	<b>INSPECTION FORM</b> <b>AUTOMATIC TRANSFER SWITCH, 600V</b>		Page 1 of 3
			ID:
<b>Project</b>	Facility:	Project Name:	
	Area :	Bid Opportunity:	

<b>Transfer Switch Data</b>	Manufacturer:	Type:	Serial #:				
	Rated Voltage:	V	Current Rating:	A	Control Voltage:	V	
	Control Power Transformer:	Size:	VA	Primary Voltage (Tap Setting):	V	Primary Fuse:	A
		Adjustable Taps:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Secondary Voltage:	V	Secondary Fuse:	A

<b>Visual Inspection / Cleaning</b>	Identification Tag Installed:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Visual Signs of Overheating:	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Cleanliness (As Found):	<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Support Insulators:	<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Connections:	<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Electro/Mechanical Interlock:	<input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Ground Connection:	<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Contact Switch Condition:	<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Door Mechanical:	<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Contact Alignment:	<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Cables Supported Appropriately:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Exercise Contactors/Switch:	<input type="checkbox"/> Yes
	Unit Cleaned:	<input type="checkbox"/> Yes	Photograph Taken:	<input type="checkbox"/> Yes
	Comments:			

<b>Settings</b>	Source 1 (Normal) Dropout Voltage:	V	Transfer to Source 2 Delay:	sec.
	Source 1 (Normal) Pickup Voltage:	V	Retransfer to Source 1 Delay:	sec.
	Source 2 (Emergency) Dropout Voltage:	V	Engine Cool-Down Delay:	sec.
	Source 2 (Emergency) Pickup Voltage:	V		

<b>Contact/Pole Measurements</b>	<b>Contact/Switch Position</b>	<b>Resistance (<math>\mu\Omega</math>)</b>			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
		<b>A</b>	<b>B</b>	<b>C</b>	
	Source 1 (Normal) to Output				
	Source 2 (Emergency) to Output				
Comments:					



## INSPECTION FORM AUTOMATIC TRANSFER SWITCH, 600V

ID:

Insulation Resistance Test	Test Preparation: <table style="display: inline-table; vertical-align: top; margin-right: 20px;"> <tr> <td>Source 1 (Normal) Cable:</td> <td>Source 2 (Emerg.) Cable:</td> <td>Output Cable:</td> </tr> <tr> <td><input type="checkbox"/> Disconnected</td> <td><input type="checkbox"/> Disconnected</td> <td><input type="checkbox"/> Disconnected</td> </tr> <tr> <td><input type="checkbox"/> Connected with Source Isolated</td> <td><input type="checkbox"/> Connected with Source Isolated</td> <td><input type="checkbox"/> Connected with Source Isolated</td> </tr> </table>			Source 1 (Normal) Cable:	Source 2 (Emerg.) Cable:	Output Cable:	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Connected with Source Isolated	<input type="checkbox"/> Connected with Source Isolated	<input type="checkbox"/> Connected with Source Isolated	Note: Approval of City's Representative is required, prior to leaving cables connected during the test.		
	Source 1 (Normal) Cable:	Source 2 (Emerg.) Cable:	Output Cable:												
	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected												
	<input type="checkbox"/> Connected with Source Isolated	<input type="checkbox"/> Connected with Source Isolated	<input type="checkbox"/> Connected with Source Isolated												
	Voltage: 1000 VDC. Ground all phases not under test!														
	Test Position	Insulation Resistance (MΩ)													
		Switch Position Source 1 (Normal)			Switch Position Source 2 (Emergency)										
		A	B	C	A	B	C								
	Source 1 Line to GND														
	Source 2 Line to GND														
Output Line to GND															
Source 1 Line to Output	N/A	N/A	N/A												
Source 2 Line to Output				N/A	N/A	N/A									
Comments:															
<b>Test Summary</b> <table style="display: inline-table; vertical-align: top;"> <tr> <td><input type="checkbox"/> Test Passed</td> </tr> <tr> <td><input type="checkbox"/> Test Inconclusive - Further Investigation Required</td> </tr> <tr> <td><input type="checkbox"/> Test Failed</td> </tr> </table>							<input type="checkbox"/> Test Passed	<input type="checkbox"/> Test Inconclusive - Further Investigation Required	<input type="checkbox"/> Test Failed						
<input type="checkbox"/> Test Passed															
<input type="checkbox"/> Test Inconclusive - Further Investigation Required															
<input type="checkbox"/> Test Failed															

Functional Testing	Step	Description	Result			
	1	ATS in Source 1 (Normal) Position with Source 1 Energized. ATS indicates Source 1 available and Source 1 position status is provided.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	2	Power down (or isolate) Source 1. ATS indicates Source 1 is not available.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	3	Source 2/Generator start signal provided.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	4	Source 2/Generator starts. ATS indicates Source 2 available and transfers to Source 2 after appropriate delay. Source 2 position status is displayed..	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	5	Power up (or reconnect) Source 1. ATS indicates Source 1 is available and delay timer starts before transfer back to Source 1. ATS continues to indicate Source 2 position status.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	6	Timer expires and ATS transfers to Source 1. ATS indicates Source 1 position status.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	7	Generator Stops after cool-down timer expires.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	8	Ensure loads are isolated such that a phase loss will not damage equipment. Simulate a Source 1 phase loss condition and verify the ATS starts Source 2/Generator and transfers to Source 2.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	9	Reinstate the lost phase on Source 1 and verify that ATS transfers back to Source 1 after the appropriate delay.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	10	Manually start Source 2/Generator and perform a manual transfer to Source 2.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
	11	Perform a manual transfer back to Source 1.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail			
<b>Test Summary</b> <table style="display: inline-table; vertical-align: top;"> <tr> <td><input type="checkbox"/> Test Passed</td> </tr> <tr> <td><input type="checkbox"/> Test Inconclusive - Further Investigation Required</td> </tr> <tr> <td><input type="checkbox"/> Test Failed</td> </tr> </table>				<input type="checkbox"/> Test Passed	<input type="checkbox"/> Test Inconclusive - Further Investigation Required	<input type="checkbox"/> Test Failed
<input type="checkbox"/> Test Passed						
<input type="checkbox"/> Test Inconclusive - Further Investigation Required						
<input type="checkbox"/> Test Failed						



**INSPECTION FORM  
AUTOMATIC TRANSFER SWITCH, 600V**


Page 3 of 3

ID:

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

	<b>INSPECTION FORM</b>		Page 1 of 2
	<b>MOLDED CASE CIRCUIT BREAKER, &lt; 1000V</b>		ID:
<b>Project</b>	Facility:	Project Name:	
	Area :	Bid Opportunity:	

<b>Breaker Data</b>	Location:		Panelboard/MCC:		Cell #:	
	Manufacturer:		Type:	Serial #:		
	Rated Voltage:	V	Frame Size:	A	Trip Unit:	
	Interrupting Rating:		kA	Comments:		

<b>Visual Inspection / Cleaning</b>	Breaker Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No		Visual Signs of Overheating: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Cleanliness (As Found): <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Cables Supported Appropriately: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Connections: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Electro/Mechanical Interlock: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	
	Ground Connection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Exercise Circuit Breaker: <input type="checkbox"/> Yes	
	Door Mechanical: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Other:	
	Comments:			

<b>Breaker Settings</b>	Trip Unit Rating: A		Trip Unit Type: <input type="checkbox"/> None <input type="checkbox"/> Thermal Magnetic <input type="checkbox"/> Electronic <input type="checkbox"/> LI <input type="checkbox"/> LSI <input type="checkbox"/> LSIG				
	<b>Breaker Setting (As Left)</b>		<b>Range</b>	<b>Setpoint</b>		<b>Delay</b>	<b>I<sup>2</sup>T</b>
	Long Time	<input type="checkbox"/> Fixed <input type="checkbox"/> Adj.	-	X	A = A	sec	<input type="checkbox"/> On <input type="checkbox"/> Off
	Short Time	<input type="checkbox"/> Fixed <input type="checkbox"/> Adj.	-	X	A = A	sec	<input type="checkbox"/> On <input type="checkbox"/> Off
	Instantaneous	<input type="checkbox"/> Fixed <input type="checkbox"/> Adj.	-	X	A = A	N/A	
	Ground Fault	<input type="checkbox"/> Fixed <input type="checkbox"/> Adj.	-		A	sec	<input type="checkbox"/> On <input type="checkbox"/> Off

<b>Insulation Resistance Test</b>	<i>Perform insulation resistance measurements for breakers &gt;= 250A, or as specified.</i>									
	Temperature: °C	Source: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected (Source Isolated)				<i>Approval is required, prior to leaving cables connected during the test.</i>				
		Load: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected (Load Isolated)								
	<b>Test Voltage (VDC)</b>	<b>Insulation Resistance (MΩ)</b>								
		<b>Phase To GND (Breaker Closed)</b>			<b>Phase To Phase (Breaker Closed)</b>			<b>Line to Load (Breaker Open)</b>		
		<b>A</b>	<b>B</b>	<b>C</b>	<b>A - B</b>	<b>B - C</b>	<b>A - C</b>	<b>A</b>	<b>B</b>	<b>C</b>
<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive. Further Investigation Required. <input type="checkbox"/> Test Failed										
Comments:										

<b>Contact Resistance</b>	<i>Perform contact measurements for breakers &gt;= 250A, or as specified.</i>					
	<b>Resistance (μΩ)</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed	
Comments:						



**INSPECTION FORM**  
**MOLDED CASE CIRCUIT BREAKER, < 1000V**


Page 2 of 2

ID:


<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

		<b>INSPECTION FORM CAPACITOR BANK, 600V</b>			Page 1 of 1 ID:	
<b>Project</b>	Facility:		Project Name:			
	Area :		Bid Opportunity:			
<b>Capacitor Bank Data</b>	Location:		Switchgear/MCC:		Cell #:	
	Manufacturer:		Model:	Serial #:		
	Size:	VAR	Rated Voltage:	V	Capacitance:	µF
	Configuration: <input type="checkbox"/> Delta <input type="checkbox"/> Wye-Ungrounded <input type="checkbox"/> Wye-Grounded					
<b>Visual Inspection/ Cleaning</b>	Capacitor Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cables Supported Appropriately: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Cleanliness (As Found): <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Anchorage, alignment: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Connections: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Required Clearances: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Ground Connection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Unit Cleaned: <input type="checkbox"/> Yes	Photograph Taken: <input type="checkbox"/> Yes		
<b>Insulation Resistance Test</b>	Test Preparation:		Source Cables:		Note: Approval of City's Representative is required, prior to leaving cables connected during the test.	
			<input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Source Isolated			
	<b>Test Voltage</b>	<b>Insulation Resistance (MΩ) Phase To GND</b>			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed	
			<b>A (A-B)</b>	<b>B (B-C)</b>		
	1000 V					
Comments:						
<b>Capacitance</b>	<b>Capacitance (µF)</b>			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed		
	<b>A (A-B)</b>	<b>B (B-C)</b>	<b>C (C-A)</b>			
	Comments:					
<b>Discharge Resistance</b>	<b>Resistance (Ω)</b>			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed		
	<b>A (A-B)</b>	<b>B (B-C)</b>	<b>C (C-A)</b>			
	Comments:					
<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No		Comments:			
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No					
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No					
	<b>Company</b>	<b>Name</b>	<b>Signature</b>	<b>Date (yyyy/mm/dd)</b>		
<b>Performed By</b>						
<b>Checked By</b>						

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

	<b>INSPECTION FORM POWER CABLE, 4160V</b>		Page 1 of 3
			Cable ID:
<b>Project</b>	Facility:	Project Name:	
	Area :	Bid Opportunity:	

<b>Cable Data</b>	Source:		Dest. / Load:	
	Manufacturer:		Type:	Conductor: <input type="checkbox"/> Copper <input type="checkbox"/> Aluminum
	No. of Conductors:	Size: <input type="checkbox"/> AWG <input type="checkbox"/> MCM	Length: m	<input type="checkbox"/> Measured <input type="checkbox"/> Previous Data <input type="checkbox"/> Jacket Markings <input type="checkbox"/> TDR
	Rated Voltage: V	Operating Voltage: V	Date Installed:	
	Installation: <input type="checkbox"/> Cable Tray <input type="checkbox"/> EMT <input type="checkbox"/> Alum. Conduit <input type="checkbox"/> Direct Buried <input type="checkbox"/> Strapped <input type="checkbox"/> Steel Conduit <input type="checkbox"/> PVC Conduit <input type="checkbox"/> Underground Duct		Other:	

<b>Visual Inspection</b>	Physical Damage on Exposed Ends: <input type="checkbox"/> Yes <input type="checkbox"/> No	Cable Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Visual Signs of Overheating/Corona: <input type="checkbox"/> Yes <input type="checkbox"/> No	Cable Supported Appropriately: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Damage to Splices/Terminations: <input type="checkbox"/> Yes <input type="checkbox"/> No	Shield Grounded: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Bend Radius Acceptable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:

<b>Insulation Resistance Test</b>	Test Preparation:	Source: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Source Isolated	Cable Dest. / Load: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Load Isolated	Note: Approval of City's Representative is required, prior to leaving cables connected during the test.	
	Cable Temperature: °C    Temperature Correction Factor for 20°C:			Ground all conductors not under test for each reading.	
	<b>Test Voltage</b>	<b>Insulation Resistance (MΩ)</b>			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
			<b>A-GND</b>	<b>B-GND</b>	
	2500V	Reading			
	Corrected to 20°C				
Comments:					



## INSPECTION FORM 4160V POWER CABLE

Cable ID: \_\_\_\_\_

High Potential Very Low Frequency (MLF) Test	Test Preparation: <table style="display: inline-table; vertical-align: top; margin-left: 20px;"> <tr> <td style="vertical-align: top;">           Source:  <input type="checkbox"/> Disconnected  <input type="checkbox"/> Connected with Source Isolated         </td> <td style="vertical-align: top;">           Cable Dest. / Load:  <input type="checkbox"/> Disconnected  <input type="checkbox"/> Connected with Load Isolated         </td> </tr> </table>				Source: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Source Isolated	Cable Dest. / Load: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Load Isolated	Note: Approval of City's Representative is required, prior to leaving cables connected during the test.	
	Source: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Source Isolated	Cable Dest. / Load: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Load Isolated						
	<b>Frequency:</b> 0.1 Hz <b>Waveform:</b> sinusoidal		Ground all conductors not under test for each reading.					
	Test Voltage (RMS)	Elapsed Time (min)	Peak Leakage Current (uA)			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed		
			A-GND	B-GND	C-GND			
	7000V	0						
	7000V	1						
	7000V	2						
	7000V	3						
	7000V	4						
	7000V	5						
	7000V	6						
	7000V	7						
	7000V	8						
	7000V	9						
7000V	10							
7000V	11							
7000V	12							
7000V	13							
7000V	14							
7000V	15							
Comments: _____								





## INSPECTION FORM 4160V POWER CABLE

Page 3 of 3

Cable ID: \_\_\_\_\_


<b>Dissipation Factor (Tangent Delta) Test</b>	<b>Frequency:</b> 0.1 Hz <b>Waveform:</b> sinusoidal										
	<b>Test Voltage (RMS)</b>	<b>A</b>			<b>B</b>			<b>C</b>			
		<b>Tan Delta</b>	<b>Capacitance (nF)</b>	<b>Current (<math>\mu</math>A)</b>	<b>Tan Delta</b>	<b>Capacitance (nF)</b>	<b>Current (<math>\mu</math>A)</b>	<b>Tan Delta</b>	<b>Capacitance (nF)</b>	<b>Current (<math>\mu</math>A)</b>	
	2400V										
	4800V										
	Difference		/	/		/	/		/	/	
<b>Test Summary</b>		Comments:									
<input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed											

<b>Connection Resistance</b>	<b>Termination</b>	<b>Connection Resistance (<math>\mu\Omega</math>) - As Left</b>			<b>Torque Check</b>
		<b>A</b>	<b>B</b>	<b>C</b>	
	Source				<input type="checkbox"/> OK
	Dest. / Load				<input type="checkbox"/> OK
Comments:					

<b>Final Analysis</b>	Cable Returned to Service:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required:	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	<b>Company</b>	<b>Name</b>	<b>Signature</b>	<b>Date (yyyy/mm/dd)</b>
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

	<b>INSPECTION FORM POWER CABLE &lt; 1000V</b>		Page 1 of 1
			Cable ID:
<b>Project</b>	Facility:	Project Name:	
	Area :	Bid Opportunity:	

<b>Cable Data</b>	Source:		Dest. / Load:	
	Manufacturer:		Type:	Conductor: <input type="checkbox"/> Copper <input type="checkbox"/> Aluminum
	No. of Conductors:	Size: <input type="checkbox"/> AWG <input type="checkbox"/> MCM	Length: m	<input type="checkbox"/> Measured <input type="checkbox"/> Previous Data <input type="checkbox"/> Jacket Markings <input type="checkbox"/> TDR
	Rated Voltage: V	Operating Voltage: V	Date Installed:	
	Installation: <input type="checkbox"/> Cable Tray <input type="checkbox"/> EMT <input type="checkbox"/> Alum. Conduit <input type="checkbox"/> Direct Buried	<input type="checkbox"/> Strapped <input type="checkbox"/> Steel Conduit <input type="checkbox"/> PVC Conduit <input type="checkbox"/> Underground Duct	Other:	


<b>Visual Inspection</b>	Physical Damage on Exposed Ends: <input type="checkbox"/> Yes <input type="checkbox"/> No	Cable Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Visual Signs of Overheating: <input type="checkbox"/> Yes <input type="checkbox"/> No	Cable Supported Appropriately: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Bend Radius Acceptable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:

<b>Insulation Resistance Test</b>	Test Preparation: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Source Isolated	Source: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Load Isolated	Cable Dest. / Load: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Load Isolated	Note: Approval of City's Representative is required, prior to leaving cables connected during the test.		
	Cable Temperature: °C		Temperature Correction Factor for 20°C:	Ground all conductors not under test for each reading.		
	<b>Test Voltage</b>	<b>Insulation Resistance (MΩ)</b>			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed	
		<b>A-GND</b>	<b>B-GND</b>	<b>C-GND</b>		<b>N-GND</b>
	V	Reading				
	Corrected to 20°C					
Utilize 1000VDC Test Voltage for 600V rated cables, 500VDC for cables rated <= 300V.						
Comments:						

<b>Connection Resistance</b>	Note: Torque check required for all cables. Connection Resistance Test required for cables 4/0 AWG or larger.					
	<b>Termination</b>	<b>Connection Resistance (μΩ) - As Left</b>				<b>Torque Check</b>
		<b>A</b>	<b>B</b>	<b>C</b>	<b>N</b>	
	Source					<input type="checkbox"/> OK
	Dest. / Load					<input type="checkbox"/> OK
Comments:						

<b>Final Analysis</b>	Cable Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	<b>Company</b>	<b>Name</b>	<b>Signature</b>	<b>Date (yyyy/mm/dd)</b>
<b>Performed By</b>				
<b>Checked By</b>				

	<b>INSPECTION FORM CONTACTOR PANEL, 600V</b>		Page 1 of 3
			ID:
<b>Project</b>	Facility:	Project Name:	
	Area :	Bid Opportunity:	

<b>Contactor Panel Data</b>	Load:				
	Manufacturer:		Type:	Serial #:	
	Rated Voltage: V		Current Rating: A	Control Voltage: V	
	<b>Input Circuit Protection:</b>	<input type="checkbox"/> Fused Disc.	Rating: A	Fuse Size: A	Fuse Mfg. Model:
		<input type="checkbox"/> Breaker	Rating: A	Inst. Setting: A	Breaker Mfg. Model:
	<b>Output Circuit Protection:</b>	<input type="checkbox"/> Fuse(s)	Fuse Size: A		Fuse Mfg. Model:
		<input type="checkbox"/> Breaker(s)	Rating: A	Inst. Setting: A	Breaker Mfg. Model:
	<b>Control Power Transformer:</b>	Size: VA	Sec. Voltage: V	Primary Fuse: A Secondary Fuse: A	

<b>Load Data</b>	ID:	Size: kW	Voltage: V
	Number of Steps:	Amps per Step: A	Other:

<b>Visual Inspection / Cleaning</b>	Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No	Visual Signs of Overheating: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Cleanliness (As Found): <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Support Insulators: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Connections: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Electro/Mechanical Interlock: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Ground Connection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Contactor Condition: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Door Mechanical: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Contact Alignment: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Cables Supported Appropriately: <input type="checkbox"/> Yes <input type="checkbox"/> No	Exercise Circuit Breaker(s)/Disconnect: <input type="checkbox"/> Yes
	Unit Cleaned: <input type="checkbox"/> Yes	Photograph Taken: <input type="checkbox"/> Yes
	Comments:	



## INSPECTION FORM CONTACTOR PANEL, 600V

ID:

Contact/Pole Measurements	Test	Resistance ( $\mu\Omega$ )			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
		A	B	C	
	Main Disconnect/Breaker				
	Main Fuse				
	Branch Fuse/Breaker #1				
	Branch Fuse/Breaker #2				
	Branch Fuse/Breaker #3				
	Branch Fuse/Breaker #4				
	Branch Fuse/Breaker #5				
	Branch Fuse/Breaker #6				
Comments:					

Insulation Resistance Test	Test Preparation:    Source: <input type="checkbox"/> Isolated    Cable Dest. / Load: <input type="checkbox"/> Disconnected    Note: Approval of City's Representative is required, prior to leaving cables connected during the test. Contactor: <input type="checkbox"/> Open <input type="checkbox"/> Connected with Load Isolated									
	Voltage: 1000 VDC. Ground all phases not under test!									
	Test	Insulation Resistance ( $M\Omega$ )								
		Contactor Line to GND			Contactor Load to GND			Contactor Line to Load		
		A	B	C	A	B	C	A	B	C
	Contactor #1									
	Contactor #2									
	Contactor #3									
Contactor #4										
Contactor #5										
Contactor #6										
Comments:										
<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive - Further Investigation Required <input type="checkbox"/> Test Failed										



**INSPECTION FORM  
CONTACTOR PANEL, 600V**

Page 3 of 3

ID:

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	<b>Company</b>	<b>Name</b>	<b>Signature</b>	<b>Date (yyyy/mm/dd)</b>
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.



# INSPECTION FORM DIGITAL METER

ID:

<b>Project</b>	Facility:	Project Name:
	Area :	Bid Opportunity:

<b>Meter Data</b>	Location:	Cell #:
	Manufacturer:	Model:

<b>Visual Inspection / Cleaning</b>	Cover Gasket: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Cover Glass: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	General Condition: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	
	Cleanliness (as found) <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Unit Cleaned: <input type="checkbox"/> Yes
	Connections (as found) <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Connections Torqued: <input type="checkbox"/> Yes

<b>Test Meter</b>	Manufacturer:	Model:
	Calibration Date:                      Meter calibration must be within one year, unless otherwise specified.	

		Nominal Test Value (V)	Phase	Calibrated Meter Measurement (V)	Meter Under Test (V)	Difference (V)	Error (%)	Acceptable (See Specs)	
		<b>Accuracy</b>	<b>Voltage</b>	0					
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Current</b>	0		A						<input type="checkbox"/> Yes <input type="checkbox"/> No
				B					<input type="checkbox"/> Yes <input type="checkbox"/> No
				C					<input type="checkbox"/> Yes <input type="checkbox"/> No
			A						<input type="checkbox"/> Yes <input type="checkbox"/> No
				B					<input type="checkbox"/> Yes <input type="checkbox"/> No
				C					<input type="checkbox"/> Yes <input type="checkbox"/> No
Measurements Applicable To: <input type="checkbox"/> As-Found <input type="checkbox"/> As-Left                      May check both boxes if applicable.									
Unit Calibration Adjusted: <input type="checkbox"/> Yes <input type="checkbox"/> No      If calibration was adjusted, complete two forms, one for as-found, the other for as-left after calibration.									



# INSPECTION FORM DIGITAL METER

Page 2 of 2

ID:

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.



**INSPECTION FORM  
GROUNDING/BONDING CONNECTION RESISTANCE**

Area:

<b>Project</b>	Facility:	Project Name:
	Area :	Bid Opportunity:

Resistance Checks (Ductor Test)	Point A	Point B	Resistance (mΩ)	Acceptable
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
	Comments:			





**INSPECTION FORM  
GROUNDING/BONDING CONNECTION RESISTANCE**

ID: \_\_\_\_\_

Resistance Checks (Ductor Test)	Point A	Point B	Resistance (mΩ)	Acceptable
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inconclusive
	Comments:			

<b>Final Analysis</b>	Monitoring / Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

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# INSPECTION FORM INTELLIGENT OVERLOAD

Page 1 of 2

ID:

<b>Project</b>	Facility:	Project Name:
	Area :	Bid Opportunity:

<b>O/L Data</b>	Location:	Cell #:
	Manufacturer:	Model:

<b>Visual Inspection / Cleaning</b>	General Condition: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	
	Cleanliness (as found) <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Unit Cleaned: <input type="checkbox"/> Yes
	Connections (as found) <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Connections Torqued: <input type="checkbox"/> Yes

<b>Communication Settings</b>	Static IP Address:	Subnet Mask
	Gateway:	Protocol:
	MAC Address:	

<b>Test Meter</b>	Manufacturer:	Model:
	Calibration Date:	Meter calibration must be within one year, unless otherwise specified.

<b>CTs</b>	Type: <input type="checkbox"/> Internal to O/L <input type="checkbox"/> External	External CT Ratio:
	External Ground CT: <input type="checkbox"/> Yes <input type="checkbox"/> No	Ground CT Ratio:



# INSPECTION FORM INTELLIGENT OVERLOAD


ID:

Verify accuracy of Intelligent O/L Measurements with the use of software via the communication network.									
Accuracy	Current	Nominal Test Value (A)	Phase	Calibrated Meter Measurement (A)	Intelligent O/L Measurement (A)	Difference (A)	Error (%)	Acceptable (See Specs)	
		0	A						<input type="checkbox"/> Yes <input type="checkbox"/> No
			B						<input type="checkbox"/> Yes <input type="checkbox"/> No
			C						<input type="checkbox"/> Yes <input type="checkbox"/> No
			A						<input type="checkbox"/> Yes <input type="checkbox"/> No
			B						<input type="checkbox"/> Yes <input type="checkbox"/> No
	C							<input type="checkbox"/> Yes <input type="checkbox"/> No	
	Measurements Applicable To: <input type="checkbox"/> As-Found <input type="checkbox"/> As-Left <span style="float: right;">May check both boxes if applicable.</span>								
	Unit Calibration Adjusted: <input type="checkbox"/> Yes <input type="checkbox"/> No <span style="float: right;">If calibration was adjusted, complete two forms, one for as-found, the other for as-left after calibration.</span>								

Final Analysis	Returned to Service:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required:	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
Performed By				
Checked By				

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	<b>INSPECTION FORM MCC, 600V</b>			Page 1 of 6	
					ID:
<b>Project</b>	Facility:		Project Name:		
	Area :		Bid Opportunity:		

<b>MCC Data</b>	Location:			# of Cells:	
	Manufacturer:		Model:		Serial #:
	Rated Voltage: V	Main Bus Rating: A		Main Bus Neutral Rating: A	
	Bus Conductor: <input type="checkbox"/> Copper <input type="checkbox"/> Aluminum		Current Withstand Rating: A		

<b>Visual Inspection / Cleaning</b>	Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No		Visual Signs of Overheating: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Visual Signs of Moisture: <input type="checkbox"/> Yes <input type="checkbox"/> No		Visual Signs of Corona: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Fuse/Breaker Sizes Match Drawings: <input type="checkbox"/> Yes <input type="checkbox"/> No		PT and CT ratios match drawings: <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Elevation Drawings Correct: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cables Supported Appropriately: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Cleanliness (As Found): <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Insulators Condition: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Connections: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Electro/Mechanical Interlock System: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Ground Connection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Vents/Filters: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Doors Mechanical: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Exercise Active Components: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Cell Fit and Alignment: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor					
	Required Clearances are Met: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor					
	Indicating mechanisms: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Unit Cleaned: <input type="checkbox"/> Yes	Photograph Taken: <input type="checkbox"/> Yes		
	Comments:					

<b>Incoming Power</b>	<b>Type:</b>	<b>Inspection</b>			
	<input type="checkbox"/> Main Breaker	Complete appropriate breaker inspection form.			
	<input type="checkbox"/> Disconnect	Complete appropriate disconnect inspection form.			
	<input type="checkbox"/> Main Lugs	Visual Inspection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
		Connections Torqued: <input type="checkbox"/> Yes			
Connection Resistance ( $\mu\Omega$ ) As Left		<b>A</b>	<b>B</b>	<b>C</b>	<b>N</b>



## INSPECTION FORM MCC, 600V

ID: \_\_\_\_\_

<b>Insulation Resistance Test (Buswork)</b>	Test Preparation:	Source: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Source Isolated	Cable Dest. / Load: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Load Isolated	Note: Approval of City's Representative is required, prior to leaving cables connected during the test.	
	Temperature: _____ °C				
	<b>Test Voltage (dc)</b>	<b>Insulation Resistance (MΩ) Phase To Phase</b>			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
	1000 V	A - B	B - C	C - A	
	<b>Test Voltage</b>	<b>Insulation Resistance (MΩ) Phase To GND</b>			
	1000 V	A - GND	B - GND	C - GND	
Comments:					

<b>Ground Resistance Checks (Ductor Test)</b>	<b>Point A</b>	<b>Point B</b>	<b>Resistance (μΩ)</b>	<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
	MCC GND Bus	Facility Ground Electrode		
	MCC GND Bus	MCC Enclosure		
	MCC GND Bus	System Neutral		
Comments:				

<b>Feeder Breakers</b>	Visual Inspect Requirements:	G=Good, A=Acceptable, P=Poor Comments are required for all items identified in Poor condition.
		<ol style="list-style-type: none"> <li>1. Confirm identification tag / lamacoid is installed.</li> <li>2. Look for visual signs of overheating.</li> <li>3. Inspect and torque connections.</li> <li>4. Inspect and test any electro/mechanical interlocks.</li> <li>5. Confirm disconnect operation.</li> <li>6. Check door mechanical condition.</li> <li>7. Exercise circuit breaker.</li> <li>8. Confirm cables are supported and routed appropriately.</li> <li>9. Visually assess the general condition of the installation.</li> </ol>
	Note:	Complete an appropriate Breaker Inspection Form for all breakers with separate adjustable Long and Short trip settings, Ground trip settings, or > 250A frame size.
Continued on next page		



# INSPECTION FORM MCC, 600V

ID:

Continued from previous page											
Feeder Breakers	ID	Loc./ Cell	Frame Rating (A)	Trip Rating (A)	Manuf.	Model	Trip Unit Type	Inst Setting	Visual Inspection	Cleaned	Comments
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
									<input type="checkbox"/>		
General Comments:											



## INSPECTION FORM MCC, 600V

ID:

<b>Motor Starters / Contactors</b>	Overcurrent Protection Type:	B=Breaker (Thermal Magnetic), M=breaker(Motor Circuit Protector), F=Fuse
	Overload Protection Type:	T=Thermal, SS=Solid State
	Visual Inspect Requirements:	G=Good, A=Acceptable, P=Poor Comments are required for all items identified in Poor condition.
		<ol style="list-style-type: none"> <li>1. Confirm identification tag / lamacoid is installed.</li> <li>2. Look for visual signs of overheating.</li> <li>3. Inspect and torque connections.</li> <li>4. Inspect and test any electro/mechanical interlocks.</li> <li>5. Confirm disconnect operation.</li> <li>6. Check door mechanical condition.</li> <li>7. Exercise circuit breaker.</li> <li>8. Confirm cables are supported and routed appropriately.</li> <li>9. Visually assess the general condition of the installation.</li> </ol>
Note:		Complete a Motor Starter Inspection Form for all Motor Starters Size 4 or larger, with VFDs, or with Soft Starters.

<b>Motor Starters / Contactors</b>	ID	Loc./ Cell	Overcurrent Protection			Contactor	Overload		Visual Insp.	Cleaned	Comments
			Type	Rating (A)	Manuf.	Model	Size / Rating	Type			
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
General Comments:											







**INSPECTION FORM  
MCC, 600V**

Page 6 of 6

ID:

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.



## INSPECTION FORM MOTOR STARTER, FVNR, 600V

Page 1 of 2

ID:

<b>Project</b>	Facility:	Project Name:
	Area :	Bid Opportunity:

<b>Starter Data</b>	Load:		Starter Location:			Cell #:		
	Manufacturer:		Type:		Serial #:			
	Size:		Rated Voltage: V		Current Rating: A		Control Voltage: V	
	<b>Circuit Protection:</b>	<input type="checkbox"/> Fused Disc.	Rating: A		Fuse Size: A		Fuse Mfg. Model:	
		<input type="checkbox"/> Breaker <input type="checkbox"/> MCP	Rating: A		Inst. Setting: A		Manufacturer: Model:	
	<b>Overload Protection:</b>	<input type="checkbox"/> Thermal <input type="checkbox"/> Electronic <input type="checkbox"/> Intelligent		Class: <input type="checkbox"/> 10 <input type="checkbox"/> 20 <input type="checkbox"/> 30 <input type="checkbox"/> Unknown		Setting / Rating: A		Manufacturer: Model:
		<b>Control Power Transformer:</b>		Size: VA		Sec. Voltage: V		Primary Fuse: A Secondary Fuse: A
	<b>Current Transformers:</b>	Phases: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C		<input type="checkbox"/> None		Ratio:		Ground Fault CT: <input type="checkbox"/> Present <input type="checkbox"/> Not Present Ratio:

<b>Motor Data</b>	ID:		Size: kW / HP		Voltage: V	
	Full Load Amps: A		Service Factor:		Other:	

<b>Visual Inspection / Cleaning</b>	Starter Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No		Visual Signs of Overheating: <input type="checkbox"/> Yes <input type="checkbox"/> No				
	Cleanliness (As Found): <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Support Insulators: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				
	Connections <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Electro/Mechanical Interlock: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				
	Ground Connection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Contactor Condition: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				
	Door Mechanical <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Contact Alignment: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				
	Verify O/L element is correctly sized for the load: <input type="checkbox"/> Yes <input type="checkbox"/> No		Exercise Circuit Breaker/MCP/Disconnect <input type="checkbox"/> Yes				
	Cables Supported Appropriately: <input type="checkbox"/> Yes <input type="checkbox"/> No		Unit Cleaned: <input type="checkbox"/> Yes		Photograph Taken: <input type="checkbox"/> Yes		
	Comments:						

<b>Contact/Pole Measurements</b>	Test	A	B	C	<b>Test Summary</b>	
	Contact Resistance ( $\mu\Omega$ )					<input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive <input type="checkbox"/> Test Failed Further Investigation Required.
	Disconnect / Breaker / MCP Resistance ( $\mu\Omega$ )					
	Fuse Resistance ( $\mu\Omega$ )					
Comments:						



**INSPECTION FORM  
MOTOR STARTER, FVNR, 600V**

ID:

<b>Insulation Resistance Test</b>	Test Preparation: Source: <input type="checkbox"/> Isolated    Cable Dest. / Load: <input type="checkbox"/> Disconnected    Note: Approval of City's Representative is required, prior to leaving cables connected during the test. Contactor: <input type="checkbox"/> Open <input type="checkbox"/> Connected with Load Isolated					
	<b>Test</b>	<b>Voltage</b>	<b>Insulation Resistance (MΩ)</b>			Ground all phases not under test!
			<b>A</b>	<b>B</b>	<b>C</b>	
	Contactor Line To GND	1000 VDC				<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
	Contactor Load To GND	1000 VDC				
Contactor Line to Load	1000 VDC					
Comments:						

<b>Final Analysis</b>	Returned to Service:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required:	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.



## INSPECTION FORM MULTI-STEP CAPACITOR BANK, 600V

ID:

<b>Project</b>	Facility:	Project Name:
	Area :	Bid Opportunity:

<b>Capacitor Bank Data</b>	Location:		Switchgear/MCC:		Cell #:	
	Manufacturer:			Model:	Serial #:	
	Total Size:	VAR	Smallest Step Size:	VAR	Rated Voltage:	
	# of Steps:	Stage Ratios:			Interrupting Rating:	
	Configuration: <input type="checkbox"/> Delta <input type="checkbox"/> Wye-Ungrounded <input type="checkbox"/> Wye-Grounded					

<b>Visual Inspection / Cleaning</b>	Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No		Visual Signs of Overheating: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Cleanliness (As Found): <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Support Insulators: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	
	Connections: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Electro/Mechanical Interlock: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	
	Ground Connection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Contactor Condition: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	
	Door Mechanical: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Contact Alignment: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	
	Cables Supported Appropriately: <input type="checkbox"/> Yes <input type="checkbox"/> No		Exercise Circuit Breaker(s)/Disconnect: <input type="checkbox"/> Yes	
	Unit Cleaned: <input type="checkbox"/> Yes		Photograph Taken: <input type="checkbox"/> Yes	
	Comments:			

<b>Insulation Resistance Test</b>	Test Preparation:                    Source Cables: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Source Isolated			Note: Approval of City's Representative is required, prior to leaving cables connected during the test.		
	<b>Insulation Resistance (MΩ) 1000V Phase To GND</b>			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed		
		<b>A (A-B)</b>	<b>B (B-C)</b>			<b>C (C-A)</b>
	Incoming					
	Step 1					
	Step 2					
	Step 3					
	Step 4					
	Step 5					
	Step 6					
Step 7						
Step 8						
Comments:						



**INSPECTION FORM  
MULTI-STEP CAPACITOR BANK, 600V**

ID:

Step #	Capacitance ( $\mu$ F)			Test Summary
	A (A-B)	B (B-C)	C (C-A)	
1				<input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
2				
3				
4				
5				
6				
7				
8				
Comments:				

Step #	Resistance ( $\Omega$ )			Test Summary
	A (A-B)	B (B-C)	C (C-A)	
1				<input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
2				
3				
4				
5				
6				
7				
8				
Comments:				



**INSPECTION FORM  
MULTI-STEP CAPACITOR BANK, 600V**

ID:

Contactor Pole Measurements	Contactor	Resistance ( $\mu\Omega$ )			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
		A	B	C	
	Incoming				
	Step 1				
	Step 2				
	Step 3				
	Step 4				
	Step 5				
	Step 6				
	Step 7				
Step 8					
Comments:					

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.





**INSPECTION FORM**  
**NON-FUSIBLE DISCONNECT SWITCH, 600V**

Page 2 of 2


ID

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

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	<b>INSPECTION FORM PANELBOARD, LOW VOLTAGE</b>		Page 1 of 2
			ID:
<b>Project</b>	Facility:	Project Name:	
	Area :	Bid Opportunity:	

<b>Panelboard Data</b>	Location:		Fed From:		No. of Circuits:	
	Manufacturer:			Model:	Serial No:	
	Rated Voltage:	V	Current Rating:	A	Withstand Rating:	A
	<input type="checkbox"/> Single Phase		<input type="checkbox"/> 3 Phase, 3 Wire	<input type="checkbox"/> 3 Phase, 4 Wire	Neutral Bonded to Ground	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Main Lugs					
	<input type="checkbox"/> Main Breaker:		Rating:	A	Manufacturer:	Model: Inst. Setting:
	<i>Complete separate inspection form (F-BKR-MC-LV) for main breaker if &gt;= 250A, or has long, short, or ground fault settings.</i>					

<b>Visual Inspection / Cleaning</b>	Identification Tag Installed:		<input type="checkbox"/> Yes <input type="checkbox"/> No	Visual Signs of Overheating:		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Visual signs of Moisture:		<input type="checkbox"/> Yes <input type="checkbox"/> No	Visual Signs of Corona:		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Fuse/Breaker Sizes Match Drawings:		<input type="checkbox"/> Yes <input type="checkbox"/> No	Cables Supported Appropriately:		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Cleanliness (As Found):		<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Connections:		<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Door Mechanical:		<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Ground Connection:		<input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Exercise All Circuit Breakers:		<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:		

<b>Insulation Resistance Test</b>	Test Preparation:		Source: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Source Isolated	Note: Approval of City's Representative is required, prior to leaving cables connected during the test.				Equipment Temperature: °C		
							Temperature Correction Factor to 20°C:			
	<b>Test Voltage</b>	<b>Insulation Resistance (MΩ) Ground all Phases not under test!</b>								<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
		<b>A-GND</b>		<b>B-GND</b>		<b>C-GND</b>		<b>N-GND</b>		
	RDG	20°C	RDG	20°C	RDG	20°C	RDG	20°C		
Test Voltages:		120-300V → 500 VDC Test Voltage				301-600V → 1000 VDC Test Voltage				
Comments:										

<b>Load/Feeder Breakers</b>	<b>Breakers &lt; 100A and Without Inst. Setting</b>					
	<i>List by model of breaker. Multiple breakers of varying ampacity may be listed per line.</i>					
	<b>Type</b>	<b>Manufacturer</b>	<b>Model Series</b>	<b>Interrupting Rating (kA)</b>	<b>Positions/Circuits</b>	<b>Notes</b>
	A					
	B					
	C					
	D					



## INSPECTION FORM PANELBOARD, LOW VOLTAGE

ID:

Breakers >= 100A or with Inst. Setting									
<i>List each breaker individually. Complete separate inspection form (F-BKR-MC-LV) for breaker if &gt;= 250A, or has long, short, or ground fault settings.</i>									
Load/Feeder Breakers	ID	Pos.	Manufacturer	Model	Trip Rating (A)	Int. Rating (kA)	Inst. Setting	Separate Form	Notes
								<input type="checkbox"/>	
								<input type="checkbox"/>	
								<input type="checkbox"/>	
								<input type="checkbox"/>	
								<input type="checkbox"/>	
								<input type="checkbox"/>	
								<input type="checkbox"/>	

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

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## INSPECTION FORM VOLTAGE MONITOR, SSAC-WVM

ID:

<b>Project</b>	Facility:	Project Name:
	Area :	Bid Opportunity:

<b>Relay Data</b>	Location:	Cell #:
	Manufacturer:	Model:
	Type:	Serial No.:
	Comments:	

<b>Visual Inspection</b>		<b>A</b>	<b>B</b>	<b>C</b>		<b>A</b>	<b>B</b>	<b>C</b>	
	Moisture/Rust:				Relay Cleaned:				
	Over-heating:				Screws Tightened:				
	Cover/Case:								
	Legend: A-Acceptable C-Corrected N-Needs Repair NA-Not Applicable								
	Comments:								

<b>Relay Settings</b>	<b>Parameter</b>	<b>Setting (As Found)</b>	<b>Setting (As Left)</b>
	Line Voltage		
	Unbalance		
	Trip Delay		
	Restart Delay		
	Mode Switch		

<b>Basic Voltage Tests</b>	<b>Desired Phase Voltage</b>			<b>Actual Voltage</b>			<b>Relay State</b>	<b>Time to Change</b>	<b>OK</b>
	<b>A</b>	<b>B</b>	<b>C</b>	<b>A</b>	<b>B</b>	<b>C</b>			
	600	600	600						
	0	600	600						
	600	600	600						
	600	0	600						
	600	600	600						
	600	600	0						
	600	600	600						
	Comments:								



**INSPECTION FORM  
VOLTAGE MONITOR, SSAC-WVM**


Page 2 of 2

ID:

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

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	<b>INSPECTION FORM SWITCHBOARD, 600V</b>			Page 1 of 4	
					ID:
<b>Project</b>	Facility:		Project Name:		
	Area :		Bid Opportunity:		

<b>SWB Data</b>	Location:			# of Cells:	
	Manufacturer:		Model:		Serial #:
	Rated Voltage: V	Main Bus Rating: A		Main Bus Neutral Rating: A	
	Bus Conductor: <input type="checkbox"/> Copper <input type="checkbox"/> Aluminum		Current Withstand Rating: A		

<b>Visual Inspection / Cleaning</b>	Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No		Visual Signs of Overheating: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Visual Signs of Moisture: <input type="checkbox"/> Yes <input type="checkbox"/> No		Visual Signs of Corona: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Fuse/Breaker Sizes Match Drawings: <input type="checkbox"/> Yes <input type="checkbox"/> No		PT and CT ratios match drawings: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Elevation Drawings Correct: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cables Supported Appropriately: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Cleanliness (As Found): <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Insulators Condition: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Connections: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Electro/Mechanical Interlock System: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Ground Connection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Vents/Filters: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Doors Mechanical: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Exercise Active Components: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Cell Fit and Alignment: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor					
	Required Clearances are Met: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor					
	Indicating mechanisms: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor		Unit Cleaned: <input type="checkbox"/> Yes	Photograph Taken: <input type="checkbox"/> Yes		
	Comments:					

<b>Incoming Power</b>	<b>Type:</b>	<b>Inspection</b>				
	<input type="checkbox"/> Main Breaker	Complete appropriate breaker inspection form.				
	<input type="checkbox"/> Disconnect	Complete appropriate disconnect inspection form.				
	<input type="checkbox"/> Main Lugs	Visual Inspection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				
		Connections Torqued: <input type="checkbox"/> Yes				
Connection Resistance ( $\mu\Omega$ ) As Left		<b>A</b>	<b>B</b>	<b>C</b>	<b>N</b>	



## INSPECTION FORM SWITCHBOARD, 600V

ID: \_\_\_\_\_

<b>Insulation Resistance Test (Buswork)</b>	Test Preparation:	Source: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Source Isolated	Cable Dest. / Load: <input type="checkbox"/> Disconnected <input type="checkbox"/> Connected with Load Isolated	Note: Approval of City's Representative is required, prior to leaving cables connected during the test.	
	Temperature: _____ °C				
	<b>Test Voltage (dc)</b>	<b>Insulation Resistance (MΩ) Phase To Phase</b>			<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
	1000 V	A - B	B - C	C - A	
	<b>Test Voltage</b>	<b>Insulation Resistance (MΩ) Phase To GND</b>			
	1000 V	A - GND	B - GND	C - GND	
Comments: _____					

<b>Ground Resistance Checks (Ductor Test)</b>	<b>Point A</b>	<b>Point B</b>	<b>Resistance (μΩ)</b>	<b>Test Summary</b> <input type="checkbox"/> Test Passed <input type="checkbox"/> Test Inconclusive Further Investigation Required. <input type="checkbox"/> Test Failed
	SWB GND Bus	Facility Ground Electrode		
	SWB GND Bus	SWB Enclosure		
	SWB GND Bus	System Neutral		
Comments: _____				

<b>Feeder Breakers</b>	Visual Inspect Requirements:	G=Good, A=Acceptable, P=Poor Comments are required for all items identified in Poor condition.
		<ol style="list-style-type: none"> <li>1. Confirm identification tag / lamacoid is installed.</li> <li>2. Look for visual signs of overheating.</li> <li>3. Inspect and torque connections.</li> <li>4. Inspect and test any electro/mechanical interlocks.</li> <li>5. Confirm disconnect operation.</li> <li>6. Check door mechanical condition.</li> <li>7. Exercise circuit breaker.</li> <li>8. Confirm cables are supported and routed appropriately.</li> <li>9. Visually assess the general condition of the installation.</li> </ol>
	Note:	Complete an appropriate Breaker Inspection Form for all breakers with separate adjustable Long and Short trip settings, Ground trip settings, or > 250A frame size.
Continued on next page		



# INSPECTION FORM SWITCHBOARD, 600V

ID:

Continued from previous page											
Feeder Breakers	ID	Loc./ Cell	Frame Rating (A)	Trip Rating (A)	Manuf.	Model	Trip Unit Type	Inst Setting	Visual Inspection	Cleaned	Comments
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	
General Comments:											



**INSPECTION FORM  
SWITCHBOARD, 600V**

Page 4 of 4


ID:

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	<b>Company</b>	<b>Name</b>	<b>Signature</b>	<b>Date (yyyy/mm/dd)</b>
<b>Performed By</b>				
<b>Checked By</b>				

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	<b>INSPECTION FORM</b> <b>TRANSFORMER, DRY TYPE, LOW VOLTAGE</b>		Page 1 of 2
			ID:
<b>Project</b>	Facility:	Project Name:	
	Area :	Bid Opportunity:	

<b>Transformer Data</b>	KVA:	Phase:	Primary Voltage: V	Secondary Voltage: V					
	Manufacturer:		Type:	Serial Number:					
	Primary Winding: <input type="checkbox"/> Δ <input type="checkbox"/> Y	Secondary Winding: <input type="checkbox"/> Δ <input type="checkbox"/> Y	Impedance: %Z	Temp Rise: °C	K Factor:				
	Winding Material: <input type="checkbox"/> Copper <input type="checkbox"/> Aluminum								
	No Load Tap Changer	Tap Voltage	1	2	3	4	5		

<b>Visual Inspection / Cleaning</b>	Transformer Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No	Visual Signs of Overheating: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Bushings: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Support Insulators: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Paint: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	No Load Tap Changer: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Fans: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Fan Controls: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Temp. Gauge: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Connections: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor
	Ground Connection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Neutral Bonded to Ground: <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No
	Cleanliness (As Found): <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor	Unit Cleaned: <input type="checkbox"/> Yes

<b>Operational Inspection</b>	Operational Conditions / Notes:					
	Primary Voltage:	H1:H2: V	H2:H3: V	H3:H1: V	Measured at:	
	Secondary Voltage:	X1:__: V	X2:__: V	X3:__: V	Measured at:	
	Current:	Ph A: A	Ph B: A	Ph C: A	Measured at:	
	Tap Setting:	<input type="checkbox"/> Appears Satisfactory <input type="checkbox"/> Further Monitoring Recommended. <input type="checkbox"/> Recommend Changing Tap.			Tap Setting (As Left):	
Thermographic Inspection Performed:	<input type="checkbox"/> Yes	Attach report separately	Results:	<input type="checkbox"/> No Issues Found <input type="checkbox"/> Potential Issue Identified.		

<b>Insulation Resistance</b>	<b>Winding</b>	<b>Test Voltage (Vdc)</b>	<b>Resistance (MΩ)</b>		<b>Dielectric Absorption Ratio 60s/30s</b>
			<b>30 sec</b>	<b>60 sec.</b>	
	Primary to Ground, Secondary Guarded				
	Secondary to Ground, Primary Guarded				
	Primary to Secondary, Ground Guarded				



**INSPECTION FORM  
TRANSFORMER, DRY TYPE, LOW VOLTAGE**


Page 2 of 2

ID:

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

	<b>INSPECTION FORM</b> <b>TRANSFORMER, DRY TYPE, MEDIUM VOLTAGE</b>		Page: 1 of 3
			ID:
<b>Project</b>	Facility:	Project Name:	
	Area :	Bid Opportunity:	

<b>Transformer Data</b>	KVA:	Phase:	Primary Voltage: V					Secondary Voltage: V					
	Manufacturer:			Model:					Serial Number:				
	Primary Winding:	<input type="checkbox"/> Δ <input type="checkbox"/> Y	Secondary Winding:	<input type="checkbox"/> Δ <input type="checkbox"/> Y	Impedance: %Z			Temp Rise: °C		K Factor:			
	Cooling:	<input type="checkbox"/> ANN <input type="checkbox"/> ANF	# Cooling Fans:			Winding Material:							
	No Load Tap Changer	Tap	1	2	3	4	5					Tap Setting (As Found):	
	Voltage												

<b>Visual Inspection / Cleaning</b>	Transformer Identification Tag Installed: <input type="checkbox"/> Yes <input type="checkbox"/> No				Visual Signs of Overheating: <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Bushings: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				Support Insulators: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Paint: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				No Load Tap Changer: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Fans: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				Fan Controls: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Temp. Gauge: <input type="checkbox"/> N/A <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				Connections: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor			
	Ground Connection: <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				Ground Conductor Size:			
	Cleanliness (As Found): <input type="checkbox"/> Good <input type="checkbox"/> Acceptable <input type="checkbox"/> Poor				Unit Cleaned: <input type="checkbox"/> Yes		Photograph Taken: <input type="checkbox"/> Yes	

<b>Operational Inspection</b>	Operational Conditions / Notes:					
	Primary Voltage:	H1:H2: V	H2:H3: V	H3:H1: V	Measured at:	
	Secondary Voltage:	X1:__: V	X2:__: V	X3:__: V	Measured at:	
	Current:	Ph A: A	Ph B: A	Ph C: A	Measured at:	
	Tap Setting:	<input type="checkbox"/> Appears Satisfactory <input type="checkbox"/> Further Monitoring Recommended. <input type="checkbox"/> Recommend Changing Tap.			Tap Setting (As Left):	
	Thermographic Inspection Performed:	<input type="checkbox"/> Yes	Attach report separately	Results:	<input type="checkbox"/> No Issues Found <input type="checkbox"/> Potential Issue Identified.	



## TRANSFORMER INSPECTION FORM DRY TYPE, MEDIUM VOLTAGE

Page: 2 of 3

ID: \_\_\_\_\_

Insulation Resistance	Winding Temperature:      °C      Temperature Correction Factor (20°C):						
	Resistance (MΩ)						
	Time	PRI-GND		SEC-GND		PRI-SEC	
		Test Voltage:		Test Voltage:		Test Voltage:	
	Reading	Corrected to 20°C	Reading	Corrected to 20°C	Reading	Corrected to 20°C	
1 min.							
2 min.							
3 min.							
4 min.							
5 min.							
6 min.							
7 min.							
8 min.							
9 min.							
10 min.							
Polarization Index	/		/		/		

Winding Resistance	Winding Temperature:      °C			
	Winding	Winding Resistance (mΩ)	Winding	Winding Resistance (mΩ)
	H2 – H1		X0 – X1	
	H3 – H2		X0 – X2	
H3 – H1		X0 – X3		

Turns Ratio Test	Tap (Designated)	Primary Voltage (V)	Secondary Voltage (V)	Calculated Ratio	Measured Ratios		
					H3 H1 / X0 X1	H1 H2 / X0 X2	H2 H3 / X0 X3

Connection Resistance	Note: Torque check required for all cables. Connection Resistance Test required for cables 250MCM or larger.					
	Termination	Connection Resistance (μΩ) - As Left				Torque Check
		A	B	C	N	
Source						<input type="checkbox"/> OK
Dest. / Load						<input type="checkbox"/> OK



**TRANSFORMER INSPECTION FORM  
DRY TYPE, MEDIUM VOLTAGE**

Page: 3 of 3

ID: \_\_\_\_\_

<b>Final Analysis</b>	Returned to Service: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
	Monitoring / Further Inspection Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Repair / Replacement Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	

	Company	Name	Signature	Date (yyyy/mm/dd)
<b>Performed By</b>				
<b>Checked By</b>				

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.