

**2003/2004 ANNUAL REPORT**  
**CITY OF MIDLAND - ENGINEERING DEPARTMENT**

*Brian P. McManus, City Engineer*

The past year has been a very busy one for the Engineering Department. We continue to evaluate the improvements made to the sanitary sewer system. Monitoring of flows within the system is a very important part of the ongoing evaluation of the capacities of our sewer system. We have also been working with the Utilities Department to identify sources of surface water entering our sanitary sewer system from roof drains, parking lots and some city street areas. Smoke testing has been performed on many parts of the sanitary sewer system to locate sources of clean water entering the sanitary sewer system and additional areas are scheduled for this year. Studies made on the storm sewer system have found deficiencies in the George Street drainage basin and a new 84" storm sewer and outlet into the Tittabawassee River are currently under construction within the green-belt area between Patrick and Lyon Streets. This sewer will provide additional carrying capacity for our storm sewer system and will reduce street flooding throughout the southeast quadrant of the city. We are currently studying the possibility of extending other storm sewers to the new pipe to help drain storm water from other problem areas within the City of Midland.

Traffic flow and traffic safety are constant concerns for the motoring public. The effects of increased traffic in a growing community can be seen at all major intersections throughout the City of Midland. With observations made by the Police Department and input from concerned citizens, evaluations of traffic patterns are conducted by the Engineering Department. The results of these evaluations are analyzed for possible remedies and changes in traffic control can be implemented on a trial basis before becoming permanent. We are currently beginning the process of extending Airport Road from Hicks Road to Stark Road. This project will provide access to Highway US-10 and help alleviate some of the traffic congestion in the Eastman Avenue area. Another future road improvement involves the extension of Letts Road from Eastman Avenue to Jefferson Avenue. Jefferson Avenue is currently being widened from Joe Mann Boulevard to Broadhead Drive and will be widened to Letts Road next summer. This will provide better access to new areas being annexed into the City of Midland.

Street reconstruction and resurfacing projects are a constant need for our community. This year parts of St. Andrews Road, Poseyville Road, Coolidge Drive, Friar Lane, Heathermoor Drive, Hollybrook Drive, Tyler Street, McKinley Street, Holyrood Street, Trinity Court, Valley Drive, Rollcrest Court, George Street, Dilloway Drive, Countryside Drive, Green Road, Dublin Avenue and Waldo Avenue were reconstructed. A Community Development Block Grant funded the improvement of Waldo Court from a gravel surfaced street with drainage ditches to a curb & gutter street with enclosed storm sewers. Bay City Road from Rockwell Drive to the railroad tracks was reconstructed and widened to five lanes and was funded partially by a \$375,000 grant from MDOT. We continue to complete an annual surface treatment program to seal cracks and treat the bituminous surfaces to prolong the pavement life of our street system. Improving traffic safety is a major concern and the intersection of Dilloway Drive at Eastman Avenue was widened to create left turn lanes for Dilloway Drive onto Eastman Avenue. George Street was narrowed at the cross walk into the Midland Community Center, to make crossing the street safer for pedestrians.

Natalie Street was constructed east of the bend in the street. This project included the installation of water mains, storm and sanitary sewers and a paved street. This area was subdivided many years ago and was finally improved to provide needed infrastructure and access for additional housing on this short street.

Annexation of neighboring properties provides the opportunity to bring needed city services to new customers. This year new water mains were extended on Commerce Drive and Jefferson Avenue. Sanitary sewers were extended to new residents on Countryside Drive, Green Road, Isabella Street and Dublin Avenue.

Development of private property sometimes requires the extension of public utilities across their private developments. These utilities become public once installed and inspected by the Engineering Department. This year public sanitary sewers and water mains were constructed on Elisenal Drive, the Home Depot site and Carolina Cove Condominiums. Public water mains were extended to the Midland Evangelical Free Church site and public sanitary sewers were constructed on James Savage Road east of Waldo Avenue.

The Northeast Pressure District is a project to increase water pressure in the northeast quadrant of the City of Midland. This area has the highest elevation of the city, which results in lower pressures from our water plant and towers. The Engineering Department designed and constructed almost two miles of new water main from the water treatment plant

on Bay City Road to the intersection of Waldo Avenue and Ashman Street. This pipe serves as the main feed for the increased pressure district of the water system from the new pumping facility constructed at the water plant. We are currently constructing several miles of new water mains that will assist in the operation of the pressure district now and in the future for expansion. Some new water mains are also being installed with valving controls at the Plymouth Park water tower site to isolate the pressures and flows to the surrounding customers.

Utility reconstruction and renovations are always required when our infrastructure does not meet current needs or when existing facilities require constant repair and maintenance. This year we replaced water mains on Coolidge Drive, Dilloway Drive, Trinity Court and Wackerly Street. These projects replaced the old water mains, which required constant repairs and maintenance.

Every year the Engineering Department completes several miscellaneous projects for the City. The parking lots surrounding the City Hall site and the lots at the Law Enforcement Center were in poor condition and were reconstructed and resurfaced this year. The electrical wiring and controls for the runway lighting at Barstow Airport were replaced and some drainage improvements and tree trimming and tree removals were completed to clear the flight paths of the runways.

The Engineering Department frequently provides technical assistance to other city departments on future projects and current maintenance situations. This assures that the City uses the most cost effective means to achieve the requested results. We believe that interdepartmental cooperation provides an efficient high level service to our customers.

## STATISTICS

### PERMITS ISSUED:

Sidewalk and Curb Cut	98
Sanitary Laterals	109
Storm Connection and Laterals	86

### CONTRACT COSTS OF CONSTRUCTION/MAINTENANCE & NEW SUBDIVISION PROJECTS:

Water Main Improvements	\$1,173,400.00
Sanitary Sewer Improvements	\$781,200.00
Storm Sewer Improvements	\$56,100.00
Major Street Reconstruction	\$1,342,000.00
Local Street Reconstruction	\$995,800.00
Broadhead Estates No. 1	\$587,000.00
Elisenal Drive	\$420,000.00
Home Depot Sanitary Sewer	\$93,000.00
Commerce Water Main	\$58,000.00
Carolina Cove - Water Main and Sanitary Sewer	\$100,000.00
Midland Evangelical Free Church - Water Main	\$100,600.00
Oakbrook Estates No. 2	\$136,200.00
James Savage Sanitary Sewer	\$26,600.00
Sidewalk Improvement	\$36,700.00
City Hall Parking Lots	\$87,300.00

## 5 YEAR CHART OF CONSTRUCTION EXPENDITURES

TYPE	03-04	02-03	01-02	00-01	99-00	TOTAL	
Water Improvements	1,662,000	1,345,000	483,000	565,000	333,000	4,388,000	
Street Recon./Resurf.	2,338,000	4,044,000	1,853,000	2,335,000	1,694,000	12,264,000	
New Street Construction	474,000	374,000	258,000	454,000	269,000	1,829,000	
Storm Sewers	282,000	382,000	384,000	305,000	514,000	1,867,000	
Sanitary Sewers	1,177,000	661,000	10,215,000	385,000	355,000	12,793,000	
Sewer Separation	0	0	0	76,000	163,000	239,000	
Sidewalk Improvement	74,000	38,000	63,000	131,000	90,000	396,000	
Miscellaneous	337,000	0	609,000	386,000	163,000	1,495,000	
<b>TOTAL</b>	6,344,000	6,844,000	13,865,000	4,637,000	3,581,000	35,271,000	35,271,000

### MILEAGE OF EXISTING STREETS, UTILITIES AND SIDEWALKS:

Streets:	Local	152
	Major	78
	Trunkline	16
Sanitary Sewers		194
Storm Sewers		168
Water Mains		252
Sidewalks		347