Received

OCT 19 2018

City of Montpelier
Planning Department
General Notes:
1. All existing utilities not incorporated into the final design shall be removed by the Contractor and replaced with new utilities in accordance with the approved plans. The Contractor shall be responsible for the final design and installation.
2. All existing utilities not incorporated into the final design shall be removed by the Contractor and replaced with new utilities in accordance with the approved plans. The Contractor shall be responsible for the final design and installation.
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EROSION CONTROL LEGEND

- Silt Fence
- Construction Limits Type
- Construction Fence in Reinforced Silt Fence
- Inlet Protection

Woven Wire Fence (W): 1.6 X 24" Mesh, 5/8" Knob & Mono (Galvanized)

Filter Fabric to be used on reinforcement material, or as approved.

Woven wire fences to be fastened securely to fence posts with wire ties. Wire fence reinforcement required with silt control fencing. Reinforced silt fence to be apposed on all construction limits.

Temporary Plt: Temporary level indicator. Taken out of service.

EROSION CONTROL PLAN

Received

City of Montpelier
Planning Department

EROSION CONTROL PLAN

C3.0
A. Upset successful completion of 5 days above, the single-day turbidity of the raw water in the intake shall be measured and recorded at the intake during the 4-day period from the end of the first day of the period to the end of the fourth day of the period, and at the intake of the Town Water Department.

B. The plant shall be operated in such a manner that the nature of the raw water entering the plant is such as to necessitate the operation of the treatment processes of the plant at or below the capacity of the plant as determined by the town water commission. The plant may be operated at capacity, if necessary, for the purpose of testing the plant equipment and procedures, but the average daily flow shall not exceed the design capacity of the plant.

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D. No person that has any knowledge of or that water flows from the Town Water Department personal or private water system shall be permitted to enter the plant or the premises on which the plant is located.

E. The plant shall be operated in such a manner that the nature of the raw water entering the plant is such as to necessitate the operation of the treatment processes of the plant at or below the capacity of the plant as determined by the town water commission. The plant may be operated at capacity, if necessary, for the purpose of testing the plant equipment and procedures, but the average daily flow shall not exceed the design capacity of the plant.

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The Philips Lumen LED post top luminaire features flexible, robust energy-saving solutions for heritage-styled urban architectural lighting. Crowned with an ornamental hood, the post top model comes with a flat lens to highlight the thinness of the LEDs. The luminaire provides attractive lighting at night, adding appeal to the surroundings and promoting safe use of the environment. Includes Service Tag, Philips innovative way to provide assistance throughout the life of the product.

**Luminaire ordering guide**

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<th>Gen.</th>
<th>Optical System</th>
<th>Voltage</th>
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1. DMG 0-10V driver come standard
2. The 347V and 480V are not available
3. Not available with HS option
4. Use of photoelectric cell or shorting cap is required to ensure proper illumination
5. Not available with Motion Response
MPTR  MetroScape LED post top

Urban

Dimensions

EPA: 197 sq ft
Weight: 31.1 lbs (141 kg)

Motion Response* (must be ordered as a separate item)

Series  Voltage  Motion Response module  Finish

ACC Accessory  120  120 volt  MR4PG1  Single grey
  277  277 volt  MR4PG2  Double grey

Consult Philips Lumeco's Color Chart for complete specifications.

*OVR option is required for Motion Response Accessory

LED Wattage and Lumen Values for 3000K & 4000K fixtures

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<th>Ordering Code</th>
<th>Total System Current (mA)</th>
<th>Average System Watts (W)</th>
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<td>90W80LED3K-G2</td>
<td>80 350 91 7188 78.3</td>
<td>7370 81.3</td>
<td>B1-U0-G1</td>
<td>7758 86.3</td>
<td>B3-U0-G1</td>
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</tr>
<tr>
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<td>80 530 136 10310 76.1</td>
<td>10571 79.0</td>
<td>B2-U0-G2</td>
<td>10773 76.6</td>
<td>B2-U0-G2</td>
<td>1143 82.4</td>
</tr>
</tbody>
</table>

MPTR 4000K

<table>
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<tr>
<th>Ordering Code</th>
<th>Total System Current (mA)</th>
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<th>LE2</th>
<th>LE3</th>
<th>LE4-W</th>
<th>LE5</th>
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<tr>
<td>72W32LED4K-G2</td>
<td>32 700 70 5211 74.0</td>
<td>5334 75.9</td>
<td>B1-U0-G1</td>
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<tr>
<td>97W32LED4K-G2</td>
<td>32 1050 104 7172 68.8</td>
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<td>B1-U0-G1</td>
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<tr>
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<td>6299 76.6</td>
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<tr>
<td>108W48LED4K-G2</td>
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<td>7855 74.5</td>
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<td>70W64LED4K-G2</td>
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<td>5790 79.3</td>
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<td>B3-U0-G1</td>
<td>6864 95.1</td>
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<tr>
<td>110W64LED4K-G2</td>
<td>64 530 105 8248 78.6</td>
<td>8305 79.1</td>
<td>B2-U0-G2</td>
<td>8457 80.5</td>
<td>B2-U0-G2</td>
<td>9094 84.9</td>
</tr>
<tr>
<td>90W80LED4K-G2</td>
<td>80 350 91 7188 78.3</td>
<td>7370 81.3</td>
<td>B1-U0-G1</td>
<td>7758 86.3</td>
<td>B3-U0-G1</td>
<td></td>
</tr>
<tr>
<td>135W80LED4K-G2</td>
<td>80 530 136 10310 76.1</td>
<td>10571 79.0</td>
<td>B2-U0-G2</td>
<td>10773 76.6</td>
<td>B2-U0-G2</td>
<td>1143 82.4</td>
</tr>
</tbody>
</table>

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc., highly recommended to confirm performance with a layout – contact Applications at outdoorlighting.applications@philips.com... Note: Some data may be scaled based on tests of similar. But not identical luminaires.

MetroScape-MPTR-spec 0V/18 page 2 of 5
Specifications

Cage
In a round shape with 4 arms and a built-in mechanical ring, this cage is a one piece die cast A360 Aluminum alloy 0.100 (2.5mm) minimum thickness, mechanically assembled to the fitter.

Fitter:
Made of die cast A360 Aluminum alloy 0.100 (2.5mm) minimum thickness, the fitter is complete with a watertight access door giving access to the driver rated IP66, and a terminal block that accepts #20 wires from the primary circuit. Comes with an easy self adjusting system with two (2) set screws 3/8 16 UNC for ease of maintenance and installation. Fits on a 4" (102mm) outside diameter by 4" (102mm) long tenon.

Finial
Decorative cast 356 aluminum, mechanically assembled.

Hood
Made of die cast A360 Aluminum alloy 0.1 (2.5mm) minimum thickness, mechanically assembled to the cast aluminum heat sink.

Access-Mechanism
A die cast A360 Aluminum alloy 0.1 (2.5mm) minimum thickness technical ring with latch and hinge.

Light Engine
LEDengine is composed of 4 main components: LED lamp / Optical System / Heat Sink / Driver. Electrical components are RoHS compliant.

LEX Lens
Flat Lens: Made of soda lime clear tempered glass, mechanically assembled and sealed onto the ring of the access mechanism.

LED Module
Composed of high-performance white LEDs, Color temperature as per ANSI/NEMA bin Neutral White. 4000 Kelvin nominal (3985K +/- 25K or 3710K to 4260K) or Warm white, 3000 Kelvin nominal (3045K +/- 175K or 2870K to 3220K), CRI 70 Min. 75 Typical.

Optical System
Composed of high performance optical polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM 63, LM 79 and TM 15 (IESNA) certifying its photometric performance. Street side indicated. Dark Sky compliant with 0% uplight and U0 per IESNA TM 15.

Heat Sink
Made of cast aluminum optimizing the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Driver
High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 and 347 to 480 VAC rated for both applications: line to line or line to neutral. Class I, T2D of 20% max. Maximum ambient operating temperature from 40°F (40°C) to 130°F (55°C). Certified in compliance to UL1310 CULus requirements. Dry and damp location. Assembled on a unitized removable tray with Tyco quick disconnect plug rated to 221°F (105°C). Dimmable driver 0-10V. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

Surge Protector
Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid State Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Driver options
AST: Pre-set driver for progressive start-up of the LED module(s) to optimize energy management and enhance visual comfort at start-up.
CLO: Pre-set driver to manage the lumen depreciation by adjusting the power given to the LEDs offering the same lighting intensity during the entire lifespan of the LED module.
DMG: Dimmable driver 0-10V.
OLT: Pre-set driver to signal end of life of the LED module(s) for better fixture management.
CDMG: Dynamically standard dimming functionalities including pre-programmed scenarios to suit many applications and needs from safety to maximum energy savings.

Luminaire options

<table>
<thead>
<tr>
<th>Luminaire options</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>FN1 Decorative fia</td>
<td>FN1</td>
</tr>
<tr>
<td>FN2 Decorative fia</td>
<td>FN2</td>
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<tr>
<td>FN3 Decorative fia</td>
<td>FN3</td>
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<tr>
<td>FN4 Decorative fia</td>
<td>FN4</td>
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<tr>
<td>FN5 Decorative fia</td>
<td>FN5</td>
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<td>FN6 Decorative fia</td>
<td>FN6</td>
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<td>FN7 Decorative fia</td>
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<td>FN8 Decorative fia</td>
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<td>FN9 Decorative fia</td>
<td>FN9</td>
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<tr>
<td>FN10 Decorative fia</td>
<td>FN10</td>
</tr>
<tr>
<td>FN11 Decorative fia</td>
<td>FN11</td>
</tr>
</tbody>
</table>

HS
House side shield

PHB (allows a 90° rotation) Photoelectric cell, twist-lock type complete with receptacle and decorative polycarbonate (grey) cap with a plastic lens.

PH9 Shorting cap, twist-lock type complete with receptacle.

PHXL (allows a 90° rotation) Extended life Photoelectric cell, twist-lock type complete with receptacle and decorative polycarbonate (grey) cap with a plastic lens.

RCD Receptacle 5-pins allowing dimming, can be used with a twist-lock Stansense, shorting cap or a photoelectric cell.

RCD7 Receptacle 7-pins.

TN3 Fitter to fit over a 3" (76 mm) O.D. by 4" (102 mm) tenon.

TN3.5 Fitter to fit over a 3-1/2" (89 mm) O.D. by 4" (102 mm) tenon.

OVR Overload function
Specifications (continued)

Luminaire accessories

Motion Response: Tenon mount motion response provides 270° coverage on an adjustable knuckle. The coverage equals up to 6 times the sensor height. It is an option offered jointly with the Dynadimmer OVR option, that can bring the light up to 100% when the motion response is triggered. It is available in a single or double mounting option. Finish options for the motion response device are white or dark gray. Finish options for the tenon must be specified to match the luminaire and pole. The tenon mount is fully rotatable 360°. This option is available for a 4" OD x 4" long tenon. See instruction sheet for time setting functionality (12 second to 16 minute turn off options) and for mounting instructions.

LED manufacturing standard

The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340 5.1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

Finish

The Thermosetting powder coating provided meets the color requirements of the AAMA 2604 specification as measured per ASTM D2244. The Thermosetting product is applied at a dry film of 2.5 to 4.0 mils (64-102 microns) on textured finishes, resulting in a durable long lasting finish

<table>
<thead>
<tr>
<th>Textured Finishes:</th>
<th>Other Finishes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE2TX: Midnight Blue</td>
<td>GR: Gray Sandtex</td>
</tr>
<tr>
<td>BE6TX: Ocean Blue</td>
<td>NP: Natural Alum.</td>
</tr>
<tr>
<td>DEBTEX: Royal Blue</td>
<td>TG: Hammer-tone</td>
</tr>
<tr>
<td>BG2TX: Sandstone</td>
<td>Gold</td>
</tr>
<tr>
<td>BKTX: Black</td>
<td>TS: Hammer-tone</td>
</tr>
<tr>
<td>BRTX: Bronze</td>
<td>Silver</td>
</tr>
<tr>
<td>GN4TX: Blue Green</td>
<td></td>
</tr>
<tr>
<td>GN6TX: Forest Green</td>
<td></td>
</tr>
<tr>
<td>GN8TX: Dark Forest Green</td>
<td></td>
</tr>
<tr>
<td>GNTX: Green</td>
<td></td>
</tr>
<tr>
<td>GY3TX: Medium Grey</td>
<td></td>
</tr>
<tr>
<td>RD2TX: Burgundy</td>
<td></td>
</tr>
<tr>
<td>RD4TX: Scarlet</td>
<td></td>
</tr>
<tr>
<td>WHTX: White</td>
<td></td>
</tr>
</tbody>
</table>

Quality Control

 Manufactured to ISO 9001 2008 and ISO 14001 2004 International Quality Standards Certification.

Vibration Resistance

Meets the ANSI C136.31, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications. (Tested for 3G over 100 000 cycles by an independent lab).

Service Tag

Each individual luminaire is uniquely identifiable, thanks to the Phillips Service tag application. With a simple scan of a QR code, placed inside the luminaire, you gain instant access to the luminaire configuration, making installation and maintenance operations faster and easier, no matter what stage of the luminaire’s lifetime. Just download the APP and register your product right away.

For more details visit: philips.com/servicetag

Certifications and Compliance

CSA, cULus Listed for Canada and USA, MetroScape is on the DesignLights.
**MPTR MetroScape LED post top**

**Urban**

---

**Specifications (continued)**

**Poles**

<table>
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<th>m</th>
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<tbody>
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<td>18</td>
<td>5.49</td>
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<td>4.27</td>
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<td>12</td>
<td>3.66</td>
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<td>10</td>
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<tr>
<td>4</td>
<td>1.22</td>
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<tr>
<td>2</td>
<td>0.61</td>
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</tbody>
</table>

**MPTR-FN10**
- Pole: RTA800-PS
- Mounting: CRF-2

**MPTR**
- Pole: RA61

**MPTR-PWB-FN11**
- Pole: RTA806-BA

Consult [Philips.com/luminaires](http://Philips.com/luminaires) for details and the complete line of Philips poles and brackets.
Philips Gardco 111 LED mini sconce luminaires are compact in size, perfect for low mounting height wall mount applications. 111 LED luminaires are designed to integrate naturally to wall surfaces. 111 LED luminaires are available with three (3) different distribution patterns, providing full cutoff performance (in the normal downlight position) and featuring LED arrays. Luminaires provide performance excellence and advanced Philips Gardco LED thermal management technology. High performance Class 1 LED systems offer potential energy savings of 50 % or more compared to HID systems. 111 LED luminaires are also available with 0-10V Dimming.

### Ordering guide

<table>
<thead>
<tr>
<th>Prefix</th>
<th>No. of LEDs</th>
<th>Drive Current</th>
<th>Color/Generation</th>
<th>Distribution</th>
<th>Voltage</th>
<th>Controls</th>
<th>Electrical/Luminaire</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>11L</td>
<td>16</td>
<td>350mA</td>
<td>WW-G2 Cool White 5700K, 70 CRI generation 2</td>
<td>2 Type II Wide Throw Optic, with maximized lateral throw</td>
<td>UNV 120-277V 50Hz/60Hz</td>
<td>DD 0-10V Dimming</td>
<td>PCB Photocell</td>
<td>Textured</td>
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<tr>
<td>11L</td>
<td>16</td>
<td>550mA</td>
<td>WW-G2 Neutral White 4000K, 70 CRI generation 2</td>
<td>3 Type III Preferred Wide Throw Optic, with improved forward throw</td>
<td>120V</td>
<td>DD</td>
<td>F1 Single fusing (120V, 277VAC)/</td>
<td>BK Black</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>750mA</td>
<td>WW-G2 Warm White 3000K, 70 CRI generation 2</td>
<td>4 Type IV Maximized forward throw optic</td>
<td>208V</td>
<td>DD</td>
<td>F2 Double fusing (208, 240VAC)</td>
<td>WH White</td>
</tr>
</tbody>
</table>

1. Provide specific input voltage.

### Dimensions

Note: Mounting plate center is located in the center of the luminaire width and 2.38" (6.03cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 1/4" (6.35cm) diameter bolts (by others) structurally to building.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
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<tbody>
<tr>
<td>Width</td>
<td>12-1/8&quot; (30.79 cm)</td>
</tr>
<tr>
<td>Height</td>
<td>7&quot; (17.78 cm)</td>
</tr>
<tr>
<td>Thickness</td>
<td>5-11/32&quot; (13.57 cm)</td>
</tr>
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</table>
111 Mini Sconce LED
110 Line LED, Wall Mount

LED Wattage and Lumen Values

<table>
<thead>
<tr>
<th>Color Temp.</th>
<th>Total Leds</th>
<th>Leds Current</th>
<th>Avg System Wattage</th>
<th>Lumen Output</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>mA</td>
<td></td>
<td></td>
<td>Bug Rating (LPW)</td>
<td>Efficiency (LPW)</td>
<td>Lumen Output</td>
</tr>
<tr>
<td>111-116-350-NN-WW-62</td>
<td>18</td>
<td>350</td>
<td>18</td>
<td>1908</td>
<td>BI-UD-60</td>
<td>103</td>
<td>1759</td>
</tr>
<tr>
<td>111-116-550-NN-WW-62</td>
<td>16</td>
<td>550</td>
<td>29</td>
<td>3900</td>
<td>BI-UD-60</td>
<td>106</td>
<td>2725</td>
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<tr>
<td>111-116-1750-WW-62</td>
<td>16</td>
<td>750</td>
<td>40</td>
<td>3807</td>
<td>BI-UD-60</td>
<td>95</td>
<td>3501</td>
</tr>
</tbody>
</table>

1. Wattage and lumen output may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature.
2. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/-10% due to actual input voltage.
3. Tests available for luminaires with the DL option and other color temperatures. Contact outdoorlightingapplications@philips.com if any approximate estimates are required for design purposes.
4. Absolute lumens for Cool White (CW) matches the Neutral White (NW) lumen output. Warm White (WW) performance is reduced by 12% compared to Neutral White (NW) values shown.

Specifications

Housing
Housings are die cast aluminum. A memory retentive gasket seals the housing to the door frame to exclude moisture, dust, insects and pollutants from the optical system. A black die cast ribbed backplate dissipates heat for longer system life. Main body cast housing and back plate made of a low copper die cast. Hinged door allows access to driver and led compartment.

Mounting
Mounting is completed through integral back plate that features a separate recessed feature for hook and lock quick mount plate that secures with two set screws from bottom of luminaire. Luminaire ships fully assembled, ready to install.

Light Engine
Composed of 4 main components: Heat Sink/LED Module/Optical System/Driver. Electrical components are RoHS compliant. Metal core board ensures greater heat transfer and longer lifespan.

IP Rating
Luminaires are rated IP66.

Predicted Lumen Depreciation Data

<table>
<thead>
<tr>
<th>Ambient Temperature</th>
<th>System Current</th>
<th>LED Current</th>
<th>Calculated L70Hrs 2</th>
<th>L70 at TM21°C</th>
<th>Lumen Maintenance at 60,000Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 °C</td>
<td>750 mA</td>
<td>750 mA</td>
<td>&gt;100,000</td>
<td>&gt;60,000</td>
<td>&gt;97%</td>
</tr>
</tbody>
</table>

1. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.
2. L70 is the predicted time when LED performance degrades to 70% of initial lumen output.
3. Calculated per IESNA TM 21-11. Published L70 hours limited to 6 times actual LED test hours.

Optical systems
The advanced LED optical systems provide IES Types 2, 3, 4. Composed of high performance UV stabilized optical grade polymeric refractor lenses to achieve desired distribution optimized to get maximum spacing, target luminaires and a superior lighting uniformity. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Dark sky compliant with 0% uplight and U0 per IESNA TM-15.

Door Frame
A single-piece die cast aluminum door frame integrates to the housing form. The door frame is hinged closed and secured to the housing with captive stainless steel fasteners. The heat and impact resistant 1/8" (32cm) tempered glass lens and one-piece gasket are mechanically secured to the door frame with galvanized steel retainers. A clear tempered glass lens is included. A diffuse lens is available as an option.

Thermal Management
Philips Gardco 111 LED luminaires utilize extruded aluminum integral thermal radiation fins to provide excellent thermal management critical to long LED system life.

Finish
Five standard colors offered in textured black, white, bronze, dark gray and medium gray. Color in accordance with the AAMA 2604 standard. Application of polyester powder coat paint 2.5 mls minimum. The thermostting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. RAL and custom color matching available.

LED Useful Life
Luminaire Useful Life accounts for LED lumen maintenance. Refer to IES files for energy consumption and delivered luminers for each option. Based on ISTTM in situ thermal testing in accordance with UL1598 and UL950, LED LM-80/ TM-21, expected to reach 100,000+ hours with >L70 lumen maintenance at 25°C.

Certifications and Compliance
cULs Listed for Canada and USA suitable for wet locations when mounted downward facing. cULs Listed for Canada and USA suitable for damp locations when inverted upward facing when mounted in covered ceiling application. DesignLights Consortium qualified on models as listed on DLC QPL. Luminaire is rated for operation in ambient temperature of -40°C (-40°F) up to +40°C (+104°F).

Limited Warranty
5-year limited warranty. See philips.com/ warrants for details and restrictions. Visit our eCatalog or contact your local sales representative for more information.

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philips.com/luminaires

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Philips Gardco 111 LED mini sconce luminaires are compact in size, perfect for low mounting height wall mount applications. 111 LED luminaires are designed to integrate naturally to wall surfaces. 111 LED luminaires are available with three (3) different distribution patterns, providing full cutoff performance (in the normal downlight position) and featuring LED arrays. Luminaires provide performance excellence and advanced Philips Gardco LED thermal management technology. High performance Class 1 LED systems offer potential energy savings of 50% or more compared to HID systems. 111 LED luminaires are also available with 0-10V Dimming.

### Ordering guide

**Example:** 111L-16L-350-CW-G2-2-UNV-DD-BK

<table>
<thead>
<tr>
<th>Prefix</th>
<th>No. of LEDs</th>
<th>Drive Current</th>
<th>Color/Generation</th>
<th>Distribution</th>
<th>Voltage</th>
<th>Controls</th>
<th>Electrical/Luminaire</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>111L</td>
<td>16L</td>
<td>350mA</td>
<td>Cool White 5300K, 70 CRI generation 2</td>
<td>Type II Wide Throw Optic with maximized lateral throw</td>
<td>UNV 120-277V 50Hz/60Hz</td>
<td>DD</td>
<td>0-10V Dimming</td>
<td>F1 Single Fusing (120, 277VAC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Neutral White 4000K, 70 CRI generation 2</td>
<td>Type III Preferred Wide Throw Optic, with improved forward throw</td>
<td>120 120V</td>
<td>DD</td>
<td>F2 Double Fusing (208, 240VAC)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>750mA</td>
<td>Warm White 3000K, 70 CRI generation 2</td>
<td>Type IV Maximized forward throw optic</td>
<td>208 208V</td>
<td>DD</td>
<td>F3 Canadian double pull fusing (208, 240VAC)</td>
<td></td>
</tr>
</tbody>
</table>

1. Provide specific input voltage.

### Dimensions

Note: Mounting plate center is located in the center of the luminaire width and 2.38" (6.03 cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 1/4" (6.4 cm) diameter bolts (by others) structurally to the wall.
Mini Sconce LED
110 Line LED, Wall Mount

LED Wattage and Lumen Values

<table>
<thead>
<tr>
<th>Color Temperature</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>111L-16L-350-WW-G2</td>
<td>18</td>
<td>20</td>
<td>22</td>
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<tr>
<td>111L-16L-550-WW-G2</td>
<td>29</td>
<td>31</td>
<td>33</td>
</tr>
<tr>
<td>111L-16L-750-WW-G2</td>
<td>40</td>
<td>42</td>
<td>44</td>
</tr>
</tbody>
</table>

1. Wattage and lumen output may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature.
2. Efficiency may vary by an additional +/- 10% due to actual input voltage.
3. Tests available for luminaires with the DL option and other color temperatures. Contact outdoorlighting.applications@philips.com for approximate estimates are required for design purposes.

Specifications

Housing
Housings are die cast aluminum. A memory retentive gasket seals the housing to the door frame to exclude moisture, dust, insects and pollutants from the optical system. A die cast ribbed backplate dissipates heat for longer system life. Mainbody casting and back plate made of a low copper die cast. Hinged door allows access to driver and LED compartment.

Mounting
Mounting is completed though integral back plate that features a separate recessed feature for hook and lock quick mount plate that secures with two set screws from bottom of luminaire. Luminaire ships fully assembled, ready to install.

Light Engine
Composed of 4 main components: Heat Sink/LED Module/Optical System/Driver. Electrical components are RoHS compliant. Metal core board ensures greater heat transfer and longer lifespan.

IP Rating
Luminaires are rated IP66.

Predicted Lumen Depreciation Data

<table>
<thead>
<tr>
<th>Ambient Temperature °C</th>
<th>System Current mA</th>
<th>LED Current mA</th>
<th>Calculated L100k hrs</th>
<th>L70 per TM21</th>
<th>Lumen Maintenance at 60,000 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>750</td>
<td>750</td>
<td>&gt;100,000</td>
<td>&gt;60,000</td>
<td>97%</td>
</tr>
</tbody>
</table>

1. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.
2. L70 is the predicted time when LED performance deprecnees to 70% of initial lumen output.
3. Calculated per IESNA TM-21. Published L70 hours limited to 6 times actual LED last hours.

Optical systems
The advanced LED optical systems provide IES Types 2, 3, 4. Composed of high performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized for maximum spacing, target lumens and a superior lighting uniformity. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Dark sky complaint with 0% uplight and U0 per IESNA TM-15.

Door Frame
A single-piece die cast aluminum door frame integrates to the housing form. The door frame is hinged closed and secured to the housing with captive stainless steel fasteners. The heat and impact resistant 1/8" (32cm) tempered glass lens and one-piece gasket are mechanically secured to the door frame with galvanized steel retainers. A clear tempered glass lens is included. A diffuse lens is available as an option.

Thermal Management
Philips Gardco 111 LED luminaires utilize extruded aluminum integral thermal radiation fins to provide excellent thermal management critical to long LED system life.

Finish
Five standard colors offered in textured black, white, bronze, dark gray and medium gray. Color in accordance with the AAAM 2604 standard. Application of polyester powder coat paint 2.5 min. minimum. The thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. RAL and custom color matching available.

LED Useable Life
Lumen Useable Life accounts for LED lumen maintenance. Refer to IES files for energy consumption and delivered lumens for each option. Based on IESNA TM-21, expected to last 100,000+ hours with >1.70 lumen maintenance at 25°C.

Certifications and Compliance
cULus Listed for Canada and USA suitable for wet locations when mounted downward facing. cULus Listed for Canada and USA suitable for damp locations when inverted upward facing when mounted in covered ceiling application. DesignLights Consortium qualified on models as listed on DLC QPL. Luminaire is rated for operation in ambient temperature of -40°C (~40°F) up to +40°C (~104°F).

Limited Warranty
5-year limited warranty. See philips.com/warranty for details and restrictions. Visit our eCatalog or contact your local sales representative for more information.

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200 Franklin Square Drive, Somerset, NJ 08873
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Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008
## SPECIFICATIONS

**DESCRIPTION:**
Compact LED adjustable accent fixture with integral angled glare shield. Suitable for wet/damp/dry location installations.

**MATERIAL:**
- Standard overall material: 5061 aluminum
  - HL-369-LED - Machined Aluminum (Standard)
  - HL-369-LED-20 - Machined Brass

**FINISH:**
- AA - Anodized Satin Aluminum
- AP - Powder Coat Aluminum
- BK - Powder Coat Black
- BZ - Powder Coat Bronze
- WT - Powder Coat White
- N - Natural, for Stainless Steel and Brass

**LED OPTIONS:**
- Integral high output LED, warm white (3000K CCT) standard, others available.
  - 3LED - 3W LED
  - 6LED - 6W LED

**OPTICS:**
- SP - Spot, 12°
- NE - Narrow, 24°
- FL - Flood, 38°

**VOLTAGE:**
- 12 - 12 VAC output transformer required, not included.

**MOUNTING:**
- Fixture is designed with a 1/2-NPS adjustable mounting stem.

**OPTIONS:**
- Lenses/Louvers/Color Filters
  - LA-1 - Hexcell Louver (Black)
  - LA-2 - Prismatic lens
  - LA-3 - Linear spread lens
  - LA-4 - Soft focus lens (diffused)
  - LA-5 - Moonlight lens
  - LA-6 - Blue lens

See fixture accessories for more information.

**SAMPLE ORDER SPECIFICATION:**
HL-369-3LED-BZ-FL-12-LA-1

**RATING:**
- Wet/damp/dry location.

---

**ORDER SPECIFICATION:**

<table>
<thead>
<tr>
<th>Fixture</th>
<th>Finish</th>
<th>Optics</th>
<th>Voltage</th>
<th>Optional/Access.</th>
</tr>
</thead>
</table>

**PROJECT:**

**APPROVED:**

**NOTE:**

**TYPE:**

---

**HEVI LITE, INC.**
9714 Variel Ave, Chatsworth, CA 91311
Tel. (818) 341-8091 - Fax (818) 998-1986
Web Site http://www.hevilit.com

MADE IN THE USA

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THE U-CARA ADVANTAGE

- Easy-to-learn system
- Easy-to-handle lightweight components
- Interchangeable components for seamless integration with other U-carl products
- One platform to create different looks
- Dimensional accuracy for precise installation

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The U-Cara Multi-Face Wall System is a platform comprised of only a few components that provide a huge array of installation and design options.
Always observe retaining wall building codes. Large walls should always be reviewed by a professional engineer prior to construction.
Virtually any landscape wall or feature can be built using the U-Cara Multiflame Wall System. U-Cara’s dimensions, sizes and technology make it the most flexible and easy-to-install system on the market. This manual will illustrate how to construct some of the most common walls and features. The more you work with it, the more you’ll discover U-Cara’s application flexibility.
The U-Cara wall system is a patented wall system that gives you more design options for complete creative flexibility. That’s because U-Cara Fasca Panels can be placed anywhere on the Sure Track™ Backer Blocks, allowing for a variety of pattern, color and texture combinations not possible with other systems.
Always start with an in-depth consultation to better understand what your client is looking for. Learning about your client's budget, needs and aspirations will help you to design their outdoor space.

In practical terms, a good outdoor living space should always take in consideration things such as group size, traffic flow of people and proportional scale to the size of the home.

We recommend that you watch the U-Cara Installation Video Series at unilock.com for a first-hand look at an actual project installation.

PLANNING

Whether you are building a seat wall, pillar or grill island, plan your project with U-Cara Fascia Panel dimensions in mind. Remember, fewer cuts means faster installation.

1. Sketch your overall design concept.
2. Use CAD or Uvision 3D to lay out location and heights of features.
3. Optimize your design using fascia panel lengths.
4. Decide on location of lights, water and other utilities.
5. Calculate number of fascia panels and Sure Track Backer Blocks.
6. Calculate base requirements.
CALCULATION EXAMPLE

The example below can help you calculate the number of U-Cara products needed for a pillar and wall project.

PILLARS:
- 4 Large Backer Blocks per layer  
  \[ = 24 \text{ units per pillar} \times 2 = 48 \text{ units total} \]
- 4 Standard U-Cara Closed-End Corner Panels per layer = 24 units per pillar  
  \[ \times 2 = 48 \text{ units total} \]
- 2 Pillar Caps
- 96 Sure Track Corner Inserts
- 8 Tubes of Concrete Adhesive (10 oz Approx.)

WALL:
- 9 Standard Sure Track Backer Blocks per layer = 27 units total
- 12 Standard U-Cara Fascia Panels per side = 24 units total
- 4 Universal Coping units
BASE PREPARATION

Base preparation for walls and pillars is standard for all Unilock wall systems. However, with U-Cara, we strongly recommend you use the Universal Base Unit as a leveling pad on top of the gravel base. This will significantly increase the speed of installation and maintain the long-term integrity of your project.

1. Excavate a trench with a minimum depth of 16" for walls and 24" for pillars.
2. The width of the trench should be twice the width of the wall unit.
3. Ensure that all topsoil is removed down to undisturbed subsoil.
4. Line the trench with Unilock DriveGrid® or a permeable landscape filter fabric.
5. Place 4" to 8" of free draining gravel in the trench. (Open-graded gravel or typical road base is recommended.)
6. Walls generally should have one complete row of wall units below grade. However, for walls 12" or lower, a half block below grade is sufficient. Pillars should have a minimum of 2 courses of wall units below grade. Adjust your excavation accordingly.
7. Compact the gravel in the trench with a jumping jack, hand tamper or plate compactor.
8. Place and level the Universal Base Units on the gravel base at the appropriate height.
GRAVITY WALL

1. Perforated Drainage Pipe
2. Filter Fabric
3. 3/4" Clear Stone (ASTM No. 57) or Road Base (6" thick)
4. Universal Base Unit
5. 3/4" Clear Stone (ASTM No. 57) Backfill min. 12" wide
6. Large Sure Track Backer Block
7. U-Cara Fascia Panel
8. Coping
9. Subsoil
10. Topsoil
11. Turf
GEOGRID WALL

1. Perforated Drainage Pipe
2. Compacted Granular Fill as specified by engineer
3. 3/4" Clear Stone (ASTM No. 57) or Road Base (6" thick)
4. Universal Base Unit
5. Approved Geogrid
6. Large Sure Track® Backer Block
7. U-Cara Fascia Panel
8. Filter Fabric
9. Coping
10. Subsoil
11. Topsoil
12. Turf

See pages 23-26 for more information about constructing higher walls.
TYPICAL ASSEMBLY

1. **U-Cara must** be installed on a hard surface. We recommend Unilock Universal Base Units placed over a compacted bed of gravel.

2. Position and glue the first row of Standard Sure Track Backer Blocks onto the Universal Base Unit using the alignment grooves to help keep your line straight.

3. Always position U-Cara Fascia Panels onto the backer blocks **before** glue sets. This will allow you to easily adjust wall straightness with a straight-edge or stringline. Avoid cutting backer blocks by spacing them apart as required. The fascia panels will cover up any gaps. **Important:** Large Sure Track Backer Blocks do not require adhesive between rows. Only use adhesive between Standard Sure Track Backer Blocks when installed in the vertical position. No adhesive is required in the setback position.

4. Position and glue subsequent rows of backer blocks onto the previous course, staggering the joints. The bottom channels of the block will allow for construction of vertical or setback walls.

5. After placing a row of glued backer blocks, hang the U-Cara Fascia Panels before the adhesive has cured making minor alignment adjustments easier.

- By offsetting the keel and channel convention, you can create a 3.3 degree battered wall for additional strength.
- Use the factory stamped grooves in the Universal Base Unit to help maintain the alignment of your first row of backer blocks.
- Backer blocks can be conveniently spaced apart to make up differences in wall lengths. The spaces are hidden by the panels. Use fiber blend behind single-sided planter walls.
**90° CORNERS**

1. Corners are generally constructed with Large Sure Track™ Backer Block units. (See Fire Pits on page 22 for an alternate method.)

2. Prepare several large backer blocks by removing both top keys with a mallet and chisel. Then, snap Sure Track Corner Inserts into one side of the corner backer block.

3. Position and glue the first corner backer block to the base unit.

4. Position and glue large or standard backer blocks in each direction from the corner unit until you reach your next corner, pillar or wall. Before the glue sets, position and glue a U-Cara Closed-End Corner Panel onto the backer blocks.

5. Complete each corner with a U-Cara Standard Half Fascia Panel (provided in the corner bundle). Position these half units on the opposing side against the closed end of the corner panel.

6. Use a large square to ensure your corner is square.

7. Reverse the position of the large backer block every other row. Position and glue this assembly carefully.

**Note:** Closed end panels come bundled with 4 panels that close on the right and 3 that close on the left (per layer). Keep this in mind when deciding which panel should be used first on a corner or pillar.

---

**TIPS**

- Horizontally adjustable Sure Track inserts simply “snap” into molded channel.
- Backer blocks can be conveniently spaced apart to make up differences in wall lengths.

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**45° CORNERS**

1. Whether you are constructing 90 or 45 degree corners, corners should always be constructed first.

2. When constructing a 45 degree corner, backer blocks will overlap every other row which will require the removal of any interfering top keys.

3. Cut the ends of U-Cara Fascia Panels and standard half panels on a 45 degree angle as shown.

4. It is a good practice to glue any angular cut backers or panels for additional strength.

5. When starting each course, always make sure to stagger the backer block joints.

6. Begin each course with the corner backers and corner panels.

7. Repeat steps 4 through 6 until desired height is reached.

---

**TIPS**

- For optimal structural and visual integrity, use concrete adhesive wherever possible between components.
CURVED WALLS

1. Always construct walls on Universal Base Units. Prepare 2 Standard Sure Track™ Backer Blocks per panel length by removing the top alignment keys.

2. For single-sided walls, you only need fascia panels on one side of the backer blocks. One panel mounts on to two standard backers. No cutting of backers or panels is required.

3. For double-sided walls, you will need to order enough fascia panels to cover both sides. Inside radius panels must be cut to a length that will achieve your desired radius.

4. Min. radius (r) = 8 ft (2 m)
   Inside panel length 8 ft \( r = 16.75^\circ \) (42.5 cm)
   Max. curved wall height = 24" above grade

5. When constructing two-sided curved walls, fill any voids between backer blocks with gravel to prevent light from showing through.

TIPS

- Adhesive is required to secure curved walls.
- You will need approximately one 10 oz. tube for every 5 feet of wall.
SURE TRACK™ OPTIONS
(VERTICAL WALLS ONLY)

Sure Track Backer Blocks offer various options for positioning U-Cara Fascia Panels. Fascia panels can be placed anywhere and on any track vertically or horizontally. This can only be done when the backers are stacked vertically.

**Note:** When a fascia panel straddles two courses of backer blocks, the wall will automatically be strengthened by a mechanical connection.

**Tips:**
- Straddling the backer blocks with the fascia panels will require the first row of panels to be cut lengthwise as a starter unit. Keep the cut-off piece to use for the last row, just under the coping, or choose option B.
- In order to create a utility channel for electricity, gas, or irrigation, simply install a full panel as the last row and then cap with coping. Use liberal amounts of concrete adhesive and always secure your work so that panel will not shift before curing.
CARA

SEAT WALLS

1. Universal 14" x 19" Coping (1.75" overhang each side)
2. U-Cara Fascia Panels (on both sides)
3. Patio or Lawn
4. Paver Bedding Course 1/4" Clear Chip Stone (ASTM No. 8 or 9)
5. 4"-6" of 3/4" Clear Stone Base (ASTM No. 57)
6. Unilock DriveGrid®
7. 4"-6" of 3/4" Clear Stone Base (ASTM No. 57)
8. Universal Base Unit
9. Native Subsoil

Remove alignment key from top row of backer blocks.

Seat Wall Side Elevation

Tip: Comfortable seat width are typically 16-18" from patio floor to top of coping.

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GARDEN BORDERS

The combined thickness of a Standard Sure Track™ Backer Block and a fascia panel is less than 9" deep, making the U-Cara Wall System ideal for small garden borders or self-standing planters.

1. Install Universal Base Units on a 6" gravel base ensuring they are perfectly level. Use DriveGrid™ under gravel for added stability.
2. Use a permeable filter fabric to separate the soil from the back of the wall.
3. If stacked vertically, standard backer blocks should be glued.
4. Attaching fascia panels to backers will help align the backers as you go. Note: In frost-prone areas, applying some glue between the bottom of the fascia panels and the universal base unit is good practice.
5. Always glue coping to the top of your backers after removing the alignment key.

TIPS
- For narrow planters consider using U-Cara Fascia Panels as coping.
Building steps with U-Cara is like building a set of miniature single-course walls, one behind the other.

1. Universal Base Units should be used to construct steps quickly and securely.

2. Steps are constructed using Large Sure Track™ Backer Blocks with the top keys removed. Position and glue an entire row of the backer blocks to the Universal Base Unit. Be sure to leave enough room to adhere fascia panels onto the front of the backer. Then, the assembly of backers and fascia can be pushed forward to meet the previous coping or paver surface. The adhesive under the backers will facilitate the sliding forward.

3. Complete each step by gluing the coping to the top of the large backer units. An overhang of 1.5" (3.8 cm)–2" (5 cm) is recommended.

4. For each consecutive step, install another row of Universal Base Units flush to the top of the backers of the previous step.

5. In order to attach panels on an exposed end, simply snap in the Sure Track Corner inserts and attach a U-Cara Fascia Panel.
**RAISED PATIO**

1. Install Universal Base Units on a 6" gravel base, ensuring they are perfectly level.

2. Adhere the first row of Large Sure Track™ Backer Blocks onto the Universal Base Units. (Optional) Use the grooves impressed onto the surface of the base unit to maintain block alignment.

3. Continue to install subsequent rows of backer blocks making sure you horizontally offset each row by one half block. You may need to cut one backer in half every other row. We recommend installing backers in the "set-back" position for increased wall strength.

4. Back fill as you go (max two layers of U-Cara) with 3/4" clear stone (ASTM No. 57). A layer of filter fabric is recommended directly behind the block to prevent any aggregate from migrating through any openings. **Note:** Geogrid (optional) may also be used to reinforce walls (See page 25).

5. When you reach patio-level height and your plan calls for a seat wall around the perimeter of the patio, you can transition over to standard backer blocks and clad both sides with fascia panels.

6. In order to attach coping to the top of the seat wall, remove the top key on the top row.
PILLARS ASSEMBLY

Pillars should be constructed on 6" (15 cm) to 12" (30 cm) of clear, open graded gravel. The pillar embedment should never be less than 12" (30 cm) below grade.

1. Install 4 Universal Base Units on a compacted gravel base. These base units must be level.

2. Before constructing the pillar, prepare enough large backers by removing the “front” top key of each block. Using concrete adhesive, adhere 4 large backer blocks to the base units ensuring that the corner inserts face outwards.

3. Position 4 “left” panels on the Sure Track® Rails. Use a carpenter’s square to square up the first layer of corner backer blocks and fascia panels.

4. To begin the second layer, adhere 4 corner backer blocks in an offset “log cabin” layout.

5. Position 4 “right” fascia panels on the rails. Use a carpenter’s square to square up the first layer to the second layer.

6. Continue each layer until you have reached the desired height.

7. Adhere a coping unit to the top.

TIPS:
- For lamp posts: be sure to run conduit and electrical wire to the pillar. (All electrical work must be done by a qualified electrician)
- Clip end corner fascia panels come in “lefts” and “rights”. Alternate between lefts and rights every other course.
Grill Islands and other larger features should be constructed on a concrete pad supported by 10" diameter concrete piers seated below the frost line. Space piers 6' apart and place a wire mesh or rebar across the piers prior to pouring the 6" thick pad.

2. Ensure there is also 6" of 3/4" open-graded stone gravel under the pad.

3. Position Large Sure Track™ Backer Blocks at the corner locations and fill in between with standard or large backers. If you are constructing the island within the panel dimensions, attach the panels to the backer blocks as you go for precise alignment. You will need to insert 4 Sure Track Corner Inserts into the side channel so you can hang a panel. We recommend that you glue corner fascia panels to the backer blocks for additional strength.

4. In order to "log cabin" the corners, remove the top key and repeat step 3 with the corner backer starting in the opposite direction.

5. Install precast or granite counter top.

TIPS:
- Install gas lines right after drilling in the piers and before pouring the concrete pad.
- Order the grill in advance of constructing the grill island so that you will know the exact dimensions for the opening in the grill island and the counter top.

Remove alignment key from top row of backer blocks.
FIRE PIT

1. Install 8 Universal Base Units on a minimum 6" gravel base as shown, ensuring they are perfectly level.

2. You will need to prepare 12 Standard Sure Track Backer Blocks by removing the top key. Construct the corners by creating a butt joint with the standard backer blocks as shown. Note: Do not use the large backer blocks with the plastic inserts because the inserts are not designed for high heat applications.

3. Position and glue the first row of standard backer blocks as shown. Only use construction adhesive rated for high-heat applications (A 1200°F minimum rating is recommended).

4. Adhere U-Cara Corner Fascia Panels on the outside and inside of the fire pit using the same construction adhesive. Position and glue the next row of backer blocks onto the first row of backers. Create a "log cabin" corner as shown.

5. Repeat for consecutive rows until the desired height has been reached.

TIPS:
- Only use construction adhesive rated for high-heat applications. A 1200°F minimum rating is recommended.
- If you are building a gas fire pit, make sure that you run your gas line to the center of the pit area before installing the base units.
- Always apply adhesive between the bottom of the first row of fascia panels and the Universal Base Units.
Load Assumptions

<table>
<thead>
<tr>
<th>Wall Alignment</th>
<th>Exposed Wall Height</th>
<th>Max Total Wall Height</th>
<th>Exposed Wall Height</th>
<th>Max Total Wall Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>0° Vertical</td>
<td>1.7/0.52</td>
<td>2.2/0.67</td>
<td>1.7/0.52</td>
<td>2.2/0.67</td>
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<tr>
<td>5.5° Battered</td>
<td>2.2/0.67</td>
<td>2.7/0.82</td>
<td>2.2/0.67</td>
<td>2.7/0.82</td>
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Soil Assumptions

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<thead>
<tr>
<th>Soil Condition</th>
<th>Description</th>
<th>O-degrees</th>
<th>Unit Weight (g/lb/cu.ft)</th>
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<tbody>
<tr>
<td>Drainage (Min. 12°/0.3m)</td>
<td>GP Free Draining Gravel, max 5% fines</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Retained</td>
<td>CL Inorganic Clays, low-med plasticity</td>
<td>28</td>
<td>125</td>
</tr>
<tr>
<td>Foundation</td>
<td>CL Inorganic Clays, low-med plasticity</td>
<td>28</td>
<td>125</td>
</tr>
</tbody>
</table>

Drainage to be Free Draining Material in accordance with NCMA recommendations. A minimum Embedment of 0.5 ft/0.15 m is required.
Load Assumptions

<table>
<thead>
<tr>
<th>Wall Alignment</th>
<th>Exposed Wall Height (ft/m)</th>
<th>Max Total Wall Height (ft/m)</th>
<th>Exposed Wall Height (ft/m)</th>
<th>Max Total Wall Height (ft/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0° Vertical</td>
<td>2.6/0.79</td>
<td>3.1/0.94</td>
<td>2.6/0.79</td>
<td>3.1/0.94</td>
</tr>
<tr>
<td>5.5° Battered</td>
<td>3.1/0.94</td>
<td>3.6/1.0</td>
<td>3.1/0.94</td>
<td>3.6/1.0</td>
</tr>
</tbody>
</table>

Soil Assumptions

<table>
<thead>
<tr>
<th>Soil Condition</th>
<th>Description</th>
<th>0-degrees</th>
<th>Unit Weight (p-lb/cu.ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drainage/Retained</td>
<td>GP Free Draining Gravel, max 5% fines</td>
<td>35</td>
<td>115</td>
</tr>
<tr>
<td>1H:1V Gravel Wedge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundation</td>
<td>CL Inorganic Clays, low-med plasticity</td>
<td>28</td>
<td>125</td>
</tr>
</tbody>
</table>

Drainage to be Free Draining Material in accordance with NCMA recommendations. A minimum Embedment of 0.5 ft/0.15 m is required.
## Soil Assumptions

<table>
<thead>
<tr>
<th>Soil Condition</th>
<th>Description</th>
<th>0-degrees</th>
<th>Unit Weight (g-lb/cu.ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infill (Reinforced)</td>
<td>GW Well graded gravel, gravel sand, max 5% fine content</td>
<td>35</td>
<td>140</td>
</tr>
<tr>
<td>Retained</td>
<td>CL Inorganic Clays, low-med plasticity</td>
<td>28</td>
<td>125</td>
</tr>
<tr>
<td>Foundation</td>
<td>CL Inorganic Clays, low-med plasticity</td>
<td>28</td>
<td>125</td>
</tr>
</tbody>
</table>

**Disclaimer**: GeoGrid Reinforcement to be EuroGrid 200 or equivalent. The above design information is being provided for preliminary estimate and feasibility purpose only, and should not be used for construction. Prior to wall construction, a Final Design must be supplied by a qualified Engineer licensed in the applicable State/Province. Handrails and/or traffic barriers are not shown but are typically required and may influence the wall design. The above design is not to be used with the terraced structures, water applications or within the line of influence of other permanent structures. 1800UNLOCK | unlock.com.


**Geogrid Reinforced**

**Typical Battered (5.5-Degree)**

<table>
<thead>
<tr>
<th>Exposed Wall Height (ft/m)</th>
<th>Embedment (ft/m)</th>
<th>Total Wall Height (ft/m)</th>
<th>No. Geogrid Layers</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2/0.97</td>
<td>0.5/0.15</td>
<td>3.7/1.12</td>
<td>2</td>
</tr>
<tr>
<td>3.7/1.12</td>
<td>0.5/0.15</td>
<td>4.2/1.27</td>
<td>2</td>
</tr>
<tr>
<td>4.1/1.27</td>
<td>0.5/0.15</td>
<td>4.7/1.42</td>
<td>3</td>
</tr>
<tr>
<td>4.6/1.41</td>
<td>0.5/0.15</td>
<td>5.2/1.56</td>
<td>3</td>
</tr>
<tr>
<td>5.1/1.55</td>
<td>0.6/0.17</td>
<td>5.6/1.72</td>
<td>3</td>
</tr>
<tr>
<td>5.5/1.68</td>
<td>0.6/0.19</td>
<td>6.1/1.87</td>
<td>4</td>
</tr>
<tr>
<td>6.0/1.82</td>
<td>0.7/0.20</td>
<td>6.6/2.02</td>
<td>4</td>
</tr>
<tr>
<td>6.4/1.95</td>
<td>0.7/0.22</td>
<td>7.1/2.17</td>
<td>4</td>
</tr>
<tr>
<td>6.8/2.09</td>
<td>0.8/0.23</td>
<td>7.6/2.32</td>
<td>5</td>
</tr>
<tr>
<td>7.3/2.22</td>
<td>0.8/0.25</td>
<td>8.1/2.47</td>
<td>5</td>
</tr>
<tr>
<td>7.7/2.36</td>
<td>0.9/0.26</td>
<td>8.6/2.62</td>
<td>5</td>
</tr>
</tbody>
</table>

**Loading Conditions**

**Geogrid Required** (for Vertical or Battered Wall Installation)

<table>
<thead>
<tr>
<th>Flat</th>
<th>Pedestrian Load (2000/124 kN)</th>
<th>Slope</th>
<th>3H:1V</th>
<th>Heavy Traffic (2500/135 kN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid Length (ft/m)</td>
<td>Grid Length (ft/m)</td>
<td>Grid Length (ft/m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.0/1.22</td>
<td>4.0/1.22</td>
<td>4.0/1.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.0/1.22</td>
<td>4.0/1.22</td>
<td>4.0/1.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.0/1.22</td>
<td>4.5/1.37</td>
<td>4.5/1.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.5/1.37</td>
<td>4.5/1.37</td>
<td>4.5/1.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0/1.52</td>
<td>5.5/1.68</td>
<td>5.5/1.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0/1.52</td>
<td>5.5/1.68</td>
<td>5.5/1.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.5/1.68</td>
<td>6.0/1.83</td>
<td>6.0/1.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.0/1.83</td>
<td>6.5/1.98</td>
<td>6.5/1.98</td>
<td></td>
<td></td>
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<tr>
<td>6.0/1.83</td>
<td>7.0/2.13</td>
<td>7.0/2.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.5/1.98</td>
<td>7.0/2.13</td>
<td>7.0/2.13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Received**

OCT 19 2016

City of
Planning Department
Notice of Intent (NOI) for Stormwater Discharges
Associated with Construction Activities on LOW RISK SITES
Under Vermont Construction General Permit 3-9020

Submission of this completed Notice of Intent (NOI) constitutes notice that the entities in Section A intend to be authorized to discharge pollutants to Waters of the State, from the project identified in Section 3, under Vermont’s Construction General Permit (CGP). Submission of the NOI constitutes notice that the parties identified in Section 1 of this form have read, understand, and meet the eligibility conditions of the CGP; have determined that the project qualifies for coverage as a Low Risk project in conformance with Appendix A of the CGP; agree to comply with all applicable terms and conditions of the CGP; understand that continued authorization under the CGP is contingent on maintaining eligibility for coverage; and that all applicable practices in the Low Risk Site Handbook for Erosion Prevention and Sediment Control must be implemented and maintained for the duration of construction activities. In order to be granted coverage, all information required on this form must be provided and an application fee payable to the State of Vermont must be submitted.

A. Applicant(s) Information (as of January 1st, 2018, email addresses are required)

1. Landowner: Mary H. Heney Trust/Lawrence P. Heney Trust

2a. Mailing Address: c/o Tim Heney, Heney Realtors, 80 Main Street
2b. Town: Montpelier
2c. State: VT
2d. Zip: 05602
3. Phone: 802-229-0345
4. Email: Tim@HeneyRealtors.com

5. Additional Contact Name/Email (if applicable): 

6. Principal Operator (if known): City of Montpelier, City Manager, William Fraser

7a. Mailing Address: 39 Main Street
7b. Town: Montpelier
7c. State: VT
7d. Zip: 05602-2950
8. Phone: 802-223-9502
9. Email: wfraser@montpelier-vt.org

10. Additional Contact Name/Email (if applicable):

B. Application Preparer / Consultant Information

2. Name: David S. Marshall, P.E.

3a. Mailing Address: 10 Mansfield View Lane
3b. Town: South Burlington
3c. State Vermont
3d. Zip 05403
4. Phone: 802-864-2323 x310
5. Email: dmarshall@cea-vt.com

6. Additional Contact Name/Email (if applicable):

C. Project Information (all fields are required)

1. Project Name: City Parking Garage

2a. Is this project part of a Common Plan of Development? ☑ Yes □ No

2b. If Yes, name of Development: Hampton Inn Hotel and Garage

3a. Does this project have any previously issued or pending stormwater discharge permits? ☑ Yes □ No

3b. If Yes, prior NOI number(s): None

4a. Physical Address of Project: 60 State Street
4b. Town: Montpelier
4c. County: Washington

Project Coordinates (project center in Decimal Degrees with 6 digits to the right of the decimal)

5a. Latitude: 44.25976
5b. Longitude: -72.57783

Received

City of Montpelier Planning Department

OCT 19 2018

Revised May 2018
6. **SPAN**: Enter the 11-digit number that is printed on the property tax bill for the applicable parcel(s). Projects that involve more than 1 parcel shall list all applicable SPANS.

```
4 0 5 - 1 2 6 - 1 1 3 8 2
```

7. **Name of receiving water(s):** North Branch Winooski River

Include a topographic location map - Must provide sufficient information to determine the location of the project. Must be in the form of a USGS topographical map or directional map.

8. **Total area of disturbance:** 2.2 Acres (<= 5 acres: $100 per application, > 5 acres: $220 per application)

9. **Description of construction activities to be permitted:**

Construction of a new parking garage facility and supporting infrastructure as a part of a common plan of development with the adjacent new Hampton Inn hotel.

---

**E. Certification Relating to the Accuracy of the Information Submitted**

I hereby certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I also certify that the applicable practices in The Low Risk Site Handbook for Erosion Prevention and Sediment Control will be implemented for the duration of the project for which this NOI is submitted.

**Landowner Name:** Mary H. Heney Trust/Lawrence P. Heney Trust  
**Title:** Managing Partner

**Signature:**  
**Date:**

**Principal Operator**

**Signature:**  
**Date:**  
**Title:** City Manager

**Application Prepared**

**Signature:**  
**Date:**  
**Title:** Principal Engineer

---

**Submit this form, Appendix A, location map, and the $100.00 application review fee to:**  
Vermont DEC - Watershed Management Division, Stormwater Program  
1 National Life Drive, Main Building Second Floor  
Montpelier, VT 05620-3522

**Refund Policy:**
- If an application is modified, withdrawn or denied after technical review has commenced; application review fees are retained.
- If an application is withdrawn prior to commencement of technical review, deemed administratively incomplete and returned to applicant, or determined that a permit is not required; application review fees will be refunded.

By initialing to the left, I certify that I have read and understand the refund policy above.
Received

OCT 19 2018

City of Montpelier
Planning Department
APPENDIX A - RISK EVALUATION

Accurately answering the questions in this appendix will allow you to determine whether a proposed construction project is considered a Low Risk or Moderate Risk project, which defines the application and permit requirements that are applicable to your project.

The risk evaluation procedure consists of two parts. Part I is a Basic Risk Evaluation, which determines if a project is automatically categorized as Low Risk based upon the answers to a few basic questions.

If a project is not automatically categorized as Low Risk based upon the Basic Risk Evaluation, you must complete Part II, Detailed Risk Evaluation, to determine the risk category for your project. This part includes questions on more detailed aspects of the project.

Once the appropriate risk category has been determined, refer to Part III for the application requirements.

You should be aware that each completed Appendix A is incorporated by reference and included in the terms of this general permit, and each permittee shall undertake its construction activities in accordance with the completed Appendix A, as a condition of this permit. Failure to comply with the completed Appendix A shall be deemed a violation of this permit and subject to enforcement action.
APPENDIX A

Part I – Basic Risk Evaluation

A project may automatically be categorized as Low Risk based on a few basic project characteristics. Answer each question below to determine if a project is automatically categorized as Low Risk. For definitions of terms used in the following questions (e.g., disturbance, vegetated buffer) refer to Appendix C.

<table>
<thead>
<tr>
<th>Basic Risk Evaluation Criteria</th>
<th>Answer</th>
<th>Score Direction</th>
<th>Enter Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Will the proposed independent project alone disturb more than 2 acres of land?</td>
<td>YES</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Is the project within a watershed impaired due to stormwater or sediment as specified on Part A of the Vermont 303(d) list?</td>
<td>YES</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Will the project have any stormwater discharges from the construction site to receiving water(s) that do not first pass through a 50 ft vegetated buffer area?</td>
<td>YES</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Will the project have disturbed earth in any one location for more than 14 consecutive calendar days without temporary or final stabilization?</td>
<td>YES</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Will the project have more than five acres of disturbed earth at any one time?</td>
<td>YES</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Score for Basic Risk Evaluation (add score from questions 1-5)

If the Total Score for Basic Risk Evaluation is 0, the proposed project is eligible for coverage under this permit as a Low Risk project. Proceed to Part IV of Appendix A for a summary of the application requirements for Low Risk Projects. If not, proceed to Part II.

**Criterion 1:** Only include the disturbance planned for an independent project. For example, if a lot owner is only building on a single house lot in a residential subdivision, only consider the disturbance associated with that lot, not the entire common plan. Refer to Appendix C for definitions of independent project and disturbance.

**Criterion 2:** Refer to the following web page for a list of waters in these categories: [http://www.vtwaterquality.org/stormwater/htm/sw_eggeligibility.htm](http://www.vtwaterquality.org/stormwater/htm/sw_eggeligibility.htm)

**Criterion 3:** Refer to the Appendix C for the definition of vegetated buffer area.

**Criterion 4:** Refer to Appendix C for definitions of temporary and final stabilization.

**Criterion 5:** Refer to Appendix C for the definition of disturbed earth.
# Part II – Detailed Risk Evaluation

For projects not automatically categorized as Low Risk in Part I, this Detailed Risk Evaluation must be completed to determine if a project is Low Risk, Moderate Risk, or requires an Individual Permit. This evaluation determines the risk category by weighing the balance of factors which contribute to and mitigate against the risk of a discharge of sediment from the construction project. Complete all questions in Part II for the independent project. For definitions of terms used in the evaluation, refer to Appendix C.

## Detailed Risk Evaluation – Identify Risk Factors

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Answer</th>
<th>Score Direction</th>
<th>Enter Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Will the proposed project have earth disturbance within 100 ft (horizontal) upslope of any lake or pond or 50 feet (horizontal) upslope of any rivers or stream (perennial or seasonal)?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td>B. Will the project have stormwater discharges by direct conveyance (tributary, channel, ditch, storm sewer, etc.) to a water of the state listed on the 303 (d) Part A list as being impaired by stormwater or sediment; a Class A Water; or an Outstanding Resource Water?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td>C. Will the project have more than five acres of disturbed earth at any one time?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td>D. Will the project have disturbed earth in any one location for more than 14 consecutive calendar days without temporary or final stabilization?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td>E. Will the project include more than one acre of disturbance on soil that is greater than 15% slope?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td>F. Will the project include more than one acre of disturbance of soils with a high (K&gt;0.36) erodibility rating?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
</tbody>
</table>

## Total Score for Risk Factors (add A through F)

**Criterion A:** Measure lake distance from mean water level, and stream or river distance from top of bank. Do not include disturbance for the installation of stormwater treatment facilities or road stream crossings if there are no reasonable alternative locations.

**Criterion B:** Refer to [http://www.vtwaterquality.org/stormwater/htm/sw_cgpeligibility.htm](http://www.vtwaterquality.org/stormwater/htm/sw_cgpeligibility.htm) for the listing.

**Criterion C:** The maximum allowable for Low Risk Projects is 7 acres. Moderate risk projects over 5 acres may be required to file an Individual Discharge Permit application if determined necessary by the Secretary.

**Criterion D:** The maximum allowable for Low Risk Projects is 21 days. Moderate risk projects over 21 days may be required to file an Individual Discharge Permit application if determined necessary by the Secretary.

**Criterion E:** Include disturbance for the duration of the project, not at any one point in time. Slope determinations should be based on a site survey of the future disturbance area.

**Criterion F:** Include disturbance for the entire individual project, not at any one point in time. The Erosion Factor K, is a measure of the inherent erodibility of a soil type. Refer to NRCS soil maps for your county. If soils data is not available (e.g. if the site is built on assorted fill material), contact ANR for directions on evaluating soil erodibility.
### Detailed Risk Evaluation – Identify Risk Mitigation Factors

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Answer</th>
<th>Score Direction</th>
<th>Enter Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Will stormwater leaving the construction site pass through at least 50 feet of established vegetated buffer before entering a receiving water?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td>I. Will the project be limited to two acres or less of disturbed earth at any one time?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td>J. Will the project have a maximum of 7 consecutive days of disturbed earth exposure in any location before temporary or final stabilization is implemented?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td>K. Will the project disturb less than two acres of soil with an erodibility higher than K=0.17?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
<tr>
<td>L. Will the project include less than two acres of disturbance on soil that is greater than 5% slope?</td>
<td>YES NO</td>
<td>If YES, enter 1, if NO enter 0</td>
<td></td>
</tr>
</tbody>
</table>

**Total Score for Risk Mitigation Factors (add H through L.)**

---

**Criterion H:** Refer to Appendix C for a definition of vegetated buffer.

**Criterion I:** Refer to Appendix C for a definition of earth disturbance.

**Criterion J:** Refer to Appendix C for definitions of temporary and final stabilization.

**Criterion K:** Include disturbance for the duration of the project, not at any one point in time. The Erosion Factor K, is a measure of the inherent erodibility of a soil type. Refer to NRCS soil maps available at USDA-NRCS District Offices. If soils data are not available (e.g. if the site is built on assorted fill material), contact DEC for directions on evaluating soil erodibility.

**Criterion L:** Include disturbance for the duration of the project, not at any one point in time. Slope determinations should be based on a site survey of the proposed disturbance area.

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### Total Risk Score

<table>
<thead>
<tr>
<th>N.</th>
<th>Moderate Risk Base Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>O.</td>
<td>Enter Score from Line G above (Risk Factor Total)</td>
</tr>
<tr>
<td>P.</td>
<td>Add lines N and O</td>
</tr>
<tr>
<td>Q.</td>
<td>Enter Score from Line M above (Risk Mitigation Factor Total)</td>
</tr>
<tr>
<td>R.</td>
<td><strong>OVERALL RISK SCORE:</strong> Subtract line Q from line P</td>
</tr>
</tbody>
</table>

---

**Received**

OCT 19 2013

City of Montpelier
Planning Department
## Part III– Interpreting the Detailed Risk Evaluation

<table>
<thead>
<tr>
<th>OVERALL SCORE</th>
<th>Risk Category</th>
<th>Directions for Filing for Permits</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>Low Risk</td>
<td>The proposed project is eligible for the Construction General Permit as a Low Risk project provided that the requirements of Subpart 2 are met. If these requirements cannot be met, contact DEC to determine if the project should seek coverage as a Moderate Risk project or under an Individual Discharge Permit. Refer to Part IV of Appendix A for a summary of the application requirements for Low Risk projects.</td>
</tr>
<tr>
<td>1-2</td>
<td>Moderate Risk</td>
<td>The proposed project is eligible for the Construction General Permit as a Moderate Risk project provided that the requirements of Subpart 3 are met. If these requirements cannot be met, contact DEC to determine if the project should seek coverage as a Moderate Risk project or under an Individual Discharge Permit. Refer to Part IV of Appendix A for a summary of the application requirements for Moderate Risk projects.</td>
</tr>
<tr>
<td>&gt;2</td>
<td>Requires Individual Permit</td>
<td>The proposed project is not eligible for coverage under the Construction General Permit, and therefore requires coverage under an Individual Discharge Permit. Please refer to Stormwater Section on the Water Quality Division website for more information: <a href="http://www.vtwaterquality.org/stormwater.htm">www.vtwaterquality.org/stormwater.htm</a>.</td>
</tr>
</tbody>
</table>
Design Review Committee and  
Development Review Board  
City Hall  
39 Main Street  
Montpelier, VT 05602

Dear Design Review Committee and Development Review Board members,

We write to express concern for pedestrian issues surrounding the new parking garage. For the garage to be an asset to the downtown, shoppers who park in the garage must be able to safely and efficiently walk from their cars to stores and restaurants. We have several suggestions on how to improve the design of the garage site.

1. The current design of the garage does not provide for easy pedestrian access to Main Street businesses located across the new pedestrian bridge on the multi-use path. The architect has stated that the grade from the door at the southeast corner of the garage to the path is too steep to accommodate a ramp. Therefore, the only access shown on his plans is through the narrow alley between the new hotel and the garage. A viable link to the path is essential for making full use of the path and for leading shoppers into the heart of our downtown. Therefore, we suggest:
   a. A stairway should be built from the southeast door of the garage to the multi-use path.
   b. Architectural elements should be used to highlight the alley as a means of connecting to the path and the downtown. There could be many ways of achieving this. One option might be to create a cover over the walkway that extends out to the north beyond the edge of the parking garage, announcing its presence to those who are exiting the garage. A covered walkway would have the advantage of keeping the path free of snow and ice in the winter, which is going to be a real problem given the narrowness of the alley.

2. Egress from the garage at the northwest corner toward State Street is a dangerous undertaking for pedestrians, forcing them to cross the main vehicular entrance to the garage before reaching the sidewalk that runs along the side of the Capitol Plaza/Northfield Savings Bank. We suggest:
   a. Two sets of columns on either side of the main vehicular entrance from Taylor Street, or some other architectural element, should be designed to create a visible presence for the crosswalk. This would also have the benefit of defining the space in front of the parking garage.
b. The crosswalk should be textured to give motorists further indication that they are cross a pedestrian way.

3. The absence of a pedestrian path from the northeast corner of the parking garage to State Street along the side of Christ Church is dangerous. At the northeast corner of the garage pedestrians are dumped out into the Heney parking lot, which has no sidewalks. This area needs complete reengineering to accommodate the pedestrians who will be using this entrance to walk to local businesses on State Street.

4. The traffic patterns on the site and its interactions with sidewalks and streets are unknown. The city's traffic study did not address circulation of traffic on the garage site itself. The study failed to examine potential traffic backing up on the site as it attempts to exit onto State Street or Taylor Street. These potential backups could affect pedestrian and vehicular safety alike.

5. There is no safe pedestrian access to the parking garage from Taylor Street, where buses will be discharging passengers. The plans show a vehicle entrance from Taylor Street without any accommodation for pedestrians. This means that vehicular and pedestrian traffic will mix in one space. Someone who parks a car in the parking garage and then takes a bus leaving from the transit center would either have to find the circuitous route along the multi-use path or walk with cars toward Taylor Street. People always want to take the most direct route to their destination, so we need to make that direct route safe and attractive. This seems to be a real failure in planning.

The focus of planning for this garage seems to have been on how to squeeze in as many cars as possible. There does not seem to have been any attention paid to the experience of the drivers when they leave their cars and become pedestrians. In order for the garage be an attractive amenity for the city, pedestrians need to be provided with safe, attractive, and efficient connections to the city streets and their businesses. We urge you to require the city to create a plan that protects pedestrians as they move to and from this garage.

Thank you,

Paul and Eve

Paul Carnahan and Eve Jacobs-Carnahan