



-----BURLINGTON ELECTRICAL TESTING COMPANY-----

**REPORT**

**Issued to:** Mr. Jesse Ohm  
Concord Engineering Co.  
520 S Burnt Mill Road  
Voorhees, NJ 08043

**Date of Report:** 8/13/10

**Report No:** 16-0532N-1

**Project:** Cherry Hill School District

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**Reference:** a) Cherry Hill School District Site Assessment Report, provided by others

**Description:** Electrical Load Studies

Summary:

Thirteen independent electrical load studies were conducted at select locations within the Cherry Hill School District. Voltage and current waveforms were continuously monitored and the respective RMS values of voltage, current, and power parameters were continuously recorded. The detailed data is provided in both graphical and tabulated formats on the attached data sheets.

The loading data was acquired for only brief duration, for many locations the data was acquired for a period of twenty-four (24) hours. These load studies are ‘snap-shots’ in time and it is not known if the data acquired during these recordings is representative of the maximum demand load at each of the metered locations. An evaluation of the system loading, based on reference (a), at each of the metered locations is contained herein. Modifications to the distribution system and / or electrical loading at these facilities shall not be based on solely on this report, but subsequent to a thorough engineering evaluation accompanied by a thirty - day load study as required by the National Electric Code.

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This report certifies that the above equipment has been tested in compliance with recognized standards or for safe use in a specific manner, or in accordance with Federal, State or Municipal regulations. The report is accurate and true to the best of our knowledge and belief. All equipment used in making physical determinations is accurate and bears recent and direct traceability to the National Bureau of Standards (NBS).

Burlington Electrical Testing Co., Inc.  
825 Sycamore Avenue  
Croydon, Pa. 19021 (215) 826-9400

By

Thomas Coughlin  
Thomas Coughlin

<b>Facility: Barclay Early Childhood Center</b>			
<b>System Loading Level:</b>	<input checked="" type="checkbox"/> Low	<input type="checkbox"/> Moderate	<input type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 24% and 27% respectively. Load levels less than 50% of capacity are considered low by BET standards.		
<b>Recommendation</b>	No Corrective Actions Recommended		
<b>Load Imbalance Overall Rating:</b>	<input checked="" type="checkbox"/> Acceptable	<input type="checkbox"/> Moderate	<input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 12%. Load imbalances of less than 20% are considered low by BET standards.		
<b>Recommendation:</b>	No Corrective Actions Recommended		

<b>Facility: H.C. Beck Elementary School</b>			
<b>System Loading Level:</b>	<input checked="" type="checkbox"/> Low	<input type="checkbox"/> Moderate	<input type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 34% and 20% respectively. Load levels less than 50% of capacity are considered low by BET standards.		
<b>Recommendation</b>	No Corrective Actions Recommended		
<b>Load Imbalance Overall Rating:</b>	<input checked="" type="checkbox"/> Acceptable	<input type="checkbox"/> Moderate	<input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 10%. Load imbalances of less than 20% are considered low by BET standards.		
<b>Recommendation:</b>	No Corrective Actions Recommended		



<b>Facility:</b> J. A. Carusi Middle School	
<b>System Loading Level:</b>	<input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 33% and 30% respectively. Load levels less than 50% of capacity are considered low by BET standards.
<b>Recommendation</b>	No Corrective Actions Recommended
<b>Load Imbalance Overall Rating:</b>	<input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Moderate <input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 12%. Load imbalances of less than 20% are considered low when system overall loading is low.
<b>Recommendation:</b>	No Corrective Actions Recommended

<b>Facility:</b> J. F. Cooper Elementary School	
<b>System Loading Level:</b>	<input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 30% and 33% respectively. Load levels less than 50% of capacity are considered low by BET standards.
<b>Recommendation</b>	No Corrective Actions Recommended
<b>Load Imbalance Overall Rating:</b>	<input type="checkbox"/> Acceptable <input type="checkbox"/> Moderate <input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 15%. Load imbalances of less than 20% are considered low when system overall loading is low.
<b>Recommendation:</b>	No Corrective Actions Recommended



<b>Facility:</b> J. Kilmer Elementary School	
<b>System Loading Level:</b>	<input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 72% and 40% respectively. Load levels between 50% and 80% of capacity are considered Moderate by BET standards.
<b>Recommendation</b>	No Corrective Actions Recommended
<b>Load Imbalance Overall Rating:</b>	<input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Moderate <input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 6%. Load imbalances of less than 20% are considered low by BET standards.
<b>Recommendation:</b>	No Corrective Actions Recommended

<b>Facility:</b> J. Johnson Elementary School	
<b>System Loading Level:</b>	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 86% and 49% respectively. Load levels in excess of 80% of capacity are considered High by BET standards. Electrical loading is within the design capabilities of the system equipment.
<b>Recommendation</b>	No Corrective Actions Recommended
<b>Load Imbalance Overall Rating:</b>	<input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Moderate <input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 10%. Load imbalances of less than 20% are considered low by BET standards. Efforts to redistribute loading would result in only a very moderate reduction in demand load.
<b>Recommendation:</b>	No Corrective Actions Recommended



<b>Facility:</b> J. Sharp Elementary School	
<b>System Loading Level:</b>	<input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 30% and 24% respectively. Load levels less than 50% of capacity are considered low by BET standards.
<b>Recommendation</b>	No Corrective Actions Recommended
<b>Load Imbalance Overall Rating:</b>	<input type="checkbox"/> Acceptable <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 21%. Load imbalances between 20% and 40% are considered Moderate by BET standards. Due to the low system loads at this facility an imbalance of 21% is inconsequential
<b>Recommendation:</b>	No Corrective Actions Recommended

<b>Facility:</b> Rosa International Middle School	
<b>System Loading Level:</b>	<input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 44% and 32% respectively. Load levels less than 50% of capacity are considered low by BET standards.
<b>Recommendation</b>	No Corrective Actions Recommended
<b>Load Imbalance Overall Rating:</b>	<input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Moderate <input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 10%. Load imbalances of less than 20% are considered low by BET standards.
<b>Recommendation:</b>	No Corrective Actions Recommended



<b>Facility:</b> R. S. Stockton Elementary School	
<b>System Loading Level:</b>	<input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 64% and 34% respectively Load levels between 50% and 80% of capacity are considered Moderate by BET standards.
<b>Recommendation</b>	No Corrective Actions Recommended
<b>Load Imbalance Overall Rating:</b>	<input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Moderate <input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 2%. Load imbalances of less than 20% are considered low by BET standards.
<b>Recommendation:</b>	No Corrective Actions Recommended

<b>Facility:</b> Woodcrest Elementary School	
<b>System Loading Level:</b>	<input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High
<b>Analysis:</b>	Service transformer and distribution system demand loading is 52% and 65% respectively. Load levels between 50% and 80% of capacity are considered Moderate by BET standards. <b>Note; there is an inconsistency in the service transformer sizing upon which this evaluation is based. Both 300kVA and 500kVA is listed on the provided assessment data sheet for this location. The evaluation was based on the 300kVA value.</b>
<b>Recommendation</b>	No Corrective Actions Recommended
<b>Load Imbalance Overall Rating:</b>	<input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Moderate <input type="checkbox"/> Severe
<b>Analysis:</b>	Electrical service load imbalance is 10%. Load imbalances of less than 20% are considered low by BET standards.
<b>Recommendation:</b>	No Corrective Actions Recommended



Facility: <b>'Old' J. Sharp Elementary School</b>			
<b>System Loading Level:</b>	<input type="checkbox"/> Low	<input type="checkbox"/> Moderate	<input type="checkbox"/> High
Analysis:	Apparent power and line current demand is 21.8 kVA and 115 A respectively.		
Recommendation	Distribution system equipment ratings are unknown at this facility, preventing an evaluation of loading at this location.		
<b>Load Imbalance Overall Rating:</b>	<input type="checkbox"/> Acceptable	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Severe
Analysis:	Electrical service load imbalance is 183%. Load imbalances in excess of 40% are considered severe by BET standards.		
Recommendation:	Investigate system loading and nature of loads at this facility.		

Facility: <b>'Old' J. Sharp Elementary Garage</b>			
<b>System Loading Level:</b>	<input type="checkbox"/> Low	<input type="checkbox"/> Moderate	<input type="checkbox"/> High
Analysis:	Apparent power and line current demand is 5.8 kVA and 37 A respectively.		
Recommendation	Distribution system equipment ratings are unknown at this facility, preventing an evaluation of loading at this location.		
<b>Load Imbalance Overall Rating:</b>	<input type="checkbox"/> Acceptable	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Severe
Analysis:	Electrical service load imbalance is 183%. Load imbalances in excess of 40% are considered severe by BET standards.		
Recommendation:	Investigate system loading and operational nature of loads at this facility.		



Facility: <b>'Old' J. Sharp Elementary Warehouse</b>	
<b>System Loading Level:</b>	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High
Analysis:	Apparent power and line current demand is 30.9 kVA and 106 A respectively.
Recommendation	Distribution system equipment ratings are unknown at this facility, preventing an evaluation of loading at this location.
<b>Load Imbalance Overall Rating:</b>	<input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Moderate <input type="checkbox"/> Severe
Analysis:	Electrical service load imbalance is 10%. Load imbalances of less than 20% are considered low by BET standards.
Recommendation:	No Corrective Actions Recommended



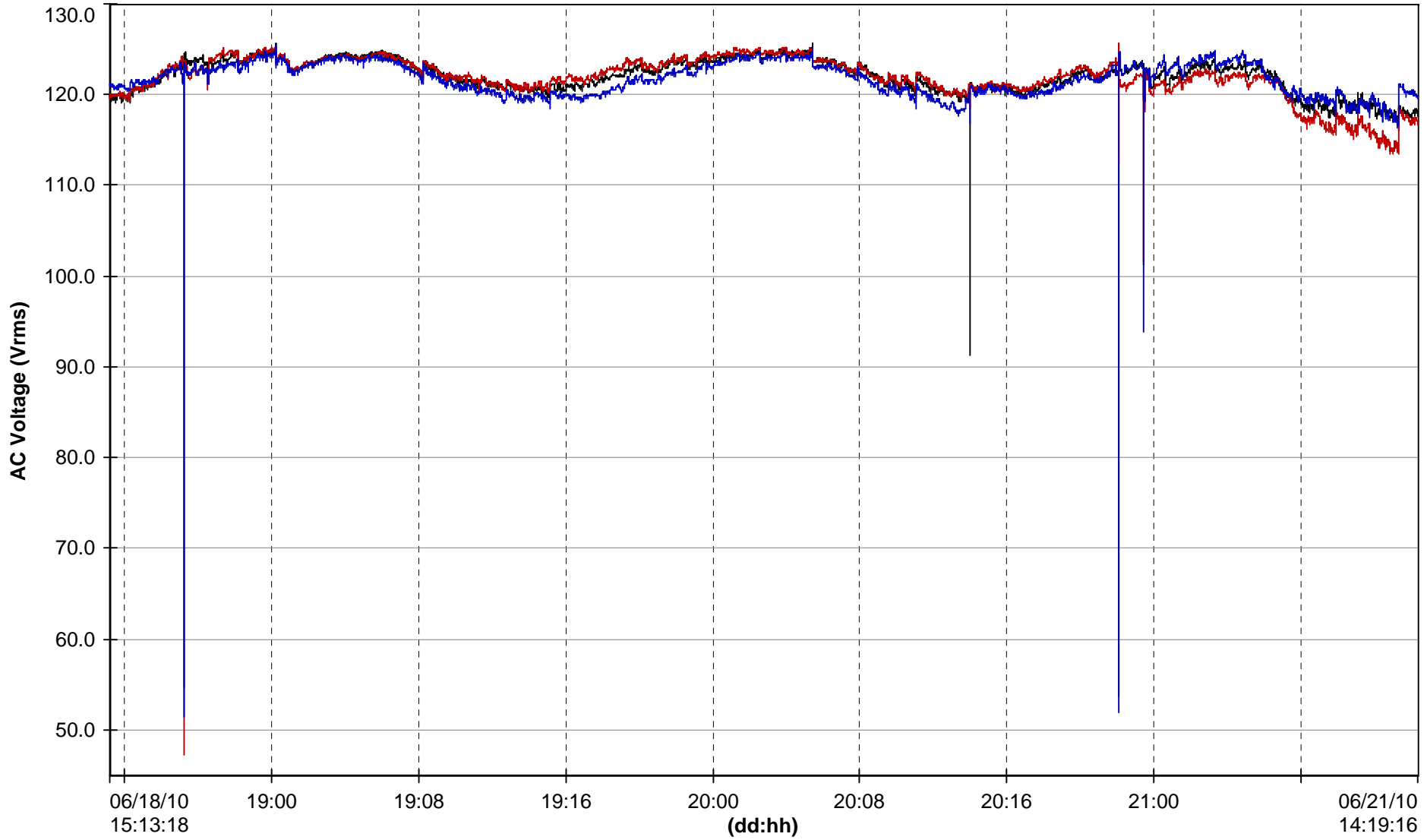


# Barclay Early Childhood Center

*Electrical Load Study*  
*June 18 – 21, 2010*

Cherry Hill School District

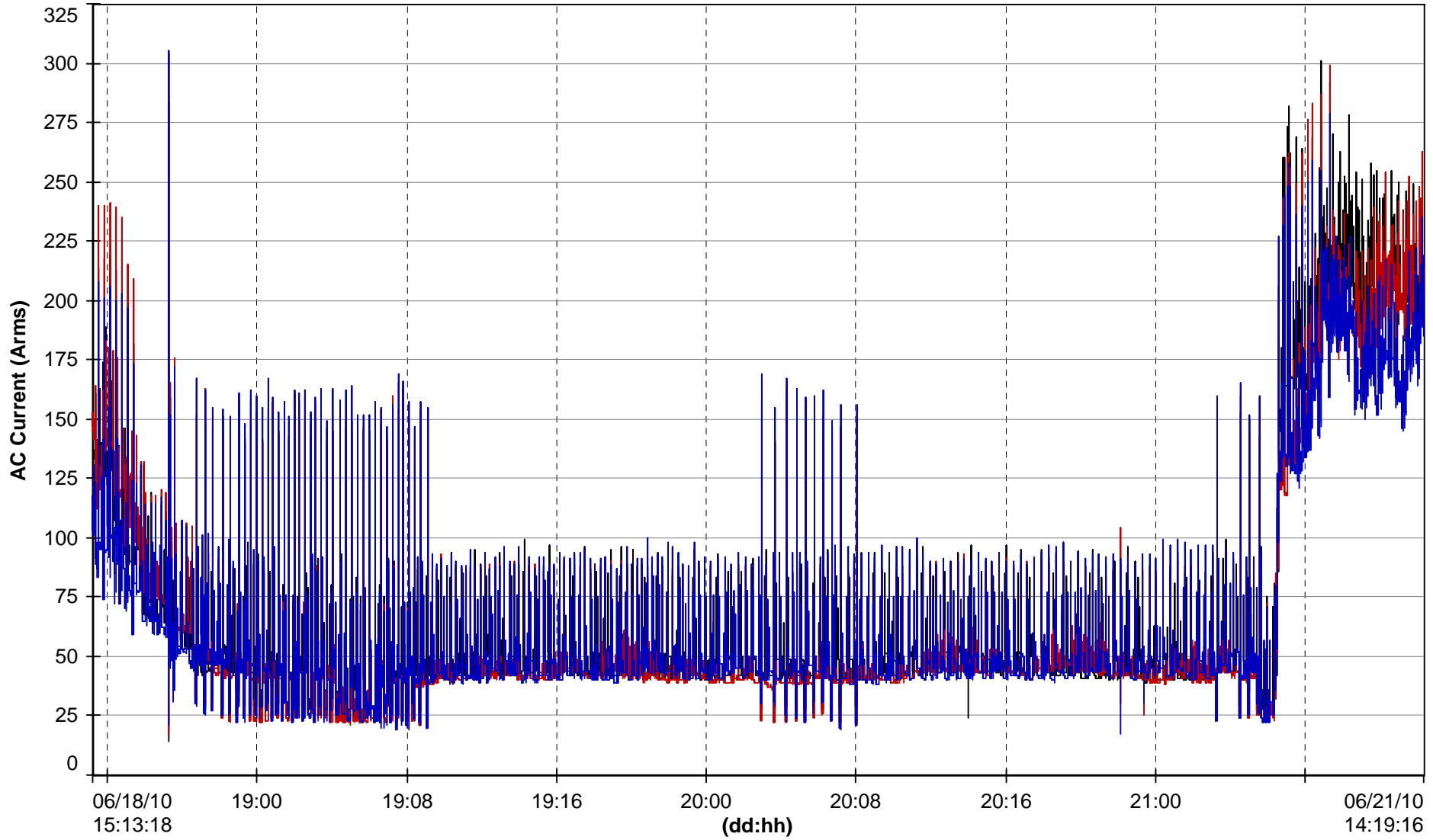
### Main Service Phase Voltage



	Maximum	Minimum	Average
— Va	125.7	53.6	122.1
— Vb	125.6	47.2	122.0
— Vc	125.3	50.9	121.8

### Barclay Early Childhood Center

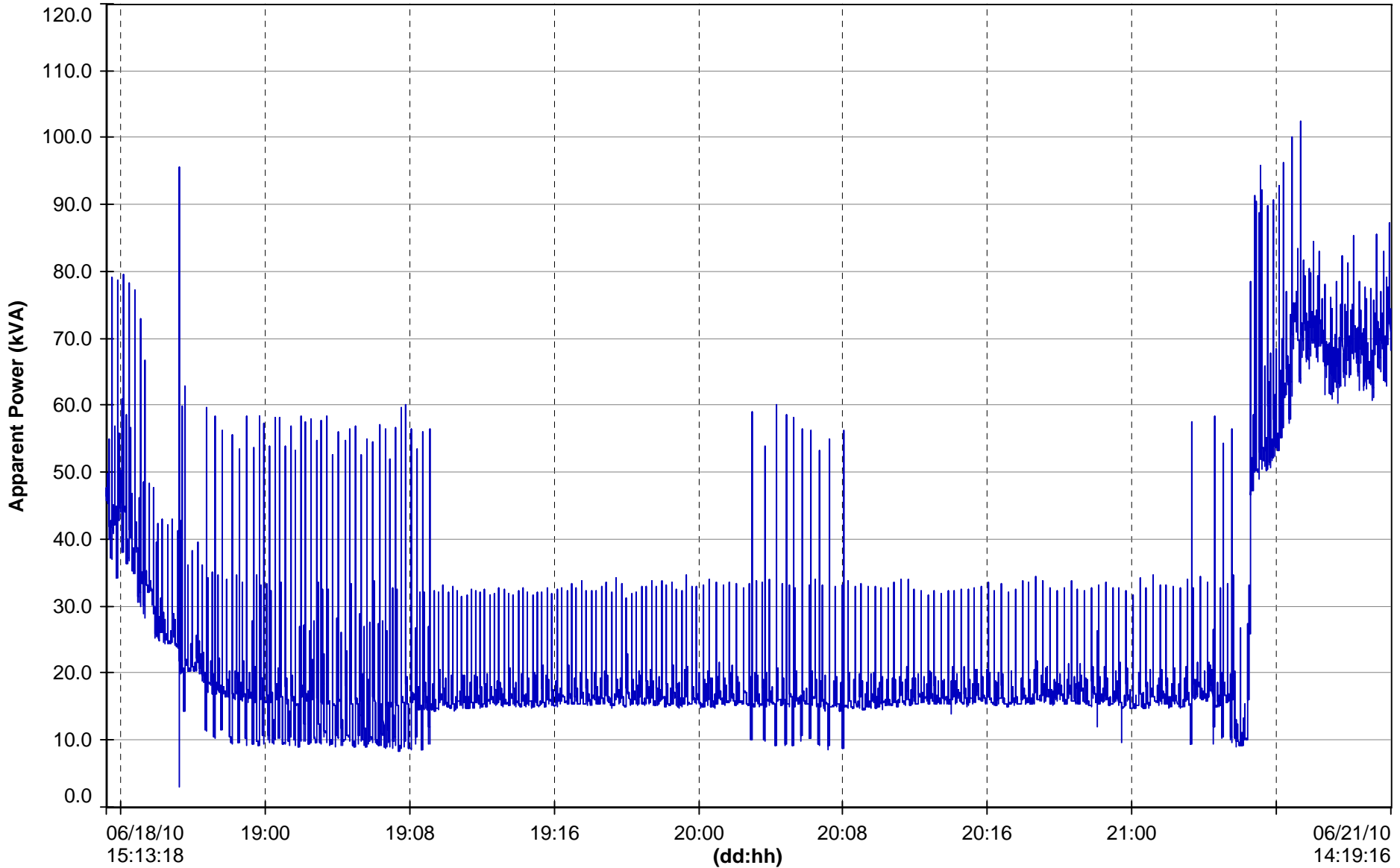
### Main Service Line Current



	Maximum	Minimum	Average
— la	301	14	63
— lb	308	13	60
— lc	310	12	58

### Barclay Early Childhood Center

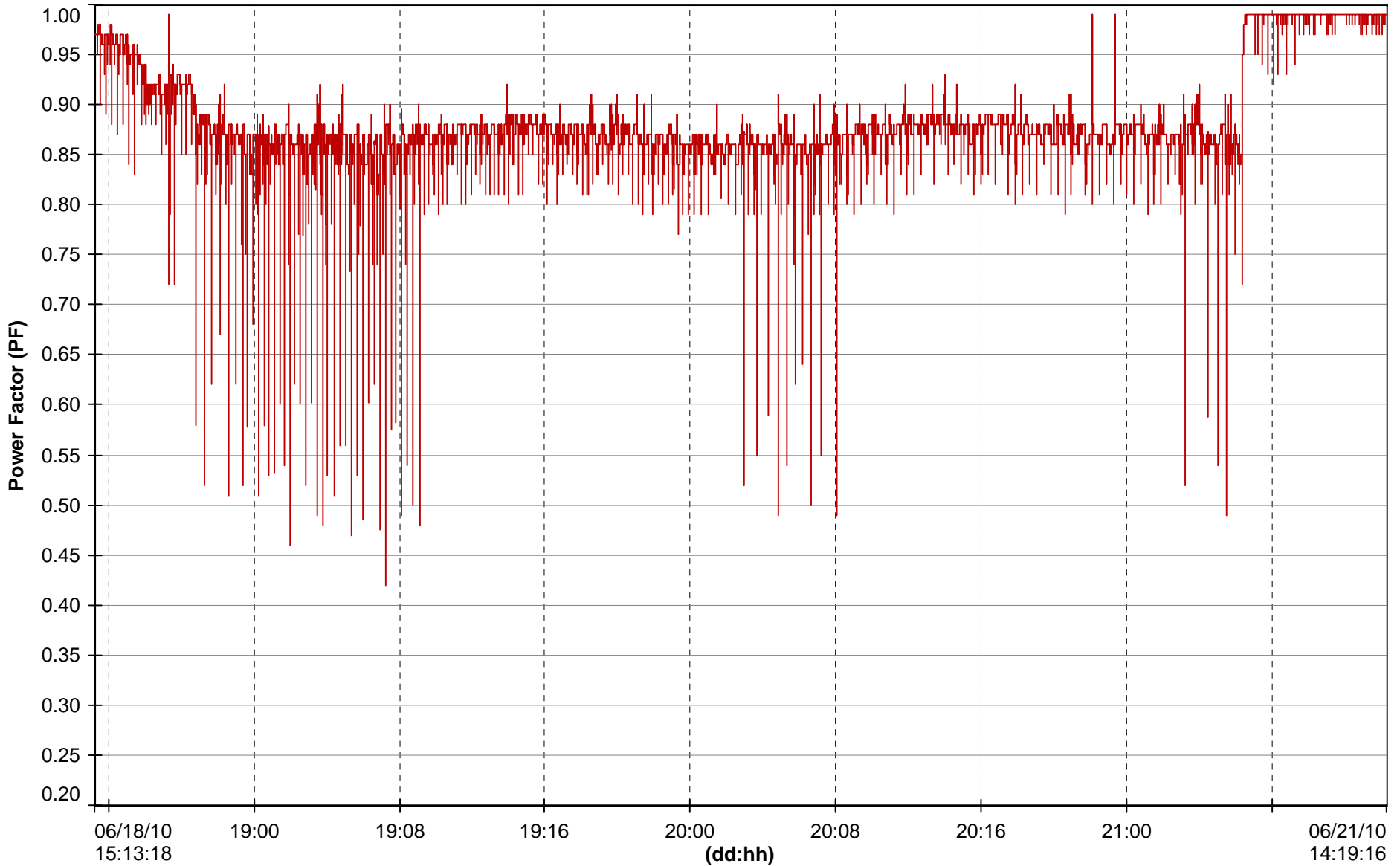
### Main Service Apparent Power



	Maximum	Minimum	Average
— kVA 3ø 4 wire	102.4	2.4	21.8

### Barclay Early Childhood Center

### Main Service Power Factor



	Maximum	Minimum	Average
PF	1.00	0.42	0.88

### Barclay Early Childhood Center

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 15:28	119.7	119.9	121.0	130	138	98	43.8	0.97
6/18/10 15:43	119.7	119.9	120.8	127	125	95	41.5	0.97
6/18/10 15:58	119.7	120.1	121.0	121	122	87	39.7	0.97
6/18/10 16:13	119.8	119.9	120.7	123	133	96	42.1	0.97
6/18/10 16:28	119.8	120.1	120.9	122	131	90	41.2	0.96
6/18/10 16:43	120.7	120.6	121.2	113	133	88	40.2	0.96
6/18/10 16:58	120.6	120.7	121.4	109	123	88	38.7	0.96
6/18/10 17:13	120.9	121.0	121.4	93	102	78	33.0	0.95
6/18/10 17:28	120.9	121.0	121.5	89	106	72	32.2	0.95
6/18/10 17:43	121.3	121.4	121.5	94	102	79	33.3	0.95
6/18/10 17:58	121.4	121.9	121.7	80	89	75	29.6	0.93
6/18/10 18:13	122.0	122.5	122.2	68	77	67	26.0	0.91
6/18/10 18:28	122.4	122.8	122.6	71	76	68	26.2	0.91
6/18/10 18:43	122.8	123.1	122.7	66	76	62	25.0	0.91
6/18/10 18:58	122.7	123.1	122.7	68	75	65	25.5	0.91
6/18/10 19:13	123.1	123.5	122.7	67	73	61	24.8	0.91
6/18/10 19:28	123.6	123.1	122.2	59	67	53	22.0	0.92
6/18/10 19:43	123.5	122.0	122.4	55	57	46	19.3	0.92
6/18/10 19:58	123.8	122.5	122.9	55	62	53	20.8	0.92
6/18/10 20:13	123.8	122.7	122.7	54	62	54	20.9	0.92
6/18/10 20:28	123.7	122.7	122.8	61	64	52	21.8	0.91
6/18/10 20:43	123.3	122.8	122.4	53	58	50	19.7	0.91
6/18/10 20:58	123.4	124.0	122.8	43	47	43	16.4	0.88
6/18/10 21:13	123.6	124.4	123.0	43	48	48	17.0	0.88
6/18/10 21:28	124.0	124.6	123.1	42	45	46	16.5	0.88
6/18/10 21:43	123.8	124.5	123.3	45	43	41	15.9	0.87
6/18/10 21:58	124.3	124.7	123.4	45	43	50	17.1	0.87
6/18/10 22:13	124.2	124.4	123.4	40	36	41	14.5	0.86
6/18/10 22:28	123.5	123.7	122.8	47	42	47	16.8	0.87
6/18/10 22:43	123.8	124.0	123.4	40	36	40	14.2	0.87
6/18/10 22:58	124.3	124.1	123.8	45	39	41	15.4	0.86
6/18/10 23:13	124.4	124.4	123.9	42	41	42	15.6	0.86
6/18/10 23:28	124.7	124.8	124.3	40	37	36	14.1	0.86
6/18/10 23:43	124.6	124.8	124.3	42	36	40	14.6	0.85
6/18/10 23:58	124.7	124.8	124.3	38	34	41	14.2	0.85
6/19/10 0:13	124.7	125.0	124.4	46	37	40	15.4	0.86
6/19/10 0:28	124.1	124.1	123.8	40	35	41	14.3	0.86
6/19/10 0:43	124.2	124.3	124.0	38	35	39	13.9	0.85
6/19/10 0:58	123.8	123.9	123.7	43	35	38	14.3	0.85
6/19/10 1:13	122.8	122.8	122.6	36	33	34	12.7	0.86
6/19/10 1:28	122.9	122.9	122.5	39	33	34	12.9	0.85
6/19/10 1:43	123.0	123.1	122.8	38	33	37	13.1	0.85
6/19/10 1:58	123.2	123.5	123.1	37	35	35	13.1	0.87
6/19/10 2:13	123.4	123.6	123.4	41	35	34	13.5	0.85
6/19/10 2:28	123.4	123.7	123.4	38	36	38	13.8	0.86
6/19/10 2:43	123.7	123.8	123.7	40	37	37	13.9	0.85
6/19/10 2:58	124.0	124.0	123.8	38	36	35	13.4	0.86
6/19/10 3:13	124.2	124.2	124.0	34	32	30	12.0	0.85
6/19/10 3:28	124.1	124.1	123.9	37	30	33	12.4	0.84
6/19/10 3:43	124.3	124.1	124.1	35	33	35	12.7	0.86

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/19/10 3:58	124.4	124.3	124.2	38	32	32	12.7	0.86
6/19/10 4:13	124.5	124.3	124.2	39	33	40	14.0	0.85
6/19/10 4:28	124.2	124.1	123.9	32	26	31	11.0	0.85
6/19/10 4:43	124.2	124.1	123.9	39	28	32	12.3	0.84
6/19/10 4:58	124.1	124.0	123.8	35	30	33	12.2	0.86
6/19/10 5:13	124.2	124.0	123.9	37	30	36	12.7	0.85
6/19/10 5:28	124.5	124.2	124.1	39	31	36	13.2	0.84
6/19/10 5:43	124.6	124.4	124.2	32	27	28	10.9	0.86
6/19/10 5:58	124.6	124.6	124.1	35	27	30	11.4	0.84
6/19/10 6:13	124.6	124.5	124.0	36	34	35	13.0	0.85
6/19/10 6:28	124.5	124.4	123.9	36	32	31	12.2	0.85
6/19/10 6:43	124.3	124.2	123.8	36	29	28	11.5	0.83
6/19/10 6:58	124.3	124.0	123.7	33	28	28	11.0	0.84
6/19/10 7:13	123.9	123.8	123.3	39	30	31	12.3	0.84
6/19/10 7:28	123.7	123.6	123.0	38	33	32	12.6	0.86
6/19/10 7:43	123.3	123.5	122.7	37	35	34	13.0	0.86
6/19/10 7:58	123.0	123.1	122.4	41	33	35	13.3	0.84
6/19/10 8:13	122.4	122.6	122.0	36	33	31	12.2	0.86
6/19/10 8:28	123.3	123.4	122.6	41	35	38	13.9	0.84
6/19/10 8:43	123.1	123.2	122.4	43	36	39	14.4	0.85
6/19/10 8:58	122.9	123.2	122.2	39	35	40	13.9	0.86
6/19/10 9:13	122.4	122.5	121.8	42	34	35	13.6	0.85
6/19/10 9:28	122.2	122.1	121.5	42	39	43	15.1	0.87
6/19/10 9:43	122.0	122.0	121.2	42	41	46	15.6	0.86
6/19/10 9:58	121.8	122.0	121.2	46	43	43	15.9	0.86
6/19/10 10:13	121.6	122.0	121.0	44	42	44	15.6	0.86
6/19/10 10:28	121.4	121.9	120.8	47	41	42	15.8	0.86
6/19/10 10:43	121.3	121.9	120.9	43	41	42	15.2	0.87
6/19/10 10:58	121.5	121.9	120.9	44	41	44	15.6	0.87
6/19/10 11:13	121.3	121.6	120.6	48	41	43	15.9	0.87
6/19/10 11:28	121.3	121.5	120.5	42	42	44	15.4	0.87
6/19/10 11:43	121.5	121.7	120.5	45	41	42	15.6	0.87
6/19/10 11:58	121.3	121.2	120.4	46	42	44	15.8	0.87
6/19/10 12:13	121.2	121.2	120.3	43	43	44	15.8	0.87
6/19/10 12:28	120.9	121.1	120.1	48	43	41	15.8	0.87
6/19/10 12:43	120.9	120.8	119.4	44	43	47	16.0	0.87
6/19/10 12:58	121.2	121.3	120.1	44	42	46	15.9	0.87
6/19/10 13:13	121.0	121.1	120.1	47	43	42	15.9	0.87
6/19/10 13:28	120.8	120.9	119.6	45	43	46	16.1	0.87
6/19/10 13:43	120.6	120.8	119.6	47	44	45	16.3	0.87
6/19/10 13:58	120.7	121.1	119.7	44	43	44	15.7	0.88
6/19/10 14:13	120.4	120.6	119.6	45	42	44	15.6	0.88
6/19/10 14:28	120.4	120.9	119.8	49	42	43	16.1	0.87
6/19/10 14:43	120.6	121.2	120.0	44	42	45	15.8	0.87
6/19/10 14:58	120.4	120.9	119.6	47	42	41	15.6	0.88
6/19/10 15:13	120.3	120.9	119.5	47	42	44	15.9	0.88
6/19/10 15:28	121.0	121.7	120.3	44	41	46	15.8	0.88
6/19/10 15:43	120.8	121.6	119.9	49	42	42	16.0	0.87
6/19/10 15:58	120.6	121.4	119.8	44	42	45	15.8	0.88
6/19/10 16:13	120.9	121.9	119.9	44	43	43	15.7	0.88

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/19/10 16:28	120.9	121.9	119.8	48	45	43	16.3	0.87
6/19/10 16:43	121.1	121.8	119.7	44	45	45	16.2	0.87
6/19/10 16:58	120.9	121.7	119.5	47	45	45	16.5	0.87
6/19/10 17:13	121.1	121.6	119.7	45	45	45	16.2	0.87
6/19/10 17:28	121.4	121.8	120.0	45	43	43	15.8	0.87
6/19/10 17:43	121.2	122.1	120.0	48	43	46	16.6	0.87
6/19/10 17:58	121.6	122.3	119.8	43	43	45	15.8	0.87
6/19/10 18:13	121.7	122.4	120.1	47	43	41	15.9	0.87
6/19/10 18:28	121.8	122.8	120.3	45	43	46	16.2	0.87
6/19/10 18:43	122.1	122.9	120.7	43	46	44	16.2	0.87
6/19/10 18:58	122.1	122.9	120.9	49	46	42	16.6	0.86
6/19/10 19:13	122.1	123.0	120.6	43	46	43	16.1	0.87
6/19/10 19:28	122.7	123.7	121.6	44	44	42	15.9	0.87
6/19/10 19:43	122.7	123.5	121.4	47	43	44	16.4	0.86
6/19/10 19:58	123.1	123.7	121.7	43	44	44	15.9	0.87
6/19/10 20:13	123.1	123.7	122.0	47	43	45	16.5	0.86
6/19/10 20:28	122.7	123.2	121.4	43	43	43	15.8	0.87
6/19/10 20:43	122.6	123.1	121.5	44	42	45	15.9	0.87
6/19/10 20:58	122.5	122.9	121.4	46	42	48	16.5	0.86
6/19/10 21:13	122.6	123.2	121.8	43	43	46	16.0	0.87
6/19/10 21:28	123.0	123.4	121.9	47	42	46	16.5	0.86
6/19/10 21:43	123.3	123.7	122.3	42	41	47	15.9	0.86
6/19/10 21:58	123.6	124.1	122.5	42	41	46	15.8	0.86
6/19/10 22:13	123.5	123.9	122.4	47	40	44	16.0	0.86
6/19/10 22:28	123.6	124.0	122.6	42	41	45	15.8	0.86
6/19/10 22:43	123.5	123.8	122.7	46	41	48	16.5	0.85
6/19/10 22:58	123.3	123.5	122.3	44	41	43	15.6	0.86
6/19/10 23:13	123.4	123.7	122.4	42	42	44	15.7	0.86
6/19/10 23:28	123.8	124.1	123.0	47	43	45	16.7	0.85
6/19/10 23:43	123.8	124.3	123.2	43	43	43	15.9	0.85
6/19/10 23:58	123.6	124.1	123.1	44	42	46	16.2	0.85
6/20/10 0:13	123.6	124.3	123.3	43	41	43	15.6	0.86
6/20/10 0:28	124.0	124.4	123.5	43	40	44	15.8	0.86
6/20/10 0:43	124.1	124.5	123.5	46	40	43	16.1	0.86
6/20/10 0:58	124.2	124.6	123.9	41	40	44	15.4	0.86
6/20/10 1:13	124.2	124.7	123.8	44	40	47	16.3	0.85
6/20/10 1:28	124.5	124.9	124.2	46	40	44	16.1	0.85
6/20/10 1:43	124.3	124.8	124.0	41	41	47	16.0	0.86
6/20/10 1:58	124.3	124.8	124.1	47	41	46	16.6	0.85
6/20/10 2:13	124.3	124.6	124.0	43	41	44	15.9	0.86
6/20/10 2:28	124.6	124.8	124.2	41	41	46	16.0	0.86
6/20/10 2:43	124.2	124.7	123.9	47	40	47	16.6	0.85
6/20/10 2:58	124.2	124.7	124.0	39	36	41	14.4	0.85
6/20/10 3:13	124.4	124.7	124.1	44	39	41	15.3	0.86
6/20/10 3:28	124.4	124.6	124.0	44	38	44	15.6	0.86
6/20/10 3:43	124.7	124.7	124.1	38	33	41	13.9	0.85
6/20/10 3:58	124.8	125.0	124.3	47	40	42	16.0	0.86
6/20/10 4:13	124.4	124.6	123.9	42	38	45	15.5	0.86
6/20/10 4:28	124.5	124.5	124.0	40	35	40	14.3	0.85
6/20/10 4:43	124.4	124.7	124.2	45	40	44	16.0	0.86

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/20/10 4:58	124.5	124.7	124.1	37	33	38	13.5	0.86
6/20/10 5:13	124.7	124.6	124.2	47	40	44	16.3	0.85
6/20/10 5:28	124.7	124.7	124.2	38	35	38	13.7	0.86
6/20/10 5:43	123.8	123.7	123.1	41	37	45	15.1	0.86
6/20/10 5:58	123.9	123.9	123.1	43	38	43	15.2	0.84
6/20/10 6:13	123.8	123.8	123.1	38	37	41	14.3	0.85
6/20/10 6:28	123.6	123.7	123.2	45	41	42	15.8	0.85
6/20/10 6:43	123.7	123.6	123.0	40	37	38	14.1	0.84
6/20/10 6:58	123.2	123.3	122.8	42	40	45	15.7	0.85
6/20/10 7:13	123.3	123.4	122.7	42	34	35	13.6	0.85
6/20/10 7:28	122.8	122.7	122.3	43	40	42	15.2	0.86
6/20/10 7:43	122.6	122.7	122.1	45	40	43	15.6	0.86
6/20/10 7:58	122.8	122.9	122.0	44	40	41	15.3	0.86
6/20/10 8:13	123.2	123.1	122.2	39	34	34	13.1	0.86
6/20/10 8:28	123.0	122.7	121.9	47	41	44	16.1	0.86
6/20/10 8:43	122.3	122.2	121.4	42	42	44	15.5	0.86
6/20/10 8:58	122.2	121.9	121.1	45	41	40	15.3	0.87
6/20/10 9:13	121.8	121.8	120.7	46	42	41	15.6	0.87
6/20/10 9:28	121.3	121.3	120.4	43	41	45	15.6	0.87
6/20/10 9:43	121.7	121.9	120.8	48	41	41	15.7	0.87
6/20/10 9:58	121.4	122.0	120.8	43	41	43	15.4	0.87
6/20/10 10:13	121.0	121.2	120.3	43	40	45	15.5	0.87
6/20/10 10:28	121.2	121.7	120.6	47	40	43	15.8	0.87
6/20/10 10:43	121.2	121.7	120.7	43	41	45	15.7	0.87
6/20/10 10:58	120.8	121.2	119.7	47	42	44	16.0	0.87
6/20/10 11:13	121.4	121.9	120.5	45	43	44	15.9	0.87
6/20/10 11:28	121.4	122.1	120.3	44	44	45	16.1	0.87
6/20/10 11:43	121.3	121.7	120.1	48	45	44	16.6	0.87
6/20/10 11:58	120.7	121.2	119.8	44	45	44	16.1	0.88
6/20/10 12:13	120.4	121.1	119.3	47	45	43	16.1	0.88
6/20/10 12:28	120.6	120.8	119.1	46	46	43	16.3	0.87
6/20/10 12:43	120.3	120.4	118.9	45	46	47	16.4	0.87
6/20/10 12:58	120.1	120.2	118.5	49	45	42	16.2	0.88
6/20/10 13:13	120.1	120.4	118.8	44	46	43	15.9	0.88
6/20/10 13:28	119.8	120.2	118.1	46	46	45	16.4	0.88
6/20/10 13:43	119.8	120.3	118.4	48	44	44	16.2	0.88
6/20/10 13:58	119.7	120.1	119.4	43	45	44	15.8	0.88
6/20/10 14:13	120.8	120.9	120.6	49	45	45	16.7	0.88
6/20/10 14:28	120.6	120.7	120.3	44	44	47	16.2	0.88
6/20/10 14:43	120.8	120.9	120.5	45	44	45	16.2	0.88
6/20/10 14:58	120.9	121.0	120.5	48	44	45	16.5	0.87
6/20/10 15:13	121.1	121.3	121.0	44	43	45	15.9	0.88
6/20/10 15:28	120.9	120.9	120.7	48	45	45	16.7	0.87
6/20/10 15:43	120.9	120.8	120.5	45	46	47	16.6	0.87
6/20/10 15:58	120.8	121.0	120.7	44	44	45	16.0	0.88
6/20/10 16:13	120.6	121.1	120.4	49	45	44	16.6	0.87
6/20/10 16:28	120.4	120.8	120.1	44	44	44	15.8	0.89
6/20/10 16:43	120.3	120.6	119.8	46	42	44	15.9	0.89
6/20/10 16:58	120.0	120.6	119.8	47	43	47	16.4	0.88
6/20/10 17:13	120.3	120.7	119.9	44	44	43	15.6	0.89

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/20/10 17:28	120.2	120.9	120.1	48	41	42	15.7	0.88
6/20/10 17:43	120.6	121.2	120.1	44	44	46	16.2	0.88
6/20/10 17:58	121.0	121.3	120.3	44	46	43	16.1	0.88
6/20/10 18:13	121.0	121.6	120.3	46	44	43	16.0	0.87
6/20/10 18:28	121.2	121.6	120.4	44	45	45	16.2	0.87
6/20/10 18:43	121.5	121.7	120.9	48	48	44	16.9	0.87
6/20/10 18:58	121.6	122.2	120.8	42	46	44	16.0	0.87
6/20/10 19:13	121.5	122.1	121.1	44	47	45	16.5	0.87
6/20/10 19:28	121.5	122.2	121.4	47	46	45	16.7	0.86
6/20/10 19:43	122.2	122.6	121.6	43	43	44	15.8	0.87
6/20/10 19:58	122.4	123.0	121.7	47	45	47	17.0	0.86
6/20/10 20:13	122.5	123.0	122.0	43	45	48	16.5	0.86
6/20/10 20:28	122.7	122.9	122.0	42	45	44	16.0	0.87
6/20/10 20:43	122.3	122.5	121.7	48	45	46	17.0	0.86
6/20/10 20:58	121.8	122.2	121.6	41	44	46	16.0	0.88
6/20/10 21:13	121.9	122.3	121.6	44	43	47	16.4	0.87
6/20/10 21:28	121.9	122.6	122.0	45	44	46	16.5	0.87
6/20/10 21:43	122.4	123.2	122.6	41	42	44	15.5	0.88
6/20/10 21:58	122.7	123.6	123.1	46	42	47	16.6	0.86
6/20/10 22:13	122.8	122.5	122.9	43	43	44	15.9	0.87
6/20/10 22:28	122.5	121.0	122.6	44	42	46	16.0	0.87
6/20/10 22:43	122.6	121.0	122.8	47	43	47	16.6	0.86
6/20/10 22:58	123.0	121.5	123.3	43	43	42	15.6	0.87
6/20/10 23:13	123.2	122.0	123.0	46	41	46	16.3	0.86
6/20/10 23:28	122.5	121.5	122.4	42	41	47	15.8	0.87
6/20/10 23:43	122.5	122.0	122.4	41	41	44	15.5	0.87
6/20/10 23:58	121.3	120.7	122.0	46	40	46	15.9	0.87
6/21/10 0:13	121.8	120.9	122.3	41	40	46	15.4	0.87
6/21/10 0:28	122.2	121.2	123.3	44	41	47	16.1	0.87
6/21/10 0:43	121.9	120.7	123.1	43	40	44	15.4	0.88
6/21/10 0:58	121.6	120.4	122.8	41	41	45	15.4	0.87
6/21/10 1:13	121.9	120.8	123.2	46	45	46	16.7	0.86
6/21/10 1:28	122.4	121.4	123.2	42	43	46	15.9	0.87
6/21/10 1:43	122.0	121.3	122.5	42	44	46	16.1	0.86
6/21/10 1:58	122.3	121.7	123.3	44	44	45	16.2	0.86
6/21/10 2:13	123.0	122.1	123.7	42	40	41	15.0	0.87
6/21/10 2:28	123.2	122.4	123.7	46	41	47	16.3	0.86
6/21/10 2:43	123.2	122.2	123.9	41	41	46	15.7	0.86
6/21/10 2:58	123.3	122.5	124.2	42	40	42	15.2	0.87
6/21/10 3:13	123.3	122.3	124.4	45	40	44	15.8	0.86
6/21/10 3:28	122.9	121.7	123.6	41	41	42	15.1	0.87
6/21/10 3:43	122.5	121.6	123.4	48	44	47	16.9	0.87
6/21/10 3:58	122.9	121.6	123.5	47	45	46	16.9	0.87
6/21/10 4:13	123.0	121.9	123.8	45	43	49	16.7	0.87
6/21/10 4:28	123.0	122.1	124.0	49	43	48	17.2	0.86
6/21/10 4:43	123.3	122.2	124.0	38	37	38	13.8	0.86
6/21/10 4:58	123.2	122.2	124.4	41	40	45	15.6	0.86
6/21/10 5:13	122.3	121.3	123.6	44	37	41	14.8	0.86
6/21/10 5:28	122.7	121.6	123.6	43	41	43	15.5	0.87
6/21/10 5:43	123.0	122.0	123.5	42	36	39	14.4	0.86

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/21/10 5:58	123.1	122.0	123.2	30	24	25	9.6	0.86
6/21/10 6:13	122.4	121.8	122.0	29	25	26	9.8	0.85
6/21/10 6:28	122.2	121.4	121.6	37	31	33	12.2	0.88
6/21/10 6:43	121.9	121.4	121.5	117	103	112	40.4	0.99
6/21/10 6:58	121.4	121.1	121.1	161	122	135	50.6	0.99
6/21/10 7:13	120.7	119.9	120.4	172	135	138	53.5	0.99
6/21/10 7:28	119.8	119.4	119.9	169	134	132	51.8	0.99
6/21/10 7:43	119.4	118.4	120.3	176	146	136	54.7	0.99
6/21/10 7:58	119.5	117.8	119.9	171	153	138	55.0	0.99
6/21/10 8:13	118.9	117.4	119.8	171	160	144	56.2	0.99
6/21/10 8:28	118.5	117.1	119.3	178	171	154	59.5	0.99
6/21/10 8:43	118.6	117.2	119.4	187	184	164	63.3	0.99
6/21/10 8:58	119.4	117.9	119.9	204	184	164	65.7	0.99
6/21/10 9:13	118.7	117.0	119.6	219	202	194	72.8	0.99
6/21/10 9:28	118.6	116.4	119.5	203	191	179	67.6	0.99
6/21/10 9:43	117.9	116.3	119.2	215	197	189	70.7	0.99
6/21/10 9:58	118.7	116.7	119.3	209	188	188	69.1	0.99
6/21/10 10:13	119.2	117.3	120.3	214	191	185	70.1	0.99
6/21/10 10:28	119.3	117.1	119.4	212	190	183	69.2	0.99
6/21/10 10:43	118.7	116.3	118.5	207	188	178	67.6	0.99
6/21/10 10:58	118.7	115.9	118.8	205	188	161	65.1	0.99
6/21/10 11:13	119.4	116.9	118.9	196	183	161	64.0	0.99
6/21/10 11:28	119.3	116.9	119.1	194	181	165	64.0	0.99
6/21/10 11:43	118.7	116.4	118.5	210	193	169	67.3	0.99
6/21/10 11:58	118.9	115.7	119.7	202	192	162	65.5	0.99
6/21/10 12:13	118.2	115.2	119.2	211	197	167	67.4	0.99
6/21/10 12:28	118.1	114.9	118.2	209	201	176	68.5	0.99
6/21/10 12:43	118.3	114.8	118.2	199	195	174	66.5	0.99
6/21/10 12:58	117.7	114.2	118.0	205	198	164	66.0	0.99
6/21/10 13:13	117.7	114.4	117.4	199	199	155	64.4	0.99
6/21/10 13:28	118.0	116.9	119.8	193	196	156	64.3	0.99
6/21/10 13:43	118.1	117.6	120.5	203	203	173	68.6	0.99
6/21/10 13:58	117.9	117.3	120.3	196	202	179	68.3	0.99
6/21/10 14:13	118.0	117.1	120.3	189	201	176	66.9	0.99
6/21/10 14:19	118.1	117.2	119.8	199	215	193	71.8	0.99

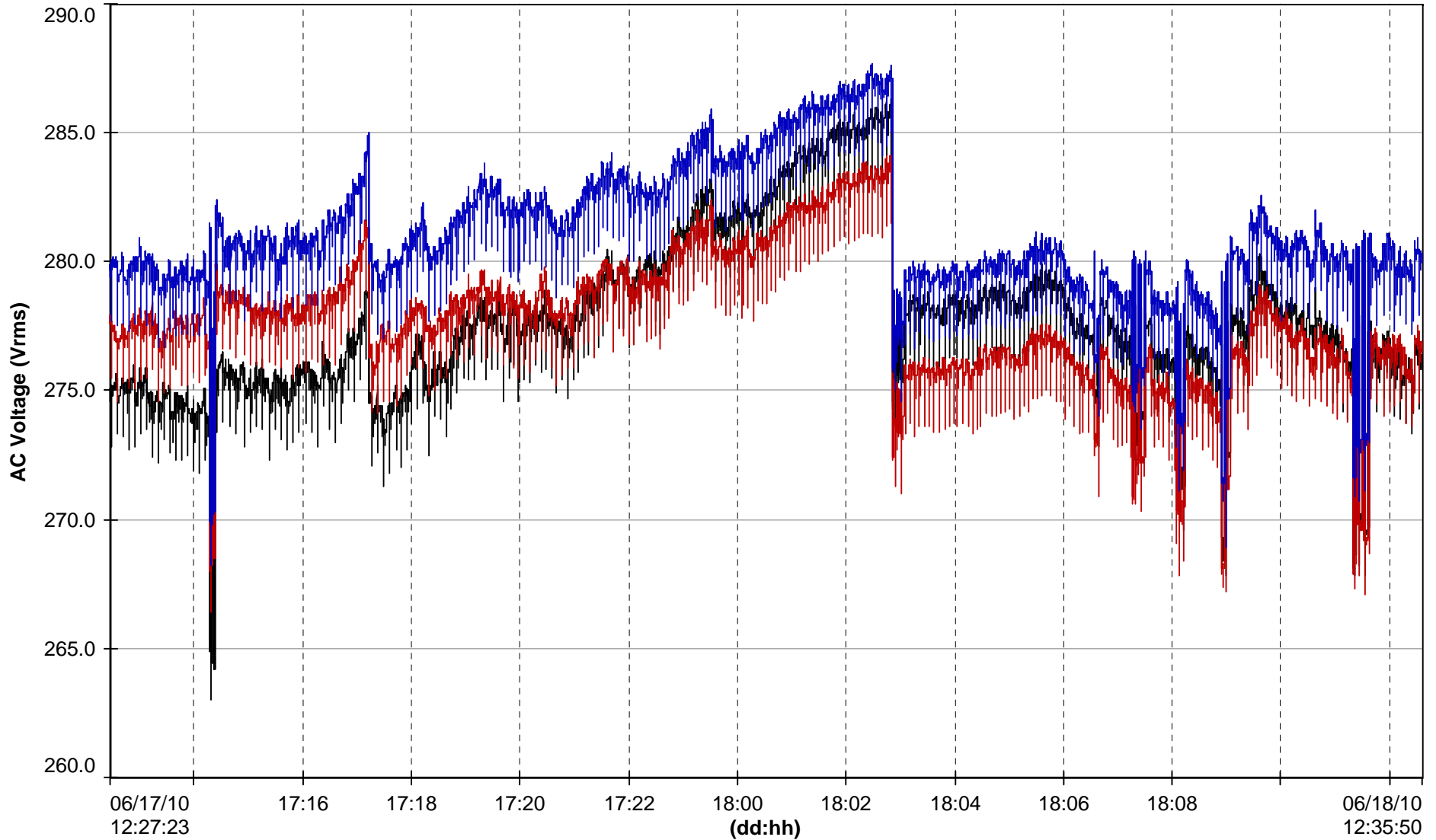


# Henry C. Beck Middle School

*Electrical Load Study*  
*June 17 – 18, 2010*

Cherry Hill School District

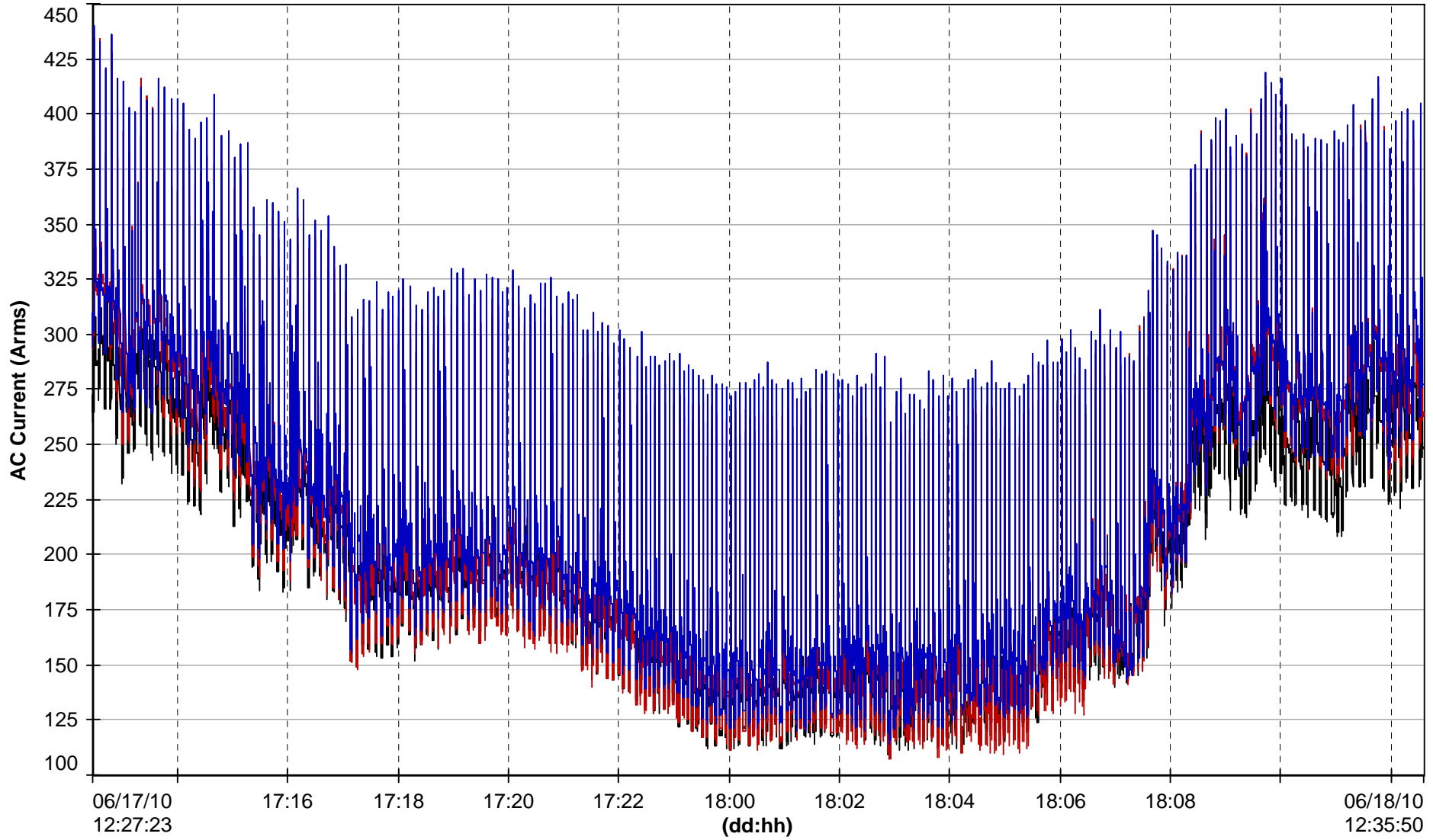
### Main Service Phase Voltage



	Maximum	Minimum	Average
— Va	286.5	262.9	277.8
— Vb	284.3	266.2	277.8
— Vc	287.8	268.1	281.1

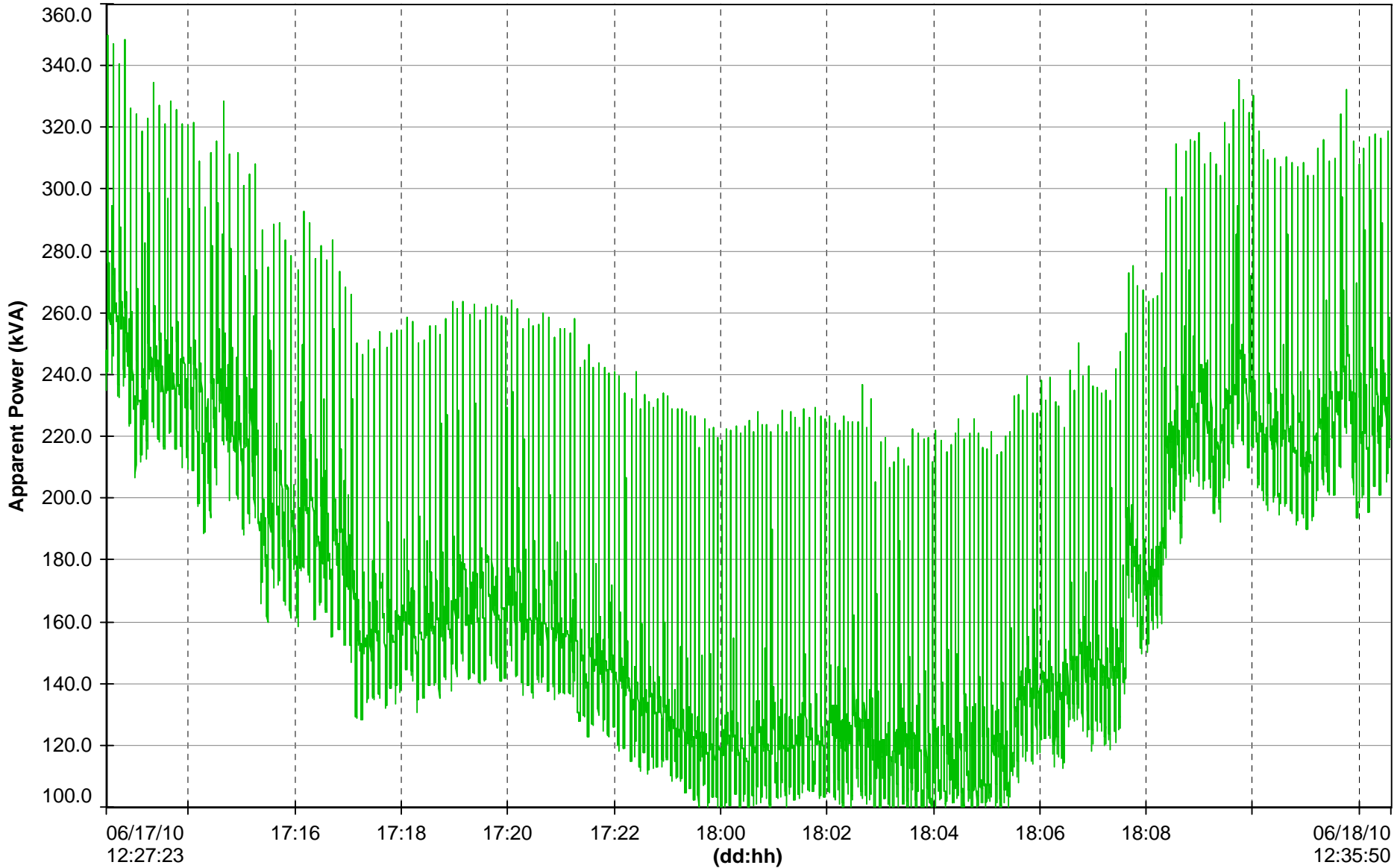
### Henry C. Beck Middle School

### Main Service Line Current



### Henry C. Beck Middle School

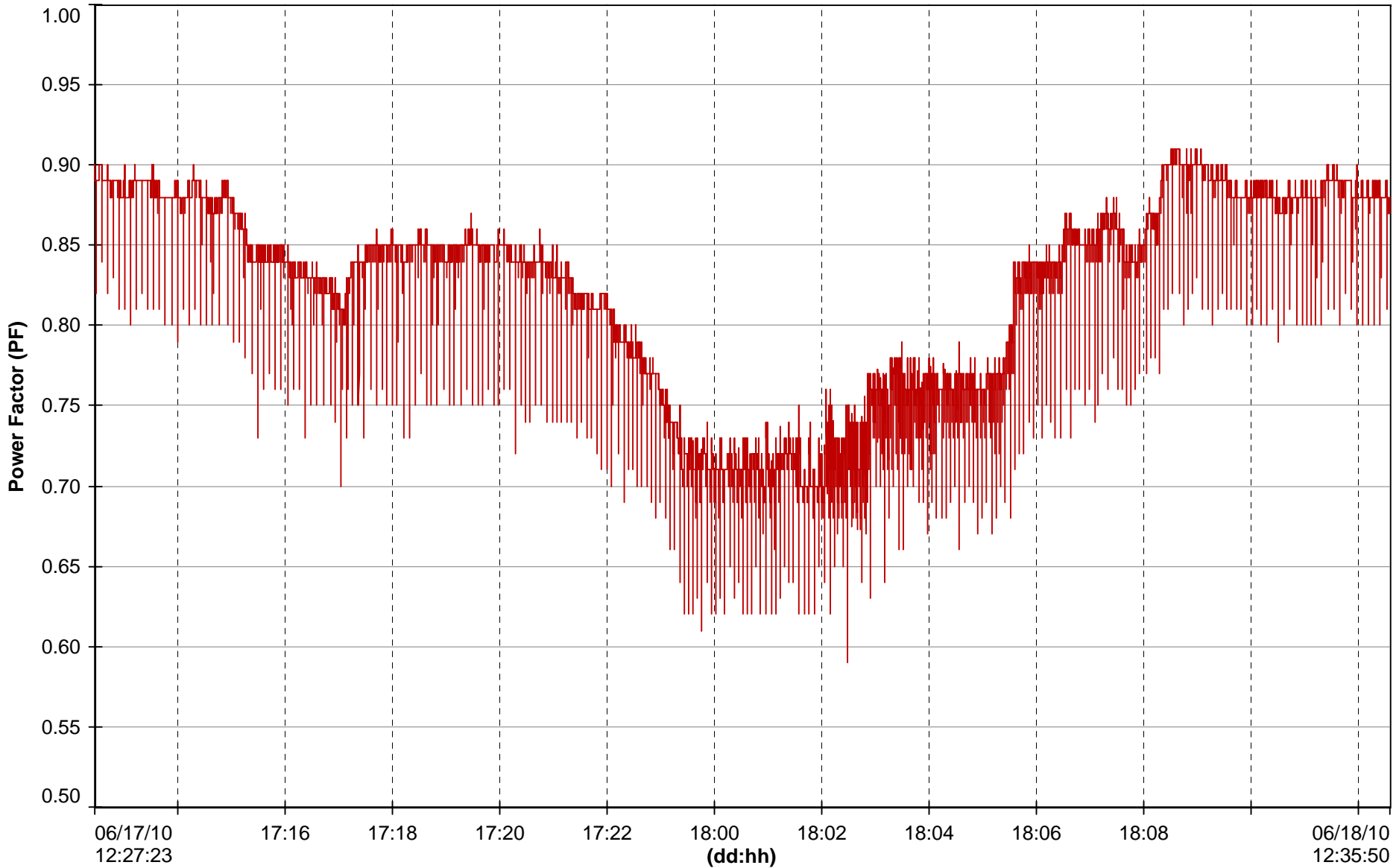
### Main Service Apparent Power



	Maximum	Minimum	Average
kVA	354.5	90.4	165.4

### Henry C. Beck Middle School

### Main Service Power Factor



	Maximum	Minimum	Average
PF	0.92	0.59	0.82

### Barclay Early Childhood Center

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 12:42	275.1	277.2	279.8	289	321	319	257.8	0.89
6/17/10 12:57	275.1	277.3	279.6	286	311	316	253.1	0.89
6/17/10 13:12	275.2	277.7	280.1	263	277	290	230.5	0.88
6/17/10 13:27	274.5	277.2	279.4	275	295	294	239.3	0.89
6/17/10 13:42	274.5	277.3	279.3	274	295	298	239.9	0.88
6/17/10 13:57	274.4	277.5	279.5	266	285	295	234.6	0.88
6/17/10 14:12	274.2	277.8	279.5	258	277	285	227.4	0.88
6/17/10 14:27	270.6	274.0	276.2	247	261	278	215.3	0.89
6/17/10 14:42	275.9	278.7	280.9	263	277	289	230.7	0.88
6/17/10 14:57	275.5	278.6	280.7	252	262	273	219.0	0.88
6/17/10 15:12	275.3	278.2	280.6	243	258	270	214.3	0.87
6/17/10 15:27	275.3	278.1	280.8	231	237	248	199.2	0.85
6/17/10 15:42	275.4	278.1	280.3	218	229	235	189.6	0.84
6/17/10 15:57	275.2	278.2	281.0	215	224	233	186.8	0.84
6/17/10 16:12	275.7	278.3	280.7	215	220	233	185.7	0.84
6/17/10 16:27	275.6	278.3	280.8	222	230	239	192.1	0.83
6/17/10 16:42	275.5	278.7	281.6	208	214	224	180.0	0.83
6/17/10 16:57	276.5	279.3	282.1	207	212	221	178.6	0.82
6/17/10 17:12	277.7	280.5	283.2	193	198	204	166.6	0.82
6/17/10 17:27	274.8	276.8	280.2	179	177	191	151.6	0.84
6/17/10 17:42	274.1	277.0	279.6	180	185	197	155.5	0.84
6/17/10 17:57	274.7	277.2	280.1	175	183	190	152.1	0.85
6/17/10 18:12	276.3	278.2	281.1	182	185	198	157.2	0.85
6/17/10 18:27	275.5	277.5	280.6	182	184	193	155.3	0.85
6/17/10 18:42	275.7	277.7	280.6	186	189	200	159.7	0.85
6/17/10 18:57	276.9	278.4	281.6	182	182	195	155.9	0.85
6/17/10 19:12	277.6	278.7	282.2	191	194	209	166.1	0.84
6/17/10 19:27	278.0	279.0	282.9	190	188	197	161.0	0.85
6/17/10 19:42	277.8	278.7	282.7	190	186	200	161.2	0.85
6/17/10 19:57	277.7	278.5	282.0	189	187	199	160.6	0.85
6/17/10 20:12	277.5	278.3	282.2	191	188	201	161.9	0.85
6/17/10 20:27	277.9	278.6	282.2	187	184	194	158.0	0.84
6/17/10 20:42	277.7	278.3	281.7	181	179	192	154.2	0.84
6/17/10 20:57	277.3	278.1	281.4	183	181	197	156.4	0.84
6/17/10 21:12	278.0	278.7	282.2	176	174	185	149.4	0.83
6/17/10 21:27	278.7	279.1	282.9	171	170	181	146.5	0.83
6/17/10 21:42	279.6	279.8	283.4	163	163	176	141.1	0.82
6/17/10 21:57	279.5	279.4	283.2	166	166	177	142.7	0.81
6/17/10 22:12	279.4	279.1	282.8	160	161	173	138.4	0.81
6/17/10 22:27	279.8	279.4	282.7	156	153	167	133.7	0.79
6/17/10 22:42	279.8	279.3	282.7	147	147	157	126.5	0.78
6/17/10 22:57	280.8	280.5	283.6	147	146	157	126.8	0.77
6/17/10 23:12	281.3	280.8	284.1	142	142	154	123.4	0.75
6/17/10 23:27	282.3	281.4	284.8	135	137	148	118.8	0.73
6/17/10 23:42	282.1	281.1	284.5	131	134	143	115.4	0.71
6/17/10 23:57	281.6	280.4	284.0	130	133	142	113.9	0.71
6/18/10 0:12	282.1	280.7	284.2	129	131	141	113.5	0.71
6/18/10 0:27	281.9	280.5	284.1	132	132	142	114.3	0.71
6/18/10 0:42	282.6	281.0	284.7	129	131	141	113.3	0.70
6/18/10 0:57	283.4	281.6	285.4	131	132	143	115.1	0.71

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 1:12	283.9	282.1	285.6	134	139	147	119.0	0.71
6/18/10 1:27	284.3	282.3	286.0	131	134	137	114.5	0.71
6/18/10 1:42	284.4	282.4	286.1	134	138	145	118.5	0.71
6/18/10 1:57	285.1	283.0	286.3	134	135	145	118.0	0.70
6/18/10 2:12	285.2	283.1	286.6	137	136	147	119.8	0.71
6/18/10 2:27	285.2	283.5	286.8	133	131	142	115.9	0.70
6/18/10 2:42	285.6	283.4	287.1	134	138	147	119.6	0.71
6/18/10 2:57	281.9	279.7	283.1	131	131	142	113.8	0.72
6/18/10 3:12	277.1	274.8	278.5	132	134	142	112.7	0.75
6/18/10 3:27	278.3	275.9	279.6	132	133	144	113.7	0.75
6/18/10 3:42	278.2	275.8	279.4	133	134	146	114.6	0.75
6/18/10 3:57	278.1	275.8	279.4	135	135	146	115.5	0.75
6/18/10 4:12	278.3	275.9	279.4	136	140	150	118.2	0.76
6/18/10 4:27	278.2	275.8	279.6	134	134	146	115.1	0.76
6/18/10 4:42	278.7	276.3	279.9	135	138	148	117.3	0.76
6/18/10 4:57	278.8	276.4	280.0	136	134	147	115.9	0.76
6/18/10 5:12	278.5	276.3	279.8	135	135	145	115.3	0.76
6/18/10 5:27	278.8	276.6	280.1	134	133	143	114.1	0.76
6/18/10 5:42	279.3	277.1	280.5	148	150	157	126.9	0.80
6/18/10 5:57	279.2	277.0	280.5	160	155	165	133.9	0.83
6/18/10 6:12	278.3	276.5	279.6	157	154	165	132.7	0.83
6/18/10 6:27	277.4	275.8	279.0	157	152	164	131.2	0.84
6/18/10 6:42	276.4	274.6	277.8	167	173	174	141.7	0.85
6/18/10 6:57	277.9	276.1	279.3	169	173	175	143.7	0.85
6/18/10 7:12	277.0	275.2	278.6	163	169	170	138.9	0.85
6/18/10 7:27	274.8	272.9	276.6	166	167	167	137.4	0.86
6/18/10 7:42	276.4	275.0	278.4	183	190	195	157.2	0.85
6/18/10 7:57	276.3	275.0	278.4	204	213	217	175.2	0.84
6/18/10 8:12	273.7	272.3	275.8	203	211	211	171.0	0.86
6/18/10 8:27	276.1	274.8	278.5	222	232	232	189.8	0.88
6/18/10 8:42	276.3	275.1	278.5	245	264	265	214.0	0.90
6/18/10 8:57	274.7	273.6	276.9	253	274	274	220.2	0.90
6/18/10 9:12	275.0	273.9	277.6	257	281	280	225.4	0.90
6/18/10 9:27	277.4	276.3	280.0	240	267	264	214.3	0.89
6/18/10 9:42	279.3	278.2	281.7	252	281	278	227.1	0.89
6/18/10 9:57	278.8	278.2	281.1	259	289	291	234.4	0.88
6/18/10 10:12	278.1	277.6	280.5	246	273	278	222.1	0.88
6/18/10 10:27	277.9	277.1	280.7	244	266	271	217.5	0.88
6/18/10 10:42	277.6	276.5	280.4	245	270	272	218.6	0.88
6/18/10 10:57	277.3	276.8	280.5	239	261	266	212.9	0.88
6/18/10 11:12	276.8	276.5	280.2	229	255	263	207.5	0.88
6/18/10 11:27	273.3	273.0	276.7	250	270	279	219.2	0.89
6/18/10 11:42	272.2	271.8	275.5	261	288	285	227.7	0.89
6/18/10 11:57	276.5	276.6	280.1	260	284	286	230.3	0.89
6/18/10 12:12	276.4	276.7	280.3	246	260	271	215.8	0.88
6/18/10 12:27	275.6	276.0	279.7	259	271	285	225.7	0.88
6/18/10 12:35	276.4	276.7	280.2	254	271	285	225.3	0.88

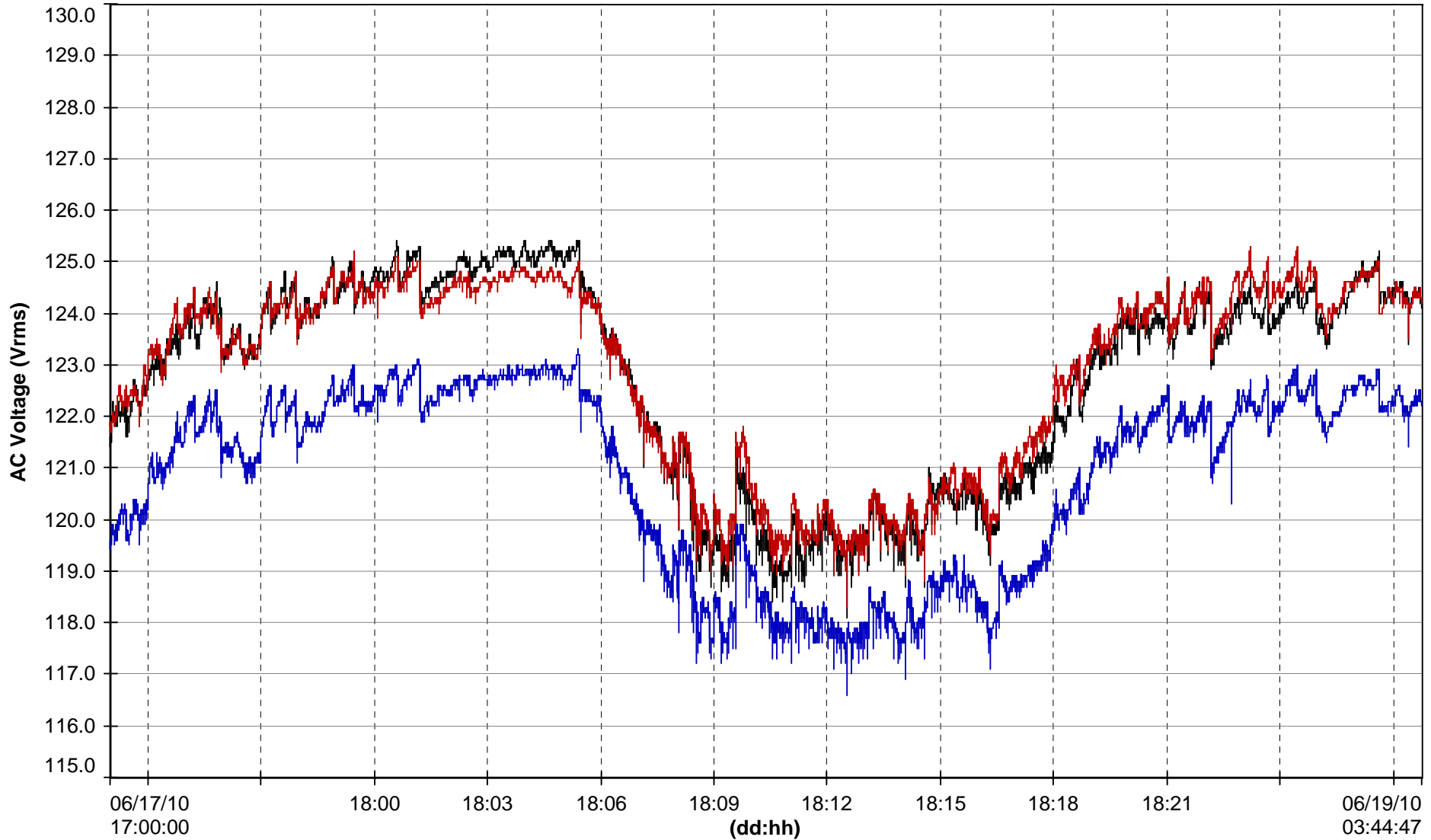


# John A. Carusi Middle School

*Electrical Load Study*  
*June 17 – 19, 2010*

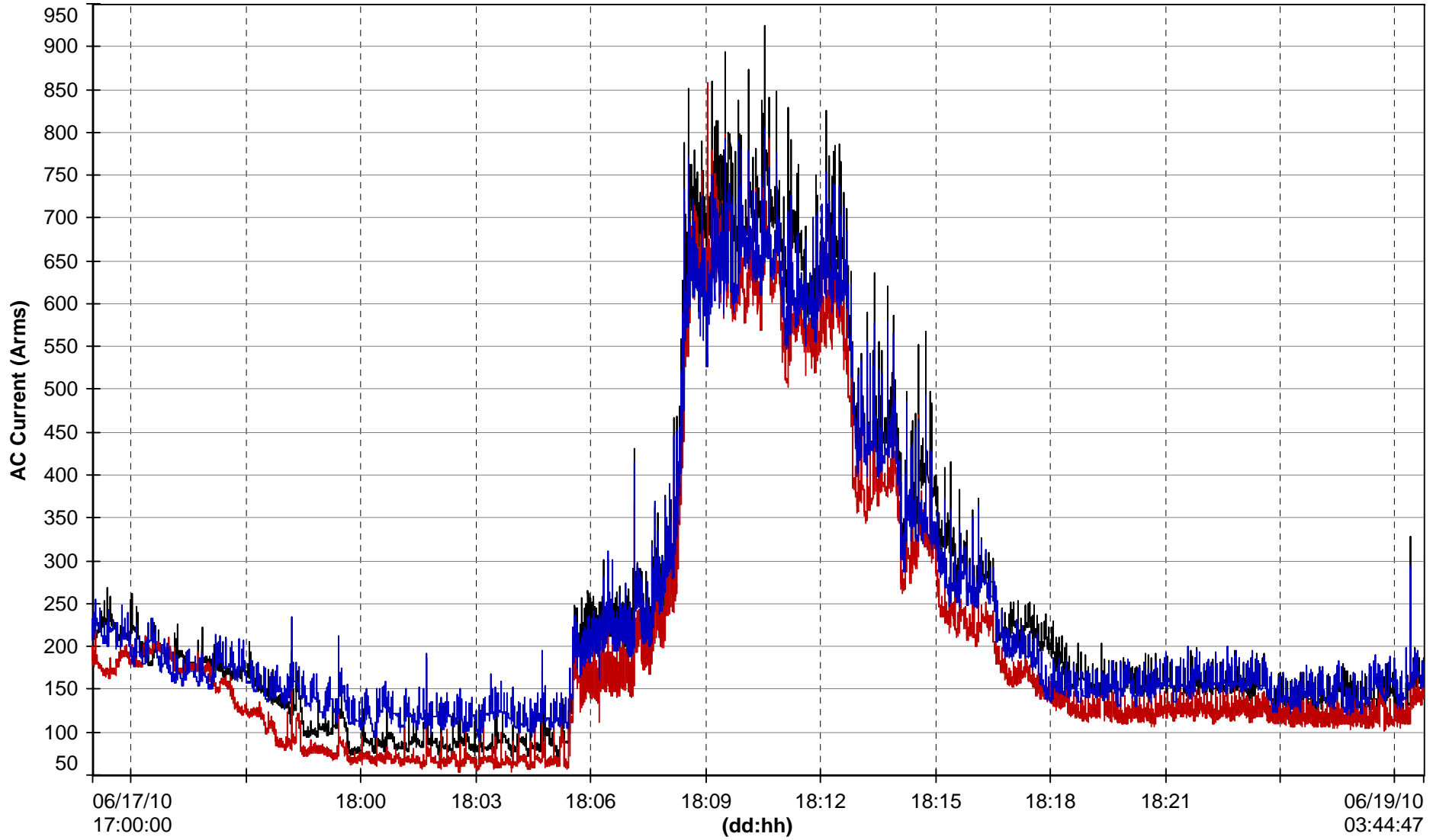
Cherry Hill School District

### Main Service Phase Voltage



### John A. Carusi Middle School

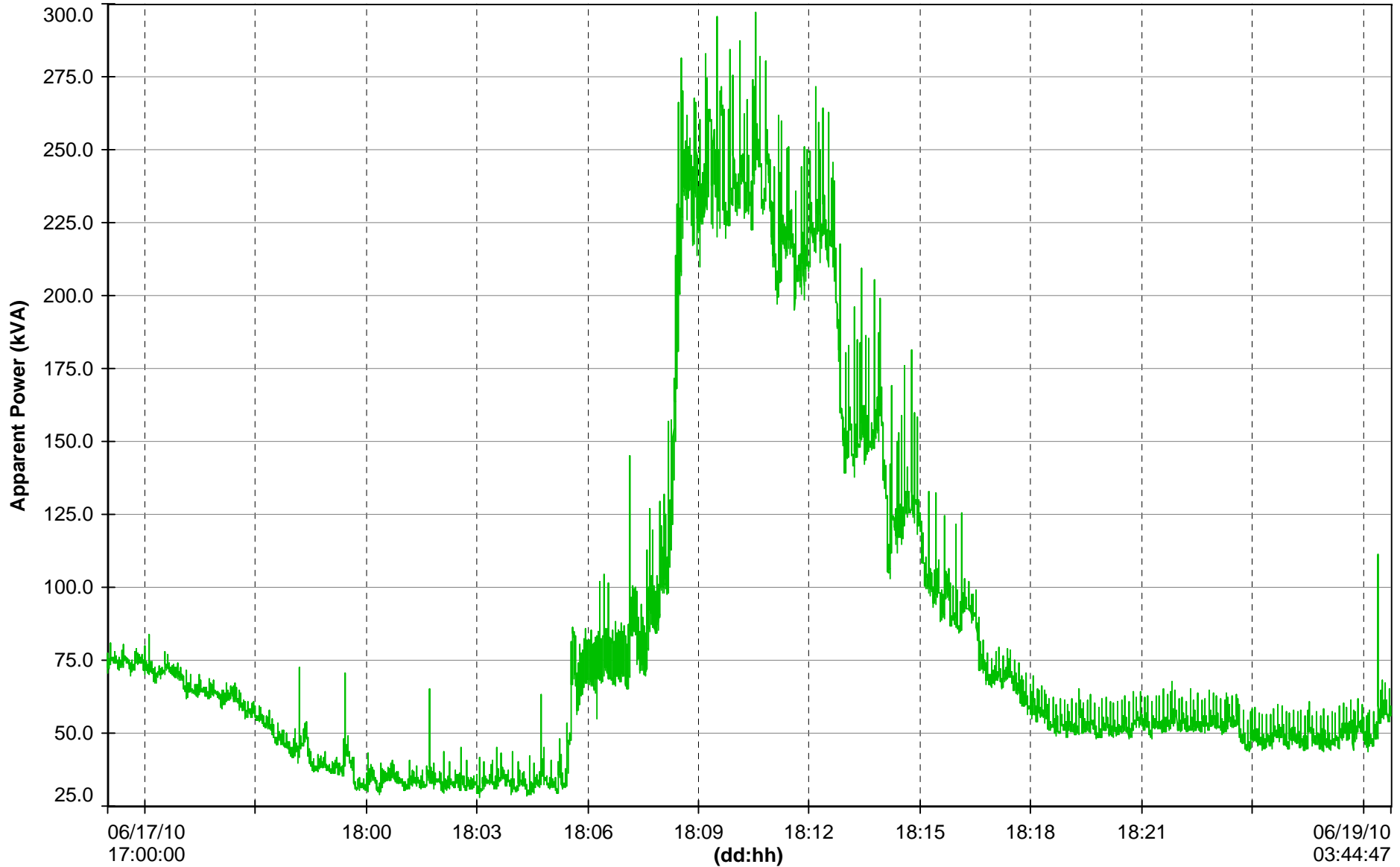
### Main Service Line Current



	Maximum	Minimum	Average
— la	924	71	242
— lb	868	54	202
— lc	804	88	235

### John A. Carusi Middle School

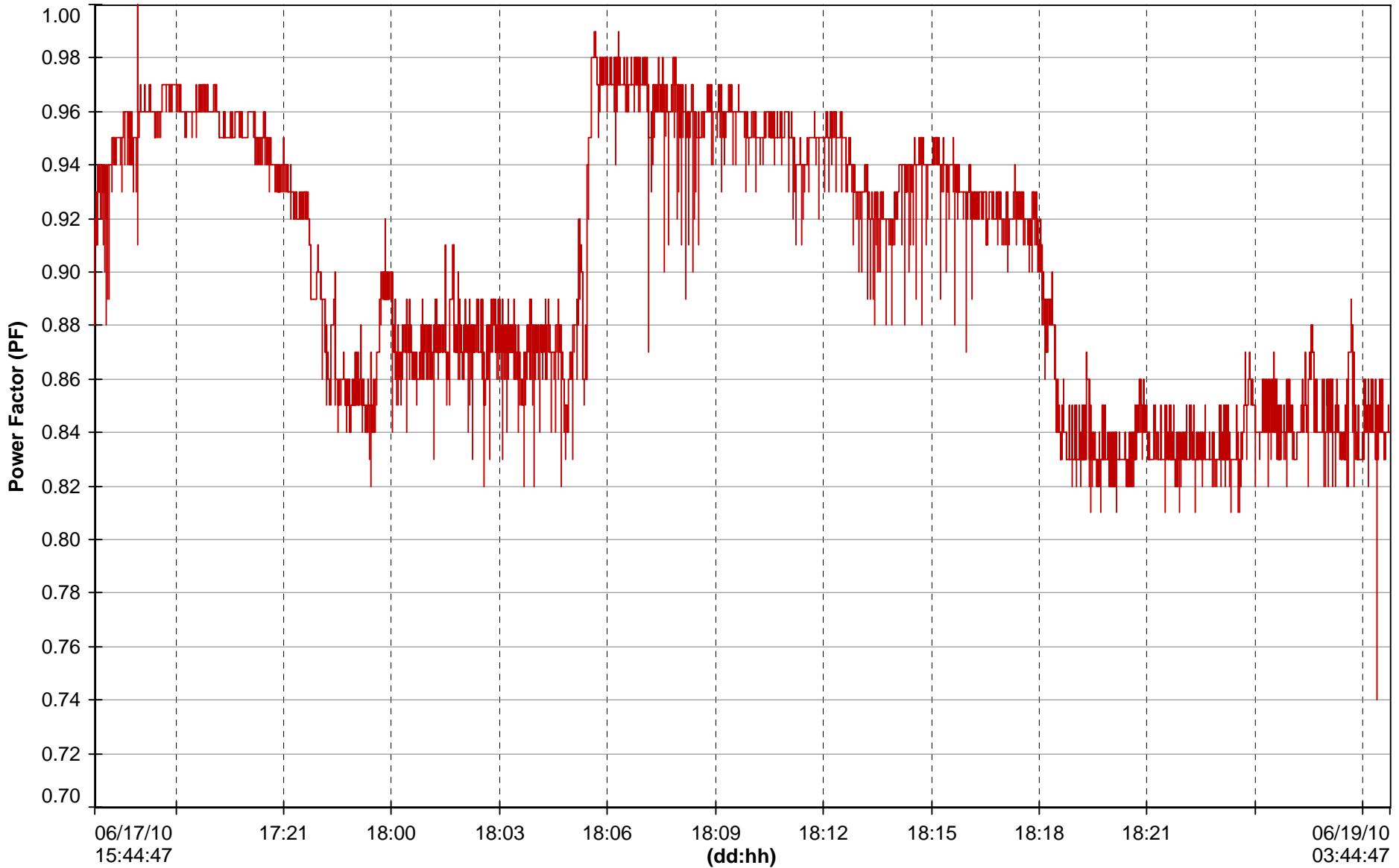
### Main Service Apparent Power



	Maximum	Minimum	Average
kVA	297.1	27.3	82.0

### John A. Carusi Middle School

### Main Service Power Factor



### John A. Carusi Middle School

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 17:15	122.0	122.0	119.8	216	179	220	74.5	0.96
6/17/10 17:30	122.0	122.3	120.0	229	169	209	73.7	0.96
6/17/10 17:45	122.3	122.4	120.1	215	176	209	72.8	0.97
6/17/10 18:00	122.4	122.5	120.1	212	189	211	74.3	0.97
6/17/10 18:15	122.9	123.2	121.0	217	181	188	71.7	0.97
6/17/10 18:30	123.0	123.1	121.0	188	193	188	69.6	0.96
6/17/10 18:45	123.4	123.7	121.2	191	197	198	71.8	0.96
6/17/10 19:00	123.6	123.8	121.6	193	195	179	69.7	0.96
6/17/10 19:15	123.9	124.1	122.1	184	181	164	65.2	0.96
6/17/10 19:30	123.7	124.0	121.7	184	171	164	63.9	0.95
6/17/10 19:45	124.1	124.2	122.1	174	174	168	63.7	0.95
6/17/10 20:00	123.9	123.7	121.8	180	174	161	63.4	0.95
6/17/10 20:15	123.3	123.3	121.3	175	163	162	61.2	0.96
6/17/10 20:30	123.5	123.5	121.4	171	155	183	62.5	0.95
6/17/10 20:45	123.2	123.2	121.0	165	144	174	59.0	0.94
6/17/10 21:00	123.3	123.3	121.2	169	125	173	57.1	0.94
6/17/10 21:15	124.2	124.3	122.1	164	121	156	54.5	0.93
6/17/10 21:30	124.0	124.1	122.0	151	119	152	51.9	0.92
6/17/10 21:45	124.4	124.1	122.3	141	104	140	47.6	0.92
6/17/10 22:00	124.3	124.3	122.1	134	86	145	45.1	0.89
6/17/10 22:15	124.0	124.0	121.7	124	85	143	43.3	0.88
6/17/10 22:30	124.0	124.0	121.8	132	94	150	46.2	0.87
6/17/10 22:45	124.3	124.3	122.0	97	76	136	38.1	0.86
6/17/10 23:00	124.6	124.6	122.4	100	78	135	38.7	0.85
6/17/10 23:15	124.4	124.6	122.4	100	75	128	37.4	0.86
6/17/10 23:30	124.7	124.7	122.7	110	76	128	38.9	0.84
6/17/10 23:45	124.5	124.5	122.3	97	74	128	37.0	0.87
6/18/10 0:00	124.5	124.4	122.2	76	67	113	31.5	0.90
6/18/10 0:15	124.8	124.5	122.5	86	70	117	33.8	0.87
6/18/10 0:30	124.7	124.6	122.7	83	66	106	31.6	0.87
6/18/10 0:45	124.9	124.7	122.6	86	69	128	34.9	0.86
6/18/10 1:00	124.9	124.7	122.7	86	67	119	33.7	0.87
6/18/10 1:15	125.0	124.7	122.8	80	65	113	32.0	0.87
6/18/10 1:30	124.3	124.1	122.2	88	67	113	33.1	0.87
6/18/10 1:45	124.6	124.2	122.3	94	63	117	33.9	0.88
6/18/10 2:00	124.7	124.4	122.5	87	69	114	33.5	0.87
6/18/10 2:15	124.9	124.6	122.6	80	62	111	31.3	0.87
6/18/10 2:30	125.0	124.6	122.7	82	67	115	32.7	0.87
6/18/10 2:45	124.8	124.5	122.6	88	62	111	32.3	0.86
6/18/10 3:00	125.0	124.6	122.7	82	67	111	32.2	0.88
6/18/10 3:15	125.0	124.6	122.7	82	63	105	30.8	0.87
6/18/10 3:30	125.2	124.7	122.8	79	66	122	33.1	0.87
6/18/10 3:45	125.2	124.7	122.8	88	62	123	33.9	0.86
6/18/10 4:00	125.1	124.8	122.9	83	63	115	32.4	0.87
6/18/10 4:15	125.1	124.7	122.9	83	66	107	31.7	0.87
6/18/10 4:30	125.1	124.7	122.9	80	62	107	30.9	0.87
6/18/10 4:45	125.3	124.8	122.9	82	67	111	32.3	0.87
6/18/10 5:00	125.2	124.7	122.9	93	65	114	33.8	0.85
6/18/10 5:15	125.1	124.5	122.7	81	68	111	32.2	0.89
6/18/10 5:30	125.1	124.7	122.9	98	78	118	36.4	0.89

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 5:45	124.5	124.3	122.4	188	154	183	64.8	0.97
6/18/10 6:00	124.2	124.1	122.3	208	146	186	66.6	0.97
6/18/10 6:15	123.5	123.5	121.5	211	147	199	68.3	0.97
6/18/10 6:30	123.4	123.4	121.3	215	158	211	71.5	0.97
6/18/10 6:45	123.0	123.0	120.9	217	151	207	70.3	0.97
6/18/10 7:00	122.6	122.5	120.4	215	160	210	71.1	0.97
6/18/10 7:15	122.0	122.0	119.9	236	175	223	76.7	0.96
6/18/10 7:30	121.8	121.7	119.7	231	194	226	78.7	0.96
6/18/10 7:45	121.3	121.3	119.3	244	200	233	81.6	0.96
6/18/10 8:00	121.0	121.1	118.9	272	222	265	91.2	0.97
6/18/10 8:15	121.2	121.3	119.3	304	257	304	104.2	0.96
6/18/10 8:30	120.8	121.0	119.1	475	408	449	160.1	0.96
6/18/10 8:45	119.6	120.0	118.1	697	612	622	230.2	0.96
6/18/10 9:00	119.6	119.8	118.1	696	645	612	232.7	0.96
6/18/10 9:15	119.5	119.9	118.2	701	638	602	231.3	0.96
6/18/10 9:30	119.3	119.6	117.9	745	671	660	246.8	0.96
6/18/10 9:45	120.5	121.0	119.3	719	638	654	241.9	0.96
6/18/10 10:00	120.5	121.1	119.3	688	612	643	233.7	0.95
6/18/10 10:15	119.9	120.3	118.7	699	612	657	235.4	0.95
6/18/10 10:30	119.6	120.1	118.4	701	610	637	232.5	0.95
6/18/10 10:45	119.1	119.6	118.0	739	653	656	243.5	0.95
6/18/10 11:00	119.0	119.5	117.9	704	623	650	234.8	0.95
6/18/10 11:15	119.6	120.1	118.2	636	542	580	209.7	0.95
6/18/10 11:30	119.3	119.8	118.1	672	574	593	218.9	0.94
6/18/10 11:45	119.5	119.8	117.9	616	556	596	210.5	0.95
6/18/10 12:00	119.9	120.1	118.2	609	546	589	208.2	0.95
6/18/10 12:15	119.8	119.9	117.9	659	577	631	222.4	0.95
6/18/10 12:30	119.3	119.5	117.7	663	587	617	221.8	0.95
6/18/10 12:45	119.4	119.5	117.7	637	552	606	213.3	0.95
6/18/10 13:00	119.6	119.6	117.8	487	414	474	163.5	0.93
6/18/10 13:15	119.9	120.0	118.2	438	366	425	146.6	0.93
6/18/10 13:30	120.2	120.3	118.3	447	378	433	150.5	0.92
6/18/10 13:45	119.8	120.0	118.1	446	384	420	149.1	0.92
6/18/10 14:00	119.5	119.8	117.8	468	397	438	155.0	0.92
6/18/10 14:15	119.9	120.1	118.2	350	305	339	118.5	0.93
6/18/10 14:30	119.7	119.9	117.9	361	298	346	119.7	0.94
6/18/10 14:45	120.1	120.1	118.4	389	326	337	125.7	0.94
6/18/10 15:00	120.6	120.3	118.7	398	321	332	125.9	0.94
6/18/10 15:15	120.6	120.6	118.9	335	257	298	106.7	0.94
6/18/10 15:30	120.3	120.8	118.9	319	231	266	97.9	0.94
6/18/10 15:45	120.6	120.7	118.7	293	228	267	94.4	0.94
6/18/10 16:00	120.4	120.7	118.6	277	220	269	91.7	0.93
6/18/10 16:15	120.2	120.4	118.3	274	218	261	90.0	0.93
6/18/10 16:30	119.7	120.0	117.9	279	227	265	91.9	0.93
6/18/10 16:45	120.5	121.0	118.8	232	191	228	78.2	0.92
6/18/10 17:00	120.6	120.9	118.7	213	163	194	68.5	0.92
6/18/10 17:15	120.7	121.1	118.8	219	159	194	68.7	0.92
6/18/10 17:30	120.9	121.5	118.9	222	167	191	69.9	0.92
6/18/10 17:45	121.2	121.7	119.2	211	151	178	65.0	0.92
6/18/10 18:00	121.2	121.8	119.5	202	143	148	59.6	0.92

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 18:15	122.0	122.6	120.1	187	135	149	57.1	0.89
6/18/10 18:30	122.1	122.6	120.2	176	132	148	55.4	0.88
6/18/10 18:45	122.6	122.8	120.6	156	122	147	51.7	0.84
6/18/10 19:00	122.6	123.0	120.5	159	118	142	51.0	0.83
6/18/10 19:15	123.3	123.6	121.3	151	121	146	51.2	0.83
6/18/10 19:30	123.2	123.4	121.3	158	129	144	52.9	0.84
6/18/10 19:45	123.4	123.7	121.4	154	119	150	51.9	0.83
6/18/10 20:00	123.8	124.0	121.8	151	113	144	50.3	0.83
6/18/10 20:15	123.7	124.0	121.8	152	116	148	51.1	0.83
6/18/10 20:30	123.7	123.9	121.7	150	116	148	50.9	0.83
6/18/10 20:45	123.8	124.1	122.0	158	113	143	51.0	0.83
6/18/10 21:00	123.9	124.2	122.3	158	122	156	53.7	0.84
6/18/10 21:15	123.6	123.8	121.8	151	119	154	52.0	0.83
6/18/10 21:30	124.1	124.2	122.1	148	122	152	52.0	0.83
6/18/10 21:45	123.8	124.0	121.8	153	122	147	51.9	0.83
6/18/10 22:00	124.3	124.3	122.0	154	122	159	53.7	0.83
6/18/10 22:15	123.8	124.1	121.7	149	120	154	52.0	0.83
6/18/10 22:30	123.5	123.7	121.3	152	117	155	52.0	0.83
6/18/10 22:45	123.7	124.1	121.8	152	120	156	52.6	0.83
6/18/10 23:00	124.1	124.6	122.2	154	122	158	53.6	0.83
6/18/10 23:15	124.3	124.8	122.3	147	121	154	52.1	0.83
6/18/10 23:30	124.0	124.5	122.1	151	120	158	53.0	0.83
6/18/10 23:45	124.0	124.6	122.3	147	121	150	51.6	0.84
6/19/10 0:00	123.9	124.4	122.1	129	115	131	46.2	0.86
6/19/10 0:15	124.2	124.6	122.4	135	113	137	47.6	0.84
6/19/10 0:30	124.4	124.9	122.7	130	111	131	46.0	0.84
6/19/10 0:45	124.2	124.6	122.4	139	112	141	48.4	0.84
6/19/10 1:00	124.4	124.7	122.6	134	111	139	47.5	0.84
6/19/10 1:15	123.7	124.0	121.9	136	111	143	47.9	0.84
6/19/10 1:30	123.8	124.0	121.9	129	110	135	46.0	0.85
6/19/10 1:45	124.2	124.3	122.3	146	112	141	49.2	0.85
6/19/10 2:00	124.5	124.6	122.5	135	111	130	46.5	0.84
6/19/10 2:15	124.8	124.7	122.7	130	110	135	46.4	0.84
6/19/10 2:30	124.8	124.8	122.6	136	110	146	48.6	0.84
6/19/10 2:45	124.7	124.5	122.5	134	120	149	49.8	0.85
6/19/10 3:00	124.4	124.3	122.2	142	111	154	50.2	0.83
6/19/10 3:15	124.5	124.4	122.4	129	112	138	46.8	0.84
6/19/10 3:30	124.3	124.2	122.1	141	120	155	51.3	0.84
6/19/10 3:44	124.4	124.3	122.3	158	137	162	56.4	0.84

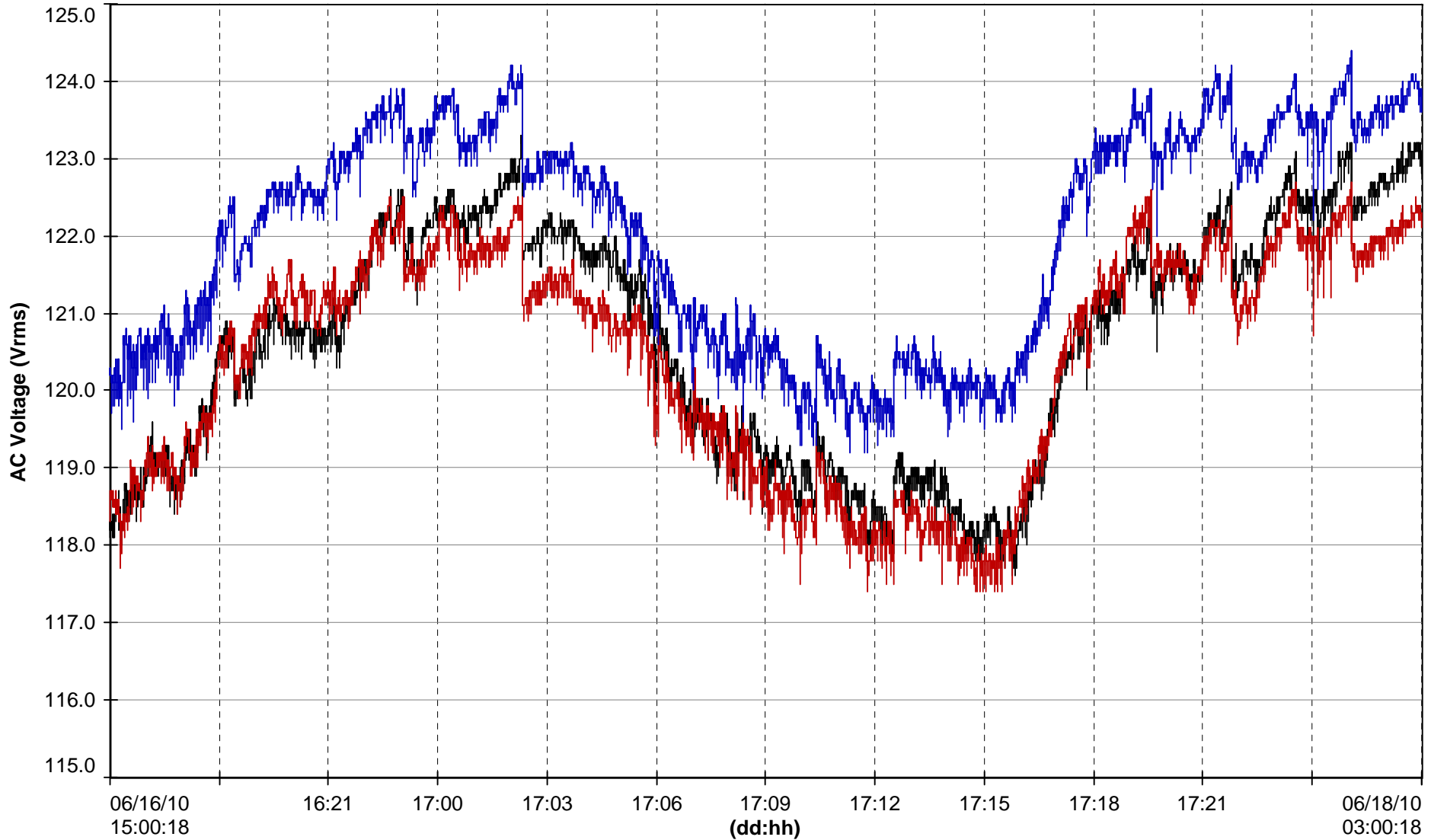


# James F. Cooper Elementary School

*Electrical Load Study*  
*June 16 – 18, 2010*

Cherry Hill School District

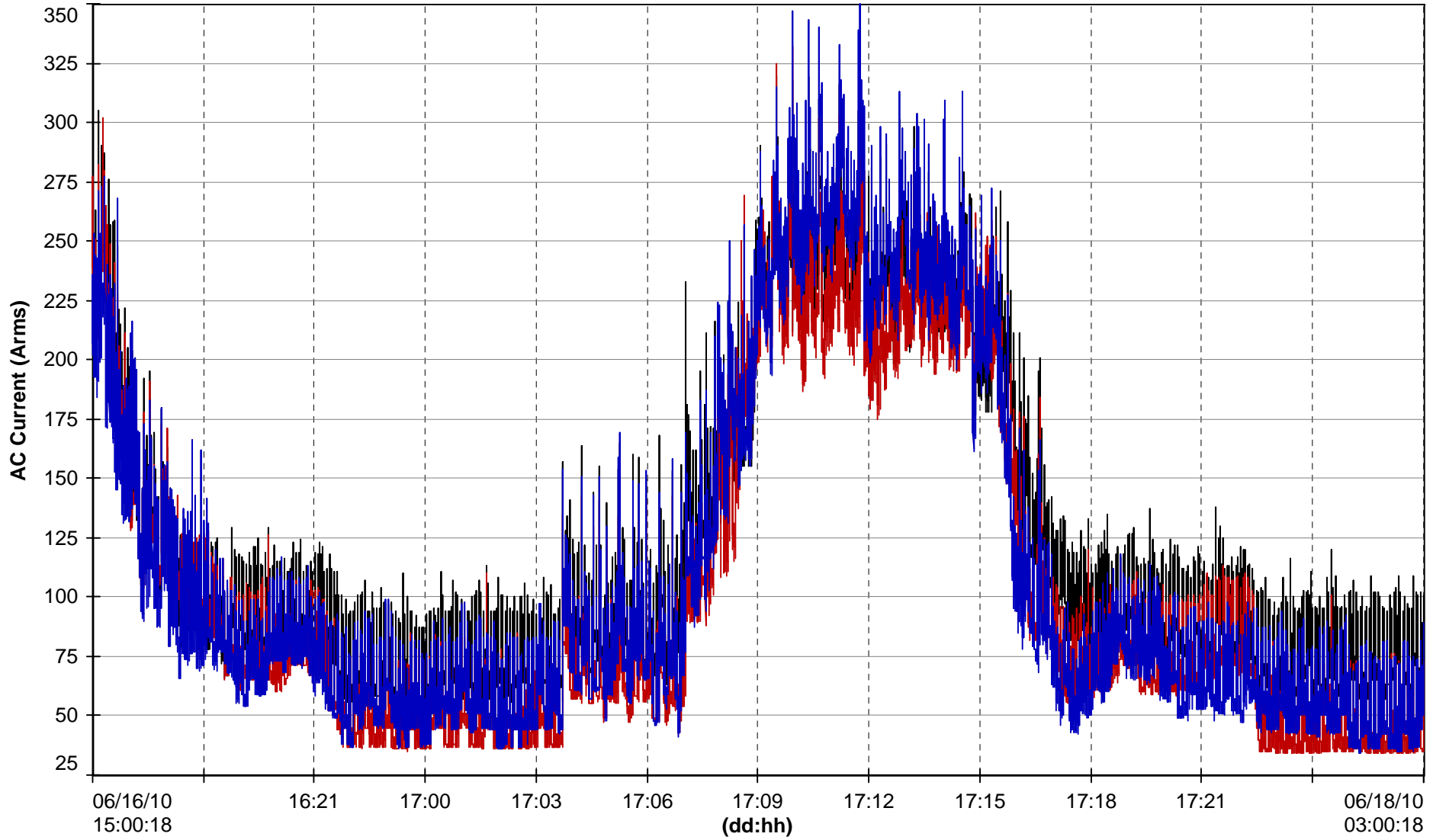
### Main Service Phase Voltage



	Maximum	Minimum	Average
— Va	123.4	117.6	120.7
— Vb	122.8	117.3	120.5
— Vc	124.4	119.1	122.1

### James F. Cooper Elementary School

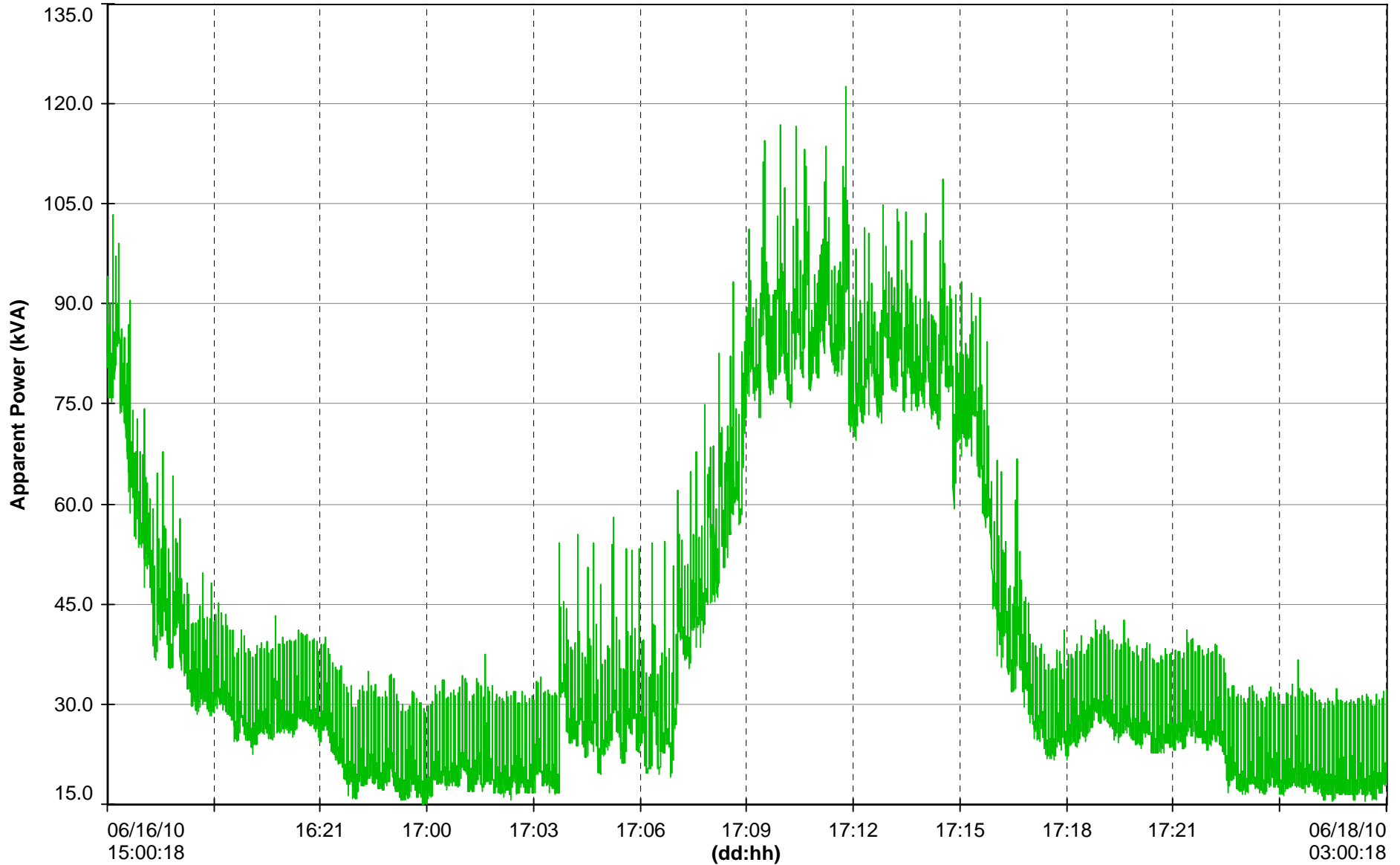
### Main Service Line Current



	Maximum	Minimum	Average
— la	335	48	114
— lb	332	34	97
— lc	372	34	102

### James F. Cooper Elementary School

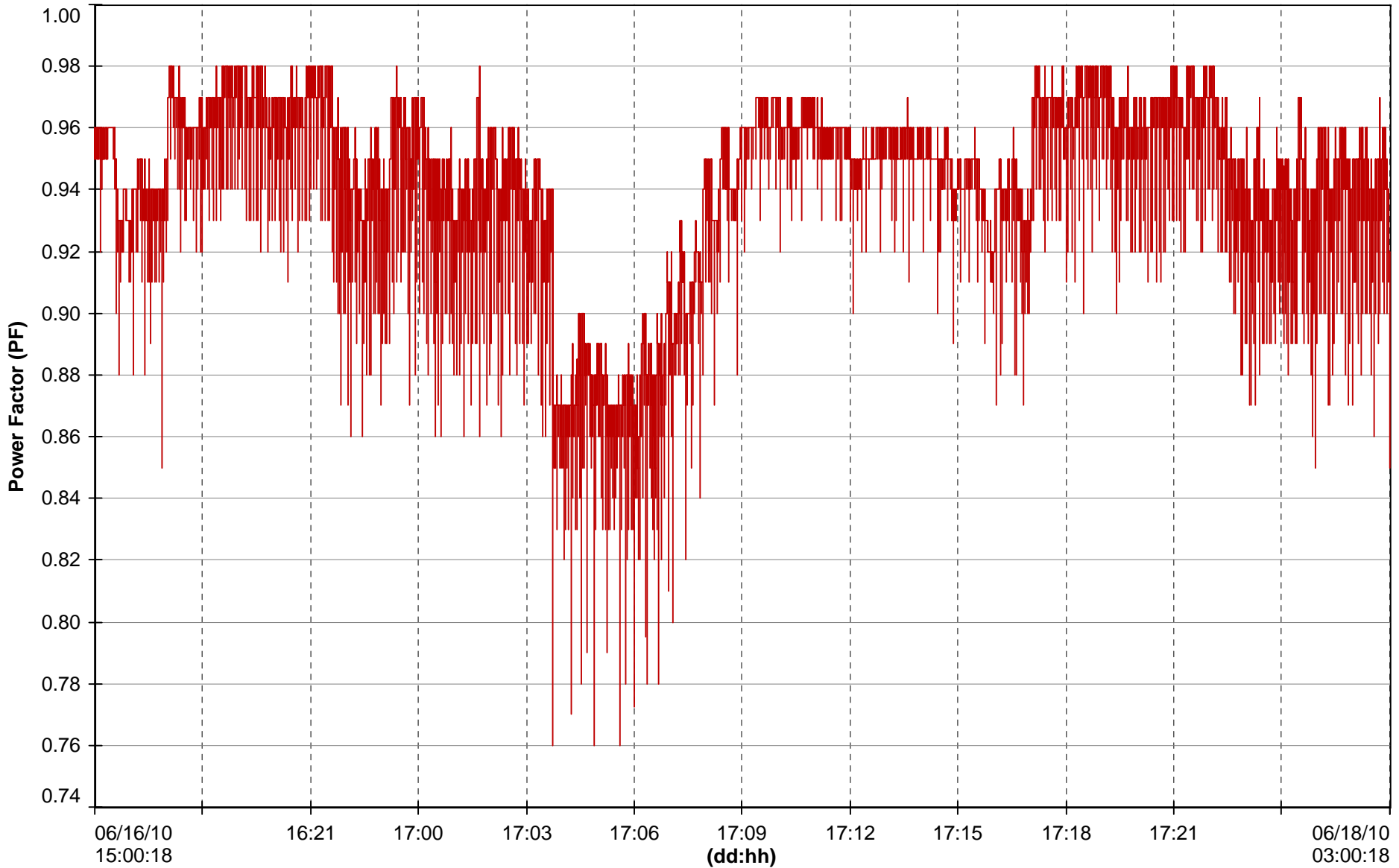
### Main Service Apparent Power



	Maximum	Minimum	Average
kVA	122.5	14.9	37.7

### James F. Cooper Elementary School

### Main Service Power Factor



	Maximum	Minimum	Average
PF	0.99	0.76	0.94

### James F. Cooper Elementary School

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/16/10 15:15	118.4	118.6	120.2	239	223	202	79.0	0.95
6/16/10 15:30	118.5	118.3	120.3	234	233	201	79.5	0.96
6/16/10 15:45	118.6	118.8	120.4	201	183	167	65.6	0.94
6/16/10 16:00	118.8	118.8	120.6	178	160	142	57.1	0.93
6/16/10 16:15	119.2	119.1	120.6	147	142	143	51.6	0.94
6/16/10 16:30	119.0	119.1	120.8	124	116	107	41.5	0.94
6/16/10 16:45	119.0	119.1	120.7	126	120	109	42.4	0.94
6/16/10 17:00	118.8	118.8	120.5	114	116	104	39.8	0.94
6/16/10 17:15	119.2	119.3	121.0	111	112	95	38.0	0.97
6/16/10 17:30	119.4	119.3	121.0	86	99	80	31.7	0.97
6/16/10 17:45	119.6	119.6	121.1	86	90	84	31.1	0.96
6/16/10 18:00	120.2	119.9	121.6	83	92	79	30.5	0.96
6/16/10 18:15	120.7	120.6	122.1	83	90	83	31.1	0.96
6/16/10 18:30	120.4	120.5	122.1	86	83	77	29.8	0.97
6/16/10 18:45	120.2	120.4	121.8	72	74	75	26.6	0.97
6/16/10 19:00	120.2	120.6	122.0	86	70	65	26.8	0.97
6/16/10 19:15	120.6	121.0	122.3	81	67	59	25.0	0.97
6/16/10 19:30	120.9	121.3	122.5	86	68	65	26.6	0.97
6/16/10 19:45	120.9	121.2	122.6	84	74	62	26.7	0.97
6/16/10 20:00	120.8	121.4	122.6	82	67	75	27.2	0.96
6/16/10 20:15	120.8	121.2	122.7	80	66	73	26.6	0.96
6/16/10 20:30	120.8	121.2	122.6	82	72	77	28.1	0.96
6/16/10 20:45	120.7	121.1	122.5	84	73	76	28.2	0.97
6/16/10 21:00	120.7	121.2	122.6	78	71	73	27.0	0.97
6/16/10 21:15	120.8	121.2	122.9	86	69	66	26.8	0.97
6/16/10 21:30	120.8	121.2	123.0	79	59	56	23.5	0.97
6/16/10 21:45	121.2	121.2	123.1	71	50	52	20.9	0.96
6/16/10 22:00	121.5	121.6	123.2	60	44	43	17.9	0.95
6/16/10 22:15	121.8	121.8	123.5	63	40	49	18.5	0.94
6/16/10 22:30	122.2	122.0	123.6	64	43	54	19.8	0.93
6/16/10 22:45	122.2	122.2	123.6	61	40	51	18.7	0.94
6/16/10 23:00	122.2	122.1	123.6	64	42	54	19.5	0.94
6/16/10 23:15	122.0	121.8	123.4	60	41	52	18.6	0.93
6/16/10 23:30	121.7	121.6	122.9	56	39	43	16.8	0.96
6/16/10 23:45	122.0	121.6	123.3	59	43	46	18.0	0.96
6/17/10 0:00	122.2	121.9	123.5	53	39	43	16.5	0.95
6/17/10 0:15	122.3	122.2	123.7	59	41	45	17.8	0.95
6/17/10 0:30	122.5	122.2	123.7	60	47	50	19.3	0.94
6/17/10 0:45	122.2	121.9	123.3	62	40	51	18.6	0.93
6/17/10 1:00	122.2	121.7	123.2	65	42	51	19.2	0.94
6/17/10 1:15	122.3	121.8	123.3	60	45	55	19.6	0.93
6/17/10 1:30	122.4	121.8	123.5	66	39	49	18.9	0.93
6/17/10 1:45	122.5	121.9	123.6	67	50	48	20.1	0.94
6/17/10 2:00	122.7	122.0	123.8	62	41	46	18.3	0.94
6/17/10 2:15	122.9	122.3	124.0	64	39	40	17.5	0.95
6/17/10 2:30	122.2	121.4	123.1	60	43	46	18.1	0.94
6/17/10 2:45	121.9	121.3	122.8	66	39	43	18.0	0.95
6/17/10 3:00	122.0	121.3	123.0	61	40	46	17.9	0.94
6/17/10 3:15	122.1	121.4	123.0	61	45	56	19.8	0.93
6/17/10 3:30	122.0	121.4	123.0	65	40	47	18.6	0.94

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 3:45	122.1	121.4	123.0	65	44	54	19.8	0.92
6/17/10 4:00	121.9	121.2	122.7	97	72	84	30.7	0.86
6/17/10 4:15	121.7	121.1	122.7	84	60	64	25.2	0.86
6/17/10 4:30	121.8	121.0	122.6	81	64	71	26.2	0.88
6/17/10 4:45	121.8	121.1	122.7	82	63	67	25.7	0.89
6/17/10 5:00	121.7	120.8	122.5	70	56	62	22.9	0.88
6/17/10 5:15	121.4	120.8	122.2	80	60	70	25.4	0.88
6/17/10 5:30	121.3	120.9	122.1	85	62	74	26.9	0.86
6/17/10 5:45	121.4	120.9	122.1	82	56	68	24.9	0.86
6/17/10 6:00	120.8	120.3	121.6	82	63	72	26.3	0.87
6/17/10 6:15	120.7	120.2	121.4	78	56	65	24.0	0.86
6/17/10 6:30	120.4	120.1	121.4	88	60	61	25.2	0.88
6/17/10 6:45	120.2	119.9	121.0	74	57	68	23.8	0.87
6/17/10 7:00	119.8	119.6	120.9	87	54	59	24.0	0.89
6/17/10 7:15	119.8	119.8	120.9	134	88	102	38.8	0.90
6/17/10 7:30	119.6	119.6	120.8	125	96	103	38.9	0.91
6/17/10 7:45	119.3	119.5	120.5	138	103	116	42.7	0.91
6/17/10 8:00	119.5	119.5	120.7	147	129	144	50.2	0.92
6/17/10 8:15	119.1	119.1	120.4	154	130	156	52.5	0.93
6/17/10 8:30	119.4	119.3	120.5	176	147	176	59.7	0.94
6/17/10 8:45	119.5	119.0	120.8	170	183	168	62.3	0.94
6/17/10 9:00	119.2	118.9	120.5	184	186	186	66.4	0.95
6/17/10 9:15	119.1	118.6	120.6	227	221	224	80.2	0.96
6/17/10 9:30	119.1	118.7	120.5	228	229	226	81.6	0.96
6/17/10 9:45	119.0	118.6	120.2	237	231	239	84.3	0.96
6/17/10 10:00	118.6	118.2	119.8	237	233	257	86.3	0.96
6/17/10 10:15	119.0	118.5	120.0	228	213	240	81.2	0.96
6/17/10 10:30	118.9	118.7	120.1	243	223	258	86.2	0.96
6/17/10 10:45	119.1	118.8	120.2	245	231	267	88.7	0.96
6/17/10 11:00	118.9	118.8	120.0	225	207	250	81.4	0.96
6/17/10 11:15	118.9	118.4	120.1	240	226	264	86.9	0.96
6/17/10 11:30	118.6	118.2	119.8	235	222	266	85.9	0.96
6/17/10 11:45	118.6	118.2	119.8	233	215	257	83.7	0.96
6/17/10 12:00	118.3	118.0	119.8	237	229	255	85.4	0.96
6/17/10 12:15	118.4	118.1	119.8	215	193	223	74.9	0.94
6/17/10 12:30	118.2	118.1	119.8	227	197	230	77.6	0.95
6/17/10 12:45	118.9	118.5	120.3	215	205	231	77.6	0.95
6/17/10 13:00	118.8	118.4	120.4	234	214	249	83.1	0.95
6/17/10 13:15	118.9	118.4	120.4	222	212	234	79.6	0.96
6/17/10 13:30	118.8	118.3	120.2	221	217	238	80.5	0.95
6/17/10 13:45	118.8	118.3	120.3	227	219	229	80.4	0.95
6/17/10 14:00	118.8	118.3	120.1	212	207	225	76.6	0.95
6/17/10 14:15	118.5	118.2	120.0	220	213	230	78.8	0.95
6/17/10 14:30	118.3	117.9	120.0	218	206	216	76.0	0.95
6/17/10 14:45	118.1	117.9	120.1	236	218	235	81.8	0.95
6/17/10 15:00	118.1	117.8	120.0	197	199	194	69.9	0.94
6/17/10 15:15	118.3	117.8	120.1	189	211	199	71.0	0.94
6/17/10 15:30	118.2	117.8	119.9	204	204	211	73.3	0.95
6/17/10 15:45	118.1	118.1	120.1	197	168	169	63.4	0.94
6/17/10 16:00	118.0	118.3	120.2	179	150	124	53.7	0.92

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 16:15	118.5	118.8	120.5	141	109	95	41.1	0.94
6/17/10 16:30	118.9	119.0	120.7	127	92	90	36.8	0.94
6/17/10 16:45	119.1	119.3	121.1	127	97	84	36.9	0.94
6/17/10 17:00	119.7	119.8	121.5	106	82	79	32.0	0.92
6/17/10 17:15	120.2	120.4	122.2	98	71	57	27.2	0.96
6/17/10 17:30	120.5	120.7	122.5	90	59	58	25.0	0.97
6/17/10 17:45	120.7	120.9	122.8	86	60	48	23.4	0.97
6/17/10 18:00	120.8	120.8	122.7	91	68	54	25.7	0.96
6/17/10 18:15	121.1	121.3	123.1	78	64	62	24.7	0.96
6/17/10 18:30	121.0	121.3	123.1	89	64	63	26.3	0.97
6/17/10 18:45	121.2	121.5	123.2	80	67	73	26.7	0.97
6/17/10 19:00	121.5	121.7	123.2	86	75	78	29.1	0.97
6/17/10 19:15	121.7	122.2	123.6	91	72	70	28.5	0.97
6/17/10 19:30	121.7	122.3	123.6	80	65	73	26.7	0.96
6/17/10 19:45	121.6	121.9	123.3	85	64	71	26.9	0.96
6/17/10 20:00	121.4	121.6	123.0	81	63	69	26.0	0.96
6/17/10 20:15	121.6	121.7	123.2	82	64	62	25.4	0.96
6/17/10 20:30	121.7	121.7	123.4	84	61	57	24.7	0.96
6/17/10 20:45	121.5	121.4	123.2	77	63	55	23.7	0.96
6/17/10 21:00	121.6	121.5	123.4	82	64	57	24.8	0.97
6/17/10 21:15	122.1	122.0	123.8	76	71	57	24.9	0.97
6/17/10 21:30	122.3	122.1	124.0	88	70	54	26.0	0.97
6/17/10 21:45	122.3	121.9	123.8	83	74	56	26.0	0.97
6/17/10 22:00	121.7	121.3	123.2	79	73	55	25.2	0.97
6/17/10 22:15	121.6	121.1	123.0	83	73	54	25.6	0.97
6/17/10 22:30	121.7	121.2	123.0	74	65	60	24.1	0.96
6/17/10 22:45	121.8	121.6	123.1	68	39	51	19.2	0.94
6/17/10 23:00	122.3	121.8	123.4	62	38	48	18.1	0.94
6/17/10 23:15	122.5	122.1	123.6	62	36	51	18.3	0.93
6/17/10 23:30	122.8	122.3	123.7	65	38	46	18.2	0.94
6/17/10 23:45	122.6	122.2	123.7	62	36	49	18.0	0.93
6/18/10 0:00	122.4	122.0	123.5	69	37	47	18.7	0.94
6/18/10 0:15	122.4	121.9	123.4	61	36	46	17.6	0.93
6/18/10 0:30	122.5	122.0	123.5	69	41	49	19.4	0.94
6/18/10 0:45	122.7	122.2	123.8	67	42	46	19.0	0.94
6/18/10 1:00	123.0	122.4	124.0	62	37	51	18.5	0.92
6/18/10 1:15	122.5	122.0	123.6	67	38	39	17.6	0.95
6/18/10 1:30	122.4	121.7	123.4	61	37	42	17.1	0.94
6/18/10 1:45	122.5	121.9	123.5	66	37	38	17.4	0.95
6/18/10 2:00	122.7	122.0	123.6	63	36	42	17.2	0.94
6/18/10 2:15	122.7	122.1	123.7	64	37	39	17.2	0.94
6/18/10 2:30	122.9	122.1	123.7	65	37	40	17.4	0.94
6/18/10 2:45	123.0	122.2	123.9	62	36	40	17.0	0.94
6/18/10 3:00	123.1	122.4	123.9	67	38	43	18.2	0.94
6/18/10 3:00	123.1	122.3	123.9	69	40	59	20.6	0.90

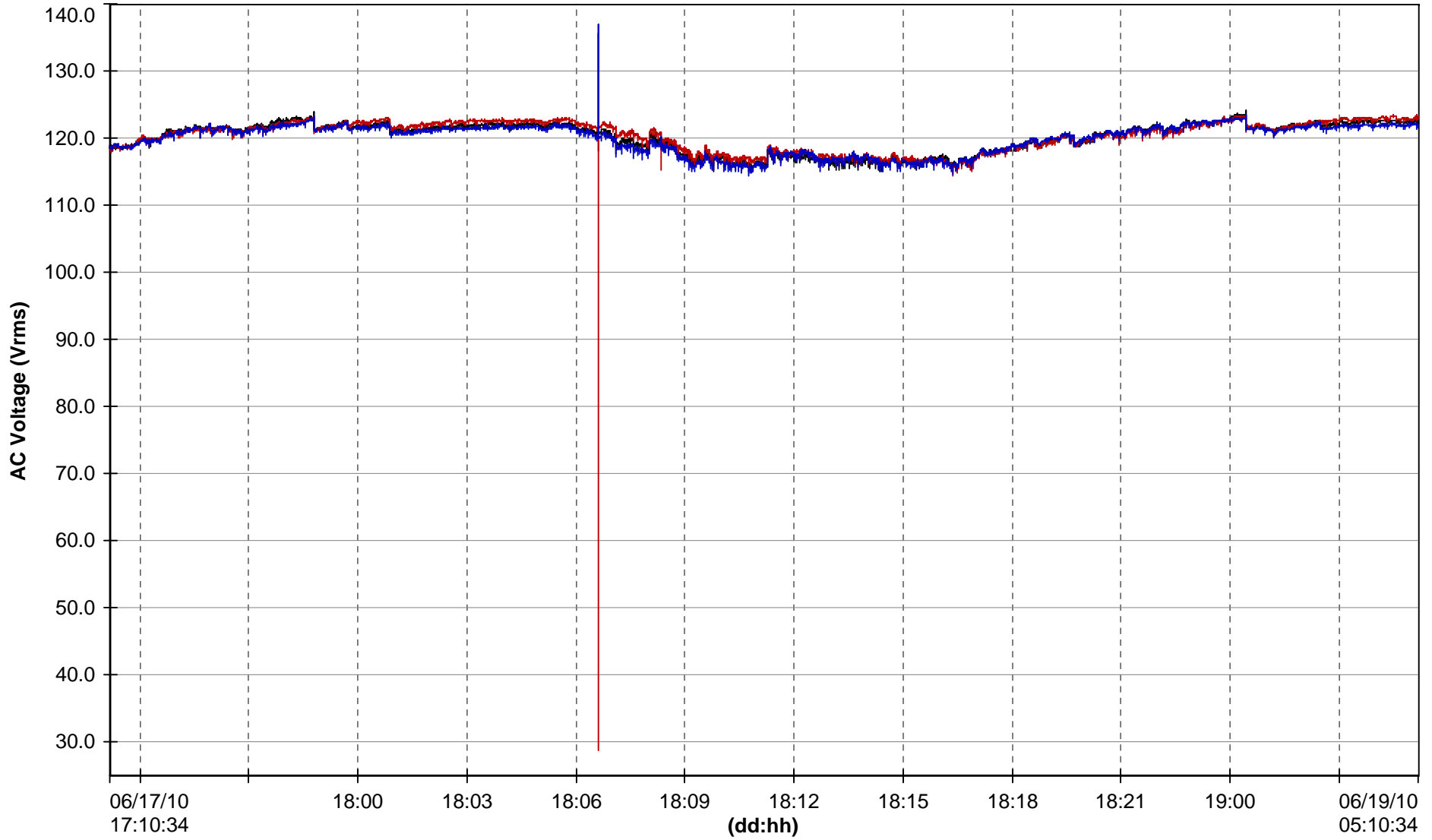


# Joyce Kilmer Elementary School

*Electrical Load Study*  
*June 17 – 19, 2010*

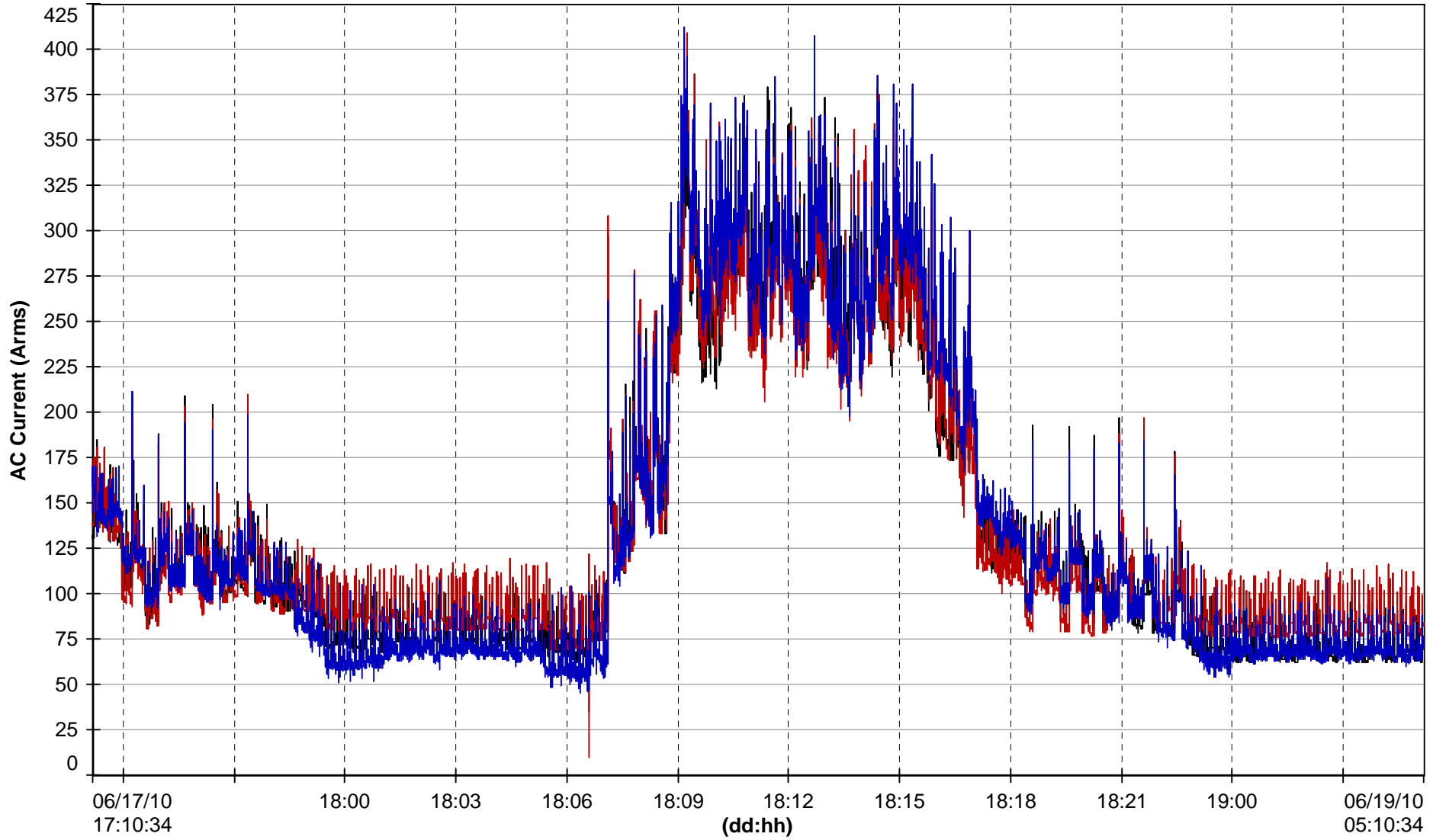
Cherry Hill School District

### Main Service Phase Voltage



### Joyce Kilmer Elementary School

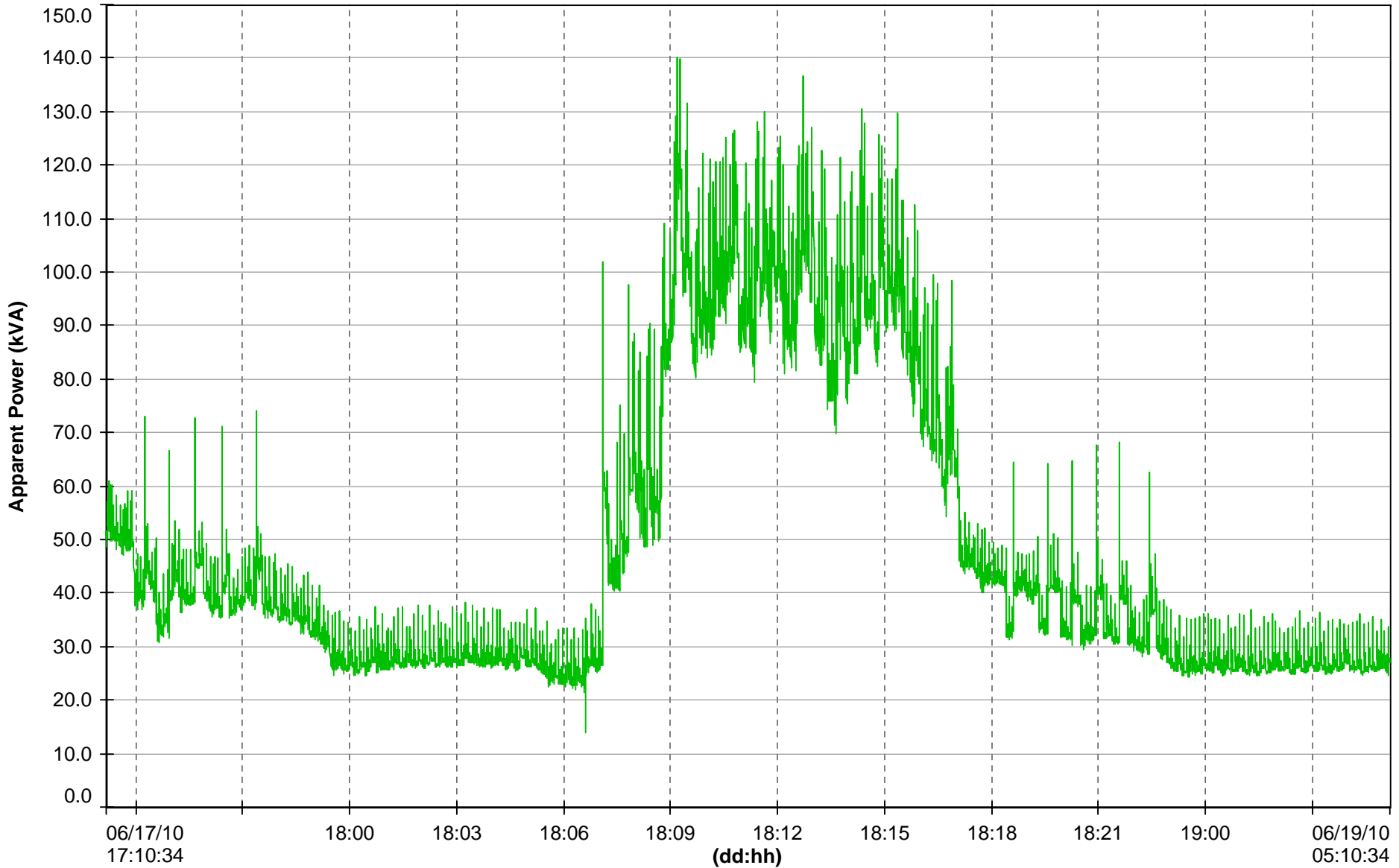
### Main Service Line Current



	Maximum	Minimum	Average
— la	394	35	128
— lb	414	10	131
— lc	412	43	129

### Joyce Kilmer Elementary School

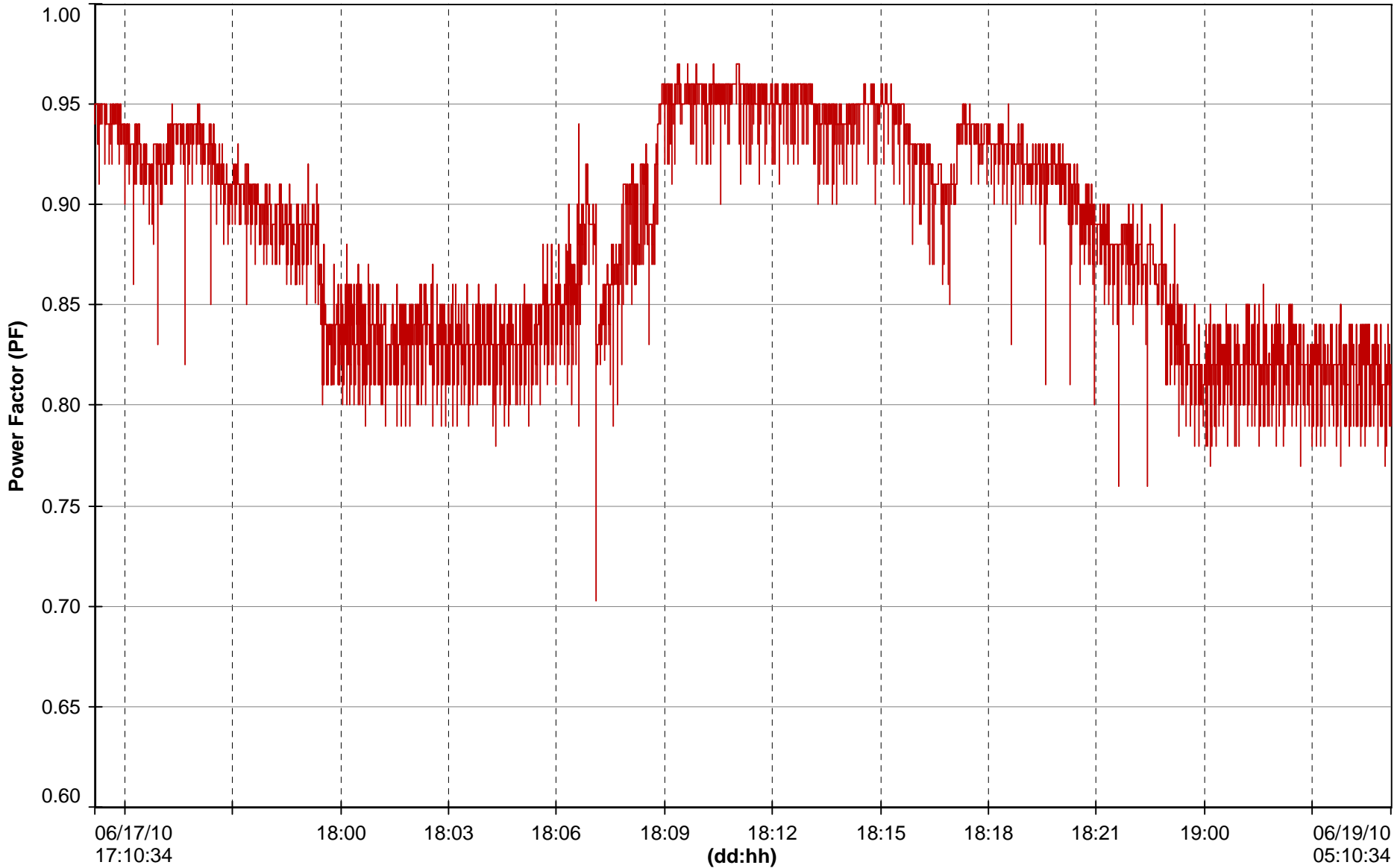
### Main Service Apparent Power



Maximum Minimum Average  
— kVA 140.1 13.5 46.2

### Joyce Kilmer Elementary School

### Main Service Power Factor



Maximum Minimum Average  
— PF 0.97 0.70 0.88

### Joyce Kilmer Elementary School

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 17:25	118.7	118.6	118.8	140	146	145	51.1	0.94
6/17/10 17:40	118.7	118.8	118.7	137	140	141	49.6	0.94
6/17/10 17:55	118.9	118.9	118.8	133	137	144	49.1	0.94
6/17/10 18:10	119.8	119.9	119.5	111	106	121	40.4	0.93
6/17/10 18:25	119.6	119.8	119.5	121	111	121	42.1	0.93
6/17/10 18:40	120.0	119.9	119.8	103	103	112	38.0	0.92
6/17/10 18:55	121.0	120.6	120.5	91	92	97	33.7	0.92
6/17/10 19:10	121.0	120.7	120.7	109	108	116	40.2	0.92
6/17/10 19:25	121.3	121.1	121.1	111	111	110	40.1	0.93
6/17/10 19:40	121.6	121.2	121.4	109	103	105	38.5	0.94
6/17/10 19:55	121.5	121.4	121.3	128	125	123	45.5	0.93
6/17/10 20:10	121.4	121.3	121.2	108	103	104	38.2	0.93
6/17/10 20:25	121.6	121.4	121.6	108	100	99	37.4	0.93
6/17/10 20:40	121.3	120.9	121.2	114	115	111	41.2	0.92
6/17/10 20:55	121.1	120.9	120.8	102	100	106	37.1	0.91
6/17/10 21:10	121.5	121.4	121.2	108	102	111	38.9	0.91
6/17/10 21:25	121.9	121.5	121.4	107	109	113	39.9	0.91
6/17/10 21:40	121.9	121.4	121.3	112	114	117	41.7	0.90
6/17/10 21:55	122.5	122.0	121.9	100	102	102	37.1	0.90
6/17/10 22:10	122.6	122.2	122.0	97	97	102	36.1	0.89
6/17/10 22:25	123.0	122.6	122.0	97	92	101	35.6	0.89
6/17/10 22:40	122.8	122.6	122.3	95	96	98	35.3	0.88
6/17/10 22:55	122.3	122.2	122.1	98	98	82	33.9	0.88
6/17/10 23:10	121.7	121.5	121.4	94	94	77	32.2	0.88
6/17/10 23:25	121.7	121.8	121.5	88	90	74	30.7	0.88
6/17/10 23:40	122.2	122.0	122.0	75	85	62	27.1	0.84
6/17/10 23:55	121.7	122.1	121.6	74	84	59	26.4	0.83
6/18/10 0:10	121.8	122.4	121.6	74	85	59	26.5	0.83
6/18/10 0:25	121.8	122.3	121.5	71	85	60	26.4	0.83
6/18/10 0:40	122.1	122.7	121.8	73	83	61	26.5	0.83
6/18/10 0:55	122.1	122.6	121.7	75	84	61	26.9	0.83
6/18/10 1:10	121.2	121.6	120.8	72	85	64	26.6	0.83
6/18/10 1:25	121.2	121.6	120.8	72	85	67	27.1	0.83
6/18/10 1:40	121.2	121.8	120.9	74	83	66	27.1	0.83
6/18/10 1:55	121.4	122.0	121.1	73	83	67	27.0	0.83
6/18/10 2:10	121.6	122.1	121.1	71	86	68	27.3	0.82
6/18/10 2:25	121.7	122.2	121.3	73	85	69	27.6	0.83
6/18/10 2:40	121.7	122.4	121.4	74	84	66	27.2	0.83
6/18/10 2:55	121.9	122.4	121.4	71	84	68	27.1	0.83
6/18/10 3:10	121.8	122.5	121.5	72	85	68	27.4	0.82
6/18/10 3:25	121.9	122.6	121.5	74	85	69	27.8	0.82
6/18/10 3:40	122.1	122.5	121.6	73	85	68	27.5	0.82
6/18/10 3:55	122.1	122.6	121.6	71	85	68	27.3	0.82
6/18/10 4:10	122.0	122.6	121.7	74	83	67	27.2	0.82
6/18/10 4:25	121.9	122.5	121.6	74	84	66	27.3	0.82
6/18/10 4:40	122.1	122.6	121.7	70	86	66	27.1	0.82
6/18/10 4:55	122.1	122.6	121.7	74	85	67	27.6	0.82
6/18/10 5:10	121.9	122.4	121.5	73	83	67	27.1	0.82
6/18/10 5:25	122.0	122.5	121.6	69	84	64	26.5	0.83
6/18/10 5:40	122.1	122.8	121.9	70	77	56	24.8	0.84

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 5:55	122.1	122.8	121.8	69	74	57	24.4	0.84
6/18/10 6:10	121.5	122.2	121.2	67	73	56	23.8	0.85
6/18/10 6:25	121.2	121.9	120.9	66	73	53	23.3	0.85
6/18/10 6:40	120.8	121.6	120.4	67	73	56	23.7	0.85
6/18/10 6:55	121.0	122.0	120.4	77	82	64	27.0	0.88
6/18/10 7:10	120.1	121.3	119.6	105	105	82	35.0	0.87
6/18/10 7:25	119.4	120.6	118.7	137	137	123	47.4	0.84
6/18/10 7:40	119.5	120.7	118.6	128	124	124	44.9	0.86
6/18/10 7:55	118.9	120.0	118.2	151	141	145	52.0	0.88
6/18/10 8:10	119.6	120.4	118.8	168	165	164	59.5	0.90
6/18/10 8:25	119.5	120.4	119.0	161	159	156	56.7	0.90
6/18/10 8:40	119.1	119.6	118.7	154	156	161	56.1	0.89
6/18/10 8:55	118.2	118.9	117.8	207	199	215	73.3	0.93
6/18/10 9:10	117.3	118.1	116.8	253	250	270	90.7	0.96
6/18/10 9:25	116.6	117.2	116.1	299	311	319	108.3	0.95
6/18/10 9:40	117.3	117.7	116.6	265	274	289	97.0	0.96
6/18/10 9:55	116.9	117.4	116.6	236	255	261	87.9	0.96
6/18/10 10:10	117.0	117.5	116.3	240	258	280	90.9	0.96
6/18/10 10:25	116.2	117.0	115.9	269	265	289	95.6	0.95
6/18/10 10:40	116.3	117.0	115.9	278	269	290	97.4	0.95
6/18/10 10:55	116.0	116.8	115.6	305	289	308	104.8	0.96
6/18/10 11:10	116.3	117.0	116.1	263	243	264	89.6	0.96
6/18/10 11:25	117.3	117.9	117.2	259	240	259	89.0	0.96
6/18/10 11:40	117.3	118.0	117.5	294	270	285	99.8	0.95
6/18/10 11:55	117.4	117.9	117.6	277	269	280	97.2	0.95
6/18/10 12:10	117.3	117.9	117.6	283	266	280	97.5	0.95
6/18/10 12:25	117.3	118.0	117.9	255	239	249	87.3	0.95
6/18/10 12:40	117.2	117.5	117.4	261	261	270	92.9	0.95
6/18/10 12:55	116.8	117.4	116.6	291	286	305	103.2	0.96
6/18/10 13:10	116.4	117.2	116.8	282	257	278	95.4	0.96
6/18/10 13:25	116.3	117.1	116.7	267	247	253	89.5	0.94
6/18/10 13:40	116.6	117.2	117.2	224	217	221	77.4	0.95
6/18/10 13:55	116.5	117.0	117.1	258	257	251	89.5	0.94
6/18/10 14:10	116.6	117.2	117.3	245	241	241	85.1	0.94
6/18/10 14:25	116.3	116.9	116.5	259	261	268	91.8	0.95
6/18/10 14:40	116.4	116.7	116.2	263	264	285	94.5	0.95
6/18/10 14:55	116.9	117.2	116.5	252	259	280	92.4	0.95
6/18/10 15:10	116.6	116.8	116.4	268	268	296	97.0	0.95
6/18/10 15:25	116.5	116.8	116.2	259	264	289	94.5	0.95
6/18/10 15:40	116.6	116.6	116.4	249	251	276	90.3	0.95
6/18/10 15:55	116.9	116.8	116.7	226	228	243	81.3	0.93
6/18/10 16:10	117.1	116.7	116.6	200	209	237	75.5	0.93
6/18/10 16:25	116.5	116.1	116.0	185	192	219	69.3	0.92
6/18/10 16:40	116.5	116.0	116.3	187	191	206	67.8	0.91
6/18/10 16:55	116.7	116.4	116.8	176	172	191	62.8	0.91
6/18/10 17:10	117.5	117.2	117.3	164	156	183	59.0	0.92
6/18/10 17:25	117.9	117.6	117.9	127	117	144	45.7	0.94
6/18/10 17:40	118.0	117.8	118.0	120	118	140	44.6	0.94
6/18/10 17:55	118.2	118.1	118.2	118	110	132	42.5	0.93
6/18/10 18:10	118.5	118.6	118.8	119	109	131	42.6	0.93

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 18:25	118.8	118.8	119.1	120	108	126	42.1	0.93
6/18/10 18:40	119.4	119.5	119.8	100	87	100	34.2	0.92
6/18/10 18:55	118.9	118.9	119.4	121	106	119	41.1	0.93
6/18/10 19:10	119.6	119.4	119.9	117	108	110	40.1	0.92
6/18/10 19:25	119.9	120.0	120.1	112	98	109	38.1	0.92
6/18/10 19:40	120.3	120.3	120.5	104	89	103	35.6	0.91
6/18/10 19:55	119.2	119.2	119.4	121	106	118	41.1	0.92
6/18/10 20:10	119.6	119.6	120.0	100	84	93	33.1	0.91
6/18/10 20:25	120.4	120.3	120.4	99	96	105	35.9	0.91
6/18/10 20:40	120.6	120.5	120.6	93	91	97	33.9	0.90
6/18/10 20:55	120.6	120.4	120.8	88	91	87	31.9	0.89
6/18/10 21:10	120.5	120.2	120.7	108	112	106	39.3	0.89
6/18/10 21:25	121.3	120.9	121.3	86	94	88	32.4	0.88
6/18/10 21:40	121.4	121.0	121.3	87	95	94	33.4	0.87
6/18/10 21:55	121.5	121.0	121.3	94	103	102	36.3	0.88
6/18/10 22:10	121.7	121.3	121.7	82	90	82	30.8	0.87
6/18/10 22:25	121.1	120.8	121.3	79	89	78	29.8	0.87
6/18/10 22:40	121.4	121.0	121.5	96	105	93	35.6	0.87
6/18/10 22:55	122.1	121.9	122.2	75	86	77	29.0	0.86
6/18/10 23:10	122.3	121.8	122.2	67	84	71	27.1	0.83
6/18/10 23:25	122.2	122.1	122.3	72	83	63	26.6	0.82
6/18/10 23:40	122.3	122.2	122.4	69	81	60	25.7	0.82
6/18/10 23:55	122.6	122.6	122.6	69	80	61	25.7	0.81
6/19/10 0:10	123.1	122.8	122.8	66	83	66	26.3	0.81
6/19/10 0:25	123.4	123.1	122.9	65	83	67	26.5	0.81
6/19/10 0:40	121.6	121.7	121.3	67	81	65	25.9	0.81
6/19/10 0:55	121.8	121.9	121.5	68	80	65	26.0	0.81
6/19/10 1:10	121.3	121.4	121.1	68	81	67	26.2	0.82
6/19/10 1:25	121.3	121.2	121.0	66	81	66	25.8	0.82
6/19/10 1:40	121.7	121.6	121.3	66	82	66	25.9	0.81
6/19/10 1:55	121.9	121.9	121.6	67	80	66	26.0	0.81
6/19/10 2:10	122.0	122.0	121.7	69	81	67	26.4	0.81
6/19/10 2:25	122.4	122.3	122.0	67	82	65	26.2	0.82
6/19/10 2:40	122.1	122.5	121.7	65	82	66	26.0	0.82
6/19/10 2:55	122.0	122.6	121.6	66	80	68	26.2	0.81
6/19/10 3:10	122.3	122.9	121.8	68	82	66	26.4	0.81
6/19/10 3:25	122.2	122.7	121.8	67	84	65	26.4	0.81
6/19/10 3:40	122.4	122.9	121.8	64	81	66	25.9	0.81
6/19/10 3:55	122.4	122.9	121.9	69	81	67	26.5	0.81
6/19/10 4:10	122.4	122.9	121.8	68	83	68	26.8	0.81
6/19/10 4:25	122.6	123.0	121.9	65	83	66	26.2	0.81
6/19/10 4:40	122.5	123.1	122.0	66	81	65	26.0	0.81
6/19/10 4:55	122.4	122.9	121.9	68	81	65	26.1	0.81
6/19/10 5:10	122.5	123.0	122.0	66	84	66	26.5	0.81
6/19/10 5:10	122.5	123.1	121.8	69	83	71	27.2	0.80

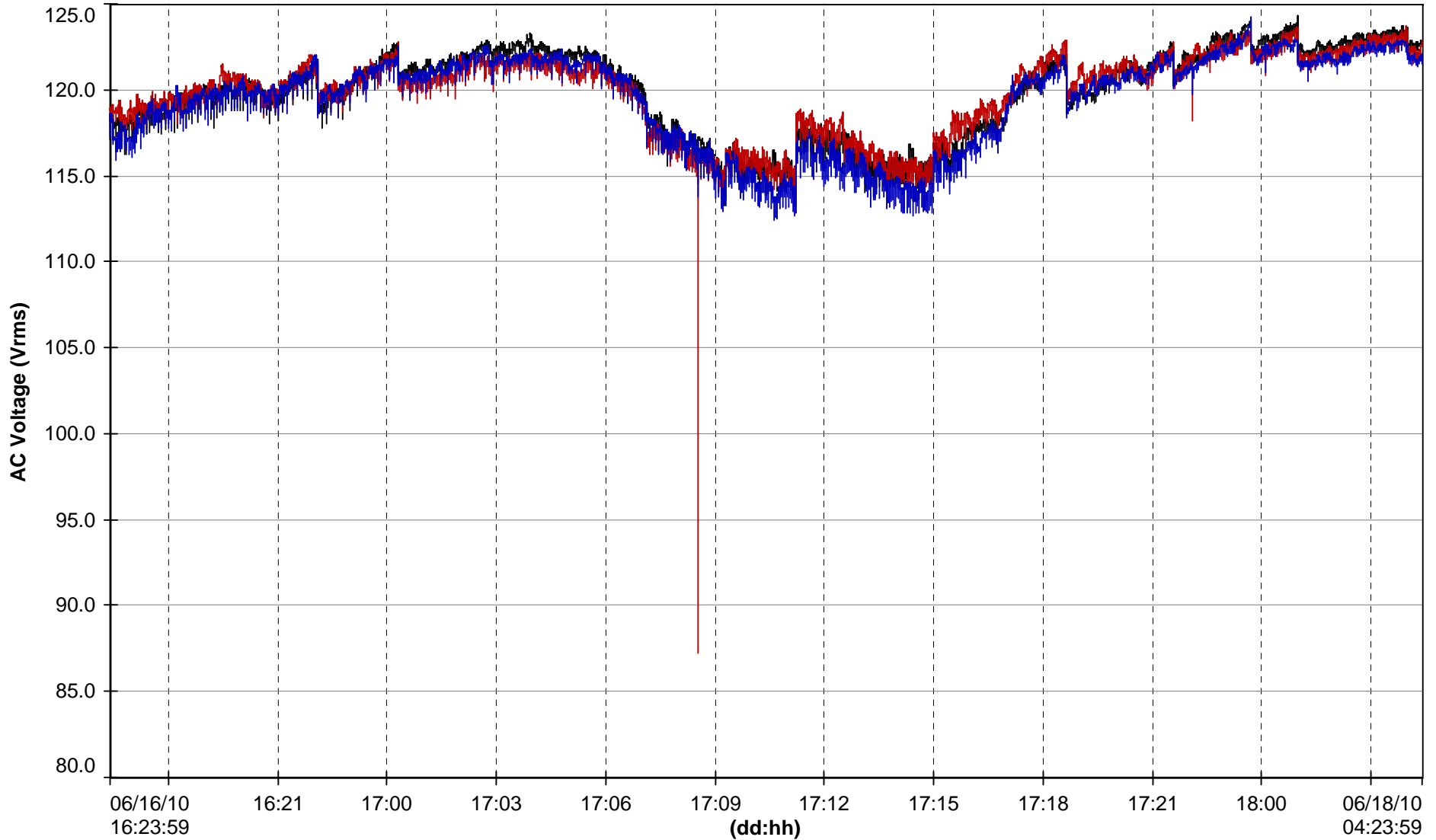


# James Johnson Elementary School

*Electrical Load Study*  
*June 16 – 18, 2010*

Cherry Hill School District

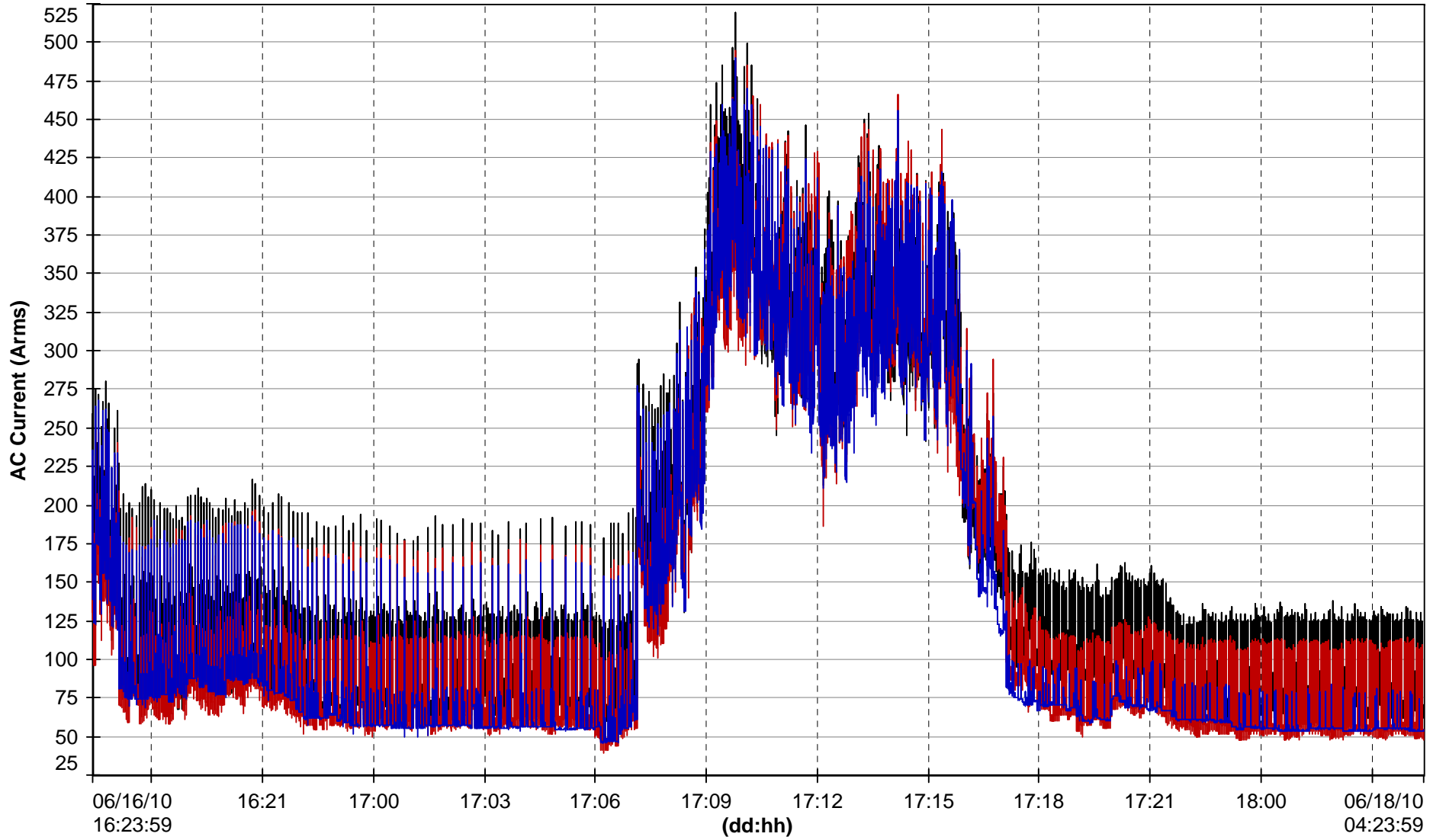
### Main Service Phase Voltage



	Maximum	Minimum	Average
— Va	124.3	113.2	120.0
— Vb	123.8	86.8	120.0
— Vc	124.2	112.3	119.5

### James Johnson Elementary School

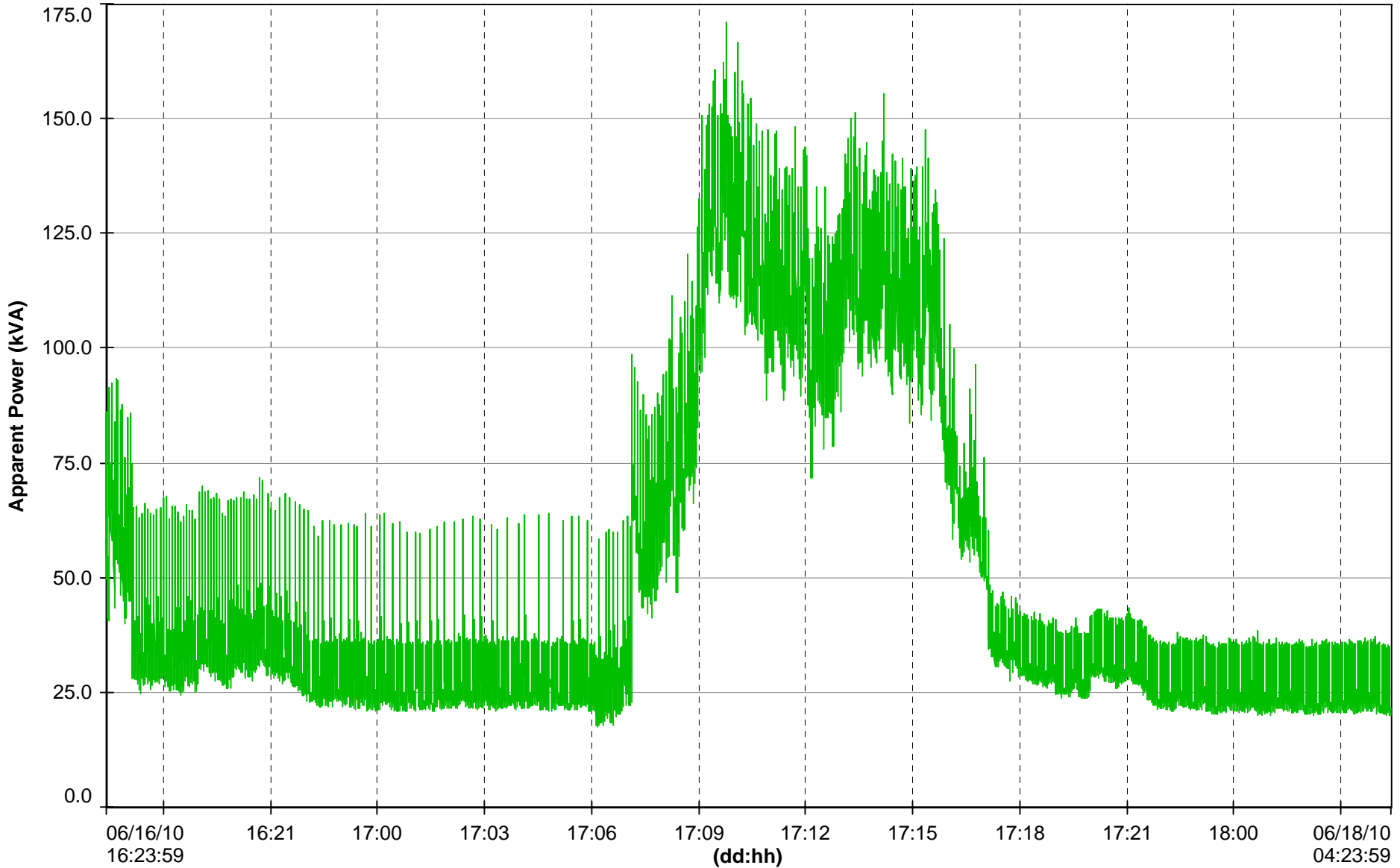
### Main Service Line Current



	Maximum	Minimum	Average
— la	524	57	136
— lb	498	39	121
— lc	494	45	122

### James Johnson Elementary School

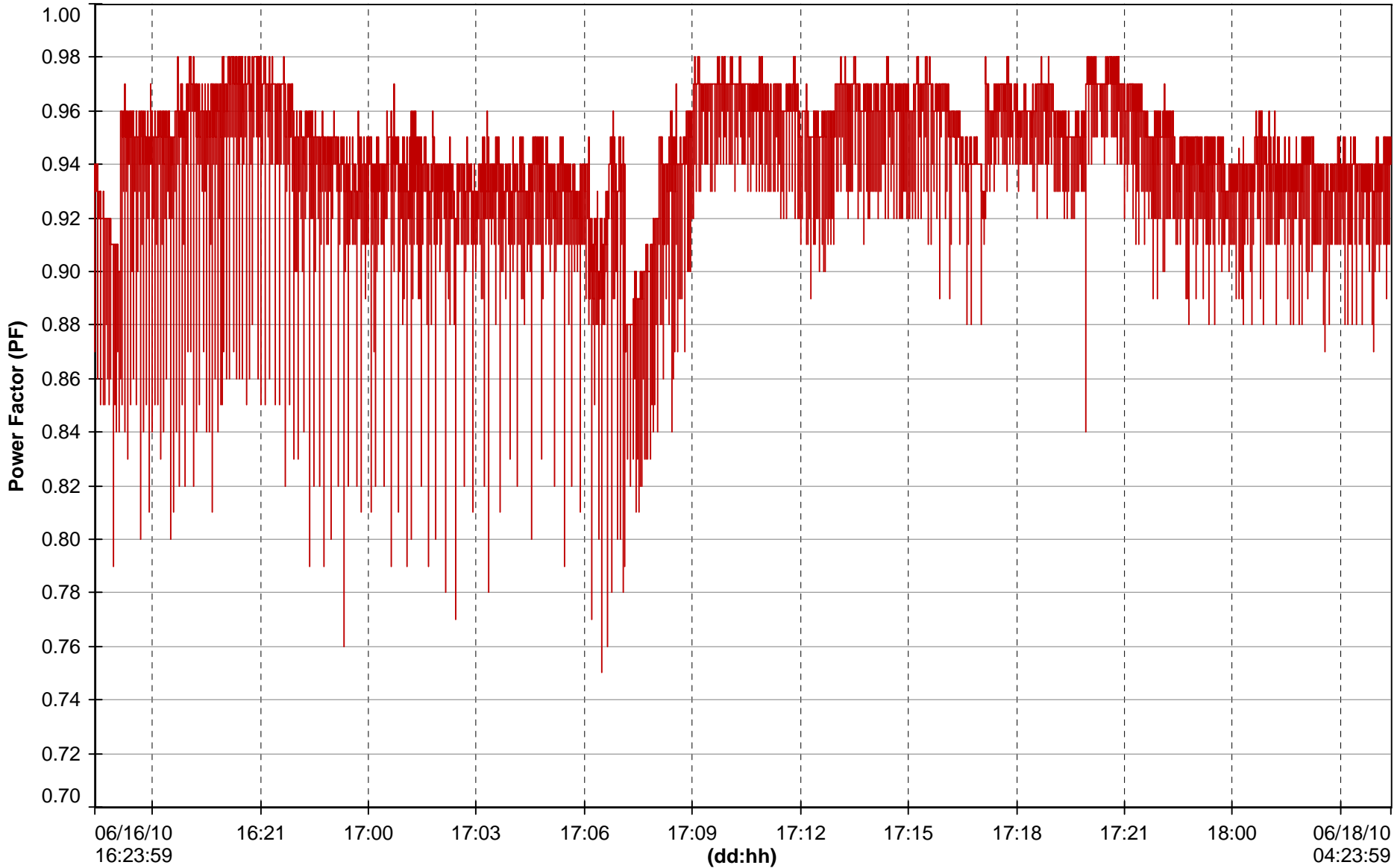
### Main Service Apparent Power



Maximum Minimum Average  
— kVA 173.0 17.4 44.7

### James Johnson Elementary School

### Main Service Power Factor



Maximum Minimum Average  
— PF 0.99 0.75 0.95

### James Johnson Elementary School

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/16/10 16:38	118.2	118.8	117.5	166	143	165	55.9	0.93
6/16/10 16:53	117.8	118.6	117.5	159	141	157	53.9	0.92
6/16/10 17:08	118.0	118.8	117.3	142	129	139	48.3	0.91
6/16/10 17:23	118.7	119.1	118.1	93	75	86	30.1	0.95
6/16/10 17:38	118.8	119.2	118.9	89	83	82	30.1	0.95
6/16/10 17:53	118.8	119.3	118.8	105	69	81	30.3	0.95
6/16/10 18:08	119.3	119.4	118.7	95	76	85	30.4	0.95
6/16/10 18:23	119.2	119.4	119.5	88	70	84	28.9	0.95
6/16/10 18:38	119.4	119.7	119.0	88	71	82	28.7	0.95
6/16/10 18:53	119.6	120.0	119.4	84	82	87	30.2	0.96
6/16/10 19:08	119.9	119.9	119.7	94	83	91	32.0	0.96
6/16/10 19:23	119.5	120.2	119.9	100	81	93	32.8	0.96
6/16/10 19:38	120.1	120.9	119.9	93	76	88	30.8	0.96
6/16/10 19:53	120.0	120.7	120.0	88	74	85	29.6	0.96
6/16/10 20:08	120.1	120.7	120.2	93	82	90	32.0	0.96
6/16/10 20:23	120.3	120.3	119.7	91	84	94	32.3	0.97
6/16/10 20:38	120.1	120.1	120.0	91	81	92	31.7	0.97
6/16/10 20:53	119.4	119.8	119.8	99	88	93	33.5	0.97
6/16/10 21:08	119.6	120.0	119.8	94	80	89	31.4	0.97
6/16/10 21:23	120.2	120.5	120.2	91	76	84	30.1	0.97
6/16/10 21:38	120.5	120.9	120.7	93	77	83	30.4	0.97
6/16/10 21:53	120.8	121.5	120.9	86	72	79	28.6	0.96
6/16/10 22:08	120.9	121.1	121.1	80	65	72	26.2	0.95
6/16/10 22:23	119.0	120.0	119.6	80	64	67	25.3	0.95
6/16/10 22:38	119.8	120.2	119.8	74	62	65	24.0	0.95
6/16/10 22:53	119.7	119.9	120.1	77	64	68	25.0	0.94
6/16/10 23:08	120.2	120.5	120.5	75	64	65	24.5	0.94
6/16/10 23:23	120.9	120.9	121.0	76	64	64	24.7	0.94
6/16/10 23:38	121.1	121.2	120.9	76	62	60	23.9	0.93
6/16/10 23:53	121.6	121.2	121.3	77	63	62	24.4	0.94
6/17/10 0:08	122.0	121.9	121.6	74	59	60	23.5	0.94
6/17/10 0:23	121.8	121.5	121.3	77	62	60	24.1	0.93
6/17/10 0:38	121.0	120.6	120.8	72	62	59	23.3	0.94
6/17/10 0:53	121.3	120.5	120.8	73	65	61	24.0	0.94
6/17/10 1:08	121.3	120.6	120.9	76	62	58	23.6	0.93
6/17/10 1:23	121.3	120.7	121.1	74	62	58	23.4	0.93
6/17/10 1:38	121.5	120.9	121.3	76	60	60	23.6	0.94
6/17/10 1:53	121.6	120.9	121.4	77	61	61	24.2	0.93
6/17/10 2:08	121.9	121.4	121.5	71	61	58	23.1	0.93
6/17/10 2:23	121.9	121.5	121.8	76	62	60	24.1	0.93
6/17/10 2:38	122.5	121.7	122.0	74	63	60	24.0	0.93
6/17/10 2:53	122.5	121.6	122.1	73	62	58	23.6	0.93
6/17/10 3:08	122.3	121.7	121.8	78	62	58	24.1	0.93
6/17/10 3:23	122.4	121.7	121.7	75	60	60	23.8	0.93
6/17/10 3:38	122.6	121.7	121.8	72	61	56	23.1	0.93
6/17/10 3:53	122.6	121.8	122.0	78	62	59	24.1	0.93
6/17/10 4:08	122.7	121.9	122.0	74	64	59	24.0	0.93
6/17/10 4:23	122.5	121.7	121.7	74	62	58	23.5	0.93
6/17/10 4:38	122.2	121.7	121.9	77	62	59	24.0	0.93
6/17/10 4:53	122.2	121.5	122.0	74	59	59	23.4	0.94

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 5:08	122.1	121.3	121.5	74	60	55	22.9	0.93
6/17/10 5:23	122.2	121.1	121.5	73	62	57	23.4	0.93
6/17/10 5:38	122.1	121.5	121.9	73	62	58	23.4	0.93
6/17/10 5:53	121.9	121.3	121.7	77	61	58	23.8	0.92
6/17/10 6:08	121.6	121.0	121.1	72	57	57	22.6	0.93
6/17/10 6:23	121.1	120.8	120.8	70	48	50	20.2	0.90
6/17/10 6:38	120.7	120.4	120.7	76	53	53	21.8	0.90
6/17/10 6:53	120.5	120.1	120.1	77	58	59	23.3	0.93
6/17/10 7:08	119.9	119.2	119.4	86	67	70	26.6	0.93
6/17/10 7:23	118.1	117.4	118.2	179	157	165	58.9	0.88
6/17/10 7:38	118.1	117.5	117.6	151	119	139	48.1	0.89
6/17/10 7:53	117.5	117.2	117.3	162	126	148	51.1	0.90
6/17/10 8:08	117.7	117.2	117.5	175	152	165	57.6	0.92
6/17/10 8:23	117.0	116.6	117.0	190	182	186	65.3	0.94
6/17/10 8:38	117.0	116.1	116.6	190	190	192	66.6	0.94
6/17/10 8:53	116.7	116.1	116.4	228	218	221	77.6	0.95
6/17/10 9:08	115.9	115.8	115.5	286	270	268	95.2	0.96
6/17/10 9:23	115.6	115.6	115.1	352	331	329	116.8	0.97
6/17/10 9:38	116.4	116.4	115.7	367	332	351	122.0	0.97
6/17/10 9:53	115.6	116.3	114.9	392	354	375	129.4	0.97
6/17/10 10:08	115.6	116.1	115.0	376	341	351	123.4	0.97
6/17/10 10:23	115.6	116.1	114.5	355	339	343	119.7	0.97
6/17/10 10:38	115.5	115.6	114.2	325	330	333	113.8	0.97
6/17/10 10:53	115.3	115.4	114.0	314	321	323	110.0	0.97
6/17/10 11:08	115.5	115.7	114.5	300	300	298	103.4	0.97
6/17/10 11:23	116.3	117.3	115.6	315	306	303	107.4	0.96
6/17/10 11:38	117.6	118.2	116.8	300	292	293	104.0	0.96
6/17/10 11:53	117.1	117.9	116.4	309	297	280	103.8	0.97
6/17/10 12:08	117.2	117.8	115.8	300	295	281	102.5	0.96
6/17/10 12:23	116.9	117.7	116.4	275	244	249	89.9	0.95
6/17/10 12:38	117.0	117.6	115.7	271	261	257	92.0	0.95
6/17/10 12:53	116.7	117.1	115.9	263	262	249	90.3	0.96
6/17/10 13:08	116.2	116.7	115.8	300	289	279	100.7	0.96
6/17/10 13:23	115.5	116.4	114.9	339	330	309	113.1	0.97
6/17/10 13:38	115.7	116.2	115.3	320	304	287	105.3	0.97
6/17/10 13:53	115.7	115.7	114.6	307	314	298	105.9	0.96
6/17/10 14:08	115.8	115.9	114.4	296	303	310	104.8	0.96
6/17/10 14:23	115.7	115.6	114.2	310	316	316	108.5	0.96
6/17/10 14:38	115.4	115.5	114.0	296	314	308	105.4	0.96
6/17/10 14:53	115.6	115.4	114.2	292	292	295	101.1	0.96
6/17/10 15:08	116.1	116.6	115.4	289	296	291	101.6	0.96
6/17/10 15:23	116.4	117.1	115.8	292	288	289	101.1	0.96
6/17/10 15:38	116.2	117.8	115.6	300	282	291	101.6	0.97
6/17/10 15:53	116.7	118.2	116.2	280	250	280	94.8	0.96
6/17/10 16:08	117.5	118.2	116.8	197	204	202	70.8	0.96
6/17/10 16:23	117.9	118.8	117.0	181	188	181	64.8	0.96
6/17/10 16:38	118.1	119.0	117.6	169	175	148	58.1	0.94
6/17/10 16:53	118.3	118.9	117.5	171	180	147	58.8	0.94
6/17/10 17:08	118.7	119.5	118.9	150	156	120	50.7	0.93
6/17/10 17:23	119.8	120.5	120.0	110	94	78	33.9	0.96

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 17:38	120.4	120.9	120.5	107	91	73	32.6	0.96
6/17/10 17:53	120.6	121.1	120.6	111	80	73	31.8	0.97
6/17/10 18:08	120.9	121.6	120.5	103	75	72	30.3	0.96
6/17/10 18:23	121.4	122.1	121.0	97	68	71	28.7	0.96
6/17/10 18:38	121.7	122.2	121.4	95	64	73	28.2	0.96
6/17/10 18:53	119.6	120.2	119.3	96	66	70	27.8	0.97
6/17/10 19:08	119.8	120.9	119.9	96	62	67	26.9	0.96
6/17/10 19:23	119.7	120.7	120.0	92	59	60	25.5	0.95
6/17/10 19:38	120.1	120.9	120.4	94	63	63	26.5	0.95
6/17/10 19:53	120.3	121.2	120.6	87	59	61	24.9	0.95
6/17/10 20:08	120.9	121.2	120.4	93	68	71	28.0	0.97
6/17/10 20:23	121.2	121.6	120.9	100	73	72	29.8	0.97
6/17/10 20:38	121.4	121.5	121.0	95	69	71	28.5	0.97
6/17/10 20:53	121.0	121.1	120.8	93	68	70	27.9	0.97
6/17/10 21:08	121.4	121.3	121.4	97	74	69	29.1	0.97
6/17/10 21:23	122.0	122.0	121.6	92	68	69	27.8	0.96
6/17/10 21:38	122.1	121.9	121.5	83	63	66	25.8	0.96
6/17/10 21:53	121.4	121.3	120.9	74	60	62	23.6	0.95
6/17/10 22:08	121.8	121.8	121.2	69	58	61	22.7	0.95
6/17/10 22:23	121.9	122.3	121.5	68	55	61	22.4	0.95
6/17/10 22:38	122.3	122.1	121.9	74	57	61	23.4	0.94
6/17/10 22:53	123.1	122.6	122.2	69	57	60	22.8	0.94
6/17/10 23:08	123.1	122.6	122.5	70	56	60	22.7	0.94
6/17/10 23:23	123.1	122.8	122.7	71	55	57	22.5	0.94
6/17/10 23:38	123.5	123.1	123.1	69	52	55	21.6	0.94
6/17/10 23:53	122.8	122.4	122.4	71	55	56	22.3	0.93
6/18/10 0:08	122.9	122.3	122.1	72	55	55	22.3	0.93
6/18/10 0:23	122.9	122.5	122.4	69	56	55	22.1	0.94
6/18/10 0:38	123.3	122.8	122.7	73	56	54	22.5	0.93
6/18/10 0:53	123.6	123.2	122.7	69	52	54	21.6	0.95
6/18/10 1:08	123.0	122.6	122.2	71	54	53	21.8	0.94
6/18/10 1:23	122.2	121.9	121.6	74	56	54	22.4	0.93
6/18/10 1:38	122.5	122.0	121.8	71	56	55	22.2	0.94
6/18/10 1:53	122.5	122.3	122.0	71	55	55	22.0	0.93
6/18/10 2:08	122.5	122.2	121.7	71	53	56	21.9	0.94
6/18/10 2:23	122.9	122.3	121.9	68	54	54	21.6	0.94
6/18/10 2:38	123.0	122.6	122.2	72	56	53	22.3	0.93
6/18/10 2:53	123.1	122.8	122.4	69	56	54	21.9	0.93
6/18/10 3:08	123.2	122.9	122.6	70	55	54	21.9	0.94
6/18/10 3:23	123.2	123.0	122.5	73	53	55	22.1	0.94
6/18/10 3:38	123.4	123.0	122.6	69	55	55	22.0	0.93
6/18/10 3:53	123.4	123.1	122.7	69	56	55	22.2	0.93
6/18/10 4:08	123.0	122.8	122.3	72	55	54	22.3	0.93
6/18/10 4:23	122.6	122.3	121.9	69	54	53	21.5	0.94
6/18/10 4:23	122.8	122.5	122.0	68	53	53	21.4	0.94

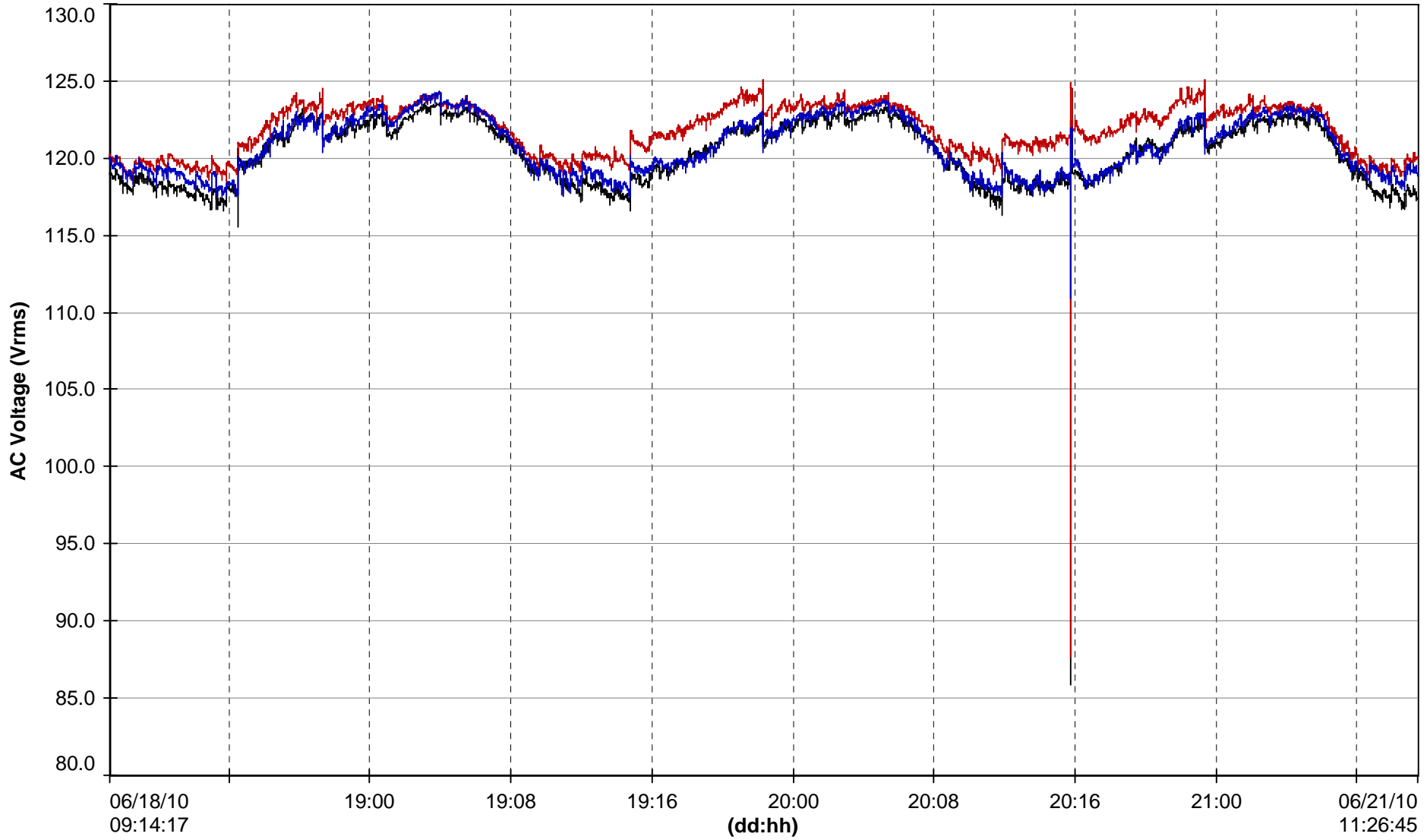


# Joseph Sharp Elementary School

*Electrical Load Study*  
*June 18 – 21, 2010*

Cherry Hill School District

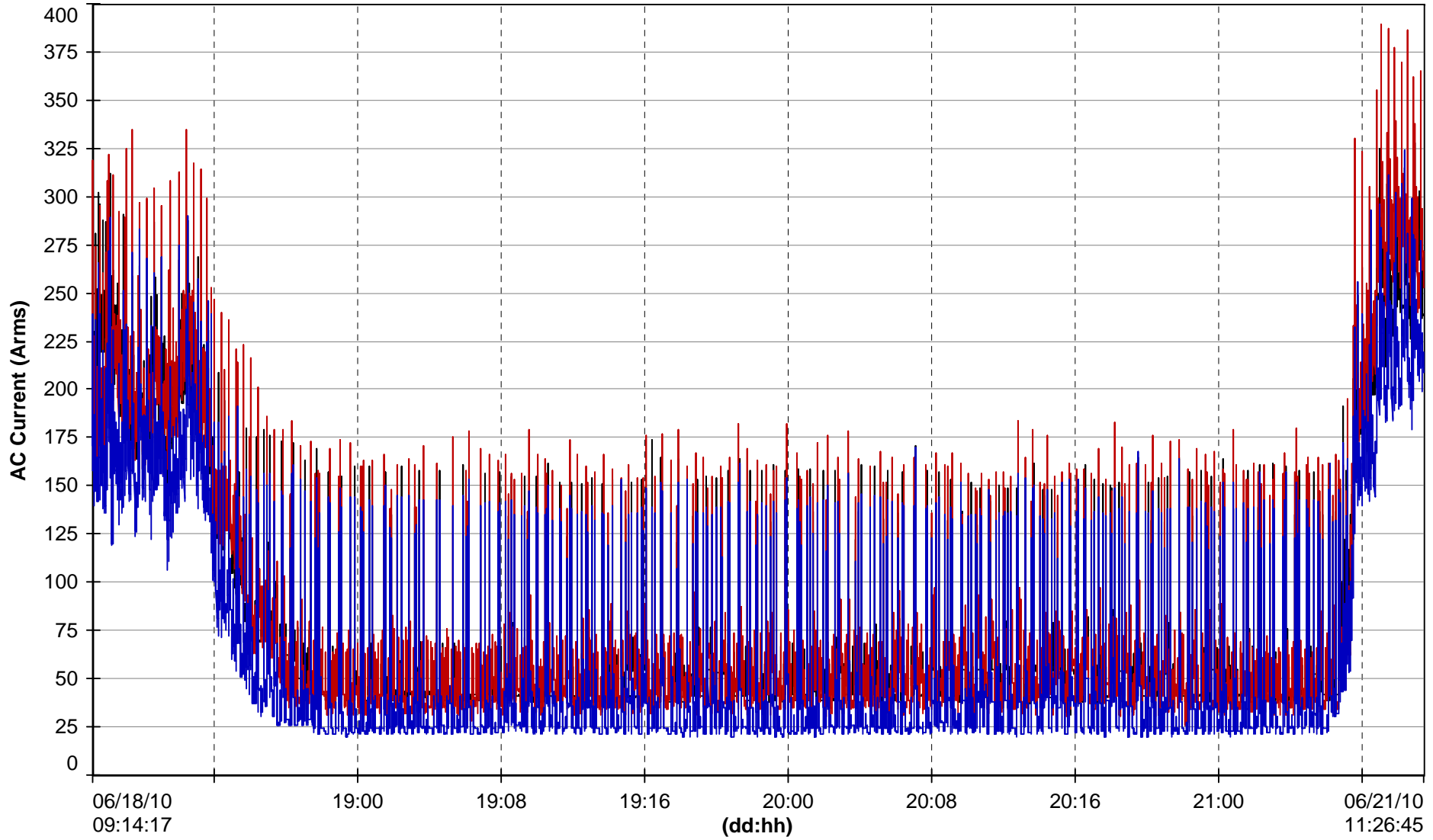
### Main Service Phase Voltage



	Maximum	Minimum	Average
— Va	123.7	85.9	120.4
— Vb	125.1	87.6	121.9
— Vc	124.3	110.6	120.8

### Joseph Sharp Elementary School

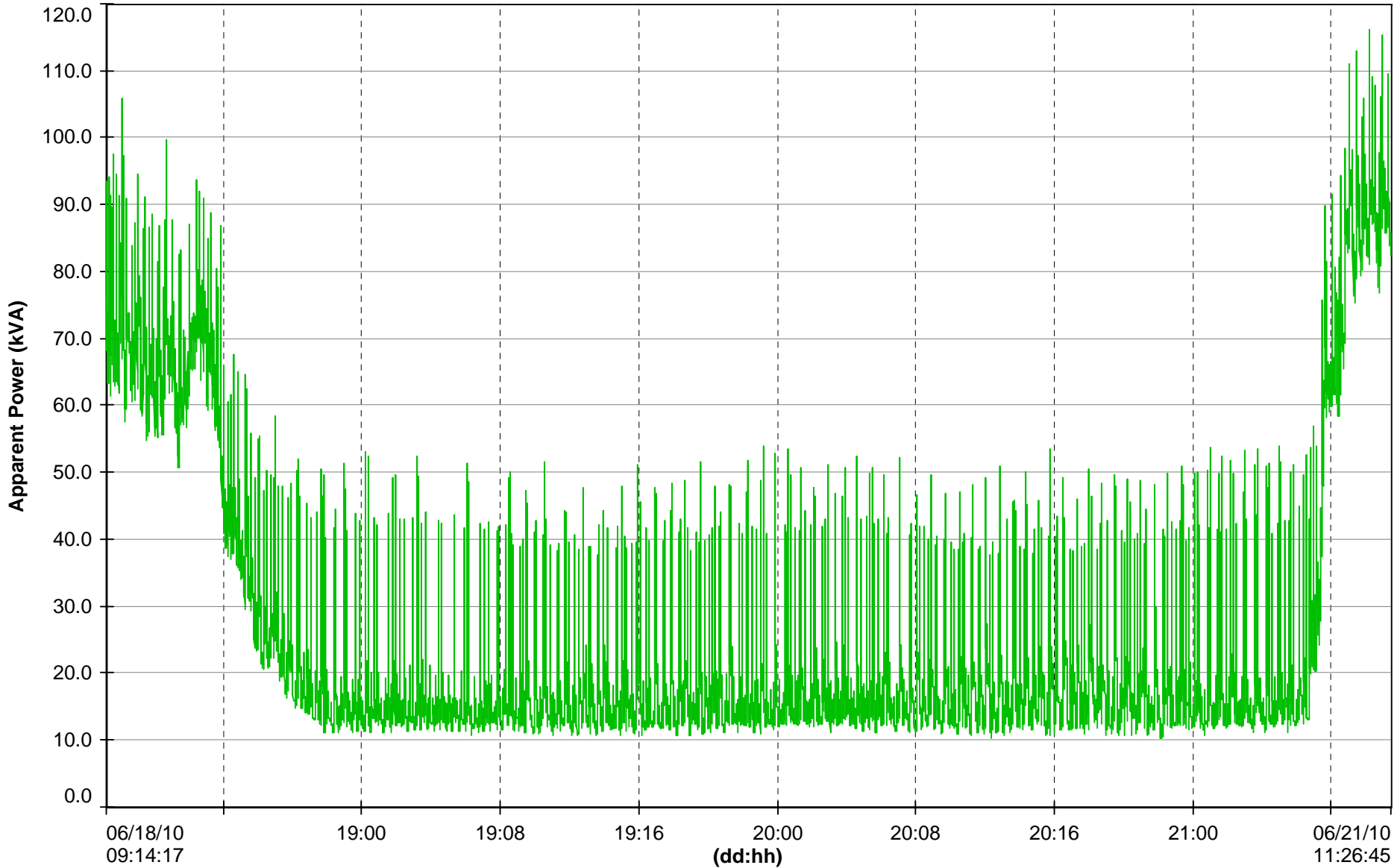
### Main Service Line Current



	Maximum	Minimum	Average
— la	328	31	72
— lb	394	26	72
— lc	329	20	52

### Joseph Sharp Elementary School

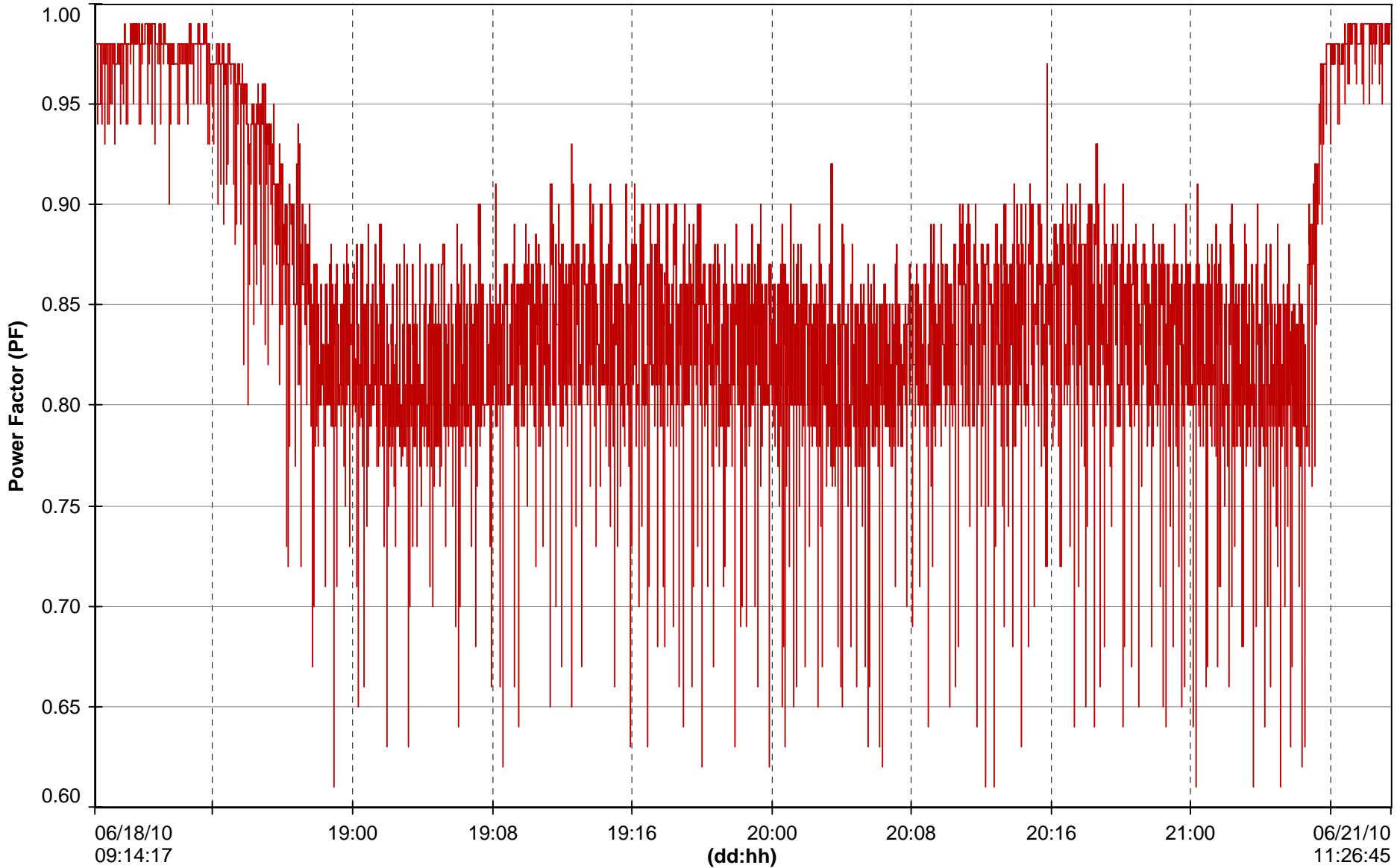
### Main Service Apparent Power



Maximum Minimum Average  
— kVA 116.1 10.2 23.6

### Joseph Sharp Elementary School

### Main Service Power Factor



Maximum Minimum Average  
— PF 0.99 0.61 0.85

### Joseph Sharp Elementary School

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 9:29	118.9	120.0	119.6	217	201	163	69.4	0.98
6/18/10 9:44	118.9	119.9	119.7	220	187	158	67.4	0.98
6/18/10 9:59	118.7	119.7	119.5	226	187	150	67.0	0.98
6/18/10 10:14	118.2	119.2	119.0	231	222	180	75.2	0.98
6/18/10 10:29	118.0	119.1	118.9	212	201	152	67.0	0.98
6/18/10 10:44	118.2	119.2	119.0	219	204	149	68.0	0.98
6/18/10 10:59	118.7	119.8	119.5	204	190	150	64.9	0.98
6/18/10 11:14	118.8	119.8	119.4	210	212	165	70.0	0.98
6/18/10 11:29	118.7	119.7	119.2	183	193	156	63.4	0.98
6/18/10 11:44	118.5	119.5	119.0	181	181	145	60.3	0.98
6/18/10 11:59	118.0	119.4	118.8	191	197	164	65.5	0.98
6/18/10 12:14	118.3	120.0	119.3	169	171	152	58.7	0.98
6/18/10 12:29	118.1	119.6	119.1	186	185	160	63.1	0.98
6/18/10 12:44	118.1	120.0	119.2	206	189	157	65.7	0.99
6/18/10 12:59	118.1	120.0	119.2	202	203	161	67.4	0.98
6/18/10 13:14	118.0	119.8	119.0	197	185	169	65.5	0.98
6/18/10 13:29	118.0	119.7	118.9	159	177	128	55.1	0.98
6/18/10 13:44	117.8	119.4	118.5	179	187	136	59.4	0.97
6/18/10 13:59	117.6	119.2	118.4	185	190	143	61.3	0.97
6/18/10 14:14	117.7	119.4	118.5	199	205	160	66.8	0.98
6/18/10 14:29	117.7	119.2	118.6	203	217	163	69.0	0.98
6/18/10 14:44	117.4	119.3	118.3	214	221	189	73.8	0.98
6/18/10 14:59	117.2	119.0	118.2	201	215	179	70.3	0.98
6/18/10 15:14	117.7	119.8	118.9	191	189	162	64.3	0.98
6/18/10 15:29	117.3	119.4	118.2	196	197	160	65.4	0.98
6/18/10 15:44	117.2	119.0	117.9	168	183	143	58.2	0.98
6/18/10 15:59	117.6	119.3	118.2	152	158	127	51.8	0.97
6/18/10 16:14	118.0	119.5	118.4	123	135	96	41.9	0.97
6/18/10 16:29	117.8	119.2	118.1	129	128	86	40.7	0.98
6/18/10 16:44	119.8	120.8	119.5	129	131	85	41.3	0.97
6/18/10 16:59	119.5	120.8	119.6	131	127	91	41.9	0.97
6/18/10 17:14	119.6	121.1	119.6	106	116	65	34.5	0.97
6/18/10 17:29	119.7	120.9	119.8	114	121	73	37.0	0.96
6/18/10 17:44	119.8	121.2	120.0	96	105	59	31.2	0.96
6/18/10 17:59	120.1	121.6	120.3	83	80	54	26.2	0.95
6/18/10 18:14	120.7	122.2	120.8	84	93	56	28.2	0.93
6/18/10 18:29	121.1	122.4	121.2	79	73	42	23.5	0.94
6/18/10 18:44	121.4	122.6	121.7	72	79	38	23.0	0.94
6/18/10 18:59	121.3	122.7	121.6	85	77	48	25.5	0.94
6/18/10 19:14	121.3	122.9	121.6	88	81	53	26.9	0.93
6/18/10 19:29	121.2	123.2	121.9	72	65	38	21.4	0.93
6/18/10 19:44	121.9	123.7	122.3	63	58	28	18.3	0.90
6/18/10 19:59	122.6	123.6	122.6	67	60	41	20.7	0.91
6/18/10 20:14	122.9	123.7	122.4	62	42	29	16.3	0.87
6/18/10 20:29	122.5	123.1	122.3	70	54	40	20.2	0.88
6/18/10 20:44	122.7	123.5	122.6	60	44	29	16.3	0.87
6/18/10 20:59	122.3	123.4	122.3	49	46	38	16.3	0.88
6/18/10 21:14	122.5	123.6	122.5	54	41	32	15.6	0.86
6/18/10 21:29	121.7	122.7	121.7	49	47	33	15.6	0.86
6/18/10 21:44	121.3	122.7	121.4	48	43	29	14.6	0.84

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 21:59	121.8	122.9	121.7	47	45	31	15.1	0.84
6/18/10 22:14	121.7	122.8	121.9	42	43	23	13.2	0.80
6/18/10 22:29	121.5	122.9	121.8	45	40	28	13.8	0.83
6/18/10 22:44	121.8	123.0	122.2	42	41	25	13.2	0.81
6/18/10 22:59	122.2	123.4	122.5	43	43	24	13.5	0.80
6/18/10 23:14	122.1	123.3	122.5	50	49	33	16.2	0.84
6/18/10 23:29	122.1	123.4	122.4	40	37	22	12.2	0.81
6/18/10 23:44	122.2	123.4	122.6	42	44	27	13.9	0.81
6/18/10 23:59	122.2	123.5	123.0	45	41	27	13.9	0.82
6/19/10 0:14	122.5	123.7	123.1	41	39	24	12.7	0.81
6/19/10 0:29	122.5	123.5	123.0	47	50	30	15.6	0.81
6/19/10 0:44	122.7	123.8	123.4	43	42	24	13.4	0.81
6/19/10 0:59	122.2	123.3	122.8	42	41	28	13.7	0.83
6/19/10 1:14	121.5	122.5	122.2	42	41	24	12.9	0.80
6/19/10 1:29	121.6	122.6	122.3	41	42	22	12.8	0.81
6/19/10 1:44	121.9	122.8	122.6	45	41	29	14.0	0.83
6/19/10 1:59	122.4	123.2	123.0	47	46	28	14.9	0.81
6/19/10 2:14	122.6	123.3	123.1	41	41	26	13.3	0.80
6/19/10 2:29	122.7	123.4	123.3	41	43	25	13.3	0.80
6/19/10 2:44	123.0	123.7	123.5	44	37	26	13.2	0.81
6/19/10 2:59	123.2	123.8	123.8	43	45	27	14.2	0.80
6/19/10 3:14	123.4	124.0	124.0	44	45	26	14.1	0.80
6/19/10 3:29	123.2	123.9	123.9	46	42	27	14.1	0.80
6/19/10 3:44	123.4	124.0	124.1	44	44	30	14.6	0.81
6/19/10 3:59	123.5	124.1	124.1	41	41	23	13.0	0.79
6/19/10 4:14	122.9	123.5	123.6	41	39	23	12.7	0.79
6/19/10 4:29	123.0	123.6	123.7	42	41	26	13.4	0.80
6/19/10 4:44	122.8	123.5	123.5	44	42	28	14.1	0.82
6/19/10 4:59	122.9	123.4	123.4	41	39	23	12.6	0.80
6/19/10 5:14	122.8	123.5	123.5	41	44	30	14.2	0.83
6/19/10 5:29	123.2	123.8	123.8	41	44	26	13.7	0.80
6/19/10 5:44	123.0	123.6	123.5	40	40	23	12.7	0.79
6/19/10 5:59	122.9	123.4	123.5	45	39	27	13.7	0.81
6/19/10 6:14	122.7	123.2	123.2	47	47	30	15.3	0.82
6/19/10 6:29	122.5	123.1	123.0	40	37	24	12.3	0.81
6/19/10 6:44	122.2	122.8	122.9	42	39	24	12.8	0.80
6/19/10 6:59	122.0	122.7	122.6	41	43	28	13.6	0.81
6/19/10 7:14	121.7	122.3	122.2	45	41	27	13.7	0.82
6/19/10 7:29	121.4	122.1	121.8	43	43	29	13.9	0.82
6/19/10 7:44	121.4	122.1	121.8	42	44	24	13.1	0.80
6/19/10 7:59	121.2	121.8	121.5	44	46	30	14.5	0.83
6/19/10 8:14	120.7	121.5	121.0	41	41	25	12.9	0.81
6/19/10 8:29	120.7	121.2	120.8	42	47	32	14.6	0.82
6/19/10 8:44	120.2	120.9	120.6	50	50	32	15.8	0.82
6/19/10 8:59	119.8	120.4	120.0	40	44	29	13.6	0.83
6/19/10 9:14	119.2	120.1	119.6	39	42	28	13.1	0.83
6/19/10 9:29	119.1	120.0	119.5	45	43	30	14.0	0.83
6/19/10 9:44	119.4	120.1	119.5	49	55	38	17.0	0.84
6/19/10 9:59	119.4	120.2	119.6	39	38	23	12.0	0.81
6/19/10 10:14	119.3	120.2	119.5	45	46	33	14.7	0.83

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/19/10 10:29	119.2	120.2	119.3	40	42	25	12.6	0.81
6/19/10 10:44	118.8	119.8	118.9	53	53	41	17.5	0.85
6/19/10 10:59	118.4	119.5	118.6	41	46	29	13.7	0.82
6/19/10 11:14	118.3	119.7	118.9	40	41	24	12.5	0.81
6/19/10 11:29	118.3	119.5	118.6	45	42	32	14.0	0.85
6/19/10 11:44	118.2	119.9	119.1	44	45	27	13.8	0.81
6/19/10 11:59	117.8	119.5	118.5	48	52	36	16.1	0.85
6/19/10 12:14	118.2	120.0	119.3	41	37	25	12.2	0.82
6/19/10 12:29	118.5	120.2	119.2	40	44	29	13.5	0.83
6/19/10 12:44	118.1	120.2	119.0	45	45	33	14.6	0.85
6/19/10 12:59	118.3	120.3	119.0	48	55	37	16.7	0.85
6/19/10 13:14	118.1	120.2	118.9	45	40	28	13.4	0.83
6/19/10 13:29	117.8	120.1	118.6	40	46	30	13.7	0.83
6/19/10 13:44	117.5	119.8	118.4	44	41	28	13.3	0.84
6/19/10 13:59	117.7	120.0	118.2	41	43	29	13.4	0.83
6/19/10 14:14	117.8	119.9	118.3	51	54	36	16.7	0.84
6/19/10 14:29	117.5	120.0	118.3	42	42	29	13.3	0.83
6/19/10 14:44	117.4	119.6	118.1	40	41	28	12.9	0.82
6/19/10 14:59	118.8	121.3	119.4	46	42	29	13.9	0.83
6/19/10 15:14	118.7	121.0	119.3	50	58	38	17.5	0.84
6/19/10 15:29	118.5	120.9	119.3	47	38	30	13.6	0.84
6/19/10 15:44	118.4	120.6	119.2	40	45	30	13.8	0.83
6/19/10 15:59	118.6	121.0	119.3	49	43	30	14.5	0.84
6/19/10 16:14	119.3	121.6	119.8	48	52	37	16.4	0.85
6/19/10 16:29	119.3	121.5	119.8	44	38	26	13.0	0.82
6/19/10 16:44	119.2	121.4	119.6	42	45	32	14.2	0.84
6/19/10 16:59	119.1	121.4	119.5	49	47	32	15.4	0.83
6/19/10 17:14	119.2	121.6	119.5	48	49	35	15.9	0.85
6/19/10 17:29	119.5	121.6	119.8	41	41	25	12.8	0.82
6/19/10 17:44	119.7	121.8	119.8	45	44	31	14.4	0.84
6/19/10 17:59	119.7	121.9	119.6	55	54	41	18.0	0.85
6/19/10 18:14	120.2	122.1	119.8	40	43	25	13.0	0.82
6/19/10 18:29	120.3	122.1	119.9	45	43	32	14.6	0.84
6/19/10 18:44	120.2	122.5	120.2	46	45	28	14.4	0.82
6/19/10 18:59	120.3	122.5	120.3	47	52	34	16.1	0.84
6/19/10 19:14	120.6	122.5	120.3	45	40	27	13.6	0.82
6/19/10 19:29	120.8	122.6	120.6	41	43	28	13.5	0.84
6/19/10 19:44	120.8	122.8	120.6	54	54	35	17.3	0.83
6/19/10 19:59	121.0	123.0	121.1	40	48	34	14.9	0.85
6/19/10 20:14	121.6	123.3	121.7	45	39	27	13.5	0.83
6/19/10 20:29	121.8	123.5	121.8	48	55	35	16.9	0.83
6/19/10 20:44	121.9	123.6	121.9	46	42	27	14.1	0.82
6/19/10 20:59	121.9	123.8	122.1	42	42	28	13.8	0.83
6/19/10 21:14	122.0	124.2	122.2	41	42	23	13.0	0.80
6/19/10 21:29	121.9	124.0	122.0	54	55	39	18.1	0.84
6/19/10 21:44	121.8	123.9	122.1	41	40	24	12.9	0.80
6/19/10 21:59	122.0	123.9	122.5	43	44	29	14.2	0.83
6/19/10 22:14	122.2	124.3	122.7	46	46	27	14.6	0.82
6/19/10 22:29	121.0	123.0	121.6	44	46	30	14.5	0.82
6/19/10 22:44	121.4	123.0	121.7	45	42	26	13.7	0.82

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/19/10 22:59	121.5	122.8	121.6	41	44	28	13.7	0.82
6/19/10 23:14	121.7	123.0	121.6	49	48	30	15.4	0.82
6/19/10 23:29	122.1	123.5	121.9	44	44	29	14.2	0.83
6/19/10 23:44	122.1	123.4	122.3	41	41	22	12.8	0.80
6/19/10 23:59	122.0	123.4	122.2	53	49	37	16.9	0.83
6/20/10 0:14	122.2	123.3	122.5	41	42	23	13.0	0.81
6/20/10 0:29	122.6	123.7	122.8	41	42	23	13.0	0.80
6/20/10 0:44	122.1	123.3	122.7	51	48	35	16.4	0.84
6/20/10 0:59	122.4	123.5	122.8	43	44	23	13.4	0.81
6/20/10 1:14	122.4	123.4	122.7	40	43	27	13.5	0.82
6/20/10 1:29	122.5	123.6	122.9	52	47	33	16.1	0.83
6/20/10 1:44	122.9	123.7	123.2	42	46	27	14.3	0.82
6/20/10 1:59	122.6	123.5	123.0	42	41	24	13.2	0.81
6/20/10 2:14	122.4	123.4	123.0	49	44	32	15.3	0.82
6/20/10 2:29	122.7	123.6	123.2	43	42	29	13.9	0.80
6/20/10 2:44	122.8	123.9	123.5	45	42	27	13.9	0.81
6/20/10 2:59	122.8	123.9	123.4	47	50	33	15.9	0.81
6/20/10 3:14	122.4	123.2	123.0	45	45	27	14.2	0.80
6/20/10 3:29	122.4	123.3	122.9	45	48	37	15.9	0.84
6/20/10 3:44	122.5	123.4	123.0	42	41	25	13.2	0.79
6/20/10 3:59	122.7	123.5	123.3	47	49	31	15.5	0.81
6/20/10 4:14	122.8	123.6	123.3	45	42	29	14.3	0.82
6/20/10 4:29	122.9	123.7	123.3	42	41	24	13.1	0.79
6/20/10 4:44	123.0	123.7	123.4	48	51	34	16.2	0.81
6/20/10 4:59	122.9	123.8	123.5	45	41	27	14.0	0.81
6/20/10 5:14	123.1	123.9	123.7	42	42	27	13.7	0.80
6/20/10 5:29	123.1	123.9	123.5	47	48	29	15.2	0.81
6/20/10 5:44	122.6	123.4	123.2	46	41	27	14.0	0.81
6/20/10 5:59	122.8	123.5	123.1	42	45	29	14.1	0.81
6/20/10 6:14	122.6	123.4	123.0	46	45	29	14.8	0.80
6/20/10 6:29	122.4	123.2	122.8	49	47	32	15.6	0.83
6/20/10 6:44	122.3	123.1	122.6	42	45	26	13.7	0.80
6/20/10 6:59	121.9	122.8	122.3	40	38	23	12.3	0.80
6/20/10 7:14	121.8	122.5	122.0	54	57	40	18.4	0.83
6/20/10 7:29	121.4	122.2	121.4	40	44	24	13.2	0.80
6/20/10 7:44	121.2	122.0	121.1	40	43	26	13.2	0.82
6/20/10 7:59	121.0	121.9	121.0	46	44	28	14.2	0.82
6/20/10 8:14	120.6	121.2	120.5	50	56	33	16.8	0.82
6/20/10 8:29	120.2	121.2	120.2	41	44	32	14.1	0.83
6/20/10 8:44	119.7	120.5	119.6	44	43	30	13.8	0.82
6/20/10 8:59	119.8	120.7	120.0	44	52	33	15.5	0.82
6/20/10 9:14	119.9	120.8	119.8	50	50	36	16.3	0.84
6/20/10 9:29	119.6	120.7	119.7	41	43	27	13.3	0.81
6/20/10 9:44	119.3	120.6	119.2	43	45	32	14.4	0.83
6/20/10 9:59	118.8	120.2	118.8	51	53	34	16.3	0.83
6/20/10 10:14	118.3	120.1	118.4	43	45	32	14.2	0.83
6/20/10 10:29	118.2	120.4	118.7	42	43	29	13.5	0.83
6/20/10 10:44	118.2	120.4	118.7	51	58	38	17.4	0.84
6/20/10 10:59	118.0	120.3	118.3	44	44	36	14.8	0.85
6/20/10 11:14	117.8	120.3	118.4	39	46	31	13.8	0.84

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/20/10 11:29	117.4	119.6	118.1	56	59	43	18.7	0.85
6/20/10 11:44	117.3	119.9	118.1	39	43	30	13.2	0.84
6/20/10 11:59	117.6	120.0	118.4	47	41	29	13.8	0.84
6/20/10 12:14	118.9	121.3	119.2	50	57	41	17.7	0.85
6/20/10 12:29	118.5	121.0	119.0	47	39	32	14.1	0.85
6/20/10 12:44	118.1	120.9	118.7	39	42	26	12.9	0.82
6/20/10 12:59	118.1	120.8	118.5	56	60	45	19.2	0.86
6/20/10 13:14	118.5	121.0	118.5	40	42	24	12.7	0.82
6/20/10 13:29	117.9	120.8	118.2	47	44	36	15.2	0.85
6/20/10 13:44	118.1	120.7	118.1	49	59	38	17.4	0.84
6/20/10 13:59	118.4	121.0	118.7	49	43	32	14.8	0.84
6/20/10 14:14	118.3	120.9	118.2	40	44	31	13.7	0.83
6/20/10 14:29	118.2	120.9	118.2	58	55	41	18.4	0.85
6/20/10 14:44	118.2	121.0	118.2	41	47	30	14.1	0.82
6/20/10 14:59	118.3	121.0	118.5	48	43	36	15.1	0.86
6/20/10 15:14	118.7	121.4	119.0	50	52	32	16.1	0.83
6/20/10 15:29	118.6	121.4	119.0	50	48	38	16.3	0.85
6/20/10 15:44	118.5	121.2	118.9	40	40	28	12.9	0.83
6/20/10 15:59	119.7	122.3	119.9	60	57	43	19.2	0.85
6/20/10 16:14	119.0	122.1	119.8	44	45	34	14.8	0.84
6/20/10 16:29	118.8	121.7	119.1	45	39	28	13.4	0.83
6/20/10 16:44	118.5	121.4	118.6	58	59	46	19.5	0.87
6/20/10 16:59	118.3	121.2	118.6	41	43	29	13.6	0.84
6/20/10 17:14	118.6	121.3	118.8	51	42	35	15.3	0.86
6/20/10 17:29	118.8	121.2	118.8	50	58	40	17.7	0.85
6/20/10 17:44	118.9	121.7	119.1	48	40	29	14.0	0.85
6/20/10 17:59	119.1	121.7	119.2	41	46	29	13.8	0.84
6/20/10 18:14	119.4	121.7	119.2	60	55	44	19.0	0.87
6/20/10 18:29	119.4	121.8	119.5	41	45	28	13.8	0.82
6/20/10 18:44	119.5	122.2	119.6	48	47	42	16.4	0.89
6/20/10 18:59	120.1	122.3	120.0	51	53	33	16.6	0.83
6/20/10 19:14	120.3	122.6	120.3	49	45	35	15.5	0.85
6/20/10 19:29	120.6	122.5	120.6	40	38	22	12.1	0.81
6/20/10 19:44	120.4	122.3	120.3	58	58	45	19.4	0.86
6/20/10 19:59	120.7	122.8	120.5	41	44	27	13.4	0.82
6/20/10 20:14	121.0	122.7	120.8	47	42	31	14.5	0.84
6/20/10 20:29	120.9	122.8	120.5	49	55	38	17.1	0.85
6/20/10 20:44	120.7	122.5	120.3	47	41	28	14.0	0.83
6/20/10 20:59	120.6	122.3	120.1	41	45	29	13.8	0.83
6/20/10 21:14	120.5	122.6	120.5	53	50	34	16.6	0.84
6/20/10 21:29	120.8	123.0	120.9	44	45	31	14.5	0.85
6/20/10 21:44	121.2	123.5	121.5	41	41	24	12.9	0.80
6/20/10 21:59	121.8	123.8	122.0	56	55	42	18.7	0.85
6/20/10 22:14	121.7	123.9	122.2	40	38	22	12.3	0.82
6/20/10 22:29	121.9	124.0	122.5	44	41	31	14.3	0.84
6/20/10 22:44	121.9	123.9	122.3	52	51	33	16.7	0.83
6/20/10 22:59	122.0	123.9	122.6	41	44	29	13.9	0.82
6/20/10 23:14	122.3	124.1	122.7	46	41	28	14.0	0.83
6/20/10 23:29	121.6	123.2	121.7	47	49	32	15.6	0.83
6/20/10 23:44	120.7	122.5	121.0	47	42	28	14.1	0.83

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/20/10 23:59	120.9	122.7	121.2	41	44	28	13.6	0.83
6/21/10 0:14	121.0	122.9	121.5	46	47	29	14.8	0.81
6/21/10 0:29	121.3	123.1	121.7	48	45	34	15.4	0.84
6/21/10 0:44	121.6	122.9	121.6	40	40	22	12.4	0.81
6/21/10 0:59	121.6	122.9	121.9	47	51	32	15.9	0.83
6/21/10 1:14	121.7	123.2	122.2	48	41	29	14.4	0.82
6/21/10 1:29	121.9	123.3	122.5	40	43	27	13.5	0.82
6/21/10 1:44	121.9	123.2	122.3	53	51	34	16.9	0.83
6/21/10 1:59	122.4	123.7	122.7	42	39	26	13.1	0.81
6/21/10 2:14	122.4	123.6	122.9	42	44	27	13.9	0.81
6/21/10 2:29	122.3	123.2	122.7	52	52	38	17.5	0.84
6/21/10 2:44	122.4	123.7	123.0	42	41	29	13.8	0.81
6/21/10 2:59	122.5	123.4	123.0	45	47	28	14.7	0.80
6/21/10 3:14	122.3	123.3	122.6	48	46	32	15.5	0.83
6/21/10 3:29	122.4	123.4	122.9	42	38	24	12.7	0.79
6/21/10 3:44	122.7	123.3	122.9	47	49	31	15.6	0.81
6/21/10 3:59	122.7	123.4	123.2	47	44	32	15.0	0.82
6/21/10 4:14	122.7	123.6	123.3	41	38	24	12.7	0.80
6/21/10 4:29	122.7	123.5	123.2	49	54	34	16.8	0.82
6/21/10 4:44	122.5	123.3	123.1	45	40	27	13.8	0.81
6/21/10 4:59	122.5	123.3	123.1	43	42	29	14.0	0.81
6/21/10 5:14	122.3	123.1	122.9	47	48	30	15.3	0.80
6/21/10 5:29	122.6	123.2	123.0	45	41	27	13.8	0.82
6/21/10 5:44	122.7	123.3	123.0	45	46	31	15.0	0.82
6/21/10 5:59	122.4	123.3	122.8	45	45	26	14.2	0.80
6/21/10 6:14	122.0	122.8	122.5	43	43	33	14.5	0.80
6/21/10 6:29	121.6	122.5	121.9	48	46	39	16.1	0.80
6/21/10 6:44	121.2	121.9	121.4	45	45	35	15.2	0.79
6/21/10 6:59	120.5	121.5	121.0	77	63	52	23.2	0.88
6/21/10 7:14	120.0	121.1	120.3	91	66	60	26.0	0.90
6/21/10 7:29	119.9	120.8	120.2	96	94	66	30.7	0.94
6/21/10 7:44	119.4	120.3	119.8	167	196	142	60.4	0.97
6/21/10 7:59	119.2	120.3	119.5	180	182	150	61.3	0.98
6/21/10 8:14	119.1	119.9	119.4	185	198	159	64.6	0.97
6/21/10 8:29	118.8	119.8	119.2	191	214	172	68.8	0.98
6/21/10 8:44	118.4	119.2	118.8	194	212	162	67.4	0.97
6/21/10 8:59	118.1	119.9	119.4	235	254	188	80.6	0.98
6/21/10 9:14	117.8	119.4	119.3	261	278	215	89.5	0.99
6/21/10 9:29	117.6	119.4	118.9	226	253	196	80.0	0.99
6/21/10 9:44	117.7	119.5	118.7	241	273	213	86.2	0.98
6/21/10 9:59	117.6	119.2	118.9	240	279	207	86.1	0.99
6/21/10 10:14	118.0	119.7	119.0	247	272	204	86.0	0.99
6/21/10 10:29	117.6	119.3	118.5	248	283	230	90.1	0.99
6/21/10 10:44	117.1	119.2	118.5	242	267	208	84.8	0.99
6/21/10 10:59	117.9	119.9	119.3	250	254	209	84.7	0.99
6/21/10 11:14	117.7	119.9	119.3	269	261	217	88.9	0.98
6/21/10 11:26	117.6	120.0	119.2	260	261	215	87.6	0.99

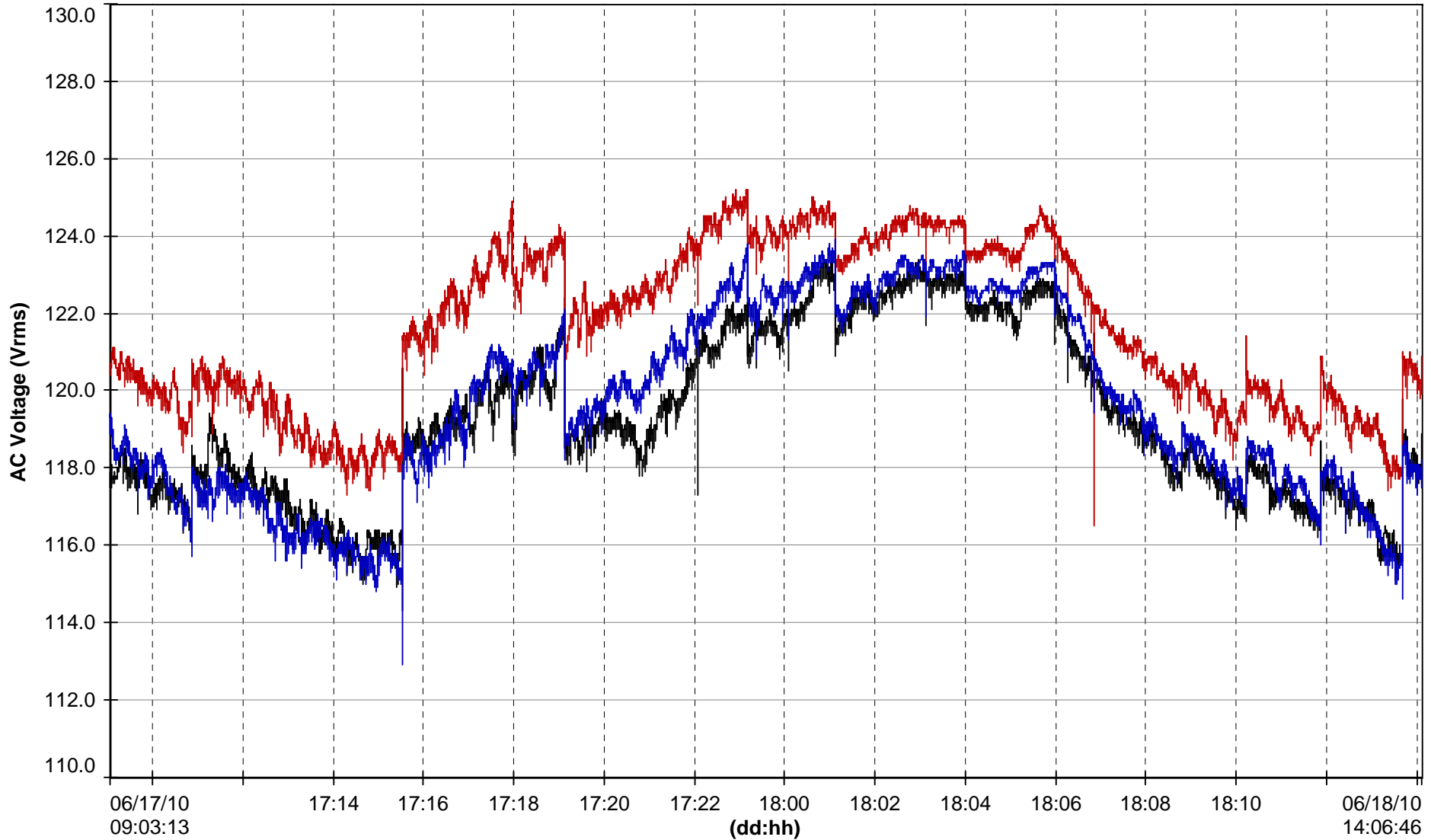


# Rosa International Middle School

*Electrical Load Study*  
*June 17 – 18, 2010*

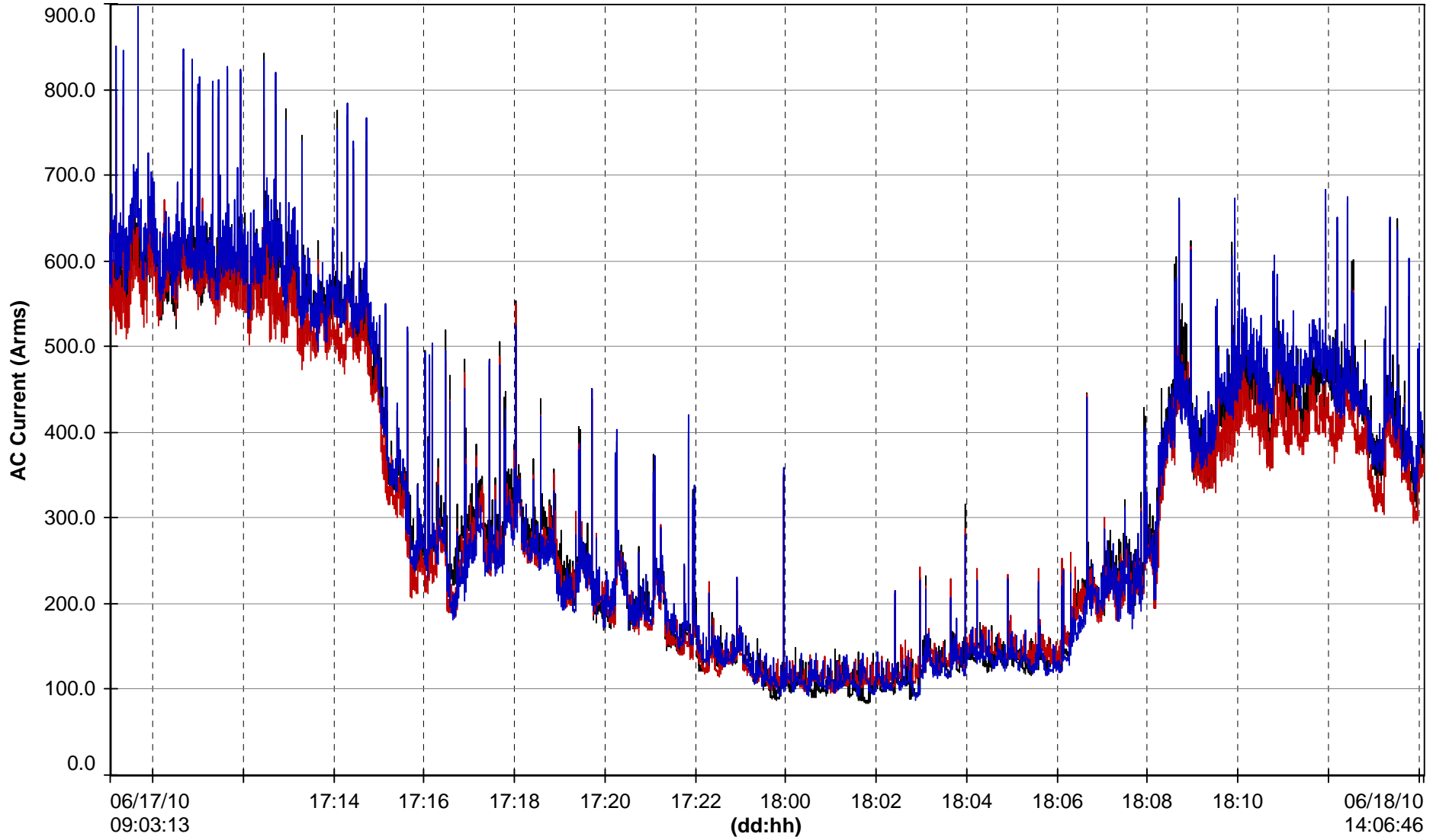
Cherry Hill School District

### Main Service Phase Voltage



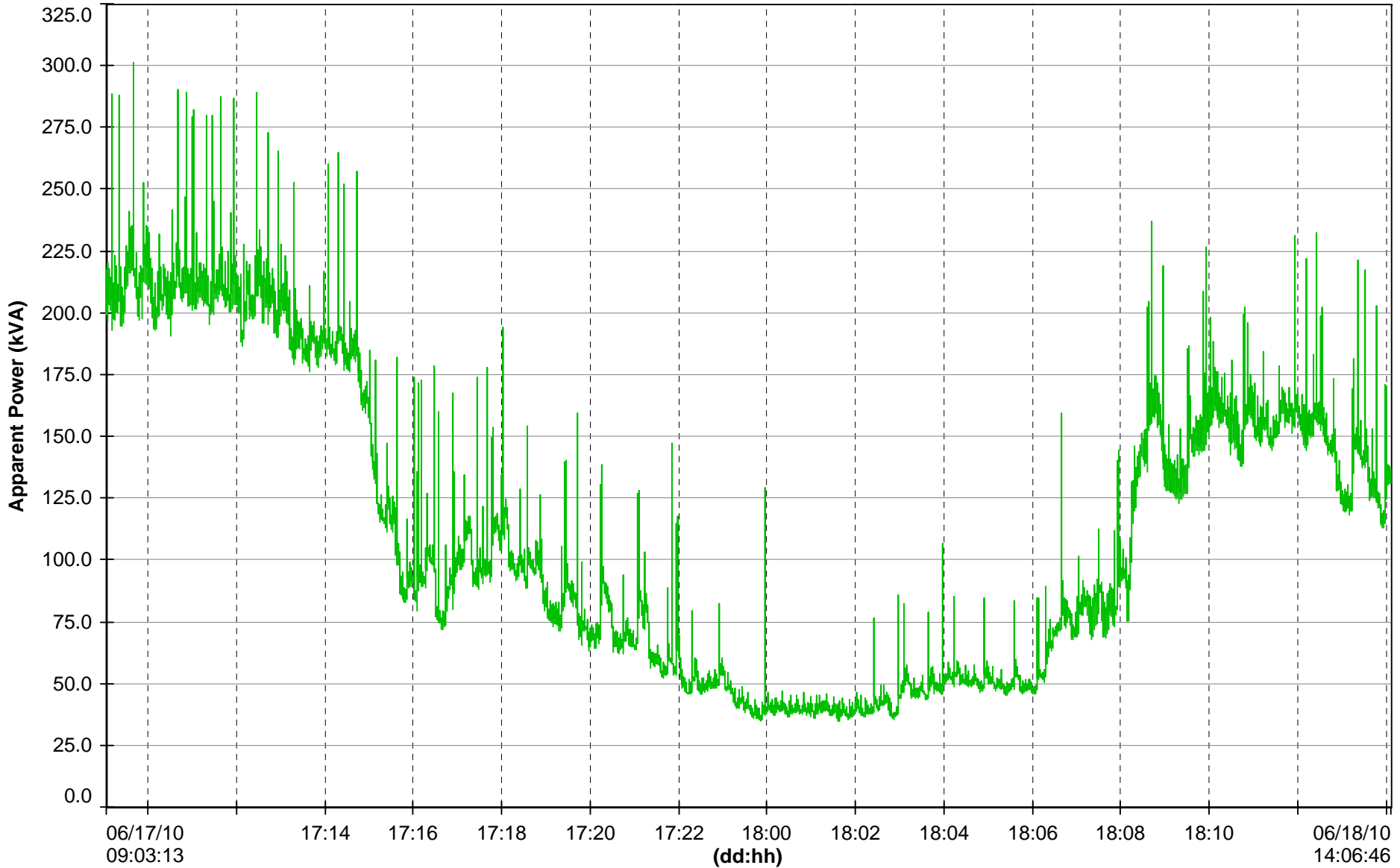
### Rosa International Middle School

### Main Service Line Current



### Rosa International Middle School

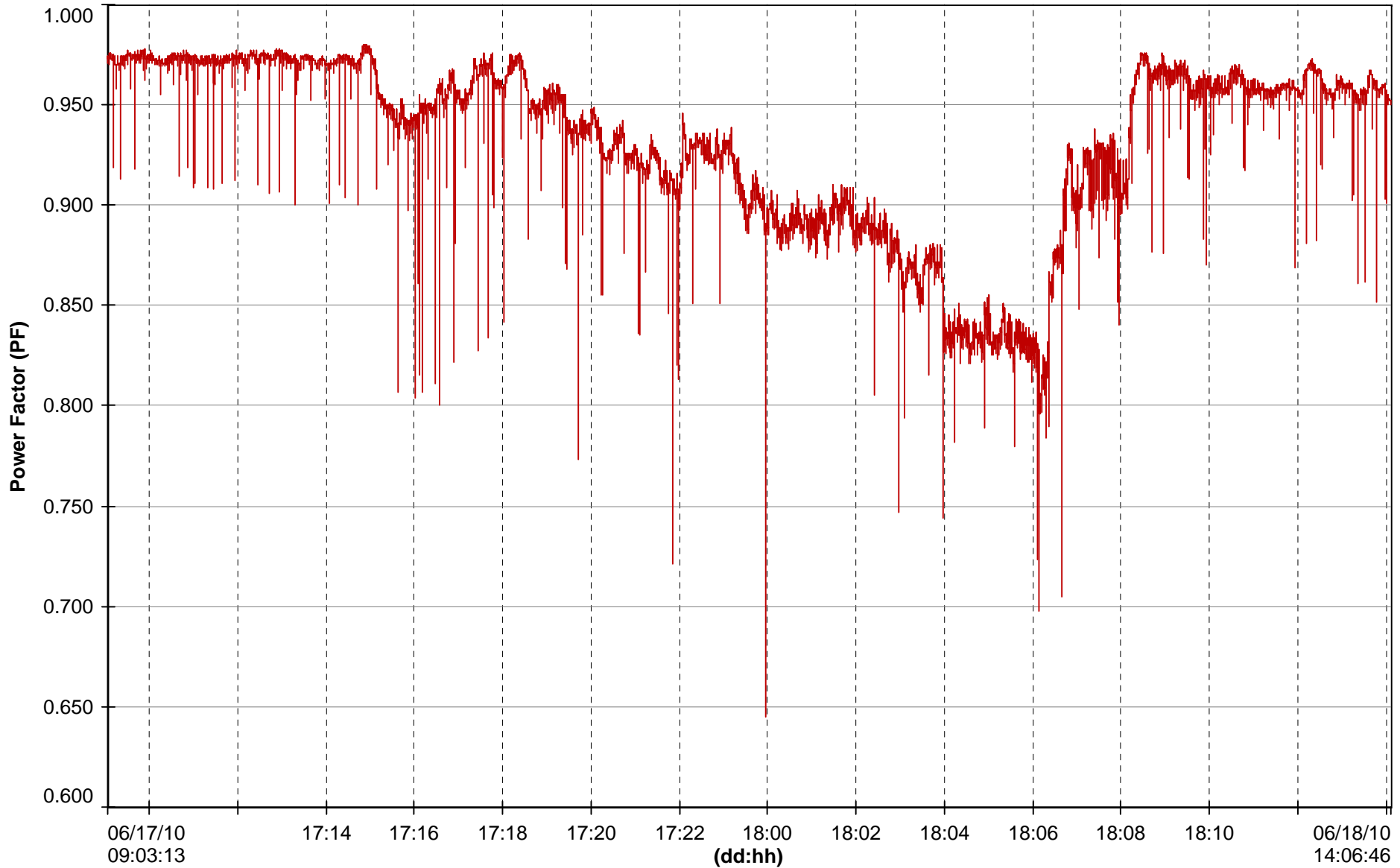
### Main Service Apparent Power



Maximum Minimum Average  
— kVA 301.5 34.5 109.8

### Rosa International Middle School

### Main Service Power Factor



Maximum Minimum Average  
— PF 0.981 0.645 0.932

### Rosa International Middle School

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 9:18	117.9	120.7	118.6	567.3	555.2	605.1	205.1	0.97
6/17/10 9:33	118.1	120.6	118.6	581.5	551.2	612.3	207.3	0.97
6/17/10 9:48	118.0	120.4	118.1	607.0	583.8	646.1	217.7	0.97
6/17/10 10:03	117.6	120.0	117.9	610.2	595.7	637.0	217.8	0.97
6/17/10 10:18	117.6	120.0	118.2	567.7	567.1	593.2	204.5	0.97
6/17/10 10:33	117.4	120.0	117.3	567.0	580.9	597.8	205.9	0.97
6/17/10 10:48	117.1	119.2	117.1	598.0	598.8	614.8	212.9	0.97
6/17/10 11:03	117.6	120.2	117.4	591.8	587.8	599.8	210.1	0.97
6/17/10 11:18	118.2	120.4	117.4	587.6	584.2	600.3	209.8	0.97
6/17/10 11:33	118.6	120.2	117.5	587.5	565.0	590.1	206.6	0.97
6/17/10 11:48	118.3	120.3	117.6	596.6	577.2	607.3	211.1	0.97
6/17/10 12:03	117.7	120.2	117.4	598.4	565.5	605.6	209.1	0.97
6/17/10 12:18	117.9	119.8	117.4	572.4	552.6	584.8	201.9	0.97
6/17/10 12:33	117.5	119.9	117.2	604.1	562.5	606.8	209.1	0.97
6/17/10 12:48	117.5	119.7	116.6	593.6	546.4	620.8	207.1	0.97
6/17/10 13:03	117.3	119.3	116.4	588.7	536.4	586.6	200.9	0.97
6/17/10 13:18	116.8	118.9	116.2	565.6	528.2	582.5	196.2	0.97
6/17/10 13:33	116.6	118.8	116.3	551.2	506.1	545.5	187.5	0.97
6/17/10 13:48	116.5	118.5	116.5	537.3	514.7	531.0	185.1	0.97
6/17/10 14:03	116.4	118.6	116.0	543.6	506.7	546.5	186.4	0.97
6/17/10 14:18	116.3	118.3	115.9	549.2	496.6	544.0	185.3	0.97
6/17/10 14:33	116.0	118.1	115.9	536.7	508.4	539.1	184.4	0.97
6/17/10 14:48	115.8	118.3	115.6	522.2	499.7	539.8	181.5	0.97
6/17/10 15:03	116.1	118.4	115.5	469.0	447.6	486.1	163.2	0.98
6/17/10 15:18	116.2	118.5	115.9	380.5	345.8	382.6	129.2	0.96
6/17/10 15:33	116.2	118.7	115.8	340.6	317.8	350.6	117.6	0.95
6/17/10 15:48	118.7	121.5	118.5	291.2	258.6	280.2	98.9	0.94
6/17/10 16:03	118.8	121.3	118.2	257.7	233.7	261.4	89.6	0.94
6/17/10 16:18	118.9	121.6	118.4	263.2	238.6	263.4	91.2	0.95
6/17/10 16:33	119.0	122.2	118.8	287.2	255.4	262.8	96.3	0.95
6/17/10 16:48	119.2	122.4	119.4	238.8	206.7	200.1	77.4	0.96
6/17/10 17:03	119.4	122.2	119.1	282.0	255.5	235.9	92.7	0.96
6/17/10 17:18	119.5	123.0	120.1	307.9	292.6	274.4	105.5	0.95
6/17/10 17:33	120.1	123.3	120.6	278.3	260.3	254.5	96.0	0.97
6/17/10 17:48	120.1	123.7	120.9	283.6	265.4	252.0	97.1	0.97
6/17/10 18:03	120.0	123.6	120.4	326.9	304.7	293.6	112.0	0.96
6/17/10 18:18	120.2	123.1	120.3	299.3	285.1	288.2	105.5	0.97
6/17/10 18:33	120.5	123.4	120.7	277.8	254.3	263.3	96.4	0.97
6/17/10 18:48	120.5	123.3	120.6	283.9	265.0	253.3	97.2	0.95
6/17/10 19:03	120.7	123.9	121.1	255.1	245.6	233.0	89.1	0.95
6/17/10 19:18	119.7	122.3	120.0	219.7	206.9	206.0	76.0	0.95
6/17/10 19:33	118.7	122.0	119.2	237.6	238.4	224.5	83.7	0.95
6/17/10 19:48	119.0	122.0	119.4	226.0	217.3	218.7	79.2	0.94
6/17/10 20:03	119.3	122.0	119.6	187.6	198.3	198.3	70.0	0.94
6/17/10 20:18	119.2	122.3	120.1	202.3	195.7	208.7	72.8	0.94
6/17/10 20:33	119.1	122.2	120.2	222.9	227.8	218.9	80.5	0.93
6/17/10 20:48	118.7	122.4	119.9	183.9	178.6	182.8	65.4	0.93
6/17/10 21:03	118.6	122.6	120.2	194.2	179.0	185.9	67.1	0.92
6/17/10 21:18	119.3	122.7	120.6	219.9	209.7	216.8	77.9	0.92
6/17/10 21:33	119.7	122.9	121.1	161.7	162.9	179.7	60.9	0.93

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 21:48	119.7	123.4	121.1	153.9	149.5	162.5	56.3	0.91
6/17/10 22:03	120.6	123.8	121.7	165.8	155.0	169.0	59.5	0.91
6/17/10 22:18	121.3	124.0	121.9	128.2	127.6	140.9	48.3	0.93
6/17/10 22:33	121.1	124.3	122.2	139.2	130.6	143.0	50.2	0.93
6/17/10 22:48	121.7	124.6	122.7	134.9	129.8	133.5	48.7	0.93
6/17/10 23:03	121.9	124.8	122.8	141.9	140.8	145.4	52.4	0.93
6/17/10 23:18	121.6	124.5	122.8	132.0	121.3	126.5	46.4	0.93
6/17/10 23:33	121.7	123.9	122.3	113.2	112.8	113.1	41.3	0.91
6/17/10 23:48	121.8	124.2	122.5	99.7	105.5	109.7	38.3	0.90
6/18/10 0:03	121.6	124.1	122.6	100.9	107.1	103.3	37.9	0.89
6/18/10 0:18	122.0	124.2	122.6	102.7	111.5	107.4	39.2	0.89
6/18/10 0:33	122.2	124.4	123.0	109.9	103.2	103.9	38.7	0.89
6/18/10 0:48	122.9	124.6	123.2	96.7	111.1	110.4	39.0	0.89
6/18/10 1:03	123.2	124.6	123.5	101.7	108.4	105.5	38.8	0.89
6/18/10 1:18	122.0	123.6	122.5	108.8	106.2	104.2	38.8	0.89
6/18/10 1:33	122.0	123.5	122.3	100.0	109.4	110.2	38.9	0.89
6/18/10 1:48	122.4	123.8	122.6	90.6	107.3	109.2	37.4	0.90
6/18/10 2:03	122.3	123.9	122.6	98.8	108.1	102.5	37.7	0.89
6/18/10 2:18	122.5	124.0	122.9	101.7	107.2	106.3	38.5	0.89
6/18/10 2:33	122.7	124.3	123.1	104.9	111.6	110.7	40.0	0.89
6/18/10 2:48	122.9	124.4	123.3	105.3	125.9	109.6	41.8	0.88
6/18/10 3:03	123.1	124.5	123.2	105.4	116.7	101.5	39.7	0.88
6/18/10 3:18	122.8	124.4	123.2	133.6	134.5	128.6	48.6	0.87
6/18/10 3:33	122.8	124.3	123.1	125.5	129.4	121.2	46.1	0.86
6/18/10 3:48	122.9	124.3	123.3	127.6	134.5	125.7	47.5	0.87
6/18/10 4:03	122.8	124.2	123.2	131.2	133.1	130.0	48.4	0.86
6/18/10 4:18	122.1	123.5	122.6	139.6	146.6	140.8	52.1	0.84
6/18/10 4:33	122.2	123.7	122.6	133.8	149.2	139.1	51.5	0.84
6/18/10 4:48	122.3	123.7	122.8	134.3	141.8	133.2	50.0	0.83
6/18/10 5:03	122.2	123.5	122.6	134.3	145.0	137.2	50.8	0.84
6/18/10 5:18	121.9	123.5	122.6	131.4	141.5	132.1	49.4	0.83
6/18/10 5:33	122.5	124.1	123.0	126.2	134.5	126.7	47.4	0.84
6/18/10 5:48	122.7	124.4	123.2	132.4	143.8	131.6	50.0	0.83
6/18/10 6:03	122.6	124.2	123.1	131.8	133.8	123.5	47.6	0.83
6/18/10 6:18	121.9	123.6	122.4	138.9	151.7	133.5	51.7	0.81
6/18/10 6:33	121.1	123.2	121.9	190.4	185.7	164.2	65.6	0.86
6/18/10 6:48	120.7	122.6	121.4	223.4	208.1	196.3	76.1	0.89
6/18/10 7:03	120.2	122.0	120.6	204.9	194.9	203.4	72.8	0.91
6/18/10 7:18	119.6	121.7	120.0	235.6	214.6	220.5	80.6	0.92
6/18/10 7:33	119.5	121.3	119.7	236.2	216.9	217.4	80.4	0.92
6/18/10 7:48	119.2	121.1	119.7	224.6	217.3	209.5	77.9	0.92
6/18/10 8:03	118.9	121.0	119.3	252.2	238.9	238.5	87.1	0.91
6/18/10 8:18	118.8	120.7	119.1	287.9	256.8	274.1	97.6	0.93
6/18/10 8:33	118.3	120.4	118.6	400.2	372.7	388.2	138.0	0.97
6/18/10 8:48	117.8	120.2	118.4	464.6	432.6	433.5	157.7	0.97
6/18/10 9:03	118.5	120.4	118.8	433.1	415.3	410.2	149.7	0.97
6/18/10 9:18	118.2	120.1	118.7	373.2	358.5	383.1	132.4	0.97
6/18/10 9:33	117.9	119.7	118.3	367.6	358.5	394.8	132.7	0.97
6/18/10 9:48	117.6	119.5	117.9	427.2	385.7	442.5	148.3	0.96
6/18/10 10:03	117.2	119.0	117.6	454.5	404.7	452.1	154.4	0.96

Load Study  
15-Minute Data Averages

<b>Date / Time</b>	<b>Va</b>	<b>Vb</b>	<b>Vc</b>	<b>Ia</b>	<b>Ib</b>	<b>Ic</b>	<b>kVA</b>	<b>PF</b>
6/18/10 10:18	117.3	119.7	117.7	466.5	436.0	487.6	164.0	0.96
6/18/10 10:33	118.1	120.1	118.5	439.6	415.1	468.5	157.0	0.96
6/18/10 10:48	117.8	120.0	118.4	418.7	385.3	445.0	147.9	0.96
6/18/10 11:03	117.3	119.7	117.6	465.5	420.5	484.4	161.6	0.96
6/18/10 11:18	117.3	119.3	117.8	439.1	401.2	463.4	153.6	0.96
6/18/10 11:33	117.0	119.3	117.6	430.6	393.0	456.2	150.6	0.96
6/18/10 11:48	116.9	118.9	117.0	449.8	423.1	485.2	159.3	0.96
6/18/10 12:03	117.4	119.8	117.5	458.9	413.8	476.5	159.1	0.96
6/18/10 12:18	117.6	119.9	117.9	448.5	392.9	447.7	152.3	0.96
6/18/10 12:33	117.2	119.3	117.5	458.8	424.5	446.5	156.5	0.97
6/18/10 12:48	117.2	119.3	117.3	439.2	388.7	432.2	148.2	0.96
6/18/10 13:03	116.9	119.1	116.8	392.5	352.6	395.2	133.8	0.96
6/18/10 13:18	116.2	118.9	116.3	370.7	332.8	378.7	126.4	0.96
6/18/10 13:33	116.1	118.1	115.8	429.6	388.9	415.3	143.6	0.95
6/18/10 13:48	117.0	119.1	116.8	384.5	357.4	381.5	131.8	0.96
6/18/10 14:03	118.2	120.6	118.0	340.0	320.8	359.0	120.9	0.96
6/18/10 14:06	118.1	120.3	117.9	374.3	352.8	388.9	132.2	0.95

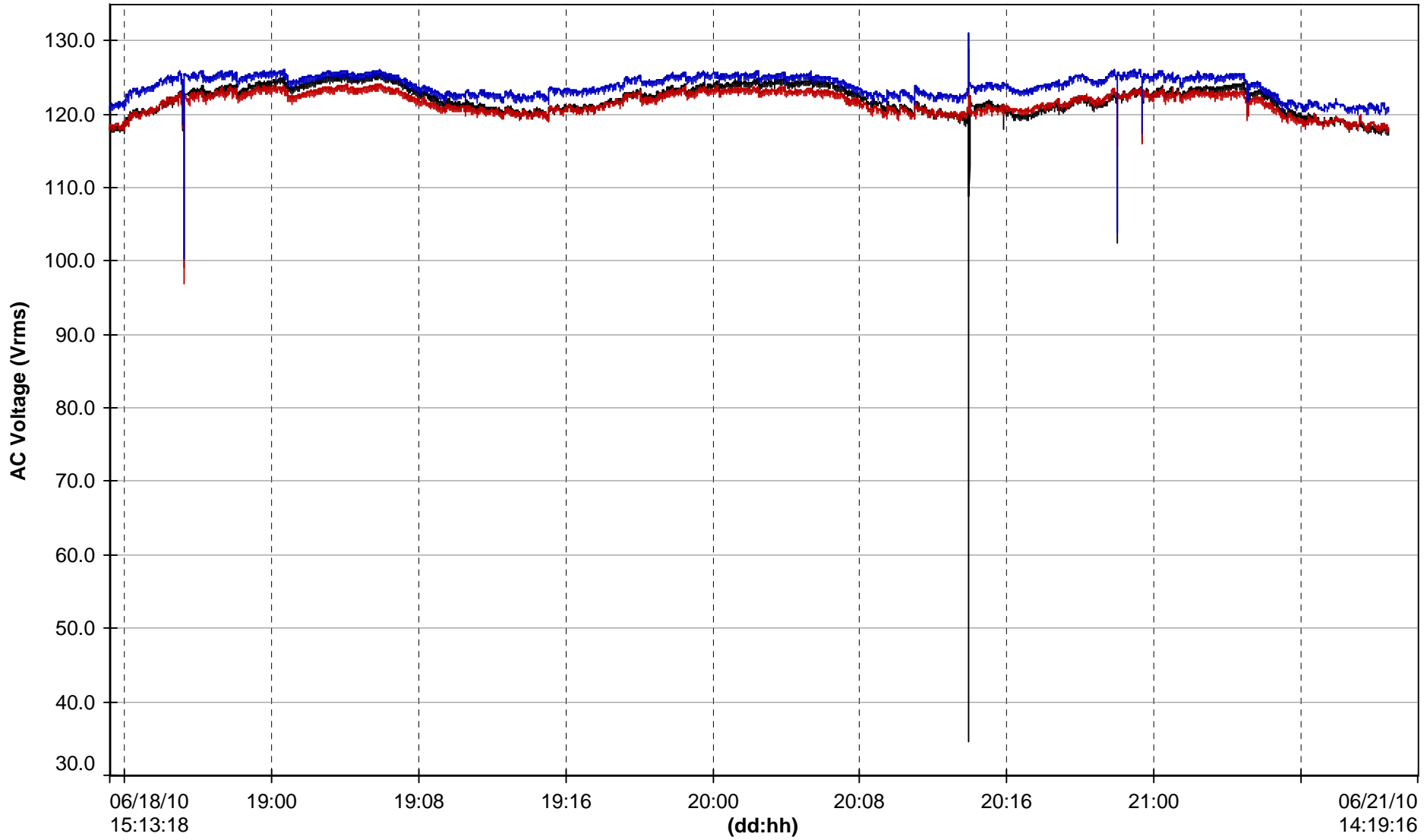


# Richard S. Stockton Elementary School

*Electrical Load Study*  
*June 18 – 21, 2010*

Cherry Hill School District

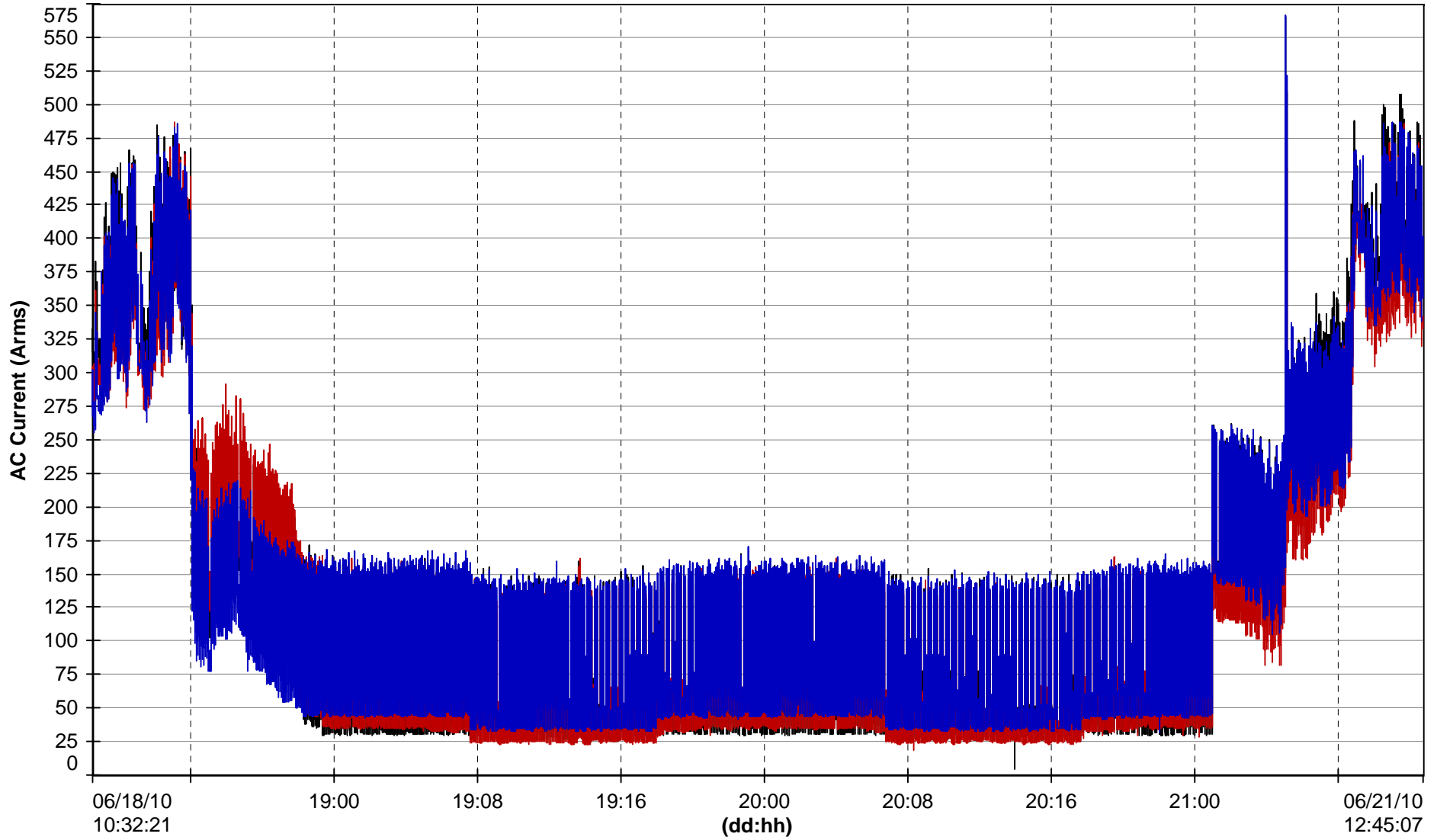
### Main Service Phase Voltage



	Maximum	Minimum	Average
— Va	125.6	33.9	122.1
— Vb	128.9	96.5	121.7
— Vc	131.1	100.0	124.0

### Richard S. Stockton Elementary School

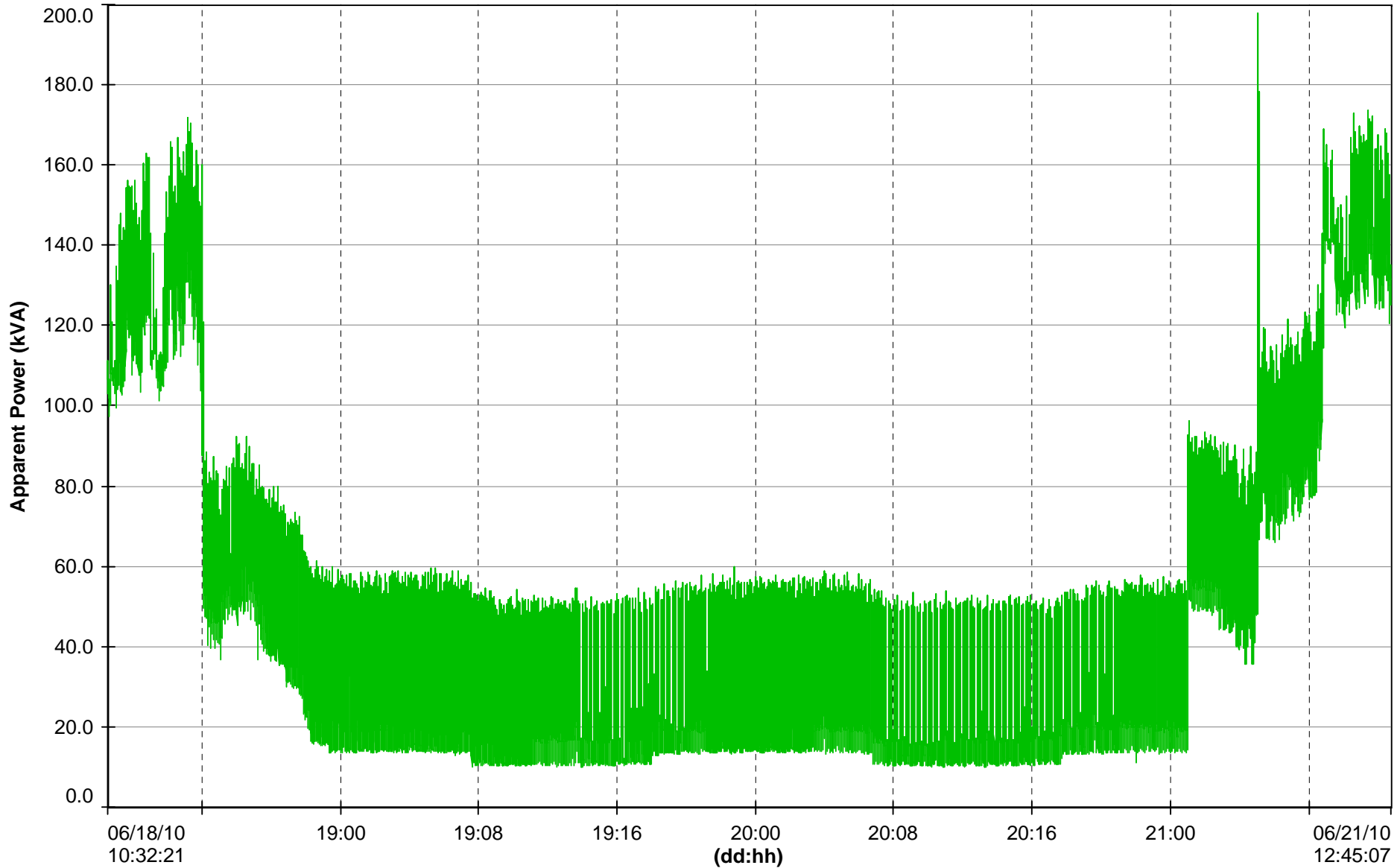
### Main Service Line Current



	Maximum	Minimum	Average
— la	565	4	102
— lb	515	18	97
— lc	566	30	103

### Richard S. Stockton Elementary School

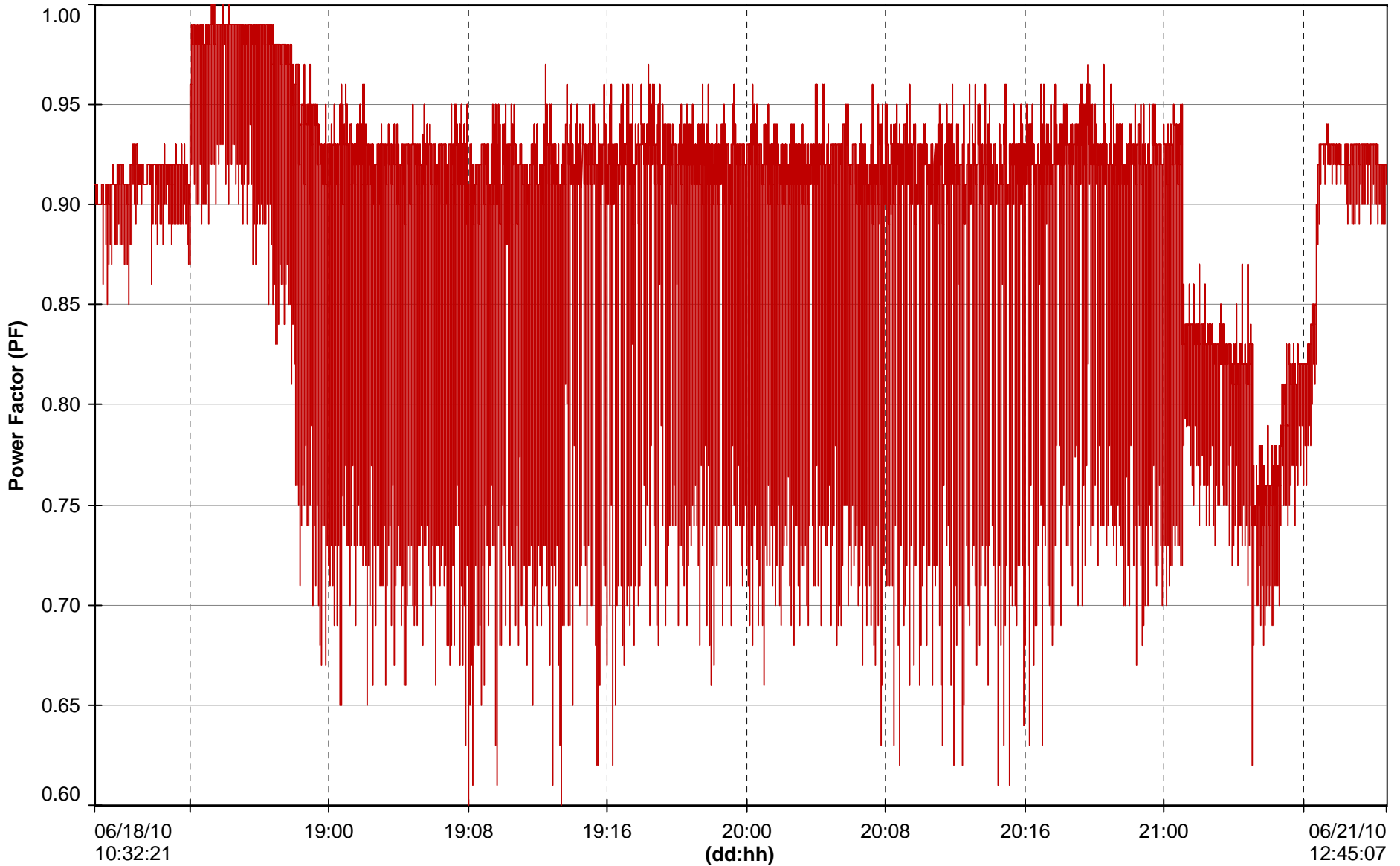
### Main Service Apparent Power



	Maximum	Minimum	Average
— kVA	197.8	8.5	36.7

### Richard S. Stockton Elementary School

### Main Service Power Factor



Maximum Minimum Average  
— PF 1.00 0.60 0.91

### Richard S. Stockton Elementary School

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 10:47	119.8	119.4	121.6	304	290	272	104.1	0.90
6/18/10 11:02	119.6	119.2	121.4	312	295	278	106.2	0.90
6/18/10 11:17	119.5	119.4	121.4	313	299	284	107.5	0.90
6/18/10 11:32	119.6	119.3	121.6	311	294	294	108.0	0.91
6/18/10 11:47	119.3	119.2	121.3	345	323	336	120.4	0.91
6/18/10 12:02	119.1	119.1	121.2	348	316	325	118.4	0.91
6/18/10 12:17	119.0	119.0	121.1	340	315	317	116.4	0.91
6/18/10 12:32	119.3	119.4	121.7	318	298	303	110.4	0.91
6/18/10 12:47	119.0	119.1	121.4	361	338	345	125.1	0.92
6/18/10 13:02	118.8	118.9	121.4	359	347	348	126.0	0.92
6/18/10 13:17	119.7	119.8	122.2	325	311	313	114.3	0.91
6/18/10 13:32	119.6	119.8	122.3	315	290	297	108.7	0.91
6/18/10 13:47	119.3	119.6	122.0	314	284	289	106.6	0.92
6/18/10 14:02	119.0	119.0	121.8	337	308	311	114.6	0.92
6/18/10 14:17	118.6	118.9	121.4	373	338	361	128.2	0.92
6/18/10 14:32	118.4	118.8	121.3	347	316	333	119.0	0.92
6/18/10 14:47	118.3	118.4	121.2	357	346	346	125.0	0.92
6/18/10 15:02	118.4	118.8	121.6	349	338	336	122.4	0.91
6/18/10 15:17	118.2	118.4	121.2	376	377	375	134.6	0.92
6/18/10 15:32	118.1	118.4	121.3	359	364	359	128.9	0.92
6/18/10 15:47	118.3	118.6	121.5	342	355	341	124.0	0.92
6/18/10 16:02	118.2	118.6	121.4	332	327	312	115.9	0.91
6/18/10 16:17	119.1	119.1	122.3	178	178	144	59.8	0.98
6/18/10 16:32	120.2	120.0	123.1	139	151	101	47.2	0.98
6/18/10 16:47	120.4	120.2	123.2	137	151	98	46.6	0.98
6/18/10 17:02	120.4	120.2	123.2	133	148	95	45.5	0.98
6/18/10 17:17	120.4	120.3	123.4	128	148	98	45.4	0.99
6/18/10 17:32	120.7	120.6	123.6	140	167	113	50.9	0.99
6/18/10 17:47	120.6	120.7	123.8	144	170	118	52.4	0.99
6/18/10 18:02	121.0	121.2	124.4	160	181	117	55.8	0.99
6/18/10 18:17	121.5	121.7	124.6	156	164	118	53.5	0.99
6/18/10 18:32	121.8	121.9	125.0	157	166	125	55.0	0.99
6/18/10 18:47	122.0	122.0	124.9	152	169	123	54.4	0.99
6/18/10 19:02	122.4	122.2	125.2	155	163	116	53.4	0.99
6/18/10 19:17	122.4	122.3	124.9	141	148	107	48.6	0.99
6/18/10 19:32	122.6	122.0	125.2	134	143	102	46.5	0.99
6/18/10 19:47	123.1	122.5	125.3	118	131	90	41.9	0.98
6/18/10 20:02	123.1	122.5	125.2	118	130	84	40.9	0.98
6/18/10 20:17	123.3	122.7	125.6	116	134	82	41.1	0.99
6/18/10 20:32	122.9	122.2	125.0	117	135	76	40.2	0.99
6/18/10 20:47	122.9	122.5	125.0	108	128	76	38.4	0.98
6/18/10 21:02	122.9	122.8	125.1	96	116	69	34.6	0.98
6/18/10 21:17	123.4	123.0	125.5	94	109	63	32.8	0.97
6/18/10 21:32	123.6	123.1	125.5	95	110	62	32.9	0.98
6/18/10 21:47	123.7	123.2	125.6	86	102	64	31.1	0.97
6/18/10 22:02	123.7	123.1	125.5	71	81	58	25.9	0.96
6/18/10 22:17	123.0	122.5	124.7	62	63	54	22.0	0.96
6/18/10 22:32	123.1	122.6	124.9	49	50	51	18.4	0.94
6/18/10 22:47	123.5	122.9	125.2	49	52	51	18.7	0.94
6/18/10 23:02	123.8	123.0	125.2	44	50	50	17.7	0.94

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/18/10 23:17	124.1	123.3	125.6	44	50	51	18.0	0.94
6/18/10 23:32	124.1	123.4	125.5	39	45	49	16.5	0.93
6/18/10 23:47	124.2	123.6	125.6	39	41	52	16.5	0.92
6/19/10 0:02	124.3	123.5	125.6	40	41	50	16.2	0.91
6/19/10 0:17	124.4	123.5	125.6	40	40	50	16.3	0.91
6/19/10 0:32	124.7	123.5	125.7	39	40	50	16.1	0.92
6/19/10 0:47	124.6	123.5	125.7	38	40	50	15.9	0.92
6/19/10 1:02	123.8	122.7	124.8	41	46	49	16.8	0.93
6/19/10 1:17	123.5	122.3	124.3	39	41	50	16.0	0.92
6/19/10 1:32	123.7	122.5	124.5	41	41	50	16.3	0.92
6/19/10 1:47	124.0	122.7	124.8	39	40	50	16.0	0.92
6/19/10 2:02	124.1	122.9	125.0	38	40	48	15.5	0.92
6/19/10 2:17	124.3	123.0	125.1	38	40	50	15.9	0.92
6/19/10 2:32	124.4	123.1	125.2	38	41	51	16.1	0.92
6/19/10 2:47	124.7	123.4	125.3	40	41	50	16.3	0.91
6/19/10 3:02	124.9	123.6	125.6	38	39	48	15.6	0.92
6/19/10 3:17	124.9	123.5	125.6	38	39	49	15.8	0.92
6/19/10 3:32	125.0	123.5	125.6	38	40	51	16.0	0.92
6/19/10 3:47	125.1	123.7	125.6	37	40	50	15.8	0.92
6/19/10 4:02	125.2	123.8	125.8	37	39	48	15.4	0.92
6/19/10 4:17	125.1	123.6	125.6	39	40	49	15.9	0.91
6/19/10 4:32	124.9	123.5	125.5	38	39	50	15.9	0.92
6/19/10 4:47	124.8	123.4	125.3	38	40	50	15.8	0.92
6/19/10 5:02	124.8	123.5	125.4	37	39	48	15.3	0.92
6/19/10 5:17	125.0	123.6	125.6	37	40	49	15.6	0.92
6/19/10 5:32	125.2	123.8	125.6	38	37	51	15.7	0.91
6/19/10 5:47	125.3	123.8	125.8	38	36	48	15.2	0.92
6/19/10 6:02	125.3	123.9	125.8	38	36	48	15.3	0.92
6/19/10 6:17	125.0	123.6	125.5	38	38	49	15.6	0.92
6/19/10 6:32	124.9	123.4	125.3	37	37	51	15.6	0.92
6/19/10 6:47	124.7	123.3	125.2	37	36	49	15.2	0.92
6/19/10 7:02	124.6	123.2	125.1	38	36	47	15.1	0.92
6/19/10 7:17	124.0	122.8	124.7	40	38	50	15.9	0.92
6/19/10 7:32	123.7	122.6	124.4	40	38	53	16.1	0.92
6/19/10 7:47	123.3	122.3	124.1	36	32	42	13.4	0.91
6/19/10 8:02	123.0	122.0	123.8	34	30	40	12.7	0.92
6/19/10 8:17	122.8	121.8	123.5	35	31	40	12.9	0.91
6/19/10 8:32	122.9	121.8	123.6	38	32	44	13.9	0.90
6/19/10 8:47	122.3	121.5	123.3	37	31	41	13.4	0.91
6/19/10 9:02	122.1	121.3	123.0	36	32	40	13.2	0.92
6/19/10 9:17	121.7	120.8	122.7	35	31	41	13.0	0.92
6/19/10 9:32	121.5	120.8	122.4	35	31	42	13.0	0.92
6/19/10 9:47	121.8	121.1	122.9	37	31	41	13.4	0.91
6/19/10 10:02	121.5	121.0	122.7	39	32	41	13.5	0.91
6/19/10 10:17	121.4	120.9	122.5	38	32	42	13.5	0.92
6/19/10 10:32	121.3	120.9	122.5	36	32	42	13.3	0.92
6/19/10 10:47	121.5	121.0	122.9	37	32	42	13.4	0.91
6/19/10 11:02	121.2	120.7	122.7	39	32	42	13.7	0.91
6/19/10 11:17	120.9	120.5	122.5	38	33	43	13.7	0.91
6/19/10 11:32	121.2	120.7	123.0	38	33	43	13.9	0.91

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/19/10 11:47	121.0	120.5	122.8	37	33	42	13.6	0.91
6/19/10 12:02	120.8	120.5	122.6	37	32	43	13.6	0.91
6/19/10 12:17	120.8	120.5	122.6	39	33	44	14.1	0.91
6/19/10 12:32	120.5	120.2	122.5	40	34	44	14.2	0.91
6/19/10 12:47	120.5	120.3	122.6	38	33	43	13.8	0.91
6/19/10 13:02	120.9	120.6	122.9	38	34	43	14.0	0.92
6/19/10 13:17	120.5	120.3	122.5	38	33	45	14.1	0.91
6/19/10 13:32	120.4	120.1	122.4	39	33	44	14.1	0.91
6/19/10 13:47	120.2	120.2	122.3	46	44	44	16.2	0.93
6/19/10 14:02	120.2	120.1	122.3	37	34	42	13.7	0.92
6/19/10 14:17	120.1	120.1	122.4	37	30	43	13.3	0.92
6/19/10 14:32	120.5	120.3	122.8	37	32	42	13.4	0.92
6/19/10 14:47	120.4	120.2	122.7	36	32	42	13.3	0.92
6/19/10 15:02	120.1	120.0	122.4	37	31	41	13.1	0.92
6/19/10 15:17	120.8	120.7	123.3	35	30	40	12.8	0.92
6/19/10 15:32	120.8	120.8	123.3	39	34	44	14.1	0.92
6/19/10 15:47	120.8	120.7	123.2	36	31	41	13.2	0.92
6/19/10 16:02	121.0	120.7	123.2	37	33	42	13.6	0.92
6/19/10 16:17	121.1	121.0	123.3	39	34	44	14.2	0.92
6/19/10 16:32	121.2	120.7	123.2	37	31	40	13.2	0.92
6/19/10 16:47	120.9	120.8	123.1	40	32	43	13.8	0.91
6/19/10 17:02	121.0	120.6	123.1	39	32	43	13.8	0.92
6/19/10 17:17	120.9	120.8	123.2	39	31	43	13.7	0.91
6/19/10 17:32	121.1	120.9	123.3	39	31	41	13.4	0.91
6/19/10 17:47	121.0	120.8	123.2	39	34	41	13.9	0.92
6/19/10 18:02	121.3	121.1	123.4	41	33	45	14.4	0.92
6/19/10 18:17	121.5	121.4	123.6	42	36	50	15.8	0.93
6/19/10 18:32	121.9	121.5	123.8	40	37	49	15.4	0.93
6/19/10 18:47	121.7	121.7	123.8	44	41	52	16.8	0.92
6/19/10 19:02	121.9	121.6	123.9	39	39	51	15.9	0.92
6/19/10 19:17	122.4	122.2	124.3	40	40	51	16.1	0.92
6/19/10 19:32	122.7	122.5	124.7	42	39	52	16.4	0.92
6/19/10 19:47	122.8	122.6	124.8	44	40	53	16.8	0.92
6/19/10 20:02	123.0	122.7	124.9	42	39	52	16.4	0.92
6/19/10 20:17	122.8	122.2	124.6	41	41	53	16.6	0.92
6/19/10 20:32	122.5	122.1	124.4	41	44	53	16.9	0.92
6/19/10 20:47	122.5	122.1	124.4	43	43	52	17.0	0.92
6/19/10 21:02	122.5	122.1	124.4	44	42	55	17.3	0.92
6/19/10 21:17	122.7	122.6	124.6	44	44	54	17.5	0.92
6/19/10 21:32	123.1	122.7	124.9	42	44	52	17.0	0.92
6/19/10 21:47	123.6	123.0	125.2	40	43	52	16.6	0.92
6/19/10 22:02	123.5	123.0	125.2	42	43	54	17.1	0.92
6/19/10 22:17	123.4	123.2	125.2	43	42	53	17.0	0.91
6/19/10 22:32	123.8	123.3	125.5	43	43	52	17.2	0.91
6/19/10 22:47	123.1	122.7	124.9	42	43	51	16.8	0.92
6/19/10 23:02	123.3	122.7	124.9	40	42	53	16.7	0.92
6/19/10 23:17	123.7	123.1	125.3	41	42	54	16.8	0.92
6/19/10 23:32	124.1	123.5	125.6	42	44	52	17.1	0.92
6/19/10 23:47	123.7	123.2	125.3	43	43	51	17.0	0.91
6/20/10 0:02	123.8	123.2	125.3	42	43	54	17.2	0.91

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/20/10 0:17	124.1	123.4	125.6	40	43	52	16.7	0.92
6/20/10 0:32	123.8	123.0	125.1	40	42	51	16.5	0.92
6/20/10 0:47	123.9	123.3	125.2	42	42	52	16.7	0.92
6/20/10 1:02	124.0	123.2	125.2	43	43	54	17.3	0.91
6/20/10 1:17	124.3	123.5	125.5	42	42	53	17.0	0.91
6/20/10 1:32	124.4	123.4	125.4	41	43	50	16.7	0.92
6/20/10 1:47	124.2	123.4	125.4	41	43	52	16.8	0.92
6/20/10 2:02	124.2	123.3	125.3	41	42	54	17.0	0.92
6/20/10 2:17	124.3	123.4	125.4	43	42	53	17.1	0.91
6/20/10 2:32	124.4	123.3	125.6	42	42	52	16.9	0.91
6/20/10 2:47	124.0	123.0	125.0	41	42	51	16.5	0.92
6/20/10 3:02	124.2	123.2	125.2	41	42	54	16.9	0.92
6/20/10 3:17	124.3	123.2	125.2	40	42	53	16.8	0.92
6/20/10 3:32	124.4	123.2	125.2	43	43	51	16.9	0.91
6/20/10 3:47	124.5	123.4	125.4	42	42	52	16.9	0.91
6/20/10 4:02	124.5	123.3	125.3	46	49	52	18.2	0.93
6/20/10 4:17	124.1	123.1	125.0	43	44	53	17.2	0.92
6/20/10 4:32	124.2	123.1	125.1	41	43	51	16.7	0.92
6/20/10 4:47	124.3	123.2	125.2	42	42	52	16.9	0.91
6/20/10 5:02	124.3	123.1	125.2	42	43	52	16.9	0.91
6/20/10 5:17	124.5	123.3	125.3	41	42	52	16.7	0.92
6/20/10 5:32	124.3	123.1	125.2	41	42	52	16.7	0.92
6/20/10 5:47	124.4	123.0	125.1	41	41	52	16.6	0.92
6/20/10 6:02	124.2	123.0	125.0	42	41	53	16.7	0.92
6/20/10 6:17	124.3	123.1	125.0	42	40	51	16.5	0.92
6/20/10 6:32	124.1	123.0	124.9	41	40	51	16.4	0.92
6/20/10 6:47	123.8	122.7	124.7	42	40	53	16.7	0.92
6/20/10 7:02	123.6	122.7	124.4	38	33	44	14.3	0.91
6/20/10 7:17	123.4	122.4	124.3	38	32	43	13.9	0.91
6/20/10 7:32	123.0	121.9	124.0	38	32	42	13.7	0.91
6/20/10 7:47	122.8	121.8	123.6	35	29	41	12.9	0.91
6/20/10 8:02	122.5	121.8	123.5	36	31	41	13.2	0.91
6/20/10 8:17	122.2	121.4	123.1	36	30	41	12.9	0.91
6/20/10 8:32	121.7	121.0	122.8	35	31	41	12.9	0.91
6/20/10 8:47	121.6	120.7	122.5	35	30	40	12.7	0.92
6/20/10 9:02	121.6	120.8	122.7	36	30	40	12.8	0.92
6/20/10 9:17	121.2	120.5	122.5	35	30	39	12.4	0.92
6/20/10 9:32	121.1	120.4	122.4	34	30	40	12.6	0.92
6/20/10 9:47	121.2	120.8	122.8	34	29	41	12.6	0.91
6/20/10 10:02	121.0	120.5	122.7	37	31	40	13.0	0.92
6/20/10 10:17	120.7	120.4	122.6	34	30	39	12.4	0.92
6/20/10 10:32	121.0	120.7	123.0	36	33	42	13.5	0.91
6/20/10 10:47	120.7	120.2	122.6	38	31	44	13.6	0.91
6/20/10 11:02	120.7	120.4	122.7	35	30	40	12.8	0.92
6/20/10 11:17	121.4	121.0	123.3	37	33	41	13.5	0.91
6/20/10 11:32	121.0	120.8	123.0	34	29	40	12.5	0.91
6/20/10 11:47	120.6	120.4	122.6	35	31	42	13.1	0.91
6/20/10 12:02	120.2	120.3	122.5	37	32	41	13.3	0.92
6/20/10 12:17	120.0	120.2	122.4	36	32	40	13.1	0.92
6/20/10 12:32	120.4	120.3	122.6	36	33	42	13.3	0.91

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/20/10 12:47	120.1	120.0	122.5	37	32	43	13.5	0.91
6/20/10 13:02	120.0	120.1	122.5	37	32	41	13.2	0.92
6/20/10 13:17	119.8	120.1	122.4	37	31	41	13.2	0.92
6/20/10 13:32	119.5	119.8	122.4	37	32	43	13.5	0.91
6/20/10 13:47	119.4	120.1	122.5	36	30	42	12.9	0.92
6/20/10 14:02	120.4	120.4	123.4	38	34	42	13.7	0.92
6/20/10 14:17	121.1	120.3	123.6	35	30	40	12.7	0.92
6/20/10 14:32	121.2	120.5	123.6	37	30	41	13.2	0.91
6/20/10 14:47	121.3	120.5	123.8	37	31	43	13.5	0.91
6/20/10 15:02	121.6	120.8	124.0	38	33	43	13.8	0.92
6/20/10 15:17	121.5	120.8	124.1	35	31	40	13.0	0.92
6/20/10 15:32	121.1	120.7	123.9	38	34	44	14.1	0.91
6/20/10 15:47	121.2	120.7	123.8	39	33	44	14.1	0.91
6/20/10 16:02	120.5	120.8	123.9	37	30	41	13.2	0.91
6/20/10 16:17	120.3	120.8	123.6	39	35	44	14.3	0.92
6/20/10 16:32	119.8	120.6	123.2	39	33	43	14.0	0.92
6/20/10 16:47	119.8	120.6	123.0	38	32	43	13.6	0.92
6/20/10 17:02	119.8	120.5	123.1	42	34	44	14.4	0.92
6/20/10 17:17	119.8	120.6	123.2	41	32	43	14.0	0.92
6/20/10 17:32	120.1	120.8	123.4	41	35	46	14.8	0.92
6/20/10 17:47	120.3	121.1	123.6	43	37	48	15.6	0.93
6/20/10 18:02	120.7	121.3	123.8	44	42	52	16.8	0.93
6/20/10 18:17	120.7	121.2	123.9	47	43	54	17.5	0.92
6/20/10 18:32	121.0	121.4	124.0	43	41	53	16.8	0.92
6/20/10 18:47	121.3	121.8	124.2	43	43	55	17.2	0.93
6/20/10 19:02	120.8	121.3	123.9	43	42	52	16.7	0.93
6/20/10 19:17	120.9	121.5	124.2	44	43	53	17.1	0.92
6/20/10 19:32	121.4	121.7	124.6	46	42	54	17.3	0.92
6/20/10 19:47	121.9	122.1	125.0	51	52	55	19.4	0.94
6/20/10 20:02	122.1	122.3	125.1	42	43	53	17.0	0.92
6/20/10 20:17	122.1	122.4	125.1	45	43	55	17.6	0.92
6/20/10 20:32	121.8	122.2	124.8	43	43	52	17.0	0.92
6/20/10 20:47	121.1	121.9	124.4	45	44	53	17.4	0.92
6/20/10 21:02	121.5	121.9	124.4	41	43	53	16.8	0.92
6/20/10 21:17	121.5	121.9	124.6	42	45	54	17.4	0.92
6/20/10 21:32	121.7	122.4	124.9	43	47	55	17.8	0.92
6/20/10 21:47	122.4	122.9	125.7	44	44	54	17.5	0.92
6/20/10 22:02	122.4	122.9	125.4	43	44	52	17.2	0.92
6/20/10 22:17	122.3	122.4	125.2	41	43	54	17.0	0.92
6/20/10 22:32	122.6	122.5	125.3	41	44	54	17.1	0.92
6/20/10 22:47	122.8	122.7	125.6	42	43	53	17.0	0.92
6/20/10 23:02	123.1	123.1	125.7	43	43	53	17.3	0.91
6/20/10 23:17	123.2	123.2	125.8	42	43	53	17.1	0.92
6/20/10 23:32	122.5	122.6	125.0	40	42	51	16.4	0.92
6/20/10 23:47	122.9	122.7	125.2	41	44	52	16.8	0.92
6/21/10 0:02	122.7	122.5	125.1	42	43	53	17.0	0.92
6/21/10 0:17	123.1	122.8	125.5	43	42	53	17.1	0.91
6/21/10 0:32	123.4	123.1	125.7	42	43	51	16.9	0.92
6/21/10 0:47	122.9	122.4	125.1	39	43	51	16.4	0.93
6/21/10 1:02	123.4	122.8	125.3	45	46	57	18.4	0.91

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/21/10 1:17	122.9	122.5	125.0	151	130	156	53.9	0.83
6/21/10 1:32	122.6	122.3	124.4	149	125	152	52.4	0.84
6/21/10 1:47	122.8	122.4	124.8	147	125	150	52.1	0.83
6/21/10 2:02	123.3	122.7	125.0	146	127	152	52.6	0.83
6/21/10 2:17	123.4	123.0	125.1	147	126	153	52.7	0.83
6/21/10 2:32	123.4	122.9	125.3	146	122	148	51.5	0.83
6/21/10 2:47	123.5	122.9	125.2	149	124	151	52.5	0.83
6/21/10 3:02	123.6	122.8	125.2	142	118	146	50.3	0.83
6/21/10 3:17	123.5	122.8	125.2	138	117	143	49.3	0.83
6/21/10 3:32	123.5	122.7	125.0	136	116	140	48.5	0.83
6/21/10 3:47	123.5	122.6	125.0	140	116	142	49.2	0.83
6/21/10 4:02	123.7	122.9	125.2	123	103	127	43.7	0.82
6/21/10 4:17	123.8	122.9	125.3	129	108	133	46.0	0.82
6/21/10 4:32	123.9	122.9	125.3	118	101	123	42.5	0.82
6/21/10 4:47	123.9	122.9	125.3	123	105	128	44.2	0.82
6/21/10 5:02	123.6	122.5	124.8	133	109	137	46.8	0.82
6/21/10 5:17	122.6	121.8	124.0	203	172	206	71.2	0.75
6/21/10 5:32	122.9	122.0	124.1	223	193	229	79.2	0.75
6/21/10 5:47	123.1	122.1	124.2	201	174	208	71.8	0.74
6/21/10 6:02	122.7	121.7	123.5	210	180	218	74.5	0.75
6/21/10 6:17	122.5	121.5	123.2	206	177	209	72.5	0.75
6/21/10 6:32	122.0	121.1	122.7	216	184	218	75.3	0.76
6/21/10 6:47	121.5	120.7	122.4	225	193	221	77.7	0.77
6/21/10 7:02	120.7	120.1	121.6	242	204	227	81.2	0.80
6/21/10 7:17	120.2	119.6	121.4	232	198	215	77.5	0.80
6/21/10 7:32	120.5	119.9	121.8	233	203	215	78.5	0.81
6/21/10 7:47	120.1	119.3	121.3	244	212	225	81.8	0.81
6/21/10 8:02	120.0	119.2	121.4	248	216	233	83.7	0.82
6/21/10 8:17	119.6	118.9	121.1	237	209	225	80.4	0.82
6/21/10 8:32	119.5	119.2	121.5	254	227	233	85.6	0.83
6/21/10 8:47	119.6	119.4	121.5	282	246	252	93.8	0.86
6/21/10 9:02	119.1	119.0	121.2	378	358	372	132.7	0.92
6/21/10 9:17	118.9	118.7	120.8	402	396	403	143.5	0.93
6/21/10 9:32	118.8	118.8	121.0	401	399	398	143.3	0.93
6/21/10 9:47	119.1	119.0	121.3	374	347	362	129.6	0.93
6/21/10 10:02	119.3	119.3	121.5	377	339	361	129.2	0.92
6/21/10 10:17	119.1	119.2	121.3	372	329	349	125.7	0.92
6/21/10 10:32	118.7	118.7	120.9	383	338	360	129.1	0.92
6/21/10 10:47	118.4	118.5	120.7	394	346	374	132.7	0.92
6/21/10 11:02	118.7	118.8	120.8	383	348	373	131.9	0.93
6/21/10 11:17	118.7	119.1	121.1	390	353	378	134.0	0.93
6/21/10 11:32	118.3	118.4	120.9	397	370	386	137.4	0.93
6/21/10 11:47	118.2	118.4	121.0	401	373	392	138.9	0.93
6/21/10 12:02	118.1	118.7	121.1	375	355	380	132.4	0.93
6/21/10 12:17	118.0	118.2	120.8	372	352	370	130.2	0.93
6/21/10 12:32	118.0	118.4	121.1	387	358	371	133.0	0.92
6/21/10 12:45	117.9	118.2	120.8	374	347	361	128.7	0.92

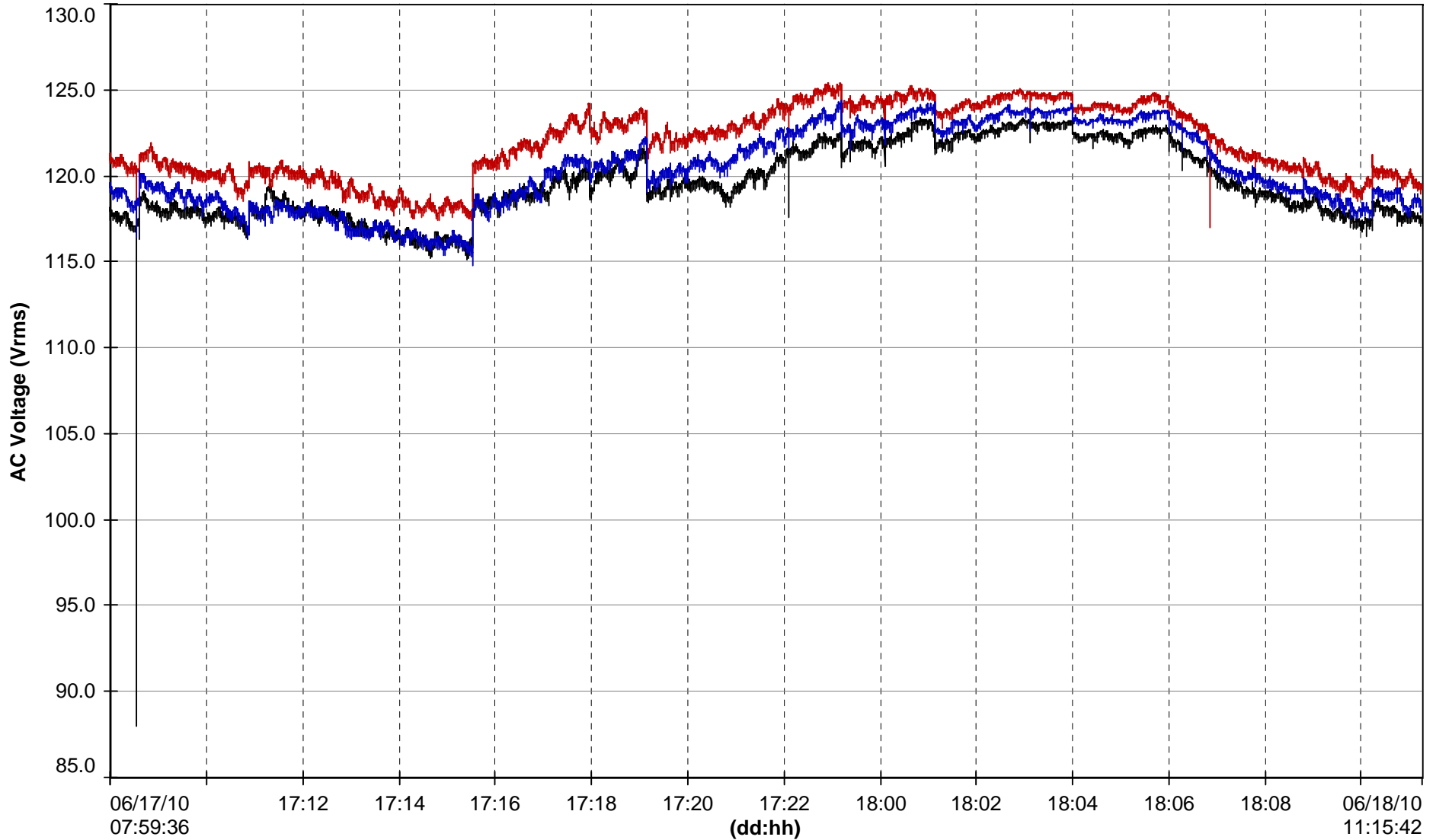


# Woodcrest Elementary School

*Electrical Load Study*  
*June 17 – 18, 2010*

Cherry Hill School District

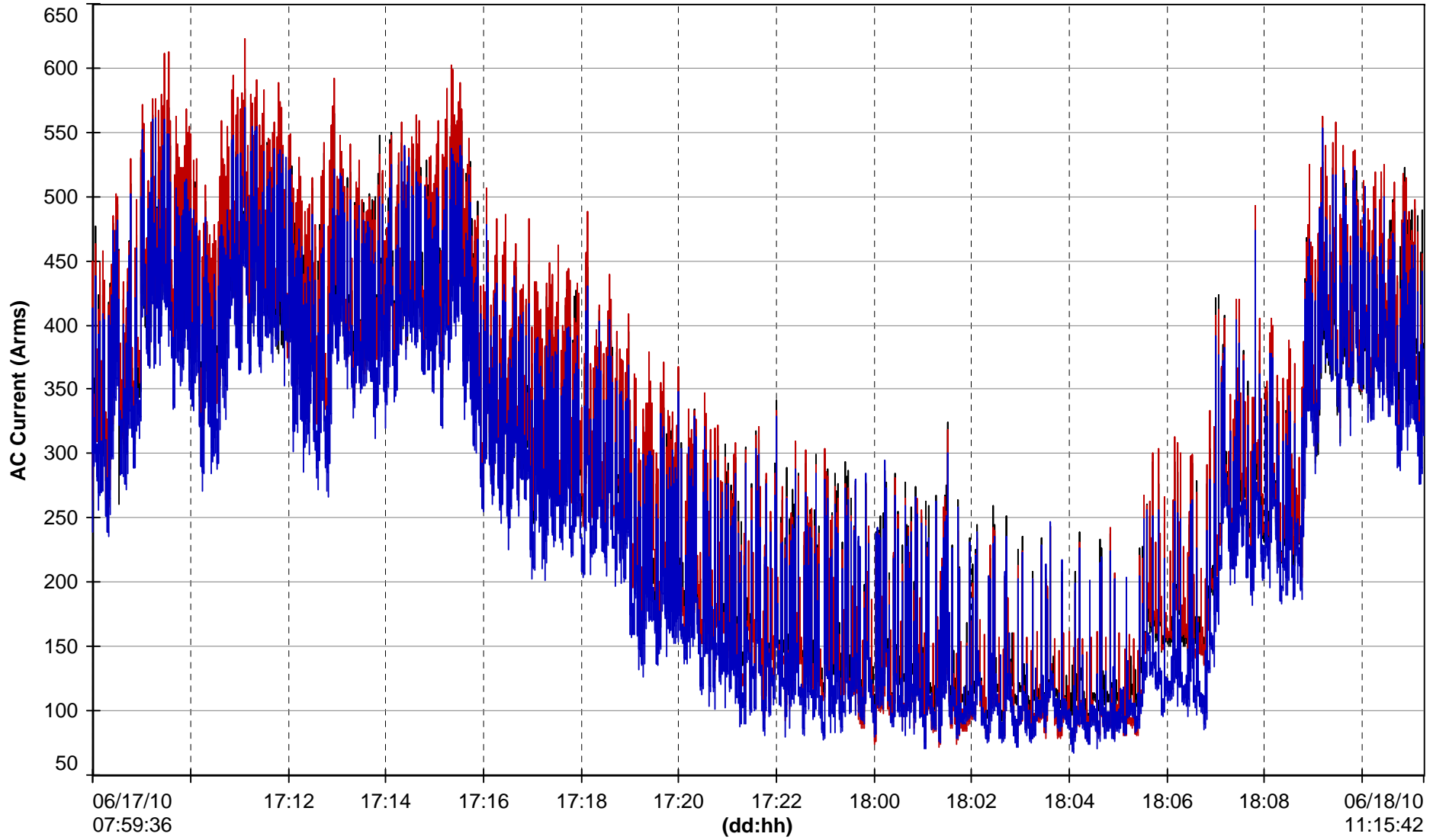
### Main Service Phase Voltage



	Maximum	Minimum	Average
— Va	123.4	87.7	119.7
— Vb	125.5	117.0	121.9
— Vc	124.4	114.8	120.4

### Woodcrest Elementary School

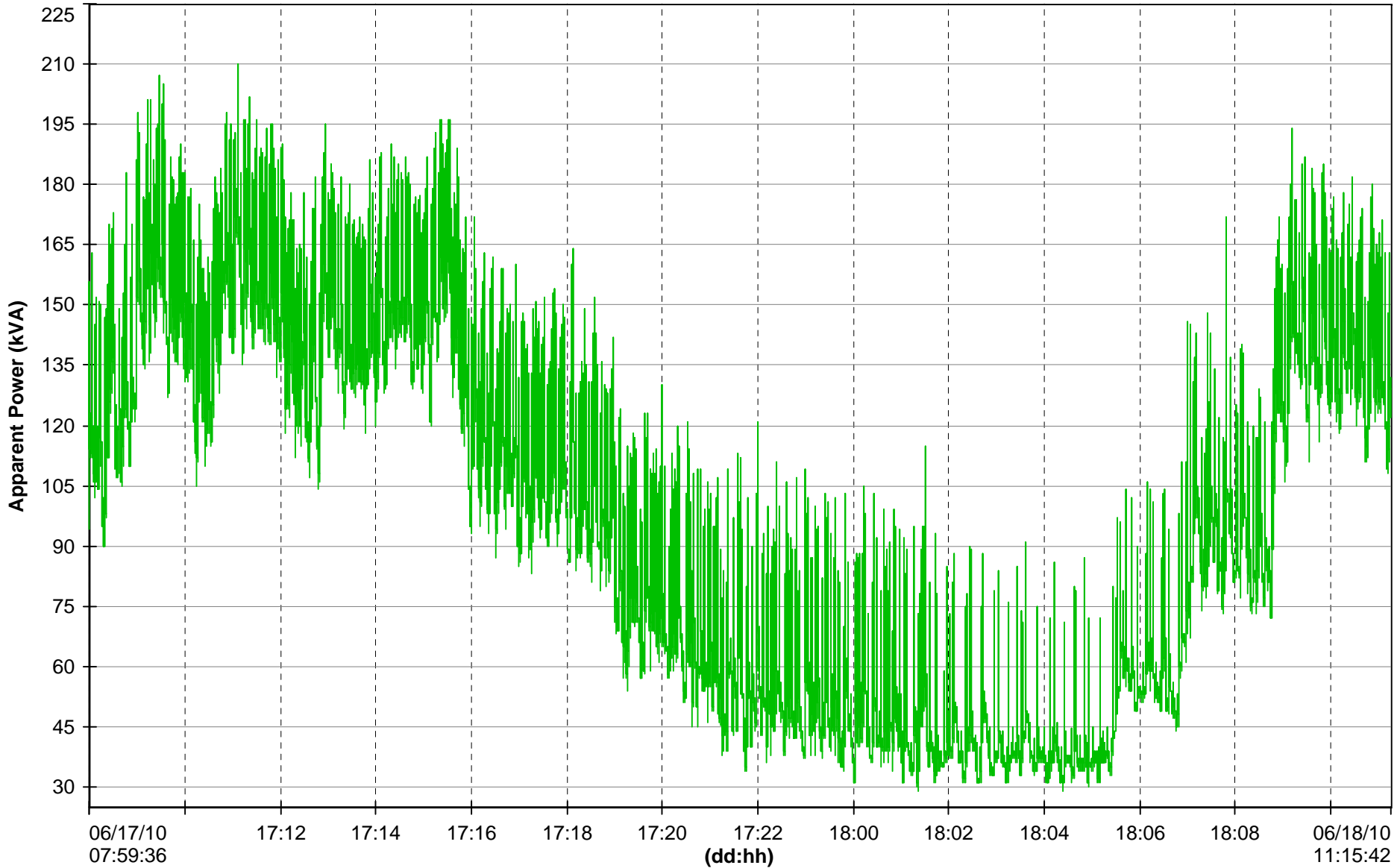
### Main Service Line Current



	Maximum	Minimum	Average
— la	584	88	260
— lb	623	72	262
— lc	569	65	236

### Woodcrest Elementary School

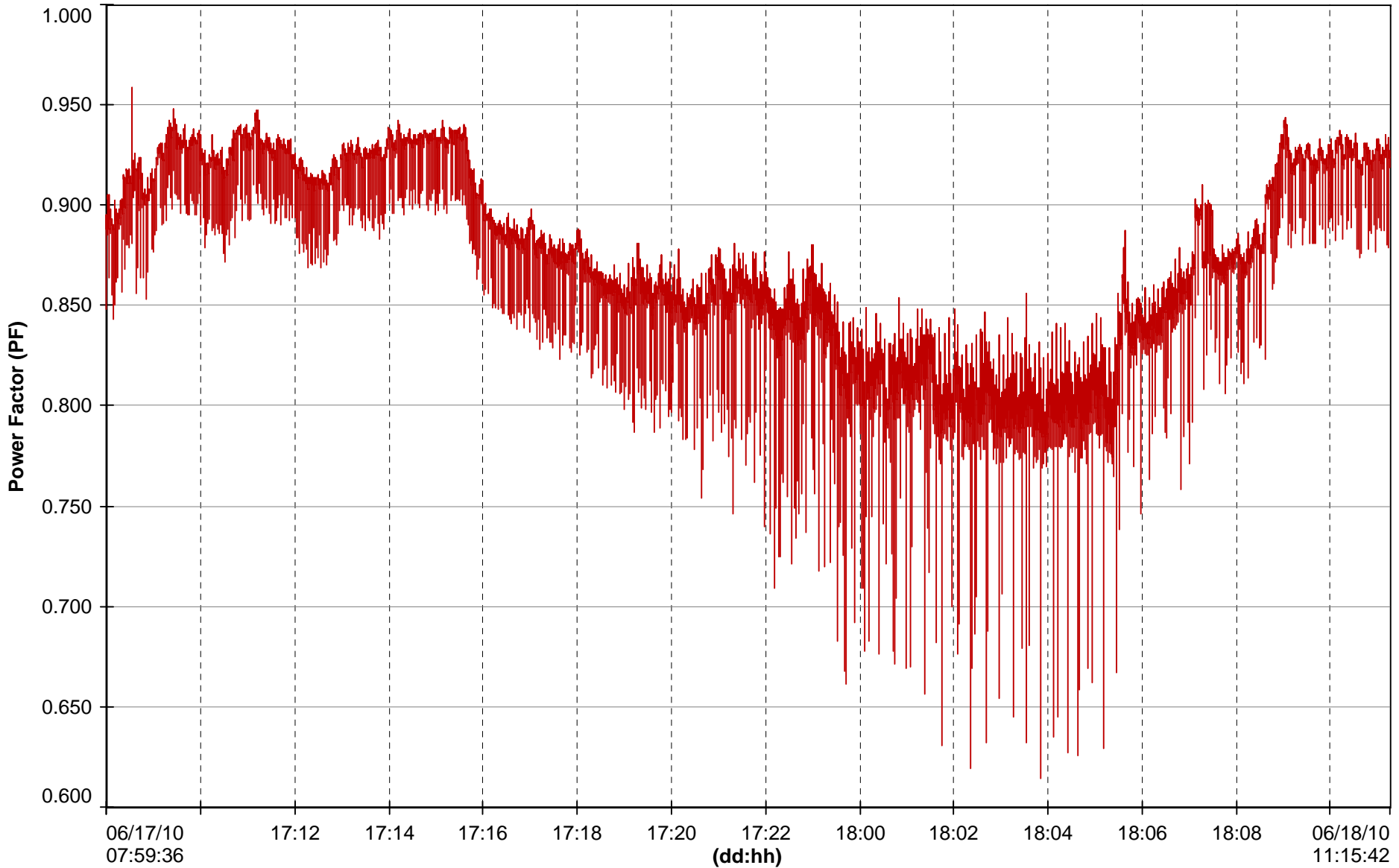
### Main Service Apparent Power



Maximum Minimum Average  
— kVA 210 29 90

### Woodcrest Elementary School

### Main Service Power Factor



Maximum Minimum Average  
— PF 0.959 0.613 0.871

### Woodcrest Elementary School

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 8:14	117.7	120.9	119.1	326	325	292	101	0.89
6/17/10 8:29	117.5	120.6	118.7	323	322	301	113	0.90
6/17/10 8:44	118.0	120.8	119.2	344	348	318	114	0.91
6/17/10 8:59	118.3	121.3	119.4	348	365	329	120	0.91
6/17/10 9:14	117.9	120.7	119.2	414	433	411	126	0.92
6/17/10 9:29	118.1	120.6	119.1	435	452	413	150	0.94
6/17/10 9:44	118.0	120.4	118.8	416	433	395	155	0.93
6/17/10 9:59	117.9	120.1	118.5	403	429	386	147	0.93
6/17/10 10:14	117.7	120.1	118.7	385	397	362	144	0.92
6/17/10 10:29	117.7	120.1	118.3	354	359	324	134	0.92
6/17/10 10:44	117.5	119.6	117.8	382	389	337	124	0.92
6/17/10 10:59	117.4	119.7	117.7	433	455	418	132	0.93
6/17/10 11:14	118.0	120.4	118.0	437	465	419	155	0.94
6/17/10 11:29	119.0	120.1	118.0	425	453	411	157	0.93
6/17/10 11:44	118.6	120.5	118.2	421	440	407	153	0.93
6/17/10 11:59	118.1	120.1	117.9	404	431	407	150	0.93
6/17/10 12:14	118.1	119.9	118.1	393	397	360	147	0.92
6/17/10 12:29	117.8	120.1	118.0	366	382	333	136	0.91
6/17/10 12:44	117.8	119.8	117.5	371	371	328	128	0.91
6/17/10 12:59	117.6	119.3	117.4	388	402	344	126	0.92
6/17/10 13:14	117.1	119.2	116.9	407	417	394	134	0.93
6/17/10 13:29	116.9	119.0	116.8	393	391	369	143	0.92
6/17/10 13:44	116.9	118.6	117.0	388	387	373	135	0.93
6/17/10 13:59	116.7	118.5	116.8	406	399	366	135	0.93
6/17/10 14:14	116.6	118.7	116.5	404	402	373	136	0.93
6/17/10 14:29	116.2	118.1	116.5	418	425	407	139	0.93
6/17/10 14:44	116.0	118.3	116.2	421	440	408	146	0.93
6/17/10 14:59	116.3	118.0	116.0	403	405	383	148	0.93
6/17/10 15:14	116.3	118.3	116.4	411	427	384	138	0.93
6/17/10 15:29	115.9	118.1	116.0	434	453	407	144	0.93
6/17/10 15:44	118.0	120.2	118.0	422	430	394	151	0.93
6/17/10 15:59	118.5	120.8	118.2	352	352	324	147	0.91
6/17/10 16:14	118.5	121.0	118.5	310	322	302	120	0.89
6/17/10 16:29	118.8	121.3	118.8	312	327	295	113	0.89
6/17/10 16:44	119.0	121.9	119.3	294	304	277	111	0.88
6/17/10 16:59	119.1	121.6	119.2	304	312	281	105	0.88
6/17/10 17:14	119.2	122.4	120.2	285	296	250	106	0.88
6/17/10 17:29	120.0	122.6	120.5	283	296	248	101	0.88
6/17/10 17:44	119.6	123.2	120.9	284	296	260	100	0.87
6/17/10 17:59	120.1	123.3	120.8	301	300	254	102	0.87
6/17/10 18:14	119.8	122.6	120.5	290	291	247	103	0.87
6/17/10 18:29	120.2	123.1	120.8	267	272	245	100	0.86
6/17/10 18:44	120.6	123.1	120.9	265	270	237	95	0.86
6/17/10 18:59	120.2	123.4	121.2	264	265	232	94	0.85
6/17/10 19:14	120.5	122.8	121.1	218	218	176	92	0.85
6/17/10 19:29	119.1	122.1	119.9	200	218	171	73	0.86
6/17/10 19:44	119.3	122.2	120.2	192	203	169	71	0.85
6/17/10 19:59	119.5	122.1	120.3	205	208	173	67	0.86
6/17/10 20:14	119.6	122.4	120.7	190	190	161	71	0.85
6/17/10 20:29	119.6	122.5	120.9	185	191	161	65	0.85

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 20:44	119.4	122.6	120.7	177	181	147	64	0.84
6/17/10 20:59	118.9	122.8	120.8	170	169	134	60	0.86
6/17/10 21:14	119.6	122.9	121.4	170	156	132	58	0.86
6/17/10 21:29	120.1	123.2	121.7	146	137	115	55	0.86
6/17/10 21:44	120.1	123.4	121.9	158	158	132	48	0.85
6/17/10 21:59	120.8	124.0	122.3	137	134	118	54	0.85
6/17/10 22:14	121.4	124.0	122.4	155	146	128	49	0.85
6/17/10 22:29	121.4	124.5	122.7	148	138	121	52	0.84
6/17/10 22:44	121.7	124.7	123.3	137	138	112	50	0.84
6/17/10 22:59	122.2	125.0	123.5	136	128	104	48	0.84
6/17/10 23:14	122.0	124.8	123.6	146	145	116	45	0.85
6/17/10 23:29	121.6	124.2	122.7	149	130	112	51	0.84
6/17/10 23:44	121.9	124.3	123.1	129	117	116	47	0.81
6/17/10 23:59	121.7	124.3	123.0	125	118	115	44	0.81
6/18/10 0:14	122.1	124.4	123.1	128	109	113	44	0.81
6/18/10 0:29	122.2	124.6	123.3	130	117	113	44	0.81
6/18/10 0:44	122.7	124.8	123.7	127	107	103	44	0.80
6/18/10 0:59	123.2	124.9	123.9	130	121	111	41	0.81
6/18/10 1:14	122.5	124.2	123.4	118	102	98	45	0.81
6/18/10 1:29	121.9	123.7	122.6	121	107	103	38	0.82
6/18/10 1:44	122.4	124.0	123.1	124	110	107	42	0.81
6/18/10 1:59	122.4	124.2	123.1	111	91	96	40	0.79
6/18/10 2:14	122.4	124.2	123.1	121	109	107	37	0.80
6/18/10 2:29	122.7	124.4	123.5	110	98	92	41	0.79
6/18/10 2:44	122.9	124.7	123.8	112	101	95	37	0.80
6/18/10 2:59	123.1	124.8	123.7	121	103	95	38	0.79
6/18/10 3:14	123.1	124.7	123.8	113	95	92	39	0.79
6/18/10 3:29	123.0	124.7	123.7	109	96	95	37	0.79
6/18/10 3:44	123.0	124.6	123.8	118	107	107	37	0.80
6/18/10 3:59	123.1	124.7	123.9	109	91	95	41	0.79
6/18/10 4:14	122.4	124.0	123.3	112	93	86	36	0.79
6/18/10 4:29	122.3	124.0	123.1	107	93	89	36	0.80
6/18/10 4:44	122.4	124.1	123.3	113	95	92	35	0.79
6/18/10 4:59	122.3	124.0	123.3	108	94	88	37	0.80
6/18/10 5:14	122.1	123.8	123.1	104	92	91	36	0.80
6/18/10 5:29	122.5	124.3	123.5	118	96	96	35	0.79
6/18/10 5:44	122.7	124.6	123.6	162	165	134	39	0.84
6/18/10 5:59	122.7	124.4	123.7	160	165	117	58	0.83
6/18/10 6:14	122.1	123.9	123.1	166	170	120	54	0.84
6/18/10 6:29	121.4	123.5	122.6	164	171	116	57	0.84
6/18/10 6:44	121.0	123.0	122.2	167	162	120	55	0.85
6/18/10 6:59	120.5	122.5	121.5	173	174	126	54	0.86
6/18/10 7:14	119.7	121.8	120.6	250	247	224	59	0.88
6/18/10 7:29	119.5	121.5	120.2	245	250	232	88	0.89
6/18/10 7:44	119.2	121.2	120.0	254	260	236	88	0.87
6/18/10 7:59	119.0	121.1	120.0	259	265	232	88	0.87
6/18/10 8:14	118.9	120.9	119.6	254	259	238	91	0.87
6/18/10 8:29	118.8	120.6	119.4	232	238	210	90	0.88
6/18/10 8:44	118.2	120.5	119.2	242	254	218	81	0.89
6/18/10 8:59	118.4	120.5	119.3	314	320	295	85	0.92

Load Study  
15-Minute Data Averages

<b>Date / Time</b>	<b>Va</b>	<b>Vb</b>	<b>Vc</b>	<b>Ia</b>	<b>Ib</b>	<b>Ic</b>	<b>kVA</b>	<b>PF</b>
6/18/10 9:14	118.4	120.2	119.1	352	376	354	114	0.93
6/18/10 9:29	117.9	119.7	118.7	383	409	387	130	0.92
6/18/10 9:44	117.8	119.5	118.5	368	381	365	139	0.92
6/18/10 9:59	117.4	119.3	118.1	377	387	371	132	0.92
6/18/10 10:14	117.3	119.4	118.0	362	380	361	134	0.93
6/18/10 10:29	118.3	120.3	119.1	387	398	371	130	0.93
6/18/10 10:44	118.1	120.2	119.0	374	370	350	139	0.92
6/18/10 10:59	117.6	119.8	118.6	374	368	329	128	0.92
6/18/10 11:14	117.6	119.7	118.5	369	353	320	127	0.93
6/18/10 11:15	117.5	119.3	118.2	374	355	326	123	0.92

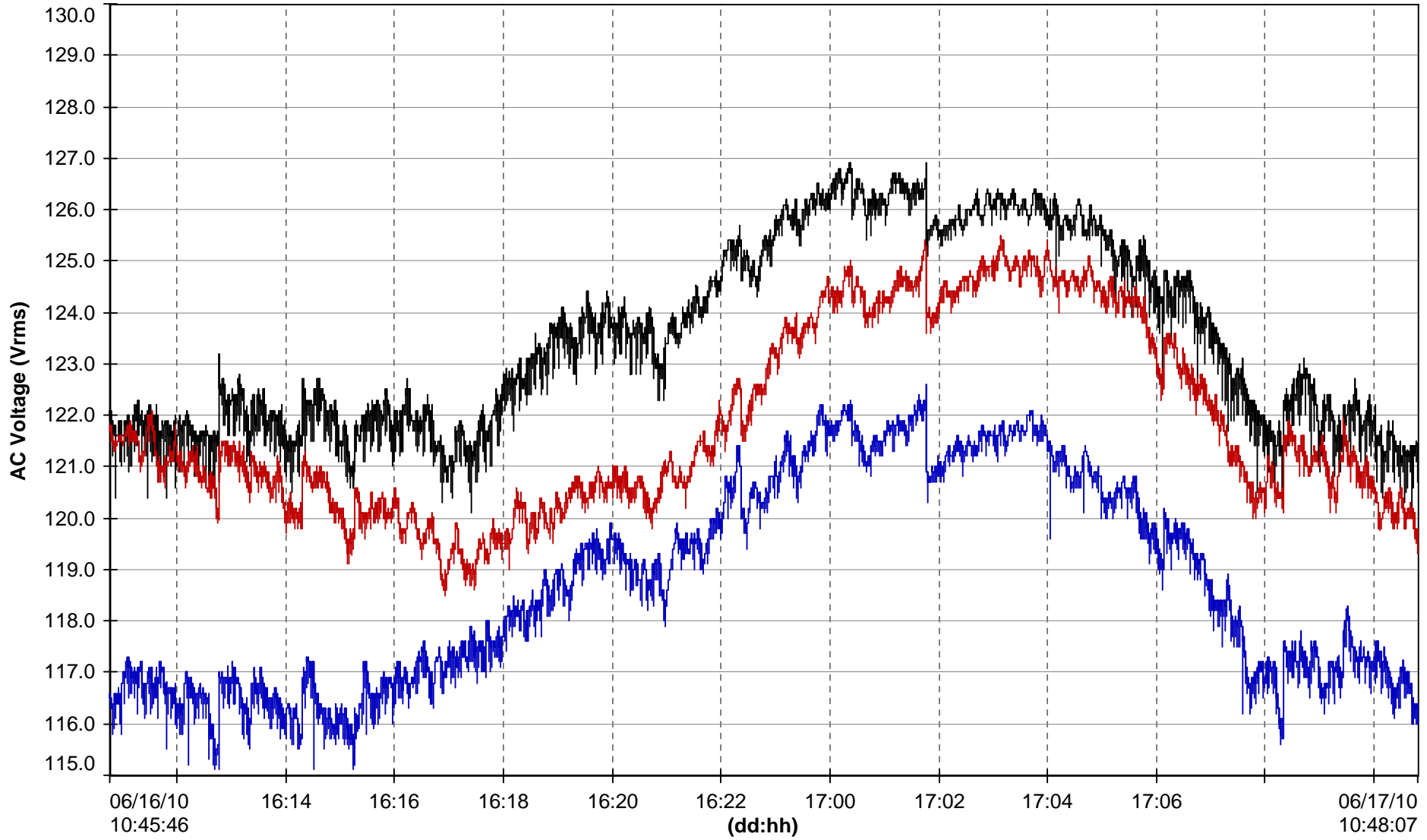


# 'Old' Joseph Sharp Elementary School

*Electrical Load Study*  
*June 16 – 17, 2010*

Cherry Hill School District

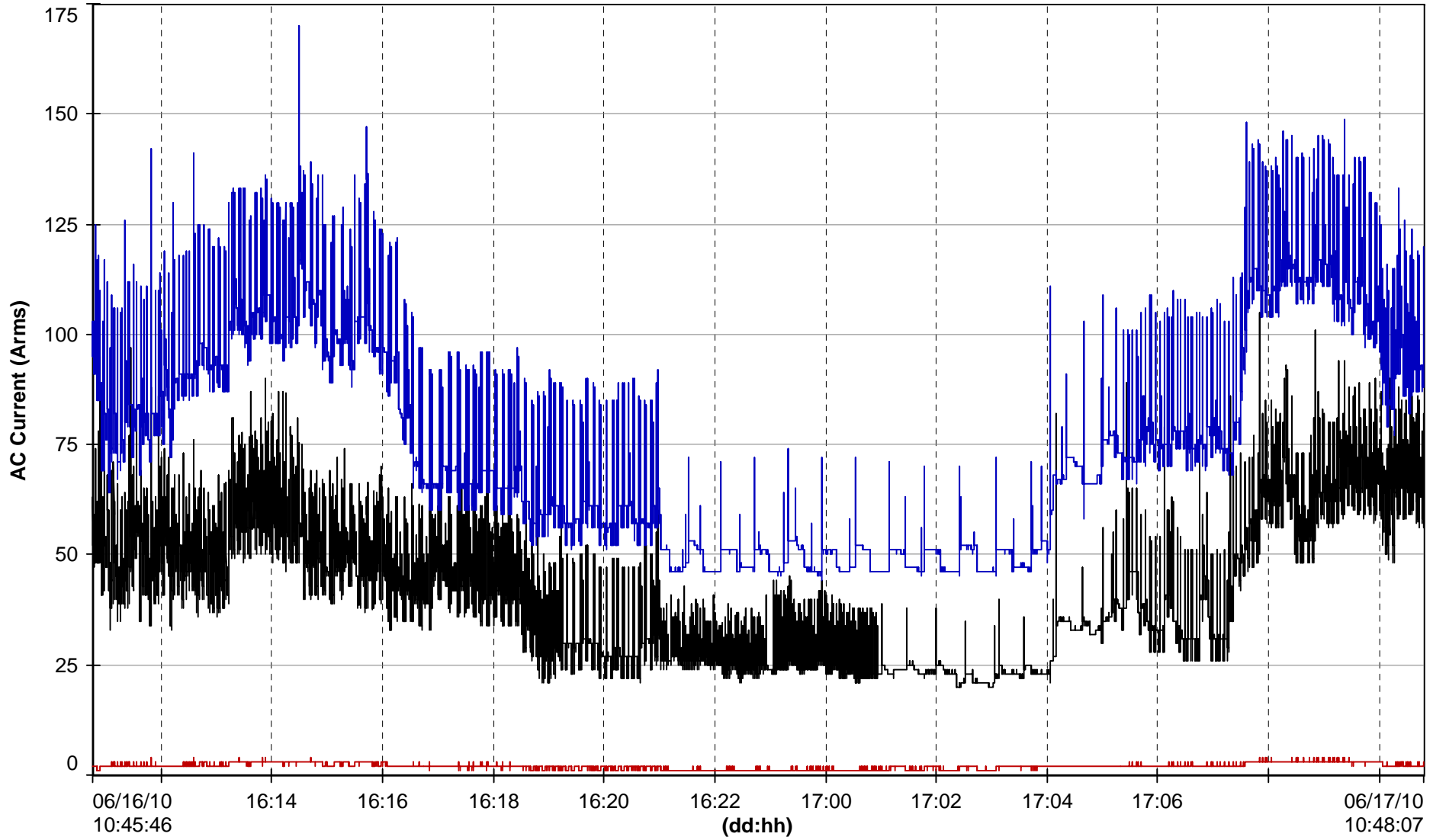
### Main Service Phase Voltage



	Maximum	Minimum	Average
— Va	127.0	119.9	123.6
— Vb	125.6	118.3	121.9
— Vc	122.6	115.0	118.8

### 'Old' Joseph Sharp Elementary School

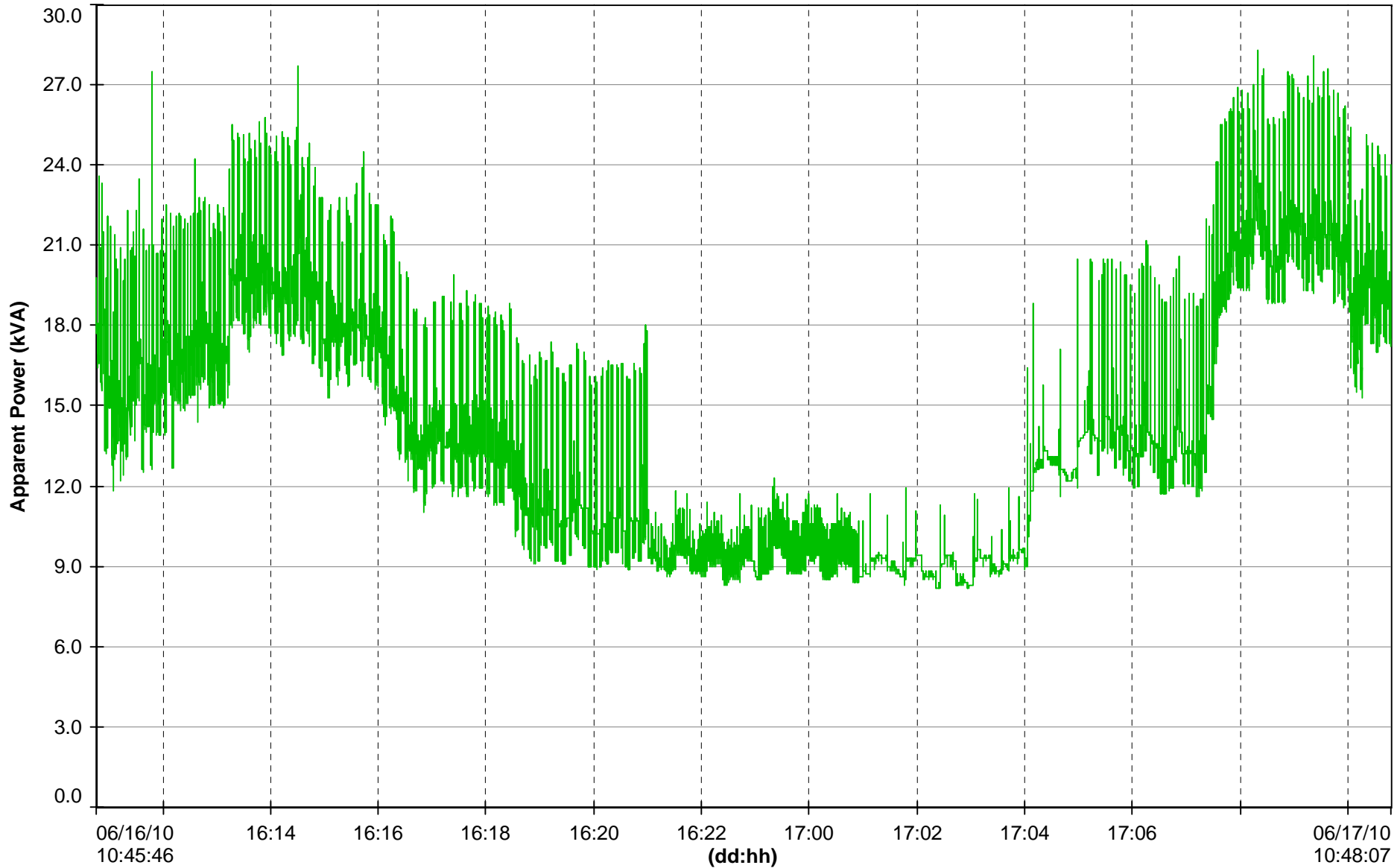
### Main Service Line Current



	Maximum	Minimum	Average
— la	106	20	38
— lb	4	1	2
— lc	170	44	73

### 'Old' Joseph Sharp Elementary School

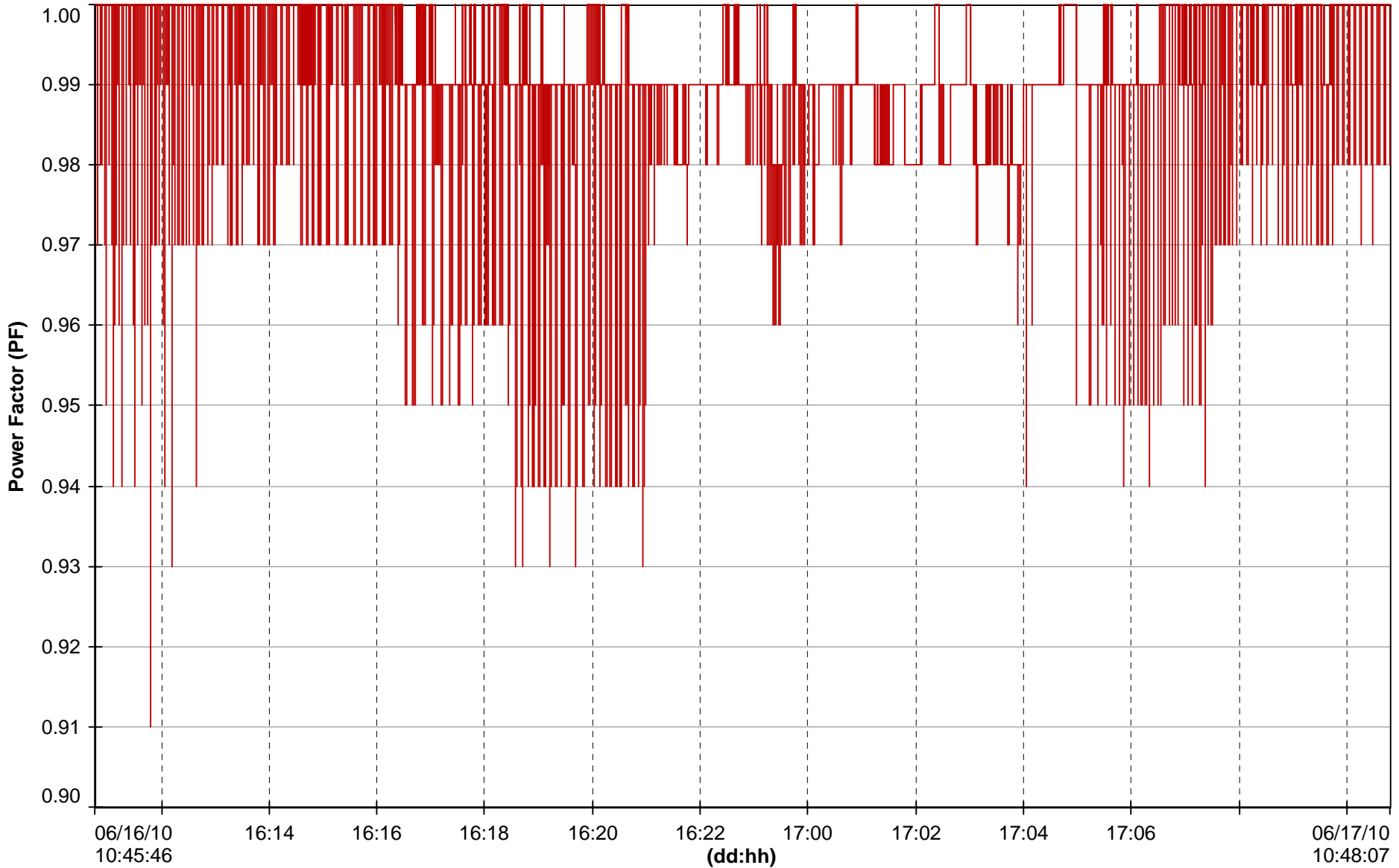
### Main Service Apparent Power



Maximum Minimum Average  
— kVA 28.7 8.2 13.4

### 'Old' Joseph Sharp Elementary School

### Main Service Power Factor



Maximum Minimum Average  
— PF 1.00 0.91 0.99

### 'Old' Joseph Sharp Elementary School

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	PF	kVA
6/16/10 11:00	121.7	121.5	116.5	53	2	87	1.00	16.7
6/16/10 11:15	121.8	121.6	117.0	44	2	74	1.00	14.3
6/16/10 11:30	122.0	121.5	116.9	44	2	78	1.00	14.6
6/16/10 11:45	121.8	121.3	116.9	48	2	78	1.00	15.2
6/16/10 12:00	121.7	121.2	116.6	43	2	80	1.00	14.8
6/16/10 12:15	121.8	121.1	116.6	47	2	84	1.00	15.7
6/16/10 12:30	121.6	121.0	116.6	45	2	89	1.00	16.0
6/16/10 12:45	121.5	120.6	116.0	44	2	92	1.00	16.3
6/16/10 13:00	122.3	121.3	116.8	43	2	93	1.00	16.4
6/16/10 13:15	122.4	121.2	116.7	43	2	92	1.00	16.3
6/16/10 13:30	122.0	120.9	116.5	54	3	104	1.00	19.1
6/16/10 13:45	122.1	120.8	116.6	56	3	100	1.00	18.8
6/16/10 14:00	121.8	120.7	116.3	55	3	104	1.00	19.2
6/16/10 14:15	121.5	120.1	116.1	54	3	100	1.00	18.5
6/16/10 14:30	122.1	120.8	116.8	53	3	103	1.00	18.7
6/16/10 14:45	122.3	120.8	116.4	48	3	111	0.99	19.1
6/16/10 15:00	121.9	120.3	116.1	46	3	103	1.00	17.9
6/16/10 15:15	121.3	119.7	116.0	45	2	96	1.00	16.9
6/16/10 15:30	121.7	120.2	116.5	47	2	96	1.00	17.2
6/16/10 15:45	122.0	120.2	116.6	43	3	103	1.00	17.6
6/16/10 16:00	122.0	120.2	116.8	43	3	97	1.00	16.9
6/16/10 16:15	122.1	119.9	116.9	41	2	93	1.00	16.1
6/16/10 16:30	121.9	119.9	117.0	40	2	82	1.00	14.7
6/16/10 16:45	121.9	119.7	117.1	38	2	70	0.99	13.0
6/16/10 17:00	121.2	119.1	117.1	41	2	65	0.99	12.8
6/16/10 17:15	121.4	119.5	117.3	43	2	66	0.99	13.2
6/16/10 17:30	121.3	119.0	117.5	42	2	66	0.99	13.0
6/16/10 17:45	121.7	119.4	117.6	42	2	64	0.99	12.8
6/16/10 18:00	122.2	119.6	117.6	39	2	68	0.99	12.9
6/16/10 18:15	122.7	119.8	118.1	39	2	64	0.99	12.5
6/16/10 18:30	122.8	120.0	118.2	38	2	65	0.99	12.6
6/16/10 18:45	123.2	120.0	118.4	32	2	59	0.99	11.1
6/16/10 19:00	123.5	120.0	118.7	27	2	57	0.99	10.2
6/16/10 19:15	123.7	120.3	118.7	27	2	60	0.99	10.6
6/16/10 19:30	123.6	120.6	119.2	28	2	56	0.99	10.2
6/16/10 19:45	123.9	120.6	119.5	29	2	58	0.99	10.7
6/16/10 20:00	124.0	120.7	119.4	27	2	58	0.99	10.5
6/16/10 20:15	123.9	120.8	119.5	26	1	55	1.00	9.9
6/16/10 20:30	123.6	120.6	119.1	26	2	60	0.99	10.5
6/16/10 20:45	123.7	120.4	118.8	26	2	56	0.99	10.0
6/16/10 21:00	123.1	120.6	118.8	30	2	57	0.99	10.6
6/16/10 21:15	123.7	120.9	119.3	26	1	50	0.99	9.3
6/16/10 21:30	124.0	120.8	119.5	26	1	46	0.99	8.9
6/16/10 21:45	124.2	121.4	119.4	26	1	52	0.98	9.5
6/16/10 22:00	124.6	121.6	119.9	26	1	47	0.99	8.9
6/16/10 22:15	125.2	122.0	120.5	25	1	49	0.99	9.0
6/16/10 22:30	125.2	122.2	120.5	24	1	49	0.99	8.9
6/16/10 22:45	124.8	122.4	120.4	23	1	47	0.99	8.7
6/16/10 23:00	125.4	123.0	120.6	24	1	51	0.99	9.2
6/16/10 23:15	125.9	123.5	121.2	24	1	46	0.99	8.7

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	PF	kVA
6/16/10 23:30	125.8	123.6	121.0	25	1	52	0.98	9.5
6/16/10 23:45	126.1	123.8	121.4	24	1	49	0.99	9.0
6/17/10 0:00	126.2	124.3	121.9	25	1	47	0.99	9.0
6/17/10 0:15	126.5	124.3	121.8	24	1	50	0.99	9.2
6/17/10 0:30	126.5	124.6	122.0	23	1	46	0.99	8.6
6/17/10 0:45	126.2	124.2	121.3	22	1	51	0.99	9.1
6/17/10 1:00	126.2	124.1	121.5	22	1	47	0.99	8.6
6/17/10 1:15	126.4	124.4	121.8	24	1	48	0.99	9.0
6/17/10 1:30	126.4	124.7	121.8	24	2	50	0.98	9.3
6/17/10 1:45	126.4	124.8	122.1	24	1	47	0.99	8.8
6/17/10 2:00	125.8	124.1	121.0	23	2	50	0.98	9.2
6/17/10 2:15	125.6	124.4	121.2	24	1	48	0.99	8.9
6/17/10 2:30	125.8	124.5	121.4	22	1	48	0.99	8.6
6/17/10 2:45	126.1	124.7	121.4	22	2	51	0.98	9.2
6/17/10 3:00	126.1	124.9	121.6	21	1	46	0.99	8.3
6/17/10 3:15	126.2	125.1	121.6	23	2	49	0.98	9.1
6/17/10 3:30	126.1	124.9	121.7	23	2	49	0.99	9.0
6/17/10 3:45	126.0	125.0	121.8	24	2	47	0.98	9.0
6/17/10 4:00	126.2	124.9	121.7	23	2	52	0.98	9.4
6/17/10 4:15	125.9	124.7	121.2	29	2	62	0.99	11.3
6/17/10 4:30	125.7	124.7	121.0	34	2	70	0.99	13.0
6/17/10 4:45	125.9	124.7	121.0	34	2	68	0.99	12.7
6/17/10 5:00	125.8	124.6	120.8	33	2	66	1.00	12.3
6/17/10 5:15	125.4	124.4	120.4	36	2	76	0.99	13.9
6/17/10 5:30	125.2	124.3	120.6	39	2	72	0.99	13.8
6/17/10 5:45	125.0	124.2	120.4	41	2	72	0.99	14.0
6/17/10 6:00	124.8	123.6	119.8	33	2	76	0.99	13.5
6/17/10 6:15	124.5	123.1	119.6	36	2	73	0.99	13.4
6/17/10 6:30	124.5	123.2	119.7	33	2	77	0.99	13.5
6/17/10 6:45	124.4	122.8	119.5	29	2	74	1.00	12.7
6/17/10 7:00	123.9	122.5	119.0	37	2	75	1.00	13.7
6/17/10 7:15	123.5	122.0	118.4	30	2	75	0.99	12.8
6/17/10 7:30	122.8	121.3	118.2	42	2	75	1.00	14.2
6/17/10 7:45	122.5	120.9	117.4	50	3	104	1.00	18.6
6/17/10 8:00	122.0	120.4	116.9	58	3	110	1.00	20.3
6/17/10 8:15	121.6	120.7	117.0	61	3	109	1.00	20.5
6/17/10 8:30	121.9	121.2	116.9	66	3	115	0.99	21.8
6/17/10 8:45	122.6	121.3	117.3	52	3	111	1.00	19.8
6/17/10 9:00	122.4	121.1	117.3	58	3	113	1.00	20.7
6/17/10 9:15	122.0	121.0	116.8	62	3	112	0.99	20.9
6/17/10 9:30	121.7	121.0	117.3	65	3	108	1.00	20.9
6/17/10 9:45	122.2	121.1	117.5	64	3	109	0.99	20.9
6/17/10 10:00	121.9	120.8	117.2	65	3	102	1.00	20.2
6/17/10 10:15	121.5	120.2	117.3	59	2	90	1.00	17.8
6/17/10 10:30	121.5	120.3	116.7	62	2	93	1.00	18.6
6/17/10 10:45	121.2	120.1	116.8	63	2	90	1.00	18.4
6/17/10 10:48	121.3	119.7	116.3	62	2	91	1.00	18.3

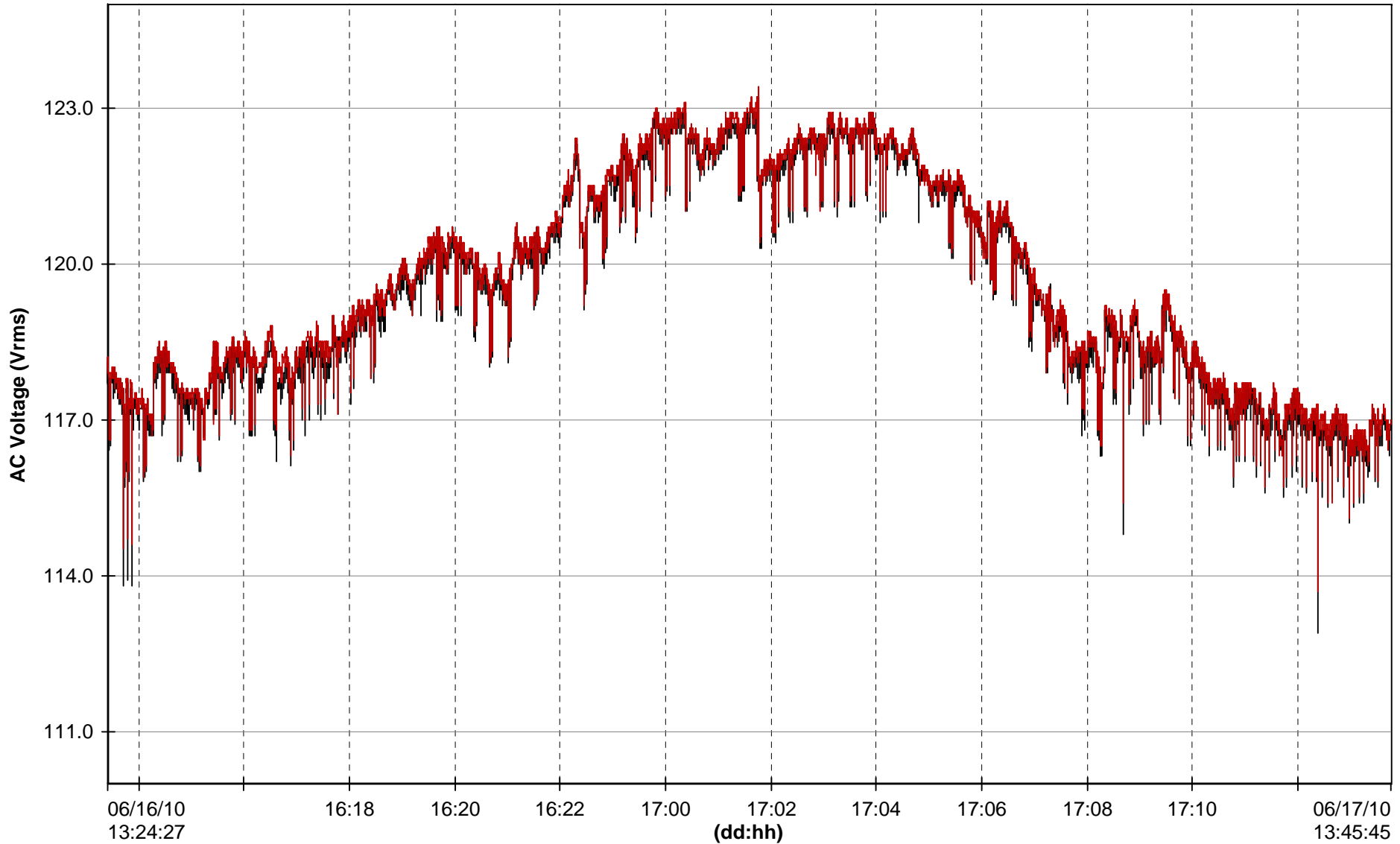


‘Old’ Joseph Sharp Elementary  
School’s Garage

*Electrical Load Study*  
*June 16 – 17, 2010*

Cherry Hill School District

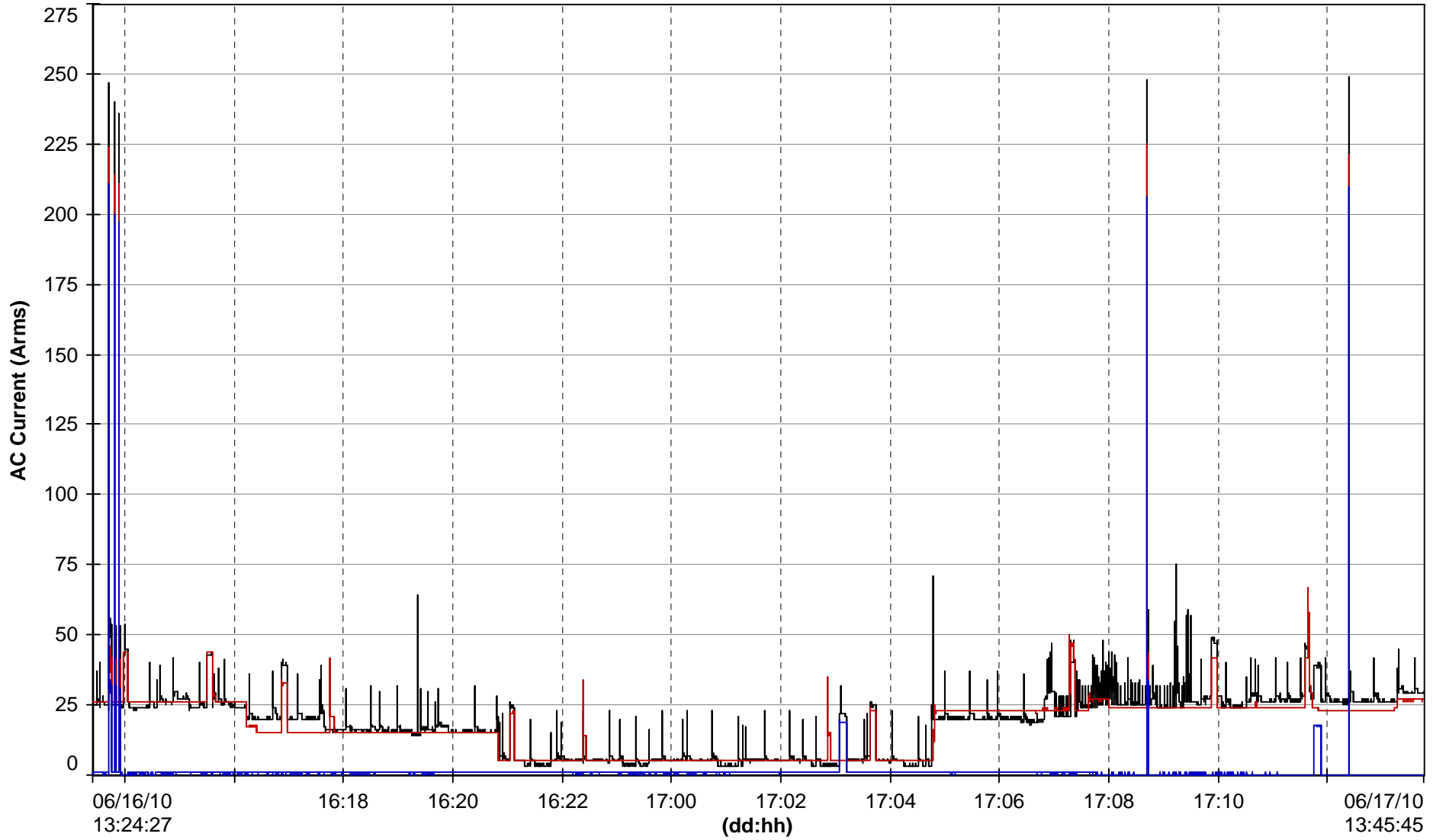
### Main Service Phase Voltage



	Maximum	Minimum	Average
— V1	123.2	112.8	119.6
— V2	123.4	113.6	119.7

### 'Old' Joseph Sharp Elementary School's Garage

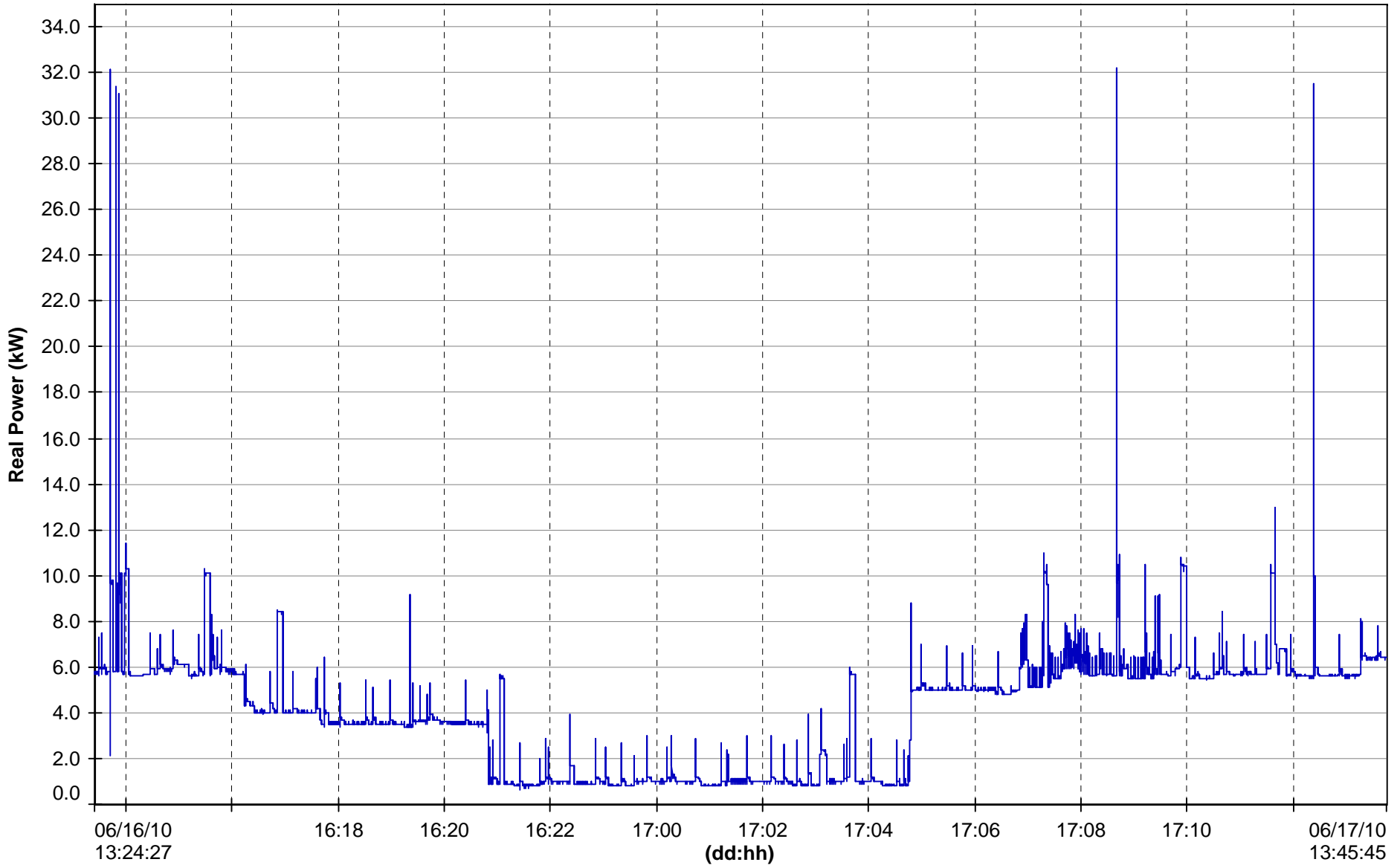
### Main Service Line Current



	Maximum	Minimum	Average
— a	252	3	18
— b	228	5	17
— c	211	0	1

### 'Old' Joseph Sharp Elementary School's Garage

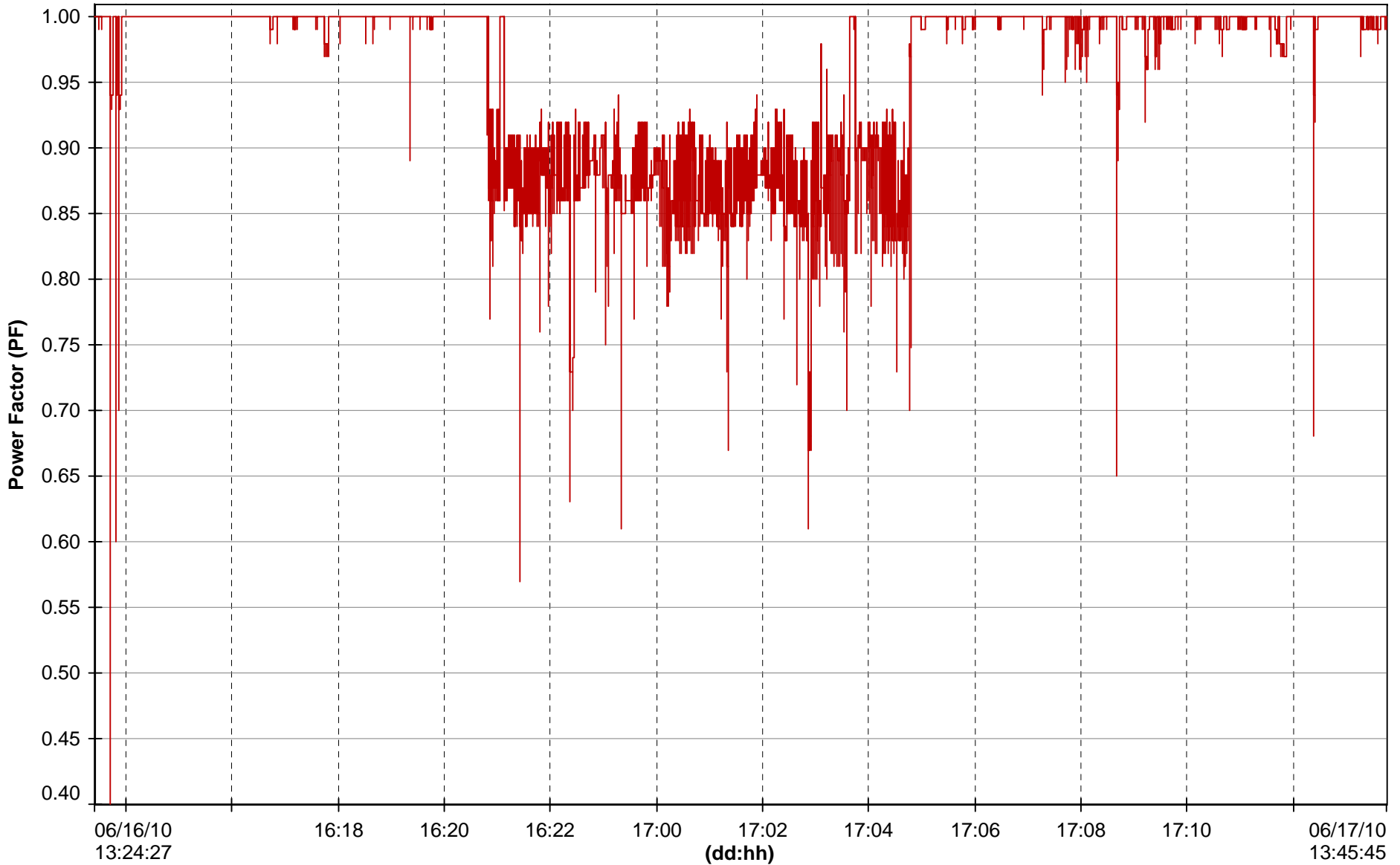
### Main Service Real Power



— kW      Maximum Minimum Average  
                 32.5      0.6      4.0

### 'Old' Joseph Sharp Elementary School's Garage

### Main Service Power Factor



Maximum Minimum Average  
— PF 1.00 0.40 0.95

### 'Old' Joseph Sharp Elementary School's Garage

Load Study  
15-Minute Data Averages

Date / Time	V1	V2	Ia	Ib	Ic	kW	PF
6/16/10 13:39	117.7	117.8	25	26	1	5.8	1.00
6/16/10 13:54	117.3	117.5	37	32	14	7.5	0.97
6/16/10 14:09	117.2	117.3	33	33	1	7.5	1.00
6/16/10 14:24	117.5	117.6	24	26	1	5.6	1.00
6/16/10 14:39	118.1	118.2	25	26	0	5.8	1.00
6/16/10 14:54	117.5	117.6	26	26	1	5.9	1.00
6/16/10 15:09	117.3	117.5	28	26	1	6.1	1.00
6/16/10 15:24	117.4	117.5	25	26	1	5.7	1.00
6/16/10 15:39	118.0	118.1	32	33	1	7.6	1.00
6/16/10 15:54	118.2	118.3	26	26	1	6.0	1.00
6/16/10 16:09	118.2	118.3	24	26	1	5.8	1.00
6/16/10 16:24	117.9	118.1	22	20	1	4.8	1.00
6/16/10 16:39	118.1	118.4	20	15	1	4.0	1.00
6/16/10 16:54	117.7	118.0	24	18	1	4.8	1.00
6/16/10 17:09	117.9	118.1	25	20	1	5.2	1.00
6/16/10 17:24	118.3	118.5	21	15	1	4.1	1.00
6/16/10 17:39	118.1	118.4	21	15	1	4.1	1.00
6/16/10 17:54	118.5	118.6	16	17	1	3.7	0.99
6/16/10 18:09	118.7	118.9	16	15	1	3.6	1.00
6/16/10 18:24	119.0	119.1	16	15	1	3.5	1.00
6/16/10 18:39	119.1	119.3	16	15	1	3.6	1.00
6/16/10 18:54	119.3	119.5	16	15	1	3.5	1.00
6/16/10 19:09	119.7	119.8	16	15	1	3.6	1.00
6/16/10 19:24	119.7	119.8	15	15	1	3.4	1.00
6/16/10 19:39	120.2	120.3	16	15	1	3.6	1.00
6/16/10 19:54	120.1	120.3	17	15	1	3.7	1.00
6/16/10 20:09	120.3	120.4	15	15	1	3.6	1.00
6/16/10 20:24	120.0	120.1	15	15	1	3.5	1.00
6/16/10 20:39	119.7	119.8	16	15	1	3.6	1.00
6/16/10 20:54	119.6	119.7	14	12	1	3.0	0.96
6/16/10 21:09	119.6	119.8	13	11	1	2.7	0.91
6/16/10 21:24	120.2	120.3	4	5	1	0.9	0.86
6/16/10 21:39	120.3	120.4	4	5	1	0.9	0.85
6/16/10 21:54	120.4	120.5	4	5	1	0.9	0.86
6/16/10 22:09	121.0	121.1	6	5	1	1.1	0.87
6/16/10 22:24	121.6	121.7	5	6	1	1.1	0.85
6/16/10 22:39	121.0	121.1	5	7	1	1.1	0.84
6/16/10 22:54	121.2	121.4	5	5	1	0.9	0.89
6/16/10 23:09	121.6	121.8	5	5	1	1.0	0.89
6/16/10 23:24	122.0	122.1	4	5	1	0.9	0.87
6/16/10 23:39	122.1	122.2	4	5	1	0.9	0.86
6/16/10 23:54	122.5	122.6	6	5	1	1.1	0.87
6/17/10 0:09	122.6	122.7	5	5	1	1.0	0.88
6/17/10 0:24	122.7	122.9	6	5	1	1.1	0.85
6/17/10 0:39	122.3	122.4	5	5	1	1.0	0.85
6/17/10 0:54	122.1	122.2	5	5	1	1.0	0.86
6/17/10 1:09	122.4	122.4	3	5	1	0.8	0.85
6/17/10 1:24	122.6	122.8	5	5	1	0.9	0.84
6/17/10 1:39	122.7	122.9	5	5	1	1.0	0.85
6/17/10 1:54	122.1	122.3	5	5	1	1.1	0.86

Load Study  
15-Minute Data Averages

Date / Time	V1	V2	Ia	Ib	Ic	kW	PF
6/17/10 2:09	121.8	121.9	5	5	1	1.0	0.88
6/17/10 2:24	122.0	122.1	5	5	1	1.0	0.86
6/17/10 2:39	122.3	122.4	5	5	1	1.0	0.85
6/17/10 2:54	122.3	122.4	4	7	1	1.0	0.81
6/17/10 3:09	122.4	122.5	9	6	7	1.3	0.83
6/17/10 3:24	122.5	122.6	8	5	5	1.3	0.88
6/17/10 3:39	122.5	122.6	6	5	1	1.1	0.88
6/17/10 3:54	122.6	122.7	12	12	1	2.8	0.94
6/17/10 4:09	122.3	122.5	5	5	1	1.0	0.89
6/17/10 4:24	122.3	122.4	4	5	1	0.9	0.87
6/17/10 4:39	122.1	122.2	4	5	1	0.9	0.84
6/17/10 4:54	122.0	122.1	13	12	1	2.8	0.91
6/17/10 5:09	121.6	121.6	21	23	1	5.1	1.00
6/17/10 5:24	121.5	121.6	20	23	1	5.0	1.00
6/17/10 5:39	121.5	121.6	21	23	1	5.1	1.00
6/17/10 5:54	121.0	121.1	20	23	1	5.0	1.00
6/17/10 6:09	120.6	120.7	21	23	1	5.1	1.00
6/17/10 6:24	120.8	120.9	20	23	1	5.0	1.00
6/17/10 6:39	120.7	120.8	19	23	1	4.9	1.00
6/17/10 6:54	120.2	120.2	22	23	1	5.2	1.00
6/17/10 7:09	119.4	119.6	26	23	1	5.8	1.00
6/17/10 7:24	119.1	119.1	29	32	1	7.1	1.00
6/17/10 7:39	118.7	118.9	25	23	1	5.6	1.00
6/17/10 7:54	118.1	118.3	28	27	0	6.2	1.00
6/17/10 8:09	118.2	118.4	29	25	0	6.2	1.00
6/17/10 8:24	118.2	118.3	26	24	0	5.8	1.00
6/17/10 8:39	118.7	118.8	26	24	0	5.8	1.00
6/17/10 8:54	118.5	118.7	31	26	5	6.4	0.99
6/17/10 9:09	118.4	118.5	25	24	0	5.6	1.00
6/17/10 9:24	118.3	118.4	27	24	0	5.7	0.99
6/17/10 9:39	119.0	119.1	27	24	0	5.8	1.00
6/17/10 9:54	118.4	118.5	28	25	0	6.1	1.00
6/17/10 10:09	118.0	118.1	34	30	0	7.4	1.00
6/17/10 10:24	117.7	117.8	25	24	0	5.6	1.00
6/17/10 10:39	117.5	117.6	25	24	0	5.7	1.00
6/17/10 10:54	117.2	117.3	27	24	0	5.8	1.00
6/17/10 11:09	117.4	117.5	27	24	0	5.8	1.00
6/17/10 11:24	117.1	117.2	27	24	0	5.7	1.00
6/17/10 11:39	117.0	117.2	32	29	0	6.9	1.00
6/17/10 11:54	116.9	117.0	35	27	9	6.9	0.98
6/17/10 12:09	117.1	117.3	27	23	0	5.7	1.00
6/17/10 12:24	116.9	117.0	28	24	2	5.9	1.00
6/17/10 12:39	116.7	116.9	28	23	1	5.8	1.00
6/17/10 12:54	116.8	117.0	26	23	0	5.6	1.00
6/17/10 13:09	116.5	116.6	26	23	0	5.6	1.00
6/17/10 13:24	116.5	116.6	28	25	0	6.0	1.00
6/17/10 13:39	116.9	117.0	29	27	0	6.4	0.99
6/17/10 13:45	116.8	116.9	29	27	0	6.4	1.00

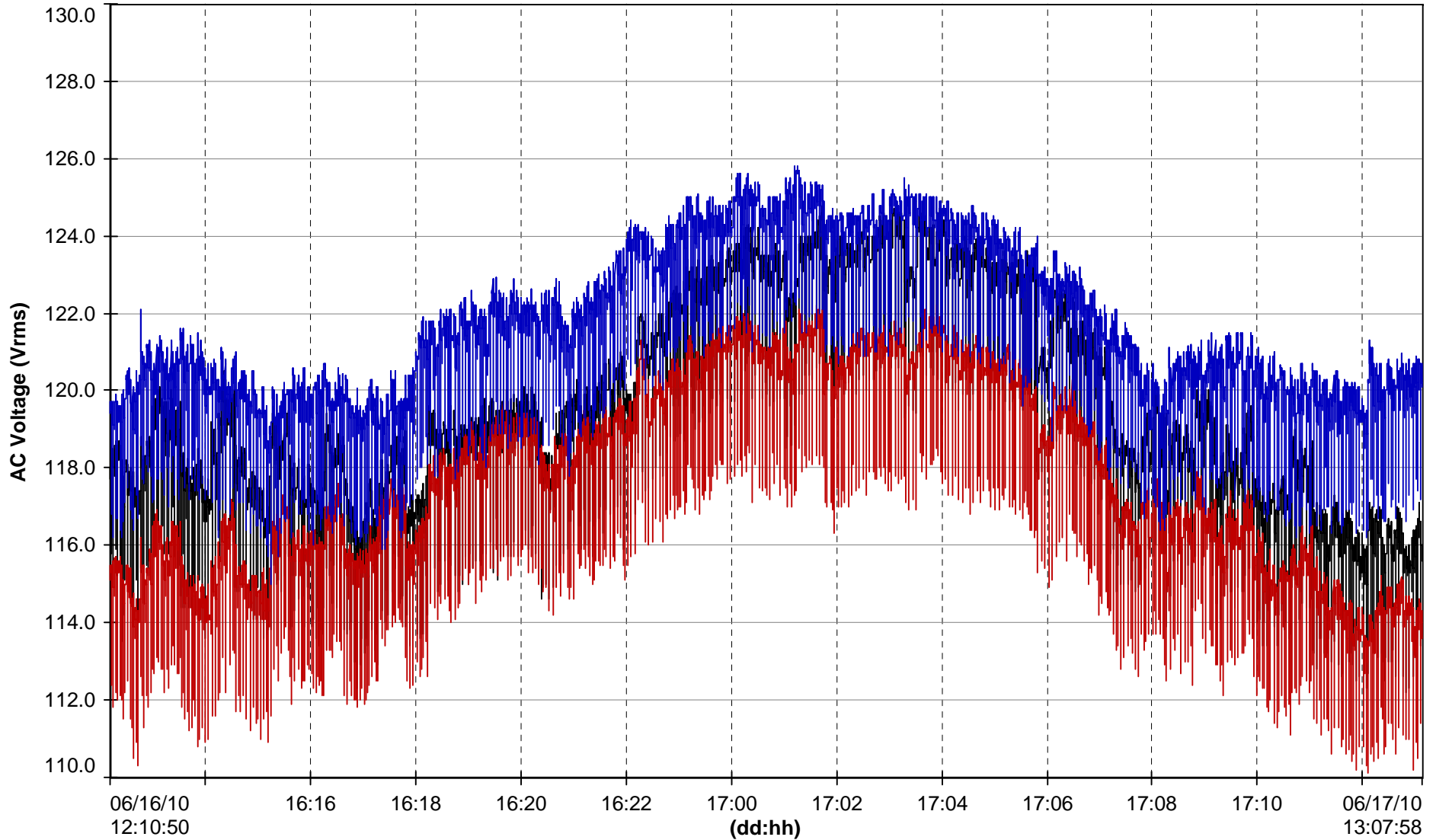


‘Old’ Joseph Sharp Elementary  
School’s Warehouse

*Electrical Load Study*  
*June 16 – 17, 2010*

Cherry Hill School District

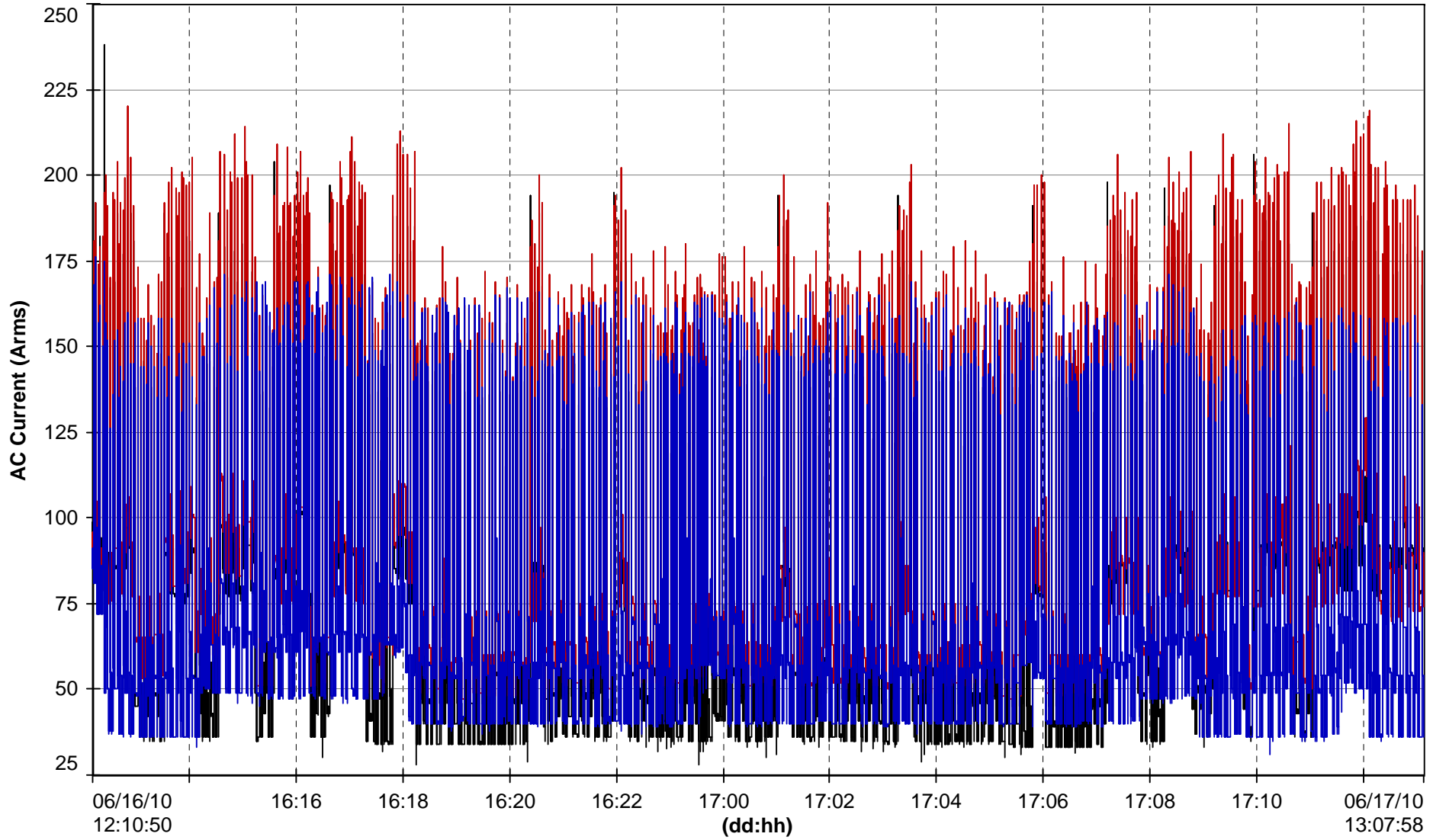
### Main Service Phase Voltage



	Maximum	Minimum	Average
— Va	124.9	112.2	119.8
— Vb	122.3	110.1	117.9
— Vc	125.9	114.9	121.8

### 'Old' Joseph Sharp Elementary School's Warehouse

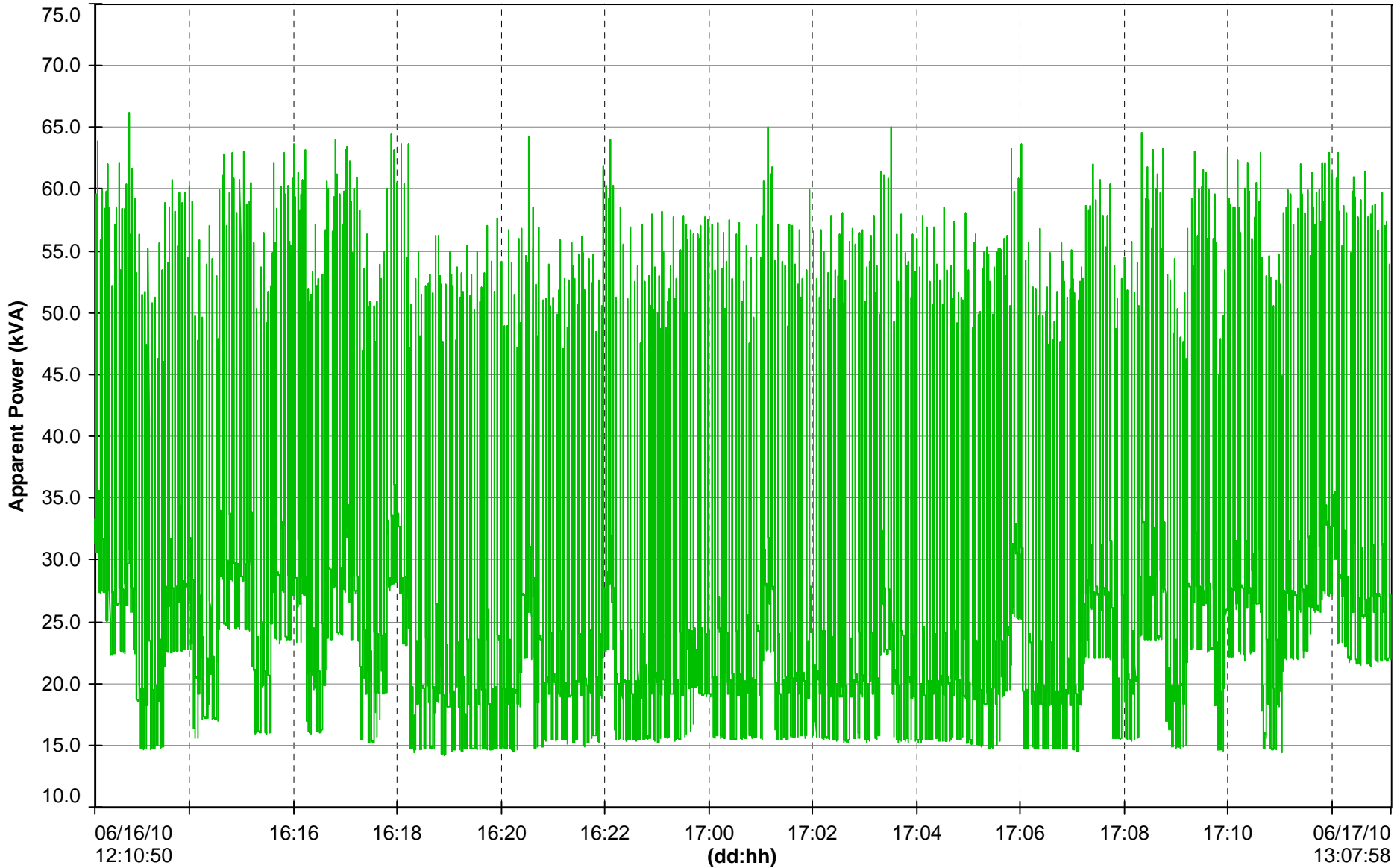
### Main Service Line Current



	Maximum	Minimum	Average
— la	240	28	60
— lb	220	46	72
— lc	176	31	55

### 'Old' Joseph Sharp Elementary School's Warehouse

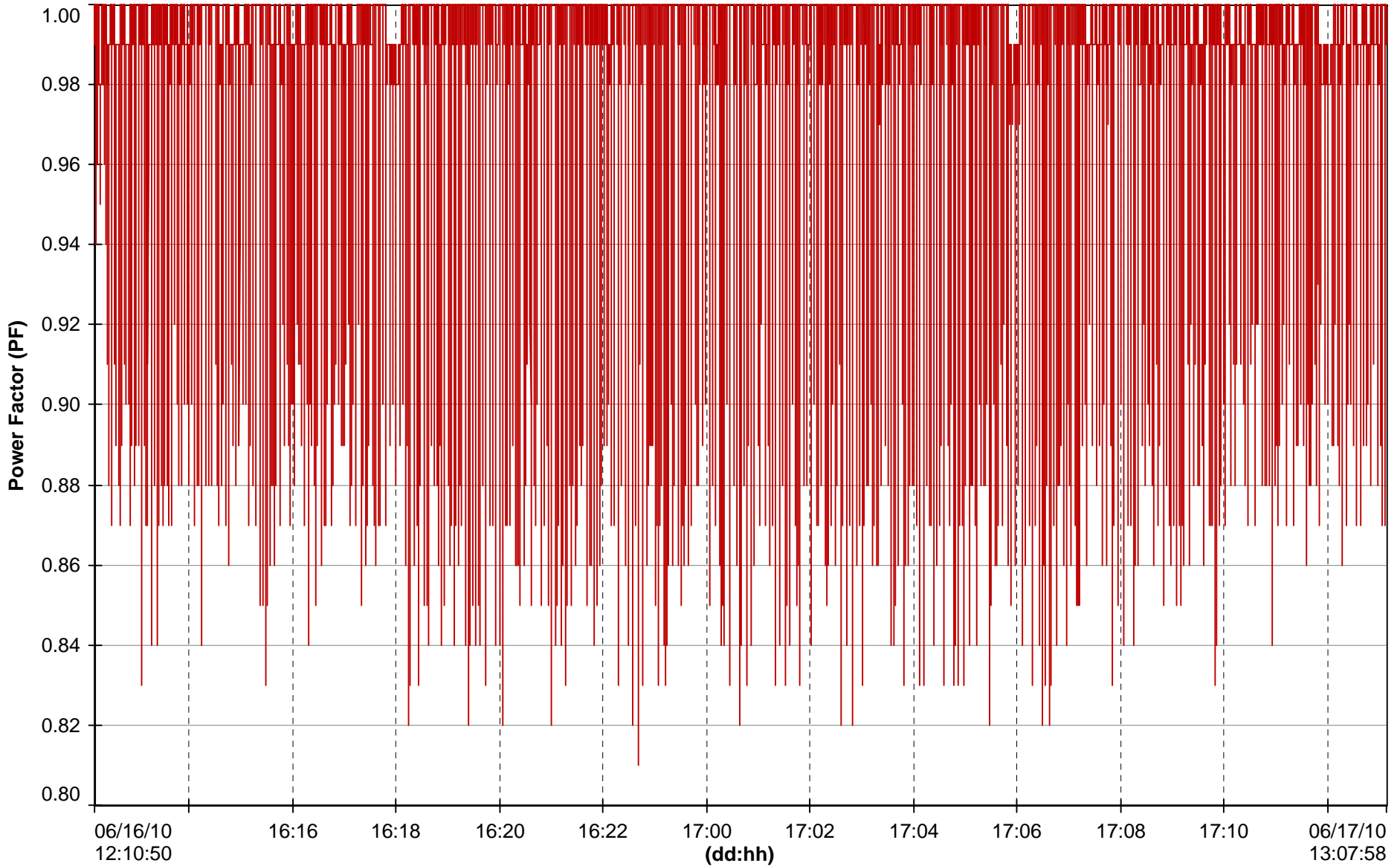
### Main Service Apparent Power



Maximum Minimum Average  
— kVA 66.2 13.9 22.2

### 'Old' Joseph Sharp Elementary School's Warehouse

### Main Service Power Factor



Maximum Minimum Average  
— PF 1.00 0.81 0.99

### 'Old' Joseph Sharp Elementary School's Warehouse

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/16/10 12:25	118.2	115.3	119.4	91	90	82	30.9	0.99
6/16/10 12:40	117.5	114.8	119.8	88	89	51	26.7	0.99
6/16/10 12:55	117.9	114.8	120.5	90	93	49	27.2	0.99
6/16/10 13:10	119.2	116.1	120.6	54	67	47	19.9	1.00
6/16/10 13:25	119.2	115.8	120.5	45	63	49	18.5	1.00
6/16/10 13:40	118.3	115.4	120.7	69	80	49	23.2	0.99
6/16/10 13:55	117.6	114.7	120.7	85	92	49	26.4	0.99
6/16/10 14:10	117.6	114.6	120.2	73	86	48	24.2	0.99
6/16/10 14:25	119.1	115.6	120.1	46	72	60	21.0	1.00
6/16/10 14:40	118.7	115.9	120.1	64	82	62	24.5	1.00
6/16/10 14:55	117.7	115.0	119.9	85	93	61	28.1	0.99
6/16/10 15:10	117.1	114.7	119.5	86	94	61	28.0	0.99
6/16/10 15:25	118.1	115.7	119.1	56	71	64	22.3	1.00
6/16/10 15:40	118.2	116.3	119.6	58	70	62	22.4	1.00
6/16/10 15:55	117.4	115.9	119.9	86	86	60	27.2	0.99
6/16/10 16:10	117.2	115.8	119.7	89	88	60	27.8	0.99
6/16/10 16:25	118.0	116.3	119.8	62	71	62	23.0	0.99
6/16/10 16:40	118.2	116.6	119.8	50	66	61	20.8	1.00
6/16/10 16:55	116.5	115.4	119.4	88	89	61	27.8	0.99
6/16/10 17:10	116.6	115.6	119.4	89	91	60	28.0	0.99
6/16/10 17:25	117.0	116.4	119.3	66	75	62	23.9	0.99
6/16/10 17:40	118.1	117.1	119.6	41	62	64	19.7	1.00
6/16/10 17:55	117.6	116.5	119.5	63	84	72	25.7	0.99
6/16/10 18:10	117.0	116.1	120.9	86	97	63	29.0	0.99
6/16/10 18:25	118.7	117.4	121.2	52	68	55	20.7	1.00
6/16/10 18:40	118.7	117.8	121.6	42	61	53	18.6	1.00
6/16/10 18:55	118.6	117.9	121.5	45	62	52	19.0	1.00
6/16/10 19:10	118.8	118.6	121.8	43	57	54	18.2	0.99
6/16/10 19:25	119.2	118.5	121.6	42	58	54	18.4	1.00
6/16/10 19:40	119.2	118.9	122.2	42	57	52	18.1	1.00
6/16/10 19:55	119.3	118.9	122.0	42	58	53	18.2	1.00
6/16/10 20:10	119.4	119.0	121.9	43	59	55	18.9	1.00
6/16/10 20:25	119.0	118.7	121.8	48	59	52	19.1	1.00
6/16/10 20:40	118.0	117.8	122.0	79	78	52	24.8	0.99
6/16/10 20:55	119.1	118.3	121.6	44	60	53	18.7	1.00
6/16/10 21:10	119.6	118.3	121.7	45	63	55	19.5	1.00
6/16/10 21:25	119.5	118.8	122.2	43	60	51	18.5	1.00
6/16/10 21:40	120.0	119.0	122.5	44	60	52	18.8	1.00
6/16/10 21:55	120.2	119.1	122.9	44	62	53	19.3	0.99
6/16/10 22:10	119.8	119.1	123.6	79	82	54	25.9	0.99
6/16/10 22:25	121.2	120.2	123.7	49	64	52	19.9	1.00
6/16/10 22:40	121.3	119.8	123.3	43	61	52	18.9	1.00
6/16/10 22:55	121.8	120.1	123.7	43	61	53	19.1	1.00
6/16/10 23:10	122.4	120.4	124.2	43	61	52	19.1	1.00
6/16/10 23:25	122.8	120.8	124.5	43	60	52	19.0	1.00
6/16/10 23:40	122.8	120.8	124.2	42	68	59	20.7	1.00
6/16/10 23:55	123.1	121.3	124.4	44	69	63	21.6	1.00
6/17/10 0:10	123.3	121.4	124.8	46	63	57	20.3	1.00
6/17/10 0:25	123.7	121.5	124.9	44	63	54	19.9	1.00
6/17/10 0:40	123.5	121.1	124.8	42	59	51	18.6	1.00

Load Study  
15-Minute Data Averages

Date / Time	Va	Vb	Vc	Ia	Ib	Ic	kVA	PF
6/17/10 0:55	123.2	121.0	124.6	43	60	52	19.0	1.00
6/17/10 1:10	122.6	120.8	124.7	64	72	55	23.3	0.99
6/17/10 1:25	123.2	121.3	125.1	59	68	52	21.9	0.99
6/17/10 1:40	123.7	121.6	124.9	43	60	51	18.9	1.00
6/17/10 1:55	123.5	120.9	124.4	44	61	53	19.4	1.00
6/17/10 2:10	123.4	120.5	124.2	47	66	53	20.3	1.00
6/17/10 2:25	123.5	120.9	124.3	43	60	52	18.9	1.00
6/17/10 2:40	123.7	121.2	124.4	43	58	51	18.7	1.00
6/17/10 2:55	124.0	121.3	124.5	42	59	51	18.6	1.00
6/17/10 3:10	124.2	121.2	124.6	43	61	53	19.3	1.00
6/17/10 3:25	123.4	120.8	124.7	63	72	53	23.0	0.99
6/17/10 3:40	123.6	121.1	124.6	58	68	51	21.7	0.99
6/17/10 3:55	123.9	121.7	124.7	42	57	51	18.5	1.00
6/17/10 4:10	123.8	121.2	124.4	44	61	54	19.5	0.99
6/17/10 4:25	123.4	120.9	124.1	42	60	51	18.7	1.00
6/17/10 4:40	123.4	120.8	124.2	42	59	50	18.4	1.00
6/17/10 4:55	123.4	120.8	124.0	43	61	53	19.1	1.00
6/17/10 5:10	123.0	120.5	123.9	44	59	53	19.1	1.00
6/17/10 5:25	123.1	120.6	123.7	41	55	50	17.8	0.99
6/17/10 5:40	123.0	120.2	123.2	41	65	59	20.1	1.00
6/17/10 5:55	121.9	119.2	123.0	61	81	65	24.9	0.99
6/17/10 6:10	121.1	119.0	122.7	61	70	55	22.5	0.99
6/17/10 6:25	121.9	119.4	122.6	43	60	55	19.0	0.99
6/17/10 6:40	121.5	119.3	122.6	41	58	51	18.1	1.00
6/17/10 6:55	121.2	118.9	122.1	40	56	51	17.7	1.00
6/17/10 7:10	120.6	118.1	121.6	42	59	52	18.3	1.00
6/17/10 7:25	119.0	117.0	121.2	75	80	54	24.8	0.99
6/17/10 7:40	118.3	116.6	121.0	82	82	51	25.4	0.99
6/17/10 7:55	118.2	116.5	120.3	64	71	57	22.6	1.00
6/17/10 8:10	119.1	116.9	119.7	48	63	60	20.2	1.00
6/17/10 8:25	118.4	116.3	119.7	67	75	59	23.8	0.99
6/17/10 8:40	118.5	116.6	120.4	86	85	60	27.2	0.99
6/17/10 8:55	118.7	116.8	120.5	69	75	59	24.0	0.99
6/17/10 9:10	119.3	116.7	120.5	45	63	49	18.6	1.00
6/17/10 9:25	117.8	115.9	120.5	83	86	50	25.8	0.99
6/17/10 9:40	118.1	116.5	120.9	87	89	50	26.6	0.99
6/17/10 9:55	118.6	116.7	120.7	56	66	47	20.0	1.00
6/17/10 10:10	117.1	115.6	120.3	86	86	51	26.0	0.99
6/17/10 10:25	117.0	115.0	120.2	88	90	50	26.6	0.99
6/17/10 10:40	117.1	115.0	120.1	87	90	49	26.3	0.99
6/17/10 10:55	118.1	115.6	119.8	45	61	49	18.3	1.00
6/17/10 11:10	117.1	115.4	119.8	67	75	51	22.5	0.99
6/17/10 11:25	116.3	114.5	119.7	88	87	50	26.0	0.99
6/17/10 11:40	116.3	114.5	119.7	86	92	54	27.0	0.99
6/17/10 11:55	116.1	113.8	119.7	89	104	62	29.5	0.99
6/17/10 12:10	115.8	113.8	119.6	95	106	55	29.6	0.99
6/17/10 12:25	116.3	114.1	120.1	88	92	51	26.7	0.99
6/17/10 12:40	116.0	114.4	120.0	88	84	51	25.9	0.99
6/17/10 12:55	115.8	114.4	120.1	87	83	48	25.3	0.99
6/17/10 13:07	116.0	113.9	120.2	88	86	49	25.9	0.99