

The Relation of County Roads to Indiana's Industrial Economy

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Indiana's location in respect to the nation's major markets and raw materials has made it a major industrial state. In the latest census, Indiana ranked *eighth* in the "value added by manufacture."

The competition between states and between communities to attract new industry is tremendous today. In spite of the state's fine location and other natural advantages, Indiana communities must constantly battle to keep their present industry and attract new industry. The State Chamber of Commerce has estimated that population growth, automation, and other new developments create a need for 30,000 new jobs in Indiana each year.

The Indiana Employment Security Division has estimated the state's population in 1970 will be 5,731,000. The annual rate of increase, therefore, is estimated at 100,000, so the current estimate of a need for 30,000 new jobs each year will probably increase rather than shrink.

The latest census of manufacturers shows that Indiana actually lost 6 per cent of its manufacturing jobs between 1954 and 1958. To offset this downward trend, the Indiana Employment Security Division reports show a trend upward in the number of certain nonmanufacturing jobs. The job classifications that appear to be growing most rapidly are retail selling, general merchandise, service, government, and educational services. These are the jobs that are created by new shopping centers, schools, service stations, and so on.

The need for the creation of more jobs in the state is apparent. The type of jobs that will probably be created is indicated in the trend toward automation in manufacturing and the increase in services needed by an expanding population. Now the questions are—where within the state will this expansion take place and where within the county should we expect the greatest need for better county roads?

Indiana, like most of the rest of the nation, showed a large growth in population between 1950 and 1960. However, the growth was not

an even growth. The ten largest counties experienced over 65 per cent of the total population growth for the state.

The census also showed that those counties with the largest total population also had the largest rural population. During the 1950s the larger centers of population experienced the most growth while the basically rural areas of the state were losing total population or, at best, standing still. The increase in population is not limited to areas within city limits. The census indicates the greatest growth has occurred in the suburban areas of the larger counties.

Marion and Lake counties, Indiana's largest counties in population, are industrialized areas and accounted for nearly 40 per cent of the state's growth between 1950 and 1960. Other counties with large growth characteristics include other industrial counties such as Allen, St. Joseph, Elkhart, Madison, Delaware, Porter, and LaPorte. Several more-or-less rural counties surrounding Marion County also showed substantial growth—percentage wise the greatest. These were Johnson and Hendricks.

Reading down the list of those counties showing the largest *rural* growth sounds nearly like a repeat of the general population table: Marion, Lake, Allen, Elkhart, St. Joseph, Madison, Delaware, Bartholomew, Hendricks, Hamilton, . . . and so on.

The point to be made here is that we cannot say the growth is in the cities and therefore of no concern to the counties. The opposite is true. Those counties showing a major growth in population during the past ten years are showing their major growth outside the city limits.

When we take the various pieces of information about general growth in population, the trends in the location of the growth, the changes in the type of employment, and the tendency for both industry and business to move away from the central city, and add them together, we get a picture of the need for a topgrade county highway system.

Our society depends a great deal upon the automobile. It has given the individual a new freedom. A freedom in regard to his place of employment, his residence, and a greater freedom in choosing where he wants to trade. I think we all can see this from personal observation. Each of us could give a personal example of someone with whom we are acquainted who may drive 10, 20, or 30 miles every day to work.

A study made by the Indianapolis Metropolitan Plan Commission showed many factory workers in the Indianapolis area drove to work from as far away as Rushville and Newcastle. This means a trip of approximately 45 miles each way. The same survey showed that

west of Indianapolis where travel was on a four-lane highway—U. S. 40—the radius of employment extended to Brazil, which is nearly 60 miles from the city. A 1956 survey by the Plan Commission indicated at least 17 per cent of Marion County's manufacturing labor force commuted daily from a place of residence in some other county. There is also probably a large number of nonmanufacturing commuters too. Many of the out-of-county commuters use county roads traveling to and from the plant. We should expect this if we will remember that about 77 per cent of the roads in the state are under the counties' jurisdiction.

We also want to develop the point that while industry and business need good county roads their employees and customers, new industry is locating in large numbers on county roads. One reason for this is that many new state highways are built with a limited access provision. This limits the number of good sites directly on state highways but good county feeder roads make the choice of sites almost endless.

A great deal of space is required for the construction of a new industrial plant. Many industries observe a rule-of-thumb ratio that requires 10 acres of land for each acre of property under roof. An adequate area is necessary for the location of a one-story plant, parking space, loading docks, landscaping, and especially to provide room for future expansion. To find this much area, it has been necessary for industry to seek sites outside the cities and very often on county roads.

This sounds generous, but quoting from Wisconsin's 1957 Industrial Zoning Practices, 240 square feet of building area are required per employee and their ratio for new plant building coverage is one unit of land to 16 units of unoccupied area. Their definition of unoccupied area is off-street parking, landscaping, access streets, easements, etc.

The case for industry locating on county highways seems convincing, but what is actually happening both in Indiana and in other states?

A recent report by the Evansville-Vanderburgh Regional Plan Commission proposed that obsolete plants within the city be abandoned and that small local industry located in congested quarters move to new industrial areas outside the city. The commission has designated three major sites for industrial development—all outside the city limits. Two of these sites are served by both county and state roads and the other area is served exclusively by a county highway. Four more areas have been reserved for future development and each of these are located on county roads.

Marion County, Indiana, has many examples of industries which have chosen to locate on county roads. The first example that springs

to my mind is Post Road, which extends from Fort Harrison on the north to the southern part of the county. Located on this county road are any number of individual businesses, shopping centers, housing developments, schools, and a number of large industries. In the western part of the county, plans have recently been announced for the establishment of an industrial park, Fletcher Park. It is located near an Interstate Highway and the municipal airport, but it still will be directly served by a county road.

The 1958 industrial rezoning action by Marion County set aside several major industrial areas. Nearly all of these areas were on county roads. Besides Post Road, major industrial reservations were made on Harding Street, Holt Road, High School Road, and Country Club Road.

Several counties outside of Indiana serve as good examples of the extent to which counties road systems are used for industrial development. Kent County, Michigan, is located at Grand Rapids. As long ago as 1936, General Motors located a stamping plant on a county road and shortly after World War II, built a diesel plant on a county road in the same township. Since that time other industries have also located in the same general area. A housing boom followed and the necessary service industries also were established in the area. Today this township has a population of nearly 50,000 persons. Bissell Carpet Sweeper found they could not expand their old plant and no parking facilities were available so last year they moved north of Grand Rapids on a county road. Warehouses were also located on county roads by Kroger, Spartan Stores, and I. G. A., all of which do a great deal of trucking.

The secretary-manager of the Board of County Road Commissioners, L. E. Kaufman, says there are not enough good locations on state highways. Industry has a much better selection of sites if they are willing to locate on county roads. In most cases the locations are near the state highway but it is still necessary to use the county roads as feeders.

We have also corresponded with the county highway departments of Monroe County, New York, and Davidson County, Tennessee, about their industrial development programs. Both reported that a number of major industries had located on county roads during the past few years. Both also reported that the establishment of these industries on their highway system has meant that the county highways must often be constructed to equal or surpass state highway standards.

W. B. Lamb, engineer, Davidson County (Tenn.) Highway Department, said their county has worked very hard on attracting industry.

His county is particularly interested in attracting warehouses, large printing corporations, water heater plants, and industries of this type. The county provided highway facilities for two new plants that recently located on their highway system. For the Ford Glass Company, the county constructed a three-lane highway which is the only access to the plant. The county highway was a secondary access to the new Gates Rubber Company facility but the department improved a two-lane facility to serve the plant.

These three out-of-state counties had one thing in common which all public officials responsible for county highways will want to consider. They established definite standards for construction of the roads which were serving industry and they worked closely with industry in planning ahead for the highway facilities that would be needed by both the industry and the employees of the industry. Each of these three county highway departments said it was their objective to work very closely with the planning people of the various towns since it is, after all, they who control the type of growth that our highways must support. They said this coordination prevents their permitting development that cannot be practically accommodated by county highways and alerts the departments in advance of needed improvements.

The Davidson County Highway Commission has classified their highway system into three classes: residential; collector; commercial and industrial road. The minimum construction standards for industrial and commercial roads require a 60-foot right-of-way and a 10-inch base. Under conventional construction the base is required to be 24 feet wide. The minimum dimensions for each class and type of roadway are outlined in the following table:

The exact figures here aren't particularly important in themselves but it is an important indication of what Indiana's county highway departments must expect if industry does develop in their county. And most of us think we would like to have new and expanded industry in our local community.

County highway departments should expect industry to sit down with them and discuss what type of highway improvement will be needed to serve a new plant. Industry should cooperate in the matter of right-of-way and set-back distances. The county highway department should do its share by encouraging the location to be reasonably near a state highway and then building an all-weather road to standards that will be required to handle the type of traffic expected.

Of course, other industrial location factors should be considered

MINIMUM DIMENSIONS OF ROADWAY CROSS-SECTION
(Davidson County (Tenn.) Highway Department)

CLASS OF ROAD	RESIDENTIAL		COLLECTOR		INDUSTRIAL & COMMERCIAL		
	Type of Cross Section	Conventional	Curb & Gutter	Conventional	Curb & Gutter	Conventional	Curb & Gutter
Right-Of-Way	50'		50'	60'	60'	60'	60'
Width of Base	20'		33'	22'	41'	24'	41'
Thickness of Base	6"		6"	8"	8"	10"	10"
Type & Width of Surfacing	20' Asphaltic Concrete Binder Course		30' A. C. Binder Course	22' Asphaltic Concrete Binder Course	38' A. C. Binder Course	22' Asphaltic Concrete Binder Course	38' A. C. Binder Course
Width of shoulder	8'		—	8'	—	8'	—
Average thickness of shoulder	5"		—	6"	—	7"	—

too, e.g., utilities, transportation, water, waste disposal, storm water, and zoning.

Those of you who have been in the highway business for many years remember the slogans urging us to get out of the mud, and then out of the dust, and then the term "farm to market" was popular. With industry's employees already living on county roads to a great extent and with more and more new industry locating on county roads, I'd like to suggest the new battle cry of the highway user may be "get us home from the shop on time" on better "job-to-home" roads.