92
		MFL	101	114	84	103	12,834	26,416	107	13,278	27,354	111	10,294	27,725	113
		WFL	124	133	107	113	9,815	26,187	106	10,154	27,117	110	12,040	27,486	112
P3	295W	VNPS	28	28	10	9	400,242	25,129	85	425,929	26,741	91	427,942	26,868	91
		MFL	101	114	84	103	12,468	30,670	104	13,278	32,638	111	10,194	32,792	111
		WFL	127	130	112	112	9,535	30,366	103	12,422	32,315	110	11,923	32,467	110

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.05
10°C	50°F	1.03
20°C	68°F	1.01
25°C	77°F	1
30°C	86°F	0.98
40°C	104°F	0.95

Projected LED Lumen Maintenance

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor		HLF1 LED P1		
	1	0.98	0.96	0.93
	1	0.98	0.96	0.93
HLF1 LED P2	1	0.98	0.96	0.93
	1	0.93	0.9	0.83

Electrical Load

Power Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	166W	1.4	0.8	0.7	0.7	0.5	0.4
P2	246W	2.1	1.2	1.0	0.9	0.7	0.6
P3	295W	2.5	1.4	1.2	1.1	0.9	0.7

PER Table

Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)	
		Wire 4/Wire 5	Wire 4/Wire 5	Wire 4/Wire 5	Wire 6/Wire 7
Photocell Only (On/Off)	✓	Wired to dimming leads on driver	Wired to dimming leads on driver	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	✗	Wired to dimming leads on driver	Wired to dimming leads on driver	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion (ROAM on/off only)	✗	Wires Capped inside fixture	Wires Capped inside fixture	Wires Capped inside fixture	Wires Capped inside fixture
Future-proof*	✗	Wired to dimming leads on driver	Wired to dimming leads on driver	Wired to dimming leads on driver	Wires Capped inside fixture
Future-proof* with Motion	✗	Wires Capped inside fixture	Wires Capped inside fixture	Wires Capped inside fixture	Wires Capped inside fixture

- ✓ Recommended
- ✗ Will not work
- ⚠ Alternate

*Future-proof means: Ability to change controls in the future.



Mounting, Options and Accessories



IS - Integral slipfitter
(fits 2-7/8" O.D. tenon)



YKC62
Yoke with 16-3 50 cord



UBV
Upper/Bottom visor (universal)



FV
Full visor



VG
Vandal guard



WG
Wire guard



CFB
Black facoplate

Optics

Depending on the distribution chosen, luminaires are built using internal and external reflectors.



Internal reflectors
MFL, WFL

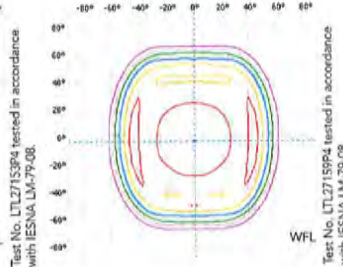
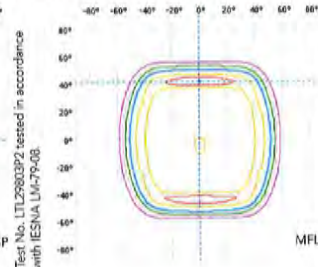
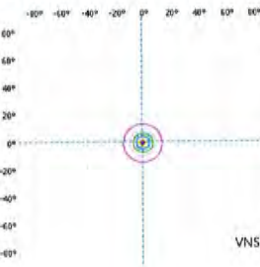
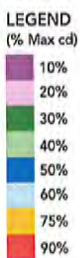


Internal and external reflectors
VN5P

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [HLF Size 1 homepage](#).

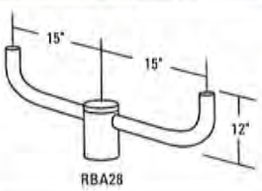
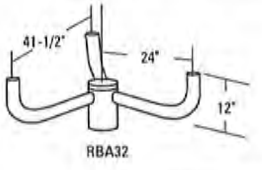
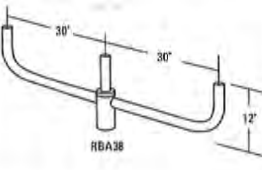
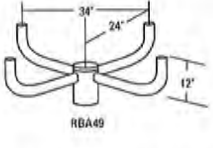
Isofootcandle plots for the HLF1 LED P3 40K. Distances are in units of mount height (20ft).



Mounting Bracket Summary

The following is a list of approved mounting brackets for use with the HLF1. These are rated for use in up to 90mph wind zones. Mounting brackets are ordered separate from the luminaires.

*Aluminum Bullhorns

	Catalog Number	Weight (lbs.)	Max Luminaire Weight/Arm (lbs.)	Bracket EPA ft ² (m ²)	Bracket Configuration	Weight of Luminaires (lbs.)	Luminaire Tilt	Luminaire EPA ft ² (m ²)	Total EPA ft ² (m ²)
 RBA28	*RBA28	8.4	100	1.3 (0.12)	2 @ 180°	2 x 61 = 122	0°	2.4 (0.22)	6.1 (0.57)
							15°	2.5 (0.23)	6.3 (0.59)
							30°	2.8 (0.26)	6.9 (0.64)
							45°	3.5 (0.33)	8.3 (0.77)
							60°	3.6 (0.34)	8.5 (0.79)
							90°	3.6 (0.34)	8.5 (0.79)
 RBA32	*RBA32	14.3	100	1.7 (0.15)	3 @ 120°	3 x 61 = 183	0°	2.4 (0.22)	8.9 (0.83)
							15°	2.5 (0.23)	9.2 (0.85)
							30°	2.8 (0.26)	10.1 (0.94)
							45°	3.5 (0.33)	12.2 (1.13)
							60°	3.6 (0.34)	12.5 (1.16)
							90°	3.6 (0.34)	12.5 (1.16)
 RBA38	*RBA38	12.5	100	2.0 (0.18)	3 @ 180°	3 x 61 = 183	0°	2.4 (0.22)	9.2 (0.85)
							15°	2.5 (0.23)	9.5 (0.88)
							30°	2.8 (0.26)	10.4 (0.97)
							45°	3.5 (0.33)	12.5 (1.16)
							60°	3.6 (0.34)	12.8 (1.19)
							90°	3.6 (0.34)	12.8 (1.19)
 RBA49	*RBA49	17.5	100	2.2 (0.20)	4 @ 180°	4 x 61 = 244	0°	2.4 (0.22)	11.8 (1.10)
							15°	2.5 (0.23)	12.2 (1.13)
							30°	2.8 (0.26)	13.4 (1.24)
							45°	3.5 (0.33)	16.2 (1.51)
							60°	3.6 (0.34)	16.6 (1.54)
							90°	3.6 (0.34)	16.6 (1.54)

* This can only be used with 4.0" OD tenon/pole tops

November 8, 2019

Konrad Hyle
Verizon Wireless
PO Box 1744
Tualatin, OR 97062

RE: 150' Sabre Monopine for POR Stinger, OR (Sabre Job No. 446974)

Dear Mr. Hyle,

As shown in the above referenced structural design report dated: November 5, 2019, this monopine was designed for a Basic Wind Speed of 120 mph with 1/2" ice, Structure Class II, Exposure Category C and Topographic Category 1 in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas".

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors, resulting in an overall minimum safety factor of 25%. Therefore, it is highly unlikely that the monopine will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the least likely points of failure would be in the foundation and base plate. The most likely failure point would be higher in the monopine shaft. Assuming that the wind pressure profile is similar to that used to design the monopine, the monopine will buckle at the location of the highest combined stress ratio within the monopine shaft. This is likely to result in the portion of the monopine above leaning over and remaining in a permanently deformed condition. ***Please note that this letter only applies to the above referenced monopine designed and manufactured by Sabre Towers & Poles.***

In addition, a waveguide bridge and ice shields can be provided for protection from falling ice for horizontal runs of transmission lines and microwave antennas, respectively.

Sincerely,

Robert E. Beacom, P.E., S.E.
Engineering Supervisor

