

LBL--30401-Pt.2

DE92 000722

## **Integrated Estimation of Commercial Sector End-Use Load Shapes and Energy Use Intensities, Phase II**

*Final Report  
Appendices*

January 1991

Prepared for  
California Energy Commission  
and  
California Institute for Energy Efficiency

Prepared by  
Hashem Akbari, Leo Rainer, and Joseph Eto  
Energy Analysis Program  
Applied Science Division  
Lawrence Berkeley Laboratory  
University of California  
Berkeley, CA 94720

This report has been reproduced directly from the best available copy.

This research was sponsored by the California Energy Commission through the California Institute for Energy Efficiency (CEC Contract No. 300-88-004), and by the Assistant Secretary for Conservation and Renewable Energy, Office of Building and Community Systems of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

*[Signature]* **MASTER**  
DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

## Table of Contents

Title	Description	Page
-	Abstract .....	i
-	Executive Summary .....	ii
-	List of Tables .....	viii
-	List of Figures .....	x
Chapter I	Introduction .....	1
Chapter II	Methodology and Data.....	4
Chapter III	Prototype Building Descriptions and DOE-2 Building Simulations.....	14
Chapter IV	Whole-Building Load Shapes.....	34
Chapter V	Reconciling End-Use EUIs and Load Shapes .....	54
Chapter VI	Developing EUIs for the CEC Forecasting Model ...	97
Chapter VII	References .....	118

### **Appendices (under separate cover)**

Appendix A	Memo on Re-examination of Phase I EUIs for Large Office, Large Retail, and Small Retail and Replacement Tables for LBL-27512.....	1
Appendix B	DOE-2 BDL Prototype Input Files .....	22
Appendix C	Summaries of LRD.....	60
Appendix D	Results from Load-Temperature Regressions.....	79
Appendix E	THI Matrices for Cooling .....	96

**Appendix A. Memo on Re-examination of Phase I EUIs for Large Office, Large Retail, and Small Retail and Replacement Tables for LBL-27512**

**CEC EUI/LS Phase II Project**

Revised End Use EUIs and Load Shapes for:  
Large Office, Large Retail, and Small Retail

**Discussion Notes Prepared for CEC Review**  
(May 8, 1990)

One of the outstanding issues from the Phase I project was the validity of the resultant end-use EUIs and load shapes for small office, large office, large retail, and small retail buildings. Phase I resultant EUIs for these building categories were considered at variance compared to other utility data. The EUIs of the Phase I project was obtained from utility bills of a sample of 375 buildings in Southern California. The average whole-building electric EUIs calculated from the sample utility bills were different for these building types. A reanalysis of the end-use EUIs and LSs for these three buildings was postponed to Phase II (the current Phase) of the project.

As we have discussed in the Phase I Final Report, whole-building EUIs are "control" figures for the reconciliation process; they are used to estimate end-use EUIs and LSs subject to the condition that the total of all end-use EUIs for a building type would be the same as the controlling whole-building EUIs. The whole-building EUIs were calculated by weighting and averaging the electric bills for the on-site survey premises. Small sample sizes and uncertain weights may have led to whole-building EUIs for these building types that were different from other utility data sources.

In collaboration with CEC project staff, we have reviewed the available whole-buildings EUIs for these building categories in order to arrive at a set of acceptable whole-building EUIs for

the reconciliation process. These notes summarize our conclusions. We have also carried out the process of reconciliation for these buildings and obtained a new set of end-use EUIs and LSSs.

#### **Whole-Building EUIs**

As we have stated in our February 23, 1990 memo to CEC, several sources for whole-building EUIs were considered including: LBL analysis of the SCE 1985 mail survey, CEC analysis of the SCE 1988 mail survey, CEC analysis of SCE 1987 and 1988 QFER data, and SCE analysis of its 1988 accounts by SIC code (provided by Tim Tutt on February 22, 1990). The following whole-building EUIs were adopted:

Small Retail	12.2 kWh/sf
Large Retail	18.2 kWh/sf

Although, initially, it was planned to reanalyze the small office buildings, at the February 23 meeting, it was decided not to proceed with the reanalysis. This decision was based on additional data supporting the Phase I whole-building EUI for small offices.

For large offices, LBL was charged to review the available data and prepare a memo proposing whole-building EUIs. This note is intended to replace that memo.

Available Data. SCE analysis of 1988 accounts (S1) estimates a whole-building EUI for large offices of 19.8 kWh/sf. (S1 also estimates a whole-building EUI for small offices of 12.6 kWh/sf; we will use this data later on to justify our conclusions.) CEC estimates whole-building EUIs for all offices from 1986 (S2) and 1987 (S3) data of 16.2 and 16.5 kWh/sf, respectively. CEC

preliminary analysis of 1988 SCE mail data (S4) has resulted in a whole-building EUI for large offices of 11.0 kWh/sf. (S4 also estimates a whole-building EUI for small offices of 15.9 kWh/sf; we will use this data later on to justify our conclusions.) The following table summarizes these data sources

Code	Description	Large Offices	Small Offices	All Offices
S1	SCE 1988 accounts	19.8	12.6	
S2	CEC 1986 analysis			16.2
S3	CEC 1987 analysis			16.5
S4	CEC 1988 analysis	11.0	15.9	

Review and Recommendation. If we calculate the whole-building EUIs for all office buildings from S1 and S4, using the estimates of floor areas for large offices (241 Msf) and small offices (125 Msf) in the SCE service area, the resulting EUIs will be 17.4 and 12.7 kWh/sf. A quick comparison of all-office EUIs from these sources indicate that difference between S1, S2, and S3 are less than 7%. However, the difference between S4 and all other sources is 20% - 27%. (S1 is used as the basis for estimating percent differences.)

To understand these differences better, we reviewed the S4 data in further details. Cumulative frequency plot of the floor areas for large offices in this data set indicated that close to 35% of records are buildings with less than 10,000 sf; 25% are less than 6,500 sf; and 50% less than 23,000 sf (See **Figure 1**). There appears to be some errors in the data base which need to be filtered. Cumulative frequency plots for the EUIs also indicated that about 25% of large offices have EUIs less than 6 kWh/sf and about 10% have unusually large EUIs (> 50 kWh/sf).

To preliminary check the impact of these possible data errors on EUIs, we **arbitrarily** dropped the lower and upper 25% of the data points and noticed that the average EUI increased to 14.6 kWh/sf. A step in the right direction!

In summary, it is obvious that data source S4 needs to be cleaned up and cannot be considered as reliable. Also, the differences between S1, S2, and S3 are fairly minimal. Therefore, to be consistent with sources for small and large retail whole-building EUIs, **we propose using S1, EUI = 19.8 kWh/sf, as the controlling whole-building EUI for reconciliation process.**

### Results

We applied the EDA, discussed in detail in Phase I final report, to obtain individual end use EUIs and LSs. Since, the whole building EUIs reflect the energy intensity of the entire SCE service area, we needed to adjust these EUIs to estimate EUIs for each climate zones. We used adjustment factors derived from DOE-2 simulations as discussed in Phase I final report. The adjustment factors by climate zones are:

Building Type	LAX	BUR	NOR
Large Office	0.95	1.00	1.06
Large Retail	0.97	0.99	1.06
Small Retail	0.96	0.99	1.06

The adjusted whole-building EUIs are then used to estimate end-use EUIs and load shapes. **Table 1** summarizes the 'new' end-use EUIs and compares them with those report in Phase I report ('old'). The annual average daily load shapes for standard and non-standard days for these building types are estimated and

plotted on **Figures 2(a&b)** for large offices, **Figures 3(a&b)** for large retails, and **Figures 4(a&b)** for small retails.

Upon CEC's review and approval of the 'new' EUIs and load shapes, we will calculate THI matrixes for these building types and transfer the data electronically to CEC.

**Table 1. Reconciled Electricity EUIs ( $\text{kWh}/\text{ft}^2\text{-yr}$ ) for Large Offices, Large Retail, and Small Retail for Climate Zone 1 (LAX), Zone 2 (BUR) and Zone 3 (NOR). A comparison of 'new' and 'old' EUIs.**

	Indoor Lighting	Outdoor Lighting	Misc. Equip.	Refrig.	Cooking	Heating	Ventilation <sup>1</sup>	Cooling <sup>1</sup>	Total
Large Office <b>(old)</b>	11.93	2.11	4.28	0.10	0.00	0.16	3.09	3.93	24.54 LAX
<b>(new)</b>	9.05	1.61	3.21	0.10	0.00	0.12	2.45	3.01	25.94 BUR
Small Retail <b>(old)</b>	7.49	1.59	1.48	0.95	0.01	0.04	2.72	5.11	27.58 NOR
<b>(new)</b>	4.71	1.36	0.91	0.94	0.01	0.03	1.67	5.45	18.75 LAX
Large Retail <b>(old)</b>	12.21	1.47	1.12	0.61	0.19	0.02	1.82	2.04	19.82 BUR
<b>(new)</b>	9.44	1.14	0.87	0.61	0.17	0.02	1.17	1.26	21.07 NOR

1. Cooling and ventilation EUIs were estimated separately for the Coastal region (represented by Los Angeles Airport weather), the Inland region (represented by Hollywood-Burbank Airport weather), and the Desert region (represented by Norton Air Force Base weather), in descending order.

**Table 1. Reconciled Electricity EUIs ( $\text{kWh}/\text{ft}^2\text{-yr}$ ) for Large Offices, Large Retails, and Small Retails for Climate Zone 1 (LAX), Zone 2 (BUR) and Zone 3 (NOR). A comparison of 'new' and 'old' EUIs.**

	Indoor Lighting	Outdoor Lighting	Misc. Equip.	Refrig.	Cooking	Heating	Water	Ventilation <sup>1</sup>	Cooling <sup>1</sup>	Total
Large Office (old)	11.93	2.11	4.28	0.10	0.00	0.16	3.09	3.93	24.54	LAX
(new)	8.67	1.44	3.06	0.10	0.00	0.12	2.45	3.01	25.94	BUR
	9.18	1.66	3.26	0.09	0.00	0.12	2.60	3.00	27.58	NOR
	9.29	1.72	3.32	0.10	0.00	0.13	2.72	3.91	18.75	LAX
Avg.	9.05	1.61	3.21	0.10	0.00	0.12			19.82	BUR
									21.07	NOR
Small Retail (old)	7.49	1.59	1.48	0.95	0.01	0.04	1.67	5.45	17.21	LAX
(new)	5.12	1.52	1.01	0.95	0.01	0.03	1.82	6.54	17.40	BUR
	4.88	1.43	0.95	0.94	0.01	0.03	1.26	4.40	11.97	NOR
	4.12	1.14	0.78	0.93	0.01	0.02	1.43	7.57	12.94	LAX
Avg.	4.71	1.36	0.91	0.94	0.01	0.03			18.81	BUR
										NOR
Large Retail (old)	12.21	1.47	1.12	0.61	0.19	0.02	3.41	5.79	22.50	LAX
(new)	9.25	1.08	0.85	0.61	0.17	0.02	2.65	4.94	22.76	BUR
	9.70	1.12	0.89	0.61	0.17	0.02	2.88	7.65	24.48	NOR
	9.37	1.21	0.87	0.61	0.18	0.02	2.81	3.86	17.84	LAX
Avg.	9.44	1.14	0.87	0.61	0.17	0.02		5.97	19.19	BUR
										NOR

1. Cooling and ventilation EUIs were estimated separately for the Coastal region (represented by Los Angeles Airport weather), the Inland region (represented by Hollywood-Burbank Airport weather), and the Desert region (represented by Norton Air Force Base weather), in descending order.

# 'Igoff'

## 'StandardDayLoadShapes'

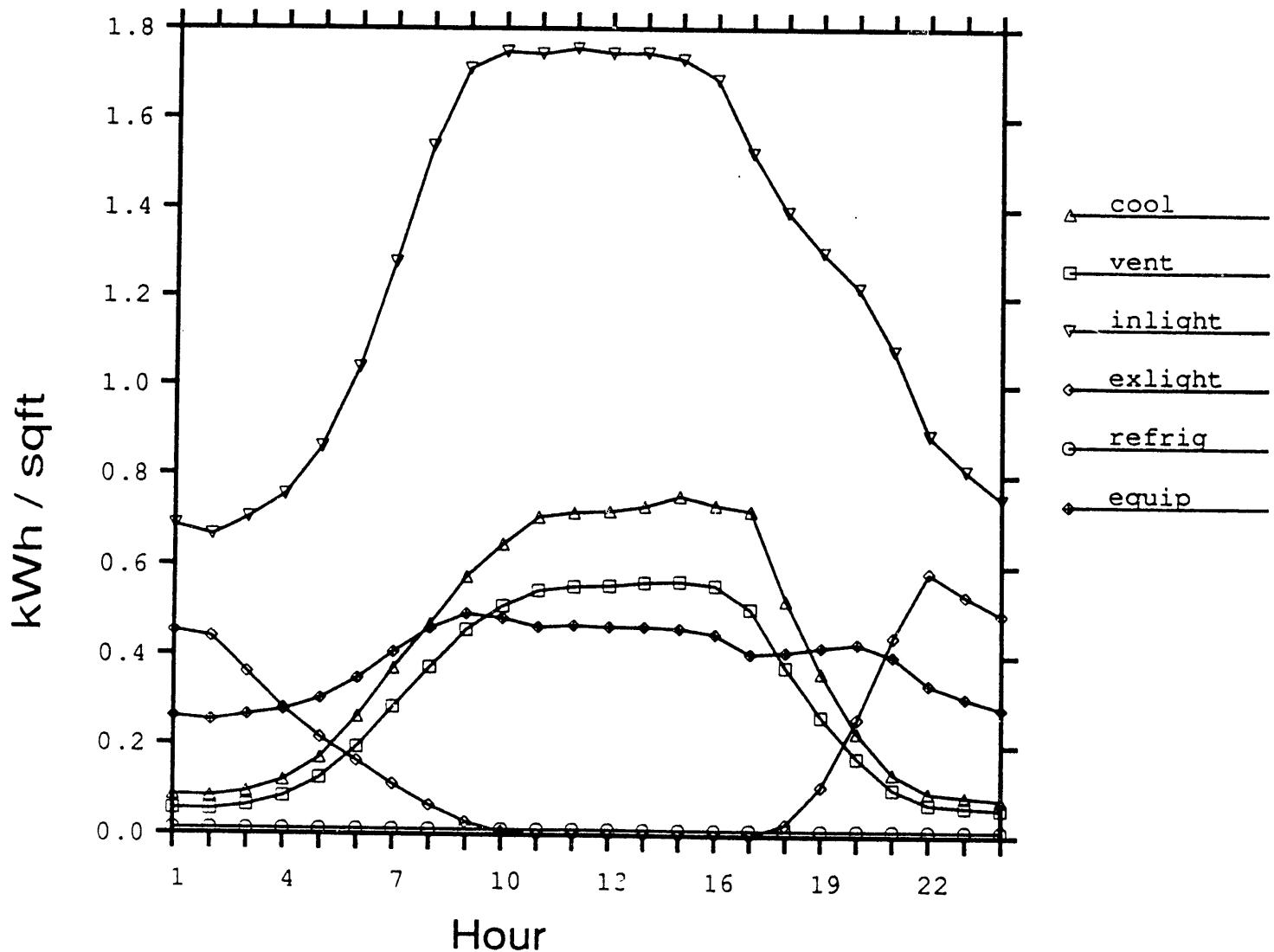


Fig 2b

## 'Igoff'

### 'NonstandardDayLoadShapes'

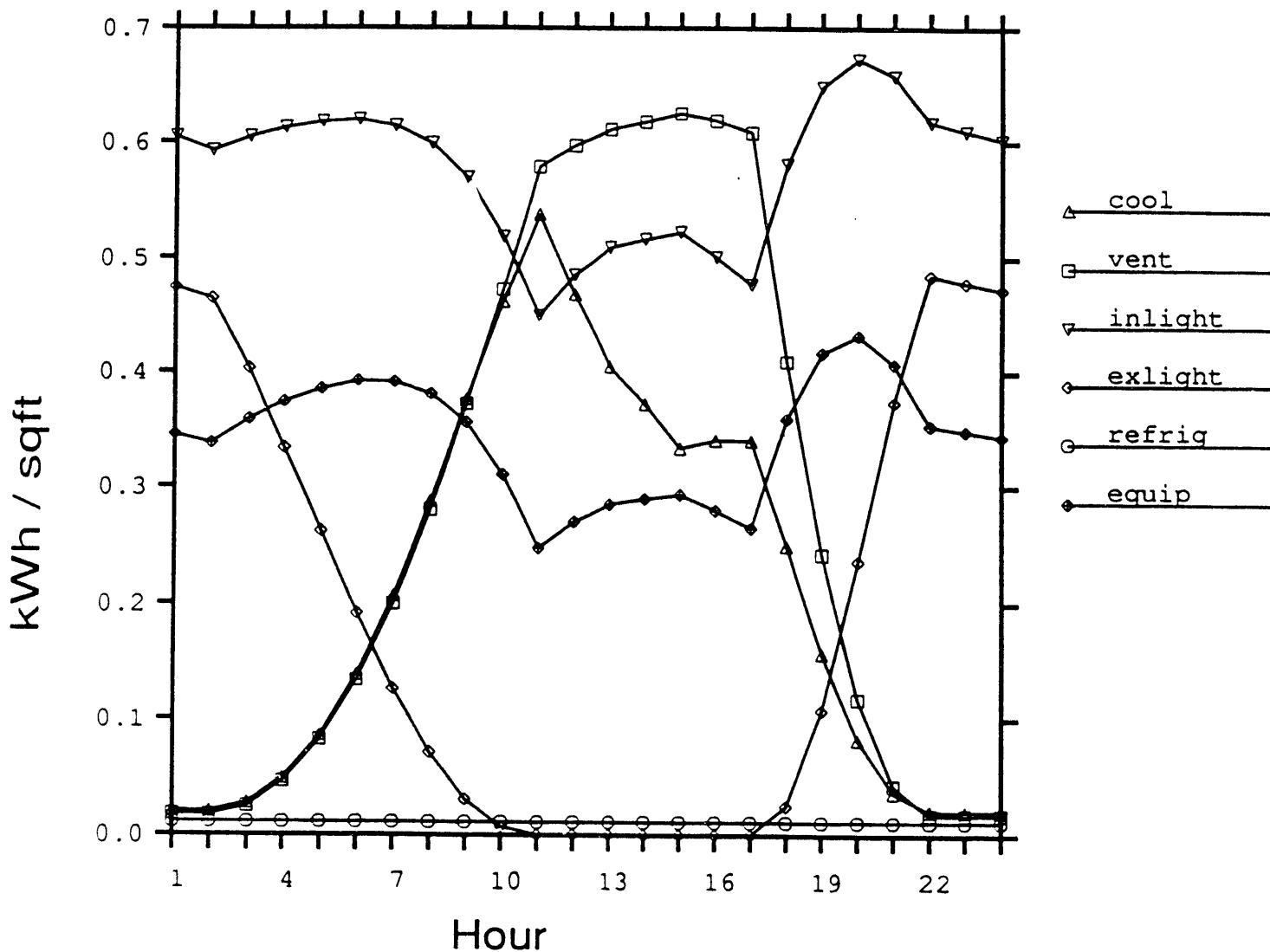


Fig 3a

## 'Igret' 'StandardDayLoadShapes'

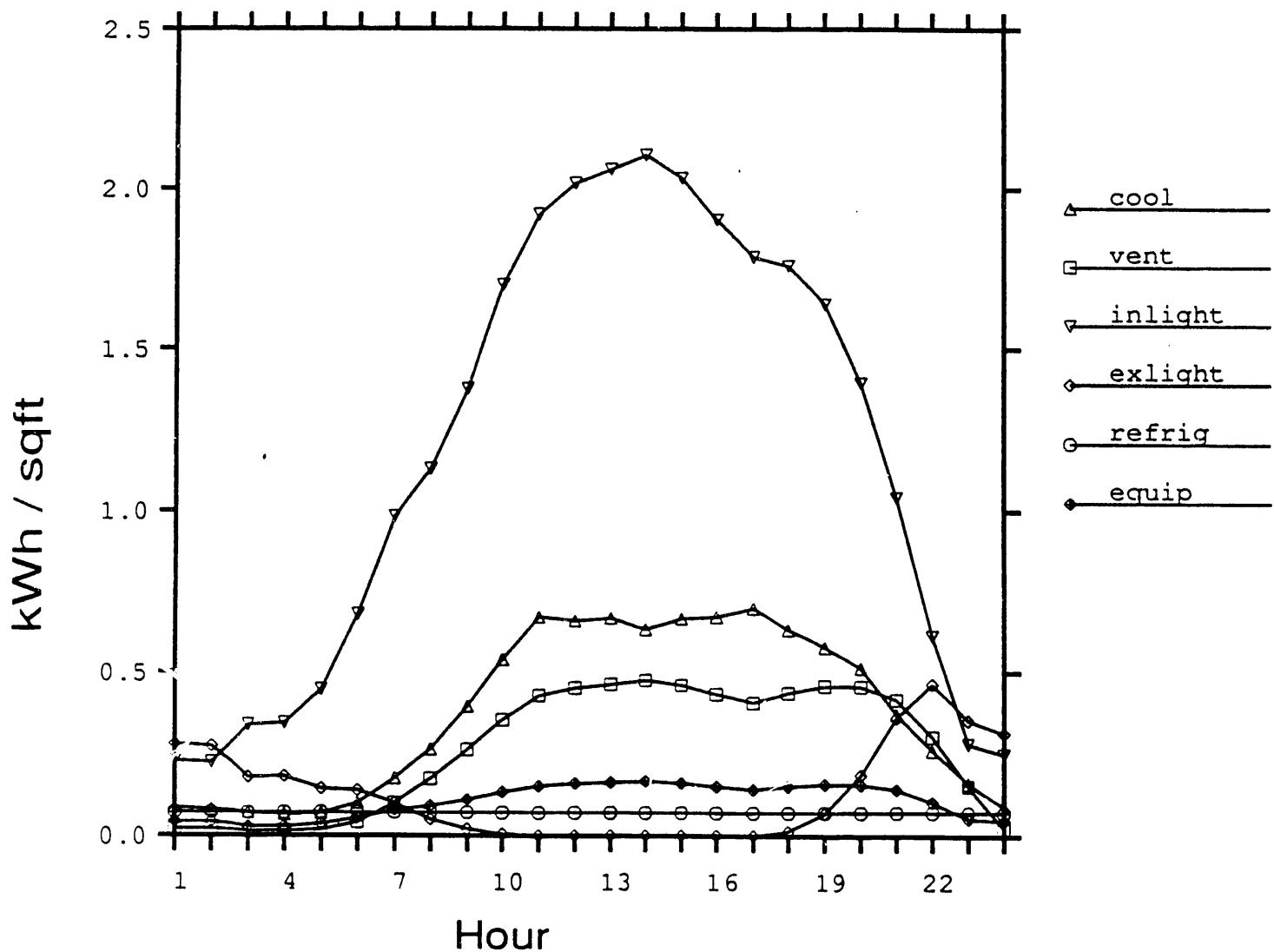


Fig 3 b

## 'Igret'

### 'NonstandardDayLoadShapes'

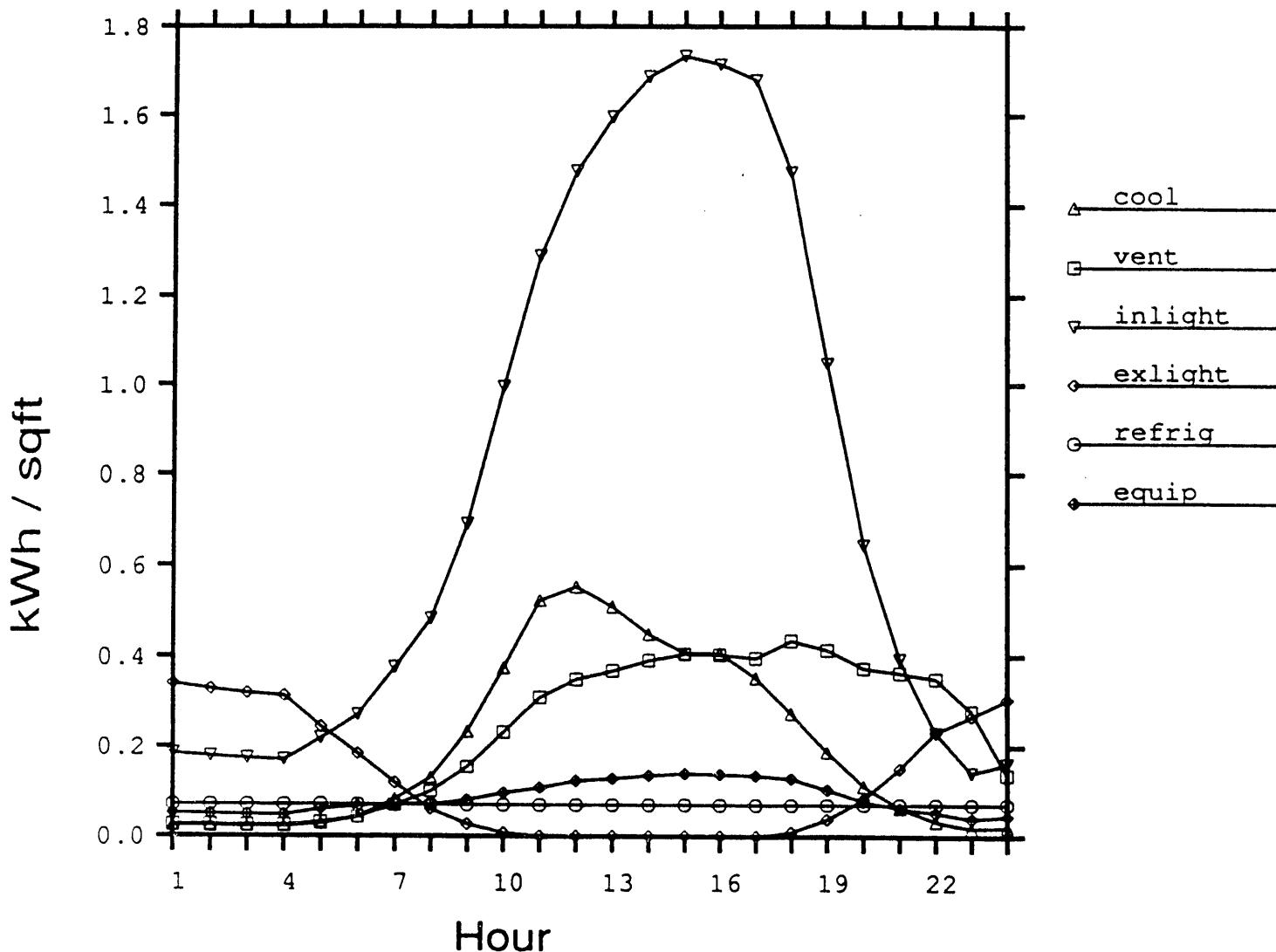


Fig 4a

## 'smret'

### 'StandardDayLoadShapes'

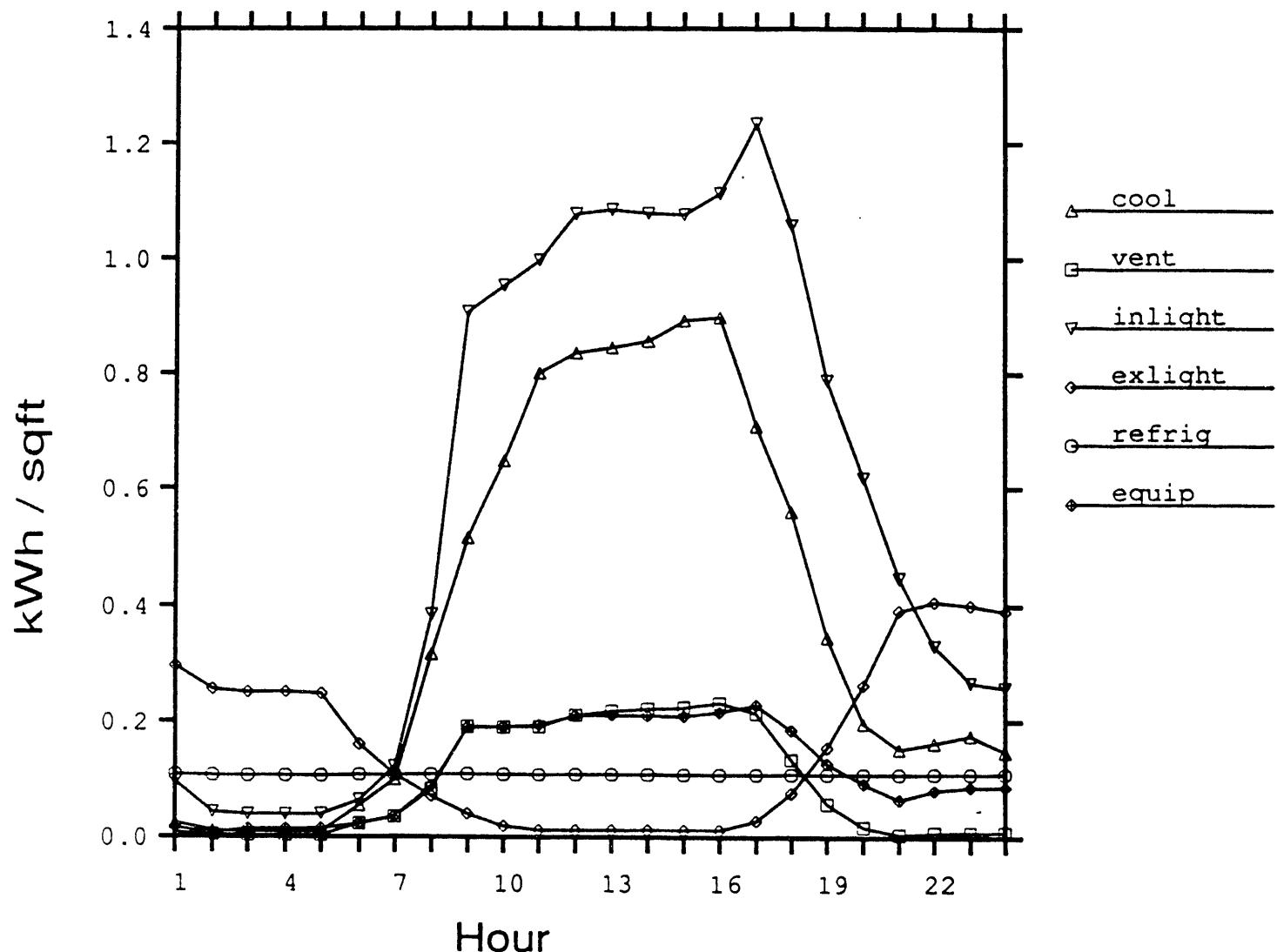
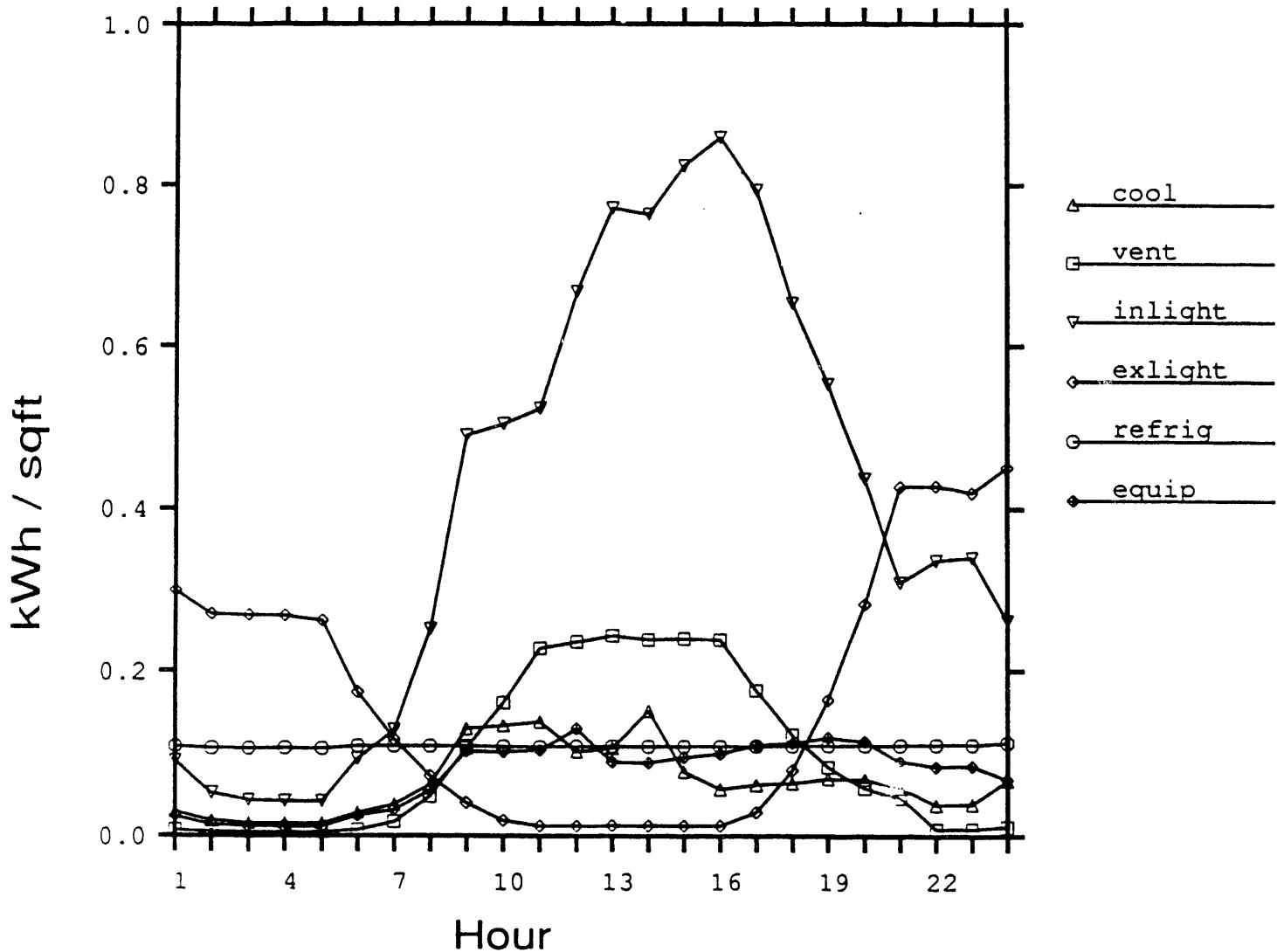


Fig 4b

# 'smret'

## 'NonstandardDayLoadShapes'



## **Guide to the Replacement Tables for LBL-27512 rev.**

The following pages contain revised tables for the Phase I report, LBL-27512 rev. These tables are intended to be wholly substituted for those in the Phase I report. That is the table numbering corresponds exactly to that used in the Phase I report.

There are four replacement tables:

1. Table VIII-30 contains new reconciled cooling EUIs for large office, small retail, and large retail (based on the re-analysis reported in this Appendix). In addition, all U75 values have been re-expressed in kBtu/sqft.
2. Table VIII-31 contains new values for non-electric heating U75s for food store, non-refrigerated warehouse, and restaurant. This corrects a calculation error in the Pcontainse I report.
3. Table VIII-32 contains new reconciled ventilation EUIs for large office, small retail, and large retail (based on the re-analysis reported in this Appendix).
4. Table VIII-33 contains new reconciled indoor lighting, outdoor lighting, miscellaneous equipment, refrigeration, cooking, and water heating EUIs for large office, small retail, and large retail (based on the re-analysis reported in this Appendix).

**Table VIII-30. Cooling EUIs for 1975 and 1980 Vintages**  
 (changes from original in boldface)

	Recon EUI	Load <sub>Proto</sub> EUI <sub>Proto</sub> <sup>1</sup>	Load <sub>1975</sub> Load <sub>Proto</sub> <sup>2</sup>	Fuel Type	1975 EUI <sup>3,4</sup>	Load <sub>1980</sub> Load <sub>1975</sub> <sup>5</sup>
Sm Off LAX	2.77	2.48	0.94	Elec.	<b>6.76</b>	0.91
				Gas	<b>57.01</b>	
				Other	<b>37.40</b>	
Sm Off BUR	5.80	2.36	0.98	Elec.	<b>14.02</b>	0.84
				Gas	<b>118.16</b>	
				Other	<b>77.49</b>	
Sm Off NOR	8.92	2.19	0.97	Elec.	<b>19.86</b>	0.92
				Gas	<b>167.36</b>	
				Other	<b>109.76</b>	
Lg Off LAX	<b>3.01</b>	3.48	1.98	Elec.	<b>21.71</b>	0.38
				Gas	<b>182.86</b>	
				Other	<b>119.94</b>	
Lg Off BUR	<b>3.00</b>	3.41	1.82	Elec.	<b>19.49</b>	0.40
				Gas	<b>164.15</b>	
				Other	<b>107.67</b>	
Lg Off NOR	<b>3.91</b>	3.22	1.72	Elec.	<b>22.66</b>	0.47
				Gas	<b>190.92</b>	
				Other	<b>125.23</b>	
Sm Ret LAX	<b>3.68</b>	2.51	0.92	Elec.	<b>8.97</b>	0.97
				Gas	<b>62.62</b>	
				Other	<b>49.14</b>	
Sm Ret BUR	<b>4.40</b>	2.38	0.94	Elec.	<b>10.39</b>	0.87
				Gas	<b>72.54</b>	
				Other	<b>56.93</b>	
Sm Ret NOR	<b>7.57</b>	2.21	0.95	Elec.	<b>16.77</b>	0.90
				Gas	<b>117.12</b>	
				Other	<b>91.91</b>	
Lg Ret LAX	<b>4.52</b>	2.80	1.17	Elec.	<b>15.63</b>	0.75
				Gas	<b>109.12</b>	
				Other	<b>85.63</b>	
Lg Ret BUR	<b>3.86</b>	2.72	1.18	Elec.	<b>13.07</b>	0.72
				Gas	<b>91.30</b>	
				Other	<b>71.65</b>	
Lg Ret NOR	<b>5.97</b>	2.59	1.13	Elec.	<b>18.44</b>	0.84
				Gas	<b>128.76</b>	
				Other	<b>101.04</b>	

**Table VIII-30. Cooling EUIs cont.<sup>6</sup>**  
 (changes from original in boldface)

	Recon EUI	Load <sub>Proto</sub> / <sup>1</sup> EUI <sub>Proto</sub>	Load <sub>1975</sub> / <sup>2</sup> Load <sub>Proto</sub>	Fuel Type	1975 EUI <sup>3,4</sup>	Load <sub>1980</sub> / <sup>5</sup> Load <sub>1975</sub>			
NonRef Ware	LAX	1.16	2.56	0.85 <sup>5</sup> 0.96 <sup>5</sup>	Elec.	<b>2.87</b>			
					Gas	<b>18.19</b>			
					Other	<b>13.96</b>			
	BUR				Elec.	<b>3.04</b>			
					Gas	<b>19.24</b>			
					Other	<b>14.77</b>			
	NOR				Elec.	<b>3.07</b>			
					Gas	<b>19.65</b>			
					Other	<b>15.08</b>			
Ref Ware	LAX	2.82	2.27	0.97 0.79	Elec.	<b>5.77</b>			
					Gas	<b>36.71</b>			
					Other	<b>28.18</b>			
	BUR				Elec.	<b>6.24</b>			
					Gas	<b>39.75</b>			
					Other	<b>30.50</b>			
	NOR				Elec.	<b>8.73</b>			
					Gas	<b>55.65</b>			
					Other	<b>42.72</b>			
Restaurant	LAX	12.25	2.55	0.88 0.94	Elec.	<b>24.57</b>			
					Gas	<b>177.01</b>			
					Other	<b>149.55</b>			
	BUR				Elec.	<b>24.57</b>			
					Gas	<b>177.01</b>			
					Other	<b>149.55</b>			
	NOR				Elec.	<b>30.03</b>			
					Gas	<b>216.32</b>			
					Other	<b>182.78</b>			

### **Notes for Table VIII-30**

1. Developed from DOE-2 simulations of the NELDIG prototype.
2. Developed using an additional simulation of the prototype modified for the 1975 vintage.
3. Calculated using CEC weighted average energy conversion efficiencies by fuel type: electricity, gas, and other.
4. **Converted to kBtu/ft<sup>2</sup>/yr using a conversion factor of 3.412 kBtu/kWh.**
5. Because reconciliation was not performed separately for each climate region, climate variation is introduced by multiplying the 1975 EUI (one column to the right and above) by this ratio, which was developed using additional DOE-2 simulations of the prototype in each climate region.
6. Food stores showed no cooling load in the simulations of the NELDIG prototype; consequently, all temperature-sensitive load was assigned to refrigeration, and the cooling EUI was set to zero.

**Table VIII-31. Heating EUIs cont.<sup>5</sup>**  
 (changes to original in **boldface**)

	NELDIG EUI	Load <sub>EUI<sub>Proto</sub></sub> / EUI <sub>Proto</sub>	Load <sub>1975</sub> / <sup>1</sup> Load <sub>Proto</sub>	Fuel Type	1975 EUI	Load <sub>1980</sub> / <sup>3</sup> Load <sub>1975</sub>
Food Store LAX <sup>4</sup>	2.44	0.74	1.17			
			1.00	Elec.	3.90	1.00
				Gas	<b>10.93</b>	
	BUR		1.00	Other	<b>10.93</b>	
				Elec.	3.90	1.00
				Gas	<b>10.93</b>	
	NOR		1.00	Other	<b>10.93</b>	
				Elec.	3.90	1.00
				Gas	<b>10.93</b>	
NonRef Ware LAX	1.48	0.74	0.91	Other	<b>10.93</b>	
			1.00	Elec.	1.02	1.00
				Gas	<b>1.58</b>	
	BUR		1.00	Other	<b>1.58</b>	
				Elec.	1.02	1.00
				Gas	<b>1.58</b>	
	NOR		1.00	Other	<b>1.58</b>	
				Elec.	1.02	1.00
				Gas	<b>1.58</b>	
Restaurant LAX	5.47	0.74	1.58	Other	<b>1.58</b>	
			0.99	Elec.	6.92	1.02
				Gas	<b>11.36</b>	
	BUR		1.00	Other	<b>11.36</b>	
				Elec.	6.94	1.08
				Gas	<b>11.39</b>	
	NOR		1.01	Other	<b>11.39</b>	
				Elec.	6.98	1.05
				Gas	<b>11.45</b>	
				Other	<b>11.45</b>	

**Table VIII-32. Ventilation EUIs for 1975 and 1980 Vintages**  
 (changes to original in **boldface**)

	Reconciled EUI	1975/ <sup>1</sup> Prototype	1975 EUI (kWh/ft <sup>2</sup> /yr)	1975 EUI (kBtu/ft <sup>2</sup> /yr)	1980/ <sup>2</sup> 1975
Small Office LAX	0.97	0.93	0.90	3.08	1.02
Small Office BUR	1.38	0.97	1.34	4.58	0.97
Small Office NOR	1.23	0.98	1.20	4.09	0.98
Large Office LAX	<b>2.45</b>	1.52	<b>3.72</b>	<b>12.71</b>	0.36
Large Office BUR	<b>2.60</b>	1.49	<b>3.87</b>	<b>13.22</b>	0.37
Large Office NOR	<b>2.72</b>	1.47	<b>4.00</b>	<b>13.64</b>	0.38
Small Retail LAX	<b>1.17</b>	0.92	<b>1.08</b>	<b>3.67</b>	1.04
Small Retail BUR	<b>1.26</b>	0.94	<b>1.18</b>	<b>4.04</b>	1.01
Small Retail NOR	<b>1.43</b>	0.95	<b>1.36</b>	<b>4.64</b>	1.02
Large Retail LAX	<b>2.65</b>	1.05	<b>2.78</b>	<b>9.49</b>	0.97
Large Retail BUR	<b>2.88</b>	1.05	<b>3.02</b>	<b>10.32</b>	0.96
Large Retail NOR	<b>2.81</b>	1.05	<b>2.95</b>	<b>10.07</b>	0.96

1. Based on DOE-2 simulations of the NELDIG prototype and a prototype modified for the 1975 vintage.
2. Based on DOE-2 simulations of the 1975 vintage prototype and a prototype modified for the 1980 vintage.

**Table VIII-33. Electric Non-HVAC EUIs for 1975 Vintage**  
 (changes to original in **boldface**)

	In Light	Ex Light	Misc Eq	Refrig	Cook	Water Ht
<b>Reconciled EUIs (kWh/ft<sup>2</sup>)</b>						
Small Office	5.47	1.24	3.59	0.23	0.04	0.12
Large Office	<b>9.05</b>	<b>1.61</b>	<b>3.21</b>	<b>0.10</b>	<b>0.00</b>	<b>0.12</b>
Small Retail	<b>4.71</b>	<b>1.36</b>	<b>0.91</b>	<b>0.94</b>	<b>0.01</b>	<b>0.03</b>
Large Retail	<b>9.44</b>	<b>1.14</b>	<b>0.87</b>	<b>0.61</b>	<b>0.17</b>	<b>0.02</b>
Food Store	11.96	2.01	1.77	23.17	0.24	0.03
Ref Ware	3.02	0.55	6.24	11.34	0.01	0.17
NonRef Ware	3.38	0.17	0.70	0.41	0.00	0.03
Restaurant	7.94	4.09	4.89	10.78	4.46	0.03
Saturation from on-site survey and sampling weights (%) <sup>1</sup>						
Small Office	1.00	1.00	1.00	0.77	0.16	0.42
Large Office	1.00	1.00	1.00	0.81	0.43	0.28
Small Retail	1.00	1.00	1.00	0.79	0.10	0.26
Large Retail	1.00	1.00	1.00	0.99	0.56	0.14
Food Store	1.00	1.00	1.00	1.00	0.27	0.13
Ref Ware	1.00	1.00	1.00	1.00	0.66	0.73
NonRef Ware	1.00	1.00	1.00	0.83	0.00	0.76
Restaurant	1.00	1.00	1.00	1.00	0.90	0.02
1975 EUIs (kBtu/ft <sup>2</sup> ) <sup>2</sup>						
Small Office	19.95	4.51	7.84	1.10	1.03	1.05
Large Office	<b>33.04</b>	<b>5.88</b>	<b>7.01</b>	<b>0.45</b>	<b>0.00</b>	<b>1.56</b>
Small Retail	<b>17.20</b>	<b>4.97</b>	<b>2.51</b>	<b>4.34</b>	<b>0.37</b>	<b>0.42</b>
Large Retail	<b>34.46</b>	<b>4.16</b>	<b>2.40</b>	<b>2.25</b>	<b>1.11</b>	<b>0.52</b>
Food Store	43.66	7.34	4.86	84.59	3.27	0.84
Ref Ware	11.03	2.01	17.14	41.40	0.06	0.86
NonRef Ware	12.34	0.62	1.92	1.81	0.00	0.14
Restaurant	28.99	14.93	13.43	39.36	18.11	6.44

- Developed on a total floor area basis using the on-site survey and the same weighting factors used for prototype development.
- Developed using CEC short-run price elasticities and SCE historic prices and, for miscellaneous equipment only, a CEC technology growth adjustment factor. For all end uses but miscellaneous equipment, the price effect increases the reconciled EUIs by 7%. For office miscellaneous equipment, the combined effect reduces the miscellaneous equipment EUI by 36%; for all other building types, the combined effect reduces the miscellaneous equipment EUI by 19%.

## **Appendix B. DOE-2 BDL Prototype Input Files**

/user2/bed/lirsce/DOE2/Proto/college.inp

Tue Jan 29 01:55:39 1991 1

/user2/bed/lirsce/DOE2/Proto/college.inp

Tue Jan 29 01:55:39 1991 2

STRUCTURE CLASS-TYPE: PLATE  
SHADING-COFF: 0.4  
GLASS-CONDUCTANCE: 1.0218  
..

\$ DEFAULT CONSTRUCTIONS \$

SET-DEFAULT FOR EXTERIOR-WALL  
CONSTRUCTION = WALL-1  
HEIGHT = 10.  
..

SET-DEFAULT FOR WINDOW  
GLASS-TYPE = SINGLE  
..

\$ GENERAL SPACE CHARACTERISTICS \$

CLASS-ROOM SPACE-CONDITIONS  
TEMPERATURE = (74)  
P-SCH = OCC-CLASS  
P-H-S = 230  
P-H-L = 190  
L-SCH = LIGHT-CLASS  
L-T = SUS-FLOOR L-W = 2.0  
FLOOR-WEIGHT = 70  
Z-TYPE = CONDITIONED  
..

OFFICE SPACE-CONDITIONS  
TEMPERATURE = (74)  
P-SCH = OCC-OFF  
N-O-P = 2  
P-H-S = 255  
P-H-L = 255  
E-SCH = LIGHT-OFF E-W = 0.6  
L-SCH = LIGHT-OFF  
L-T = REC-FLOOR-RV  
FLOOR-WEIGHT = 70  
Z-TYPE = CONDITIONED  
..

BASE SPACE-CONDITIONS \$ Basement  
ZONE-TYPE = UNCONDITIONED  
INF-METHOD = AIR-C-CHANGE  
AIR-CHANGES/HR = 2  
SOURCE-TYPE = PROCESS  
SOURCE-BTU/HR = 140000  
SOURCE-SCHEDULE = Allways.on  
FLOOR-WEIGHT = 130  
..

S CLASS ROOMS \$

CLASSRM: SPACE  
SPACE-CONDITIONS = CLASS-ROOM  
AREA = 32500  
VOLUME = 325000  
N-O-P = 200  
..

CEN-1 EXTERIOR-WALL  
WIDTH = 180  
AZIMUTH = 0  
..

CLASS-ROOMS CEN-1

WINDOW  
HEIGHT = 2  
WIDTH = 180  
..  
EXTERIOR-WALL LIKE CEN-1 AZIMUTH = 90 ..  
WINDOW LIKE CW-1 ..  
EXTERIOR-WALL LIKE CEN-1 AZIMUTH = 180 ..  
WINDOW LIKE CW-1 ..  
EXTERIOR-WALL LIKE CEN-1 AZIMUTH = 270 ..  
WINDOW LIKE CW-1 ..

CF-1 INTERIOR-WALL  
CONSTRUCTION = FLOOR-1  
AREA = 32500  
NEXT-TO BASEMENT  
..

\$ OFFICES \$

OFF-1 SPACE  
MULTIPLIER = 32  
SPACE-CONDITIONS = OFFICE  
AREA = 500  
VOLUME = 5000  
..  
EXTERIOR-WALL  
WIDTH = 25  
AZIMUTH = 0  
..  
WINDOW  
HEIGHT = 2  
WIDTH = 25  
..  
EXTERIOR-WALL  
WIDTH = 25  
AZIMUTH = 0  
..  
WINDOW  
HEIGHT = 2  
WIDTH = 25  
..  
EXTERIOR-WALL  
WIDTH = 25  
AZIMUTH = 90 ..  
WINDOW LIKE W1 ..

OFF-2 SPACE LIKE OFF-1  
MULTIPLIER = 32  
..  
EXTERIOR-WALL  
WIDTH = 25  
AZIMUTH = 90 ..  
WINDOW LIKE W1 ..

OFF-3 SPACE LIKE OFF-1  
MULTIPLIER = 32  
..  
EXTERIOR-WALL  
WIDTH = 25  
AZIMUTH = 90 ..  
WINDOW LIKE W1 ..

OFF-4 SPACE LIKE OFF-1  
MULTIPLIER = 32  
..  
EXTERIOR-WALL  
WIDTH = 25  
AZIMUTH = 270 ..  
WINDOW LIKE W1 ..

OFF-1T SPACE LIKE OFF-1  
MULTIPLIER = 16  
..  
EXTERIOR-WALL  
WIDTH = 25  
AZIMUTH = 0 ..  
WINDOW  
..  
ROOF  
CONSTRUCTION = ROOF-1  
R1  
TILT  
GND-REFLECTANCE = 0.0  
HEIGHT = 25  
WIDTH = 20  
..

/user2/bcd/lirsce/DOE2/Proto/college.inp

Tue Jan 29 01:55:39 1991 3

OFF-11 SPACELIKE OFF-1T  
MULTIPLIER = 16  
..  
EXTERIOR-WALL-LIKE EWI AZIMUTH = 90 ..  
W-NORTH LIKE WI ..  
ROOF LIKE RI ..  
OFF-15 SPACE LIKE OFF-1T  
MULTIPLIER = 16  
..  
EXTERIOR-WALL-LIKE EWI AZIMUTH = 180 ..  
WINDOW LIKE WI ..  
ROOF LIKE RI ..  
OFF-47 SPACE LIKE OFF-1T  
MULTIPLIER = 16  
..  
EXTERIOR-WALL-LIKE EWI AZIMUTH = 270 ..  
WINDOW LIKE WI ..  
ROOF LIKE RI ..  
S Basement  
BASMENT SPACELIKE  
SPACE-CONDITIONS \* HAVE  
AREA \* 32500  
VOLUME \* 260000  
..  
SLB-1 UNDERGROUND-FLOOR  
CONSTRUCTION \* SLAB-1  
AREA \* 32500  
U-EFFECTIVE \* 0.0414  
..  
\$ BUILDING RESOURCES \$  
BUILDING-RESOURCE  
V-T-SCH \* OCC-OFF  
VERT-TRANS-KW \* 30  
HW-SCHEDULE \* DHW  
HOT-WATER \* 280000  
..  
\$ LOADS REPORT DATA \$  
Space peak loads summary Building peak load components  
LOADS-REPORT S (LS-C, LS-F) ..  
COMPUTE LOADS ..  
\$ SYSTEMS DATA \$  
INPUT SYSTEMS ...  
\$ SYSTEM Schedules \$  
\$ fan schedules \$  
\$ Heat-Temp schedules \$  
AWAYSON = SCH THRU DEC 31 (ALL) (1,24) (1) ..  
S Heat-Temp and Cool-Temp schedules  
CLASSHT = SCH THRU DEC 31  
(ALL) (1,6) (65) (9,23) (72) (24) (65) ..  
CLASSCL = SCH THRU DEC 31  
(ALL) (1,24) (76) ..  
OFFHT = SCH THRU DEC 31  
(ALL) (1,24) (72) ..  
OFFCL = SCH THRU DEC 31  
(ALL) (1,24) (76) ..  
SYS-AIR = ZONE-AIR OA-CFM/PER = 15 ..  
CNTRL-CLASS ZONE-CONTROL  
DESIGN-HEAT-T 72  
DESIGN-COOL-T 76  
HEAT-TEMP-SCH CLASHT  
COOL-TEMP-SCH CLASCL  
THERMOSTAT-TYPE PROPORTIONAL  
..  
CNTRL-OFFICE ZONE-CONTROL  
DESIGN-HEAT-T 72  
DESIGN-COOL-T 76  
HEAT-TEMP-SCH OFFHT  
COOL-TEMP-SCH OFFCL  
THERMOSTAT-TYPE PROPORTIONAL  
..  
CLASSRM ZONE  
ZONE-TYPE CONDITIONED  
ZONE-AIR SYS-AIR  
ZONE-CONTROL CNTRL-CLASS ..  
OFF-1 ZONE LIKE CLASSRM  
MULTIPLIER = 32  
ZONE-CONTROL CNTRL-OFFICE ..  
OFF-2 ZONE LIKE OFF-1 ..  
OFF-3 ZONE LIKE OFF-1 ..  
OFF-4 ZONE LIKE OFF-1 ..  
OFF-1T ZONE LIKE OFF-1 ..  
S MULTIPLIER = 16 ..  
OFF-2T ZONE LIKE OFF-1 ..  
OFF-3T ZONE LIKE OFF-1 ..  
OFF-4T ZONE LIKE OFF-1 ..  
BASEMENT ZONE ZONE-TYPE UNCONDITIONED .  
NORM-CONT SYSTEM-CONTROL  
MAX-S-T 110 MIN-S-1  
H-SCH ALWAYSON  
C-SCH ALWAYSON  
..  
SYS1 SYSTEM S Class rooms  
SYSTEM-TYPE SZRH  
OA-CONTROL TEMP  
REHEAT-DELTAT 50  
S-C NORM-CONT  
F-SCH FAYSEN  
ZONE-NAMES (CLASSRM, BASEMENT) ..  
52

```
/user2/bed/lirsce/DOE2/Proto/college.inp
```

```
Tue Jan 29 01:55:39 1991
```

```
4
```

```
SYST? SYSTEM $ offices
      SYSTEM-TYPE    RHFS
      REHEAT-DELT-A  SC
      MIN-CFM-RATIO 1
      ECONG-LIMIT-T 68
      S-C             NORM-CONT
      ZONE-NAMES     (OFF-1, OFF-2, OFF-3, OFF-4,
                      OFF-17, OFF-21, OFF-31, OFF-47) ...

PLT? 1   PLANT-ASSIGNMENT
        SYSTEM-NAMES (SYS1, SYS2) ...
        #detl sys..rep[1] 2

$ SYSTEM REPORT DATA $

@include /user2/bed/lirsce/DOE2/Proto/system.rep.inc

$ PLANT DATA $

INPUT PLANT ...
PLT? 1   PLANT-ASSIGNMENT ...
        DHW   P-E TYPE DHW-HEATER SIZE -999 ...
        HMG   P-E TYPE HW-BOTLER SIZE -999 1-N 2 ...
        CLG   P-E TYPE HERM-CENT-CHLR SIZE -999 1-N 2 ...
        CTW   P-E TYPE COOLING-TWR SIZE -999 1-N 2 ...

PLANT-PARAMETERS
        BOILER-FUEL NATURAL-GAS ...

$ PLANT REPORT DATA $

@include /user2/bed/lirsce/DOE2/Proto/plant.rep.inc

STOP ..
```

/user2/bed/lirsce/DOE2/Proto/dorm.inp

Tue Jan 29 01:56:17 1991 1

```

S LOADS SCHEDULE DATA FOR S
S COLLEGE DORM $
```

OCC-COR-ALL	(1,8)	( .1, .1, .1, .1, .1, .1, .1, .1)	= DAY-SCHEDULE
	(9,16)	( .6, .4, .2, .2, .2, .2, .2, .3)	
	(17,24)	( .3, .4, .8, .8, .7, .6, .3, .1)	

OCC-COR	= SCHEDULE THRU DEC 31
(ALL) OCC-COR-ALL	

LIGHT-COR	= SCHEDULE THRU DEC 31
(ALL) (1,24) (1) ..	

OCC-KIT-ALL	(1,8)	( .0, .0, .0, .0, .2, .2, .4, .8)	= DAY-SCHEDULE
	(9,16)	( .8, .4, .6, .8, .8, .4, .4, .4)	
	(17,24)	( .8, .9, .4, .4, .2, .1, .1, .0)	

OCC-KIT	= SCHEDULE THRU DEC 31
(ALL) (1,6) (0,0) (.7,10) (0,5) (1,1,17) (0,7) (1,8,24) (0,2) ..	

LIGHT-KIT	= SCHEDULE THRU DEC 31
(ALL) (1,5) (.2) (6,23) (.9) (24) (.2)	

EQUIP-KIT	= SCHEDULE THRU DEC 31
(ALL) (1,6) (0,0) (.7,10) (0,5) (1,1,17) (0,7) (1,8,24) (0,2) ..	

OCC-DIN	= SCHEDULE THRU DEC 31
(ALL) OCC-KIT-ALL	

LIGHT-DIN	= SCHEDULE THRU DEC 31
(ALL) (1,6) (.1) (7,23) (.9) (24) (.1)	

```

OCC-R-ROOM = SCHEDULE THRU DEC 31
(ALL) OCC-ROOM-ALL.

LIGHT-ROOM-ALL. ( .0, .0, .0, .0, .0, .0, .0, .0) = DAY-SCHEDULE
(1,8) ( .2, .0, .0, .0, .0, .0, .0, .0)
(9,16) ( .2, .2, .4, .4, .4, .4, .4, .4)
(17,24) ( .2, .2, .4, .4, .4, .4, .4)

LIGHT-ROOM = SCHEDULE THRU DEC 31
(ALL) LIGHT-ROOM-ALL.

DHW-ROOM-ALL. ( .21, .20, .22, .20, .51, .61) = DAY-SCHEDULE
(1,8) ( .59, .48, .47, .48, .45, .40, .35)
(9,16) ( .33, .45, .60, .65, .55, .50, .48, .20)
(17,24) ( .33, .45, .60, .65, .55, .50, .48, .20)

DHW-ROOM = SCHEDULE THRU DEC 31
(ALL) DHW-ROOM-ALL.

ALLWAYSON = SCHEDULE THRU DEC 31
(ALL) (1,24) (1) ..
```

S LOADS DATA S

S EXTERIOR SURFACES

S WALL - Poured concrete, insulation, air-space, gypsum-board

S IN-W MATERIAL RES = 2.6

S WALL LAYERS MAT = (CC06, IN-W, AL21, GP02) ..

S WALL-1 CONSTRUCTION LAYERS = WALLR ..

S ROOF - Built-up roofing, concrete, insulation

S IN-R MATERIAL RES = 5.8

S ROOF LAYERS MAT = (BRO1, CC25, IN-R) ..

S ROOF-1 CONSTRUCTION LAYERS = ROOFR ..

S FLOOR - 6" heavy-weight conc., pad, carpet

S FLOOR LAYERS MAT = (CC15, CP01) ..

S FLOOR-1 CONSTRUCTION LAYERS = FLOORR ..

S SINGLE GLASS

S SINGLE GLASS-TYPE PANES = 1

S SHADING-COEFF = 0.6

S GLASS-CONDUCTANCE = 1.0278

S ..

S ZONE CALCULATIONS

S BASE AREA = 9,600 sqft, 5 floors

S 4 floors of rooms, 50 rooms per floor, 200 sqft per room

S 1st floor = 2,600 sqft kitchen, 7,000 sqft dining

S DEFAULT CONSTRUCTIONS S

S SET-DEFAULT FOR EXTERIOR-WALL

S CONSTRUCTION = WALL-1

S HEIGHT = 8'

S ..

S SET-DEFAULT FOR WINDOW

/user2/beed/lirsce/DOE2/Proto/dorm.inp

Tue Jan 29 01:56:17 1991

2

CLASS-TYPE = SINGLE  
..  
\$ GENERAL SPACE CHARACTERISTICS \$  
CORRIDOR SPACE-CONDITIONS  
TEMPERATURE = (74)  
P-SCH = OCC-COR  
P-H-S = 315  
P-H-I = 325  
L-SCH LIGHT-COR  
L-T REC-FLOOR-RV  
FLOOR-WEIGHT = 70  
Z-TYPE = CONDITIONED  
..  
KITCHEN SPACE-CONDITIONS  
TEMPERATURE = (74)  
P-SCH = OCC-KIT  
P-H-S = 345  
P-H-L = 435  
E-SCH = EQUIP-KIT E-W = 3.0  
L-SCH = LIGHT-KIT  
L-T = SUS-FLOOR L-W = 2.0  
SOURCE-TYPE HOT-WATER  
SOURCE-SCHEDULE EQUIP-KIT  
SOURCE-BTU/HR = 165400  
S-1 0.1 S-S 0.1  
Floor-WEIGHT = 70  
Z-TYPE = CONDITIONED  
..  
DINING SPACE-CONDITIONS  
TEMPERATURE = (74)  
P-SCH = OCC-ROOM  
P-H-S = 255  
P-H-L = 325  
L-SCH = LIGHT-DIN  
L-T = INCAND L-W = 1.5  
Floor-WEIGHT = 70  
Z-TYPE = CONDITIONED  
..  
ROOM SPACE-CONDITIONS  
TEMPERATURE = (74)  
P-SCH = OCC-ROOM  
P-H-S = 230  
P-H-I = 190  
E-SCH = LIGHT-ROOM E-W = 0.6  
L-SCH = LIGHT-ROOM  
L-T = INCAND L-W = 1.0  
Floor-WEIGHT = 70  
Z-TYPE = CONDITIONED  
..  
\$ CORRIDOR \$  
CORR SPACE-CONDITIONS = CORRIDOR  
AREA = 2400  
VOLUME = 19200  
N-O-P = 10  
..  
DW-1 EXTERIOR-WALL  
WIDTH = 4  
AZIMUTH = 0  
..  
\$ KITCHEN \$  
KIT SPACE-CONDITIONS = KITCHEN  
AREA = 2600  
VOLUME = 20800  
N-O-P = 10  
..  
KEW-1 EXTERIOR-WALL  
WIDTH = 48  
AZIMUTH = 0  
..  
KW-1 WINDOW  
HEIGHT = 0.5  
WIDTH = 48  
..  
EXTERIOR-WALL LIKE KEW-1  
WINDOW LIKE KW-1  
..  
SLB-1 UNDERGROUND-FLOOR  
CONSTRUCTION = FLOOR-1  
AREA = 2600  
U-EFFECTIVE = 0.0414 ..  
\$ DINNING ROOM \$  
DIN SPACE-CONDITIONS = DINNING  
AREA = 7000  
VOLUME = 56000  
N-O-P = 400  
..  
DEW-1 EXTERIOR-WALL  
WIDTH = 118  
AZIMUTH = 0  
..  
DW-1 WINDOW  
HEIGHT = 2  
WIDTH = 118  
..  
EXTERIOR-WALL LIKE DEW-1  
WINDOW LIKE DW-1  
EXTERIOR-WALL LIKE DEW-1  
WINDOW LIKE DW-1  
EXTERIOR-WALL LIKE DEW-1  
WINDOW LIKE DW-1  
UNDERGROUND-FLOOR  
SLB-2 ..

/user2/bed/lirsce/DOE2/Proto/dorm.inp

Tue Jan 29 01:56:17 1991

3

CONSTRUCTION : FIBERGLASS  
AREA = 1000  
U-EFFECTIVE = 0.0414 ..  
\$ ROOMS \$  
ROOM-1  
SPACE MULTIPLIER = 40  
SPACE-CONDITIONS = ROOM  
AREA = 200  
VOLUME = 1600  
N-O-P = 2  
..  
EXTERIOR-WALL  
WIDTH = 3  
AZIMUTH = 0  
..  
WINDOW  
HEIGHT = 1.6  
WIDTH = 3  
..  
\$ BUILDING RESOURCES \$  
BUILDING-RESOURCE  
V-T-SCH \* OCC-KIT  
VERT-TRANS-KW = 54  
HW-SCHEDULE \* DW-ROOM  
HOT-WATER = 260000  
GAS-SCHEDULE \* EQUIP-KIT  
GAS-THERMS = 2.6  
..  
\$ LOADS REPORT DATA \$  
\$ Space peak loads summary, Building peak load components  
LOADS-REPORT S (LS-C,LS-F) ..  
END ..  
COMPUTE LOADS ..  
\$ SYSTEMS DATA \$  
INPUT SYSTEMS ..  
\$ SYSTEM SCHEDULES \$  
\$ fan schedules \$  
FAN-KIT = SCH THRU DEC 31 (ALL) (1,5) (0) (6,24) (1)  
ALWAYSON = SCH THRU DEC 31 (ALL) (1,24) (1) ..  
\$ Heat-Temp and Cool-Temp schedules  
ROOMKIT = SCH THRU DEC 31  
(ALL) (1,8) (72) (9,-18) (65) (19,-24) (72) ..  
ROOMCL = SCH THRU DEC 31  
(ALL) (1,24) (85) ..  
KITHT = SCH THRU DEC 31  
(ALL) (1,6) (65) (7,-23) (70) (24) (65) ..  
KITCL = SCH THRU DEC 31  
(ALL) (1,6) (85) (7,-23) (78) (24) (85) ..  
CORHT = SCH THRU DEC 31  
(ALL) (1,24) (72) ..  
CORCL = SCH THRU DEC 31  
(ALL) (1,24) (85) ..  
KIT-AIR = ZONE-AIR OA-CHANGES = 3.0 ..  
EXTERIOR-WALL LIKE EW1 AZIMUTH = 180 ..  
WINDOW LIKE W1 ..  
ROOM-2T  
SPACE LIKE ROOM-1T  
MULTIPLIER = 10  
..  
EXTERIOR-WALL LIKE EW1 AZIMUTH = 0 ..  
WINDOW LIKE W1 ..  
ROOF CONSTRUCTION = ROOF-1  
TILT = 0.0  
GND-REFLECTANCE = 0.0  
HEIGHT = 12  
WIDTH = 16  
..  
ROOM-2T  
SPACE LIKE ROOM-1T  
MULTIPLIER = 10  
..  
EXTERIOR-WALL LIKE EW1 AZIMUTH = 90 ..  
WINDOW LIKE W1 ..  
ROOF LIKE R1 ..  
ROOM-3T  
SPACE LIKE ROOM-1T  
MULTIPLIER = 10  
..  
EXTERIOR-WALL LIKE EW1 AZIMUTH = 180 ..  
WINDOW LIKE W1 ..

/user2/bed/lirsce/DOE2/Proto/dorm.inp

Tue Jan 29 01:56:17 1991 4

```
NORM-CONT  
  (CORR, ROOM-1, ROOM-2, ROOM-3, ROOM-4  
  ROOM-1T, ROOM-2T, ROOM-3T, ROOM-4T) ..  
  
CNTRL-COR ZONE-CONTROL  
DESIGN-HEAT-T 72  
DESIGN-COOL-T 76  
HEAT-TEMP-SCH CORHT  
COOL-TEMP-SCH CORCL  
THERMOSTAT-TYPE PROPORTIONAL  
..  
  
CNTRL-KIT ZONE-CONTROL  
DESIGN-HEAT-T 70  
DESIGN-COOL-T 78  
HEAT-TEMP-SCH KIHT  
COOL-TEMP-SCH KICL  
THERMOSTAT-TYPE PROPORTIONAL  
..  
  
CNTRL-ROOM ZONE-CONTROL  
DESIGN-HEAT-T 72  
DESIGN-COOL-T 76  
HEAT-TEMP-SCH ROOMHT  
COOL-TEMP-SCH ROOMCL  
THERMOSTAT-TYPE PROPORTIONAL  
..  
  
KIT ZONE  
ZONE-TYPE CONDITIONED  
ZONE-AIR KIT-AIR  
ZONE-CONTROL CNTRL-KIT  
..  
DIN ZONE  
ZONE-LIKE KIT  
ZONE-AIR COR-AIR ..  
CORR ZONE  
ZONE-LIKE KIT  
ZONE-AIR COR-AIR  
ZONE-CONTROL CNTRL-COR ..  
ROOM-1 ZONE  
ZONE-LIKE CORR  
MULTIPLIER = 40  
ZONE-CONTROL CNTRL-ROOM ..  
ROOM-2 ZONE  
ZONE-LIKE ROOM-1 ..  
ROOM-3 ZONE  
ZONE-LIKE ROOM-1 ..  
ROOM-4 ZONE  
ZONE-LIKE ROOM-1 ..  
ROOM-1T ZONE  
MULTIPLIER = 10 ..  
ROOM-2T ZONE  
ZONE-LIKE ROOM-1T ..  
ROOM-3T ZONE  
ZONE-LIKE ROOM-1T ..  
ROOM-4T ZONE  
ZONE-LIKE ROOM-1T ..  
  
NORM-CONT SYSTEM-CONTROL  
MAX-S-T 110 MIN-S-T 52  
H-SCH ALWAYSON  
C-SCH ALWAYSON  
..  
  
SYS1 SYSTEM S_kitchen  
SYSTEM-TYPE SZRH  
S-C NORM-CONT  
REHEAT-DELTA-T 5G  
F-SCH FAN-KIT  
ZONE-NAMES (KIT,DIN) ..  
  
SYS2 SYSTEM S_rooms  
SYSTEM-TYPE TPFC
```

/user2/bcd/lirsce/DOE2/Proto/hospital.inp

Mon Jan 28 19:21:48 1991 1

```

S SITE-1: HGT: 100' FOR 4 SEPARATE
S 1990 CEC LS/EUI Study

POST-PROCESSOR PARTIAL ...
INPUT LOADS ...
TITLE LINE-1 * 1990 CEC LS/EUI Study*
LINE-2 *Hospital* ...
RUN-PERIOD JAN 1 1986 THRU DEC 31 1986 ...
BUILDING-LOCATION LAT 34.07 LON 118.25 ALT 50 T-Z 8
AZIMUTH 0
HOLIDAY YES
DAYLIGHT-SAVINGS YES
...
ABORT ERRORS ...
LIST WARNINGS ...
PARAMETER CREDIT-DAYLTG NO ...
S LOADS SCHEDULES S

S OCC S
OCC-SCHED-1=SCHEDULE THRU DEC 31
(MD) (1,7) (0.50) (8,17) (1.00) (18,24) (0.50)
(WFH) (1,24) (0.50) ...
OCC-SCHED-2=SCHEDULE THRU DEC 31
(MD) (1,5) (0.26) (6,7) (0.48) (8) (0.86) (9,11) (0.75)
(12) (1.00) (13) (0.96) (14) (0.93) (15,17) (0.75)
(18) (0.62) (19) (0.59) (20) (0.55) (21,24) (0.26)
(WFH) (1,5) (0.26) (6,8) (0.48) (9,11) (0.37) (12) (0.62)
(13) (0.59) (14) (0.55) (15,17) (0.37)
(18) (0.62) (19) (0.59) (20) (0.55) (21,24) (0.26) ...
OCC-SCHED-3=SCHEDULE THRU DEC 31
(MD) (1,5) (0.18) (6,7) (0.84) (8,17) (1.00) (18,19) (0.84)
(20,24) (0.18)
(WFH) (1,5) (0.18) (6,19) (0.84) (20,24) (0.18) ...
OCC-SCHED-4=SCHEDULE THRU DEC 31
(ALL) (1,24) (1.00) ...
OCC-SCHED-5=SCHEDULE THRU DEC 31
(MD) (1,5) (0.50) (6,7) (0.67) (8,17) (1.00) (18,19) (0.84)
(20,22) (0.52)
(WFH) (1,5) (0.50) (6,7) (0.67) (8,19) (0.84) (20,22) (0.52)
(23,24) (0.50) ...
S LIT S
LIT-SCHED-1=SCHEDULE THRU DEC 31
(ALL) (1,7) (0.30) (8,19) (1.00) (20,22) (0.50) (23,24) (0.30) ...
LIT-SCHED-2=SCHEDULE THRU DEC 31
(ALL) (1,5) (0.33) (6,7) (0.35) (8,19) (1.00) (20,22) (0.41)
(LIT-SCHED-3=SCHEDULE THRU DEC 31
(ALL) (1,5) (0.20) (6,7) (0.66) (8,19) (1.00) (20,22) (0.24)
(23,24) (0.20) ...
LIT-SCHED-4=SCHEDULE THRU DEC 31
(ALL) (1,7) (0.20) (8,19) (1.00) (20,22) (0.30) (23,24) (0.20) ...
LIT-SCHED-5=SCHEDULE THRU DEC 31
(ALL) (1,5) (0.61) (6,7) (0.73) (8,19) (1.00) (20,22) (0.64)
(23,24) (0.61) ...
S EQP S
EQP-SCHED-1=SCHEDULE THRU DEC 31
(ALL) (1,7) (0.30) (8,19) (1.00) (20,22) (0.50) (23,24) (0.30) ...
EQP-SCHED-2=SCHEDULE THRU DEC 31
(ALL) (1,5) (0.31) (6,7) (0.35) (8) (0.97) (9,11) (0.95)
(12) (1.00) (13,14) (0.99) (15,17) (0.95)
(18) (1.00) (19) (0.99) (20) (0.44) (21,22) (0.39)
(23,24) (0.31) ...
EQP-SCHED-3=SCHEDULE THRU DEC 31
(ALL) (1,5) (0.25) (6,7) (0.93) (8,12) (1.00) (13,14) (0.66)
(15,17) (1.00) (18,19) (0.66) (20) (0.60) (21,24) (0.25) ...
EQP-SCHED-4=SCHEDULE THRU DEC 31
(ALL) (1,7) (0.20) (8,19) (1.00) (20,22) (0.30) (23,24) (0.20) ...
EQP-SCHED-5=SCHEDULE THRU DEC 31
(ALL) (1,5) (0.69) (6,7) (0.90) (8,19) (1.00) (20,22) (0.70)
(23,24) (0.69) ...
S ELECTRICAL S
EKITCH-SCHEDULE THRU DEC 31
(ALL) (1,5) (0.2) (6,12) (0.8) (13,14) (0.5) (15,17) (0.8)
(18,20) (0.5) (21,24) (0.2) ...
S HOT WATER S
WAT-SCHED-SCHEDULE THRU DEC 31
(ALL) (1,24) (0.18) (0.18) (0.25) (0.65) (1,0) (0.86,
0.8,0.69,0.69,0.73,0.57,0.69,0.84,0.73,0.66,
0.5,0.48,0.46,0.42,0.43,0.33) ...
S EQUIPMENT S
EL1-SCHED-SCHEDULE THRU DEC 31
(ALL) (1,7) (1.0) (8,17) (0) (18,24) (1.0) ...
S ELEVATOR S
ELEV-SCHED-SCHEDULE THRU DEC 31
(ALL) (1,7) (0.1) (8,22) (1.0) (23,24) (0.1) ...
S BASEMENT PROCESS LOAD S
ALWAYS-ON-SCHEDULE THRU DEC 31
(ALL) (1,24) (1) ...
S LOADS DATA S
S Exterior Surfaces
S Wall - 12" cmu, insulation, air-space, gyp-board
IN-W MATERIAL RES = 1.0
WALL LAYERS MAT = '(CB17, IN-W, AL21, GP02) ...
WALL-1 CONSTRUCTION LAYERS = WALLR ...
S Roof - built-up roofing, 6" conc., insulation, air-space, acoustic tile
IN-R MATERIAL RES = 7.3
ROOF LAYERS MAT = '(BRO1, CC26, IN-R, AL33, AC02) ...
ROOF-1 CONSTRUCTION LAYERS = ROOFR ...
S Floor - 4" light-weight conc., pad, carpet
FLOOR LAYERS MAT = '(CC24 CP01) ...
FLOOR-1 CONSTRUCTION LAYERS = FLOORR ...
S Slab - 6" heavy-weight conc., 2" soil
SOIL MATERIAL THICKNESS = 2.0
CONDUCTIVITY = 1.0 DENSITY = 115 ...
SLABL LAYERS MAT = '(SOIL CC15) ...
SLABL-1 CONSTRUCTION LAYERS = SLABL ...

```

/user2/bed/lirsce/DOEE2/Proto/hospital.inp

Mon Jan 28 19:21:48 1991 2

S Single Glass  
ST-i GLASS-TYPE PANES = 1  
SHADING-COEF = 0.4  
GLASS-CONDUCTANCE = 1.0278  
..

S E-W and L-W based on lumped 3 zone input file  
S Infiltration not included

SPACE-1 SPACE-CONDITIONS S Perimeter spaces  
ZONE-TYPE - CONDITIONED  
PEOPLE-SCHEDULE - OCC-SCHED-1 P-H-G = 400  
LIGHTING-SCHEDULE - LIT-SCHED-1 L-W = 2.00  
EQUIP-SCHEDULE - EQP-SCHED-1 E-W = 0.50  
FLOOR-WEIGHT - 60

SPACE-2 SPACE-CONDITIONS S Core and public spaces  
LIKE SPACE-1  
PEOPLE-SCHEDULE - OCC-SCHED-2 P-H-G = 400  
LIGHTING-SCHEDULE - LIT-SCHED-2 L-W = 2.00  
EQUIP-SCHEDULE - EQP-SCHED-2 E-W = 0.50

SPACE-3 SPACE-CONDITIONS S Kitchen  
LIKE SPACE-1  
PEOPLE-SCHEDULE - OCC-SCHED-3 P-H-G = 550  
LIGHTING-SCHEDULE - LIT-SCHED-3 L-W = 2.50  
EQUIP-SCHEDULE - EQP-SCHED-3 E-W = 3.40

SPACE-4 SPACE-CONDITIONS S Hallways  
LIKE SPACE-1  
PEOPLE-SCHEDULE - OCC-SCHED-4 P-H-G = 400  
LIGHTING-SCHEDULE - LIT-SCHED-4 L-W = 1.00  
EQUIP-SCHEDULE - EQP-SCHED-4 E-W = 0.00

SPACE-5 SPACE-CONDITIONS S Clinic  
LIKE SPACE-1  
PEOPLE-SCHEDULE - OCC-SCHED-5 P-H-G = 433  
LIGHTING-SCHEDULE - LIT-SCHED-5 L-W = 2.50  
EQUIP-SCHEDULE - EQP-SCHED-5 E-W = 1.47

SPACE-6 SPACE-CONDITIONS S Basement  
ZONE-TYPE - UNCONDITIONED  
INF-METHOD - AIR-CHANGE S Combustion air  
AIR-CHANGES/HR = 2 SOURCE-TYPE S PROCESS  
SOURCE-BTU/HR = 32000 S \$\* Jacket loss  
SOURCE-SCHEDULE - ALLWAYSON  
FLOOR-WEIGHT = 130

..  
S Perimeter zone (assume patient rooms 12' wide, 25' deep)  
ZONE-1 SPACE-CONDITIONS = SPACE-1  
AREA = 300  
VOLUME = 3000  
N-O-P = 2 S based on average of 26-zone BDL  
MULTIPLIER = 18

EW1-Z1 EXTERIOR-WALL CONSTRUCTION = WALL-1  
HEIGHT = 10.  
WIDTH = 12.  
AZIMUTH = 0.  
..

W1-Z1 WINDOW GLASS-TYPE = GT-1  
HEIGHT = 3.5  
WIDTH = 12.  
..

EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH = 90 ..  
WINDOW LIKE W1-Z1 ..

EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH = 180 ..  
WINDOW LIKE W1-Z1 ..

EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH = 270 ..  
WINDOW LIKE W1-Z1 ..

RF1-Z1 ROOF CONSTRUCTION = ROOF-1  
TILT = 0.0  
GND-REFLECTANCE = 0.0  
HEIGHT = 12.  
WIDTH = 25.  
..

ZONE-11 SPACE S Interior  
LIKE ZONE-1  
FLOOR-MULTIPLIER = 6

..  
EXTERIOR-WALL LIKE EW1-Z1 ..  
WINDOW LIKE W1-Z1 ..

EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH = 90 ..  
WINDOW LIKE W1-Z1 ..

EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH = 180 ..  
WINDOW LIKE W1-Z1 ..

EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH = 270 ..  
WINDOW LIKE W1-Z1 ..

F-21 INTERIOR-WALL CONSTRUCTION = FLOOR-1  
AREA = 300  
NEXT-TO ZONE-6

..

S Core/Public zone S

ZONE-2 SPACE  
SPACE-CONDITIONS = SPACE-2  
AREA = 12455  
VOLUME = 124550  
N-O-P = 34

..

EW2-Z1 EXTERIOR-WALL LIKE EW1-Z1  
WIDTH = 64

..

W2-Z1 WINDOW LIKE W1-Z1  
HEIGHT = 2  
WIDTH = 64

..

```

/user2/bed/lirsce/DOE2/Proto/hospital.inp

Mon Jan 28 19:21:48 1991          3

EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH = 90 ...
WINDOW LIKE W2-Z1 ...
EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH = 180 ...
WINDOW LIKE W2-Z1 ...
EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH = 270 ...
WINDOW LIKE W2-Z1 ...
RF2-Z1 ROOF LIKE RF1-Z1
HEIGHT = 111
WIDTH = 111
...
ZONE-21 SPACE           $ Interior
LIKE ZONE-2
FLOOR-MULTIPLIER = 6
...
EXTERIOR-WALL LIKE EW2-Z1 ...
WINDOW LIKE W2-Z1 ...
EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH = 90 ...
WINDOW LIKE W2-Z1 ...
EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH = 180 ...
WINDOW LIKE W2-Z1 ...
EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH = 270 ...
WINDOW LIKE W2-Z1 ...
F-22 INTERIOR-WALL
CONSTRUCTION = FLOOR-1
AREA = 12425
NEXT-TO ZONE-6 ...
...
$ Kitchen
ZONE-3 SPACE           $ Interior
SPACE-CONDITIONS = SPACE-3
AREA = 1775
VOLUME = 17750
N-O-P = 4
FLOOR-MULTIPLIER = 7.
...
EW3-Z1 EXTERIOR-WALL LIKE EW1-Z1
WIDTH = 10
...
W3-Z1 WINDOW LIKE W1-Z1
HEIGHT = 1
WIDTH = 10
...
EXTERIOR-WALL LIKE EW3-Z1 AZIMUTH = 90 ...
WINDOW LIKE W3-Z1 ...
EXTERIOR-WALL LIKE EW3-Z1 AZIMUTH = 180 ...
WINDOW LIKE W3-Z1 ...
F-23 INTERIOR-WALL
CONSTRUCTION = FLOOR-1
AREA = 1775

```

```

NEXT-TO ZONE-4
...
S Hallway
ZONE-4 SPACE           $ Interior
SPACE-CONDITIONS = SPACE-4
AREA = 7100
VOLUME = 71000
N-O-P = 10
...
EW4-Z1 EXTERIOR-WALL LIKE EW1-Z1
WIDTH = 20
...
W4-Z1 WINDOW LIKE W1-Z1
HEIGHT = 3.5
WIDTH = 20
...
EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH = 90 ...
WINDOW LIKE W4-Z1 ...
EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH = 180 ...
WINDOW LIKE W4-Z1 ...
EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH = 270 ...
WINDOW LIKE W4-Z1 ...
RF4-Z1 ROOF LIKE RF1-Z1
HEIGHT = 84
WIDTH = 84
...
ZONE-41 SPACE           $ Interior
LIKE ZONE-4
FLOOR-MULTIPLIER = 6
...
EXTERIOR-WALL LIKE EW4-Z1 ...
WINDOW LIKE W4-Z1 ...
EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH = 90 ...
WINDOW LIKE W4-Z1 ...
EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH = 180 ...
WINDOW LIKE W4-Z1 ...
EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH = 270 ...
WINDOW LIKE W4-Z1 ...
F-24 INTERIOR-WALL
CONSTRUCTION = FLOOR-1
AREA = 7100
NEXT-TO ZONE-6 ...
...
$ Clinic
ZONE-5 SPACE           $ Interior
SPACE-CONDITIONS = SPACE-5
AREA = 8875
VOLUME = 88750
N-O-P = 25
...
EW5-Z1 EXTERIOR-WALL LIKE EW1-Z1

```

```

WIDTH = 36
..
WINDOW LIKE Wi-21
HEIGHT = 1
WIDTH = 36
..
EXTERIOR-WALL LIKE EW5-21 AZIMUTH = 90 ..
WINDOW LIKE W5-21 ..
EXTERIOR-WALL LIKE EW5-21 AZIMUTH = 180 ..
WINDOW LIKE W5-21 ..
EXTERIOR-WALL LIKE EW5-21 AZIMUTH = 210 ..
WINDOW LIKE W5-21 ..
ROOF LIKE RF1-21
HEIGHT = 94
WIDTH = 94
..

```

```

ZONE-5: SPACE S Interior
LIKE ZONE-5
FLOOR-MULTIPLIER = 6
EXTERIOR-WALL LIKE EW5-21 ..
WINDOW LIKE W5-21 ..
EXTERIOR-WALL LIKE EW5-21 AZIMUTH = 90 ..
WINDOW LIKE W5-21 ..
EXTERIOR-WALL LIKE EW5-21 AZIMUTH = 180 ..
WINDOW LIKE W5-21 ..
EXTERIOR-WALL LIKE EW5-21 AZIMUTH = 270 ..
WINDOW LIKE W5-21 ..
INTERIOR-WALL
CONSTRUCTION = FLOOR-1
AREA = 8875
NEXT-TO ZONE-6
..
S Basement

```

```

ZONE-6 SPACE-C-CONDITIONS = SPACE-6
AREA = 35500
VOLUME = 284000
..
SLB-1 UNDERGROUND-FLOOR
CONSTRUCTION = SLAB-1
AREA = 35500
U-EFFECTIVE = 0.0145
..

```

F-25 INTERIOR-WALL

CONSTRUCTION = FLOOR-1

AREA = 8875

NEXT-TO ZONE-6

..

```

ZONE-11 SPACE-C-CONDITIONS = SPACE-6
AREA = 35500
VOLUME = 284000
..

```

SLB-1 UNDERGROUND-FLOOR

CONSTRUCTION = SLAB-1

AREA = 35500

U-EFFECTIVE = 0.0145

```

BUILDING-RESOURCE
S Schedule and intensity/sq ft. above ground floor from LBL hosp BOL
V-T-SCH = ELEV-SCHED
VERT-TRANS-KW = 80
S Schedule and intensity/sq ft. from LBL hospital BOL
HW-SCHEDULE = WAT-SCHED
HOT-WATER = 1600000
..

```

```

E-SCH = ELI-SCHFC
ELEC-KW = 16
GAS-SCHEDULE = EKITCH
GAS-THERMS = 4.5
..
$ LOADS REPORT DATA $
S Space peak loads summary, Building peak load components
LOADS-REPORT S (LS-C,LS-F) ..
END ..
COMPUTE LOADS ..
INPUT SYSTEMS ..
$ SYSTEMS DATA $
S SYSTEM SCHEDULES $
ALWAYSON SCHEDULE THRU DEC 31 (ALL) (1,24) (1)
HTG-STPT SCHEDULE THRU DEC 31 (ALL) (1,24) (72)
CLG-STPT SCHEDULE THRU DEC 31 (ALL) (1,24) (76)
CONTROL ZONE-CONTROL
DESIGN-HEAT-T 72
DESIGN-COOL-T 76
HEAT-TEMP-SCH HTG-STPT
COOL-TEMP-SCH CLG-STPT
THERMOSTAT-TYPE PROPORTIONAL
..
ZONE-1 ZONE CONTROL
ZONE-C-CONTROL CONTROL
A-C/HR 3
..
ZONE-11 ZONE LIKE ZONE-1 ..
ZONE-2 ZONE LIKE ZONE-1 ..
ZONE-3 ZONE LIKE ZONE-2 ..
ZONE-4 ZONE LIKE ZONE-1 ..
ZONE-5 ZONE LIKE ZONE-1 ..
ZONE-51 ZONE LIKE ZONE-5 ..
ZONE-6 ZONE UNCONDITIONED ..
ZONE-TYPE UNCONDITIONED ..
NORM-CONT SYSTEM-CONTROL
MAX-S-T 110 MIN-S-T 52
H-SCH ALWAYSON C-SCH ALWAYSON
HEAT-CONTROL CONSTANT COOL-CONTROL CONSTANT
HEAT-SET-T 110 COOL-SET-T 52
ECONO-LIMIT-T 68
..
SYS1 SYSTEM S Perimeter spaces
SYSTEM-TYPE FFPC
S-C NORM-CONT
M-O-A 0.25

```

/user2/bed/lirsce/DOE2/Proto/hospital.inp

Mon Jan 28 19:21:48 1991

5

```
S PLANT-STATE          C,14
SUPPLY-TIP            0.5
ZONE-NAMES           (ZONE-1, ZONE-11, ZONE-6) ...
SYSTEM S Kitchen
SYSTEM-TYPE          SZRH
S-C                  NORM-CONT
M-O-A                1
OA-CONTROL           TEMP
F-SCH                ALWAYSON
COOLING-SCHEDULE    ALWAYSON
SUPPLY-STATIC         2.5
SUPPLY-EFF            0.7
REHEAT-DELTA-T       50
ZONE-NAMES           (ZONE-3) ...

SYSTEM S Clinic
SYSTEM-TYPE          DDS
S-C                  NORM-CONT
M-O-A                1
OA-CONTROL           TEMP
FAN-SCHEDULE         ALWAYSON
SUPPLY-STATIC         4.25
SUPPLY-EFF            0.7
RETURN-STATIC         2
RETURN-EFF            0.65
MAX-HUMIDITY         50
ZONE-NAMES           (ZONE-5, ZONE-51) ...

SYSTEM S Core and public spaces
SYSTEM-TYPE          VAVS
S-C                  NORM-CONT
M-O-A                0.50
REHEAT-DELTA-T       52
OA-CONTROL           TEMP
F-SCH                ALWAYSON
SUPPLY-STATIC         4
SUPPLY-EFF            0.7
ZONE-NAMES           (ZONE-2, ZONE-21, ZONE-4, ZONE-41) ...

PLT-1 PLANT-ASSIGNMENT SYSTEM-NAMES (SYS1, SYS2, SYS3, SYS4) ...
@def: sys rep[1:4]
S SYSTEM REPORT DATA S
#include /user2/bed/lirsce/DOE2/Proto/system_rep.inc
S PLANT DATA S

INPUT PLANT ...
PIT-1   PLANT-ASSIGNMENT ...
CHW    P-E TYPE DHW-HEATER SIZE -999 1-N 2 ...
      P-E TYPE HW-BLISTER SIZE -999 1-N 2 ...
      P-E TYPE HEM-M-CENT-CHLR SIZE -999 1-N 2 ...
      P-E TYPE COOLING-TWR SIZE -999 1-N 2 ...
PLANT-PARAMS ...
      BOILER-FUEL NATURAL-GAS ...
```

/user2/bed/lirsce/DOE2/Proto/lghotel.inp

```

Tue Jan 29 01:57:11 1991      1

S POST-INIT BOL Input for Large Hotel
S 1990 CEC LS/EUI Study

POST-PROCESSOR PARTIAL ..
INPUT LOADS ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
LINE-2 *Large Hotel*.

RUN-PERIOD JAN 1 1986 THRU DEC 31 1986   ..
BUILDING-LOCATION LAT 34.0'  LON 118.25  ALT 50  T-2 8
AZIMUTH 0
HOLIDAY YES
DAYLIGHT-SAVINGS YES
..


ABORT ERRORS ..
LIST WARNINGS ..
PARAMETER CREDIT-DAYLTG NO ..

S LOADS SCHEDULE DATA FOR S
S  LARGE HOTEL      S
OCC-LOB-ALL    - DAY-SCHEDULE
(1,8)  (.1, .1, .1, .1, .2, .4, .6)
(9,16) (.6, .4, .2, .2, .2, .3)
(17,24) (.6, .8, .7, .5, .3, .1)

OCC-LOB    SCHEDULE THRU DEC 31
(ALL) OCC-LOB-ALL

LIGHT-LOB    SCHEDULE THRU DEC 31
(ALL) (1,24) (1) ..

OCC-KIT    SCHEDULE THRU DEC 31
(ALL) OCC-KIT-ALL

LIGHT-KIT    SCHEDULE THRU DEC 31
(ALL) (1,7) (.1) (8,24) (.9)

EQUIP-KIT    SCHEDULE THRU DEC 31
(ALL) (1,7) (0,0) (8,12) (0,2) (13,17) (0,8) (18,24) (0,3) ..

OCC-ROOM    SCHEDULE THRU DEC 31
(ALL) OCC-ROOM-ALL

LIGHT-ROOM-ALL    = DAY-SCHEDULE
(1,8)  (.8, .8, .8, .8, .8, .6, .4)
(9,16) (.4, .2, .2, .2, .2, .2, .3)
(17,24) (.5, .5, .6, .6, .8, .8, .8)

EQUIP-ROOM    SCHEDULE THRU DEC 31
(ALL) EQUIP-ROOM-ALL

(17,24) (.5, .6, .7, .7, .8, .8, .6)
(9,16) (.5, .5, .5, .5, .5, .5, .5)

POST-PROCESSOR PARTIAL ..
INPUT LOADS ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
LINE-2 *Large Hotel*.

RUN-PERIOD JAN 1 1986 THRU DEC 31 1986   ..
BUILDING-LOCATION LAT 34.0'  LON 118.25  ALT 50  T-2 8
AZIMUTH 0
HOLIDAY YES
DAYLIGHT-SAVINGS YES
..


ABORT ERRORS ..
LIST WARNINGS ..
PARAMETER CREDIT-DAYLTG NO ..

S LOADS SCHEDULE DATA FOR S
S  LARGE HOTEL      S
DHW-ROOM-ALL    = DAY-SCHEDULE
(1,8)  (.21, .20, .20, .20, .22, .20, .51, .61)
(9,16) (.59, .48, .42, .48, .45, .40, .35)
(17,24) (.33, .45, .60, .65, .55, .50, .48, .20)

DHW-ROOM    SCHEDULE THRU DEC 31
(ALL) DHW-ROOM-ALL

(17,24) (.33, .45, .60, .65, .55, .50, .48, .20)

ALWAYSON    SCHEDULE THRU DEC 31
(ALL) (1,24) (1) ..

$ LOADS DATA $

S Exterior Surfaces
S Wall - poured concrete, insulation, air-space, gypsum-board
IN-W MATERIAL RES = 2.6 ..
WALL LAYERS MAT = (CC06 IN-W AL21 GP02) ..
WALL-1 CONSTRUCTION LAYERS = WALLR ..

S Roof - built-up roofing, concrete, insulation, air-space, acoustic tile
IN-R MATERIAL RES = 5.8 ..
ROOF LAYERS MAT = (BR01 CC25, IN-R AL33, AC02) ..
ROOF-1 CONSTRUCTION LAYERS = ROOFR ..

S Floor - 4" light-weight conc., pad, carpet
FLOOR LAYERS MAT = (CC24, CP01) ..
FLOOR-1 CONSTRUCTION LAYERS = FLOORR ..

S Slab - 6" heavy-weight conc., 2" soil
SOIL MATERIAL THICKNESS = 2.0  SPECIFIC-HEAT = 0.26
CONDUCTIVITY = 1.0  DENSITY = 115 ..
SLABL LAYERS MAT = (SOIL, CC15) ..
SLAB-1 CONSTRUCTION LAYERS = SLABL ..

S Single Glass
SINGLE GLASS-TYPE PANES = 1
SHADING-COEFF = 0.4
GLASS-CONDUCTANCE = 1.0278

..


$ Zone Calculations
$ 701 Room, 25* Lobby/Cont, 5* Kitchen/Laundry
CONSTRUCTION = WALL-1
HEIGHT = 10.
..


SET-DEFAULT FOR EXTERIOR-WALL
$ Room calc (160 = 400 sq ft per room * 4 orientations)
$ Wall calcs (lobby has three exterior walls, kitchen has one)

SET-DEFAULT FOR WINDOW
GLASS-TYPE = SINGLE
..


$ GENERAL SPACE CHARACTERISTICS $

```

/user2/bed/lirsce/DOE2/Proto/1ghotel.inp

Tue Jan 29 01:57:11 1991 2

/user2/bed/lirsce/DOE2/Proto/lghotel.inp

Tue Jan 29 01:57:11 1991

三

```

ROOM-3 SPACE-LIKE ROOM-1
MULTIPLIER = 80
.
.
.
EXTERIOR-WALL LIKE EW1 AZIMUTH = 180 ..
WINDOW LIKE W1 ..

ROOM-4 SPACE-LIKE ROOM-1
MULTIPLIER = 80
.
.
.
EXTERIOR-WALL LIKE EW1 AZIMUTH = 270 ..
WINDOW LIKE W1 ..

ROOM-1T SPACE-LIKE ROOM-1
MULTIPLIER = 10
.
.
.
EXTERIOR-WALL LIKE EW1 AZIMUTH = 0 ..
WINDOW LIKE W1 ..
ROOF CONSTRUCTION = ROOF-1
TILT = 0.0
GND-REFLECTION = 0.0
HEIGHT = 20
WIDTH = 20
.
.
.

ROOM-2T SPACE-LIKE ROOM-1T
MULTIPLIER = 10
.
.
.
EXTERIOR-WALL LIKE EW1 AZIMUTH = 90 ..
WINDOW LIKE W1 ..
ROOF LIKE R1 ..
.
.
.

ROOM-3T SPACE-LIKE ROOM-1T
MULTIPLIER = 10
.
.
.
EXTERIOR-WALL LIKE EW1 AZIMUTH = 180 ..
WINDOW LIKE W1 ..
ROOF LIKE R1 ..
.
.
.

ROOM-4T SPACE-LIKE ROOM-1T
MULTIPLIER = 10
.
.
.
EXTERIOR-WALL LIKE EW1 AZIMUTH = 270 ..
WINDOW LIKE W1 ..
ROOF LIKE R1 ..
.
.
.

$ LOADS REPORT DATA $  

$ Space peak loads summary, Building peak load components $  

LOADS-REPORT S (LS-C,-S-F) ..  

END ..  

COMPUTE LOADS ..  

$ SYSTEMS DATA $  

INPUT SYSTEMS ..  

$ SYSTEM SCHEDULES $  

$ fan schedules $  

FAN-KIT = SCH THRU DEC 31 (ALL) (1,7)(0) (8,24)(1)  

.
.
.
ALWAYSON = SCH THRU DEC 31 (ALL) (1,24) (1) ..  

$ Heat-Temp and Cool-Temp schedules $  

ROOMHT = SCH THRU DEC 31  

(ALL) (1,8) (72) (9,23) (65) (24) (72) ..  

ROOMCL = SCH THRU DEC 31  

(ALL) (1,24) (76) ..  

KITHT = SCH THRU DEC 31  

(ALL) (1,7) (65) (8,24) (70) ..  

KITCL = SCH THRU DEC 31  

(ALL) (1,7) (85) (8,24) (78) ..  

LOBHT = SCH THRU DEC 31  

(ALL) (1,24) (72) ..  

LOBCL = SCH THRU DEC 31  

(ALL) (1,24) (76) ..  

$ Basement  

.
.
.

$ BUILDING RESOURCES $  

BASEMENT  

SPACE-CONDITIONS = BASE
AREA = 62026
VOLUME = 496200
.
.
.

SLB-1 UNDERGROUND-FLOOR
CONSTRUCTION = SLAB-1
AREA = 62026
EFFECTIVE = 0.0414
.
.
.

$ ZONE-AIR OA-CHANGES = 3.0 ..  

KIT-AIR = ZONE-AIR OA-CFM/PER = 15 ..  

.
.
.

CNTRL-LOB ZONE-CONTROL
DESIGN-HEAT-T 72
DESIGN-COOL-T 76
HEAT-TEMP-SCH LOBHT
COOL-TEMP-SCH LOBCL
THERMOSTAT-TYPE PROPORTIONAL
.
.
.

CNTRL-KIT ZONE-CONTROL
.
.
.
```

/user2/bed/lirsce/DOE2/Proto/lghotel.inp

Tue Jan 29 01:57:11 1991 4

```
DESIGN-TEMP-T 78  
HEAT-TEMP-SCH KITKIT  
COOL-TEMP-SCH KITCL  
THERMOSTAT-TYPE PROPORTIONAL  
..  
CNTRL-ZONE ZONE-CONTROL  
DESIGN-HEAT-T 72  
DESIGN-COOL-T 76  
HEAT-TEMP-SCH ROOMHT  
COOL-TEMP-SCH ROOMCL  
THERMOSTAT-TYPE PROPORTIONAL  
..  
K1T-LND ZONE  
ZONE-TYPE CONDITIONED  
ZONE-AIR KIT-AIR  
ZONE-CONTROL CNTRL-KIT  
.  
L0B-CON ZONE LIKE KIT-LND  
ZONE-AIR LOB-AIR  
ZONE-CONTROL CNTRL-LOB ..  
ROOM-1 ZONE LIKE LOB-CON  
MULTIPLIER = 80  
ZONE-CONTROL CNTRL-ROOM ..  
ROOM-2 ZONE LIKE ROOM-1 ..  
ROOM-3 ZONE LIKE ROOM-1 ..  
ROOM-4 ZONE LIKE ROOM-1 ..  
ROOM-1T ZONE LIKE ROOM-1  
MULTIPLIER = 10 ..  
ROOM-2T ZONE LIKE ROOM-1T ..  
ROOM-3T ZONE LIKE ROOM-1T ..  
ROOM-4T ZONE LIKE ROOM-1T ..  
BASEMENT ZONE ZONE-TYPE UNCONDITIONED ..  
NCRM-CONT SYSTEM-CONTROL  
MAX-S-T 110 MIN-S-T 52  
H-SCH ALWAYSON  
C-SCH ALWAYSON  
..  
SYS1 SYSTEM S lobby  
SYSTEM-TYPE VAVS  
MIN-CFM-RATIO 0.1  
OA-CONTROL TEMP  
ECONG-LIMIT-T 68  
REHEAT-DELTA-T 50  
S-C NORM-CONT  
F-SCH ALWAYSON  
ZONE-NAMES (LOB-CON, BASEMENT) ..  
SYS2 SYSTEM S kitchen  
SYSTEM-TYPE SZRH  
S-C NORM-CONT  
REHEAT-DELTA-T 50  
F-SCH FAN-KIT  
ZONE-NAMES (KIT-LND) ..  
SYS3 SYSTEM S rooms  
SYSTEM-TYPE FPFC  
S-C NORM-CONT  
ZONE-NAMES (ROOM-1, ROOM-2, ROOM-3, ROOM-4  
ROOM-1T, ROOM-2T, ROOM-3T, ROOM-4T) ..
```

## /user2/bed/lirsce/DOE2/Proto/library.inp

```

$ DEF-LIN BUL Input for College Library
$ 1990 CFC LS/EUI Study

POST-PROCESSOR PARTIAL ...
INPUT LOADS ...

TITLE LINE-1 "1990 CFC LS/EUI Study"
LINE-2 "College Library."
...

RUN-PERIOD JAN 1 1986 THRU DEC 31 1986 ...
BUILDING-LOCATION LAT 34.01 LON 118.25 ALT 50 T-2 8
AZIMUTH 0
HOLIDAY YES
DAYLIGHT-SAVINGS YES
...
ABORT ERRORS ...
LIST WARNINGS ...
PARAMETER CREDIT-DAYLTG NO ...

```

S LOADS SCHEDULE DATA S

OCC-1	-	DAY-SCHEDULE	(0)
		(1, 6)	(.1)
		(7)	(.2)
		(8, 11)	(.5)
		(12)	(.4)
		(13, 17)	(.6)
		(18, 19)	(.4)
		(20, 23)	(.7)
		(24)	(.2)
	-	DAY-SCHEDULE	(0)
		(1, 9)	(0)
		(10)	(.2)
		(11, 12)	(.4)
		(13, 16)	(.6)
		(17, 18)	(.3)
		(19, 24)	(0)

OCC - SCHEDULE THRU 'DEC 31 (WD) OCC-1 (WEH) OCC-2 ...

LTS-1	-	DAY-SCHEDULE	(.4)
		(1, 6)	(.1)
		(7)	(.5)
		(8, 23)	(.9)
		(24)	(.2)
	-	DAY-SCHEDULE	(.2)
		(1, 9)	(.2)
		(10, 18)	(.9)
		(19, 24)	(.2)

LTS - SCHEDULE THRU DEC 31 (WD) LTS-1 (WEH) LTS-2 ...

S LOADS DATA S

S Exterior Surfaces

IN-W MATERIAL RES = 1 ...
 WA LAYERS MATERIAL = (CB11, IN-W-GP02) ...
 IN-R MATERIAL RES = 4.9 ...
 RF1 LAYERS MATERIAL = (BR01, PW04, IN-R, AL33, GP02) ...
 INSIDE-FLM-RES= .61 ...

SPACE-LIKE ROOM 1 ...
 EXTERIOR-WALL LIKE EWALL ...
 WINDOW-LIKE WIND ...
 ROOF-LIKE EROOF ...
 UNDERGROUND-FLOOR LIKE SLB ...

ROOM1 = CONSTRUCTION LAYERS = 1
 TYP-WALL ...
 TYP-RCOF ...
 SINGLE ...
 GLASS-TYPE PANES = 1
 SHADING-COEF ...
 GLASS-CONDUCTANCE = 0.6 ...
 WAI ...
 RF1 ...
 1.03 ...

SLAB - 2' ...
 1, 6" heavy-weight conc.
 SOIL MATERIAL THICKNESS = 2.0 SPECIFIC-HEAT = 0.26
 CONDUCTIVITY = 1.0 DENSITY = 115 ...
 SLABL LAYERS MAT = (SOIL, CC15) ...
 SLAB-1 CONSTRUCTION LAYERS = SLABL ...

ROOM = SPACE-CONDITIONS = (74)
 TEMPERATURE = OCC ...
 PEOPLE-SCHEDULE = 30
 NUMBER-OF-PEOPLE = 420
 PEOPLE-HEAT-GAIN = LTS
 LIGHTING-SCHEDULE = REC-FLUOR-NV
 LIGHTING-TYPE = LIGHTING-W/ SOFT = 1.7
 FLOOR-WEIGHT = 70 ...
 ...

ROOM1 = SPACE-CONDITIONS = ROOM
 AREA = 10000 ...
 VOLUME = 100000 ...
 ...

EWALL = EXTERIOR-WALL
 CONSTRUCTION = TYP-WALL
 WIDTH = 250
 HEIGHT = 10
 AZIMUTH = 0 ...
 ...

WINDOW = GLASS-TYPE = SINGLE
 WIDTH = 250
 HEIGHT = 1 ...
 ...

WIND = ROOF
 CONSTRUCTION = TYP-ROOF
 GND-REFLECTANCE = 0
 TILT = 0
 WIDTH = 200
 HEIGHT = 200 ...
 ...

SLB = UNDERGROUND-FLOOR
 CONSTRUCTION = SLAB-1
 AREA = 40000
 U-EFFECTIVE = 0.0346 ...
 ...

ROOM2 = SPACE-LIKE ROOM ...
 EXTERIOR-WALL LIKE EWALL ...
 WINDOW-LIKE WIND ...
 ROOF-LIKE EROOF ...
 UNDERGROUND-FLOOR LIKE SLB ...

/user2/bed/lirsce/DOE2/Proto/library.imp

Mon Jan 28 19:17:01 1991 2

```
ROOM4 =  
    SPACE_LIKE_ROOM1 ..  
    EXTERIOR-WALL_LIKE_INWALL  AZIMUTH = 180 ..  
    WINDOW_LIKE_WIND ..  
    ROOF_LIKE_ROOF ..  
    UNDERGROUND-FLOOR_LIKE_SLB ..  
  
ROOM4 -  
    SPACE_LIKE_ROOM1 ..  
    EXTERIOR-WALL_LIKE_INWALL  AZIMUTH = 270 ..  
    WINDOW_LIKE_WIND ..  
    ROOF_LIKE_ROOF ..  
    UNDERGROUND-FLOOR_LIKE_SLB ..  
  
S LOADS REPORT DATA S  
S Space peak loads summary, Building peak load components  
LOADS-REPORT S (LS-C, LS-F) ..  
  
END ..  
COMPUTE LOADS ..  
  
S SYSTEMS DATA S  
NPUC SYSTEMS ..  
S SYSTEM SCHEDULES S  
FAN - SCHEDULE THRU DEC 31 (ALL) (1,24) (1) ..  
CLG1 - DAY-SCHEDULE (1,5) (85) ..  
CLG1 - DAY-SCHEDULE (6,24) (78) ..  
CLG2 - DAY-SCHEDULE (1,8) (85) ..  
CLG2 - DAY-SCHEDULE (9,18) (78) ..  
CLG2 - SCHEDULE THRU DEC 31 (WED) CLG1 (WEH) CLG2 ..  
HTG1 - DAY-SCHEDULE (1,5) (65) ..  
HTG2 - DAY-SCHEDULE (6,24) (72) ..  
HTG2 - DAY-SCHEDULE (1,8) (65) ..  
HTG2 - SCHEDULE THRU DEC 31 (WED) HTG1 (WEH) HTG2 ..  
  
ZNAIR = ZONE-AIR CA-CFM/PER 15.0 ..  
ROOMCON = ZONE-CONTROL  
DESIGN-HEAT-T 72  
DESIGN-COOL-T 78  
HEAT-TEMP-SCH HEATING  
COOL-TEMP-SCH COOLING  
THROTTLING-RANGE 3  
THERMOSTAT-TYPE PROPORTIONAL  
..  
  
ZONE:  
ZONE-TYPE CONDITIONED  
ZONE-AIR ZNAIR
```

/user2/bed/lirsce/DOE2/Proto/nursing.inp

Tue Jan 29 19:55:57 199

```

S LINE-2:11 RDL Input for Nursing home
S 1980 CEC LS/EUI Study
LINE-2 • Nursing Home*
...
RUN-PERIOD JAN 1 1986 THRU DEC 31 1986 ...
BUILDING-LOCATION LAT 34.07 LON 118.25 ALT 50 T-2 B
AZIMUTH 0 HOLIDAY YES
DAYLIGHT-SAVINGS YES
...
ABORT ERRORS ...
LIST WARNINGS ...
PARAMETER CREDIT-DAYLTG NO ...
...
POST-PROCESSOR PARTIAL ...
INPUT LOADS ...
TITLE LINE-1 • 1990 CEC LS/EUI Study*
LINE-2 • Nursing Home*
...
HOLIDAY YES
DAYLIGHT-SAVINGS YES
...
OCC-MULT-ALL SCHEDULE DATA S
OCC-MULT-ALL DAY-SCHEDULE
(1,8) (0.0, 0.0, 0.0, 0.0, 0.3, 0.4)
(9,16) (0.6, 0.4, 0.3, 0.3, 0.4, 0.5, 0.6)
(17,24) (0.6, 0.5, 0.4, 0.2, 0.0, 0.0, 0.0)
...
OCC-MULT SCHEDULE THRU DEC 31
(ALL) OCC-MULT-ALL
...
LIGHT-MULT SCHEDULE THRU DEC 31
(ALL) (1,6) (.3) (7,17) (.9) (18,20) (.6) (21,24) (.3) ..
...
OCC-KIT-ALL SCHEDULE DATA S
OCC-KIT-ALL DAY-SCHEDULE
(1,8) (0.0, 0.0, 0.0, 0.0, 0.5, 0.7, 0.9)
(9,16) (0.9, 0.7, 0.6, 0.7, 0.7, 0.7, 0.9)
(17,24) (0.5, 0.2, 0.0, 0.0, 0.0, 0.0, 0.0)
...
OCC-KIT SCHEDULE THRU DEC 31
(ALL) OCC-KIT-ALL
...
LIGHT-KIT SCHEDULE THRU DEC 31
(ALL) (1,5) (1,1) (6,18) (.9) (19,24) (1,1)
...
EQUIP-KIT SCHEDULE THRU DEC 31 (ALL)
(1,8) (0.0, 0.0, 0.0, 0.0, 0.2, 0.2, 0.5)
(9,16) (0.6, 0.5, 0.5, 0.5, 0.8, 0.8, 0.4, 0.4)
(17,24) (0.2, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0)
...
OCC-ROOM SCHEDULE THRU DEC 31
(ALL) OCC-ROOM-ALL
...

```

```

; MFRATE=1 (74)
P-SCH = OFF-KIT
P-H-S = 445
P-H-I = 435
E-SCH = EQUIP-KIT E-W = 3.0
L-SCH = LIGHT-KIT
L-T = SUS-LIGHT L-W = 1.7
SOURCE-TYPE HOT-WATER
SOURCE-SCHEDULE EQUIP-KIT
SOURCE-BTU/HR = 21452
S-T-O-S = 5.5 O.I.
FLOOR-WEIGHT = 70
Z-TYPE = CONDITIONED
. . .

```

ROOM	SPACE-CONDITIONS \$	S ROOMS S
	TEMPERATURE = (74)	ROOM-1
	P-SCH = OCC-ROOM	SPACE
	N-C-P = 2	MULTIPLIER = 12
	P-H-S = 230	SPACE-CONDITIONS = ROOM
	P-H-I = 190	AREA = 400
	E-SCH = LIGHT-ROOM E-W = 0.6	VOLUME = 3200
	L-SCH = LIGHT-ROOM	. . .
	L-T = INAND L-W = 1.0	EW1
	FLOOR-WEIGHT = 70	EXTERIOR-WALL
	Z-TYPE = CONDITIONED	WIDTH = 20
		AZIMUTH = 0
		. . .
		W1
		WINDOW
		HEIGHT = 1.5
		WIDTH = 20
		. . .
		ROOF CONSTRUCTION = ROOF-1
		TIKT = 0.0
		GND-REFLECTANCE = 0.0
		HEIGHT = 20
		WIDTH = 20
		. . .
		SL1
		UNDERGROUND-FLOOR
		LITE SLB-1
		AREA = 430
		U-EFFECTIVE = 0.104
		. . .
		ROOM-2
		SPACE LIKE ROOM-1
		MULTIPLIER = 12
		. . .
		EXTERIOR-WALL LIKE EW1 AZIMUTH = 180 ..
		WINDOW LIKE W1 ..
		ROOF LIKE R1 ..
		UNDERGROUND-FLOOR LIKE SL1 ..
		. . .
		ROOM-3
		SPACE LIKE ROOM-1
		MULTIPLIER = 12
		. . .
		EXTERIOR-WALL LIKE EW1 AZIMUTH = 180 ..
		WINDOW LIKE W1 ..
		ROOF LIKE R1 ..
		UNDERGROUND-FLOOR LIKE SL1 ..
		. . .
		ROOM-4
		SPACE LIKE ROOM-1
		MULTIPLIER = 12
		. . .
		EXTERIOR-WALL LIKE EW1 AZIMUTH = 210 ..
		WINDOW LIKE W1 ..
		ROOF LIKE R1 ..

ROOM	SPACE-CONDITIONS \$	S ROOMS S
	TEMPERATURE = (74)	ROOM-1
	P-SCH = OCC-ROOM	SPACE
	N-C-P = 2	MULTIPLIER = 12
	P-H-S = 230	SPACE-CONDITIONS = ROOM
	P-H-I = 190	AREA = 400
	E-SCH = LIGHT-ROOM E-W = 0.6	VOLUME = 3200
	L-SCH = LIGHT-ROOM	. . .
	L-T = INAND L-W = 1.0	EW1
	FLOOR-WEIGHT = 70	EXTERIOR-WALL
	Z-TYPE = CONDITIONED	WIDTH = 20
		AZIMUTH = 0
		. . .
		W1
		WINDOW
		HEIGHT = 1.5
		WIDTH = 20
		. . .
		ROOF CONSTRUCTION = ROOF-1
		TIKT = 0.0
		GND-REFLECTANCE = 0.0
		HEIGHT = 20
		WIDTH = 20
		. . .
		SL1
		UNDERGROUND-FLOOR
		LITE SLB-1
		AREA = 430
		U-EFFECTIVE = 0.104
		. . .
		ROOM-2
		SPACE LIKE ROOM-1
		MULTIPLIER = 12
		. . .
		EXTERIOR-WALL LIKE EW1 AZIMUTH = 180 ..
		WINDOW LIKE W1 ..
		ROOF LIKE R1 ..
		UNDERGROUND-FLOOR LIKE SL1 ..
		. . .
		ROOM-3
		SPACE LIKE ROOM-1
		MULTIPLIER = 12
		. . .
		EXTERIOR-WALL LIKE EW1 AZIMUTH = 180 ..
		WINDOW LIKE W1 ..
		ROOF LIKE R1 ..
		UNDERGROUND-FLOOR LIKE SL1 ..
		. . .
		ROOM-4
		SPACE LIKE ROOM-1
		MULTIPLIER = 12
		. . .
		EXTERIOR-WALL LIKE EW1 AZIMUTH = 210 ..
		WINDOW LIKE W1 ..
		ROOF LIKE R1 ..

/user2/bed/lirsce/DOE2/Proto/nursing.inp

Tue Jan 29 19:55:57 1991

3

```

;KG; BACKGROUND-FLOOR LIKE SIZ ...          COOL-TEMP-SCH KITCL
;THERMOSTAT-TYPE PROPORTIONAL

$ BUILDING RESOURCES $                         CNTRL-ROOM ZONE-CONTROL    70
                                                DESIGN-HEAT-T    70
                                                DESIGN-COOL-T    78
                                                DHW-ROOM      858.4
                                                HOT-WATER      858.4
                                                ROOMHT        ROOMHT
                                                COOL-TEMP-SCH  ROOMCL
                                                THERMOSTAT-TYPE PROPORTIONAL
                                                ...

$ LOADS REPORT DATA $                         MULTIP   ZONE
                                                ZONE-TYPE CONDITIONED
                                                ZONE-AIR MUL-AIR
                                                ZONE-CONTROL CNTRL-MUL
                                                ...
                                                KITCHEN  ZONE-LIKE MULTIP
                                                ZONE-AIR KIT-AIR
                                                ZONE-CONTROL CNTRL-KIT ..
                                                ROOM-1   ZONE-LIKE MULTIP
                                                MULTIPLIER = 1.2
                                                ZONE-CONTROL CNTRL-ROOM ..
                                                ...
                                                ROOM-2   ZONE-LIKE ROOM-1 ..
                                                ROOM-3   ZONE-LIKE ROOM-1 ..
                                                ROOM-4   ZONE-LIKE ROOM-1 ..

NORM-CONT SYSTEM-CONTROL 110  MIN-S-T
H-SCH   ALWAYSON
C-SCH   ALWAYSON
                                                ...
SYS1  SYSTEM $ multi-purpose
      SYSTEM-TYPE PZ
      OA-CONTROL FIXED
      S-C           NORM-CONT
      F-SCH         ALWAYSON
      ZONE-NAMES  (MULTIP) ..
                                                ...
SYS2  SYSTEM $ kitchen
      SYSTEM-TYPE PTAC
      S-C           NORM-CONT
      HEAT-SOURCE GAS-FURNACE
      ZONE-NAMES  (ROOM-1, ROOM-2, ROOM-3, ROOM-4) ..
                                                ...
PLT-1  PLANT-ASSIGNMENT
      SYSTEM-NAMES (SYS1, SYS2, SYS3) ..
      ...
      #defi sys_#pt1 3
      ...
      $ SYSTEM REPORT DATA $                         $ SYSTEM REPORT DATA $
      ...
      #include /user2/bed/lirsce/DOE2/Proto/system.refinc
      ...
CNTRL-MUL ZONE-CONTROL    70
DESIGN-HEAT-T    70
DESIGN-COOL-T    78
HEAT-TEMP-SCH  MULCL
COOL-TEMP-SCH  MULCL
THERMOSTAT-TYPE PROPORTIONAL
                                                ...
                                                ...
CNTRL-KIT ZONE-CONTROL    70
DESIGN-HEAT-T    70
DESIGN-COOL-T    78
HEAT-TEMP-SCH  KITHT

```

/user2/bed/1irsce/DOE2/Proto/nursing.inp

4

```
!$<          P-1 TYPE: PLANT DATA: 512 - 999 . .
$ PLANT REPORT DATA $  
@include /user2/bed/1irsce/DOE2/Proto/plant.rep.inp  
STOP . .
```

Tue Jan 29 19:55:57 1991

/user2/bed/lirsce/DOE2/Proto/prischool.inp

Mon Jan 28 19:20:18 1991 1

\$ PROJ-1 IN RCL input for Primary School  
\$ 1990 CEC Test Study

POST-PROCESSOR PARTIAL ..  
INPUT LOADS ..

TITLE LINE-1 \* 1990 CEC Test Study\*  
LINE-2 \*Primary School\* ..

RUN-PERIOD JAN 1 1986 THRU DEC 31 1986 ..

BUILDING-LOCATION LAT 34.07 LON 118.25 ALT 50 T-2 8  
AZIMUTH 0  
HOLIDAY YES  
DAYLIGHT-SAVINGS YES ..

ABORT ERRORS ..  
LIST WARNINGS ..  
PARAMETER CREDIT-DAYLTG NO ..

S LOADS SCHEDULE DATA \$

OCC-CLASS1 = DAY-SCHEDULE  
(1, 6) (0)  
(7) (.1)  
(8,11) (.9)  
(12) (.2)  
(13,15) (.8)  
(16,18) (.2)  
(19,24) (0) ..

OCC-CLASS2 = DAY-SCHEDULE  
(1, 24) (0) ..

OCC-CLASS = WEEK-SCHEDULE (WD) OCC-CLASS1 (WEH) OCC-CLASS2 ..  
UNOC-CLASS = WEEK-SCHEDULE (ALL) OC-CLASS2 ..  
OCC-CLASS = SCHEDULE THRU JUN 1 OC-CLASS  
THRU SEP 1 UNOC-CLASS  
THRU DEC 20 OC-CLASS  
THRU DEC 31 UNOC-CLASS ..

LTS-CLASS1 = DAY-SCHEDULE  
(1, 6) (.1)  
(7) (.2)  
(8,15) (.9)  
(19,18) (.3) ..

LTS-CLASS2 = DAY-SCHEDULE  
(1, 24) (1) ..

LTS-CLASS = WEEK-SCHEDULE (WD) LTS-CLASS1 (WEH) LTS-CLASS2 ..  
UNLT-CLASS = WEEK-SCHEDULE (ALL) LTS-CLASS2 ..  
LTS-CLASS = SCHEDULE THRU JUN 1 LT-CLASS  
THRU SEP 1 UNLT-CLASS  
THRU DEC 20 LT-CLASS  
THRU DEC 31 UNLT-CLASS ..

OCC-KIT1 = DAY-SCHEDULE  
(1, 24) (0) ..

OCC-KIT2 = DAY-SCHEDULE  
(1, 24) (0) ..

OC-KIT = WEEK-SCHEDULE (WD) OCC-KIT1 (WEH) OCC-KIT2 ..  
UNOC-KIT = WEEK-SCHEDULE (ALL) OC-KIT2 ..  
OCC-KIT = SCHEDULE THRU JUN 1 OC-KIT  
THRU SEP 1 UNOC-KIT  
THRU DEC 20 OC-KIT  
THRU DEC 31 UNOC-KIT ..

LTS-KIT1 = DAY-SCHEDULE  
(1, 9) (.1)  
(10) (.5)  
(11,13) (1)  
(14,24) (.1) ..

LTS-KIT2 = DAY-SCHEDULE  
(1, 24) (0) ..

LT-KIT = WEEK-SCHEDULE (WD) LTS-KIT1 (WEH) LTS-KIT2 ..  
UNLT-KIT = WEEK-SCHEDULE (ALL) LTS-KIT2 ..  
LTS-KIT = SCHEDULE THRU JUN 1 LT-KIT  
THRU SEP 1 UNLT-KIT  
THRU DEC 20 LT-KIT  
THRU DEC 31 UNLT-KIT ..

EQP-KITCHEN1 = DAY-SCHEDULE  
(1, 9) (0)  
(10) (.25)  
(11) (.3)  
(12) (.9)  
(13) (.8)  
(14, 24) (0) ..

EQP-KITCHEN2 = DAY-SCHEDULE  
(1, 24) (0) ..

EQP-KITCHEN = WEEK-SCHEDULE (WD) EQP-KITCHEN1 (WEH) EQP-KITCHEN2 ..

UNEQ-KITCHEN = WEEK-SCHEDULE (ALL) EQP-KITCHEN2  
EQP-KIT = SCHEDULE THRU JUN 1 EQ-KITCHEN  
THRU SEP 1 UNEQ-KITCHEN  
THRU DEC 20 EQ-KITCHEN  
THRU DEC 31 UNEQ-KITCHEN ..

INFIL1 = DAY-SCHEDULE  
(1, 7) (1)  
(8,18) (0)  
(19,24) (1) ..

INFIL2 = DAY-SCHEDULE  
(1, 24) (1) ..

INFIL = WEEK-SCHEDULE (WD) INFIL1 (WEH) INFIL2 ..  
UNINF = WEEK-SCHEDULE (ALL) INFIL2 ..  
INFIL = SCHEDULE THRU JUN 1 INF  
THRU SEP 1 UNINF  
THRU DEC 20 INF  
THRU DEC 31 UNINF ..

SERVICE-HW1 = DAY-SCHEDULE  
(1, 7) (0)  
(8) (1.05)  
(9) (.3)  
(10) (.55)  
(11) (1.6)  
(12) (.7)  
(13) (.75)

```

(1.5)   (1.5)   (1.5)
(1.5, 1.6) (1.5, 1.7) (1.5, 1.7)
SERVICE-HW2 = DAY-SCHEDULE (C) ...
SRC-HW = WEEK-SCHEDULE (6D) SERVICE-HW1 (6W) SERVICE-HW2 ...
UNSRC-HW = WEEK-SCHEDULE (ALL) SERVICE-HW2 ...
SERVICE-HW = SCHEDULE THRU CIN 1 SRC-HW
THRU SEP 1 UNSRC-HW
THRU DEC 20 SRC-HW
THRU DEC 31 UNSRC-HW ...

5 LOADS DATA $ ...

S Exterior Surfaces
IN-W MATERIAL RES = 1 ...
WAI LAYERS MATERIAL = (CB31, IN-W, GP02) ...
IN-R MATERIAL RES = 4.9 ...
RF1 LAYERS MATERIAL = (BR01, PW02, IN-R, AL33, GP02) ...
INSIDE-FLM-RES = .61 ...
TYP-WALL = CONSTRUCTION LAYERS = WAI ...
CONSTRUCTION LAYERS = RFI ...
PANES = 1 ...
GLASS-TYPE = C.85 ...
SHADING-COEFF = 1.03 ...
GLASS-CONDUCTANCE = ...

S Slab = 2", soil, 6" heavy-weight conc.
SOIL MATERIAL THICKNESS = 2.0 SPECIFIC-HEAT = 0.26
CONDUCTIVITY = 1.0 DENSITY = 115 ...
SLABL LAYERS MAT = (SOIL, C15) ...
SLAB-1 CONSTRUCTION LAYERS = SLAB: ...
SET-DEFAULT FOR WINDOW CLASS = ...

SP-CLASS SPACE-CONDITIONS = (75)
TEMPERATURE = OCC-CLASS
PEOPLE-SCHEDULE = 20
NUMBER-OF-PEOPLE = 450
PEOPLE-HEAT-GAIN = 5
EQUIP-SCHEDULE = LTS-CLASS
EQUIPMENT-W/SQFT = 2.2
LIGHTING-SCHEDULE = LTS-CLASS
LIGHTING-TYPE = REC-FLUOR-NV
INF-SCHEDULE = INFIL
INF-METHOD = AIR-CHANGE
INF-CFM/SQFT = .083
FLOOR-WEIGHT = 70

SP-113 SPACE-CONDITIONS = (75)
TEMPERATURE = OCC-CLASS
PEOPLE-SCHEDULE = 80
NUMBER-OF-PEOPLE = 550
PEOPLE-HEAT-GAIN = LTS-CLASS
EQUIP-SCHEDULE = EQUIPMENT-W/SQFT = 5
LIGHTING-SCHEDULE = LTS-CLASS
LIGHTING-TYPE = REC-FLUOR-NV
LIGHTING-W/SQFT = 1.5

IN-F-SCHEDULE = INFIL
INF-METHOD = AIR-CHANGE
INF-CFM/SQFT = .083
FLOOR-WEIGHT = 70

SP-KIT SPACE-CONDITIONS = (15)
TEMPERATURE = OCC-KIT
PEOPLE-SCHEDULE = 10
NUMBER-OF-PEOPLE = 640
PEOPLE-HEAT-GAIN = EQP-KIT
EQUIP-SCHEDULE = EQUIPMENT-W/SQFT = 50
LIGHTING-SCHEDULE = LTS-KIT
LIGHTING-TYPE = REC-FLUOR-NV
LIGHTING-W/SQFT = 1.7
SOURCE-HR/HR = 300000
SOURCE-SCHEDULE = HOT-WATER
SOURCE-TYPE = SOURCE-SENSIBLE = .3
SOURCE-LATENT = .7
INF-SCHEDULE = INFIL
INF-METHOD = AIR-CHANGE
INF-CFM/SQFT = .333
FLOOR-WEIGHT = 70

...
CLASS = ...
SPACE-CONDITIONS = SP-CLASS
AREA = 1800
VOLUME = 1800
MULTIPLIER = 15
...
EXTERIOR-WALL = TYP-WALL
WIDTH = 15
HEIGHT = 10
AZIMUTH = 0
WINDOW = WIDTH = 15
HEIGHT = 2.5
EXTERIOR-WALL LIKE EWALL AZIMUTH = 90 ...
WINDOW LIKE WINDC ...
EXTERIOR-WALL LIKE EWALL AZIMUTH = 180 ...
WINDOW LIKE WINDC ...
EXTERIOR-WALL LIKE EWALL AZIMUTH = 270 ...
WINDOW LIKE WINDC ...
ROOF = CONSTRUCTION = TYP-ROOF
GND-REFLECTANCE = 0
TILT = 0
WIDTH = 60
HEIGHT = 30
UNDERCROWD-FLOOR = SLAB-1
CONSTRUCTION = SLAB-1
AREA = 1800
G-REFLECTIVE = 0.3346
...

```

/user2/bed/lirsce/DOE2/Proto/prischool.inp

Mon Jan 28 19:20:18 1991 3

```

LIBRARY-
SPACE-CONDITIONS = SP-LIB
AREA      = 6000
VOLUME    = 60000
...
EWALLL
WINDL
EWALLL LIKE EWALLC WIDTH = 80 ...
WINDOW LIKE WINDC WIDTH = 80 ...
EXTERIOR-WALL LIKE EWALLL AZIMUTH = 90 ...
WINDOW LIKE WINDL ...
EXTERIOR-WALL LIKE EWALLL AZIMUTH = 180 ...
WINDOW LIKE WINDL ...
EXTERIOR-WALL LIKE EWALLL AZIMUTH = 270 ...
WINDOW LIKE WINDL ...
ROOF      LIKE EROFC
WIDTH     = 60
HEIGHT    = 100
...
UNDERGROUND-FLOOR LIKE SLBC
AREA      = 6000
U-EFFECTIVE = 0.0586
...
KITCHEN
SPACE-CONDITIONS = SP-KIT
AREA      = 2000
VOLUME    = 20000
...
EWALKL
EWALKL LIKE EWALKC
WIDTH     = 60 ...
EXTERIOR-WALL LIKE EWALKL AZIMUTH = 90 ...
EXTERIOR-WALL LIKE EWALKL AZIMUTH = 180 ...
EXTERIOR-WALL LIKE EWALKL AZIMUTH = 270 ...
ROOF      LIKE EROFC
WIDTH     = 20
HEIGHT    = 100
...
UNDERGROUND-FLOOR LIKE SLBC
AREA      = 2000
U-EFFECTIVE = 0.0586
...
$ LOADS REPORT DATA S
BUILDING-RESOURCE HOT-WATER
HW-SCHEDULE      = 34000
SERVICE-HW
...
$ LIBRARY ZONE
CLASSCON = ZONE-CONTROL
DESIGN-HEAT-T 75
DESIGN-COOL-T 78
HEAT-TEMP-SCH HTG-CLASS
COOL-TEMP-SCH CLG-CLASS
THROTTLING-RANGE 2
THERMOSTAT-TYPE PROPORTIONAL
...
$ ZONE-TYPE CONDITIONED
ZONE-AIR ZNAR
ZONE-CONTROL CLASSCON
...
ZONE LIBRARY ...
ZONE LIKE LIBRARY
ZONE CONTROL CLASSCON
MULTIPLIER 40 ...
SYSTEM SCHEDULES S

```

48

```

Mon Jan 28 19:20:18 1991      4
/usr2/bed/lirsce/DOE2/Proto/prischool.inp

SYS1:
  SYSTEM-LIKE SYS2
    SYSTEM-TYPE   PMS25
    COOL-SET-T    55
    MAX-SUPPLY-T  105
    MIN-SUPPLY-T  55
    REHEAT-DELTA-T 50
    OA-CONTROL    TEMP
    MIN-CFM-RATIO 0.5
    ECONO-LIMIT-T 68
    FAN-SCHEDULE  FAN-CLASS
    RETURN-STATIC 1.0
    RETURN-EFF    0.66
    HEAT-SOURCE:  GAS-FURNACE
    RETURN-AIR-PATH DUCT
    ZONE-NAMES:   (LIBRARY)
    ...

SYS2 SYSTEM LIKE SYS1 ZONE-NAMES (KITCHEN) ..
SYS3 SYSTEM LIKE SYS1 ZONE-NAMES (CLASS) ..

PLT-1  PLANT-ASSIGNMENT SYSTEM-NAMES (SYS1,SYS2,SYS3) ..

#detl sys repl 3

          S SYSTEM REPORT DATA S
#include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

          S PLANT DATA S
INPUT PLANT ...
PLT-1  PLANT-ASSIGNMENT ..
DHW   P-E TYPE DHW-HEATER SIZE -999 ..
          S PLANT REPORT DATA S
#include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc
STOP  ..

```

/user2/bed/lirsce/DOE2/Proto/secschool.inp

Mon Jan 28 19:22:51 1991

1

```

5 1986-1-1 00:00:00 1986-12-31 00:00:00
5 1990 CEC LS/EU Study

POST-PROCESSOR PARTIAL ...
INPUT LOADS ...
TITLE LINE-1 • 1990 CEC LS/EU Study
LINE-2 • Secondary School.
.

RUN-PERIOD JAN 1 1986 THRU DEC 31 1986 ...

BUILDING-LOCATION LAT 34.07 LON 118.25 ALT 50 T-Z 8
AZIMUTH 0
HOLIDAY YES
DAYLIGHT-SAVINGS YES
...
ABORT ERRORS ...
LIST WARNINGS ...
PARAMETER CREDIT-DAYLTG NO ...
.

5 LOADS SCHEDULE DATA $

OCC-CLASS: - DAY-SCHEDULE
(1, 6) (0)
(1) (.1)
(8, 11) (.9)
(12, 15) (.8)
(16) (.45)
(17, 21) (.33)
(22, 24) (.1) ...
OCC-CLASS2 - DAY-SCHEDULE
OC-CLASS - WEEK-SCHEDULE (ALL) OCC-CLASS1 (WEH) OCC-CLASS2 ...
UNOC-CLASS - WEEK-SCHEDULE (ALL) LTS-CLASS1 (WEH) LTS-CLASS2 ...
OCC-CLASS - SCHEDULE THRU JUN 1 OC-CLASS
THRU SEP 1 UNOC-CLASS
THRU DEC 20 OC-CLASS
THRU DEC 31 UNOC-CLASS ...
.

LTS-CLASS1 - DAY-SCHEDULE
(1, 6) (1)
(7) (.2)
(8, 12) (.9)
(13, 16) (.8)
(17, 23) (.6)
(24) (.1) ...
LTS-CLASS2 - DAY-SCHEDULE
(1, 24) (1) ...
LIT-CLASS - WEEK-SCHEDULE (WD) LTS-CLASS1 (WEH) LTS-CLASS2 ...
UNLT-CLASS - WEEK-SCHEDULE (ALL) LTS-CLASS2 ...
LTS-CLASS - SCHEDULE THRU JUN 1 LT-CLASS
THRU SEP 1 UNLT-CLASS
THRU DEC 20 LT-CLASS
THRU DEC 31 UNLT-CLASS ...
.

OCC-GYM1 - DAY-SCHEDULE
(1, 7) (0)
(8, 20) (0.9)
(21, 24) (0) ...
LTS-GYM2 - DAY-SCHEDULE
(1, 24) (0) ...
LT-GYM - WEEK-SCHEDULE (WD) LTS-GYM1 (WEH) LTS-GYM2 ...
UNLT-GYM - WEEK-SCHEDULE (ALL) LTS-GYM2 ...
LTS-GYM - SCHEDULE THRU SEP 1 LT-GYM
THRU DEC 20 LT-GYM
THRU DEC 31 UNLT-GYM ...
.

OCC-AUD1 - DAY-SCHEDULE
(1, 9) (0)
(10, 11) (0.75)
(12) (0.2)
(13, 14) (0.75)
(15, 24) (0) ...
OCC-AUD2 - DAY-SCHEDULE
(1, 24) (0) ...
OC-AUD - WEEK-SCHEDULE (WD) OCC-AUD1 (WEH) OCC-AUD2 ...
UNOC-AUD - WEEK-SCHEDULE (ALL) OCC-AUD2
OCC-AUD - SCHEDULE THRU JUN 1 OC-AUD
THRU SEP 1 UNOC-AUD
THRU DEC 20 OC-AUD
THRU DEC 31 UNOC-AUD ...
.

LTS-AUD1 - DAY-SCHEDULE
(1, 9) (0)
(10, 14) (0.9)
(15, 24) (0) ...
LTS-AUD2 - DAY-SCHEDULE
(1, 24) (0) ...
LT-AUD - WEEK-SCHEDULE (WD) LTS-AUD1 (WEH) LTS-AUD2 ...
UNLT-AUD - WEEK-SCHEDULE (ALL) LTS-AUD2
LTS-AUD - SCHEDULE THRU JUN 1 LT-AUD
THRU SEP 1 UNLT-AUD
THRU DEC 20 LT-AUD
THRU DEC 31 UNLT-AUD ...
.

OCC-KIT1 - DAY-SCHEDULE
(1, 8) (0)
(9, 10) (1.7)
(11, 12) (1)
(13, 18) (.4)
(19, 24) (0) ...
OCC-KIT2 - DAY-SCHEDULE
(1, 24) (C) ...
OC-KIT - SCHEDULE (WD) OCC-KIT1 (WEH) OCC-KIT2 ...
UNOC-KIT - WEEK-SCHEDULE (ALL) OCC-KIT2
OCC-C-KIT - SCHEDULE THRU JUN 1 OC-KIT ...
.
```

/user2/bed/lirsce/DOE2/Proto/secsschool.inp

Mon Jan 28 19:22:51 1991 2

```

    TSU SURF = UNL-KIT
    TSU DEC 20 GS-KIT
    THRU DEC 31 UNOC-KIT      ...          THRU DEC 31 UNL-DIN   ...
    LTS-KIT1 = DAY-SCHEDULE
        (1,9) (.1)
        (10) (.1)
        (11,18) (.1) ...
        (19,24) (.1) ...
    LTS-KIT2 = DAY-SCHEDULE
        (1,24) (.1) ...
    LT-KIT = WEEK-SCHEDULE (WD) LTS-KIT1 (WEH) LTS-KIT2 ...
    UNLT-KIT = WEEK-SCHEDULE (ALL) LTS-KIT2 ...
    LTS-KIT = SCHEDULE THRU SEP 1 LT-KIT
    THRU DEC 20 LT-KIT
    THRU DEC 31 UNLT-KIT      ...
    EQP-KITCHEN1 = DAY-SCHEDULE
        (1,9) (0)
        (10) (.1)
        (11) (.4)
        (12) (.3)
        (13) (.2)
        (14) (.1)
        (15) (.1)
        (16,24) (0) ...
    EQP-KITCHEN2 = DAY-SCHEDULE
        (1,24) (0) ...
    EQ-KITCHEN = WEEK-SCHEDULE (WD) EQP-KITCHEN1 (WEH) EQP-KITCHEN2
    UNEQ-KITCHEN = WEEK-SCHEDULE (ALL) EQP-KITCHEN2
    QP-KIT = SCHEDULE THRU JUN 1 EQ-KITCHEN
    THRU SEP 1 UNEQ-KITCHEN
    THRU DEC 20 EQ-KITCHEN
    THRU DEC 31 UNEQ-KITCHEN      ...
    OCC-DIN1 = DAY-SCHEDULE
        (1,10) (0)
        (11,13) (1)
        (14,15) (.2)
        (16,24) (0) ...
    OCC-DIN2 = DAY-SCHEDULE
        (1,24) (0) ...
    OC-DIN = WEEK-SCHEDULE (WD) OCC-DIN1 (WEH) OCC-DIN2 ...
    UNOC-DIN = WEEK-SCHEDULE (ALL) OCC-DIN2
    OCC-DIN = SCHEDULE THRU JUN 1 OC-DIN
    THRU SEP 1 UNOC-DIN
    THRU DEC 20 OC-DIN
    THRU DEC 31 UNOC-DIN      ...
    LTS-DIN1 = DAY-SCHEDULE
        (1,9) (0)
        (10) (.4)
        (11,13) (1)
        (14,15) (.4)
        (16,24) (0) ...
    LTS-DIN2 = DAY-SCHEDULE
        (1,24) (0) ...
    LT-DIN = WEEK-SCHEDULE (WD) LTS-DIN1 (WEH) LTS-DIN2 ...
    UNLT-DIN = WEEK-SCHEDULE (ALL) LTS-DIN2
    LTS-DIN = SCHEDULE THRU JUN 1 LT-DIN
    THRU SEP 1 UNIT-DIN
    THRU DEC 20 LT-DIN      ...
    INFILL = DAY-SCHEDULE
        (1,7) (1)
        (8,23) (0)
        (24) (1) ...
    INFILL2 = DAY-SCHEDULE
        (1,4) (1)
        (11) ...
    INF = WEEK-SCHEDULE (WD) INFILL (WEH) INFILL2 ...
    UNINF = WEEK-SCHEDULE (ALL) INFILL ...
    INFIL = SCHEDULE THRU JUN 1 INF
    THRU SEP 1 UNINF
    THRU DEC 20 INF      ...
    THRU DEC 31 UNINF   ...
    SERVICE-HW1 = DAY-SCHEDULE
        (1,7) (0)
        (8) (.05)
        (9) (-.3)
        (10) (.35)
        (11) (.6)
        (12) (.7)
        (13) (.75)
        (14) (.8)
        (15,16) (.6)
        (17,18) (.5)
        (19) (.15)
        (20,22) (.2)
        (23,24) (0) ...
    SERVICE-HW2 = DAY-SCHEDULE
        (1,24) (0) ...
    SRC-HW = WEEK-SCHEDULE (WD) SERVICE-HW1 (WEH) SERVICE-HW2 ...
    UNSRC-HW = WEEK-SCHEDULE (ALL) SERVICE-HW2
    SERVICE-HW = SCHEDULE THRU SEP 1 SRC-HW
    THRU DEC 20 UNSRC-HW
    THRU DEC 31 SRC-HW   ...
    PULL-SHADE = SCHEDULE THRU DEC 31 (ALL) (1,24) (40)
    SHADE-MULT = SCHEDULE THRU DEC 31 (ALL) (1,24) (.5) ...
    $ LOADS DATA S
    $ Exterior Surfaces
    INW MATERIAL RES = 1
    WAL LAYERS MATERIAL = (CB31,IN-W,GPC2)
    INR MATERIAL RES = 4.9
    RFL LAYERS MATERIAL = (B01,PW04,IN-R,AL33,GP02)
    INSIDE-FILE-RES=61
    ...
    TYP-WALL = CONSTRUCTION LAYERS = WAL
    TYP-ROOF = CONSTRUCTION LAYERS = RF1
    GLASS = GLASS-TYPE PATES = 1
    SHADING-COEF = 0.85
    GLASS-CONDUCTANCE = 1.03
    ...
    $ slab = 2' soil, 6" heavy-weight conc.
    SOIL MATERIAL THICKNESS = 2 G SPECIFIC-HEAT = 0.26
    CONDUCTIVITY = 1.0 DENSITY = 115 ...
    SLAB-LAYERS MAT = (SOIL,CC15) ...
    SLAB-1 CONSTRUCTION LAYERS = SLABL ...

```

`/user2/bed/lirsce/doe2/proto/secschool.inp` Mon Jan 28 19:22:51 1991

SET-DEFAULT FOR WINDOW	GLASS-TYPE	Glass!										
	WIN-SHADE-TYPE	MOVABLE-INTERIOR										
	MAX-SOLAR-SCH	PULL-SHADE										
	SHADING-SCHEDULE	SHADE-MULT										
		..										
SP-CLASS	SPACE-CONDITIONS	(75)										
	TEMPERATURE	OCC-CLASS										
	PEOPLE-SCHEDULE	20										
	NUMBER-OF-People	450										
	PEOPLE-HEAT-GAIN	LTS-CLASS										
	EQUIP-SCHEDULE	.5										
	EQUIPMENT-W/SQFT	LTS-CLASS										
	LIGHTING-SCHEDULE	REC-FLUOR-NV										
	LIGHTING-TYPE	2.2										
	LIGHTING-W/SQFT	INFIL										
	INF-SCHEDULE	INFIL										
	INF-METHOD	AIR-CHANGE										
	INF-CFM/SQFT	.083										
	FLOOR-WEIGHT	70										
		..										
SP-LIB	SPACE-CONDITIONS	(75)										
	TEMPERATURE	OCC-CLASS										
	PEOPLE-SCHEDULE	315										
	NUMBER-OF-People	550										
	PEOPLE-HEAT-GAIN	LTS-CLASS										
	EQUIP-SCHEDULE	.5										
	LIGHTING-SCHEDULE	LTS-CLASS										
	LIGHTING-TYPE	REC-FLUOR-NV										
	LIGHTING-W/SQFT	1.5										
	INF-SCHEDULE	INFIL										
	INF-METHOD	AIR-CHANGE										
	INF-CFM/SQFT	.083										
	FLOOR-WEIGHT	70										
		..										
SP-GYM	SPACE-CONDITIONS	(75)										
	TEMPERATURE	OCC-GYM										
	PEOPLE-SCHEDULE	175										
	NUMBER-OF-People	800										
	PEOPLE-HEAT-GAIN	LTS-GYM										
	EQUIP-SCHEDULE	.5										
	LIGHTING-SCHEDULE	LTS-GYM										
	LIGHTING-TYPE	SUS-FLUOR										
	LIGHTING-W/SQFT	0.65										
	INF-SCHEDULE	INFIL										
	INF-METHOD	AIR-CHANGE										
	INF-CFM/SQFT	.333										
	FLOOR-WEIGHT	70										
		..										
SP-AUD	SPACE-CONDITIONS	(75)										
	TEMPERATURE	OCC-AUD										
	PEOPLE-SCHEDULE	194										
	NUMBER-OF-People	450										
	PEOPLE-HEAT-GAIN	LTS-AUD										
	EQUIP-SCHEDULE	.5										
	LIGHTING-SCHEDULE	LTS-AUD										
	WINDC	WINDOW										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	AZIMUTH										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	AZIMUTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										
	WINDC	HEIGHT										
	WINDC	DEPTH										
	WINDC	ANGLE										
	WINDC	CONSTRUCTION										
	WINDC	WIDTH										

```

/user2/bed/lirsce/DOE2/Proto/secschool.inp      Mon Jan 28 19:22:51 1991      4

WIND LIKE WINDC ...
EXTERIOR-WALL-LIKE EWALLC AZIMUTH = 180 ...
WINDOW-LIKE WINDC ...
EXTERIOR-WALL-LIKE EWALLC AZIMUTH = 270 ...
WINDOW-LIKE WINDC ...
UNDERGROUND-FLOOR CONSTRUCTION = SLAB-1
AREA = 1800
U-EFFECTIVE = 0.0346

CLASSST - SPACE-LIKE CLASSB 40
MULTIPLIER = " ...

EXTERIOR-WALL-LIKE EWALLC ...
WINDOW-LIKE WINDC ...
EXTERIOR-WALL-LIKE EWALLC AZIMUTH = 90 ...
WINDOW-LIKE WINDC ...
EXTERIOR-WALL-LIKE EWALLC AZIMUTH = 180 ...
WINDOW-LIKE WINDC ...
EXTERIOR-WALL-LIKE EWALLC AZIMUTH = 270 ...
WINDOW-LIKE WINDC ...
ROOF CONSTRUCTION = TYP-ROOF
GND-REFLECTANCE = 0
TILT = 0
WIDTH = 60
HEIGHT = 30
...
LIBRARY- SPACE- CONDITIONS = SP-LIB
AREA = 31495
VOLUME = 314950

EWALLL EXTERIOR-WALL-LIKE EWALLC WIDTH = 177 ...
WINDOW-LIKE WINDC WIDTH = 177 ...
EXTERIOR-WALL-LIKE EWALLL AZIMUTH = 90 ...
WINDOW-LIKE WINDL ...
EXTERIOR-WALL-LIKE EWALLL AZIMUTH = 180 ...
WINDOW-LIKE WINDL ...
EXTERIOR-WALL-LIKE EWALLL AZIMUTH = 270 ...
WINDOW-LIKE WINDL ...
UNDERGROUND-FLOOR LIKE SLBC
AREA = 31495
U-EFFECTIVE = 0.00586

GYM - SPACE- CONDITIONS = SP-GYM
AREA = 31495
VOLUME = 1007850

EWALLC EXTERIOR-WALL-LIKE EWALLC WIDTH = 177 HEIGHT = 32 ...
WINDOW-LIKE WINDC WIDTH = 177 HEIGHT = 4 ...
EXTERIOR-WALL-LIKE EWALLG AZIMUTH = 90 ...
WINDOW-LIKE WINDG WIDTH = 177 HEIGHT = 4 ...
EXTERIOR-WALL-LIKE EWALLG AZIMUTH = 180 ...
WINDOW-LIKE WINDG ...
EXTERIOR-WALL-LIKE EWALLG AZIMUTH = 270 ...
WINDOW-LIKE WINDG ...
UNDERGROUND-FLOOR LIKE SLBC
AREA = 31495

BUILDING-PESOURCE HOT-WATER

```

Mon Jan 28 19:22:51 1991

```

U-EFFECTIVE = 0.00586
...
ROOF LIKE EROOFC
WIDTH = 177
HEIGHT = 177
...
AUDITORIUM = SPACE- CONDITIONS = SP-AUD
AREA = 19330
VOLUME = 621210

EWALLA EXTERIOR-WALL-LIKE EWLLC
WIDTH = 139 HEIGHT = 32 ...
EXTERIOR-WALL-LIKE EWALLA AZIMUTH = 90 ...
EXTERIOR-WALL-LIKE EWALLA AZIMUTH = 180 ...
EXTERIOR-WALL-LIKE EWALLA AZIMUTH = 270 ...
UNDERGROUND-FLOOR LIKE SLBC
AREA = 19380
U-EFFECTIVE = 0.00747
...
ROOF LIKE EROOFC
WIDTH = 139
HEIGHT = 139
...
KITCHEN - SPACE- CONDITIONS = SP-KIT
AREA = 4845
VOLUME = 49450

EWALLK EXTERIOR-WALL-LIKE EWALLC
WIDTH = 52 ...
EXTERIOR-WALL-LIKE EWALLK AZIMUTH = 90 ...
EXTERIOR-WALL-LIKE EWALLK AZIMUTH = 180 ...
EXTERIOR-WALL-LIKE EWALLK AZIMUTH = 270 ...
ROOF LIKE EROOFC
WIDTH = 52
HEIGHT = 52
...
DINNING - SPACE- CONDITIONS = SP-DIN
AREA = 9690
VOLUME = 69900

EWALLD EXTERIOR-WALL-LIKE EWALLC
WIDTH = 74 ...
WINDOW-LIKE WINDC
WIDTH = 74 HEIGHT = 4 ...
EXTERIOR-WALL-LIKE EWALLD AZIMUTH = 90 ...
WINDOW-LIKE WINDD ...
EXTENSION-WALL-LIKE EWALLD AZIMUTH = 180 ...
WINDOW-LIKE WINDD ...
EXTERIOR-WALL-LIKE EWALLD AZIMUTH = 270 ...
WINDOW-LIKE WINDD ...
ROOF LIKE EROOFC
WIDTH = 74
HEIGHT = 74
...
BUILDING-PESOURCE HOT-WATER

```

/user2/bed/lirsce/DOE2/Proto/secschool.inp

Mon Jan 28 19:22:51 1991

```

Mon Jan 28 19:22:51 1991      6
/usr2/bed/lirsce/DOE2/Proto/secschool.imp

FAN-SCHEDULE          FAN-OTHER
RETURN-STATIC          1.0-
RETURN-EFF             0.66
HEAT-SOURCE            GAS-FURNACE
RETURN-AIR-PATH        DUCT
ZONE-NAMES             (LIBRARY)
.

SYS2 SYSTEM  LIKE  SYS1 ZONE-NAMES (GYM) ..
SYS3 SYSTEM  LIKE  SYS1 ZONE-NAMES (AUDITORIUM) ..
SYS4 SYSTEM  LIKE  SYS1 ZONE-NAMES (KITCHEN) ..
SYS5 SYSTEM  LIKE  SYS1 ZONE-NAMES (DINNING) ..
SYS6 SYSTEM  LIKE  SYS1
FAN-SCHEDULE FAN-CLASS
ZONE-NAMES (CLASSB) ..
SYS7 SYSTEM  LIKE  SYS6 ZONE-NAMES (CLASST) ..

PLT-1    PLANT-ASSIGNMENT SYSTEM-NAMES (SYS1,SYS2,SYS3,
                               SYS4,SYS5,SYS6,SYS7) ..

##define sys_repl 17

$ SYSTEM REPORT DATA $

#include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

$ PLANT DATA $

INPUT PLANT
PLT-1    PLANT-ASSIGNMENT ..
DHW     P-E TYPE DHW-HEATER SIZE -999 ..
HMG     P-E TYPE HW-BOILER SIZE -999 I-N 2 ..
PLANT-PARAMETERS
BOILER-FUEL NATURAL-GAS ..

$ PLANT REPORT DATA $

#include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc
STOP ..

```

/user2/bed/lirsce/DOE2/Proto/smhotell.inp

Tue Jan 29 19:56:13 1991

```

S DOE-2.1D BG; Input for Small Hotel/Motel;
S 1990 CEC LS/EGI Study

POST-PROCESSOR PARTIAL ..
INPUT LOADS ..

TITLE LINE-1 *1990 CEC LS/EGI Study*
LINE-2 *Small Hotel/Motel*.

RUN-PERIOD JAN 1 1986 THRU DEC 31 1986 ..

BUILDING-LOCATION LAT 34.07 LON 118.25 ALT 50 T-Z 8

AZIMUTH 0
HOLIDAY YES
DAYLIGHT-SAVINGS YES
.

ABORT ERRORS ..
LIST WARNINGS ..
PARAMETER CREDIT-DAYLTG NO ..
.

S LOADS SCHEDULE DATA $
```

	(1, 8)	(1, .1)	(1, .1)	(1, .2)	(4, .6)
OCC-LOB-ALL	(1, 8)	(1, .1)	(1, .1)	(1, .2)	(4, .6)
(9, 16)	(.6, .4)	(.2, .2)	(.2, .2)	(.2, .3)	(.3, .1)
(17, 24)	(.6, .8)	(.8, .7)	(.5, .5)	(.3, .3)	(.1)

```

OCC-LOB = SCHEDULE THRU DEC 31
(ALL) OCC-LOB-ALL
.

LIGHT-LOB = SCHEDULE THRU DEC 31
(ALL) (1, 24) (1) ..
.

OCC-LND = SCHEDULE THRU DEC 31
(ALL) OCC-LND-ALL
.

LIGHT-LND = SCHEDULE THRU DEC 31
(ALL) (1, 7) (.1) (8, 17) (.9) (18, 24) (.1)
.

EQUIP-LND = SCHEDULE THRU DEC 31
(ALL) (1, 7) (0) (8, 17) (.8) (18, 24) (0)
.

OCC-ROOM = SCHEDULE THRU DEC 31
(ALL) OCC-ROOM-ALL
.

LIGHT-ROOM-ALL = DAY-SCHEDULE
(1, 8) (.8, .8, .8, .8, .8, .4)
(9, 16) (.4, .2, .2, .2, .2, .2, .3)
(17, 24) (.5, .5, .5, .6, .6, .7, .8, .8)
.

EQUIP-ROOM = SCHEDULE THRU DEC 31
(ALL) EQUIP-ROOM-ALL
.

LIGHT-ROOM = DAY-SCHEDULE
(1, 8) (.2, .15, .1, .1, .1, .2, .4, .5)
(9, 16) (.4, .4, .25, .25, .25, .25, .25)
(17, 24) (.25, .25, .6, .7, .8, .7, .8, .3)
.

DHW-ROOM = SCHEDULE THRU DEC 31
(ALL) DHW-ROOM-ALL
.

S LOADS DATA $
```

S Exterior Surfaces
S Wall - plywood insulation, gyp-board
IN-W MATERIAL RES = 1.0 ..
WALL LAYERS MAT = (PM001, IN-W, GP02) ..
WALL-1 CONSTRUCTION LAYERS = WALLR ..
.

S Roof - built-up roofing, plywood, insulation, air-space, acoustic tile
IN-R MATERIAL RES = 8.0 ..
ROOF LAYERS MAT = (BRO1, PM02, IN-R, AL33, AC02) ..
ROOF-1 CONSTRUCTION LAYERS = ROOFR ..
.

S Slab - 2' soil, 6" heavy-weight conc. pad, carpet
SOIL MATERIAL THICKNESS = 2.0 SPECIFIC-HEAT = 0.26
CONDUCTIVITY = 1.0 DENSITY = 115 ..
SLABL LAYERS MAT = (SOIL, CC15, CP01) ..
SLAB-1 CONSTRUCTION LAYERS = SLABL ..
.

S Single Glass
SINGLE GLASS-TYPE PANES = 1
SHADING-COEFF = 0.4
GLASS-CONDUCTANCE = 1.0278
.

S Zone Calculations
S 900 Room, 54 Lobby, 54 Laundry
CONSTRUCTION = WALL-1
HEIGHT = 8.
.

S DEFAULT CONSTRUCTIONS \$
SET-DEFAULT FOR EXTERIOR-WALL
CONSTRUCTION = WALL-1
HEIGHT = 8.
.
.

SET-DEFAULT FOR WINDOW
GLASS-TYPE = SINGLE
.
.

S GENERAL SPACE CHARACTERISTICS \$
P-SCH = OCC-LOB
P-H-S = 255
P-H-L = 255
P-H-T = 255
L-SCH = LIGHT-LOB
L-T = REC-FLOOR-RV
FLOOR-WEIGHT = 70
L-W = 1.5
.
.

/user2/bed/lirsce/DOE2/Proto/smhotel.inp

Tue Jan 29 19:56:13 1991 2

2

/user2/bed/lirsce/DOE2/Proto/smhotels.inp

Tue Jan 29 19:56:13 1991

3

```

WINDOW LIKE W1 ...
R1 ROOF CONSTRUCTION = ROOF-1
TILT = 0.0
GRD-REFLECTANCE = 0.0
HEIGHT = 10
WIDTH = 20
...
ROOM-2T SPACE LIKE ROOM-1T
MULTIPLIER = 15
...
EXTERIOR-WALL-LIKE EW1 AZIMUTH = 90 ...
WINDOW LIKE W1 ...
ROOF LIKE R1 ...
ROOM-3T SPACE LIKE RO-M-1T
MULTIPLIER = 15
...
EXTERIOR-WALL-LIKE EW1 AZIMUTH = 180 ...
WINDOW LIKE W1 ...
ROOF LIKE R1 ...
ROOM-4T SPACE LIKE ROOM-1T
MULTIPLIER = 15
...
EXTERIOR-WALL-LIKE EW1 AZIMUTH = 270 ...
WINDOW LIKE W1 ...
ROOF LIKE R1 ...

S BUILDING RESOURCES S
BUILDING-RESOURCE
$ schedule and intensity/sq ft. above ground floor from LBL hosp BDL
HW-SCHEDULE = DW-ROOM
HOT-WATER = 85824
GAS-SCHEDULE = EQUIP-LND
GAS-THERMS = 0.5
...
S LOADS REPORT DATA S
S Space peak loads summary, Building peak load components
LOADS-REPORT S (LS-C,LS-F) ...
END ...
COMPUTE LOADS ...
INPUT SYSTEMS ...
S SYSTEM SCHEDULES S
S fan schedules S
FAN-LND = SCH THRU DEC 31 (ALL) (1,4) (0) (5,23) (1) (24) (0)
ALWAYSON = SCH THRU DEC 31 (ALL) (1,24) (1) ...
S Heat-Temp and Cool-Temp schedules
ROOMHT = SCH THRU DEC 31 (ALL) (1,8) (70) (9,20) (65) (21,24) (70) ...
ROOMCL = SCH THRU DEC 31 (ALL) (1,24) (75) ...
LNDHT = SCH THRU DEC 31 (ALL) (1,4) (65) (5,23) (70) (24) (65) ...
LNDCL = SCH THRU DEC 31 (ALL) (1,4) (85) (5,23) (80) (24) (85) ...
LOBHT = SCH THRU DEC 31 (ALL) (1,24) (70) ...
LOBCL = SCH THRU DEC 31 (ALL) (1,24) (75) ...
IND-AIR = ZONE-AIR OA-CHANGES = 3.0 ...
LOB-AIR = ZONE-AIR OA-CFM/PER = 15 ...
CNTRL-LOB ZONE-CONTROL DESIGN-HEAT-T 70
DESIGN-COOL-T 75
HEAT-TEMP-SCH LOBHT
COOL-TEMP-SCH LOBCL
THERMOSTAT-TYPE PROPORTIONAL
...
CNTRL-LND ZONE-CONTROL DESIGN-HEAT-T 70
DESIGN-COOL-T 80
HEAT-TEMP-SCH LNDHT
COOL-TEMP-SCH LNDCL
THERMOSTAT-TYPE PROPORTIONAL
...
CNTRL-ROOM ZONE-CONTROL DESIGN-HEAT-T 70
DESIGN-COOL-T 75
HEAT-TEMP-SCH ROOMHT
COOL-TEMP-SCH ROOMCL
THERMOSTAT-TYPE PROPORTIONAL
...
LAUNDRY ZONE-CONTROL ZONE-TYPE CONDITIONED
ZONE-AIR LND-AIR
ZONE-CONTROL CNTRL-LND
...
LOBBY ZONE LIKE LAUNDRY
ZONE-AIR LOB-AIR
ZONE-CONTROL CNTRL-
MULTIPLIER = 15
ZONE-LIKE ROOM-1 ...
ROOM-2 ZONE LIKE ROOM-1 ...
ROOM-3 ZONE LIKE ROOM-1 ...
ROOM-4 ZONE LIKE ROOM-1 ...
ROOM-1T ZONE LIKE ROOM-1 ...
MULTIPLIER = 15.083437920 ...
ROOM-2T ZONE LIKE ROOM-1T ...
ROOM-3T ZONE LIKE ROOM-1T ...

```

/user2/bed/lirsce/DOE2/Proto/smhotel.inp      Tue Jan 29 19:56:13 1991      4

```

    RDN: 41  ZONE: L1K: ROOM-1 .. .
    NORM-CONT SYSTEM-CONTROL
    MAX-S-T 110 MIN-S-T 52
    H-SCH    ALWAYSON
    C-SCH    ALWAYSON
    ..

    SYS1 SYSTEM S lobby
    SYSTEM-TYPE PSZ
    OA-CONTROL FIXED
    NORM-CONT
    S-C          ALWAYSON
    F-SCH        (LOBBY) ..
    ZONE-NAMES

    SYS2 SYSTEM S laundry
    LINE-SYS1
    F-SCH        FAN-IND
    ZONE-NAMES   (LAUNDRY) ..

    SYS3 SYSTEM S rooms
    SYSTEM-TYPE PTAC
    NORM-CONT
    S-C          GAS-FURNACE
    HEAT-SOURCE (ROOM-1, ROOM-2, ROOM-3, ROOM-4
    ZONE-NAMES
    ROOM-1T, ROOM-2T, ROOM-3T, ROOM-4T) ..

    PLT-1 PLANT-ASSIGNMENT
    SYSTEM-NAMES (SYS1, SYS2, SYS3) ..

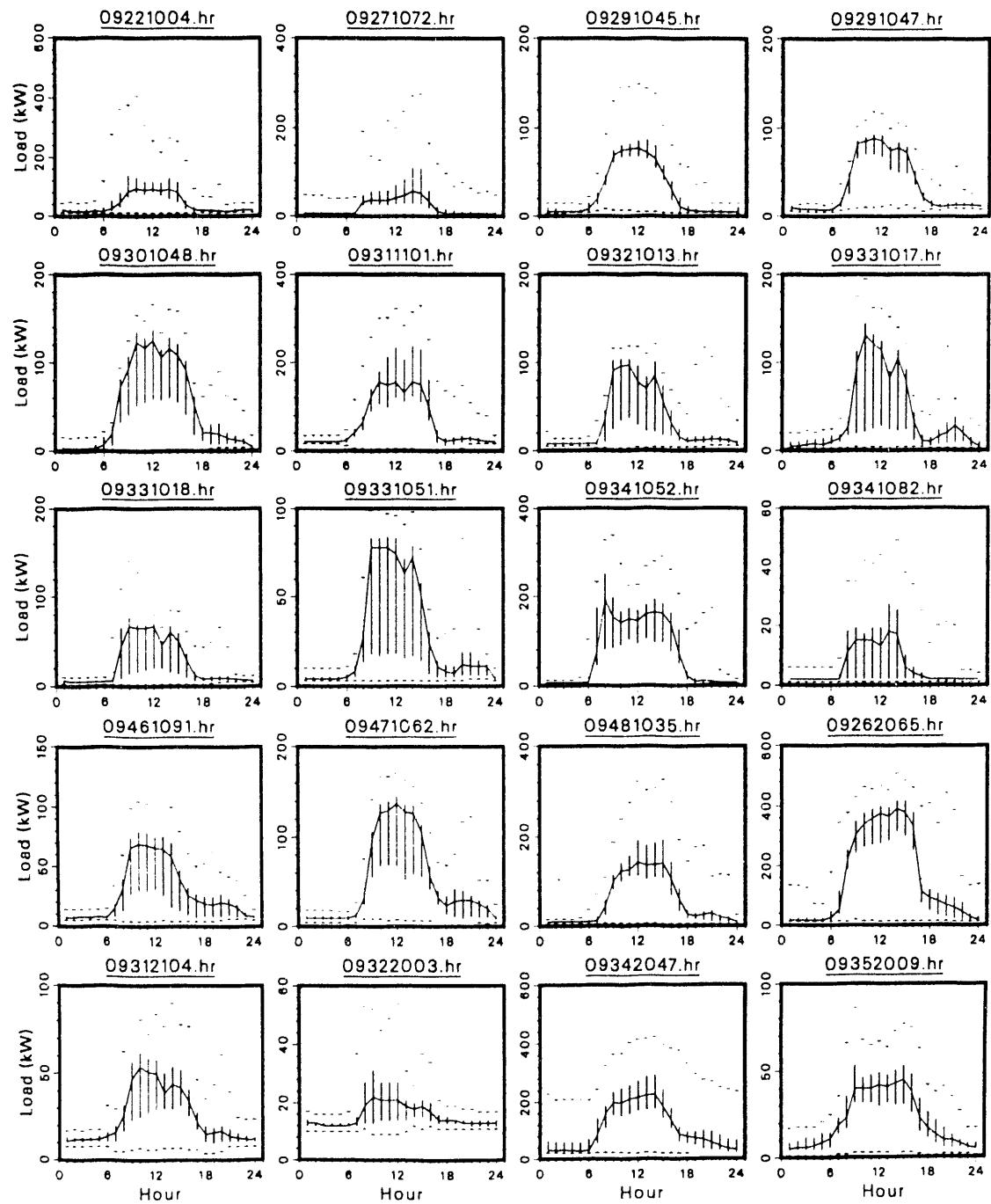
    #define sys_rep[] 3

    $ SYSTEM REPORT DATA $
    #include /user2/bed/lirsce/DOE2/Proto/system_rep.inc
    $ PLANT DATA $
    INPUT PLANT ..
    PLT-1 PLANT-ASSIGNMENT ..
    DHW P-E TYPE DHW-HEATER SIZE -999 ..
    PLANT-PARAMETERS
    BOILER-FUEL NATURAL-GAS ..

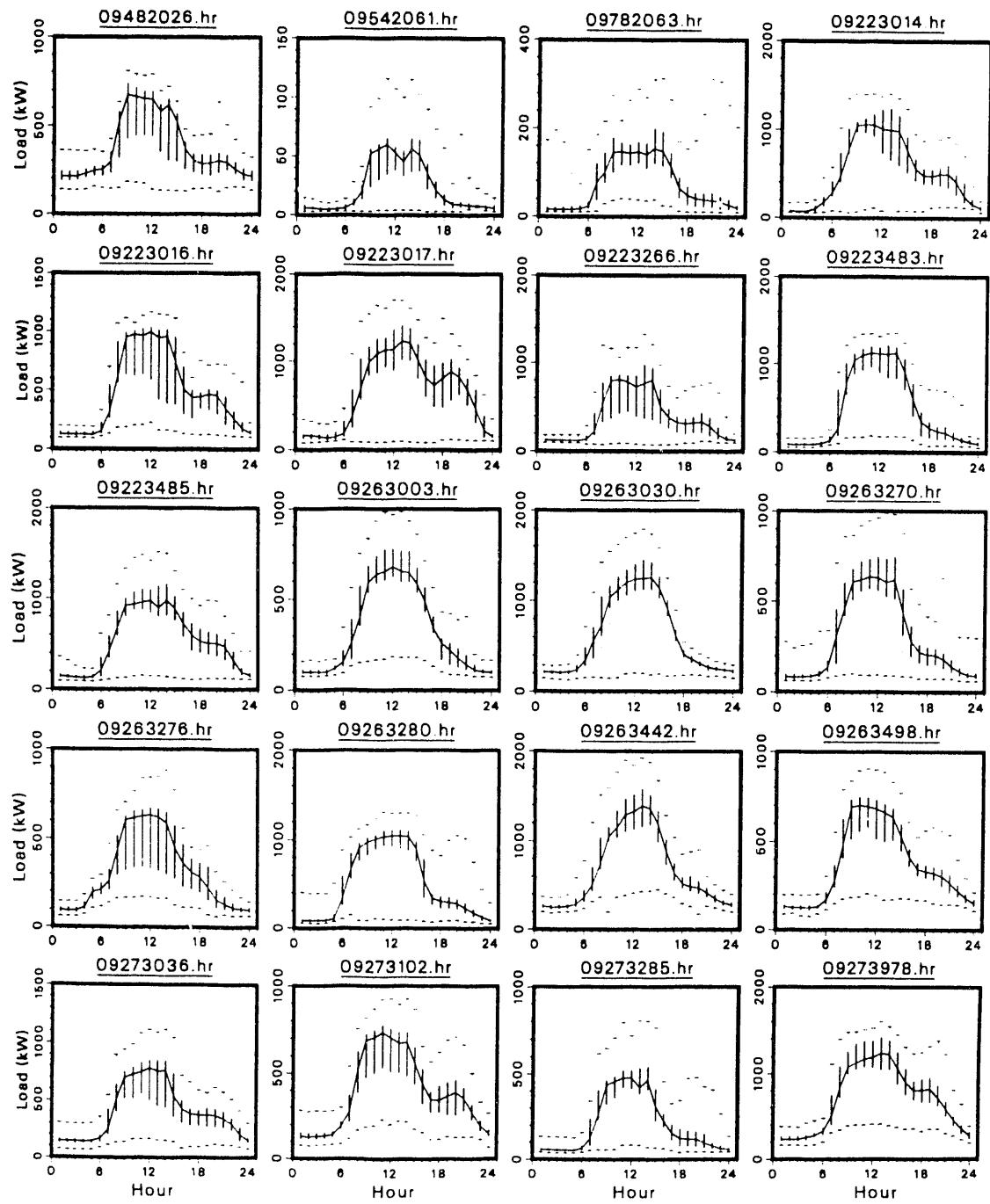
    $ PLANT REPORT DATA $
    #include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc
    STOP ..
  
```

## **Appendix C. Summaries of LRD**

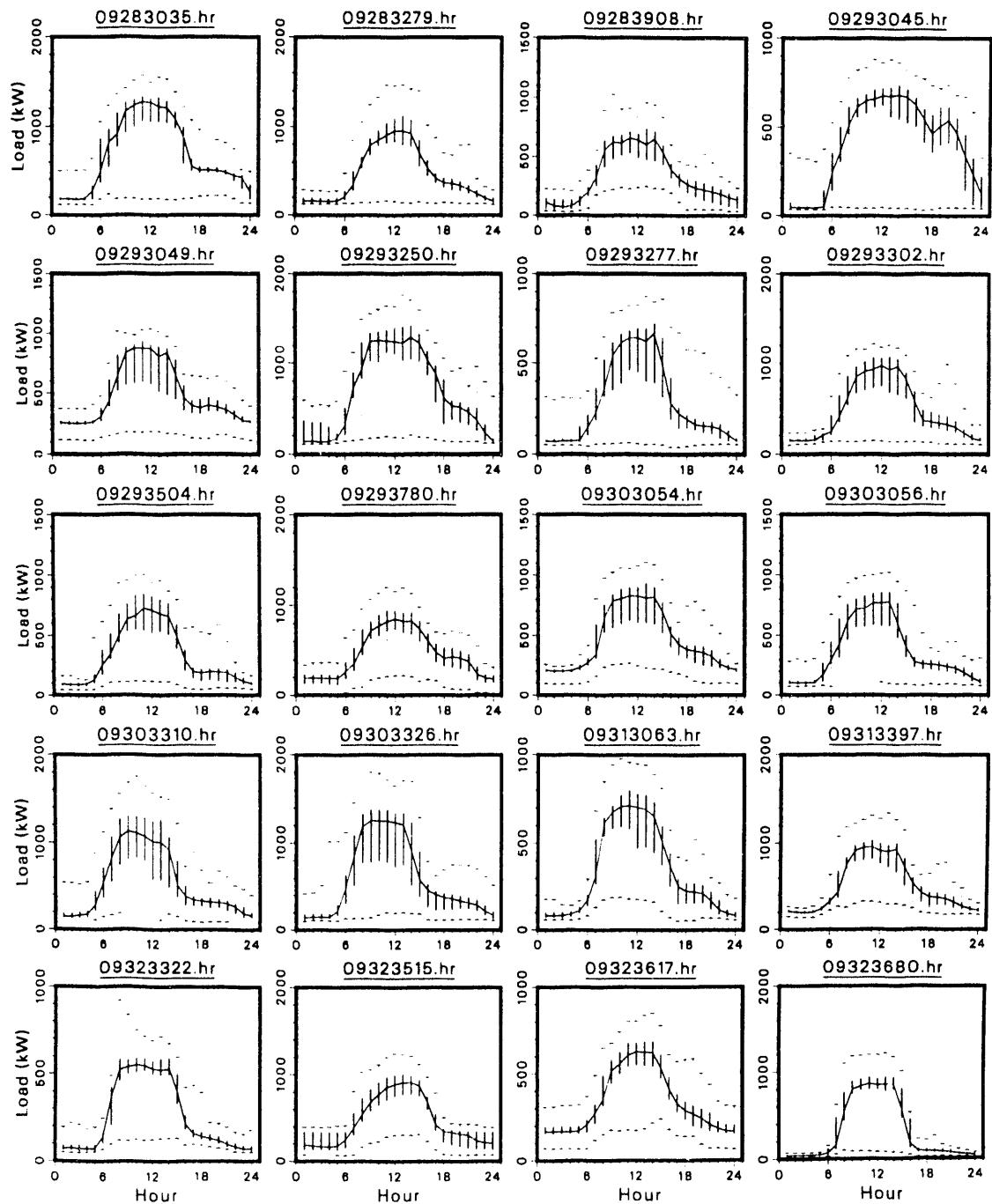
## Average Weekday Profiles for Schools



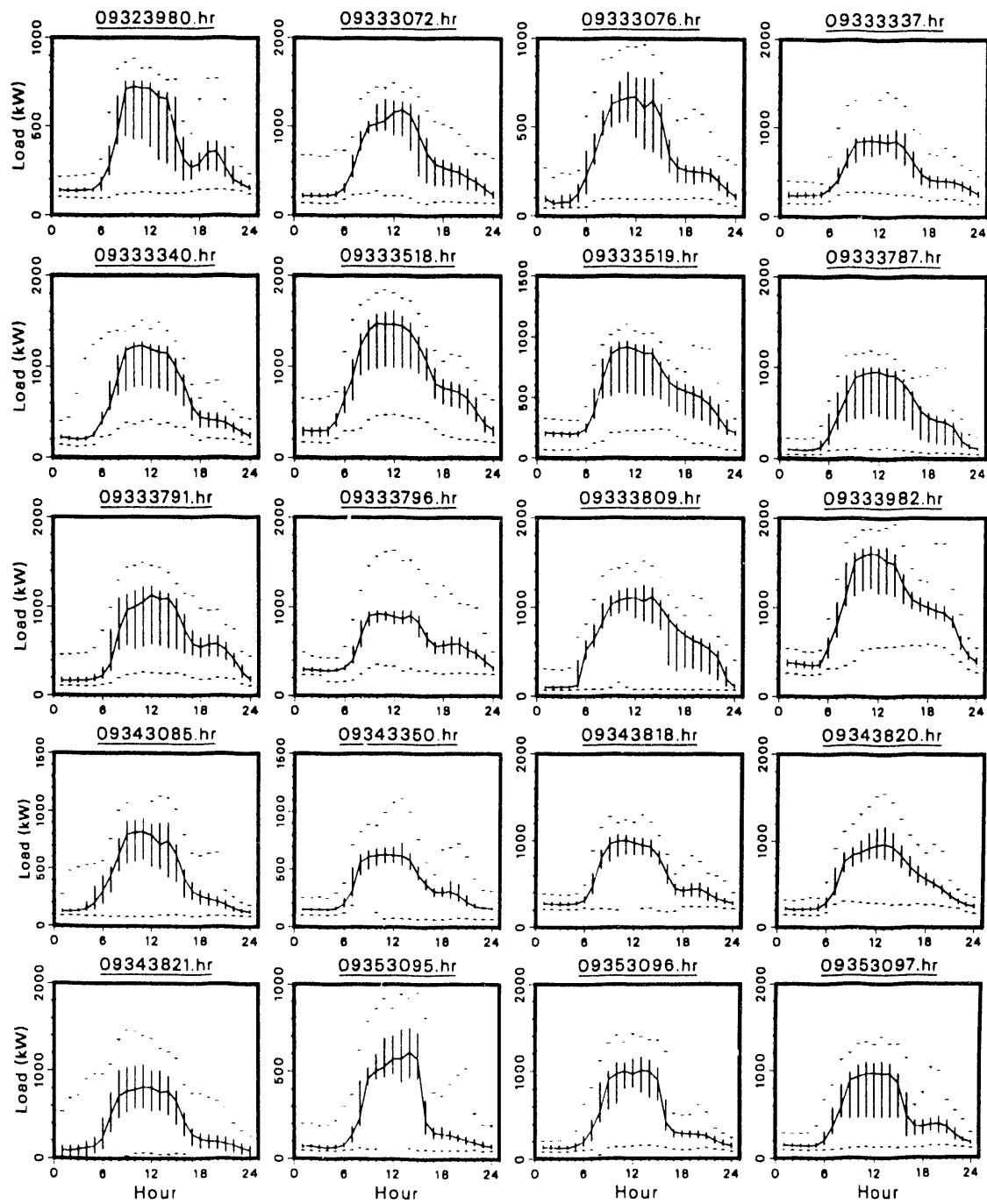
## Average Weekday Profiles for Schools



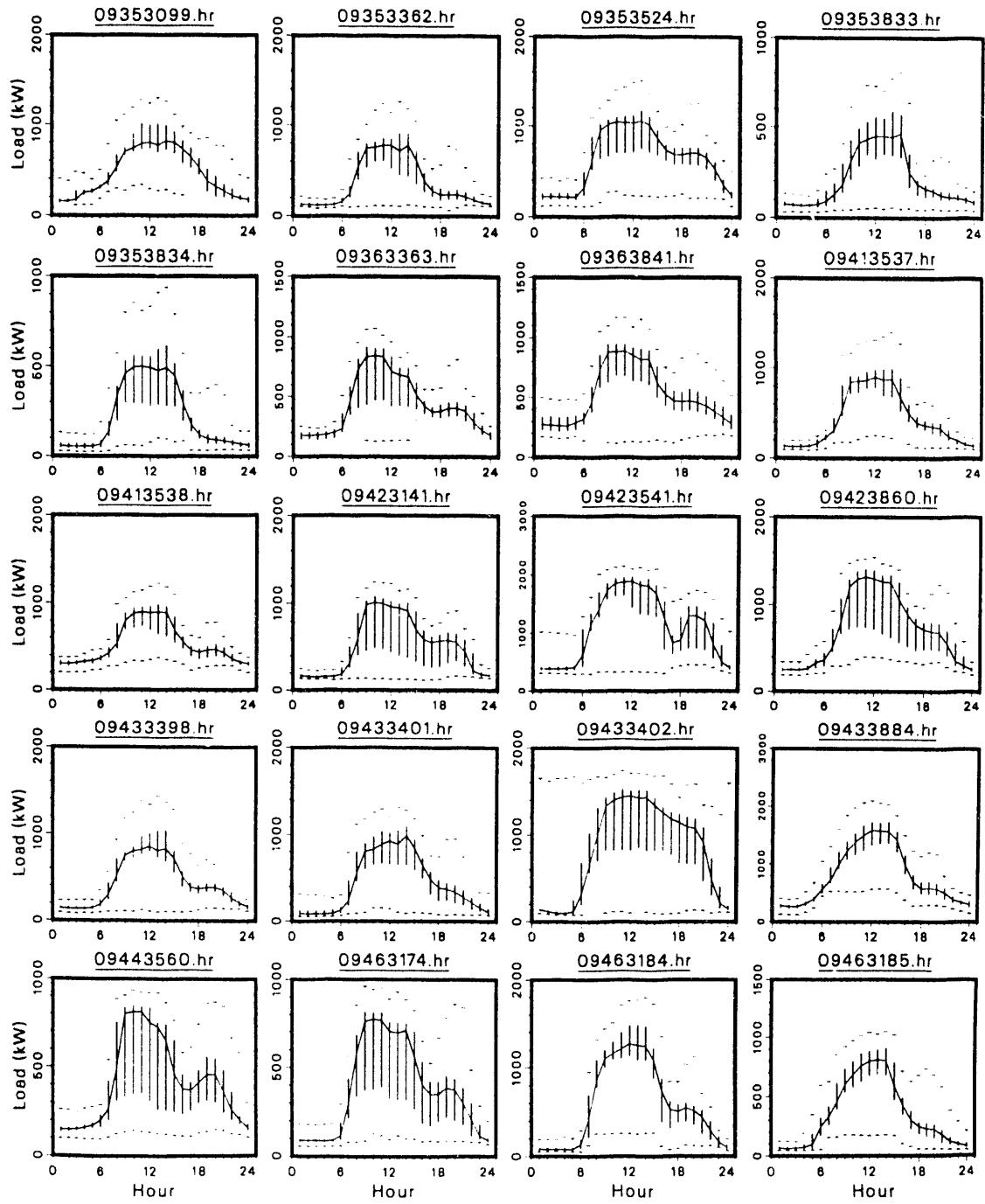
### Average Weekday Profiles for Schools



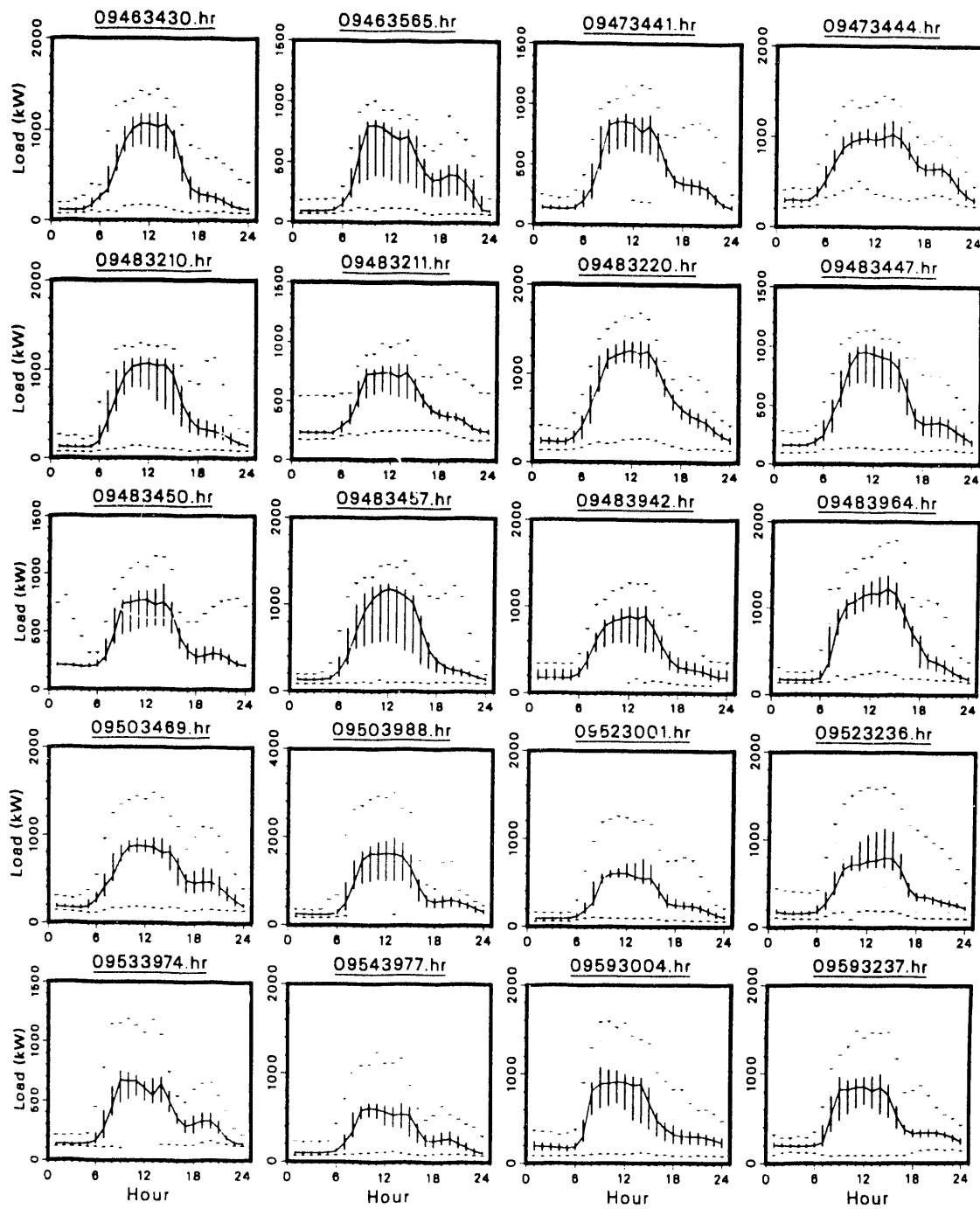
## Average Weekday Profiles for Schools



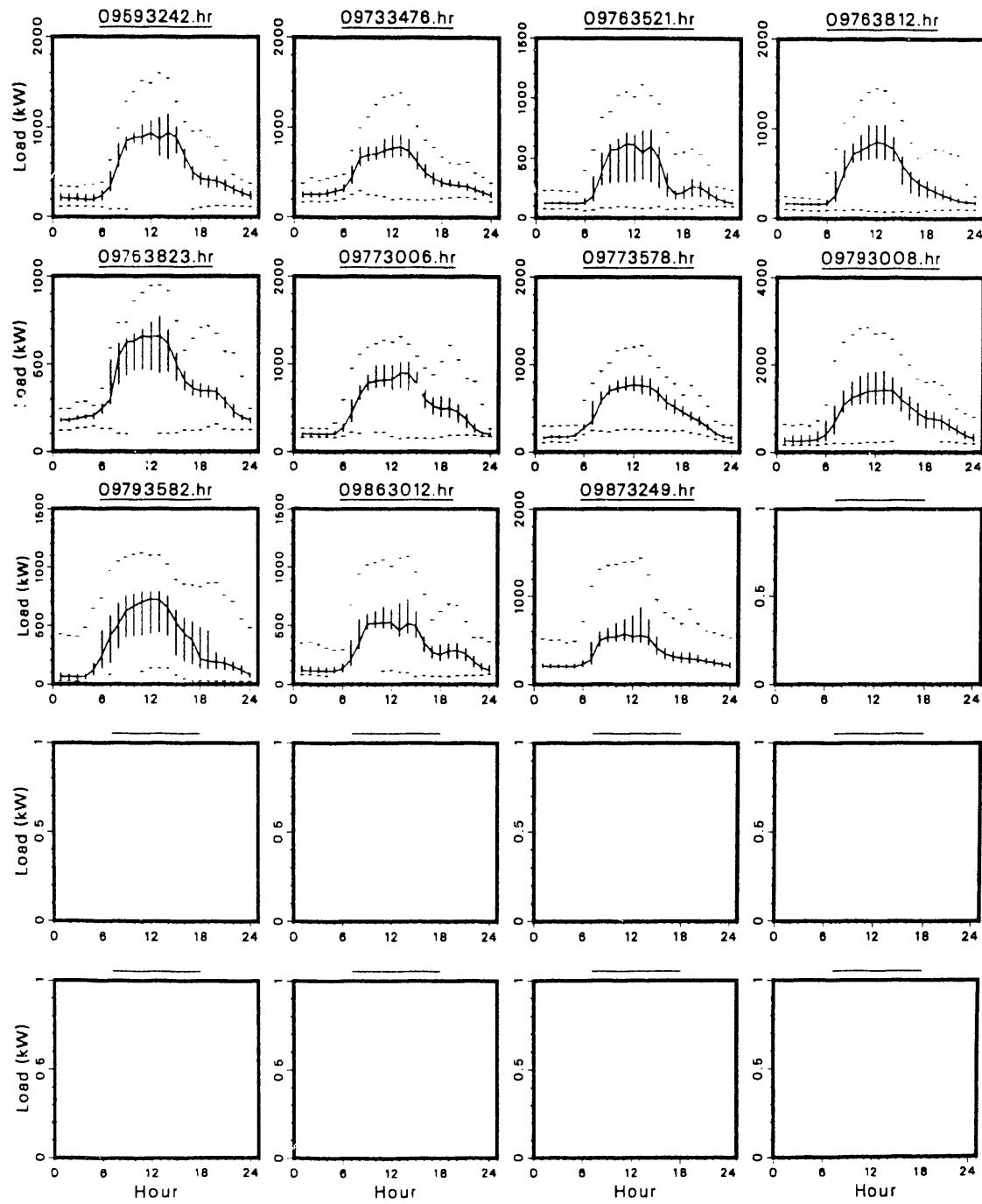
## Average Weekday Profiles for Schools



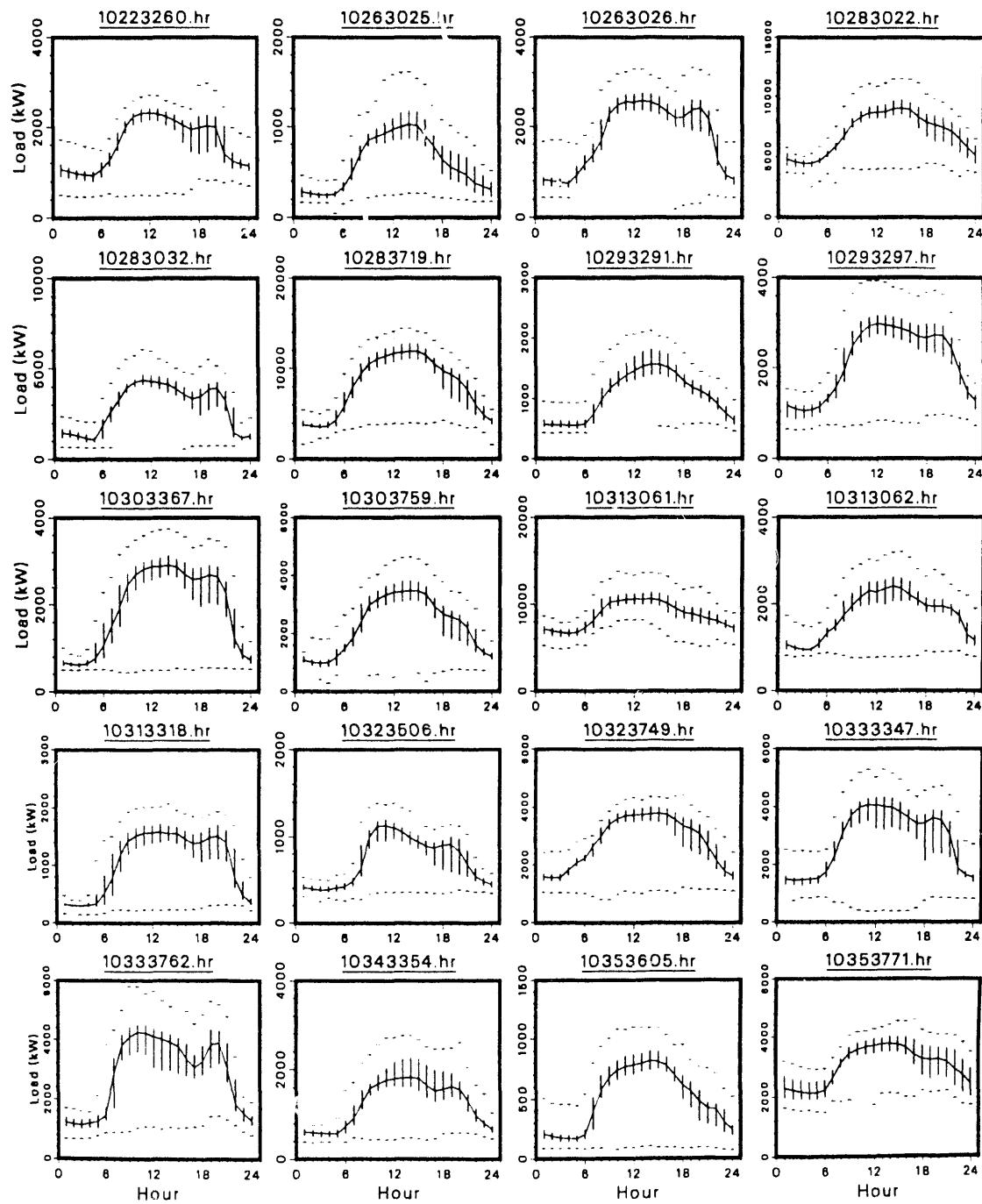
## Average Weekday Profiles for Schools



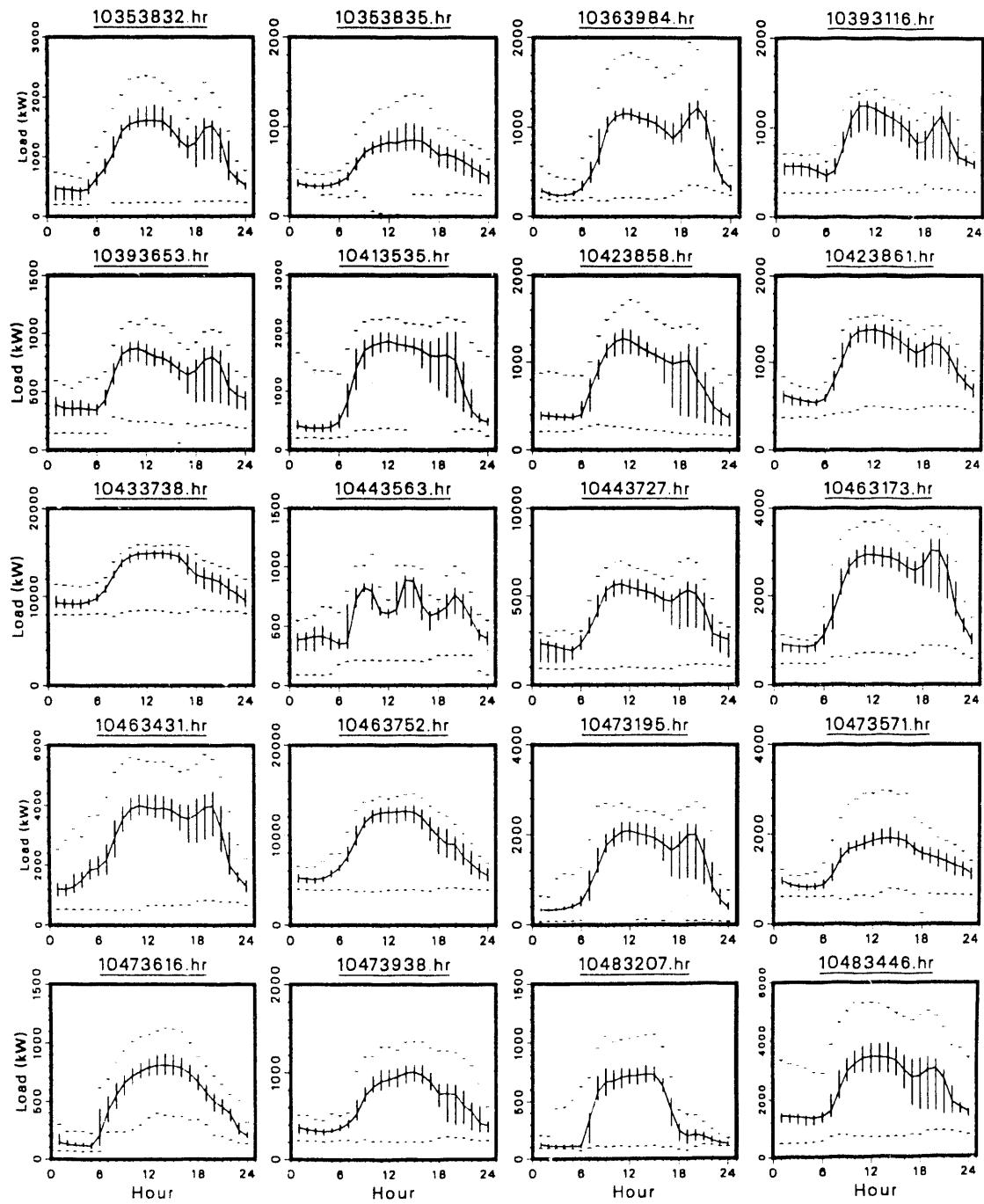
## Average Weekday Profiles for Schools



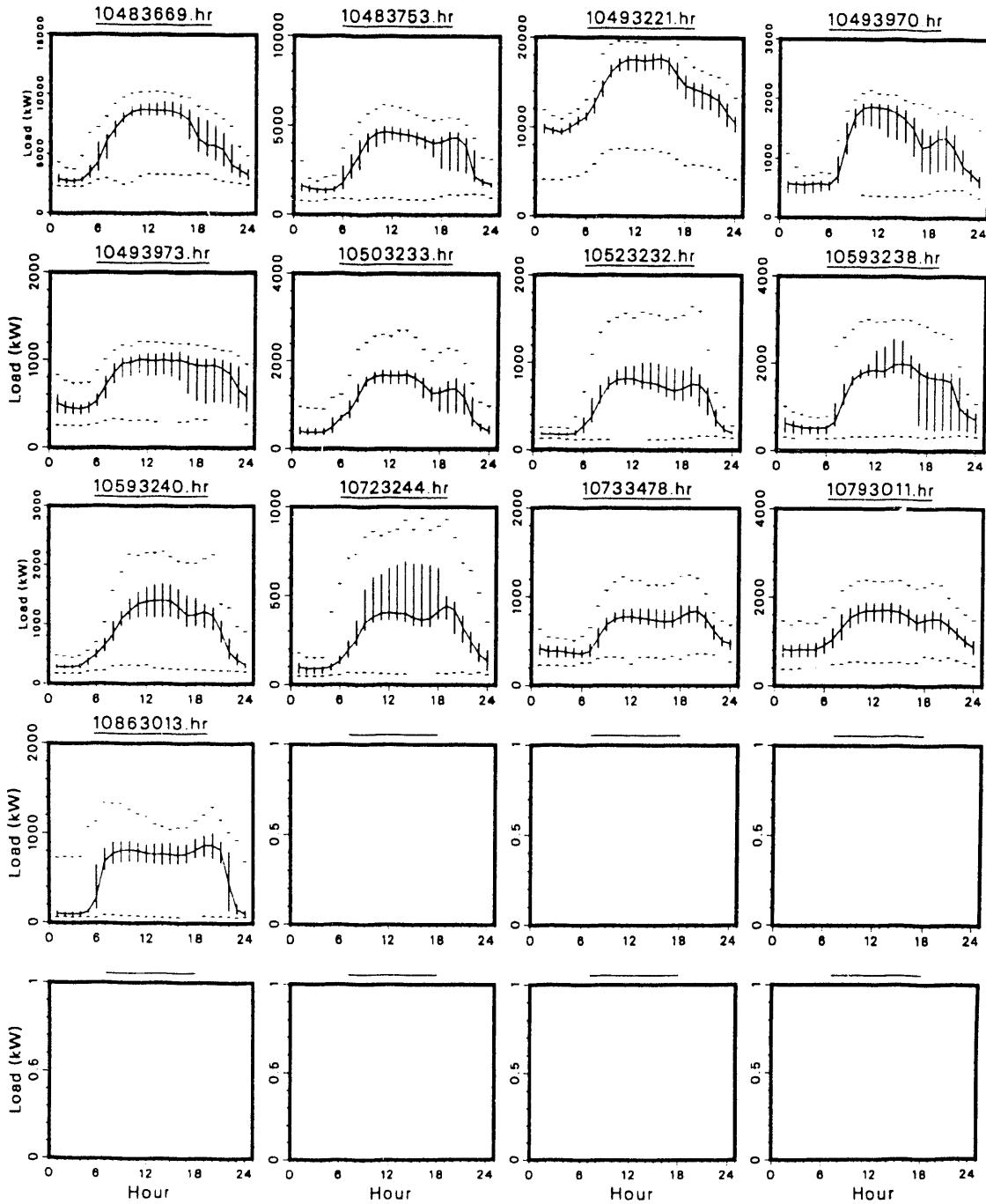
## Average Weekday Profiles for Colleges



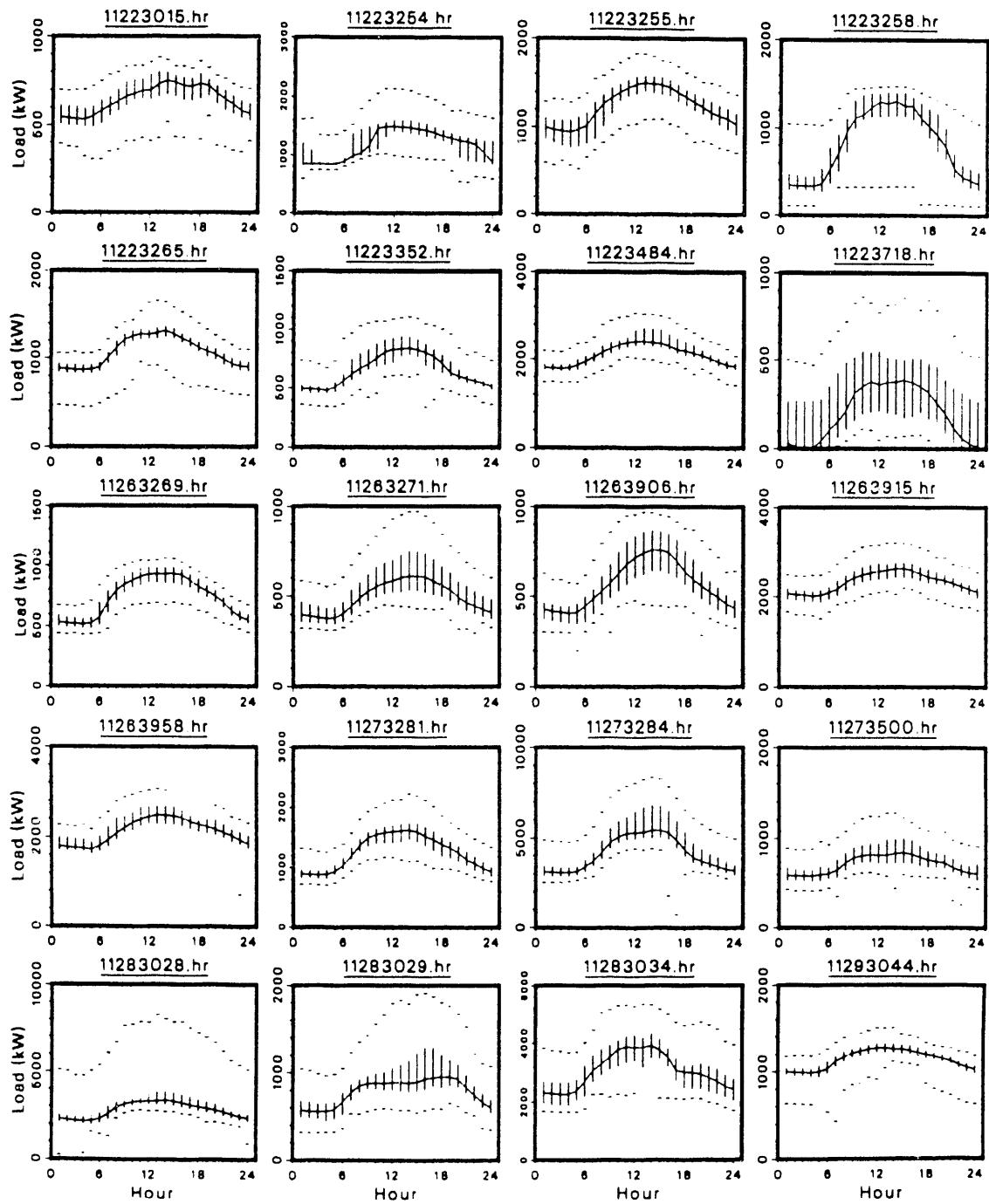
## Average Weekday Profiles for Colleges



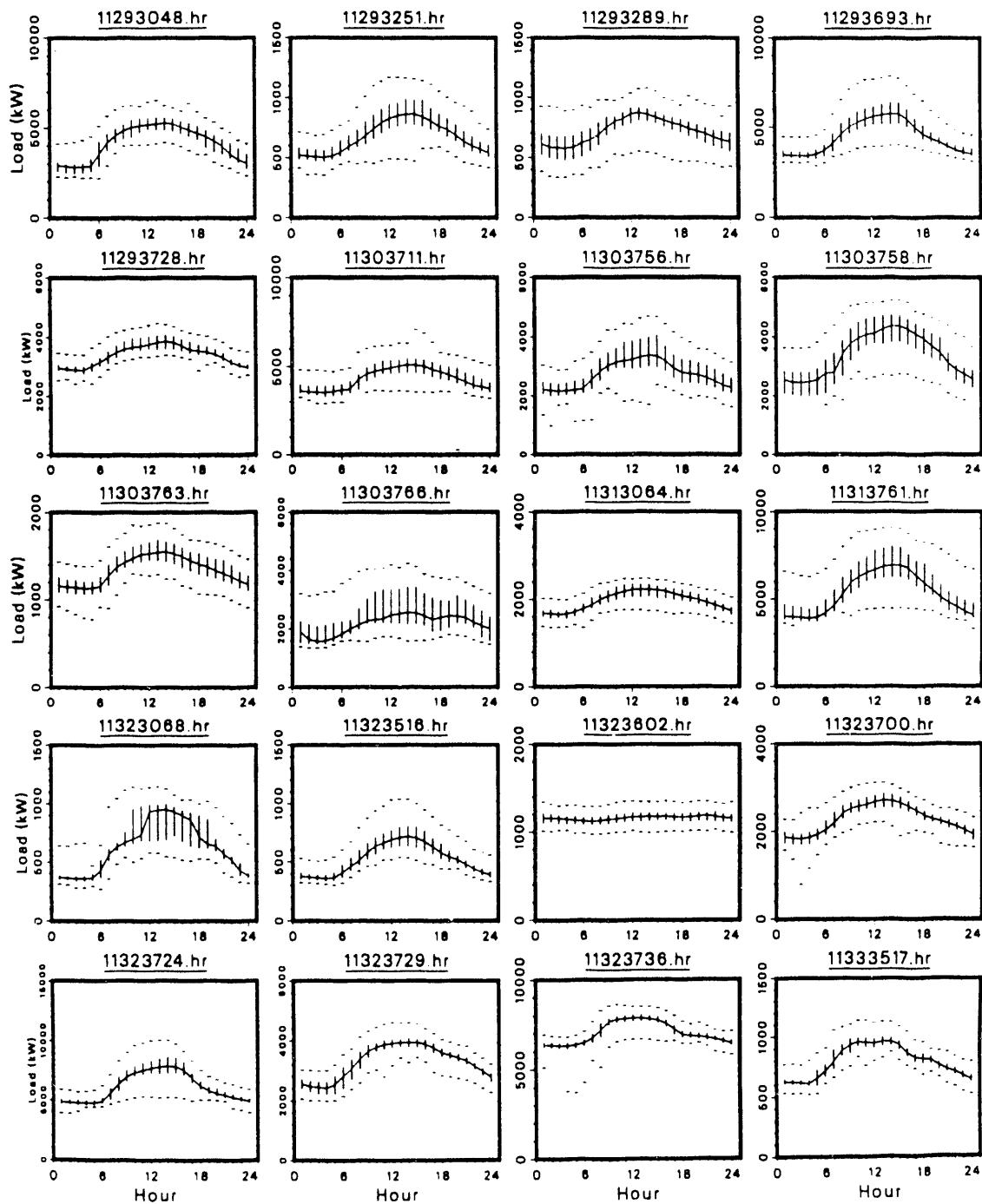
## Average Weekday Profiles for Colleges



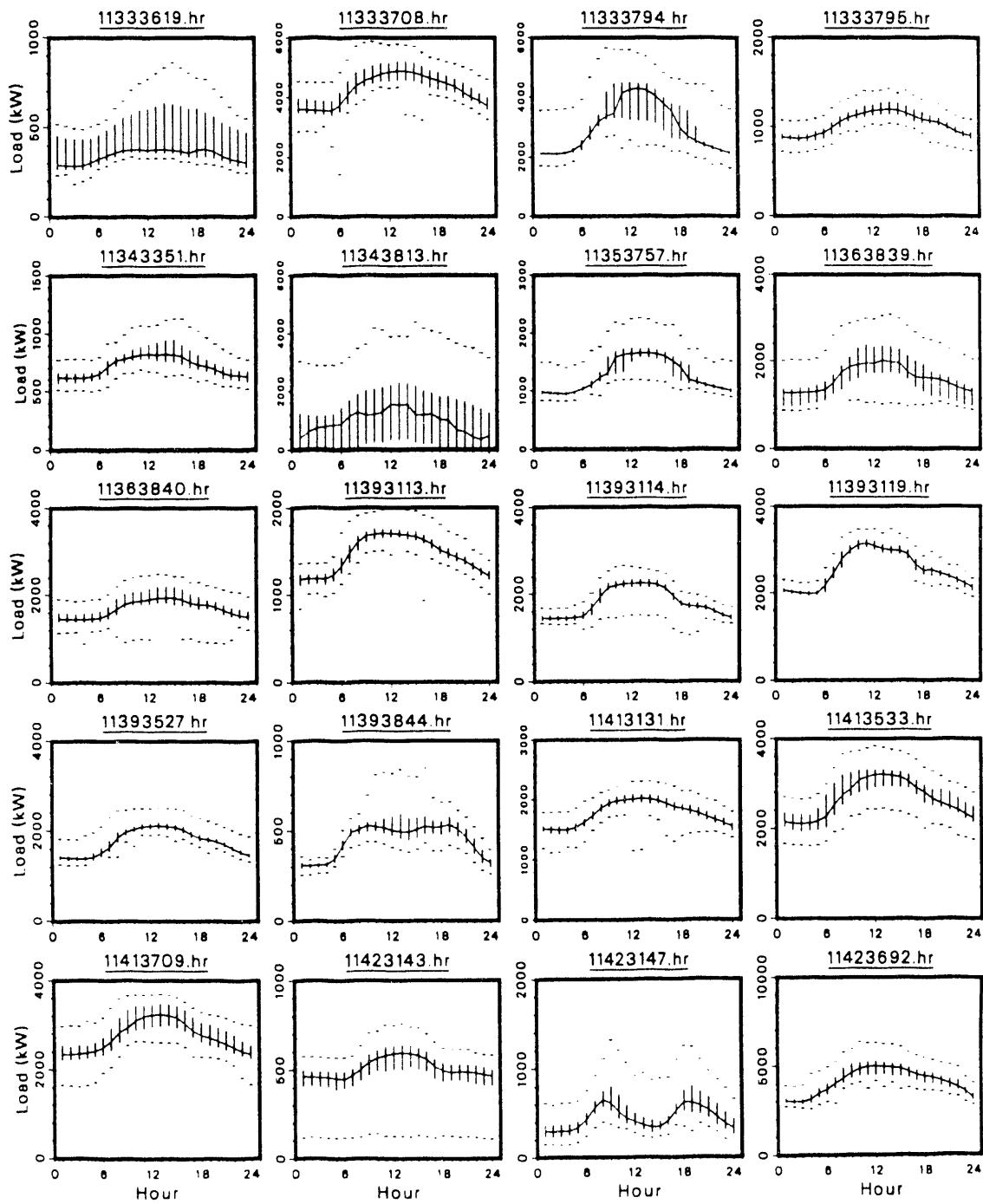
## Average Weekday Profiles for Hospitals



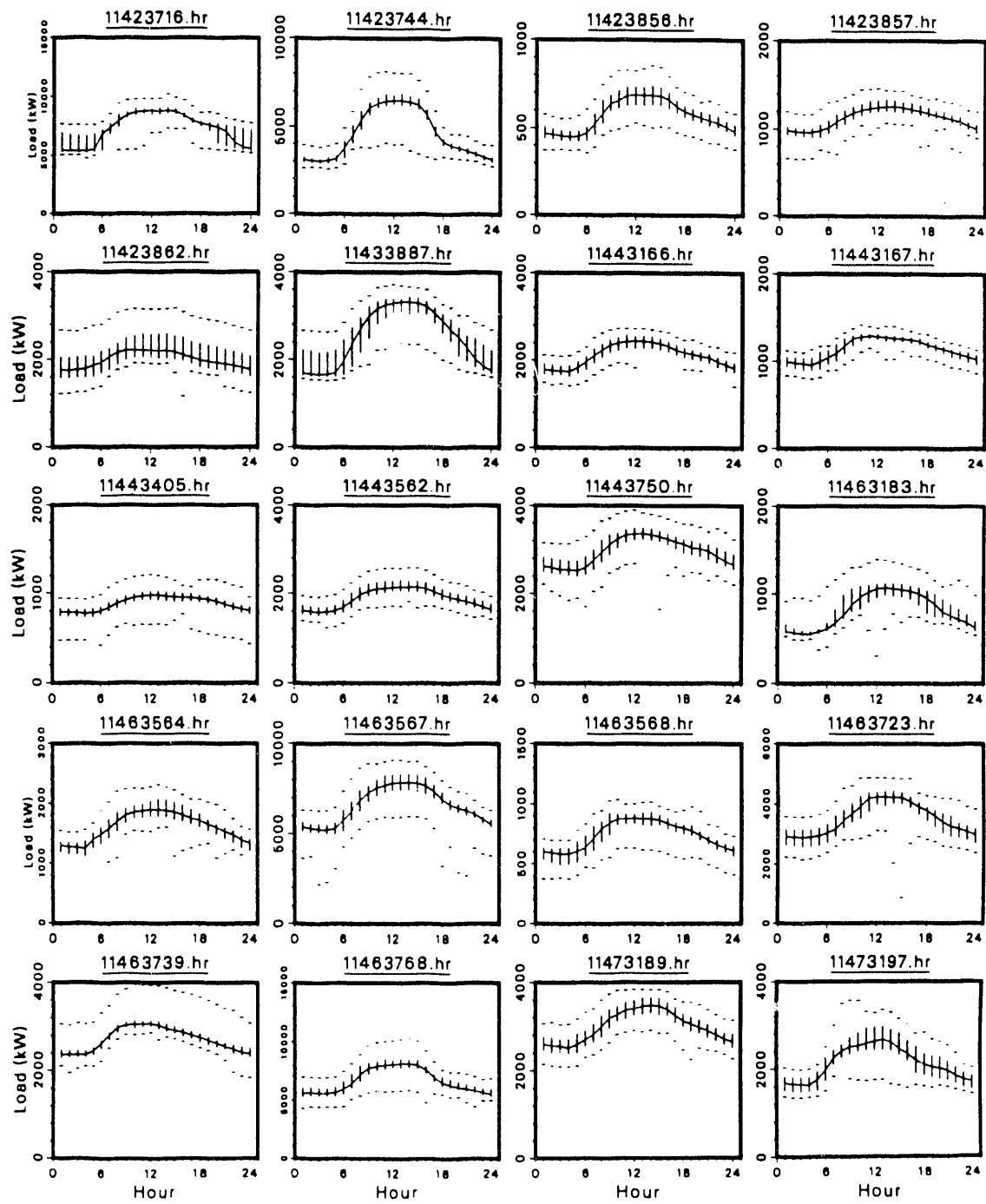
## Average Weekday Profiles for Hospitals



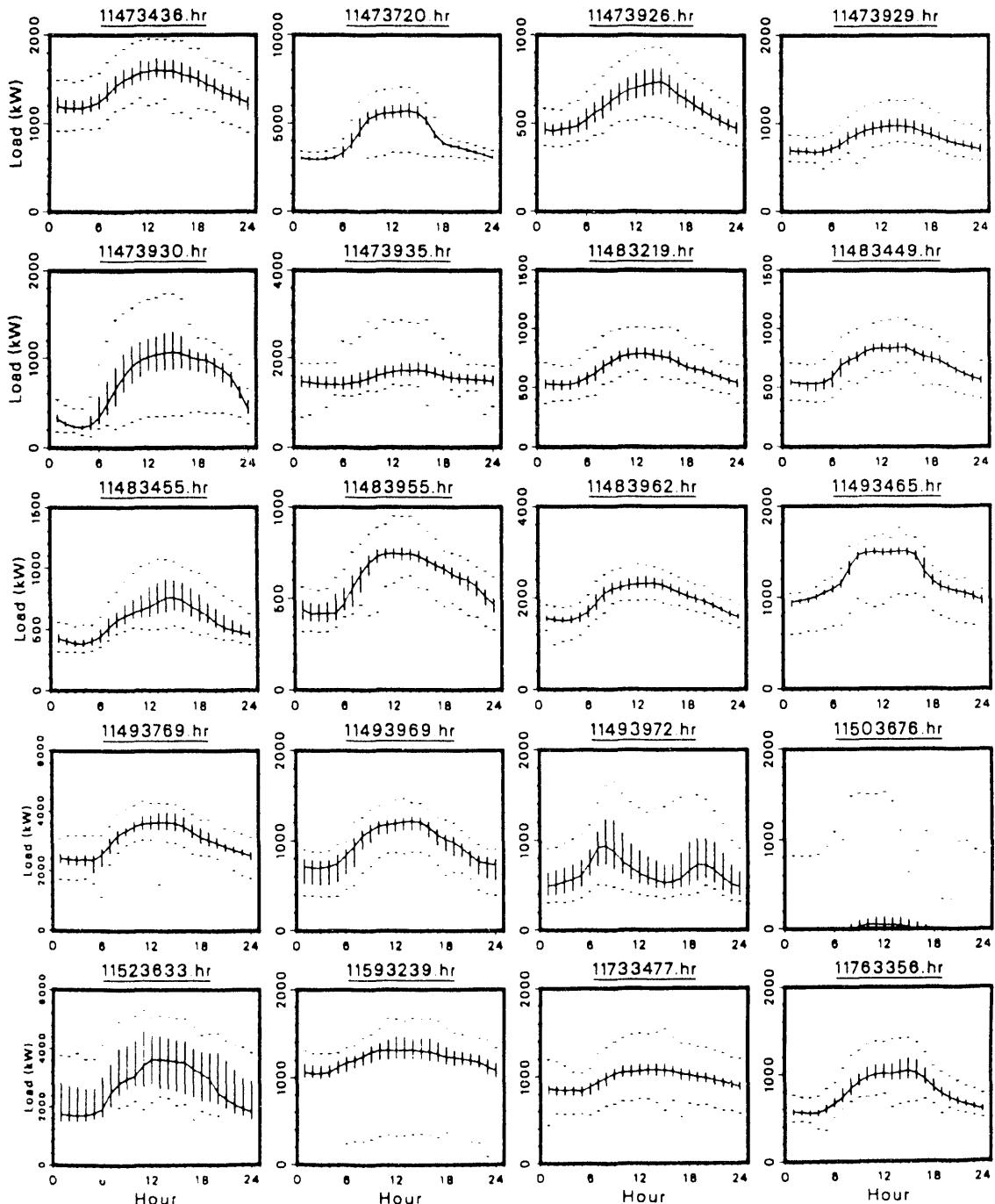
## Average Weekday Profiles for Hospitals



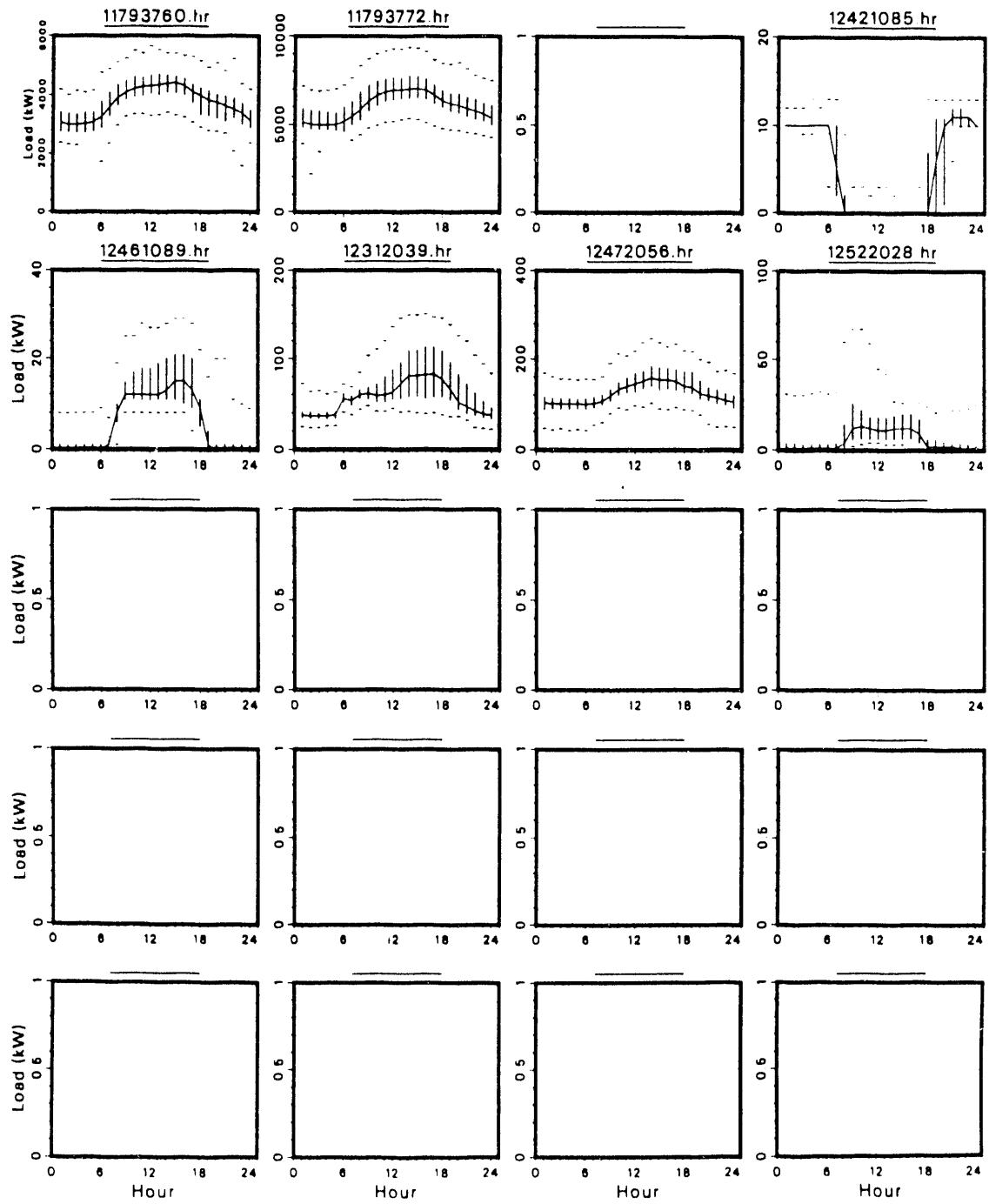
## Average Weekday Profiles for Hospitals



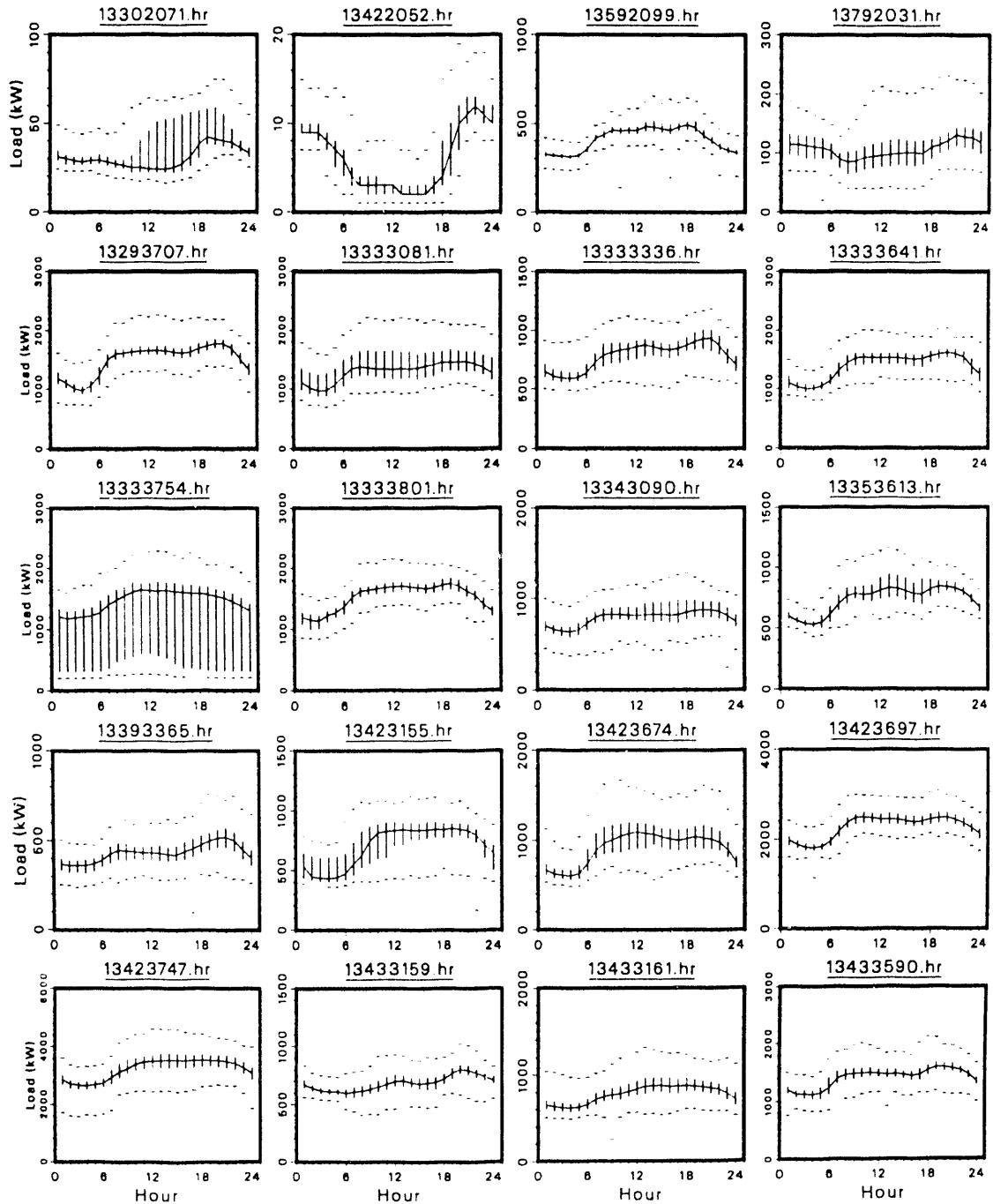
## Average Weekday Profiles for Hospitals



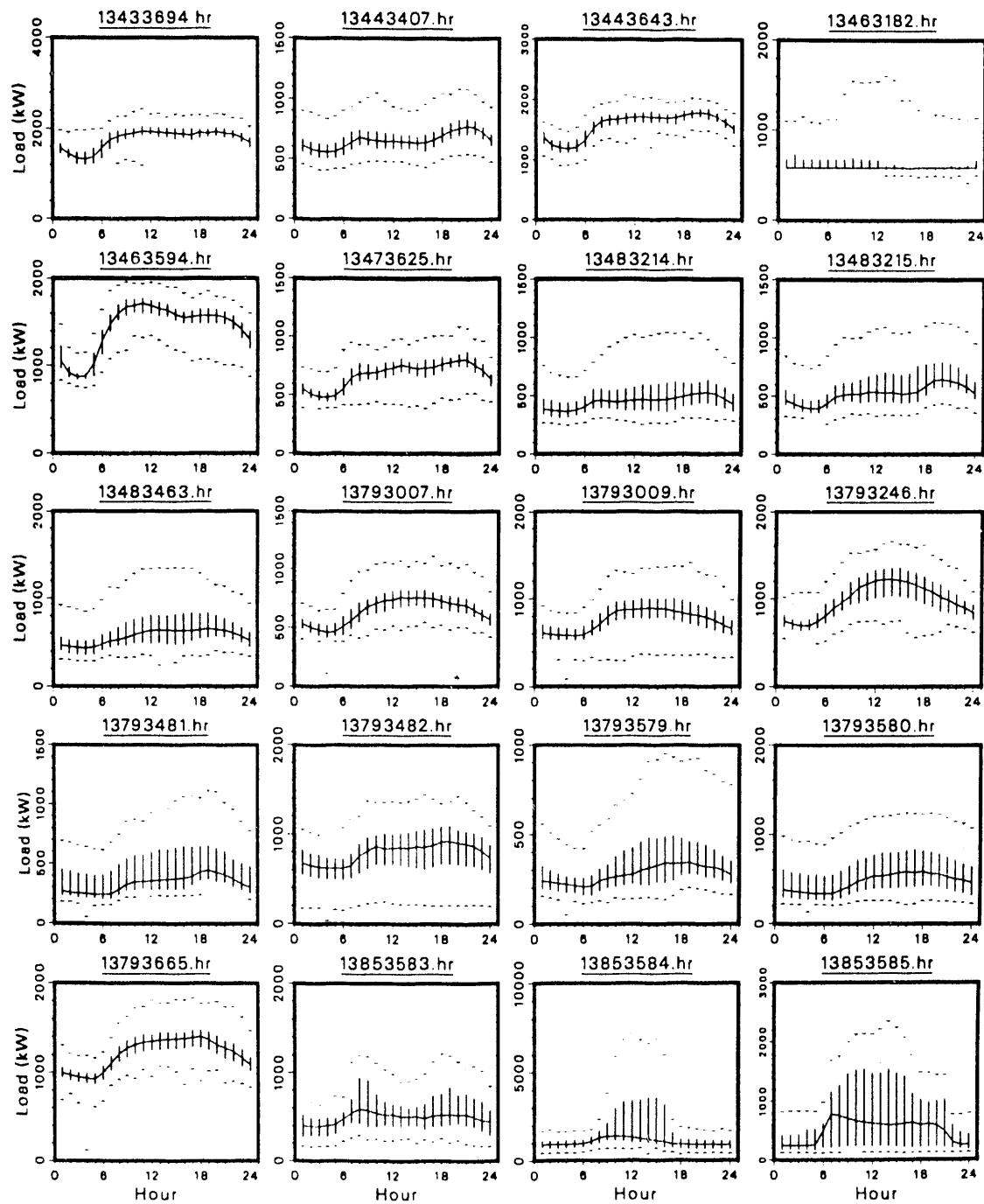
## Average Weekday Profiles for Hospitals (and Health)



### Average Weekday Profiles for Hotels & Motels



### Average Weekday Profiles for Hotels & Motels



## **Appendix D. Results from Load-Temperature Regressions**

### LRD Regression Coefficients for Coastal Health - Standard Day - Summer

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	2.233	0.009	0.043	0.79	0.000	102
2	2.214	0.009	0.041	0.79	0.000	102
3	2.215	0.008	0.042	0.77	0.000	98
4	2.199	0.011	0.040	0.75	0.000	96
5	2.287	0.009	0.040	0.73	0.000	93
6	2.429	0.009	0.040	0.66	0.000	93
7	2.590	0.012	0.046	0.67	0.000	96
8	2.758	0.015	0.043	0.87	0.000	114
9	2.842	0.023	0.035	0.85	0.000	124
10	2.913	0.025	0.031	0.83	0.000	125
11	2.940	0.025	0.033	0.84	0.000	126
12	2.931	0.023	0.037	0.81	0.000	126
13	2.958	0.022	0.037	0.76	0.000	126
14	3.022	0.017	0.034	0.75	0.000	126
15	3.004	0.016	0.031	0.73	0.000	126
16	2.854	0.021	0.031	0.76	0.000	126
17	2.712	0.020	0.034	0.78	0.000	126
18	2.575	0.026	0.038	0.81	0.000	125
19	2.554	0.024	0.040	0.83	0.000	124
20	2.468	0.024	0.044	0.86	0.000	124
21	2.407	0.024	0.044	0.80	0.000	119
22	2.358	0.020	0.042	0.80	0.000	118
23	2.271	0.019	0.040	0.81	0.000	118
24	2.208	0.017	0.041	0.82	0.000	115

### LRD Regression Coefficients for Coastal Health - Standard Day - Winter

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	2.135	0.020	0.046	0.70	0.001	14
2	2.156	0.016	0.032	0.50	0.086	9
3	2.049	0.032	0.051	0.84	0.010	7
4	2.174	0.000	0.070	0.97	0.033	4
5	2.320	-0.020	0.050	0.98	0.017	4
6	2.470	-0.021	0.008	0.71	0.155	5
7	2.555	-0.006	0.045	0.87	0.017	6
8	2.689	0.005	0.047	0.42	0.029	15
9	2.903	-0.000	0.024	0.22	0.013	37
10	3.032	0.002	0.025	0.44	0.000	65
11	3.039	0.002	0.026	0.60	0.000	96
12	3.017	0.006	0.032	0.71	0.000	112
13	2.995	0.008	0.033	0.71	0.000	116
14	3.034	0.009	0.032	0.68	0.000	115
15	2.980	0.008	0.032	0.66	0.000	115
16	2.945	0.007	0.030	0.59	0.000	116
17	2.816	0.007	0.031	0.64	0.000	117
18	2.734	0.005	0.030	0.58	0.000	105
19	2.696	0.005	0.031	0.50	0.000	79
20	2.603	0.004	0.038	0.60	0.000	63
21	2.552	0.004	0.032	0.53	0.000	43
22	2.484	0.003	0.034	0.49	0.000	29
23	2.370	0.005	0.037	0.53	0.001	21
24	2.250	0.007	0.061	0.69	0.000	16

### LRD Regression Coefficients for Coastal Health - Non-Standard Day - Summer

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	2.182	0.008	0.051	0.77	0.000	47
2	2.183	0.005	0.053	0.78	0.000	44
3	2.229	0.003	0.043	0.64	0.000	41
4	2.184	0.010	0.043	0.69	0.000	39
5	2.243	0.011	0.038	0.62	0.000	36
6	2.255	0.016	0.038	0.68	0.000	37
7	2.328	0.015	0.037	0.63	0.000	40
8	2.384	0.008	0.043	0.66	0.000	47
9	2.439	0.015	0.030	0.66	0.000	55
10	2.500	0.019	0.026	0.57	0.000	55
11	2.421	0.022	0.032	0.62	0.000	55
12	2.528	0.019	0.029	0.52	0.000	55
13	2.496	0.017	0.034	0.55	0.000	55
14	2.548	0.018	0.034	0.53	0.000	55
15	2.540	0.015	0.031	0.58	0.000	55
16	2.521	0.020	0.028	0.65	0.000	55
17	2.523	0.019	0.028	0.67	0.000	55
18	2.422	0.020	0.035	0.77	0.000	55
19	2.429	0.021	0.037	0.82	0.000	55
20	2.306	0.024	0.044	0.83	0.000	55
21	2.246	0.025	0.047	0.80	0.000	53
22	2.221	0.020	0.046	0.64	0.000	52
23	2.230	0.010	0.048	0.66	0.000	52
24	2.136	0.013	0.051	0.78	0.000	50

### LRD Regression Coefficients for Coastal Health - Non-Standard Day - Winter

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	2.199	0.010	0.024	0.95	0.010	5
2	15.835	0.006	0.259	1.00	2.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	2.370	0.003	0.027	0.66	0.342	4
9	2.579	-0.010	-0.008	0.54	0.045	10
10	2.556	-0.005	0.018	0.54	0.000	32
11	2.525	-0.003	0.021	0.64	0.000	42
12	2.470	0.003	0.028	0.72	0.000	51
13	2.462	0.003	0.027	0.75	0.000	52
14	2.493	0.005	0.028	0.76	0.000	52
15	2.446	0.005	0.030	0.80	0.000	54
16	2.432	0.006	0.030	0.75	0.000	51
17	2.410	0.004	0.030	0.73	0.000	49
18	2.449	0.001	0.026	0.73	0.000	47
19	2.482	0.004	0.031	0.72	0.000	39
20	2.468	0.002	0.023	0.66	0.000	31
21	2.402	0.000	0.022	0.68	0.000	25
22	2.342	0.001	0.020	0.45	0.002	23
23	2.319	0.001	0.012	0.41	0.053	13
24	2.262	0.002	0.006	0.23	0.352	10

### LRD Regression Coefficients for Non-Coastal Health - Standard Day - Summer

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	2.335	0.015	0.035	0.73	0.000	104
2	2.280	0.016	0.036	0.64	0.000	101
3	2.298	0.011	0.032	0.62	0.000	97
4	2.306	0.011	0.031	0.60	0.000	92
5	2.354	0.012	0.030	0.61	0.000	87
6	2.613	0.014	0.034	0.67	0.000	81
7	2.858	0.014	0.035	0.69	0.000	85
8	3.038	0.021	0.039	0.79	0.000	95
9	3.170	0.019	0.039	0.81	0.000	117
10	3.149	0.026	0.039	0.85	0.000	124
11	3.134	0.024	0.039	0.87	0.000	124
12	3.070	0.028	0.039	0.89	0.000	125
13	3.017	0.025	0.041	0.89	0.000	124
14	3.041	0.024	0.042	0.88	0.000	125
15	2.948	0.026	0.045	0.89	0.000	125
16	2.885	0.022	0.046	0.88	0.000	123
17	2.800	0.022	0.046	0.89	0.000	125
18	2.789	0.021	0.043	0.88	0.000	126
19	2.750	0.027	0.042	0.90	0.000	124
20	2.688	0.020	0.047	0.84	0.000	123
21	2.597	0.025	0.046	0.84	0.000	123
22	2.486	0.024	0.045	0.82	0.000	121
23	2.419	0.020	0.042	0.80	0.000	114
24	2.364	0.015	0.041	0.74	0.000	109

### LRD Regression Coefficients for Non-Coastal Health - Standard Day - Winter

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	2.213	0.002	0.007	0.20	0.190	17
2	2.281	0.006	-0.007	0.05	0.707	16
3	2.280	0.005	-0.008	0.03	0.829	13
4	2.335	0.000	-0.017	0.03	0.890	10
5	2.445	-0.002	-0.052	0.09	0.689	10
6	2.605	0.012	-0.024	0.13	0.506	12
7	2.986	0.008	-0.085	0.20	0.467	9
8	3.168	0.014	-0.010	0.11	0.639	10
9	3.127	0.009	0.022	0.09	0.186	36
10	3.146	0.007	0.027	0.20	0.001	62
11	3.128	0.008	0.024	0.33	0.000	93
12	3.087	0.007	0.025	0.41	0.000	111
13	3.026	0.009	0.029	0.47	0.000	112
14	2.972	0.012	0.033	0.54	0.000	116
15	2.932	0.010	0.032	0.75	0.000	113
16	2.875	0.010	0.033	0.73	0.000	112
17	2.819	0.009	0.030	0.71	0.000	111
18	2.750	0.007	0.027	0.72	0.000	110
19	2.729	0.007	0.024	0.72	0.000	91
20	2.650	0.005	0.020	0.56	0.000	77
21	2.551	0.005	0.019	0.50	0.000	57
22	2.453	0.005	0.014	0.44	0.000	42
23	2.373	0.005	0.008	0.45	0.000	34
24	2.255	0.004	0.010	0.29	0.016	26

### LRD Regression Coefficients for Non-Coastal Health - Non-Standard Day - Summer

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	2.294	0.020	0.031	0.72	0.000	45
2	2.267	0.019	0.027	0.67	0.000	43
3	2.261	0.018	0.022	0.59	0.000	41
4	2.285	0.016	0.019	0.55	0.000	40
5	2.338	0.016	0.017	0.56	0.000	37
6	2.500	0.017	0.022	0.60	0.000	37
7	2.600	0.017	0.025	0.53	0.000	40
8	2.579	0.020	0.038	0.71	0.000	43
9	2.701	0.021	0.025	0.58	0.000	53
10	2.654	0.022	0.031	0.68	0.000	55
11	2.662	0.025	0.032	0.74	0.000	55
12	2.582	0.020	0.036	0.80	0.000	55
13	2.628	0.022	0.035	0.84	0.000	55
14	2.573	0.022	0.037	0.86	0.000	54
15	2.556	0.022	0.037	0.86	0.000	55
16	2.511	0.023	0.040	0.87	0.000	54
17	2.553	0.024	0.039	0.88	0.000	55
18	2.654	0.026	0.036	0.83	0.000	55
19	2.630	0.023	0.036	0.82	0.000	55
20	2.587	0.028	0.036	0.87	0.000	55
21	2.554	0.026	0.033	0.79	0.000	54
22	2.485	0.023	0.029	0.72	0.000	52
23	2.408	0.019	0.029	0.72	0.000	48
24	2.400	0.013	0.025	0.65	0.000	45

### LRD Regression Coefficients for Non-Coastal Health - Non-Standard Day - Winter

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	2.193	0.002	0.006	0.07	0.746	10
2	2.033	-0.008	0.040	0.44	0.745	3
3	4.539	-0.000	0.040	0.00	0.952	4
4	4.410	-0.007	0.040	0.55	0.258	4
5	4.382	-0.009	0.040	0.69	0.171	4
6	2.018	-0.015	0.041	0.83	0.167	4
7	2.020	-0.017	-0.004	0.94	0.243	3
8	2.613	0.005	-0.005	0.20	0.647	6
9	2.597	-0.002	0.003	0.06	0.677	14
10	2.566	0.004	0.021	0.52	0.000	28
11	2.500	0.001	0.022	0.55	0.000	36
12	2.522	0.003	0.023	0.68	0.000	43
13	2.526	0.005	0.025	0.71	0.000	47
14	2.490	0.004	0.025	0.67	0.000	48
15	2.448	0.004	0.027	0.69	0.000	49
16	2.388	0.006	0.030	0.77	0.000	48
17	2.417	0.005	0.027	0.74	0.000	49
18	2.508	0.003	0.023	0.73	0.000	47
19	2.533	0.004	0.021	0.76	0.000	41
20	2.492	0.001	0.015	0.36	0.002	31
21	2.381	-0.001	0.012	0.30	0.013	26
22	2.322	-0.002	0.005	0.12	0.273	22
23	2.246	-0.002	0.004	0.17	0.170	21
24	2.172	-0.001	0.005	0.12	0.380	17

### LRD Regression Coefficients for Coastal Lodging - Standard Day - Summer

Hour	Regression Parameters			$R^2$	Statistics	
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)		Significance of F-Statistic	N
1	0.925	-0.000	0.013	0.34	0.000	150
2	0.870	0.000	0.013	0.42	0.000	147
3	0.855	0.000	0.012	0.44	0.000	140
4	0.854	0.001	0.012	0.46	0.000	136
5	0.892	0.002	0.012	0.40	0.000	130
6	0.970	0.004	0.013	0.32	0.000	131
7	1.052	0.005	0.013	0.25	0.000	137
8	1.095	0.006	0.012	0.47	0.000	162
9	1.097	0.007	0.011	0.62	0.000	180
10	1.092	0.007	0.011	0.67	0.000	181
11	1.092	0.008	0.010	0.66	0.000	182
12	1.082	0.007	0.010	0.64	0.000	182
13	1.078	0.006	0.011	0.61	0.000	182
14	1.084	0.005	0.010	0.57	0.000	182
15	1.076	0.005	0.009	0.58	0.000	182
16	1.074	0.005	0.009	0.54	0.000	182
17	1.078	0.005	0.010	0.51	0.000	182
18	1.098	0.006	0.010	0.40	0.000	181
19	1.143	0.006	0.009	0.30	0.000	180
20	1.153	0.006	0.012	0.43	0.000	180
21	1.162	0.005	0.014	0.40	0.000	173
22	1.128	0.004	0.014	0.40	0.000	171
23	1.060	0.002	0.014	0.38	0.000	171
24	0.991	0.001	0.013	0.34	0.000	166

### LRD Regression Coefficients for Coastal Lodging - Standard Day - Winter

Hour	Regression Parameters			$R^2$	Statistics	
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)		Significance of F-Statistic	N
1	0.906	0.003	0.006	0.07	0.516	20
2	0.803	0.006	0.019	0.51	0.041	11
3	0.765	0.011	0.010	0.52	0.113	8
4	0.895	-0.020	0.007	0.81	0.084	5
5	0.945	-0.023	-0.021	0.90	0.034	5
6	0.959	-0.014	-0.015	0.27	0.536	6
7	1.016	-0.009	0.015	0.33	0.366	7
8	1.023	0.005	0.010	0.09	0.418	20
9	1.083	-0.000	0.003	0.02	0.676	48
10	1.077	0.003	0.007	0.24	0.000	98
11	1.069	0.003	0.007	0.28	0.000	139
12	1.055	0.003	0.008	0.30	0.000	164
13	1.047	0.003	0.008	0.31	0.000	169
14	1.043	0.004	0.008	0.34	0.000	168
15	1.037	0.004	0.007	0.31	0.000	170
16	1.028	0.003	0.007	0.29	0.000	168
17	1.047	0.003	0.007	0.21	0.000	167
18	1.118	0.002	0.005	0.06	0.008	153
19	1.145	0.003	0.007	0.12	0.001	119
20	1.159	0.004	0.009	0.16	0.000	95
21	1.158	0.003	0.006	0.16	0.003	69
22	1.147	0.003	0.003	0.09	0.096	53
23	1.094	0.003	-0.000	0.11	0.142	35
24	1.011	0.001	-0.003	0.03	0.672	27

**LRD Regression Coefficients for Coastal Lodging - Non-Standard Day - Summer**

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coeficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	0.000	0.000	0.000	0.00	1.000	0
2	0.000	0.000	0.000	0.00	1.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.000	0.000	0.000	0.00	1.000	0
9	0.000	0.000	0.000	0.00	1.000	0
10	0.000	0.000	0.000	0.00	1.000	0
11	0.000	0.000	0.000	0.00	1.000	0
12	0.000	0.000	0.000	0.00	1.000	0
13	0.000	0.000	0.000	0.00	1.000	0
14	0.000	0.000	0.000	0.00	1.000	0
15	0.000	0.000	0.000	0.00	1.000	0
16	0.000	0.000	0.000	0.00	1.000	0
17	0.000	0.000	0.000	0.00	1.000	0
18	0.000	0.000	0.000	0.00	1.000	0
19	0.000	0.000	0.000	0.00	1.000	0
20	0.000	0.000	0.000	0.00	1.000	0
21	0.000	0.000	0.000	0.00	1.000	0
22	0.000	0.000	0.000	0.00	1.000	0
23	0.000	0.000	0.000	0.00	1.000	0
24	0.000	0.000	0.000	0.00	1.000	0

**LRD Regression Coefficients for Coastal Lodging - Non-Standard Day - Winter**

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coeficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	0.000	0.000	0.000	0.00	1.000	0
2	0.000	0.000	0.000	0.00	1.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.000	0.000	0.000	0.00	1.000	0
9	0.000	0.000	0.000	0.00	1.000	0
10	0.000	0.000	0.000	0.00	1.000	0
11	0.000	0.000	0.000	0.00	1.000	0
12	0.000	0.000	0.000	0.00	1.000	0
13	0.000	0.000	0.000	0.00	1.000	0
14	0.000	0.000	0.000	0.00	1.000	0
15	0.000	0.000	0.000	0.00	1.000	0
16	0.000	0.000	0.000	0.00	1.000	0
17	0.000	0.000	0.000	0.00	1.000	0
18	0.000	0.000	0.000	0.00	1.000	0
19	0.000	0.000	0.000	0.00	1.000	0
20	0.000	0.000	0.000	0.00	1.000	0
21	0.000	0.000	0.000	0.00	1.000	0
22	0.000	0.000	0.000	0.00	1.000	0
23	0.000	0.000	0.000	0.00	1.000	0
24	0.000	0.000	0.000	0.00	1.000	0

**LRD Regression Coefficients for Non-Coastal Lodging - Standard Day - Summer**

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	1.179	0.006	0.014	0.45	0.000	150
2	1.154	0.005	0.013	0.38	0.000	145
3	1.133	0.005	0.013	0.49	0.000	139
4	1.127	0.006	0.012	0.42	0.000	133
5	1.136	0.006	0.011	0.38	0.000	125
6	1.215	0.004	0.011	0.39	0.000	119
7	1.316	0.003	0.008	0.22	0.000	126
8	1.343	0.007	0.007	0.34	0.000	139
9	1.383	0.008	0.009	0.58	0.000	171
10	1.338	0.011	0.011	0.47	0.000	180
11	1.321	0.011	0.012	0.62	0.000	180
12	1.321	0.010	0.012	0.75	0.000	181
13	1.329	0.011	0.013	0.77	0.000	180
14	1.318	0.011	0.014	0.75	0.000	180
15	1.272	0.012	0.015	0.76	0.000	181
16	1.249	0.010	0.016	0.73	0.000	178
17	1.321	0.010	0.016	0.74	0.000	181
18	1.375	0.013	0.016	0.76	0.000	182
19	1.417	0.014	0.016	0.77	0.000	180
20	1.410	0.009	0.015	0.66	0.000	179
21	1.385	0.009	0.015	0.62	0.000	178
22	1.297	0.010	0.016	0.51	0.000	174
23	1.248	0.008	0.015	0.49	0.000	163
24	1.219	0.005	0.014	0.44	0.000	155

**LRD Regression Coefficients for Non-Coastal Lodging - Standard Day - Winter**

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	1.221	0.002	0.000	0.05	0.492	28
2	1.164	0.001	0.001	0.01	0.898	20
3	1.145	0.001	-0.003	0.04	0.763	17
4	1.126	-0.001	-0.004	0.08	0.602	14
5	1.137	-0.000	-0.004	0.04	0.776	14
6	1.215	0.001	0.005	0.08	0.527	17
7	1.332	0.002	0.001	0.39	0.065	13
8	1.355	0.004	0.005	0.28	0.085	17
9	1.459	0.005	0.002	0.30	0.000	51
10	1.443	0.006	0.007	0.31	0.000	91
11	1.411	0.006	0.008	0.31	0.000	130
12	1.386	0.006	0.009	0.38	0.000	155
13	1.398	0.006	0.009	0.39	0.000	160
14	1.397	0.006	0.008	0.37	0.000	165
15	1.353	0.005	0.008	0.36	0.000	163
16	1.343	0.006	0.009	0.36	0.000	161
17	1.428	0.004	0.006	0.26	0.000	161
18	1.533	0.002	0.004	0.12	0.000	158
19	1.555	0.003	0.007	0.18	0.000	133
20	1.463	0.004	0.011	0.29	0.000	109
21	1.409	0.004	0.012	0.30	0.000	84
22	1.342	0.004	0.011	0.25	0.000	65
23	1.298	0.003	0.007	0.14	0.015	56
24	1.236	0.003	0.008	0.14	0.047	44

**LRD Regression Coefficients for Non-Coastal Lodging - Non-Standard Day - Summer**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.000	0.000	0.000	0.00	1.000	0
2	0.000	0.000	0.000	0.00	1.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.000	0.000	0.000	0.00	1.000	0
9	0.000	0.000	0.000	0.00	1.000	0
10	0.000	0.000	0.000	0.00	1.000	0
11	0.000	0.000	0.000	0.00	1.000	0
12	0.000	0.000	0.000	0.00	1.000	0
13	0.000	0.000	0.000	0.00	1.000	0
14	0.000	0.000	0.000	0.00	1.000	0
15	0.000	0.000	0.000	0.00	1.000	0
16	0.000	0.000	0.000	0.00	1.000	0
17	0.000	0.000	0.000	0.00	1.000	0
18	0.000	0.000	0.000	0.00	1.000	0
19	0.000	0.000	0.000	0.00	1.000	0
20	0.000	0.000	0.000	0.00	1.000	0
21	0.000	0.000	0.000	0.00	1.000	0
22	0.000	0.000	0.000	0.00	1.000	0
23	0.000	0.000	0.000	0.00	1.000	0
24	0.000	0.000	0.000	0.00	1.000	0

**LRD Regression Coefficients for Non-Coastal Lodging - Non-Standard Day - Winter**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.000	0.000	0.000	0.00	1.000	0
2	0.000	0.000	0.000	0.00	1.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.000	0.000	0.000	0.00	1.000	0
9	0.000	0.000	0.000	0.00	1.000	0
10	0.000	0.000	0.000	0.00	1.000	0
11	0.000	0.000	0.000	0.00	1.000	0
12	0.000	0.000	0.000	0.00	1.000	0
13	0.000	0.000	0.000	0.00	1.000	0
14	0.000	0.000	0.000	0.00	1.000	0
15	0.000	0.000	0.000	0.00	1.000	0
16	0.000	0.000	0.000	0.00	1.000	0
17	0.000	0.000	0.000	0.00	1.000	0
18	0.000	0.000	0.000	0.00	1.000	0
19	0.000	0.000	0.000	0.00	1.000	0
20	0.000	0.000	0.000	0.00	1.000	0
21	0.000	0.000	0.000	0.00	1.000	0
22	0.000	0.000	0.000	0.00	1.000	0
23	0.000	0.000	0.000	0.00	1.000	0
24	0.000	0.000	0.000	0.00	1.000	0

**LRD Regression Coefficients for Coastal School - Standard Day - Summer**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.422	0.003	0.001	0.05	0.377	38
2	0.412	0.004	0.001	0.08	0.235	38
3	0.421	0.002	0.002	0.04	0.520	34
4	0.425	0.003	-0.000	0.03	0.675	32
5	0.421	0.007	-0.006	0.20	0.043	30
6	0.482	0.005	-0.005	0.10	0.233	30
7	0.678	0.002	-0.009	0.06	0.422	32
8	1.257	0.004	-0.029	0.14	0.026	50
9	1.873	0.003	-0.038	0.22	0.001	60
10	1.869	-0.002	-0.012	0.06	0.178	61
11	1.839	0.001	-0.006	0.02	0.569	62
12	1.819	0.000	-0.000	0.00	0.997	62
13	1.629	0.001	0.002	0.00	0.933	62
14	1.782	0.000	-0.005	0.02	0.619	62
15	1.474	0.004	0.000	0.03	0.349	62
16	0.973	0.004	0.005	0.19	0.002	62
17	0.732	0.004	0.005	0.12	0.025	62
18	0.664	0.007	-0.003	0.10	0.046	61
19	0.683	0.013	-0.013	0.24	0.000	60
20	0.667	0.011	-0.003	0.11	0.036	60
21	0.684	0.005	-0.004	0.03	0.462	55
22	0.587	0.001	-0.000	0.00	0.900	54
23	0.468	0.003	0.001	0.06	0.184	54
24	0.423	0.006	-0.002	0.09	0.092	51

**LRD Regression Coefficients for Coastal School - Standard Day - Winter**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.339	0.012	0.028	0.54	0.009	14
2	0.352	0.010	0.047	0.85	0.001	9
3	0.419	0.004	0.038	0.66	0.068	7
4	0.170	0.061	0.064	0.99	0.005	4
5	0.399	0.014	0.055	0.84	0.159	4
6	0.515	-0.002	0.020	0.42	0.444	5
7	0.648	-0.006	0.019	0.40	0.361	6
8	1.057	0.011	0.011	0.02	0.851	15
9	1.620	-0.003	-0.015	0.01	0.789	37
10	1.619	0.000	-0.001	0.00	0.996	65
11	1.669	0.004	-0.005	0.01	0.521	96
12	1.541	0.005	0.011	0.01	0.437	112
13	1.381	0.005	0.010	0.02	0.325	116
14	1.437	0.007	0.012	0.03	0.210	115
15	1.275	0.003	0.008	0.01	0.430	115
16	0.903	0.001	0.006	0.03	0.227	116
17	0.715	0.000	0.003	0.01	0.559	117
18	0.715	0.000	-0.002	0.01	0.733	105
19	0.720	0.000	-0.001	0.00	0.971	79
20	0.774	-0.001	-0.006	0.02	0.574	63
21	0.715	0.001	0.001	0.01	0.835	43
22	0.622	-0.000	0.001	0.00	0.993	29
23	0.499	0.001	0.003	0.02	0.787	21
24	0.441	0.002	-0.003	0.08	0.559	16

### LRD Regression Coefficients for Coastal School - Non-Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	0.445	-0.003	0.000	0.02	0.298	111
2	0.435	-0.002	0.001	0.01	0.527	108
3	0.444	-0.003	0.000	0.02	0.317	105
4	0.443	-0.002	-0.000	0.01	0.473	103
5	0.435	-0.001	-0.000	0.00	0.851	99
6	0.386	0.005	-0.000	0.04	0.121	100
7	0.341	0.011	0.003	0.09	0.010	104
8	0.406	0.021	0.001	0.06	0.030	111
9	0.588	0.023	-0.005	0.03	0.154	119
10	0.646	0.014	0.002	0.02	0.345	119
11	0.679	0.011	0.003	0.01	0.490	119
12	0.693	0.009	0.002	0.01	0.556	119
13	0.687	-0.000	0.003	0.00	0.926	119
14	0.664	0.000	0.002	0.00	0.943	119
15	0.647	-0.002	0.001	0.00	0.862	119
16	0.502	0.004	0.002	0.01	0.580	119
17	0.427	0.001	0.003	0.02	0.369	119
18	0.413	0.002	0.001	0.01	0.516	119
19	0.448	-0.001	-0.000	0.00	0.934	119
20	0.485	-0.002	-0.002	0.01	0.519	119
21	0.564	-0.007	-0.004	0.08	0.008	117
22	0.545	-0.005	-0.004	0.08	0.010	116
23	0.474	-0.003	-0.001	0.04	0.091	116
24	0.439	-0.002	0.001	0.01	0.450	114

### LRD Regression Coefficients for Coastal School - Non-Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	0.441	-0.004	-0.023	0.10	0.850	5
2	85.191	0.689	0.846	1.00	2.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.356	-0.004	0.018	0.81	0.190	4
9	0.702	-0.034	-0.065	0.61	0.024	10
10	0.398	-0.008	0.010	0.14	0.098	32
11	0.426	-0.008	0.001	0.12	0.079	42
12	0.398	-0.005	0.004	0.12	0.046	51
13	0.393	-0.004	0.003	0.12	0.044	52
14	0.384	-0.001	0.005	0.07	0.186	52
15	0.383	-0.001	0.005	0.07	0.138	54
16	0.388	-0.000	0.004	0.07	0.157	51
17	0.446	-0.003	-0.002	0.06	0.215	49
18	0.492	-0.005	-0.004	0.10	0.085	47
19	0.500	-0.003	-0.001	0.05	0.365	39
20	0.516	-0.002	0.001	0.02	0.739	31
21	0.518	-0.001	0.002	0.01	0.897	25
22	0.494	-0.001	0.003	0.01	0.886	23
23	0.389	0.004	0.014	0.16	0.396	13
24	0.404	-0.005	0.007	0.30	0.245	10

**LRD Regression Coefficients for Non-Coastal School - Standard Day - Summer**

Hour	<b>Regression Parameters</b>			<b>Statistics</b>		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	0.290	0.005	0.004	0.07	0.236	40
2	0.263	0.005	0.011	0.09	0.183	37
3	0.249	0.004	0.022	0.15	0.081	33
4	0.273	0.003	0.017	0.06	0.415	29
5	0.335	0.003	0.001	0.01	0.840	26
6	0.387	0.004	0.015	0.04	0.622	24
7	0.815	-0.008	0.033	0.10	0.336	22
8	1.624	0.001	0.042	0.22	0.027	31
9	2.103	0.003	0.020	0.12	0.041	53
10	2.144	0.007	0.028	0.30	0.000	61
11	2.053	0.012	0.037	0.48	0.000	61
12	1.991	0.019	0.042	0.57	0.000	61
13	1.915	0.016	0.042	0.61	0.000	60
14	2.010	0.012	0.044	0.60	0.000	61
15	1.736	0.021	0.048	0.71	0.000	61
16	1.449	0.016	0.037	0.50	0.000	59
17	0.907	0.010	0.013	0.17	0.005	61
18	0.747	0.009	0.005	0.09	0.060	62
19	0.694	0.006	0.001	0.04	0.335	61
20	0.620	-0.000	0.004	0.01	0.840	59
21	0.548	0.005	0.005	0.03	0.370	59
22	0.469	0.006	0.003	0.08	0.107	57
23	0.344	0.006	0.015	0.15	0.020	51
24	0.301	0.003	0.019	0.14	0.043	45

**LRD Regression Coefficients for Non-Coastal School - Standard Day - Winter**

Hour	<b>Regression Parameters</b>			<b>Statistics</b>		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	0.256	0.000	-0.003	0.02	0.851	17
2	0.270	-0.001	-0.008	0.11	0.438	16
3	0.252	-0.001	-0.005	0.20	0.295	13
4	0.234	0.002	0.001	0.14	0.539	10
5	0.228	0.002	0.006	0.29	0.260	10
6	0.310	-0.005	0.012	0.26	0.229	12
7	0.707	-0.012	0.013	0.49	0.097	9
8	1.501	-0.008	0.024	0.49	0.069	10
9	1.770	-0.009	0.027	0.08	0.256	36
10	2.005	-0.003	-0.003	0.00	0.866	62
11	2.006	0.003	0.006	0.01	0.652	93
12	1.873	0.012	0.025	0.11	0.001	111
13	1.719	0.012	0.028	0.15	0.000	112
14	1.836	0.014	0.028	0.14	0.000	116
15	1.598	0.012	0.031	0.20	0.000	113
16	1.264	0.009	0.023	0.17	0.000	112
17	0.727	0.002	0.008	0.09	0.007	111
18	0.632	0.000	0.002	0.01	0.734	110
19	0.615	0.000	-0.002	0.00	0.855	91
20	0.567	-0.001	0.000	0.00	0.942	77
21	0.496	-0.001	0.002	0.01	0.678	57
22	0.406	-0.001	0.004	0.02	0.629	42
23	0.315	-0.001	0.004	0.03	0.567	34
24	0.267	-0.001	0.003	0.03	0.706	26

### LRD Regression Coefficients for Non-Coastal School - Non-Standard Day - Summer

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.250	0.003	0.006	0.07	0.021	109
2	0.240	0.002	0.007	0.07	0.023	107
3	0.246	0.002	0.006	0.06	0.039	105
4	0.249	0.002	0.005	0.05	0.063	103
5	0.250	0.002	0.007	0.09	0.009	98
6	0.252	0.004	0.015	0.22	0.000	94
7	0.288	0.017	0.021	0.22	0.000	103
8	0.404	0.040	0.017	0.12	0.002	107
9	0.561	0.037	0.013	0.08	0.007	117
10	0.549	0.036	0.017	0.10	0.003	118
11	0.530	0.035	0.017	0.10	0.002	118
12	0.565	0.036	0.014	0.09	0.004	119
13	0.668	0.044	0.007	0.11	0.001	119
14	0.655	0.048	0.007	0.10	0.002	118
15	0.503	0.040	0.014	0.09	0.004	119
16	0.352	0.030	0.017	0.10	0.003	118
17	0.282	0.012	0.010	0.09	0.003	119
18	0.322	0.005	0.004	0.04	0.091	119
19	0.341	0.003	0.002	0.01	0.416	118
20	0.333	0.004	0.002	0.03	0.205	119
21	0.334	0.004	0.002	0.03	0.225	118
22	0.336	0.003	0.000	0.02	0.390	116
23	0.299	0.003	0.002	0.02	0.358	111
24	0.262	0.002	0.005	0.06	0.039	109

### LRD Regression Coefficients for Non-Coastal School - Non-Standard Day - Winter

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.225	-0.000	0.002	0.01	0.942	10
2	0.254	0.000	-0.004	0.28	0.848	3
3	0.001	0.000	-0.004	0.00	0.941	4
4	0.026	0.002	-0.004	0.11	0.672	4
5	0.043	0.002	-0.004	0.25	0.499	4
6	0.307	0.003	0.055	0.90	0.096	4
7	0.503	0.012	0.019	1.00	0.070	3
8	0.192	-0.001	0.005	0.32	0.458	6
9	0.338	-0.041	-0.084	0.46	0.024	14
10	0.220	-0.009	0.003	0.06	0.431	28
11	0.237	-0.010	-0.000	0.08	0.265	36
12	0.254	-0.009	-0.001	0.06	0.297	43
13	0.251	-0.006	0.001	0.04	0.395	47
14	0.229	-0.005	0.003	0.04	0.383	48
15	0.211	-0.003	0.006	0.04	0.355	49
16	0.236	-0.004	0.002	0.05	0.322	48
17	0.252	-0.003	-0.000	0.05	0.297	49
18	0.276	-0.003	-0.002	0.09	0.134	47
19	0.275	-0.003	-0.003	0.12	0.081	41
20	0.261	-0.003	-0.004	0.23	0.023	31
21	0.262	-0.003	-0.006	0.27	0.024	26
22	0.265	-0.002	-0.008	0.32	0.020	22
23	0.244	-0.001	-0.005	0.22	0.099	21
24	0.235	-0.001	-0.004	0.15	0.307	17

**LRD Regression Coefficients for Coastal College - Standard Day - Summer**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.774	-0.003	0.001	0.02	0.458	102
2	0.757	-0.003	0.001	0.02	0.376	102
3	0.758	-0.003	0.001	0.02	0.318	98
4	0.782	-0.002	0.002	0.03	0.299	96
5	0.818	0.001	0.006	0.17	0.000	93
6	0.942	0.001	0.009	0.27	0.000	93
7	1.212	-0.001	0.013	0.19	0.000	96
8	1.558	-0.005	0.008	0.06	0.037	114
9	1.732	-0.006	0.002	0.04	0.088	124
10	1.803	-0.006	0.001	0.04	0.076	125
11	1.811	-0.005	0.003	0.04	0.061	126
12	1.792	-0.005	0.003	0.05	0.030	126
13	1.800	-0.006	0.003	0.07	0.011	126
14	1.790	-0.003	0.002	0.02	0.229	126
15	1.771	-0.003	0.000	0.02	0.310	126
16	1.684	-0.003	-0.001	0.02	0.391	126
17	1.538	-0.005	-0.002	0.02	0.275	126
18	1.535	-0.002	-0.008	0.03	0.117	125
19	1.523	0.001	-0.013	0.06	0.028	124
20	1.424	0.002	-0.009	0.03	0.195	124
21	1.208	0.004	-0.003	0.01	0.633	119
22	1.001	0.001	-0.014	0.01	0.486	118
23	0.865	0.003	-0.004	0.02	0.276	118
24	0.780	0.003	-0.003	0.03	0.218	115

**LRD Regression Coefficients for Coastal College - Standard Day - Winter**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.760	0.015	-0.006	0.49	0.018	14
2	0.740	0.013	-0.007	0.40	0.164	9
3	0.700	0.017	-0.001	0.30	0.412	7
4	1.366	-0.133	-0.049	.00	0.004	4
5	0.974	-0.031	-0.030	0.23	0.769	4
6	0.815	0.012	0.050	0.12	0.830	5
7	0.916	0.018	0.105	0.33	0.451	6
8	1.311	-0.001	0.071	0.35	0.061	15
9	1.607	-0.004	0.021	0.14	0.068	37
10	1.677	0.005	0.017	0.12	0.017	65
11	1.711	0.009	0.013	0.13	0.001	96
12	1.627	0.011	0.021	0.17	0.000	112
13	1.606	0.010	0.018	0.14	0.000	116
14	1.611	0.011	0.018	0.14	0.000	115
15	1.604	0.008	0.016	0.10	0.002	115
16	1.558	0.005	0.015	0.09	0.004	116
17	1.479	0.005	0.016	0.09	0.005	117
18	1.432	0.005	0.014	0.05	0.072	105
19	1.479	0.008	0.013	0.06	0.079	79
20	1.471	0.005	0.011	0.03	0.448	63
21	1.343	0.004	0.024	0.06	0.304	43
22	1.203	0.004	0.017	0.04	0.554	29
23	1.006	0.003	0.015	0.11	0.339	21
24	0.868	0.002	0.030	0.20	0.207	16

**LRD Regression Coefficients for Coastal College - Non-Standard Day - Summer**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.687	-0.000	-0.002	0.02	0.689	47
2	0.674	-0.002	0.001	0.02	0.608	44
3	0.666	-0.001	0.001	0.01	0.795	41
4	0.665	-0.001	0.000	0.01	0.874	39
5	0.660	-0.002	0.002	0.04	0.521	36
6	0.634	-0.001	0.004	0.08	0.253	37
7	0.660	0.003	0.001	0.03	0.593	40
8	0.803	-0.001	-0.005	0.02	0.601	47
9	0.956	-0.008	-0.008	0.07	0.159	55
10	0.993	-0.011	-0.002	0.08	0.120	55
11	0.969	-0.014	0.004	0.14	0.016	55
12	0.991	-0.015	0.003	0.22	0.001	55
13	0.945	-0.015	0.007	0.35	0.000	55
14	0.971	-0.016	0.006	0.30	0.000	55
15	0.955	-0.016	0.006	0.33	0.000	55
16	0.903	-0.010	0.005	0.15	0.014	55
17	0.874	-0.014	0.005	0.21	0.002	55
18	0.892	-0.007	-0.001	0.05	0.250	55
19	0.927	-0.009	-0.003	0.09	0.075	55
20	0.907	-0.005	-0.004	0.04	0.378	55
21	0.868	-0.004	-0.002	0.02	0.558	53
22	0.828	-0.002	-0.008	0.08	0.130	52
23	0.751	-0.001	-0.006	0.05	0.247	52
24	0.673	0.002	-0.002	0.02	0.688	50

**LRD Regression Coefficients for Coastal College - Non-Standard Day - Winter**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.718	-0.001	-0.033	0.11	0.842	5
2	83.998	0.907	0.644	1.00	2.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.780	-0.002	-0.050	0.94	0.057	4
9	1.026	-0.019	-0.039	0.49	0.066	10
10	0.846	-0.002	0.011	0.08	0.272	32
11	0.863	-0.003	0.007	0.08	0.181	42
12	0.837	-0.001	0.009	0.12	0.041	51
13	0.862	-0.001	0.006	0.09	0.083	52
14	0.862	0.001	0.007	0.08	0.111	52
15	0.876	0.001	0.006	0.07	0.168	54
16	0.845	0.001	0.007	0.10	0.084	51
17	0.869	-0.004	0.003	0.09	0.108	49
18	0.899	-0.007	-0.002	0.12	0.053	47
19	0.902	-0.003	0.002	0.04	0.455	39
20	0.883	-0.000	0.009	0.05	0.473	31
21	0.875	-0.000	0.010	0.04	0.602	25
22	0.890	-0.001	-0.002	0.01	0.929	23
23	0.802	-0.000	0.004	0.06	0.717	13
24	0.751	-0.002	0.001	0.09	0.681	10

**LRD Regression Coefficients for Non-Coastal College - Standard Day - Summer**

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	0.770	0.000	0.004	0.17	0.000	104
2	0.735	0.000	0.006	0.29	0.000	101
3	0.723	0.001	0.006	0.35	0.000	97
4	0.732	0.001	0.007	0.41	0.000	92
5	0.842	0.002	0.010	0.41	0.000	87
6	1.045	0.005	0.017	0.50	0.000	81
7	1.309	0.004	0.020	0.54	0.000	85
8	1.598	0.001	0.016	0.35	0.000	95
9	1.730	0.000	0.012	0.32	0.000	117
10	1.796	0.001	0.010	0.32	0.000	124
11	1.830	0.001	0.009	0.28	0.000	124
12	1.820	0.001	0.008	0.25	0.000	125
13	1.829	0.000	0.009	0.25	0.000	124
14	1.812	0.002	0.009	0.26	0.000	125
15	1.750	0.004	0.010	0.30	0.000	125
16	1.662	0.003	0.009	0.19	0.000	123
17	1.524	0.003	0.006	0.07	0.012	125
18	1.560	0.003	0.002	0.01	0.421	126
19	1.594	0.001	-0.001	0.00	0.944	124
20	1.509	0.002	0.001	0.01	0.737	123
21	1.334	0.003	0.001	0.01	0.429	123
22	1.042	0.000	0.001	0.00	0.756	121
23	0.880	0.000	0.004	0.06	0.023	114
24	0.810	0.000	0.003	0.10	0.003	109

**LRD Regression Coefficients for Non-Coastal College - Standard Day - Winter**

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficeint (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)	R <sup>2</sup>	Significance of F-Statistic	N
1	0.782	0.003	0.004	0.35	0.040	17
2	0.750	0.003	0.004	0.52	0.006	16
3	0.733	0.002	0.002	0.53	0.015	13
4	0.732	0.002	0.001	0.30	0.238	10
5	0.825	-0.000	-0.015	0.28	0.269	10
6	0.923	0.003	-0.002	0.17	0.383	12
7	1.193	0.004	-0.008	0.19	0.476	9
8	1.506	0.008	0.019	0.31	0.233	10
9	1.632	0.005	0.019	0.26	0.005	36
10	1.764	0.005	0.006	0.10	0.045	62
11	1.769	0.006	0.010	0.13	0.001	93
12	1.710	0.010	0.017	0.27	0.000	111
13	1.659	0.010	0.016	0.28	0.000	112
14	1.667	0.011	0.016	0.28	0.000	116
15	1.642	0.011	0.016	0.29	0.000	113
16	1.570	0.011	0.017	0.29	0.000	112
17	1.496	0.009	0.017	0.27	0.000	111
18	1.432	0.007	0.015	0.18	0.000	110
19	1.515	0.008	0.012	0.13	0.002	91
20	1.495	0.006	0.011	0.06	0.081	77
21	1.526	0.008	-0.007	0.09	0.067	57
22	1.335	0.007	-0.008	0.12	0.082	42
23	1.048	0.004	-0.009	0.23	0.016	34
24	0.868	0.004	-0.001	0.32	0.009	26

**LRD Regression Coefficients for Non-Coastal College - Non-Standard Day - Summer**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.717	0.001	0.003	0.09	0.126	45
2	0.695	0.001	0.003	0.09	0.149	43
3	0.684	0.001	0.004	0.11	0.094	41
4	0.678	0.001	0.004	0.12	0.080	40
5	0.679	0.003	0.004	0.20	0.019	37
6	0.681	0.005	0.008	0.30	0.002	37
7	0.730	0.004	0.010	0.24	0.006	40
8	0.790	0.005	0.009	0.17	0.022	43
9	0.962	-0.005	-0.000	0.04	0.395	53
10	0.989	-0.005	0.004	0.07	0.160	55
11	1.004	-0.007	0.005	0.15	0.012	55
12	0.999	-0.008	0.006	0.23	0.001	55
13	0.988	-0.009	0.007	0.24	0.001	55
14	0.996	-0.009	0.006	0.25	0.001	54
15	1.030	-0.007	0.004	0.19	0.004	55
16	0.999	-0.007	0.004	0.22	0.001	54
17	0.942	-0.006	0.004	0.22	0.002	55
18	0.975	-0.010	0.002	0.32	0.000	55
19	1.007	-0.010	0.000	0.32	0.000	55
20	0.987	-0.005	0.002	0.12	0.039	55
21	0.942	-0.004	0.002	0.13	0.027	54
22	0.857	-0.001	0.003	0.13	0.034	52
23	0.798	-0.001	0.003	0.10	0.092	48
24	0.748	-0.002	0.003	0.10	0.095	45

**LRD Regression Coefficients for Non-Coastal College - Non-Standard Day - Winter**

Hour	Regression Parameters			R <sup>2</sup>	Statistics Significance of F-Statistic	N
	Base Load Intercept (W/ft <sup>2</sup> )	Dew Point Coefficient (W/ft <sup>2</sup> /°F)	Dry Bulb Coefficient (W/ft <sup>2</sup> /°F)			
1	0.707	-0.000	0.011	0.19	0.429	10
2	0.660	-0.003	0.015	0.74	0.507	3
3	1.569	-0.001	0.015	0.13	0.638	4
4	1.578	-0.000	0.015	0.00	0.984	4
5	1.568	-0.001	0.015	0.01	0.880	4
6	0.678	-0.001	0.005	0.06	0.938	4
7	0.752	0.002	0.003	0.70	0.546	3
8	0.775	-0.000	-0.003	0.09	0.827	6
9	0.876	-0.009	-0.020	0.27	0.147	14
10	0.915	0.002	0.005	0.03	0.633	28
11	0.872	0.000	0.009	0.10	0.176	36
12	0.863	0.001	0.010	0.16	0.031	43
13	0.868	0.002	0.010	0.21	0.005	47
14	0.874	0.002	0.009	0.18	0.010	48
15	0.872	0.002	0.010	0.21	0.004	49
16	0.870	0.003	0.010	0.22	0.003	48
17	0.876	0.002	0.008	0.17	0.012	49
18	0.907	-0.001	0.004	0.09	0.126	47
19	0.917	-0.000	0.006	0.10	0.142	41
20	0.940	-0.000	0.002	0.01	0.874	31
21	0.925	-0.001	-0.001	0.01	0.923	26
22	0.910	0.000	-0.004	0.01	0.894	22
23	0.824	0.001	0.003	0.02	0.828	21
24	0.748	0.002	0.013	0.34	0.043	17

## **Appendix E. THI Matrices for Cooling**

	Coastal College																								
THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
44	nd	nd	nd	nd	nd	nd	0.01	0.01	nd																
45	nd	nd	nd	0.01	0.01	nd	nd	0.01	nd																
46	nd	0.01	nd																						
47	nd	0.01	nd	nd	nd	nd	nd	0.01	0.01	0.01	nd														
48	nd	0.01	nd	nd	0.01	0.01	0.01	0.01	nd	0.01															
49	0.04	0.01	nd	0.01	0.01	0.01	0.01	0.02	nd																
50	0.01	nd	0.01	0.04	0.01	0.01	0.03	0.03	0.05	0.10	nd	0.08	nd	nd											
51	0.06	0.11	0.06	0.11	0.11	0.07	0.05	0.05	0.06	0.12	nd	0.01	0.04												
52	0.11	0.12	0.11	0.06	0.09	0.09	0.05	0.05	0.10	nd	0.09	0.08	nd												
53	0.13	0.11	0.11	0.12	0.12	0.10	0.07	0.08	0.12	0.13	nd	0.07	nd	0.08	0.12										
54	0.14	0.12	0.12	0.13	0.14	0.11	0.09	0.09	0.11	0.16	nd	0.15	0.13	0.11	0.13										
55	0.14	0.14	0.15	0.14	0.14	0.13	0.10	0.09	0.12	0.12	0.15	nd	0.13	0.12	0.10	0.09									
56	0.16	0.15	0.15	0.14	0.14	0.16	0.13	0.11	0.11	0.12	0.15	0.15	nd	0.13	0.16	0.14	0.11								
57	0.17	0.15	0.15	0.15	0.16	0.15	0.12	0.12	0.15	0.16	0.17	0.18	0.16	0.16	0.16	0.15	0.15	0.14	0.14	0.13	0.11	0.10	0.16		
58	0.18	0.15	nd	0.16	nd	0.17	0.14	0.12	0.15	0.17	0.20	0.18	0.19	0.19	0.15	0.15	0.16	nd	0.14	0.15	0.14	0.15	0.11	0.16	
59	0.21	0.19	0.18	0.19	0.19	0.18	0.15	0.15	0.16	0.20	0.20	0.18	0.20	0.20	0.20	0.19	0.18	0.20	0.17	0.16	0.16	0.13	0.12		
60	0.24	0.23	0.20	0.24	0.24	0.21	0.17	0.20	0.24	0.23	0.19	0.20	0.23	0.21	0.21	0.23	0.24	0.18	0.18	0.20	0.18	0.17	0.21		
61	0.22	0.20	nd	nd	0.24	0.24	0.20	0.19	0.22	0.24	0.24	0.25	0.23	0.23	0.24	0.25	0.21	0.22	0.21	0.21	0.20	0.17	0.14	0.21	
62	0.26	nd	nd	nd	0.25	0.24	0.24	0.24	0.26	0.26	0.26	0.27	0.25	0.25	0.26	0.27	0.24	0.22	0.22	0.23	0.24	0.20	0.16	0.24	
63	0.30	n.d.	nd	nd	nd	0.29	0.28	0.26	0.29	0.27	0.31	0.29	0.30	0.29	0.29	0.29	0.29	0.26	0.28	0.28	0.25	0.23	0.19	0.26	
64	nd	nd	nd	nd	nd	0.30	0.30	0.30	0.32	0.36	0.32	0.33	0.33	0.32	0.32	0.31	0.32	0.29	0.28	0.25	0.25	0.25	0.21	0.18	
65	0.37	nd	nd	nd	nd	0.33	0.32	0.31	0.34	0.35	0.37	0.37	0.36	0.36	0.36	0.37	0.36	0.36	0.31	0.31	0.29	0.30	0.27	0.26	
66	nd	nd	nd	nd	nd	0.36	0.35	0.33	0.37	0.39	0.39	0.39	0.38	0.38	0.39	0.39	0.36	0.32	0.30	0.32	0.33	0.29	0.20	0.29	
67	0.33	nd	0.28	nd	0.38	0.38	0.33	0.33	0.38	0.37	0.39	0.39	0.39	0.38	0.38	0.39	0.36	0.34	0.35	0.33	0.32	0.30	0.29	0.29	
68	nd	nd	nd	nd	nd	0.37	0.35	0.33	0.36	0.36	0.36	0.38	0.38	0.38	0.39	0.36	0.33	0.33	0.33	0.33	0.32	0.32	0.26	0.29	
69	nc	nd	nd	nd	nd	0.36	0.36	0.34	0.37	0.37	0.38	0.39	0.40	0.41	0.38	0.33	0.33	0.32	0.28	0.33	0.27	0.21	0.20	0.30	
70	nd	nd	nd	nd	nd	0.40	0.36	nd	0.37	0.38	0.39	0.41	0.40	0.41	0.40	0.39	0.34	0.35	0.28	0.31	nd	0.20	0.19	0.28	
71	nd	nd	nd	nd	nd	0.37	0.41	0.41	0.41	0.41	0.42	0.42	0.41	0.42	0.42	0.41	0.38	0.35	0.30	0.32	0.34	0.28	nd	0.30	
72	nd	nd	nd	nd	nd	0.36	0.41	0.43	0.41	0.41	0.42	0.43	0.39	0.37	0.34	0.39	0.35	0.31	nd	nd	nd	nd	nd	nd	nd
73	nd	nd	nd	nd	nd	nd	0.42	0.44	0.43	0.43	0.44	0.43	0.43	0.43	0.43	0.40	0.33	0.35	0.35	nd	nd	nd	nd	nd	
74	nd	nd	nd	nd	nd	nd	0.42	nd	nd	0.47	0.44	0.44	0.42	0.39	0.38	0.38	nd								
75	nd	nd	nd	nd	nd	nd	0.41	0.45	0.47	0.46	0.48	0.44	0.45	0.42	0.42	0.42	0.38	0.38	0.38	nd	nd	nd	nd	nd	
76	nd	nd	nd	nd	nd	nd	0.47	0.47	0.49	0.49	0.49	0.47	0.47	0.47	0.47	0.47	0.41	nd	nd						
77	nd	nd	nd	nd	nd	nd	0.47	0.47	0.48	0.47	0.50	0.47	0.45	0.45	0.45	0.45	0.38	nd	nd						
78	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.52	0.49	0.52	0.52	0.48	0.43	nd									
79	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.48	0.49	nd	0.50	0.51	0.48	nd									
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.50	0.51	nd											
81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.54	nd												
82	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	

Non-Coastal College

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
43	nd																							
44	0.16	nd	nd	nd	nd	nd	nd	0.14	nd															
45	nd	0.12	0.15	0.15	0.15	0.19	0.15	0.19	nd															
46	nd	nd	0.07	0.13	nd	0.02	0.05	0.09	nd															
47	nd	nd	0.13	0.10	0.09	0.22	0.13	0.19	0.17	nd														
48	nd	0.16	0.11	0.12	0.13	0.16	0.17	nd	0.15	nd														
49	0.02	0.08	0.09	0.09	0.12	0.20	0.16	0.19	0.17	0.02	nd	0.15												
50	0.16	0.15	0.23	0.14	0.16	0.19	0.18	0.18	0.17	0.13	nd	0.09	0.02											
51	0.10	0.17	0.15	0.15	0.17	0.17	0.14	0.15	0.16	0.24	0.16	nd	0.08	0.06	0.04	0.02								
52	0.15	0.14	0.14	0.19	0.19	0.17	0.14	0.16	0.15	0.23	0.19	0.13	nd	0.07	0.12	0.07	0.06	0.13						
53	0.19	0.20	0.20	0.18	0.19	0.19	0.19	0.19	0.16	0.22	0.17	0.14	nd	0.02	0.11	0.09	0.06	0.11						
54	0.18	0.15	0.14	0.19	0.19	0.19	0.18	0.15	0.13	0.20	nd	0.11	nd	0.06	0.20	0.12	0.10	0.13						
55	0.19	0.20	0.20	0.20	0.19	0.19	0.22	0.22	0.17	0.16	0.16	0.21	nd	0.15	nd	nd	0.02	0.09	0.14	0.14	0.12	0.14	0.16	0.13
56	0.21	0.21	0.18	0.20	0.23	0.21	0.19	0.22	0.18	0.20	0.19	0.14	nd	0.02	0.11	nd	nd	nd	nd	0.09	0.17	0.12	0.16	0.15
57	0.20	0.20	0.18	0.19	0.19	0.21	0.21	0.20	0.19	0.22	0.20	0.19	nd	0.12	0.10	0.14	0.16	0.12	0.13	0.10	0.17	0.15	0.14	0.19
58	0.21	0.20	0.20	0.19	0.22	0.23	0.25	0.23	0.19	0.20	0.16	0.15	nd	0.16	0.16	0.16	0.16	0.14	0.12	0.17	0.15	0.17	0.13	0.22
59	0.22	0.21	0.20	0.21	0.23	0.24	0.24	0.26	0.26	0.24	0.22	0.21	0.19	0.19	0.19	0.16	0.17	0.19	0.15	0.16	0.20	0.18	0.13	0.18
60	0.22	0.21	0.22	0.23	0.28	0.30	0.25	0.22	0.24	0.24	0.21	0.20	0.19	0.32	0.17	0.13	0.15	0.17	0.20	0.20	0.19	0.13	0.13	0.21
61	0.24	0.24	0.24	0.25	0.28	0.31	0.31	0.26	0.28	0.26	0.23	0.18	0.20	0.20	0.19	0.20	0.18	0.18	0.21	0.21	0.21	0.20	0.16	0.23
62	0.26	0.25	0.25	0.27	0.31	0.34	0.27	0.34	0.27	0.27	0.36	0.27	0.24	0.20	0.18	0.18	0.17	0.22	0.23	0.24	0.25	0.17	0.24	0.24
63	0.30	0.28	0.27	0.28	0.32	0.37	0.37	0.34	0.33	0.30	0.28	0.27	0.19	0.22	0.20	0.22	0.23	0.24	0.21	0.25	0.26	0.19	0.27	0.27
64	0.30	0.29	0.30	0.30	0.35	0.42	0.41	0.36	0.36	0.36	0.34	0.34	0.28	0.23	0.22	0.20	0.24	0.24	0.28	0.27	0.27	0.22	0.20	0.27
65	0.31	0.30	0.30	0.31	0.38	0.45	0.44	0.40	0.39	0.34	0.37	0.32	0.29	0.26	0.26	0.26	0.27	0.27	0.27	0.33	0.31	0.23	0.20	0.29
66	0.32	0.30	0.31	0.33	0.41	0.50	0.45	0.42	0.40	0.43	0.40	0.29	0.32	0.29	0.27	0.27	0.23	0.28	0.30	0.33	0.28	0.22	0.20	0.30
67	0.33	0.33	0.31	0.33	0.38	0.48	0.50	0.47	0.45	0.45	0.42	0.38	0.39	0.33	0.30	0.28	0.33	0.30	0.31	0.35	0.31	0.23	0.21	0.31
68	0.35	0.32	0.34	0.33	0.39	0.51	0.48	0.47	0.46	0.43	0.40	0.40	0.43	0.43	0.40	0.40	0.43	0.43	0.40	0.39	0.37	0.35	0.34	0.33
69	0.34	0.36	0.35	0.36	0.43	0.24	0.48	0.49	0.46	0.48	0.48	0.43	0.40	0.41	0.39	0.38	0.32	0.38	0.37	0.35	0.29	0.25	0.22	0.34
70	nd	0.35	nd	nd	nd	0.57	0.60	0.51	nd	0.50	0.42	0.45	0.37	0.39	0.38	0.41	0.33	0.37	0.39	0.41	0.33	0.36	0.25	0.29
71	0.36	0.35	nd	nd	nd	nd	0.53	0.53	0.53	0.50	0.45	0.45	0.47	0.43	0.41	0.39	0.39	0.38	0.36	0.34	0.36	0.24	0.23	0.33
72	nd	nd	nd	nd	nd	nd	0.50	0.52	0.43	0.47	0.44	0.47	0.49	0.47	0.41	0.41	0.39	0.34	0.37	0.30	0.30	nd	nd	nd
73	0.37	nd	0.36	0.37	0.45	0.53	0.57	0.51	0.54	0.52	0.46	0.48	0.52	0.50	0.40	0.40	0.40	0.36	0.36	0.37	0.30	0.34	0.24	0.33
74	nd																							
75	nd	0.58	0.57	0.53	0.54	0.52	0.54	0.53	0.51	0.40	0.40	0.36	0.40	0.37	0.37	0.24	nd	nd						
76	nd	0.67	0.55	0.49	0.50	0.47	0.51	0.50	0.44	0.45	0.45	0.41	0.39	0.39	0.38	0.34	0.32	nd						
77	nd	0.60	0.60	0.55	0.54	0.51	0.52	0.53	0.41	0.36	0.36	0.30	0.30	nd	nd	nd	nd	nd						
78	nd	0.57	0.56	0.54	0.52	0.49	0.48	0.50	0.40	0.40	0.40	0.36	0.36	nd	nd	nd	nd	nd						
79	nd																							
80	nd																							
81	nd																							
82	nd																							
83	nd																							

THI	Coastal Health																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
44	nd	nd	nd	nd	nd	0.00	0.00	nd																
45	nd	nd	nd	0.00	0.00	nd	nd	0.00	nd															
46	nd	nd	nd	0.00	nd																			
47	nd	0.00	0.00	nd	nd	nd	nd	0.00	0.00	nd														
48	nd	0.00	nd	0.00	0.00	0.00	0.00	0.00	nd	0.00														
49	0.00	0.00	nd	0.00	0.00	0.00	0.00	0.00	0.00	nd														
50	0.00	nd	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.04	0.04	0.12	nd	0.15	nd								
51	0.09	0.08	0.06	0.12	0.09	0.00	0.00	0.07	0.09	0.09	0.09	0.23	nd	0.00										
52	0.08	0.12	0.20	0.06	0.10	0.16	0.06	0.05	0.12	0.14	nd	0.00												
53	0.15	0.15	0.14	0.19	0.18	0.14	0.07	0.17	0.23	0.25	nd	0.14												
54	0.15	0.21	0.16	0.18	0.18	0.21	0.18	0.21	0.22	nd	0.28	nd	0.18											
55	0.22	0.22	0.22	0.22	0.22	0.25	0.23	0.25	0.26	0.27	0.28	nd	0.22											
56	0.22	0.23	0.22	0.22	0.24	0.23	0.25	0.26	0.27	0.28	0.27	nd	0.23											
57	0.23	0.23	0.24	0.25	0.23	0.26	0.26	0.28	0.28	0.31	0.31	0.31	0.32	0.29	0.28	0.27	0.28	0.26	0.31	0.27	0.27	0.26	0.24	
58	0.25	0.27	nd	0.26	0.26	0.28	0.28	0.29	0.30	0.31	0.30	0.30	0.31	0.30	0.29	0.31	nd	0.29	0.31	0.29	0.29	0.27	0.26	0.25
59	0.27	0.27	0.26	0.27	0.27	0.28	0.30	0.32	0.32	0.34	0.34	0.34	0.31	0.32	0.32	0.33	0.33	0.34	0.33	0.34	0.33	0.33	0.30	
60	0.30	0.31	0.30	0.34	0.35	0.32	0.32	0.33	0.33	0.36	0.36	0.36	0.33	0.33	0.36	0.36	0.37	0.36	0.37	0.33	0.33	0.32	0.30	
61	0.32	0.34	nd	nd	0.34	0.36	0.37	0.38	0.37	0.39	0.39	0.38	0.41	0.41	0.36	0.38	0.41	0.41	0.36	0.38	0.41	0.35	0.36	0.33
62	0.37	nd	nd	nd	nd	0.41	0.44	0.45	0.39	0.41	0.41	0.41	0.40	0.41	0.40	0.42	0.40	0.41	0.43	0.41	0.41	0.40	0.39	0.37
63	0.45	nd	nd	nd	nd	0.48	0.53	0.49	0.47	0.43	0.46	0.46	0.47	0.48	0.49	0.47	0.48	0.49	0.47	0.49	0.49	0.46	0.46	0.45
64	nd	nd	nd	nd	nd	0.52	0.59	0.60	0.52	0.56	0.56	0.56	0.50	0.50	0.52	0.51	0.51	0.50	0.53	0.52	0.53	0.52	0.52	0.50
65	0.59	nd	nd	nd	nd	0.58	0.66	0.65	0.62	0.61	0.59	0.56	0.56	0.56	0.58	0.60	0.62	0.60	0.59	0.60	0.59	0.63	0.57	0.57
66	nd	nd	nd	nd	nd	0.65	0.73	0.72	0.70	0.69	0.68	0.66	0.64	0.65	0.68	0.64	0.67	0.65	0.70	0.67	0.64	0.63	0.62	0.62
67	0.61	nd	nd	nd	nd	0.72	0.82	0.77	0.75	0.71	0.70	0.73	0.71	0.73	0.72	0.73	0.72	0.75	0.77	0.74	0.72	0.70	0.71	0.71
68	nd	nd	nd	nd	nd	0.89	0.91	0.79	0.78	0.78	0.74	0.77	0.78	0.81	0.79	0.81	0.81	0.77	0.81	0.78	0.76	0.72	0.75	0.75
69	nd	nd	nd	nd	nd	0.78	0.89	0.96	0.87	0.84	0.83	0.85	0.85	0.86	0.89	0.87	0.87	0.93	0.86	0.88	0.86	0.87	0.91	0.81
70	nd	nd	nd	nd	nd	0.97	0.98	nd	0.88	0.91	0.94	0.92	0.94	0.93	0.91	0.98	0.97	0.93	0.97	0.97	0.93	0.97	0.81	
71	nd	nd	nd	nd	nd	1.00	1.02	0.97	0.95	0.99	0.98	1.00	0.99	0.97	0.99	0.98	0.97	0.99	0.97	0.99	0.98	0.91	nd	0.84
72	nd	nd	nd	nd	nd	0.98	1.03	1.08	1.02	1.07	1.11	1.10	1.07	1.06	1.08	1.10	1.10	1.08	1.10	1.09	1.09	nd	nd	nd
73	nd	nd	nd	nd	nd	nd	1.11	1.13	1.16	1.16	1.18	1.11	1.13	1.13	1.10	1.13	1.11	1.13	1.12	nd	nd	nd	nd	nd
74	nd	nd	nd	nd	nd	nd	1.15	nd	nd	1.13	1.13	1.16	1.20	1.14	1.19	1.22	1.22	nd						
75	nd	nd	nd	nd	nd	nd	1.13	1.21	1.23	1.24	1.27	1.18	1.26	1.30	1.27	nd								
76	nd	nd	nd	nd	nd	nd	1.28	1.32	1.34	1.32	1.38	1.24	1.35	1.31	nd									
77	nd	nd	nd	nd	nd	nd	1.30	1.33	1.28	1.40	1.37	1.41	1.43	1.44	nd									
78	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.59	1.46	1.46	1.45	1.53	1.48	nd								
79	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.40	1.43	nd	1.52	1.59	1.58	nd							
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
82	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	

		Non-Coastal Health																								
THI		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
43	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
44	0.30	nd	nd	nd	nd	nd	nd	0.37	nd																	
45	0.32	0.22	0.31	0.31	0.33	0.33	0.33	0.41	nd																	
46	nd	nd	0.00	0.25	nd	0.00	0.12	0.27	rd	nd																
47	nd	nd	0.16	0.16	0.13	0.46	0.31	0.30	0.37	nd																
48	nd	0.25	0.17	0.21	0.09	0.26	0.22	nd	0.38	nd																
49	0.00	0.11	0.16	0.17	0.32	0.26	0.36	0.41	0.00	nd	0.29	nd														
50	0.27	0.21	0.38	0.30	0.26	0.38	0.37	0.42	0.38	nd	0.20	0.00														
51	0.13	0.18	0.23	0.25	0.30	0.29	0.36	0.37	0.45	0.34	nd	0.04														
52	0.21	0.25	0.22	0.35	0.29	0.28	0.38	0.44	0.47	0.37	0.17	nd	0.19													
53	0.28	0.31	0.35	0.33	0.35	0.39	0.44	0.39	0.43	0.36	0.18	nd	0.23													
54	0.30	0.25	0.27	0.34	0.34	0.39	0.40	0.39	0.30	0.38	nd	0.17	nd	0.27												
55	0.31	0.34	0.34	0.35	0.34	0.39	0.39	0.43	0.37	0.31	0.37	nd	0.33	nd	nd	0.14	0.23	0.31	0.30	0.27	0.31	0.35	0.31	0.28		
56	0.35	0.35	0.33	0.37	0.39	0.38	0.42	0.50	0.40	0.40	0.34	nd	0.00	0.23	0.22	0.23	0.24	0.27	0.30	0.28	0.32	0.33	0.30	0.38		
57	0.35	0.36	0.35	0.35	0.37	0.42	0.44	0.46	0.48	0.40	0.41	0.43	0.27	0.18	0.28	0.37	0.20	0.21	0.25	0.31	0.36	0.32	0.36	0.32		
58	0.37	0.34	0.38	0.35	0.39	0.41	0.53	0.53	0.41	0.44	0.28	0.35	0.38	0.34	0.37	0.21	0.29	0.27	0.38	0.33	0.34	0.36	0.35	0.38		
59	0.39	0.39	0.37	0.39	0.39	0.46	0.53	0.61	0.51	0.44	0.43	0.43	0.44	0.50	0.33	0.38	0.40	0.36	0.38	0.40	0.38	0.39	0.36	0.34		
60	0.38	0.38	0.41	0.43	0.52	0.58	0.50	0.53	0.50	0.48	0.43	0.40	0.40	0.53	0.41	0.31	0.34	0.36	0.42	0.40	0.40	0.37	0.34	0.35		
61	0.42	0.46	0.47	0.48	0.49	0.58	0.67	0.57	0.58	0.50	0.44	0.41	0.42	0.41	0.43	0.46	0.40	0.38	0.44	0.42	0.43	0.50	0.46	0.44		
62	0.50	0.53	0.54	0.55	0.57	0.59	0.71	0.56	0.53	0.64	0.48	0.46	0.39	0.36	0.40	0.41	0.43	0.47	0.56	0.46	0.55	0.44	0.46	0.44		
63	0.65	0.61	0.60	0.60	0.61	0.69	0.80	0.77	0.64	0.56	0.54	0.52	0.40	0.42	0.40	0.42	0.44	0.49	0.55	0.52	0.56	0.56	0.56	0.56		
64	0.66	0.65	0.70	0.69	0.76	0.89	0.96	0.76	0.79	0.68	0.59	0.52	0.48	0.43	0.44	0.49	0.51	0.49	0.58	0.60	0.64	0.64	0.66	0.62		
65	0.76	0.77	0.75	0.75	0.81	0.87	0.97	1.00	0.76	0.63	0.65	0.57	0.53	0.48	0.49	0.47	0.56	0.59	0.56	0.63	0.76	0.79	0.77	0.75		
66	0.85	0.84	0.83	0.86	0.92	1.22	0.95	1.05	0.93	0.84	0.76	0.50	0.57	0.54	0.50	0.53	0.50	0.59	0.62	0.75	0.69	0.74	0.77	0.82		
67	0.91	0.89	0.78	0.83	0.85	0.95	1.15	1.29	1.08	0.90	0.70	0.72	0.57	0.54	0.56	0.63	0.67	0.65	0.89	0.79	0.88	0.82	0.94	0.93		
68	0.90	0.86	0.91	0.81	0.84	0.79	1.08	1.02	1.09	0.83	0.77	0.71	0.87	0.60	0.55	0.61	0.59	0.81	0.83	0.90	0.94	1.01	1.03	1.01		
69	0.83	0.84	0.87	0.82	0.88	0.54	0.92	1.20	1.06	1.10	0.90	0.84	0.74	0.77	0.76	0.78	0.71	0.82	0.87	1.02	1.00	1.20	1.02	0.98		
70	nd	0.73	nd	nd	nd	1.29	1.49	1.31	nd	1.11	0.89	0.88	0.70	0.74	0.74	0.78	0.74	0.74	0.96	1.03	1.25	1.12	1.02	0.64		
71	0.79	0.76	nd	nd	nd	1.33	1.29	1.08	0.92	0.91	0.92	0.84	0.86	0.88	0.86	0.88	0.97	1.04	1.05	1.14	0.97	1.06	0.94	nd		
72	nd	nd	nd	nd	nd	0.89	1.06	0.87	1.05	0.96	0.92	0.94	0.95	0.87	1.11	1.06	1.01	1.34	1.04	nd	nd	nd	nd	nd	nd	
73	0.83	nd	0.81	0.91	1.04	1.31	1.49	1.23	1.19	1.01	1.05	1.08	1.14	1.12	1.14	1.15	1.20	1.10	nd	1.06	0.95	0.91	nd	nd	nd	
74	nd	nd	nd	nd	nd	nd	nd	1.83	1.32	1.65	1.25	1.07	0.99	1.20	1.19	1.12	1.10	1.11	nd							
75	nd	nd	nd	nd	nd	nd	nd	1.45	1.41	1.17	1.23	1.26	1.27	1.28	1.32	1.24	1.29	1.23	1.28	1.21	1.23	1.17	nd	nd		
76	nd	nd	nd	nd	nd	nd	nd	1.96	1.33	1.21	1.24	1.20	1.25	1.35	1.11	1.34	1.38	1.34	1.29	nd	nd	nd	nd	nd	nd	nd
77	nd	nd	nd	nd	nd	nd	nd	1.56	1.52	1.41	1.43	1.40	1.45	1.33	1.50	1.36	1.34	nd								
78	nd	nd	nd	nd	nd	nd	nd	1.39	1.44	1.44	1.45	1.43	1.47	1.54	1.58	1.51	1.36	nd								
79	nd	nd	nd	nd	nd	nd	nd	nd	1.74	1.63	1.56	1.57	1.63	1.60	1.56	1.52	nd									
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.91	1.67	1.71	1.66	1.69	1.69	nd										
81	nd	nd	nd	nd	nd	nd	nd	1.67	nd	1.82	1.74	1.75	1.78	nd	1.57	nd										
82	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.60	nd	1.68	1.74	nd												
83	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.77	1.78	1.76	1.86	nd											

## Coastal Hotel

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
44	nd	nd	nd	nd	0.00	0.00	nd																		
45	nd	nd	nd	0.00	0.00	nd	nd	0.00	nd																
46	nd	nd	C.00	nd	nd	nd	nd	0.00	nd																
47	nd	0.00	0.00	nd	nd	0.00	0.00	0.00	0.02	nd															
48	nd	0.08	nd	0.00	0.04	0.04	0.01	nd	0.06																
49	0.05	0.00	0.00	0.04	0.07	0.05	0.03	0.03	0.02	nd															
50	0.00	0.08	0.04	0.06	0.07	0.08	0.06	0.08	0.03	0.08	nd	0.08	0.06	nd											
51	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.08	nd	0.07	0.07	0.07										
52	0.09	0.09	0.09	0.08	0.08	0.08	0.09	0.10	0.09	0.08	0.08	nd	0.07	0.07	0.06										
53	0.10	0.09	0.08	0.08	0.08	0.09	0.10	0.11	0.10	0.11	0.10	0.11	0.10	0.11	0.10	nd	nd	nd	nd	0.07	0.08	0.08	0.08	0.08	
54	0.11	0.10	0.10	0.09	0.09	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	nd	nd	nd	0.11	0.08	0.08	0.09	0.09	
55	0.12	0.11	0.10	0.09	0.10	0.12	0.13	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.10	nd	nd	nd	0.10	nd	0.10	0.09	0.10	0.09	
56	0.13	0.13	0.12	0.12	0.12	0.13	0.15	0.14	0.13	0.13	0.12	0.13	0.12	0.13	0.12	0.10	nd								
57	0.16	0.14	0.12	0.13	0.13	0.16	0.18	0.16	0.16	0.15	0.14	0.15	0.14	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	
58	0.17	0.15	0.14	0.13	0.13	0.18	0.19	0.17	0.16	0.15	0.15	0.14	0.15	0.14	0.13	0.13	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	
59	0.17	0.15	0.14	0.14	0.13	0.17	0.17	0.18	0.17	0.16	0.16	0.15	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.13	
60	0.18	0.19	0.14	0.16	0.16	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.13	
61	0.18	0.16	0.16	nd	0.16	0.19	0.20	0.18	0.18	0.16	0.16	0.16	0.15	0.16	0.15	0.16	0.16	0.15	0.15	0.14	0.14	0.14	0.14	0.13	
62	0.18	0.15	nd	nd	nd	0.20	0.22	0.20	0.18	0.18	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.16	0.15	0.15	0.14	
63	0.20	nd	nd	nd	nd	0.21	0.24	0.21	0.21	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.18	0.18	0.18	0.16	
64	nd	nd	nd	nd	nd	0.22	0.24	0.23	0.22	0.22	0.20	0.20	0.20	0.21	0.21	0.21	0.22	0.21	0.21	0.21	0.22	0.20	0.20	0.17	
65	0.21	nd	nd	nd	nd	0.22	0.24	0.25	0.24	0.24	0.23	0.23	0.23	0.23	0.23	0.23	0.25	0.26	0.27	0.24	0.26	0.28	0.30	0.24	
66	nd	nd	nd	nd	nd	0.23	0.27	0.28	0.27	0.28	0.28	0.28	0.28	0.29	0.29	0.30	0.32	0.32	0.32	0.32	0.32	0.34	0.36	0.28	
67	0.20	0.21	nd	nd	nd	0.26	0.32	0.32	0.31	0.30	0.30	0.32	0.34	0.32	0.36	0.36	0.36	0.36	0.37	0.38	0.44	0.44	0.41	0.36	0.32
68	nd	nd	nd	nd	nd	0.40	0.44	0.34	0.36	0.37	0.37	0.39	0.39	0.42	0.44	0.44	0.47	0.47	0.42	0.46	0.50	0.53	0.50	0.45	0.39
69	nd	nd	nd	nd	nd	0.56	0.58	0.49	0.42	0.39	0.43	0.45	0.46	0.47	0.48	0.50	0.52	0.52	0.53	0.56	0.61	0.61	0.60	0.47	
70	nd	nd	nd	nd	nd	0.78	0.60	nd	0.42	0.48	0.54	0.53	0.54	0.54	0.55	0.55	0.56	0.57	0.57	0.57	0.67	0.65	0.67	0.61	
71	nd	nd	nd	nd	nd	0.62	0.58	0.53	0.56	0.58	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.57	0.57	0.57	0.57	0.61	
72	nd	nd	nd	nd	nd	0.81	0.64	0.68	0.64	0.63	0.69	0.66	0.65	0.69	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	
73	nd	nd	nd	nd	nd	0.78	0.78	0.75	0.75	0.72	0.68	0.69	0.72	0.78	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
74	nd	nd	nd	nd	nd	0.92	nd	nd	0.73	0.71	0.78	0.74	0.75	0.81	0.85	nd									
75	nd	nd	nd	nd	nd	0.91	0.89	0.86	0.83	0.83	0.74	0.79	0.83	0.88	0.82	nd									
76	nd	nd	nd	nd	nd	1.03	0.91	0.91	0.90	0.81	0.80	0.84	0.80	0.84	0.80	nd									
77	nd	nd	nd	nd	nd	1.00	0.93	0.91	0.87	0.91	0.87	0.91	0.92	0.93	0.97	nd									
78	nd	nd	nd	nd	nd	nd	1.13	1.02	1.04	1.04	1.04	1.05	1.05	1.05	1.05	nd									
79	nd	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	nd															
80	nd																								
81	nd																								
82	nd																								

Non-Coastal Hotel

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
43	nd																							
44	0.15	0.14	nd	nd	nd	nd	nd	0.23	nd	0.10														
45	0.20	0.14	0.16	0.15	0.19	0.20	0.27	nd																
46	nd	nd	0.12	0.13	nd	0.08	0.12	0.16	nd															
47	0.14	nd	0.14	0.10	0.15	0.23	0.24	0.21	0.16	nd	0.10	0.10												
48	nd	0.15	0.12	0.15	0.14	0.19	0.16	0.18	0.19	nd														
49	0.12	0.11	0.14	0.14	0.18	0.22	0.19	0.13	nd	0.11														
50	0.14	0.15	0.16	0.16	0.16	0.22	0.24	0.21	0.19	nd	0.09	0.09												
51	0.11	0.15	0.14	0.16	0.21	0.20	0.26	0.22	0.21	0.17	nd	0.08												
52	0.15	0.13	0.16	0.19	0.16	0.20	0.24	0.27	0.23	0.18	0.13	nd	0.09											
53	0.17	0.19	0.20	0.19	0.20	0.23	0.28	0.23	0.23	0.19	0.15	nd	0.12	nd	nd	nd	nd	nd	0.03	0.12	0.09	0.11	0.12	0.11
54	0.18	0.18	0.20	0.21	0.21	0.24	0.25	0.21	0.16	0.20	0.15	0.15	nd	0.13	0.11	0.14	0.12	0.17	0.11	0.11	0.12	0.13	0.13	0.13
55	0.20	0.20	0.19	0.20	0.20	0.23	0.25	0.21	0.20	0.18	0.20	0.14	0.15	0.11	nd	0.00	0.12	0.13	0.11	0.15	0.12	0.13	0.15	0.14
56	0.22	0.22	0.21	0.22	0.24	0.23	0.24	0.27	0.28	0.23	0.22	0.18	0.13	0.12	0.13	0.08	0.09	0.15	0.14	0.13	0.14	0.14	0.17	
57	0.22	0.22	0.22	0.22	0.21	0.24	0.27	0.26	0.26	0.21	0.19	0.19	0.22	0.15	0.14	0.14	0.14	0.14	0.13	0.12	0.14	0.16	0.15	0.16
58	0.23	0.22	0.24	0.22	0.23	0.25	0.33	0.25	0.23	0.22	0.18	0.19	0.22	0.17	0.17	0.17	0.13	0.20	0.18	0.16	0.16	0.17	0.18	0.17
59	0.25	0.26	0.24	0.24	0.25	0.28	0.33	0.33	0.33	0.27	0.22	0.23	0.20	0.24	0.25	0.15	0.16	0.20	0.16	0.17	0.17	0.18	0.18	0.17
60	0.25	0.24	0.25	0.29	0.32	0.38	0.36	0.29	0.29	0.27	0.21	0.21	0.21	0.23	0.23	0.16	0.19	0.20	0.18	0.18	0.16	0.17	0.21	0.21
61	0.28	0.31	0.31	0.32	0.35	0.40	0.40	0.32	0.33	0.33	0.28	0.23	0.21	0.21	0.22	0.21	0.21	0.23	0.21	0.21	0.20	0.18	0.19	0.23
62	0.33	0.35	0.36	0.34	0.33	0.45	0.34	0.30	0.26	0.23	0.21	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.20	0.19	0.27	0.24
63	0.40	0.38	0.37	0.35	0.34	0.40	0.46	0.41	0.35	0.29	0.31	0.26	0.26	0.23	0.20	0.21	0.23	0.20	0.21	0.23	0.20	0.18	0.26	0.30
64	0.44	0.44	0.43	0.41	0.45	0.60	0.58	0.38	0.39	0.41	0.28	0.28	0.28	0.23	0.22	0.23	0.23	0.23	0.21	0.29	0.26	0.26	0.30	0.30
65	0.50	0.48	0.48	0.49	0.54	0.55	0.63	0.41	0.30	0.33	0.30	0.28	0.24	0.24	0.23	0.23	0.27	0.27	0.22	0.34	0.39	0.42	0.40	0.43
66	0.56	0.59	0.55	0.54	0.51	0.62	0.48	0.51	0.41	0.36	0.26	0.29	0.29	0.27	0.27	0.26	0.30	0.27	0.39	0.39	0.41	0.45	0.48	0.48
67	0.62	0.59	0.49	0.51	0.52	0.61	0.73	0.67	0.63	0.49	0.34	0.36	0.31	0.29	0.28	0.33	0.36	0.27	0.46	0.40	0.51	0.47	0.60	0.51
68	0.58	0.55	0.56	0.39	0.46	0.29	0.64	0.62	0.65	0.48	0.42	0.31	0.41	0.29	0.32	0.28	0.30	0.44	0.50	0.51	0.58	0.60	0.65	0.62
69	0.52	0.60	0.61	0.49	0.49	0.16	0.32	0.74	0.62	0.8	0.49	0.45	0.36	0.37	0.34	0.40	0.40	0.36	0.44	0.48	0.55	0.55	0.71	0.68
70	nd	nd	0.25	nd	nd	0.86	1.00	0.88	0.64	0.59	0.53	0.49	0.38	0.38	0.34	0.39	0.37	0.50	0.52	0.54	0.74	0.75	0.65	0.43
71	C.55	0.52	nd	nd	nd	0.84	0.81	0.62	0.50	0.42	0.55	0.43	0.48	0.52	0.54	0.57	0.62	0.75	0.69	0.65	0.62	nd	nd	nd
72	nd	nd	nd	nd	nd	0.57	0.71	0.61	0.64	0.53	0.49	0.52	0.51	0.53	0.60	0.54	0.53	0.78	0.73	0.62	nd	nd	nd	nd
73	0.66	nd	0.64	0.62	0.73	0.83	0.97	0.99	0.76	0.79	0.69	0.57	0.52	0.58	0.60	0.59	0.60	0.61	0.73	0.73	0.63	0.71	0.63	0.63
74	nd	1.15	0.89	0.97	0.71	0.57	0.58	0.63	0.65	0.64	0.60	0.66	0.73	nd	nd	nd	nd							
75	nd	0.96	0.92	0.60	0.69	0.65	0.63	0.68	0.70	0.71	0.71	0.89	0.90	0.70	nd	nd	nd							
76	nd	1.21	0.89	0.69	0.70	0.52	0.59	0.68	0.59	0.69	0.73	0.76	0.77	0.75	0.86	0.76	nd							
77	nd	1.02	0.81	0.78	0.77	0.70	0.67	0.73	0.74	0.75	0.76	0.77	0.77	0.77	0.77	0.77	nd							
78	nd	0.97	1.02	0.99	0.95	0.99	0.75	0.86	0.86	1.01	0.92	nd	nd	nd	nd	nd	nd							
79	nd																							
80	nd																							
81	nd																							
82	nd																							
83	nd																							

	Coastal Schroy																											
	THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
44	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			
45	nd	nd	nd	nd	0.01	0.01	nd	nd	0.00	nd																		
46	nd	nd	nd	0.01	nd																							
47	nd	0.01	0.01	nd	nd	nd	nd	0.00	0.00	nd	0.01																	
48	nd	0.01	nd	nd	0.01	0.01	0.00	nd	0.00	nd																		
49	0.01	0.01	nd	0.01	0.01	0.01	0.00	0.01	0.00	nd																		
50	0.01	nd	0.01	0.01	0.01	0.01	0.00	0.00	0.00	nd	0.00	nd	nd															
51	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.00	0.00	nd	0.00	0.01	nd														
52	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.00	0.00	nd	0.01	0.00															
53	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.01	0.02	nd	0.00	0.00	0.01													
54	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.05	0.00	nd	0.01	nd	0.02	0.02	0.01											
55	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.05	0.02	0.01	nd	0.03	nd	0.03	0.01	0.01											
56	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.05	0.03	0.04	0.01	nd	0.05	0.03													
57	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.10	0.06	0.09	0.11	0.08	0.12	0.11	0.09	0.07	0.06	0.04	0.07	0.04	0.02	0.03	0.02	0.01				
58	0.01	0.01	nd	0.01	0.01	0.01	0.04	0.08	0.09	0.09	0.09	0.10	0.09	0.14	0.08	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.01				
59	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.09	0.10	0.14	0.10	0.12	0.12	0.09	0.13	0.10	0.06	0.06	0.06	0.05	0.05	0.04	0.04	0.01				
60	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.13	0.15	0.14	0.16	0.11	0.18	0.19	0.20	0.11	0.09	0.06	0.07	0.06	0.07	0.05	0.01	0.01				
61	0.01	0.01	nd	0.01	0.01	0.05	0.13	0.14	0.20	0.19	0.22	0.11	0.08	0.12	0.11	0.09	0.07	0.06	0.04	0.07	0.04	0.02	0.03	0.02	0.01			
62	0.01	nd	nd	nd	0.01	0.01	0.07	0.22	0.19	0.20	0.25	0.21	0.23	0.18	0.16	0.12	0.11	0.10	0.10	0.11	0.09	0.09	0.04	0.04	0.01			
63	0.01	nd	nd	nd	nd	0.01	0.01	0.07	0.22	0.28	0.25	0.29	0.27	0.26	0.25	0.22	0.16	0.14	0.12	0.12	0.12	0.12	0.02	0.02	0.01			
64	nd	nd	nd	nd	nd	0.01	0.01	0.09	0.27	0.31	0.37	0.35	0.33	0.32	0.34	0.28	0.18	0.16	0.13	0.13	0.14	0.14	0.07	0.07	0.01			
65	0.01	nd	nd	nd	nd	0.01	0.09	0.31	0.38	0.39	0.41	0.41	0.33	0.36	0.32	0.21	0.18	0.15	0.15	0.16	0.15	0.14	0.00	0.01	0.01			
66	nd	nd	nd	nd	nd	0.01	0.08	0.24	0.46	0.54	0.50	0.53	0.44	0.42	0.35	0.24	0.21	0.16	0.14	0.11	0.09	0.08	0.08	0.04	0.01			
67	0.01	nd	nd	nd	nd	0.07	0.23	0.36	0.54	0.58	0.59	0.50	0.52	0.40	0.27	0.23	0.20	0.20	0.19	0.17	0.00	0.00	0.00	0.01	0.01			
68	nd	nd	nd	nd	nd	nd	0.59	0.53	0.57	0.58	0.55	0.58	0.42	0.29	0.24	0.19	0.19	0.19	0.19	nd	nd	nd	nd	nd	nd	nd		
69	nd	nd	nd	nd	nd	nd	0.41	0.57	0.63	0.63	0.55	0.61	0.47	0.30	0.26	0.22	0.19	0.26	nd	nd								
70	nd	nd	nd	nd	nd	nd	nd	0.45	0.68	0.62	0.56	0.50	0.31	0.28	0.22	nd												
71	nd	nd	nd	nd	nd	nd	0.51	0.67	0.59	0.58	0.69	0.48	0.33	0.27	0.19	nd	nd											
72	nd	nd	nd	nd	nd	nd	nd	0.55	0.82	0.54	0.60	0.47	0.37	0.32	0.24	nd	nd	nd										
73	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.54	0.81	0.41	0.29	nd	nd													
74	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.68	0.59	0.52	0.38	0.32	nd	nd											
75	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.63	0.59	0.41	0.46	0.39	nd	nd	nd										
76	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.70	0.58	0.47	0.39	nd	nd	nd	nd										
77	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.77	nd	nd	nd	nd													

## Non-Coastal School

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
43	nd																									
44	0.00	nd	nd	nd	nd	nd	nd	0.02	nd																	
45	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
46	nd																									
47	nd	nd	0.00	0.00	0.01	0.01	0.05	0.07	0.14	0.09	nd															
46	nd	0.00	0.00	0.00	0.00	0.02	0.07	nd	0.09	nd																
49	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.08	0.11	0.00	nd															
50	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.04	0.19	0.01	nd															
51	0.01	0.00	0.01	0.01	0.00	0.00	0.02	0.08	0.11	0.21	0.09	nd														
52	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.07	0.18	0.09	0.10	0.07	0.00	nd											
53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11	0.16	0.24	0.07	0.07	nd												
54	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.11	0.02	0.18	nd	0.04	nd												
55	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.15	0.10	0.14	0.14	nd	0.07	nd											
56	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.20	0.12	0.14	0.04	nd	0.00	0.01	0.00	0.01	0.02	0.05	0.01	0.01	0.03	0.04	0.03		
57	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.16	0.18	0.14	0.10	0.14	0.04	0.05	0.03	0.09	0.00	0.00	0.00	0.03	0.04	0.05			
58	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.12	0.20	0.16	0.14	0.11	0.08	0.11	0.05	0.12	0.00	0.00	0.00	0.04	0.04	0.06	0.03			
59	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.28	0.20	0.18	0.14	0.17	0.09	0.07	0.10	0.07	0.00	0.02	0.01	0.05	0.04	0.00			
60	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.19	0.23	0.22	0.16	0.13	0.08	0.45	0.11	0.04	0.06	0.07	0.05	0.03	0.04	0.03			
61	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.15	0.27	0.32	0.27	0.18	0.10	0.14	0.10	0.15	0.05	0.06	0.06	0.06	0.08	0.02	0.00			
62	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.29	0.26	0.52	0.25	0.18	0.15	0.13	0.16	0.12	0.07	0.09	0.07	0.06	0.10	0.06	0.02			
63	0.00	0.00	0.00	0.00	0.05	0.17	0.35	0.41	0.37	0.33	0.34	0.18	0.21	0.18	0.14	0.08	0.11	0.06	0.10	0.08	0.07	0.02	0.00			
64	0.00	0.01	0.01	0.01	0.05	0.20	0.37	0.53	0.43	0.46	0.36	0.23	0.19	0.18	0.23	0.13	0.10	0.13	0.11	0.10	0.09	0.03	0.00			
65	0.00	0.00	0.01	0.00	0.00	0.09	0.27	0.56	0.54	0.50	0.54	0.49	0.43	0.29	0.30	0.24	0.15	0.14	0.09	0.13	0.12	0.12	0.01			
66	0.00	nd	nd	nd	nd	nd	nd	0.75	nd	0.72	0.70	0.43	0.55	0.40	0.40	0.43	0.55	0.40	0.40	0.29	0.13	0.15	0.12	0.15		
67	nd	0.68	0.78	0.66	0.63	0.62	0.51	0.47	0.44	0.44	0.21	0.15	0.19	0.12	0.12	0.07	0.00	0.00								
68	nd	0.77	0.58	0.71	0.80	0.78	0.55	0.58	0.48	0.48	0.13	0.20	0.15	0.14	nd	nd	nd	nd								
69	nd	0.63	0.98	0.77	0.68	0.77	0.74	0.55	0.18	0.22	0.19	0.17	0.05	nd	nd	nd	nd	nd								
70	nd	1.17	0.74	0.99	0.85	0.87	0.76	0.60	0.19	0.26	0.12	0.08	nd	nd	nd	nd	nd									
71	nd	0.92	1.14	0.63	1.01	1.06	0.89	0.83	0.70	0.28	0.22	0.13	0.03	nd	nd	nd	nd	nd								
72	nd	0.69	0.89	0.98	1.05	0.75	0.39	0.27	0.06	nd																
73	nd	1.29	0.79	0.98	1.20	1.17	0.87	0.31	0.19	0.13	nd															
74	nd	1.24	nd	0.98	0.89	1.09	1.27	0.90	0.16	0.17	0.16	nd	nd													
75	nd	1.40	1.37	1.10	1.35	1.25	0.90	0.08	0.07	nd	nd															
76	nd	0.85	0.71	0.96	0.65	0.14	nd	nd	nd	nd	nd	nd	nd													
77	nd	1.51	1.36	1.10	1.28	0.59	0.31	nd	nd																	
78	nd	1.26	nd	nd																						
79	nd	1.28	1.34	1.59	1.19	nd	nd	nd	nd	nd	nd	nd														
80	nd	1.55	nd	nd	nd	nd	nd	nd	nd	nd																

**END**

**DATE  
FILMED**

**// 1/14/91**

