

# City Engineer



**2003 Annual Report of the City Engineer**

# TAYLOR ROAD PROJECT COMPLETION

## TAYLOR ROAD EXTENSION

On August 22<sup>nd</sup> 2003, Mayor Fred Armstrong, City Council Members, INDOT officials and Milestone Employees, among others cut the ribbon for the Taylor Road Extension Project. This new section of Taylor Road consists



**Ribbon cutting for the Taylor Road Project**

of two twelve foot travel lanes with dedicated left turn lanes at both intersections, concrete curb and gutter, storm sewer, and people trail on the west side. The pavement is 1 1/2" of Hot Mix Asphalt (HMA) surface on 2 1/2" of HMA intermediate course on 9" of HMA base course on treated subgrade.



**Milestone compacts the subgrade to prepare for paving**

Milestone Contractors were able to get a quick start on the project in March, but late spring and early summer rains delayed the earthwork operations.

The Taylor Road Extension project is the second phase of a four phase project of roadway improvements for the northeast portion of the City. The first phase was a Bartholomew County sponsored project that provided a new crossing over Haw Creek and a realignment of Marr Road. That project was completed in 2002. The north end of the Taylor Road project ties into the south end of the Marr Road project. Phase three includes improvements to Rockyford Road between Marr Road and Taylor Road that will include realignment of the Rockyford/Marr intersection. Phase four includes improvements to Marr Road and Road 300 North. They will include a large radius curve to eliminate the ninety degree turn currently at the Marr Road/300 North intersection.



**Milestone raises the subgrade by placing and compacting fill**

The final construction cost for the project was \$953,596.47. Eighty percent of this project was paid for with federal funds. Therefore, the construction cost for the City of Columbus was \$191,000.

# ANNUAL STREET PROGRAM COVERS 21 MILES

This year's overlay, patching, crack sealing, and concrete repair projects covered over 21 miles, approximately 9.3 % of the City's 230 miles of streets.

## CRACK SEALING PROGRAM

Dave O'Mara was awarded the contract to seal cracks on streets throughout the city. Sealing cracks in city streets increases pavement life allowing a longer time between more intense street maintenance such as overlay. O'Mara placed 17.8 tons of material to seal cracks on 24.9 lane miles of City street. The cost for this preventative maintenance was \$50,000. Crack sealing costs an average of \$2011 per mile of street.

## OVERLAY REPAIRS

C.A.S.E. Construction was awarded a contract for street repairs that included 425 syds of patching, 250' of under drain installation, and various other drainage repairs. By addressing these problems before overlaying the streets, we plan to extend the pavement life and avoid cutting into newly paved streets. Milestone Contractors was also awarded a contract for street repairs in the Woodside Business Center. Milestone patched 936 syds of pavement and installed 45 feet of underdrains. The cost of both repair contracts was \$62,700.

## MISCELLANEOUS REPAIRS

Milestone Contractors repaired the two east bound lanes of 25<sup>th</sup> Street near the Hawcreek Boulevard intersection at a cost of \$5500.00, and Robertson Paving repaired 90 syds of failed pavement on Ruddick Avenue prior to overlay.

## OVERLAY PROGRAM

This year's overlay program started on September 29. Milestone Contractors was awarded the project with a low bid of

\$439,617.00. As part of the overlay project, Milestone raised manholes, water valves,



Milestone Contractors overlaid City Streets

detector housings and installed thermoplastic pavement markings. Milestone placed 9130 tons of asphalt in 15 working days. To overlay a one mile stretch of City street 24 feet wide by 1 inch in depth costs \$30,162.88.

## CONCRETE STREET REPAIRS

Carya Square and Mockernut Court street repairs were completed by C.A.S.E. Construction. C.A.S.E removed and replaced 609 square yards of concrete on Carya Square and 40 square yards on Mockernut Court at a cost of \$64,951. Central Indiana Contracting completed a separate contract for repairs to Mockernut Court in which they replaced 242 square yards of concrete at a cost of \$12,985.

## CURB RAMPS

In a continuing effort to bring our walkways into compliance with the Americans with Disabilities Act, the city bid a curb ramp project. C.A.S.E. Construction was the low bidder at \$42,030. 82 new, compliant ramps were installed along with 62 square yards of sidewalk. The contractor completed this job in three weeks.

## 2070 FEET OF PIPE ADDED TO STORM SEWER

The City awarded contracts totaling \$278,646. for miscellaneous drainage repairs and improvements in 2002. Through city contracts, 2070 linear feet of pipe were added to Columbus' storm sewer system. In addition to the new pipe, 8 new inlets were installed. The existing storm sewer system is aging and requires maintenance to avoid failures. Several repairs were made this year including 13 inlets, 3 manhole, 483 feet of curb, and 65 feet of pipe.

### FLINTWOOD STORM SEWER

Milestone received a contract to install a new storm sewer between 25<sup>th</sup> and 28<sup>th</sup> Streets in the Flintwood Swale. The storm sewer will consist of 1000 feet of corrugated aluminum pipe, four - 24" diameter risers with frames and grates, and one preformed concrete box structure with frame and grate. The existing swale has an inadequate grade and steep side slopes making it a maintenance problem. In addition, some of the storm drains discharging into the swale are actually below the existing swale grade causing inefficient operation of those drains. The new storm sewer will alleviate those problems by providing a hydraulically more efficient channel, correcting fluctuations in grade, and filling the side slopes.



Central Indiana Contracting installs storm sewer

Due to the property tax reassessment process, funds were not available for this capital project

until late in the year. Construction will begin in early 2004. The low bid for the project is \$213,900.

### CHAPEL AND FLINTWOOD DR

A failing cross gutter at the intersection of Chapel and Flintwood Drives precipitated this project. The cross gutter was removed, two inlets and 190 feet of drain pipe were installed, and 195 feet of roll curb and gutter were replaced. Hot Mix Asphalt pavement replaced the no longer needed concrete cross gutter. Replacing the gutter eliminated future maintenance concerns typical of concrete cross gutters and provided the motoring public with a much smoother ride at this intersection. The project was completed by Milestone Contractors at a cost of \$13,975.

### DRAINAGE MAINTENANCE

Every year, a number of drainage structures fail throughout the City. In the older sections of town the City has structures made of brick or concrete block with mortar joints that have been in service for decades without problem. Eventually, time and the elements compromise those joints and the soil surrounding those slowly seeps into the structure creating a sink hole. This is usually the first indication of a problem. Some newer structures can be repaired, but most of the older brick and mortar structures need to be replaced. In 2003 the City spent over \$40,000 for this type of maintenance.

A type of preventative maintenance being pursued is the installation of underdrains. Underdrains are perforated pipes that are installed under the edge of the roadway. They are designed to keep the ground water away from the pavement. Wet sub-grade makes the pavement susceptible to freeze/thaw failure. In 2003, nearly 500 feet of underdrains were installed

## **WALK WORKS 2003**

Walk Works, the City's sidewalk replacement program, was established in 1991 to encourage property owners to replace unsafe, deteriorated sidewalks and to build new sidewalks. The program has facilitated the replacement of more than eight miles of sidewalks in the last twelve years. This year the City reimbursed property owners \$10 per foot of sidewalk after it was replaced and inspected.

*Walk Works 2003* replaced 1300 linear feet of concrete sidewalk across 17 lots. In addition to the *Walk Works* program, a few other walks and paths were installed with Engineering Department support. At the 9<sup>th</sup> Street Park, 320 feet of sidewalk and two ADA compliant ramps were installed. Workers from the City Garage installed the walks and materials were paid for through the Engineering Department. The Engineering Department participated in a cooperative effort to install a pedestrian connection between Post Horn Court and Chapel Drive. With cooperation from area residents, the school corporation, the parks department, the City Garage, and the Engineering Department, 695 feet of walk and two ADA compliant ramps were installed at a material cost of \$2947. Workers from the City Garage installed the walk, City Engineering paid for the walk materials, and the school corporation paid for the installation of a fence. City Engineering also funded a portion of the new walk at Donner Park. K&M Construction installed 400 feet of walk at a cost of \$3990.

## **STATE PROJECTS**

The Indiana Department of Transportation continues to develop the State sponsored improvement projects in the Columbus Area.

INDOT is currently acquiring rights-of-way for the US 31 project which is scheduled to begin construction in 2005. The project includes 4

travel lanes with a center turn lane, new concrete curb and gutter, new storm sewer, new sidewalk, interconnected signal equipment, and two new bridges.

State Street is scheduled for improvements between Marr Road and Mapleton Street. The improvements include 4 travel lanes with a center turn lane, sidewalk replacement, realignment of Mapleton/Pence Street, new traffic signals at Marr, Gladstone, and Mapleton, and new left turn lanes at intersections. These improvements are scheduled for contract in 2006.

## **FORECAST 2004**

The City Engineer's Office is in the process of purchasing rights-of-way for an improvement project for Rockyford Road. The improvements will be from Duffer Drive to Marr Road. Improvements include a four lane section with curb and gutter, storm sewer, pedestrian trail, and intersection realignment. If right-of-way can be secured in a timely manner, the project will be let in 2004.

Other projects to expect in 2004 include a signal modernization at 11<sup>th</sup> and Washington Streets. The existing equipment at this intersection is reaching the end of its service life and needs to be updated. An automatic preemption system will be installed in coordination with Fire Station #1.

## **City Engineering Staff**

Steve Ruble	City Engineer
Steve Rucker	Assistant City Engineer
Randy Sims	Senior Engineering Technician
Rebecca Douglas	Technician
Shawn Plummer	Technician
Patricia Whitson	Technician

## NPDES PERMIT

In December 2002, the Board of Public Works and Safety signed a contract with DLZ Engineers to provide professional engineering services to assist the City in obtaining a National Pollutant Discharge Elimination System (NPDES) phase II permit.

To obtain this permit, the City must prepare a Storm Water Quality Management Plan (SWQMP). The SWQMP is divided into three different submittal parts as follows:

- Part A – Initial Application
- Part B – Baseline Characterization and Report
- Part C – Program Implementation

In addition to the submittal of Parts A, B, and C, the City will be required to perform a Program Reporting task which includes an annual report to the Indiana Department of Environmental Management.

### NPDES Permit Milestones

- 11/4/03** – Part A submission
- 5/2/04** – Part B submission
- 11/3/04** – Part C submission
- 11/3/04** – Public Education and Outreach Program Development Certification submission
- 11/3/04** – Public Involvement and Participation Program Development Certification submission
- 11/3/04** – Illicit Discharge Plan and Regulatory Mechanism Certification submission
- 11/3/04** – Construction Site Program Plan and Regulatory Mechanism Certification submission
- 11/3/04** – Operations Pollution Prevention Program Development Certification submission
- 11/3/05** – Operational and Maintenance Plan Certification submission

## COLUMBUS MPO

Formation of the Columbus Area Metropolitan Planning Organization (CAMPO) has been underway for nearly 18 months. Much effort has gone into coordinating with the Indiana Department of Transportation, Federal Highway Administration, Federal Transit Administration, and local governmental units to form an Interlocal Agreement which creates a policy board to conduct the business of the MPO.

### CAMPO POLICY BOARD

#### *Voting Members*

Mayor, City of Columbus  
President, Columbus City Council  
President, City of Columbus Plan Commission  
Chairman, Town Council of Edinburgh  
President, Bartholomew County Council  
President, Bartholomew County Plan Commission  
Chairman, Bartholomew County Commissioners

#### *Non-voting Ex-officio Members*

Chairman, Johnson County Commissioners  
Chairman, Shelby County Commissioners  
Indiana Department of Transportation  
Federal Highway Administration  
Federal Transit Administration

The policy board is tasked with forming two committees; the Technical Advisory Committee (TAC) and the Citizens Advisory Committee. The proposed TAC is comprised of 12 members from the City of Columbus, Bartholomew County, Edinburgh, Bartholomew County School Corporation, INDOT, and FHWA.

The City Engineer's office is in the process of setting up the first policy board meeting to be held after the first of the year.