



# Illinois Department of Transportation

Office of Intermodal Project Implementation / Division of Aeronautics  
1 Langhorne Bond Drive / Springfield, Illinois 62707-8415

November 8, 2023

SUBJECT: Crawford County Airport  
Palestine, Illinois  
Crawford County  
Illinois Project Number: RSV-5062  
SBG Project Number: 3-17-SBGP-TBD  
Contract No. RB022  
Item No. 07A, November 17, 2023, Letting  
Addendum A

## NOTICE TO PROSPECTIVE BIDDERS

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

Reason for Addendum:

Special Provision Clarification – Add Appendix A and Appendix B that was missing from the document.

To All Plan Holders:

Includes missing forms required for testing of constant current regulators, cables, and the PAPI unit.

Plan Changes:

No Changes

Special Provisions Changes:

Includes:

Appendix A Constant Current Regulator and Cable Testing Forms  
Appendix B PAPI Ground Check List Forms

Schedule of Prices Changes:

No changes

Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Questions on this addendum may be directed to Jeff Olson of Hanson Professional Services Inc. at 217-747-9278 or [jolson@hanson-inc.com](mailto:jolson@hanson-inc.com).

# APPENDIX A

RSV-Crawford County Airport  
Palestine, Illinois

Illinois Project No. RSV-5062  
SBG Project No. 3-17-SBGP-TBD  
Hanson Project No. 23A0038D

Install LED Precision Approach Path Indicator  
(PAPI) System and Associated Electrical  
Improvements of Duct, Structures, Cabling, and  
Vault Work

Constant Current Regulator and  
Cable Testing Forms



<b>Engineering Firm</b>	Hanson Professional Services Inc.
<b>Airport Name</b>	RSV-Crawford County Airport
<b>Project</b>	Install LED Precision Approach Path Indicator (PAPI) System and Associated Electrical Improvements of Duct, Structures, Cabling, and Vault Work
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## TESTING FORMS

Prior to beginning airfield lighting removals, modifications, replacements, and/or cable installation all existing series circuit cables shall be Megger tested with an insulation resistance tester and recorded at the vault. All existing series circuit cable loops shall have the resistance measured with an Ohmmeter and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded. Note: output voltage measurements are not required for constant current regulators that are not equipped with output voltage meters. Provide a True RMS Ammeter for current measurements.

Insulation resistance testing equipment for use with 5,000 Volt series circuit cables shall use an insulation resistance tester capable of testing the cables at 5,000 Volts. Older series circuit cables and/or cables in poor condition may require the test voltage to be performed at a voltage lower than 5,000 Volts (Example 1,000 Volts, 500 Volts, or less than 500 Volts). The respective test voltage shall be recorded for each cable insulation resistance test result.

Insulation resistance testing equipment for use with 600 Volt rated cables shall use a 500 Volt insulation resistance tester. The respective test voltage shall be recorded for each cable insulation resistance test result.

It is recommended to use the same insulation resistance test equipment throughout the project to ensure reliable comparative readings at the beginning of the project and at the completion of the project.

Disconnect the airfield lighting series circuit cables from the constant current regulator when performing cable insulation resistance tests (Megger Tests). Test the cables that go to the airfield for the respective airfield lighting series circuit. Connect the cable insulation resistance tester to one of the airfield lighting series circuit cables and to a good ground in the airport electrical vault such as the airport vault ground bus. Conduct the cable insulation resistance test on each respective cable for not less than 90 seconds. Record the test results at the end of the time duration for the test.

FAA Advisory Circular 150/5340-26C Maintenance of Airport Visual Aid Facilities provides guidance on Insulation Resistance Tests. Also refer to the user manual for the respective cable insulation resistance tester. Reasonably new series circuit cables and transformers with good connections should read 500 Mega-Ohms to 1,000 Mega-Ohms or higher. The readings should decrease with age. The resistance value declines over the service life of the circuit; a 10-20 percent decline per year may be considered normal. A yearly decline of 50 percent (4 percent monthly) or greater indicates the

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## TESTING FORMS

existence of a problem, such as a high resistance ground, serious deterioration of the circuit insulation, lightning damage, bad connections, bad splices, cable insulation damage, or other failure. FAA Advisory Circular 150/5340-26C notes “Generally speaking, any circuit that measures less than 1 megohm is certainly destined for rapid failure.” Airfield lighting series circuits with cable insulation readings of less than 1 megohm are not uncommon for older circuits that are 20 years or more of age.

Based on information in FAA AC No. 150/5340-26C Maintenance of Airport Visual Aid Facilities, the cable insulation resistance value inevitably declines of the service life of the circuit; a 10-20 percent decline per year may be considered normal. In the event that the cable insulation resistance readings have declined more than 2 percent per month it might indicate cable damage due to lightning or damage as a result of Contractor operations. Where the cable insulation resistance readings have declined more than 2 percent per month over the project construction duration as a result of Contractor operations, Contractor will need to investigate, address, and repair the respective cable circuits.

All existing series circuit cable loops shall also have the resistance measured with an Ohmmeter and recorded for each circuit at the vault. The resistance of the series circuit loop with connections using #8 AWG copper conductor should be approximately 0.8 to 1 Ohm per thousand feet of cable length. The resistance of the series circuit loop with connections using #6 AWG copper conductor should be approximately 0.5 to 0.7 Ohm per thousand feet of cable length. The number of series circuit transformers and connections will affect the overall resistance of the series circuit loop and therefore the measurements might be slightly higher than the calculated resistance for the respective length of cable.

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## TESTING FORMS

\_\_ Record the date for the respective tests.

\_\_ Record the manufacture and model number of the insulation resistance tester used for the Megger tests. Note: it is recommended to use the same insulation resistance tester again after airfield lighting modifications, additions, and/or upgrades have been completed.

\_\_ Record the manufacture and model number of the Ohmmeter used to measure resistance of each series circuit cable loop. Note: it is recommended to use the same Ohmmeter again after airfield lighting modifications, additions, and/or upgrades have been completed.

\_\_ Record the manufacture and model number of the Ammeter used to measure current readings.

\_\_ Record personnel conducting tests.

\_\_ Record personnel observing tests.

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**TESTING FORMS**

\_\_\_ Conduct cable insulation resistance test (Megger test) and record Runway 9-27 lighting series circuit cable loop at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 9-27 series circuit cable			

\_\_\_ Runway 9-27 lighting series circuit cable loop shall have the resistance tested and recorded at the vault. Use an Ohmmeter and measure the resistance of the series circuit loop at the Vault.

<b>Cable Under Test</b>	<b>Series Circuit Loop Resistance in Ohms</b>
Runway 9-27 series circuit cable	

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**TESTING FORMS**

\_\_\_ Conduct cable insulation resistance test (Megger test) and record Taxiway lighting series circuit cable loop at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Taxiway Lighting series circuit cable			

\_\_\_ Taxiway lighting series circuit cable loop shall have the resistance tested and recorded at the vault. Use an Ohmmeter and measure the resistance of the series circuit loop at the Vault.

<b>Cable Under Test</b>	<b>Series Circuit Loop Resistance in Ohms</b>
Taxiway Lighting series circuit cable	



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**TESTING FORMS**

\_\_\_ Conduct cable insulation resistance test (Megger test) and record Runway 17-35 lighting series circuit cable loop at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 17-35 series circuit cable			

\_\_\_ Runway 17-35 lighting series circuit cable loop shall have the resistance tested and recorded at the vault. Use an Ohmmeter and measure the resistance of the series circuit loop at the Vault.

<b>Cable Under Test</b>	<b>Series Circuit Loop Resistance in Ohms</b>
Runway 17-35 series circuit cable	

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**TESTING FORMS**

\_\_\_ Conduct cable insulation resistance test (Megger test) and record Runway 9 PLASI feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 9 PLASI Feeder phase conductor			

\_\_\_ Conduct cable insulation resistance test (Megger test) and record Runway 27 PLASI feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 27 PLASI Feeder phase conductor			

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**TESTING FORMS**

\_\_\_ Conduct cable insulation resistance test (Megger test) and record Runway 9 REILS feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 9 REILS Feeder Circuit Phase A conductor			
Runway 9 REILS Feeder Circuit Phase B conductor			

\_\_\_ Conduct cable insulation resistance test (Megger test) and record Runway 27 REILS feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 27 REILS Feeder Circuit Phase A conductor			
Runway 27 REILS Feeder Circuit Phase B conductor			

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**TESTING FORMS**

\_\_\_\_ Conduct cable insulation resistance test (Megger test) and record Runway 17 REILS feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 17 REILS Feeder Circuit Phase A conductor			
Runway 17 REILS Feeder Circuit Phase B conductor			

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Tests for constant current regulators shall include the following.

1. The respective personnel performing airfield lighting work, vault work, and/or tests shall be familiar with and qualified to work on 5000 Volt airfield lighting series circuits, constant current regulators, and associated airport electrical vault equipment.
2. Prior to conducting tests confirm each constant current regulator has a good and secure frame ground connection to the vault grounding electrode system. The constant current regulator frame ground shall be a minimum #6 AWG copper conductor and UL listed grounding connectors with secure and tight connections. Correct where missing. This is required for the safety of personnel.
3. The respective personnel performing tests shall be familiar with the respective test equipment and the use and operation of the test equipment. The Contractor is responsible to employ the services of personnel qualified to perform the respective tests and qualified to work on 5000 Volt airfield lighting series circuits, constant current regulators, and associated airport electrical vault equipment.
4. Test each brightness step and measure and record the input current on Phase A and Phase B for the 240 VAC branch circuit to each CCR. Note: Provide a True RMS Ammeter for current measurements.
5. Test each brightness step and record the CCR output current to the series circuit lighting. Each CCR should be equipped with an output current meter. In the event the output current meter is not working properly or is out of calibration use a True RMS Ammeter for output current measurements and measure the current in the output series circuit conductor.
6. Test each brightness step and record the CCR output voltage for the series circuit lighting. Each CCR should be equipped with an output voltage meter. Where the CCR does not include an output voltage meter, the output voltage measurements are not required. Do not use a 0 to 600 Volt voltmeter to measure voltage across the CCR output terminals due to safety concerns and high voltages at the CCR output.

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**TESTING FORMS**

Prior to beginning airfield lighting modifications and/or cable installation each constant current regulator shall be tested with results recorded. **Note: Output voltage measurements are not required for constant current regulators that are not equipped with output voltage meters.**

\_\_ Test Runway 9-27 CCR by Manual Control and record input current, output amperage and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

\_\_ Test Runway 9-27 CCR by L-854 Radio Control (**Photocell Bypass On**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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**TESTING FORMS**

\_\_\_ Test Runway 9-27 CCR by Photocell and record input current, output amperage, and output voltage at respective preset step.

<b>STEP</b>	<b>INPUT CURRENT</b>	<b>OUTPUT CURRENT</b>	<b>OUTPUT VOLTS</b>
B10	Phase A:		
	Phase B:		

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**TESTING FORMS**

Prior to beginning airfield lighting modifications and/or cable installation each constant current regulator shall be tested with results recorded.

\_\_ Test Taxiway CCR by Manual Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

\_\_ Test Taxiway CCR by L-854 Radio Control (**Photocell Bypass On or Radio On**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		



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**TESTING FORMS**

Prior to beginning airfield lighting modifications and/or cable installation each constant current regulator shall be tested with results recorded.

\_\_ Test Runway 17-35 CCR by Manual Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

\_\_ Test Runway 17-35 CCR by L-854 Radio Control (**Photocell Bypass On or Radio On**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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## TESTING FORMS

After airfield lighting modifications, additions, and/or upgrades have been completed, series circuit cables shall be Megger tested with an insulation resistance tester and recorded at the vault. All series circuit cable loops shall have the resistance measured with an Ohmmeter and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded. Note: Output voltage measurements are not required for constant current regulators that are not equipped with output voltage meters. Note: Provide a True RMS Ammeter for current measurements.

\_\_ Record the date for the respective tests.

\_\_ Record the manufacture and model number of the insulation resistance tester used for the Megger tests.

\_\_ Record the manufacture and model number of the Ohmmeter used to measure resistance of each series circuit cable loop.

\_\_ Record the manufacture and model number of the Ammeter used to measure current readings.

\_\_ Record personnel conducting tests.

\_\_ Record personnel observing tests.

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**TESTING FORMS**

\_\_\_ After airfield lighting modifications, additions, and/or upgrades have been completed, Conduct cable insulation resistance test (Megger test) and record Runway 9-27 lighting series circuit cable loop at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 9-27 series circuit cable			

\_\_\_ Runway 9-27 lighting series circuit cable loop shall have the resistance tested and recorded at the vault. Use an Ohmmeter and measure the resistance of the series circuit loop at the Vault.

<b>Cable Under Test</b>	<b>Series Circuit Loop Resistance in Ohms</b>
Runway 9-27 series circuit cable	

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**TESTING FORMS**

\_\_\_ After airfield lighting modifications, additions, and/or upgrades have been completed, Conduct cable insulation resistance test (Megger test) and record Taxiway lighting series circuit cable loop at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Taxiway lighting series circuit cable			

\_\_\_ Taxiway lighting series circuit cable loop shall have the resistance tested and recorded at the vault. Use an Ohmmeter and measure the resistance of the series circuit loop at the Vault.

<b>Cable Under Test</b>	<b>Series Circuit Loop Resistance in Ohms</b>
Taxiway lighting series circuit cable	

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**TESTING FORMS**

\_\_\_ After airfield lighting modifications, additions, and/or upgrades have been completed, Conduct cable insulation resistance test (Megger test) and record Runway 17-35 lighting series circuit cable loop at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 17-35 series circuit cable			

\_\_\_ Runway 17-35 lighting series circuit cable loop shall have the resistance tested and recorded at the vault. Use an Ohmmeter and measure the resistance of the series circuit loop at the Vault.

<b>Cable Under Test</b>	<b>Series Circuit Loop Resistance in Ohms</b>
Runway 17-35 series circuit cable	

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\_\_\_ After airfield lighting modifications, additions, and/or upgrades have been completed, conduct cable insulation resistance test (Megger test) and record Runway 9 PAPI feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

Cable Under Test	Cable Insulation Resistance	Test Voltage	Time Duration
Runway 9 PAPI Feeder Circuit Phase A conductor			
Runway 9 PAPI Feeder Circuit Phase B conductor			

\_\_\_ After airfield lighting modifications, additions, and/or upgrades have been completed, conduct cable insulation resistance test (Megger test) and record Runway 27 PAPI feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

Cable Under Test	Cable Insulation Resistance	Test Voltage	Time Duration
Runway 27 PAPI Feeder Circuit Phase A conductor			
Runway 27 PAPI Feeder Circuit Phase B conductor			

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**TESTING FORMS**

\_\_\_ After airfield lighting modifications, additions, and/or upgrades have been completed, conduct cable insulation resistance test (Megger test) and record Runway 9 REILS feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 9 REILS Feeder Circuit Phase A conductor			
Runway 9 REILS Feeder Circuit Phase B conductor			

\_\_\_ After airfield lighting modifications, additions, and/or upgrades have been completed, conduct cable insulation resistance test (Megger test) and record Runway 27 REILS feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 27 REILS Feeder Circuit Phase A conductor			
Runway 27 REILS Feeder Circuit Phase B conductor			

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**TESTING FORMS**

\_\_\_ After airfield lighting modifications, additions, and/or upgrades have been completed, conduct cable insulation resistance test (Megger test) and record Runway 17 REILS feeder circuit cable at the vault. Time duration of test should not be less than 90 seconds.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
Runway 17 REILS Feeder Circuit Phase A conductor			
Runway 17 REILS Feeder Circuit Phase B conductor			



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<b>Hanson Project</b>	23A0038D
<b>Date</b>	

## TESTING FORMS

Tests for constant current regulators shall include the following.

1. The respective personnel performing airfield lighting work, vault work, and/or tests shall be familiar with and qualified to work on 5000 Volt airfield lighting series circuits, constant current regulators, and associated airport electrical vault equipment.
2. Prior to conducting tests confirm each constant current regulator has a good and secure frame ground connection to the vault grounding electrode system. The constant current regulator frame ground shall be a minimum #6 AWG copper conductor and UL listed grounding connectors with secure and tight connections. Correct where missing. This is required for safety of personnel.
3. The respective personnel performing tests shall be familiar with the respective test equipment and the use and operation of the test equipment. The Contractor is responsible to employ the services of personnel qualified to perform the respective tests and qualified to work on 5000 Volt airfield lighting series circuits, constant current regulators, and associated airport electrical vault equipment.
4. Test each brightness step and measure and record the input current on Phase A and Phase B for the 240 VAC branch circuit to each CCR. Note: Provide a True RMS Ammeter for current measurements.
5. Test each brightness step and record the CCR output current to the series circuit lighting circuit. Each CCR should be equipped with an output current meter. In the event the output current meter is not working properly or is out of calibration use a True RMS Ammeter for output current measurements and measure the current in the output series circuit conductor.
6. Test each brightness step and record the CCR output voltage for the series circuit lighting circuit. Each CCR should be equipped with an output voltage meter. Where the CCR does not include an output voltage meter, the output voltage measurements are not required. Do not use a 0 to 600 Volt voltmeter to measure voltage across the CCR output terminals due to safety concerns and high voltages at the CCR output.

**Engineering Firm** Hanson Professional Services Inc.  
**Airport Name** RSV-Crawford County Airport  
**Project** Install LED Precision Approach Path Indicator (PAPI) System and Associated Electrical Improvements of Duct, Structures, Cabling, and Vault Work  
**IDA Project** RSV-5062  
**SBG Project** 3-17-SBGP-TBD  
**Hanson Project** 23A0038D  
**Date** \_\_\_\_\_

**TESTING FORMS**

After airfield lighting modifications, additions, and/or upgrades have been completed, each constant current regulator shall be tested with results recorded. **Note: Output voltage measurements are not required for constant current regulators that are not equipped with output voltage meters.**

\_\_ Test Runway 9-27 CCR by Manual Control and record input current, output amperage and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

\_\_ Test Runway 9-27 CCR by L-854 Radio Control (**Photocell Bypass On**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

**Engineering Firm** Hanson Professional Services Inc.  
**Airport Name** RSV-Crawford County Airport  
**Project** Install LED Precision Approach Path Indicator (PAPI) System and Associated Electrical Improvements of Duct, Structures, Cabling, and Vault Work  
**IDA Project** RSV-5062  
**SBG Project** 3-17-SBGP-TBD  
**Hanson Project** 23A0038D  
**Date** \_\_\_\_\_

**TESTING FORMS**

\_\_ Test Runway 9-27 CCR by Photocell and record input current, output amperage, and output voltage at respective preset step.

<b>STEP</b>	<b>INPUT CURRENT</b>	<b>OUTPUT CURRENT</b>	<b>OUTPUT VOLTS</b>
B10	Phase A:		
	Phase B:		

**Engineering Firm** Hanson Professional Services Inc.  
**Airport Name** RSV-Crawford County Airport  
**Project** Install LED Precision Approach Path Indicator (PAPI) System and Associated Electrical Improvements of Duct, Structures, Cabling, and Vault Work  
**IDA Project** RSV-5062  
**SBG Project** 3-17-SBGP-TBD  
**Hanson Project** 23A0038D  
**Date** \_\_\_\_\_

**TESTING FORMS**

After airfield lighting modifications, additions, and/or upgrades have been completed, each constant current regulator shall be tested with results recorded.

\_\_ Test Taxiway CCR by Manual Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

\_\_ Test Taxiway CCR by L-854 Radio Control (**Photocell Bypass On or Radio On**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

**Engineering Firm** Hanson Professional Services Inc.  
**Airport Name** RSV-Crawford County Airport  
**Project** Install LED Precision Approach Path Indicator (PAPI) System and Associated Electrical Improvements of Duct, Structures, Cabling, and Vault Work  
**IDA Project** RSV-5062  
**SBG Project** 3-17-SBGP-TBD  
**Hanson Project** 23A0038D  
**Date** \_\_\_\_\_

**TESTING FORMS**

After airfield lighting modifications, additions, and/or upgrades have been completed, each constant current regulator shall be tested with results recorded.

\_\_ Test Runway 17-35 CCR by Manual Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

\_\_ Test Runway 17-35 CCR by L-854 Radio Control (**Photocell Bypass On or Radio On**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

# APPENDIX B

RSV-Crawford County Airport  
Palestine, Illinois

Illinois Project No. RSV-5062  
SBG Project No. 3-17-SBGP-TBD  
Hanson Project No. 23A0038D

Install LED Precision Approach Path Indicator  
(PAPI) System and Associated Electrical  
Improvements of Duct, Structures, Cabling, and  
Vault Work

PAPI  
GROUND CHECK LIST

<b>Airport Identifier:</b>	<b>RSV</b>
<b>Airport Name:</b>	<b>Crawford County Airport</b>
<b>Location:</b>	<b>Crawford County Airport, 10748 North 1650<sup>th</sup> Street, Palestine, Illinois 62451</b>
<b>FAA ACIP No.:</b>	<b>3-17-SBGP-TBD</b>
<b>IDOT/IDA No.:</b>	<b>RSV-5062</b>
<b>Hanson Project No.:</b>	<b>23A0038C</b>
<b>Date:</b>	
<b>Site Conditions:</b>	

- a. Inspect PAPI to determine that it is installed correctly, at the proper height, at the correct location, level, and properly oriented.
- b. Check all fixture securing screws or bolts to ensure that they have been tightened per manufacturer recommendations. Use an anti-seize compound on bolts made of stainless steel.
- c. Check PAPI to determine that the lenses are clean and unscratched and the channels in front of the lenses are clean.
- d. Test PAPI feeder circuits for continuity and insulation resistance to ground. Observe and record megger test for PAPI feeder circuit conductors.

<b>Cable Under Test</b>	<b>Cable Insulation Resistance</b>	<b>Test Voltage</b>	<b>Time Duration</b>
<b>Phase A Conductor</b>			
<b>Phase B Conductor</b>			

- e. Check fuses and circuit breakers to determine if they are of the proper rating.
- f. Check PAPI to determine that it is properly oriented with respect to the runway longitudinal sides and the threshold. Check PAPI for proper location.
- g. Check identification number or legend plate for PAPI unit to determine that the respective identification at the installation is as assigned in the Plans.
- h. Check equipment covered by FAA specifications to determine if the manufacturers have supplied certified equipment. Also check the equipment for general conformance with requirements of the Plans, Specifications, and Special Provisions.
- i. Inspect all cables, wiring, and splices to obtain assurance that the installation is per FAA AC 150/5370-10H Standard Specifications for Construction of Airports, Item L-108, the Plans, the National Electrical Code, and local codes. Inspect and test insulation resistance of underground cables before backfilling.
- j. Check all ducts and duct markers to determine that the installation is per FAA AC 150/5370-10H Standard Specifications for Construction of Airports, Item L-110, and the Plans. Inspect underground ducts before backfill is made.
- k. Check the input voltage at the power and control circuits to determine that the voltage is within limits required for proper equipment operation. Select the proper voltage tap on equipment where taps are provided. Circuitry should also be checked per the manufacturer's requirements.
- l. Check base plates for damage during installation and refinish according to manufacturer's instructions and as acceptable to the Engineer.
- m. Check the current or voltage at the lamps to determine if the regulator current or supply voltage is within specified tolerance. If a current or voltage exceeds rated values, the lamp life will be reduced.



n. Record nameplate data for PAPI.

<b>Manufacturer:</b>	
<b>FAA Type:</b>	
<b>Part No.:</b>	
<b>ID No.:</b>	
<b>Power Requirement:</b>	

o. Test PAPI by respective control system and confirm proper operation.

p. Check the size and type of feeder conductor from the vault or power source to the PAPI.

q. Make sure PAPI has good ground. Test and record ground resistance of ground rod installation at each PAPI Unit.

<b>PAPI LIGHT HOUSING UNIT</b>	<b>Ground Resistance Measurement in Ohms</b>
<b>PAPI Light Housing Unit #1 (Closest to the Runway Pavement)</b>	
<b>PAPI Light Housing Unit #2</b>	
<b>PAPI Light Housing Unit #3</b>	
<b>PAPI Light Housing Unit #4 (Furthest from the Runway Pavement)</b>	

- r. Check to make sure equipment ground wires were run from the PAPI Power and Control Unit to each PAPI.
  
- s. Observe and record the aiming angle of each PAPI Light Housing Unit.

<b>PAPI LIGHT HOUSING UNIT</b>	<b>MEASURED AIMING ANGLE</b>
<b>PAPI Light Housing Unit #1 (Closest to the Runway Pavement)</b>	
<b>PAPI Light Housing Unit #2</b>	
<b>PAPI Light Housing Unit #3</b>	
<b>PAPI Light Housing Unit #4 (Furthest from the Runway Pavement)</b>	

- t. Observe operation of the PAPI Power and Control Unit photocell and confirm proper operation of day/night brightness levels.
  
- u. Confirm Operation and Maintenance Manuals are provided for each PAPI unit.
  
- v. Record input voltage and amperage at the PAPI under operation.

<b>DAY TIME OPERATION</b>	
<b>Input Voltage:</b>	
<b>Input Amperage:</b>	
<b>NIGHTTIME OPERATION</b>	
<b>Input Voltage:</b>	
<b>Input Amperage:</b>	
<b>RECORD VOLTAGE AT POWER SOURCE</b>	
<b>Voltage:</b>	

w. Ground Check test results submitted by:

<b>Name:</b>	
<b>Company:</b>	
<b>Date:</b>	