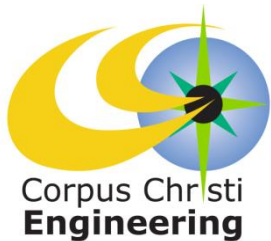




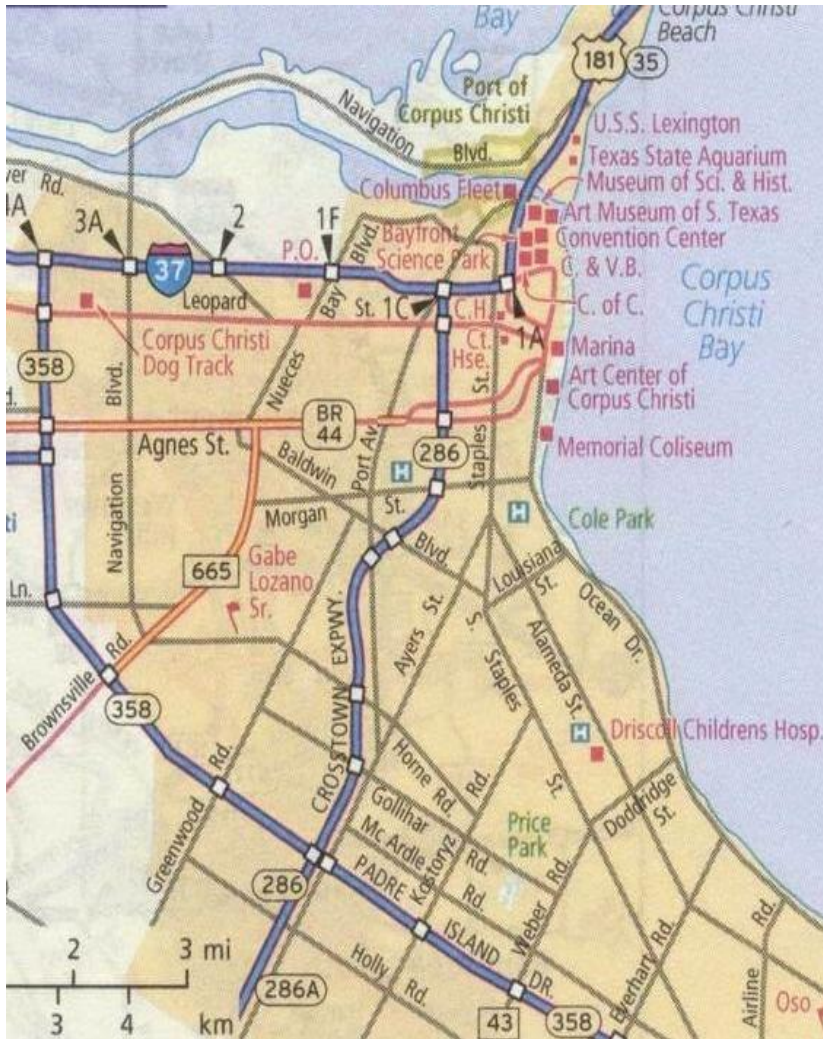
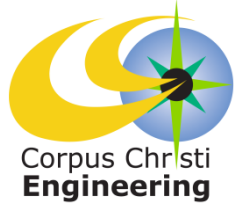
Energy Efficiency Retrofit of City Facilities - Phase 2



Council Presentation
February 25, 2014



Project Scope



City-Wide : 76 facilities

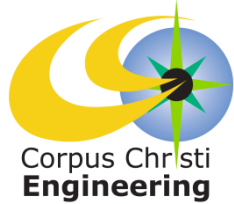
Fire Department, Police, Libraries, Marina, Rec Centers, Senior Centers, Art Museum

Gas Department Administration, Water/Wastewater Department Administration, Warehousing, Frost Bank

American Bank Center, City Hall, Health Department, Police and Courts, Museum of Science and History.



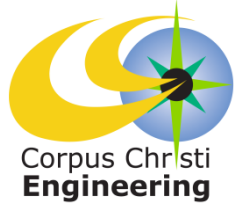
Project Scope



- Completion of City-Wide Building Automation System
- Completion of City-Wide Lighting Efficiency Upgrades
- City-Wide Facility Envelope Renovations
- Re-Commissioning of Existing Mechanical Systems
- Water Conservation Replacement and Repair
- Retro-Commissioning of Existing Chill Water Storage System



Environmental Summary



A reduction of
6,672,622 lbs.
of CO₂ emissions



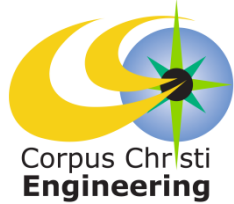
The addition of
827 acres
of trees



581 cars
removed from
the roads



Project Schedule



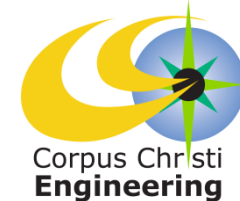
2013												2014												2015											
Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep								
Project Development												Construction																							

Project Estimate: 548 Calendar Days \approx 18 Months

Projected Schedule reflects City Council award in March 2014 with anticipated construction completion in September 2015.



Project Cost and Payback

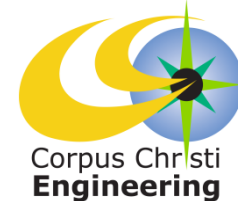


Project Cost	\$8,982,327
Guaranteed Annual Project Savings	
Energy	\$ 584,454
Maintenance and Operations	\$ 33,358
Projected Interest Rate	3.25%
Estimated Utility Rebates and Incentive	\$ 30,670
Return on Investment	15 years
Average Equipment Life Cycle	20 years*

*Benefit of new and retrofitted systems for 20 years that have been paid for by redirecting part of the existing utility budget to capital renewal. No new money and no rate or tax increases to implement this project.



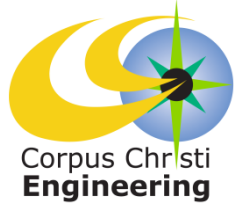
Project Budget



FUNDS AVAILABLE:	AMOUNT
Energy Efficiency New Certificates of Obligation, Phase 2.....	\$ 8,950,000.00
Green Energy Rebates from AEP.....	\$ 32,326.50
TOTAL AVAILABLE:	\$ 8,982,326.50
FUNDS REQUIRED:	
Construction (McKinstry Essention).....	\$ 7,709,592.00
Contingencies (2%).....	\$ 154,191.84
Consultant Fees:	
Consultant (McKinstry) Basic Svcs \$365,000.00 - 5.5%.....	Part of Construction
Construction Management/Inspection/Design review/Audit.....	\$ 400,000.00
Peer Review (Stridde Callins)	\$ 44,000.00
MIS Improvements*.....	\$ 50,000.00
Reimbursements:	\$ 612,975.00
TOTAL **	\$ 8,970,758.84
ESTIMATED PROJECT BUDGET BALANCE	\$ 11,567.66
* MIS Improvements are required at 47 public facilities to support the proposed energy saving upgrades.	
** Phase 2 project costs and energy savings are tracked and audited separately and independently from Phase 1.	



Phase 1 Measured Savings Summary

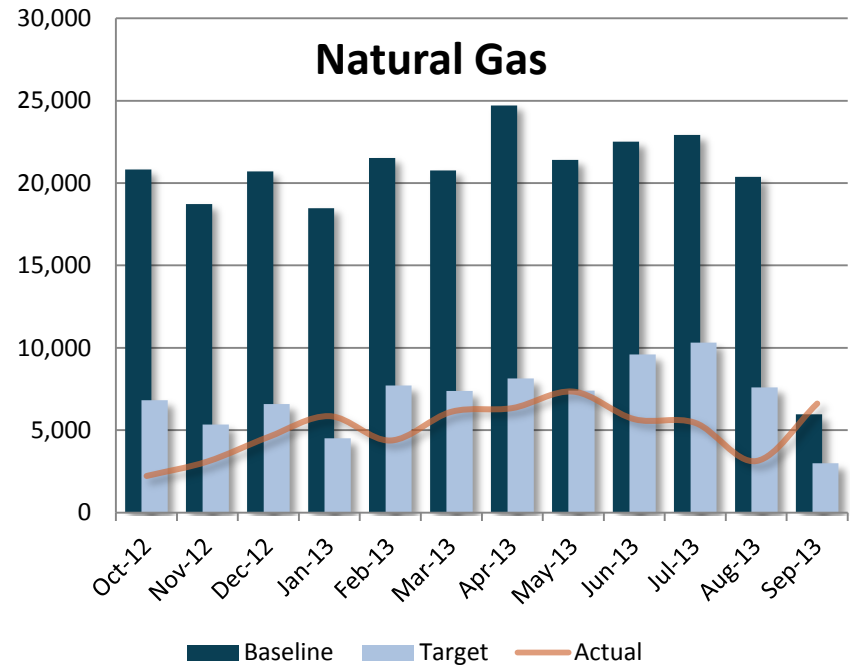
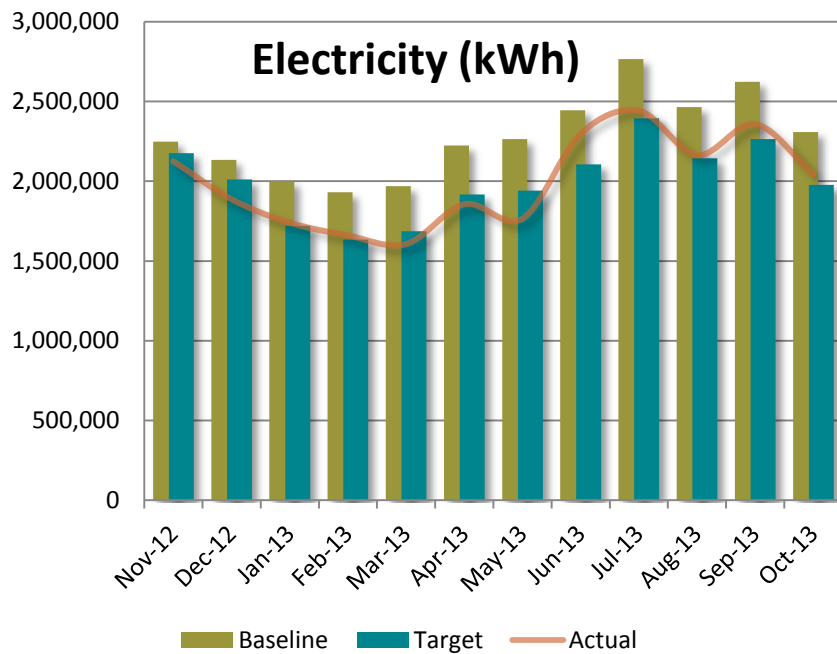
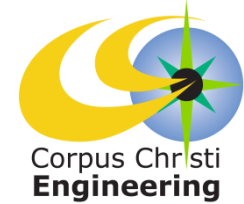


	8 Month Savings 03/13 - 10/13
Measured Energy Savings	\$387,591
Average per Month	\$48,449
Estimated Annual Savings	\$581,386
Repair & Maintenance Savings	\$161,674
Airport O & M Savings	\$2,667
Total Estimated Savings	\$745,727
Debt Payment	\$714,000
Savings under Debt Payment	\$31,727

- Annual energy cost savings (projected by actual 8-month savings results) indicates that Phase 1 is able to achieve the guaranteed energy saving goal.
- Phase 1 construction cost \$6,950,000 included newly installed/replaced equipment with a cost of \$3,307,841 and lifecycle of 15 – 20 years.

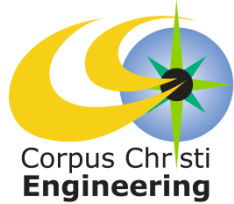


Phase 1 Energy Saving Model Summary





Phase 1 Environmental Summary



The Phase 1 project will deliver these annual results:



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A reduction of
6,355,048 lbs.
of CO₂ emissions

The addition of
788 acres
of trees

554 cars
removed from
the roads