COMcheck Software Version COMcheckWeb

Envelope Compliance Certificate

Project Information

Energy Code:	2020 Florida Building Code, Energy Conservation
Project Title:	Rountree - Moore Kia
Location:	Lake City, Florida
Climate Zone:	2a
Project Type:	New Construction

Construction Site:
2528 W. US Highway 90
Lake City, Florida 32055

Owner/Agent:

Designer/Contractor:
Ronald Renna, P.E.
Renna Enterprises, Inc.
3231 Drane Field Rd
Lakeland, Florida 33811

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
High Performance SWH, 1.0 credit

Building Area	Floor Area
1-Office : Nonresidential	500

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof: Insulation Entirely Above Deck, 3-Year-Aged Solar Reflectance Index = 55.00, Thermal Emittance = 0.75 (d), [Bldg. Use 1 - Office]	500	---	25.0	0.039	0.039
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Office] (b)	62	---	---	0.730	0.730
NORTH Ext. Wall: Concrete Block, 8in., Partially Grouted, Cells Ins., Light Density, Furring: None (c), [Bldg. Use 1 - Office]	450	---	5.7	0.078	0.151
EAST Ext. Wall: Concrete Block, 8in., Partially Grouted, Cells Ins., Light Density, Furring: None (c), [Bldg. Use 1 - Office]	240	---	5.7	0.078	0.151
WEST Ext. Wall: Concrete Block, 8in., Partially Grouted, Cells Ins., Light Density, Furring: None (c), [Bldg. Use 1 - Office]	305	---	5.7	0.078	0.151

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.
(c) CMU insulated cells must be filled with a material having a maximum thermal conductivity of 0.44 Btu in./h-ft2-degrees F. Perlite, vermiculite, polystyrene beads, or spray foam as defined in ASHRAE 2009 Handbook of Fundamentals meet this requirement. Other materials require documentation of thermal conductivity.
(d) High albedo roof requirement options: 1) 3-year aged solar reflectance index >= 55.0 thermal emittance >= 0.75, 2) 3-year aged solar reflectance index >= 64.0, 3) Initial year aged solar reflectance >= 0.70 thermal emittance >= 0.75, 4) Initial year aged solar reflectance index >= 82.0.

Envelope PASSES: Design 33% better than code

Envelope 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 systems have been designed to meet the 2020 Florida Building Code, Energy Conservation requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Ron Renna, P.E.		10-20-2022
Name - Title	Signature	Date

Ronald R Renna
This item has been electronically signed and sealed on the date shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be .verified on any electronic copies
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COM*check* Software Version COMcheckWeb
Mechanical Compliance Certificate

Project Information

Energy Code:	2020 Florida Building Code, Energy Conservation
Project Title:	Rountree - Moore Kia
Location:	Lake City, Florida
Climate Zone:	2a
Project Type:	New Construction

Construction Site:
2528 W. US Highway 90
Lake City, Florida 32055

Owner/Agent:

Designer/Contractor:
Ronald Renna, P.E.
Renna Enterprises, Inc.
3231 Drane Field Rd
Lakeland, Florida 33811

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
High Performance SWH, 1.0 credit

Mechanical Systems List

Quantity	System Type & Description
1	AHU-1/CU-1 (Single Zone): Heating: 1 each - Central Furnace, Electric, Capacity = 17 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Split System, Capacity = 17 kBtu/h, Air-Cooled Condenser, Unknown Economizer Proposed Efficiency = 15.40 SEER, Required Efficiency = 14.00 SEER Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
1	Water Heater: Electric Storage Water Heater, Capacity: 10 gallons w/ Circulation Pump No minimum efficiency requirement applies

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design 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 2020 Florida Building Code, Energy Conservation requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Ron Renna, P.E.
Name - Title

Signature
Ronald R Renna
This item has been electronically signed and sealed on the date shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be .verified on any electronic copies
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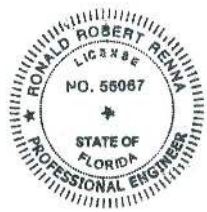

10-20-2022
Date

Inspection Checklist

Energy Code: 2020 Florida Building Code, Energy Conservation

Requirements: 69.0% 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 # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR1][1]	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [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.
C103.2 [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.
C402.4.1 [PR10][1]	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR11][1]	The skylight area <= 3 percent of the gross roof area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C402.4.2 [PR14][1]	In enclosed spaces > 2,500 ft2 directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent or <= 0.66 using Tubular Daylighting Device's VT rating.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4][2]	Slab edge insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [FO6][1]	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C104 [FO3][2]	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.5 [FO7][2]	Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or >= 10 inches of soil.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C403.2.4.5 [FO9][3]	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

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

Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C402.5.1 [FR16][1]	The building envelope contains a continuous air barrier that is sealed in an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.6.1, C404.6.2 [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.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

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

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C402.5.5, C403.2.4.3 [ME3][3]	Stair and elevator shaft vents have motorized dampers that automatically close. Refernece section C403.2.4.3 for operational details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.2.10 [ME61][2]	HVAC piping insulation insulated in accordance with Table C403.2.10. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.12.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.2.12.3 [ME117][2]	Fans have energy index (FEI) >= 1.00 in accordance with AMCA 208. Fans for VAV systems shall have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.3 [ME55][2]	HVAC equipment efficiency verified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.2.6 [ME59][1]	Natural or mechanical ventilation is provided in accordance with Florida Building Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per Florida Building Code Chapter 4.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.6.1 [ME59][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:** Requirement does not apply.
C403.2.6.2 [ME115][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.
C403.2.4.8 [ME141][3]	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.2.4.8.1 and C403.2.4.8.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.2.7 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.2.7(1) and C403.2.7(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.2.8 [ME116][3]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.2.9.1, C403.2.9.2 [ME60][2]	HVAC ducts and plenums insulated in accordance with C403.2.9.1 and constructed in accordance with C403.2.9.2, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.6 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.2.1 [ME53][3]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.5, C403.5.1, C403.5.2 [ME123][3]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2..	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

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

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.5.3 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C402.2.1.1 [IN20][1]	Insulation installed on a suspended ceiling having ceiling tiles is not being specified for roor/ceiling assemblies. Continuous insulation board installed in 2 or more layers with edge joints offset between layers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2 [IN10][2]	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [IN14][2]	Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C104 [IN6][1]	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.4 [IN8][2]	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.6 [IN18][3]	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.3 [IN5][3]	High-albedo roofs satisfy one of the following: 3-year-aged solar reflectance >= 0.55 and thermal emittance >= 0.75 or 3-year-aged solar reflectance index >= 64.0.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C104 [IN2][1]	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1.1 [IN1][1]	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C402.5.8 [FI26][3]	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.2.1 [FI50][3]	HVAC systems and equipment design loads calculated in accordance with ANSI/ASHRAE/ACCA Standard 183 or by an approved equivalent computational procedure	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [FI27][3]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1.2 [FI38][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1.3 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2 [FI39][3]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.1, C403.2.4.2.2 [FI40][3]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [FI11][3]	Heat traps installed on supply and discharge piping of non-circulating systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.4 [FI25][2]	All recirculation piping, first 8 feet of outlet or branch piping, inlet piping and piping that is externally heated shall be insulated in accordance with section details and Table C403.2.10	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1 [FI12][3]	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C406.7, C406.7.1 [FI53][1]	Enhanced Service Water Heat System efficiency package. One of the following SWH system enhancements must satisfy 60 percent of buildings annual hot water requirements, or 100 percent if the building requirements otherwise complies with heat recovery per Section C403.9.5: Waste heat recovery (from SWH, process equipment, OR on-site renewable water-heating.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, recommendations, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated. Regular maintenance actions shall be clearly stated on accessible label.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.1 [FI31][1]	HVAC equipment has been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.2 [FI10][1]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI7][3]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.3 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.4 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

Air System Sizing Summary for PARTS ROOM BLOCK LOAD

Project Name: 22076 — 10/20/22
Prepared by: Renna Enterprises INC. — 02:41 PM

Air System Information

System Name	PARTS ROOM BLOCK LOAD		
Equipment Class	SPLT AHU	Number of Zones	1
System Type	SZCAV	Floor Area	495.0 ft²

Sizing Calculation Information

Zone and Space Sizing Method:

Zone CFM	Peak zone sensible load	Calculation Months	Jan to Dec
Space CFM	Coincident space loads	Sizing Data	Calculated

Central Cooling Coil Sizing Data

Total coil load	1.2 Tons	Load occurs at	Jun 1700
Sensible coil load	0.9 Tons	OA DB / WB	92.5 / 79.6 °F
Coil CFM at Jun 1700	566 CFM	Entering DB / WB	76.3 / 66.4 °F
Max possible CFM	566 CFM	Leaving DB / WB	59.2 / 58.3 °F
Design supply temp.	59.0 °F	Coil ADP	57.3 °F
ft²/Ton	414.6	Bypass factor	0.100
BTU/hr/ft²	28.9	Resulting RH	59 %
Water flow @ 10.0 °F rise	- gpm	Zone T-stat Check	1 of 1 OK

Central Heating Coil Sizing Data

Max coil load	8284 BTU/hr	Load occurs at	Des Htg
Coil CFM at Des Htg	566 CFM	BTU/hr/ft²	16.7
Max possible CFM	566 CFM	Ent. DB / Lvg DB	64.7 / 78.2 °F
Water flow @ 20.0 °F drop	- gpm		

Supply Fan Sizing Data

Actual max CFM at Jul 1600	566 CFM	Fan motor BHP	0.12 BHP
Standard CFM	565 CFM	Fan motor kW	0.09 kW
Actual max CFM/ft²	1.14 CFM/ft²	Fan static	1.00 in. wg.

Outdoor Ventilation Air Data

Design airflow CFM	80 CFM	CFM/person	26.67 CFM/person
CFM/ft²	0.16 CFM/ft²		

Ronald R Renna
This item has been electronically signed and sealed on the date shown using a digital signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on .any electronic copies
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Zone Sizing Summary for PARTS ROOM BLOCK LOAD

Project Name: 22076 10/20/22
Prepared by: Renna Enterprises INC. 02:41 PM

Sizing Calculation Information

Zone and Space Sizing Method:

Zone CFM ____ **Peak zone sensible load**
Space CFM ____ **Coincident space loads**

Calculation Months ____ **Jan to Dec**
Sizing Data ____ **Calculated**

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (MBH)	Design Air Flow (CFM)	Minimum Air Flow (CFM)	Time of Peak Load	Maximum Heating Load (MBH)
Zone 1	8.5	560	560	Jul 1600	5.6

Zone Terminal Sizing Data

No Zone Terminal Sizing Data required for this system

Space Loads and Airflows

Zone Name / Space Name	Mult	Cooling Sensible (MBH)	Time of Load	Air Flow (CFM)	Heating Load (MBH)
Zone 1					
PARTS ROOM	1	8.5	Jul 1600	560	5.6

Air System Design Load Summary for PARTS ROOM BLOCK LOAD

Project Name: 22076 10/20/22
Prepared by: Renna Enterprises INC. 02:41 PM

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jun 1700 COOLING OA DB / WB 92.5 °F / 79.6 °F			HEATING DATA AT DES HTG HEATING OA DB / WB 35.0 °F / 30.3 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Solar Loads	0 ft²	0	-	0 ft²	-	-
Wall Transmission	975 ft²	3923	-	975 ft²	3102	-
Roof Transmission	495 ft²	1281	-	495 ft²	912	-
Glass Transmission	0 ft²	0	-	0 ft²	0	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Transmission	0 ft²	0	-	0 ft²	0	-
Floor Transmission	495 ft²	0	-	495 ft²	1286	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	495 W	1689	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	0 W	0	-	0	0	-
People	3	660	630	0	0	0
Infiltration	-	0	0	0	0	0
Miscellaneous	-	500	0	-	0	0
Safety Factor	5% / 5%	403	32	5%	265	0
>> Total Zone Loads	-	**8456**	**662**	-	**5565**	**0**
Zone Conditioning	-	8416	662	-	5545	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Return Fan Load	566 CFM	0	-	560 CFM	0	-
Ventilation Load	80 CFM	1632	3231	80 CFM	2985	0
Supply Fan Load	566 CFM	302	-	566 CFM	-302	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	1%	85	-	1%	56	-
>> Total System Loads	-	**10435**	**3893**	-	**8284**	**0**
Central Cooling Coil	-	10435	3893	-	0	0
Central Heating Coil	-	0	-	-	8284	-
>> Total Conditioning	-	**10435**	**3893**	-	**8284**	**0**
Key:	**Positive values are clg loads Negative values are htg loads**			**Positive values are htg loads Negative values are clg loads**		

COM*check* Software Version COMcheckWeb

Envelope Compliance Certificate

Project Information

Energy Code:	2020 Florida Building Code, Energy Conservation
Project Title:	Kia Service Department Addition
Location:	Lake City, Florida
Climate Zone:	2a
Project Type:	New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Reduced Lighting Power, 1.0 credit

Building Area	Floor Area
1-Service Department (Automotive Facility) : Nonresidential	4331

Envelope Assemblies

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

Envelope TBD: All building area types must be assigned to at least one envelope assembly

COM*check* Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code:	2020 Florida Building Code, Energy Conservation
Project Title:	Kia Service Department Addition
Project Type:	New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Reduced Lighting Power, 1.0 credit

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Service Department (Automotive Facility)	4331	0.64	2768
		Total Allowed Watts =	2768

Proposed Interior Lighting Power

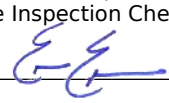
A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Service Department (Automotive Facility)				
LED: A: 4' Vaportite: Other:	1	1	30	30
LED: B: 8' Vaportite: Other:	1	36	66	2365
			Total Proposed Watts =	2395

Interior Lighting PASSES: Design 13% 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 2020 Florida Building Code, Energy Conservation requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Eric Encarnacion, P.E. — Name - Title

 — Signature

08/18/22 — Date

COM*check* Software Version COMcheckWeb

Exterior Lighting Compliance Certificate

Project Information

Energy Code:	2020 Florida Building Code, Energy Conservation
Project Title:	Kia Service Department Addition
Project Type:	New Construction
Exterior Lighting Zone	2 (Neighborhood business district (LZ2))

Construction Site: Owner/Agent: Designer/Contractor:

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Service Building Wall (Illuminated area of facade wall or surface)	2480 ft2	0.07	No	186
			Total Tradable Watts (a) =	0
			Total Allowed Watts =	186
			Total Allowed Supplemental Watts (b) =	400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 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 Fixture	D Fixture Watt.	E (C X D)
Service Building Wall (Illuminated area of facade wall or surface, 2480 ft2): Non-tradable Wattage				
LED: D: Wall Fixture: Other:	1	4	44	175
			Total Tradable Proposed Watts =	0

Exterior Lighting PASSES: Design 0.0% 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 2020 Florida Building Code, Energy Conservation requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Eric Encarnacion, P.E. — Name - Title

Signature

08/18/22 — Date

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code:	2020 Florida Building Code, Energy Conservation
Project Title:	Kia Service Department Addition
Location:	Lake City, Florida
Climate Zone:	2a
Project Type:	New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Reduced Lighting Power, 1.0 credit

Mechanical Systems List

Quantity **System Type & Description**

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design 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 2020 Florida Building Code, Energy Conservation requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

Inspection Checklist

Energy Code: 2020 Florida Building Code, Energy Conservation

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 # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [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.
C103.2 [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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Daylight spaces that comply with this code.
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans. 1. Display and accent lighting, lighting in display cases, supplemental task lighting and lighting equipment for sale shall have occupancy sensor control. 2) Sleeping units shall have auto off controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.5 [EL28][3]	Manual lighting controls are in a location with ready access and where controlled lights are visible.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.6 [EL30][3]	Exterior lighting systems provided with controls complying with C405.2.6.1 through C405.2.6.4 for daylight shutoff and decorative lighting shutoff.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.5.3 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.3.2 [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 ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C405.4.2 [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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, recommendations, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated. Regular maintenance actions shall be clearly stated on accessible label.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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