

Stonegate Village Metropolitan District Treatment Plant Rehabilitation

Project Overview
February 19, 2014

Presentation Overview

- Why are we Upgrading Stonegate's Wastewater Plant?
- Options Considered
- Selected Option
- What is the scope of the project?
- Project Approach
- Preliminary Project Costs
- Preliminary Financing Costs
- Preliminary Rate Impacts

Existing Plant Issues

- Operations
 - Labor intensive
 - Large dependency on outside services
 - Limited automatic controls
 - Difficult to optimize performance due to poorly matched past expansions
 - Expensive to operate
 - Numerous Structural issues. Walkways are not structurally sound
 - Plant Equipment has reached it's end of its useful life and is in poor repair
 - Cannot Meet Existing Build-out Demand
 - Past Regulatory Compliance Issues
 - Existing plant can not meet water quality discharge standards with colder surface water

Original Scope of Work

- Option 1 - Minimum filtration/equalization/chemical handling options to achieve overall plant design capacity of 1.1mgd.
- Option 2 – Option 1 items plus correct most significant deficiencies throughout plant including:
 - Mix box
 - Foam Handling
 - Clarifier Weirs
 - Separate storm/overflow ponds
 - Separate blower for digesters
 - Separate electrical rooms/replace MCCs
 - Upgrade control system
 - Pavement and Drainage
 - Generator installation
 - Remove chemicals from electrical room
- Option 3 – All Option 2 items plus:
 - Alternate AWT technology
 - Solids handling facilities
 - Admin building improvements

Study Rationale

- WWTF Upgrade Alternatives
 - Tier 1 – Safety, Capacity, Permit Compliance, Emergency Items
 - Tier 2 – Tier 1 plus upgrades to improve existing processes (First level of 20-year planning)
 - Tier 3 – Performance improvements plus long term sustainability (20-year planning with operational flexibility)
 - Tier 4 – Completely new facility
 - Tier 5 – New facility, Increased capacity

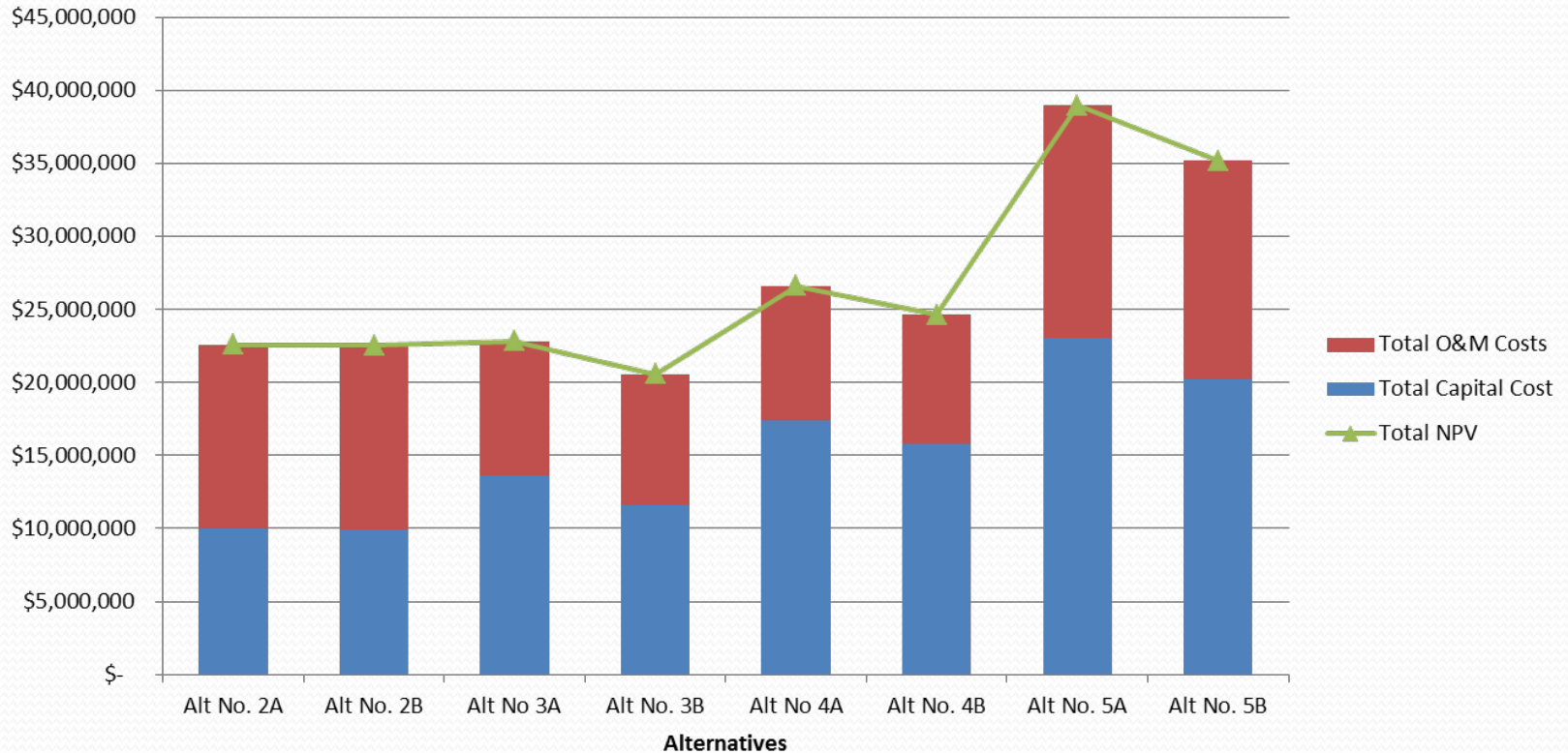
Study Rationale

Why Select One Tier of Improvement over another? (Non-economical)

- Tier 1 – Emergency improvements
- Tier 2 – Improved reliability but limited operations improvement
- Tier 3 – Long term improvements in operations and reliability. Design will meet known upcoming permit changes and provide operational flexibility to handle changing water sources.
- Tier 4 – New facility – optimize for modern operations
- Tier 5 – Increased capacity – economy of scale if sharing costs

20 Year Net Present Value

Stonegate WWTF Alternative Evaluation



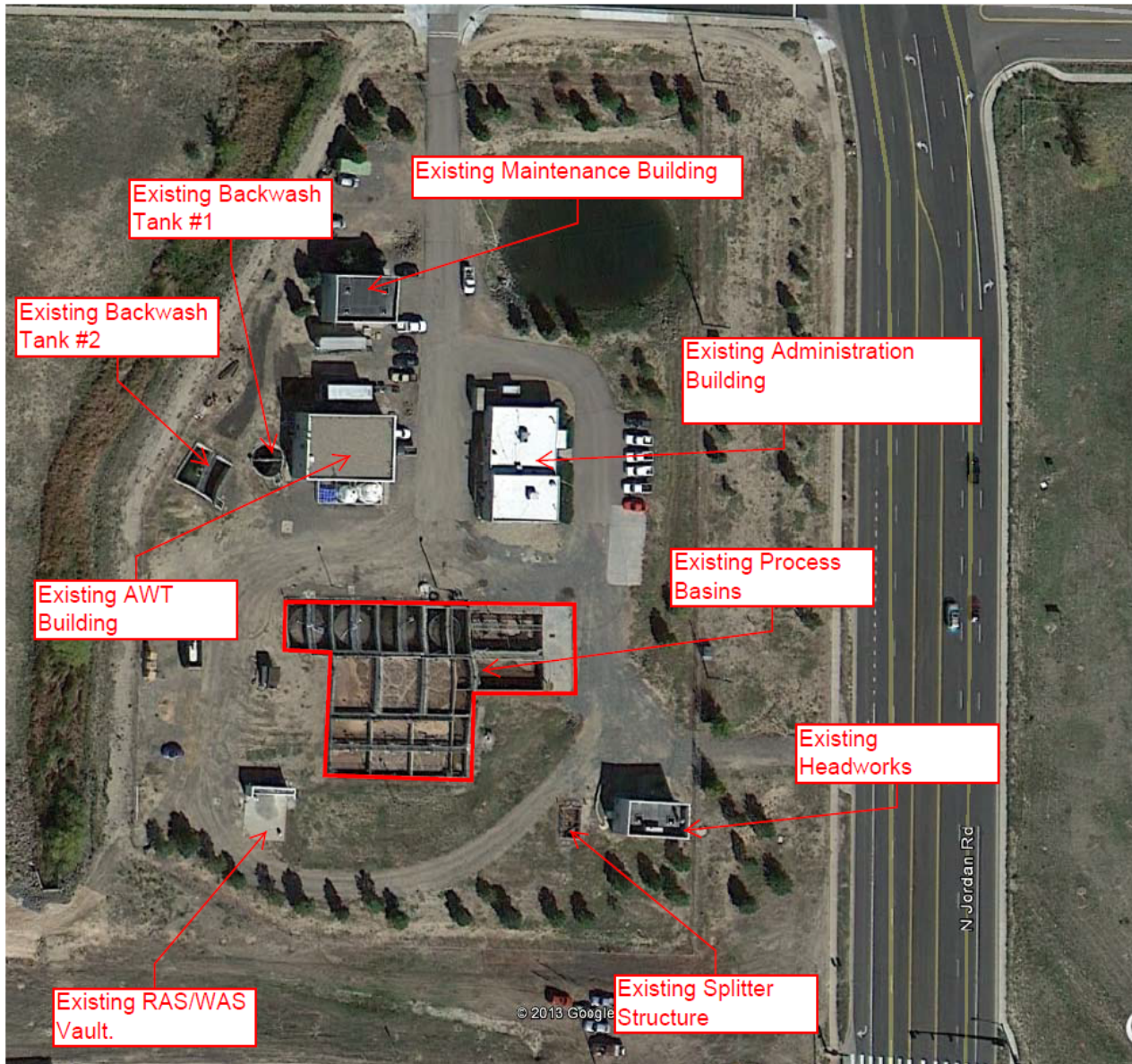
Summary

- Alternatives 2-5 are feasible
- Alternatives 3 and higher are long term solutions
- Recommend a Tier 3 Alternative
 - NPV cost is competitive
 - Reduce operational risk
 - Upcoming permit flexibility
 - Possible source water change
 - Possible organic loading change
- Tier 5 provides increased Capacity

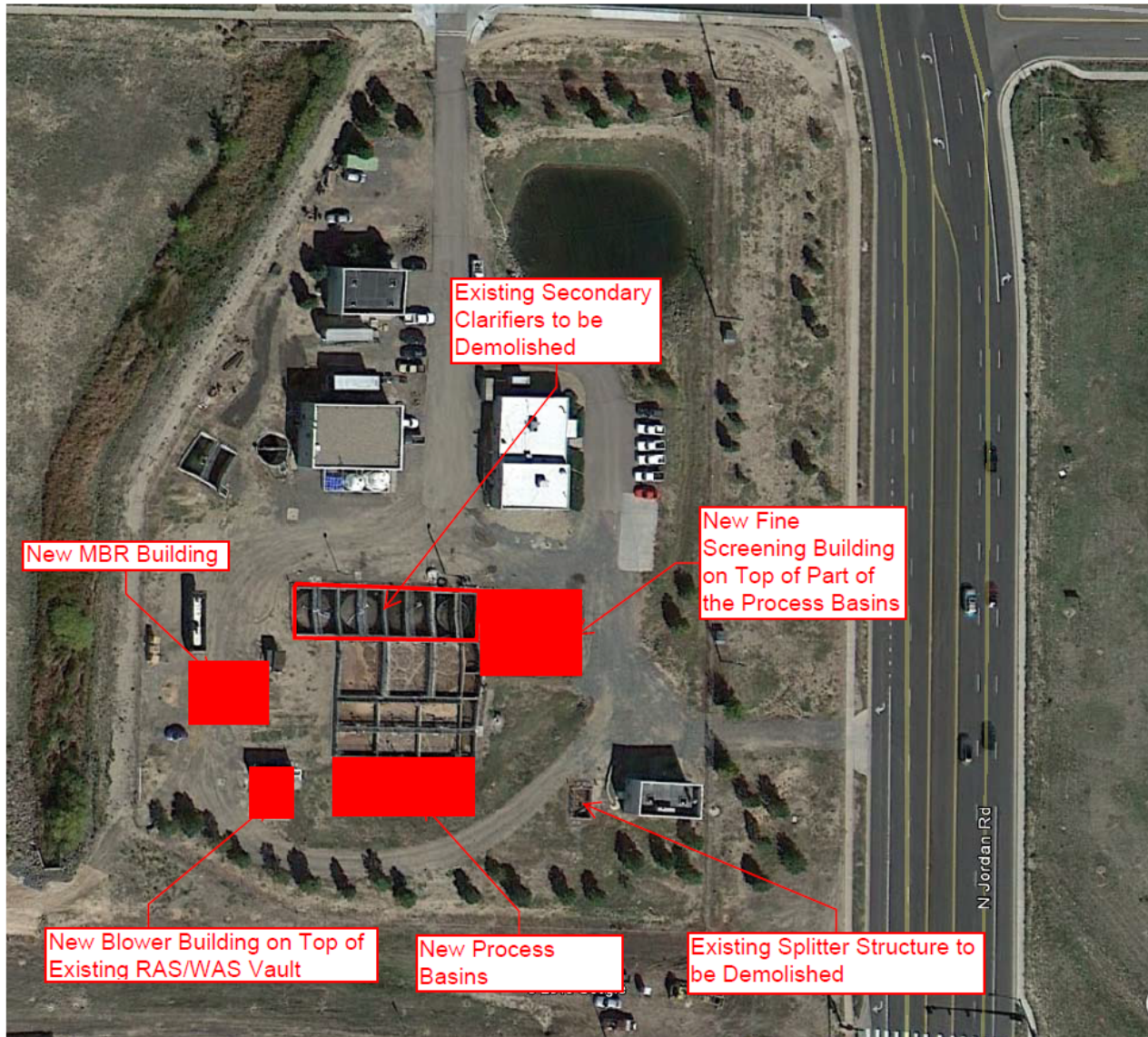


So What does the New Plant Look Like?

Existing Facility



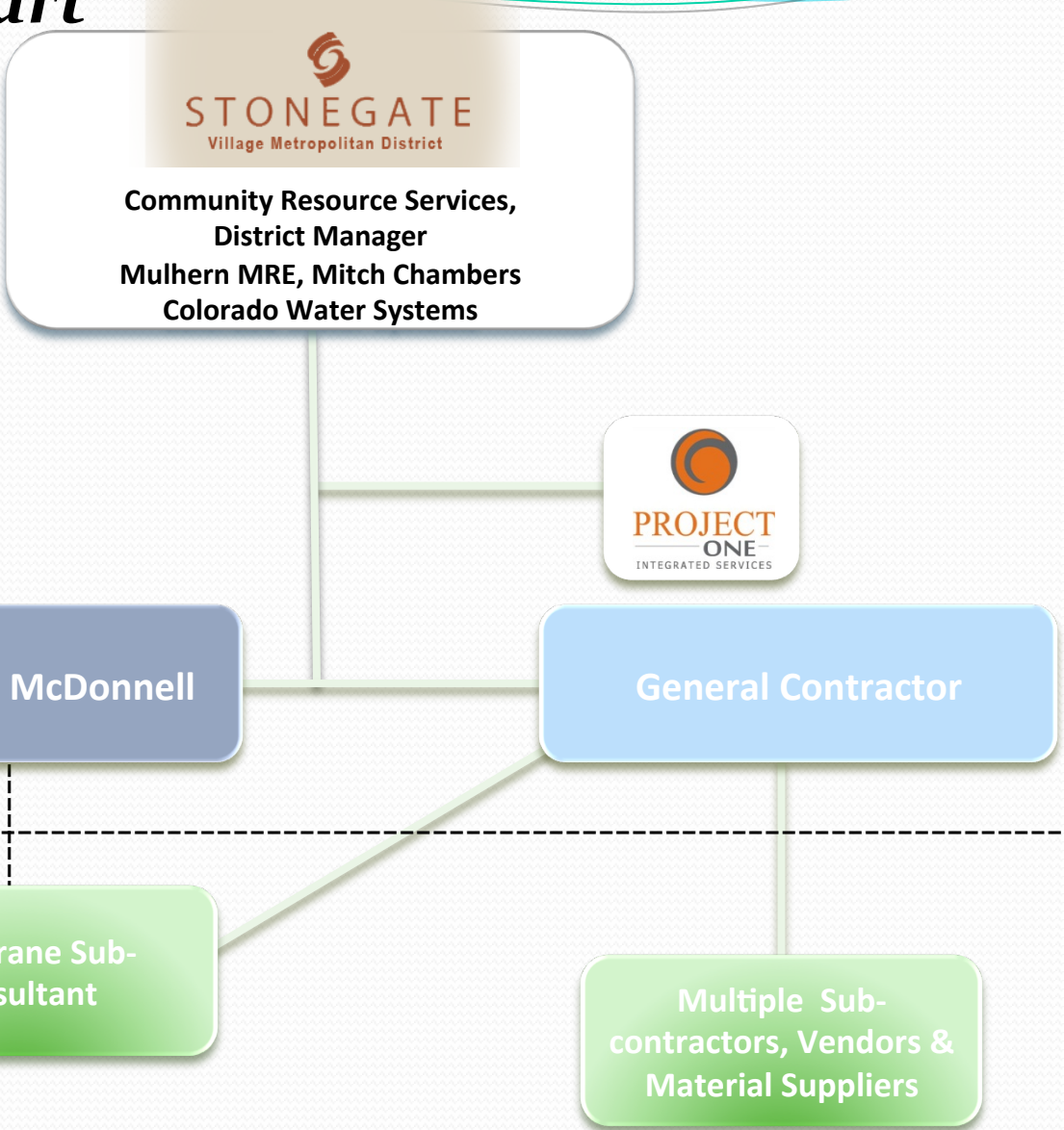
Proposed Facility





So How do we get this Project
Done?

Organization Chart



Project Goals

- *Provide an upgraded facility to the District that represents the **Best Value at the lowest appropriate cost.***
- *Promote a safe and secure jobsite.*
- *Throughout construction, successfully transition to the new systems and processes with limited interruptions to current operations.*
- *Promote a Project approach that results in no compliance violations.*

Project Goals

- *Through a collaborative open book process, establish a project design, budget and schedule that encompasses the appropriate scope.*
- *Eliminate unnecessary Change Orders.*
- *All entities work as a collaborative team to ensure a successful project for Stonegate Village Metropolitan District, Burns & McDonnell, Project One, the selected Contractor and the community.*

COMPLETED STEPS

Construction Management/General Contractor at Risk - Selection Process

- Public advertisement for Request For Qualifications (RFQ) in Douglas County News Press and McGraw Hill Daily Journal
- Shortlist of five firms for Request for Proposal (RFP)
Bosco, Garney, Glacier, Hydro & Moltz
- Proposal Review/Evaluations/Work Sessions with 3 Firms
Glacier, Hydro & Moltz
- Ranked Firms based on 9 different criteria
- Selection based on “Best Value”, or lowest “Final Cost” with the Appropriate Scope
- Moltz unanimously #1 ranked firm

Top Ranked Firm - Moltz

- Unanimous decision by Project Team on #1 ranking
- Quality of estimate and assumptions
- Knowledge of the GMP bidding process including commitment to bid out all potential Self-Perform Work over \$60,000
- Quality and Experience of proposed staff for Project Type and Delivery Method
- Experience with Burns & McDonnell & Project One
- Schedule detail and duration
- Minimal contractual objections
- Financial Strength
- Competitive Fees & General Conditions

Membrane Selection Process

- Preliminary discussions with potential membrane vendors to determine:
 - Appropriate Scope
 - Budgetary Pricing
 - Best Technology Fit for the Project
- Once District approved the GC's and BMcD initiated Public Advertisement for Membrane Package
 - Douglas County News Press & McGraw Hill Daily Journal
- Outreach to known membrane vendors to invite them to submit formal proposals
- Three vendors notified Burns & McDonnell they would respond to the Request for Proposal (RFP)
 - Siemens, General Electric, Koch

Membrane Selection Process

- Siemens later dropped out due to internal structure changes. This division of Siemens is in the process of being sold off.
- Proposals Received and Evaluated by the team
 - Review/Evaluations (GE & Koch)

Process of Ranking Firms

- Looking for the Firm that can get the lowest “Final Cost” with the Appropriate Scope based on:
 - Firm Capabilities
 - Cost (Detail and Reasonableness)
 - Understanding of the Project and the Process
 - Acceptance of Contract Terms
 - Schedule
- General Electric (GE) was the top ranked firm over Koch

GE Ranking Considerations

- Cost \$1,930,000 (\$110,750 less than Koch)
- Quality of estimate and assumptions
- Quality and Experience of vendor
- Experience with Burns & McDonnell
- Schedule durations
- Minimal contractual objections

Action Taken

- Finalized working with GE to align cost with intended scope
 - Redundancy requirements
 - Spare Parts
 - Support during start-up
- Finalized Contract Language
- Upon final selection and approval of the Board, released GE to proceed with membrane system submittals

Budget Considerations

- Moltz IGMP for Membrane System is \$1,600,000
- Original GE Proposal amount is \$1,930,000 (\$330,000 over IGMP)
- Through scope review with GE, Revised Proposal amount is \$1,812,000 (\$212,000 over IGMP) . This is still being finalized with GE.
- Original Overall Project Budget \$13,000,000
 - Current Estimate after IGMP Scope Reconciliation with Moltz \$13,183,000
 - Current Estimate after Membrane Proposal Review \$13,395,000
- Released membrane vendor on submittals ONLY to continue the process of determining “best value” cost

GMP Process – Determining “Best Value”

Release membrane submittals to continue design process. As the design progresses:

- Continue to monitor estimated costs with Moltz
- Promote subcontractor market involvement and create competitive bidding structure to ensure appropriate market value
- Discuss potential cost savings/Value Engineering Ideas
- Investigate potential design alternatives

Future Board Requests

- 1) Approval of the Amendment establishing the Final Guaranteed Maximum Price (FGMP) prior to the start of Construction, along with the approved Schedule.
- 2) Approval of a Reimbursement Resolution in the Event project starts before Financing is Finalized.
- 3) Conduct Public Hearing on Wastewater Rates. March 19, 2014.
- 4) Approve Rate Resolution
- 5) Approval of a Parameters Resolution authorizing the issuance of debt.

Schedule of Milestones

- 10/30/13 - Finalize contract with membrane vendor and release them on submittals
- 12/16/13 - Complete Membrane Submittals
- 1/27/14 - Complete 60% design budget check
- 2/20/14 - Release 90% documents for review
- 2/23/14 - Begin Obtaining CDPHE Permit, South Metro Fire, Douglas County Building Department
- 3/28/14 - Finalize FGMP with Moltz
- 4/15/14 - Start of construction

Current Action

Initial Budgets in excess of Owner's Budget (based on 60% Design)

Scope Reconciliation with Moltz Construction

- Collaborative approach
- Working with the Project Team, Reviewed the Budget in Detail
Aligning Budget with Scope
- Discuss Cost Savings/Value Engineering Ideas
- Included reasonable Contingencies based on current design
- Working towards a Final Guaranteed Maximum
Price within the District's Budget

Estimated Project Costs

Projected Total 60% Budget	\$ 15,093,748	\$ 14,238,089	\$ 13,194,580
Less Contractor and Owner Contingencies	\$ 1,105,025	\$ 1,034,374	\$ 948,213
Estimated Reasonable Maximum Price	\$ 13,988,723	\$ 13,203,715	\$ 12,246,367
Plus 5% Contingency for Uncertainty	\$ 699,436	\$ 660,186	\$ 612,318
Reasonable Maximum Price Plus Contingency	\$ 14,688,159	\$ 13,863,901	\$ 12,858,685
Less Owner Costs Prepaid	\$ 1,710,671	\$ 1,710,671	\$ 1,710,671
Amount Financed	\$ 12,977,488	\$ 12,153,230	\$ 11,148,014

Rate Comparison

Total Cost for 7,000 gallons average monthly use:

• Castle Rock	\$55.43
• Parker Water and Sanitation*	\$69.16
• Pinery Water and Wastewater*	\$40.90
• ACWWA*	\$51.24

Proposed Stonegate Wastewater Rate* \$60.00 -
\$65.00

*Discharges to Cherry Creek

Comments, Questions

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