



**B U I L T
S M A R TSM**

Sub-Contractor Alerts

**www.seattle.gov/light/conserve/resident
(206) 684-3800**



Revised February 2012

Contractor Alert

Site Superintendent

This project is enrolled in Seattle City Light's BUILT SMART program. This program offers incentives for energy efficient building measures, and requires field inspection for particular building elements. Please contact your BUILT SMART field inspector for a required inspection:

Leslie Wagoner: 206-684-4285, leslie.wagoner@seattle.gov

Joseph Faris: 206-386-4594, joseph.faris@seattle.gov

Inspections are required at the following times:

- **Slab-On-Grade/Full Under-Slab Insulation:** Prior to concrete slab pour.
- **Exterior Wall Framing:** Prior to installation of wall insulation - to confirm that all enclosed exterior wall framing cavities are insulated.
- **Ceiling/Roof Framing:** Prior to installation of ceiling insulation – to confirm that clearances are adequate for full insulation coverage.
- **Ceiling/Roof Insulation:** Prior to cover by any other materials (polyethylene [or other sheet] vapor retarder, gypsum wallboard (GWB), etc.).
- **Glazing:** When windows are delivered to site – to confirm that glazing meets the required U-Values based on the approved design criteria of your building. NOTE: The window supplier must supply the BUILT SMART representative with a window schedule identifying total glazing square footage, window sizes, U-Value for each type of window/glass door, and the weighted average U-Value calculation.
- **Caulking and Air Sealing:** Prior to cover by insulation and/or gypsum wallboard.
- **Insulation:** Prior to cover by any other materials (polyethylene [or other sheet] vapor retarder, gypsum wallboard (GWB), etc.).
- **Vapor Retarder:**
 - 1) For sheet-type vapor retarders, prior to cover by GWB or other material (Polyethylene is not recommended.)
 - 2) For vapor retarder primers, at time of application
- **In-Unit Exhaust Ventilation Fans:** Prior to installation.
- **HVAC Equipment:** Prior to installation.

At the final inspection, the following will be confirmed:

- Ventilation exhaust fans have correct airflow.
- Correct number of fresh air inlets are installed and working properly.
- Interior doors have ½-inch minimum undercut from finish floor.
- Whole house exhaust fan timers are installed and working properly.
- Lighting fixtures and controls meet specifications.
- Appliance and other equipment upgrades meet specifications, if required.

OVER

For a detailed explanation of these requirements, refer to the February 2012 edition of the BUILT SMART Technical Specifications - Chapter 2 (available at www.seattle.gov/light/conserves/resident),
For more information, contact your BUILT SMART representative:

Meghan Pinch: 206-684-3901, Meghan.pinch@seattle.gov

Beth Rocha: 206-684-5945, beth.rocha@Seattle.gov

Contractor Alert: Air Sealing and Insulation

This project is enrolled in Seattle City Light's BUILT SMART program. This program offers incentives for energy efficient building measures, and requires particular air sealing and insulation measures..

Air Sealing Requirements

All penetrations through the building envelope shall be sealed with appropriate material (caulking, insulating foam, mineral wool, backer rod, etc.) to limit air-leakage, including:

- Around all window and door frames to control air-leakage.
- At all exterior penetrations in the rim joist framing including blocking where the floor joists are cantilevered to support an exterior deck.
- At the bottom of the wall plate where wall meets the slab floor.
- Around any penetrations in the building envelope to ducts, through-the-wall air inlet vents and accesses hatches.
- Around all outlets, switches, or other electrical boxes in the exterior walls, ceilings or floors. (Foam gaskets behind electrical cover plates meet this requirement.)
- All recessed fixtures (e.g. wall heaters, exhaust fans, medicine cabinets, recessed lights, etc.) shall be sealed to the assembly in all exterior walls and ceilings and in all ceilings between floors of stacked multifamily units.

Insulation Requirements

Seattle City Light BUILT SMART Inspectors will thoroughly inspect the quality of all insulation applications, including the following areas:

- Perimeter slab on grade insulation must be R-5.
- Insulation must be cut to fit cavity. No voids or compression are allowed.
- All framing cavities in exterior wall must be fully insulated (no voids).
- All headers must be insulated to R-10 or maximum possible. (See BUILT SMART Specification 3.2.2)
- Split or cut batts around all plumbing and wiring.
- All rim joists between floors shall be insulated to the above-grade wall R-value.
- Insulation shall be installed in a permanent manner and include required vapor barrier.
- All fan and recessed light housing on the top floor only must be fully insulated above.
- Eaves shall be insulated with R-38 fiberglass batts.

- Hatches connecting the conditioned spaces to attics and crawlspaces shall be insulated to at least the minimum requirement for the appropriate component. The insulation shall be held in place in a permanent manner.
- Vapor barrier required on all exterior walls and exterior ceiling.
- All interior stairwell and elevator shaft walls adjacent to any residential unit, or any other conditioned residential space shall be insulated to a minimum of R-21.
- All concrete exterior walls above and below grade must be insulated to a minimum of R-21 plus R-5 exterior.

Required Inspections

A BUILT SMART inspector must conduct the following inspections:

- All slab-on-grade insulation prior to concrete pour.
- All caulking prior to covering with insulation.
- All insulation and vapor barrier(s) prior to covering with wallboard.
- All outside exterior wall insulation prior to covering with exterior finish.

For a detailed explanation of these requirements, refer to the February 2012 edition of the BUILT SMART Technical Specifications - Chapter 3 (available at www.seattle.gov/light/conserves/resident)
For more information, contact your BUILT SMART representative:

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Contractor Alert: Electrical

Whole House Ventilation

To qualify for the BUILT SMART incentive, whole house fans must draw less than 30 watts, must be less than one sone, and must fall below acceptable CFM thresholds.

A BUILT SMART inspector will perform air flow tests for each fan in a project.

For a detailed explanation of these requirements, refer to the February 2012 edition of the BUILT SMART Technical Specifications - Chapter 3 (available at www.seattle.gov/light/conserves/resident)
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Contractor Alert: Lighting Supplier – Optional (In-Unit) Lighting

This project is enrolled in Seattle City Light's BUILT SMART program. BUILT SMART offers incentives for energy efficient building measures. Efficient in-unit lighting fixtures are optional measures; however, Seattle City Light strongly encourages you to install these efficient fixtures and controls whenever possible. All controls and fixtures shall be reviewed and approved prior to installation and inspected after installations.

In-Unit Fixture Locations

Fluorescent fixtures in kitchens, dining rooms, living rooms, bedrooms, bathrooms, hallways, entryways, entry porches, and stairwells are eligible for an incentive if they are Energy Star labeled. Incentives are not paid for fixtures in closets or laundry rooms. Only one fixture per each bedroom and bathroom is eligible for a rebate.

In-Unit Fixture Specifications

- All lamps must be Energy Star approved, or LED fixtures.
- LED fixtures must be Energy Star, Lighting Design Lab (LDL) or Design Lights Consortium (DLC) certified.
- Only T-8 or smaller lamps are allowed where linear fluorescent fixtures are installed.
- All lamps must have a Color Rendition Index of 70 or better.
- All fixtures must be hardwired.
- Linear fixtures must have electronic, high power factor ballasts.
- Where required, recessed lighting must be air-sealed.
- Fixtures switched on and off more than once a day must switch on without flicker. Fixtures should switch on in one second or less.
- Where fluorescent lamps are used, low mercury content is strongly recommended.

For a detailed explanation of these requirements, refer to the February 2012 edition of the BUILT SMART Technical Specifications (available at www.seattle.gov/light/conserves/resident). For more information, contact your BUILT SMART representative:

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Contractor Alert: Lighting Supplier – Required Lighting

This project is enrolled in Seattle City Light's BUILT SMART program. BUILT SMART offers incentives for energy efficient building measures, and requires particular common area lighting measures.

Interior Common Area Lighting Efficiency

Interior common area lighting incentives are based on efficiency improvements over the Energy Code's Lighting Power Allowances for multifamily buildings (Washington Energy Code, Table 15-1). BUILT SMART threshold requirements for Lighting Power Density are as follows:

BUILT SMART Program Chart 6-1: Lighting Power Density (LPD) Allowance by Use		
Use	2009 Seattle Energy Code Allowance (watts/ sq ft)	BUILT SMART Requirement (watts/ sq ft)
Parking Garages	0.20	0.18
Common Areas, corridors, restrooms, elevator lobbies	0.80	0.65
Exercise Center	0.88	0.73
Office/ administrative areas	0.90	0.75
Main floor building lobbies	1.10	0.90
Laundry rooms	1.20	0.96
Workshops	1.20	0.96

Additional uses are listed in Table 15-1, Seattle Energy Code. Assume a BUILT SMART requirement of 80% of 2009 SEC lighting power allowance.

Note: Seattle City Light recommends that all multifamily common areas have a minimum of 5 foot-candles over the entire space being considered. (See Category B of the Lighting Handbook 8th Edition, Reference and Application, IESNA for details.)

Interior Common Area Lighting Review

A set of architectural drawings (including common area square footages), a reflective ceiling plan, a fixture schedule and the manufacturer's specifications sheets for the residential common areas must be submitted for review prior to installation.

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Interior Common Area Lighting Specifications

- Only T-8 or smaller lamps are allowed where linear fluorescent fixtures are installed.
- All lamps must have a Color Rendition Index of 70 or better.
- All fixtures must be hardwired.

- Linear fixtures must have electronic, high power factor ballasts.
- Where required, recessed lighting must be air-sealed.
- Fixtures switched on and off more than once a day must switch on without flicker. Fixtures should switch on in one second or less.
- Where fluorescent lamps are used, low mercury content is strongly recommended.
- If LED fixtures are used, they must be Energy Star, Lighting Design Lab (LDL) or Design Lights Consortium (DLC) certified.

Exterior Common Area Lighting Review and Inspections

BUILT SMART does not provide incentives for exterior common area lighting.

Exceptions

This program allows deviations from the lighting requirements for specific unique architectural details. Any exception must be reviewed and approved on a case-by-case basis by a BUILT SMART Program representative.

For a detailed explanation of these requirements, refer to the BUILT SMART Technical Specifications - Chapter 6 (available at www.seattle.gov/light/conserves/resident). For more information, contact your BUILT SMART representative:

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Contractor Alert: Window Supplier/Installer

This project is enrolled in Seattle City Light's BUILT SMART program. BUILT SMART offers incentives for energy efficient building measures, and requires particular window installation measures.

NFRC Ratings

All windows and sliding glass doors shall be NFRC certified and labeled.

Window suppliers shall supply the following information to the BUILT SMART representative:

1. A complete window schedule including sizes & U-values for each type of window & glass door, and total square footage of all glazing to be installed in the project
2. A calculation of the overall weighted average U-value of all glazing being installed in the project.

BUILT SMART Window Specifications

1. Maximum overall tested U-value shall be .30. (Overall weighted average is acceptable.)

For more information, contact your BUILT SMART representative:

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