

Design and Construction Program Notes

By

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The year 2001 saw us committing over \$8 million to design and construction projects by year-end. Most of this funding has gone toward the construction of several new projects as well as the continuation of projects started in past years. One notable change to the Design and Construction Program was the addition of Ken MacKenzie as Project Engineer effective February of this year. After several years of trying to manage 80 to 90 projects each year, Paul and I are grateful for the assistance that Ken is now giving us. We are currently working toward dividing the District by county with Paul responsible for Douglas and Arapahoe Counties, Ken for Denver and Jefferson Counties and myself for Adams and Boulder Counties. We thought it advantageous to have local governments dealing with only one point of contact for capital projects.

A number of unique projects were constructed this past year including some which had been many years in the planning and design process. The Little Dry Creek Railroad Culverts project in Adams County was completed this year. Design of this project was initiated in the early 1980s and it took several years of negotiations with the Burlington Northern Santa Fe Railroad before final agreement was reached in late 2000. Hats off to Adams County for their persistence in bringing this project to fruition. Adequate conveyance is now available to carry 100-year flows between Federal Boulevard and Clear Creek; and a much needed trail connection is now in place along Little Dry Creek from Arvada and Westminster to the Clear Creek trail corridor.

Acquisition and construction of improvements to Leyden Reservoir were also completed in 2001. This was a joint project with the Cities of Arvada and Westminster. Acquisition of the property and the commitment of funding for the improvements took a yeoman effort on the part of the City Managers

STATUS OF DISTRICT DESIGN PROJECTS

Project	Participating Jurisdiction(s)	Status
North Tributary of Massey Draw	Jefferson County	Complete
Lakewood Gulch @ Welchester Park	Jefferson County	Complete
Drainageway G	Jefferson County	Complete
Cottonwood Creek	Arapahoe County	Complete
Happy Canyon Creek	Douglas County	Complete
Brookridge/Grant Outfall	Arapahoe County	Complete
Cherry Crest West Outfall	Arapahoe County	Complete
Erie Drainage	Erie	Complete
Leyden Dam	Arvada	Complete
McKay Outfall	Adams County	95% Complete
Pinehurst & Academy Park Tribs	Denver	95% Complete
Plaster Reservoir Detention	Broomfield	90% Complete
South Lakewood Gulch	Lakewood	50% Complete
Kalcevic Reservoir	Adams County	35% Complete
Lena Gulch @ Mountain Side	Jefferson County	30% Complete
Parker/Jewell Outfall	Arapahoe County	25% Complete
Arvada Channel	Arvada	20% Complete
Little Willow Creek	Douglas County	10% Complete
Sand Creek Stapleton to Toll Gate	Aurora	5% Complete
Sulpher Gulch	Parker	5% Complete

STATUS OF DISTRICT CONSTRUCTION PROJECTS

Project	Jurisdiction(s)	Cost	Status
Westerly Creek @ Expo Park	Aurora	\$3,400,000	Complete
Meadowood Creek	Aurora	3,204,000	Complete
Cherry Creek Drops	Glendale	700,000	Complete
Grange Hall Creek Phase 2/3	Northglenn	1,506,000	Complete
Weaver Creek @ Simms	Jefferson County	1,020,000	Complete
South Trib. Slaughterhouse Gulch	Littleton	837,000	Complete
Twenty Mile Detention	Parker	795,000	Complete
Lakewood Gulch @ Perry	Denver	1,136,900	Complete
Big Dry Creek Trail	Littleton, Englewood	715,000	Complete
Virginia Village Outfall Phase 1	Denver	1,230,000	Complete
Valley Club Outfall	Arapahoe County	1,400,000	Complete
Pleasantview Tributary	Jefferson County	281,000	Complete
Shaw Heights Trib. Phase II	Westminster	638,000	Complete
Goose Creek	Boulder	3,803,000	95% Complete
Bear Creek Maintenance Access	Morrison	817,300	95% Complete
Leyden Dam	Arvada	1,604,000	95% Complete
Little Dry Creek RR Culverts	Adams County	3,200,000	95% Complete
Niver Trib. M Outfall	Federal Heights	172,000	95% Complete
Marcy Gulch	Highlands Ranch	1,800,000	90% Complete
Lemon Gulch	Douglas County	815,000	90% Complete
Cottonwood Creek	ArapCo. Greenwood	1,360,200	85% Complete
Dad Clark Gulch	Highlands Ranch	523,000	80% Complete
Wonderland Creek	Boulder	575,000	80% Complete
Indiana St. Outfall	Lakewood	950,000	75% Complete
Virginia Village Phase II	Denver	789,000	50% Complete

of Arvada and Westminster, as well as the Jefferson County Administrator. The improvements consisted of construction of a 380-foot wide spillway over the top of the existing 40-foot high dam. The new spillway is capable of safely passing 75% of the Probable Maximum Flood. Unique to this project was the use of roller compacted concrete to construct the spillway. Leyden Dam will now fully detain the 100-year event cutting approximately

2,000 cfs from the previous master plan release of approximately 2,200 cfs. We are just now starting the Letter of Map Revision process for what we anticipate to be significant impacts to the downstream floodplain along Leyden and Ralston Creeks.

The third and final phase of Grange Hall Creek was completed this past year in the City of Northglenn. The uniqueness of this project was in the nineteen drop



Looking upstream at the new Perry Street bridge along Lakewood Gulch.

structures constructed along Grange Hall Creek and its North Tributary. These two and four foot drops were constructed of concrete utilizing a reinforced concrete substructure with a colored shotcrete covering. After application of the shotcrete, the finished surface was sculpted to give the appearance of a rock outcrop. These “feaux” rock structures have been getting considerable attention in the metropolitan area and we anticipate using them on other projects. The Grange Hall Creek Project received the Grand Award at this year’s Annual Conference of the Colorado Association of Stormwater and Floodplain Managers. Congratulations to the City of Northglenn and Muller Engineering for their fine work on this project.



Goose Creek form liner detail.

Yet another phase of Goose Creek in the City of Boulder was completed this past year. Unique to this project was the use of a very intricate form liner, which gives the appearance of a rock wall. Coloration was added to the individual “concrete” rocks to enhance the appearance of the wall. The final phase of the Goose Creek channel improvements was bid by the City of Boulder in late 2001 and should be starting early in 2002. This will conclude a multi-year multi-phase project that was initiated in the mid-1980s. The resultant 100-year channel improvements will remove a number of properties from the floodplain.



Constructing a soil cement drop structure on Marcy Gulch.

The year 2002 looks to be very busy with funding identified in the 5-Year Capital Improvement Program for 40 new or existing projects.