COM*check* Software Version 4.1.5.3 **Interior Lighting Compliance Certificate**

Project Information

Energy Code:	90.1 (2016) Standard
Project Title:	Cava - Lee's Summit
Project Type:	Alteration

Construction Site: 900 NW Pryor Rd Lee's Summit, MO 64081
> Owner/Agent: Cava 702 H Street 2nd Floor Washington, D.C., DC 20001

Designer/Contractor: Annex Engineering Group 589 W. Nationwide Blvd. Suite B Columbus, OH 43215

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft		D owed Watts (B X C)
1-Common Space Types:Dining Area - Bar Lounge/Leisure	2562	0.93		2383
		Total Allowed V	/atts =	2383
Proposed Interior Lighting Power				
A	B	C s/ #of	D Fixture	E (CXD)

Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	Lamps/ Fixture	# of Fixtures	Fixture Watt.	(C X D)	_
<u>Common Space Types:Dining Area - Bar Lounge/Leisure (2562 sq.ft.)</u>					
LED 1: R1: LED DOWNLIGHT: Other:	1	17	10	170	
LED 2: R2: LED DOWNLIGHT: Other:	2	28	20	560	
LED 3: R4: CAN LIGHT: Other:	1	10	20	200	
LED 4: P6.1: LINEAR PENDANTS: Other:	1	10	32	320	
LED 5: A1: LED PANEL: Other:	1	9	37	333	
		Total Propos	ed Watts =	1583	_

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project 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 (2016) Standard requirement in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist

Jason Wilson Name - Title

Signature

<u>6/15/2022</u>

COMcheck Software Version 4.1.5.3 Mechanical Compliance Certificate

Project Information

Energy Code: Project Title: Location: Climate Zone: Project Type: 90.1 (2016) Standard Cava - Lee's Summit Lees Summit, Missouri 4a Alteration

Construction Site: 900 NW Pryor Rd Lee's Summit, MO 64081 Owner/Agent: Cava 702 H Street 2nd Floor Washington, D.C., DC 20001

Designer/Contractor: Annex Engineering Group 589 W. Nationwide Blvd. Suite B Columbus, OH 43215

Mechanical Systems List

Quantity System Type & Description

4 HVAC System 1

Heating: 1 each - Central Furnace, Gas, Capacity = 80 kBtu/h

Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et (or 78% AFUE) Cooling: 1 each - Single Package DX Unit, Capacity = 57 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 15.00 SEER, Required Efficiency: 14.00 SEER Fan System: FAN SYSTEM 1 | RTU-1 thru 4 -- Compliance (Motor nameplate HP method) : Passes

Fans:

FAN 1 Supply, Constant Volume, 2000 CFM, 1.0 motor nameplate hp, 1.0 fan efficiency grade

SYSTEM VERIFICATION REQUIRED.

1 Water Heater 1

Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 150 kBtu/h w/ Circulation Pump Proposed Efficiency: 96.00 % Et, Required Efficiency: 80.00 % Et

SWH COMPLIANCE REQUIRED.

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2016) Standard requirements in COM*check Version* 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jason Wilson Name - Title

Signaturg

<u>6/15/2022</u> Date

COMcheck Software Version 4.1.5.3 Inspection Checklist

Energy Code: 90.1 (2016) Standard

Requirements: 100.0% were addressed directly in the COM*check* 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 #	Plan Review	Complies?	Comments/Assumptions
& Req.ID 4.2.2, 6.4.4.2.1, 6.7.2 [PR2] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	Complies Does Not Not Observable Not Applicable	Requirement will be met.
4.2.2, 7.7.1, 10.4.2 [PR3] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
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%.	□Complies □Does Not □Not Observable □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.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.7.2.4 [PR5] ¹	Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >=50,000 ft2.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1)

2 Medium Impact (Tier 2)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
6.4.3.7 [FO9] ³	melting system sensors for future connection to controls.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.

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

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
7.4.4.1 [PL2] ³	Temperature controls installed on service water heating systems (<=120ºF to maximum temperature for intended use).	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
7.4.4.2 [PL3] ¹	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

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

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.1.4, 6.4.1.5 [ME1] ²	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	Efficiency:	Efficiency:	□Complies □Does Not □Not Observable □Not Applicable	<i>See the Mechanical Systems list for values.</i>
6.4.3.4.1 [ME3] ³	Stair and elevator shaft vents have motorized dampers that automatically close.			Complies Does Not Not Observable Not Applicable	Exception: Requirement does not apply.
6.4.3.4.2, 6.4.3.4.3 [ME4] ³	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.4.3.4.5 [ME39] ³	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
6.4.3.4.4 [ME5] ³	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.4.3.8 [ME6] ¹	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Systems with a design outdoor airflow less than 1200 cfm.
6.5.3.2.1 [ME40] ²	DX cooling systems >= 75 kBtu/h (>= 65 kBtu/h effective 1/2016) and chilled-water and evaporative cooling fan motor hp >= $\frac{1}{4}$ designed to vary supply fan airflow as a function of load and comply with operational requirements.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. See the Mechanical Systems list for values.
6.4.4.1.1 [ME7] ³	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.4.4.1.2 [ME8] ²	HVAC ducts and plenums insulated per Table 6.8.2. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	R	R	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.4.4.1.3 [ME9] ²	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	in.	in.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Piping within HVAC equipment.

2 Medium Impact (Tier 2)

Section # & Reg.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.4.1.4 [ME41] ³	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.			Complies Does Not Not Observable	Exception: Requirement does not apply.
6.4.4.2.1 [ME10] ²	Ducts and plenums having pressure class ratings are Seal Class A construction.			□Not Applicable □Complies □Does Not □Not Observable	Requirement will be met.
6.8.1-15, 6.8.1-16 [ME110] ²	Electrically operated DX-DOAS units meet requirements per Tables 6.8.1-15 or 6.8.1-16.			Not Applicable	Requirement will be met.
6.4.4.2.2 [ME11] ³	Ductwork operating >3 in. water column requires air leakage testing.			 Not Applicable Complies Does Not Not Observable Not Applicable 	Exception: Requirement does not apply.
6.5.2.3 [ME19] ³	Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream.			Complies Does Not Not Observable Not Applicable	Requirement will be met.
6.5.2.4.1 [ME68] ³	Humidifiers with airstream mounted preheating jackets have preheat auto-shutoff value set to activate when humidification is not required.			Complies Does Not Not Observable Not Applicable	Exception: Requirement does not apply.
6.5.2.4.2 [ME69] ³	Humidification system dispersion tube hot surfaces in the airstreams of ducts or air- handling units insulated >= R- 0.5.			Complies Does Not Not Observable Not Applicable	Exception: Mechanical cooling (including economizer operation) does not occur simultaneously with humidification.
6.5.2.5 [ME70] ³	Preheat coils controlled to stop heat output whenever mechanical cooling, including economizer operation, is active.			Complies Does Not Not Observable Not Applicable	Requirement will be met.
6.5.2.6 [ME106] ³	Units that provide ventilation air to multiple zones and operate in conjunction with zone heating and cooling systems are prevented from using heating or heat recovery to warm supply air above 60°F when representative building loads or outdoor air temperature indicate that most zones demand cooling.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.5.3.6 [ME72] ²	Motors for fans >= 1/12 hp and < 1 hp are electronically- commutated motors or have a minimum motor efficiency of 70%. These motors are also speed adjustable for either balancing or remote control.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

2 Medium Impact (Tier 2)

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.5.3.4 [ME108] ²	Parallel-flow fan-powered VAV air terminals have automatic controls to a) turn off the terminal fan except when space heating is required or if required for ventilation; b) turn on the terminal fan as the first stage of heating before the heating coil is activated; and c) during heating for warmup or setback temperature control, either operate the terminal fan and heating coil without primary air or reverse the terminal damper logic and provide heating from the central air handler through primary air.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
6.5.3.7 [ME109] ²	Required minimum outdoor air rate is the larger of minimum outdoor air rate or minimum exhaust air rate required by Standard 62.1, Standard 170, or applicable codes or accreditation standards. Outdoor air ventilation systems shall comply with one of the following: a) design minimum system outdoor air provided < 135% of the required minimum outdoor air rate, b) dampers, ductwork, and controls allow the system to supply <= the required minimum outdoor air rate with a single set-point adjustment., or c) system includes exhaust air energy recovery complying with Section 6.5.6.1.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.5.3.3 [ME42] ³	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
6.5.4.2 [ME25] ³	HVAC pumping systems with >= 3 control values designed for variable fluid flow (see section details).			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
7.5.3 [ME78] ²	Gas-fired water-heating equipment installed in new buildings: where a singular piece of water-heating equipment >= 1,000 kBtu/h serves the entire building, thermal efficiency must be >= 90 Et. Where multiple pieces of water-heating equipment serve the building with combined rating is >= 1,000 kBtu/h, the combined input- capacity-weighted-average thermal efficiency , thermal efficiency must be >= 90 Et. Exclude input rating of equipment in individual dwelling units and equipment <= 100 kBtu/h.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

2 Medium Impact (Tier 2)

Section #	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
& Req.ID 6.5.6.1 [ME56] ¹	Exhaust air energy recovery on systems meeting Tables 6.5.6.1- 1, and 6.5.6.1-2.			Complies Does Not	Requirement will be met.
6.5.7.1 [ME100] ²	Conditioned supply air to space with mechanical exhaust <= the greater of criteria of supply flow, required ventilation rate, exhaust flow minu the available transffer air (see section details).			 Not Applicable Complies Does Not Not Observable Not Applicable 	Requirement will be met.
6.5.7.2.1 [ME32] ²	Kitchen hoods >5,000 cfm have make up air >=50% of exhaust air volume.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.5.7.2.4 [ME49] ³	Approved field test used to evaluate design air flow rates and demonstrate proper capture and containment of kitchen exhaust systems.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.5.8.1 [ME34] ²	Unenclosed spaces that are heated use only radiant heat.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
6.5.9 [ME35] ¹	Hot gas bypass limited to: <=240 kBtu/h - 15% >240 kBtu/h - 10%			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
7.4.2 [ME36] ²	Service water heating equipment meets efficiency requirements.			□Complies □Does Not □Not Observable □Not Applicable	
6.4.3.9 [ME63] ²	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
6.5.10 [ME73] ³	Doors separating conditioned space from the outdoors have controls that disable/reset heating and cooling system when open.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

1 High Impact (Tier 1)

2 Medium Impact (Tier 2)

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.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Space type is not private office, open office, or computer classroom.
8.4.3 [EL11] ²	New buildings have electrical energy use measurement devices installed. Where tenant spaces exist, each tenant is monitored separately. In buildings with a digital control system the energy use is transmitted to to control system and displayed graphically.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Buildings 25,000 ft2.
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.	□Complies □Does Not □Not Observable □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.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
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.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
9.4.1.3 [EL4] ¹	Separate lighting control devices for specific uses installed per approved lighting plans.	□Complies □Does Not □Not Observable □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.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
10.4.1 [EL9] ²	Electric motors meet requirements where applicable.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 M

2 Medium Impact (Tier 2)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
6.4.3.1.2 [FI3] ³	Thermostatic controls have a 5 °F deadband.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
6.4.3.2 [FI20] ³	Temperature controls have setpoint overlap restrictions.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
6.4.3.3.1 [FI21] ³	HVAC systems equipped with at least one automatic shutdown control.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
6.4.3.3.2 [FI22] ³	Setback controls allow automatic restart and temporary operation as	□Complies □Does Not	Requirement will be met.
	required for maintenance.	□Not Observable □Not Applicable	
6.4.3.12 [FI200] ³	and diagnostics (FDD) system (see	□Complies □Does Not	Requirement will be met.
	details for configuration and operational requirements).	□Not Observable □Not Applicable	
6.4.3.6 [FI6] ³	When humidification and dehumidification are provided to a	□Complies □Does Not	Requirement will be met.
	zone, simultaneous operation is prohibited. Humidity control prohibits the use of fossil fuel or electricity to produce RH > 30% in the warmest zone humidified and RH < 60% in the coldest zone dehumidified.	□Not Observable □Not Applicable	
6.7.2.1 [FI7] ³	Furnished HVAC as-built drawings submitted within 90 days of system	□Complies □Does Not	Requirement will be met.
	acceptance.	□Not Observable □Not Applicable	
6.7.2.2 [FI8] ³	systems within 90 days of system	□Complies □Does Not	Requirement will be met.
	acceptance.	□Not Observable □Not Applicable	
6.7.2.3 [FI9] ¹	An air and/or hydronic system balancing report is provided for HVAC	□Complies □Does Not	Requirement will be met.
	systems serving zones >5,000 ft2 of conditioned area.	□Not Observable □Not Applicable	
6.7.2.4 [FI10] ¹	HVAC control systems have been tested to ensure proper operation,	□Complies □Does Not	Requirement will be met.
	calibration and adjustment of controls.	□Not Observable □Not Applicable	
7.4.4.3 [FI11] ³	Public lavatory faucet water temperature <=110°F.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
7.4.4.4 [FI12] ³		□Complies □Does Not	Requirement will be met.
	installed to maintain temperature of a storage tank.	□Not Observable □Not Applicable	

2 Medium Impact (Tier 2)

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.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
8.7.2 [FI17] ³	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
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.	□Complies □Does Not	See the Interior Lighting fixture schedule for values.
		□Not Observable □Not Applicable	
9.4.4 [FI20] ¹	At least 75% of all permanently installed lighting fixtures in dwelling units have >= 55 lm/W efficacy or a >= 45 lm/W total luminaire efficacy.	□Complies □Does Not	Exception: Lighting is controlled by dimmers or automatic control devices.
		□Not Observable □Not Applicable	
10.4.3 [FI24] ²	Elevators are designed with the proper lighting, ventilation power, and standby mode.	□Complies □Does Not	Exception: Requirement does not apply.
		□Not Observable □Not Applicable	

1 High Impact (Tier 1)

2 Medium Impact (Tier 2)