

NFPA 285 TEST REPORT

Report No.: C1143.04-121-24

Test Date: April 24, 2013

Rendered to:

ALCOA ARCHITECTURAL PRODUCTS
50 Industrial Blvd.
Eastman, GA 31023

PRODUCT TYPE:

Exterior Non-Loadbearing Wall Assembly

This report contains in its entirety:

Cover Page:	1 page
Report Body:	10 pages
Graphical Data:	7 pages
Numerical Data:	24 pages
Photographs:	10 pages
Drawings:	7 pages



1.0 Report Issued To: Alcoa Architectural Products
50 Industrial Boulevard
Eastman, Georgia 31023

2.0 Test Laboratory: Architectural Testing, Inc.
130 Derry Court
York, Pennsylvania 17406-8405
717-764-7700

3.0 Introduction:

[Section 1.3.1, NFPA 285] The NFPA 285 test apparatus is used to evaluate the fire propagation characteristics of exterior non-load-bearing wall assemblies and panels used as components of curtain wall assemblies that are constructed using combustible materials or that incorporate combustible components within the wall assemblies as specified in the following:

- A. The ability of the wall assembly to resist flame propagation over the exterior face of the wall assembly.
- B. The ability of the wall assembly to resist vertical flame propagation within the combustible core or within other combustible components from one story to the next.
- C. The ability of the wall assembly to resist vertical flame propagation over the interior surface of the wall assembly from one story to the next.
- D. The ability of the wall assembly to resist lateral flame propagation from the compartment of fire origin to adjacent compartments or spaces.

4.0 Project Summary:

4.1 Product Type: Exterior Non-Loadbearing Wall Assembly

4.2 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). The specimen(s) were tested and evaluated against the requirements of the standard. A summary of the results is listed in the Test Results section and the complete graphical test data is included in Appendix A of this report.

4.3 Test Date: 4/24/2013

4.4 Test Location: Architectural Testing, Inc., test facility in York, Pennsylvania.

4.5 Test Sample Source: Air-Bloc 32MR used in testing was independently sampled by Architectural Testing. The remaining components of the test specimen were provided by the client except for the core wall components that were acquired and assembled by Architectural Testing, Inc. personnel.

4.6 Test Method(s), Practices and/or Classifications: NFPA 285 - *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components, 2012*



4.0 Project Summary: (Continued)

4.7 List of Official Observers:

<u>Name</u>	<u>Company</u>
Brian West	The Henry Company
Thomas Rodgers	Alcoa Architectural Products
Art Parker	Hughes Associates
Matthew Freeborn	Architectural Testing, Inc.
Ethan Grove	Architectural Testing, Inc.
Scott Gingrich	Architectural Testing, Inc.
Mark Haab	Shaffner Heaney Associates, Inc.
Jeff Cleek	Shaffner Heaney Associates, Inc.
Chris Kimball	Shaffner Heaney Associates, Inc.

5.0 Calibration Information: The apparatus is considered to be under calibrated conditions when the time average temperatures and the time average heat flux readings obtained for a calibration wall match the requirements of Table 8.1.6 of NFPA 285. Calibration was performed on February 25, 2013. Table 1 shows the average burner flow and heat flux. Table 2 shows the time average temperatures obtained during the calibration test. The values are within the allowable ranges as specified in Table 8.1.6 ($\pm 10\%$).

Table 1 Average Burner Output Information

Time Interval (min)	Room Burner (SCFM)	Window Burner (SCFM)	2 FT Flux (W/cm ²)	3 FT Flux (W/cm ²)	4 FT Flux (W/cm ²)
0:00-5:00	32.6	0.0	1.3	1.3	0.6
5:00-10:00	33.8	3.7	2.3	2.4	1.2
10:00-15:00	40.7	4.8	3.0	2.9	1.9
15:00-20:00	42.5	6.5	3.4	3.3	2.3
20:00-25:00	42.7	8.6	3.7	3.6	2.5
25:00-30:00	44.8	11.0	4.0	4.0	3.0

Some values obtained during the calibration were slightly above the limit. These values represent a more severe test scenario.

Table 2 Average Time Temperature Values for Calibration

Time (min)	Location							
	Burn Room (°F)	Int. Wall (°F)	1FT (°F)	2FT (°F)	3FT (°F)	4FT (°F)	5FT (°F)	6FT (°F)
0:00-5:00	1047.0	1033.1	680.1	724.7	700.0	630.6	579.0	491.9
5:00-10:00	1221.4	1213.3	889.4	940.9	979.1	936.6	880.9	762.6
10:00-15:00	1390.2	1394.3	1004.4	1055.5	1101.5	1053.1	987.8	859.4
15:00-20:00	1465.9	1474.4	1065.3	1114.9	1165.3	1123.2	1065.3	924.7
20:00-25:00	1489.7	1507.6	1103.8	1157.9	1209.5	1172.7	1127.3	981.2
25:00-30:00	1544.5	1565.8	1136.9	1191.3	1249.5	1222.2	1184.1	1027.3

Some values obtained during the calibration were slightly above the limit. These values represent a more severe test scenario.

Architectural Testing's NFPA 285 ISMA apparatus meets the calibration requirements.

Test Specimen Description:

Interior Cladding:

The interior wall was clad with National Gypsum 5/8 in. thick Type X gypsum board fastened to the core wall with Fastenal #10 x 1-1/4 in. long flat head self-drilling screws with a nominal spacing of 8 inches on the perimeter and 12 inches in the field. Drywall orientation on the burn floor consisted of two vertical pieces on each side of the window opening, parallel with the studs. Two pieces were then cut and placed above and below the window opening with the long side factory edges facing the window opening. Drywall orientation on the second floor consisted of horizontally oriented sheets with the short dimension running parallel with the studs and a single 24 in. wide sheet oriented with the long direction facing vertically. Drywall orientation for the gaps above the top support angle and below the bottom support angle consisted of drywall that was oriented with the long dimension running perpendicular with the steel studs. All joints were taped with USG Sheetrock paper joint tape, and spackled with USG Sheetrock Joint Compound.

Core Wall:

The steel framing used in the core wall consisted of 18 ft. long, 3-5/8 in. deep, 16 gauge galvanized steel studs fastened to 14 ft. length, 16 gauge galvanized steel track. The studs were connected to the track with Fastenal #8 x 1 in. long wafer head self-drilling screws. Horizontal 16 gauge x 1-1/2" wide CRC steel bracing was fit into the cutouts of the studs and fastened to the studs every 4 ft. above the window opening. The CRC Bracing was fastened to the studs by using TSN BridgeClip brackets. The brackets were attached to the studs with two Fastenal #8 x 1 in. long wafer head self-drilling screws and to the CRC bracing with one Fastenal #8 x 1 in. long wafer head self-drilling screw.

Window Opening:

A 78 in. wide x 30 in. tall window opening was made from 16 gauge galvanized steel track was centered on the vertical centerline of the wall assembly with the finished sill of the opening 30 inches above the first story floor line. The steel track sections were welded at each corner. 0.030 in. thick stainless steel L-flashing was installed around the perimeter of the window opening. Both legs of the L-flashing were 4 in. long. Two pieces were used at each jamb, header, and sill. The first piece that was installed faced the interior and covered the opening frame. These pieces were fastened to the window opening frame interior with #10 x 1-1/4 in. long Tek screws every 24 in. on center. The second piece of flashing faced the assembly's exterior and was flush with the window opening surface. These pieces were fastened through the first piece of flashing, through the sheathing and into each stud.

Exterior Sheathing:

The exterior sheathing consisted of 5/8 in. thick National Gypsum EXP exterior sheathing that was fastened to the stud wall with Fastenal #10 x 1-1/4 in. long flat head self-drilling screws with a nominal spacing of 8 inches on the perimeter and 12 inches in the field. Sheathing sizes were 4 ft. x 8 ft. and 4 ft. x 6 ft. The 6 ft. and 8 ft. lengths were offset each vertical row.

Test Specimen Description: (Continued)

Air/Vapor Barrier:

Henry Air-Bloc 32MR was brushed over each horizontal and vertical sheathing joint. After a joint was covered, 2 in. wide FibaTape was placed in the Air-Bloc and was then brushed over with an additional layer of Air-Bloc. Once all horizontal and vertical joints were covered, Henry Air-Bloc 32MR was applied over the full surface of the exterior sheathing to a nominal thickness of 0.075 in. The Air-Bloc 32 MR was applied using a Graco Texspray 7900HD sprayer in conjunction with a Graco 531 tip with an operating pressure range of 1700-1750 psi. The Air-Bloc was left to cure for 32 days until covered with insulation.

Exterior Insulation:

Prior to insulation panel installation, 0.060 in. thick J girts were fastened to the assembly perimeter with 1/4 in. thick x 2 in. long Tek screws every 24 in. on center. The J-girts were bent to create a 3 in. leg and a 2 in. leg that were 2 in. apart. Above the first row of insulation panels, 0.060 in. thick Z-girts were placed on both sides of the window opening sill and fastened through the sheathing and into the studs with 1/4 in. thick x 2 in. long Tek screws every 24 in. on center. The Z-girts were bent to create two 2 in. long legs, 2 in. apart. At the window opening sill, a 78 in. long J-girt was placed facing downward to accept the insulation panel below. The J-girt was fastened through the window opening sill flashing, through the sheathing, and into the studs with 1/4 in. thick x 2 in. long Tek screws. 2 in. thick Atlas EnergyShield PRO2 was placed into the sill J-girts along the full width of the assembly. The insulation panels were also placed in the J-girts along the assembly perimeter. Identical 30 in. long J-girt pieces were placed over the window opening jamb flashing and faced the assembly jambs so that it would accept the insulation panels. The J-girts were fastened through the window opening jamb flashing, through the sheathing and into the window opening jambs. The insulation panels located on both sides of the window opening rested on the Z-girt below and into the assembly perimeter and window opening jamb J-girts. Above the window opening header, a 78 in. long pieces of 0.060 in. thick J-girt was fastened through the window flashing, through the sheathing, and into each stud above the window opening. 0.060 in. thick Z-girts were cut the full width of the insulation panels below and were fastened through the sheathing and into each stud with 1/4 in. thick x 2 in. long Tek screws. The insulation panels above the window opening header were placed into the J-girt and panels located outside of the vertical plane of the window opening rested on top of the Z-Girts below. Each row following was placed on top of Z-girts that ran full width of the assembly. The top of each row of insulation panels were covered with Z-girts that ran the full width of the assembly and were fastened through the sheathing and into each stud. All Insulation panels above the window opening were 4 ft. wide x 96 in. long and 48 in. wide x 72 in. long. The 96 in. and 72 in. lengths were offset each vertical row.

Exterior Cladding:

A 0.080 in. thick extruded aluminum starter rail was fastened to the assembly sill J-girt with #10 x 3/4 in. long Tek screws every 24 in. on center. The extruded aluminum rail was placed flush with the assembly sill and ran the full width of the assembly. Alcoa Architectural Products Reynobond 4mm Panels, RB160FR, were used for the exterior cladding. The panels were installed into Shaffner Heaney Associates, Inc. RLS 9000 rainscreen system. 0.080 thick extruded aluminum clips were fastened to the top and sides of each panel with #10 x 3/4 in. long Tek screws. Panel sides that were located at the assembly jambs did not have clips fastened to the sides. The clips were fastened from the rear of the panel every 16 in. on center. The panel located below the window opening sill had 0.080 thick extruded aluminum top clips. Each aluminum clip was fastened to the Z-girts with one #10 x 2 in. long Tek screws. Prior to installation of the next row of panels, Alcoa Reynobond 4 mm splines were placed in all horizontal and vertical joints. The splines were set in the contours of the aluminum clips. Installation of the next row of panels began by resting the panel in the top clips of the panel below. Once level, the panels were then fastened to the next row of Z-girts with #10 x 2 in. long Tek screws. Once fastened, the splines were placed in the horizontal and vertical joints. Prior to installation of the panels above the window opening header, a 0.080 in. thick extruded aluminum starter rail was fastened with #10 x 3/4 in. long Tek screws to the window opening header flashing to accept the panel above. The same process for mounting the panels to the clips below was used for the succeeding rows. The top row of panels used the same clips along the top side as the panel located below the window opening sill. Once the installation of the panels was complete, the panel joints at the window opening sill and jambs were filled with 7/8 in. wide open-cell backer rod. Once the backer rod was in place, Dow Corning 795 silicone sealant was applied to fill the joints.

7.0 Instrumentation and Test Procedure:

7.1 Instrumentation: Wall assembly was instrumented with thermocouples in accordance with figures 6.1 of NFPA 285 test method. 18-gauge Type “K” TCs were used in the burn room and 20-gauge Type “K” was used on exterior façade and cavity air space. The window burner was positioned in the center of the opening and 4-1/2 in. off the exterior face of the wall assembly. Position of the window burner was determined by calibration of the ISMA on February 25, 2013.

7.2 Test Procedure: Testing was performed on 4/24/2013 in accordance with NFPA 285 test method. Ambient conditions were 68°F and 54% relative humidity. An anemometer was used to verify airflow across test assembly was less than 4 ft. /s as specified in the test method. Video recording, digital photographs, visual observations, and data collection were performed prior, during, and after testing was completed. Temperature data was recorded every 15 seconds.

8.0 Test Results: The test was performed at 10:36 am with the burners on for 30 minutes. The burners were turned off and the specimen was allowed to burn for an additional 10 minutes after the test. All observations are recorded in the following table.

Table 3 Test Observations

Time (min:sec)	Observations
00:00	Ignition of the room burner.
00:45	Window opening header warping.
01:30	Interior gypsum ignition in test room.
02:30	First panel above the window opening header warping.
03:45	Second panel above the window opening header warping.
05:00	Ignition of the window burner.
05:30	Vapor from assembly perimeter.
13:00	Charring, peeling, and intermittent ignition 2 ft. above the window opening header on the assembly centerline.
18:00	Charring and peeling 3 ft. above the window opening header on the assembly centerline.
21:00	Sustained ignition at the window opening header and first panel joint.
24:00	Charring and peeling 4 ft. above the window opening header on the assembly centerline.
25:30	Ignition at first and second panel horizontal joint at the assembly centerline.
30:00	The burners were extinguished.
30:01	Flaming continues at the window opening header and the first panel joint.
	Flames self-extinguish.
40:00	The test was terminated.

8.0 Test Results (Continued)

Table 4 Test Requirements

Test Requirements	Test Observations	Pass/Fail
Flames did not reach 10 ft. above the window opening header.	Flames did NOT reach 10 ft. above the window opening header.	PASS
Flames did not reach a lateral distance of 5 ft. from the vertical centerline.	Flames did NOT reach a lateral distance of 5 ft. from the vertical centerline.	PASS
Flames did not propagate beyond the limits of the first story test room.	Flames did NOT propagate beyond the first story test room.	PASS
No visible flaming in the second story test room	NO visible flaming in the second story test room.	PASS
TC's 11 and 14-17 (1000°F limit)	TC's 11 and 14-17 did not exceed the 1000°F limit	PASS
TC's 28, 34-35, and 39-40 (1000°F limit)	TC's 28, 34-35, and 39-40 did not exceed the 1000°F limit	PASS
TC's 18 and 19 (1000°F limit)	TC's 18 and 19 did not exceed the 1000°F limit	PASS
TC's 55-67 (750° above ambient)	TC's 55-67 did not reach 750° above ambient.	PASS
TC's 49-54 (500°F above ambient)	TC's 49-54 did not reach 500°F above ambient.	PASS

Description of Extent of Damage:

Interior Cladding:

The interior gypsum was still intact after the separation of the assembly from the test fixture. However, the area exposed to the test room was heavily fatigued and showed significant flame damage.

Air/Vapor Barrier:

The charring area of the Air/Vapor Barrier was less than 4 in. above the window opening across the full width of the window opening.

Exterior Insulation:

Discoloration was present on the assembly centerline of the insulation panels. Delamination of the facer of the panels was evident up to 10 ft. above the window opening but no more than 3 ft. bilaterally from the centerline. Light charring was evident 5 ft. above the window opening header on the centerline. Charring was also evident no higher than 4 in. from the window opening header across the full width of the header.



8.0 Test Results (Continued)

Exterior Cladding:

Discoloration of surface coating was evident up to 11 ft. above the window opening header. Charring was evident up to 4 ft. above the window opening header.

The assembly described in this report met the Condition of Acceptance of NFPA 285.

9.0 Equipment: The following devices were used for testing.

Device	Asset No.
Orifice Plate 1	675-1
Orifice Plate 2	1400-4
Data Acquisition (SCXI Chassis)	63523
Ashcroft Differential Pressure Transducer 1	63523-1
Ashcroft Differential Pressure Transducer 2	63523-2
ALNOR Wind Vane Anemometer	63192



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For ARCHITECTURAL TESTING, Inc.

Ethan Grove
Technician

Matthew Freeborn
Program Manager – Fire Testing

EJG:ddr

Attachments (pages): This report is complete only when all attachments listed are included.

- Appendix-A: Graphical Data (7)
- Appendix-B: Numerical Data (24)
- Appendix-C: Photographs (10)
- Appendix-D: Drawings (7)

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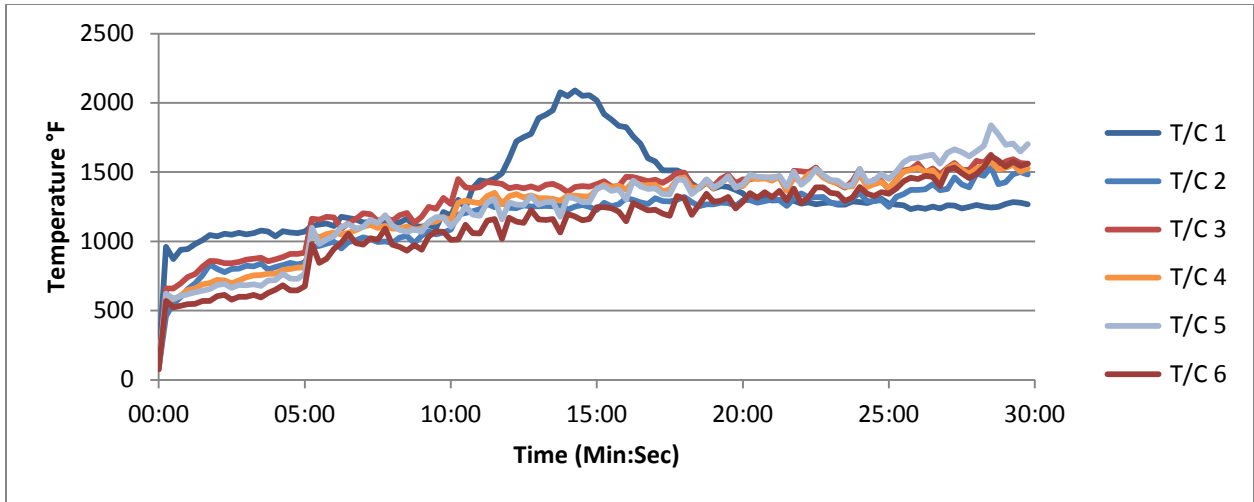
Revision Log

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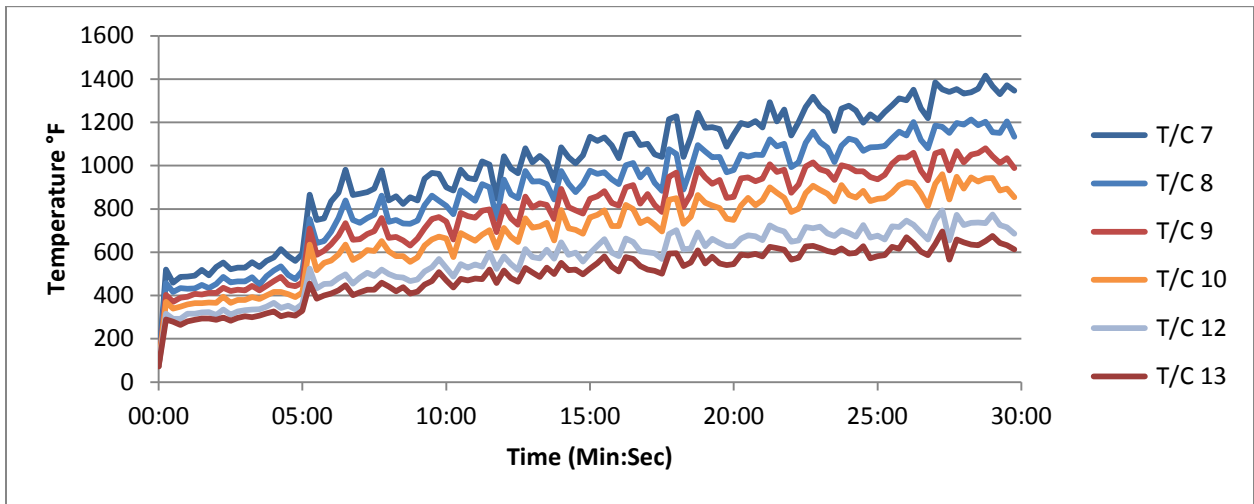


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Test Record Retention End Date: 4/24/17

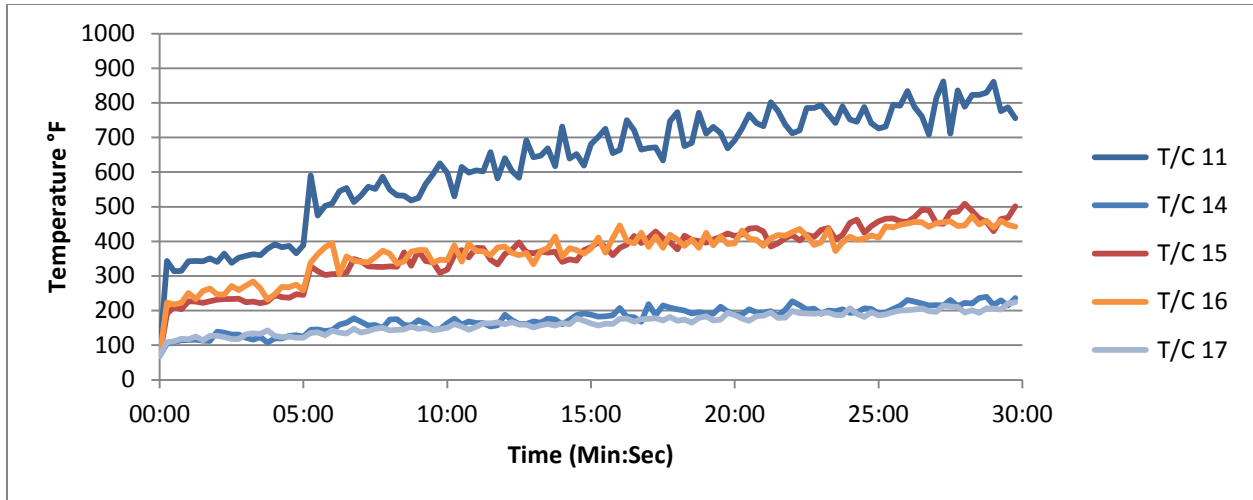
Appendix A
Graphical Data



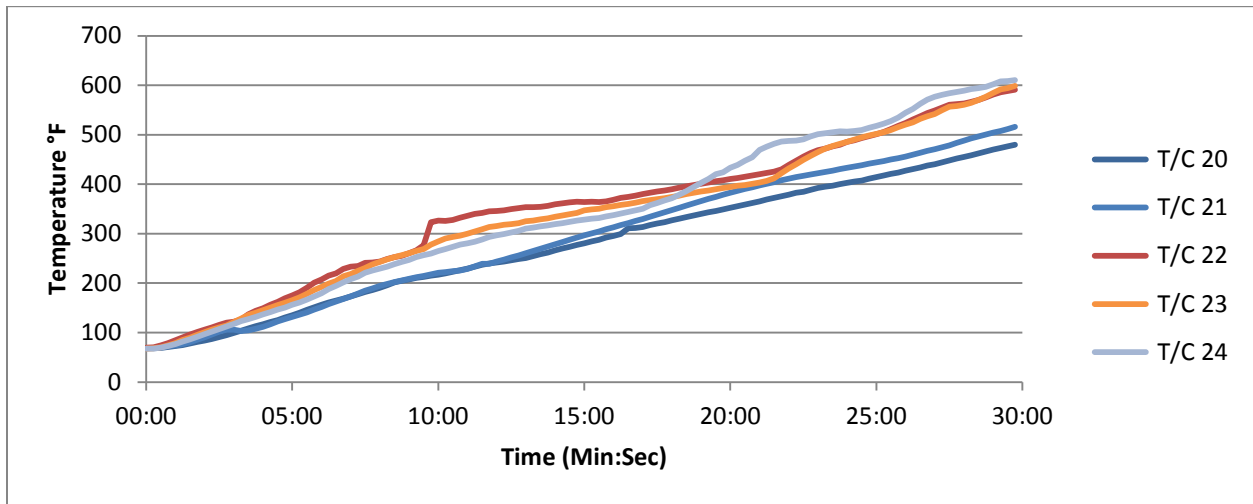
Graph No. 1
Assembly Centerline (Exterior Surface)



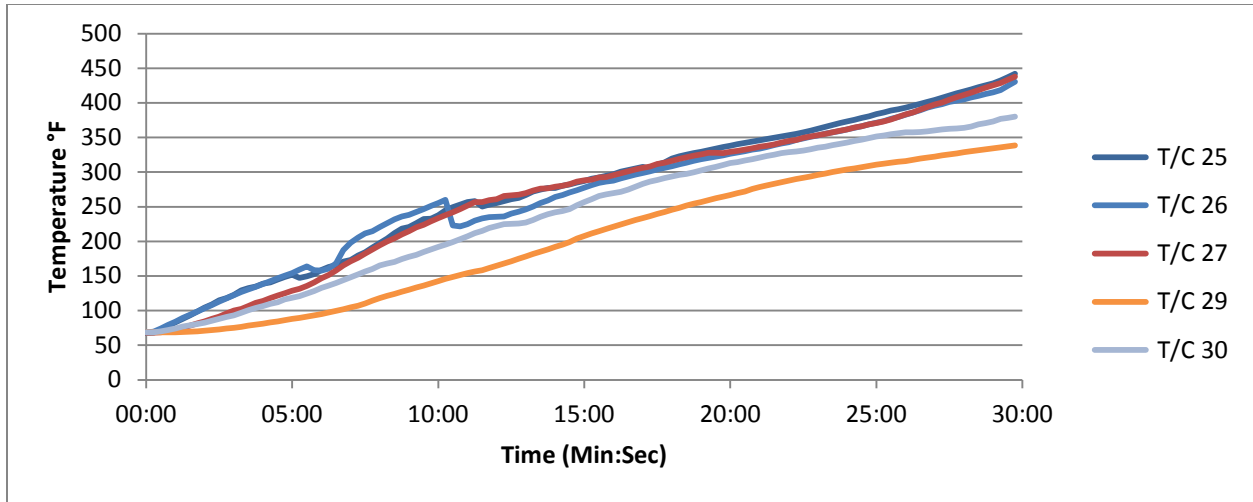
Graph No. 2
Assembly Centerline (Exterior Surface)



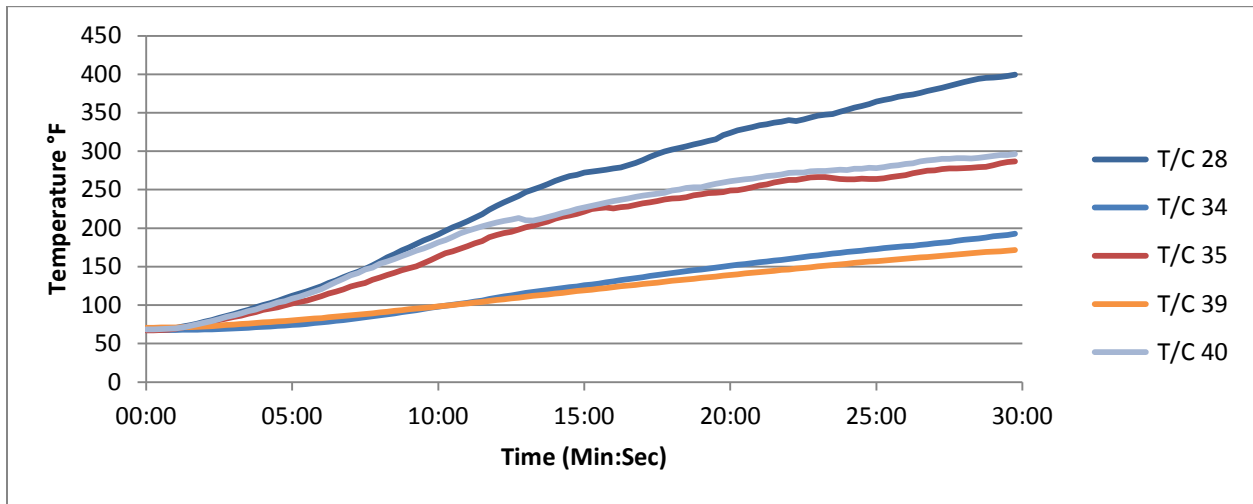
Graph No. 3
10 ft. Above Window Opening Header (Exterior Surface)



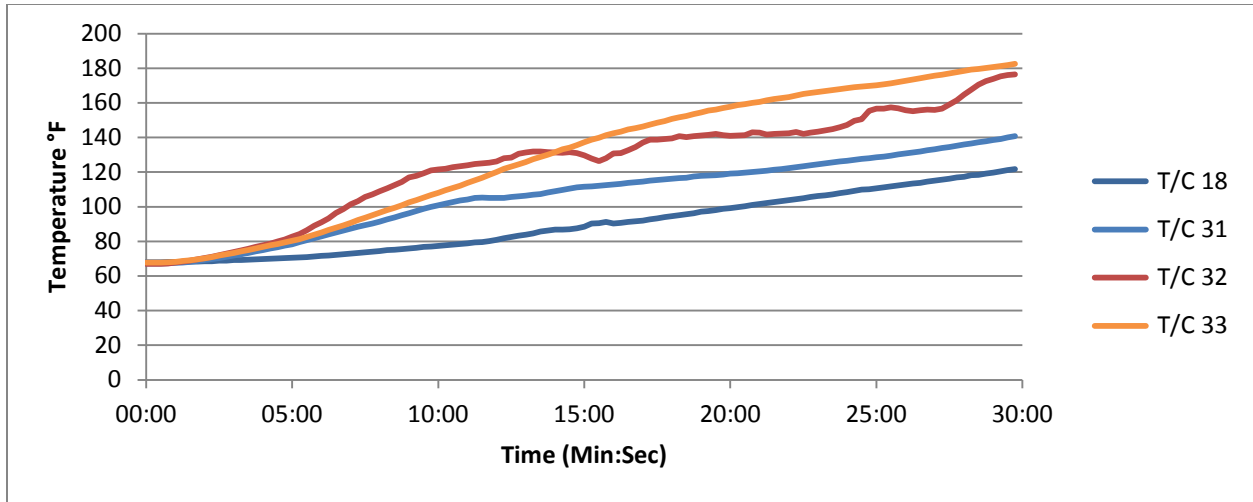
Graph No. 4
Assembly Centerline (Air Cavity)



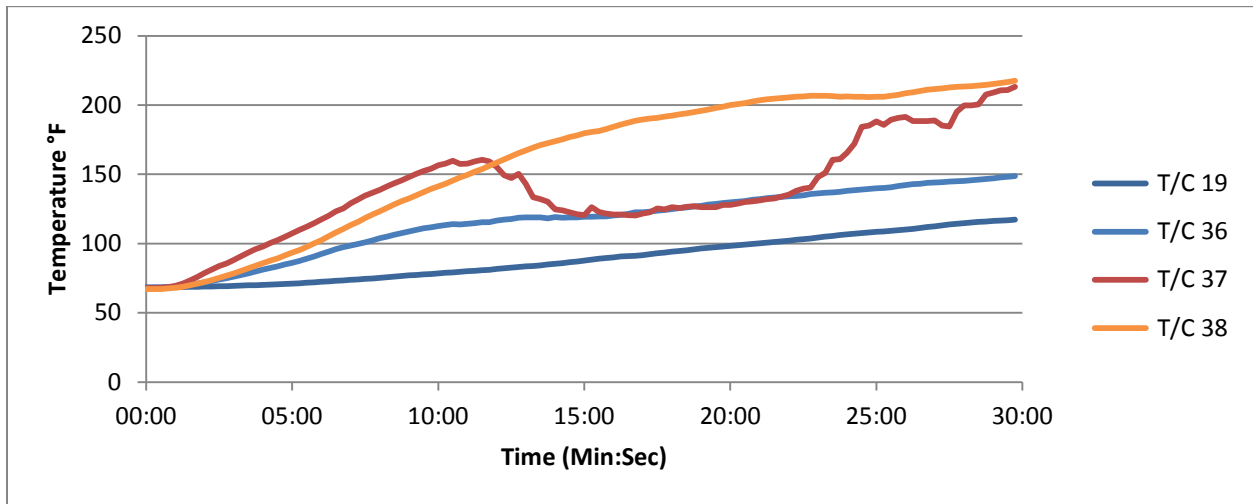
Graph No. 5
Assembly Centerline (Air Cavity)



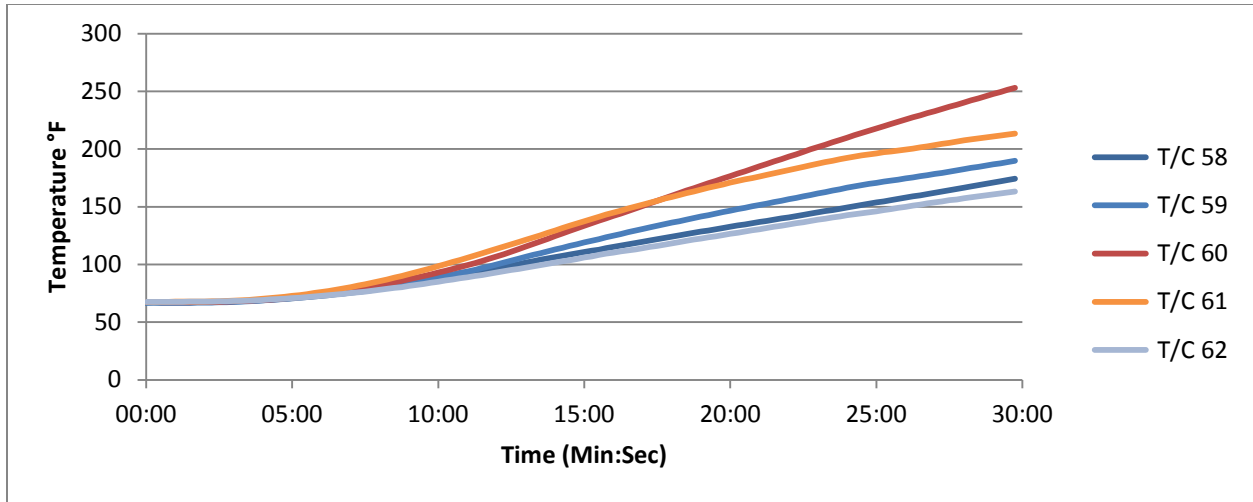
Graph No. 6
10 ft. Above Window Opening Header (Air Cavity)



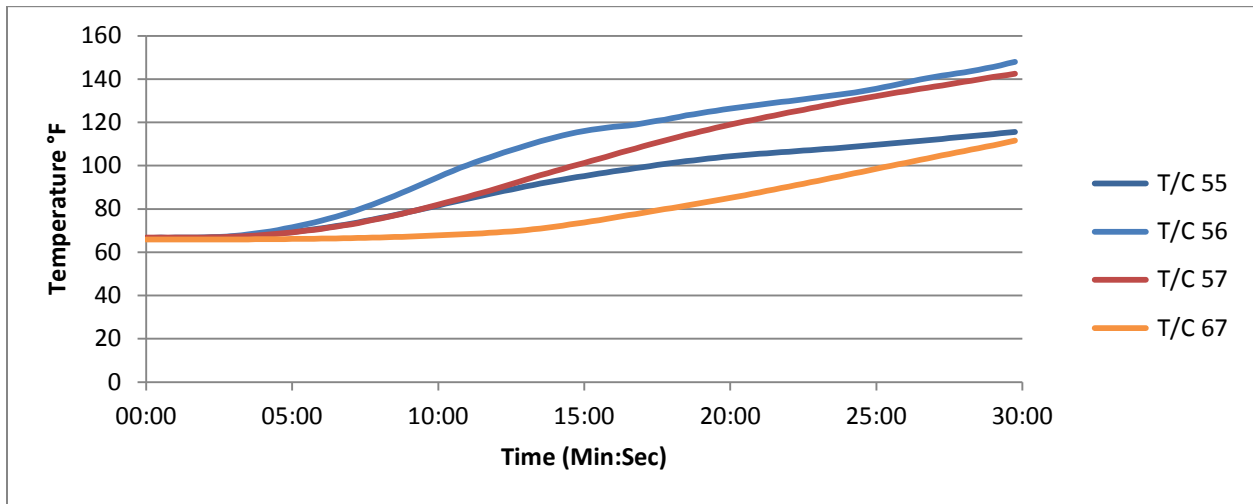
Graph No. 7
Left of Assembly Centerline (Air Cavity)



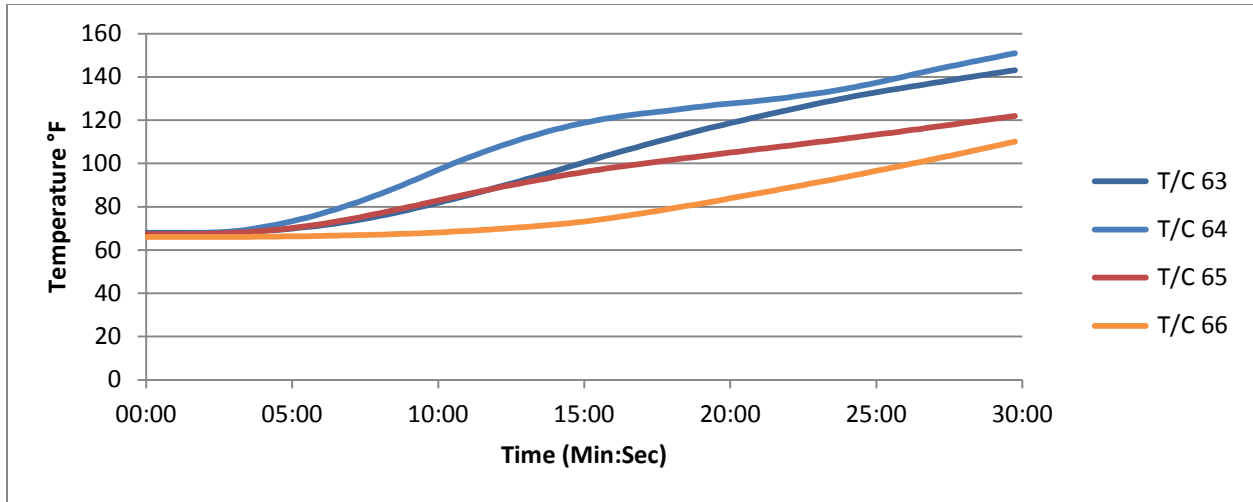
Graph No. 8
Right of Assembly Centerline (Air Cavity)



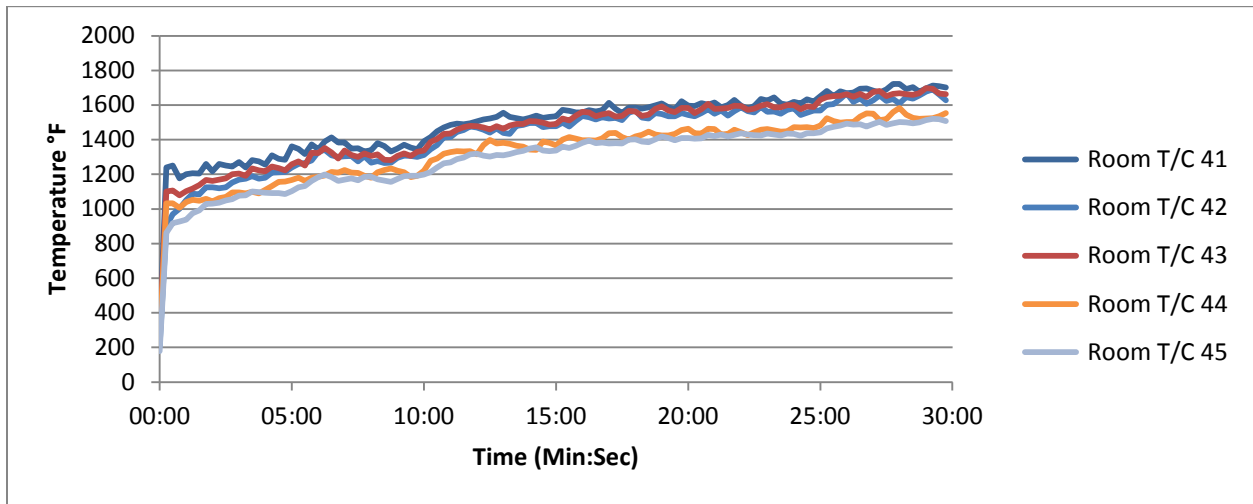
Graph No. 9
10 ft. Above Window Opening Header (Combustible Insulation)



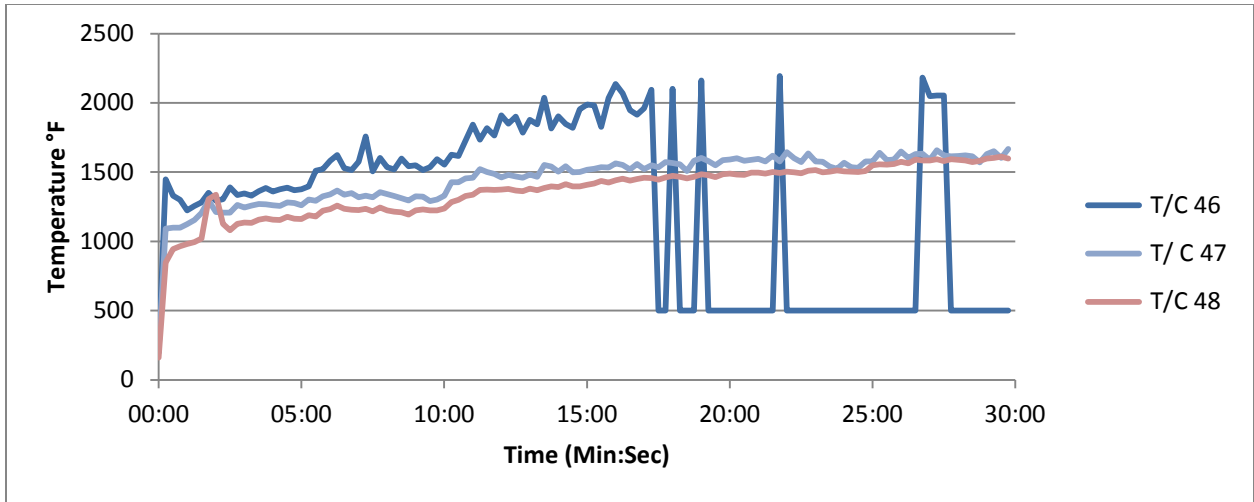
Graph No. 10
Left of Assembly Centerline (Combustible Insulation)



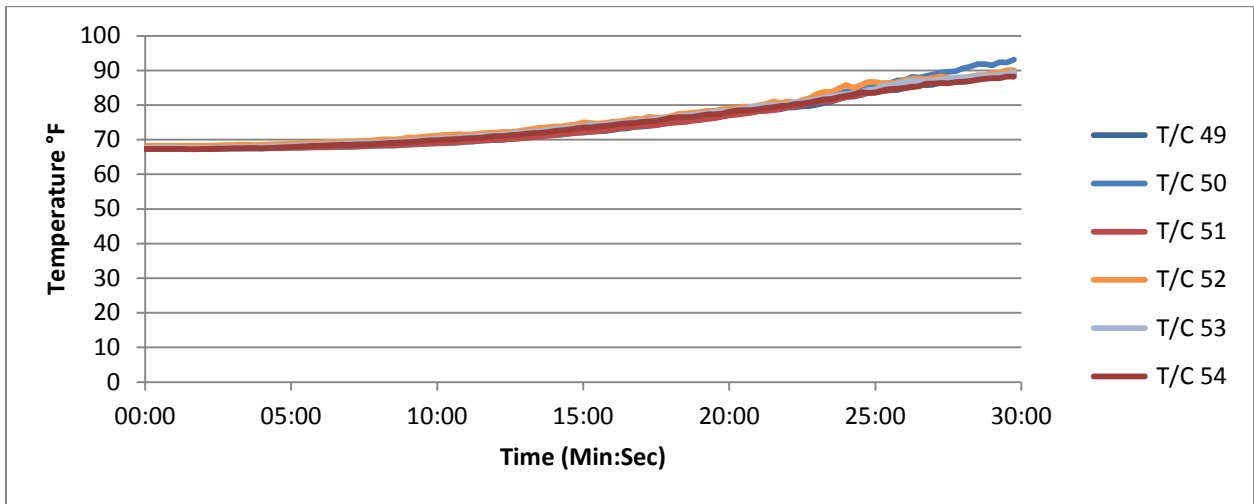
Graph No. 11
Right of Assembly Centerline (Combustible Insulation)



Graph No. 12
Burn Room



Graph No. 13
First Story Interior Wall



Graph No. 14
Second Story Interior Wall

Appendix B
Numerical Data



Time (Min:Sec)	Room Gas Flow	Window Gas Flow	T/C 1	T/C 2	T/C 3	T/C 4	T/C 5	T/C 6	T/C 7	T/C 8
00:00	55.94	-0.13	110.95	80.07	81.04	76.31	74.89	74.23	74.99	74.44
00:15	35.81	-0.13	960	461.4	659.35	577.88	622.92	570.31	520.23	458.35
00:30	31.82	-0.13	873.02	547.82	660	580.68	585.51	523.12	459.4	416.98
00:45	32.44	-0.13	938.41	597.36	696.1	608.89	604.15	534.41	485.24	433.43
01:00	37.14	-0.13	943.62	656.01	742.18	647.52	617.78	547.46	487.74	431.4
01:15	32.05	-0.13	979.9	697.53	764.68	659.51	631.29	548.89	492.44	432.02
01:30	37.64	-0.13	1008.83	754.65	817.48	690.54	644.56	569.56	518.21	448.81
01:45	30.15	-0.13	1045.77	831.89	858.64	699.58	654.04	570.12	493.28	434.39
02:00	37.64	-0.13	1037.21	801.19	857.15	722.2	684.76	604.92	532.22	453.48
02:15	33.42	-0.13	1054.33	776.67	841.73	718.02	693.05	613.05	552.39	485.61
02:30	33.33	-0.13	1048.97	800.5	841.82	697.04	663.64	578.8	520.98	459.98
02:45	33.24	-0.13	1060.79	803.26	851.87	717.83	685.83	599.14	528.5	465.07
03:00	33.39	-0.13	1051.05	823.84	867.12	740.51	683.1	600.2	528.47	465.63
03:15	38.83	-0.13	1059.96	819.44	873.47	753.85	689.96	614.45	553.39	483.73
03:30	30.79	-0.13	1078.93	840.26	881.16	756.24	677.17	595.49	530.94	450.15
03:45	32.85	-0.13	1071.75	796.8	855.28	766.81	718.16	627.76	560.19	489.41
04:00	37.26	-0.13	1036.72	815.23	870.74	765.53	720.32	649.81	575.94	515.33
04:15	32.65	-0.13	1073.72	827.4	886.58	793.8	765.87	683.78	614.8	534.89
04:30	28.84	-0.13	1064.55	844.02	910.08	800.32	731.81	646.65	582.15	495.1
04:45	32.96	-0.13	1060.06	832.2	909.71	809.11	729.53	644.9	559.58	475.83
05:00	34.31	10.11	1070.57	847.75	917.58	812.74	765.76	676.91	591.63	514.15
05:15	31.02	3.88	1112.1	959.37	1162.53	1052.34	1097.61	981.82	866.23	753.64
05:30	35.92	3.8	1120.88	967.43	1156.42	1029.26	980.22	845.58	748.54	642.2
05:45	33.19	3.88	1129.4	982.41	1177.12	1051.77	1013.95	875.44	757.04	651.29
06:00	33.1	3.34	1109.83	996.85	1172.13	1064.18	1039.61	946.21	834.51	694.12
06:15	34.85	4.57	1176.98	949.54	1090.93	1049.32	1102.63	990.87	874.4	757.28
06:30	32.67	3.24	1166.91	994.85	1131.44	1061.1	1125.45	1054.47	980.63	839.85
06:45	37.88	4.3	1158.14	1005.24	1160.24	1079.36	1091.82	988.86	864.57	749.55
07:00	33.28	3.7	1135.77	1028.38	1201.95	1105.07	1103.48	976.82	869.91	736.26
07:15	33.54	3.57	1139.17	1015.05	1195.07	1119.24	1156.91	1022.36	878.07	758.17
07:30	36.31	4.11	1120.72	994.63	1143.89	1095.98	1130.14	1009.81	893.97	774.38
07:45	29.32	3.37	1143.21	999.41	1175.93	1111.82	1188.26	1091.76	978.68	861.75
08:00	36.34	4.57	1130.19	987.57	1146.67	1091.45	1114.26	977.27	839.82	739.89
08:15	30.59	3.29	1136.69	1027.39	1188.88	1092.39	1082.13	959.11	858.27	749.21
08:30	32.42	4.4	1164.11	1037.77	1204.62	1106.82	1068.99	931.22	823.26	732.15
08:45	38.17	2.98	1109.4	988.81	1133.78	1081.44	1086.49	973.67	853.37	730.72
09:00	36.68	4.52	1105.37	1040.4	1177.06	1094.84	1068.23	940.28	839.36	746.1
09:15	29.55	3.45	1118.52	1073.77	1248.21	1136.45	1139.61	1035.29	939.92	817.41
09:30	36.59	4.18	1096.74	1050.56	1234.08	1143.53	1175.63	1071.47	966.11	861.67
09:45	38.04	3.75	1211.59	1064.27	1312.48	1174.04	1172.24	1069.81	961.51	837.45



Time (Min:Sec)	Room Gas Flow	Window Gas Flow	T/C 1	T/C 2	T/C 3	T/C 4	T/C 5	T/C 6	T/C 7	T/C 8
10:00	33.23	4.18	1187.33	1084.97	1269.6	1152.48	1105.94	1009.9	900.11	814.77
10:15	39.34	5	1299.12	1193.79	1449.05	1279.55	1165.56	1012.3	885.43	775.48
10:30	44.5	3.9	1245.01	1203.85	1389.63	1294.31	1252.75	1120.62	981.52	886.23
10:45	36.49	4.76	1382.23	1215.56	1382.8	1283.8	1193	1059.35	942.7	862.64
11:00	45.2	4.87	1441.29	1231.91	1392.02	1274.47	1184.75	1057.71	936.38	837.86
11:15	36.62	4.95	1431.01	1269.53	1430.1	1326.85	1280.81	1149.82	1020.28	913.94
11:30	45.1	5.1	1451.58	1247.03	1422.77	1350.36	1303.32	1161.84	1004.12	900.26
11:45	36.42	4.52	1491.76	1287.63	1414.69	1267	1158.47	1016.94	847.55	754.35
12:00	45.97	5.18	1596.29	1242.93	1382.3	1325.43	1282.14	1169.84	1042.58	935.24
12:15	36.51	4.55	1723.4	1239.98	1394.55	1341.47	1265.6	1142.77	987.37	866.64
12:30	46.41	5.79	1751.79	1259.55	1383.96	1315.76	1262.68	1133.18	964.47	850.04
12:45	40.98	4.25	1775.29	1250.47	1397.5	1332.57	1330.2	1225.62	1080.48	974.73
13:00	37.42	5.44	1890.03	1252.57	1378.5	1310.28	1265.56	1159.75	1015.45	926.63
13:15	43.72	4.75	1915.27	1256.74	1408.22	1311.6	1283.36	1154.58	1044.63	927.58
13:30	37.38	4.66	1946.71	1254.22	1415.98	1306.97	1285.44	1160.75	1016.59	914.2
13:45	36.99	4.77	2075.84	1260.39	1392.77	1292.24	1177.9	1064.3	932.49	842.98
14:00	46.07	4.78	2048.84	1227.34	1354.65	1328.68	1321.29	1198.48	1084.7	975.29
14:15	40.21	5.03	2088.8	1250.18	1391.34	1329.08	1308.09	1180.4	1039.3	916.65
14:30	35.63	4.69	2050.31	1263.31	1399.09	1325.36	1283.13	1152.81	1010.37	877.12
14:45	42.1	4.86	2055.05	1248.08	1395.58	1322.88	1282.78	1160.41	1047.79	916.84
15:00	44.9	5.47	2017.27	1226.38	1412.5	1376.22	1380.31	1246.51	1133.71	976.92
15:15	38.26	6.52	1919.45	1279.74	1434.14	1408.48	1398.12	1247.24	1114.06	962.47
15:30	43.82	6.78	1880.51	1253.12	1395.42	1387.35	1363.65	1239.7	1130.45	969.49
15:45	46.22	6.05	1834.4	1266.25	1399.72	1401.84	1376.18	1215.31	1093.19	936.38
16:00	40.58	6.38	1823.46	1312.18	1466.31	1373.35	1300.94	1144.39	1034.44	914.38
16:15	38.9	6.36	1757.7	1299.13	1463.47	1433.83	1438.52	1277.61	1141.95	1002.09
16:30	44.43	7.35	1703.11	1280.13	1449.87	1403.01	1396.72	1247.98	1148.62	1012.38
16:45	44.87	7.26	1599.41	1270.29	1433.61	1406	1379.14	1224.13	1094.47	945.96
17:00	39.91	5.88	1577.44	1312.09	1445.58	1409.24	1382	1227.82	1101.05	983.17
17:15	39.4	6.01	1512.29	1289.9	1421.18	1362.42	1342.26	1199.59	1051.87	920.02
17:30	44.82	7.63	1511.79	1289.26	1451.09	1374.64	1338.82	1184.59	1041.04	883.09
17:45	44.74	7.17	1511.48	1300.15	1492.79	1447.29	1444.26	1326.72	1214.44	1075.11
18:00	39.15	5.82	1486.18	1319.78	1496.26	1462.2	1442.36	1309.79	1227.76	1052.98
18:15	40.19	7.16	1416.34	1283.37	1399.65	1385.96	1341.45	1191.08	1039.91	889.09
18:30	45.63	6.02	1383.54	1254.47	1383.6	1391.05	1385.8	1265.15	1131.41	985.82
18:45	43.91	7.61	1426.5	1267.89	1445.36	1426.48	1448.66	1344.06	1244.32	1095.12
19:00	38.23	6.05	1380.28	1268.38	1397.79	1383.26	1390.08	1286.9	1174.39	1065.93
19:15	40.92	6.6	1399.22	1279.05	1451.22	1420.89	1417.59	1293.18	1177.47	1039.57
19:30	45.85	6.26	1392.45	1276.38	1479.11	1464.04	1470.14	1319.59	1168.63	1040.86
19:45	44.01	7.55	1370.65	1255.89	1420.27	1391.77	1386.9	1238.16	1086.99	969.33



Time (Min:Sec)	Room Gas Flow	Window Gas Flow	T/C 1	T/C 2	T/C 3	T/C 4	T/C 5	T/C 6	T/C 7	T/C 8
20:00	37.83	7.37	1345.93	1296.3	1446.62	1399.06	1412.08	1284.72	1144.32	979.38
20:15	41.11	7.8	1298.46	1296.9	1448.44	1455.73	1478.97	1348.86	1197.26	1052
20:30	47.87	9.73	1306.47	1279.24	1460.34	1448.85	1466.25	1313.53	1186.51	1042.18
20:45	42.52	8.1	1307.16	1291.11	1458.37	1453.9	1464.68	1355.14	1206.54	1050.22
21:00	37.29	9	1295.34	1302.2	1461.79	1438.98	1455.78	1318.69	1176.7	1049.13
21:15	42.83	7.65	1297.81	1298.43	1463.19	1468.08	1472.73	1365.53	1292.53	1121.1
21:30	47.45	9.4	1293.1	1256.8	1366.28	1366.61	1394.96	1295.55	1205.19	1089.42
21:45	42.04	8.02	1292.99	1309.74	1509.34	1460.99	1502.29	1380.39	1258.89	1101.45
22:00	37.39	8.68	1271.69	1345.02	1505.26	1426.16	1408.2	1275.71	1138.78	992.55
22:15	42.84	8.28	1280.73	1318.37	1498.57	1483.57	1452.9	1318.79	1200.98	1014.5
22:30	45.29	9.67	1267.64	1318.63	1533.16	1512.22	1524.58	1390.85	1270.48	1105.78
22:45	42.36	7.95	1276.56	1319.97	1473.27	1461.4	1476.59	1389.68	1318.11	1157.87
23:00	36.22	8.99	1281.17	1278.96	1440.76	1432.68	1442.7	1351.71	1273.01	1108.04
23:15	41.59	8.1	1264.33	1272.29	1417.52	1419.94	1439.33	1343.38	1243.93	1082.49
23:30	45.66	9.33	1265.83	1280.46	1386.39	1393.31	1399.8	1290.87	1160.63	1016.38
23:45	46.26	8.27	1288.93	1308.23	1434.59	1395.8	1409.05	1314.87	1264.33	1091.41
24:00	40.11	9.07	1284.39	1350.13	1521.32	1485.92	1522.55	1392.65	1277.55	1125.18
24:15	45.28	8.43	1276.36	1287.26	1395.84	1392.03	1427.71	1343	1254.91	1115.9
24:30	44.23	9.37	1292.06	1291.24	1446.19	1412.22	1441.78	1327.16	1197.97	1068.55
24:45	41.14	8.79	1306.08	1297.58	1436.06	1428.92	1486.77	1354.52	1236.84	1084.91
25:00	45.44	10	1271.36	1249.42	1375.2	1384.68	1450.13	1342.56	1211.51	1085.95
25:15	42.75	10.81	1265.72	1320.31	1445.64	1440.7	1502.1	1379.7	1246.74	1091.22
25:30	46.84	12.15	1260.67	1341.8	1512.81	1502.25	1569.47	1433.47	1278.78	1126.49
25:45	53.74	12.37	1231.64	1370.36	1518.7	1513.57	1600.65	1459	1310.9	1156.58
26:00	41.04	11.16	1243.61	1370.94	1559.86	1531.52	1602.23	1449.24	1302.78	1139.81
26:15	50.51	11.76	1234.58	1376.51	1496.12	1497.66	1615.27	1473.93	1351.11	1201.29
26:30	44.8	11.53	1251.43	1413.94	1525.23	1512.97	1625.03	1466.96	1265.5	1118.17
26:45	45.38	12.04	1238.41	1369.46	1482.01	1452.04	1560.26	1400.21	1218.55	1079.73
27:00	46.6	11.41	1260.91	1377.93	1531.57	1525.64	1640.31	1517.35	1384.73	1185.54
27:15	42.69	10.79	1259	1461.77	1564.68	1553.98	1663.83	1533.63	1352.58	1179.5
27:30	48.54	12.56	1236.85	1409.89	1517.57	1520.2	1643.37	1491.95	1340.97	1150.77
27:45	43.98	11.08	1247.83	1389.6	1513.71	1486.29	1613.84	1456.83	1354.56	1196.62
28:00	40.56	10.77	1263.12	1489.36	1580.85	1526.39	1650	1486.44	1333.01	1189.09
28:15	43.89	12.22	1251.12	1472.07	1567.09	1548.02	1689.07	1535.71	1338.69	1213.28
28:30	48.16	12.27	1244.3	1538.26	1624.78	1574.91	1837.3	1616.12	1355.05	1187.24
28:45	54.78	10.9	1249.75	1413.51	1523.31	1519.42	1773.04	1584.72	1415.57	1202.9
29:00	50.02	10.92	1270.36	1427.48	1575.91	1530.53	1697.56	1539.65	1367.01	1154.81
29:15	45.5	12.3	1283.89	1483.68	1592.43	1553.25	1706.29	1574.3	1330.71	1150.61
29:30	41.81	12.25	1278.59	1500.14	1565.15	1502.51	1649.43	1545.74	1372.08	1204
29:45	43.24	0.72	1268.07	1481.44	1561.57	1526.11	1701.85	1560.56	1346.13	1133.56



Time (Min:Sec)	T/C 9	T/C 10	T/C 11	T/C 12	T/C 13	T/C 14	T/C 15	T/C 16	T/C 17	T/C 18	T/C 19
00:00	73.89	73.54	73.19	72.56	71.61	68.79	69.38	69.65	68.21	68.02	68.26
00:15	403.71	370	343.22	315.84	289.06	105.04	190.43	223.4	108.24	68	68.28
00:30	370.52	339.35	313.54	292.6	278.23	109.59	210.4	217.86	111.41	68.02	68.29
00:45	389.05	347.83	314.86	291.77	263.36	114.13	204.2	222.04	118.46	68.09	68.4
01:00	394.22	359.08	342.44	316.28	280.27	114.82	226.91	251.16	116.68	68.2	68.45
01:15	406.91	363.95	343.48	316.02	286.93	116.05	225.83	233.03	125.32	68.14	68.57
01:30	403.74	364.03	342.35	321.34	292.87	112.81	222.41	256.53	113.87	68.29	68.66
01:45	411.47	368.08	350.34	323.88	293.67	112.28	227.19	263.93	127.55	68.37	68.78
02:00	412.11	366.45	340.88	309.99	286.99	139.02	231.16	246.12	126.76	68.48	68.87
02:15	434.89	394.46	364.56	334.31	298.19	136.44	233	246.29	123.49	68.58	69.02
02:30	420.91	366.22	338.16	311.43	282.97	130.89	233.18	271.46	118.18	68.77	69.15
02:45	427.37	379.44	352.82	326.03	296.68	130.65	234.39	259.1	117.97	68.88	69.29
03:00	423.14	379.12	358.07	332.26	303.79	121.28	223.94	272.39	131.54	69.14	69.48
03:15	443.74	392.74	362.63	334.49	299.41	115.6	226.02	283.79	134.59	69.26	69.66
03:30	423.8	384.44	359.62	336.67	307.02	123.1	221.69	263.64	132.31	69.44	69.82
03:45	443.97	399.43	378.44	347.78	316.99	108.07	225.82	231.94	142.43	69.65	70.01
04:00	466.24	415.59	391	365.43	325.66	119.41	244.83	247.05	127.56	69.76	70.21
04:15	485.58	416.93	382.9	343.03	304.12	119.38	238.56	268.87	123.04	69.95	70.43
04:30	449.1	406.51	387.01	352.66	312.2	127.17	236.64	267.61	124.8	70.13	70.66
04:45	442.48	393.37	365.38	336.06	307.58	129.18	247.64	275.4	121.92	70.35	70.89
05:00	459.24	412.92	388.36	360.31	329.55	124.04	245.04	258.76	121.27	70.58	71.09
05:15	709.04	634.63	590.33	524.02	454.83	144.31	327.7	338.81	135.34	70.68	71.36
05:30	587.16	516.82	474.87	432.67	385.98	145.74	314.01	362.85	137.7	70.92	71.66
05:45	607.53	550.3	502.7	453.79	399.46	140.53	302.82	383.06	129.25	71.25	71.96
06:00	636.08	561.06	508.9	454.54	408.85	143.48	305.75	395.45	141.86	71.67	72.34
06:15	676.75	589	545.21	480.61	424.27	159.89	305.77	304.12	135.91	71.87	72.7
06:30	734.67	634.7	554.15	498.34	448.05	164.62	309.37	356.56	133.61	72.26	73.03
06:45	656.7	564.33	513.08	454.84	401.28	178.29	348.82	344.57	147.45	72.49	73.38
07:00	660.36	582.11	532.2	483.05	415.56	167.36	342.35	340.4	136.31	72.93	73.81
07:15	683.66	610.14	558.23	504.46	426.56	156.73	327.95	340.1	141.42	73.31	74.1
07:30	696.6	605.4	551.25	490.07	427.13	158.91	326.87	354.04	147.78	73.6	74.51
07:45	758.06	651.24	586.08	520.32	458.49	149.1	326.22	372.73	150.55	74.01	74.86
08:00	665.92	604.11	549.64	499.08	440.86	173.97	327.67	364.76	142.41	74.34	75.27
08:15	671.31	582.63	533.21	485.28	418.89	174.74	326.37	334.6	144.61	74.89	75.72
08:30	655.07	582.27	531.49	482.91	438.36	158.47	368.73	342.08	145.63	75.11	76.1
08:45	630.78	555.12	518.13	466.66	409.03	156.27	329.79	370.35	153.6	75.46	76.52
09:00	663.42	575.46	525.31	473.7	418.48	172.63	372.55	374.51	147.47	75.97	76.95
09:15	710.28	630.42	565.16	510.47	450.39	163.58	343.69	374.4	150.02	76.26	77.34
09:30	753.58	658.19	593.5	530.84	465.9	145.01	339.54	338.15	144.19	76.76	77.66



Time (Min:Sec)	T/C 9	T/C 10	T/C 11	T/C 12	T/C 13	T/C 14	T/C 15	T/C 16	T/C 17	T/C 18	T/C 19
09:45	762.95	671.54	625.18	567.97	507.69	146.49	308.94	347.2	146.07	76.98	77.99
10:00	742.19	662.67	597.33	527.83	469.26	163.58	318.16	344.97	150.26	77.31	78.48
10:15	658.55	577.23	530.29	486.85	436.78	176.89	359.69	388.79	161.22	77.7	78.83
10:30	780.84	688.88	615.4	545.09	476.57	159.39	374.42	341.33	154.1	78.04	79.23
10:45	766.56	670.65	598.1	528.87	470.01	168.24	353.78	393.21	145.04	78.49	79.58
11:00	759.92	652.83	604.54	543.97	478.65	164.37	380.97	371.73	152.97	78.85	79.97
11:15	792.4	680.74	602.26	533.16	475.97	163.72	380.3	371.47	163.35	79.37	80.36
11:30	797.65	702.37	657.48	597.54	520.35	154.09	346.96	359.83	163.51	79.63	80.66
11:45	693.05	620.56	581.84	523.43	457.75	157.27	332.75	382.08	166.02	80.12	81.08
12:00	812.45	711.59	640.39	580.38	514.65	188.15	364.04	385.05	160.46	80.9	81.57
12:15	755.82	670.24	603.32	544.45	480.5	171.97	375.29	366.57	167	81.77	82.12
12:30	726.66	647.72	583.79	517.86	463.53	161.02	397.38	360.3	159.86	82.58	82.5
12:45	856.32	757.11	691.48	614.74	526.65	161.69	368.56	366.29	159.29	83.29	83
13:00	806.91	712.83	642.48	576.98	506.22	168.43	365.21	334.16	151.58	83.86	83.45
13:15	825.27	719.02	647.65	571.49	485.87	165.33	371.2	372.4	157.48	84.64	83.87
13:30	818.69	735.99	668.3	610.99	529.01	177.31	367.77	380.6	161.53	85.75	84.23
13:45	753.52	654.98	616.59	570.32	498.48	174.5	369.84	413.72	157.08	86.2	84.85
14:00	892.16	794.77	731.75	645.26	551.3	160.79	340.28	355.3	164.47	86.78	85.44
14:15	807.51	710.65	639.44	587.43	517.25	172.89	348.11	379.91	160.51	86.78	85.92
14:30	793.37	703.25	652.21	598.47	519.85	186.75	344.52	375.12	177.74	86.99	86.47
14:45	779.26	685.13	618.62	557.11	497.13	191.49	374.6	364.59	170.63	87.62	87.05
15:00	847.11	760.44	680.44	595.35	523.56	187.84	383.33	379.38	162.8	88.5	87.6
15:15	858.87	772.59	702.13	629.87	549.35	182.6	398.33	410.66	156.68	90.22	88.39
15:30	881.39	793.08	725.01	659.83	581.14	183.87	384.03	367.39	162.01	90.43	89.08
15:45	827.16	721.49	654.61	597.9	533.33	186.33	359.72	408.92	161.48	91.21	89.57
16:00	815.83	720.54	664.39	581.75	510.37	207.34	380.91	445.74	175.96	90.35	90.05
16:15	900.25	819.06	750.46	663.61	577.18	181.7	390.46	401.89	176.72	90.73	90.63
16:30	909.91	799.73	720.75	647.17	568.61	181.08	415.42	394.24	167.38	91.17	90.83
16:45	824.12	733.54	664.99	604.09	536.57	167.94	394.85	424.54	175.43	91.55	91.27
17:00	868.38	752.6	669.94	599.96	520.01	218.19	409.65	384.34	176.05	92.05	91.72
17:15	818.28	726.52	671.59	595.85	513.61	186.89	428.61	414.13	177.72	92.68	92.37
17:30	785.7	695.37	633.13	568.71	500	215.29	408.53	381.3	171.82	93.3	92.94
17:45	948.87	842.91	746.98	683.8	593.98	208.67	397.76	419.32	181.56	93.99	93.54
18:00	968.13	849.38	773.37	701.44	594.51	204.04	376.35	405.36	170.87	94.53	94.11
18:15	810.2	730.98	675.14	612.31	536.17	199.73	416.75	386.92	174.58	95.06	94.63
18:30	867.91	764.1	684.22	617.79	551.97	191.63	404.26	405.67	164.59	95.62	95.17
18:45	988.32	864.42	770.94	691.13	608.96	195.89	400.29	381.14	178.95	96.26	95.78
19:00	946.43	828.15	711.51	627.24	547.65	191.43	396.02	424.72	183.23	97.07	96.41
19:15	915.98	816.17	730.79	661.09	579.16	190.7	405.05	388.76	171.36	97.59	96.86
19:30	933.17	803.58	712.94	642.01	547.3	211.6	412.43	414.9	174	98.14	97.37



Time (Min:Sec)	T/C 9	T/C 10	T/C 11	T/C 12	T/C 13	T/C 14	T/C 15	T/C 16	T/C 17	T/C 18	T/C 19
19:45	850.59	755.22	668.23	627.41	539.85	196.94	422.63	392.37	193.36	98.79	97.94
20:00	855.37	749.26	692.08	627.86	545.1	189.16	415.39	394.38	187.53	99.2	98.35
20:15	941.3	815.53	725.98	662.87	588.85	188.99	420.41	431.19	177.37	99.73	98.8
20:30	946.09	850.5	766.35	677.39	584.34	203.66	437.07	408.26	170.27	100.23	99.26
20:45	928.09	816.55	741.86	673.55	592.87	194.25	438.17	404.77	183.73	101.07	99.71
21:00	939.43	841.22	732.03	655.14	580.64	194.84	428.59	386.48	185.3	101.5	100.19
21:15	1006.93	900.26	801.86	723.29	624.09	198	384.82	408.58	194.5	102.19	100.63
21:30	970.46	874.7	777.23	705.9	618.41	185.02	394.05	417.89	178.94	102.63	101.07
21:45	981.31	850.88	737.39	695.11	611.24	202.11	409.16	416.62	179.52	103.16	101.5
22:00	875.31	785.34	712.36	648.83	565.94	226.79	418.35	426.44	199.12	103.73	102.04
22:15	913.33	800.5	720.85	653.75	574.6	216.12	402.61	436.24	192.93	104.38	102.64
22:30	996.49	873.22	785.15	716.38	626.54	202.66	419.36	416.66	191.81	104.95	103.22
22:45	1015.27	907.51	784.95	710.38	629.95	205.91	413.01	389.48	190.99	105.55	103.72
23:00	982.67	888.64	793.74	717.43	619.41	191.08	433	397.3	192.38	106.14	104.34
23:15	972.54	870.84	766.78	687.45	605.62	200.4	438.98	435.66	194.53	106.62	104.92
23:30	933.86	834.4	741.67	675.82	598.47	198.14	405.35	372.19	186.85	107.18	105.53
23:45	1001.92	910.04	789.94	702.01	617.16	203.52	418.18	396.72	187.6	107.9	106.14
24:00	992.67	864.13	751.78	689.01	593.49	193.32	453.38	413.3	206.97	108.37	106.58
24:15	973.32	852.52	745.3	672.07	596.7	194.44	462.97	404.72	191.04	109.11	107.1
24:30	973.46	883.28	787.72	725.81	628.09	206.94	424.89	408.12	181.33	109.83	107.54
24:45	947.22	835.93	740.78	667.96	572.19	204.65	443.94	417.62	195.14	109.99	107.97
25:00	937.51	847.15	725.79	675.84	582.29	191.65	458.38	411.04	185.85	110.69	108.42
25:15	957.39	849.07	731.93	658.75	586.74	194.59	465.37	442.78	188.58	111.15	108.75
25:30	1009.86	876.89	794.43	719.28	625.29	204.34	465.86	440.04	195.58	111.76	109.14
25:45	1036.92	910.19	791.77	715.92	615.24	214.11	457.54	447.76	200.05	112.37	109.63
26:00	1037.09	923.36	834.4	746.17	669.53	230.9	456.52	451.54	201.16	112.87	110.11
26:15	1059.59	919.56	788.2	726.39	640.34	226.42	470.12	456.32	202.67	113.35	110.67
26:30	976.75	871.32	761.31	690.89	602.16	220.74	491.19	454.76	206.56	113.82	111.22
26:45	931.85	812.96	708.81	658.33	586.46	215.29	490.65	442.49	198.45	114.43	111.93
27:00	1056.7	916.73	813.77	747.83	638.19	215.7	452.59	452.3	196.52	115.04	112.51
27:15	1067.03	959.76	862.27	793.54	695.23	214.57	450.27	455.2	214.46	115.57	113.22
27:30	978.24	844.03	710.76	654.63	566.1	230.76	484.03	458.31	211.95	116.19	113.84
27:45	1067.3	948.86	836.1	772.86	658.35	212.79	486.03	444.15	210.25	116.97	114.33
28:00	1015.06	894.2	788.57	725.25	645.05	222.46	509.2	446.24	195.03	117.31	114.74
28:15	1051.27	945.46	822.79	736.32	634.98	220.8	487.68	473.21	201.38	118.15	115.22
28:30	1058.21	926.48	823.35	737.16	631.61	236.17	466.66	449.03	193.74	118.42	115.57
28:45	1080.3	941.6	829.45	734.49	651.03	239.89	456.03	459.81	206.74	119.15	115.91
29:00	1043.52	942.86	861.37	773.6	675.07	215.37	428.99	439.79	205.99	119.72	116.24
29:15	1011.6	884.46	775.61	724.93	642.72	229.51	464.58	459.5	203.1	120.47	116.51
29:30	1034.96	893.81	786.69	715.59	631.72	214.85	468.19	447.57	220.71	121.14	116.89



Architectural Testing

Test Report No.: C1143.02-121-24
Report Date: 6/03/13
Test Record Retention End Date: 4/24/17

Time (Min:Sec)	T/C 9	T/C 10	T/C 11	T/C 12	T/C 13	T/C 14	T/C 15	T/C 16	T/C 17	T/C 18	T/C 19
29:45	988.22	853.55	755.91	685.2	612.77	236.34	500.96	442.23	224	121.76	117.21



Time (Min:Sec)	T/C 20	T/C 21	T/C 22	T/C 23	T/C 24	T/C 25	T/C 26	T/C 27	T/C 28	T/C 29	T/C 30
00:00	68.17	68.81	69.41	67.78	67.52	67.49	68.58	67.96	68.06	68.55	68.47
00:15	68.26	68.8	70.08	67.98	67.6	68.24	69.63	68.08	68.14	68.53	68.53
00:30	69.17	69.93	74.14	70.44	69.34	72.1	74.36	68.83	68.4	68.57	69.85
00:45	70.88	72.2	78.92	74.17	72.75	77.15	79.17	70.79	69.05	68.55	71.68
01:00	72.69	73.96	84.65	78.73	76.55	82.73	84.09	72.64	70.28	68.77	74.19
01:15	74.93	76.82	90.4	84.81	81.8	88.19	89.21	75.25	72.01	69.11	76.87
01:30	77.8	80.56	96.14	89.86	86.51	93.34	94.12	78.48	73.97	69.57	79.03
01:45	81.08	85.56	101.31	95.61	91.28	98.77	98.61	81.49	75.93	70.19	80.62
02:00	83.85	90.33	105.97	100.77	96.59	104.2	103.39	84.55	78.24	70.96	82.65
02:15	86.95	96.12	110.62	105.49	101.7	108.76	108.01	88.01	80.48	71.89	85.49
02:30	90.95	101.69	115.26	110	107.16	114.68	113.07	91.49	83.41	72.9	88.25
02:45	94.9	105.83	119.96	113.94	112.18	118.31	117.77	95.83	85.91	74.05	90.77
03:00	99.42	106.1	122.18	121.24	117.21	122.93	122.23	99.84	88.29	75.3	93.34
03:15	103.83	102.96	126.56	128.22	122.97	128.97	126.65	102.15	91.19	76.72	96.88
03:30	108.28	104.45	137.08	135.66	127.26	132.43	130.76	106.72	93.9	78.15	100.3
03:45	112.61	107.7	144.18	140.4	131.84	134.82	134.33	111.13	97.02	79.6	103.55
04:00	116.7	111.86	149.23	145.45	136.97	139.03	138.39	114.08	99.91	80.95	106.31
04:15	121.18	116.75	156.33	150.23	141.22	140.56	142.6	117.94	102.64	82.83	109.67
04:30	125.46	122.6	161.97	155.5	146.5	145.1	146.94	121.58	105.56	84.23	112.3
04:45	130.25	127.35	169.14	160.45	150.73	148.46	150.48	125.03	108.95	86.06	116.17
05:00	135.05	131.81	175.27	165.06	156.31	151.88	153.92	128.6	111.99	88.2	118.65
05:15	139.94	135.95	181.28	170.94	160.53	147.25	158.98	131.69	114.94	89.36	121.08
05:30	145.64	141	190.68	177.94	166.76	149.49	163.81	135.72	118.03	91.15	124.51
05:45	151.29	146.37	200.68	186	173.17	152.8	158.28	140.81	121.08	93.14	128.24
06:00	156.35	151.76	207.6	192.8	179.73	158.86	157.86	146.87	124.65	95.18	132.67
06:15	160.7	157.27	215.31	199.17	188.05	162.87	160.6	151.21	128.81	97.38	136.31
06:30	164.93	162.46	219.58	204.19	194.52	165.78	167.95	157.79	132.17	99.61	139.87
06:45	168.56	167.84	228.85	213.83	201.38	170.53	187.38	165.03	136.04	102.03	144.03
07:00	173.2	173.26	233.09	218.53	207.93	172.86	197.96	171.25	139.87	104.51	148.18
07:15	177.41	179.17	234.56	225.08	213.5	179.64	205.35	176.13	143.14	107.08	152.4
07:30	181.86	185.03	241.02	230.65	220.93	184.13	211.65	182.49	146.85	110.05	156.3
07:45	186.16	189.27	241.51	237.9	225.16	191.29	214.83	188.21	151.79	114.31	160.34
08:00	190.79	194.21	243.57	243.12	229.3	197.55	220.88	194.13	156.65	118.17	165.01
08:15	195.97	198.39	248.55	248.11	233.51	204.05	226.34	199.89	161.81	121.31	168.1
08:30	201.36	202.02	252.74	252.97	238.44	211.73	231.6	204.43	166.35	124.24	170.34
08:45	204.77	205.65	255.17	256.79	242.86	218.26	235.85	209.84	170.98	127.26	174.4
09:00	207.66	208.61	260.68	260.45	247	220.74	238.44	214.79	175.01	130.29	177.84
09:15	210.35	211.57	266.38	265.09	252.8	226.07	242.61	220.27	179.6	133.29	180.58
09:30	212.72	214.64	276.58	268.66	256.46	232.39	246.52	223.96	184.15	136.3	184.77
09:45	215.05	217.59	322.87	277.71	259.94	232.6	251.02	229.09	187.8	139.42	188.28



Time (Min:Sec)	T/C 20	T/C 21	T/C 22	T/C 23	T/C 24	T/C 25	T/C 26	T/C 27	T/C 28	T/C 29	T/C 30
10:00	217.28	220.71	326.39	284.63	264.8	237.86	255.19	233.69	192.12	142.53	191.81
10:15	219.85	222.41	326	290.23	268.59	244.8	259.85	237.89	196.36	145.64	195.06
10:30	223.13	224.19	327.54	293.42	273.08	249.42	223.16	242.12	200.91	148.74	199.17
10:45	226.28	225.48	332.41	296.17	277.65	252.84	221.78	246.5	204.9	151.53	203.21
11:00	229.59	229.03	336.31	300.01	280.51	256.59	224.83	251.43	209.06	153.98	207.09
11:15	233.28	234.09	339.85	304.55	283.71	258.31	229.91	256.83	213.45	156.43	211.88
11:30	237.33	239.32	341.66	308.82	287.91	250.42	233.04	256.64	218.34	158.51	214.97
11:45	239.63	239.31	345.13	313.39	293.3	253.03	234.88	259.52	224.11	161.46	219.19
12:00	241.63	243.3	345.52	315.52	296.8	255.37	235.56	260.65	228.81	164.7	222.2
12:15	243.64	247.66	346.89	318.24	299.52	258.1	235.96	265.49	233.64	167.97	224.69
12:30	246.04	252.13	349.81	319.43	302.37	260.69	240.28	266.21	237.77	171.37	225.41
12:45	248.52	256.16	351.69	321.35	305.83	262.83	243.07	267.36	241.9	174.82	225.52
13:00	250.81	260.19	353.4	324.86	310.11	266.74	246.13	269.85	246.77	178.26	226.99
13:15	254.36	264.7	353.64	326.48	311.94	271.77	250.39	273.24	250.26	181.65	230.75
13:30	258.5	269.17	354.44	328.86	314.69	274.64	255.27	276.33	253.33	185.02	235.5
13:45	261.75	273.72	356.4	331.17	316.74	277.25	259.07	276.64	257.44	188.4	239.14
14:00	266.27	278.46	359.23	334.36	319.11	276.84	263.99	279.04	261.43	191.84	241.86
14:15	270.07	283.14	361.25	336.97	321.49	280.41	266.98	280.05	264.8	195.23	243.66
14:30	273.42	287.89	363.5	339.25	324.03	282.1	270.61	282.74	267.58	199.05	246.53
14:45	277.28	291.94	364.46	341.71	326.66	284.72	273.95	286.46	269.44	203.92	252.21
15:00	280.75	296.46	364.2	346.87	328.62	287.09	277.36	288.08	272.06	207.92	256.56
15:15	284.64	300.45	364.68	349.16	330.17	290.42	281.07	289.13	273.34	211.39	261.1
15:30	287.78	304.59	364.11	350.64	331.81	292.16	284.43	292.49	274.83	214.65	265.69
15:45	291.85	308.71	365.1	353.5	334.54	294.66	286.12	292.93	276.12	218.11	267.63
16:00	295.6	312.97	368.24	355.72	337.6	297.07	287.62	295.52	277.72	221.35	269.57
16:15	299.35	317.08	372.23	358.17	340.67	300.47	290.71	298.27	279.07	224.52	271.31
16:30	311.17	321.36	374.5	359.99	343.61	302.95	293.83	301.18	281.58	227.65	274.53
16:45	311.28	325.73	377.14	362.61	346.88	305.33	296.28	303.65	284.64	230.61	278.86
17:00	313.67	329.82	379.94	365.58	350.26	307.7	298.86	306.28	288.32	233.52	283.18
17:15	317.13	334.03	382.93	367.72	357.64	304.62	301.26	308.1	292.39	236.43	286.37
17:30	320.86	338.4	385.18	369.63	362.16	310.55	303.62	311.71	296.43	239.48	288.72
17:45	323.25	342.98	387.15	371.88	366.93	314.06	306.02	313.52	299.68	242.47	291.54
18:00	326.78	347.55	389.8	374.2	372.01	319.59	308.46	316.43	302.31	245.41	293.68
18:15	330.31	352.06	392.72	376.61	378.75	322.62	311.34	319.24	304.22	248.38	295.86
18:30	333.61	356.78	395.58	379.87	385.69	325.16	313.64	321.47	306.49	251.4	297.59
18:45	336.85	361.38	398.32	382.43	394.6	327.22	316.22	323.85	308.7	254.27	299.5
19:00	340.02	365.84	400.99	385.02	402.96	329.23	318.49	325.75	310.9	256.82	302.54
19:15	343.02	370.14	403.18	387.3	410.65	331.45	320.69	327.93	313.23	259.4	305.21
19:30	345.96	374.42	405.69	389.73	420.33	333.91	322.23	327.89	315.65	262.09	307.5
19:45	349.07	378.76	408.01	392.11	424.39	336.06	324.21	327.62	320.73	264.48	310.38



Time (Min:Sec)	T/C 20	T/C 21	T/C 22	T/C 23	T/C 24	T/C 25	T/C 26	T/C 27	T/C 28	T/C 29	T/C 30
20:00	352.44	382.72	410.23	394.39	433.11	338.25	326.36	329.26	323.72	266.99	313.03
20:15	355.66	386.59	412.17	396.6	439.21	340.29	328.43	330.69	326.92	269.56	314.27
20:30	358.95	390.18	414.75	398.49	447.33	342.24	330.31	332.43	329.08	272.03	316.86
20:45	362.26	393.8	417.47	400.78	454.44	343.93	332.35	334.35	331.43	275.51	318.7
21:00	365.51	397.45	420.28	403.32	469.67	345.83	334.06	336.55	333.56	278.22	320.96
21:15	368.88	400.87	423.01	406.62	475.79	347.62	336.13	338.17	334.91	280.87	323.21
21:30	372.36	404.25	425.14	411.97	481.95	349.5	338.92	339.98	336.92	283.17	325.32
21:45	375.31	407.75	429.78	422.27	486.31	351.38	341.08	342.48	338.37	285.25	327.46
22:00	379.09	411.29	438.8	431.84	487.73	353.31	343.23	344.79	340.4	287.66	328.85
22:15	382.38	414.5	447.42	440.26	487.92	355.25	346.45	346.47	339.29	289.78	329.82
22:30	384.75	416.86	455.65	449.08	490.68	357.41	348.9	349.45	341.16	291.82	331.06
22:45	388.39	419.42	462.67	457.04	496.45	359.71	350.77	351.29	343.69	293.85	332.94
23:00	392.5	421.99	468.69	465.13	501.15	362.62	353.02	353.38	346.21	295.78	335.09
23:15	395.06	424.75	471.84	471.67	503.03	365.48	355.52	355.16	347.61	297.95	336.86
23:30	397.23	427.6	476.56	477.12	504.8	368.07	357.55	357.44	348.25	299.99	338.78
23:45	400.2	430.35	479.91	481.83	506.92	370.86	359.52	359.93	351.36	301.78	340.84
24:00	402.62	433.13	485.78	485.33	506.11	372.95	361.84	361.73	353.66	303.65	342.59
24:15	405.5	435.8	488.63	490.19	507.25	375.56	364.15	364.16	356.49	305.42	344.79
24:30	407.55	438.54	493.08	494.38	509.73	378.13	366.16	366.42	358.68	307.23	347.01
24:45	411.21	441.32	497.02	498.39	514.03	380.74	368.8	369.23	361.32	309	349.09
25:00	414.24	444.13	500.96	501.56	517.77	383.75	371.23	370.84	364.34	310.73	351.23
25:15	417.34	446.99	505.32	505.19	522.3	386.2	373.7	373.34	366.59	312.37	352.97
25:30	420.69	449.77	511.24	509.65	527.42	388.66	376.68	376.04	368.37	313.59	354.59
25:45	423.44	452.71	517.67	515.19	534.85	390.7	379.71	379.5	370.7	315.15	356.13
26:00	427.11	455.9	523.83	520.21	544.54	393.05	382.83	383.28	372.57	315.9	357.3
26:15	430.8	459.78	530.67	525.17	552.28	395.95	386.31	386.15	373.86	317.84	357.53
26:30	434.03	463.74	537.62	531.93	562.46	398.48	389.35	390.03	375.88	319.55	358.11
26:45	437.52	467.4	543.97	537.06	571.06	401.14	392.86	393.88	378.13	321.1	358.91
27:00	440.56	470.64	549.11	542	576.84	404.25	395.74	397.52	380.28	322.56	360.38
27:15	444.32	474.33	555.06	549.38	580.54	407.44	398.01	400.61	382.54	324.04	361.44
27:30	448.2	478.74	560.85	556.76	583.98	410.66	401.39	404.6	385.01	325.58	362.45
27:45	451.87	483.42	562.03	557.92	586.79	413.75	403.4	408.19	387.52	327.1	362.95
28:00	455.37	488.03	563.27	560.31	589.08	416.5	405.24	411.53	389.88	328.61	363.85
28:15	458.55	492.56	566.58	564.78	592.11	419.5	407.94	414.72	392.02	330.04	365.76
28:30	462.25	496.76	570.3	570.35	594.53	422.64	410.22	418.38	393.99	331.46	368.78
28:45	466.24	500.71	575.69	576.81	596.73	425.59	412.94	421.96	395.3	332.86	370.88
29:00	470.04	504.36	581.04	584.53	602.26	428.36	415.4	425.48	395.85	334.25	373.28
29:15	473.28	507.86	585.55	591.94	607.77	432.14	418.6	428.83	396.52	335.67	376.83
29:30	476.36	511.5	588.33	594.39	608.66	436.9	424.59	433.33	397.75	337.02	378.05
29:45	479.64	515.64	590.75	598.59	610.58	441.95	430.33	437.68	399.3	338.43	379.93



Time (Min:Sec)	T/C 31	T/C 32	T/C 33	T/C 34	T/C 35	T/C 36	T/C 37	T/C 38	T/C 39	T/C 40	Room T/C 41
00:00	67.28	67.03	67.72	67.56	67.21	68.25	67.88	67.16	70.46	68.5	276.75
00:15	67.28	67.01	67.7	67.57	67.36	68.3	67.95	67.15	70.6	68.47	1238.64
00:30	67.28	67.1	67.75	67.6	67.52	68.34	67.97	67.21	70.77	68.68	1250.38
00:45	67.33	67.27	67.91	67.65	68.18	68.54	68.43	67.5	70.97	69.1	1176.99
01:00	67.54	67.71	68.19	67.72	69.24	68.95	69.38	68.08	71.1	69.87	1199.84
01:15	67.84	68.27	68.62	67.82	70.77	69.56	71.11	68.85	71.34	71.02	1205.82
01:30	68.21	68.91	69.12	67.95	72.44	70.26	73.44	69.88	71.49	72.89	1204.73
01:45	68.63	69.6	69.68	68.12	74.41	71.09	75.96	70.97	71.87	75	1260.24
02:00	69.15	70.26	70.24	68.28	76.35	71.99	78.72	72.24	72.29	77.32	1218.03
02:15	69.74	71.05	70.98	68.53	78.34	73	81.25	73.6	72.73	79.41	1259.2
02:30	70.38	72.07	71.74	68.88	80.39	73.96	83.78	75.17	73.29	81.84	1251.3
02:45	71.09	72.92	72.49	69.22	82.53	74.98	85.59	76.85	74.05	84.54	1244.07
03:00	71.82	73.89	73.29	69.63	84.57	76.08	88.14	78.55	74.79	86.9	1270.8
03:15	72.54	74.79	74.19	70.12	86.35	77.22	90.92	80.33	75.33	89.1	1238.75
03:30	73.35	75.63	75.05	70.61	88.7	78.53	93.51	82.14	76.07	92.12	1281.68
03:45	74.15	76.72	75.89	71.16	91.02	79.79	95.93	83.94	76.76	94.27	1274.4
04:00	75.03	77.7	76.72	71.68	93.6	81.13	97.79	85.81	77.37	97.38	1256.43
04:15	75.86	78.72	77.65	72.3	95.54	82.27	100.37	87.61	78.15	100.08	1309.3
04:30	76.64	80.02	78.55	72.94	97.26	83.59	102.43	89.34	78.83	103.28	1290.05
04:45	77.53	81.15	79.45	73.56	99.42	84.84	104.89	91.41	79.44	105.18	1282.88
05:00	78.37	82.64	80.33	74.18	101.92	86.12	107.41	93.36	80.22	108.17	1360.64
05:15	79.56	84.29	81.21	74.85	104.15	87.48	109.79	95.35	80.9	111.01	1345.78
05:30	80.73	86.43	82.49	75.67	105.78	88.98	112.29	97.57	81.59	114.29	1316.47
05:45	81.84	88.93	83.84	76.58	108.92	90.74	114.7	100.08	82.4	117.51	1373.4
06:00	82.94	90.98	85.19	77.55	111.83	92.48	117.45	102.56	83.16	120.95	1345.4
06:15	84.1	93.27	86.54	78.43	114.83	94.25	120.09	105.3	84.06	125.2	1388.97
06:30	85.16	96.47	87.89	79.54	117.6	96	123.29	107.95	85.01	129.87	1413.74
06:45	86.25	98.64	89.14	80.5	120.51	97.3	125.32	110.48	85.88	133.98	1382.84
07:00	87.41	101.43	90.76	81.75	124.31	98.56	129.09	113.25	86.79	138.84	1383.89
07:15	88.36	103.32	92.29	82.96	126.63	99.61	131.9	115.75	87.67	141.78	1348.75
07:30	89.34	105.65	93.61	84.14	128.91	100.85	134.66	118.37	88.57	146.02	1350.23
07:45	90.35	107.11	95.1	85.48	133.02	102.29	136.62	121.04	89.42	148.87	1332.13
08:00	91.47	109.01	96.56	86.73	135.98	103.79	138.65	123.32	90.48	153.64	1338.93
08:15	92.67	110.7	97.98	88.06	139.06	105.06	141.24	125.71	91.4	156.75	1380.2
08:30	93.82	112.4	99.39	89.37	141.97	106.47	143.54	128.41	92.45	159.87	1363.21
08:45	95.05	114.41	100.91	90.7	145.57	107.58	145.77	130.68	93.37	163.52	1332.14
09:00	96.3	116.96	102.41	92.07	147.72	108.72	148.11	132.53	94.42	167.17	1348.72
09:15	97.54	117.9	103.81	93.54	150.3	109.93	150.26	134.77	95.54	170.86	1370.18
09:30	98.74	119.37	105.35	94.97	154.65	111.04	152.49	137.25	96.36	173.61	1353.7



Time (Min:Sec)	T/C 31	T/C 32	T/C 33	T/C 34	T/C 35	T/C 36	T/C 37	T/C 38	T/C 39	T/C 40	Room T/C 41
09:45	99.83	120.93	106.69	96.51	158.61	111.81	154.07	139.51	97.18	177.57	1345.42
10:00	100.83	121.52	108.07	97.77	163.39	112.55	156.5	141.26	98.37	181.4	1390.26
10:15	101.75	121.99	109.57	99.08	167.53	113.33	157.69	143.23	99.33	184.52	1414.87
10:30	102.7	122.8	110.85	100.45	169.95	114.02	159.75	145.56	100.24	188.57	1448.89
10:45	103.53	123.39	112.19	101.72	173.16	113.89	157.4	147.84	101.09	193.07	1471
11:00	104.2	123.95	113.73	103.02	176.76	114.35	157.73	149.72	102.04	196.61	1484.63
11:15	105.1	124.61	115.21	104.42	180.42	114.73	159.38	151.93	103.31	199.51	1493.25
11:30	105.33	125.08	116.74	106.05	183.15	115.37	160.54	153.75	104.33	202.4	1488.1
11:45	105.02	125.34	118.47	107.74	188.06	115.51	159.26	156.14	105.33	205.02	1494.87
12:00	105.04	126.2	120.05	109.4	190.98	116.56	155.43	158.45	106.51	207.3	1505.59
12:15	105.11	127.92	121.91	111.11	193.69	117.26	149.35	160.8	107.57	209.39	1516.53
12:30	105.55	128.42	123.22	112.61	195.23	117.63	147.24	163.08	108.72	211.28	1522.18
12:45	105.93	130.52	124.57	114.18	198.11	118.75	150.2	165.22	109.72	213.03	1531.75
13:00	106.42	131.31	125.84	115.66	201.01	118.84	143.06	167.11	110.81	210.11	1555.22
13:15	106.97	131.86	127.42	117.06	203.14	118.97	133.49	169.14	111.98	209.93	1532.36
13:30	107.31	131.98	128.7	118.35	206.27	118.8	132.15	171.06	112.88	212.08	1523.67
13:45	108.14	131.56	130.1	119.57	208.65	118.29	130.2	172.54	113.95	214.49	1517.34
14:00	108.88	131.38	131.48	120.69	212.52	119.1	124.7	173.85	115.01	216.82	1525.56
14:15	109.68	131.22	133.1	121.93	215	118.71	123.88	175.29	116.03	219.86	1539.53
14:30	110.45	131.49	134.17	123.15	216.59	118.78	122.62	176.82	117.26	222.04	1525.92
14:45	111.18	131.01	135.52	124.24	218.63	118.88	121.29	178.07	118.14	224.77	1530.9
15:00	111.6	129.75	137.34	125.65	221.29	119.3	120.43	179.69	119.26	226.91	1534.87
15:15	111.82	127.87	138.64	126.84	224.72	119.4	126.36	180.5	120.18	229.01	1571.41
15:30	112.2	126.26	139.85	128.05	226.17	119.57	122.71	181.32	121.27	231.06	1566.87
15:45	112.49	128.06	141.39	129.4	226.78	119.67	121.69	182.6	122.13	233.18	1557.48
16:00	112.76	130.79	142.41	130.94	225.72	120.3	121.06	184.2	123.24	235.2	1556.53
16:15	113.27	130.92	143.42	132.27	227.37	120.84	120.99	185.93	124.39	236.84	1570.11
16:30	113.73	132.66	144.56	133.64	228.24	121.4	120.47	187.38	125.24	238.72	1563.57
16:45	114.17	134.55	145.45	134.88	230.2	122.64	120.36	188.62	126.3	240.57	1569.75
17:00	114.58	137.09	146.28	136.39	232.39	122.67	121.72	189.54	127.42	242.46	1612.22
17:15	115.11	138.8	147.45	137.76	233.69	123.1	122.63	190.21	128.32	243.58	1577.67
17:30	115.49	138.82	148.57	139.15	235.18	123.74	125.24	190.81	129.29	244.84	1553.01
17:45	115.82	139.17	149.49	140.47	237.22	124.17	124.71	191.68	130.43	245.9	1584.48
18:00	116.2	139.44	150.67	141.68	238.35	124.8	126.19	192.32	131.7	248.91	1584.75
18:15	116.53	140.7	151.68	142.9	238.84	125.51	125.68	193.27	132.65	250.26	1578.93
18:30	116.82	140.28	152.46	144.16	240.08	126.05	126.62	194.08	133.42	252.06	1586.1
18:45	117.4	140.71	153.59	145.44	242.85	126.7	127.05	194.95	134.2	253	1597.5
19:00	117.77	141.07	154.43	146.36	244	127.23	126.38	195.8	135.34	253.08	1608.6
19:15	117.97	141.48	155.55	147.49	245.61	128.13	126.33	196.79	136.36	255.62	1587.24
19:30	118.17	142	156.18	148.71	245.95	128.64	126.37	197.8	137.21	257.5	1574.96



Time (Min:Sec)	T/C 31	T/C 32	T/C 33	T/C 34	T/C 35	T/C 36	T/C 37	T/C 38	T/C 39	T/C 40	Room T/C 41
19:45	118.61	141.4	156.96	149.98	246.94	129.24	127.9	198.87	138.32	259.2	1621.72
20:00	119.05	140.96	157.8	151.27	249.07	129.73	127.92	199.98	139.09	260.78	1596.46
20:15	119.3	141.22	158.6	152.23	249.38	130.18	128.89	200.6	139.94	262.2	1594.52
20:30	119.65	141.33	159.2	153.29	251.16	130.69	129.92	201.47	141.16	263.38	1610.67
20:45	120.05	142.89	160	154.58	253.29	131.54	130.45	202.49	142.06	264.24	1601.45
21:00	120.42	142.8	160.56	155.64	255.51	132.01	131.23	203.35	142.86	266.02	1613.94
21:15	120.84	141.74	161.38	156.57	256.62	132.72	131.99	204.12	143.83	267.74	1587.71
21:30	121.31	142.01	162.12	157.7	259.41	133.12	132.4	204.65	144.71	268.56	1599.26
21:45	121.72	142.27	162.72	158.75	261.07	133.72	133.92	205.08	145.64	269.7	1630.3
22:00	122.28	142.4	163.34	159.99	262.51	134.08	135.23	205.54	146.4	271.81	1596.07
22:15	122.81	143.12	164.3	161.27	262.55	134.45	138.01	205.99	147.35	272.03	1580.27
22:30	123.35	142	165.1	162.38	264.18	134.85	139.72	206.23	148.31	272.22	1595.12
22:45	124.02	142.79	165.68	163.48	265.77	135.68	140.38	206.77	149.23	273.73	1635.38
23:00	124.57	143.27	166.23	164.57	266.29	136.12	147.91	206.71	150.2	274.41	1626.32
23:15	125.1	144.02	166.75	165.72	266.31	136.58	150.99	206.65	151.01	274.3	1643.6
23:30	125.59	144.8	167.38	166.83	265.1	136.97	160.41	206.45	151.86	274.99	1608.67
23:45	126.1	145.99	167.92	167.88	264	137.4	160.94	206.04	153.04	275.97	1601.12
24:00	126.58	147.23	168.43	169.02	263.29	138	165.54	206.11	153.87	275.53	1618.4
24:15	127.08	149.66	169.03	170.09	263.3	138.49	172.13	205.97	154.75	277.15	1608.34
24:30	127.59	150.6	169.43	170.94	264.18	139.04	184.19	205.99	155.65	277.34	1632.64
24:45	128.05	155.28	169.8	171.94	263.71	139.5	185.11	205.84	156.46	278.38	1620.05
25:00	128.55	156.57	170.2	172.88	263.81	139.81	188.22	205.91	157.01	277.94	1650.8
25:15	129.01	156.71	170.76	174.05	264.54	140.13	185.62	206.08	157.87	279.17	1681.56
25:30	129.57	157.32	171.23	174.72	266.32	140.61	189.33	206.62	158.66	280.94	1652.34
25:45	130.17	156.79	171.94	175.58	267.53	141.57	190.65	207.4	159.66	281.96	1679.42
26:00	130.73	155.73	172.66	176.43	269.06	142.19	191.43	208.46	160.42	283.47	1668.68
26:15	131.34	155.13	173.45	177.12	271.51	142.99	188.47	209.2	161.07	284.39	1672.37
26:30	131.96	155.65	174.25	178.12	272.85	143.22	188.48	210.23	161.92	286.82	1694.67
26:45	132.6	156.1	174.94	178.91	274.56	143.82	188.52	211.06	162.6	287.92	1696.81
27:00	133.27	155.99	175.61	180.21	275.02	144.1	188.78	211.65	163.37	288.74	1683.35
27:15	133.94	156.71	176.33	181.28	276.74	144.37	185.09	212.1	164.25	290.12	1671.39
27:30	134.56	159.06	177.08	182.12	277.43	144.72	184.43	212.69	164.91	290.02	1690.86
27:45	135.22	161.48	177.8	183.45	277.58	144.98	195.06	213.07	165.78	290.85	1721.57
28:00	135.91	164.82	178.44	184.85	278.11	145.2	199.78	213.41	166.69	291.11	1722.15
28:15	136.59	167.56	179.12	185.86	278.39	145.77	199.66	213.66	167.32	290.69	1691.38
28:30	137.17	170.44	179.63	186.65	279.15	146.11	200.5	214	168.17	291.44	1702.93
28:45	137.8	172.53	180.11	187.6	279.87	146.59	207.64	214.43	169	292.61	1678.28
29:00	138.47	173.82	180.72	189.64	281.72	147.15	208.99	215.17	169.54	293.74	1695.64
29:15	139.15	175.33	181.17	190.41	284.26	147.81	210.66	215.98	170.11	294.89	1712.14
29:30	139.95	176.09	181.79	191.25	285.98	148.25	210.77	216.71	170.9	295.07	1708.96



Architectural Testing

Test Report No.: C1143.02-121-24
Report Date: 6/03/13
Test Record Retention End Date: 4/24/17

Time (Min:Sec)	T/C 31	T/C 32	T/C 33	T/C 34	T/C 35	T/C 36	T/C 37	T/C 38	T/C 39	T/C 40	Room T/C 41
29:45	140.69	176.41	182.54	192.63	286.95	148.69	213.19	217.46	171.7	296.5	1701.79



Time (Min:Sec)	Room T/C 42	Room T/C 43	Room T/C 44	Room T/C 45	T/C 46	T/ C 47	T/C 48	T/C 49	T/C 50	T/C 51
00:00	206.34	258.34	237.84	178.42	197.68	208.04	161.13	67.56	67.28	67.43
00:15	901	1100.68	1032.44	862.43	1448.52	1091.15	847.83	67.57	67.3	67.44
00:30	970.18	1105.89	1032.19	918.24	1329.71	1098.63	943.14	67.52	67.33	67.43
00:45	1000.89	1079.07	1006.29	927.41	1298.8	1098.8	964.96	67.56	67.33	67.42
01:00	1050.36	1102.87	1039.11	938.79	1224.55	1124.13	981.41	67.58	67.34	67.42
01:15	1087.54	1118.14	1052.47	974.5	1256.75	1154.04	994.71	67.6	67.35	67.4
01:30	1083.88	1137.83	1046.3	991.06	1281.27	1203.85	1020.59	67.59	67.34	67.35
01:45	1125.33	1167.21	1057.78	1028.02	1351.39	1295.18	1303.47	67.54	67.32	67.33
02:00	1125.36	1161.87	1043.82	1031.03	1292.83	1211.05	1337.81	67.53	67.31	67.33
02:15	1119.75	1169.69	1062.78	1036.06	1303.88	1207.21	1125.55	67.55	67.32	67.35
02:30	1125.29	1175.96	1069.72	1049.71	1389.1	1207.61	1081.38	67.58	67.34	67.42
02:45	1152.98	1199.88	1094.6	1056.01	1334.85	1263.84	1126.07	67.61	67.38	67.47
03:00	1168.64	1204.15	1095.82	1076.94	1345.86	1244.09	1136.28	67.66	67.43	67.48
03:15	1175.35	1191.84	1089.3	1077.68	1330.82	1259.07	1133.3	67.67	67.42	67.51
03:30	1190.19	1234.43	1098.44	1100.65	1361.83	1270.7	1156.21	67.69	67.42	67.52
03:45	1174.72	1222.61	1089.61	1097.4	1385.99	1266.69	1165.57	67.63	67.44	67.52
04:00	1180.02	1218.06	1109.24	1092.86	1360.6	1260.19	1155.66	67.63	67.43	67.54
04:15	1210.32	1244.31	1131.92	1091.04	1376.42	1254.79	1154.12	67.69	67.47	67.6
04:30	1211.86	1235.43	1156.15	1091.6	1388.12	1281.76	1177.82	67.73	67.51	67.67
04:45	1213.46	1223.02	1157.83	1085.56	1369.85	1275.53	1163.46	67.75	67.54	67.66
05:00	1239.83	1258.04	1166.9	1102.97	1376.61	1259.43	1160.44	67.78	67.69	67.67
05:15	1259.05	1274.38	1180.77	1125.09	1396.45	1302.97	1189.47	67.86	67.7	67.72
05:30	1265.3	1250.98	1161.42	1131.74	1509.11	1292.66	1178.77	67.93	67.72	67.78
05:45	1279.4	1324.24	1179.92	1162.12	1521.7	1325.2	1220.02	67.95	67.76	67.81
06:00	1330.81	1323.41	1185	1184.84	1581.42	1338.63	1233.64	68	67.81	67.85
06:15	1340.47	1351.33	1192.52	1197.88	1623.74	1366.76	1258.21	68.05	67.82	67.91
06:30	1309.13	1326.57	1212.8	1183.59	1527.35	1336.32	1234.55	68.14	67.86	67.95
06:45	1300.7	1290.37	1210.16	1162.66	1515.1	1347.71	1227.48	68.18	67.91	67.99
07:00	1304.03	1338.02	1224.52	1168.6	1575.61	1317.14	1225.14	68.19	67.93	68.06
07:15	1305.14	1311.56	1210.71	1176.97	1757.59	1330.81	1235.22	68.27	67.97	68.11
07:30	1274.8	1300.41	1207.08	1166.24	1505.52	1318.28	1215.55	68.3	68.07	68.17
07:45	1304.1	1320.75	1191.57	1185.9	1602.11	1354.68	1245.38	68.43	68.12	68.26
08:00	1267.3	1306.16	1180.87	1186.5	1536.46	1341.98	1223.74	68.47	68.24	68.34
08:15	1275.74	1314.67	1211.35	1171.78	1520	1328.01	1213.4	68.54	68.26	68.41
08:30	1265.62	1284.27	1224.88	1163.35	1596.7	1311.09	1209.85	68.57	68.29	68.44
08:45	1267.08	1282.05	1234.36	1156.92	1542.32	1294.87	1193.77	68.64	68.46	68.48
09:00	1295.72	1306.14	1221.7	1173.75	1548.27	1325.17	1224.2	68.71	68.56	68.6
09:15	1307	1320.91	1212.16	1190.02	1513.46	1323.24	1230.98	68.85	68.59	68.72
09:30	1306.2	1306.6	1183.04	1190.89	1535.22	1291.33	1222.8	68.88	68.71	68.76
09:45	1301.1	1330.74	1191.02	1191.29	1592.84	1302.92	1223.15	69.06	68.87	68.92



Time (Min:Sec)	Room T/C 42	Room T/C 43	Room T/C 44	Room T/C 45	T/C 46	T/ C 47	T/C 48	T/C 49	T/C 50	T/C 51
10:00	1310.65	1337.71	1220.6	1198.52	1553.85	1330.38	1237.09	69.12	68.93	69.01
10:15	1345.47	1387.57	1278.02	1213.97	1624.73	1426.36	1284.49	69.27	68.99	69.11
10:30	1369.69	1404.58	1290.44	1238.82	1615.66	1427.13	1299.79	69.31	69.03	69.2
10:45	1412.58	1433.73	1319.55	1263.06	1726.24	1453.76	1328.57	69.49	69.22	69.28
11:00	1414.59	1434.86	1328.54	1268.91	1842.4	1458.86	1336.35	69.53	69.39	69.43
11:15	1444.5	1458.31	1332.84	1287.67	1733.06	1521.04	1370.44	69.65	69.48	69.51
11:30	1456.32	1472.26	1331.5	1296.2	1818.23	1501.49	1373.17	69.87	69.75	69.74
11:45	1475.37	1479.65	1333.05	1314.8	1764.89	1487.06	1370.74	69.9	69.85	69.82
12:00	1470.55	1477.81	1314.5	1319.69	1909.18	1460.96	1372.53	69.95	69.92	69.92
12:15	1456.95	1470.83	1369.23	1307.82	1849.29	1479.72	1378.89	70.12	70.03	70.02
12:30	1440.9	1459.61	1397.97	1303.04	1900.15	1467.8	1366.61	70.16	70.2	70.22
12:45	1464.42	1478.21	1377.79	1311.31	1785.35	1459.2	1362.77	70.39	70.52	70.32
13:00	1439.02	1462.21	1381.39	1310.39	1876.26	1481.65	1380.57	70.61	70.61	70.57
13:15	1432.78	1480.85	1376.45	1316.49	1844.72	1466.8	1369.95	70.73	70.71	70.7
13:30	1480.13	1491.07	1365.23	1327.93	2037.64	1552.18	1384.77	70.92	70.99	70.87
13:45	1486.11	1490.24	1360.43	1335.6	1815.08	1540.44	1396.39	71.17	71.29	71.09
14:00	1496.09	1506.85	1342.1	1349.19	1903.25	1503.71	1393.3	71.47	71.49	71.35
14:15	1497.09	1506.35	1341.63	1355.95	1847.23	1541.89	1411.82	71.46	71.44	71.63
14:30	1472.62	1497.49	1389.69	1336.66	1818.53	1499.23	1397.81	71.86	71.99	71.66
14:45	1478.19	1486.26	1382.43	1332.96	1954.46	1501.09	1397.42	72.07	71.97	71.93
15:00	1477.34	1490.83	1367.42	1337.99	1987.8	1517.01	1409.12	72.08	72.23	72.1
15:15	1497.61	1521.72	1400.26	1359.76	1981.18	1524.61	1418.55	72.25	72.73	72.31
15:30	1475.66	1512.03	1415.61	1352.9	1827.29	1534.73	1436.85	72.39	72.91	72.53
15:45	1509.72	1538.7	1405.7	1365.33	2033.66	1533.07	1424.34	72.52	73.19	72.74
16:00	1536.85	1560.91	1396.42	1382.29	2135.8	1562.62	1441.11	72.78	73.53	72.9
16:15	1529.52	1556.72	1396.2	1394.75	2069.52	1551.97	1451.99	73.14	73.66	73.38
16:30	1516.42	1534.47	1393.81	1379.46	1946.58	1519.77	1438.26	73.29	74	73.58
16:45	1530.44	1546	1407.91	1384.35	1914.52	1559.03	1449	73.69	74.25	73.69
17:00	1521.8	1553.4	1436.96	1378.58	1961.18	1522.64	1458.74	73.77	74.57	73.97
17:15	1525.35	1532.88	1439.59	1380.37	2095.43	1548.85	1457.08	73.97	74.57	74.1
17:30	1512.26	1536.84	1414.52	1378.46	500	1536.29	1444.35	74.22	75.27	74.21
17:45	1555.03	1567.28	1400.34	1400.1	500	1571.51	1460.59	74.64	75.37	74.52
18:00	1568.42	1562.6	1419.29	1401.54	2101.92	1565.29	1472.24	74.92	75.31	74.83
18:15	1527.92	1537.82	1427.1	1389.61	500	1557.11	1465.9	75.24	75.68	75
18:30	1522.16	1544.93	1446.2	1384.83	500	1508.17	1453.55	75.51	76.14	75.09
18:45	1554.17	1577.05	1429.03	1401.67	500	1582.53	1466.99	75.61	76.15	75.49
19:00	1547.99	1592.92	1424.13	1419.36	2162.69	1602.92	1485.03	76.08	76.69	75.64
19:15	1535.11	1567.6	1424.36	1409.94	500	1579.57	1478.2	76.32	76.96	76.05
19:30	1534.92	1560.07	1432.83	1395.94	500	1548.71	1463.96	76.46	77.21	76.22
19:45	1552.96	1583.06	1456.37	1409.05	500	1585.09	1484.99	76.79	77.45	76.66



Time (Min:Sec)	Room T/C 42	Room T/C 43	Room T/C 44	Room T/C 45	T/C 46	T/ C 47	T/C 48	T/C 49	T/C 50	T/C 51
20:00	1542.81	1582.71	1462.29	1409.72	500	1590.34	1489.36	77.17	77.66	77.08
20:15	1535.44	1553.73	1436.83	1405.88	500	1599.58	1482.67	77.52	77.99	77.19
20:30	1553.15	1576.52	1434.57	1407.08	500	1580.67	1480.61	77.77	78.59	77.49
20:45	1575.27	1606.54	1463.34	1427.32	500	1589.63	1495.73	77.92	78.55	77.73
21:00	1549.76	1578.47	1461.82	1421.13	500	1596.47	1496.39	78.28	79.12	78.2
21:15	1568.69	1579.69	1429.01	1430.15	500	1575.98	1488.88	78.4	79.46	78.34
21:30	1539.04	1583.98	1433.02	1418.28	500	1618.28	1501.32	78.64	79.76	78.55
21:45	1564.94	1597.06	1457.57	1427.76	2193.01	1576.2	1494.64	78.76	80.34	78.93
22:00	1586.92	1594.54	1442.85	1437.54	500	1643.42	1503.99	79.25	80.37	79.42
22:15	1564.96	1572.7	1426.19	1429.51	500	1599.91	1499.06	79.31	80.65	79.65
22:30	1557.73	1580.4	1442.85	1426.11	500	1571.4	1491.08	79.66	81.01	79.99
22:45	1588.82	1595.94	1457.5	1425.12	500	1634.88	1509.77	79.69	81.5	80.41
23:00	1561.44	1605.82	1461.71	1435.84	500	1576.17	1515.76	80.09	82.02	80.84
23:15	1563.18	1586.55	1453.49	1429.61	500	1574.85	1497.83	80.54	82.37	81.01
23:30	1550.63	1587.3	1446.05	1423.9	500	1540.83	1503.81	81.02	82.75	81.15
23:45	1572.46	1600.6	1448.86	1436.19	500	1524.68	1512.21	81.79	83.27	81.77
24:00	1581.39	1600.31	1471.7	1433.78	500	1568.08	1506.34	82.51	83.9	82.19
24:15	1542.63	1575.8	1470.52	1423.04	500	1534.43	1502.87	82.35	84.29	82.64
24:30	1555.85	1591.83	1472.78	1436.32	500	1530.94	1501.82	82.92	84.7	82.84
24:45	1567.8	1588.68	1467.44	1436.95	500	1577.93	1507.98	83.5	85.47	83.64
25:00	1567.91	1632.17	1480.79	1442.87	500	1575.9	1548.99	83.71	85.76	83.62
25:15	1601.5	1645.85	1523.74	1465.07	500	1638.72	1557.02	84.02	86.3	84.04
25:30	1605.99	1651.39	1507.62	1474.18	500	1586.03	1553.21	84.21	86.29	84.37
25:45	1635.86	1653.03	1498.65	1482.27	500	1591.28	1559.3	84.3	87.09	84.84
26:00	1668.2	1663.13	1501.31	1491.73	500	1647.92	1575.2	84.92	87.2	85.06
26:15	1618.92	1647.76	1502.72	1487.09	500	1602.24	1563.23	85.37	88.16	85.47
26:30	1638.92	1665	1532.86	1488.64	500	1630.88	1591.65	85.92	87.94	85.7
26:45	1607.27	1646.8	1551.5	1476.62	2183.38	1632.5	1583.88	85.7	88.39	86.05
27:00	1626.66	1675	1550.63	1491.47	2048.76	1588.5	1583.09	85.93	88.88	86.64
27:15	1655	1681.19	1512.59	1503.85	2051.87	1657.29	1592.03	86.68	89.39	86.55
27:30	1623.14	1651.16	1518.91	1485.73	2053.75	1620.9	1579.5	86.59	89.61	86.82
27:45	1635.05	1665.1	1559.74	1494.38	500	1613.93	1592.38	86.66	89.82	87.13
28:00	1609.12	1667.82	1583.07	1501.2	500	1615.91	1587.69	86.72	90.6	87.53
28:15	1645.89	1662.08	1543.81	1500.56	500	1620.59	1584.74	86.97	91.06	87.66
28:30	1637.45	1659.04	1526.51	1494.32	500	1613.76	1573.27	88.06	91.81	88.45
28:45	1655.2	1668.91	1519.5	1499.54	500	1569.75	1581.48	88.05	91.84	88.41
29:00	1678.03	1698.15	1523.06	1513.84	500	1631.22	1597.73	88.61	91.47	88.75
29:15	1690.48	1694.97	1523.67	1520.53	500	1651.25	1602.1	88.51	92.38	88.65
29:30	1660.27	1666.99	1535.63	1518.8	500	1603.04	1610.94	88.45	92.28	89.55
29:45	1626.8	1663.01	1553.66	1508.01	500	1666.99	1598.05	89.01	93.08	89.88



Time (Min:Sec)	T/C 52	T/C 53	T/C 54	T/C 55	T/C 56	T/C 57	T/C 58	T/C 59	T/C 60	T/C 61	T/C 62
00:00	68.2	67.63	67.31	66.68	66.47	66.73	67.03	66.82	67.41	67.63	67.56
00:15	68.21	67.66	67.32	66.68	66.48	66.74	67.03	66.84	67.43	67.62	67.52
00:30	68.26	67.66	67.29	66.7	66.49	66.77	67.06	66.79	67.38	67.62	67.58
00:45	68.27	67.69	67.32	66.69	66.48	66.75	67.07	66.79	67.35	67.65	67.48
01:00	68.26	67.7	67.35	66.71	66.5	66.75	67.05	66.8	67.37	67.66	67.56
01:15	68.25	67.68	67.34	66.73	66.5	66.76	67.04	66.79	67.37	67.67	67.57
01:30	68.25	67.63	67.26	66.73	66.58	66.76	67.07	66.82	67.37	67.7	67.68
01:45	68.21	67.58	67.28	66.76	66.6	66.78	67.12	66.86	67.4	67.75	67.71
02:00	68.24	67.61	67.31	66.82	66.74	66.84	67.22	66.92	67.46	67.83	67.83
02:15	68.27	67.64	67.32	66.87	66.84	66.88	67.32	67.03	67.53	67.95	67.84
02:30	68.34	67.71	67.41	66.96	67.03	66.91	67.45	67.17	67.65	68.12	67.94
02:45	68.42	67.78	67.43	67.06	67.23	67.05	67.61	67.34	67.8	68.32	68.11
03:00	68.47	67.81	67.47	67.22	67.52	67.16	67.8	67.55	67.99	68.57	68.23
03:15	68.49	67.85	67.49	67.38	67.83	67.29	68.05	67.83	68.22	68.87	68.48
03:30	68.5	67.87	67.57	67.55	68.21	67.47	68.29	68.12	68.49	69.26	68.66
03:45	68.47	67.88	67.59	67.79	68.67	67.69	68.56	68.47	68.82	69.7	68.97
04:00	68.5	67.93	67.55	68.06	69.16	67.94	68.95	68.87	69.16	70.18	69.32
04:15	68.61	68.04	67.63	68.32	69.65	68.19	69.33	69.28	69.59	70.72	69.63
04:30	68.7	68.13	67.74	68.62	70.23	68.47	69.71	69.74	70.06	71.35	69.99
04:45	68.73	68.19	67.82	68.97	70.85	68.8	70.14	70.23	70.51	72.01	70.39
05:00	68.78	68.26	67.88	69.32	71.5	69.15	70.62	70.81	71.12	72.72	70.8
05:15	68.87	68.35	67.96	69.71	72.17	69.59	71.12	71.35	71.71	73.46	71.26
05:30	69	68.49	68.11	70.13	72.94	69.99	71.64	71.94	72.32	74.3	71.76
05:45	69.13	68.56	68.21	70.54	73.7	70.37	72.17	72.54	72.99	75.2	72.26
06:00	69.22	68.62	68.29	71	74.55	70.8	72.77	73.23	73.72	76.09	72.79
06:15	69.32	68.72	68.31	71.51	75.44	71.3	73.42	73.93	74.53	77.07	73.31
06:30	69.41	68.77	68.47	72.02	76.4	71.79	74.06	74.64	75.34	78.09	73.82
06:45	69.47	68.89	68.5	72.59	77.39	72.38	74.78	75.4	76.15	79.16	74.5
07:00	69.51	68.99	68.56	73.15	78.43	72.89	75.47	76.21	77.14	80.32	75.2
07:15	69.58	69.06	68.59	73.77	79.58	73.48	76.25	77.04	78.11	81.54	75.86
07:30	69.6	69.1	68.61	74.42	80.75	74.18	77.05	77.96	79.24	82.83	76.52
07:45	69.76	69.2	68.7	75.06	82	74.84	77.89	78.86	80.42	84.21	77.3
08:00	69.98	69.28	68.83	75.78	83.3	75.55	78.78	79.82	81.72	85.57	78.05
08:15	70.09	69.36	68.97	76.42	84.62	76.23	79.67	80.82	83.02	87.03	78.85
08:30	70.05	69.43	69.05	77.13	86.01	76.99	80.63	81.86	84.37	88.55	79.61
08:45	70.24	69.57	69.14	77.85	87.42	77.77	81.62	82.93	85.74	90.08	80.41
09:00	70.66	69.7	69.28	78.57	88.84	78.57	82.59	84.04	87.12	91.71	81.29
09:15	70.61	69.87	69.38	79.34	90.33	79.41	83.61	85.17	88.55	93.35	82.18
09:30	70.8	70.04	69.64	80.08	91.83	80.22	84.63	86.33	89.96	95	83.15



Time (Min:Sec)	T/C 52	T/C 53	T/C 54	T/C 55	T/C 56	T/C 57	T/C 58	T/C 59	T/C 60	T/C 61	T/C 62
09:45	71.05	70.21	69.8	80.83	93.3	81.11	85.65	87.51	91.44	96.71	84.15
10:00	71.11	70.34	69.82	81.63	94.77	81.99	86.8	88.74	92.96	98.45	85.04
10:15	71.4	70.49	69.97	82.39	96.18	82.87	87.9	89.99	94.51	100.23	85.97
10:30	71.45	70.6	70.09	83.13	97.55	83.79	88.98	91.29	96.09	102.06	86.99
10:45	71.56	70.68	70.2	83.9	98.94	84.69	90.12	92.62	97.74	103.91	87.93
11:00	71.53	70.83	70.35	84.67	100.22	85.62	91.26	93.98	99.4	105.78	88.91
11:15	71.62	70.92	70.5	85.4	101.45	86.52	92.39	95.38	101.13	107.67	89.85
11:30	71.83	71.14	70.59	86.14	102.67	87.43	93.49	96.81	102.91	109.59	90.94
11:45	71.97	71.28	70.83	86.86	103.79	88.39	94.75	98.28	104.83	111.57	91.92
12:00	72.06	71.39	71.02	87.59	104.94	89.38	96.18	99.87	106.76	113.52	92.97
12:15	72.21	71.53	71.04	88.31	106.05	90.38	97.57	101.52	108.84	115.52	94.03
12:30	72.25	71.77	71.32	89.02	107.16	91.44	98.96	103.21	111	117.47	95.11
12:45	72.41	71.96	71.43	89.7	108.19	92.5	100.3	104.86	113.2	119.45	96.18
13:00	72.83	72.15	71.69	90.41	109.26	93.56	101.61	106.54	115.43	121.37	97.19
13:15	73.09	72.31	71.85	91.06	110.24	94.56	102.85	108.15	117.7	123.32	98.23
13:30	73.44	72.46	71.92	91.71	111.25	95.61	104.06	109.76	119.99	125.31	99.32
13:45	73.54	72.8	72.16	92.33	112.16	96.55	105.16	111.32	122.26	127.36	100.45
14:00	73.82	73.06	72.55	92.94	113.05	97.55	106.31	112.89	124.55	129.43	101.49
14:15	73.76	73.21	72.71	93.54	113.89	98.47	107.46	114.42	126.77	131.47	102.61
14:30	74.17	73.46	72.92	94.1	114.63	99.41	108.58	115.97	129.05	133.49	103.65
14:45	74.36	73.69	73.2	94.67	115.37	100.38	109.64	117.49	131.28	135.49	104.77
15:00	74.98	73.91	73.5	95.22	115.99	101.29	110.71	118.99	133.52	137.48	106.04
15:15	74.83	74.23	73.48	95.77	116.57	102.25	111.82	120.48	135.7	139.41	107.02
15:30	74.65	74.27	73.8	96.31	117.08	103.18	112.83	121.93	137.83	141.29	108.26
15:45	74.82	74.38	73.99	96.83	117.54	104.1	113.97	123.43	139.94	143.11	109.43
16:00	75.18	74.68	74.18	97.36	117.86	105.04	115.13	124.94	142.04	144.88	110.34
16:15	75.3	74.9	74.53	97.84	118.22	106.03	116.25	126.43	144.18	146.63	111.32
16:30	75.61	75.1	74.76	98.31	118.59	106.92	117.39	127.9	146.3	148.36	112.24
16:45	76.01	75.32	74.83	98.83	119.02	107.93	118.59	129.34	148.48	150.09	113.1
17:00	75.9	75.47	75.11	99.32	119.54	108.87	119.65	130.77	150.66	151.82	114.12
17:15	76.6	75.61	75.25	99.79	120.09	109.77	120.71	132.15	152.87	153.54	115.21
17:30	76.36	75.99	75.33	100.27	120.67	110.72	121.9	133.51	155.12	155.26	116.08
17:45	76.4	76.16	75.81	100.74	121.26	111.61	122.97	134.84	157.31	156.94	117.27
18:00	76.75	76.43	76.29	101.19	121.92	112.45	124.08	136.15	159.47	158.56	118.21
18:15	77.39	76.76	76.51	101.64	122.56	113.34	125.2	137.5	161.71	160.15	119.34
18:30	77.57	77.04	76.48	102.07	123.19	114.18	126.27	138.82	163.88	161.74	120.39
18:45	77.73	77.12	76.59	102.48	123.76	115.02	127.32	140.13	166.04	163.31	121.46
19:00	77.99	77.46	76.93	102.89	124.34	115.85	128.4	141.44	168.17	164.87	122.38
19:15	78.37	77.78	77.35	103.25	124.85	116.6	129.45	142.74	170.31	166.4	123.51
19:30	78.36	78.06	77.32	103.63	125.38	117.42	130.54	144.03	172.4	167.89	124.49



Time (Min:Sec)	T/C 52	T/C 53	T/C 54	T/C 55	T/C 56	T/C 57	T/C 58	T/C 59	T/C 60	T/C 61	T/C 62
19:45	78.75	78.17	77.53	103.96	125.88	118.17	131.58	145.34	174.49	169.36	125.4
20:00	79	78.44	78.08	104.28	126.37	118.92	132.63	146.58	176.57	170.81	126.52
20:15	79.15	78.64	78.44	104.62	126.83	119.65	133.69	147.84	178.69	172.2	127.47
20:30	79.57	78.99	78.55	104.9	127.28	120.4	134.71	149.09	180.78	173.58	128.58
20:45	79.56	79.48	78.56	105.18	127.71	121.09	135.69	150.32	182.9	174.93	129.52
21:00	79.92	79.51	78.8	105.46	128.11	121.78	136.72	151.54	184.98	176.3	130.52
21:15	80.3	79.88	79.12	105.72	128.55	122.47	137.74	152.75	187.11	177.66	131.5
21:30	80.97	80	79.32	105.99	128.96	123.18	138.69	153.99	189.16	178.98	132.55
21:45	80.65	80.13	79.7	106.23	129.42	123.85	139.76	155.23	191.27	180.32	133.49
22:00	81.04	80.26	79.8	106.47	129.83	124.57	140.79	156.47	193.36	181.66	134.61
22:15	80.6	80.79	80.23	106.69	130.23	125.18	141.81	157.73	195.47	183.02	135.64
22:30	81.43	80.94	80.41	106.94	130.7	125.83	142.85	158.98	197.57	184.42	136.65
22:45	81.96	81.32	80.75	107.17	131.14	126.47	143.92	160.2	199.65	185.81	137.7
23:00	83.24	81.65	81.19	107.43	131.53	127.15	145.04	161.46	201.71	187.19	138.74
23:15	83.79	82.18	81.62	107.68	131.98	127.8	146.14	162.72	203.73	188.55	139.65
23:30	83.74	82.52	81.75	107.95	132.36	128.45	147.22	163.97	205.77	189.89	140.65
23:45	84.82	82.89	82.28	108.21	132.82	129.13	148.24	165.18	207.82	191.15	141.6
24:00	85.82	83.09	82.69	108.47	133.24	129.72	149.34	166.39	209.84	192.31	142.59
24:15	84.99	83.44	83.04	108.73	133.76	130.36	150.36	167.53	211.85	193.41	143.49
24:30	85.73	83.81	83.65	109.01	134.28	130.91	151.43	168.64	213.83	194.42	144.39
24:45	86.67	84.36	83.52	109.3	134.87	131.54	152.55	169.7	215.82	195.4	145.19
25:00	86.66	84.51	83.61	109.59	135.54	132.14	153.63	170.71	217.79	196.3	146.12
25:15	86.23	85.53	84.28	109.88	136.2	132.69	154.69	171.67	219.74	197.15	147.1
25:30	86.36	85.74	84.66	110.18	136.91	133.28	155.74	172.6	221.72	197.96	148.05
25:45	86.59	86.21	84.68	110.5	137.64	133.86	156.82	173.54	223.63	198.74	148.94
26:00	87.24	86.63	84.91	110.8	138.38	134.36	157.86	174.45	225.54	199.54	149.91
26:15	87.6	87	85.19	111.14	139.05	134.95	158.92	175.43	227.42	200.39	150.89
26:30	87.65	86.92	85.47	111.46	139.75	135.46	159.95	176.38	229.23	201.31	151.86
26:45	87.47	86.94	86.14	111.75	140.37	136.02	161.04	177.37	231.04	202.23	152.79
27:00	87.82	87.02	86.15	112.06	140.98	136.53	162.06	178.36	232.86	203.27	153.77
27:15	88.31	87.43	86.33	112.38	141.55	137.06	163.24	179.37	234.72	204.36	154.7
27:30	87.71	87.54	86.29	112.7	142.05	137.62	164.27	180.43	236.57	205.45	155.56
27:45	87.69	87.94	86.62	113.01	142.59	138.14	165.34	181.47	238.4	206.49	156.34
28:00	87.86	88.05	86.77	113.33	143.1	138.73	166.52	182.55	240.22	207.46	157.33
28:15	88.21	87.96	86.95	113.62	143.68	139.23	167.57	183.61	242.09	208.35	158.12
28:30	88.57	88.41	87.32	113.96	144.27	139.82	168.67	184.66	243.94	209.22	159
28:45	88.64	88.51	87.61	114.29	144.93	140.37	169.78	185.68	245.79	210.03	159.87
29:00	89.2	88.52	87.77	114.6	145.64	140.94	170.95	186.68	247.64	210.82	160.71
29:15	89.35	88.64	87.8	114.95	146.38	141.45	172.05	187.71	249.46	211.62	161.54
29:30	90.06	88.96	88.23	115.29	147.17	141.93	173.2	188.73	251.27	212.43	162.44



Architectural Testing

Test Report No.: C1143.02-121-24
Report Date: 6/03/13
Test Record Retention End Date: 4/24/17

Time (Min:Sec)	T/C 52	T/C 53	T/C 54	T/C 55	T/C 56	T/C 57	T/C 58	T/C 59	T/C 60	T/C 61	T/C 62
29:45	90.08	89.49	88.23	115.63	147.97	142.53	174.36	189.78	253.06	213.3	163.26

Time (Min:Sec)	T/C 63	T/C 64	T/C 65	T/C 66	T/C 67
00:00	67.96	67.44	67.35	65.99	65.84
00:15	67.97	67.4	67.34	65.98	65.82
00:30	67.95	67.43	67.33	65.97	65.81
00:45	67.99	67.38	67.33	65.98	65.82
01:00	67.96	67.43	67.36	65.98	65.83
01:15	67.98	67.43	67.35	65.97	65.82
01:30	67.98	67.51	67.39	66	65.82
01:45	68	67.56	67.42	65.99	65.83
02:00	68.02	67.71	67.47	66.01	65.83
02:15	68.06	67.84	67.52	66.02	65.83
02:30	68.11	68.05	67.6	66.01	65.86
02:45	68.17	68.35	67.76	66.02	65.88
03:00	68.29	68.65	67.89	66.06	65.89
03:15	68.39	69.05	68.06	66.06	65.92
03:30	68.53	69.46	68.25	66.1	65.93
03:45	68.69	69.98	68.49	66.12	65.96
04:00	68.87	70.54	68.77	66.14	65.97
04:15	69.09	71.19	69.09	66.18	66.01
04:30	69.35	71.83	69.4	66.22	66.05
04:45	69.62	72.54	69.75	66.26	66.08
05:00	69.93	73.3	70.17	66.31	66.13
05:15	70.25	74.09	70.58	66.34	66.14
05:30	70.59	74.96	71.04	66.39	66.19
05:45	70.96	75.83	71.5	66.44	66.23
06:00	71.38	76.79	72.01	66.49	66.28
06:15	71.8	77.79	72.53	66.56	66.31
06:30	72.3	78.77	73.09	66.62	66.38
06:45	72.78	79.89	73.7	66.7	66.42
07:00	73.32	81.04	74.34	66.78	66.51
07:15	73.87	82.22	74.97	66.85	66.59
07:30	74.46	83.39	75.62	66.93	66.66
07:45	75.1	84.66	76.33	67.02	66.75
08:00	75.73	85.91	76.98	67.11	66.83
08:15	76.42	87.23	77.72	67.24	66.93
08:30	77.13	88.55	78.43	67.34	67.03
08:45	77.86	89.88	79.12	67.45	67.13
09:00	78.64	91.31	79.86	67.57	67.24
09:15	79.43	92.68	80.59	67.71	67.37
09:30	80.22	94.15	81.35	67.83	67.48
09:45	81.01	95.63	82.12	67.98	67.62

Time (Min:Sec)	T/C 63	T/C 64	T/C 65	T/C 66	T/C 67
10:00	81.85	97.05	82.86	68.16	67.75
10:15	82.71	98.45	83.6	68.31	67.9
10:30	83.55	99.86	84.36	68.5	68.06
10:45	84.42	101.24	85.11	68.68	68.24
11:00	85.29	102.53	85.83	68.85	68.38
11:15	86.17	103.79	86.53	69.06	68.59
11:30	87.06	105.07	87.28	69.28	68.75
11:45	87.98	106.26	87.96	69.48	68.96
12:00	88.89	107.42	88.65	69.69	69.17
12:15	89.8	108.6	89.32	69.92	69.39
12:30	90.71	109.68	89.96	70.14	69.62
12:45	91.65	110.78	90.63	70.4	69.91
13:00	92.61	111.86	91.28	70.65	70.22
13:15	93.58	112.82	91.9	70.92	70.56
13:30	94.53	113.77	92.5	71.19	70.95
13:45	95.51	114.77	93.15	71.49	71.36
14:00	96.51	115.65	93.77	71.78	71.83
14:15	97.5	116.52	94.36	72.12	72.29
14:30	98.51	117.31	94.94	72.46	72.78
14:45	99.5	118.03	95.49	72.81	73.27
15:00	100.52	118.8	96.06	73.18	73.79
15:15	101.52	119.43	96.6	73.59	74.3
15:30	102.54	120.17	97.14	74.02	74.82
15:45	103.55	120.8	97.65	74.47	75.36
16:00	104.53	121.26	98.14	74.94	75.9
16:15	105.51	121.76	98.62	75.44	76.5
16:30	106.43	122.17	99.05	75.95	77.07
16:45	107.36	122.6	99.5	76.48	77.63
17:00	108.29	123.04	99.92	77.01	78.2
17:15	109.17	123.46	100.37	77.57	78.77
17:30	110.13	123.78	100.73	78.05	79.32
17:45	111.03	124.21	101.2	78.62	79.89
18:00	111.94	124.58	101.61	79.17	80.43
18:15	112.81	125.06	102.06	79.72	80.99
18:30	113.71	125.47	102.5	80.3	81.56
18:45	114.56	125.86	102.92	80.87	82.12
19:00	115.43	126.24	103.32	81.44	82.72
19:15	116.24	126.7	103.81	82.03	83.3
19:30	117.05	127.04	104.22	82.63	83.9
19:45	117.85	127.34	104.62	83.23	84.5

Time (Min:Sec)	T/C 63	T/C 64	T/C 65	T/C 66	T/C 67
20:00	118.64	127.68	105.04	83.85	85.13
20:15	119.42	127.96	105.43	84.47	85.76
20:30	120.14	128.34	105.87	85.09	86.34
20:45	120.97	128.65	106.24	85.7	87.02
21:00	121.72	128.99	106.64	86.31	87.65
21:15	122.47	129.33	107.01	86.9	88.32
21:30	123.2	129.72	107.43	87.54	88.97
21:45	124	130.09	107.81	88.17	89.63
22:00	124.73	130.54	108.23	88.79	90.32
22:15	125.46	131.02	108.64	89.41	90.99
22:30	126.22	131.51	109.05	90.03	91.66
22:45	126.95	131.99	109.49	90.66	92.32
23:00	127.66	132.48	109.91	91.28	93.01
23:15	128.4	132.94	110.31	91.92	93.71
23:30	129.06	133.51	110.74	92.56	94.38
23:45	129.76	134.05	111.15	93.21	95.08
24:00	130.39	134.69	111.59	93.86	95.76
24:15	131.05	135.3	112.03	94.55	96.47
24:30	131.67	135.95	112.43	95.21	97.15
24:45	132.29	136.6	112.86	95.87	97.83
25:00	132.87	137.3	113.3	96.58	98.55
25:15	133.45	138.05	113.73	97.26	99.24
25:30	134.01	138.81	114.16	97.95	99.92
25:45	134.54	139.55	114.59	98.62	100.61
26:00	135.11	140.31	115.05	99.3	101.29
26:15	135.63	141.13	115.52	99.98	101.95
26:30	136.17	141.85	115.93	100.67	102.64
26:45	136.72	142.62	116.4	101.36	103.33
27:00	137.26	143.34	116.88	102.06	104.01
27:15	137.8	144.1	117.33	102.79	104.7
27:30	138.36	144.78	117.79	103.5	105.37
27:45	138.94	145.44	118.25	104.24	106.04
28:00	139.45	146.24	118.77	104.98	106.7
28:15	140.01	146.88	119.24	105.73	107.39
28:30	140.54	147.57	119.72	106.47	108.05
28:45	141.07	148.2	120.14	107.19	108.74
29:00	141.57	148.88	120.58	107.92	109.42
29:15	142.11	149.52	121.02	108.64	110.14
29:30	142.62	150.28	121.48	109.36	110.83
29:45	143.13	150.97	121.88	110.04	111.54



Test Report No.: C1143.02-121-24
Report Date: 6/03/13
Test Record Retention End Date: 4/24/17

Appendix C

Photographs



Photo No. 1
Sheathing and Application of Joint System



Photo No. 2
Completion of Air/Vapor Barrier
www.archtest.com



Photo No. 3
Assembly Sill Flashing and Starter Rail



Photo No.4
Window Opening Sill Detail



Photo No. 5
Window Opening Jam Detail



Photo No. 6
Insulation Installation



Photo No. 7
Complete Insulation Installation



Photo No. 8
Panel Installation
www.archtest.com



Photo No. 9
Panel Installation Complete

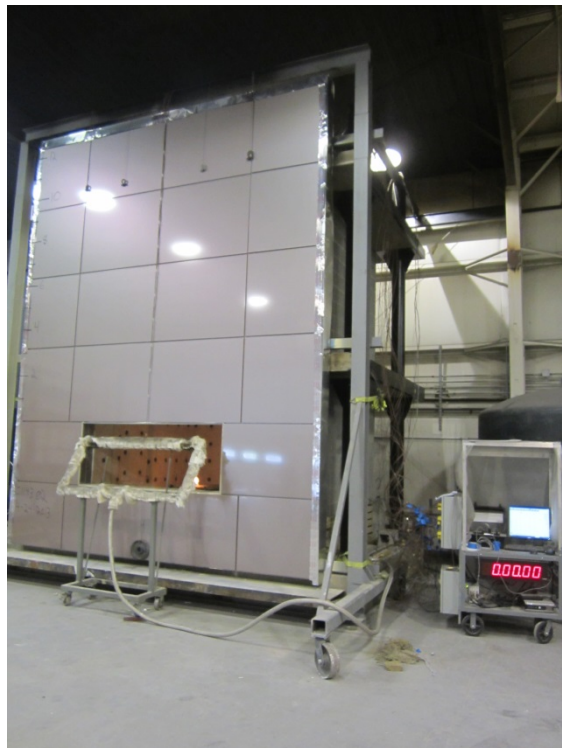


Photo No. 10
Complete Assembly (Pre-Test)
www.archtest.com



Photo No. 11
First Story Interior (Pre-Test)



Photo No. 12
Second Story Interior (Pre-Test)
www.archtest.com

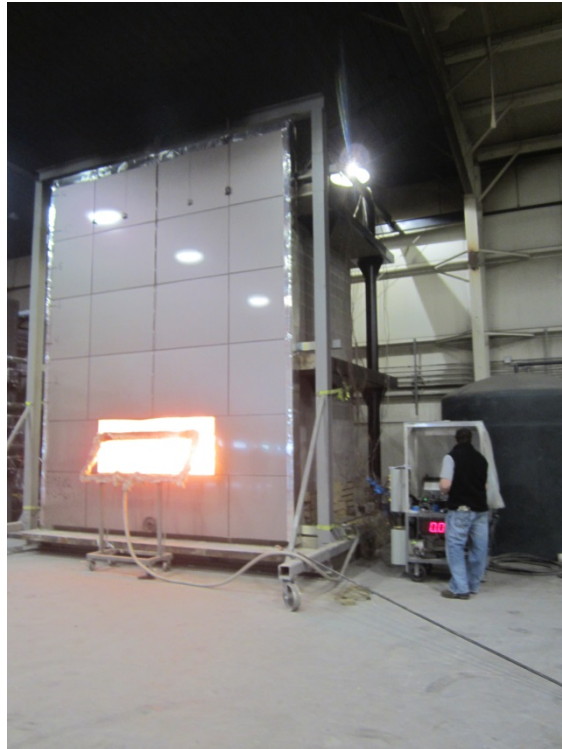


Photo No. 13
Ignition of the Room Burner



Photo No. 14
Ignition of Window Opening Burner
www.archtest.com



Photo No. 15
Burners Extinguished



Photo No. 16
Complete Assembly (Post-Test)

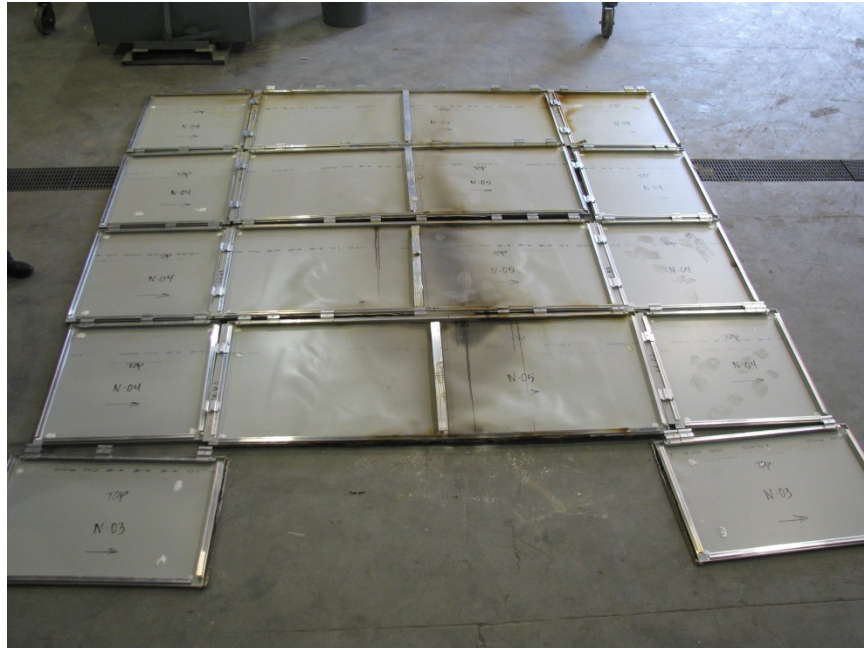


Photo No. 17
Back of Cladding Panels (Post-Test)



Photo No. 18
Insulation Panels (Post-Test)

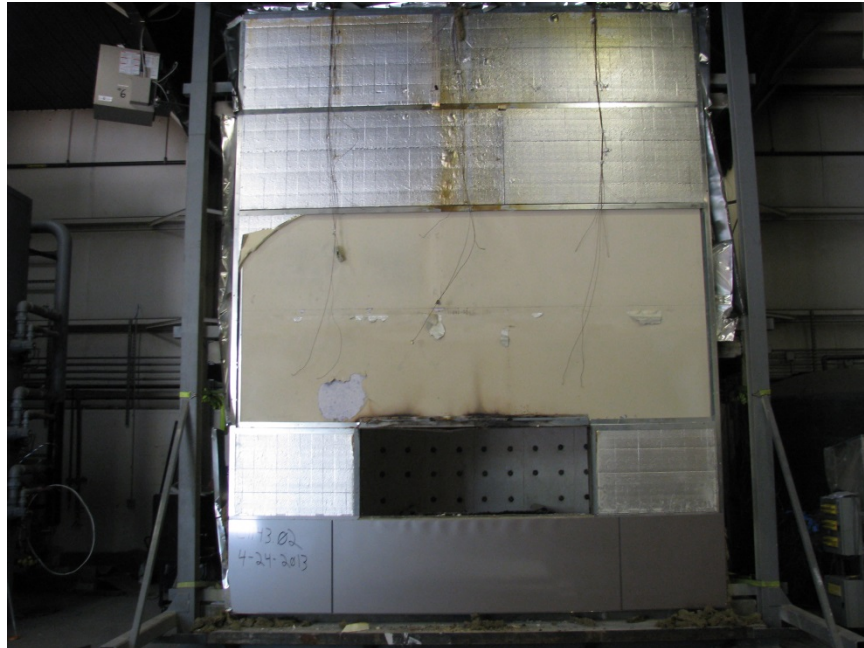


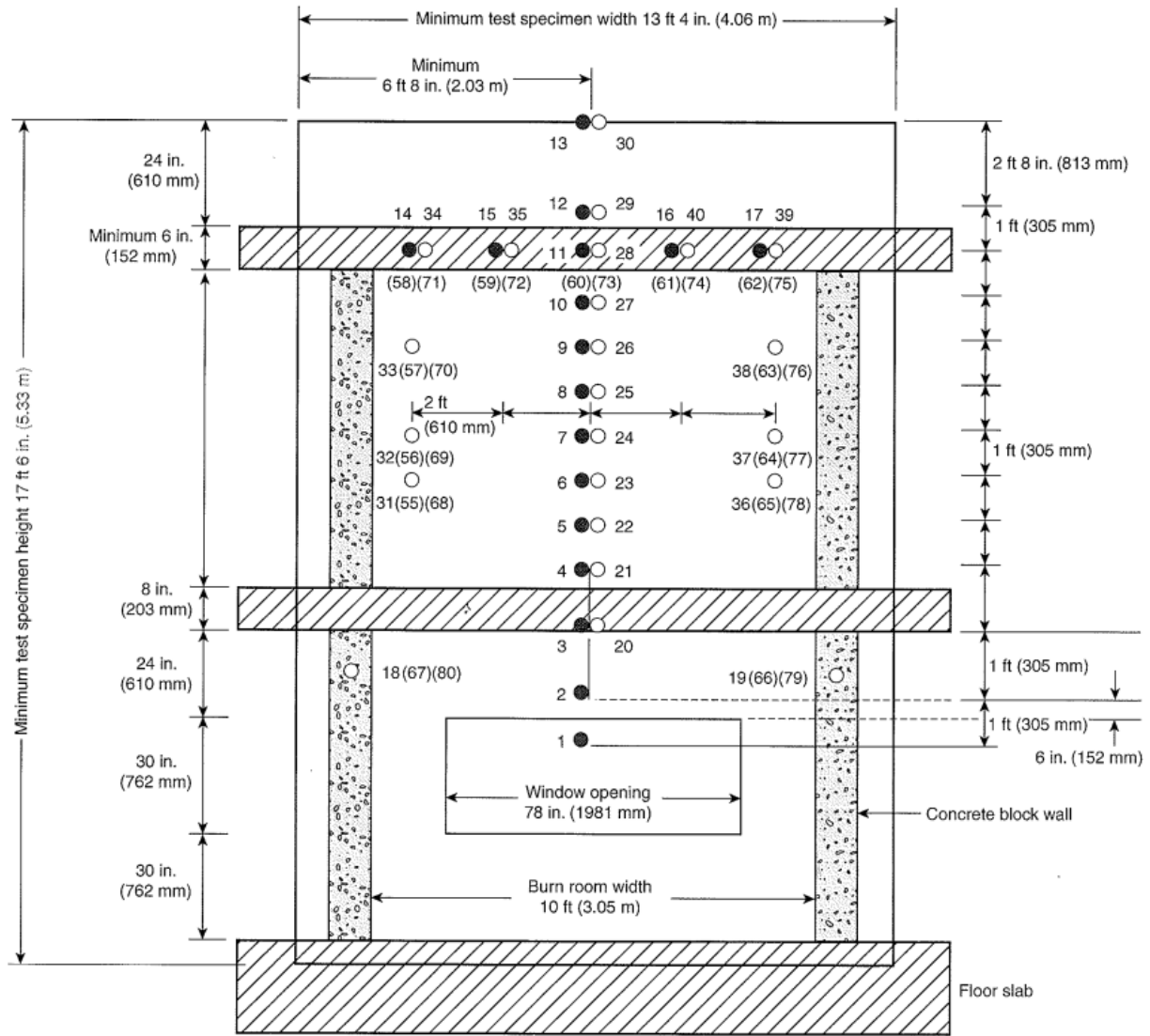
Photo No. 19
Air/Vapor Barrier (Post-Test)



Test Report No.: C1143.02-121-24
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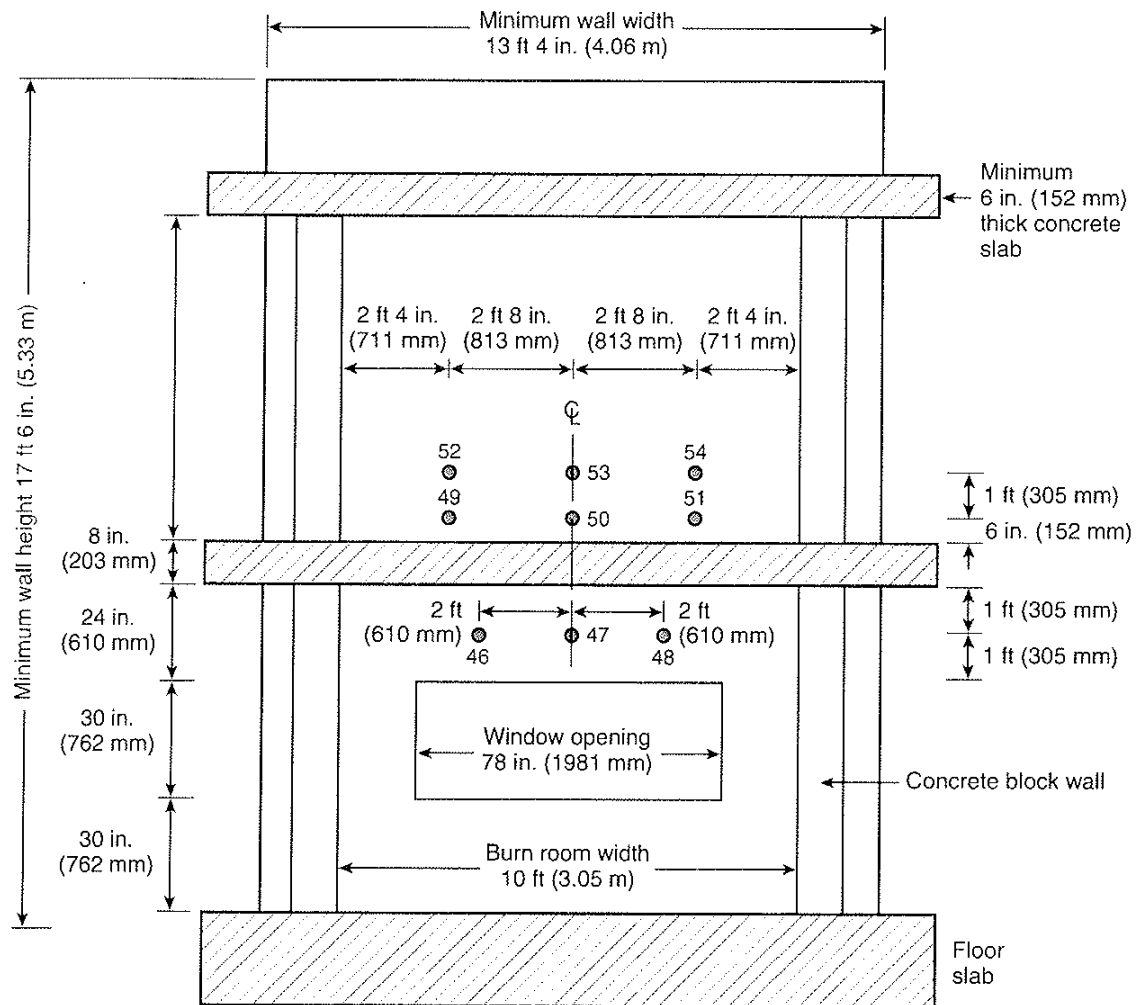
Appendix D

Drawings



- Thermocouples — 1 in. (25 mm) from exterior wall surface
- Thermocouples — In the wall cavity air space or the insulation, or both, as shown in Figure 6.1(b) Details A through I.
- () Thermocouples — Additional thermocouples in the insulation or the stud cavity, or both, where required for the test specimen construction being tested, as shown in Figure 6.1(b) Details C through I.

FIGURE 6.1(a) Front View of Test Specimen Superimposed over Test Apparatus Thermocouple Locations.



⊙ Thermocouples — 1 in. (25 mm) from interior wall surface

FIGURE 6.1(c) Interior View of the Test Specimen. Instrumentation arrangement.

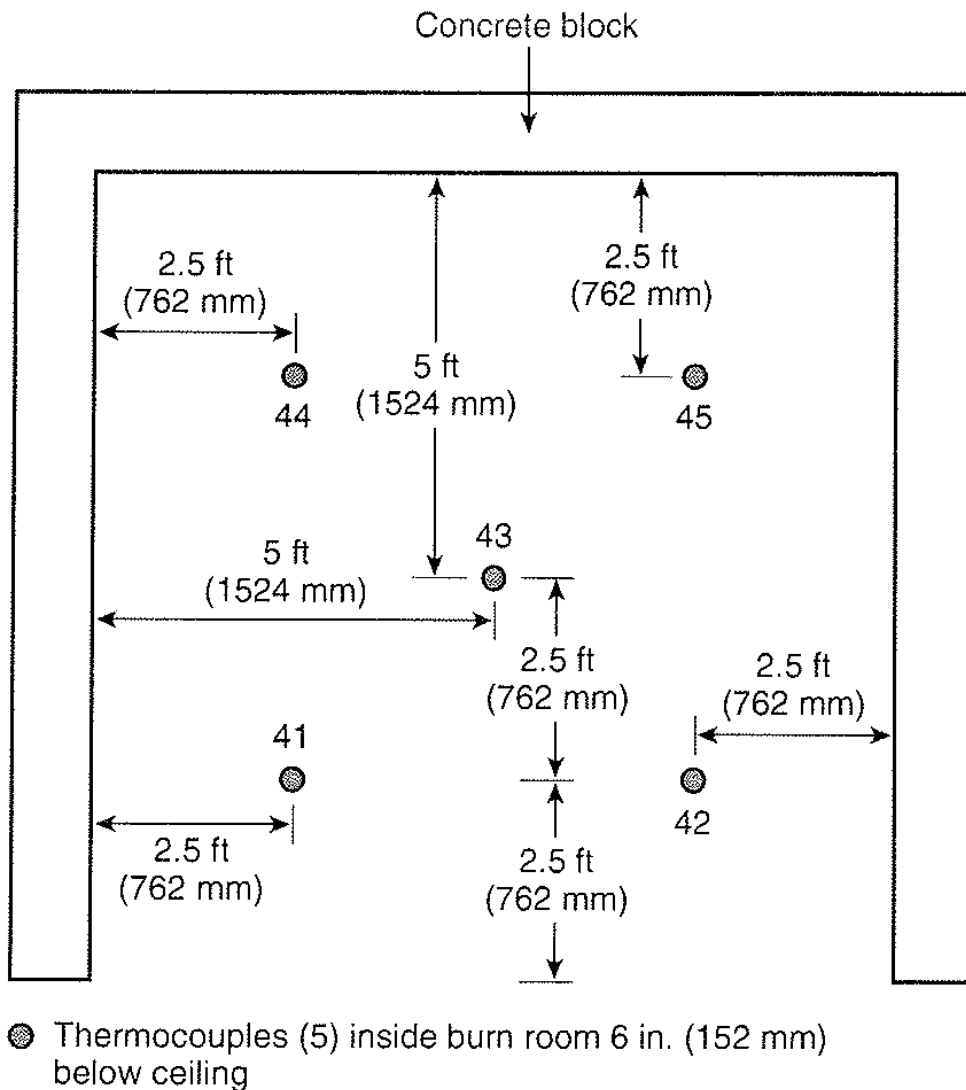
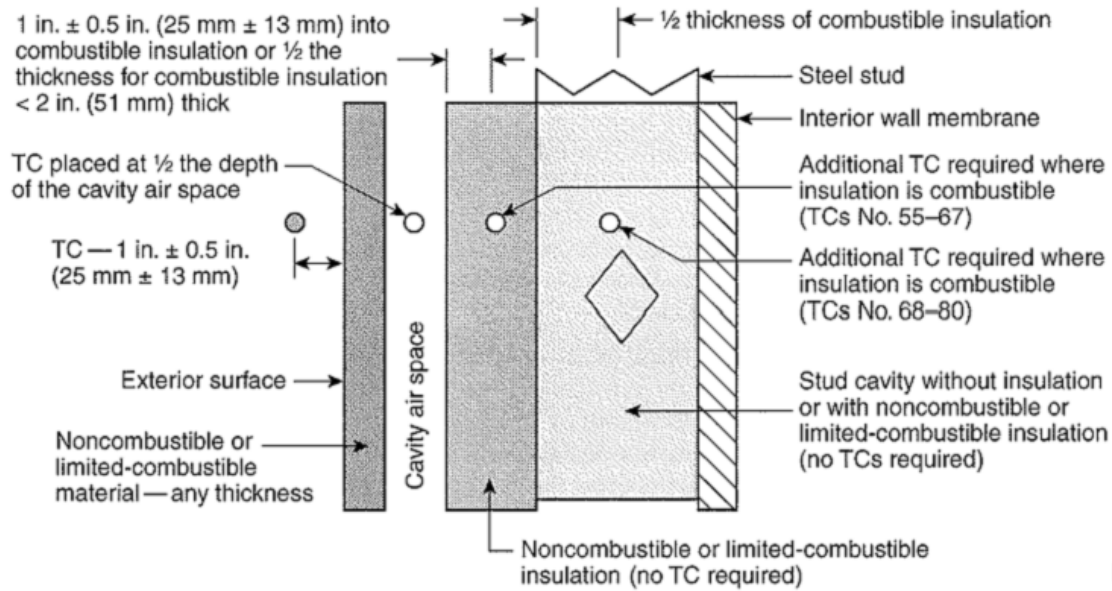


FIGURE 6.1(d) Plan View — First-Story Test Room. Instrumentation arrangement.



Detail I

FIGURE 6.1(b) *Continued*

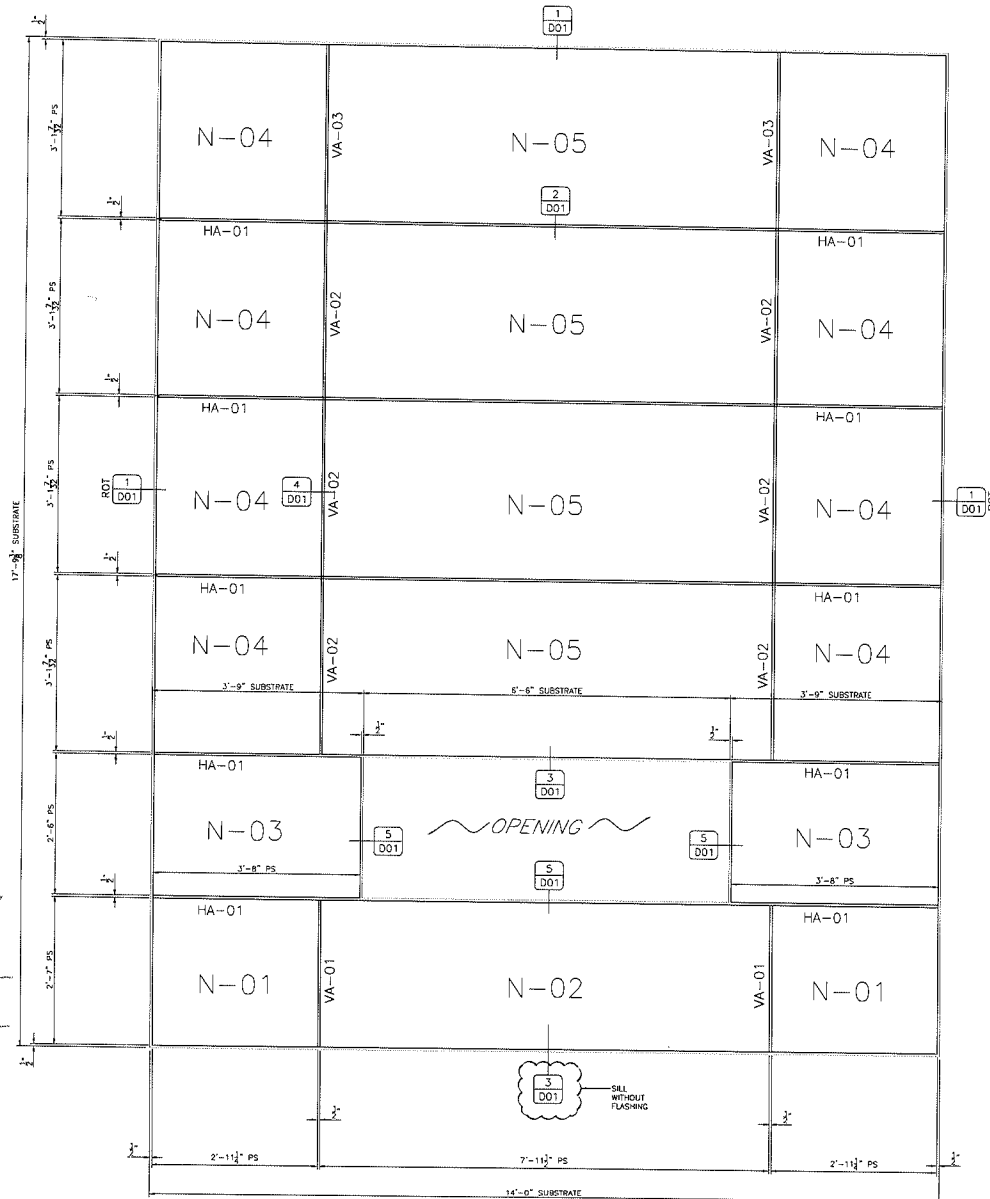


Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report # C1143.02-121-24

Date 5-9-13 Tech EG



PROJECT NO.	1143.02-121-24	DATE	5-9-13
INFORMANT	EG	LOCATION	South Bend
ARCHITECT	SHAFFNER HEANEY ASSOCIATES, INC.	CHECKED BY	Troy Indianapolis
CUSTOMER	SELECT SYSTEMS PROFESSIONALS	CHECK DATE	5-27-13
Job #		E01	



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report # **C1143.02-121-24**

Date **5-9-13** Tech **EG**

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