



TECHNICAL SERVICES DEPARTMENT

Engineering/Construction – 30LV and 30RP

PURPOSE:

To develop and implement projects that will expand and improve County infrastructure. The program achieves this purpose through the management of engineering design; construction of public works projects, including roadways, bridges, water, sewer, and drainage systems. Identify infrastructure projects necessary to meet the needs in developing areas of the County and program projects needed to sustain existing infrastructure systems. The program's primary function will be to plan, initiate, design, and construct infrastructure projects. The program has adopted a 'cradle-to-grave' concept whereby the project team stays with the project and manages its projects completely through the construction phase.

SERVICES PROVIDED:

Management of construction contracts, contract administration, design of projects, and coordination of professional engineering consultants' designs assures project compliance with environmental requirements and coordination of design and construction activities. The program also provides construction inspection to ensure construction is in compliance with design and specifications and that the quality of construction projects meets minimum county requirements. The inspection staff maintains project documentation in accordance with funding source requirements. Other services provided are materials testing of construction work, coordination of projects with utility companies, assistance in development of capital improvement plans, and engineering assistance to other County departments. The program has an emphasis on coordination with the public to ensure successful completion of projects.

ENGINEERING/CONSTRUCTION – 30LV & 30RP EXPENDITURES BY CATEGORY:

	Actuals FY 2004	Actuals FY 2005	Estimated FY 2006	Budget FY 2007	% Var	Budget FY 2008	% Var
Salaries and Benefits	1,650,877	1,915,206	2,029,921	2,011,724	-1%	2,031,311	1%
Office Expense	10,308	10,575	10,413	13,889	33%	13,919	0%
Operating Expense	2,421	1,022	3,135	6,230	99%	6,230	0%
Technical and Professional Expense	446	3,625	3,055	4,200	38%	4,600	10%
Carryovers	7,001	9,615	11,279	-	-100%	-	0%
PROG EXPENDITURES TOTAL	1,671,054	1,940,043	2,057,802	2,036,043	-1%	2,056,060	1%

FUNDING SOURCE SUMMARY

General Fund – 30LV & 30RP Revenue	2,788,627.67	4,137,459.77	3,499,206.62	3,334,931.33	-5%	3,494,681.33	5%
General Fund	-	-	-	-	0%	-	0%
PROG FUNDING SOURCE TOTAL	2,788,627.67	4,137,459.77	3,499,206.62	3,334,931.33	-5%	3,494,681.33	5%

Authorized Full-time Equivalents	36	36	35	35	0%	35	0%
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PROGRAM HIGHLIGHTS AND MAJOR ACCOMPLISHMENTS:

- During the 2004-06 fiscal years, numerous significant projects were constructed or started construction as follows:
 - Isleta Boulevard Reconstruction Project, Phase 1
 - Isleta Boulevard Reconstruction Project, Phase 2
 - Golf Course Road
 - Area "D" Sanitary Sewer, Phase 2
 - Area "D" Sanitary Sewer, Phase 3
 - Area "D" Vacuum Station
 - Hunter Road/Elsa Road Sanitary Sewer
 - Love Road Sewer Extension
 - El Pinon/Vera Completion Area
 - Boddy/Coors Utility Project
 - Area 'H' Utility Project
 - Foothill/Bridge Utility Project
 - Caballero del Norte Gravity Sewer System (Village of Los Ranchos)
 - Coors 8, 9, and 10 Sanitary Sewer
 - Coors 8, 9, and 10 Vacuum Station
 - Industrial Park Water System, serving Tempur-Pedic
- The design for the Isleta Boulevard Reconstruction Project, Phase 2, was completed and construction started. Through the use of funds from County bonds and NMDOT, the program was able to complete the construction of a number of local road improvement projects throughout the County. In addition to the major projects listed above, many local road projects provided an immediate positive impact to the residents throughout the County. Staff's use of the Construction Procedures Manual implemented in FY 01/02 continues to be successful in standardizing construction procedures.
- Program staff has continued coordination with AMAFCA and the Corps of Engineers (COE) on the Southwest Valley Flood Reduction study with the completion of the environmental assessment and initiating the design phase occurring in the past budget cycle. Two projects have been identified that will serve the area. The primary project that meets COE criteria as eligible for federal funding in a \$19.5 million planning, acquisition, design and construction project for a drainage system in the South Valley area from Bridge Boulevard south to Rio Bravo Boulevard. The project will provide of a major outfall to the Rio Grande by upgrading MRGCD facilities consisting of the Isleta, Armijo, and Los Padillas drainways and constructing new facilities to reach the Rio Grande. This outfall system will be the backbone for a regional drainage system serving the majority of the central South Valley area. Work that will be completed in FY 06/07 and FY07/08 include completing the engineering and design phase and starting construction. A second project, funded through the 593 program, is a drainage project in the far South Valley, being identified as the Black Mesa project. This \$7.7 million project consists of two phases with the first being an outfall connecting three AMAFCA west mesa dams directly to the Rio Grande. The second phase consists of upgrading the Los Padilla's and Isleta drains to convey storm water to a detention pond and a new or upgraded pump station located near Malpais Road and I-25. The pump station will discharge storm water to the Rio Grande. The first project will begin the construction phase early in FY 06/07. Construction of the second phase is scheduled for FY 07/08.
- The Valley Utility Project (VUP) continued with numerous projects occurring during the last budget cycle. VUP construction projects, providing approximately 1,900 water and sanitary sewer connections, were either completed or started construction. Bernalillo County took over as lead agency from the City of Albuquerque for the Area I and J project that will serve a large portion of the Village of Los Ranchos de Albuquerque. The initial project, serving the Caballero del Norte subdivision, has started construction. The design phase for the larger second phase will be completed early in FY 06/07.
- The construction materials laboratory continues to provide materials testing and inspection services for County projects. The lab has been approved for both State and EPA projects. The lab personnel have been certified by the American Concrete Institute (ACI) and the statewide Technician Training and Certification Program (TTCP).

SERVICE IMPROVEMENT GOALS & OBJECTIVES:

FY07

- Improve customer service in the Design/Construction project area through meetings and solicitation of feedback.
 - Two public meetings will be scheduled for each major project. For minor projects, either one public meeting will be conducted or a project flyer will be distributed.
 - Measure: Compare number of residents in attendance per meeting.
 - Conduct a customer survey at the end of projects.
- Complete legislative projects prior to the next legislative session.
 - Construct and seek reimbursement for legislative-funded projects by the end of the calendar year in which the funding is appropriated.
- Improve within one month of the publication of the list of projects funded by the legislature; a list of those projects that should be constructed within the same calendar year will be prepared. Certain projects, such as phased projects, studies, or major projects that the legislative funding accounts for a portion of the funding may not be completed within the same calendar year. Include the individual projects in the department schedule with the target of completing each applicable project and requesting reimbursement prior to the end of the calendar year.
- Improve capital project execution.
 - Negotiate basic engineering costs for engineering services contracts to the amounts projected from the ASCE fee curve.
- Compare negotiated fee to 100% of the projected fee from the ASCE fee curve.
 - Based on the construction estimate and anticipated schedule at the inception of design services, complete capital project “on time and within budget”.
- Report percentage of projects that were completed “on time and within budget”.
 - Develop engineering cost estimates at the end of the design phase and immediately prior to the bidding phase that are within 10% of the actual low bid received.
 - Report % deviation of the final engineer’s estimate compared to the low bid amount.
- Improve engineering staff presentation skills.
 - Each staff engineer will develop, organize and conduct at least one training class with the required attendance of other in-house staff. Ideas for presentation: Contract Negotiation Approach/ASCE’s Guide for the Engagement of Engineering Services; Differences between NMDOT Blue Book and COA Specs; Construction Safety; etc.
- Number of presentations made by the professional staff.
- Reduce fuel consumption by 20% from 2005 level. Measure: Report quarterly fuel usage.

FY08

- Improve customer service in the Design/Construction project area through meetings and solicitation of feedback.
 - Two public meetings will be scheduled for each major project. For minor projects, either one public meeting will be conducted or a project flyer will be distributed.
- Measure: Compare number of residents in attendance per meeting.
 - Conduct a customer survey at the end of projects
- Complete legislative projects prior to the next legislative session.
 - Construct and seek reimbursement for legislative-funded projects by the end of the calendar year in which the funding is appropriated.
- Improve capital project execution.
 - Negotiate basic engineering costs for engineering services contracts to the amounts projected from the ASCE fee curve.
- Compare negotiated fee to 100% of the projected fee from the ASCE fee curve.
 - Within one month of the publication of the list of projects funded by the legislature, a list of those projects that should be constructed within the same calendar year will be prepared. Certain projects, such as phased projects, studies, or major projects that the legislative funding accounts for a portion of the funding may not be completed within the same calendar year. Include the individual projects in the department schedule with the target of completing each applicable project and requesting reimbursement prior to the end of the calendar year.

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- Based on the construction estimate and anticipated schedule at the inception of design services, complete capital project “on time and within budget”. Measure: Report percentage of projects that were completed “on time and within budget”.
- Develop engineering cost estimates at the end of the design phase and immediately prior to the bidding phase that are within 10% of the actual low bid received. Measure: Report % deviation of the final engineer’s estimate compared to the low bid amount.
- Improve engineering staff presentation skills.
- Each staff engineer will develop, organize and conduct at least one training class with the required attendance of other in-house staff. Ideas for presentation: Contract Negotiation Approach/ASCE’s Guide for the Engagement of Engineering Services; Differences between NMDOT Blue Book and COA Specs; Construction Safety; etc.
- Number of presentations made by the professional staff.
- Reduce fuel consumption by 20% from 2005 level. Measure: Report quarterly fuel usage.

PERFORMANCE DATA:

Performance Measures	Actual FY 2004	Actual FY 2005	Estimated FY 2006	Target FY 2007	Target FY 2008
Design Contracts Completed	2	5	11	9	8
Engineering \$ Expended	2,452,932	2,487,286	2,832,000	2,194,000	1,588,000
Construction \$ Placed	7,051,371	13,883,090	25,594,000	41,381,000	29,375,000
Construction Projects Completed	16	14	20	28	25
Engineering Basic Services Fee – Based on the actual negotiated fee compared to 100% of the projected fee from the ASCE fee curve	N/A	N/A	100	100	100
Construction Project Performance – Based on the % of the total number of projects that were completed “on time and within budget”.	N/A	N/A	95	95	95
Project Construction Estimates – Based on the % deviation of the final engineer’s construction estimate compared to the low bid amount.	N/A	1%	+/-10	+/-10	+/-10
Number of attendees at public meetings	50	50	40 – Large 15 - Small	40 – Large 15 - Small	40 – Large 15 - Small
Number of presentations by professional staff	N/A	1	16	16	16
Fuel consumption (gal. per month)	N/A	855	684	684	684