



## McLennan Community College – Waco, Texas

Estes, McClure & Associates, Inc.: Prime Professional Projects

### Infrastructure Planning (1998)

MCC retained Estes, McClure and Associates, Inc., to conduct a master plan of the campus utility infrastructure, campus air-conditioning systems and controls, campus outdoor lighting, interior lighting, and other building systems.

### Infrastructure Upgrades & Improvements (Since 1998-2008)

- High voltage electrical distribution and service loop around campus and for each building.
- Central plant chilled-hot water piping loop around campus and to buildings.
- New energy efficient HVAC systems and controls for nine buildings.
- Fire alarm for three buildings
- Central plant boiler
- Chiller replacement
- Central plant renovations
- Technology Learning Center – technology consultant
- Energy audit
- Security cameras
- Gym lighting
- Lighting improvements at selected buildings
- New campus outdoor lighting



### Estes, McClure & Associates, Inc.: Sub Consultant to MCC Architect

- Technology Learning Center
- CSC Modules renovations
- Veterinarian Clinic renovations
- LTC Kitchen renovations
- Facility Office and Lecture Hall renovations
- Field House
- Classroom Building
- Science Lab
- Parking Lot
- Powell Dr. Entrance
- Emergency Service Building
- Parking Garage



## MCC Constructs and Renovates “Green” (2008)

McLennan Community College in Waco is in the process of constructing three new buildings: a classroom building, a science building, and the Emergency Services Education Center, a joint venture with the City of Waco to serve all fire, law enforcement, and EMTs in McLennan County. It will also house several MCC programs.



The college also plans to renovate numerous other campus facilities and upgrade the central plant. All of the new facilities are being built with energy efficiency in mind and have been designed to achieve **LEED gold certification**. They will be the first LEED certified buildings on the MCC campus.

All three new buildings will have the following energy efficiency and sustainable features.

- Variable air volume systems with individual space controls and full economizer capabilities.
- Low water usage plumbing fixtures.
- Demand control ventilation with CO<sub>2</sub> sensors
- Energy-saving light fixtures with T-5 lamps
- Full commissioning for mechanical and electrical systems

Additionally, the new science building will have an energy recovery system for the building exhaust and outside air units. The Emergency Services Education Center will also utilize a high-efficiency geothermal heat pump system and a rainwater harvesting system for irrigation.

To provide adequate heating and cooling for the newly constructed facilities, MCC is also upgrading their central plant. A new 400-ton centrifugal chiller with a variable speed drive is being added as the plant's lead chiller. This machine has excellent part-load efficiencies. Also, the entire central plant will be converted from a constant volume to a variable primary pumping system. This new design will be able to operate more efficiently across a wide range of campus heating and cooling loads.

The buildings to undergo renovations will receive the following energy efficiency improvements:

- Replace existing multizone units with high-efficiency variable air volume air handlers.
- Replace existing pneumatic controls with electronic controls
- Replace existing T-12 lighting with high-efficiency T-8 or T-5 lighting

Construction is scheduled to continue through 2009.

McLennan Community College  
Waco, Texas  
8000 average students enrolled  
Beautiful 200 acre campus adjacent to  
Cameron Park and the Brazos River.  
[www.mclennan.edu](http://www.mclennan.edu)