

NICE AND EASY

This issue of teMPO deals with the extremes of transportation planning in the Indianapolis MPA. Several articles detail the dramatic growth, and resulting traffic concerns, of Hamilton County where various roadway projects are now underway to increase the area's traffic-handling capacity. Several other articles concern traffic-calming measures now in

use here and around the country to reduce both traffic speed and volume.

How can these opposing strategies

both be used to improve transportation convenience and quality of life for residents throughout the metro area? Find out, by reading this issue of teMPO!



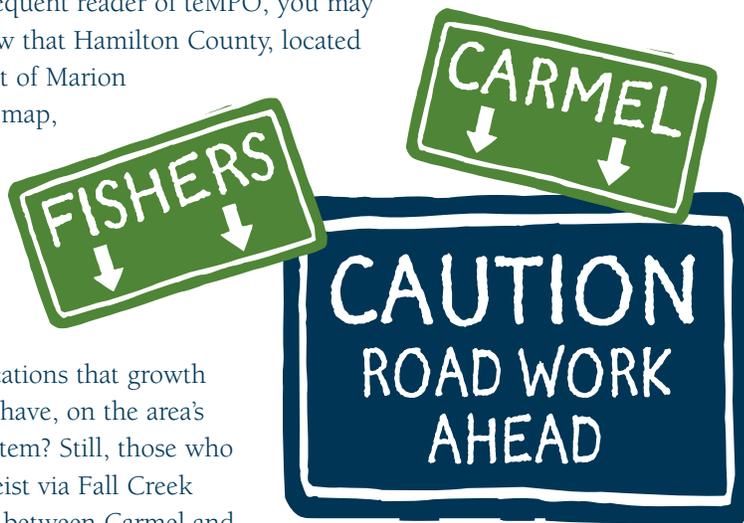
CURING GROWTH PAINS IN HAMILTON COUNTY

If you're a frequent reader of teMPO, you may already know that Hamilton County, located north by northeast of Marion County (see MPA map, page 3), is the fastest growing area of the state. But, do you know just how fast it's growing?

And, what ramifications that growth has had, and will have, on the area's transportation system? Still, those who commute from Geist via Fall Creek Parkway or travel between Carmel and Fishers via 116th Street, know these are issues that need to be addressed.

"Of all the surrounding counties, Hamilton has been the growth leader since 1970," says Chuck Kiphart, Hamilton Plan Commission Director. Back then, the county was the third most populous in the area, behind Marion (794,130) and Johnson (61,340) with a population of 54,760.

cont on page 10, see Growth Pains



IN THIS ISSUE

CURING GROWTH PAINS IN HAMILTON COUNTY.....	PAGE 1
NATIONAL EXCITEMENT OVER TRAFFIC-CALMING TECHNIQUES.....	PAGE 1
HAMILTON COUNTY ROAD REMEDIES.....	PAGE 2
CAC MEETING UPDATE.....	PAGE 3
LOCAL TRAFFIC CALMED.....	PAGE 4
IRONS IN THE FIRE.....	PAGE 5
TCMs DEFINED.....	PAGE 7

NATIONAL EXCITEMENT OVER TRAFFIC CALMING TECHNIQUES

It started in Berkeley, California, when a 1974 traffic management plan incorporated traffic-calming measures (TCMs). Since that time, interest in these strategies designed to slow and reduce vehicular trips has built among transportation planners and city engineers in the country's biggest cities. "It's easy to understand why," says Kaizer Rangwala, DMD Principal Planner and Manager of the Comprehensive Planning Section.

cont on page 8, see Calming



ACRO-NYMBLE

Here's a list of the agency and program acronyms mentioned in this issue. Refer to it to keep your understanding letter-perfect.

CAC - Citizens Advisory Committee

DCAM - Indianapolis Department of Capital Asset Management

DMD - Department of Metropolitan Development

INDOT - Indiana Department of Transportation

IRTC - Indianapolis Regional Transportation Council

IRTIP - Indianapolis Regional Transportation Improvement Program

MIS - Major Investment Study

MPA - Metropolitan Planning Area

MPO - Metropolitan Planning Organization

R-O-W - right-of-way

TCM - Traffic-Calming Measure

TIP - Transportation Improvement Program

TIS - Transportation Impact Study

HAMILTON COUNTY ROAD REMEDIES

Here is just a sampling of transportation convenience and capacity-increasing projects currently in the works around Hamilton County, the state's fastest growing area. This is, by no means, a complete listing of all such projects, but simply a review of some considered noteworthy by the people who deal with them every day.

96TH STREET

Perhaps because 96th Street forms the county line between Marion and Hamilton Counties, this project, begun in early 1996, was the one most often mentioned by area transportation planners/engineers. Funded predominantly with local revenues, this \$22 million project represents a financial and cooperative partnership among the City of Indianapolis, City of Carmel, Town of Fishers and Hamilton County. Not included in that budget figure is the cost of improving the 96th Street bridge over I-69, which was widened by INDOT in 1997. Slated for completion by Labor Day, 1998, the 96th Street project will enable an estimated 23,000 vehicles a day to travel 3.8 miles from Lakeshore Drive to I-69 on four lanes, crossing the White River via a new bridge.

146TH STREET

In 1997, Hamilton County passed a \$70 million bond referendum to fund much needed road improvements. This project, along with the following four, were designated for that funding. Here, an eight and a half mile stretch of 146th Street, heading east from Springmill, will be widened to 4 lanes and will, for the first time, bridge U.S. 31. Upon completion, drivers will no longer have to turn on to Greyhound Pass and be diverted through a busy theater/retail complex.

116TH STREET

Currently under construction through the 97/98 winter, this project will widen 116th Street to four lanes between the City of Carmel and the Town of Fishers. Included in the work is the widening of the bridge and the re-routing of Eller Road where it meets 116th Street. Completion is tentatively scheduled for late 1998.

OLIO ROAD

A 2.5 mile stretch of this primary arterial, from the Geist Causeway Bridge north to S.R. 238, will be widened to four lanes over the next 2 years. Work began this March on the center section of the designated area surrounding, and including, the 126th Street intersection and a bridge north of 126th Street on Olio Road which is in need of immediate repair.
cont on page 6, see Remedies



? DID YOU KNOW ?

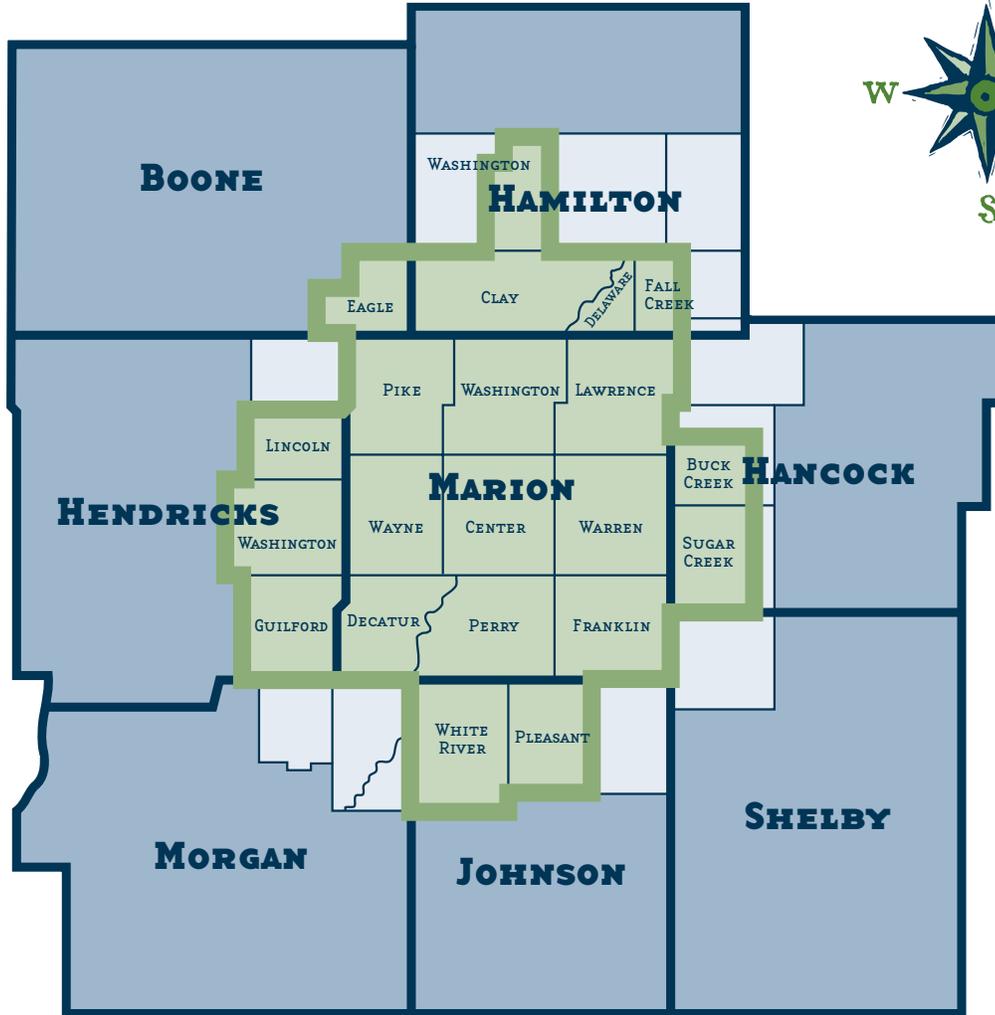
Between 1990 and 1996, the population of Hamilton County jumped a whopping 36%, according to the U.S. Census – from 108,136 to 147,719!

INDIANAPOLIS METROPOLITAN PLANNING AREA

METROPOLITAN PLANNING AREA
(PROJECTED URBANIZATION BY THE YEAR 2020)

MPO MODELING AREA
(STUDIED BECAUSE OF ITS PROXIMITY TO, AND INFLUENCE ON, MPA TRAFFIC)

Note: all roads on boundary lines are excluded except Marion County's east and south county lines.



CITIZENS ADVISORY COMMITTEE UPDATE

The next meeting of the Citizens Advisory Committee has been scheduled for May 19th. Anyone interested in participating in the regional transportation planning process is welcome to attend. Tentative agenda items include the region's railroad industry, the new Northeast Corridor Major Investment

Study and the Citizens Participation Handbook currently in the works. Come to listen and be heard!

Now in its fourth year, the CAC advises the Indianapolis Regional Transportation Council (IRTC) on a variety of transportation-related issues of public interest. For more on upcoming agenda items, or on selection criteria for serving on the CAC, call Mike Peoni, MPO Principal Planner, at 317/327-5133.

CAC MEETING

Tuesday, May 19th, 1998
6:30 to 8 PM
Room 107
City-County Building
200 East Washington St.
Indianapolis

LOCAL TRAFFIC CALMED

Have you ever heard a car scream past your house in the middle of the night and wondered how you can stop it from happening? Or, seen day time hot-rodders jeopardize neighborhood children and pets? Or, sat in your drive way unable to pull out because of the constant stream of rapid “cut through” traffic? A lot of people have, and have sought traffic calming remedies as a solution.

“There are a lot of TCMs (traffic calming measures) being used nationally,” says Ron Greiwe, Assistant Administrator of Traffic Engineering for the city of Indianapolis, “but here, as in most other older cities, our remedial efforts focus on speed reduction techniques, such as speed humps.”

Speed humps are mounds of asphalt, approximately three inches high and 12 feet wide, placed across the street any where from 400’ to 800’ apart. Cars traveling approximately 20 - 30 mph, the recommended speed limit in residential neighborhoods, will feel a slight ‘bump’ when they encounter a speed hump. Those traveling faster feel a more severe jolt, intended to make them reduce their speed. The higher the speed, the bigger the jolt.

“It’s a quick, relatively inexpensive way to make certain streets safer, more friendly places for pedestrians, drivers and neighboring residents alike,” says Greiwe. No wonder 40 speed humps have been placed in 16 Indianapolis neighborhoods since 1995. “They’re a less intrusive traffic-calming technique than some,” Greiwe notes, “and completely effective when excessive speed is the problem.”

Before speed humps can be installed, a petition requesting assistance must be signed by three-quarters of all affected

property owners. Then, the city collects speed and volume data to determine whether or not there is more traffic than accounted for by local residents, indicating “cut through” usage, and that its average speed exceeds recommended limits. If these criteria are met, speed humps are installed pending scheduling and funding.

Some speed hump installations, currently reducing traffic volume and speed within the Indianapolis MPA, include:

- a half mile stretch with three speed humps on Manderly Drive between 86th Street and 91st Street (See Traffic Calming Case Study)
- Delaware Street between 91st and 96th Street

- 83rd Street, west of Springmill
- 82nd Street, between College and Central

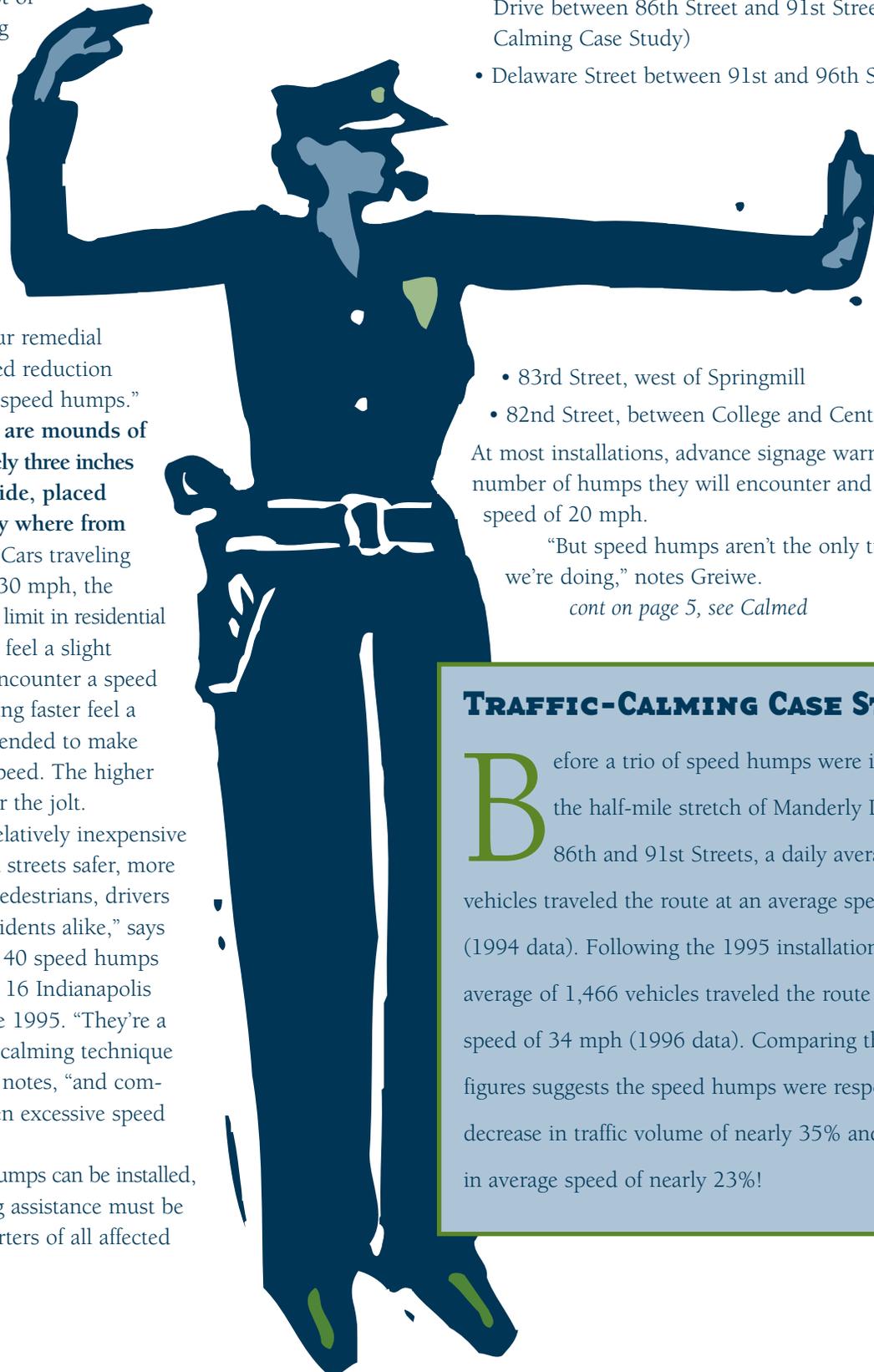
At most installations, advance signage warn drivers of the number of humps they will encounter and recommends a speed of 20 mph.

“But speed humps aren’t the only traffic calming we’re doing,” notes Greiwe.

cont on page 5, see Calmed

TRAFFIC-CALMING CASE STUDY #1

Before a trio of speed humps were installed along the half-mile stretch of Manderly Drive between 86th and 91st Streets, a daily average of 2,242 vehicles traveled the route at an average speed of 44 mph (1994 data). Following the 1995 installation, a daily average of 1,466 vehicles traveled the route at an average speed of 34 mph (1996 data). Comparing these data figures suggests the speed humps were responsible for a decrease in traffic volume of nearly 35% and a reduction in average speed of nearly 23%!



CALMED *(from page 4)*

“Naturally, we still make use of three and four-way stops at intersections to inhibit speeds. And, more and more, we’re working with designers and developers of new subdivisions and commercial parks, where the use of a greater variety of TCMs is economically feasible, such as traffic circles instead of traditional intersections,” he explains. “It’s the retrofitting of these techniques that’s prohibitively expensive.”

Still, the benefits far outweigh the costs. Greiwe, who has a grown daughter in Portland, Oregon marvels at that city’s commitment to traffic calming and the diversity of techniques in use, including channelization and lane designations. “On a good day, she can go everywhere by bike in perfect safety,” he says. “We’re not there yet, but we’re working on it.”

IRONS IN THE FIRE

Here are just a few of the issues “heating up” for your MPO and its planning partners:

NORTHEAST CORRIDOR MIS

As previously reported (*teMPO*, Vol. 1, Issue 2), a Major Investment Study will be conducted to assess the feasibility of rail transit in the Northeast Corridor among other things. The study, scheduled to begin this spring, will examine various ways for mitigating traffic congestion resulting from this area’s rapid growth. Included among the options studied will be highway improvements, light rail and bus transit systems. Implementing transit alternatives of this kind in the Northeast Corridor would represent a major change in how congestion is currently addressed in the region. For this reason, the 18-month study holds considerable significance for the area’s future transit capabilities.

TRAFFIC-CALMING CASE STUDY #2

The intersection of 10th and Rural on the city’s near-east side has been the focus of on-going traffic-calming interest since early 1996, reports Dorothy Mack, a resident of the area. Dorothy, *teMPO*’s first MPO Profile (Volume One, Issue Two), is active in the East 10th & Rural Group which represents the interests of four neighborhood associations which border on the intersection in question. DCAM has worked with the group to arrive at an intersection improvement design that incorporates TCMs, like green space and intersection narrowing devices. Though not yet final, DCAM’s latest improvement design has been accepted in concept by the resident group, who would like to see additional traffic-calming measures incorporated, such as staggered signals and “no turn on red” right lane designations. Bidding on the project is scheduled for next March with construction to begin April, 1999.

INDIANAPOLIS REGIONAL BIKE & PED SYSTEM PLAN

Phase III of the Bike/Ped Plan is up and rolling! With the assistance of HNTB Corporation, your MPO is preparing a capital improvement program and strategic plan that will prioritize funding and construction for each segment of the Bike/Ped Plan. The Regional Study Review Committee, which was involved with Phases I and II of the Bike/Ped Plan, is participating in this six-month study of Phase III.

REGIONAL TRANSPORTATION PLAN UPDATE

Your MPO will work with the Polis Center at IUPUI to review and modify the socio-economic forecasts upon



which the growth assumptions of the Indianapolis Regional Transportation Plan are based. Special emphasis will be placed on incorporating the forecasts developed for Hamilton County as part of the US 31 and S.R. 37/I-69 studies completed by the INDOT in 1997. The Indianapolis Regional Transportation Council will coordinate.

CITIZENS PARTICIPATION HANDBOOK

On February 3, 1998, the firm of Plum, Klausmeier and Gehrum (PKG) attended the meeting of the MPO’s Citizens Advisory Committee as a first step in preparing a Citizens Participation Handbook. PKG solicited ideas and suggestions from the committee for a handbook that would serve as a “toolbox” for citizens who want to participate in the transportation and land-use decision-making process.

REMEDIES *(from page 2)*

STRAWTOWN AVENUE

This two-lane road will be widened from Joyce Avenue, just west of the White River, to 1.5 miles east of S.R. 37. In addition to lane widening, dangerous curves will be straightened and drainage improved.

TOWN OF WESTFIELD, VARIOUS

Hamilton County growth has resulted in various transportation-related projects within the Town of Westfield.

Included among these is the widening of Hoover Street to accommodate increased school traffic. This project has involved seeding, grading and the construction of additional



sidewalks. A traffic signal has been constructed at the intersection of 181st Street and U.S. 31. Another signal is planned for installation at the intersection of U.S. 31 and 161st Street. In addition, the previously mentioned 146th Street bridge over U.S. 31 will begin construction in late summer or early fall.

HAZELDELL PARKWAY

A five-mile, four-lane section of new road, located on the eastern edge of Clay Township, will be constructed between 96th and 146th Streets by the City of Carmel. This project will incorporate traffic-calming measures (see TCMs Defined, page 7), including roundabouts at 126th and 131st Streets and signals at 96th, 116th and 146th Streets. Completion is slated for late November, 1998.

CITY OF CARMEL, VARIOUS

Increased traffic from Hamilton County's recent growth has prompted the following transportation-related projects within the city of Carmel: finishing the improvement of Second Avenue and Second Street in



? D I D Y O U K N O W ?

Contributing to the area's traffic congestion is an increase in Hamilton County's total employment of 37%, from 59,180 in 1990 to 81,110 just seven years later!

Old Town, including the widening of traffic lanes and the addition of curbs, sewers and lights; the addition of traffic signals on 96th, 116th and 146th Streets; improving both First Avenue and First Street; Extending 126th Street west from Rangeline Road to Adams Street; the improvement of Adams Street, including widening and re-pavement; improving Pennsylvania Street from 103rd Street north to 131st Street to four lanes with median, plus improved traffic signals, bike/ped paths and a roundabout at Old Meridian Street; and, multiple drainage improvements throughout the city's roadway system.

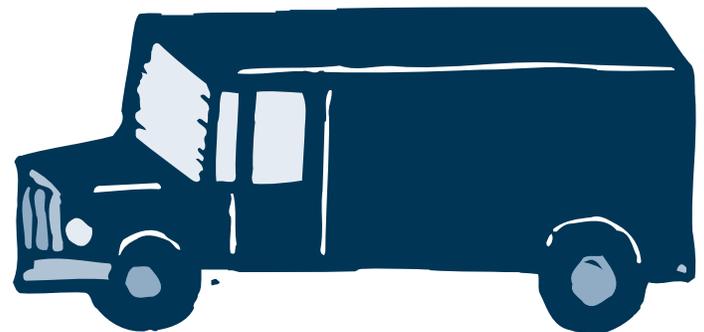
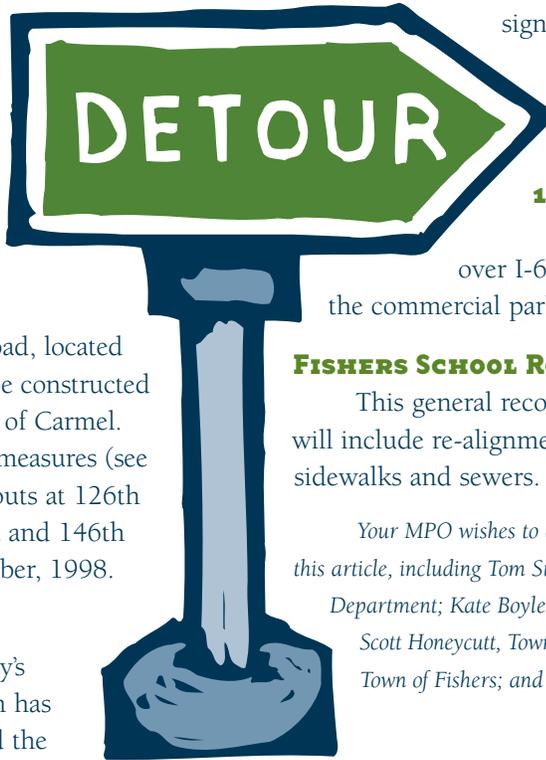
116TH BRIDGE

INDOT will widen the 116th Bridge over I-69 and extend its five lanes east past the commercial park turn-ins.

FISHERS SCHOOL ROAD

This general reconstruction north of 106th Street will include re-alignment, re-paving and the addition of sidewalks and sewers.

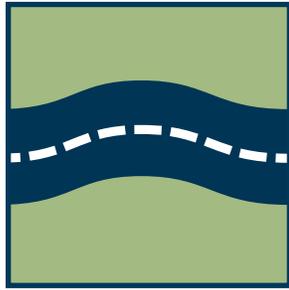
Your MPO wishes to extend its thanks to those who contributed to this article, including Tom Stevens, Director, Hamilton County Highway Department; Kate Boyle, Engineer, City of Carmel; Matt Skelton and Scott Honeycutt, Town of Westfield; Roger Johnson and Jim Brimberry, Town of Fishers; and Steve Fehribach, A & F Engineering.



TCMs DEFINED

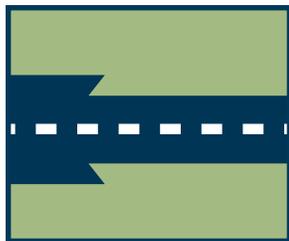
Several criteria determine the relative effectiveness of traffic calming measures, especially those intended to reduce vehicle speed. TCMs must be spaced no more than 200 or 300 feet apart to prevent drivers from speeding up in-between. Similarly, TCMs must provide a sharp change in horizontal or vertical alignment to reduce traffic speed and/or volume. That is, they must alter road surface elevation (e.g. speed humps) or lane width (e.g. curb bump-outs).

Commonly used traffic-calming measures meeting these criteria can be divided into ten general categories. These include:



ANGLE POINTS/CHICANES

Constructed along the edge of roadways similar to street narrowing features, these TCMs more dramatically deflect a vehicle's travel path. To reduce speed, the more effective applications extend laterally to the center line of the roadway.



CHANNELIZATION

Measures in this category horizontally alter motor vehicle paths of travel and include pedestrian refuge treatments, mid-block median islands and other forms of traffic control islands. By restricting certain intersection turning movements, these TCMs also divert traffic within the roadway network.

DRIVEWAY LINKS

These TCMs dramatically change the typical section and alignment characteristics of the travel environment, while maintaining connectivity to that environment, just as a driveway changes the travel section and alignment of the street to which it is connected. Traditionally, alleys have performed this function but have been confined most often to commercial, rather than residential, applications.

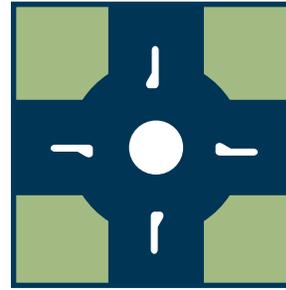


INTERSECTION DIVERTERS

Measures in this category include full diagonal diverters which alter network traffic flow patterns by dividing four-way intersections in two and partial diverters which create "right-in, right-out only" traffic at 'T' intersections. Construction variables here include raised curbs, traffic islands and physical barricades.

PERIMETER TREATMENTS

Here, intersection narrowings, signs and landscaping features are used to communicate to vehicle operators that they are entering a special area within the urban roadway network.



ROUNDBABOUTS

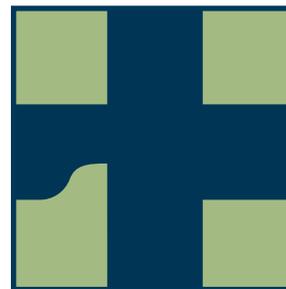
Also called traffic circles, these TCMs create circular flow patterns using yield rather than stop control conditions. Key design and implementation issues include the radius of the roundabout and the physical means of construction.

SPEED HUMPS

These TCMs create vertical speed constraints by changing the street surface elevation to deliver the desired motor vehicle speed. Speed Humps are usually placed at intervals of 300 to 400 feet. **Speed humps are mounds of asphalt, approximately three inches high and 12 feet wide, placed across the street any where from 400' to 800' apart.**

STREET CLOSURES

These TCMs eliminate neighborhood cut-through traffic thereby dramatically impacting network traffic flow. Because of right-of-way constraints and potential disruption of emergency services, these traffic calming measures are difficult to apply to existing roadways. However, street closures, in the form of cul-de-sacs are regularly designed into new subdivisions.



STREET NARROWING

Also called chokers or slow points, these TCMs narrow roadways down to minimum widths using curb modifications, channelization and landscaping features. Side friction and shy distance from these measures reduces speed.

SPEED TABLES

Similar to speed bumps which interrupt the street's surface elevation, these vertically applied speed constraints have a flat or plateaued top, creating a roadway environment where other modes of travel, such as walking, are given priority.

? D I D Y O U K N O W ?

Fountain Square is an example of a traffic circle or roundabout.

CALMING *(from page 1)*

“Transportation planners are now encouraged to address the social issues and lifestyle concerns associated with automobile use. TCMs enable us to do this.” (see TCMs Defined, page 7)

Traffic calming is the general term applied to placing physical features in the roadway to reduce travel speed. Reducing traffic volume is often a secondary benefit of these measures.

How do TCMs reduce travel speed? “By making people think more,” explains Rangwala. “People feel free to drive faster on wide-laned, uninterrupted roadways. By narrowing lanes with measures like traffic islands, roundabouts and curb bump-outs, we can reduce vehicle speeds. As travel speeds drop, so does traffic noise.” As a result, the street becomes a more pleasant environment for pedestrians and travel safety increases for everyone, including those who prefer alternative modes of travel. “We try to encourage a change in public travel habits by modifying operating characteristics of individual roadways,” notes Rangwala.

When successful, these strategies result in either a shift from one mode (e.g. privately operated vehicles) to another mode (e.g. public transit, bicycling, pedestrian travel) or a diversion from one route (e.g. neighborhood street)

to another (e.g. collector roadway). In addition to solving site-specific problems, traffic calming supports other transportation planning initiatives, such as ISTEA — the 1991 Intermodal Surface Transportation Efficiency Act, which encourages the accommodation of alternative travel modes within urban transportation plans — and the Indianapolis Regional Bicycle & Pedestrian System Plan.

TCM BENEFITS

Enthusiasts of traffic-calming strategies include the following among their potential benefits:

1. Reduction of traffic speed, thereby increasing safety for drivers, pedestrians, bicyclists and children playing nearby.
2. Improvement of air quality by reducing both physical and noise pollution associated with high volume and high speed, stop/start traffic.
3. Reduction in the likelihood of being killed or seriously injured in an accident involving a motorized vehicle.
4. Creation of a greater degree of urban transportation



equality, especially among those who cannot or choose not to travel by automobile, such as the elderly, children and the disabled.

? DID YOU KNOW ?

Some sections of Washington Street have been traffic-calmed with one-way traffic designations and/or angled parking which reduces travel lane width.

5. Enhancement of neighborhoods, and improvement in the quality of life for residents, by dedicating portions of the urban streetscape for recreational use.

Hoping to acquire these benefits, cities across the country have incorporated TCMs into their transportation plans. Techniques intended to control traffic speed, such as speed humps and tables, rather than volume control measures, have been more widely used for a variety of reasons. Speed humps visibly and immediately mitigate the traffic problem they are designed to address. In the presence of these and other speed control TCMs, such as traffic circles, nubs and chokers, traffic slows down.

cont on page 9, see Calming

? DID YOU KNOW ?

Massachusetts Avenue is an example of a traffic calmed street, where perpendicular parking and intersection chicanes reduce travel lanes from more than 40 feet to approximately 20 feet.

CALMING *(from page 8)*

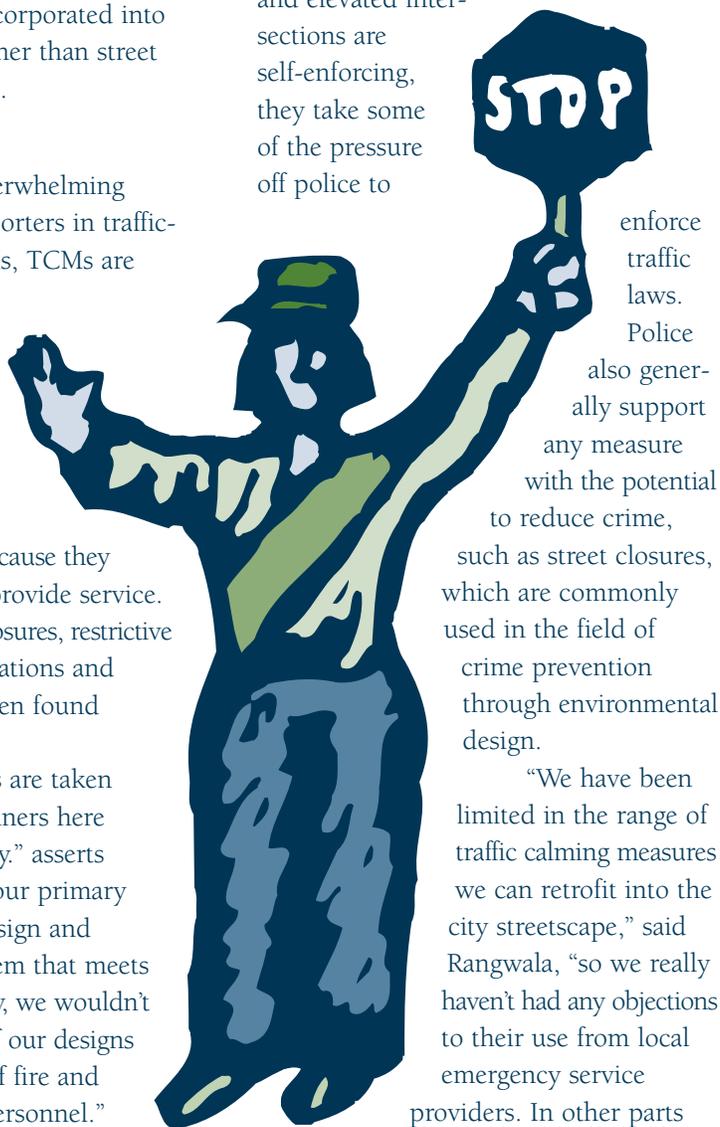
Because certain TCMs slow traffic rather than divert it, they are preferred in cases where residential streets would experience traffic spillover. This is why traffic circles and speed humps, for example, are often incorporated into urban street plans rather than street closures and diverters.

REAL CONCERNS

Still, despite overwhelming acceptance from supporters in traffic-calmed neighborhoods, TCMs are occasionally the focus of concern among city service providers. In some areas, emergency vehicle operators oppose various traffic calming techniques because they impair the ability to provide service. In this regard, street closures, restrictive one-way street designations and speed bumps have been found most objectionable.

"These concerns are taken very seriously by planners here and across the country," asserts Rangwala. "After all, our primary responsibility is to design and maintain a street system that meets peoples' needs. Clearly, we wouldn't be meeting that goal if our designs hindered the efforts of fire and emergency medical personnel."

For the most part, police across the country have supported traffic-calming measures because of their potential for controlling traffic speed and reducing accidents. Because engineering measures such as speed humps and elevated inter-sections are self-enforcing, they take some of the pressure off police to



enforce traffic laws. Police also generally support any measure with the potential to reduce crime, such as street closures, which are commonly used in the field of crime prevention through environmental design.

"We have been limited in the range of traffic calming measures we can retrofit into the city streetscape," said Rangwala, "so we really haven't had any objections to their use from local emergency service providers. In other parts

of the country, however, traffic engineers and planners have had to make a case for traffic calming based on quality of life issues, improved traffic safety and the relative rarity of emergencies versus the constant problems of speeding traffic." In Indianapolis, TCMs are currently most often installed, not by the city, but by private developers committed to better designs for their commercial and residential subdivisions.

POSITIVE PROCESS, PROVEN PERKS

To insure the success, and wide spread acceptance, of TCMs, municipalities across the country have adopted a conservative, methodical procedure concerning their use. Transportation Planners nationwide first document the existence and nature of traffic problems via speed and volume measurements. Then, they propose traffic-calming measures on a temporary basis subject to performance evaluations. Finally, speed and volume follow-up studies assure that the TCMs are mitigating the problems they're designed to solve. Only then, do the measures become permanent. "As in all aspects of our planning, public input is an important part of the process," says Rangwala. "In fact, most of the proposed TCM projects were initiated by builders and developers excited about bringing the benefits of traffic calming to their developments."

Y O U R M P O S T A F F

... includes these people who would be happy to address your comments or questions on any aspect of the transportation planning process:

STEVE CUNNINGHAM • SENIOR PLANNER	317/327-5403
MIKE DEARING • SENIOR PLANNER	317/327-5139
KEVIN MAYFIELD • PLANNER	317/327-5135
LORI MISER • MANAGER-TRANSPORTATION PLANNING	317/327-5136
MICHAEL PEONI • PRINCIPAL PLANNER	317/327-5133
SWESON YANG, AICP • CHIEF TRANSPORTATION PLANNER	317/327-5137

teMPO

is published quarterly by your Metropolitan Planning Organization, part of the Department of Metropolitan Development. If you know of anyone who would like to receive teMPO, or if you have any questions concerning its publication, please call:

Mike Peoni at 327-5133
Department of Metropolitan Development
Metropolitan Planning Organization
City-County Building
200 East Washington Street
Suite 1841
Indianapolis, IN 46204-3310

teMPO was written and prepared for publication by Whitman Communications, Inc.

GROWTH PAINS *(from page 1)*

Over the next ten years, Hamilton grew more than 50% — far faster than any of the other surrounding counties, including Hendricks which was closest with 29.32% growth.

Hamilton County's growth continued to 1990 when it posted a whopping 20-year gain of 101.37%. By comparison, Johnson County had the next largest gain with 44.63%. "No other area in the eight-county region comes even close," says Kiphart. "Just since 1990, Hamilton County has grown another 36% and added more than 37,000 to its population."

What has this growth meant to the area's roadways? Readers of last fall's Special Report on Land Use (teMPO, November, 1997) know that the type of development attending this growth

has a direct effect on road usage and traffic congestion. For example, a neighborhood commercial center of 100,000 sq. ft. will generate more than 7,000 trips a day; an 80-acre residential development with approximately 12 homes/acre, almost 9,200 a day; a regional office park of 500,000 sq. ft., more than 5,700 daily trips. "We've already seen the influence of Hamilton County's unprecedented growth on various roadways," says Kiphart.

That influence has been forecast in the Indianapolis Regional Transportation Plan, where the number of households in the

Hamilton County townships located within the MPO modeling area (see map page 3) are predicted to grow 225% between 1990 and 2020. No wonder transportation planners throughout Hamilton County are currently engaged in a variety of capacity-increasing projects to keep pace (see Road Remedies, page 2)

COMING SOON IN TEMPO:

- **Rail Service in the MPA**

Tracking the local industry in a Special Report due out mid-May

- **Regional Vision Plan**

A glimpse ahead in the Second Quarter Issue due early July



Metropolitan Planning Organization

City-County Building
200 East Washington Street
Suite 1841
Indianapolis, IN 46204-3310

tempo



SPECIAL

EDITION

MAY/JUNE 1998

KEEPING PACE WITH OUR TRANSPORTATION NEEDS

SPECIAL REPORT

Cha-cha-cha-changes. No, we haven't lost our train of thought. But to better meet our goal of promoting the public's informed and timely participation in the transportation planning process, your Metropolitan Planning Organization (MPO) is temporarily sidetracking our issue on the area's rail service. Instead, this issue will cover *conNECTIONS* — the major investment study of northeast corridor transportation — a story now gaining attention in various media throughout the region.

Read on to get the answers to why this study is being done, how it relates to past studies of the same area, how the public will participate in the study and, most importantly, what the entire region has to gain from its objective handling over the next 18 months. And, look for our special rail issue to get back on-track later this year.

YOU'VE GOT CONNECTIONS

Annoyed by the rush hour congestion found heading north or south on SR 37/I-69? Irritated by the lack of options to reach Hamilton County from downtown Indy? Frustrated by the need for more bus service northeast of downtown and the complete lack of transit north of the Marion County line?

northeast corridor transportation

Or, are you just concerned that the relative efficiency of our region's current transportation system can't last when handling the increased capacity demands caused by the record growth projected to

CONNECTIONS



linking
our region's
opportunities

continue throughout the northeast corridor? How about the significant growth, and subsequent congestion, in Johnson or Hendricks Counties? If you answered "Yes" to any of these questions, relax. You've got *conNECTIONS*.

conNECTIONS is an 18-month, transportation study of the region's most traveled corridor — the section of the metropolitan planning area (see MPA map, page 3) stretching from just south of downtown Indianapolis northeast to Noblesville. As such, the area roughly follows the path of Fall Creek to Allisonville Road and north to Noblesville, incorporating all of Castleton and Fishers and parts of Carmel to the west and Lawrence to the east (See study area map, page 3).

cont on page 10, see conNECTIONS

IN THIS ISSUE

- YOU'VE GOT CONNECTIONS . . . PAGE 1
- COMMITMENT TO BUS/RAIL NOT TRANSIT-ORY. PAGE 1
- STUDY PROMISES REGION-WIDE BENEFITS. PAGE 2
- MPA MAP PAGE 3
- NEC MAP PAGE 3
- NECT PROBLEMS & POSSIBLE SOLUTIONS PAGE 4
- COMPARISON OF NEC STUDIES. PAGE 5
- CONNECTING WITH YOU PAGE 5
- CONNECTIONS Q & A PAGE 7

COMMITMENT TO BUS/RAIL NOT TRANSIT-ORY

We have always wanted to expand the role transit plays in area mobility," explains Mike Peoni, MPO Principal Planner, "but this is the best opportunity we've ever had to give it the kind of careful consideration it deserves." Based on the region's historic reliance on car travel, past participants in the transportation planning process may have assumed that transit would not play a major role in our regional transportation plan.

cont on page 11, see Commitment



ACRO-NYMBLE

Here's a list of the agency and program acronyms mentioned in this issue. Refer to it to keep your understanding letter-perfect.

ATMS - Advanced Traffic Management Systems

CAC - Citizens Advisory Committee

CBD - Central Business District

c/d - collector/distributor, referring to a specific type of lane

CIRCL - Central Indiana Regional Citizens League

DMD - Department of Metropolitan Development

HAR - Highway Advisory Radio

HOV - High Occupancy Vehicle

IDEM - Indiana Department of Environmental Management

INDOT - Indiana Department of Transportation

ISTEA - Intermodal Surface Transportation Efficiency Act

ITS - Intelligent Transportation System

MAGIC - Metropolitan Association of Greater Indianapolis Communities

MIS - Major Investment Study

MPA - Metropolitan Planning Area

MPO - Metropolitan Planning Organization

TDM - Travel Demand Management

TSM - Transportation Systems Management

UNIGOV - Unified Government of the City of Indianapolis

VMS - Variable Message Signs

STUDY PROMISES REGION-WIDE BENEFITS

Though focused on the current and projected transportation problems of the northeast corridor, *conNECTIONs* promises to benefit the region's entire transportation system, and its users. What is learned through its evaluation of various travel modes and travel demand management measures can be applied to other areas experiencing their own growth-related issues.

For example, Johnson County is the second fastest growing area in the nine county Indianapolis Metropolitan Planning Area (MPA). Its rush hour travelers, like those in the northeast corridor, experience delays and congestion, though to a lesser degree. And, like in the northeast corridor, a rail line stretches from Johnson County to downtown Indy, offering the potential for a number of transit options.

On the west side, Hendricks County is experiencing its own growth-related problems. As the region's third fastest growing area, its major roadways frequently fail to provide a preferred level of transportation service, especially during peak hours. In addition, a recent INDOT study indicates that the stretch of I-465 west of downtown, roughly from "8 to 10 o'clock" is the busiest outside of the *conNECTIONs* study area.

Alternatives will need to be considered here, just as they now are in the northeast corridor.

The region-wide benefits likely to result from *conNECTIONs*

fall into two transportation-related categories: problem mitigation, or lessening the symptoms of congestion such as travel time delays and the high emission levels associated with stop/start travel; and, mobility enhancement, or more and better ways to get around.

By decreasing traffic congestion, either by increasing roadway capacity or reducing demand through viable alternatives to car travel (e.g. rail or bus transit), system efficiency and convenience improve. Travel times are shorter. Operation is easier and more pleasant. Stop and start travel is reduced so noise and air pollution decreases.

Increasing mobility, in effect, empowers people who are transit dependent to make greater use of our transportation system and our region's resources. Perhaps these people can't drive, don't have access to a car, or simply prefer a less frustrating and more ecologically-conscious alternative to rush hour traffic. By offering options other than car travel, such as high-occupancy vehicles (e.g. express buses traveling designated HOV lanes) or rail service, peoples' circles of influence and trade expand. They are able to make use of more of the attractions our area has to offer, including seeking employment opportunities along expanded bus routes, or shopping in Castleton without fear of congestion or parking delays.

More people traveling more efficiently to more of our regional opportunities. That's the goal behind *conNECTIONs* and the benefit promised not only to travelers in the northeast corridor, but throughout our regional transportation system.



teMPO

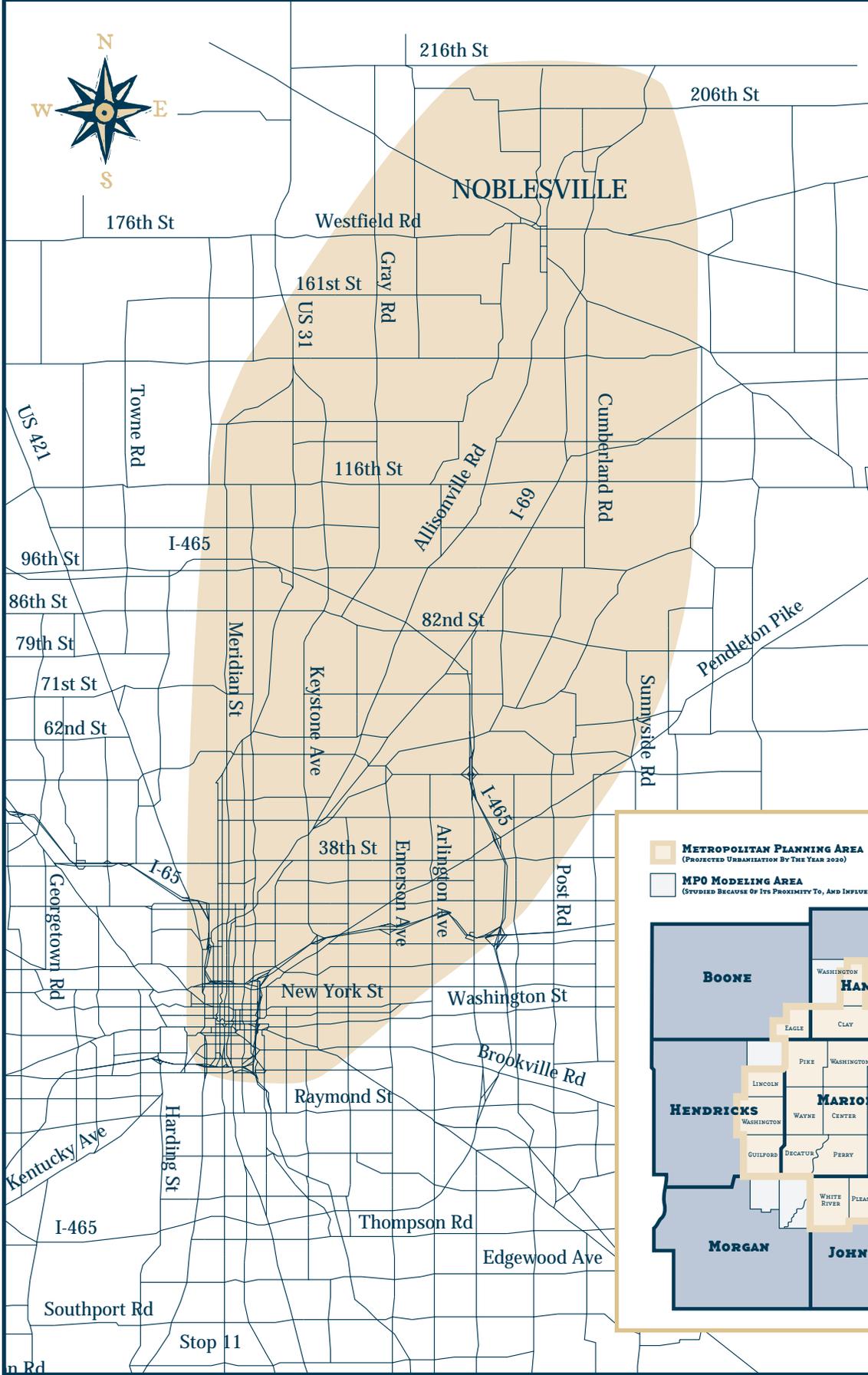
is published quarterly by your Metropolitan Planning Organization, part of the Department of Metropolitan Development. If you know of anyone who would like to receive *teMPO*, or if you have any questions concerning its publication, please call:

Mike Peoni at 327-5133

Department of Metropolitan Development
Metropolitan Planning Organization
City-County Building
200 East Washington Street
Suite 1841
Indianapolis, IN 46204-3310

teMPO was written and prepared for publication by Whitman Communications, Inc.

THE NORTHEAST CORRIDOR

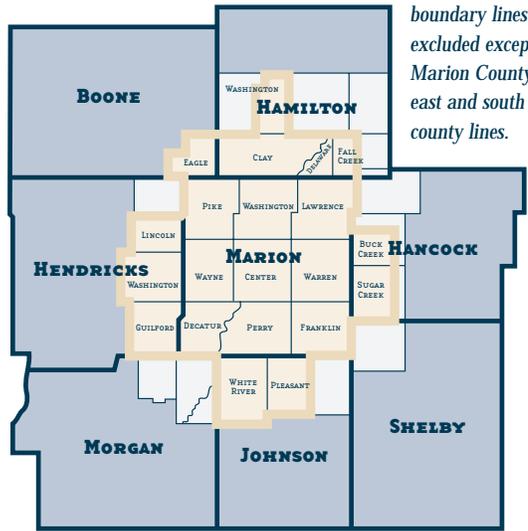


The Northeast Corridor, study area of conNECTIONS, runs from just south of downtown Indianapolis northeast to just north of Noblesville. It includes most of the northeast quadrant of Marion County, the Town of Fishers and the Cities of Noblesville and Carmel and portions of southern Hamilton County.

INDIANAPOLIS METROPOLITAN PLANNING AREA

- METROPOLITAN PLANNING AREA**
(PROJECTED URBANIZATION BY THE YEAR 2020)
- MPO MODELING AREA**
(STUDIED BECAUSE OF ITS PROXIMITY TO, AND INFLUENCE ON, MPA TRAFFIC)

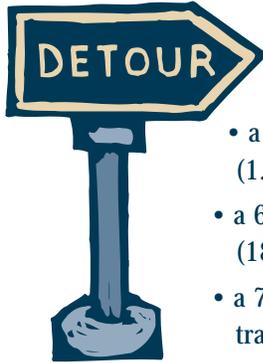
Note: all roads on boundary lines are excluded except Marion County's east and south county lines.



NECT PROBLEMS & POSSIBLE SOLUTIONS

The transportation needs of the Northeast Corridor — the fastest growing area in central Indiana — are currently served by:

- I-69
- SR 37
- I-465
- SR 32
- I-70
- SR 38
- I-65 (short segments)
- US 31
- US 40
- numerous arterials throughout both Marion and Hamilton Counties



Bus service within Marion County is provided by the Indianapolis Public Transportation Corporation (METRO) and ATE, a private company. Bus service is concentrated around downtown Indianapolis and offers fewer opportunities for use as it moves to outlying areas of the county. There is currently no transit service in Hamilton County.

THE PROBLEM

The established transportation infrastructure and transit service schedules have been unable to keep pace with the increasing mobility needs of those regularly traveling the northeast corridor. The need for new transportation strategies results from major population and employment growth in the region. The Indianapolis Regional Transportation Plan (May, 1995) states that “nearly all new development is expected to occur in suburban portions of the metropolitan planning area” mainly outside of Marion County. That growth is forecast to include:

- a 27% population growth between 1990 and 2020 (from 1 to 1.3 million)
- a 38% increase in the number of households (from 410,000 to 565,000)
- a 44% rise in employment (from 729,000 to 1 million)

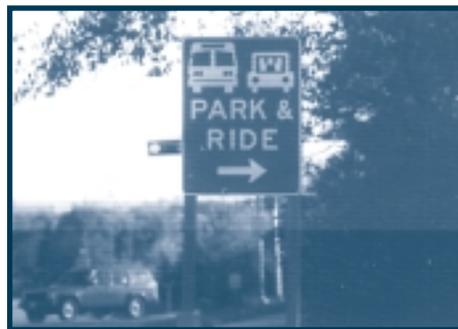
Accompanying this growth will be increased strain on the already overburdened transportation infrastructure of northeast Marion County and southeast Hamilton County — traditionally the most heavily traveled in the metropolitan area. Region-wide, the transportation plan forecasts:

- a 48% increase in daily person trips (1.8 million more trips per day)
- a 69% rise in vehicle miles of travel (18.2 million more miles per day)
- a 77% increase in vehicle hours of travel (467,000 more hours)

From these projections, two things are clear. First, such dramatic increases in travel could threaten the very quality of life that makes the Northeast Corridor attractive. Secondly, the traditional approach of expanding highway facilities may not be adequate to handle growth of this magnitude.

POSSIBLE SOLUTIONS

As a Major Investment Study (MIS), *conNECTIONs* will investigate a diverse group of transportation strategies already proven worthy of further consideration through a preliminary feasibility study which serves as the first step in the planning process for any significant transportation projects that use federal funds. *conNECTIONs* will study all options in greater detail, assessing their effectiveness in addressing



current and anticipated transportation problems within the study area, as well as considering their likely economic and technical ramifications. Throughout this 18-month process, the study will provide continuous opportunity for public participation and comment prior to recommending strategies upon its completion. Options



under consideration include:

EXPRESS BUSWAY

This mode could entail express buses operating on a busway or separate bus lane along the roadway or segregated right-of-way. These buses might collect passengers on local streets or at park-and-ride facilities at one end of the busway, then operate with few, if any, stops until reaching the end of the line. Express buses might serve the Central Business District (CBD) directly, or feed a rail transit station. This service could:

- serve medium to high passenger volumes
- generally serve long distance commuter trips
- continue on local collector routes to provide rides without transfers
- operate in high-occupancy vehicle (HOV) lanes with other traffic or on exclusive lanes, and
- operate at high speed by avoiding roadway congestion via use of exclusive lanes

cont on page 8, see Solutions

COMPARISON OF NEC STUDIES

Can't tell the players without a scorecard? Join the club that includes elected officials, business representatives and private citizens who attempt to stay informed on the region's transportation planning process. When told of the new *conNECTions* study focusing on transportation in the northeast corridor, many ask the same questions: "Haven't we already studied that?", "Did we act on any of the recommendations from past studies?", "Why do we have to do it all again?"

"It's a real problem," acknowledges Ken Kinney, NECT Consultant. "People have trouble telling these studies apart, especially when they seem to be covering the same ground and dealing with the same issues."

There is good reason for the confusion. Sometimes the studies, though differently focused, overlap either in geographic study area, or issues under study, such as land use- and/or transportation-related concerns. Also, the studies are sometimes conducted simultaneously, so that people feel they're being repeatedly invited to the same public forum. And, without exception," Kinney acknowledged, "all of us who are responsible for these studies feel we could do a better job of communication."

The key to recognizing a study, and to understanding its subsequent impact on our regional transportation system, lay in clearly defining its basics: Who's running it?, Why's it being done?, Where's it focused?, What's it studying? How's it being handled? and When's it finished? Following is a brief description of *conNECTions'* basics, as well as those of half a dozen other studies recently in the news.

conNECTions is a Major Investment Study (MIS) sponsored by your MPO and funded jointly through the federal government (70%), the Indiana Department of Transportation, the City of Indianapolis, Hamilton County, Town of Fishers, City of Carmel and City of Noblesville. Its purpose is to identify strategies that

will help alleviate current and projected traffic congestion and to improve mobility throughout the northeast corridor, the region's most heavily traveled area, which stretches from downtown Indianapolis to Noblesville. To achieve this purpose, it will consider a wide variety of roadway and bus/rail transit options. When completed in November, 1999, *conNECTions* will recommend a combination of transportation strategies that were evaluated by both technical/engineering criteria and an extensive public participation process. These strategies can be subsequently applied to other problem areas throughout the MPA. No previous study has considered transportation options in such detail.

The Central Indiana Transportation and Land Use Vision Plan, which is funded by the Lilly Endowment (100%), is intended to draw a "big picture perspective" of current and future transportation and land use issues, concerns and goals. The Central Indiana Regional Citizens League (CIRCL) is its sponsoring organization. When completed in March, 1999, the Vision Plan will have identified both priorities and policies that reflect the goals of area residents, thanks to its extensive public involvement process. With the advantage of regional acceptance already in place, these policies will be easier to incorporate into the transportation and land use decision-making process.

cont on page 12, see Comparisons



CONNECTING WITH YOU

It's what we always do, only more so." That's how Mike Peoni describes the Public Involvement Phase of *conNECTions*, the study focused on Northeast Corridor transportation. As Principal Planner of your MPO, and the person most often responsible for interacting with the public, Peoni often chairs committees, calls meetings, draws up agendas and publishes reports intended to educate the public and encourage their participation. But, even by his standards, the *conNECTions'* initiative is unique.

"Given the size of the study, the

significance of the problems addressed, and the influence of the resulting recommendations on the region's future transportation efficiency, we're pulling out all the stops," says Peoni. "We've always actively pursued the informed participation of the public in our region's transportation planning process. The quarterly meetings of our Citizens Advisory Committee and six annual issues of *teMPO* are just two examples of the vehicles we use," he explains. "But this time, we're exploring a variety of techniques and venues to capture attention, inform, and solicit feedback."

Included among the efforts aimed at connecting with the public, encouraging

their participation, and gathering their input are:

COMMUNITY MEETINGS

Scheduled throughout the study's 18-month duration, these large public meetings will serve as forums for the exchange of ideas. Hosted by the Metropolitan Planning Organization and Parsons Brinckeroff, the transportation engineering firm conducting the study, these meetings will incorporate progress reports and opportunities for public questions and comments.

cont on page 6, see You

You (from page 5)

GROUP APPEARANCES

MPO staff members involved with *conNECTIONS* and their representatives will meet with groups voicing a special interest in the transportation issues facing the northeast corridor, including employee groups of corporations headquartered within the corridor, church groups, schools, and retailer and neighborhood associations.

FOCUS GROUPS

Groups of 10-12, selected to reflect the demographic and psychographic composition of the region's population, will provide qualitative research input for incorporation into the public involvement phase of the study. In this way, your MPO can be assured of addressing the transportation issues and attitudes upper most on your mind. A total of six groups, reflecting various market segments, is anticipated.

INTERACTIVE VOICE RESPONSE SYSTEM

This technology will allow interested parties to call toll-free 1-877-NEC-LINK, learn more about *conNECTIONS* and the options its studying, and participate in an automated survey. In this way, your MPO can gather data directly from its customers and build its mailing list for subsequent related literature.

WRITTEN COMMUNICATIONS

A variety of publications are planned to complement the *conNECTIONS* study and insure active public participation. Included among these will be one-page progress reports, notifications of upcoming meetings, instructions on ways to further participate in the study, and announcements of new involvement plan elements and developments.

TRAFFIC REPORT SPONSORSHIPS

Your MPO plans to sponsor the traffic reports of several local radio and television stations intermittently

throughout the study period. In this way, we hope to build consumer awareness both of transportation planning as an on-going, interactive process and of *conNECTIONS* as an initiative requiring widespread, informed public participation.



WEB SITE

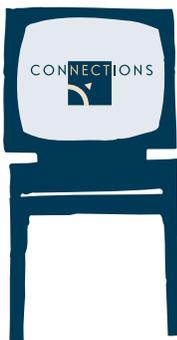
conNECTIONS will have its own Home Page within the city's web site www.indygov.org/connections. Here, interested parties can get an update on the study's progress, investigate the various transportation options under consideration, learn more about how the options are evaluated, request further information and/or fill out and e-mail back a brief survey.

MEDIA CAMPAIGN

Those involved with *conNECTIONS* at the MPO, and its various agents and subcontractors, will actively pursue accurate, continuous coverage of the study through the region's various print and broadcast media outlets, including all radio and television stations, *The Star/News* as well as suburban newspapers, special interest tabloids such as the *Senior Beacon*, and appropriate neighborhood association and employee newsletters. This effort is likely to include personal interviews, press conferences, news releases and telephone contact.

VIDEOS

Three informative video projects are planned that, when complete, will form a *conNECTIONS* presentation approximately 10 minutes in length. The first five minute segment will define the northeast corridor's transportation problems, *conNECTIONS'* scope of study and the public involvement process. The second and third segments, approximately two and a half minutes each in length and produced in the second and third quarters of the study, will address in detail the options under consideration and the study's final recommendations. These videos will be used to educate the media, decision-makers and the general public at public forums, group meetings and special presentations.



TELEPHONE SURVEY

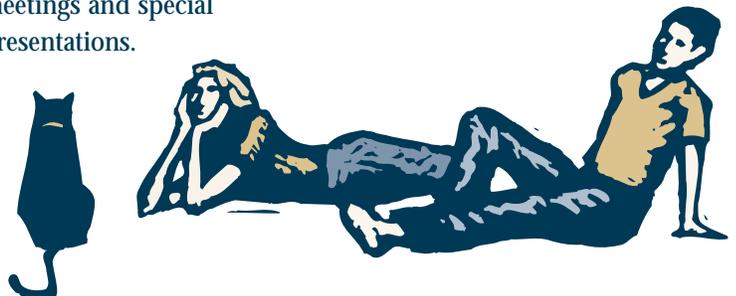
Your MPO will gather reaction to the transportation alternatives being studied through a comprehensive telephone survey. With a minimum of 400 respondents, findings of this survey will accurately reflect the opinion and attitudes of the region's general population to within +-5%.



RADIO/TELEVISION PUBLIC SERVICE ANNOUNCEMENTS

Designed to attract attention and encourage further investigation/participation, these spots will feature the toll-free 1-877-NEC-LINK telephone number as well as the *conNECTIONS* web site address.

"Everything we do will carry the *conNECTIONS* logo and 'linking our region's opportunities' signature line," says Peoni. "That's the best way to heighten top-of-mind awareness and consumer recall among the public, and to give us our best chance at achieving a common goal. If we do it right, we'll know where each other is coming from and agree on where the region should be headed."



CONNECTIONS Q & A

Here are some common questions and straight answers concerning the region's newest transportation study:

Why study the northeast corridor?

It is the most heavily traveled area in the region with the most extreme transportation problems in need of immediate solutions.

If I don't live in the northeast corridor, why should I care?

Because the transportation problems being experienced by people in the northeast corridor are just around the corner for us all. The northeast corridor got them first, because of the unprecedented growth in the corridor. Sooner or later, however, we'll all be dealing with them. Consider the recent sustained growth, and building traffic congestion, of southern Marion County and Johnson County to the south and western Marion County and Hendricks County to the west. These areas will benefit from what we find out through *conNECTIONs*.

What makes conNECTIONs different from other transportation studies?

Both its narrow focus and its broad scope. *conNECTIONs* is concentrating on transportation issues in the northeast corridor unlike the Vision Plan, for example, which is concerned with the entire region. *conNECTIONs* is also studying a broader scope of transportation options, in much greater depth, to address these issues.

What's a mode?

In transportation planning, the word "mode" refers to a method of travel, such as bike, car, bus, rail, even pedestrian travel. *conNECTIONs* will evaluate both rail and bus transit modes, as well as a variety of roadway measures related to car travel.

Who decides which modes get studied?

Based on input from the Technical Working Group and other parties involved in the study, and on technical advice from the consulting team, the Policy Steering Committee will decide

which modes and alternatives to evaluate at the start of the study. It is also possible that other options will be added for preliminary consideration along the way. The Policy Steering Committee will also make final decisions on which alternatives to drop from the study.

Do I have any say over what conNECTIONs recommends?

Yes! Over the course of its 18-month duration, *conNECTIONs* will incorporate the most extensive public participation program ever undertaken by a study in this region. Interested parties will have the opportunity to voice their opinion at large public forums and intimate special interest group presentations, by calling 1-877-NEC-LINK, in focus groups, via telephone surveys, or on the internet at the *conNECTIONs*' web site www.indygov.org/connections. In addition meeting reminders, progress updates and invitations to participate will reach the public on television, radio, message boards and direct mail.

Will conNECTIONs' recommendations be implemented?

It is imperative that the congestion problems and mobility issues of the northeast corridor be addressed as quickly and efficiently as possible. *conNECTIONs*, thanks in part to its public involvement process, will recommend a "locally preferred alternative" that is financially achievable. The intent is to have this recommendation implemented as quickly as possible.

How will conNECTIONs recommendations be paid for?

Until we know what those recommendations are, guessing how they'll be paid for is premature. Chances are, however, that the eventual recommendations will involve a combination of capacity and efficiency increasing roadway measures and some form of transit. Possible funding for these initiatives could come from federal grants, state allocations, or other sources.

What happens if we do nothing?

Given the growth and increased traffic

projections of the northeast corridor, even doing nothing costs something. First, area residents will pay for it with increased travel time and inconvenience. Quality of life issues, ranging from property values to emergency services, will be impacted. Eventually, the area will be viewed as less desirable by residents and lose its appeal for potential employers, developers, builders and commercial/retail business, negatively impacting the area's tax base. These and other implications of doing nothing will be analyzed in the study.

How will conNECTIONs arrive at its recommendations?

The study can be viewed as a detailed cost/benefit analysis that compares various transportation strategies and recommends a preferred strategy that could combine elements of several of the options studied. For example, the recommendation could include both highway and rail transit components. Decisions on alternatives will be made at several stages as study participants work to reduce the number of options under consideration.

The Policy Steering Committee will make final strategy recommendations based on the technical analysis/recommendations of both the Technical Working Group and Citizens Advisory Committee, as well as the results of the study's extensive public involvement process.

How quickly will our transportation system improve because of conNECTIONs?

Some of the study's more modest recommendations could be implemented quickly and many projects are already underway in the area. However, most large-scale highway and transit improvement projects take 10 or more years to implement, so it's likely that conditions will get worse before they get better. The important thing is to identify a workable plan now. The sooner one is developed, the sooner our entire region can benefit from *conNECTIONs*.

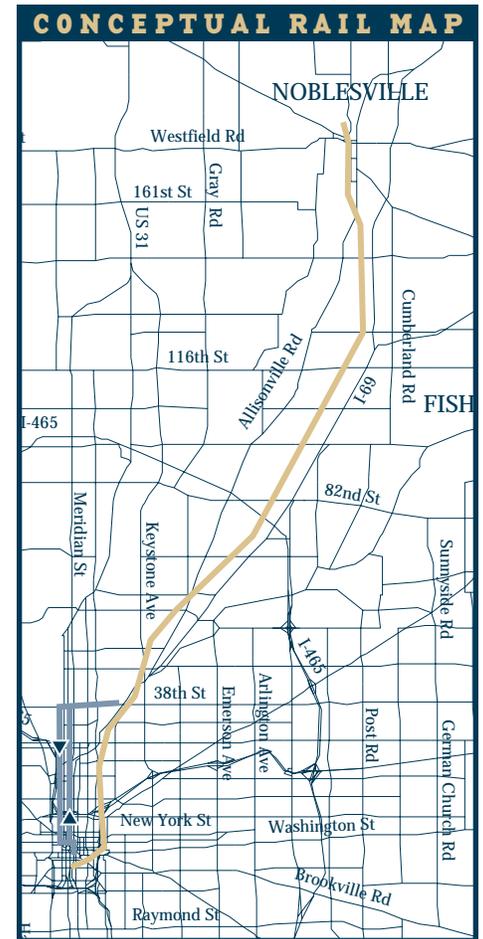
SOLUTIONS *(from page 4)*

In the express busway alternative, an exclusive bus-only facility (one lane in each direction) could be constructed in the Norfolk Southern rail corridor and in the median of SR 37. Express bus service could operate on city streets in downtown Indianapolis, allowing direct or close access to many origins and destinations. Buses could then travel non-stop on the busway to origins and destinations in the Castleton, Fishers and Noblesville areas. Operating in this way, express bus service offers the potential benefits of close, local access at each end of the run combined with the benefits of speed offered by the busway facility in-between.



- be diesel powered, or use electric power from overhead catenary wire
- run medium to long trains (usually four to ten cars), and
- have stations spaced two to six miles apart

This alternative has the potential of using existing right-of-way from Noblesville to Union Station in downtown Indianapolis. Stations could be positioned at various locations along the route. This service would be intended almost entirely for traditional commuting patterns (i.e., suburb to CBD), although supplemental service could be provided for special events, such as the State Fair.



- serve short- to long-distance trips
- use overhead power collection
- operate in mixed traffic with cross traffic, or on exclusive right-of-ways
- have stations spaced one-half to one mile apart
- operate vehicles alone or in trains of up to four cars
- be automated where exclusive right-of-ways are used
- accommodate fare-collection either in stations or on-board vehicles

Light rail lines can operate on separate right-of-ways, such as the Hoosier Heritage Port Authority's rail corridor from Noblesville through Fishers to downtown Indianapolis, or on city streets, like the streetcars that once carried commuters and shoppers throughout the city. It is likely that both types of service, or a hybrid combination, will be evaluated in the study.

cont on page 9, see Solutions

COMMUTER RAIL

Commuter rail service could use standard railroad technology to provide long distance, high speed commuter service. Examples of this mode are in service around Chicago, New York, Boston and other large cities. Commuter rail service usually consists of unpowered passenger vehicles pulled or pushed by a locomotive. This transit mode could:

- serve medium to high passenger volumes
- operate at medium to high speed
- serve long trips
- operate usually on railroad right-of-ways, but may have street crossings

LIGHT RAIL

Light rail transit is a flexible mode that can operate in a variety of settings. Light rail trains can operate in mixed traffic like street cars, using overhead power collection; on an at-grade right-of-way with street and pedestrian crossings; or, on a fully segregated right-of-way. Light rail stations can be simple with low platforms for faster loading/ unloading, since passengers can walk across tracks. Light rail service can:

- serve medium to high passenger volume
- operate at low to high speed (depending on distance between stops and degree of separation of right-of-way)

SOLUTIONS *(from page 8)*

HIGHWAY EXPANSIONS/ IMPROVEMENTS

This alternative could include for consideration a variety of expansions/improvements to key street, road and highway facilities throughout the corridor. These facilities include:

- I-69 north of I-465
- I-70 from downtown to I-465
- I-465 from I-70 north to west of US 31
- SR 37 from Noblesville to downtown
- Allisonville Road
- Keystone Avenue
- US 31 and SR 431 from Carmel to downtown
- Fall Creek Parkway
- North-south streets that comprise the Meridian Corridor

Options for expansion/improvement include adding travel lanes and improving interchange and intersection designs. In addition, express lanes on freeways could be considered, as well as lanes designated exclusively for high-occupancy vehicle (HOV) use which are separate lanes for buses and cars with more than one occupant.



OTHER ROAD-RELATED CONSIDERATIONS

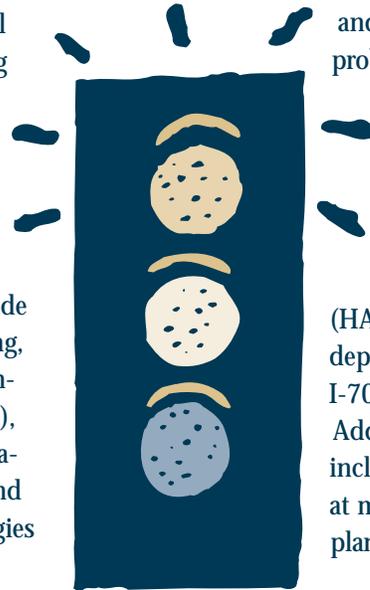
Highway expansion is not the only road-related option being considered to help alleviate traffic congestion and enhance mobility in the northeast corridor. *conNECTIONS* will also evaluate the following strategies, some of which are already in use throughout the region:

Transportation Systems Management (TSM)

TSM measures include fringe parking, ride sharing, bus transfer facilities, high-occupancy vehicles (HOV), traffic signal time optimization or synchronization and other practices and strategies that aid the movement of people.

Travel Demand Management (TDM)

While TSM measures are aimed at improving the efficiency of existing facilities, such as roadway improvements and increased bus service, TDM strategies are focused on reducing or restructuring travel demand and/or use behavior. Where as TSM strategies attempt to meet travel demand by making better use of existing facilities, TDM measures, such as bikeways, park & ride facilities and van pooling services, strive to reduce travel demand.



Intelligent Transportation Systems (ITS)

ITS refers to the application of emerging communications, information and control technologies to surface transportation needs. These technologies include closed-circuit television cameras, electronic message signs and other monitoring devices that relay information to motorists for travel planning purposes.

In the Indianapolis region, the Indiana Department of Transportation (INDOT) has lead the way in deploying intelligent transportation systems, since developing its Early Deployment Plan in July of 1996. Currently, INDOT is introducing an advanced traffic management system (ATMS) throughout the region that includes:

The Hoosier Helper Service Patrol which assists stranded drivers, removes disabled vehicles and minimizes congestion problems. One Hoosier Helper vehicle already operates in the northeast corridor, covering portions of I-465 and I-69. A second will soon be operational.

Highway Advisory Radio (HAR) stations which are deployed at two points along I-70 east of Indianapolis. Additional HAR stations, including mobile units for use at major events/incidents, are planned for future deployment.

Variable Message Signs (VMS) which are stationed

at all four corners of the I-465/I-70 interchange east of Indianapolis. Though currently in portable form, permanent versions of these signs are to be installed in the fall of 1999. Other permanent deployments are planned at the same time for I-70 west of downtown, I-65 south and in the northeast corridor along I-465, I-69 and US 31.

cont on page 11, see Solutions

CONNECTIONS *(from page 1)*

Why focus on the northeast corridor exclusively in this study? “Because that’s where the region’s transportation system has the most immediate need of improvement,” explains Lori Miser, MPO Manager-Transportation Planning. “It’s also where we are most likely to develop broad transportation strategies that will serve as models for other corridors throughout the region.”

Though most of Hamilton County lies outside of the Indianapolis Metropolitan Planning Area, these adjacent areas share a common bond of economic interdependence. “People may live outside of Marion County, but work downtown,” Miser notes. “Or, they may live in Marion County and commute to work in Hamilton County via SR 37/I-69. In either case, the growth in Hamilton County and northeast Marion County and its proximity to Marion County has a big impact on the whole region’s economy and transportation efficiency.”

As previously reported in *teMPO* (Vol. 2, Iss. 1), Hamilton County is the fastest growing area in the state — a distinction it’s held for nearly 30 years. In that time, Hamilton County increased its resident population by nearly 150%. That growth is projected to continue beyond the planning horizon of 2020, when the population will have jumped



another 225 percent since 1990! “Hamilton County, representing the northeastern edge of our study area, and the developed part of Marion

County has a tremendous impact on the transportation efficiency and capacity requirements of the northeast corridor,” explains Miser. “It offers us a microcosm of all the transportation problems we’re likely to face throughout the region in the future. The only difference is, we’ll need to address them here first. And, luckily,” Miser notes, “because our metropolitan statistical area is the 28th most populous in the country, and Hamilton County itself is the 36th fastest growing county nationwide, the US government approved a special appropriation to help us find solutions to these growth-related problems.”

Those solutions, when recommended by the *conNECTIONS* study following its completion in November 1999, are likely to take various forms. Like most large urban areas, the Indianapolis region has traditionally relied on increasing the car-handling capacity of its roadway system to accommodate population growth/migration. But that focus started to change in the mid-70’s as the cost of gasoline sky-rocketed and interest in alternative transportation took root. Though pump prices have fallen from their all-time high, interest in multi-modal transportation systems has flourished, officially becoming a goal of federal transportation planning in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

“We have two good reasons for studying a variety of road and non-road related options with *conNECTIONS*,” says Miser. “First, this study, like every aspect of our transportation planning process, is intended to be open and responsive to the needs and interests of the people who use our transportation system. Those

people have already expressed an interest in alternative modes. That’s why our system now incorporates elements like the Bike/Ped plan and the Monon Trail.

“Secondly, we know that traditional road improvements, such as adding lanes, cannot by themselves accommodate the degree of growth and increased capacity demands we’re expecting,” Miser explains. “By necessity, these improvements will need to work in concert with other mobility options under study to preserve, and in some cases, increase the travel convenience, efficiency and quality of life people seek.”

Reaping these, and other benefits, while addressing growth-related transportation issues is the motivation behind *conNECTIONS* (for further information on study benefits, see Study Promises Region-wide Benefits, page 2). It’s also why the study is described as ‘linking our region’s opportunities’. “Right now, whether you live in Center Township or Geist, or somewhere in between, mobility issues probably keep you from fully utilizing all the amenities our area offers,” says Miser.

“Maybe you don’t go to the Castleton area, because of traffic congestion. Or, maybe you can’t take a job in the growing northeast corridor because you wouldn’t have any way of getting to it. These are the kind of problems *conNECTIONS* will address with the help of the public (see *ConNECTing with You*, page 5),” says Miser. “Until then, just remember that you’ve got *conNECTIONS* and that “NECT” stands for NorthEast Corridor Transportation.”



SOLUTIONS (from page 9)

The Expert Traveler Information System, which will link the Hoosier Helper, HAR and VMS to a traffic management center. This system will provide information for reporting and display and will establish a priority protocol for response by incident type (e.g. reporting lane-blocking incidents before on-shoulder incidents).



Whether bus-, rail-, or road-related, these and all options studied by *conNECTions* will be evaluated using the criteria of performance. How does each address the issues prompting the study of Northeast Corridor Transportation; frequent congestion and chronic lack of mobility? And, which offers the greatest potential for alleviating these problems not only today, but tomorrow as continuing growth in the corridor assures its most traveled status. In all likelihood, *conNECTions* will not find a single answer to these questions but rather respond with a multi-part recommendation that combines the strengths of several options to meet our diverse transportation needs.

CAN WE CONNECT WITH YOUR GROUP?

To succeed in recommending a preferred transportation strategy for enhancing mobility and alleviating congestion in the Northeast Corridor, *conNECTions* needs the informed participation of people throughout the region. So, make the connection! If you'd like to schedule a special presentation on *conNECTions* and its role in our transportation planning process, please contact Mike Peoni at 327-5133.

COMMITMENT (from page 1)

"Nothing could be further from the truth," says Peoni. "In fact, we're enthusiastic about including rail and bus transit among the options being considered by the new northeast corridor transportation study, called *conNECTions*." One reason for the interest is that rail and bus transit have proven effective in improving the efficiency of transportation plans of other mid-sized urban areas, like Portland, OR, while helping to minimize the negative effects of systems too reliant on auto-based travel, such as rush hour congestion and pollution.

"We are intentionally maintaining an objective perspective and an open mind," Peoni says. "The Indianapolis region does not have exactly the same topographic, economic and lifestyle issues impacting the mobility of its residents as do other urban areas. Our city, its population densities, development patterns and

geographic barriers are different. And these, and many other factors influence the feasibility of transit as a component of a transportation plan. Fortunately, we're in the position to exhaustively study the benefits and drawbacks of several transportation options, including bus and rail transit. In so doing, we'll determine the best way to meet the future mobility needs of the region's fastest growing sector while mitigating current transportation problems."

Transportation planners believe that *conNECTions*, when complete, will probably recommend a combination of transportation options, reflecting the regions' population and lifestyle diversity, as well as economic reality and your MPO's goal of expanding the multi-modality of the region's transportation plan. "The progress we've made in this area is amazing" notes Peoni. Not so long ago, our transportation plan, like those of most cities, focused mainly on how many cars the local road system could accommodate. Now we're actively planning in all modes — bus, bike, pedestrian, rail and car. It's a trend we're committed to continuing," he confirms. "But as it relates to transit, or any other option under consideration, it would be a mistake to make up our minds prematurely and refuse to learn all that *conNECTions* has to teach us."

YOUR MPO STAFF

... includes these people who would be happy to address your comments or questions on any aspect of the transportation planning process:

STEVE CUNNINGHAM • SENIOR PLANNER	317/327-5403
MIKE DEARING • SENIOR PLANNER	317/327-5139
KEVIN MAYFIELD • PLANNER	317/327-5135
LORI MISER • MANAGER-TRANSPORTATION PLANNING	317/327-5136
MICHAEL PEONI • PRINCIPAL PLANNER	317/327-5133
SWESON YANG, AICP • CHIEF TRANSPORTATION PLANNER	317/327-5137

COMPARISON *(from page 5)*

The Regional Transit Service Plan will identify strategies to improve transit service in Indianapolis and the surrounding counties. It is funded by the federal government (80%) and by the communities participating in the Regional Transit Alliance (20%) — the planning group previously referred to as the Regional Transit Authority. When complete in the fall of 1999, this plan will recommend both short and long term strategies for enhancing public transportation.

The Northeast Corridor Feasibility Study, a pre-requisite of the federally funded major investment study known as *conNECTions*, was undertaken by your MPO following an INDOT-sponsored study which recommended major roadway improvements to I-69

and SR 37. The purpose of the feasibility study, funded with both federal and local support, was to explore alternative travel modes, including rail transit, since the Port Authority now owns the rail corridor paralleling I-69. Completed in July, 1997, the study concluded that major transit investments could be successful in the corridor. For this reason, transit options are among those now being considered by *conNECTions*.

The Regional Transportation Authority Feasibility Study was recommended by the Metropolitan Association of Greater Indianapolis Communities (MAGIC), prepared by the Indianapolis Metropolitan Planning Organization and funded with both federal and local dollars. Its purpose was to determine the feasibility of an RTA for this area and to recommend how it

should be structured and governed. Completed in January, 1997, this study recommended revisions to enabling legislation and clarified membership and governance issues, among other things. As a direct result, revised legislation was signed into law on May 15, 1997.

The Hoosier Heritage Port Authority first gained attention through a strategic plan prepared for its Board of Trustees by Parsons Brinckerhoff. This plan examined possible uses for the rail corridor that extends 38 miles from Tipton to 10th street in Indianapolis. Following plan completion in September, 1996, the Board recommended the development of light rail transit between Noblesville and Indianapolis. *conNECTions'* evaluation of rail transit could influence the possible implementation of this plan.



Metropolitan Planning Organization

City-County Building
200 East Washington Street
Suite 1841
Indianapolis, IN 46204-3310



tempo

AUTUMN 1998

VOLUME TWO

ISSUE THREE

KEEPING PACE WITH OUR TRANSPORTATION NEEDS

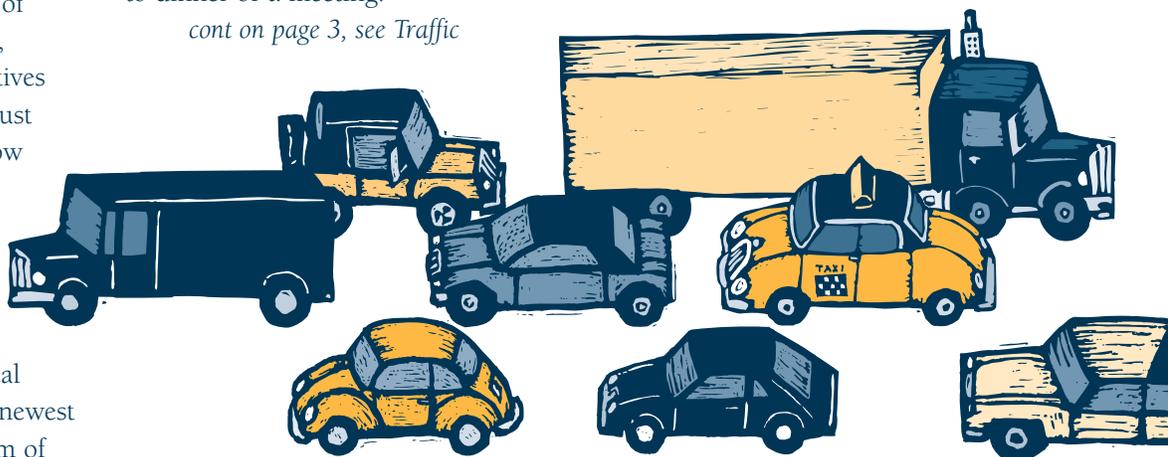
FOURTH QUARTER GROWTH

There's a common theme to this issue's articles as we head into the fourth quarter of 1998 — more, bigger, better! Growth has become the dominant influence on much of the area's transportation planning, prompting innovations and initiatives throughout the region. Find out just how much more traffic there is now in Marion County than there was 20 years ago. Learn what study recommendations are intended to accommodate our growing freight handling industry and its increasing influence on the local economy. And see how the area's newest bridge is handling the old problem of heavy traffic. You'll find it all, along with other transportation topics of growing interest, in this issue of *teMPO!*

MARION COUNTY TRAFFIC COUNTS

If you're like most people, you find yourself in a traffic jam every once in a while. If you regularly drive around the urban area during peak travel periods, either 7 am to 9 am or 4 pm to 6 pm, chances are you're in jams more often than someone who doesn't. Like so many others commuting to or from work, you sit in your car wondering if you're going to make the next light and arrive on time, or walk in late to dinner or a meeting.

cont on page 3, see Traffic



FREIGHT STUDY RECOMMENDATIONS

In 1993, it moved 82 million tons of goods. Over the next 20 or so years, the amount of material it moves will increase by 41% to 115,620,000 tons annually. And, its importance to our local economy, which now ranks it among the top seven independent industries for dollars and jobs generated, can only increase.



"It" is our region's intermodal freight system — the network of trucking routes, rail lines and air shipping services that move goods in, around and through the Indianapolis planning area — goods valued at \$69 billion dollars per year, or more than twice the region's personal income of \$31 billion (1993 figures, the most recent available).

cont on page 8, see Freight

IN THIS ISSUE

- MARION COUNTY TRAFFIC COUNTS PAGE 1
- FREIGHT STUDY RECOMMENDATIONS PAGE 1
- COOPERATION BRIDGES WHITE RIVER..... PAGE 2
- MPA MAP..... PAGE 3
- FREIGHT PRIORITY ZONES ... PAGE 4
- USING YOUR CONNECTIONS... PAGE 5
- IRONS IN THE FIRE PAGE 7

ACRO-NYMBLE

Here's a list of the agency and program acronyms mentioned in this issue. Refer to it to keep your understanding letter-perfect.

ATMS - advanced traffic management system

CAC - Citizens Advisory Committee

CCTV - closed circuit television cameras

DCAM - Indianapolis Department of Capital Asset Management

DMD - Department of Metropolitan Development

HAR - highway advisory radio

IIA - Indianapolis International Airport

INDOT - Indiana Department of Transportation

ITS - intelligent transportation systems

IRTC - Indianapolis Regional Transportation Council

IRTIP - Indianapolis Regional Transportation Improvement Program

IRTP - Indianapolis Regional Transportation Plan

LOS - level of service

MIS - major investment study

MPA - Metropolitan Planning Area

MPO - Metropolitan Planning Organization

NHS - National Highway System

PFC - passenger facilitation charge

STP - Surface Transportation Program

TEA-21 - Transportation Equity Act for the 21st Century

VMT - vehicle miles of travel

COOPERATION BRIDGES THE WHITE RIVER

When is a bridge more than a bridge? When it represents “an inspirational accomplishment” to Steve Dillinger, President of the Board of Commissioners, Hamilton County; “a real achievement” to Walt Kelly, Fishers Town Board President; and, “economic development and an improved quality-of-life” to Mayor Jim Brainard of Carmel.

“This is the most remarkable display of intergovernmental cooperation in the ten county area that I’ve witnessed in the last ten years.” That’s how Indianapolis Mayor Steven Goldsmith described the recently completed 96th Street bridge over the White River. On its dedication day, August 11, 1998, Congressman Dan Burton called the bridge “A perfect example of governments working together for the common good” and went on to call it “vitaly important to the economic development of Hamilton County, Indianapolis and the whole of central Indiana.”

By all accounts, the public agrees. The new bridge, which reduces the travel distance from Keystone to Allisonville by approximately 1.2 miles and saves about 2 minutes of travel time, had 24,500 vehicles cross it in its first 24 hours of use.

Here are some other fun facts about the area’s newest bridge:

- The project broke ground on December 4, 1995.
- 96th street from Lakeshore Drive to I-69 is approximately 4.4 miles long; from Keystone to Allisonville, about 2.4 miles.
- The east bridge approach over White River required 22’ of fill over an area that incorporated some wetlands. Wetland mitigation was required for the project.



- The length of the bridge is 565 feet across the White River and approximately 24 feet above the flow line.
- The entire project is 4-5 lanes with additional lanes at the major intersections of Gray Road, Allisonville Road and Hague Road/I-69
- The project has been in the planning stages for at least 20 years, held up by funding issues, among other things.
- Project work still continues with seeding, sodding and the construction of a multi-use path.
- By the year 2020, our current planning horizon, projected bridge use will top 57,000 vehicles a day!

TRAFFIC *(from page 1)*

But haven't you ever wondered if traffic is really getting worse? Or, are you just driving when everyone else is, along the roads everyone, like you, prefers? Is it possible that there really aren't more total cars on the street than there used to be, that the level of service (LOS) we enjoy on most roads is as good as ever, and that, despite population growth throughout the area, the actual number of vehicle miles of travel (VMT) within Marion County has remained relatively constant over the last two decades?

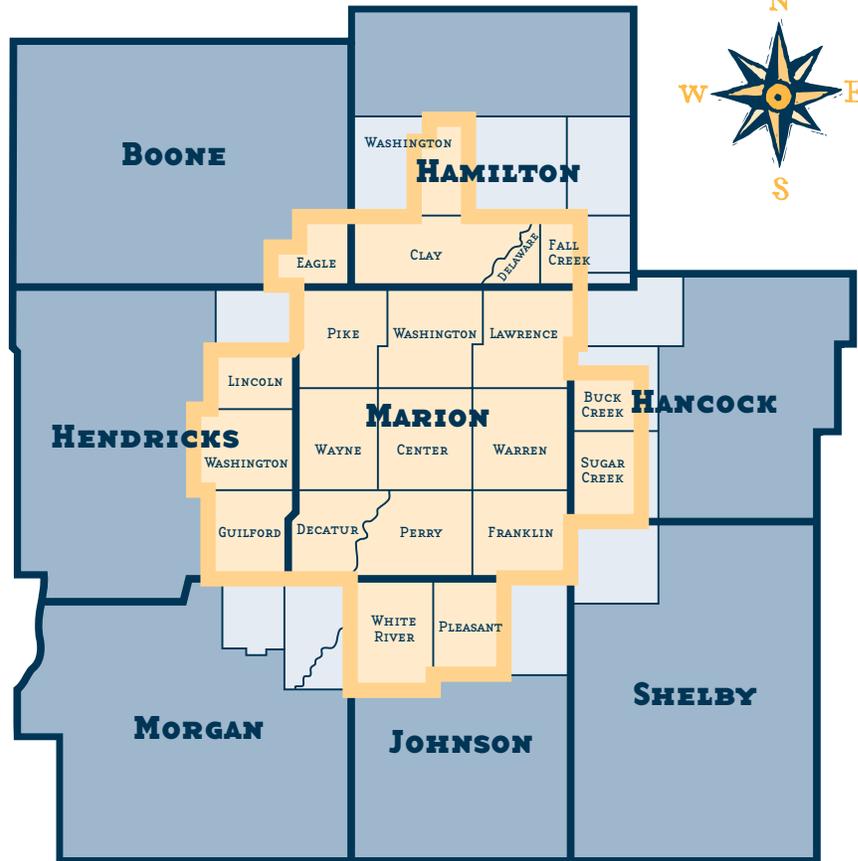
According to a recent analysis of the arterial street traffic volumes from the Department of Capital Asset Management (DCAM) and the freeway traffic volumes from the Indiana Department of Transportation, the answer to all of these questions is "No".

Traffic is growing throughout Marion County on both arterial streets and our interstate freeway system. So, take heart that it isn't just your imagination and, the next time you're stuck in traffic, consider these facts:

ARTERIAL STREETS

- Marion County has 1,079 miles of arterial streets or thoroughfares.
- Between 1976 and 1996, Marion County arterial street traffic grew from 12,752,000 VMT to 16,724,000 VMT.
- Arterial street traffic has increased 31% in 20 years, or an average increase of 1.55% each year.
- The largest increase in arterial street traffic is in the city's northeast quadrant, which is also northeastern Marion County, currently one of the city's most densely populated residential areas.
- Arterial street traffic growth has also increased dramatically in western, southern and eastern suburban areas, generally outside of the I-465 loop.

INDIANAPOLIS METROPOLITAN PLANNING AREA



FREEWAYS

- There are 117 miles of interstate freeways within Marion County.
- I-465 was completed in 1970; the Inner Loop of I-65/I-70 in October of 1976.
- In 1980/81, only 29% of Marion County's traffic used freeways.
- In 1996, 58% of Marion County's traffic used freeways.
- Between 1981 and 1996, Marion County freeway traffic grew from 5,261,000 VMT to 12,058,000 VMT.
- In a decade and a half, Marion County freeway traffic increased a whopping 63%, or an average increase of 4.2% per year.
- On a six point rating scale, the overall level of service on Marion County freeways has dropped two places (from LOS B to LOS D) from 1981 to 1996, reflecting a general increase in traffic congestion and related delays.
- Marion County freeway traffic has grown the most along I-70 East and I-465, East and West legs.

FREIGHT PRIORITY ZONES

To keep pace with, and maximize the benefit of, the projected growth of our region's freight handling industry, the recently completed Intermodal Freight System Plan study identified seven priority development zones as focal points for Indianapolis freight planning and investment programs (see map, page 9). These zones were defined on the basis of concentration of freight-generating activities, truck volumes and projected employment growth. These zones are identified below along with several high-priority project recommendations for each:

ZONE 1: NORTHWEST OFFICE AND INDUSTRIAL PARK AREA

Michigan Road (U.S. 421) from 86th to 121st - widening segments both north and south of I-465 from four- to six-lane divided. As the major north-south freight route in this development zone, Michigan Road serves the large Park 100 distribution area. Construction is planned in phases to begin 1998.

71st Street from Waldemar Road to Michigan Road - widening from two- to four-lanes divided. As one of the major east-west routes serving the Park 100 area, segments of 71st Street now regularly experience unacceptable congestion and delays. Construction is listed in the Official Thoroughfare Plan for Marion County to occur between 2000 to 2006.

ZONE 2: NORTH SIDE COMMERCIAL AND OFFICE PARK AREA

96th Street from Brandt Road to Lantern Road - widening from two- to four-lanes divided. Already under construction, this improvement will aid in the east-west movement of traffic within the development zone, as does the recently completed 96th Street corridor across the White River.

82nd Street from Knue Road to I-69 - widening from four- to six-lane divided to accommodate 82nd Street's heavy concentration of commercial and retail development. Construction is scheduled to occur between 2000 and 2006.

Meridian Street (U.S. 31) from I-465 to 196th Street - major improvements, as recommended to improve this 11-mile corridor in a recent INDOT Major Investment Study (MIS). Recommended improvements include upgrading U.S. 31 to urban freeway standards from 103rd Street to 196th Street, and adding an additional travel lane in each direction to S.R. 431. Improvements could also extend farther south to include a freeway-to-freeway interchange between U.S. 31 and I-465.

I-69 from I-465 to 126th Street - widening to improve unacceptable service levels. As part of the current *conNECTIONS* study initiative of the Northeast Corridor, improvements here have not yet been programmed, awaiting final recommendations.

I-465 from U.S. 31 to I-69 - widening from six- to eight-lane divided. Currently traffic volumes result in an unacceptable level of service, especially on the segment of I-465 between S.R. 37 and 56th Street. Improvement is not expected before 2020, but could be affected by recommendations of the major investment study currently underway in the northeast corridor.

ZONE 3: EAST SIDE COMMERCIAL AND INDUSTRIAL AREA

Washington Street (U.S. 40) from I-465 to Mitthoeffer - widening from the current width of 44 to 58 feet to be six-lane divided. As a major east-west freight route with substantial industrial development, portions of Washington Street regularly experience unacceptable service levels. Improvement is scheduled in phases to begin 2001.

Shadeland Avenue from 42nd Street to Pendleton Pike - widening from two- to four-lane divided.

As a major north-south freight route with heavy commercial development, this segment of Shadeland regularly experiences unacceptable service levels. Improvement is scheduled to occur between 2007 and 2015.

I-465 from I-69 to I-70 - widening from six- to eight-lane divided. Unacceptable service levels prompt this improvement recommendation, which is not expected to occur before 2020, unless affected by recommendations of the major investment study currently underway in the northeast corridor.

ZONE 4: 38TH STREET CORRIDOR COMMERCIAL AND INSTITUTIONAL AREA

West 38th Street From Industrial Boulevard To Cold Springs Road - widening from four- to six-lane divided, to relieve unacceptable service levels. Currently scheduled in the IRTP between 2007 and 2015, this improvement was designated as the report's top priority. Additional improvements were also recommended at High School Road, Moller Road and Fall Creek.

ZONE 5: AIRPORT DEVELOPMENT AREA

Six Points Road/I-70 interchange with N/S corridor improvements - various road improvements to maintain and improve services levels to the area surrounding the airport which has been, and continues to be, the focus of intense development pressures from trucking, air cargo, warehousing and distribution interests. Specifically, an interagency task force has proposed a new I-70 interchange at Six Points Road, the improvement of Six Points Road from the new interchange north to I-74 including the north/south corridor, and the extension of Six Points Road on new alignment from the interchange southeast to S.R. 67.

cont on page 12, see Zones



USING YOUR CONNECTIONS

As previously reported in *teMPO* (Special Edition, May/June 1998), the Northeast corridor of the Indianapolis Planning Area, stretching from just south of downtown northeast to Noblesville, is now the focus of a major investment study intended to recommend possible solutions for its chronic transportation problems. As the region's most traveled corridor, our transportation system suffers its most acute problems in the northeast, including daily peak hour congestion and a severe lack of mobility characterized, in part, by the complete lack of reliable, convenient transit service north of the Marion County line. Over the course of 18-months, this study, called *conNECTIONs*, is evaluating a variety of transportation options to solve these problems using a process that encourages and accommodates public participation.

"We've always encouraged the informed participation of the public, but *conNECTIONs* is unique," notes Lori Miser, MPO Manager -Transportation

Planning. "We've never used some of the avenues that are now reaching out to educate the public and to gather their ideas and input, including internet and telephone surveys, an interactive voice response system (IVR) and various other primary research techniques as well as more traditional print, broadcast and live presentations."

Included among the primary research techniques involved in the *conNECTIONs* initiative are three sets of focus groups, which will be conducted throughout the study process to investigate public reaction to various issues and options. The first set, held in late September, investigated the public's unaided responses to the subject of northeast corridor traffic, its impact on their daily lives and how individuals might envision an improved corridor. In addition, group participants (10-12 per group) were presented with a

list of possible solutions already under consideration as well as general evaluation criteria that is being used to gauge the appropriateness of all options.

In addition, the MPO and its communications/research consultants have already hosted several discussion groups with major employers throughout the corridor. Employee groups from the Omni Hotel - Castleton and Community Hospital-North were treated to a brief mealtime presentation on *conNECTIONs* followed by a facilitated discussion of the transit and congestion challenges faced by



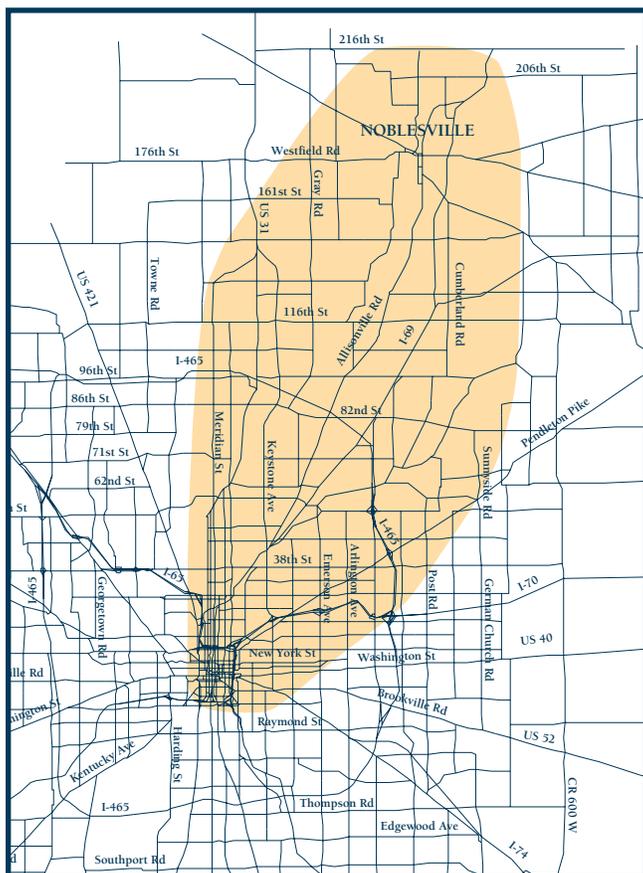
the people who deal with them everyday. Participants were also encouraged to think "outside of the box" to suggest possible solutions to mitigate these problems, such as flex-time and car-pooling.

Currently, your MPO is working with the I.U. Opinion Lab to design a broad telephone survey to serve as a benchmark of both public awareness of transportation issues and a gauge of reactions to proposed solutions and study procedures. This survey, unlike the focus groups which provide purely anecdotal input, will yield project-able results as more than 400 area residents, called at random, participate in the 10-15 minute survey. In this way, the survey responses accurately reflect the prevailing perceptions and perspectives of our region's population.

"This is an exciting process for us," says Mike Peoni, MPO Principal Planner. "I think we sometimes tend to concentrate on system problems, rather than on the impact they have on peoples' lives. These research techniques allow us to hear directly how users perceive a problem, accommodate it in their lives, and would like to see it solved. We've done this all along, through the Citizens Advisory Committee (CAC), for instance," Peoni notes, "but *conNECTIONs* is a far more comprehensive and systematic approach."

Since 1994 the CAC, a volunteer organization, has advised the Indianapolis Regional Transportation Council (IRTC) on a variety of issues of public interest.

cont on page 6, see conNECTIONs



conNECTIONS (from page 5)

For the duration of the *conNECTIONS* study, the CAC has volunteered to meet on a monthly, rather than quarterly, basis to participate more fully and responsively in this study (see sidebar, this page). The next meeting of the CAC is scheduled for Tuesday, October 27 at 6:30 pm in Room 107 of the City-County Building. As always, the public is welcome.

If you are interested in participating in our regional transportation planning process, but are unable to attend CAC meetings, you can still play a part in *conNECTIONS* through a variety of phone-based links, such as the toll-free *conNECTIONS* Hot Line at **1-877-NEC-LINK**, where it is possible to participate in a brief survey, gather general background, or hear specifics about potential solutions. Or, you can visit the study web site at **www.indygov.org/connections** to e-mail back a survey, review possible route maps, or check on recent developments. Both the toll-free hot-line and the web site offer the opportunity to leave open-ended comments and questions at your convenience, 24 hours a day.

“But its not all technology,” Miser and Peoni agree. “We’re making every effort to meet with groups face-to-face and to personally discuss the issues *conNECTIONS* involves,” Miser notes. Since May, when the study began, members of the MPO and its engineering and marketing consultants have participated in almost 30 special presentations for groups ranging from City-County Council members to the Castleton Business Alliance (See box for partial listing).

“That’s part of what *conNECTIONS* is all about,” Peoni agrees. “Talking with the people who travel the corridor everyday and hearing what they’re most concerned with and interested in.”

If you’d like to schedule a special presentation on *conNECTIONS* for your group, call Mike Peoni at **327-5133**.

CAC GETS INSIDE SCOOP

In many transportation studies, the public is given information when the project is complete. It may be in rough draft form but, essentially, the work has been done. Not so, with *conNECTIONS*.

Unique in many ways, *conNECTIONS* will share information on a monthly basis at the CAC meetings. This information will be in the form of working documents used internally by those conducting the study, such as status reports, minutes from meetings and exploratory documents. In this way, the CAC will be seeing the information as it’s unfolding and will be encouraged to contribute their ideas and suggestions as the work is being developed.

“Citizen information and citizen involvement are not the same things, “ said John Myers of the transportation engineering firm of Parson Brinckerhoff, study consultants. “Based on the comments we heard at our last CAC meeting, and that group’s willingness to meet on a more frequent basis, we see an opportunity to make genuine public involvement a reality.”

Here is just a partial listing of the groups that used their connections to learn more about the study through a special presentation from your MPO.

CITIZENS ADVISORY COMMITTEE MEETINGS

May 19
August 11
September 29
October 27 (next scheduled meeting)

GROUP PRESENTATIONS

May 11 - Greater Allisonville Community Council
June 17 - Castleton Business Alliance
August 24 - Harrison Green Homeowner’s Association (in Fishers)
August 25 - Chatham Arch Neighborhood Association
September 14 - Old Northside, Inc.
September - 19 - Marion County Alliance of Neighborhood Associations
September 24 - League of Women Voters
September 24 - Hamilton County Government Affairs Committee
October 1 - Nora Northside Community Council
October 5 - Herron-Morton Place Neighborhood Association
October 15 - Keystone Business and Community Association

October 19 - River Glen Home Owners Association (Fishers)
October 20 - Community Alliance of the Far Eastside
October 20 - Eastwood Neighborhood Association
November 16 - Sargent Road Association
January 6 - East Avalon Hills Association, Inc.
May 6 - Near Eastside Community Organization

EMPLOYEE ROUND TABLE DISCUSSIONS

September 29 - Omni Hotel
September 30 - Community Hospital North

FOCUS GROUPS

September 30 - Two Groups
February ‘99
September ‘99

TECHNICAL WORKING GROUP

July 8
September 9
September 21 - 22
October 21

POLICY STEERING COMMITTEE

July 22
November 19

FREIGHT *(from page 1)*

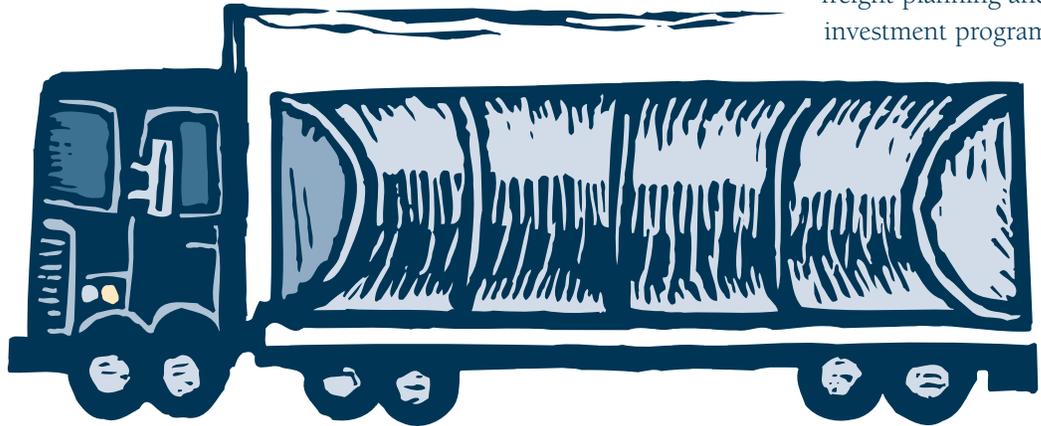
Despite these impressive totals, or maybe because of them, the condition and comprehensiveness of our freight system is the focus of constant concern and study. “It is one of our region’s major economic assets and the importance of its benefits will only grow in the future,” says Sweson Yang, AICP, Chief Transportation Planner for your MPO. “Most often, we discuss moving people when we address transportation-related issues. But the importance of efficiently and economically moving the nation’s goods through our area cannot be underestimated. As the crossroads of America, Indianapolis is in a unique position to both serve and benefit from the anticipated growth of American commerce.”

As part of an on-going effort to insure appropriate management of the area’s freight handling system, Yang oversaw a study conducted by Cambridge Systematics, Inc. of Cambridge, MA, for the Department of Metropolitan Development (DMD). The intention of the study was, in part, to recommend system improvements that will make Indianapolis businesses more competitive in global markets and suggest a priority list of improvement projects for the Indianapolis Regional Transportation Improvement Plan (IRTIP) and Regional Transportation Plan (RTP).

“The goal of planning for our intermodal freight system is three-fold,” notes Yang. “First, we want to maintain strong competitive transportation service in all modes to keep Indianapolis a desirable location for a wide range of businesses. Secondly, we need to improve modal transportation through infrastructure and operating improvements. And, finally, we must improve intermodal linkages in our area, such as expanding the truck/rail

service at the Avon rail yard and truck access to Indianapolis International Airport.”

Findings from the recently completed Intermodal Freight System Plan Study were detailed in the summer 1998 issue of *teMPO* (Volume Two, Issue Two). In this issue, we present recommendations based on those findings and the study’s



three interrelated strategies adopted as the plan’s course of action:

- implement targeted initiatives, including designating key development zones and priority projects and implementing Intelligent Transportation Systems (ITS) technologies on the truck freight network,
- enhance resources for freight projects, including giving freight projects additional weighting in the IRTIP and RTP, establishing a pool of freight-related infrastructure funding sources, and more closely linking the benefits of economic development and freight transportation, and
- strengthen freight program management, including enhancing freight transportation planning, modeling and performance monitoring capabilities of the DMD, and establishing a private sector freight users group to provide input from major shippers, carriers and freight forwarders.

RECOMMENDED ACTIONS

Development Priority Zones

Priority development zones were identified and defined on the basis of concentration of freight-generating activities, truck volumes and projected employment growth. These seven zones, shown on page 9, are focal points for Indianapolis freight planning and investment programs.

For more detail on this recommendation, see Freight Priority Zones, page 4.

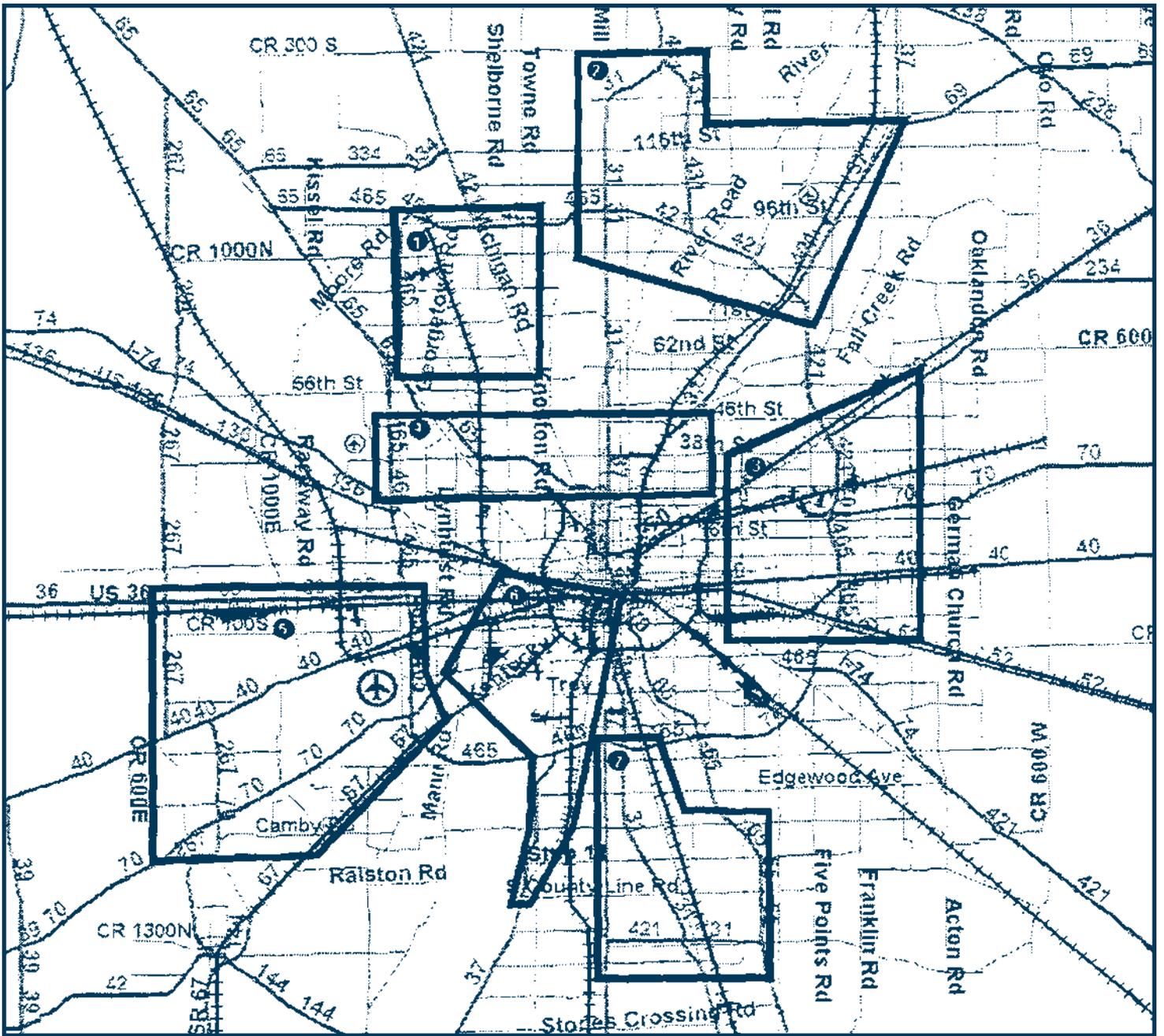
Airport Intermodal Transportation Development Study

Coordinated, overall development programming for the area around the Indianapolis International Airport should be undertaken to assure that

- the potential for the area’s long-term growth is realized
- the key development area does not become “land locked”, and its arteries clogged with traffic as is common around many other airports.

Why the focus on the airport? Because the area employs more than 10,000 and is one of the Indianapolis MPA’s largest employment centers. Between 1990 and 1997, more than 5,000 jobs were created and more than \$1.4 billion was invested in new business. Over the next 20 years, it is estimated that nearly \$2 billion in public and private investments will be made at the airport and its surrounding vicinity, generating approximately 16,000 more jobs.

cont on page 9, see Freight



FREIGHT *(from page 8)*

The airport vicinity is unique among intermodal transportation development areas. In it is located one of the largest rail classification yards between St. Louis/Chicago and the east coast, one of the largest package freight airport hubs in the U. S. and the junction of several major highways, including I-70, I-465 and SR 67. These facilities, together with major freight transportation providers including Federal Express, Conrail (soon to be CSX railroad) and multiple large

trucking and warehouse distribution activities make this area a key location for logistics-dependent businesses wanting to reach regional, national and international markets.

It is further recommended that an Airport Development Area Committee be established to coordinate and guide private and public development in the area.

Freight Intelligent Transportation Systems Projects

Intelligent Transportation Systems (ITS), defined as the application of advanced

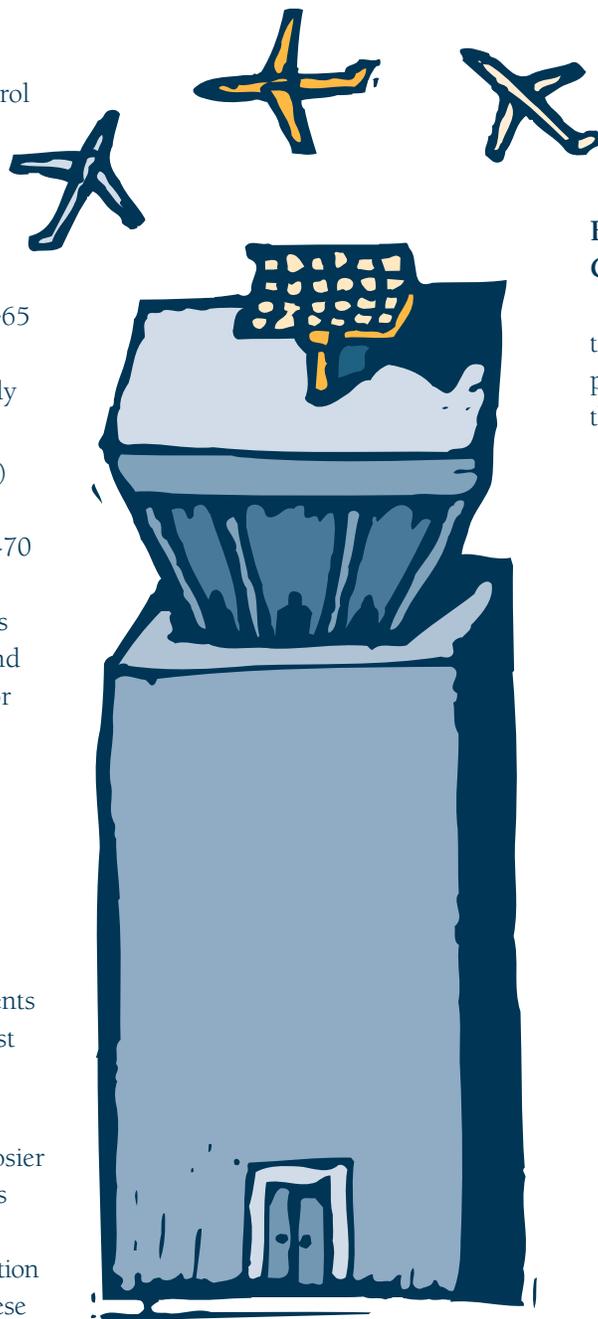
and emerging communications, information and control technologies to surface transportation needs, offers a potential solution to many of the freight transportation problems identified in our area.

The Indiana Department of Transportation (INDOT) is leading the way in ITS deployment around Indianapolis. In July of 1996, INDOT developed an Early Deployment Plan and is currently introducing an advanced traffic management system (ATMS) which includes:

cont on page 10, see Freight

FREIGHT *(from page 9)*

- The Hoosier Helper Service Patrol which is intended to prevent unnecessary congestion by assisting stranded motorists and quickly removing disabled vehicles. The patrol currently covers portions of I-465 and I-69 in the city's northeast quadrant, the area's most heavily traveled corridor.
- Highway Advisory Radio (HAR) stations, which are currently deployed at two points along I-70 east. Additional HAR stations, including portable deployments for use during special events and major incidents, are planned for the future.
- Variable Message Signs (VMS), which are deployed at all four corners of the I-465/I-70 interchange east of the city, provide traffic condition information to motorists for travel-planning purposes. Additional deployments on I-465, I-69, US 31, I-70 west and I-65 south are planned.
- An Expert Traveler Information System which will link the Hoosier Helper, HAR and VMS systems to a traffic management center. This system will provide information for response and display on these venues and establish a priority for response, such as reporting lane-blocking accidents before those on shoulders.



- Pursuing intermodal and other funding sources, to form a portfolio of funding sources upon which the DMD can draw for freight and intermodal projects.

Enhanced Freight Planning Capabilities

The following initiatives are intended to build on the existing freight program planning and management capabilities of the DMD:

- Develop a regional truck-trip table and forecasting model, which would aid the DMD in incorporating truck modeling into the Indianapolis Travel Demand Model. In addition, the Indianapolis region would benefit when developing this model from INDOT's new Indiana Statewide Travel Model, the quick-response freight modeling techniques being developed by the Federal Highway Administration, and the freight data and forecasts developed by Dr. William Black of Indiana University.
- Implement performance measures to insure the success of the planning effort.

cont on page 11, see Freight

Enhanced Resources for Freight Planning

Freight Planning resources should be enhanced as initiatives for improving truck, rail, air and intermodal initiatives are undertaken. Included among these are:

- Developing a Freight Project Selection Criteria, which recognizes the more direct economic impact freight traffic has on the region's economy than does passenger traffic.

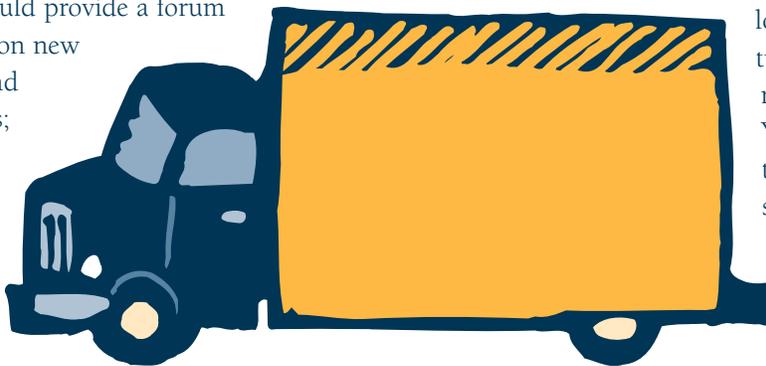
PRIMARY PERFORMANCE MEASURES

ENTITY SERVED

mean volume of capacity for road segments	trucking, passenger, MPO
hours of delay	trucking, shipping, passenger, MPO
# of accidents per movement	trucking, rail, passenger, MPO
time for alt. routing as a % of trip time	trucking, shipping
mean value of freight per movement	trucking, rail, air, shipping
pollution per ton-mile	MPO
fixed cost per ton	trucking, rail, air

FREIGHT *(from page 10)*

- Expand technical capability of the DMD, as part of an on-going effort to continually upgrade the technical capabilities of its planning staff in the areas of freight logistics, truck modeling and ITS deployment.
- Coordinate activities among public agencies involved in freight transportation. Forming a Freight Advisory Committee would provide a forum to enhance information on new service, infrastructure and regulatory developments; report on on-going work; and, elevate the attention given to freight transportation in the planning process.
- Establish a private sector freight users group as part of the Freight Advisory Committee to gather input from major shippers, carriers and freight forwarders.



- Update the Intermodal Freight System Plan on a regular basis to keep pace with the changes in the local economy and freight system as well as national trends. It is recommended that the DMD review the freight plan on an annual basis as part of the IRTIP development process, with more formal updates occurring every three to five years.

“The recommendations of this study are the result of thoroughly assessing the current economy, logistics, service flow, infrastructure and public policy of our regional freight system,” says Yang. “As such, they allow us to take a systematic approach to suggesting changes that will enhance Indianapolis’ future global competitiveness, overall economy and quality-of-life.” For more information on the Indianapolis Intermodal Freight System Plan, call Sweson Yang at 327-5237.

IRONS *(from page 7)*

HNTB Corp., project engineering consultants, will meet with the Study Review Committee in order to formulate a detailed understanding of all issues and to scope a finalized study work program and schedule. Study Area tours will also be part of Task 1.

Task 2 is focused on gathering the base data needed to generate different alternatives for the design of the trail. The responsibility of HNTB, the gathering of this data will entail collecting information on community development patterns, capital improvement programs, and

existing infrastructure. Task 2 also incorporates the initiation and implementation of a public involvement program.

Task 3 is centered on developing alternative plans using the data collected from base research and public workshops, and may include specific recommendations from the Study Review Committee. A broad examination of environmental, design, community, funding, implementation permitting and infrastructure issues will be examined in generating the alternatives.

Task 4 involves the Public Participation Program. Once the alternatives from Task 3 have been reviewed by the Study Review Committee, a public workshop

will be conducted in each special study area to gather public input, suggestions and reactions.

Task 5 has as its goal the selection of a preferred plan alternative for each study area. The selection will be made using input from both the Study Review Committee and the public workshops described in Task 4.

Task 6 will examine the schematic design issues involved with each preferred alternative selection. Typical sections and alignment profiles will be illustrated and right-of-way and environmental impact information considered. From this examination, preliminary order-of-magnitude cost estimates will be developed, including estimated design, construction, operation and maintenance figures. In addition, Task 6 will include researching property and right-of-way issues, environmental concerns and site clearing and demolition area, plus the presentation of final plan amendments to the IRTC for their approval.

YOUR MPO STAFF

... includes these people who would be happy to address your comments or questions on any aspect of the transportation planning process:

STEVE CUNNINGHAM • SENIOR PLANNER	317/327-5403
MIKE DEARING • SENIOR PLANNER	317/327-5139
KEVIN MAYFIELD • PLANNER	317/327-5135
LORI MISER • MANAGER-TRANSPORTATION PLANNING	317/327-5136
MICHAEL PEONI • PRINCIPAL PLANNER	317/327-5133
SWESON YANG, AICP • CHIEF TRANSPORTATION PLANNER	317/327-5137

ZONES *(from page 4)*

The proposed project also recommends the realignment and widening of I-70 from six- to eight-lanes, from Six Points Road to the I-465

exchange, in a manner to allow airplane taxi service to the airport property south of I-70. Considered essential to all area freight movement, this recommended improvement is especially critical to the expansion of the Federal Express facility.

Rockville Road (U.S. 36) from N/S corridor to I-465 - widening from four- to six-lanes divided, to reduce heavy congestion on the Avon Yard's primary access route. Construction is scheduled to occur between 2000 and 2006.



I-465 from Crawfordsville to Washington Street - widening from six- to eight-lanes. This improvement is not expected to occur before 2020.

ZONE 6: SOUTH SIDE INDUSTRIAL AND FREIGHT FACILITY AREA

Harding Street

(S.R. 37) - improvements and widening from Edgewood Avenue on the south to

Raymond Street on the north.

Because this route serves a high percentage of commuters and truck traffic alike,

it suffers unacceptable service levels, especially the segment from Troy Avenue to Raymond Street. Construction is currently scheduled to occur in phases beginning with the Hanna Avenue to White River segment in 2000.

teMPO

is published quarterly by your Metropolitan Planning Organization, part of the Department of Metropolitan Development. If you know of anyone who would like to receive *teMPO*, or if you have any questions concerning its publication, please call:

Mike Peoni at 327-5133

Department of Metropolitan Development
Metropolitan Planning Organization
City-County Building
200 East Washington Street
Suite 1841

Indianapolis, IN 46204-3310

teMPO was written and prepared for publication by Whitman Communications, Inc.

Holt Road from Morris to Airport Expressway - widen intersections to accommodate freight movement. DCAM is the project sponsor.

ZONE 7: FAR SOUTH SIDE COMMERCIAL AREA

No improvement projects have yet been identified for this Priority Development Zone.



Metropolitan Planning Organization

City-County Building

200 East Washington Street

Suite 1841

Indianapolis, IN 46204-3310

WINTER 1998

VOLUME TWO

ISSUE FOUR

MOVING AHEAD, LOOKING BACK

To really know where you are, and where you're headed, it helps to know where you've been. So, before we move too deeply into the new year, and to what lay just down the road, this issue of *teMPO* looks back at a few of the topics covered earlier in our pages, reporting newly updated information and subsequent developments. Included among these are facts on the conversion of old rail lines into new bike trails nationwide, the newest findings of a local study on traffic congestion, the anticipated benefits of the city's 5-year plan to synchronize downtown traffic lights, a new land use & transportation study currently in the works, a review of transportation recommendations presented at the *conNECTIONS* public forum and much more! To know where we've been, and where we're going, keep your eyes on the road *and right here*. Because this is *teMPO's* year-end wrap-up!

INDY ON CONGESTION FAST TRACK

It should come as no surprise to daily commuters that area traffic is growing. As reported in the Autumn 1998 issue of *teMPO*, the sheer number of vehicles traveling our region's most popular routes has jumped dramatically. Arterial traffic has increased by almost one-third between 1976 and 1996; freeway traffic increased almost twice that much in only fifteen years! And, despite the best efforts of local transportation planners and traffic engineers, with this increase in vehicle miles traveled (VMT) has come the inevitable reduction in level of service (LOS) along these routes. The result: frequent congestion, delays and frustration.



But, how does our region compare nationally?
cont on page 3, see Fast Track

LAND USE, TRANSPORTATION AND 96TH STREET

To most people, land use and traffic appears to be a chicken and egg thing, but not to the MPO," MPO Principal Planner Mike Peoni was quoted as saying in the *teMPO* Special Edition on Land Use in November of 1997. "To us, 'land use' refers to the specific use made of land in terms of its traffic-generating characteristics," Peoni continued. "This is why we consider all relevant Comprehensive Land Use Plans and Thoroughfare Plans when developing the Regional Transportation Plan." To do so then, as now, your MPO coordinates complementary changes in both land-use and transportation policies at a regional level.

cont on page 8, see 96th Street



IN THIS ISSUE

INDY ON CONGESTION FAST TRACK..... PAGE 1
LAND USE, TRANSPORTATION AND 96TH STREET PAGE 1
RAILS-TO-TRAILS RALLIES IN 1998 PAGE 2
MPA MAP PAGE 3
CITY SIGNALS GETTING IN SYNC..... PAGE 4
MPO PROFILE..... PAGE 5
REGIONAL MASS TRANSIT SERVICE PLAN UNDERWAY... PAGE 6
VISION PLAN PONDER'S PUBLIC PRIORITIES PAGE 7
CONNECTIONS' FORUM PRESENTS OPTIONS,
PURSUES OPINIONS PAGE 9

ACRO-NYMBLE

Here's a list of the agency and program acronyms mentioned in this issue. Refer to it to keep your understanding letter-perfect.

CAC - Citizens Advisory Committee

CIRCL - Central Indiana Regional Citizens League

CIRTA - Central Indiana Regional Transit Alliance

DMD - Department of Metropolitan Development

DMU - Diesel Multiple Unit

HOV - High Occupancy Vehicle

INDOT - Indiana Department of Transportation

LOS - Level Of Service

LRT - Light Rail Transit

MIS - Major Investment Study

MPA - Metropolitan Planning Area

MPO - Metropolitan Planning Organization

ROW - Right-of-Way

TAC - Transit Advisory Council

VMT - Vehicle Miles of Travel

RAILS-TO-TRAILS RALLIES IN 1998

The growing interest in alternative transportation modes and healthier lifestyles, much reported in past issues of *teMPO*, reached a milestone in 1998. Last year Rails-to-Trails, a national group that converts old rail lines to recreational trails, celebrated the completion of its 1,000th bike trail. Not bad for a group that opened its first 75 miles of trail just three years before, in 1995. Now, nationwide, there is more than 10,000 miles of converted rail line serving the recreational and transportation needs of our country. And that total is growing faster than ever before!

Listed below are the states with the greatest number of converted trail miles. With our own regional Bike/Ped plan in place, as well as rail-to-trail initiatives in various phases of development throughout the state, who knows? Maybe Indiana will crack the top ten next year. If so, we'll have these states to beat:

STATE MILES OF BIKE TRAILS

WISCONSIN	1,251
MINNESOTA	1,214
MICHIGAN	1,122
PENNSYLVANIA	801
IOWA	501
NEW YORK	480
WASHINGTON	446
MAINE	413
ILLINOIS	402
WEST VIRGINIA	376

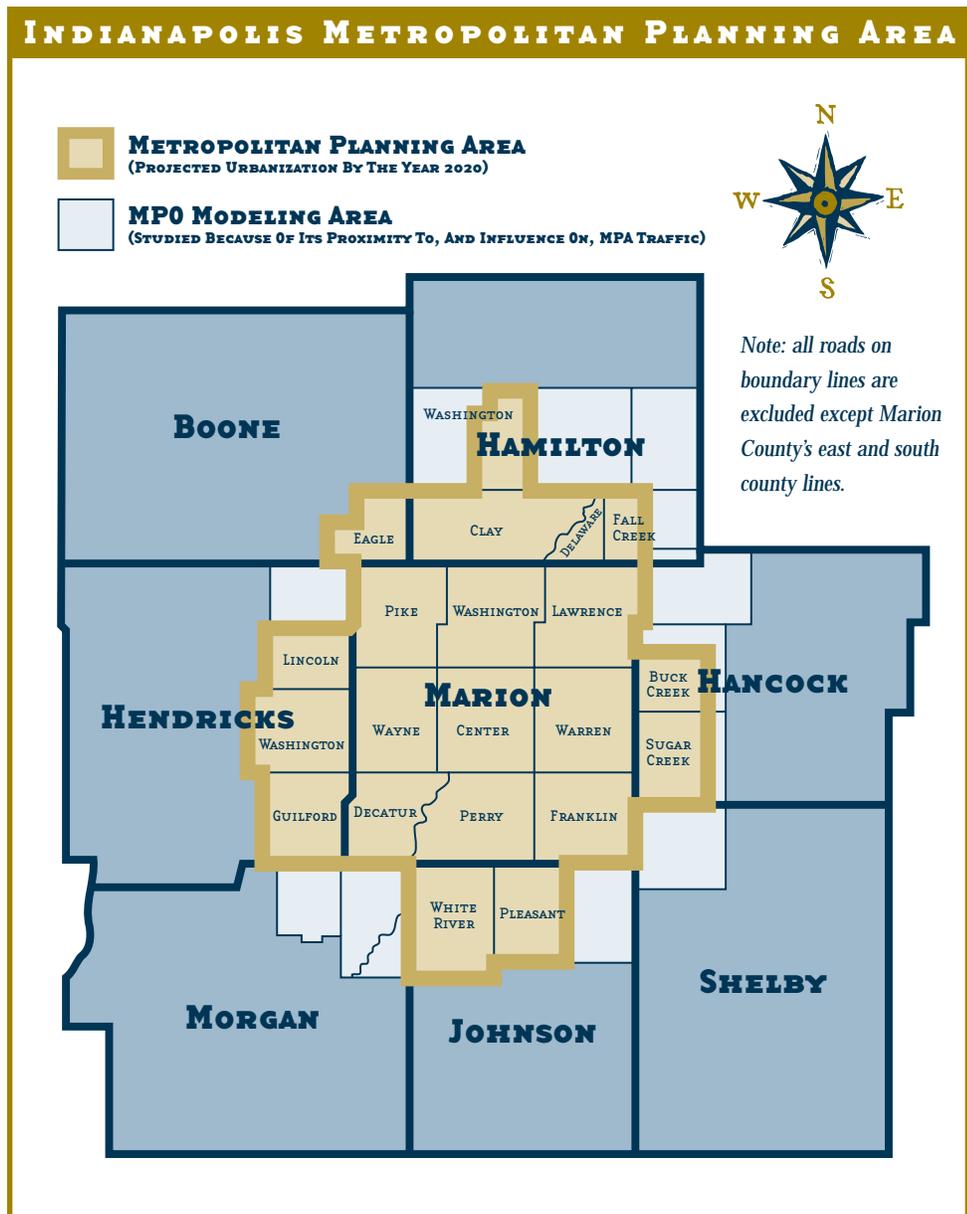


FAST TRACK *(from page 1)*

“The good news is that we only rank 40th among 70 major metropolitan areas evaluated by the Texas Transportation Institute in a national study released late last year,” said Lori Miser, Manager-Transportation Planning for your MPO. “The bad news is, because of our rapid growth, the number of hours our drivers are delayed in traffic has grown faster than any other area in the study.”

From 1982 to 1996, the years covered by the study, the number of hours Indianapolis-area drivers are delayed in traffic grew from four to 32 hours per driver, or a total of 700%! That’s a greater increase in congestion than experienced during the same time period in Los Angeles, Washington D.C. or Chicago, the study’s three most congested cities.

“Relativity is an important point to keep in mind,” Miser cautioned. “Small and mid-sized areas, like Indianapolis, are experiencing faster growth in traffic congestion because congestion is usually tied to population growth and subsequent residential construction and business development.” As reported in the Spring 1998 issue of *teMPO*, Hamilton County ranks as one of the fastest growing areas by population in the country (Editor’s note: ranking approximately 35th nationwide) — a status its held since 1970. Regionally, Johnson County ranks second, posting a 44.6% jump in population between 1970 and 1990. “Despite this growth, however, we’ve been able to design our transportation plan so that traffic delays



in our area still fall far short of the national average noted in the study,” Miser said. The Texas Transportation Institute, which is affiliated with Texas A & M University, found that our region’s delay total of 32 hours is eight hours less than the national average of 40 hours, and dramatically behind congestion capitals, such as Washington D.C. where drivers lose 82 hours per year to traffic delays.

Still, any congestion comes at a cost. Locally, drivers used an extra 47 gallons of fuel each because of traffic jams in 1996 for a community total of 37 million gallons. Nationwide, an estimated 6.7 billion additional gallons were used due to congestion.

During the same year, the most recent available for study, congestion cost Indianapolis drivers an extra \$505 each, or \$400 million region-wide. Nationally, the cost of congestion is estimated to have hit \$74 billion.

cont on page 7, see Fast Track

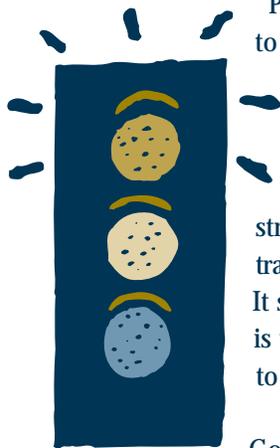
A T A G L A N C E		
	INDIANAPOLIS	NATIONAL AVERAGE
Hours spent in traffic congestion per driver*	32	40
Cost of congestion per driver	\$505	\$629
Additional gallons of fuel used community-wide due to congestion	37 million	96 million

* all statistics for 1996, the most recent year available for analysis
Source: Texas Transportation Institute Urban Mobility Study

CITY SIGNALS GETTING IN SYNC

Here's a riddle: When you're traveling downtown, do you hit more or fewer red lights by speeding up? Slowing down? "It's like when we were kids," laughs Mike Peoni, MPO Principal Planner. "We used to wonder if we would stay drier by running home in the rain and getting out of it sooner, or get wetter because we were running into more rain drops." A lot of downtown drivers have employed both strategies for years, resulting in stop-and-start traffic, squealing brakes, and general frustration. It seems the secret to traffic flow, like comedy, is timing. And there's no time like the present to prove it.

Recently, Indianapolis Mayor Stephen Goldsmith demonstrated a new traffic signal system that, when completed, will improve synchronization of more than 450 signals throughout Indianapolis, or about half of all intersections controlled by traffic lights. The system is part of the city's five-year, \$12-million traffic signal upgrade project, mentioned in previous issues of *teMPO*.



? DID YOU KNOW ?

Many police agencies and insurance companies define "aggressive driving" as at least one of these four driving offenses: running a red light or stop sign, speeding, failure to yield the right-of-way and reckless driving.

Source: USA TODAY

Now completing its first phase, the project currently coordinates 116 downtown traffic signals using a computer and fiber optic cable. The mayor, who demonstrated system technology, described signal synchronization as a more economical way to speed up traffic flow than street-widening.

"(This system) is expensive," Goldsmith said, "but widening a road is even more expensive."

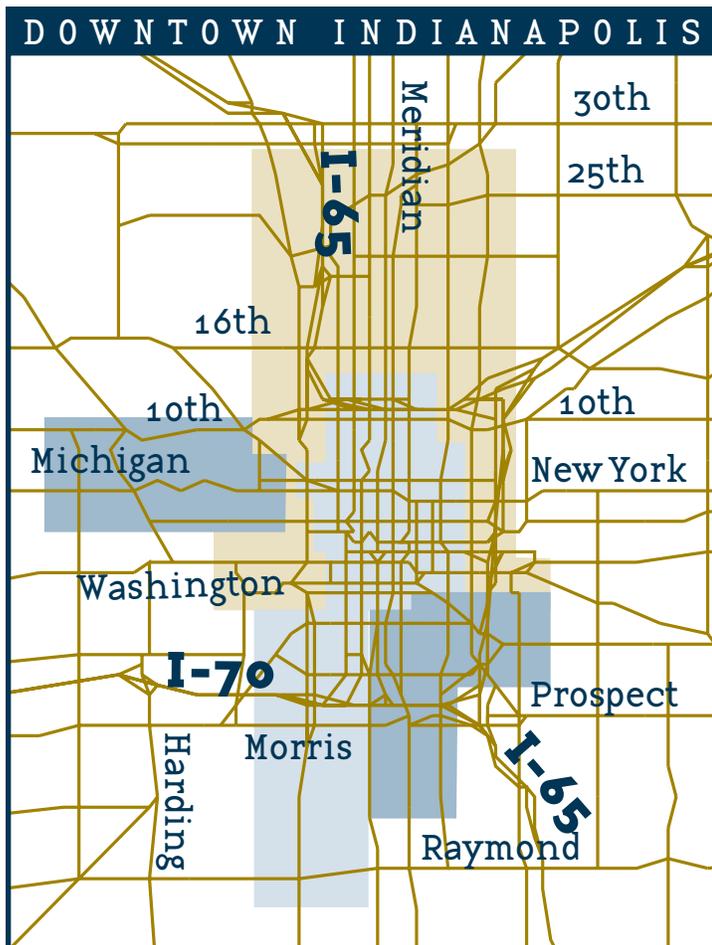
Federal funding accounts for about half of the traffic signal upgrade's total budget. In addition to coordinating the 116 signals, Phase I includes the development of a new control center in the City-County Building. Phases II and III will add 102 intersection signals to the system by year-end. Other improvements will add another 232 traffic lights by the year 2002.

Traffic signal synchronization will:

- help drivers traveling the speed limit on major streets to go from one green light to the next without having to stop
- minimize travel times and driver frustration
- reduce pollution associated with stop and start traffic and the time spent idling at red lights
- enable the city to monitor many traffic lights for malfunction
- permit traffic engineers to easily re-configure light timings to aid traffic flow around special events.

"Timing is everything, when it comes to traffic flow," says Peoni. "You need to be traveling at an optimum speed — the speed limit — to benefit from signal synchronization. Driving faster

just means you'll spend more time waiting at red lights, not that you'll get to your destination any sooner," he explains. Just like the kid who ran through the rain, anyone who tells you differently is all wet.



All road and phase boundaries approximate

PHASE 1

PHASE 2

PHASE 3

MPO PROFILE

M eet Ron Deer, a transportation professional whose unique perspective makes him a valued participant in a wide range of regional transportation planning initiatives. During the work week, Ron serves as Ground Transportation Manager for BAA-Indianapolis, the firm that has managed the Indianapolis International Airport since 1995. “BAA was the first private firm to manage an airport’s entire operation, with all of its interrelated and simultaneous systems,” says Deer. “That’s been great training for me with all of the transportation-related interests I serve during my free time.”

Among the hats Ron wears outside the office is that of Chairman of the Central Indiana Regional Transit Alliance (CIRTA), a group representing 20+ communities in and around Marion County. He is also Chairman of the Transit Advisory Council (TAC) for the Office of Mobility



Ron Deer
Transportation Professional/Big Picture Advocate

Management and a member of the Citizen’s Advisory Committee (CAC), *conNECTIONS*’ Technical Working Group, and the CIRCL-managed Central Indiana Vision Plan which is envisioning a preferred future for the region through land use and transportation planning. In addition, Ron serves as a Greenwood City Councilman, a role he is hoping to extend to a fourth term.

He is also on the Greenwood Planning Commission.

“People have asked me whether representing all of these groups creates a conflict of interest, but nothing could be further from the truth,” Deer says. “It’s because of my involvement in so many areas that I can’t afford subjective biases that might serve only one interest or niche. I have become very aware of how the land use and transportation decisions

for one area impact surrounding areas. So, I think my perspective is comprehensive, not conflicted.”

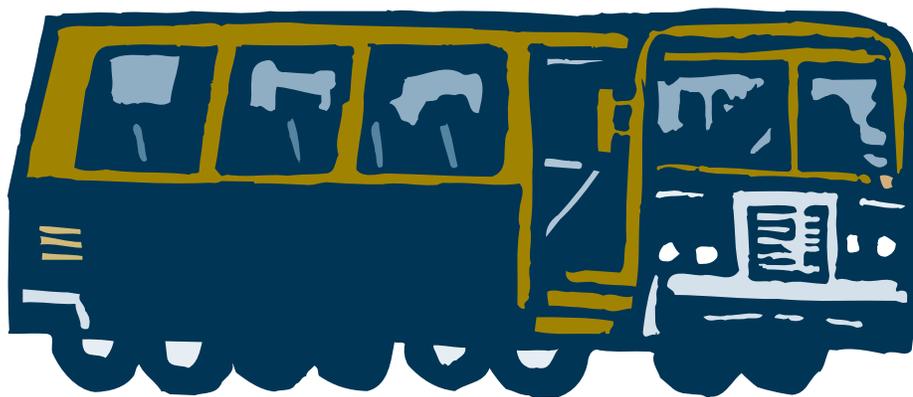


Ironically, Deer’s broad perspective came to light because of a very narrow point of contention. “About five years ago, Greenwood was going to lose its bus service,” he explains. “As a City Councilman, I worked with Metro to maintain service beyond the Marion County line.” Thanks, in part, to his contributions to that process, Deer was invited to join the Transit Advisory

Council in 1996, and the CAC in 1998. Ever since, his ability to see the big picture and take the long view has been welcome throughout the region’s transportation planning process. “I can confess only one bias,” says Deer. “Whenever I’m asked to consider a planning option, I can’t

help but ask, ‘What’s it going to cost?’ I’m sure, that comes from my council experience,” he says. “For me, cost is always a part of the big picture.”

MPO Profile is a semi-regular feature of teMPO which draws attention to the contributions of those involved in the transportation planning process for the Indianapolis region from both the public



Y O U R M P O S T A F F

... includes these people who would be happy to address your comments or questions on any aspect of the transportation planning process:

STEVE CUNNINGHAM • SENIOR PLANNER	317/327-5403
MIKE DEARING • SENIOR PLANNER	317/327-5139
KEVIN MAYFIELD • PLANNER	317/327-5135
LORI MISER • MANAGER-TRANSPORTATION PLANNING	317/327-5136
MICHAEL PEONI • PRINCIPAL PLANNER	317/327-5133
SWESON YANG, AICP • CHIEF TRANSPORTATION PLANNER	317/327-5137

REGIONAL MASS TRANSIT SERVICE PLAN UNDERWAY

Transit and the growing demand from area residents for viable transportation alternatives to the automobile have long been issues of interest in the pages of *teMPO*. Most recently, coverage of the *conNECTions* study of northeast corridor transportation has dealt with the topic in its effort to identify potential strategies to mitigate congestion and lack of mobility along our region's most traveled corridor. But that is just one of many current transit-related initiatives.

Another is the Regional Mass Transit Service Plan project which began in January of this year. A joint effort of city staff, task force members of the Central Indiana Regional Transit Alliance (CIRTA) and The Corradino Group (transportation consultants), The Regional Mass Transit Service Plan is a 12-month project that has as its goal the development of a meaningful, responsive plan for developing public transit service on a regional basis. As such, it incorporates the following steps:

TASK 1: DATA COLLECTION -

To identify all previous and current work efforts and studies that are relevant to the Regional Mass Transit Plan, including the Downtown Indianapolis Transit Center Study (1997), the Indianapolis On-Board Transit Survey (1998), and the *conNECTions* Northeast Corridor Transportation Study and the Central Indiana Vision Plan (both on-going.) In addition, demographic, market, economic and other data useful to the planning process will be gathered along with peer group analysis from other similar regions.

TASK 2: SKETCH LEVEL SERVICE PLAN - To create a conceptual service plan for use as a discussion tool during the community outreach effort. The plan will include service areas, types of service, capital and operating cost requirements, organization and funding.

TASK 3: COMMUNITY OUTREACH - To conduct an outreach effort to determine the perceived transportation needs in the region and to develop a consensus on the goals and objectives of the Regional Mass Transit Service Plan. This task will involve many meetings to identify individual community needs, level of support for regional transit, types of organization and funding mechanisms and types of services needed.

TASK 4: GOALS AND OBJECTIVES - To develop a set of goals and objectives to be used as a guideline during the service planning process. These goals and objectives will serve as a framework for the development of recommendations. For example, a general goal may be to ensure a quality level of affordable transportation for all residents of a particular city or town. Objectives to that goal may be to provide Sunday service and minimize wait and transfer times. Planning guidelines, such as these, will establish the scope and framework for the alternatives to be considered and against which they will be evaluated.

TASK 5: ALTERNATIVE DEVELOPMENT - To identify alternatives for providing transit service to the region. This task would include identifying costs, organization and implementation strategies; exploring alternatives with opinion leaders; establishing minimum/maximum service levels for each alternative; and developing an optimal alternative, including ridership projections and capital/operating costs.

TASK 6: IMPLEMENTATION PLAN - To prepare an implementation strategy for the optimal service alternative, including cost, organization and implementation details; a time frame for realization, and; appropriate decision-making structure.

TASK 7: PLAN REPORT - To produce a report on the recommended alternative for regional transit that defines appropriate service levels by type of service and region, capital and financial requirements, and an implementation strategy, including management alternatives.

In achieving these tasks, project planners will hold workshops/presentations throughout the year-long process. For more information on these events, or any aspect of the Regional Mass Transit Service Plan project, call Lori Miser at 327-5136.



VISION PLAN PONDER'S PRIORITIES

In December, 1998, the Central Indiana Regional Citizens League (CIRCL) completed its fourth set of community forums intended to gather public input on the issues of land use and transportation planning throughout the nine-county Indianapolis region. These forums, an aspect of the Central Indiana Transportation and Land Use Vision Plan, solicited the informed participation of the public to envision a preferred future for our area.

The plan differs from other current studies that acknowledge the interdependent influence of land use and transportation planning, such as *conNECTIONS* (see *teMPO* Special Edition, May/June '98), in scope. "The *conNECTIONS* Study concentrates on solving the problems of congestion and lack of mobility in the northeast corridor," explains John Myers of Parsons Brinckerhoff, the engineering firm conducting both projects. "The Vision Plan is broader in its scope and deals with the impact these and similar issues have on the entire nine-county metropolitan planning area."

As reported in the Summer 1998 issue of *teMPO*, the Vision Plan is a 15-month study intended to address growing concerns over increasing traffic congestion

of a series of citizen-supported recommendations regarding public transportation, land-use development policies, and other actions. When forwarded to state and local governments, these recommendations are intended to help reduce the region's near total dependence on the automobile for transportation.

At the December forums, citizens were asked to choose which option they prefer to be implemented. Of the more than 100 citizens who expressed an opinion at the end of the sessions, a majority said they believed the top priorities should be 1.) helping people who must use transit to get around and 2.) improving the system for people who commute from the suburbs to the city.

Participants also expressed interest in:

- a light rail system, like one being considered as a potential recommendation of the *conNECTIONS* study (see related story, page 10) between Noblesville and downtown Indianapolis
- Funding a better transportation system with transit fares and a regional gasoline tax
- Higher-density development along the routes where improved transportation would be in place.

The scheduled completion of the Vision Plan is March of 1999. For more

FAST TRACK (from page 3)

"We take these problems, and potential strategies for solving them, very seriously," said Miser. "That's why your MPO, and groups like CIRCL (see related story, page 7) are evaluating a combination of potential solutions in

? DID YOU KNOW ?

In the 20 years between 1976 and 1996, Marion County's arterial traffic jumped 31%; freeway traffic jumped 63% in just 15 years (1981 - 1996)!

studies like The Vision Plan and *conNECTIONS* (see related story, page 9)". Road-building, improved transit options, carpooling and traffic light synchronization (see related story, page 4) have all proven effective strategies in helping mitigate congestion and minimize its related costs. To the extent we are able to employ them regionally, Indianapolis may be able to maintain or even lower its congestion ranking of 40th.



(see related story, page 1) caused largely by existing development

patterns. Funded by the Lilly Endowment and sponsored by the Central Indiana Regional Citizens League, it has as its goal the development



information, call John Hay, Jr., Executive Director of CIRCL, at 920-3460.

96TH STREET (from page 1)

A current example of this comprehensive, cooperative, and coordinated effort is the 9-month 96th Street Land Use and Transportation Corridor Study which began in January, 1999. The purpose of this study is to identify a land use and transportation plan for the 96th Street Corridor between Michigan Road and Keystone Avenue which will promote compatible land use policies and maintain acceptable roadway system levels of service (LOS) as well as provide for long term community stability and anticipated regional transportation needs. The study is being jointly conducted by the Indianapolis MPO, the City of Indianapolis, Hamilton County and the City of Carmel.

In attempting to reach consensus on issues important to all participants, the study needs to eventually develop a realistic and achievable plan that is the result of a cooperative process involving government agencies, business interests and the public who support its implementation. Such a process would ensure joint agreement between counties and jurisdictional agencies prior to making future land use decisions.

The study's scope of work, which is scheduled for completion in October of this year, includes eight areas of endeavor: Data Collection, Land Use Assumptions, Traffic Forecasts, Alternatives Development, Alternatives Evaluation, Recommendations, Implementation Planning and Documentation/

Coordination, such as public information meetings and the drafting of a final report. Study participants are currently involved with the data collection, land use assumptions, traffic forecasting, alternative development and documentation segments simultaneously (See Study Time Line, below, for details).

"To achieve our goals, this study needs to answer some pretty basic questions," says Steve Cunningham, MPO Senior Planner. "We have to find out how traffic patterns on 96th street between Keystone and Michigan Road have changed since the opening of the 96th Street Bridge over the White River. We also need to determine if 96th Street's ultimate role in our regional transportation plan should be that of a thoroughfare and, if so, as a primary or secondary one." Attempting to answer these and other questions concerning traffic growth, desired levels of service and improvement cost-sharing strategies, requires two things of study participants: a commitment to cooperation and the ability to jointly envision a preferred future to the year 2020, our transportation

? DID YOU KNOW ?

The land in both Pike and Lawrence Townships of suburban Marion County is about two-thirds developed. But, since 1973, Pike Township has developed half again as fast as Lawrence Township and three times faster than Washington Township!

planning horizon. "We do both, everyday," says Cunningham. "They're two of the current strengths of our continuing, cooperative and comprehensive land use and transportation planning process that helps us build the future.

For more information on the 96th Street Land Use and Transportation Corridor Study, call Steve Cunningham at 317/317-5403 or transportation engineer John Myers of Parsons Brinckerhoff at 317/972-1706.

96th STREET SPECIAL STUDY • MICHIGAN ROAD TO KEYSTONE AVENUE

TASK	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1 Data Collection									
a. Resolve prev Corridor, LU, TIA studies	X								
b. Compile existing traf data	X								
c. Establish base mapping	X								
d. Compile LU, zoning, demographic info	X	X							
e. Identify vacant land	X	X							
2 Land Use Assumptions									
a. Identify existing zoning, incl vac land	X	X							
b. Identify existing plans & dev't proposals	X	X							
c. Develop "high intensity" LU scenario		X							
d. Develop "med intensity" LU scenario		X							
e. Develop "low intensity" LU scenario		X							
3 Traffic Forecasts									
a. Determine existing conditions (model)	X	X							
b. Determine future traffic (current base)		X							
4 Alternatives Development									
a. Ident existing deficiencies (HCS, geom)		X	X						
b. Ident future deficiencies (HCS, geom)		X	X						
c. Develop base traffic alternatives		X	X						
5 Alternatives Evaluation									
a. Assign traffic for each LU scenario			X	X					
b. Evaluate LOS & LU impacts by scenario			X	X					
c. Refine all plans to correct deficiencies			X	X	X				
d. Review costs & impacts of alternatives			X	X	X				
e. Review/refine finalized alternatives				X	X				
6 Recommendations									
a. Develop prel findings/recommendations				X	X	X			
b. Prepare recommended LU plan					X	X			
c. Prepare associated transpo plan					X	X			
7 Implementation Plan									
a. Prepare implementation cost estimates						X	X		
b. Develop staging and sequencing plan						X	X		
c. Develop implementation timetable						X	X		
d. Formulate multi-jurs review/petition proc							X		
e. Identify funding plan (agency/developer)							X		
8 Documentation/Coordination									
a. Meet with project steering committee	X	X		X		X		X	
b. Public Information Meetings		X			X		X		
c. Mgmt mtgs/agency briefings/status rpts									
d. Prepare Draft Report							X	X	
e. Prepare Final Report								X	X

CONNECTIONS' PUBLIC FORUM PRESENTS OPTIONS, PURSUES OPINIONS

The *conNECTIONS* study of Northeast Corridor Transportation is a familiar topic to most readers of *teMPO*. This 18-month study, funded with federal, state, municipal and county funds and representing a cooperative effort of eight jurisdictional authorities, is the most focused effort yet directed toward solving the chronic problems of congestion and lack of mobility in our region's most traveled corridor which stretches from downtown Indianapolis northeast to Noblesville.

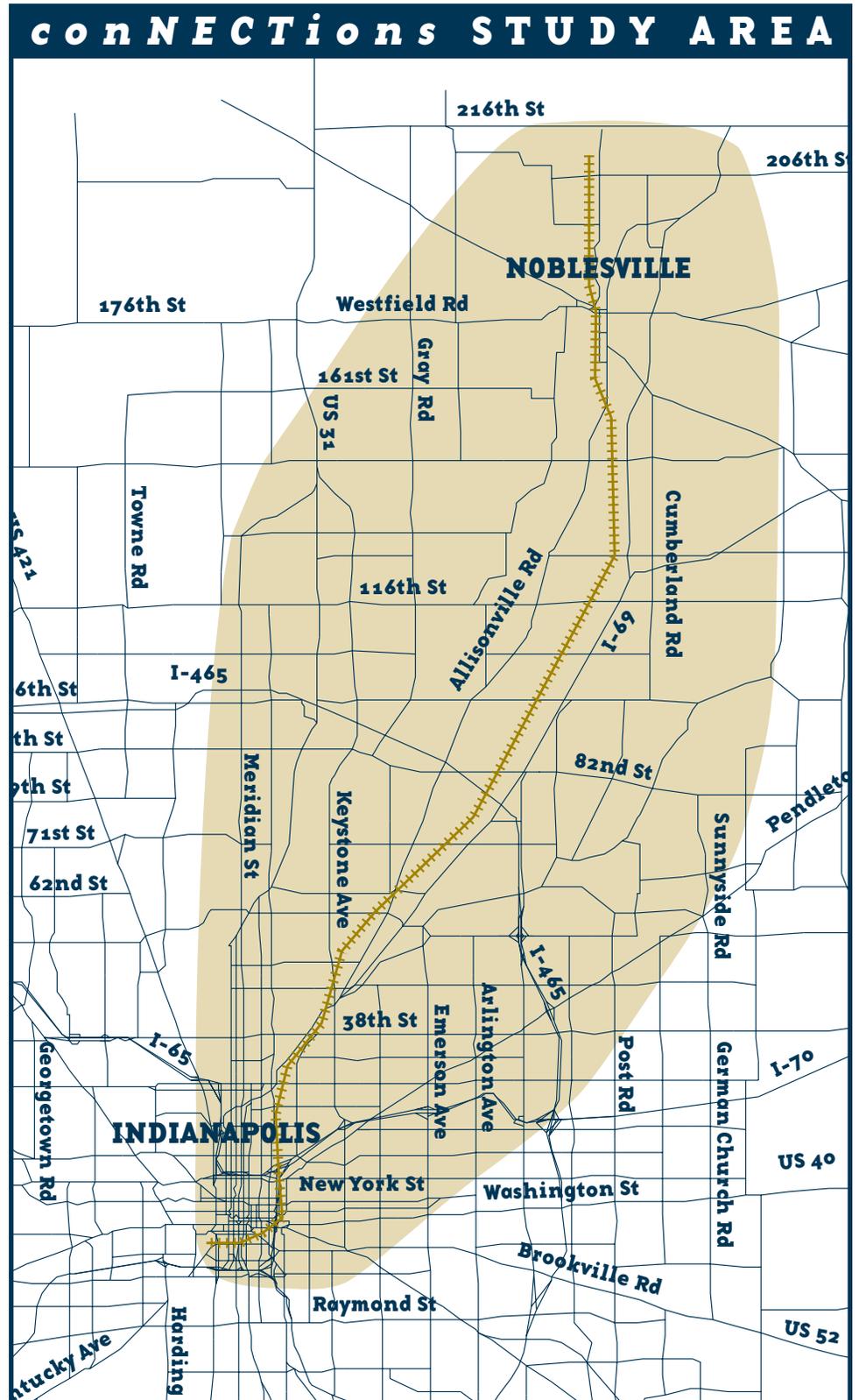
As such, it has been the subject of a *teMPO* Special Edition (May/June, 1998) and subsequent updates throughout the remainder of the year. Because of its importance both to the efficiency of our regional transportation plan and our ability to address current and anticipated growth-related issues in an effective and expeditious manner, *teMPO* will continue to pay close attention to the study until its scheduled completion in late 1999.

The new news on *conNECTIONS* concerns its Public Forum held Tuesday, January 26, 1999, in the Indiana Government South Conference Center in downtown Indianapolis. The forum was structured as an open house from 4:00 to 7:00 pm, with a special presentation at 6:00 pm on transportation options currently under consideration to solve the problems associated with travel in the northeast corridor.

As part of the study's on-going Public Involvement Plan, the forum was intended to inform the public and gather their input for use in the decision-making process. Attendees were provided with background information, details on specific transportation strategies and the opportunity to voice their opinions and concerns. Participation was promoted via direct mail, radio and public relations work with the news media, including *WTHR* and *The Indianapolis Star/News* which have shown on-going interest in the study.

Among the options presented for comment were several rail-related strategies previously described in the Special Edition, December 1998 issue of *teMPO*. For comparison purposes, they are again presented here along with some non-rail related options also presented at the forum.

cont on page 10, see conNECTIONS



CONNECTIONS *(from page 9)*

LIGHT RAIL TRANSIT (LRT)

This system is similar to the electric trolleys or street cars that characterized the region's interurban rail system in the early 1900's. Like the vehicles of old, modern light rail cars are powered by electrified overhead wires and can operate on existing streets in mixed traffic, or exclusive right-of-ways (ROW).

Average Vehicle Capacity	145 passengers
Operating Environment	Mixed traffic or separate right-of-way
Average Operating Speed	Mixed traffic - 20 mph Sep. ROW - 45 mph.
Typical Station Spacing	1/2 to 1 mile
Construction \$ per mile	\$20 to \$25 M
Operating \$ per vehicle mile	\$6.75 to \$9.60

Currently Used In Many Cities, Including:

- St. Louis, where 18 miles of track, from downtown to the airport, carries 40,000 riders a day.
- Cleveland, where 15 miles of track carries 26,000 rider a day from the suburbs to downtown and back.
- Portland, where two lines stretch 33 miles from the suburbs to downtown and carry 50,000 a day.

CONVENTIONAL COMMUTER RAIL

This system involves a diesel or electric-powered train on its own right-of-way or sharing track with a freight railroad.

Average Vehicle Capacity	125 to 200 passengers
Operating Environment	Separate or shared tracks
Average Operating Speed	40 mph
Typical Station Spacing	1 to 5 miles
Construction \$ per mile	\$10 to \$30 M
Operating \$ per vehicle mile	\$9.95

Currently Used In:

- San Francisco, where the CalTRAIN system covers 47 miles
- Baltimore, with its 187 mile MARC system.
- Chicago, where the Metra system operates over more than 400 miles of track
- NW Indiana, where the South Shore Line stretches from South Bend to Chicago.

COMMUTER RAIL/DIESEL MULTIPLE UNIT (DMU)

This system involves a self-propelled diesel powered rail car that operates on existing rail lines.

Average Vehicle Capacity	100 passengers
Operating Environment	Separate or shared track
Average Operating Speed	35 mph.
Typical Station Spacing	1 to 5 miles
Construction \$ per mile	\$4 to \$8 M
Operating \$ per vehicle mile	\$7.00 to \$8.00

Currently Used In:

- Europe. Also, the Regio Sprinter (DMU) was demonstrated in the US (including Indianapolis in 1997) and Canada.
- Dallas, where 13 refurbished rail diesel cars began service in January 1997 on an initial 10-mile segment of track.

CONVENTIONAL BUS

This system would provide transportation service using the familiar, self-propelled, rubber-tired vehicles operating on existing streets and highways. However, the *conNECTIONS* proposal calls for improved service and expanded routes.



Average Vehicle Capacity	60 passengers
Operating Environment	Mixed Traffic
Average Operating Speed	Local - 12 mph Express - 40 mph.
Typical Station Spacing	Local - 1/10 to 1/2 mile Express - few
Construction \$ per mile	Uses existing streets
Operating \$ per vehicle mile	\$2.80

Currently Used In:

- Marion County, where IndyGO operates 178 fixed route vehicles over 34 routes. In 1997, IndyGO buses carried 10.2 million passengers.
cont on page 11, see conNECTIONS

CONNECTIONS *(from page 10)*

EXCLUSIVE BUS WAYS

This system incorporates specially designed roadways for the exclusive use of buses and are usually located within existing transportation rights-of-way.

Average Vehicle Capacity	60 passengers
Operating Environment	Separate roadway or lane in median
Average Operating Speed	Free flow, 45 mph.
Typical Station Spacing	3 to 5 miles
Construction \$ per mile	\$25 to \$30 million
Operating \$ per vehicle mile	\$4.80 to \$7.00

Currently Used In:

- Pittsburgh, where the 9.9 mile East Busway stretches from downtown to residential neighborhoods
- Ottawa, with its 11 mile Southeast Transitway
- Seattle, with its 3 mile Downtown Tunnel and Busway

HIGH OCCUPANCY VEHICLE (HOV) LANES

This system would provide designated highway lanes for vehicles with two or more persons during peak travel periods.

Average Vehicle Capacity	Minimum of driver plus one passenger
Operating Environment	Separate lane in roadway/median
Average Operating Speed	Free flow, 50 mph.
Typical Station Spacing	None required
Construction \$ per mile	\$10 to \$20 million
Maintenance \$ per lane mile	\$50,000 to \$80,000

Currently Used In:

- Seattle, on 6.2 miles of I-90 with buffer separation
- Los Angeles, on 11 miles of I-10 with barrier separation
- Houston, on 11.5 miles of I-10 with barrier separation
- Pittsburgh, on 6.6 miles of I-279/579 with barrier separation

ROADWAY IMPROVEMENTS

This strategy includes new and reconstructed lanes, ramps and interchanges that add traffic handling capacity or improve safety.

Average Vehicle Capacity/hour	Access Ramp - 1,200 Highway Lane - 2,000 Arterial Lane - 1,000
Average Operating Speed	35 to 55 mph
Operating Environment	Mixed Traffic
Construction \$ per mile (Urban Highway)	6 Lane At-grade Freeway \$25 million 6 Lane Elevated Freeway \$75 million 4 Lane Arterial \$10 million

Currently Used In:

Northeast Corridor, including portions of two north-south interstates:

- a 9 mile section of I-69 from I-465 to Brooks School Road
- a 7 mile section of I-465 from I-69 to I-70 and portions of two east-west interstates
- a 6 mile section of I-465 from I-69 to US 31
- a 9.5 mile section of I-70 from I-465 to West Street

Those with comments on any options under consideration, or any aspect of the *conNECTIONS* study, were encouraged to voice them at the Forum, or to make them known within the following 60 days to ensure their consideration during the decision-making process. This can be done:

- on the world wide web at www.indygov.org/connections, or
- by calling the *conNECTIONS* Hot Line, toll free, at 1-877-NEC-LINK
- at the next Citizens Advisory Committee on Tuesday, February 23, at 6:30 pm in Room 107 of the City-County Building at 200 East Washington Street, downtown Indianapolis. The public is welcome.

cont on page 12, see conNECTIONS

? DID YOU KNOW ?

Despite attracting the bulk of media coverage thus far, less than a third of all potential strategies now under consideration by conNECTIONS involve rail service of one kind or another. Others involve various bus transit options, road improvements, advanced technologies such as variable message signs, and other options such as flextime employment (to reduce rush hour congestion) and car pooling.

CONNECTIONS *(from page 11)*

All transportation strategies under consideration are being evaluated using a criteria that includes total required cost, cost-benefit analysis, effectiveness and efficiency considerations, environmental impact, and *public acceptance*. That's where the input of forum attendees, *and people like you*, comes in. Eventual recommended solutions will be employed not only in the northeast corridor but in our region's other high-traffic areas.

In addition to public forums, *conNECTIONS'* Public Involvement Plan includes public service television and radio commercials, focus groups, an extensive telephone survey and radio traffic report sponsorships. This is the most extensive involvement program undertaken to support a major investment

teMPO is published quarterly by your Metropolitan Planning Organization, part of the Department of Metropolitan Development. If you know of anyone who would like to receive *teMPO*, or if you have any questions concerning its publication, please call:

Mike Peoni at 327-5133

Department of Metropolitan Development
Metropolitan Planning Organization
City-County Building
200 East Washington Street
Suite 1841

Indianapolis, IN 46204-3310

teMPO was written and prepared for publication by Whitman Communications, Inc.

study of this kind in our region and its key objective is to encourage the public's informed participation in the transportation planning process.

For more information on *conNECTIONS*, call Lori Miser at (317) 327-5136 or Mike Peoni at (317) 327-5133, both of your MPO.

Metropolitan Planning Organization

City-County Building
200 East Washington Street
Suite 1841
Indianapolis, IN 46204-3310



teMPO



KEEPING PACE WITH OUR TRANSPORTATION NEEDS

SPECIAL REPORT

As 1998 chugs to a close, it's a good time to review the past year's transportation planning activity. Most often, the stories that dominated throughout the year concerned car travel, the mode that most of us employ to get around. Such *teMPO* '98 headlines included "Marion County Traffic Counts", "Hamilton County Road Remedies" and "Local Traffic Calmed." Even initiatives like the much-covered *conNECTIONS* major investment study of the northeast corridor, which is multi-modal in scope, probably would not have been federally funded had traditional highway expansion not proven unable to keep pace with increased car travel and related peak hour congestion.

But there's another means of conveyance in use throughout the region that lends itself to both a backward and forward glance — rail. Whether shipping goods or carrying passengers, our rail service has long attracted national attention and praise. This was certainly true in the early 1900's when, even as our city was promoted as "the second motor city", trains kept the local population moving and the regional economy growing (see *Indy's Track Record*, this page). And, now that passenger rail service promises to be in the news throughout 1999, what better time for *teMPO* to pursue this train of thought with background, fun facts and breaking news. Read on!

INDY'S TRACK RECORD

Do all things get better with age? At the turn of the century Indianapolis had an urban rail system that was the envy of the nation. Carrying nearly 70,000,000 paying passengers annually, this form of public transportation served the needs of the business district and far flung suburbs alike, some as distant as the State Fair grounds or beyond!

Yet despite its national reputation for customer service and fine accommodations, Indy's passenger rail system eventually fell out of vogue. As the public embraced the freedom and self-sufficiency offered by the increasingly affordable automobile, transit ridership decreased.

cont on page 8, see Track Record



'C'S OF CHANGE: CONRAIL, CSX AND COMPETITION

Until recently, our local rail industry was dominated by Conrail, the country's seventh largest rail freight carrier which operated about 1,000 trains a day nationwide. Created in 1976 by the U. S. Government, Conrail was intended to run the operations of Penn Central and five other failed Northeast railroads. And, it did just that over an 11,000 mile rail network in 12 northeastern and Midwestern states, the District of Columbia and Quebec.

cont on page 6, see 'C's of Change

IN THIS ISSUE

INDY'S TRACK RECORD	PAGE 1
'C'S OF CHANGE: CONRAIL, CSX AND COMPETITION	PAGE 1
INDOT STUDIES	
PASSENGER RAIL	PAGE 2
MPA MAP	PAGE 3
INDIANA RAILROAD MAP	PAGE 3
AN OVERVIEW OF LOCAL RAIL CARRIERS	PAGE 4
THE FUTURE OF RAIL FREIGHT	PAGE 5
CONNECTIONS' RAIL CONSIDERATIONS	PAGE 10

ACRO-NYMBLE

Here's a list of the agency and program acronyms mentioned in this issue. Refer to it to keep your understanding letter-perfect.

AGT - Automated Guideway Transit

DMD - Department of Metropolitan Development

FRA - Federal Railroad Administration

FRED - Flashing Rear End Device

HOV - High Occupancy Vehicle

ICC - Interstate Commerce Commission

INDOT - Indiana Department of Transportation

IPL - Indianapolis Power & Light

MIS - Major Investment Study

MPA - Metropolitan Planning Area

MPO - Metropolitan Planning Organization

MWRRS - Midwest Regional Railroad System

ROW - Right-of-Way

TTC - Transportation Technology Center

INDOT STUDIES PASSENGER RAIL

Two studies currently underway at the Indiana Department of Transportation (INDOT) are examining the viability of developing improved inter-city passenger rail service. One study is looking at the development of a Midwest system, while the other is evaluating the potential of a few additional routes within Indiana. With increasing congestion on our interstate highways and at the region's major airports, the level of interest in passenger rail has grown dramatically in recent years.

The first, called the Midwest Regional Rail Initiative, began in 1996. It is a collaborative effort among nine Midwest states - Minnesota, Wisconsin, Illinois, Indiana, Iowa, Ohio, Missouri, Michigan and Nebraska - plus the National Railroad Passenger Corporation (Amtrak), and the Federal Railroad Administration (FRA). The first two phases of the MWRRS examined the viability of this proposed Midwest network and included the development of a business plan for its successful implementation. "Our findings demonstrated that the system will have revenues that exceed operating costs, after the initial capital costs are paid," said Tom Beck, Rail Planner with the Rail Section of INDOT. "The system proposes linking all major Midwestern cities via high speed rail, with trains traveling at approximately 110 mph."

"Ideal targets are cities at least 150 to 350 miles apart. This is the distance at which trains are most competitive with both airline and automobile travel. Total travel time from city center to city center is often quicker by rail than by air at this distance," explained Beck. "Advantages of rail over automobiles include the traveler's ability to either relax or accomplish other tasks in transit, while avoiding the high parking costs associated with car travel upon arrival in the central core of a destination city." Projected costs for high speed rail travel are expected to be equivalent to, or lower than, the lowest current discount air fares.

The proposed MWRRS is an expanded and modern passenger rail system that :

- Preserves, improves and expands passenger rail service by significantly reducing travel times and increasing frequencies.
- Provides a high quality, reliable passenger rail service that is intermodal and accessible to 80 percent of the region's population.
- Creates an appealing transportation "product" that the public will pay for and use, requiring no long-term operating subsidies.
- Follows an incremental implementation schedule that is affordable and can be cost-justified.

- Requires no more than a 20 percent contribution from the states for capital investment
 - Supports economic growth and creates business and development opportunities within and around stations
 - Increases job opportunities in manufacturing and the service industries.
- cont on page 7, see INDOT Study*

? D I D Y O U K N O W ?

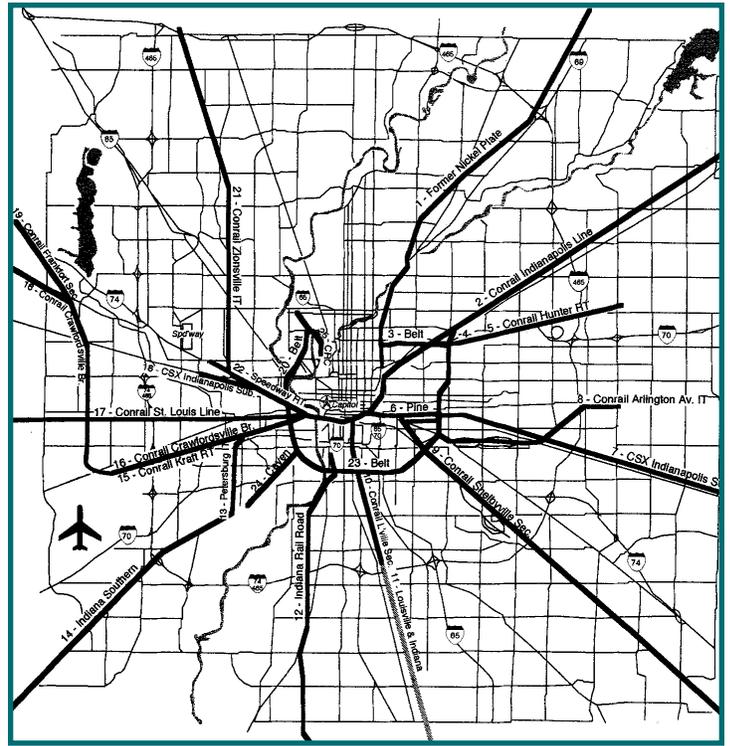
The average train takes about a mile to stop, even after the emergency brake has been pulled.

Around 500 motorists die at railroad crossing each year.

AN OVERVIEW OF LOCAL RAIL CARRIERS

Indianapolis is the “crossroads of America” for railroads, just as it is for highways. Today, a total of 26 rail corridors are operated in the city. Ownership of our regional rail network has changed dramatically over the last two decades, and is currently undergoing another set of changes as a result of the Conrail merger (see related story, page 1). In 1997, two Class I railroads and four Class III, or shortline, railroads operated in Indianapolis. These classifications are based on rail revenue standards established annually by the Interstate Commerce Commission. These standards, established in 1993, determined that Class I railroads were those which have operating revenue of more than \$250 million per year; Class II railroads have operating revenue greater than \$20 million per year but less than \$250 million; and, Class III railroads have operating revenue below \$20 million per year.

Throughout the state, six Class I railroads operate a total of 3,100 miles of main line track. Until recently, 2,963 of these miles were operated by the three largest railroads in Indiana: Conrail, CSX and Norfolk Southern. Following their purchase of Conrail, CSX and Norfolk Southern will jointly operate these facilities. The remaining 33 Class II and III railroads total an additional 1,403 miles of line.



The two Class I and four Class III railroads operating in the Indianapolis Metropolitan Planning Area (MPA) in 1997, the last full year of reporting, are identified below:

Conrail was the largest northeastern railroad system, linking Chicago and St. Louis with Philadelphia, New York and New England. Conrail was the dominant carrier in Indianapolis, serving most local retail customers by making up east- and westbound trains and providing intermodal service from its Avon Yard facility. Conrail owned and operated the lines of the Indianapolis Belt Railway, which accesses many Indianapolis businesses and links almost all of the shortline railroads. In 1998, the proposed acquisition of Conrail by CSX and Norfolk Southern was approved by the Federal Surface Transportation Board.

CSX Transportation is a major eastern system serving most areas east of the Mississippi River, except New England. Prior to its purchase of Conrail facilities, CSX had relatively few Indianapolis customers. Most of its local activity was related to the Nucor Steel mill in Crawfordsville or grain or other customers between Indianapolis and Cincinnati.

Norfolk Southern used to provide only limited service to Indianapolis, operating a total of 16 miles of trackage in the nine-county area. Now, with part ownership in the Conrail facilities, and with local access guaranteed through a city-engineered reduced switching fee agreement with CSX, Norfolk Southern is likely to play an increasing role in providing competitive rail freight service to local shippers.

cont on page 11, see Overview

MAJOR FREIGHT RAILROADS IN INDIANAPOLIS

Name	Notes	Miles of Tracking*
Conrail	Previous dominant carrier locally. Operated primarily east-west, longhaul movement. Just purchased by CSX and Norfolk Southern.	188
CSX	Until recently, served relatively few local customers, operated north-south service to Cincinnati.	42
Norfolk Southern	Limited service to Indianapolis prior to its joint purchase of Conrail with CSX. Had previously operated branch line to Noblesville.	0
Indiana Southern Railroad	Service to Evansville; significant coal traffic.	41
Indiana Railroad Company	Service to Bloomington and Sullivan; significant coal traffic.	31
Central Railroad of Indiana	Third-party owner; can enter Indianapolis using trackage rights on Conrail; service to Shelbyville and Lawrenceburg.	0

* in nine-county area. Source: City of Indianapolis Comprehensive Rail Study.

THE FUTURE OF FREIGHT RAIL

"Most people think of freight trains as a thing of the past, but they couldn't be more wrong," asserts Steve Cunningham, Senior Planner with your MPO. To substantiate his claim, Cunningham, who has both a professional and personal interest in trains, points to the facts.

"There are seven rail freight handlers in the U.S. which earn more than \$1 billion in annual revenues, including the Union Pacific, Burlington Northern, Santa Fe, Southern Pacific, Conrail (see *C's of Change*, page 1), Norfolk Southern and CSX." Cunningham notes. "And the Union Pacific alone earns \$6 billion in annual revenue. UP is also spending \$650 million a year to replace worn equipment and add new track. Does that sound like a dead industry to you?," he asks.

In addition, there are currently five other domestic rail carriers with just slightly lower revenues, and more than 400 "shortlines" that serve smaller communities by shipping local goods to the larger lines. All together, rail moves 40 percent of the nation's freight, a

percentage that continues to climb as the economy and efficiency of rail proves superior to that of trucks. Just in the decade between 1983 and 1993, rail productivity jumped 157 percent. During the same period, rail revenues increased 32 percent while rates dropped 40 percent. Is it any wonder the industry is back on track?

Still, among many, the prevailing perception is that trains are out of date.

"I think it's what we've been taught," says Cunningham. "In school, we read about the golden age of railroads that began in 1869 with the driving of the golden spike. What could be more exciting than linking the country's east and west coasts? Over the next fifty years, the American rail industry grew to about 250,000 miles of track, thanks to people like John Henry, Buffalo Bill and a lot of colorful, but unscrupulous, robber barons. How do you compete with images like that?" he asks.

Because of the influence of such robber barons, the Interstate Commerce Commission (ICC) was established to eliminate corruption and enforce government regulations on rail price rates, routes and schedules. Combined with growing competition from cars, trucks and airplanes, these regulations nearly pushed the railroads to extinction. By the late 1960's, once dominant carriers like the New York Central and Pennsylvania Railroad were headed for bankruptcy.

In 1971, the industry finally got some relief when the federal government created Amtrak to take over the failing passenger train service. This allowed surviving rail companies to concentrate on building more profitable freight business. In 1980, a bill called the Staggers Rail Act partially deregulated the industry and freed railroads to set their own routes, rates and schedules. In less than 20 years, the result has been the development of a freewheeling, highly competitive industry, dedicated to modernization and customer service.

"Our globalized economy is bringing railroads back stronger than ever," notes Cunningham. "Today, goods leaving our country arrive at the docks via rail and are loaded aboard ship by "sidepickers" or "sideloaders." Foreign goods entering the country are unloaded onto

trains or trucks to travel inland. And, often, truck trailers are piggy-backed to their



destination because it is more economical!"

After years of cutthroat competition the trucking industry, still our country's dominant mode of transport, is attempting to get rail's benefits "on board." In today's economy, and with rail's competitive shipping rates, it is often cheaper for a company to piggyback truck trailers on flat cars than to pay for drivers and fuel on a cross-country haul. A locomotive, for example, moves a ton of freight 300 miles on a single gallon of fuel- three times the distance a truck can. "Economy, speed and service are really the qualities sought by intermodal freight systems which integrate rail, road, sea and air travel. It's also why intermodal freight is the fastest growing segment of the rail industry today." Cunningham says. "The same service characteristics that first recommended rail service 150 years ago have brought it back again."

For more information on our regional Intermodal Freight System Plan, review the previous two issues of *teMPO* (Vol. 2, Issues 2 and 3) or call Sweson Yang, AICP, MPO Chief Transportation Planner at 317/327-5137. For more information on rail in our area, call Steve Cunningham, MPO Senior Planner, at 317/327-5403.

'C'S OF CHANGE (from page 1)

That all changed in June of this year when the Federal Surface Transportation Board approved the purchase and subsequent break up of Conrail by CSX and Norfolk Southern railroads. The acquisition which had been opposed by dozens of freight-dependent businesses throughout the Indianapolis metropolitan planning area (MPA), left only two major rail freight haulers east of the Mississippi River: CSX and Norfolk Southern — the same carriers who were purchasing Conrail's assets.

CSX Corporation and Norfolk Southern Corporation formed a jointly owned company to acquire the routes and assets of Conrail, Inc. In so doing, the companies tendered an offer of \$115-a-share for Conrail stock on May 23 of this year. For its portion of the deal, \$5.9 billion, Norfolk Southern would get routes representing 58% of Conrail revenue while CSX's \$4.3 billion would buy routes accounting for 42% of Conrail's revenue. The \$10 billion + deal would yield approximately 6,000 miles of track for Norfolk Southern, 3,600 miles for CSX, and 1,000 miles to be shared by both railroads. Until this agreement, CSX had been larger than Norfolk Southern, but the 58-42% split of Conrail now would make the rail carriers almost equal in size.

Generally speaking, shippers from Kansas City to the East Coast supported this acquisition because it promised more railroad choices in the northeast United States and much needed capital improvements to the rail network upon which they depended. The cost of such improvements alone were estimated by CSX Chairman John Snow at more than \$200 million and would result in benefits like higher rail speeds and shorter delivery times.

But what about local freight-dependent businesses, including the 66 area shippers identified by the city who were used to having two carriers compete for their business? How did they feel about losing Conrail as the dominant market provider and the perennial competitor CSX now wielding exclusive control of the area's rail routes?

Indianapolis Power & Light, for one, voiced its objections on the basis that less competition would inevitably mean higher shipping rates. IPL ships two million tons of coal each year to fire electric generators at two plants in

Indianapolis. Prior to the purchase IPL, like many other local businesses, benefited in negotiations by having both Conrail and CSX interested in serving its coal freight needs. With the loss of competition, IPL feared a hike in its rates which would, ultimately, have to be reflected in the utility costs charged to the public.

CSX and its purchasing partner, Norfolk Southern, have maintained that there will be no decline in competition, or customer choice in the Indianapolis market. Officials of both railroads have repeatedly said they plan to aggressively compete

for customers in the Indianapolis market, though Norfolk Southern's switching yards and other support facilities stop well north of the city at Lafayette and Muncie. Clearly, to serve just about any shipper in Indianapolis, Norfolk Southern would have to have a switching agreement with CSX to use track which CSX will control. And, being in the position to inhibit competition, CSX could choose to raise the \$390 per car switching fees most recently charged by Conrail for access to the same track.

For local shippers like IPL, the claim of continued competition and freedom of choice rang false. The Conrail acquisition would leave IPL with service from CSX Corp. and the

shortline, Indiana Railroad, to its Stout plant on South Harding Street. However, CSX owns 89% of Indiana Railroad which, for this reason, would pose no real competitive threat. Because it ships about 2 million tons of coal to its Stout and Perry K plant, the utility argued before the Federal Surface Transportation Board for better trackage rights for Norfolk Southern and another shortline railroad, Indiana Southern. In this way, the promise of competition among rail shippers serving some of the areas largest industries might be maintained, if not improved.

cont on page 7, see 'C's of Change

? DID YOU KNOW ?

The Avon Yard, located west of Indianapolis, is the largest major rail system classification yard in our region, handling approximately 30 trains and 1,400 to 1,800 cars a day!

Y O U R M P O S T A F F

... includes these people who would be happy to address your comments or questions on any aspect of the transportation planning process:

STEVE CUNNINGHAM • SENIOR PLANNER	317/327-5403
MIKE DEARING • SENIOR PLANNER	317/327-5139
KEVIN MAYFIELD • PLANNER	317/327-5135
LORI MISER • MANAGER-TRANSPORTATION PLANNING	317/327-5136
MICHAEL PEONI • PRINCIPAL PLANNER	317/327-5133
SWESON YANG, AICP • CHIEF TRANSPORTATION PLANNER	317/327-5137

'C'S OF CHANGE (from page 6)

In an effort to help ensure the continued economic health of area businesses, Indianapolis Mayor Stephen Goldsmith met with officials of CSX Corp. in fall of 1997 in order to obtain assurances on several key points. After nearly eight months of negotiations, the city announced it had reached an agreement with CSX Corp. and was withdrawing its official objections against the planned acquisition which it had filed with the Federal Surface Transportation Board. Specifics of the agreement, intended by both the city and CSX Corp., to improve the effect of the acquisition on area businesses include:

- CSX will charge no more than \$250 per rail car to switch Norfolk Southern cars in Indianapolis for five years after acquiring control of Conrail routes. This figure represents a \$140 per car reduction of the \$390 rate previously charged by Conrail.
- The city has the right to appoint an auditor to participate in a joint CSX/Norfolk Southern cost study to examine switching fees.
- CSX will negotiate to allow Norfolk Southern to purchase and/or build track for Norfolk Southern's exclusive use at Conrail's Hawthorne Yard Terminal, located off Southeastern Avenue on the city's Southeastside, if Norfolk Southern so desires.
- CSX will grant Norfolk Southern switch access to all existing and future shippers located on the Indianapolis railroad beltway and any industry not on the beltway that currently has service from two railroads.

These and other provisions go a long way toward assuring the continuation of the competitive environment that benefits local rail freight shippers and area business in general. To underscore the importance of such measures, the Federal Surface Transportation Board acknowledged the decline in our area's rail competition and offered some relief by attaching conditions to its approval of the Conrail purchase. Among these are the board's order that CSX allow Norfolk Southern access to IPL power plants on the city's Southside over what was formerly Conrail track.

INDOT STUDY (from page 2)

The Initiative has already completed Phase I and Phase II which examined the viability of the system and involved preparation of an economically feasible business operating plan. Phase III is starting now and, along with re-assessing and formalizing the existing operating plan and its ridership forecasts, it seeks to develop an efficient organizational structure for the regional system and to define cost-sharing procedures for its many multi-state rail corridors.

In Indiana, three routes are being examined. These are the Detroit-Chicago route through Northwest Indiana, the Chicago-Cleveland route across northern Indiana, and the Chicago-Cincinnati corridor through Indianapolis. In Phase III, funding briefings will be held with the staff of the Midwest Congressional delegation.

Ultimately, a high speed rail service network linking the major cities of nine Midwestern states would involve about 3,000 miles of track and



cost about \$3.5 billion. A financing goal of 80% Federal funding and 20% state/local matches is sought.

A second INDOT study concerning passenger rail service is focusing only the Hoosier State. Called the Indiana Statewide Passenger Rail Study, this initiative is concentrating on identifying the passenger rail routes with the most potential in Indiana. "This could be viewed as a complement to the geographically broader Midwest Initiative," Beck says. "Here we're looking at Indiana rail corridors exclusively, trying to determine if there may be others in Indiana that are appropriate for the development of current or future passenger rail service." Typical routes may include Indianapolis to Terre Haute, Indianapolis to Fort Wayne, Indianapolis to Louisville, or Terre Haute to Evansville. This study, begun in 1997, should be completed by early 1999.

"At one time, rail was the preferred means of travel for its convenience, comfort and speed," Beck notes. "Now, through these studies, and through preliminary discussions about corridor improvements with the owners of the rail lines, we are attempting to develop rail service that can be considered a desirable, high quality transportation alternative. Our goal is to offer riders the safety and speed benefits of new technology along with the old fashioned concepts of comfort and economy."

? D I D Y O U K N O W ?

*Indiana has lost about
2,000 miles of rail line
since 1968.*

TRACK RECORD *(from page 1)*

Only the area's freight rail system continued to grow to meet the demand of the city's retail and industrial concerns. The city's growing army of new motorists would soon complain about wheel damage and the bumpy ride caused by urban tracks, just as city fathers considered how these steel girdles inhibited development and urban redesign.

Following the Second World War as steel manufacturing and fabrication of items nonessential to the war effort resumed, it only made sense to completely convert the city public transit system to off-track buses. After all, the city was growing in all directions, to accommodate the population boom of returning G.I.s and their growing families. Buses could travel on new roads along side family sedans. Laying track to serve a diminished ridership didn't make good economic sense.

? DID YOU KNOW ?

The term "in'ter•ur'ban" was coined in 1893 by Charles L. Henry, a lawyer and electric rail pioneer from Anderson, IN, to describe electric railways between towns.

But, in a time when the car is considered the traditional form of "getting around" and there is increasing demand for alternative modes of transportation throughout the region, it's good to remember what once was and, with updating, could be again. The following excerpts appeared in the November, 1912 issue of *Brill Magazine*, a trade publication. William Howard Taft was President, the Titanic had sunk just seven months earlier and Indianapolis was showing the world how a modern city moved people.

The City

Indianapolis... has an area of 30 square miles and a population of 250,000. It is one of the most attractive inland cities in the United States, having an arrangement of streets and avenues remarkable for its orderliness, an excellent system of parks, splendid public and business buildings, and many beautiful residences. At the center is the Soldiers' and Sailor' Monument "Circle," near which four principal avenues radiate to the four corners of the city; the other streets, with few exceptions, run at right angles to each other. All streets and avenues are 90 ft. wide, except Washington Street, which has a width of 120 ft.

...Eight parks are within the city's boundaries, with an aggregate area of over 1300 acres, and three just outside the limits, add much to the beauty of the city.

...The Soldiers' and Sailors' Monument which stands in the circle in the center of the city, rises to a height of 285 ft. above the street level and has enormous fountains at the base, said to be the largest in the world, their capacity being 20,000 gallons per minute.

...The state and city institutional buildings are commodious and modern, and the city is well provided with hospitals and libraries. As an educational center, Indianapolis takes a high rank, having the University of Indiana, Indianapolis College of Law, Indiana Medical College, State College of Physicians and Surgeons, Indiana Veterinary College, the Indianapolis Normal School, and a number of technical and training schools.

The central geographical position and extensive railway connections, together with its proximity to important coal fields, make Indianapolis one of the foremost industrial centers in the middle west. In the live-stock industry, the city stands first in the Ohio Valley and has stock yards in the southwestern part which cover more than 100 acres. Slaughtering and meat-packing have, from an early date, been the principal industries, and of recent years the manufacture of automobile bodies, motors and accessories has become so large as to rival other chief industries, and today Indianapolis is said to be the second automobile-building city in America.

It has large foundries and machine shops, flour and grist mills, steam railway car building and repair shops, structural iron works, printing and publishing plants, planing and wood mills, lumber yards, carriage and wagon works, cotton and woolen goods, starch, furniture, canned goods, factories and many others which belong in the class of its chief industries.

cont on page 9, see Track Record



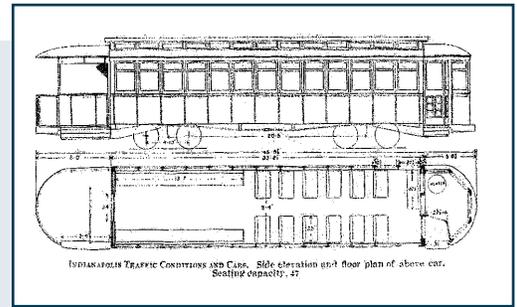
TRACK RECORD *(from page 8)*

The Rail System

...Indianapolis is served by eight trunk steam railway lines, all of which enter the Union Station, and more than 150 trains, carrying over 30,000 passengers, enter and leave daily. The station and lines are outside of the business district. The city is the greatest interurban electric railway (Editor's Note: street cars) center in the world, having no less than 12 lines radiating in all directions, aggregating a trackage of 1346 miles and averaging in 1911, 517 passenger cars leaving the interurban terminal station every 24 hours, and 65 freight cars from the freight terminal.

The Indianapolis Traction & Terminal Company operates all of the city lines, comprising 140 miles of single track with nearly all the system double-tracked. The central loop or belt system of double-track lines, which surrounds a square of four full blocks in the heart of the city, and double-track lines looping around blocks on all sides of the central belt, provide ideal terminal facilities for a radial street railway system of this character and also for the entrance to the terminal station of the interurban cars coming from all directions. The width of the streets, together with the fact that the "Circle" and the thoroughfares within the central loop are free of railway lines, facilitates the

movement in every direction of vehicles and pedestrians through this district and reduces to a minimum the traffic congestion



commonly experienced in the business districts of large cities.

The large central belt terminal, by enabling passengers from all parts of the city and vicinity to enter or leave the city and interurban cars at almost any point in this zone, has tended to distribute the office buildings, shops, banks, hotels, theaters and public buildings over a broad area (Editor's Note: an early example of the relationship between land-use and transportation planning.)

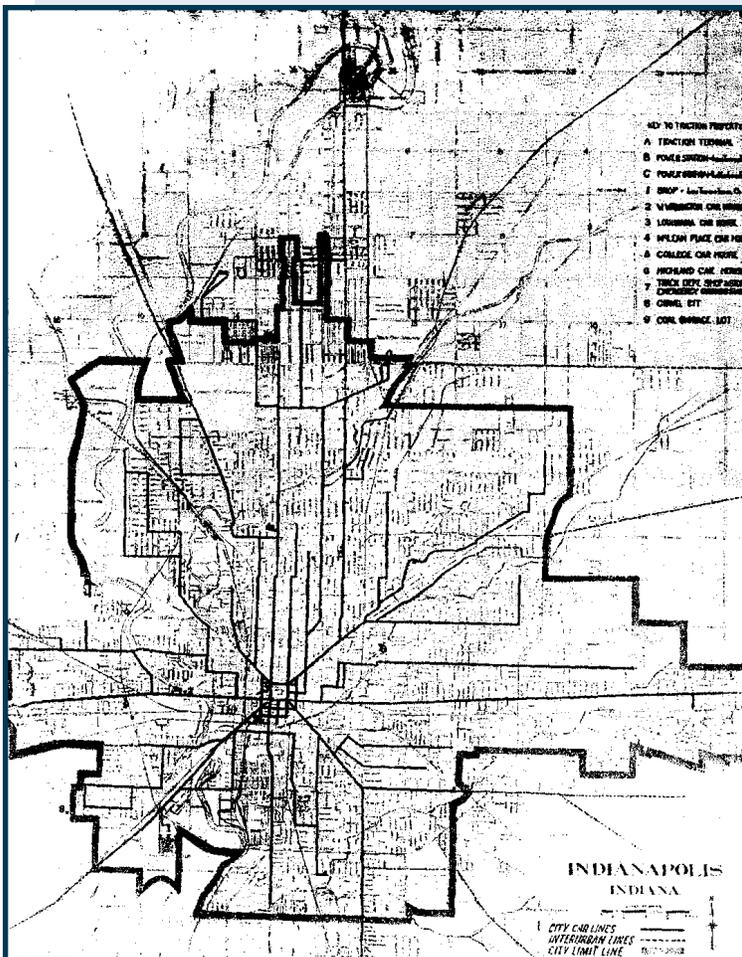
...The intersection of Washington and Illinois Streets and the junction of Kentucky Avenue form the heaviest street railway point in Indianapolis. Between 5:30 and 6 PM, when the peak of the evening rush hour occurs, an average of six cars a minute, or 360 an hour, pass or turn here. While this number is high for a system of the completely radial type and for a city of this population, it does not indicate undue congestion, as the cars receive most of the load at various points on the main loop or the supplementary loops and, therefore, the number of passengers taken on at this point or near-by points is not excessive.

...The wide, level streets and avenues, and long blocks, permit a comparatively high rate of speed to be attained as soon as the cars leave the central loop district.

...The map (Editor's Note: see this page) shows the excellent arrangement of the entire railway system. The routes in all directions are direct and sufficiently close in the outlying districts to provide adequate transportation to every section within the municipal boundaries and beyond to several parks, the State Fair Grounds, and a number of populous suburbs.

The number of cars in normal operation averages about 244 during the morning rush hour period and 245 for the evening load. These periods extend from 6 to 8:30 AM with the peak from 7:30 to 8; and in the evening from 4:30 to 6:30 PM, with the peak from 5:30 to 6. The car mileage for 1911 totaled 10,540,596 miles, with 65,504,929 revenue passengers carried, which figures 6.21 revenue passengers per car mile; 20,810,437 transfers were collected. The density of traffic in the same year, as shown by the number of revenue passengers per mile of track (140 miles) was 467,892.

cont on page 12, see Track Record



CONNECTIONS' RAIL CONSIDERATIONS

As previously reported (*teMPO* Special Edition, May/June 1998), an 18-month major investment study (MIS) of northeast corridor transportation is currently underway. This study, called *conNECTions*, is investigating potential solutions to the corridor's problems of traffic congestion and lack of mobility as it relates to public transit. The northeast corridor, stretching from just south of downtown northeast to Noblesville, is our region's most traveled corridor. As such, our region's transportation system suffers its most acute problems here.

To solve these problems, *conNECTions* is evaluating a variety of potential solutions using the assessment criteria of Effectiveness, Cost-Benefit Analysis, Financial Feasibility, Environment, Social Equity and Anticipated Public Acceptance. Included among these are several passenger rail options as well as various roadway improvements, conventional and express bus service and High Occupancy Vehicle (HOV) Lanes.

With the renewed general interest in rail service availability, as well as the growing demand for alternative transportation options, the possibility of local rail service has generated the most press for *conNECTions* to date, possibly because it promises to make economical use of existing facilities, like the 38-mile abandoned rail corridor that stretches from Tipton to 10th Street in Indianapolis. Still, there is no such thing as a free ride.

Following is a brief description of four rail systems under *conNECTions'* consideration, including the construction and operating costs per mile for each:

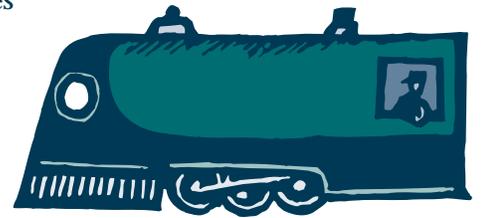
LIGHT RAIL TRANSIT

This system is similar to the electric trolleys or street cars that characterized the region's interurban rail system in the early 1900's (See *Indy's Track Record*, page 1). Like the vehicles of old, modern light rail cars are powered by electrified overhead wires and can operate on existing streets in mixed traffic, or exclusive right-of-ways (ROW).

Average Vehicle Capacity	145 passengers
Operating Environment	Mixed traffic or separate right-of-way
Average Operating Speed	Mixed traffic - 20 mph Sep. ROW - 45 mph.
Typical Station Spacing	1/2 to 1 mile
Construction \$ per mile	\$20 to \$25 M
Operating \$ per vehicle mile	\$6.75 to \$9.60

Currently Used In:

- St. Louis, where 18 miles of track, from downtown to the airport, carries 40,000 riders a day.
- Cleveland, where 15 miles of track carries 26,000 rider a day from the suburbs to downtown and back.
- Portland, where two lines stretch 33 miles from the suburbs to downtown and carry 50,000 a day.



CONVENTIONAL COMMUTER RAIL

This system involves a diesel or electric-powered train on its own right-of-way or sharing track with a freight railroad.

Average Vehicle Capacity	125 to 200 passengers
Operating Environment	Separate or shared tracks
Average Operating Speed	40 mph
Typical Station Spacing	1 to 5 miles
Construction \$ per mile	\$10 to \$30 M
Operating \$ per vehicle mile	\$9.95

Currently Used In:

- San Francisco, where the CalTRAIN system covers 47 miles
- Baltimore, with its 187 mile MARC system.
- Chicago, where the Metra system operates over more than 400 miles of track
- NW Indiana, where the SouthShiore Line stretches from South Bend to Chicago.

COMMUTER RAIL/DIESEL MULTIPLE UNIT (DMU)

This system involves a self-propelled diesel powered rail car that operates on existing rail lines.

Average Vehicle Capacity	100 passengers
Operating Environment	Separate or shared track
Average Operating Speed	35 mph.
Typical Station Spacing	1 to 5 miles
Construction \$ per mile	\$4 to 8 M
Operating \$ per vehicle mile	\$7.00 to \$8.00

Currently Used In:

- Europe. Also, the Regio Sprinter (DMU) was demonstrated in the US and Canada.
- Dallas, where 13 refurbished rail diesel cars began service in January 1997 on an initial 10-segment of track.

AUTOMATED GUIDEWAY TRANSIT (AGT)/MONORAIL

This is a system of electric-powered driver-less vehicles operated on an elevated guideway usually for circulator service.

Average Vehicle Capacity	AGT - 20 to 100 passengers Monorail - 30 to 45 passengers
Operating Environment	Elevated guideway
Average Operating Speed	AGT - 20 to 30 mph Monorail - 35 to 45 mph.
Typical Station Spacing	1/4 to 1/2 mile
Construction \$ per mile	\$30 to \$120 M
Operating \$ per vehicle mile	\$20 to \$40

Currently Used In:

- Newark, where an 1.9 miles AGT system operates between the airport and Amtrak station
- Miami, where a downtown AGT system incorporates 4 miles of track
- Disney World, where a Monorail System covers the 14.5 miles from parking facilities to park attractions
- Seattle, where the 1.1 mile Monorail system, a reminder of the 1962 World's Fair still aids downtown travelers.

For more information on these or any of the options being evaluated by *conNECTIONS*, or for more information on the study itself, call the *conNECTIONS* Hot Line, toll-free, at 1-877-NEC-LINK, visit the *conNECTIONS* web site at www.indygov.org/connections, or call Lori Miser at 327-5136 or Mike Peoni at 327-5133, both of your MPO.

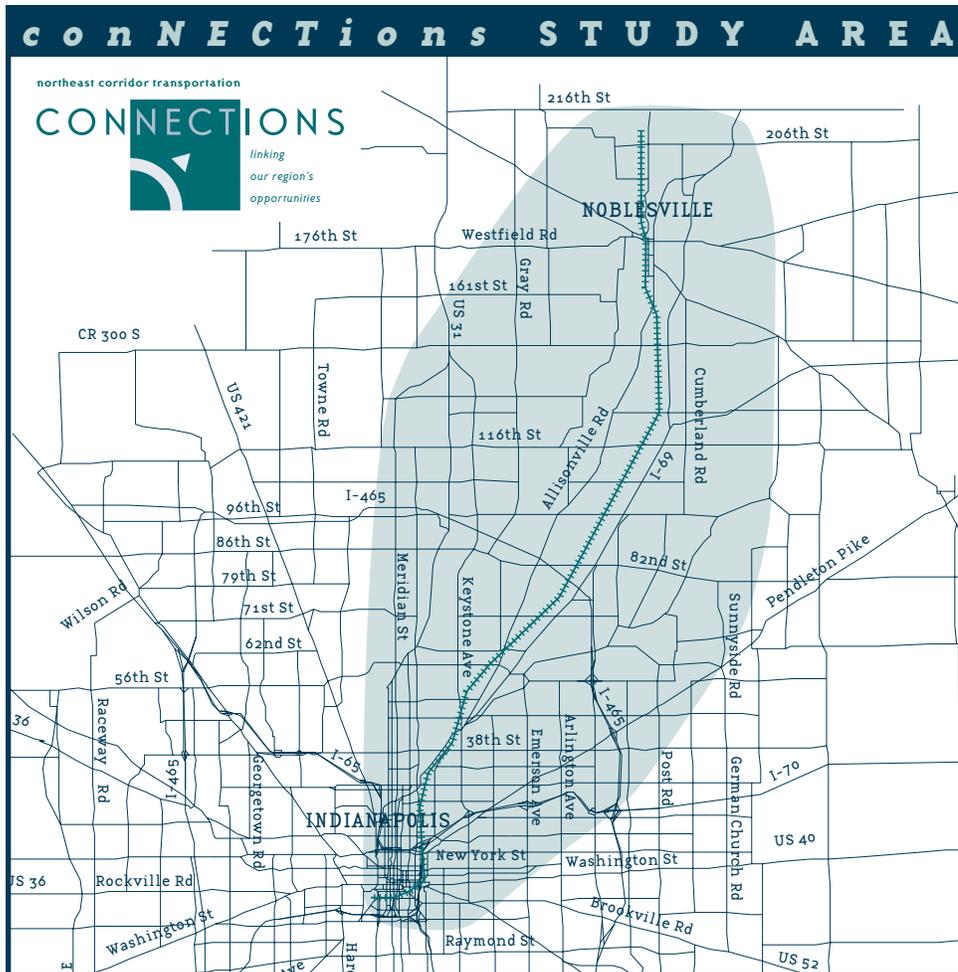
OVERVIEW (from page 4)

Central Railroad of Indiana, a shortline, operates the former Conrail line between Shelbyville and Cincinnati with trackage rights over Conrail facilities from Shelbyville to Indianapolis and Frankfort.

Indiana Railroad Company, a shortline, operates the former Illinois Central Gulf line between Indianapolis and Newton, Illinois. It handles significant coal traffic from Indiana mines to Indianapolis Power & Light Company (IPL), and directly serves IPL's Stout Plant. It is the only shortline railroad with terminal facilities in Indianapolis. CSX owns 40% of the company's stock.

? DID YOU KNOW ?

Our regional rail needs are currently served by five rail yards: Avon, Hawthorne, State Street, Transfer Yard (near Oliver and Warman Avenue), and Senate Avenue Terminal Yard.



Indiana Southern Railroad, a shortline, operates the former Conrail line between Indianapolis and Evansville. It also handles significant Indiana coal traffic destined for IPL. The company is a subsidiary of RailTex, which operates about 25 shortline railroads nationwide.

Louisville & Indiana Railroad, a shortline, operates the former Conrail line between Indianapolis and Louisville. The company has little business in Indianapolis but serves numerous customers to the south.

teMPO

is published quarterly by your Metropolitan Planning Organization, part of the Department of Metropolitan Development. If you know of anyone who would like to receive *teMPO*, or if you have any questions concerning its publication, please call:

Mike Peoni at 327-5133
 Department of Metropolitan Development
 Metropolitan Planning Organization
 City-County Building
 200 East Washington Street
 Suite 1841
 Indianapolis, IN 46204-3310

teMPO was written and prepared for publication by Whitman Communications, Inc.

TRACK RECORD *(from page 9)*

The Facilities

The type of closed car chiefly used on the Indianapolis system is arranged for single-end operation and is built on a staunch wooden bottom frame having sills well reinforced with steel plate and inside and under-trussing to withstand any tendency to deflection due to the wide truck centers and long rear platform. The sides are sheathed in No. 10 sheet steel put on in short sections and readily removable in case of injury. The seating arrangement, shown in the accompanying diagram, provides efficiently for the mixed city and suburban service characteristic of all the lines. Standing space at the rear is supplemented by the long

platform on which passengers are allowed to smoke. A wire screen encloses the upper part of the far side of the platform. Ingress and egress are at both ends, the rear step being wide enough for three persons to board or alight at the same time.

...Brill No. 27-F trucks, capable of a speed of 35 miles per hour, are employed under the majority of these cars.

A large portion of the closed cars are replaced during the summer by 15-bench open cars equipped for single-end control and, therefore, have a running board on one side only and high wire screens enclosing the far side from end-to-end. The passenger equipment comprises in all 211 double-truck closed cars, 60

single-truck closed, 65 double-truck open, 122 single-truck open. The service cars include 7 sweepers, 2 snow plows, and 6 sands cars equipped with track scrapers.

? DID YOU KNOW ?

Railroading dates back to 1803 when the steam-puffing "iron horse" was invented in Great Britain.



Metropolitan Planning Organization

City-County Building
200 East Washington Street
Suite 1841
Indianapolis, IN 46204-3310

