



Envelope Compliance Certificate

Section 1: Project Information

Energy Code: **2014 Oregon Energy Efficiency Specialty Code**

Project Title: St. Elizabeth Ann Seton New Parish Office Building

Project Type: New Construction

Envelope Compliance Method: Simplified Trade-Off

Construction Site:

3145 SW 192nd Avenue
Aloha, OR 97006

Owner/Agent:

Ian Mickelson
Soderstrom Architects
1200 NW Naito Parkway
Suite 410
Portland, OR 97209
(503) 228-5617
imickelson@sdra.com

Designer/Contractor:

Building Location (for weather data):

Aloha, Oregon

Climate Zone:

4c

Vertical Glazing / Wall Area Pct.:

54%

Building Use: Area Type

Floor Area

1-General Office (Office) : Nonresidential	2954
2-Chapel (Religious Building) : Nonresidential	1004
3-Storage (Warehouse) : Nonresidential	907

Section 2: Envelope Assemblies and Requirements Checklist

Envelope PASSES: Design 0.1% better than code.

Envelope Assemblies:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor ^(a)
Roof 1: Attic Roof with Wood Joists, [Bldg. Use 1 - General Office]	2954	38.0	0.0	0.027	0.027
Roof 2: Attic Roof with Wood Joists, [Bldg. Use 2 - Chapel]	1004	38.0	0.0	0.027	0.027
Roof 3: Attic Roof with Wood Joists, [Bldg. Use 3 - Storage]	907	30.0	0.0	0.034	0.027
Exterior Wall 1: Wood-Framed, 16" o.c., [Bldg. Use 1 - General Office]	1884	21.0	0.0	0.062	0.064
Window 1: Metal Frame Curtain Wall/Storefront, Perf. Specs.: Product ID Solarban 60, SHGC 0.39, [Bldg. Use 1 - General Office] (c)	859	---	---	0.270	0.450
Door 1: Insulated Metal, Swinging, [Bldg. Use 1 - General Office]	27	---	---	0.140	0.700
Door 2: Other Door, Non-Swinging, [Bldg. Use 1 - General Office]	72	---	---	0.140	0.500
Door 3: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Specs.: Product ID Solarban 60, SHGC 0.39, [Bldg. Use 1 - General Office] (c)	102	---	---	0.270	0.800
Door 4: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Specs.: Product ID Solarban 60, SHGC 0.39, [Bldg. Use 1 - General Office] (c)	54	---	---	0.270	0.800
Floor 1: Slab-On-Grade:Unheated, Vertical 3 ft., [Bldg. Use 1 - General Office]	2998	---	8.0	---	---

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

(b) 'Other' components require supporting documentation for proposed U-factors.

(c) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

In the following requirements, blank checkboxes identify requirements that the applicant has not acknowledged as being met. Checkmarks identify requirements that the applicant acknowledges are met or excepted from compliance. 'Plans reference page/section' identifies where in the plans/specs the requirement can be verified as being satisfied.

Fenestration Product Rating:

1. U-factors of fenestration products (windows, doors and skylights) are determined in accordance with NFRC 100 by an accredited, independent laboratory, and labeled and certified by the manufacturer or are determined using the commercial size category values listed in Chapter 15 of the 2009 ASHRAE Handbook of Fundamentals, Table No.4 and shall include the effects of the window frame. The temporary label affixed to the fenestration products must not be removed prior to inspection.

Exception(s):

- Site-built fenestration products shall have a single certificate specifying glazing type, special coatings, spacers, gas fills, center-of-glass and overall U-factor, and center-of-glass SHGC for every type of site built glass used. These certificates shall be maintained on the jobsite and made available to the inspector.

Plans reference page/section: SHEET G0.3, SPECIFICATIONS

2. Solar heat gain coefficient (SHGC) of glazed fenestration products (windows, glazed doors and skylights) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and labeled and certified by the manufacturer or be determined using the Solar Heat Gain Coefficients (SHGC) in Chapter 15 of the 2009 ASHRAE Handbook of Fundamentals, Table No.10. The overall values must consider type of frame material and operator for the SHGC at normal incidence.

Exception(s):

- Site-built fenestration products shall have a single certificate specifying glazing type, special coatings, spacers, gas fills, center-of-glass and overall U-factor, and center-of-glass SHGC for every type of site built glass used. These certificates shall be maintained on the jobsite and made available to the inspector.

Plans reference page/section: SHEET G0.3, SPECIFICATIONS

Air Leakage, Insulation, and Component Certification:

3. Sealing of the building envelope. Openings and penetrations in the building envelope are sealed with caulking materials or closed with gasketing systems compatible with the construction materials and location. Joints and seams are sealed in the same manner or taped or covered with a moisture vapor-permeable wrapping material. Sealing materials spanning joints between construction materials allow for expansion and contraction of the construction materials.

Plans reference page/section: SHEET G0.3, SPECIFICATIONS

4. Window and door assemblies. The air leakage of window and sliding or swinging door assemblies that are part of the building envelope are determined in accordance with AAMA/WDMA/CSA 101/I.S.2/A440, or NFRC 400 by an accredited, independent laboratory, and labeled and certified by the manufacturer.

Exception(s):

- Site-constructed windows and doors that are weatherstripped or sealed in accordance with Section 502.4.3.

Plans reference page/section: SHEET G0.3, SPECIFICATIONS

5. Curtain wall, storefront glazing and commercial entrance doors. Curtain wall, storefront glazing and commercial-glazed swinging entrance doors and revolving doors are tested for air leakage in accordance with ASTM E 283. For curtain walls and storefront glazing, the maximum air leakage rate is 0.3 cubic foot per minute per square foot of fenestration area. For commercial glazed swinging entrance doors and revolving doors, the maximum air leakage rate is 1.00 cfm/ft² of door area.

Exception(s):

- Requirement is not applicable.

Plans reference page/section: SHEET G0.3, SPECIFICATIONS

6. Building thermal envelope insulation. An R-value identification mark is applied (by manufacturer) to each piece of insulation 12 inches or greater in width. Alternately, the insulation installers have provided a signed, dated and posted certification listing the type, manufacturer and R-value of insulation installed. Refer to code section for blown or sprayed insulation installation/settling depths and marker requirements.

7. Insulation mark installation. Insulating materials are installed such that the manufacturer's R-value mark is readily observable upon inspection.

8. Insulation product rating. The thermal resistance (R-value) of insulation has been determined in accordance with the U.S. FTC R-value rule.

9. Installation. All material, systems and equipment are installed in accordance with the manufacturer's installation instructions and the International Building Code.

10. Outdoor air intakes and exhaust openings. Stair and elevator shaft vents and other outdoor air intakes and exhaust openings integral to the building envelope shall be equipped with not less than a Class I motorized, leakage-rated damper with a maximum leakage rate of 4 cfm per square foot at 1.0 inch water gauge when tested in accordance with AMCA 500D. Stair and shaft vent dampers shall be capable of being automatically closed during normal building operation and interlocked to open as required by fire and smoke detection systems.

Exception(s):

- Requirement is not applicable.

Plans reference page/section: _____

11. Loading dock weatherseals. Cargo doors and loading dock doors are equipped with weather seals to restrict infiltration when vehicles are parked in the doorway.

Exception(s):

- Requirement is not applicable.

Plans reference page/section: _____

- 12. Recessed lighting. Recessed luminaires installed in the building thermal envelope are sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires are IC-rated and labeled as meeting ASTM E 283. All recessed luminaires are sealed with a gasket or caulk between the housing and interior wall or ceiling covering.

Exception(s):

- Requirement is not applicable.

Plans reference page/section: SHEET G0.3, SPECIFICATIONS

- 13. Vestibules. Doors that separate conditioned space from the exterior are protected with an enclosed vestibule, with all doors of the vestibule equipped with self-closing devices. Vestibules are designed so interior and exterior doors to not operate simultaneously.

Exception(s):

- Doors not intended to be used as a building entrance door, such as doors to mechanical or electrical equipment rooms.
- Doors opening directly from a sleeping unit or dwelling unit.
- Doors that open directly from a space less than 3000 sq. ft. in area.
- Revolving doors.
- Doors used primarily to facilitate vehicular movement or material handling and adjacent personnel doors.
- Requirement is not applicable.

Plans reference page/section: SHEET A2.1, FLOOR PLAN AND SHEET A8.0 DOOR SCHEDULE AND HARDWARE GROUPS

- 14. 'Other' components have supporting documentation for proposed U-Factors.

Exception(s):

- Requirement is not applicable.

Plans reference page/section: SHEET G0.3, SPECIFICATIONS AND SHEET G1.1, ENERGY CODE SUMMARY

Section 3: Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the 2014 Oregon Energy Efficiency Specialty Code requirements in COMcheck Version 4.0.7.0 and to comply with the mandatory requirements in the Requirements Checklist.

Ian R. Mickelson, AIA / Associate

Name - Title

Signature

Date



COMcheck Software Version 4.0.7.0

Interior Lighting Compliance Certificate

Section 1: Project Information

Energy Code: **2014 Oregon Energy Efficiency Specialty Code**
 Project Title: St. Elizabeth Ann Seton New Parish Office Building
 Project Type: New Construction
 Envelope Compliance Method: Simplified Trade-Off

Construction Site:
 3145 SW 192nd Avenue
 Aloha, OR 97006

Owner/Agent:
 Ian Mickelson
 Soderstrom Architects
 1200 NW Naito Parkway
 Suite 410
 Portland, OR 97209
 (503) 228-5617
 imickelson@sdra.com

Designer/Contractor:

Section 2: Interior Lighting and Power Calculation

A	B Floor Area	C Allowed Watts / ft2	D Allowed Watts
General Office (Office)	2954	0.91	2688
Chapel (Religious Building)	1004	1.05	1054
Storage (Warehouse)	907	0.66	599
Total Allowed Watts =			4341

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
General Office (Office 2954 sq.ft.)				
LED 1: Type A: Finelite Direct 2": LED Linear 10W:	1	10	39.6	396
LED 2: Type AA: Finelite Direct/Indirect 4": LED Linear 20W:	1	7	75.6	529.2
LED 3: Type B: Finelite Wall Mount Direct: LED Linear 10W:	1	4	60	240
LED 4: Type C: Lithonia Downlight: Other:	1	9	22.5	202.5
LED 5: Type D: Finelite Series 12 ID/D: LED Linear 10W:	1	5	55.8	279
LED 6: Type DD: Finelite Series 12 ID/D: LED Linear 10W:	1	1	74.4	74.4
LED 7: Type E: Lithonia LBL4: LED Panel 40W:	1	3	40.5	121.5
LED 8: Type F: Visa Lighting CV1700: LED Linear 11W:	1	4	11	44
LED 9: Type G: Eureka 4810D-24: Other:	1	2	31	62
LED 10: Type H: Lithonia Closet Light: LED Linear 17W:	1	1	17	17
LED 11: Type U: Lithonia UCEL Cab Light: LED Undercabinet Unit 5.7W:	1	6	10.2	61.2
Chapel (Religious Building 1004 sq.ft.)				
LED 4: Type C: Lithonia Downlight: Other:	1	3	22.5	67.5
LED 8: Type U: Lithonia UCEL Cab Light: LED Undercabinet Unit 5.7W:	1	1	10.2	10.2
LED 13: Type J: Gotham 2" Incito Downlight: LED A Lamp 25W:	1	20	22	440
LED 14: Type K: Gammalux G-Beam Series: LED Linear 33W:	1	11	35.3	388.3
Storage (Warehouse 907 sq.ft.)				
LED 7: Type E: Lithonia LBL4: LED Panel 40W:	1	13	40.5	526.5
LED 12: Type HH: Lithonia WL2 Surface: LED Linear 17W:	1	1	17.5	17.5
Total Proposed Watts =			3477	

Section 4: Requirements Checklist

In the following requirements, blank checkboxes identify requirements that the applicant has not acknowledged as being met. Checkmarks identify requirements that the applicant acknowledges are met or excepted from compliance. 'Plans reference page/section' identifies where in the plans/specs the requirement can be verified as being satisfied.

Lighting Wattage:

1. Total proposed watts must be less than or equal to total allowed watts.
Allowed Wattage: 4341 Proposed Wattage: 3477
Complies: YES

Mandatory Requirements:

2. Exit signs. Internally illuminated exit signs shall not exceed 5 watts per side.

Plans reference page/section: _____

3. Daylight zone control. All daylight zones are provided with individual controls that control the lights independent of general area lighting in the non-daylight zone. In all individual daylight zones larger than 350 sq.ft., automatic daylight controls is provided. Automatic daylight sensing controls reduce the light output of the controlled luminaires at least 50 percent, and provide an automatic OFF control, while maintaining a uniform level of illumination. Contiguous daylight zones adjacent to vertical fenestration may be controlled by a single controlling device provided that they do not include zones facing more than two adjacent cardinal orientations (i.e., north, east, south, west). Daylight zones under skylights shall be controlled separately from daylight zones adjacent to vertical fenestration.

Exception(s):

- Retail spaces adjacent to vertical glazing (retail spaces under overhead glazing are not exempt).
 Display, exhibition and specialty lighting
 HID lamps 150 watts or less.
 Spaces required to have occupancy sensors.

Plans reference page/section: _____

4. Interior lighting controls. At least one local shutoff lighting control has been provided for every 2,000 square feet of lit floor area and each area enclosed by walls or floor-to-ceiling partitions. The required controls are located within the area served by the controls or are a remote switch that identifies the lights served and indicates their status.

Exception(s):

- Lighting systems serving areas designated as security or emergency areas that must be continuously lighted.
 Lighting in public areas such as concourses, stairways or corridors that are elements of the means of egress with switches that are accessible only to authorized personnel.
 Lighting for warehouses, parking garages or spaces using less than 0.5 watts per square foot.
 Lighting for contiguous, single-tenant retail spaces.

Plans reference page/section: _____

5. Sleeping unit controls. Master switch at entry to hotel/motel guest room.

Plans reference page/section: _____

6. Egress lighting. Egress illumination is controlled by a combination of listed emergency relay and occupancy sensors to shut off during periods that the building space served by the means of egress is unoccupied.

Exception(s):

- Building exits as defined in Section 1002 of the Oregon Structural Specialty Code.

Plans reference page/section: _____

7. Additional controls. Each area that is required to have a manual control shall have additional controls that meet the requirements of Sections 505.2.2.1 and 505.2.2.2.

Plans reference page/section: _____

8. Light reduction controls. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either

- 1) controlling (dimming or multi-level switching) all luminaires; or
- 2) dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps; or
- 3) switching the middle lamp luminaires independently of other lamps; or
- 4) switching each luminaire or each lamp.

Exception(s):

- Only one luminaire in space.
 An occupant-sensing device controls the area.
 The area is a corridor, storeroom, restroom, public lobby or sleeping unit.

- Electrical and mechanical room.
- Areas that use less than 0.6 Watts/sq.ft.

Plans reference page/section: _____

- 9. Buildings larger than 2,000 square feet are equipped with an automatic control device to shut off lighting in those areas. This automatic control device shall function on either:
 - 1) a scheduled basis, using time-of-day, with an independent program schedule that controls the interior lighting in areas that do not exceed 10,000 square feet and are not more than one floor; or
 - 2) an occupant sensor that shall turn lighting off within 30 minutes of an occupant leaving a space; or
 - 3) a signal from another control or alarm system that indicates the area is unoccupied.

Exception(s):

- Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.

Plans reference page/section: _____

- 10. Occupancy sensors in rooms that include daylight zones are required to have Manual ON activation.

Plans reference page/section: _____

- 11. An occupant sensor control device is installed that automatically turns lighting off within 30 minutes of all occupants leaving a space.

Exception(s):

- Classrooms and lecture halls.
- Conference, meeting and training rooms.
- Employee lunch and break rooms.
- Rooms used for document copying and printing.
- Office spaces up to 300 square feet.
- Restrooms.
- Dressing, fitting and locker rooms.

Plans reference page/section: _____

- 12. Additional controls. An occupant sensor control device that automatically turns lighting off within 30 minutes of all occupants leaving a space or a locally activated switch that automatically turns lighting off within 30 minutes of being activated is installed in all storage and supply rooms up to 1000 square feet.

Plans reference page/section: _____

- 13. Occupant override. Automatic lighting shutoff operating on a time-of-day scheduled basis incorporates an override switching device that: 1) is readily accessible, 2) is located so that a person using the device can see the lights or the area controlled by that switch, or so that the area being lit is annunciated, 3) is manually operated, 4) allows the lighting to remain on for no more than 2 hours when an override is initiated, and 5) controls an area not exceeding 2,000 square feet.

Exception(s):

- In malls and arcades, auditoriums, single-tenant retail spaces, industrial facilities and arenas, where captive-key override is utilized, override time is permitted to exceed 2 hours.
- In malls and arcades, auditoriums, single-tenant retail spaces, industrial facilities and arenas, the area controlled shall not exceed 20,000 square feet.

Plans reference page/section: _____

- 14. Holiday scheduling. Automatic lighting shutoff operating on a time-of-day scheduled basis has an automatic holiday scheduling feature that turns off all loads for at least 24 hours, then resumes the normally scheduled operation.

Exception(s):

- Retail stores and associated malls, restaurants, grocery stores, places of religious worship, theaters and exterior lighting zones.
- Single zone electronic time control devices and self-contained wall box preset lighting controls.

Plans reference page/section: _____

- 15. Exterior lighting controls. Lighting not designated for dusk-to-dawn operation shall be controlled by either a combination of a photosensor and a time switch, or an astronomical time switch. Lighting designated for dusk-to-dawn operation shall be controlled by an astronomical time switch or photosensor.

Plans reference page/section: _____

- 16. Tandem wiring. The following luminaires located within the same area shall be tandem wired:

1. Fluorescent luminaires equipped with one, three or odd-numbered lamp configurations, that are recess-mounted within 10 feet center-to-center of each other.

2. Fluorescent luminaires equipped with one, three or any odd-numbered lamp configuration, that are pendant- or surface-mounted within 1 foot edge- to-edge of each other.

Exception(s):

- Where electronic high-frequency ballasts are used.
- Luminaires on emergency circuits.
- Luminaires with no available pair in the same area.

Plans reference page/section: _____

- 17. Medical task lighting or art/history display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.

Plans reference page/section: _____

- 18. Each dwelling unit in a building is metered separately.

Plans reference page/section: _____

Interior Lighting PASSES: Design 20% better than code.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2014 Oregon Energy Efficiency Specialty Code requirements in COMcheck Version 4.0.7.0 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title

Signature

Date



Exterior Lighting Compliance Certificate

Section 1: Project Information

Energy Code: **2014 Oregon Energy Efficiency Specialty Code**
 Project Title: St. Elizabeth Ann Seton New Parish Office Building
 Project Type: New Construction
 Envelope Compliance Method: Simplified Trade-Off
 Exterior Lighting Zone: 2 (Residentially zoned area)

Construction Site:
 3145 SW 192nd Avenue
 Aloha, OR 97006

Owner/Agent:
 Ian Mickelson
 Soderstrom Architects
 1200 NW Naito Parkway
 Suite 410
 Portland, OR 97209
 (503) 228-5617
 imickelson@sdra.com

Designer/Contractor:

Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Entry Eave Light (Main entry)	2 ft of door width	20	Yes	40	45
Building Sign Lighting (Illuminated area of facade wall/surface or roof path)	1 ft ²	0.1	No	0	49
Door Eave Light (Other door (not main entry))	2 ft of door width	20	Yes	40	45
Total Tradable Watts* =				80	90
Total Allowed Watts =				80	
Total Allowed Supplemental Watts** =				600	

* Wattage tradeoffs are only allowed between tradable areas/surfaces.

** A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Entry Eave Light (Main entry 2 ft of door width): Tradable Wattage				
LED 4: Type XC: Lithonia Downlight: Other:	1	2	22.5	45
Building Sign Lighting (Illuminated area of facade wall/surface or roof path 1 ft ²): Non-tradable Wattage				
LED 15: Type XS: Elliptipar S222: LED Other Fixture Unit 16W:	1	3	16.4	49.2
Door Eave Light (Other door (not main entry) 2 ft of door width): Tradable Wattage				
LED 4: Type XC: Lithonia Downlight: Other:	1	2	22.5	45
Total Tradable Proposed Watts =				90

Section 4: Requirements Checklist

In the following requirements, blank checkboxes identify requirements that the applicant has not acknowledged as being met. Checkmarks identify requirements that the applicant acknowledges are met or excepted from compliance. 'Plans reference page/section' identifies where in the plans/specs the requirement can be verified as being satisfied.

Controls, Switching, and Wiring:

1. Lighting designated to operate more than 2000 hours per year for Uncovered Parking Areas shall be equipped with motion sensors that will reduce the luminaire power by thirty-three percent or turn off one-third the luminaires when no activity is detected.

Plans reference page/section: _____

Exterior Lighting Restrictions and Exceptions:

- 2. Mercury vapor and incandescent lighting is not permitted for use as exterior lighting.
Exception(s):
 - Incandescent lighting controlled by motion sensors and having total power less than 150 watts.
 - Incandescent lighting used in or around swimming pools, water features, or other locations subject to the requirements of Article 680 of the National Electric Code.
- 3. Exempt lighting fixtures are equipped with a control device independent of the control of the nonexempt lighting and are identified in Section 3 table above.

Plans reference page/section: _____

Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2014 Oregon Energy Efficiency Specialty Code requirements in COMcheck Version 4.0.7.0 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title

Signature

Date