Standard 310 - 2 HVAC Systems

1240 Joseph Earl Drive
Desoto, TX 75115

Status	Scheduled Date	Completed Date
Pass	8/30/2024	8/30/2024

DAVONTE JONES

Builder	Community
Bloomfield Homes	Trees Farm

Superintendent	Superintendent
Jason McKenzie-Smith	VERIFY
Phone	Phone
972-877-1732	VERIFY

Total Items	Defects	Failed Items
202	3	0

Plan	Lot				
Seaberry - D - R	36	On site	Yes	Complete	Yes

PO #	WO #
300DAVONTE	764705

Inspection		Inspection	
Superintendent Attended	No	Number	4

Front View of House

Rear View of House

Left View of House

Right View of House

Construction Status	
Climate Zone	3
Options	
Rater/RFI ID	721KVS
IECC certification number	10271216

Energy Code Year	2021
Section Inspection Status - HVAC Design Review?	Pass
Section Inspection Status - Total Duct Leakage?	Pass
Section Inspection Status - Flow Grid?	Pass
Section Inspection Status - OEM Static Pressure?	Unanswered
Section Inspection Status - Blower Fan Airflow - Watt Draw?	Pass
Section Inspection Status - Non-Invasive Refrigerant Charge?	Unanswered
Section Inspection Status - Weigh-in Refrigerant Charge?	Pass

VERSION: 3.1 REFERENCE: 2151215

Testing Methodologies	
What testing method was used for Task 3 - Blower Fan Volumetric Airflow	Flow Grid Method
Which testing method was used for Task 5 - Refrigerant Charge Verification?	Weigh-In Method
Task 1 - HVAC Design Review	
Does the name of the plan or address for the Home match the HVAC design? (Architectural Plans) & (STD.310 HVAC Design Report / 1.4)	Yes
Do the options used in the Home match those in the HVAC design, or are they listed in the options the HVAC design can be used with? (Architectural Plans) & (STD.310 HVAC Design Report / 1.5-1.6)	Yes
Has all required design documentation been collected, or an IVR obtained? (Architectural Plan & STD.310 HVAC Design Report)	Yes
Home is between 60 sq. ft. smaller & 15 sq. ft. larger than HVAC design, or for zones with > 500 sq. ft. of windows, between 12% smaller and 3% larger? (Insulation Report / Window Section / Sq.ft. of Glazing) & (STD.310 HVAC Design Report / 3.10)	Yes
Is the Predominant window SHGC in the home within + or - 0.1 of HVAC design? (Insulation Report / Window Section / SHGC) & (STD.310 HVAC Design Report / 3.11)	Yes
Is the predominant R-value of the home within + or - R-2 of HVAC design? (Insulation Report / Rating Verification Section / Exterior Wall Cavity R-Value) & (STD.310 HVAC Design Report / 3.12)	Yes
Is the predominant R-value of the home within + or - R-4 of HVAC design? (E-Final Report / Insulation Verification Section / R-Value) & (STD.310 HVAC Design Report / 3.12)	Yes
Actual home infiltration(ACH50) is within + or - 2.0 of HVAC design? (E-Final Report / Blower Door Section / Multi-Point or Single Point Testing ACH50) & (STD.310 HVAC Design Report / 3.13)	N/A
Actual home infiltraion(ACH50) is within Table 1 tolerance for input used in HVAC design? Table 1 ACH50 Tight = 0-4 Semi-Tight = 1-5 Average = 3-7 Semi-Leaky = 7-11 Leaky = >11 (E-Final Report / Blower Door Section / Multi-Point or Single Point Testing ACH50) & (STD.310 HVAC Design Report / 3.13)	Yes
Is the Home between 300 sq. ft. smaller & 100 sq. ft. larger than HVAC design? (E-Final Report / Duct Blaster Section / Conditioned Floor Area Sq.ft.) & (STD.310 HVAC Design Report / 3.9)	Yes
Number of occupants in Home within + or - 2 of occupants in HVAC Design? (E-Final Report / Rating Verification Section / No. of bedrooms +1) & (STD.310 HVAC Design Report / 3.7)	Yes

Task 1 - HVAC Design Review	
Does front orientation of the Home match one of the orientations in the HVAC design? (E-Final Report / Rating Verification Section / Orientation of Home) & (STD.310 HVAC Design Report / 3.15)	Yes
Does each HVAC System in Home match the equipment type specified in the HVAC design? (E-Final Report / Images Section / Condenser, Coil, and Furnace Model #'s) & (STD.310 HVAC Design Report 4.3-4.5 & 4.17-4.18)	Yes
Is the sum of the time-averaged ventilation rate across all zones equal to the sum of the time-average design ventilation rate use in the loads across all heated / cooled zones? (STD.310 HVAC Design Report / 3.14 &2.11)	Yes
Does each HVAC system in the Home serve the zone(s) specified in the HVAC design? (STD.310 HVAC Design Report / 3.6)	Yes
Does the sum of design airflows across all rooms equal airflow of cooling or heating mode mode with higher airflow? (STD.310 HVAC Design Report / 5.3-5.6)	Yes
In HVAC Design, is the max. minus min. total heat gain across orientations < or = 6 kBtuh? (STD.310 HVAC Design Report / 3.16)	Yes
In HVAC Design, have heating and cooling loads have been calculated room-by-room? (STD.310 HVAC Design Report / 3.2)	Yes
Are indoor design temps in HVAC design 70 Degrees Fahrenheit for heating season & 75 Degrees Fahrenheit for cooling season? (STD.310 HVAC Design Report / 3.3)	Yes
Are outdoor design temps in HVAC design within limits defined in Appendix A? (STD.310 HVAC Design Report / 3.4-3.5) & (STD.310 / Appendix A / Page 49)	Yes
Does all HVAC design elements meet the required tolerances?	Yes
Does the name of the plan or address for the Home match the HVAC design? (Architectural Plans) & (STD.310 HVAC Design Report / 1.4) - System - 2	Yes
Do the options used in the Home match those in the HVAC design, or are they listed in the options the HVAC design can be used with? (Architectural Plans) & (STD.310 HVAC Design Report / 1.5-1.6) - System - 2	Yes
Has all required design documentation been collected, or an IVR obtained? (Architectural Plan & STD.310 HVAC Design Report)- System - 2	Yes
Home is between 60 sq. ft. smaller & 15 sq. ft. larger than HVAC design, or for zones with > 500 sq. ft. of windows, between 12% smaller and 3% larger? (Insulation Report / Window Section / Sq.ft. of Glazing) & (STD.310 HVAC Design Report / 3.10) - System - 2	Yes
Is the Predominant window SHGC in the home within + or - 0.1 of HVAC design? (Insulation Report / Window Section / SHGC) & (STD.310 HVAC Design Report / 3.11) - System - 2	Yes
Is the predominant R-value of the home within + or - R-2 of HVAC design? (Insulation Report / Rating Verification Section / Exterior Wall Cavity R-Value) & (STD.310 HVAC Design Report / 3.12) - System - 2	Yes
Is the predominant R-value of the home within + or - R-4 of HVAC design? (E-Final Report / Insulation Verification Section / R-Value) & (STD.310 HVAC Design Report / 3.12) - System - 2	Yes
Actual home infiltration(ACH50) is within + or - 2.0 of HVAC design? (E-Final Report / Blower Door Section / Multi-Point or Single Point Testing ACH50) & (STD.310 HVAC Design Report / 3.13) - System - 2	Yes

Task 1 - HVAC Design Review	
Actual home infiltraion(ACH50) is within Table 1 tolerance for input used in HVAC design? Table 1 ACH50 Tight = 0-4 Semi-Tight = 1-5 Average = 3-7 Semi-Leaky = 7-11 Leaky = >11 (E-Final Report / Blower Door Section / Multi-Point or Single Point Testing ACH50) & (STD.310 HVAC Design Report / 3.13) - System - 2	Yes
Is the Home between 300 sq. ft. smaller & 100 sq. ft. larger than HVAC design? (E-Final Report / Duct Blaster Section / Conditioned Floor Area Sq.ft.) & (STD.310 HVAC Design Report / 3.9) - System - 2	Yes
Number of occupants in Home within + or - 2 of occupants in HVAC Design? (E-Final Report / Rating Verification Section / No. of bedrooms +1) & (STD.310 HVAC Design Report / 3.7) - System - 2	Yes
Does front orientation of the Home match one of the orientations in the HVAC design? (E-Final Report / Rating Verification Section / Orientation of Home) & (STD.310 HVAC Design Report / 3.15) - System - 2	Yes
Does each HVAC System in Home match the equipment type specified in the HVAC design? (E-Final Report / Images Section / Condenser, Coil, and Furnace Model - 's) & (STD.310 HVAC Design Report 4.3-4.5 & 4.17-4.18) - System - 2	Yes
Is the sum of the time-averaged ventilation rate across all zones equal to the sum of the time-average design ventilation rate use in the loads across all heated / cooled zones? (STD.310 HVAC Design Report / 3.14 & 2.11) - System - 2	Yes
Does each HVAC system in the Home serve the zone(s) specified in the HVAC design? (STD.310 HVAC Design Report / 3.6) - System - 2	Yes
Does the sum of design airflows across all rooms equal airflow of cooling or heating mode mode with higher airflow? (STD.310 HVAC Design Report / 5.3-5.6) - System - 2	Yes
In HVAC Design, is the max. minus min. total heat gain across orientations < or = 6 kBtuh? (STD.310 HVAC Design Report / 3.16) - System - 2	Yes
In HVAC Design, have heating and cooling loads have been calculated room-by-room? (STD.310 HVAC Design Report / 3.2) - System - 2	Yes
Are indoor design temps in HVAC design 70 Degrees Fahrenheit for heating season & 75 Degrees Fahrenheit for cooling season? (STD.310 HVAC Design Report / 3.3) - System - 2	Yes
Are outdoor design temps in HVAC design within limits defined in Appendix A? (STD.310 HVAC Design Report / 3.4-3.5) & (STD.310 / Appendix A / Page 49) - System - 2	Yes
Does all HVAC design elements meet the required tolerances? - System - 2	Yes
Section Inspection Status - HVAC Design Review	Pass
Task 2 - Total Duct Leakage	
Does the system have a total amount of supply ductwork or distribution building cavities that is > 10 total linear feet? - System 1	Yes
Is the system entirely in Conditioned Space Volume?	No
Was total duct leakage test exemption taken? - System 1	No
Did testing occur at rough-in or final? (E-Final Report / Duct Blaster Section)	Final
Enter the number of returns in the system (E-Final Report / Duct Blaster Section)	3
Enter the Conditioned Floor Area served by the system (E-Final Report / Duct Blaster Section)	2071
Enter the total duct leakage of the system (E-Final Report / Duct Blaster Section)	105
Total duct leakage per 100 sq. ft. of CFA served by system? - System 1	5.07001

Task 2 - Total Duct Leakage	
Grade 1 Leakage Limit for System-1?	248.52
Grade 2 Leakage Limit for System-1?	289.94
Grade 3 Leakage Limit for System-1?	289.94
Total Duct Leakage Grade? - 310 Central Latest	Grade I
Does the system have a total amount of supply ductwork or distribution building cavities that is > 10 total linear feet? - System 2	Yes
Is the system entirely in Conditioned Space Volume? - System 2	No
Was total duct leakage test exemption taken? - System 2	No
Did testing occur at rough-in or final? - System 2	Final
Enter the number of returns in the system - System 2 (E-Final Report / Duct Blaster Section)	3
Enter the Conditioned Floor Area served by the system - System 2 (E-Final Report / Duct Blaster Section)	1294
Enter the total duct leakage of the system - System 2 (E-Final Report / Duct Blaster Section)	72
Total duct leakage per 100 sq. ft. of CFA served by system? - System 2	5.56414
Grade 1 Leakage Limit for System-2?	144
Grade 2 Leakage Limit for System-2?	168
Grade 3 Leakage Limit for System-2?	168
Total Duct Leakage Grade? - System 2 - 310 Central Latest	Grade I
Section Inspection Status - Total Duct Leakage? Grade 1 or 2 can proceed to Take 3. Grade 3 must stop testing.	Pass
Task 3 - Blower Fan Air Flow - Flow Grid (Primary Method)	
Did total duct leakage achieve Grade I or II designation?	Yes
Was blower fan airflow test exemption taken?	No
Enter design-specified blower fan airflow (Qdesign) (STD.310 HVAC Design Report / 5.3 Cooling CFM)	1540
Enter mode that forced-air HVAC system was tested in (Always test in Cooling)	Cooling
Enter Psop - pressure of the supply-side under normal operation (IWC)	0.238
Was there turbulence (fluctuations greater than 0.05 IWC) when measuring Psop?	No
Enter Ptest - pressure of the supply-side during test (IWC) (Use test results from PSOP)	0.238
Enter Qtest - the airflow through Flow Grid (CFM)	1505
Blower fan airflow at operating conditions? (Qop) - System 1	1505
Airflow Fault? (FaF) - System 1	-2.27273
Blower fan volumetric airflow grade (Primary Method)? - 310 Central Latest	Grade I
Did total duct leakage achieve Grade I or II designation? - System 2	Yes
Was blower fan airflow test exemption taken? - System 2	No
Enter design-specified blower fan airflow (Qdesign) - System 2 (STD.310 HVAC Design Report / 5.3 Cooling CFM)	922
Enter mode that forced-air HVAC system was tested in - System 2 (Always test in Cooling)	Cooling
Enter Psop - pressure of the supply-side under normal operation (IWC) - System 2	0.189

Task 3 - Blower Fan Air Flow - Flow Grid (Primary Method)	
Was there turbulence (fluctuations greater than 0.05 IWC) when measuring Psop? - System 2	No
Enter Ptest - pressure of the supply-side during test (IWC) - System 2 (Use test results from PSOP)	0.189
Enter Qtest - the airflow through Flow Grid (CFM) - System 2	916
Blower fan airflow at operating conditions (Qop) - System 2	916
Airflow Fault? (FaF) - System 2	-0.65
Blower fan volumetric airflow grade (Primary Method)? - System 2 - 310 Central Latest	Grade I
Section Inspection Status - Flow Grid? Grade 1 or 2 can proceed to Task 4. Grade 3 must stop testing.	Pass
Task 3 - Blower Fan Air Flow - OEM Static Pressure (Secondary Method)	**N/A**
Task 4 - Blower Fan Watt Draw - Clamp on Meter	
Did blower fan airflow achieve Grade I or II designation?	Yes
Enter mode that forced-air HVAC system was tested in (Always test in Cooling)	Cooling
Blower fan airflow at operating conditions? (Qop)	1505
Blower fan watt draw at operating conditions? (Wfan)	242.6
Blower fan efficiency?	0.161196
Blower fan watt draw grade?	Grade I
Did blower fan airflow achieve Grade I or II designation? - System 2	Yes
Enter mode that forced-air HVAC system was tested in - System 2 (Always test in Cooling)	Cooling
Blower fan airflow at operating conditions? (Qop) - System 2	916
Blower fan watt draw at operating conditions? (Wfan) - System 2	347.2
Blower fan efficiency? - System 2	0.379039
Blower fan watt draw grade? - System 2	Grade I
Section Inspection Status - Blower Fan Airflow - Watt Draw? Grade 1,2, or 3 can proceed to Task 5.	Pass
Task 5 - Non-Invasive Refrigerant Charge	**N/A**
Task 5 - Weigh-in Refrigerant Charge	
Contractor - The total weight of refrigerant added to or removed from the system? (Oz.)	15
Contractor - Refrigerant added or removed?	Added
Contractor - Was factory charge removed first?	No
Contractor - Was time-stamped geotagged photo(s) collected, showing scale with amount of refrigerant added or removed?	Yes
Contractor - The total length of the liquid line (Ft.)	40
Contractor - The outside diameter of the liquid line (In.)	0.375
Contractor - The length of liquid line accounted for in the factory-supplied? (Ft.)	15
Contractor - The weight of the factory-supplied refrigerant? (Oz.)	104
Contractor - The weight of refrigerant added for specific components (other than line length)	0
Rater - Enter the total length of the liquid line	40

Task 5 - Weigh-in Refrigerant Charge	
Rater - Enter the outside diameter of the liquid line (please enter one of the these decimal points - 0.25 [1/4"], 0.125 [1/8"], 0.5 [1/2"] or 0.375 [3/8"])	0.375
Rater - Delta liquid line length	25
Rater - Weight of the refrigerant required for the incremental liquid line length	15
Rater - Total anticipated refrigerant weight	119
Rater - Total reported refrigerant weight	119
Rater - Deviation between the total anticipated and total reported refrigerant weight	0
Rater - Does the location of the geotagged photo provided in Section 8.5.2.1.2 match the location of the Forced-Air HVAC System under test?	Yes
Refrigerant Charge Grade - System 1	Grade I
Contractor - The total weight of refrigerant added to or removed from the system? (Oz.) - System 2	16
Contractor - Refrigerant added or removed? - System 2	Added
Contractor - Was factory charge removed first? - System 2	No
Contractor - Was time-stamped geotagged photo(s) collected, showing scale with amount of refrigerant added or removed? - System 2	Yes
Contractor - The total length of the liquid line (Ft.) - System 2	40
Contractor - The outside diameter of the liquid line (In.) - System 2	0.375
Contractor - The length of liquid line accounted for in the factory-supplied? (Ft.) - System 2	15
Contractor - The weight of the factory-supplied refrigerant? (Oz.) - System 2	156
Contractor - The weight of refrigerant added for specific components (other than line length) - System 2	0
Rater - Enter the total length of the liquid line - System 2	40
Rater - Enter the outside diameter of the liquid line - System 2 (please enter one of the these decimal points - 0.25 [1/4"], 0.125 [1/8"], 0.5 [1/2"] or 0.375 [3/8"])	0.375
Rater - Delta liquid line length - System 2	N/A
Rater - Weight of the refrigerant required for the incremental liquid line length - System 2	15
Rater - Total anticipated refrigerant weight - System 2	171
Rater - Total reported refrigerant weight - System 2	172
Rater - Deviation between the total anticipated and total reported refrigerant weight - System 2	0.01
Rater - Does the location of the geotagged photo provided in Section 8.5.2.1.2 match the location of the Forced-Air HVAC System under test? - System 2	Yes
Refrigerant Charge Grade - System 2	Grade I
Section Inspection Status - Weigh-in Refrigerant Charge?	Pass
General Comments/Documents	
Comment - 1	Comment Only

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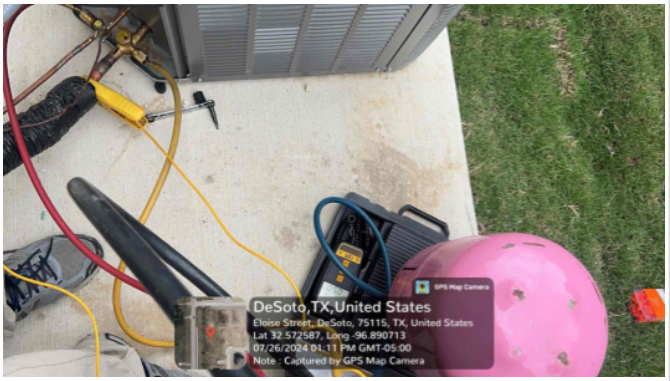

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Comment - 2	N/A
Comment - 3	N/A
Comment - 4	N/A
Comment - 5	N/A