

P.O. Box 39 Burlington, NJ 08016 Phone: (609) 386-1281 Fax: (609) 387-4334

## INFRARED ELECTRICAL SYSTEM SURVEY

for

ABC Company 123 Main Street Anytown, USA

at

#1 Elementary School #2 Elementary School #3 Elementary School #4 Elementary School Middle School Anytown, US

Our Job Number: 13-0000.00



P.O. Box 39 Burlington, NJ 08016 Phone: (609) 386-1281 Fax: (609) 387-4334

January 9, 2013

Mr. Smith ABC Company 123 Main Street Anytown, USA

RE: INFRARED ELECTRICAL SYSTEM SURVEY REPORT OUR JOB NUMBER: 13-0000.00

Dear Mr. Smith:

Here is our completed report and CD-ROM for the Infrared Electrical System Survey performed for the ABC Company at the Anytown Public School facilities listed below on January 3 and 4, 2013.

#1 Elementary School #2 Elementary School #3 Elementary School #4 Elementary School Middle School

Thank you for this opportunity to serve you. If you have any questions or if we can be of further assistance, please feel free to call.

Very truly yours,

MC Level III Infraspection Institute Certified Infrared Thermographer

MC:clt Enclosure

# RSEY INFRARED CONSULTANTS

P.O. Box 39 Burlington, NJ 08016 Phone: (609) 386-1281 Fax: (609) 387-4334

#### INTRODUCTION TO THE INFRARED ELECTRICAL SYSTEM SURVEY

Infrared thermography is a form of non-contact, non-destructive testing used to detect and document thermal patterns and associated temperatures across a given surface. Performed regularly, infrared inspections can help to identify incipient equipment failures.

Our Infrared Surveys are performed by Certified Thermographers using a portable infrared imaging system called FLIR ThermaCAM. This equipment detects infrared energy emitted from an object and converts it into an image which is displayed on a monitor screen.

Because infrared energy is a direct and proportional function of temperature, the video image is designed to depict temperature levels on the monitor. This thermal image looks very similar to a black and white or a color television picture where the various shades of color represent different temperature levels throughout the chosen temperature range. In the black and white mode, darker shades of gray correspond to lower temperatures while lighter shades of gray correspond to higher temperatures. In the color mode, colors are matched to the reference bar at the side of the monitor screen. Temperature values increase for those colors which appear closer to the top of the scale.

Our FLIR ThermaCAM equipment has the capability to sense object temperatures from -10° Celsius to +1500° Celsius, with sensitivity of as little as 0.07 Celsius degrees.

When an area or component with an unusual temperature differential is located, our thermal imager is used to measure the temperature of the problem area.

Once the temperature and location of the problem area have been noted, a photograph is taken of the image displayed on the FLIR ThermaCAM monitor. These Thermograms, along with a standard photograph and our problem definition, provide you with the necessary information to correct a problem before it becomes serious.

For your reference as a maintenance scheduling tool, the following temperature differential table is presented. This table is intended only as a guideline based on our experience with electrical system inspections. Actual scheduling of repairs is the customer's responsibility.

Temp. Differential:

Priority 3 1 - 3 C°

Priority 1

Possible deficiency; inspect Repair as time permits

Priority 2 4 - 15 C° Over 15 C°

Major deficiency; repair as soon

as possible

It must be noted that the above temperature differential/severity guide is based on our experience with electro/mechanical inspections. Although some of the problems identified in this report may seem insignificant, the ultimate decision to repair them is the customer's responsibility.



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January 9, 2013

ABC Company 123 Main Street Anytown, USA

THERMOGRAPHER'S COMMENTS OUR JOB NUMBER: 13-0000.00

On January 3 and 4, 2013, an Infrared Electrical System Survey was performed for the ABC Company at Anytown Public Schools listed below:

#1 Elementary School #2 Elementary School #3 Elementary School #4 Elementary School Middle School

The Survey covered electrical equipment in the areas listed on the "List of Equipment Surveyed".

Eight (8) problems were located during the Survey, all of which required thermograms. All problems were photographically recorded. These photographs, along with their respective thermograms and a brief description of each problem, appear on the following pages.

It should be noted that the problem described in picture number 6 has extremely high temperature differentials. This problem requires immediate attention.

It is recommended that the cause of each problem be investigated and that the proper corrective measures be taken. A follow-up Survey should then be performed once repairs have been made. Infrared surveys are then recommended at least once a year as part of a preventive maintenance program.

Please note that all inspections are performed with the electrical system in an "as found" condition. No attempt is made to verify that the system is under full load at the time of the infrared survey.

Ammeter readings, where provided, are given as a reference only and are not necessarily indicative of an overloaded circuit.

ABC Company January 9, 2013

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This report depicts thermal patterns in electrical system components at the time of the infrared survey. Assurances regarding the integrity of the electrical system are neither provided nor implied.

MC Level III Infraspection Institute Certified Infrared Thermographer

MC:clt



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## Avoided Cost Analysis Report For Infrared Electrical System Surveys

This Avoided Cost Analysis Report calculates the estimated cost savings realized from this Infrared Survey. The calculations utilized in this report are based upon insurance industry cost estimates for loss experience with commercial and industrial facilities. These calculations take into account the severity of each exception along with the overall size of the facility.

The calculations shown below multiply the number of exceptions found during the Survey by the severity of each exception. By inputting the cost to perform the Survey, the gross potential savings from this report are automatically calculated. The calculations are based on the cost of the Infrared Survey and do not include preparation or remediation figures.

Because no one can actually calculate the exact avoided costs provided by an infrared inspection, the numbers contained in the report are intended to serve as a guide.

Total # of Critical or Serious Anomalies =	0	000.00
Total # of Intermediate or Minor Anomalies =	0	000.00
Cost of Infrared Survey	000.00	
Gross Potential Savings		00.00

## TABLE OF CONTENTS OUR JOB NUMBER: 13-0000.00

PICTURE	LOCATION	EQUIPMENT	PRIORITY
1	#1 Elementary School, Boiler Room	Power Panel, BA, Main Circuit Breaker	2
2	#1 Elementary School, Boiler Room	Circuit Breaker, Disconnect for AP-1 Panel	2
3	Middle School, Electrical Panel Room	Power Panel, PP6, Main Circuit Breaker	3
4	Middle School, Electrical Panel Room	ATS, ATS-2	2
5	Middle School, 1st Floor, Electrical Closet A -1TS-1	Distribution Panel, DP4, Circuit Breakers 1, 3 5	3, 2
6	#3 Elementary School, Switchgear Room	Switchgear, Section 4, XFMR	1
7	#3 Elementary School, Storage at Room 7	Distribution Panel, HVC, Circuit Breaker 3	2
8	#3 Elementary School, Storage at Room 36	Power Panel, PP2, Main Circuit Breaker	2

## Database Terminology

Upon entering into an area, our personnel collect the necessary data to construct the database by recording the nameplate information on each piece of electrical equipment.

Listed below are some common abbreviations used for equipment type.

Air Handler Unit	AHU	Lightning Arrestor	LA
Automatic Transfer Switch	ATS	Lighting Contactor	L C
Battery Rack	BATT	Metering Cabinet	MET
Bus Duct	BUS	Motor	MTR
Capacitor	CAP	Motor Control Center	MCC
Circuit Breaker	СВ	Motor Controller	МС
Control Cabinet	CC	Oil Circuit Breaker	ОСВ
Current Transformer	СТ	Peckerhead	PKHD
Disconnect Switch	DISC	Potential Transformer	PΤ
Distribution Panel	DP	Power Distribution Unit	PDU
Emergency Distribution Panel	EDP	Power Panel	PΡ
Emergency Power Panel	EPP	Power Transformer	XFMR
Emerg. Power Transformers	EXFMR	Switchgear	SG
Environmental Control Unit	ECU	Uninterruptable Power Supply	UPS
Fire Pump Panel	FPP	Voltage Regulator	V R
Generator	GEN	Variable Speed Drive	VSD
Incoming Lines	I L	Variable Frequency Drive	VFD
Junction Box	JB		

In Service Equipment is observed in the "on" position. Unless otherwise noted, no attempt is made to verify that the device is under load.

Picture No. Corresponds to the predictive maintenance inspection card number.

Delta T Temperature rise noted on the predictive maintenance inspection card.

Visual Notation for broken parts, excessive dirt, rust, dead animals, etc.

The results are either pass (P) or fail (F).

Ultrasound Results of ultrasonic test data (when performed). The results are either pass (P) or fail (F).

Follow-up Required Indicates a follow-up Survey should be performed.

Comments Summary of findings. More details can be found on the predictive

maintenance inspection card.

Route No.: 1 Date: 1/3/2013

# List of Equipment Surveyed

Location	Equipment Type	Equipment ID	In Service	Picture No.	Priority	Visual	Ultra Sound
#1 Elem. School							
Boiler Room	PP	No ID	Yes			Pass	
Boiler Room	PP	BB	Yes			Pass	
Boiler Room	CONT	HV-2	Yes			Pass	
Boiler Room	PP	BA	Yes	4		Pass	
Boiler Room	PP	Normal	Yes			Pass	
Boiler Room	CONT	P1-B	Yes			Pass	
Boiler Room	CONT	P1-A	Yes			Pass	
Boiler Room	CONT	P5	Yes			Pass	
Boiler Room	CONT	P4	Yes			Pass	
Boiler Room	PP	ECP	Yes			Pass	
Boiler Room	СВ	Disconnect for ECP Panel	Yes			Pass	
Boiler Room	СВ	Disconnect for AP-1 Panel	Yes	2		Pass	
Boiler Room	MC	Tower Fan	Yes			Pass	
Boiler Room	MC	P-2A, P-2B	Yes			Pass	
Boiler Room	PP	EM	Yes			Pass	
Boiler Room	ATS	Cummins	Yes			Pass	
Boiler Room	СВ	Disconnect for ATS	Yes			Pass	
Boiler Room	DP	No ID	Yes			Pass	
Boiler Room	PP	Trailer 1 & 2	Yes			Pass	
Boiler Room	PP	Trailer 3 & 4	Yes			Pass	
#2 Elem. School							
Garage	PP	KP-1, Left	Yes			Pass	
Garage	PP	KP-1, Right	Yes			Pass	
Garage	PP	No ID	Yes			Pass	

Note: In service designates device was observed in the "On Position". Unless otherwise noted, no attempt is made to verify that device is under load. \*NS indicates Equipment Not Surveyed

Route No.: 1 Date: 1/3/2013

# List of Equipment Surveyed

#### #2 Elem. School continued:

Loc	cation	Equipment Type	Equipment ID	In Service	Picture No. Priority	Visual	Ultra Sound
#2	Elem. School						
	Storage Room	PP	RP-2	Yes		Pass	
	Storage Room	PP	LP-2	Yes		Pass	
#2	Elem. School						
	Grade 1 Storage	PP	EM-3	Yes		Pass	
	Grade 1 Storage	PP	EM-4	Yes		Pass	
	Grade 1 Storage	PP	LP-7	Yes		Pass	
#2	Elem. School						
	Main Electrical Room	DP	No ID, MAin	Yes		Pass	
	Main Electrical Room	DISC	No ID, Main, Through Vents	Yes		Pass	
	Main Electrical Room	ATS	ASCO	Yes		Pass	
	Main Electrical Room	PP	EM-1	Yes		Pass	
	Main Electrical Room	PP	EM-2	Yes		Pass	
#2	Elem. School						
	Boiler Room	PP	BP-1	Yes		Pass	
	Boiler Room	PP	BP-2	Yes		Pass	
	Boiler Room	CONT	P1-P2	Yes		Pass	
	Boiler Room	CONT	P3	Yes		Pass	
	Boiler Room	CONT	P4	Yes		Pass	
	Boiler Room	CONT	P5	Yes		Pass	
	Boiler Room	CONT	P6	Yes		Pass	
	Boiler Room	CONT	P7	Yes		Pass	
	Boiler Room	CONT	P8	Yes		Pass	
	Boiler Room	CONT	P9	Yes		Pass	

Route No.: 1 Date: 1/3/2013

# List of Equipment Surveyed

#### Middle Schl., 1st Floor continued:

Location	Equipment Type	Equipment ID	In Service	Picture No.	Priority	Visual	Ultra Sound
Middle Schl., 1st Floor							
Main Electrical Room	DP	No ID, Left	Yes			Pass	
Main Electrical Room	DP	No ID, Right	Yes			Pass	
Main Electrical Room	DISC	Main, Through Vents	Yes			Pass	
Middle Schl., 1st Floor							
Electrical Panel Room	PP	PP6B	Yes			Pass	
Electrical Panel Room	PP	PP6A	Yes			Pass	
Electrical Panel Room	PP	PP6	Yes	3		Pass	
Electrical Panel Room	PP	LP6	Yes			Pass	
Electrical Panel Room	PP	DP6	Yes			Pass	
Electrical Panel Room	PP	EP2A	Yes			Pass	
Electrical Panel Room	PP	EDP	Yes			Pass	
Electrical Panel Room	ATS	ATS-2	Yes	4		Pass	
Electrical Panel Room	ATS	ATS-1	Yes			Pass	
Electrical Panel Room	PP	EP-1	Yes			Pass	
Electrical Panel Room	PP	EP-2	Yes			Pass	
Electrical Panel Room	PP	CP-6	Yes			Pass	
Electrical Panel Room	PP	CP-6A	Yes			Pass	
Electrical Panel Room	PP	PP26	Yes			Pass	
Electrical Panel Room	PP	PP26A	Yes			Pass	
Electrical Panel Room	PP	PP26B	Yes			Pass	
Middle Schl., 1st Floor		k.					
Electrical Closet B-1TS-1	CONT	No ID, Left	Yes			Pass	
Electrical Closet B-1TS-1	CONT	No ID, Right	Yes			Pass	
Electrical Closet B-1TS-1	PP	PP1	Yes			Pass	
Electrical Closet B-1TS-1	₽P	PP21	Yes			Pass	

Note: In service designates device was observed in the "On Position". Unless otherwise noted, no attempt is made to verify that device is under load. \*NS indicates Equipment Not Surveyed

Route No.: 1 Date: 1/3/2013

# **List of Equipment Surveyed**

#### Middle Schl., 1st Floor continued:

Location	Equipment Type	Equipment ID	In Service	Picture No.	Priority	Visual	Ultra Sound
Electrical Closet B-1TS-1	DP	DP1	Yes			Pass	
Electrical Closet B-1TS-1	PP	LP1	Yes			Pass	
Electrical Closet B-1TS-1	PP	CP1	Yes			Pass	
Electrical Closet B-1TS-1	PP	CP1A	Yes			Pass	
Electrical Closet B-1TS-1	CONT	No ID	Yes			Pass	
Middle Schl., 2nd Floor							
Electrical Closet B-2TS-2	PP	PP7	Yes			Pass	
Electrical Closet B-2TS-2	CONT	No ID, Left	Yes			Pass	
Electrical Closet B-2TS-2	CONT	No ID, Right	Yes			Pass	
Electrical Closet B-2TS-2	PP	CP7	Yes			Pass	
Electrical Closet B-2TS-2	DP	DP7	Yes			Pass	
Electrical Closet B-2TS-2	PP	LP7	Yes			Pass	
Electrical Closet B-2TS-2	PP	PP27	Yes			Pass	
Middle Schl., 1st Floor							
Electrical Closet A-1TS-1	PP	PP24	Yes			Pass	
Electrical Closet A-1TS-1	PP	PP4A	Yes			Pass	
Electrical Closet A-1TS-1	PP	PP4	Yes			Pass	
Electrical Closet A-1TS-1	PP	LP4	Yes			Pass	
Electrical Closet A-1TS-1	DP	DP4	Yes	5		Pass	
Electrical Closet A-1TS-1	CONT	No ID, Left	Yes			Pass	
Electrical Closet A-1TS-1	CONT	No ID, Middle	Yes			Pass	
Electrical Closet A-1TS-1	CONT	No ID, Right	Yes			Pass	
Electrical Closet A-1TS-1	PP	CP4	Yes			Pass	
Electrical Closet A-1TS-1	PP	CP4A	Yes			Pass	
Middle Schl., 2nd Floor							
Electrical Closet A-2TS-2	DP	DP3	Yes			Pass	

Route No.: 1 Date: 1/3/2013

## **List of Equipment Surveyed**

#### Middle Schl., 2nd Floor continued:

Lo	ecation	Equipment Type	Equipment ID	In Service	Picture No.	Priority	Visual	Ultra Sound
	Electrical Closet A-2TS-2	PP	LP3	Yes			Pass	
	Electrical Closet A-2TS-2	PP	PP23	Yes			Pass	
	Electrical Closet A-2TS-2	PP	PP3	Yes			Pass	
	Electrical Closet A-2TS-2	CONT	No ID, Left	Yes			Pass	
	Electrical Closet A-2TS-2	CONT	No ID, Right	Yes			Pass	
	Electrical Closet A-2TS-2	PP	CP3	Yes			Pass	

Route No.: 2 Date: 1/4/2013

# **List of Equipment Surveyed**

Lo	ocation	Equipment Type	Equipment ID	In Service	Picture No. Pri	ority Visual	Ultra Sound
#3	Elementary School						
	Main Electrical Room	DP	Main	Yes		Pass	
	Main Electrical Room	DISC	Main	Yes		Pass	
	Main Electrical Room	ATS	Optional - Standby	Yes		Pass	
	Main Electrical Room	PP	EM-1	Yes		Pass	
	Main Electrical Room	PP	EM-2	Yes		Pass	
#3	Elementary School						
	Boiler Room	PP	BP-1	Yes		Pass	
	Boiler Room	PP	BP-2	Yes		Pass	
	Boiler Room	ATS	Life Safety	Yes		Pass	
	Boiler Room	CONT	P-8	Yes		Pass	
	Boiler Room	CONT	P-9	Yes		Pass	
	Boiler Room	CONT	P1-P2	Yes		Pass	
	Boiler Room	CONT	P-3	Yes		Pass	
#3	B Elementary School						
	Garage	PP	KP-1, Left	Yes		Pass	
	Garage	PP	KP-1, Right	Yes		Pass	
	Garage	PP	No ID	Yes		Pass	
#3	B Elementary School						
	Storage Room	PP	LP-2	Yes		Pass	
	Storage Room	PP	RP-2	Yes		Pass	
#3	3 Elementary School						
	Grade 1 Storage	PP	LP-7	Yes		Pass	
	Grade 1 Storage	PP	EM-3	Yes		Pass	

Route No.: 2 Date: 1/4/2013

# List of Equipment Surveyed

### #3 Elementary School continued:

Location	Equipment Type	Equipment ID	In Service	Picture No.	Priority	Visual	Ultra Sound
Grade 1 Storage	PP	EM-4	Yes			Pass	
#4 Elementary School							
Switchgear Room	DP	480 Taps	Yes			N/A	
Switchgear Room	SWGR	Section 4	Yes	6		Pass	
Switchgear Room	DP	Heating and Ventilating	Yes			N/A	
Switchgear Room	PP	Lighting Panel A	Yes			N/A	
Switchgear Room	PP	Receptacle and Lighting A	Yes			N/A	
Switchgear Room	PP	F	Yes			Pass	
#4 Elementary School							
Storage	PP	HVAC-2	Yes			Pass	
#4 Elementary School							
Storage at Room 7	PP	No ID	Yes			Pass	
Storage at Room 7	PP	HVB	Yes			Pass	
Storage at Room 7	DP	HVC	Yes	7		Pass	
Storage at Room 7	PP	REC-B	Yes			Pass	
Storage at Room 7	PP	No ID, SubPanel	Yes			Pass	
Storage at Room 7	PP	B-2	Yes			Pass	
Storage at Room 7	CONT	No ID	Yes			Pass	
#4 Elementary School							
Panel Room at 41	DP	DP-1, Right	Yes			Pass	
Panel Room at 41	DP	DP-1, Left	Yes			Pass	
Panel Room at 41	PP	HL	Yes			Pass	
Panel Room at 41	PP	L	Yes			Pass	
Panel Room at 41	PP	L2	Yes			Pass	
Panel Room at 41	DP	DP2	Yes			Pass	

Route No.: 2 Date: 1/4/2013

# List of Equipment Surveyed

#### #4 Elementary School continued:

Location	Equipment Type	Equipment ID	In Service	Picture No.	Priority	Visual	Sound
#4 Elementary School							
Storage Room at 36	PP	PP1	Yes			Pass	
Storage Room at 36	PP	LP1	Yes			Pass	
Storage Room at 36	PP	LP2	Yes			Pass	
Storage Room at 36	PP	PP2	Yes	8		Pass	

Area/Picture No.

**Job No.** 13-0000.00

**Date** 1/3/13

Location

#1 Elementary School, Boiler Room

Equipment

Power Panel, BA, Main Circuit Breaker

Wind Speed N/A

N/A Wind From

Sky Indoor

Emiss. 1.00 B/G N/A°

**Distance** 

Lens 1x

Rated Load 175 Amps

Measured Load 18 Amps

% Load 10.29

Ambient Temp 20°C

7 ° Rise Over Left Connection

5'

Comments

Conductor Connection Temperatures:

Left 22°C Middle 23°C

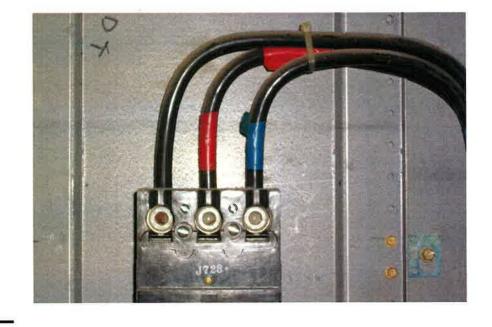
Right 29°C 16

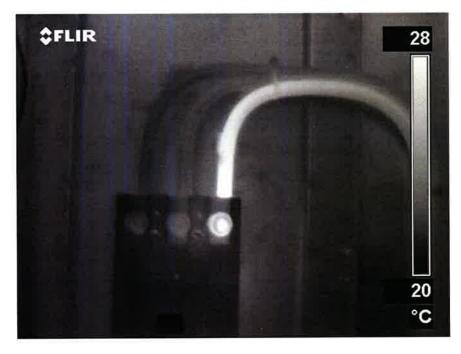
Amps 18

Priority 2

Repair Check Date

° Rise Over







**Area/Picture No.** 2 **Job No.** 13-0000.00 **Date** 1/3/13

**Location** #1 Elementary School, Boiler Room

**Equipment** Circuit Breaker, Disconnect for AP-1 Panel

Wind Speed N/A Wind From N/A Sky Indoor

Emiss. 1.00 B/G N/A° Distance 5' Lens 1x

Rated Load 80 Amps Measured Load 33 Amps % Load 41.25

Ambient Temp 20°C 4 ° Rise Over Upper Right Connection

**Comments** Conductor Connection Temperatures:

 Left
 Middle
 Right

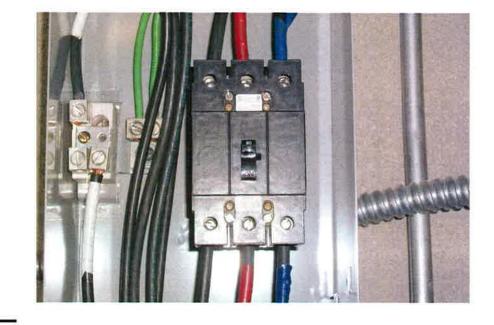
 Upper
 31°C
 31°C
 27°C

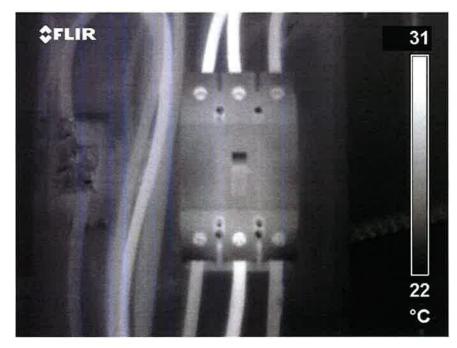
 Lower
 27°C
 30°C
 27°C

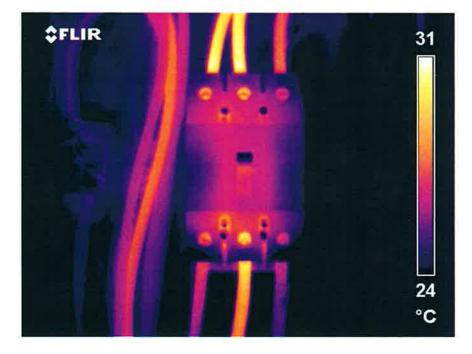
 Amps
 18
 33
 18.6

Priority 2

Repair Check Date ° Rise Over







Area/Picture No.

**Job No.** 13-0000.00

**Date** 1/3/13

Location

Middle School, Electrical Panel Room

Equipment

Power Panel, PP6, Main Circuit Breaker

Wind Speed N/A

N/A Wind From

Sky Indoor

Emiss. 1.00 B/G N/A°

5' Distance

Lens 1x

Rated Load N/A

Measured Load N/A

% Load

Ambient Temp 17°C

3 ° Rise Over Right Connection

Comments

**Bus Connection Temperatures:** 

Left 15°C

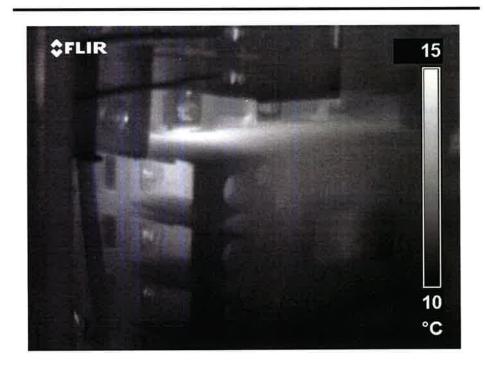
Middle 13°C

Right 12°C

Priority 3

**Repair Check Date** 

° Rise Over







Area/Picture No.

**Job No.** 13-0000.00

Date 1/3/13

Location

Middle School, Electrical Panel Room

Equipment

ATS, ATS-2

Wind Speed N/A

N/A Wind From

Sky Indoor

Emiss. 1.00 B/G N/A°

Distance

5'

Lens 1x

Rated Load N/A

Measured Load N/A

% Load

Ambient Temp 17°C

8 ° Rise Over Left CT

Comments

CT Temperatures:

CT-1 12°C

CT-2 20°C

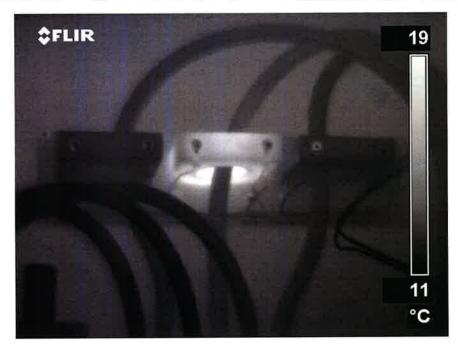
CT-3 12°C

Priority 2

Repair Check Date

° Rise Over







Area/Picture No. **Job No.** 13-0000.00 **Date** 1/3/13

Location

Middle School, 1st Floor, Electrical Closet A-1TS-1

Equipment

Distribution Panel, DP4, Circuit Breakers 1, 3, 5

Wind Speed N/A

N/A Wind From

Sky Indoor

Emiss. 1.00 B/G N/A°

Distance

Lens 1x

Rated Load N/A

Measured Load N/A

% Load

Ambient Temp 20°C

6 ° Rise Over Upper Connection

5'

Comments

Conductor Connection Temperatures:

Amps 14.3

Circuit 1 Circuit 3 Circuit 5 21°C 22°C 27°C

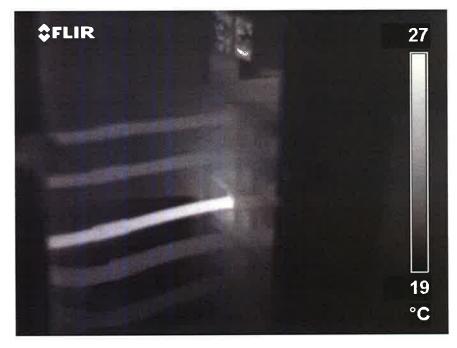
10.2 12.3

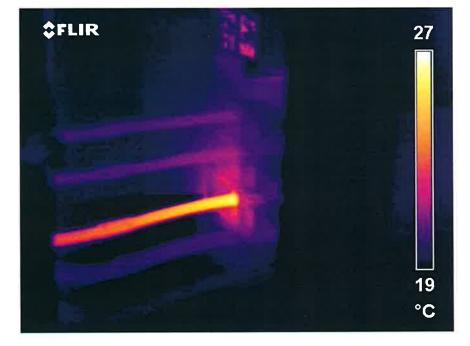
Priority 2

Repair Check Date

° Rise Over







**Area/Picture No.** 6 **Job No.** 13-0000.00 **Date** 1/4/13

Location #3 Elementary School, Switchgear Room

**Equipment** Switchgear, Section 4, XFMR

Wind Speed N/A Wind From N/A Sky Indoor

Emiss. 1.00 B/G N/A° Distance 5' Lens 1x

Rated Load N/A Measured Load N/A % Load

Ambient Temp 13°C 16 ° Rise Over Left Winding

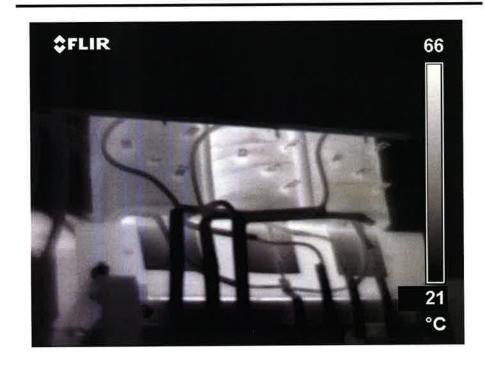
**Comments** Winding Temperatures:

Left Middle Right 40°C 56°C 45°C

Priority 1

Repair Check Date ° Rise Over







**Area/Picture No.** 7 **Job No.** 13-0000.00 **Date** 1/4/13

**Location** #3 Elementary School, Storage at Room 7

**Equipment** Distribution Panel, HVC, Circuit Breaker 3

Wind Speed N/A Wind From N/A Sky Indoor

Emiss. 1.00 B/G  $N/A^{\circ}$  Distance 5' Lens 1x

Rated Load N/A Measured Load N/A % Load

Ambient Temp 20°C 14 ° Rise Over Circuit Breaker 1

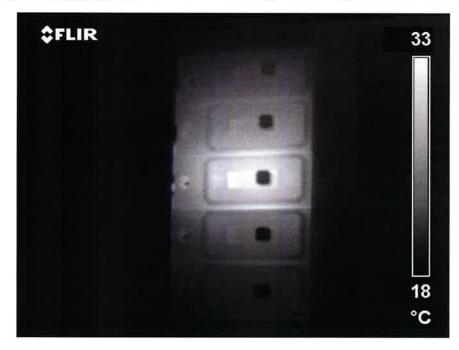
**Comments** Circuit Breaker Surface Temperatures:

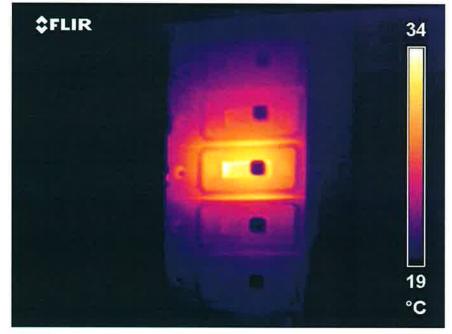
Circuit Breaker 1 20°C Circuit Breaker 3 34°C Circuit Breaker 5 20°C

Priority 2

Repair Check Date ° Rise Over







**Area/Picture No.** 8 **Job No.** 13-0000.00 **Date** 1/4/13

**Location** #3 Elementary School, Storage at Room 36

**Equipment** Power Panel, PP2, Main Circuit Breaker

Wind Speed N/A Wind From N/A Sky Indoor

Emlss. 1.00 B/G N/A° Distance 5' Lens 1x

Rated Load 60 Amps Measured Load 29 Amps % Load 48.33

Amblent Temp 20°C 5 ° Rise Over Lower Connection

**Comments** Conductor Connection Temperatures:

| Amps | Upper | 22°C | 29 | Middle | 18°C | 5.5 | Lower | 17°C | 7.4

Priority 2

Repair Check Date ° Rise Over

