QMS4-8.5.1-7 EE Testing Checklist

Project No: 63480 Project Name: RWE/COMED BUFFALO SOLAR HOG RUN Date: 8/20/2025 Project Manager: Bridget Becker

Building Wiring Pre-Test: Please initial each task once completed; enter any unresolved issues as a Write-Up

GW 1. Review Issue Board for missing materials / open issues and write any applicable items on comments sheet.

GW 2. Review Assembly/Wire QC 18 for correct wire lugs and any special notes.

GW 3. Review L1, L2, L3, L4, L5 prints. Verify all building wiring items and all boxes/conduits needed for integration are installed.

GW 4. Visually inspect Battery Charger, DC Main Panel, DC Breaker Panel(s). Verify Charger input matches building AC power/phase. Verify DC output power (48V/125V/250V) matches panel requirements and AC breaker matches charger requirements.

GW 5. Verify fuses are installed in disconnects and fused breakers per drawing.

GW 6. Check AC and DC breakers for a tight connection of the conductor - also breaker to the panel board bus.

GW 7. Ring out all beakers AC & DC for shorts to ground or neutral or phase to phase.

8. Perform a visual inspection of the following components for physical or paint damage / defects; Initial each line when complete (or N.A.):

GW	Battery Charger(s)	GW	Switches/Recepts.	N/A	Net Shelter
GW	DC Panel Board(s)	TG	Interior Lights	GW	DC Monitor Box
GW	AC Panel Board(s)	N/A	DC Lights	N/A	Telco Board
GW	Transfer Switch	GW	Exit Lights	GW	HVAC Unit
GW	DC Disconnects		Exterior Lights	GW	HVAC Disconnect
GW	AC Disconnects	GW	Exterior GFCI Recepts.	GW	HVAC Thermostat
N/A	AC Switch Gear	N/A	Timers	GW	Heater(s)
GW	J Boxes / Wireway	GW	Exhaust Fan / Louvers		
GW	Cable Tray	GW	Fire Alarms / RIB Relays		

GW 9. Check all J boxes, wireways, receptacles, light switches, for correct box grounds, loose wirenuts, cut wire strands, and loose or pinched wires.

GW 10. Check for proper bonding of all wall mounted panels and boxes, battery chargers, transfer switches, disconnects, fuse panels, cable tray, penetrations to outside ground pads and pigtails if applicable

GW 11. Verify AC breaker(s) for HVAC unit(s) meet requirements shown on HVAC plate/label

GW 12. Verify that the bonding screws for the AC dist. panels and AC disc. switches are secured in the panels (or installed if needed).

	Serial number	Wall A, B, C or D
HVAC	10048849	C 60
HVAC	10048850	A 60
HVAC		
HVAC		
Battery Charger	474065-2	ED right
Battery Charger	474065-1	ED Left
Battery Charger		
Battery Charger		
Transfer Switch	US1150250400064358	A
Transfer Switch		

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Integration Pre-Test: Please initial each task once completed; enter any unresolved issues as a Write-Up

TG 1. If panels were tested prior to installation to the building, review the individual QC-18s for completeness. Address all open items, or transfer them onto this checklist. Place QC 18 back into the Packet when complete

TG 2. Review Integration QC 18 for correct wire lugs and any special notes

TG 3. Inspect integration cabling/wiring to wall mounted devices previously inspected. (Battery charger alarms, ATS alarms, rib relay/fire alarm connections, telco board cables, net shelter, Positron etc.)

4. Inspect all panels and termination cabinets for:

TG a. Proper insertion of stripped wire into lugs,
TG b. Proper crimps
TG c. Proper connection of lugs to terminals,
TG d. Tightness of lugs
TG e. Wires on correct side of terminal blocks in term cab
TG f. Panels bolted together
TG g. No loose wire strands at compression fittings
TG h. Correct lugs/ferrules used
TG i. Correct cable / wire size (gauge)
TG j. Correct cable color-coding used (panels, term cabs, wall-mounted devices)

TG 5. Check all panel and term cab wire diagrams for missing cables and missing or damaged components

6. Verify communication cables have been run and terminated

_____ Coax _____ IRIG X SEL _____ Fiber X Cat 5

_____ 7. Verify GPS clock antenna and surge suppressor are installed

TG 8. Ring out all breakers AC & DC for shorts to ground or neutral or phase to phase.

Torque Verifications & Post-Test: Please initial each task once completed; enter any unresolved issues as a Write-Up

1. Verify torque on the following compression connections; initial each item below when complete, and record torque tool(s) used. Apply a stripe across torqued bolts / nuts, or a dot for smaller wires, to indicate that torque has been verified.

_____ Battery Charger(s)	_____ DC Disconnects	Torque Tool Type & Serial Number(s) used:
_____ DC Panel Board(s)	_____ AC Disconnects	_____
_____ AC Panel Board(s)	_____ AC Switch Gear	_____
_____ Transfer Switch	_____ HVAC Disconnect	_____

_____ 2. Verify torque on all panel and term cabinet compression connections; indicate that torque has been verified by placing your initials and "LT2" notation on the WD's. Initial and record torque tool(s) used below:

Torque Tool Type & Serial Number(s) used:

_____

_____

_____

_____ 3. Gather Stickset(s); return to Project Manager or designee for scanning

_____ 4. Scan a copy of the Test Sheet and save to the Test Dept. file location under the job name

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Test: Please initial each task once completed; enter any unresolved issues as a Write-Up

_____ 1. Review the Pre-Test checks above. Ensure that all items are completed, or documented as a Write-Up.

2. Review the QC-18 for testing requirements. Put a check below by the test(s) required. (If IHB building, tests b,c,e,f are required

_____ a. Wiring Diagram Pt-to-Pt Test. If required, perform wire continuity check by following the individual panel wiring diagrams and using a Fluke Multi-meter.

✓ b. Functional Schematic Pt-to-Pt Test. If required, perform test by following the individual panel schematic diagrams and using a Fluke Multi-meter and Omicron Test Set as required.

Initial Date

_____ c. Dielectric Test. If required, test all AC utility circuits to NEC 550.17a with the Hipot-Megohmeter. _____ / _____

_____ d. Polarity Testing: _____

_____ e. Continuity Bonding required: _____

_____ f. Review QC18 for any special Tests or Requirements; mark N.A. or Initial below if applicable

_____ AEP pre commissioning document _____ Factory Acceptance Testing (FAT)

_____ Install customer provided relay settings _____ Other _____

3. If the panels/racks were <u>not</u> tested prior to installation in the building, perform the following tests:

_____ a. Check all devices for freedom of moving parts. Remove any shipping material that may prevent operation.

_____ b. Check relays to ensure that the AC and DC voltage taps are at the proper settings. Use the individual schematics

_____ c. Apply specified DC voltage to the individual panels/racks through the DC panel boards with a Sorensen DC power supply c battery charger

_____ d. Install customer provided relay settings.

_____ e. Check all relays for proper operation of the specified voltage range as shown on the schematics or the device manual.

_____ f. Apply voltage and current with an Omicron test set to simulate field conditions causing the devices to trip/function as designed. See device function specifications in the manual to determine acceptable operation tolerances.

_____ Accept _____ Reject

_____ g. Verify timing relays for correct sequence and operation as shown on the schematics.

_____ h. Record readings and outputs of meters, recorders, and transducers on schematics. See device manual for tolerances.

_____ i. Record firmware for any relays that were missing during PANEL TEST _____

_____ 4. For split buildings that require field work, repeat steps 5 through 9 for cables / wires pulled back for travel

_____ 5. Make sure there is no back feeding of power from the HVAC or lighting circuits

6. Apply AC voltage to the AC panel boards using the AC test plug. Use the AC schematic drawing to determine rated voltage and phasing requirements. (Please intial tasks once completed)

_____ a. Turn the AC breakers on individually to verify correctness of branch circuits including main breaker

✓ b. Verify correctness of wiring of all receptacles (indoor & outdoor) with a Fluke Multi-meter and circuit tester

_____ c. Verify correct operation of all lights. (indoor and outdoor)

_____ d. Verify correct operation of the exhaust fan circuit

✓ e. Verify correct operation of HVAC circuit; Test to ensure Heating functions are operational

✓ f. Verify correct operation of HVAC circuit; Test to insure Cooling functions are operational

_____ g. Verify correct operation of the fire alarm circuit. Confirm shutdown of HVAC and exhaust fan during any alarm condition

_____ h. Verify correct operation of the Automatic Transfer Switch (Load settings for ATC)

✓ i. Verify ATS position contacts to the schematic with a Fluke Multi-meter

Test (continued):

7. Apply DC voltage to the DC panel boards with a Sorensen power supply or battery charger. Use the DC schematic drawing to determine the rated voltage value. Verify polarity to NEC 550.17b at the panel boards with a Fluke Multi-meter.
- ✓ a. Turn DC breakers on individually and verify voltage magnitude and polarity to NEC 550.17b with a Fluke Multi-meter. Use the schematics and wiring diagrams to determine the test points.
- ✓ b. Allow sufficient time for the devices to reach normal operating temperatures. Use the device manual to determine the time.
- ✓ c. Check all devices for abnormal heating.
- ✓ d. Where an OCB or other external device is shown on the schematics, connect an Electro switch series 24 LSR switch to simulate the OCB or other external device.
- ✓ e. Verify relay targets, coils, contacts etc., for correct operation as shown on the schematics.

8. Perform AC Cabling verifications for C.T.s and P.T.s from furthest point or term cab.
- ✓ a. Using the schematics, apply AC voltage and current to the P.T. and C.T. circuits using an Omicron test set.
- ✓ b. Verify current polarity with an Arbiter Systems Multi-meter. Confirm current magnitude and phase angle.
- ✓ c. Verify voltage points with an Arbiter Systems Monitor. Confirm voltage magnitude and phase angle.
- ✓ d. Verify relay targets, coils, contacts etc., for correct operation as shown on the schematics.
- ✓ e. Verify single point ground

9. Verify communication cabling. Check the method used below:
- ✓ Continuity check with a Fluke Multi-meter
- ✓ Tx/Rx interruption method
- ✓ Light method
- _____ Establish relay communication

_____ 10. Identify all extra cables and tag with circuit number or panel number. Cap all conductors.

_____ 11. Verify certification labels, data plates, and CT circuit labels are installed where applicable

_____ 12. Verify AC and DC panelboard circuit cards and/or labels are correctly installed where applicable

_____ 13. If nameplates weren't installed prior to testing, verify the correctness of the building nameplates.

Test Equipment Used:

_____ Omicron Test Set Serial No._____
_____ Fluke Multi-meter Serial No._____
_____ Sorensen power supply Serial No._____
_____ Phase Angle meter Serial No._____
_____ Hipot-Megohmeter Serial No._____
_____ Receptacle Tester Serial No._____
_____ CAT5/6 Cable Tester _____

Enter all Pre-Test and Test Comments and/or Discrepancies on Page 7

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Engineering and Post Test Instructions

	INSTRUCTIONS: Please complete this section with legible, concise statements.	Dept. Eng.	Dept. Mfg.	Completed Initials / Date
Panel Engineering Instructions:				
1.	Prepare a Ship Loose List for Crate, listing any loose items required such as: extra hardware, extra devices, touch-up paint, tech manuals, drawings, etc...	X		
2.	Inspect the wired Panels - note here if any special bracing should be added.	X		
3.	Review QC-18 to verify that the correct crimpers were used. This is not necessary for any crimps made in the Wire Processing cell.	X		
Building Engineering Instructions:				
1.	Prepare a Ship Loose List for Crate, listing any loose items required such as: extra hardware, extra devices, touch-up paint, tech manuals, drawings, etc...	X		
2.	For split-construction jobs, ensure that copies of all the Test Sheet and Schemes are sent with the building	X		
3.	For AEP jobs, ensure that copies of all the Test Sheet and Schemes are sent with the building	X		
4.	For ATC jobs, ensure that copies of the "as-built" W.D.'s are sent with the building	X		
5.	Review QC-18 to verify that the correct crimpers were used. This is not necessary for any crimps made in the Wire Processing cell.	X		
6.	Complete circuit cards for the AC and DC distribution panels.	X		
7.	Make an 11x17 copy of the final HVAC wiring detail (generally on the "E3" drawing); stamp as "Information Only" and place inside a clear protective sleeve inside the main HVAC cover plate	X		

Panel Specific Write-ups

	Write Up By	Write Up Date	INSTRUCTIONS: Please transfer any unresolved panel issues to this form before beginning building test. **Only missing nameplates and missing defective material may be unresolved to move a panel to the EE (unless approved by Test Supervisor or Quality Manager).**	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
1	HE	10-28	MISSING 5 TERM BLOCKS, TB35, TB36, TB45, TB46, TB47 update Block layout per wld markups (PANEL - 138 R6) 63480-015	X		X	BB 1/5	BH	1-6
2	RZ	11-11	INSTALL NEW HYBRID. (RELAY PANEL - 138121)			X			
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

03480

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Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
1	GW	12/4	Install And wire H-VAC's WAll A+C ~~[illegible]~~			HW X	DM BC DONE 12-16	BH	1-6
2	GW	12/4	fix Qty: 23 Holes WAll A			X	JB done 12-18	BH	12-22
3	GW	12/4	Wire H-VAC And Exhaust shut Down J-Box OK AS IS *Field install* WAll A	X		X	TP 12/16	—	—
4	GW	12/4	Install Components And wire Lighting Contactor Missing Components (Please order) WAll A MP 12-22	X X		X			
5	GW	12/4	Wire Both Exhaust FANS Exhaust fans wired, waiting on backdraft damper. (DM 12-15) WAll A			HW X	Done MP 1-6-26		
6	GW	12/4	Install Battery monitoring system, Conduit And wire (Removed on print) 10.29 WAll B	X		HW X	TP 12/16	—	—
7	GW	12/4	Install No Smoking Sign WAll B			HW X	DONE 12-17 DONE	JO	12-18
8	GW	12/5	Install Louver, motor And wire Need parts WAll C+ED	X		HW X	Done	BH	1-6
9	GW	12/5	Install Components And wire Alarm J-Box WAll C			HW X HW	JB 12-18	BH	12-22
10	GW	12/5	Install And wire OCEF Cab, 2" EMT, FIBER DUCT PER L4C WAll C			X			
11	GW	12/5	Install Cell Phone Antenna WAll C			HW X	DONE	JO	12-17

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Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
12	GW	12/5	INSTALL Screws in Standoff WALL C			BW. X	Done		
13	GW	12/5	fix Qty: 1 hole WALL C			X		BH	12-22
14	GW	12/5	INSTALL Cell Booster, Shelf And Surge, Suppressor WALL D	X		BW. X	Done	J.O.	12.17
15	GW	12/5	fix Qty: 1 hole WALL D			X		BH	12-22
16	GW	12/15	fix Qty: 10 holes WALL ED			X			
17	GW	12/15	fix Qty: 1 hole WALL B			X			
18	GW	12/15	fix Qty: 2 Holes WALL EB			X			
19	GW	12/15	INSTALL Eye WASH STATIONS -missing one on skid loose Bom WALL EB	X		[redacted] X S.P Hole?	Done	BH	12-22
20	GW	12/15	AC PANELS Qty: 4 Missing Breakers to MANY to List	X		BW X			
21	GW	12/5	DC PANEL #1 missing Qty: 9 50 AMP Breakers 2 Pole see 40	X		BW X		SEE	#40
22	GW	12/5	DC PANEL #2 missing Qty: 1 50 AMP 2 Pole Breaker see 40	X		BW. X	—	SEE	#40

Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
23	GW	12/5	DC PANEL #4 missing Qty: 9 50AMP 2 Pole Breakers see 40	X		HW	—	SEE	#40
24	GW	12/5	DC PANEL #3 missing Qty: 12 50AMP 2 Pole Breakers see 40	X		HW	—	SEE	#40
25	GW	12/5	~~Install And~~ wire Door Alarms WALL C+D					BH	12-22
26	GW	12/5	Install And wire smoke Alarms No Fire system or ceiling? CUSTOMER INSTALL Ceiling	X		HW			
27	GW	12/5	INSTALL Fuses in Heater Disconnects 30 A FRN (STOCKED PNL SIDE) WALL A+C	X		HW	Done	J.O.	12-18
28	GW	12/5	INSTALL Fuses in All Exterior Disconnects (3 installed, need 3 more.)	X		HW	12-19	BH	12-22
29	GW	12/5	finish H.W. in Exterior Trailer Connection PANEL #2 LUGS ORDERED 12/19 (NO lugs) E9 & E17	X		HW	TP 12/23		
30	GW	12/5	INSTALL And wire Exterior Lights ORDERED 12/19 (Missing lights)	X		HW	TP 12/23 SAP 1-4		
31	J.O.	12-15	Need to rewire transfer Switch to AC Panel Boards and Outside Disconnects so Color Code in A@Black, B@ Blue and C@ Red			HW	DONE	J.O.	12-17
32	J.O.	12-15	Both Battery charger AC Circuits are wired out of the wrong Panel Board, should come from Panel PDP-1A Circuits 29 + 30 (JH updated Layouts Dgns	X		HW	TP 12/15	J.O.	12-18
33	J.O.	12-15	Need to finish wiring North Slept per E6,			HW	DONE	J.O.	12-17

Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
34	TG	12-15	CABLE 277 - RELAY PANEL 138 R4 (40556) MARKED ON WIRE PLANT COMPLETED, FOR 1-4 12, - NOT LANDED, CABLE MISSING (MARSHALLING CABINET #2)			X	PA 12/17	J.O.	12-18
35	J.O.	12-15	AC Panels 1A + 1B are wired Backwards Panel 1A is to left of transfer Switch Panel 1B is to right of transfer Switch Per L1 Drawing, Please rewire UPDATED	X		HW.	DP 12/15	J.O.	12-17
36	J.O.	12-15	Need to wire Cell Booster Antennas and Surge Supressor			HW. X	DONE	J.O.	12-17
37	J.O.	12-15	All four DC Panel Boards need Breakers installed to Match ORDERED Panel Board Drawing. To many 12/19 wrong to list them All- need Breakers -	X		HW. X	DP 12/23	BH	1-6
38	J.O.	12-15	Need to finish wiring Revenue Meters, missing 4 Cables, #81 + #82 for meters 1 + 1A and #85 + #86 to Meter 2 + 2A ~~Not~~ on Run List ~~*~~ SEL-C607	X		X	DP 12/23		
39	J.O.	12-15	Need to install load share wire between Chargers, from W1 to W1			HW X	MP 12-22	BH	12-23
40	J.B.	12-15	Missing 22, 50 Amp DC breakers between DC Panels 2,3,4 / DC-3 Missing (12), DC-4 Missing (9), DC-2 Missing (1) ORDERED 12/19 ADDITIONAL BREAKERS IN BOX NEAR DOOR	X		HW X	DP 12/23 AP 1-5	BH	1-6
41	J.O.	12-16	Dwg. 4151A shows Panel Board #3 Circuit #212, should show Panel Board #2 Circuit #213, marked up in test Eng to Verify	X			DP 12/18		
42	J.O.	2-16	Dwg. 4151 shows Panel Board #3 Circuit #212 should show Panel Board #2	X			DP 12/18		
43	J.O.	2-16	Panel R2, need to lug and land white wire out of cable #244 on 34-12			X	12-16	J.O.	12-17
44	J.O.	2-16	Panel R2, #14 ga. integration Cables lugged with wrong lugs Need Amp lugs with yellow/BL stripe 14/16 ga. Not yellow 10/12 ga. (Ref Dwg. 4150 & 4150A & 4155			X	12-16	J.O.	12-17

Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Reteste By	Reteste Date
45	J.O.	12-16	Panel R4, TB37-12 shows Red MC1 TB89-2 shows Green Scheme 4150B also for 89-3 and 37-11 what color should be where? MARKED UP PNL R4 W/D PLEASE WIRE PER W/D	X		X	DP 12/18 / MC 12-18	BH	12-22
46	J.O.	12-16	Panel R5 missing TB 46 Please install and wire (Test dwg 4150AC)			X	MC 12-18	BH	12-22
47	JA	12-16	PNL 2 Relug and crimp with correct lug and perfect crimp profile			X	JB 12-17	J.O	12/8
48	JA	12-16	Evaluate all 10-12 [redacted] AWG panels crimps for Integration wires for correct size and crimp profile (Quality issue? LT?) isn't that your job? NO!		X	X	MP 12-22	—	
49	J.O.	12-16	Panel R5 Should TB17-1+2 have a mschanica Jumper, Without we don't get our hot to the termCab Tested with Jumper Dwg 4150BC YES, MARKED UP W/D PLEASE INSTALL	X		X	DP 12/18 / MC 12-18	BH	12-22
50	J.O.	12-16	Scheme 4151, shows Panel R5 94-1 + 94-2 relays goingto Panel R2 in 106, W.P. for Cable 232 on R5 TB28 on R2 TB15 don't match MARKED UP W/D PLEASE RE-WIRE	X		X	DP 12/18 / BB 12-19	SEE	#91
51	J.O.	12-16	Panel R2, lug and land white wire out of 233 on TB15-12			X	JB 12-16	J.O.	12-17
52	J.O.	12-16	Cable 220 from Panel R1 TB36 to Panel R2 TB17 Don't match End to End and Scheme (Scheme 4151A) MARKED UP PNL R2 W/D WIRE PER CHANGE	X		X	DP 12/18 / MP 12-18	BH	12-22
53	J.O.	12-16	need to finish Sat Clock Antenna Cable			MW		BH	12-22
54	J.O.	12-17	Panel R1, TB45 has Broken Pin on Block, Pleas replace			X		BH	12-22
55	J.O.	12-17	need to Relug Panel #R2 integration Cables with Proper lugs, Per Write up #47, There are still some not done R4 also			X	—	J.O.	12-6

277 281 282

Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
56	J.O.	12-17	Panel R2, need to lug and land Black wire out of Cable 249 ON TB35-2			X	PA 12/17	J.O.	12-18
57	J.O.	12-17	Panel R2, Scheme 4152, shows w103 going to Panel R1 Relays 94-1, 94-2, 94TT W.D. shows going to Panel R5 MARKED UP PNL R2 W/D PLEASE WIRE	X		X	DP 12/18 BB 12-19	SEE	#91
58	J.O.	12-17	Cable 238 from Panel R2 to R3 is Ran as 2 conductor needs to Be 4 Conductor cable SCH.-4152A			X	MP 12-18	BH	12-22
59	J.O.	12-17	Panel R6, need to lug and land Cable 295 on TB14 per W.D. (Dwg 4153)			X	PA 12/17	J.O.	12-18
60	J.O.	12-17	Panel C1, Cable 304 to Term Cab doesn't match End to End, white needs to land on Panel End not on W.D. (Test Dwg 4154C) MARKED UP TERM CAB #1 W/D	X		X	DP 12/18 MC 12-18	BH	12-22
61	J.O.	12-17	Panel C1, Cable 301 to Term Cab doesn't match End to End white wire needs to land on Panel End, not on W.D. (Test Dwg 4154C) MARKED UP TERM CAB #1 W/D	X		X	DP 12/18 MC 12-18	BH	12-22
62	J.O.	12-17	Cable 298 from C1 to Term Cab 1 doesn't match End to End on W.D.'s MARKED UP TERM CAB #1 W/D (Test Dwg 4154C)	X		X	DP 12/18 MC 12-18	BH	12-22
63	J.O.	12-17	Santa Cruz Cabinet, do we need to install the Nokia 7705 Routers? YES, INSTALL MISO #373 (Test Dwg 5010)	X		X	TP 12/23		
64	J.O.	12-17	do we need to install the Exeltech Inverters on the telco Board (Test Dwg 5010) ALREADY INSTALLED IN S1	X			TP 12/23	—	
65	J.O.	12-17	Cabinet S2, Cables 300, 303, 306 to Term Cab don't match End to End MARKED UP TERM CAB #2 W/D (test Dwg 5010D)	X		X	MC 12-18	BH	12-22
66	J.O.	12-17	need to test House Alarms scheme 5010C		X			BH	12-23

Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
66	J.O.	12.17	Need to Run and land Cables 281 + 282 from Panel R4 to MTC2 (Test Dwg. 4100B)			X	PA 12/17	J.O	12-18
68	J.O.	12.17	Need to run and land Cable 277 from Panel R4 to MTC2 (Test Dwg. 4100B)			X	PA 12/17	J.O.	12-18
69	J.O.	12.17	Run all Com Cables and IRIG 3 missing, 5 no cable #'s ORDERED & CABLE #'s ADDED TO Run Lis #447 has already been used. 12/30 (CHANGED #5)	X	SHOWN ON RUN LIST ONLY	X	TP 12/23		
70	J.O.	12.17	Need to Run and land Cable 278 from TC2 to Panel R4 per W.D. (Test Dwgs 4100B & 4100C) W.D. 279 not Req Bad			X			
			Run list and WD's show cable 278 from TC2 to R3. Currently landed in TC2 + R3?		X			J.O.	12-18
71	J.O.	12-18	Need to run Grounds to outside Disconnects and Bars from transfer Switch and AC Panel Boards			X Hw	12/27 Dan	BH	1-5
72	J.O.	12-18	When testing Light first light in Corner of walls C & D should be off of Panel 1B Circuit #3 also light in Corner of Walls A & ED SEE E4 dwg.		X				
73	J.O.	12.18	E4 shows AC PDP-1B Circuit #3 for Emergency & Exit lights, Dwg. 4201A shows Exhaust f-ns, should this be out of 1A Circuit #3 MOVE EXIT/EMERG MARK TO CKT #4 PER MARK	X		X	DP 12/18 JB 12-18	BH	12-22
74	J.O.	12.18	Need to Install and Wire Exterior Recpt. on Wall "B" No recepts on L3 LOCATED IN TRAILER B2	X		X Hw	12/29 Dan	BH	1-6
75	J.O.	12-18	out side Recpt on WALL "C" is bad, Pleas replace	X		X Hw	JB 12-18	BH	12-22
76	J.O.	12.18	Dwg. 4201A shows Control Building interior Recpt. Circuit #3, No "E" Dwg. for this REMOVED FROM DWG	X		-	DP 12/18		

Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
77	J.O.	12-18	W.'ll need to test everything on E10 when Battery room is done getting Wired also E11		X				
78	J.O.	12-18	We have no Dwg for Lighting Contactor Box in stick Set PLACED ON TOP OF STICK SET NEEDS TO BE WIRED + COMPONENTS INSTALLED	X	X	X	DP 12/18		
79	J.O.	12-18	HVAC #2 (Battery room) Damaged Needs to be fixed or Replaced? I&L CREATED, TO PULL FROM 65053	X		X	DP 12/23	BH	1-6
80	J.O.	12-18	Missing 9- 66Amp fuses for HVAC's	X		X HW	BL 12-19	BH	12-22
81	J.O.	12-18	Need to check all Breaker Sizes both AC + DC when Installed		X				
82	J.O.	12-18	HVAC #3 should be Wired off AC Panel 1B Circuit #38, Curently on 37, Please fix could we swap this on Print? No, WILL NEED TO SWAP IN PANEL	X		X HW	DP 12/23 Done	BH	1-6
83	J.O.	12-18	Wires in AC Disconnect for HVAC #1 should Be Color Coded Black, Blue, Red Please Tape. als need to Swap Cdors in w/t on Breaker			X HW	Done	BH	12-22
84	J.O.	12-18	Need to install Aux heater in Battery room			X HW	Done	BH	12-22
85	J.O.	12-18	Disconnect SW for Aux Heater Number 2 not working, Knifes Do not move with Actuator Arm	X		HW X	LW 12-19	BH	12-22
86	J.O.	12-18	need to finish Wiring Door Alarm J-Box on Wall "C"			X	JB 12-21	BH	12-22
87	J.O.	12-18	Still need to test the remove motors		X			BH	12-23

Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
88	DP	12/18	INSTALL MIMIC LABELS ON C1	X		X	Done	BH	1-5
89	JP	12-8	Should the Surge Suppressor for the cell booster be between the booster and the indoor antenna? (NO) BETWEEN BOOSTER & OUTDOOR ANT	X	X	HW X	TP 12/23		
90	DP	12/19	PNLS S1 & S2 FINISH INSTALLING 3" CHASE NIPPLES FOR CABLE ENTRY POINTS ON TOP.			X	BB CH 12-19	BH	12-22
91	BH	12-22	PNL-R2 CABLES (215 & 232) & LABELS ARE SWAPPED SCH. - 4151 SEE #50 & 57			X	MC 12-22	BH	12-25
92	|		RUN COAX CABLES (426 & 428) DWG. - 5010F			X	MC 12-22	BH	12-23
93	|		TC-2 MISSING MARKER STRIP ON (83) BLOCK			X	MC 12-22	BH	12-23
94	|		TC-2 RELUG TB 63-1			X	MC 12-22	BH	12-23
95	|		CONNECT CEILING LIGHTS TO HOUSE WIRING			X			
96	|		AUX HEATERS HAVE (2) WIRES ON 3-POLE BREAKERS Correct	X			TP 12/23 Done	—	
97	|		DWG. - 5040A RTU RTAC COM PORTS 3,4,6,7,8,15+16 INFO DOES NOT MATCH RUN LIST UPDATED SCHEME	X			TP 12/23	BH	1-5
98			CAN'T INSTALL BATTERY ROOM HVAC Dampers AS IS. NO HAT OR Frame TO BOLT Them To. CREATE I+I AND ASSIGN TO DRAFTING ON ORDER TO DEL 1/29 MP 12-22	X			TP 1/3 Done		

Test Comments and/or Rework Required

	Write Up By	Write Up Date	INSTRUCTIONS: Please complete this section with legible, concise statements.	Dept. Eng	Dept. Test	Dept. Mfg	Corrected Date	Retested By	Retested Date
99	BH	12-23	RUN FIBERS 374, 352 & 354 ~~374 need cable~~ 352, 354 > Not on Print in (S1) IN S3 PNL DWG.S - 5040F & G	X		X	TP 1/5		
100			CABLE -215 COLOR CODE DOES NOT MATCH END TO END IN PNLs R1 & R2 UPDATED IN R2 SCH. - 4151	X		X	TP 12/23 MC 12-23	BH	1-6
101			CABLES (79 & 84) & LABELS ARE SWAPPED IN TC-1 W.D.s - 4855B & C			X	MC 12-23	BH	1-6
102			INSTALL & WIRE COMPONENTS IN J-BOXES UNDER REV. METERS W.D.s - 4855B & C			HW X			
103	DP	1/5	PNL 138R6 MOVE TERM BLOCKS TB33, 34, 43, 44 TO TB35, 36, 45, 46 PER W/D MARK-UP. See Panel Write up #1			X	JB 1-5	BH	1-6
104	DP	1/5	PNL 138R6 MOVE TERM BLOCK TB23 TO TB47 PER W/D MARK-UP. See Panel Write up #1			X	JB 1-5	BH	1-6
105	BH	1-5	AC PNL BRDS NEED EDGE GUARD ON NEUTRAL BARS & OTHER EDGES			SP X	MC 1-05	BH	1-6
106			RUN AC PNL-1B CKT-4(0) TO HVAC SHUTDOWN J-BOX ON WALL-A PER E13			HW X	JB 1-6		
107			WIRE FIRE/SMOKE ON HVAC CONTROLER TO SHUTDOWN J-BOX PER E12			X	JB 1-5	BH	1-6
108	BH	1-6	~~in any ext or int lights~~ E10 DWG. SHOWS EXHAUST FAN ON AC PNL-1A CKT.-3, PNL BRD DWG DOES NOT SEE E11, 1B-3 PER E11 MARK-UP MOVE TO	X		X	TP 1/6	JC	1-7
109			E10 ICE CUBE RELAY SOCKET TERM. #s SHOWN INCORRECTLY	X					

Test Comments and/or Rework Required

	Write Up		INSTRUCTIONS: Please complete this section with **legible**, concise statements.	Dept.			Corrected	Retested	
	By	Date		Eng	Test	Mfg	Date	By	Date

QMS4-8.5.1-7 EE Testing Checklist

Note: The following tasks must be completed and signed-off in order.

Building & Integration Testing By (Test Engineer): J.O. + Bob Ofarrell

Was all required in-house Testing able to be Completed?: [ ] Yes [X] No Date: 1-7-26

If "No" above, Project Manager approval is required here: _____

(Does not include Reconnect Testing for Split EEs)

Date: _____

If "No" above, record open Test Sheet items and/or a Description of remaining Open Issues below:

SEE OPEN TEST SHEET ITEMS

Torque Verifications & Post-Test completion (Quality or Test): _____

Date: _____

Released from Test / Ok to split (Project Manager): _____

Date: _____

Ship Prep Sheet Completion verified by (Lead or Supervisor): _____

Date: _____

*Note: The building schematic stick set(s) and test sheet MUST be sent with all split buildings

Final Inspection / Approved to Ship (Project Manager): _____

Date: _____

Note: The above Final Inspection line **MUST be signed before building can be shipped*

Field Work and Post Test Completed by: _____

(Split buildings)

Date: _____

Final Verification / Approval of Site Work: _____

(any open items from above, and any items found at the jobsite)

Date: _____