

6.01.20 – APPENDIX: SUPPLEMENTAL MATERIAL FOR SECTION 4.02 – LCC Input Guide

DESIGN AND CONSTRUCTION STANDARD

The latest version of the Building Life-Cycle Cost (BLCC) program can be downloaded for free from http://www1.eere.energy.gov/femp/information/download_blcc.html. BLCC is a program developed by the National Institute of Standards and Technology (NIST) to provide computational support for the analysis of capital investments in buildings.

The following parameters should be utilized to build the LCC model:

Upon opening the BLCC program, create a new Federal Analysis, Financed Project

Project Level Entries

General Information Tab

- Location: **Texas**
- Utilize **End-of-Year Discounting** Convention
- Utilize **Current Dollar Analysis**
- Set Nominal Discount Rate to **6.0%**

Key Dates Tab

- Set Base Date
- Length of Study Period shall be 25 years.

Add Alternative Tab

- Creat **Baseline** and add as many other alternatives as will be studied

Alternative Level Entries

General Information Tab

- Enter a brief description of the alternative in the comment box

Contract Costs – Annually Recurring Subfolder

- Cost Type: **Debt Service**
- Click **Create Cost** button
- Calculate annual simple mortgage payment for estimated construction cost based on 25 year term and 6.0% interest. Enter this value in the Amount box.
- Change escalation rate to 0.0% (payments will be locked for length of term).

Energy Costs Subfolder:

- Cost Name: pull down **Natural Gas** and click **Create Cost**
Note: all energy costs will be built from “natural gas” because it is the only utility imported to the campus. UT generates its own electricity, steam, and chilled water locally.
- Name: **Electricity**
- Annual Consumption: enter value from energy model. Change units to **kWh**.
- Click **Energy Cost** tab
 - Change Rate Schedule to **Industrial**
 - Enter Price/kWh: **\$0.0770**
 - Retain DOE Price Escalation Rates are for Natural Gas (do not override)

Go back to Energy Costs Subfolder to create new cost:

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- Cost Name: pull down **Natural Gas** and click **Create Cost**
- Name: **Chilled Water**
- Annual Consumption: enter value from energy model. Change units to **Therm.**
- Click **Energy Cost** tab
 - Change Rate Schedule to **Industrial**
 - Enter Price/Therm: **\$0.8875**
 - Retain DOE Price Escalation Rates are for Natural Gas (do not override)

Go back to Energy Costs Subfolder to create new cost:

- Cost Name: pull down **Natural Gas** and click **Create Cost**
- Name: **Steam**
- Annual Consumption: enter value from energy model. Change units to **Therm.**
- Click **Energy Cost** tab
 - Change Rate Schedule to **Industrial**
 - Enter Price/Therm: **\$0.9140**
 - Retain DOE Price Escalation Rates are for Natural Gas (do not override)

Water Costs Subfolder:

- Cost Name: **Water** and click **Create Cost**
- Units: **1,000 Gallons**
- Annual Water Usage: enter calculated values
- Price/Unit: **\$2.77** for usage; **\$4.49** for disposal (there is no seasonal difference, so usage and price values can simply be entered on one line).
- **Price Escalation Rates** tab
 - Usage and Disposal Cost Escalation: **3.00%**

Capital Component Subfolder:

- OM&R Costs – Annually Recurring Subfolder
 - Cost Name: **User Defined** and click **Create Cost**
 - Amount: enter calculated value
 - Annual Rate of Increase: **3.00%**
- OM&R Costs – Non-Annually Recurring Subfolder (*if needed*)
 - Cost Name: **User Defined** and click **Create Cost**
 - Years/Months (from Base Date): enter value
 - Amount: enter calculated value
 - Annual Rate of Increase: **3.00%**

END OF STANDARD