

6.01.40 – APPENDIX: ENERGY IMPACT STATEMENT - Description
DESIGN AND CONSTRUCTION STANDARD

Energy Impact Statement, Description

For all new buildings and major renovations with a construction budget of \$10 million or more, the design professional shall complete the attached Energy Impact Statement as required by the Design Phase Deliverables. The design professional shall refine and update the Energy Impact Statement throughout the three design phases as more detailed information regarding the project becomes available. For comparison, prior estimates are to be shown on subsequent updates of the Energy Impact Statement.

For those projects with a construction budget between \$2 million and \$10 million, the design professional shall perform a single iteration of the Energy Impact Statement as part of the Design Development Phase.

The following describes the general methodology to be used for each utility section. Provide supporting information with the Energy Impact Statement for each phase where required.

Legend:

| | |
|------|-----------------------------|
| ALL: | Requirement for each phase |
| SD: | Schematic Design Phase |
| DD: | Design Development Phase |
| CD: | Construction Document Phase |

Electrical:

| | |
|----------|---|
| ALL: | Describe methods and assumptions used to calculate electrical estimates. |
| SD: | Can use watts per square foot. Identify any unusual loads. Estimates can be developed using a computer simulation or a spread sheet listing peak demand, estimated diversity and annual consumption. |
| DD & CD: | Estimates based on actual design and not watts per square foot. Estimates can be developed using a computer simulation program or a Spread sheet listing peak demand, estimated diversity and annual consumption. Indicate diversity assumptions or include schedules from computer simulation. |

Low Pressure Steam:

| | |
|----------|--|
| ALL: | Describe methods and assumptions used to calculate low pressure steam estimates. Provide list of significant loads showing peak demand and annual consumption. |
| SD: | Heating consumption estimate can be developed using ASHRAE Degree Day Formula or Bin Estimate Method. |
| CD & DD: | Develop heating consumption estimates using a computer simulation program utilizing 8,760 hours per year analysis such as Trane Trace, Carrier HAP or Elite EZDOE. |

Energy Impact Statement, Page 2 of 5

165 PSI Steam:

- ALL: Describe methods and assumptions used to calculate 165 PSI steam estimates.
Provide list of significant loads showing peak demand and annual consumption.

Chilled Water:

- ALL: Describe methods and assumptions used to calculate chilled water estimates. Provide list of significant loads showing peak demand and annual consumption.
- CD & DD: Develop chilled water cooling estimates using a computer simulation program utilizing 8,760 hours per year analysis such as Trane Trace, Carrier HAP or Elite EZDOE.

Domestic Cold Water:

- ALL: Describe methods and assumptions used to calculate domestic cold water estimates.
Provide fixture count summary and site source for estimating peak diversified demand.

Domestic Hot Water:

- ALL: Describe methods and assumptions used to calculate domestic hot water estimates.
Provide fixture count summary and site source for estimating peak diversified demand.

Natural Gas:

- ALL: Describe methods and assumptions used to calculate natural gas estimates.

Storm Drainage System:

- ALL: Describe methods and assumptions used to calculate storm drainage estimates.

6.01.40 – APPENDIX: ENERGY IMPACT STATEMENT - Description
DESIGN AND CONSTRUCTION STANDARD

Energy Impact Statement, Page 3 of 5

Project Name: _____ OFPC Project No.: _____

Building Description and Assumptions:

The design professional shall provide a brief narrative describing various building related items and assumptions used to complete the Energy Impact Statement. Among these are the following:

Building Gross Floor Area

Building Hours of Operation (breakdown for various key areas as required)

Utilities Required

Mechanical Systems Description

 Chilled Water Design Entering and Leaving Temperatures

 Assumed Design Residual Pressure for the Domestic Cold Water System

Electrical System Description

6.01.40 – APPENDIX: ENERGY IMPACT STATEMENT - Description
DESIGN AND CONSTRUCTION STANDARD

Energy Impact Statement, Page 4 of 5

Project Name: _____ OFPC Project No.: _____

| Building Energy Summary | Schematic Phase | Design Development Phase | Construction Document Phase |
|---|------------------------|---------------------------------|------------------------------------|
| Project Affected Gross Area, (GSF) | | | |
| Annual Building Energy Consumption All Energy Input Converted to BTU, (MBTU/year) | | | |
| Annual Building Energy Consumption per GSF, (BTU/year/GSF) | | | |

Electrical:

| | | | |
|---------------------------------|---------------------|----------------------------|----------------------------|
| Maximum Demand, (kW) | | | |
| Annual Consumption, (kWH/year): | | | |
| Lighting | <i>Not Required</i> | KWh KWpeak Diversity | KWh KWpeak Diversity |
| Miscellaneous Power | <i>Not Required</i> | KWh KWpeak Diversity | KWh KWpeak Diversity |
| HVAC Equipment | <i>Not Required</i> | KWh KWpeak Diversity | KWh KWpeak Diversity |

Low Pressure Steam:

| | | | |
|-------------------------------|---------------------|--|--|
| Peak Load, (lbs/hr): | | | |
| Summer | | | |
| Winter | | | |
| Annual Consumption, (MLB/yr): | | | |
| Heating | <i>Not Required</i> | | |
| Humidification | <i>Not Required</i> | | |
| Air Conditioning | <i>Not Required</i> | | |
| Domestic Water Heating | <i>Not Required</i> | | |
| Process | <i>Not Required</i> | | |

165 PSI Steam:

| | | | |
|------------------------------|--|--|--|
| Peak Load, (lbs/hr): | | | |
| Summer | | | |
| Winter | | | |
| Annual Consumption, (Lb/yr): | | | |

6.01.40 – APPENDIX: ENERGY IMPACT STATEMENT - Description
DESIGN AND CONSTRUCTION STANDARD

Energy Impact Statement, Page 5 of 5

Project Name: _____ OFPC Project No.: _____

| Chilled Water: | Schematic Phase | Design Development Phase | Construction Document Phase |
|--------------------------------------|------------------------|---------------------------------|------------------------------------|
| Peak Load, (tons/hour): | | | |
| Summer | | | |
| Winter | | | |
| Annual Consumption, (ton-hours/year) | | | |

Domestic Cold Water:

| | | | |
|---|---------------------|--|--|
| Peak Cold Water Demand, (GPM) | | | |
| Peak Sanitary Demand, (GPM) | | | |
| Annual Consumption, (million gallons/year): | | | |
| Sanitary Sewer | <i>Not Required</i> | | |

Domestic Hot Water:

| | | | |
|--------------------------------|--|--|--|
| Peak Demand, (CCF/hour) | | | |
| Annual Consumption, (CCF/year) | | | |

Storm Drainage System:

| | | | |
|---------------------------------|--|--|--|
| Design Storm Peak Volume, (GPM) | | | |
|---------------------------------|--|--|--|