

OFFICE OF THE CITY ENGINEER 2006 ANNUAL REPORT



On the front cover:

2nd Street and Washington Street brick replacement
Vectren street cut at 6th Street and Union Street
Milestone Contractors overlaying 12th Street
Indigo Hotel site storm sewer tie in
C.A.S.E. Construction installing Central Avenue turn lane
16th Street and Orinoco Street drainage repair by C.A.S.E. Construction
Creekview Drive concrete street repair by C.A.S.E. Construction
Milestone Contractors drainage repair at Wedgewood Drive and Yellowwood Drive
2nd Street and Washington Street brick replacement
City garage installing ramp at River Road and Hummingbird Lane
Girl Scouts in city government day
Gehring Underground boring at 25th Street and Central Avenue
2nd Street and Washington Street brick replacement
Terrace Woods street paving
Milestone Contractors repair at 20th Street and Washington Street

Overlay Program

In June of 2006, Milestone Contractors was awarded the City's annual overlay program with a contract amount of \$355,490. Before overlaying began, Milestone completed 1047 square yards of patching, using 368 tons of asphalt. Patching extends the pavement life and mitigates the need to cut into newly paved streets. As part of the overlay project, Milestone raised manholes, raised water valves, and installed thermoplastic pavement markings. Milestone placed 3900 tons of asphalt on 4.54 miles of City streets. Overlaying a one mile stretch of City street, 24 feet wide by 1 inch in depth, costs \$45,147.52. Also included in Milestone's contract was the installation of 1750 linear feet of underdrain.



Milestone overlaying Washington Street, south of 37th Street

Installation of curb ramps by C.A.S.E.



In a continuing effort to bring our walkways into compliance with the American with Disabilities Act, the city quotes curb ramp projects to bring the overlayed streets into compliance. In 2005, C.A.S.E. Construction was awarded the project with the low quote of \$38,338. They replaced 37 ramps and replaced 18 square yards of sidewalk. C.A.S.E Construction was also awarded the contract to install accessible ramps for the 2006 overlay program. The work must be completed by April 2007.

Curb Ramps

Concrete Street Repairs

C.A.S.E. Construction was awarded the concrete street repair contract with a low bid of \$72,815. The repairs were made at Creekview Drive and Schnier Drive. C.A.S.E. removed and replaced 1020 square yards of concrete street, installed 205 linear feet of curb and gutter, laid 325 tons of #73 stone, installed 610 feet of underdrain and excavated 340 cubic yards of concrete and soil.



Creekview Drive concrete street repair

Dave O'Mara Contractor, Inc. was awarded the 2006 crack sealing contract with a low bid of \$50,000. They crack sealed 36.5 lane miles to add longevity to the City's streets.

Drainage Repairs

The City awarded contracts totaling \$94,208 for miscellaneous drainage repairs and improvements made throughout the City in 2006. Specific projects focused on Oakbrook Addition in The Tipton Lakes area, at the intersection of Wedgewood Drive and Yellowwood Drive, and at 16th and Orinoco.



Wedgewood Drive and Yellowwood Drive



Orinoco drainage repair

Through City contracts, 477 linear feet of pipe was added to Columbus' storm sewer system. The existing storm sewer system is aging and requires maintenance to avoid failures; thus several repairs were made this year. Forty inlets were repaired, and 316 linear feet of curb and 281 linear feet of sidewalk were removed and replaced.

Drainage 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. Through various City contracts 2612 linear feet of underdrain was installed in 2006 at a cost of \$38,480.



Drainage Improvement at Conestoga Trail at Prairie Streams

Infrastructure

The City's infrastructure continued to expand in 2006 with the addition of four new residential subdivisions: Horizon's West, Westlake Hills, Princeton Park III, and Terrace Woods 4 and 5. This growth added approximately 8500 linear feet of new streets, approximately 7,560 linear feet of new storm sewer pipe, and 79 new storm sewer inlets and manholes. Similar growth is anticipated in 2007 with a new development, Wildflower Estates, and new phases in Shadow Creek Farms, Sycamore Bend, and Northbrook.



Westlake Hills

Indiana Department of Transportation

The Indiana Department of Transportation (INDOT) continues to develop State sponsored improvement projects in the Columbus area. In 2004 INDOT reviewed and reprioritized all projects based on its budget and a point rating system. The resulting project list and schedule outlines construction projects over the next ten years.

INDOT is in the process of acquiring rights-of-way for the US 31 project, which is scheduled to begin construction in 2010. 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, storm sewer, 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 2008.

Improvements are scheduled for I65 and State Road 58, with the project currently in the scoping process. One design under consideration uses two modern roundabouts at the top of the interchange ramps. This project is scheduled for contract in 2010.

Projects in Development

The Rocky Ford Road improvement project was let in November, and the contractor will begin clearing right-of-way in December. A four lane section with curb and gutter, storm sewer, pedestrian trail, and intersection realignment are among the improvements to be made between Duffer Drive and Marr Road.

Also under development are improvements to 17th Street from Central Avenue to US 31. Improvements will include four travel lanes, sidewalk, curb and gutter, storm sewers, and dedicated bicycle lanes. Strand and Associates is approximately sixty percent complete with the right-of-way engineering. Right-of-way services will begin in 2007.

Janssen & Spaans Engineering, Inc. and Traffic Engineering, Inc. are currently developing plans for a modern roundabout which would eliminate 8th Street between Lindsey and Indianapolis Road. It is anticipated that this project will be ready to bid in early 2007.

Road 200 South between State Road 11 and 150 West is scheduled for improvements. Improvements will include a dual left turn lane, curb and gutter, and storm sewer. Plans are currently being prepared by Janssen & Spaans Engineering for public hearing submittal to INDOT. Construction is projected to begin in 2008.

Plans prepared by Christopher B. Burke Engineering, Ltd. are part of a storm sewer master plan which will extend a 60 inch diameter storm sewer pipe from 5th Street and Chestnut Street to 7th Street and Chestnut Street. Plans are ready for bid, but funding shortfalls may delay construction.

Preliminary Engineering has begun on the following improvement projects:

Marr Road from Station Drive to 300N – Aecon, Inc.

Westenedge from US 31 to Rocky Ford Road – Christopher B. Burke Engineering, LTD.

Rocky Ford Road from Taylor Road to Talley Road – Strand Associates

Taylor Road from 25th Street to Rocky Ford Road - DLZ

Indiana Avenue from State Street to Marr Road – Hannum, Wagle & Cline Engineering

WalkWorks

WalkWorks, 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 nine miles of sidewalk in the past fifteen years. This year the City reimbursed property owners \$10 per linear foot of sidewalk, after it was replaced and inspected. During the 2006 construction season, *WalkWorks* replaced approximately 1500 linear feet of concrete sidewalk across 14 parcels. *WalkWorks* funds were also used to pay for the installation of twenty ADA compliant accessible ramps. In addition, *WalkWorks* participated financially in the Community Development Block Grant program by matching funds and by paying for asphalt wedging at the alleyways.



New CDBG sidewalk on 13th Street

NPDES

In continued efforts to comply with the National Pollutant Discharge Elimination System (NPDES) Phase II storm water permit for the City, the Engineering staff, along with staff from various other City departments, is working with consultant DLZ. DLZ has been hired to provide technical assistance to the City in order to comply with the complex regulations of the rule.

The permitting and certification process is designed to improve storm water quality in communities with populations greater than 10,000.

To comply with the requirements of the City's NPDES permit, the Engineer's office has undertaken the following tasks:

Illicit Discharge Ordinance

The intent of this Ordinance is to protect and enhance the water quality of our watercourses and water bodies in a manner pursuant to and consistent with the Federal Clean Water Act (33 U.S.C. §1251 et seq). This ordinance also provides for the health, safety, and general welfare of the citizens of the City of Columbus through the reduction of pollutants in stormwater discharges and the regulation of non-stormwater discharges to the storm drainage system to the maximum extent practicable. This ordinance was passed by the City Council on March 7, 2006, and will take effect January 1, 2007.

Erosion Control Ordinance

The purpose of this Ordinance is to establish minimum erosion and sediment control requirements to protect and safeguard the general health, safety, and welfare of the public by guiding, regulating, and controlling the design, construction, use, and maintenance of any development or other land altering activity which disturbs or breaks the topsoil or otherwise results in the movement of earth within the defined boundaries of the City and as specified herein. This ordinance was passed by the City Council on August 1, 2006, and will take effect January 1, 2007.

BMP Ordinance

Stormwater runoff contains many types and forms of pollutants that lead to impairments in our Nation's waterways. Best management practices (BMPs) or stormwater controls are an effective means of reducing the amount of pollutants in stormwater. A BMP Ordinance is currently being developed.

Permitting

The City Engineer's office administers several types of permits to control day to day impacts to infrastructure and traffic. Applications for permits can be picked-up in the Engineering office, or can be accessed on-line at the following web address:

<http://www.columbus.in.gov/engineers-row.html>

There is no charge for making permit applications to the Engineering office.



Street closings for Ethnic Expo

A Special Use of Right-of-Way permit is required any time the right-of-way is going to be encumbered. Typical applications are for street closures, closure of sidewalks, or parking spaces. Although the City Engineer can approve some requests, any lane closures on City streets must be approved by the Board of Public Works and Safety. In 2006, **128** applications were processed, including requests for neighborhood block parties, city special events, parades, benefit walks, placement of sculptures, and parked cranes used for HVAC installation on roofs.

A Permit to Excavate in Public Street, Alley or Right-of-Way is self explanatory. Applicants for this type of permit are generally accessing utilities that reside within the right-of-way of a City street. Some utilities lie under pavement necessitating a street cut to access the utility. Although there is no cost to make the permit application, contractors are required to bond their work for a period of three years to protect the City infrastructure which they have impacted. The City Engineer's office processed **300** permits to excavate in a public street, alley or right-of-way in 2006.



Right-of-Way Excavation on 6th Street

Improvement in the Right-of-Way Permits are required for work performed in the right-of-way that does not fall under the Permit to Excavate in Public Street, Alley or Right-of-way. Typical applications are for driveway or curb repairs. Improvements are required to meet City standards and the Engineer's office inspects all work. In 2006, **57** Improvement in the Right-of-Way Permits were processed by the City Engineers office.

The Engineer's office provides technical assistance to other City departments to facilitate, administer, or complete projects. The Engineer's office provided the following assistance in 2006:

Mayor's office

- Columbus in Bloom
- Vision 20/20 Committee
- Technology Task Force
- Greater Columbus Conduit and InfoTech Park Campus Duct System

Community Development

- Block Grant Sidewalk Project
- Veteran's Day Parade
- Ethnic Expo
- Garden plots



Columbus in Bloom preparations

Parks and Recreation Department

- Festival of Lights Parade
- Columbus Art Invitational
- Donner Park sidewalk project



Greater Columbus Conduit Project

Fire and Police

- Mapping and Diagrams

Planning Department

- Plan Commission Member
- Subdivision/Plat Review Committee
- Improvement plan and Drainage review



Columbus Art Invitational sculpture



The City Engineer’s office is responsible for the design and construction of all city streets and storm sewers. This involves the review of plans prepared by other engineers and the inspection of construction performed by contractors. The City Engineer directs the use of all traffic signs, signals, pavement markings, and street lights. The office regulates Right-of-Way including street and alley closings, utility street cuts, and sidewalk and driveway work. Maps, such as plat maps, storm sewer maps, topography maps and annexation maps are kept in the City Engineer’s office. Typical projects include street reconstruction and widening, annual street repaving program, drainage repairs, WalkWorks - the City’s sidewalk replacement program, and the Accessible Parking program.

City Engineering Staff

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2005 INTERSECTION ACCIDENT REPORT

Introduction

The **2005 Intersection Accident Report** is a summary of intersection traffic accident data for the City of Columbus during the five-year period from 2001 through 2005.

Summary

The intersection of National Road and 25th Street was the most frequent site of accidents in 2005. The number of accidents has fluctuated between 26 and 49 between 2001 and 2005 with a five year average of 37.4. This intersection also has the second highest five year average. Although natural fluctuations exist in the five year data, 2004 was the highest accident year by nine accidents. In 2005, INDOT added left turn phases to the signal at this intersection on the 25th street approaches. National Road and 25th Street had been a perennial problem prior to reconstruction in 1992. The current total is still well below the all time peak of 62 accidents in 1990.

The intersection of National Road and 10th Street/Taylor Road was the second most frequent accident location for the third year in a row. Continued commercial development in this area is putting pressure on the intersection. Over the past four years, the accident totals have been holding steady and will likely stay at these levels or increase until the National Road improvements scheduled to begin in 2008 are complete.

The National Road and Washington Street intersection shows the third highest frequency of accidents for 2005. This year's total of 31 is below the five year average of 33, and is the lowest total since 2001. This intersection is scheduled for improvements during the National Road project being implemented by INDOT. Increased travel lanes, turn lanes, and improved signalization should decrease the number of accidents at this intersection.

Most of the intersections where 10 or more accidents occur per year have been improved or are being considered for improvements. The highest accident count at an intersection not scheduled for improvement is 23 at 25th Street and Home Avenue.

Intersections to watch:

- 7th Street and Pleasant Grove Drive. Accidents jumped to 7 in 2005 from a total of 3 in the four previous years combined.
- 3rd Street and California Street shows an increase of 9 accidents more than last year's total of 5. The 2005 total was 14, and the 5 year average is 7.8.
- 10th Street and Whitfield Drive was a new intersection in 2002. It serves a commercial/retail area and sees high volumes of traffic. The intersection has had an average of nearly 11 accidents per year after its first three full years in service.

Most improved:

- National Road and Herman Darlage Drive/Middle Road 14 fewer accidents than in 2004 and 7.2 fewer than the five year average
- 25th Street and Marr Road shows 9 fewer accidents than 2004 and 7.2 fewer accidents than the five year average of 11.2

2005 INTERSECTION ACCIDENT REPORT CITY OF COLUMBUS

Map of intersections with 10 or more accidents.

LEGEND

- 30 or more ●
- 25 - 29 ●
- 20 - 24 ●
- 15 - 19 ●
- 10 - 14 ●

