



Interior Lighting Compliance Certificate

Project Information

Energy Code: 90.1 (2013) Standard
 Project Title: Taco Bell
 Project Type: New Construction

Construction Site: 4047 Grange Hall Road
 Holly Township, MI 48442
 Owner/Agent: Bob Grabowski
 Dortch Enterprises, LLC
 8487 Retreat Dr.
 Grand Blanc, MI 48439
 810-771-4500 ext 1018
 bgrabowski@dortchenterprises.com
 Designer/Contractor: Diane Barry
 EAM Engineers.com
 180 High Oak Rd
 Bloomfield, MI 48304
 248-528-2670
 dbarry@eam-engineers.com

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Dining: Cafeteria/Fast Food	2349	0.90	2114
Total Allowed Watts =			2114

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Dining: Cafeteria/Fast Food				
LED 1: B2: 2X2 LED RECESSED TROFFER: Other:	1	2	45	90
LED 2: B4: 2X4 LED RECESSED TROFFER: Other:	1	11	45	495
LED 3: B4E: SAME AS B4 EXCEPT WITH BATTERY: Other:	1	3	45	135
LED 4: C1W: 6" RECESSED LED DOWN LIGHT: Other:	1	16	14	224
LED 5: F6: 9.75 GLASS LED PENDANT LIGHT: Other:	1	4	100	400
LED 6: F7: 12" PENDANT LED DOWN LIGHT: Other:	1	7	20	140
LED 7: F19C: 3" PENDANT LED DOWN LIGHT: Other:	1	1	9	9
Total Proposed Watts =				1493

Interior Lighting PASSES: Design 29% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.5.4 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Salim Sessine, P.E.
 Name - Title

Signature



2022.05.17
 Date



Exterior Lighting Compliance Certificate

Project Information

Energy Code: 90.1 (2013) Standard
 Project Title: Taco Bell
 Project Type: New Construction
 Exterior Lighting Zone: 2 (Light industrial area with limited nighttime use (LZ2))

Construction Site: 4047 Grange Hall Road Holly Township, MI 48442	Owner/Agent: Bob Grabowski Dortch Enterprises, LLC 8487 Retreat Dr. Grand Blanc, MI 48439 810-771-4500 ext 1018 bgrabowski@dortchenterprises.com	Designer/Contractor: Diane Barry EAM Engineers.com 180 High Oak Rd Bloomfield, MI 48304 248-528-2670 dbarry@eam-engineers.com
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Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
North/East (Driveway)	6325 ft2	0.06	Yes	380
South (Parking area)	1614 ft2	0.06	Yes	97
South (Driveway)	2155 ft2	0.06	Yes	129
East (Parking area)	7147 ft2	0.06	Yes	429
West side (Drive-up windows/doors)	2 windows	400	No	800
Front Entrance Door (Main entry)	6 ft of door	20	Yes	120
Kitchen Door (Other door (not main entry))	3 ft of door	20	Yes	60
Side Door (Other door (not main entry))	3 ft of door	20	Yes	60
Drive Thru Side (Illuminated length of facade wall or surface)	28 ft	2.5	No	70
Front Entrance Side (Illuminated length of facade wall or surface)	28 ft	2.5	No	70

Total Tradable Watts (a) = 1274

Total Allowed Watts = 2214

Total Allowed Supplemental Watts (b) = 600

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.

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

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
<u>North/East (Driveway 6325 ft2): Tradable Wattage</u>				
LED 1: A2/A4: SINGLE POLE MTD LED LIGHT: Other:	1	2	30	60
LED 2: A1/A4: TWIN POLE MTD LED LIGHT: Other:	1	1	60	60
LED 7: H1: LED FLOOD LIGHT: Other:	1	2	15	30
<u>South (Parking area 1614 ft2): Tradable Wattage</u>				
LED 3: A1/A4: TWIN POLE MTD LED LIGHT: Other:	1	1	60	60
<u>South (Driveway 2155 ft2): Tradable Wattage</u>				
LED 4: A2/A4: SINGLE POLE MTD LED LIGHT: Other:	1	2	30	60
<u>East (Parking area 7147 ft2): Tradable Wattage</u>				
LED 5: A1/A4: TWIN POLE MTD LED LIGHT: Other:	1	2	60	120

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
<u>West side (Drive-up windows/doors 2 windows or doors): Non-tradable Wattage</u> LED 6: G1: RECESSED LED CANOPY LIGHT: Other:	1	3	14	42
<u>Front Entrance Door (Main entry 6 ft of door width): Tradable Wattage</u> LED 8: E2: LED WALL MTD LIGHT: Other:	1	1	10	10
<u>Kitchen Door (Other door (not main entry) 3 ft of door width): Tradable Wattage</u> LED 9: E2: LED WALL MTD LIGHT: Other:	1	1	10	10
<u>Side Door (Other door (not main entry) 3 ft of door width): Tradable Wattage</u> LED 10: E2: LED WALL MTD LIGHT: Other:	1	1	10	10
<u>Drive Thru Side (Illuminated length of facade wall or surface 28 ft): Non-tradable Wattage</u> LED 11: D1: DECORATIVE LED WALL SCONCE: Other:	1	2	11	22
<u>Front Entrance Side (Illuminated length of facade wall or surface 28 ft): Non-tradable Wattage</u> LED 12: D1: DECORATIVE LED WALL SCONCE: Other:	1	4	11	44
Total Tradable Proposed Watts =				420

Exterior Lighting PASSES: Design 78% better than code

Exterior Lighting 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 exterior lighting systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.5.4 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Salim Sessine, P.E.

Name - Title

Signature



2022.05.17

Date



Inspection Checklist

Energy Code: 90.1 (2013) Standard

Requirements: 97.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 8.4.1.1, 8.4.1.2, 8.7 [PR6] ²	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
4.2.2, 9.4.3, 9.7 [PR4] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
9.7 [PR8] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
8.4.2 [EL10] ²	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
9.4.1.1 [EL1] ²	Automatic control requirements prescribed in Table 9.6.1, for the appropriate space type, are installed. Mandatory lighting controls (labeled as 'REQ') and optional choice controls (labeled as 'ADD1' and 'ADD2') are implemented.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
9.4.1.1 [EL2] ²	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
9.4.1.2 [EL11] ²	Parking garage lighting is equipped with required lighting controls and daylight transition zone lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
9.4.1.1f [EL13] ¹	Daylight areas under skylights and roof monitors that have more than 150 W combined input power for general lighting are controlled by photocontrols.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
9.4.1.4 [EL3] ²	Automatic lighting controls for exterior lighting installed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
9.4.1.3 [EL4] ¹	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
9.6.2 [EL8] ¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
8.7.1 [FI16] ³	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
8.7.2 [FI17] ³	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
9.2.2.3 [FI18] ¹	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
9.4.2 [FI19] ¹	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Exterior Lighting fixture schedule for values.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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