



OPERATIONS & MAINTENANCE DEPARTMENT

Road Maintenance Program – 30MD

PURPOSE:

Through various maintenance methods that are applied cyclically dependent upon infrastructure type, road service life is extended until major reconstruction or replacement is needed. Bernalillo County has 718 road miles that require routine maintenance and emergency repair to enhance and promote public highway safety and user welfare. Roads maintained include dirt, gravel, asphalt pavement, and bridge crossings.

SERVICES PROVIDED:

Street, highway, and road maintenance includes road surface grading, base repair, street sweeping, shoulder repair, ditch cleaning and reshaping, culvert installation and repair, pothole patching, crack sealing, chip sealing, surface oiling, machine mowing, concrete sidewalk repair, remove and install asphalt curb, remove and install concrete curb, spot surface asphalt repair and replacement, asphalt overlay, asphalt surface treatment, paving fabric application, street cut repairs, road ice and snow removal. Additional services are weed and litter removal by citizen labor provided through Juvenile Detention Center Community Services.

ROAD MAINTENANCE - 30MD EXPENDITURES BY CATEGORY:

	Actuals FY 2004	Actuals FY 2005	Estimated FY 2006	Budget FY 2007	% Var	Budget FY 2008	% Var
Salaries and Benefits	1,594,826	1,560,948	1,620,781	1,837,428	13%	1,858,295	1%
Office Expense	3,824	3,543	4,266	5,130	20%	5,130	0%
Operating Expense	53,806	16,514	16,979	21,306	25%	21,306	0%
Maintenance Expense	366,745	341,111	236,797	514,528	117%	514,528	0%
Technical and Professional Expense	5,679	8,334	4,835	6,400	32%	6,400	0%
Capital Expenditures	-	-	1,218	200	-84%	200	0%
Carryovers	187,059	109,622	179,439	-	-100%	-	0%
PROG EXPENDITURES TOTAL	2,211,938	2,040,071	2,064,317	2,384,992	16%	2,405,859	1%

FUNDING SOURCE SUMMARY

General Fund – 30MD Revenue	2,240,948	2,232,258	2,623,062	2,300,000	-12%	2,300,000	0%
General Fund Contribution	-	-	-	84,992.00	-115%	105,859	25%
PROG FUNDING SOURCE TOTAL	2,240,948	2,232,258	2,623,062	2,384,992	16%	2,405,859	1%

Authorized Full-time Equivalents	47	41	41	41	0%	41	0%
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Operations & Maintenance Department Road Maintenance – 30MD

PROGRAM HIGHLIGHTS AND MAJOR ACCOMPLISHMENTS:

- Legislative grant funding in the amount of \$1,428,000 was secured during the 2005 grant year enabling road construction improvements for various projects.
- Paving improvements from grants were made to 23 roads throughout the County that were included in the STB Program.
- An additional \$1,484,000 of paving projects were completed using '04-'06 CIP GO Bonds for local roads, and encompassed 13 roads throughout the County.
- Paving improvements extended the service life of the roads and reduced the levels of maintenance required for them. The improvements allowed maintenance efforts to be redirected for maintenance of other County maintained roads.
- 718 maintained miles were certified to the State as the County's most accurate measure of the roads maintained.
- Every maintained mile of roadway in the County area was inspected during the year and its condition noted for maintenance scheduling.

SERVICE IMPROVEMENT GOALS & OBJECTIVES:

FY07

- The primary goal of the program is to inspect each and every road in accordance with department schedules, generate inter-departmental work orders, and respond to 100% of all work order requests from the public within 10 days.
- The objective is to successfully schedule all work orders during the calendar year for completion, with priority assigned to those work orders that involve higher degrees of benefit to public highway safety.
- Productivity is projected and measured through various performance measures including the number of road miles graded, the number of miles of roadside vegetation mowed, and miles of road shoulder repaired.

FY08

- Better utilization of the Community Service program to reduce the need for hand labor tasks by equipment operators.
- Implementation of a full pavement management system (PMS) covering every maintained road in the County will be ongoing.
- The maintenance, repair, and replacement of aged and worn road maintenance equipment remains a continuous goal to provide a road maintenance fleet that is available for work on demand, and that is not susceptible to breakage and out of service time because of age and component wear.

PERFORMANCE DATA:

Performance Measures	Actual FY 2004	Actual FY 2005	Estimated FY 2006	Target FY 2007	Target FY 2008
Road miles inspected	717	718	718	719	719
Work orders responded to in 10 days	100%	100%	100%	100%	100%
Road Lane miles graded	802	1100	1100	1100	1100
Road miles shoulder repair	784	500	500	450	450
Road miles deicing/snow removal	9051	1500	1500	5000	5000



OPERATIONS AND MAINTENANCE DEPARTMENT

Traffic Engineering– 30TC

PURPOSE:

Traffic Engineering maintains and updates traffic control infrastructure in accordance with established engineering guidelines and principles. Policy, design guidelines, and placement recommendations for traffic control devices are established in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). The Institute of Transportation Engineers (ITE) and the American Association of State Highway and Transportation Officials (AASHTO) disseminate other standards, methodologies, and design guidelines to ensure that maintenance and new construction activities comply with proven traffic engineering standards and principles. The County adheres to the established principles to provide the users of Bernalillo County Roads with the highest level of mobility, safety, and reasonable access to businesses and residences.

SERVICES PROVIDED:

The Traffic Engineering Program operates and maintains the County’s traffic control devices and also provides input on the design of new traffic control devices that will become County’s maintenance responsibility. Program personnel maintains and inspects approximately 19,000 traffic signs, 40 school flashing beacons, 49 traffic signals along 12 major urban arterials, roadway striping along approximately 200 miles of roadway, traffic calming devices in numerous residential areas, roadside barriers, and 223 County owned streetlights. The Program administers engineering studies for the installation of traffic calming devices and oversees the associated construction activities. Meetings with neighborhood groups are conducted to increase the public’s knowledge of traffic calming measures and to inform the neighborhood groups of the County’s role and policies related to this activity. To ensure safe traffic control through construction work zones in the unincorporated area, the Program administers and enforces the Traffic Control Barricading Ordinance.

TRAFFIC ENGINEERING 30TC EXPENDITURES BY CATEGORY:

	Actuals FY 2004	Actuals FY 2005	Estimated FY 2006	Budget FY 2007	% Var	Budget FY 2008	% Var
Salaries and Benefits	560,566	587,128	679,980	635,245	-7%	642,518	1%
Office Expense	10,348	9,286	4,713	3,010	-36%	3,010	0%
Operating Expense	3,526	2,522	5,592	5,830	4%	5,830	0%
Maintenance Expense	406,169	400,692	170,633	131,865	-23%	131,865	0%
Technical and Professional Expense	1,624	8,575	2,007	2,166	8%	2,166	0%
Capital Expenditures	-	3,239	-	-	0%	-	0%
Carryovers	28,627	21,806	29,016	-	-100%	-	0%
Capital Carryovers	-	-	28	-	-100%	-	0%
PROG EXPENDITURES TOTAL	1,010,860	1,033,247	891,969	778,116	-13%	785,389	1%

FUNDING SOURCE SUMMARY

General Fund-30TC Revenue	512,557	507,138	384,432	510,265	33%	510,265	0%
General Fund Contribution	498,303	526,109	507,537	267,851	-47%	275,124	2%
PROG FUNDING SOURCE TOTAL	1,010,860	1,033,247	891,969	778,116	-13%	785,389	1%
Authorized Full-time Equivalents	14	14	14	14	0%	14	0%

PROGRAM HIGHLIGHTS AND MAJOR ACCOMPLISHMENTS:

- With the completion of the Tramway/Isleta Blvd. fiber optic project, the progression along Tramway Blvd. has greatly improved. Signal progression along the Tramway and other coordinated corridors contributes to the overall efficiency of the transportation system and improved safety.
- Implemented signage inspection program to ensure appropriation signage is in place on all County maintained roadways. Data was collected for all signs located on Bernalillo County roads and entered into an Excel spreadsheet, which constitutes a complete sign inventory for BC maintained roadways. The sign inventory is used to generate sign inspection forms for the Traffic Technicians for routine inspection.
- Traffic infrastructure inspection work is tracked by reporting percent completion ratios for each maintenance area. This process is monitored for accuracy and effectiveness. Areas of improvement that become apparent are addressed by implementing improvements to increase accuracy and efficiency.
- Sign fabrication process was supplemented with development and implementation of raw and fabricated materials inventory for controls related to production, cost, and accountability.
- Sign fabrication plotter/cutter equipment was acquired to replace worn unreliable equipment for sign fabrication.
- Traffic Technician Career Ladder was amended to enhance production and inspection duties related to work zone control and associated permitting process in the County's rights of way.
- Traffic progression and flow enhancements were achieved by the fiber optic signalized interconnects made between the intersection of Coors Boulevard and Loris SW.
- Traffic flow enhancements were achieved at the signalized intersection for Eubank and Paseo Del Norte by modifications made for the south to east traffic movements in the removal of the protected only to protective permissive protocols for signal operation.

SERVICE IMPROVEMENT GOALS & OBJECTIVE

FY07

- Traffic Engineering is work order and inspection oriented. Work orders for maintenance and repairs are generated from public requests, department requests, and inspection activities. The program's goal is to provide inspection and maintenance to traffic control devices located on the county's transportation infrastructure to enhance traffic safety and improve traffic flow efficiency. The program's objectives are to provide maintenance functions for signs, signals, barricading, speed humps, pavement markings, guardrail, and streetlights.
- To achieve the objectives, productivity is evaluated from measured performance of the following activities:
 - Number of work orders generated vs. the number of work orders closed within 4 days
 - Number of signs inspected
 - Amount of roadway striping and pavement markings completed
 - Number of traffic calming devices inspected and maintained
 - Number of speed studies completed within 15 days of request
 - Amount of guardrail inspected
 - Number of County owned streetlights inspected
 - Signal maintenance and inspection

**Operations and Maintenance Department
Traffic Engineering – 30TC**

FY08

- The program’s objectives of providing maintenance functions for signs, signals, barricading, speed humps, pavement markings, guardrail, and street-lighting for FY07 will be evaluated for effectiveness based on results and manpower allocation.
- Control all of the signals along Isleta from one master controller located at the intersection of Rio Bravo and Isleta with the completion of the Isleta Phase II project. When implemented, this will streamline signal timing changes as well as provide better ITS incident management capabilities pending expected future high bandwidth connections to the regional traffic management system by the NMDOT.
- Convert 75% of red incandescent traffic signal lamps to LED lamps which will provide better reliability and significant power consumption savings.

PERFORMANCE DATA:

Performance Measures	Actual FY 2004	Actual FY 2005	2 nd Qtr. FY 2006	Target FY 2007	Target FY 2008
100% Work Orders Completed w/ in 4 days	96.5%	95.7%	93.4%	100%	100%
100% Traffic Control Signage Inspected QTRLY	New	New	135%	100%	100%
50 Miles of Roadway Striping Completed	108	53.5	34	50	50
100% Traffic Calming Devices Inspected and Maintained Annually	New	New	55%	100%	100%
100% Speed Studies Completed w/in 15 days of request	New	New	67%	100%	100%
100% Guardrail Inspected Annually	New	New	37%	100%	100%
612 Traffic Signal Inspections Annually	588	554	291	612	612
100% County Owned and Maintained Street-lights Inspected Annually	New	New	94%	100%	100%



OPERATIONS & MAINTENANCE DEPARTMENT

Storm Drainage Maintenance Program– 30UT

PURPOSE:

The program provides the systematic maintenance of the County's storm drainage infrastructure. Drain systems includes ten storm water lift stations that provide out-fall for surface drainage systems including side ditches, catch basins and other inlets, and storm water conduits that collect and transport drainage to these discharge areas and other retention ponds. Structural as well as operational and functional maintenance includes the protection and repair of these drainage systems to keep them sound, unobstructed and operating at full capacity to reduce flooding, destructive erosion and road surface weakening.

SERVICES PROVIDED

Systematic maintenance and operation of storm drainage infrastructure including storm water detention and retention ponds, mechanical ditch cleaning, cleaning of catch basins and similar drainage structures, underground pipe flushing, culvert cleaning, installation and repair of miscellaneous concrete structures, and storm water lift station operation and maintenance.

STORM DRAINAGE MAINTENANCE PROGRAM – 30UT EXPENDITURES BY CATEGORY:

	Actuals FY 2004	Actuals FY 2005	Esti- mated FY 2006	Budget FY 2007	% Var	Budget FY 2008	% Var
Salaries and Benefits	160,055	177,860	194,023	189,726	-2%	191,207	1%
Office Expense	2,473	4,077	1,605	725	-55%	725	0%
Operating Expense	7,106	3,814	4,874	13,443	176%	13,443	0%
Maintenance Expense	201	326	-	-	0%	-	0%
Technical and Professional Expense	738	1,096	968	1,000	3%	1,000	0%
PROG EXPENDITURES TOTAL	170,615	187,434	201,830	204,894	2%	206,375	1%

FUNDING SOURCE SUMMARY

General Fund-30UT Revenue	512,557	507,138	384,432	510,265	33%	510,265	0%
General Fund Contribution	0-	0	0	0	0%	0	0%
	512,557	507,138	384,432	510,265	33%	510,265	0%

Authorized Full-time Equivalents	4	4	4	4	0%	4	0%
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PROGRAM HIGHLIGHTS AND MAJOR ACCOMPLISHMENTS

- Maintenance of storm drainage systems occurred at levels projected and planned for that kept all systems functional and ready for operation.
- All system components have been mapped on the geographical information system's network and included new construction of infrastructure requiring maintenance such as the Isleta Boulevard Phase I and Gatewood drainage improvements, and Primrose Pointe Units V and VI.
- Three detention ponds, 3.32 miles storm sewer lines, 82 manholes, 107 drop-inlets and 13901-ft of new culvert were added to the storm drainage system.
- Maintenance of storm drainage systems occurred at levels projected and planned for that kept all systems functional and ready for operation. All system components have been mapped on the geographical information system's network.
- GIS was updated to include new construction of infrastructure added to the storm drainage inventory: Golf Course Rd, Hunter Ct and Five Points Rd drainage components
- The Storm Drainage Program has acquired an articulating boom tractor mower to enable more effective maintenance of drainage ponds, channels and right of way areas.
- The Storm Drainage Crew was partially staffed to a total of three maintenance workers and one supervisor during the year.

**Operations and Maintenance Department
Storm Drainage Maintenance Program- 30UT**

SERVICE IMPROVEMENT GOALS & OBJECTIVES

FY07

- Our primary goal is to provide a quality storm drainage maintenance program to achieve minimal flooding where drainage infrastructure exists and rapid dissipation of standing storm waters.
- Our objectives include the updating of the storm drainage infrastructure inventory as new infrastructure is constructed so that those components can be included in the maintenance plan for systematic maintenance.
- Regular and routine maintenance in addition to responsive service is accounted for in the quality program through various work tasks in the maintenance plan. These activities include inspection and maintenance of channels, drainage fence, drainage inlets and outlets, high pressure flushing of storm sewers and culverts, mowing of detention ponds and rights of way and the operation and maintenance of storm water pump stations.

FY08

- An increase in crew size with additional labor will be required in future years to meet the growing demand for maintenance of storm drainage infrastructure as it is constructed. New drainage system installations occurring and planned will necessitate an increase in staff to perform the work that will enable constructed systems to function and operate as designed. As this infrastructure increases, a more sophisticated storm water system management will be required for its long term operation and maintenance. Funding maintenance activities, and replacing drainage system components as they wear out and fail will be required in much larger amounts than can be accommodated in the current budget. Several funding sources that may be considered include property taxes, sales taxes, impact fees, and enterprise funds. By treating storm water systems as an enterprise and establishing a storm water utility, funds can be raised through user fees to pay for operation and maintenance, which can also include NPDES program elements, an unfunded Federal mandate for the County. Storm water utility rates are often proportional to the user's man-made impervious surfaces. This method has been accepted as a means of determining the user's contribution to water runoff from their site. Fees also can include components covering the costs of administration, planning, and capital projects. National average monthly residential rates fall predominately in the \$2 to \$4 range. This enterprise method should be considered to fund the future maintenance need.

PERFORMANCE DATA

Performance Measures	Actual FY 2004	Actual FY 2005	Estimated FY 2006	Target FY 2007	Target FY 2008
Compliance with systems maintenance schedule	50%	50%	50%	50%	50%
Storm Station readiness for storm events	100%	100%	100%	100%	100%