SCHOOL OF CIVIL ENGINEERING

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HISTORY OF THE INTERSTATE
SYSTEM IN INDIANA

VOLUME III - ROUTE HISTORY
Part II

David A. Ripple

PURDUE UNIVERSITY
INDIANA STATE HIGHWAY COMMISSION

HISTORY OF THE INTERSTATE SYSTEM IN INDIANA

Another volume as an Appendix which is a detailed Table titled "Interstate Highway Construction Record" is also in preparation and will be issued at a later date. A brief summary of the entire history is also in preparation.

Each of the Volumes covers a part of the History and may be used separately as each is complete for the topic or topics covered. The entire set of four volumes provides an excellent in-depth reference document of the Interstate System history in Indiana and should be extremely valuable for many purposes. To my knowledge Indiana is the first state to prepare such a factual detailed history of the Interstate System.

Sincerely,

Harold L. Michael
Associate Director

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Final Report
HISTORY OF THE INTERSTATE HIGHWAY SYSTEM IN INDIANA
Volume III (Chapter VI)
ROUTE HISTORY

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In Cooperation With

Indiana State Highway Commission

The contents of this Report reflect the views of the author who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Indiana State Highway Commission or of the Joint Highway Research Project of Purdue University.

Purdue University
West Lafayette, Indiana
December, 1975

This dissertation is dedicated to those who conceived an interregional system of superhighways and to those who brought this concept into reality.

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ABSTRACT

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The History of the Interstate Highway System in Indiana.
Major Professor: Harold L. Michael.

This work is a reconstruction of the planning, development and implementation of the Interstate Highway Program in Indiana as well as the Nation. The historical data for this record was gathered from Federal reports, documents, and legislation; Federal Highway Administration documents and interviews; Indiana State Highway Commission records and interviews; and other transportation related agency reports and interviews throughout Indiana.

Because of the voluminous amount of data involved, a combination of the stages of the systems analysis process and the highway planning and programming process was used in the reconstruction and presentation of the historical record.

The work begins with a description of the traditional role of transportation in the economy and the role of government in highway development. The need for an interregional super highway system and the goals and objectives of the Interstate Program are documented.

The development of the Interstate Program is traced from its conception in the late 1930's to the landmark legislation in 1956. The highway needs and programs developed by numerous studies during this period are described in detail.

The Interstate Program as set forth by the Federal Aid Highway Act of 1956 and its evolution are described in terms of policies on construction time, the utilization of manpower, the use of material and equipment, and financing. Under

financing, the report covers in great depth the apportionment of funds, federal participation, the use of funds, administrative policy, right-of-way acquisition, the inclusion of toll roads in the Interstate System and the reimbursement to States for completed Interstate sections.

All programs are subject to an evolution in policies and standards which ultimately affect the ultimate product. The research covers Interstate route location and selection, the route alternative evaluation process, the public hearing process, the A-95 Review Process (Project Notification and Review Process), the decision-making process and interagency cooperation, the environmental statement process and highway impact guidelines, policies on multiple use and joint development, the evolution of design standards with a heavy emphasis on safety in design, the evolution of interchange location and spacing, federal policies on fund participation, the evolution of landscape design including billboard and junkyard control, the evolution of the land acquisition process and the relocation process and other processes and policies.

Leaving the national scene, the work concentrates on designation of the Interstate Routes in Indiana, the formulation of the Indiana Interstate Program, and the historical development of the Indiana System. A description of studies and events leading to the development of each Interstate Route is covered in great detail.

Finally, the report assesses the relationship between revenues, expenditures, and cost completion estimates on the Interstate System. The progress of the Indiana System toward completion is documented on a fiscal year basis. A gross overview of the benefits and impacts of Interstate development on the citizens of Indiana concludes the presentation.

Indianapolis Metropolitan Area Interstates

Outside Interstate 465

The location planning of the seven Interstate legs that converge on Indianapolis will be discussed in subsequent subsections. Since portions of these routes fall in the Indianapolis Metropolitan Area, events that occurred on segments of these routes are discussed below.

Southport Road Controversy. The approved access control on Interstate 65 from Interstate 65 south to the Marion-Johnson County line included provisions for only an interchange at Southport Road. Full Federal Aid Interstate participation in the cost of constructing four lanes on Southport Road through the interchange area was approved by the Bureau of Public Roads in August of 1965 provided right-of-way was acquired to the extent necessary to protect the corridor from future costly negotiations and unregulated development. To determine the required right-of-way, the Metropolitan Thoroughfare Authority awarded a contract in December of 1965 to Huntington, Wade, and Associates to perform the preliminary engineering for the widening of Southport Road to four lanes from Madison Avenue to Emerson Avenue.

The Metropolitan Thoroughfare Authority consultant's report of March of 1966 recommended the relocation of the interchange from Southport Road to Emerson Avenue or Stop 11 Road because the cost of widening Southport Road through the Town of Southport was prohibitive. [Refer to Figure 72, p.489]. The report concurred with the Metropolitan Planning Commission Thoroughfare Plan which had designated Southport Road as a secondary thoroughfare, Stop 11 Road as a primary thoroughfare, and Emerson Avenue as an expressway. An interchange at Emerson Avenue would allow the distribution of traffic north and south on Emerson Avenue and the distribution of Emerson Avenue traffic east and west on Southport Road

or Stop 11 Road with preference given to Stop 11 Road. An interchange at Stop 11 Road would be more desirable than Southport Road because of the lesser cost to upgrade Stop 11 Road.

On April 18, 1966, the Metropolitan Thoroughfare Authority requested the relocation of the Southport Road interchange to Emerson Avenue on the basis of their consultant's findings. Although such a relocation would involve the abandonment of the Southport Road interchange design plan, the Indiana State Highway Commission agreed to consider the proposal and to make a recommendation to the Marion County Highway Cooperative Committees.

After study of the proposal, the Indiana State Highway Commission concluded the interchange should remain at Southport Road as originally planned and designed. An interchange on Interstate 65 at Emerson Avenue was considered less satisfactory than at Southport Road because the proposed multifamily residences along Emerson Avenue would result in higher right-of-way costs for the interchange. Furthermore, when the proposed Southport Road was constructed from Mooresville Road to Mann Road, Southport Road would become a major east-west road extending from SR 67 at Camby to Interstate 74 at Pleasant View and would serve as a collector-distributor road for traffic in southern Marion County providing access to all the major north-south highways. The ISHC also noted that an interchange at Stop 11 Road would result in adverse travel for traffic in the area of Southport and Homecraft and that Stop 11 Road would require extensive improvement, including a bridge over the White River.

An interchange at Emerson Avenue was noted as causing adverse travel to the central city for residents in the area between the Keystone Avenue and Greenwood Road interchanges on Interstate 65. Due to the area served, present and future

volumes on Southport Road were estimated to be greater than Emerson Avenue regardless of the interchange location. As Emerson Avenue paralleled Interstate 65, an interchange at an east-west road (Southport Road) would more adequately serve the greater amount of traffic destined downtown because Emerson Avenue serves the east side of Indianapolis.

In December of 1966, the Metropolitan Thoroughfare Authority of Marion County, with the backing of the Metropolitan Plan Commission and Marion County Commissioners, insisted that the interchange with Interstate 65 be relocated from Southport Road to Emerson Avenue if only one interchange was to serve southern Marion County. The Metropolitan Thoroughfare Authority based its recommendation on the fact that the Southport Road interchange would be inconsistent with the Metropolitan Thoroughfare Plan for Marion County since Southport Road was designated as a secondary thoroughfare; that the consultant report had recommended an interchange at Emerson Avenue; that right-of-way had been reserved on Emerson Avenue (a designated expressway) and not on Southport Road; that Emerson Avenue had a higher improvement priority than Southport Road; that Emerson Avenue would be able to collect traffic from several east-west roads; and that half of the projected traffic preferred Stop 11 Road to Southport Road.

The Indiana State Highway Commission replied that the consultant had not considered traffic assignment data in his recommendation, that the lack of continuity and lower level of improvement of Stop 11 Road would result in greater overall cost to improve the road as a cross county route than Southport Road, that interchange spacing and the location of developed areas to be served indicated that Southport Road was a better interchange location, and that the Emerson Avenue interchange would result in greater adverse travel from the developed areas.

In accordance with Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966, the Metropolitan Planning Department of Marion County reviewed the development plans for Interstate 65 between Greenwood Road and Thompson Road in July of 1968. An investigation of the IRTADS traffic assignments on Stop 8 Road, Southport Road and Stop 11 Road at Interstate 65 was initiated in March of 1968.

According to the 1985 traffic assignments, the location of an interchange at Southport Road, as proposed and designed, resulted in serious overloads on Southport Road and at the interchange of Emerson Avenue and Interstate 465. It also resulted in undesirable use of Interstate 465 from Emerson Avenue to Interstate 65 as a local access route to the central city from south Marion County.

The location of interchanges at Stop 8 Road and Stop 11 Road instead of Southport Road was found to result in substantial usage of these facilities and in reduction of the formerly overloaded conditions at adjacent interchanges. Stop 8 and Stop 11 Roads were classified as collectors in the 1965 Existing Major Street System and as Primary Thoroughfare in the Recommended 1985 Thoroughfare Plan by IRTADS. Southport Road was classified as an arterial in the 1964 Existing Major Street System and as a Secondary Arterial in the Recommended 1985 Thoroughfare Plan by IRTADS. On the basis of these conditions and the consultant's report of March of 1966, the Metropolitan Planning Commission requested replacement of the Southport Road interchange by interchanges at Stop 8 Road and at Stop 11 Road.

In an analysis of the Metropolitan Planning Commission's review of preliminary engineering on Interstate 65 from Greenwood Road to Thompson Road, the Indiana State Highway Commission concurred in the provision of a grade separation for the Marion-Johnson County Line Road, a two-lane separation of Gray Road on existing alignment, and a four-lane divided

highway separation for Thompson Road. The Metropolitan Thoroughfare Authority had previously made a commitment to widen Thompson Road to four lanes.

In the case of Emerson Avenue, additional right-of-way could not be acquired with Federal Aid Interstate funds unless local government made a commitment to construct a four-lane facility to logical termini within five years of completion of the Interstate facility. For Stop 11 Road, the Indiana State Highway Commission recommended that a twenty-four foot grade separation be provided rather than an interchange and additional right-of-way for widening to four lanes in the future. In the case of Stop 8 Road, a twenty-four-foot grade separation was to be provided, as designed, rather than an interchange with a four-lane divided facility.

The Indiana State Highway Commission again recommended a four-lane divided highway grade separation with interchange ramps for Southport Road. In support of the interchange at Southport Road, the Indiana State Highway Commission stated that Southport Road had greater continuity than the Stop 8 and Stop 11 Roads, that Southport Road served existing development better, and that an interchange at Stop 8 Road might create weaving problems because of proximity to the Interstate 465 interchange. It was noted that traffic from interchanges at Stop 8 Road or Stop 11 Road would pass through residential areas; however, traffic from the interchange at Southport Road would pass through a commercial area.

The Indiana State Highway Commission also suggested that a future interchange be planned at County Line Road because such a location would serve Greenwood Shopping Center, the major traffic generator in the area, and provide more acceptable interchange spacing.

The Indiana State Highway Commission held a public hearing in Southport on September 24, 1968 to determine public

reaction to the proposed interchange locations. Public opinion appeared to favor the location of the interchange at Southport Road as planned.

Various schemes of interchange and separation location were also evaluated in terms of capital cost. The location of the interchange at Southport Road was the least costly and displaced the least number of people. Of the alternatives with two interchanges, the alternative with interchanges at Southport Road and County Line Road was the least costly and displaced the least number of people.

In review of the recommendations by the State and the Metropolitan Planning Commission, the Federal Highway Administration agreed with the State that Southport Road was superior to Stop 8 Road or Stop 11 Road as a potential major east-west arterial on the basis of traffic service and continuity; however, it noted that the problem of widening Southport Road through the Southport business section was not resolved. FHWA further noted that the decision as to which interchange location would be in the best long range public interest was not clear cut. However, because the State's findings appeared to be supported by the local majority, particularly the residents of the area, the Federal Highway Administration concurred with the State recommendations.

Separation of 82nd and 86th Streets on Interstate 65 North. The original plans called for the separation of 86th Street and the closure of 82nd Street with a frontage road on the west side of Interstate 65 from 82nd Street south to Dandy Trail Road (Wilson Road). The street was to be closed on the basis of low traffic volume and lack of continuity; however, in April of 1958 potential community development in the area, as indicated by the New Macedonia Methodist Church at US 52 and 82nd Street, provided a better basis for estimating future traffic demands of the area. Consequently,

the Highway Commission requested a grade separation of 82nd Street. The regional office of the Bureau of Public Roads, however, found that the extension of the frontage road from 82nd Street north to 86th Street would provide adequate traffic service in the area without the separation at 82nd Street. The Bureau was reluctant to approve both separations because of their proximity and because the 82nd Street justification, which was submitted in August of 1958, also raised doubts as to the value of the 86th Street separation.

In September of 1958, the Indiana State Highway Commission submitted further documentation for separation at 82nd and 86th Streets. Considering anticipated traffic, the damages that would accrue to the Eagle Creek Nursery should 82nd Street be closed and traffic induced by the new church, the savings in road user cost and severance damages would amortize the cost of the grade separation at 82nd Street in four years.

The Indiana State Highway Commission requested the separation of 86th Street because it was the only road between 116th Street and 71st Street extending across Marion County. It was designed as a thoroughfare across the northern part of Marion County by the Official Thoroughfare Plan of Marion County, considered the location of an east-west route from SR 67 and SR 234 near McCordsville to SR 234 and SR 75 near Jamestown, and served an area of anticipated rapid residential development. The savings in road user cost would amortize the cost of the grade separation at 86th Street in four to five years.

If only one of the roads was separated, a frontage road between 82nd and 86th Streets would be required; however, the separation of both roads would eliminate the need for the frontage road resulting in a savings of \$32,000. In regard to separation spacing in rural areas, the Indiana State Highway Commission stated that proximity to a large metropolitan area such as Indianapolis justified separations at more frequent intervals than in strictly rural areas.

The Bureau of Public Roads approved grade separations at both 82nd and 85th Streets on Interstate 65.

86th Street Separation on Interstate 69. At the public hearing in the Spring of 1963, the Metropolitan Park Department requested the separation of 86th Street to provide access to new North Eastway Park west of Masters Road between 86th and 91st Streets. Furthermore, the Metropolitan Park Department had plans to include 86th Street from Masters Road to SR 37A, and perhaps from Masters Road to Fall Creek Road, in its boulevard system. The Metropolitan Planning Commission felt ultimate growth in the area between 82nd and 86th Streets on both sides of Interstate 69 (as indicated by subdivision plans and zoning) would justify the closer spacing of access across the Interstate for the park and local circulation in the future. In lieu of the separation, the Indiana State Highway Commission provided frontage roads on both sides of Interstate 69 from 86th Street to the 82nd Street interchange.

Bridgeport Road Separation on Interstate 70 West. In the Marion County Highway Coordination Committee meeting of July 20, 1959, discussion centered on the most suitable location for a future interchange between the Interstate 465 and SR 267 (later relocated) interchanges on Interstate 70. Bridgeport Road was an existing black top road that carried moderate traffic between Bridgeport on US 40 and Camby on SR 67, was very close to the center point of the 7.2 mile stretch between planned interchanges, and was the location of a presently planned separation.

The Metropolitan Planning Department felt a future interchange should be located one mile east of Bridgeport on the extension of Flynn Road because the alignment of Flynn Road was the designated location of a Industrial Primary Thoroughfare according to the Marion County Thoroughfare Plan and was a part of a planned outer belt.

Serious problems, however, confronted the development of a thoroughfare along the alignment of Flynn Road. The 25,000 foot extension of Flynn Road from SR 67 to US 40 required 16,000 feet of new construction on new right-of-way and two railroad crossings. Industrial development on Flynn Road might interfere with the expansion of Weir Cook Field and the flight path.

The Indiana State Highway Commission felt it would be more feasible to develop Bridgeport Road as a thoroughfare and recommended that Bridgeport Road be separated as planned and that Bridgeport Road be the site of a future interchange when traffic volumes warranted.

Interstate 70 East in Marion County. At the public hearing of January 29, 1963 on Interstate 70 from Interstate 465 east to the Marion-Hancock County Line, the Marion County Commissioners suggested that consideration be given to the grade separation of Cumberland Road and to a future interchange at German Church Road when future traffic warranted such an interchange.

In February of 1963, the Indiana State Highway Commission submitted economic justification for an additional highway grade separation on Interstate 70 at Cumberland Road to the Bureau of Public Roads for approval. The economic justification for the separation consisted of a benefit-cost ratio of 1.40, with the savings in road user cost amortizing the cost of the separation in seven years. The Indiana State Highway Commission also noted that county roads spaced approximately one mile apart should be separated where they were in proximity to a metropolitan area and because of the rapid subdivision development in the area north and east of Indianapolis. The Cumberland Road separation was subsequently built.

To obtain Federal Aid Interstate participation in additional lanes through separation areas, the city and county

made several commitments. The Indiana Board of Public Works promised to widen Franklin Road to four lanes from 21st Street to 42nd Street (the city limits of Lawrence) within five years after completion of the Interstate section.

Marion County also made a commitment to four lane Post Road from 21st Street to 30th Street. The Bureau of Public Roads, however, requested traffic data for Post Road, stating that four-laning would have to be extended farther north and south because traffic volumes exceeded 5,000 vehicles per day beyond the proposed termini. The county later expanded their commitment to widen Post Road to four lanes from US 52 to SR 67 within five years of completion of Interstate 70 in the area.

Interstate 74 Interchange at Clermont. In 1963, the Safety Director of Indianapolis Raceway Park requested an interchange at Hunter Road on Interstate 74 to alleviate traffic problems in connection with the operation of the park. Because of the lack of access to Interstate 74, traffic in the Brownsburg-Clermont area was served by US 136 which was a two-lane facility until 0.4 mile west of Girl's School Road.

The Indiana State Highway Commission reported that the area was adequately served by interchanges on Interstate 465 and the interchange at SR 267 on Interstate 74, approximately seven miles apart, and that separations between Interstate 465 and SR 267 on Interstate 74 (including 56th Street,

Hunter Road, Marion-Hendricks County Line Road and Salt Lake Road (Dandy Trail)) provided adequate local circulation. Because there was no substantial change in land use in the area and Raceway Park operated for a very limited time during the year, the construction of the interchange at that location was not justified nor economically feasible.

The fact that Interstate 74 had already been completed at the time of the request and that the interchange would violate rural interchange spacing guidelines made approval

of the additional interchange by the Bureau of Public Road unlikely. The petitioners requested U.S. Senator Bayh to intervene in the matter; however, the Bureau of Public Road's Washington Office agreed with the Indiana State Highway Commission.

In 1964, petitioners in Clermont requested an interchange on Interstate 74 at County Line Road. The Indiana State Highway Commission replied that Bureau of Public Roads policy prohibited the use of Federal Aid Interstate funds for additions to completed sections of the Interstate in order to keep within the present allocations and to complete the System on schedule.

In 1967, the Hendricks County Planning Commission and Hendricks County Commissioners requested an interchange on Interstate 74 in northwest Hendricks County because areas adjacent to Marion County had shown the highest residential growth; the completion of Eagle Creek Reservoir was expected to accelerate residential growth along Interstate 74; the area between US 136 on the north, the Baltimore and Ohio Railroad on the south, and one-half mile west of the Marion-Hendricks County line was zoned as industrial; tanker traffic from tank farms in the industrial area created a hazard in Clermont as they used US 136; and of the need to alleviate the traffic problems created by Indianapolis Raceway Park.

Since the Federal Highway Administration prohibited the use of Federal Aid Interstate Funds for additions to completed portions of the Interstate System and the Marion-Hendricks County Line Road was not a part of the State Highway System, the Indiana State Highway Commission stated that local financing of the interchange was an alternative. Marion and Hendricks County considered financing an interchange at County Line Road under fifty percent county and fifty percent Federal Aid Secondary county funds, but an agreement has as yet not been reached.

In March of 1972, the Sheriff of Marion County and Police Chief of Clermont again requested an interchange on Interstate 74 at the Marion-Hendricks County Line Road because of traffic problems. The Indiana State Highway Commission again stated that only local funds could be used to finance the interchange and that the interchange would receive consideration if future Federal Aid Interstate funding provided for additions to the basic System.

Similarly, Marion County requested an interchange at Dandy Trail and Interstate 74 in February of 1962. The interchange could not be added because of regulations on Interstate funding; however, the location will receive consideration for an interchange when funding becomes available.

Interstate Route 64

The Interstate 64 corridor parallels US 60 from Norfolk, Virginia, to Louisville, Kentucky; however, because the traditionally recognized major routing from Louisville to St. Louis was composed of US 150 from Louisville to Shoals and US 50 from Shoals to St. Louis, Interstate 64 was initially designated as paralleling the traditional routing. Due to the size of the Cincinnati Metropolitan Area, Interstate 64 could have been moved northward to cross the Ohio River near Cincinnati and to parallel US 50 to St. Louis; however, the introduction of Interstate 71 between Cincinnati and Louisville forced Interstate 64 farther south on US 60 through Lexington, Frankfort and Louisville.

Interstate 64 passes through sparsely populated areas of Illinois and Indiana and might not have been extended from Louisville to St. Louis in the Interstate inception stage of the early 1940's if Indiana had not promoted such an extension. From a national standpoint, the route probably could have terminated at Louisville with little opposition. In fact, Interstate 64 from Louisville to St. Louis was one

of the few Interstates east of the Mississippi River that was originally designated for construction with only two lanes.

The State of Illinois for some years had planned to build a four-lane divided highway to replace inadequate US 50 from East St. Louis to Vincennes. The intervention of World War II delayed such reconstruction and the possibility of similar reconstruction in Indiana. Consequently, US 50-150, being a part of the strategic highway network, further deteriorated during the war.

Before US 50-150 became a part of the Interstate System in 1947, Indiana had envisioned a new US 50 from Vincennes to Cincinnati. On the basis of US 50 development studies by Illinois and Indiana, plans for a toll bridge that was to link Mt. Vernon and New Haven were shifted to the north of Vincennes to serve new US 50. When legislation placed emphasis on the Interstates, the US 50 plans came to be utilized for the Interstate Route from Louisville to St. Louis. The improvement of US 50 all the way to Cincinnati was irrelevant to the Interstate Program.

Thus, the normal sequence of upgrading US 50 in the Vincennes area became the construction of Interstate 64. Construction contracts were let to four-lane US 50, Interstate 64, from Vincennes to Lawrenceville in 1956 and 1957. On April 7, 1958 Illinois and Indiana submitted an agreement to the Bureau of Public Roads covering the construction of the Interstate 64 bridge over the Wabash River north of Vincennes. The agreement was approved on June 12, 1958 and construction soon began on the bridge. The Wabash River bridge and the relocation of US 50 from Vincennes across the bridge to Lawrenceville was eventually completed and dedicated as a part of the Interstate System; however, these improvements ultimately became a part of the US 50 bypass of Vincennes rather than a part of the final location of Interstate 64.

Shifting Corridors

Because of the necessity to meet the Bureau of Public Roads deadline of January 1, 1957 for the submission of all general Interstate route alignments, the Indiana State Highway Commission submitted strip maps of US 50-150 from Vincennes to New Albany for the proposed alignment of Interstate 64. Plans had been developed to upgrade US 50 in the Vincennes area, and US 50-150 had been the general corridor for Interstate 64 since the 1940's.

To gain informal approval of the route by the Bureau of Public Roads, Indiana agreed as soon as possible after June 30, 1957 (the date of formal approval of all routes to be included in the Interstate System) to begin comparative studies with a more direct alignment between Vincennes and New Albany. The initial alignment studied was a straight line from New Albany to Vincennes which passed about ten miles south of Washington.

When local interests heard of the consideration of several alternatives (particularly more southern alternatives) in the development of a more detailed alignment, they began to develop information and to lobby in support of an alternative through their area. The local Chambers of Commerce and civic groups formed two major factions, one favoring the originally designated alignment through Vincennes, and the other favoring a southern alignment closer to Evansville.

In the spring of 1957, Evansville interest groups attempted to enlist the support of Southern Illinois Incorporated (an association of community development groups) to promote the shifting of Interstate 64 southward from US 50 in Illinois and US 150 in Indiana. At a meeting of Southern Indiana Incorporated (an association of community development groups which represented both Vincennes and Evansville) on October 30, 1957, Governor Handley of Indiana announced

that Illinois and Indiana were considering the shift of Interstate 64 southward to serve a greater number of people. The supporters of the original alignment formed the St. Louis - Vincennes - Louisville Interstate Highway Committee on November 17, 1957, to promote their interests. On February 12, 1958, Governor Handley formally announced the moving of Interstate 64 to the southern alignment.

Original Location Proponents. The interests favoring the original alignment were slower to organize than those favoring the southern alignment. Because construction had already begun on Interstate 64 in the Vincennes area, the shifting of the route had not seemed possible. Nevertheless, the shifting of the route southward resulted in the formation of vocal interest groups bitterly opposed to the shift.

The arguments for the original location centered on the possibility of economic loss if the southern alignment was built. If the Interstate were shifted south, US 50-150 might not be developed as a four-lane divided highway from Vincennes to Louisville or Vincennes to Cincinnati. Because Interstate 64 on the southern alignment would divert through traffic from US 50-150, highway-oriented business on US 50-150 would lose patronage. The failure to improve US 50-150 would retard all development.

The original location proponents also contended that the southern route would not serve the best interests of a majority of the urban areas in Indiana, that industrial and commercial activities of Evansville were geared to a north-south axis not an east-west axis from St. Louis to Louisville, that Interstate 64 was not far enough south to adequately serve Evansville, and that the original location would better serve its population area than the southern route would serve its population area. Since traffic volumes were heavier on US 50 than US 460, the original alignment of Interstate 64 would better serve existing travel demands.

Although the Interstate System was to serve defense installations, the southern alignment of Interstate 64 would provide inadequate service to the Crane Naval Depot. The relocation of Interstate 64 to the south would delay completion of Interstate 64 and cost Indiana more money due to the greater length in Indiana. Cities on the northern route claimed to have adequate facilities to serve the traveling public (emergency facilities, restaurants, motels, garages and gas stations), while the southern alignment lacked these facilities.

Southern Route Proponents. The primary contention of the southern alignment proponents was that Evansville would be one of the few metropolitan areas in the United States excluded from the Interstate System. The May of 1958 report by the Evansville faction summarized their arguments as follows:

"The communities and related counties in southern Indiana and southern Illinois believe that the more southerly relocation, as close to the Ohio River as is consistent with sound engineering and reasonable cost, will more properly integrate this east-west road into the National System of Interstate Highways, will better serve the requirement of our country's defense in case of a national emergency, and will, at the same time, allow for a vastly improved service to the present and potential economies in both areas".³⁵

The southern route proponents felt Interstate 64 should be relocated to the south to serve the greater population, the greater present and potential manufacturing production and capability, the greater present and potential manufacturing work force, the greater present and potential agricultural production and capability, the greater present and potential production of prime natural resources, the greater existing State road mileage, the greater vehicle registration, and the greater wholesale trade of the counties within twenty miles of the southern location as compared to the same for the northern location.

Evansville had been an area of chronic labor surplus for many years. The east-west route near the Ohio River was essential to continued manufacturing growth along the Ohio River. At the time, there was still a possibility that Interstate 24 from Nashville to St. Louis might come through Evansville; in such a case, the southern location of Interstate 64 would make Interstate 24 shorter. Although Interstate 64 through Vincennes was closer to the Crane Naval Depot, it would not serve the defense related industries in the Evansville area.

One fact of major importance was that the southern location of Interstate 64 would not replace an existing major east-west route; whereas, the northern location would replace an existing primary east-west route resulting in duplication.

Comparison of Route Alternatives. In 1957, Indiana and Illinois began to develop more detailed locations for Interstate 64. Due to the proximity of Interstate 64 to Interstate 70, Illinois proceeded to study a more southerly corridor on a more direct line from St. Louis to Louisville which crossed the Indiana-Illinois State Line between Mt. Carmel and New Harmony. Indiana followed suit and eventually made an economic comparison of the original alignment from New Albany to Vincennes (north line) with the alternate alignment from New Albany to Grayville (south line).

The economic comparison of the north and south line revealed that the south line was preferable on all points of comparison within Indiana.

Population Density. Referring to Figure 73, p. 603, the study area for each line was a forty-mile corridor with the common area excluded. No portion of Illinois or the Louisville Metropolitan Area was included; however, parts of Kentucky that fell in the corridor were included. The population densities were 56 persons per square-mile for the area served only by the north line, 36 persons per square-mile for the

FIGURE 73. INTERSTATE

FIGURE 73. INTERSTATE 64: ECONOMIC COMPARISON OF ROUTE ALTERNATIVES³⁶

area served by both lines, 103 persons per square-mile for the area served only by the south line, and 58 persons per square-mile for the area served only by the south line, excluding Evansville. On the basis of the full forty-mile corridor including areas common to both lines, the population densities were 48 persons per square-mile for the north line, 81 persons per square-mile for the south line, and 53 persons per square-mile for the south line, excluding Evansville.

The southern alignment for Interstate 64 served a substantially greater population density and a slightly greater population density when Evansville was excluded. Because the common area of the two lines had a lower population density than the area served exclusively by either alternative, an intermediate compromise alignment was less desirable than either line.

Population and Economic Growth. The rate of growth of cities and towns from 1930 to 1950 was substantially greater for those in the area served by the south line. Over the twenty year period, the population grew 21.4 percent in the south corridor 5.3 percent in the north corridor.

The Indiana State Highway Department felt industrial growth was an indicator of potential economic or population growth because industry provides the economic foundation for all growth. Evaluating the basic prerequisites for industrial development, the Indiana State Highway Department found that the area served by the south line had superior water resources and superior water and rail transportation. Capital investment in the area served by the south line since 1950 was nearly double that of the area served by the north line. Additional bridges were also planned across the Ohio River at Cannelton and Mauckport to reduce adverse trans river travel distances.

Service to Evansville and Crane Naval Depot. In 1950, Evansville had a population of 128,636 and was a regional

center for industry and commerce. Because of its labor supply, rail and water facilities, air terminal, and commercial facilities, Evansville was the focal point for industrial development along the Ohio River for miles in either direction. Because of the size of the Evansville Metropolitan Area and the absence of nearby urban areas of comparable importance, the Indiana State Highway Department felt that Interstate 64 should be routed close to an area of such size and potential. Although the south line was fourteen miles north of Evansville, it was forty miles closer than the north line.

The north line was thirty-two miles closer to the Crane Naval Depot via SR 45. However, the State felt Crane was presently served by adequate highways and the forty additional miles from the north line to Evansville were more significant than the thirty-two additional miles from the south line to Crane Naval Depot.

User Benefits. Based on projected traffic volumes, the south line would carry 3070 more vehicles per day or 558,627 more vehicle-miles. In 1975 or 1978, the 103.7 mile north line would handle 861,546 vehicle-miles or an average flow of 8,310 vehicles per day. For the south line, the estimated volumes for 1978 would amount to 1,420,173 vehicle-miles over a distance of 124.8 miles or an average flow of 11,380 vehicles per day.

The traffic corridor of the north line was identical to US 50-150 which was the best east-west route in the southern portion of Indiana. With normal improvements, US 50-150 would be adequate to serve its corridor for many years as the area was not subject to rapid growth.

On the other hand, existing highways in the corridor of the south line were so inferior that major relocation and reconstruction would be needed to meet the demands of growth in the area. Adoption of the southern alignment

would provide a new facility where it was most needed and would not duplicate the service of US 50-150 which would necessitate the downgrading of US 50-150; consequently, the construction of the southern alignment would provide the greatest total service to all of southern Indiana. The more southern location of Interstate 64 also provided superior east-west Interstate route spacing.

Construction Cost. The total cost of the southern alignment was less for Indiana and Illinois. The northern route was estimated to cost 112,594,000 for 103.5 miles in Indiana and 130,829,000 for 146.6 miles in Illinois. In contrast, the southern route was estimated to cost \$120,267.00 for 125.4 miles in Indiana and \$110,613,000 for 124.3 miles in Illinois. Although the southern route would cost Indiana \$7,673,000 more than the northern route, the total cost for Interstate 64 from Louisville to St. Louis was \$12,543,000 less for the southern alignment.

Resolution of Events. Although the decision to build Interstate 64 on the southern alignment was annouced in February of 1958, the Vincennces faction and Evansville faction continued to lobby for their interests. Many Chicago newspapers voiced indignation at the decision to shift Interstate 64 to the south.

On May 19, 1959, Governor Stratton of Illinois and the Chairman of the Indiana State Highway Commission sent a formal recommendation to the Regional Office of the Bureau of Public Roads recommending the shift of Interstate 64 from the original corridor to the southern corridor. Documentation for the request was based on the original and southern corridor comparisons by the Illinois and Indiana State Highway Departments. On February 4, 1960, the Chief Highway Engineer of Illinois and the Chairman of the Indiana State Highway Commission supplemented the previous joint request by separately requesting Bureau of Public Roads approval of the south alignment.

When the original alignment proponents learned the Indiana and Illinois Governors were going to speak with the Commissioner of the Bureau of Public Roads to obtain his approval of the southern alignment, requests were made to the Bureau of Public Roads to hold public hearings on the shifting of the alignment of Interstate 64.

The Bureau of Public Roads conducted three days of public hearings allowing the two major factions to present their arguments. The Bureau of Public Roads ultimately approved the southern alignment because the two States were in agreement on the preference for the southern alignment in late 1960.

In September of 1960, Governor Stratton of Illinois implied that US 50 would continue to be upgraded to a four-lane divided limited access facility along the original alignment of Interstate 64. Indiana also programmed the upgrading of US 50 from Vincennes to the Ohio State Line. By 1963, Indiana had started construction on the US 50-bypass of Vincennes and the four-laning of US 50 west from Aurora.

Despite Bureau of Public Roads approval of the south alignment for Interstate 64 and the commitment of the States to upgrade US 50, the St. Louis-Vincennes-Louisville Interstate Highway Committee continued their fight for the construction of Interstate 64 on the original alignment each time a new State administration was elected. The Vincennes group disputed the documentation of the May 19, 1959 letter requesting approval of the southern alignment.³⁷

Governor Welsh also backed the prior approval of the southern alignment; and the northern alignment's proponents were unsuccessful in other attempts to persuade Indiana to build Interstate 64 on the original alignment. After the public hearing of July 26, 1961 concerning the southern

alignment of Interstate 64 and the subsequent location approved by the Bureau of Public Roads, opposition to the construction of Interstate 64 on the southern alignment apparently ceased.

Southern Route Location Studies. In May of 1958, Indiana executed an agreement with Photronix, Inc. to study alternative locations for Interstate 64 in the southern corridor.

The consultant evaluated three alternative alignments in a ten-mile corridor from New Harmony to New Albany on the basis of local and through traffic service, land usage and property damage, potential development of the areas involved, topographic and geologic conditions and construction costs. The most southern alternative was recommended because it was the least expensive to construct, traversed more favorable topography, served the Evansville area best, and relieved the US 460-SR 62 corridor more adequately.

Although the southern alternative was slightly longer than the adjacent more northern alternative, the recommended southern alternative would yield greater user benefits in the future because of the expected growth of industry along the Ohio River. In other words, the southern alternative's proximity to areas of greater potential growth would offset any short run user benefit disadvantage when compared to the more northern alternative.

These three alternative locations were presented at the public hearing of July 26, 1961 on the segment of Interstate 64 from the Illinois-Indiana State Line to US 41. The State recommended the most southern alternative as the best alternative on the basis of traffic service, community service, and construction cost.

Lynnville Location Study

H. W. Lockner, Inc. was employed in 1963 to review the location of Interstate 64 across Indiana that was developed for the Interstate Cost of Completion Estimate by Photronix, Inc. For the segment of Interstate 64 from the Wabash River to US 41, Lochner concurred in the Photronix recommendation of the most southern alternative. For the segment of Interstate 64 from US 41 to SR 145, the Lochner report of September 27, 1963 concluded that the Interstate Cost of Completion Estimate location was basically sound from US 41 to SR 57; however, new strip mining operations in the Lynnville area between SR 57 and SR 161 necessitated several alternative location studies.

Alternative Location Study from SR 57 to SR 45. Since the initial location study in 1958, Peabody Coal Company had begun extensive strip mining operations along a three-mile length of the initial location approximately one and one-half miles east of SR 61. After discussions with the coal company the feasibility of the initial location was questionable due to the presence of existing and anticipated mining operations and the extent of coal reserves underlying the location. Consequently, three alternative locations were eventually compared on the basis of highway and user cost, terminal points of the corridor, the value of coal landlocked, earthwork problems in mined out areas, damage to tippel operations, and severance damages. [Refer to Figure 74, p. 513].

The original location (alternative B) paralleled SR 68 approximately two and a half to three miles to the south, passing through extensive coal reserves and mined out areas and remaining south of the tippel operations. Alternative A which paralleled SR 68 on the south passed north of the coal reserves west of SR 61, north of the Lynnville Tipple and north of the waste basin extending from the Tecumseh Tipple.

FIGURE LE AREA³⁸

FIGURE 74, CONT.

Alternative C followed alternative A to the west of Lynnville Tipple, angled southeast passing south of the Lynnville waste basin, passed through the area of projected mining operations during the next three years, and rejoined alternative B just east of SR 61.

Although alternative C avoided the extensive coal reserves east and west of SR 61, the savings in right-of-way costs were offset by increases in road user and construction costs due to its longer length. Thus, alternative C was dropped from further consideration.

Alternative B was similar to the initial location except for the relocation of County Road 325W, the elimination of separations at County Road 100W and Dickeyville Road, and the addition of three mine access underpasses. This alternative traversed approximately seven miles of coal reserves west of SR 61 and one and a half miles east of SR 61. Because the SR 61 interchange would have to be built adjacent to a mined area, the overburden in the interchange area would have to be leveled. The alternative also crossed two and a half miles of mined out area east of SR 61 requiring leveling earthwork.

Alternative A was developed to minimize the damage to coal reserves as well as to minimize road user and highway costs. This location avoided all but a half-mile of coal reserves west of SR 61. Since the location was on the northern edge of the coal fields near SR 68, possible disruption of future mining operations was minimized; the need for mining access roads was also eliminated. The SR 61 interchange was located in a mined out area on this alternative. Over the total length, the mined out area transversed by alternatives B and A were approximately equal.

Comparing alternatives A and B on the basis of total annual cost (annual capital cost and annual user cost),

alternative A was found to cost \$99,020 less annually. Because alternative A was 0.15 miles shorter than alternative B, alternative A resulted in an \$89,874 annual savings in road user cost. As alternative A avoided the large coal reserve areas, the right-of-way cost for alternative A was approximately \$900,000 less than alternative B; however, the increased construction cost of alternative A offset \$720,000 of the right-of-way savings.

According to Peabody Coal Company, alternative B would reduce the coal mining potential of the Lynnville area by seven percent with a corresponding decrease in local commerce, rail and truck activity, and local and State taxes. Consequently, indirect economic effects made alternative A more preferable. The Indiana State Highway Commission felt a conservative figure was placed on the coal reserves isolated by alternative B; any increase in coal cost would make alternative A even more favorable.

The Indiana State Highway Commission and Bureau of Public Roads concurred in the Lochner recommendation of the northern alignment (alternative A). However, Lochner was requested to study additional alternatives in the SR 61 interchange area to reduce the damage to coal reserves and to develop a more direct alignment.

Alternatives in the SR 61 Interchange Area. Referring to Figure 75 (p. 517), the consultant compared three alternatives on the basis of total annual user and capital costs. Alternative A was the previously recommended northern alternative. Alternative C was the shortest of the three alternatives and was the closest to Lynnville. Alternative D was on an alignment north of Lynnville.

Although interchange traffic on SR 61 was heavier from the south, penalizing alternatives C and D, the shorter main line distance of alternative C outweighed the longer access distance for SR 61 traffic. Due to two additional grade

FIGURE 75. INTERSTATE 600 WEST³⁹

separations and the necessity to acquire residences in the interchange area, alternative D had the highest capital cost. Although alternative C required greater earthwork than alternative A (alternative C traversed additional mined out areas), the total capital cost for alternative C was less than alternative A because alternative C traversed less coal reserve area. Consequently, alternative C had the lowest total annual user and capital cost and was approved as the preferable alignment for Interstate 64.

Alternatives near Warrick County Road 600 West. Lochner also studied an alternative in the vicinity of Warrick County Road 600 West and Big Creek since the approved location required the construction of a new bridge over Big Creek for County Road 600 West and extensive channel relocation of Big Creek. The approved alignment, however, was found to have the lowest total annual user and capital cost. The approved alignment was more costly to construct; however, road user savings due to its shorter length offset the higher construction cost.

Location Alternatives Between State Road 145 and State Road 64

Several location alternatives were explored for the segment of Interstate 64 from SR 145 to SR 64. These alternatives were refined to produce two final alternatives which were studied in detail. Lochner recommended the southern alternative on the basis of both lower user costs and lower construction costs in February of 1964. Some additional studies were made of the grade possibilities on the two alternatives in March of 1964, but the southern alternative was retained because the two alternatives were found to have approximately similar grades.

At the September 24, 1964 public hearing on the section of Interstate 64 through Harrison County, the Harrison County

Planning Commission and the Lincoln Hills Resources, Conservation and Development Commission favored a more northern alignment for Interstate 64 similar to the Photronix location and the northern alternative studied by Lochner in the area of White Cloud. [Refer to Figure 76 , p. 520]. The northern alignment adherents wanted Interstate 64 north of the historic attraction of Harrison Spring where the Harrison family had operated a grist mill and brewery, north of the recreation areas in the Blue River area, and north of the proposed industrial site west of SR 135 which the current location severed.

The Harrison County Planning Commission also proposed additional interchanges on Interstate 64 at the Blue River Road to serve recreation areas along Blue River and the Harrison-Crawford County State Forest and at Old Lanesville Road to serve the commuter traffic to the Louisville Metropolitan Area. The Lochner corridor also conflicted with the proposed Brush Heap Creek Impoundment of the Overall Economic Development Program adopted by the Rural Area Development Commission. This impoundment was one of eight proposed in the Corydon area and no one proposal was deemed critical to the total development program although each was locally important.

The Harrison County Planning Commission considered section 19 the only area close to Corydon suitable for industrial development; there 123 acres had already been acquired for an industrial park and an additional 500 acres south of the area was considered as industrial reserve. The Lochner corridor bisected this reserve. The Harrison County Planning Commission felt that Nevin Road could serve as a frontage road for the Interstate if the Interstate was closer to Nevin Road, that the improvement of Nevin Road as an extension of SR 337 would eliminate the need for the SR 337 Separation, and that the location of the Interstate near the north section line would reduce severance damages.

FIGURE 76 INTERSTATI

FIGURE 76 INTERSTATE 64 — HARRISON COUNTY PLANNING COMMISSION ALTERNATIVE LOCATION⁴⁰

Although the Lochner location passed 0.8 mile south of Harrison Spring, the Harrison County Planning Commission objected to the intrusion of the Interstate into the unique Blue River Valley. Entrance of the Interstate into the valley might handicap efforts to restrict commercial development.

The Indiana State Highway Commission noted that the location proposed by the Harrison County Plan Commission was similar to an alternative studied by Lochner, and that it was found less desirable than the location presented at the public hearing. However, the State promised to further review the suggested location and make an effort in design to minimize possible adverse effects of the route. The Indiana State Highway Commission subsequently concluded that Lochner's southern alignment was overall the most desirable.

Location of Interstate 64 in New Albany

The location of Interstate 64 in the New Albany area was controlled by the Ohio River escarpment, the Ohio River crossing, and existing development in the Louisville Metropolitan Area.

Early Location Studies. The construction of a single bridge across the Ohio River for Interstate 64 and Interstate 65 was once considered a possible alternative. In 1955, three general corridors were considered for the Ohio River crossing of Interstate 64: (1) one from the Louisville inner belt at US 31W across the Ohio River at 34th Street or farther downstream to the northwest of New Albany, (2) another extending north from the east leg of Interstate 264 across the Ohio River east of Louisville to Interstate 64 northwest of New Albany via a northern bypass of Jeffersonville and New Albany, and (3) the last from the Louisville inner belt across the existing Clark Memorial Bridge to Interstate 64 northwest of New Albany via Interstate 65 and a northern bypass of New Albany. [Refer to Figure 77, p. 522].

The 4.6 mile corridor from Indian Creek northwest of New Albany to the Ohio River bridge between 11th and 12th Streets in New Albany and 36th and 37th Streets in Louisville was estimated to cost \$11,000,000. The 12.7 mile bypass from Indian Creek northwest of New Albany to the Ohio River bridge on the northward extension of the east leg of Interstate 264 was estimated to cost \$16,000,000. The 7.7 mile route from Indian Creek northwest of New Albany to the Clark Memorial bridge via US 31E was estimated to cost \$11,000,000.

The Highway Commission favored the corridor across the Ohio River at New Albany because the location provided a needed river crossing at New Albany and reduced the traffic load over the Clark Memorial Bridge. Utilization of the Clark Memorial Bridge would have overloaded the existing approach facilities, superimposed interstate and local traffic, disrupted trans river movements during construction, and necessitated the construction of a future twin bridge.

Even though the New Albany crossing would provide the best traffic service, Kentucky felt the corridor involved too much adverse distance for US 60, and completion of the inner belt from US 31W to US 31E would be very difficult. Nevertheless, the two states agreed the New Albany crossing was the best route for Interstate 64 if it could be developed.

In September of 1955, Indiana began to reevaluate possible locations for the New Albany-Louisville bridge located from the Kentucky-Indiana Toll Bridge to 4th Street in New Albany. Two bridge location alternatives were selected for detailed studies: one between 36th and 37th Streets in Louisville and 11th and 12th Streets in New Albany and the other between Bank Street in Louisville and 4th and 5th Streets in New Albany. Louisville and Governor Craig of Indiana favored the upstream location because it would not sever Shawnee Park and was the site recommended

by Cloverdale and Colpitts in 1952 for a toll bridge. New Albany favored a location west of State Street because the location would be less destructive to existing development. Cloverdale and Colpitts were retained to make more detailed studies of the two bridge locations.

In December of 1955, Kentucky reported that the west leg of Interstate 264 along 34th Street (\$28,000,000) and the river route from 34th Street east (\$72,000,000) would be too expensive to justify as a part of the Interstate System and that the 34th Street Route also involved adverse travel distance. Consequently, Kentucky suggested that the Interstate 64 crossing be located in Jeffersonville near the Big Four Railroad Bridge and that the New Albany crossing be programmed with Federal Aid Primary funds rather than Federal Aid Interstate funds so that the bridge approaches would not have to be built to Interstate limited access standards. The two States also agreed that the New Albany bridge location between 11th and 12th Streets in New Albany and 36th and 37th Streets in Louisville was preferable, subject to further studies by the consultant to fix the exact location.

Indiana recognized the cost advantages to Kentucky of an Interstate 64 crossing near the Big Four Railroad, but objected to another Interstate facility through the heart of Jeffersonville. The possibility of combining Interstate 64 and Interstate 65 through Jeffersonville and across the Clark Memorial Bridge was considered again, but Interstate 65 would have been overloaded unless a twin structure was added to the Memorial Bridge and the four-lane divided highway under construction for Interstate 65 was increased to six or eight lanes.

After passage of the Federal Aid Highway Act of 1956 which increased Interstate Federal funding to 90%, Kentucky also favored the use of the New Albany bridge for Interstate

64. In Kentucky, Interstate 64 was proposed to follow the Louisville Riverfront Expressway east along the river or the west leg of Interstate 264 on 34th Street with US 60 relocated to the south to connect into the south leg of Interstate 264 to reduce the amount of adverse travel. Discussions on August 2, 1956 also covered the possible relocation of Interstate 65 east of the Clark Memorial Bridge near the Big Four Railroad Bridge because of interchange location problems in Kentucky on the Clark Memorial Bridge location.

On November 9, 1956, Kentucky and Indiana agreed to the location of the Interstate 64 bridge between 11th and 12th Streets in New Albany and 36th and 37th Streets in Louisville.

Reevaluation of the New Albany Location. The Indiana State Highway Department investigated several alternative locations for Interstate 64 in the New Albany area in an attempt to find an alignment that joined a feasible river crossing, did not violate Interstate grade standards, and did not require a deep cut or tunnel through the escarpment. Two alternatives were eventually developed through New Albany to feasible Ohio River crossings at 11th and 12th Streets and at 4th Street in New Albany; however, an eighty-foot rock cut through the escarpment was necessary for the grades to remain within Interstate Standards. Even then some of the sections still had four and five percent grades.

Edwards and Kelcey of Newark were directed to make comparative cost studies of the two alternatives (routes A and B as shown in Figure 78 , p. 526) from Interstate 264 to the junction of the two alternatives near Indian Creek northwest of New Albany. A third alternative (route E) from Market Street in Louisville to Shipping Street in New Albany was initially considered, but was dropped because of poor traffic service to the New Albany area.

ROUTE A—36th & 37th Streets in Louisville to 11th & 12th Streets in New Albany (34th Street Crossing) ROUTE B—Bank Street in Louisville to 4th & 5th Streets in New Albany
 ROUTE C—Twin Bridge for Clark Memorial Bridge ROUTE D—Campbell & Clay Streets in Louisville to Ohio & Fort Streets in Jeffersonville (Big Four Railroad Crossing)
 ROUTE E—Market Street in Louisville to Shipping Street in New Albany

FIGURE 78. INTERSTATES 64 AND 65: ALTERNATIVE OHIO RIVER CROSSINGS ⁴¹

Route A was 0.29 mile longer than Route B (5.44 miles) and passed through a highly developed section of New Albany necessitating more grade separations and interchanges than Route B. Route B passed through the Valley View Golf Club, Falling Run Park and four blocks of low income housing near the waterfront, but its cost of right-of-way was nearly four and a half million less than route A. The cost of the Ohio River bridge on Route B (between 4th Street in New Albany and Bank Street in Louisville), from floodwall to floodwall, was greater than the bridge on Route A (between 12th Street in New Albany and 37th Street in Louisville), \$10,989,050 for Route B as compared to \$9,333,900 for Route A. Overall, the total capital costs for route A were much greater than for route B, \$39,216,000 for route A as compared to \$31,403,000 for route B.⁴²

Using the 1955 origin and destination data for trans river trips developed by Cloverdale and Colpitts in their study of 1955, Edwards and Kelcey expanded the data to 1975 by the growth factor method. The expanded zone to zone movements were then assigned by the time ratio method to each alternative location for Interstate 64 assuming an adequate facility for Interstate 65. Because route A traversed a section of New Albany having a greater traffic generating potential, it carried more vehicles miles per day than route B. At five cents per vehicle-mile, route A offered a road user savings of \$139,800 per year.

Considering both construction and road user cost, however, it would take over a century for the road user savings of route A to offset the \$7,813,000 additional construction cost of Route A. Consequently, route B which crossed the Ohio River between 4th Street in New Albany and Bank Street in Louisville was recommended by the consultant in June of 1958 and was ultimately built.

Additional Interchanges

In 1961, the Vanderburgh County Commissioners approved the proposed construction of Interstate 64 except for the plans at St. Joseph Avenue, two and a half miles west of US 41. This county road was proposed for closing due to its lack of continuity north of Interstate 64 and because of inadequate traffic to justify a separation.

The county initially suggested that the planned SR 65 interchange be relocated to St. Joseph Avenue. The Bureau of Public Roads agreed to participate in the cost of only a grade separation provided the county made a commitment to improve the road and existing traffic was sufficient to justify the separation. The county failed to make the commitment and a separation justification was never developed by the Indiana State Highway Department.

Additional interchanges were requested at SR 161 near Selvin in 1970; at St. Meinrad on an extension of SR 545 at the public hearing of September 14, 1964; at SR 145; at Blue River Road and Lanesville Road at the Crawford County hearing of June 4, 1964; and at US 150. The request for an interchange at SR 161 near Selvin was too late in the Interstate Program for consideration. An interchange at SR 545 was denied by the Indiana State Highway Commission because SR 37 was being upgraded to the Tell City-Cannelton area, and the St. Meinrad area was adequately served by Interstate 64 via US 460 with interchanges at SR 162 and SR 145.

When the Interstate 64 location was moved farther north between SR 57 and SR 145, the interchange locations with intersecting highways were altered, and the proposed interchange at SR 145 was classified as an addition to the route according to the Bureau of Public Roads in March of 1964. The original location of Interstate 64 intersected SR 62 east of St. Meinrad. With the shift of Interstate 64 northward, Interstate 64 no longer intersected SR 62 and the interchange

there was shifted to SR 162 south of Ferdinand. The nearest interchanges to SR 145 then were at SR 162 9.1 miles to the west and at SR 37 5.8 miles to the east. Indiana easily justified an additional interchange at SR 145 on the basis of user service as reflected by a benefit cost ratio of 11.9 and average rural interchange spacing.

Blue River Road lacked adequate traffic to justify an interchange and the request was denied.

The Indiana State Highway Commission requested an additional interchange at Lanesville Road on the basis of local area needs, traffic generation potential, and cost considerations. An interchange at Lanesville was proposed as substantially reducing user costs for traffic commuting to the Louisville Metropolitan Area. SR 62 and SR 64 were already overloaded in the Lanesville area, and the Lanesville interchange would reduce traffic on these highways to the extent that immediate improvements would not be needed. Road user savings with the interchange were found to exceed construction cost by more than eight times. The Bureau of Public Roads subsequently approved the addition of the interchange.

Because US 150 did not interchange with Interstate 265 or Interstate 64, interstate traffic on US 150 could only gain access to the Interstate System by passing through New Albany to the Spring Street interchange of Interstate 64. Due to adverse travel time and distance for such traffic, relocation of US 150 and an interchange with Interstate 64 was approved despite minimum rural spacing requirements.

Interstate Route 65

The Interstate 65 corridor as initially designated followed US 31 from Louisville to Indianapolis, US 52 from Indianapolis to Kentland, and US 41 from Kentland to the Chicago Metropolitan Area.

Jeffersonville

The Clark Memorial Bridge had been the generally agreed Kentucky-Indiana control point for the construction of Interstate 65 since its designation in 1947. In 1955, Indiana had begun to upgrade US 31E through Jeffersonville as a four-lane divided limited access highway to serve as Interstate 65. Kentucky was not particularly pleased with the utilization of the Clark Memorial Bridge for Interstate 65 because local and Interstate traffic would be superimposed, the approach of a North-South Expressway to the Clark Memorial Bridge would be very expensive and destructive to existing development, and the construction of the interchange between the North-South Expressway and the Louisville Inner Belt Expressway (Riverfront Expressway), south of the Clark Memorial Bridge, would be even more expensive and destructive to existing development.

In a transportation study of the Louisville CBD in 1955, Wilbur Smith and Associates suggested that a new bridge (located upstream from the Clark Memorial Bridge) was preferred over development of a new twin bridge for the Clark Memorial Bridge and that new bridges upstream and downstream would be needed if the Clark Memorial Bridge was to have adequate capacity by 1964.

In the Louisville transportation study of 1955, Harland Bartholomew and Associates stated that the North-South Expressway should not be connected to the Clark Memorial Bridge because CBD traffic and through traffic would compete for the same facility, congestion would result at access points to the expressway too close to the CBD, and the connection would constitute a barrier to the eastward expansion of the CBD and would interfere with circulation and access to the CBD.

In August of 1956, Kentucky suggested the relocation of Interstate 65 from the Clark Memorial Bridge to a new bridge upstream in the vicinity of the Big Four Railroad Bridge. The area in the vicinity of the Big Four Railroad Bridge was generally open, with light commercial development, and was also a more preferable location to Kentucky for the interchange of the North-South Expressway and the Riverfront Expressway than the area south of the Memorial Bridge.

In Indiana, development along the Big Four Railroad was primarily medium and low income residences. The difficult planning problem for Indiana was where to tie into new US 31E which was under construction. Consideration had also been given to the possibility of utilizing the Clark Memorial Bridge with the interchange of the North-South Expressway and the Riverfront Expressway located to the east of the Clark Memorial Bridge, in the vicinity of the Big Four Railroad Bridge.

In 1957, Edwards and Kelcey of Newark were retained to make a comparison of two alternative locations for the Interstate 65 Ohio River Bridge in Jefferson as shown in Figure 78, p. 526. Route C was a continuation of the North-South Expressway north of Chestnut Street in Louisville to 9th Street in Jeffersonville on the recently constructed US 31E four-lane expressway. On Route C, a new four-lane structure parallel to the Clark Memorial Bridge was proposed to carry the northbound flow, and the existing Clark Memorial Bridge was to carry the southbound flow. Route D angled northeast from the North-South Expressway at Chestnut Street crossing the Ohio River near Campbell Street in Louisville and rejoining US 31E near 9th Street in Jeffersonville.

On the basis of right-of-way and construction costs, Route C was estimated to cost \$9,337,000 less than Route D (\$44,379,000). On Route D, the savings in right-of-way costs in Kentucky were offset by increases in right-of-way

costs in Indiana. Since Route D was 0.4 mile longer than Route C (2.1 miles) and required the construction of a new bridge for both directions of travel, the cost of construction for Route D was \$8,508,000 greater than Route C. The total annual road user cost was determined to be \$3,324,420 for Route C and \$3,920,830 for Route D. On the basis of total annual user and capital cost, Route C was found to cost \$5,232,735 less than Route D (\$885,943 annually).

Although route C was preferable to Route D on the basis of cost, other considerations in favor of Route D offset the cost advantage of Route C. The existing Clark Memorial Bridge of 38 feet in width was substandard for the four lanes in one direction necessary to serve Interstate traffic. The design hour volume could only be handled by construction of a six-lane twin bridge built to carry northbound traffic and two additional southbound lanes. Furthermore considerable disruption of traffic flow would occur during the conversion of the Clark Memorial Bridge for only southbound flow.

The Clark Memorial Bridge had also been built by the City of Louisville for local traffic, and Louisville did not want that intended use subverted. Kentucky too still believed a direct connection between the North-South Expressway and the Clark Memorial Bridge with an interchange south of the bridge would entail high utility relocation costs, destroy the wholesale district next to the CBD, constrain the growth of the CBD, and overload surface streets in the CBD.

Edwards and Kelcey reported that the use of the Clark Memorial Bridge for Interstate 65 was undesirable from a functional standpoint because local and through traffic were combined, thus compounding the weaving and merging maneuvers. A bridge, however, on Route D would serve only through traffic, relieve the Clark Memorial Bridge of longer trips so that it functioned to serve local movements, and assure a superior location for the North-South Expressway and Riverfront Expressway Interchange.

Indiana and Kentucky soon agreed that Interstate 65 should be relocated from the Clark Memorial Bridge to a new bridge upstream between Campbell and Clay Streets in Louisville and Ohio and Fort Streets in Jeffersonville.

While the two Interstate 65 bridge locations were being compared, Indiana considered alternative alignments for Interstate 65 through Jeffersonville because improved US 31E lacked adequate capacity for both Interstate and local traffic and would have to be extended to the new bridge upstream if it were selected. Indiana, however, decided to utilize the location of US 31 for the alignment of Interstate 65 because any alternative alignment would have necessitated a new corridor through the urban area, increased the destruction to existing development and resulted in greater right-of-way costs.

Interstate 65 Location Studies from Jeffersonville to Indianapolis

Because there were no urban areas outside the US 31 corridor, the study corridor for Interstate 65 was a narrow corridor (less than five miles wide) centered on US 31. Nevertheless, several location alternatives were considered. The alternatives were general alignments east and west of existing US 31 and the utilization of segments of the alignment of US 31.

Alternatives from Jeffersonville to Seymour. Alternative locations for Interstate 65 were considered on both sides of Austin and Scottsburg. The western alternative required less grade separations and was shorter, and it became the preferable location.

Alternative locations on both sides of Seymour were also considered. The western alternative required more grade separations, was greater in length, and might have required acquisition of land needed for the Seymour airport. Consequently, the eastern alternative was the recommended location for Interstate 65.

Alternatives from Seymour to Indianapolis. In January of 1958, the Indiana State Highway Commission completed a comparison of four alternative locations for Interstate 65 from the Muscatatuck River to the South Leg of Interstate 465 as shown in Figure 79 , p. 535 . The Tentative Approved Line utilized existing dual-lane US 31 from Indianapolis to Columbus and continued south to the Muscatatuck River on a relocation of US 31 within half a mile of US 31. The East Alternative Line was an alignment two to three miles east of existing US 31 except from SR 7 to the Muscatatuck River, where the East Alternative Line was the same as the Tentative Approved Line.

The West Alternative Line was an alignment one to two miles west of existing US 31 which bypassed Columbus on the west side. The West-East Combined Line followed the West Alternative from the Muscatatuck River to Taylorsville, continued north to join the East Alternative Line northeast of Edinburg, and followed the East Alternative Line to the South Leg of Interstate 65.

Estimated capital costs for the alternatives were \$55,069,000 for the 62.0-mile long East Alternative; \$57,050,000 for the 61.2-mile West-East Combined Alternative; \$60,016,000 for the 60.1-mile West Alternative; and \$67,632,000 for the 61.7-mile Tentative Approved Line. The right-of-way cost for the Tentative Approved Line was nearly double the other alternatives, and the cost of base, surface and shoulders was nearly five million dollars more than the other alternatives.

As a result of the location studies for Interstate 65 within Interstate 465, the extension of the West Alternative Line into Indianapolis was found to be infeasible because of excessive costs. The extension of the East Alternative into Indianapolis, on the other hand, was found to be nearly two million dollars less than the extension of the Tentative

EXCHANGE
 TWO-WAY GRADE SEPARATION
 ONE-WAY GRADE SEPARATION
 ONE-WAY-RAILROAD GRADE SEPARATION
 OVER BRIDGE
 HISTORIC ROAD

FIGURE 79. INTERST

FIGURE 79. INTERSTATE 65: ALTERNATIVES FROM SEYMOUR TO INDIANAPOLIS⁴³

FIGURE 79, CONT.

FIGURE 79, CONT.

FIGURE 79, CONT.

FIGURE 79, CONT.

FIGURE 79, CONT.

Approved Line into Indianapolis. From a capital cost standpoint, the East Alternative appeared preferable.

In February of 1958, a review of Bakalar Air Force Base expansion plans revealed the East Alternative was unacceptable. To properly serve the City of Columbus, the Indiana State Highway Commission further considered an alignment that bypassed Columbus on the west, namely the West-East Combined Alternative.

After minor adjustments in the original alternatives such as the reduction of the number of grade separations, the East Alternative, the West-East Combined Alternative and the Tentative Approved Lines were recompared from the Muscatatuck River to Interstate 465. Because the West-East Combined Alternative passed through the Driftwood River and East Fork of the White River Flood Plains, grade and drainage costs for this route were nearly two million dollars more than the East Alternative. Because of flood problems, an additional \$1,338,000 was necessary for the West-East Combined Alternative to reconstruct SR 46 from US 31A to Interstate 65 and to provide additional overflow structures under the Pennsylvania Railroad. In terms of overall capital cost, the East Alternative was approximately four and a half million dollars less than the West-East Combined Alternative which bypassed Columbus on the west.

In April of 1958, alignment revisions were made to the West-East Combined Alternative. It was moved approximately one mile west, from five miles south of SR 46 to one mile north of SR 46, in order to place the facility on higher ground to reduce grading costs. The West-East Combined Line was also revised at Taylorsville to reduce the skew of the intersection with existing US 31.

The cost comparison of the revised alternatives from 1.3 miles north of US 50 to Interstate 465 revealed the West-East Combined Alternative with alignment revisions cost only \$2,151,000 more than the East Alternative

(\$45,990,000) if the estimated \$1,124,000 cost of reconstructing SR 46 and the Pennsylvania Railroad Bridge at Columbus was excluded.

A comparison of construction and user costs for the East Alternative and the revised West-East Combined Alternative from common points at 1.27 miles north of US 50 and 4.8 miles south of SR 44 revealed that construction cost was \$2,306,000 less for the East Alternative and that user cost was \$391,000 in favor of the revised West-East Combined Alternative; furthermore, the increased cost of the West-East Combined Alternative would be amortized in 5.5 years by road user savings (8 years if the cost of upgrading SR 46 were included).

There were several other advantages to the revised West-East Combined Alternative. The west route provided a more direct connection to the center of Columbus. The west route was located in an area not then served by an adequate highway; whereas, the east route would duplicate the present US 31 bypass of Columbus. The west route provided a direct connection to existing four-lane US 31 at Taylorsville so that construction of the remainder of Interstate 65 north to Indianapolis could be delayed until the latter part of the Interstate Program.

The West-East Combined Alternative provided a northern entrance to Seymour via its interchange with US 31A and crossed farm land of lower value. The increased service of the West-East Combined Alternative was reflected in increased road user savings as previously described. Consequently, the Indiana State Highway Commission favored the West-East Combined Alternative, and it was approved by the Bureau of Public Roads on July 8, 1958.

At the insistence of property owners of Bartholomew and Johnson Counties, who felt Interstate 65 should be located through little used Camp Atterbury, the Indiana State

Highway Commission compared the revised West-East Combined Alternative with an alternative through Camp Atterbury from 0.9 mile south of SR 46 to SR 44 in January of 1959. [Refer to Figure 79, p. 535].

Although the Camp Atterbury Alternative was 0.6 mile shorter and the right-of-way through Camp Atterbury was considered a free grant, the Camp Atterbury Alternative was estimated to cost \$768,000 more than the revised West-East Combined Alternative (without the cost of relocating SR 46) or \$2,230,000 more than the revised West-East Combined Alternative considering the cost of relocating SR 46. The Camp Atterbury Route cost approximately two million dollars more for right-of-way despite the Camp Atterbury free land grant. Because of increased access distance to Interstate 65 from major traffic generators, road user costs were \$142,000 greater for the Camp Atterbury Route for the first year. With expanding traffic volumes, the excess in user costs for the Camp Atterbury Route would have become greater.

In the summer of 1959, the Johnson County Plan Commission and the Bartholomew County Plan Commission submitted evidence to the Administrator of Public Roads in Washington in support of the relocation of Interstate 65 through Camp Atterbury. The planning commissions believed the Camp Atterbury Route would eliminate the bridge over Driftwood River near Columbus which necessitated considerable fills, levees and channel relocations that might obstruct natural drainage; would eliminate excessive fills and levees in the SR 46 interchange area that obstructed drainage; would eliminate considerable fills and levees through the flood plain required by the east route; would not interfere with growth in the Columbus area; required fewer grade separations; was less costly in terms of right-of-way and construction; and would not create a flood hazard in the Columbus area.

The Indiana State Highway responded that the design of the east route was subject to the approval of the Indiana Flood Control Commission; that the crossing of Driftwood River was not difficult or expensive and required only a minor channel relocation; that the SR 46 interchange area required little fill because it was only three feet below extreme high water; that the route was located in the foothills south of SR 46; that little grade would lie in the flood plain area after the interchange was constructed; that the Camp Atterbury route had two more interchanges, an equal number of highway grade separations, one more railroad separation and five more stream crossings over tributaries of Driftwood River; that the east route was on high ground north of SR 46; and that the east route was estimated to cost less for right-of-way and construction.⁴⁴

The Bureau of Public Roads did not alter its approval of the revised West-East Combined Alternative.

Interstate 65 South: Special Requests

Market Street Exit Ramp. In May of 1967, the City of Jeffersonville requested an exit ramp to Market Street from southbound Interstate 65. In a detailed justification of the additional ramp the City of Jeffersonville stated that the exit ramp was needed (1) to relieve hazardous traffic congestion at the 10th Street interchange; (2) to complete the Court Avenue-4th Street Interchange which lacked the southbound exit movement; (3) to provide the City of Jeffersonville with direct access to the Interstate System in all directions; (4) to provide egress from Interstate 65 to the fastest growing area in the Louisville Metropolitan Area; (5) to stimulate growth in the southeastern corner of Jeffersonville; (6) to provide direct access to the Jeffersonville CBD, to future industrial and motel sites; (7) to eliminate traffic hazards resulting from motorists

missing the one southbound exit at Eastern Boulevard and wishing to get off Interstate 65 before crossing the Ohio River; (8) to provide another southbound exit from the mainline of Interstate 65 between Eastern Boulevard and the Louisville CBD in a distance of two miles; and (9) to implement the Riverside Central Urban Renewal Project plans.⁴⁵

The collector-distributor system with US 31E provided additional southbound exits at Stansifer Avenue and 6th Street via US 31E although not directly from the Interstate mainline [Refer to Figures 80 and 81, pages 544 and 545].

The Indiana State Highway Commission initially rejected the proposal because the proximity of the southbound off ramp at Market Street to the southbound on ramp at 4th Street would cause weaving problems and the present system provided adequate access to Jeffersonville. At a conference on July 19, 1962, the Jeffersonville delegation contended that the southbound collector-distributor system did not provide adequate access to the CBD and that a southbound exit ramp directly from the mainline was needed. The Indiana State Highway Commission agreed to reconsider the matter.

In August of 1963, the Indiana State Highway Commission completed a planning study which recommended addition of the Market Street exit ramp. The study found that new Interstate 65 provided the same number of southbound exits as temporary Interstate 65, that the corridor had always lacked adequate southbound access, that drastic land use changes caused by the Riverside Central Urban Renewal Project would generate increased traffic in the area causing numerous deficiencies in the existing transportation system unless improved access was provided to Interstate 65, that improved access would insure a more desirable use of land in the renewal area, and that Market Street was the logical feeder street for Interstate 65.

FIGURE 80. INTERSTATE 65: JEFFERSONVILLE ⁴⁷

FIGURE 81. PROPOSED MARKET STREET RAMP⁴⁶

The study also recommended a limited access connector between the Market Street southbound off ramp and the 6th Street northbound on ramp. The City of Jeffersonville, however, failed to make a commitment for such a connector, and the Indiana State Highway Commission delayed further consideration of the exit ramp until the Louisville Metropolitan Area Transportation study was completed and evaluated. Nevertheless, the City of Louisville kept the proposal alive.

On September 26, 1967, the Indiana State Highway Commission forwarded to the City of Jeffersonville justification for the Market Street exit ramp and formally requested Federal approval of the ramp construction. The Indiana State Highway Commission stated that numerous local organizations had made requests for the addition of the ramp during and since construction of the Interstate through the area; however, the requests had been deferred until the Indiana State Highway Commission had an opportunity to evaluate the adequacy of the completed facility. Subsequent observations of the traffic operations on the completed facility revealed the exit ramp would complement rather than duplicate service to the local area and should be added.

The Bureau of Public Roads approved the addition of the Market Street ramp to the completed Interstate Route on February 2, 1968; however, the ramp could not be financed with any type of Federal Aid funds. The Indiana State Highway Commission had taken the position that the Market Street ramp would complete the present partial interchange at Court Avenue and 4th Street and was, therefore, eligible for Federal Aid Interstate fund participation or at least Federal Aid Primary fund participation.

Federal policy required the approval of the Secretary of Transportation for any additional point of entrance or exit from an Interstate project for which plans had

previously been approved. Consequently, any ramp added to a completed Interstate project constituted an additional interchange requiring specific prior approval action and authorization as to the class of Federal aid funds that might be used. Furthermore, Federal policy on additions to a completed Interstate project automatically excluded the utilization of Federal Aid Interstate funds so as to keep the cost of the System within the financing schedule developed.

As Market Street was not a part of any Federal aid system, the policy of the Bureau of Public Roads excluded the use on any type of Federal aid funds for the ramp. The Indiana State Highway Commission appealed the Bureau of Public Roads decision on the basis that the Interstate System was a part of the Federal Aid Primary System and that the ramp could be financed with Federal Aid Primary funds if Federal Aid Interstate participation was not authorized.

No Federal funding was approved and Indiana and Jeffersonville financed the construction of the Market Street exit ramp without Federal funds. The ramp was completed in the fall of 1972.

Memphis Interchange. At the public hearing of November 28, 1957 on the section of Interstate 65 from SR 131 to the Clark-Scott County Line, the residents requested an interchange at Memphis because of the great distance to adjacent planned interchanges. In March of 1958, the Indiana State Highway Commission completed a planning study that recommended a half-diamond interchange at Blue Lick Road near Memphis. Traffic demand was not considered sufficient to justify a full diamond interchange; however, right-of-way was requested for a future ramp in the northeast quadrant. The half-diamond interchange was ultimately approved.

Later, the Indiana State Highway Commission submitted revised traffic estimates for the Memphis interchange that

indicated the two north ramps of the diamond interchange were justified. Since the Interstate project was not completed, the Bureau of Public Roads agreed to Federal Interstate Fund participation in the additional ramps.

Underwood Interchange. In late 1963, the residents of Underwood began to press for direct access to Interstate 65 because of the adverse travel distance to the existing interchanges at Scottsburg to the north and at Henryville to the south. In January of 1964, the Indiana State Highway Commission stated that it was not possible to economically justify the interchange because there was little adverse travel distance on old US 31 to existing access points and that such an addition to a completed Interstate project was not eligible for Federal Aid Interstate financing.

In April 22, 1964, the Underwood residents resubmitted their request stating that the interchange was needed to serve commuter traffic to the Louisville area, to serve the recreational areas near Underwood, and to stimulate an economically depressed area. The Indiana State Highway requested Federal approval of the additional interchange in June 22, 1964; however, the Bureau of Public Roads denied the request because sufficient economic justification was lacking.

Underwood continued to petition elected officials in the State and Federal governments. On June 14, 1965, the Indiana State Highway Commission resubmitted the Underwood interchange request with detailed justification. Indiana stated the interchange was needed to provide high-speed access between the Louisville industrial complex and areas desirable for residential development in the vicinity of Underwood; to provide access to scenic highways and scenic corridors; and to provide access to areas of immense recreational value from the nearby expanding urban communities.

Underwood was a potentially attractive area for residential development since the town was less than thirty miles

from Louisville and a large percent of residents commuted to the Louisville Metropolitan Area to work. The Underwood interchange would also stimulate tourist and residential development which would bolster the sagging local economy. The savings in estimated road user costs with the interchange exceeded the cost of the interchange more than fifteen times.

The Bureau of Public Roads approved the Underwood interchange at the Clark-Scott County Line Road on July 28, 1965. However, the cost of the interchange could not be financed with Federal Aid Interstate funds according to Federal policy. Because the Clark-Scott County Line Road was not in the State Road system; the interchange must be financed by County Federal Aid Secondary funds or local funds.

The counties involved, however, have made no commitment and the Indiana State Highway Commission has delayed further consideration of the interchange until the Interstate Program is completed.

Jackson County. The Indiana State Highway Commission met with the Jackson County Commissioners on four occasions to discuss the standard access control resolution; however, the commissioners refused to sign the resolution fearing reprisals from the local residents during elections. Residents indicated dissatisfaction with the proposed frontage roads and grade separated roads along Interstate 65. In accordance with local demands, the commissioners requested a service road connecting Motel Road to US 31 near Crothersville, a service road from SR 250 to Commisky Road on the east side of Interstate 65, the separation of Commisky Road, and the separation of Carter School Road. [Refer to Figure 82, p. 550].

After an economic review of the access features proposed, the Indiana State Highway Commission added the service road

FIGURE 82. INT

FIGURE 82. INTERSTATE 65: JACKSON COUNTY

connecting Motel Road to US 31, a short frontage road from Commisky Road south to an already planned frontage road from SR 250 to Barnes Road on the east side of Interstate 65, a separation on Chestnut Ridge Road, which was extended to Commisky Road, and a frontage road from Commisky Road to US 31 on the east side of Interstate 65.

The Carter School Road separation was not economically justified since separations were planned 1.25 miles to the north at US 50 and 1.25 miles to the south at Kriste Road. Pottschmidt Road served as a frontage road from Kriste Road to US 50 on the west side of the Interstate, and a frontage road from Carter Road to US 50 was provided on the east side of the Interstate.

State Road 44 Interchange. At the public hearing of November 7, 1963 on Interstate 65 through Johnson County, the City of Franklin and local civic groups requested the relocation of the SR 44 interchange to Upper Shelbyville Road to divert through traffic from downtown Franklin and to link with the proposed norther bypass of Franklin as shown in Figure 83 ,p. 552.

The Indiana State Highway Commission stated consideration would be given to the relocation of the interchange if Johnson County and the City of Franklin upgraded Upper Shelbyville Road and a route through the city to provide a level of service comparable to SR 44. Since the local governments failed to make this commitment, the Indiana State Highway Commission proceeded with the design of the interchange at SR 44. The State pointed out that the location of the interchange would not preclude the development of the northern bypass of Franklin although some modifications would have to be made to the Franklin Thoroughfare Plan.

In March of 1965, the Bureau of Public Roads refused to participate in the construction of four lanes through

FIGURE 83. FRANKLIN THOROUGHFARE PLAN ⁴⁷

the SR 44 interchange area because the State had not made a commitment to upgrade SR 44 to a four-lane facility to logical termini. Indiana replied that it had programmed all Federal aid funds and that the commitment to upgrade SR 44 to four lanes from Interstate 65 to Franklin would upset established program priorities.

On May 10, 1965, the Bureau of Public Roads agreed to participate with Federal Aid Interstate funds in the four-laning of SR 44 through the interchange area, provided the State purchased right-of-way to protect the SR 44 corridor for future four-lane construction. Indiana complied with the requirement.

Interstate 65 Location Studies From Indianapolis to Gary

When the Interstate Program began in 1956, US 41 from Hammond to Kentland and much of US 52 from Kentland to the south of Lebanon had already been upgraded to four-lane divided highways. Since plans had also been developed to upgrade US 52 to a four-lane facility from Lebanon to Indianapolis before August of 1956, it was logical from an economic and time standpoint to modify these plans to acceptable Interstate Standards and to utilize them for Interstate 65.

From a construction priority standpoint, the fact that Interstate 65 would then connect to an existing four-lane facility to Chicago at the Lebanon Bypass*meant construction of the remainder of Interstate 65 from Lebanon to Chicago could be delayed until the latter part of the Interstate Program. The location of Interstate 65 from Indianapolis to Lebanon required little further investigation after 1956; however, location of Interstate 65 north of the Lebanon Bypass required extensive studies.

Swanington to Gary Location Study. Initial consideration was given to a corridor from Lebanon to Swanington on US 52 bypassing Lafayette on the west. North of Swanington the Indiana State Highway Department directed Photronix, Inc.,

*Except for the Lafayette Bypass.

to investigate alternative locations for Interstate 65 to Gary. [Refer to Figure 84 , p. 555]. The study corridor was approximately five miles wide, parallel and to the east of US 52 and US 41. Because of the anticipated high cost of a controlled access highway through the developed area adjacent to US 52 and US 41, the consultant was requested to compare alternatives through open land east of US 52 and US 41.

Two north-south lines were evaluated in conjunction with two crossovers. Because the study area encompassed lightly populated and gently rolling agricultural area, the consultant found no significant difference between the two basic lines and combinations in regard to service to existing and future population centers, use by local and through traffic, land usage, and property damage. Consequently, construction cost and directness of the alternatives were the remaining determinants for the preferable location.

Alternative A, which comprised the southern part of the eastern line (alternative D), the northern part of the western line (alternative B) and the northern crossover, was found to be the least expensive and most direct alternative. Because of a costly, combination structure over the New York Central Railroad and Kankakee River, Alternative C, which comprised the southern portion of the western line, the northern portion of the eastern line and the southern crossover, was more expensive than Alternative A. The poor location of the interchange with US 6 and the Tri-State Highway in Hobart also weighed against Alternative C. Interstate 65 was built on the alignment of Alternative A to SR 14.

Lafayette. Although Interstate 65 was originally located west of Lafayette, the possibility of a more direct routing with lower construction cost and greater user service led to the consideration of an alternative east of Lafayette in 1960.

ALTERNATIVE	A
	ALTERNATIVE	B
ALTERNATIVE	C
ALTERNATIVE	D

FIGURE 84. INTERSTATE 65: SWANINGTON
TO GARY⁴⁸

West Lafayette, Purdue University, the Bureau of Public Roads, and the Tippecanoe County Area Plan Commission had originally preferred the location west of Lafayette. The western location obviously provided better service to West Lafayette than an alternative east of Lafayette. The western location would remove the heavy Purdue University football traffic (although infrequent) from Lafayette.

For some years the Indiana State Highway Department had suggested as an additional Interstate route, one parallel to US 41 which would join Interstate 65 west of Lafayette. A location west of Lafayette for Interstate 65 would have reduced the length of the suggested route parallel to US 41. In 1960, the location for Interstate 24 was still undecided; and if Interstate 24 came to Evansville, there would be pressure to extend Interstate 24 to Chicago, the suggested Interstate joining Interstate 65 west of Lafayette.

The Tippecanoe County Area Plan Commission pressed for the location west of Lafayette to stimulate development of two large industrially zoned areas near West Lafayette and to provide greater highway service to West Lafayette and Purdue University. Since Lafayette already had a bypass, Interstate 65 east of Lafayette would duplicate the service of the existing bypass according to the Area Plan Commission; West Lafayette had no facility of comparable nature.

The reasons for relocating Interstate 65 to the east of Lafayette, however, were substantial. The eastern location was much cheaper because it was shorter and required fewer structures. The east route provided greater service to the Lafayette Metropolitan Area because it was nearer the center of population, intersected highways of higher flow volumes, and provided better service to downtown Lafayette. The eastern location provided greater service to Indiana because it was farther from the Interstate 74 corridor and closer to other urban areas such as Frankfort,

Kokomo, Logansport, Delphi, Monticello and Rensselaer. The eastern route provided greater accessibility to greater existing and potential industrial and commercial development in the Lafayette Metropolitan Area and, consequently, would reinforce continued development.

The western route bisected present and proposed development north of West Lafayette and interfered with the possible expansion of the Purdue Airport. If the Wildcat Reservoir was constructed as planned, the eastern route would better serve recreational traffic to this water complex. Even though Lafayette had the US 52 Bypass, the facility was overloaded and no longer functioned as an adequate bypass, as it lacked access control. Interstate 65 would divert through traffic from the US 52 Bypass so that it could better serve local needs. Local traffic volumes, however, would still necessitate the upgrading of US 52 Bypass to four lanes despite the diversion of through traffic by Interstate 65.

On July 19, 1961, the Indiana State Highway Department completed a comparison of location alternatives in the Lafayette area which included alternatives bypassing Lafayette on the east and west. The portion of Interstate 65 from Indianapolis to Lebanon was already under construction, and the location of Interstate 65 from the Indiana East-West Toll Road to Fair Oaks near SR 14 had been determined with a reasonable amount of certainty by the Photronix location study of 1958.

The study corridor for the central portion of Interstate 65, which stretched from Lebanon to Fair Oaks, was twenty to thirty miles wide, centered on US 52 from Lebanon to Montmorenci, and on US 231 from Montmorenci to Fair Oaks. Referring to Figure 85, (p. 558) three basic location alternatives and several subalternatives were compared on the basis of traffic service, right-of-way and construction

FIGURE 85. INTERSTATE 65: FROM LEBANON TO FAIR OAKS⁴⁹

FIGURE 85. INTERSTATE 65: FROM LEBANON TO FAIR OAKS⁴⁹

cost, and community benefits considering land use and potential development.

Alternative A, which was used in the 1960 Estimate of the Cost of Completing the Interstate System, followed US 52 from Lebanon to SR 47, angled due west from SR 47 to Thorntown, continued northwest from Thorntown to SR 25, angled due north at SR 25 bypassing Lafayette on the west, and turned northwest at US 24 to rejoin the accepted alignment near Fair Oaks. Subalternatives for Alternative A were developed in the Lebanon area as alternatives to the utilization of the existing alignment of US 52 from Lebanon to SR 47.

"The basic reasoning behind this location represented an attempt to route the interstate highway to the west of Lafayette and thus provide a balanced system of major highways serving the Lafayette area. It was thought that a location east of the city would have added to the already congested traffic conditions which exist on the US 52 bypass and would have placed an additional burden on the main traffic arteries on the east side in the years to come." ⁵⁰

Alternative A did not interfere with the operation of Purdue Airport and was compatible with the Proposed Future Land Use Map and the Proposed Traffic Plan for Metropolitan Lafayette as shown in Figures 86 and 87, pages 560 and 561. The Interstate location west of Lafayette would have provided the transportation facilities required for balanced industrial and residential development on all sides of the city as existing industrial expansion was tending toward a single highly concentrated industrial area in the southeast. Alternate A was 90.1 miles long and involved fourteen interchanges, twenty-eight highway grade separations, twenty-two stream structures and eight railroad separations.

FIGURE 86. INTERSTATE 65: LOCATION ALTERNATIVES AND PROPOSED FUTURE LAND USE OF LAFAYETTE⁵¹

FIGURE 86. INTERSTATE 65: LOCATION ALTERNATIVES AND PROPOSED FUTURE LAND USE OF LAFAYETTE⁵¹

FIGURE 87. PROPOSED TRAFFIC PLAN FOR METROPOLITAN LAFAYETTE IN 1961⁵²

Alternative C was the same as the location proposed by Photronix from Fair Oaks to Swanington, and then angled southwest at SR 352 to join Alternative A near SR 2. Two sub-alternatives were developed in the Lafayette Area to provide greater service to Lafayette. This location served a dual purpose as it provided a link of Interstate 65 from Indianapolis to Gary and also a direct connection to US 41 via SR 55 from Attica. Since US 41 was a major truck route serving traffic from Chicago to the south and was rapidly approaching functional obsolescence, a southern connection with Interstate 65 was logical. Alternative C was 91.4 miles long and included fourteen interchanges, twenty-seven highway grade separations, twenty two-stream structures and nine railroad separations.

Alternative B followed Alternative A from Fair Oaks to US 24 and diverged from Alternative A near US 24 to continue in a southeast direction bypassing Lafayette on the east. Alternative B represented an attempt to connect the termini at Lebanon and Fair Oaks by a direct line. Such a location would be the most economical to construct and would also provide good traffic service for Lafayette as well as for through trips from Indianapolis to Chicago.

This location provided a more balanced Interstate service for Indiana because the alignment was farther from Interstate 74 and better served Frankfort. This location might add to congestion on US 52 and Lafayette arteries; however, improvement of the Interstate access roads might enable the local highway network to carry the large volumes of traffic anticipated in the future. The location of a proposed Wildcat Reservoir had not been finalized but had to be considered. If the reservoir required a relocation of Alternative B to the west, the alternative would increase in length and would cause increased property damage to the rapidly developing residential area east of Lafayette.

Alternative B was 86.3 miles in length and required thirteen interchanges, thirty-two highway grade separations, nineteen stream structures and seven railroad separations.

Alternatives B, A, and A₂ were the shortest locations with lengths of 86.3, 89.4 and 89.1 miles respectively. Alternative B had the least capital cost at \$63,278,000; the nearest alternative was A which had a capital cost of \$64,131,000. Because Alternative B had the shortest length, it had the lowest road user cost.

Incremental benefit cost analysis revealed Alternative B (Line ABA) was the most desirable route. Since Alternative B provided the best traffic service to Lafayette and long distance trips, it was preferred over the other alternatives. Although alternative A would have provided a more balanced transportation system for the Lafayette area, it would have cost \$2,662,000 more per year than Alternative B in capital and road user costs. Alternative C, which provided the least traffic service to Lafayette, had the lowest user benefit rating.

The eastern location (Alternative B) recommended by the 1961 study was submitted to the Bureau of Public Roads for concurrence. On September 28, 1961, the Bureau of Public Roads requested an investigation of a more direct alignment for Interstate 65 between US 231 and SR 114 by extending Alternative B directly to Alternative A. A comparison of the original location and the more direct alternative location (referring to Figure 88, p. 564) revealed the more direct alternative was preferable from the standpoint of traffic service and capital cost.

On May 10, 1962, the Indiana State Highway Department revised the alignment of Interstate 65 between SR 18 and US 231, referring to Figure 88. Because the revision reduced the length of the Alternative Location another 0.3 of a mile, the Alternative Location was now 1.6 miles shorter

FIGURE

88.

ITIES⁵³

FIGURE 88.

INTERSTATE 65: ALTERNATIVE LOCATIONS IN WHITE AND JASPER COUNTIES⁵³

FIGURE 88, CONT.

FIGURE 88, CONT.

than the Original Line. The revised Alternative Location was now even more preferable on the basis of traffic service and capital cost.

Wildcat Creek Reservoir. When the location study for the central portion of Interstate 65 was completed in July of 1961, uncertainty existed as to the location and feasibility of the proposed Wildcat Creek Reservoir east of Lafayette and its effect on the recommended eastern location for Interstate 65. The location of the proposed reservoir was definitely established in late 1962 and was found to conflict with the previously recommended location for Interstate 65. Consequently, the Highway Department launched an investigation of alternative locations in the Wildcat Creek area to determine the best alignment that would accommodate the construction of the reservoir.

Referring to Figure 29, p.567, Alternative A represented a location to the east of reservoir. The location provided an adequate crossing of the Wabash River. Since the crossing of the Main Branch and North Fork of Wildcat Creek required extensive earthwork (\$1,559,000) to maintain the highway grade above high water level of the reservoir, the location was not considered desirable.

Alternative B was the alignment recommended in the location report of July of 1961. The alignment passed east of the South Fork of Wildcat Creek, avoiding the two costly structures of Alternative A; however, Alternative B passed through the pool east of the dam making the location impractical if the reservoir was constructed. Consequently, Alternative B served only as a reference line for comparing other alternatives with the recommended location.

Subalternatives B_1 and B_2 were attempts to reduce the conflict of Alternative B with the reservoir. Alternative B_1 crossed the Wildcat Creek Dam eliminating the need for a separate Wildcat Creek Bridge. Although the bridge and

TIVE C (31.7 Mi.)

TIVE D (31.7 Mi.)

FIGURE 89. RESERVOIR AREA⁵⁴

FIGURE 89. INTERSTATE 65: ALTERNATIVE LOCATIONS IN THE PROPOSED WILDCAT RESERVOIR AREA⁵⁴

FIGURE 89, CO

FIGURE 89, CONT.

dam combination structure appeared advantageous, Alternative B₁, required a twin bridge of 2600 feet in length to cross the spillway which was estimated to cost \$2,521,000.

Alternative B₂ passed west of the dam and was even more expensive than Alternative B₁ because expensive structures were required over Wildcat Creek (\$811,000) and the spillway (\$2,104,000) and extensive fill was needed across the Wildcat Creek Valley.

Alternative C was an attempt to bypass the dam and spillway on the west. This alternative was slightly shorter and passed through slightly less rugged terrain than Alternative B. Alternative C made a right angle crossing of the Wabash River but necessitated a forty-foot cut south of the Wabash River Bridge and 3600 feet of fill through the flood plain north of the river. Although Alternative C passed close to Aretz and Halsmer Airports, the location would not restrict the operation of the airports.

Alternative D avoided all conflict with Wildcat Creek by passing to the west of the junction of the creek with the Wabash River. The proximity of the Wabash Railroad structure to the SR 25 interchange required extension of the interchange ramps under the railroad separation. There was also insufficient space for a runaround track for the railroad so that the structure would have to be built under rail traffic conditions. The location also conflicted with the eastward expansion of the railroad yards. Because the location crossed the Wabash River on a twenty-degree skew downstream of the 9th Street Bridge, the Wabash River crossing was not desirable and created drainage problems in the area. Alternative D also passed close to existing residential development northeast of Lafayette which might have resulted in public opposition.

Alternative B, without consideration for the reservoir, had the least capital investment at \$27,140,000 and was followed by Alternative D at \$27,816,000 and Alternative C at \$27,822,000. Alternative D required a smaller expenditure for stream structures and grading because it avoided Wildcat and Burnett Creeks and their rough terrain; however, a greater right-of-way expenditure was required due to the proximity to Lafayette. Difficulty at the Wabash Railroad separation was reflected in the estimated cost for Alternative D. Alternative A, B₁, and B₂ were not comparable to the other alternatives in terms of capital cost and were dropped from further consideration.

In regard to travel service, Alternatives B, C, and D were equal except for small differences in travel and proximity to Lafayette. Alternative D provided slightly superior traffic service because of proximity to Lafayette,

Even though Alternative D had a slight advantage in capital cost an user service over Alternative C, Alternative D has several undesirable features. The horizontal alignment involved a series of tight curve reversals with undesirably short tangents. The crossing of the Wabash River and the Wabash Railroad separation created problems. In regard to land use and future development potential, Alternative D had several objectionable features. It passed close to the Vinton Woods Addition and the Springvale and St. Boniface Cemeteries, crossed the rapidly developing residential area southwest of Vinton Woods, separated National Homes Corporation from its land holdings to the northeast, and would have taken several homes.

The Governor's Industrial Committee preferred the location farther east (Alternative C) because it would permit industrial development on both sides of the Interstate. Because Alternative C exhibited few objectionable design features and had little adverse effect on existing land use,

it was also considered the most feasible location. The Indiana State Highway Department recommended Alternative C on January 23, 1963 on the basis of design standards, economic feasibility, travel service, compatibility with land use, and consistency with natural features in the study area.

On March 8, 1963, Alternative C of the 1963 report was compared to an earlier alternative location to the west of Lafayette (referred to as Alternative A in the report of 1961) to determine if the increased cost of the location east of Lafayette due to the Wildcat Creek Reservoir nullified the 1961 outcome.

Alternative C east of Lafayette was still found to be superior to Alternative A west of Lafayette on the basis of capital cost and traffic service. Consequently, the conclusion of the 1961 report was still proper. On March 21, 1963, the Bureau of Public Roads approved the public hearing on Alternative C.

Interstate 65 North: Special Requests

Directional Sign to Whitestown. In April of 1965, the residents of Whitestown petitioned the Indiana State Highway Commission and U.S. Senators Bayh and Hartke to provide an interchange on the north-south Federal Aid Secondary road through Whitestown with Interstate 465 and to provide a sign at the SR 334/I-65 interchange directing traffic to Whitestown. Since three interchanges on Interstate 65 at SR 32, SR 267, and SR 334 already served the city indirectly and the suggested interchange with Interstate 465 violated policy on interchange spacing, the interchange request was denied.

As Whitestown was not on a direct route from any interchange, Interstate signing standards also prohibited the installation of a directional sign for Whitestown at any interchange. The Whitestown Lions' Club ultimately placed

a directional sign to Whitestown on private property adjacent to the SR 334 interchange with Interstate 65.

Tippecanoe County. At the public hearing of May 9, 1963 on Interstate 65 through Tippecanoe County, the County Commissioners requested the elevation of SR 43 above the flood level of the Wabash River from the Harrison Street Bridge to Interstate 65, the extension of SR 443 from US 52 to Interstate 65 via a route west of the Indiana Soldier's Home to provide West Lafayette with a new entrance from Interstate 65, the relocation of the SR 26 interchange to Union Street extended to route SR 26 through Lafayette via the Salem-Union Street One-Way Couple, and the construction of an interchange at SR 38. A few residents suggested that Interstate 65 follow the existing alignment of US 52 and US 41 to Gary, that Interstate 65 bypass Lafayette on the west, or that Alternative B be reconsidered.

Because of limited funds, the Indiana State Highway Commission was unable to approve many of the requests of the County Commissioners. The extension of SR 443 was a local responsibility because the proposed route was not a part of a Federal aid system. The City of Lafayette and Tippecanoe County, however, felt that it was the responsibility of the Indiana State Highway Commission and the Bureau of Public Roads to provide the community with adequate access and circulation to and from Interstate 65.

Union Street east of US 52 had narrow right-of-way and was lined by residential development, and the Indiana State Highway Commission felt the relocation of SR 26 to Union Street was infeasible. A new connection from SR 26 to Union Street was considered, but was not approved because the local governments failed to make a commitment to improve the Union-Salem Street One-Way Couple. In July of 1963, the Indiana State Highway Commission submitted justification for the interchanges on I-65 from Lebanon to US 30, including

SR 38; the submission was subsequently approved by the Bureau of Public Roads.

One local resident, who had suggested the utilization of US 52 and US 41 for Interstate 65, circulated petitions to back his position and met with the Indiana State Highway Commission on August 16, 1963. The Indiana State Highway Commission stated that it was more economical to construct a fully controlled access facility on a new location than upgrading the existing facility and that fewer homes and businesses were disrupted when a facility was constructed on a new location. The individual was also provided an extensive list of reasons for selecting the east route for Interstate 65 rather than the alternative bypassing Lafayette on the west: shorter length, less capital and maintenance cost, higher benefit cost ratio, greater traffic service to downtown Lafayette and to a greater population, less overlapping of the Interstate 74 corridor, less adverse effect on development, greater service to potential industrial and commercial development, greater service to the future Wildcat Creek recreation area, and better service to more larger cities.

In June of 1963, the Indiana State Highway Commission reviewed the January 23, 1963 report in regard to the comparison of Alternative B across the Wildcat Creek Reservoir and Alternative C to the west of the South Fork of Wildcat Creek. Although Alternative C was determined to be \$683,000' more costly than Alternative B, the savings in road user cost for Alternative C more than offset the additional construction cost. In fact the benefit cost ratio of Alternative C, compared to Alternative B, was 18.5 indicating considerable user benefit for the additional construction cost.

Clinton County. In September of 1963, the Clinton County Commissioners requested that Interstate 65 be routed over present US 52 from Lebanon to Lafayette because of extensive damage to forty-five farms and nineteen crossroads. The commissioners also feared that US 52 would be turned over to the county for maintenance. The county pressed the Governor and a U.S. Congressman to reverse the Indiana State Highway Commission's decision. Governor Welsh backed the Indiana State Highway Commission, stating the utilization of US 52 for Interstate 65 was dismissed because of greater cost, lower service, and greater damage to existing development.

In a May of 1964 letter to U.S. Congressman Roush, the Chairman of the Indiana State Highway Commission stated that it was not economical to upgrade existing US 52 to Interstate standards because of the necessity to purchase the access rights of all property fronting on the existing route, to provide continuous frontage roads to serve the adjacent property owners which would require even more right-of-way and structure removal, to extend separation structures over the frontage roads unless the frontage roads were routed around the end of the separation, to acquire the existing commercial properties in all quadrants for interchanges at major roads, and to replace or strengthen existing pavement. Furthermore, the median width for US 52 was only fifty feet, falling below the sixty-foot standard Interstate median width, and utilization of the existing highway would have eliminated the road for local usage.

Jasper County. In 1967, the Indiana State Highway Commission received requests for an interchange at SR 16 and a grade separation at Jasper County Road 1600S which was one mile north of US 24. Due to insufficient usage and lack of existing or potential development, neither request was approved.

A request was then made to relocate the US 231 interchange to SR 16 because the US 231 interchange duplicated the service of the nearby US 24 interchange. However, an interchange at US 231 served more traffic than an interchange at SR 16, and the request was denied.

In the spring of 1967, the Town of Demotte requested an interchange with Interstate 65 directly west of the town. The Indiana State Highway Commission replied that Demotte was adequately served by interchanges at SR 10 and SR 2 which were 10.4 miles apart, that there was little adverse distance for traffic to and from Interstate 65, and that Federal policy required an average interchange spacing of eight miles. Since this section of Interstate 65 was already under construction, Federal policy prohibited the utilization of Federal Aid Interstate funds for additions to such a project.

Indian Gardens. At the public hearing of September 23, 1962, on the location of Interstate 65 through Newton County and the southern part of Lake County, several citizens objected to the location of the route through their private hunting preserve along the Kankakee River because it disrupted wildlife and left one thousand acres without access.

In reviewing the design plans, the Division of Fish and Game of the Indiana Department of Conservation stated that Cameron Marsh had functioned as a wildlife and waterfowl refuge and a private hunting area for many years and that the highway location would adversely affect the utilization of the area by waterfowl. Consequently, the Division of Fish and Game requested consideration of an alternate proposed location to minimize damage to the wildlife and waterfowl refuge as shown in Figure 90, page 576.

FIGURE 90. INTERSTATE 65: ALTERNATE ROUTE THROUGH INDIAN GARDENS

In January of 1964, the Indiana State Highway Commission convened and reached the following conclusions: The area designated as Indian Gardens was not operated as a game preserve, but rather as a private hunting club; the alternative line proposed did not provide any major benefit for the operation of the wildlife area; the route location study by the Planning Department of the Indiana State Highway Commission proved that the existing alignment was most economical and most beneficial to the public interest as a whole; further location studies would delay the completion of the final construction plans and incur additional cost; and the existing alignment should be approved.

On April 13, 1964, the Indiana State Highway Commission made a comparison of various alternatives to reduce severance costs and determined that two structures to provide boat and farm equipment access to the Indian Gardens property was the most economical alternative.

On April 21, 1964, the Indiana Department of Conservation again requested consideration of an alternate location for Interstate 65 through Indian Gardens since the alternate route would cause less damage to the waterfowl habitat. According to a Department of Conservation investigation, the existing location crossed the marsh at the point of highest waterfowl usage and would reduce the marsh for waterfowl use by fifty to eighty percent under present management practices. Furthermore, they stated that the need for land suitable for waterfowl was becoming more critical every year and that Indian Gardens was a major resting place during spring migration.

The Indiana State Highway Commission requested Federal concurrence in the alternative comparison study of April and stated that the relocation would cost \$52,400 more for surveys and result in an additional cost to users of \$237,250 due to the six-month delay in construction. The

Bureau of Public Roads concurred in the scheme to reduce severance damages and in retaining the existing location; however, additional documentation was requested on measures to reduce adverse effects on the wildlife and waterfowl refuge.

The Indiana State Highway Commission subsequently replied that adequate drainage structures were provided, that two structures for boats and farm equipment were added to provide access to the preserve, that there was no difference between the existing location and the location proposed 1200 feet to the northeast on the basis of fish and wildlife preservation, that the existing location caused no serious damage to fish and wildlife resources, and that capital and user cost favored the existing location. This documentation was adequate according to the Bureau of Public Roads.

The Commissioner of the Bureau of Public Roads ultimately reviewed the case and replied to inquiries. Commissioner Whitton stated that his decision to retain the existing location considered all facts and the certain six month delay in construction and the additional cost if the route were relocated.

Crownpoint Interchange. In 1961, the Town of Crownpoint requested the relocation of the SR 8 and US 231 interchange 1.7 miles north to the county road running east from Crownpoint to provide better service to the community. Because the interchange at the county road was closer to Crownpoint and would not entail adverse travel distance for northbound traffic, the location appeared to provide superior traffic service. Although the interchange at the county road would eliminate some southbound travel for northbound traffic, interstate traffic to and from US 231 would be forced to travel a circuitous route to reach the interchange.

On July 10, 1961, the Indiana State Highway Commission compared the alternative interchange locations on the basis of road user cost which reflected user service, capital cost, and the cost of additional improvements in conjunction with either alternative. The interchange at the county road resulted in an annual road user savings of \$150,685 in the travel corridor over the interchange at SR 8 and US 231. The construction of the interchange at the county road, however, was estimated to cost \$85,729 more annually for capital cost and additional improvements in the corridor.

The interchange at the county road location provided superior travel service in the corridor, and the resulting road user savings offset the additional cost of the interchange and improvements in the corridor on an annual basis. The benefit-cost ratio, however, for the additional cost of the county road interchange was low, and the Indiana State Highway Commission felt the additional cost of \$1,519,000 could be used elsewhere with a greater return.

On July 28, 1961, the Bureau of Public Roads reported that the proposed interchange location at US 231 was favored. The Bureau of Public Roads suggested that additional advantages to the US 231 interchange were better interchange spacing, no delay in constructing Interstate 65, and no problem of coordinating county road improvement with Interstate construction. Because SR 55 and US 30 provided good service to northbound traffic from Crownpoint without adverse distance, the Bureau of Public Roads was reluctant to approve a relocation of the US 231 interchange.

Additional Service in Gary. At the October 19, 1962 public hearing on Interstate 65 from north of Interstate 80 to the Indiana East-West Toll Road, local residents and the Mayor and Chamber of Commerce of Gary requested an interchange at 15th Avenue from Interstate 65 because 15th Avenue was an important work route and lack of access to

the nearby industrial area would depreciate land values. At the public hearing, the Indiana State Highway Commission stated that a spur, connecting Interstate 65 to US 12 and 20, was under study.

Indiana subsequently justified a full interchange at 15th Avenue because alternate routes to Interstate 65 and the Indiana Toll Road required considerable travel distance over city streets.

In July of 1968, the Indiana State Highway Commission completed an engineering study on the feasibility of more directly connecting US 12 and 20 with Interstate 65. According to the traffic analysis, traffic making the connection between Interstate 65 and US 20 consisted of thirty percent trucks and commercial vehicles and utilized an inadequate local street system. Consequently, the proposed connection would divert heavy truck traffic from local streets and eliminate an expensive upgrading program for local streets. An at-grade expressway was proposed for the connection from Interstate 65 to US 20. A grade separation was not provided for the Wabash Railroad tracks because the line had only two freight trains each direction daily and would likely be abandoned as a result of a Norfolk and Western Railroad merger. The estimated cost for the 0.4 mile connection was \$410,000, referring to Figure 91, p. 581.

A public hearing on the connection was delayed because the Indiana State Highway Commission believed the Federal Highway Administration might not approve the use of Federal funds until the local urban transportation study was completed. On November 19, 1970, the City of Gary agreed to pay the Federal share of the project.

In 1970, the Republic Steel Company proposed an alternative alignment to reduce conflict with their expansion plans. At the public hearing of September 1, 1971, the Republic Steel Company voiced continued opposition to the

FIGURE 91. INTERSTATE 65: PROPOSED SPUR TO U.S. 12-20 55

location of the connection. After the hearing, Gary pledged to do everything possible to alleviate the problems of the steel company. When the connection is completed, congestion at the local terminus of Interstate 65 at 15th Avenue will be relieved and the adverse travel distance for Interstate traffic desiring to use US 12 and 20 will be eliminated.

Interstate Route 69

Interstate 69 was envisioned as a link between the major metropolitan areas of Indianapolis and Detroit with Fort Wayne as the intermediate control point. The route was originally described as following SR 67 to Anderson, SR 9 to Marion, SR 37 to Huntington, US 24/SR 37 to Fort Wayne, old US 27 or SR 327 to SR 8, SR 8 to Auburn, and a northeast course from Auburn to Detroit. When the Interstate Routes were designated in 1947, Interstate 69 was terminated at the Indiana East-West Toll Road.

Shift of Corridor: West of Anderson to East of Anderson

On January 6, 1958, the Indiana State Highway Department met with a delegation from Delaware County, the City of Muncie and the Muncie Chamber of Commerce to discuss the proposed location of Interstate 69 west of Anderson. The Muncie delegation requested the relocation of Interstate 69 from west of Anderson to midway between Muncie and Anderson to serve a greater population. Muncie ranked seventh in population in Indiana and was one of the largest metropolitan areas in Indiana not connected directly with the Interstate System. The Muncie delegation further stated that connection to the Interstate System was essential to sustained manufacturing growth in Delaware County which ranked third in new capital expenditures and eighth in value added by manufacturing in Indiana.

The Indiana State Highway Commission replied that the present route west of Anderson had already been approved north to the Grant-Huntington County Line by the Bureau of Public Roads and that considerable work had already been done on the design plans. Consequently, the Indiana State Highway turned down the request stating no major change could be made at this point in time. The Muncie delegation stated they would pursue the matter.

Clyde E. Williams and Associates was later retained to investigate a location of Interstate 69 from Pendleton to Landess running between Anderson and Muncie as suggested by the Muncie delegation. This location would later be compared with the location west of Anderson by the Indiana State Highway Department.

Referring to Figure 92, p. 584 , the consultant compared several alternatives in a three-mile band extending from northwest of Pendleton to Chesterfield and to Landess on the basis of capital cost. Traffic diversion to the Interstate route was determined but was not utilized in the comparison of alternatives. The preferred alternative (line A) was estimated to cost \$38,278,000 in July of 1958.

On December 4, 1958, the Indiana State Highway Commission completed a series of location studies on Interstate 69 from Pendleton to Ft. Wayne which were begun in March of 1958. Referring to Figure 93 (p. 585), Alternative A was the original location submitted in the 1958 Estimate of the Cost of Completing the Interstate System except for the relocation of a segment from Huntington to Fort Wayne. The original location utilized existing US 24 from Huntington to Fort Wayne; however, an investigation of the upgrading of US 24 (an existing four-lane divided highway) to Interstate standards revealed that it would be more economical to build the Interstate on a new location to the northwest.

FIGURE 92. INTERSTATE 69: LOCATION EAST OF ANDERSON⁵⁶

FIGURE 92. INTERSTATE 69: LOCATION EAST OF ANDERSON⁵⁶

FIGURE 93. INTERSTATE 69: ALTERNATIVE LOCATIONS FROM PENDLETON TO FORT WAYNE 57

FIGURE 93. INTERSTATE 69: ALTERNATIVE LOCATIONS FROM PENDELTON TO FORT WAYNE 57

Alternative B, which was requested by the Grant County area, was identical to Alternative A to the junction with SR 15 southeast of Marion; from that point Alternative B followed a direct line from Marion to Fort Wayne bypassing Huntington ten miles to the east. Alternative C, which was recommended by the Muncie area, was identical to line A recommended by Clyde E. Williams and Associates in July of 1958. It departed from Alternative A and B near SR 38; passed south and east of Anderson; angled due north at Chesterfield between Anderson and Muncie; and rejoined Alternative B near Landess. A basic system consisting of existing routes in the Interstate 69 corridor was used as a basis of comparison with the alternatives.

To determine the travel patterns in the Interstate 69 corridor, the study area was divided into zones. The origin and destination data was then simulated over the entire area served on the basis of population and distance between population centers. The annual user costs were found to be \$108,485,484 for the basic system, \$104,290,465 for Alternative C, \$103,951,631 for Alternative B, and \$103,470,895 for Alternative A. The initial capital costs were determined to be \$79,948,000 for Alternative A, \$73,153,000 for Alternative B, and \$69,168,000 for Alternative C.

The total annual capital costs, including maintenance and loss of tax revenue for right-of-way, were estimated to be \$4,687,721 for 90.6-mile Alternative A; \$4,421,625 for 85.8-mile Alternative B; \$4,270,501 for 90.3 mile Alternative C; and \$1,487,127 for the basic system. The benefit-cost comparison with the basic system resulted in values of 1.567 for Alternative A, 1.545 for Alternative B, and 1.507 for Alternative C.

On the basis of incremental benefit-cost, Alternative A was favored over Alternative B. The Indiana State Highway

Commission, however, felt that the benefit-cost ratios were too similar to be decisive and that the preferable alternative would have to be determined by the investigation of other factors.

On the basis of initial capital cost, Alternative C required the least outlay of funds. Consideration was given to the duplication of existing facilities by the alternatives because proximity to existing facilities would result in functional downgrading of the facility. Alternative A paralleled existing facilities (SR 67, SR 9, and US 24) for its entire length. Alternative B paralleled SR 67 for fifteen miles, SR 9 for thirty-seven miles and partially SR 3 for twenty miles; this amounted to approximately seventy percent of the total length of Alternative B. Alternative C paralleled SR 67 for fifteen miles and partially duplicated SR 67 south and east of Anderson and SR 3 for twenty miles; the duplication of existing highways was estimated to be forty-one percent of the total length of Alternative C.

Considering possible conflict or stimulus to orderly urban development by each alternative, the Indiana State Highway Department preferred Alternative C in the case of Anderson which was the only city directly affected by proximity of the Interstate locations to existing development. In regard to the affect of the Interstate locations on other urban areas, Alternative C was ten miles closer to Muncie (population 65,100) with a penalty of two to four miles to Marion (population 35,300). Alternatives B or C had the advantage of better service to Bluffton (population 6,076) at the expense of Huntington (population 15,079).

On the basis of service to projected urban growth, Alternative C was preferred thirty-nine to thirty-four (estimated rate of population growth) over Alternate A or

B from Anderson to Marion. From Marion north, the area served by Alternative B or C exhibited a greater population growth rate than Alternative A.

The Indiana State Highway Department concluded the following:

"(1) During the initial years of operations, the user benefits for each route would be substantially proportional to respective costs with a slight preference in the sequence of A,B,C.

(2) Route C would be a greater stimulus to growth for the composite of all urban areas served and would eventually surpass routes A and B in user benefits.

(3) Route A would be of greatest and Route C of least service to short commuter trips to urban centers, but these trips are served by existing highways and a new pattern of such trips will develop for any of the routes of choice.

(4) Route C is more truly an addition to the Highway System rather than a replacement of some of its components.

(5) For ultimate, long range benefits, Route C is recommended."⁵⁸

Consequently, the Indiana State Highway Commission requested that the Bureau of Public Roads withdraw approval of the original location west of Anderson and approve the location between Anderson and Muncie.

Shift of Interstate 69 from a Junction with
Interstate 70 to a Junction with Interstate 465

In April of 1961, H. W. Lochner Incorporated was contracted to reevaluate the location of Interstate 70 east of Indianapolis and Interstate 69 from Indianapolis to Pendleton. Interstate 69 originally joined Interstate 70 near German Church Road in Marion County and had a common entry into Indianapolis from the east. The location of Interstate 69 from Indianapolis to Pendleton had not been finalized due to the possible relocation of Interstate 70 and the effect of such a relocation on Interstate 69.

The study corridor for the Interstate 69 alternatives stretched from a northeast terminus at SR 38 near Pendleton to a southeast terminus at the northeast interchange on the Indianapolis Inner Belt. Referring to Figure 94 (p. 590), Alternative X was basically the location submitted in the 1958 and 1960 Estimate of the Cost of Completing the Interstate System. Alternative X started at SR 38 northwest of Pendleton, paralleled SR 67 on the northwest, and angled across SR 67 near Woodbury to join Interstate 70 near German Church Road. Alternative X a was subalternate to Alternate X providing a more direct alignment for Alternative X from SR 32 to 56th Street, passing southeast of Pendleton, and paralleling SR 67 to the southeast.

Alternative Y was developed to pass the Geist Reservoir complex on the north and west to serve the rapidly developing residential area of northeast metropolitan Indianapolis. Alternative Y proceeded due west from SR 38 along 136th Street to SR 238, angled southwest to join SR 37 northeast of Fishers, assumed the location of SR 37 to Interstate 465, followed the East Leg of Interstate 465 to Interstate 70, and continued along Interstate 70 to the northeast interchange of the Indianapolis Inner Belt.

Alternative Z was developed as an alternative to routing Interstate 69 traffic over Interstate 465 and Interstate 70 to the Indianapolis Inner Belt. Alternative Z was identical to Alternative Y to Interstate 465, but continued southwest from Interstate 465 to the northeast interchange of the Indianapolis Inner Belt. At Interstate 465, Alternative Z assumed the location of SR 37 to 44th Street, shifted to the south of SR 37 on new right-of-way to 38th Street, and paralleled Fall Creek and the Monon Railroad to the northeast interchange of the Inner Belt. Alternative Za was a refinement of Alternative Z which passed closer to the Geist Reservoir.

FIGURE 94. INTERS

FIGURE 94. INTERSTATE 69: ALTERNATIVE LOCATIONS FROM INDIANAPOLIS TO PENDLETON⁵⁹

The three basic alternatives and the two subalternatives were compared on the basis of traffic service (user cost), capital cost, and impact on the community. The cost of related highway improvements was also considered in the capital cost of each alternative; there was a basic assumption that SR 37 would have to be upgraded from 126th Street to the Inner Belt regardless of the alternative chosen.

Alternative X was the shortest and most direct alignment; had the lowest right-of-way and capital cost at \$24,320,000; and had a minor impact on the surrounding area. Although Alternative Xa had a lower capital cost than Alternative X, Alternative X had a lower total annual capital and user cost than Alternative Xa. Since Alternative X provided superior traffic service to Anderson, the additional capital cost of Alternative X was more than offset by a reduction in user costs. Since there was no apparent difference in impact on the areas through which Alternative X and Xa passed, Alternative Xa was dropped from further consideration.

Alternative X also created increased costs for related facility improvements. From its junction with Interstate 69, Interstate 70 would have to be increased from four to six lanes to the Inner Belt. SR 37 would have to be widened to four lanes from 126th Street to 65th Street, redeveloped to six lanes from 65th Street to 46th Street, and extended from 46th Street to the Inner Belt as a six-lane expressway on new right-of-way.

Alternative Y was less direct than Alternative X and had a slightly higher capital cost at \$24,565,000 when compared to Alternative X. However, Alternative Y would serve a more heavily developed area than Alternative X. Although Alternative Y might stimulate development near Fishers, the alternative would have little development impact on the area from Fishers to Castleton because Alternative Y followed the existing corridor of SR 37.

Interstate 69 would follow Interstate 465 and Interstate 70 to the Inner Belt, and considerable improvement of related facilities would be necessary. SR 37 would still have to be upgraded from Interstate 465 to the Inner Belt. Interstate 465 would have to be increased from four to eight lanes between SR 37 and 56th Street and from four to six lanes between 56th Street and Interstate 70. Interstate 70 would still have to be increased from four to six lanes to the Inner Belt. The indirectness for through traffic resulted in a higher annual user cost than the other alternatives

Alternative Z was the most costly of the alternatives from the development cost standpoint at \$32,005,000. Alternative Z was estimated to cost approximately two million dollars more for right-of-way and five million more for construction than the other alternatives. However, Alternative Z had the lowest total annual user and capital cost at \$71,800,000 as compared to \$74,179,000 for Alternative X and \$83,628,000 for Alternative Y. Because the length of Alternative Z and Za were the same and Alternative Za might conflict with development along Geist Reservoir, Alternative Za was dropped from further consideration.

Alternative Z would have the same community impact as Alternative Y from Pendleton to Interstate 465. Since SR 37 already existed in the corridor from Interstate 465 to 38th Street, the conversion of SR 37 to Interstate 69 would not change the character, scope or rapidity of development of the adjacent area. The consultant, however, felt the location would be advantageous to the 38th Street area. From 46th Street to 38th Street, twenty-eight residences would have to be acquired for new right-of-way. South of 38th Street, numerous homes would have to be acquired in an area that would have to be redeveloped within the next twenty years anyway, and one area adjacent to the location was already undergoing redevelopment.

From the long range economic standpoint, Alternative Z was preferred. It served more traffic and appeared to benefit the area through which it passed. The fact that the northeastern sector of Indianapolis was the most rapidly developing area of Indianapolis, that the existing street network would be seriously inadequate in the future and that other sectors of Indianapolis were served by a freeway underscored the recommendation to locate Interstate 69 in a corridor northeast from Indianapolis in December of 1961. The Indiana State Highway Department also noted that the elimination of a combined entrance of Interstate 69 and 70, by moving Interstate 69 farther north on Interstate 465, would distribute the traffic load more evenly on Interstate 465.

The possibility of another Interstate radial route in Indianapolis resulted in a comparison of the approved 12th Street location for Interstate 65 with an alternate location for Interstate 65 along 30th Street. Accordingly, Interstate 65 would have followed Interstate 69 to the Inner Belt. The 12th Street location was retained because the 30th Street location resulted in adverse travel for through traffic, concentrated traffic on the Inner Belt causing unbalanced traffic distribution, required eight lanes on Interstate 69 from 30th Street to the Inner Belt, and violated the concept of an inner belt around the Indianapolis CBD. An additional freeway was later recommended by IRTADS along 30th Street.

The Bureau of Public Roads subsequently approved the relocation of Interstate 69 along the alignment of SR 37. Because the original location of Interstate 69 terminated at the junction of Interstate 70, the relocation of Interstate 69 was only approved to Interstate 465, the first junction with another Interstate. The Bureau of Public Roads also approved the assignment of the preliminary

engineering costs of the original location to the preliminary engineering costs of the new location.

The extension of Interstate 69 from Interstate 465 to the northeast interchange of the Inner Belt was later recommended by IRTADS to complement the basis Interstate freeway system of Indianapolis. Although the Bureau of Public Roads did not approve the extension of Interstate 69 (known as the Northeast Freeway) as a part of the Interstate System, the northeast interchange of the Inner Belt was modified to accommodate the eventual construction of the Northeast Freeway; and the Northeast Freeway was considered in the traffic assignments in designing the Inner Belt.

Huntington and the Huntington Reservoir

The City of Huntington had generally opposed the relocation of Interstate 69 from the original location west of Anderson and Huntington to a new location between Anderson and Muncie that passed seven miles east of Huntington. At the public hearing of March 31, 1959 on the section of Interstate 69 through Huntington County, the City of Huntington vigorously opposed the new location east of Huntington. In fact, Huntington was the only city that opposed the new location during the public hearings on Interstate 69.

Huntington had serious traffic problems and had favored the original location because it would provide a bypass west and north of Huntington relieving local traffic problems. The relocation of Interstate 69 to the east of Huntington eliminated the possibility of the Interstate being that bypass. The Huntington delegation felt that consideration should have been given to the need for bypasses at Anderson, Marion, and Huntington in the 1958 location comparison study and that the cost of these bypasses should have been added to the cost of developing the new location to the east of these cities.

Furthermore, Huntington noted that the State had failed to consider the possible conflict of the new location with the proposed Huntington Reservoir which might have increased the cost of the new location near Markle. Some felt that Anderson and Marion had endorsed the new location because the State had promised them bypasses and improved connectors for better access to Interstate 69. The Huntington businessmen complained that business would suffer because of the diversion of through traffic so far to the east of Huntington.

In review of the public hearing, the Indiana State Highway Department rebutted the contentions of the Huntington area. The Interstate System was not intended to provide local bypasses or to solve all the local traffic problems of an urban area. Even if the Interstate was built at the original location as Huntington desired, the State felt the Interstate bypass would not significantly relieve the congestion in Huntington because the congestion was caused primarily by local short haul traffic from converging primary and secondary highways and not by long haul traffic that would be served by the Interstate.

The comment that bypasses would still be needed at Huntington, Marion and Anderson and that the cost should be added to the development cost of Interstate 69 was also based on the incorrect belief that the Interstate System would serve as local bypasses. These local bypasses would be built with Federal Aid Primary or Secondary funds when they were economically justified. No existing route into Huntington was eliminated or relocated and as existing traffic and population of Huntington would increase, the highway-oriented businesses would not suffer a loss of revenue.

In a subsequent letter to the Bureau of Public Roads the Chairman of the Indiana State Highway Commission stated that the Interstate Route was not a cure-all for local

congestion problems, that congestion was caused by the present State highway system in the area, and that these problems should be treated individually as a part of the overall system improvement with other than Federal Aid Interstate funds. To receive the full benefit of the Interstate System, adequate connecting facilities were needed to integrate the Interstate Route into the existing highway network. Non-Interstate improvements around Huntington were independent of the Interstate System except for connectors.

The Indiana State Highway Commission subsequently agreed to consider implementation of its plans for a bypass to the north and west of Huntington. The US 24 bypass of Huntington was completed in 1968.

Because the proposed location conflicted with the proposed huntington Reservoir, the Indiana State Highway Department investigated two alternatives from SR 18 to US 24. Referring to Figure 95, p. 597 ,the proposed location extended northeast from Landess to Fort Wayne passing near Markle and the upstream or east end of the proposed reservoir.

The Lancaster Alternative, which was proposed by interested people in Huntington to benefit traffic movements to and from Huntington, extended north from Landess crossing US 224 near SR 5 and angled northeast generally parallel to US 24; this alternative crossed the Wabash River below the proposed flood control dam.

The Majenica Alternative, which was an attempt to combine the better features of the other alternatives, crossed US 224 midway between the Lancaster Alternative on the west and the proposed location on the east and passed through the upstream end of the proposed reservoir.

When the study was completed on November 11, 1959, the construction cost for the proposed location was estimated to be \$23,119,000. This was \$2,391,000 less than the

Lancaster Alternative and \$1,389,900 less than the Majenica Alternative. An error in the cost estimate of the Lancaster Alternative increased the difference to \$3,265,000 in favor of the proposed location. The average annual user cost in the corridor was estimated to be \$27,548,000 for the proposed location, \$27,984,900 for the Lancaster Alternative, and \$27,773,900 for the Majencia Alternative.

Since the proposed locatin had the lowest capital and user cost, the proposed location near Markle was retained. The fact that the Lancaster Alternative duplicated an existing four-lane divided highway (US 24) between Huntington and Fort Wayne weighed against it.

In March of 1961, the Indiana State Highway recompared the alternatives on the basis of the additional cost that might be incurred as a result of the proposed reservior. The proposed reservior added \$245,090 to the proposed location and \$545,000 to the Lancaster Alternative. Comparing the capital cost for various grade elevations, the proposed location was always less costly.

Fort Wayne Relocation

In July of 1958, the Indiana State Highway Department completed a comparative cost study of the orignal tentatively approved line, which appeared in the 1958 Estimate of the Cost of Completing the Interstate System, with an alternative line to the west from south of SR 14 to US 30 and 33. The study was prompted by the cost of the Nickle Plate Railroad and Pennsylvavia Railroad crossing, the properties involved in the interchange with SR 14, the proximity of Green Lawn Cemetary on West Covington Road and the proximity to the Briar Wood Hills subdivision north of US 24.

The railroad separations on the alternative location were found to cost considerably less than the combination structure on the original location. The alternative location

involved no residential acquisition at the SR 14 interchange as compared to eight residences required on the original location. The alternative location was farther away from the Green Lawn Cemetery, did not require the reconstruction of the only entrance to the Briar Wood Hills subdivision, and did not involve residences at the US 24 interchange.

Consequently, Indiana requested approval of the alternative location (proposed location in Figure 96, p.600) in July of 1958. It also requested approval of the tentative proposed location noted in Figure 96 pending completion of location studies south of SR 14.

Extension of Interstate 69

Although Interstate 69 was described as an Interstate Route joining the Indianapolis and Detroit Metropolitan Areas, Interstate 69 had terminated at the Indiana East-West Toll Road since the 1944 study Interregional Highways. Late in 1956, Michigan and Indiana began to discuss the relocation of the Elkhart-Kalamazoo Interstate Route to connect Interstate 69 with Interstate 94 near Marshall. In essence, the relocation of the Elkhart-Kalamazoo Interstate Route was to be an extension of Interstate 69 from the Indiana East-West Toll Road to Interstate 94, a direct route to Detroit.

When the Tri-State Highway connecting Detroit and Chicago was envisioned by Illinois, Indiana and Michigan authorities in the late 1920's and when routes to be included in the Interstate System were discussed in the 1940's Indiana stated that it would only participate in construction of the Tri-State Highway (now Interstate 94) to Michigan if the route served the South Bend-Elkhart area. Specifically, Indiana wanted the route to coincide with what is

- ALTERNATED CROSS ROAD
- ORIGINAL LOCATION AT-GRADE
- INTERSECTION AREA BOUNDARY
- HIGHWAY RELOCATION

FIGURE 96. INTER

FIGURE 96. INTERSTATE 69 : ALLEN COUNTY⁶¹

now the Indiana East-West Toll Road until it reached Elkhart and then to angle northeast toward Detroit from Elkhart.

The proposed national toll road system of 1939 included a route across northern Indiana to the Ohio line (now the Indiana portion of the East-West Toll Road) and a spur off of the East-West Toll Road near the Ohio-Indiana State Line to Detroit. Pressure from Ohio to link the Indiana Toll Road with the Ohio Toll Road resulted in an agreement of Indiana to connect with the Ohio Toll Road, but it also proposed the spur east of Elkhart to Detroit to serve the original Tri-State Highway conception.

Desiring Interstate service through southwestern Michigan from Detroit, Michigan vigorously opposed the routing of the Tri-State Highway (Interstate 94) through the South Bend-Elkhart area. A compromise with Indiana was eventually reached whereby both routes were to be built. Interstate 94 was to be routed along the south shore of Lake Michigan to enter Michigan near Michigan City. Indiana was allowed to link the Indiana Toll Road to the Ohio Toll Road and was given a spur from the Indiana Toll Road near Elkhart to connect with Interstate 94 near Kalamazoo to serve the Tri-State Highway.

When Michigan approached Indiana in 1956, Indiana no longer felt the Elkhart-Kalamazoo Interstate Route was vital. Michigan suggested that relocation of the Elkhart-Kalamazoo Interstate Route to extend Interstate 69 to Interstate 94 near Marshall would result in a more consistent Interstate System providing Interstate 69 with a direct link to Detroit in accordance with the original conception of Interstate 69. Indiana concurred with Michigan feeling the extension of Interstate 69 would provide greater benefit to Indiana.

On February 26, 1957, Indiana and Michigan requested Federal consideration of a relocation of the Elkhart-Kalamazoo Interstate Route. In May of 1957, Indiana and Michigan State

Highway Department officials met to further discuss the relocation. Michigan had US 27 under study and insisted that the relocation connect with Interstate 69 through Angola. Michigan stated it would submit data for the Elkhart-Kalamazoo location; but thereafter, would take steps to get the Angola location approved. Both States agreed that traffic demand for the Angola location, as compared to the Elkhart-Kalamazoo location, would determine if the Interstate Route was to be relocated.

Preliminary studies indicated that the Angola location would carry nearly three times the volume of the Elkhart-Kalamazoo location in 1975 and was already carrying twice the volume of the Elkhart-Kalamazoo location in 1955. The traffic demand argument, along with the argument of increased continuity of the Interstate System, convinced the Bureau of Public Roads that the relocation of the Elkhart-Kalamazoo Interstate Route to provide an extension of Interstate 69 to Interstate 94 should be approved. In January of 1958, Indiana requested that further consideration be given to the recommendation that Interstate 69 follow US 27 to the Michigan-Indiana State Line on the basis that Michigan had made a similar request. On January 21, 1958, the Bureau of Public Roads approved the extension of Interstate 69.

After approval of the extension of Interstate 69 directly north from Waterloo to the Indiana-Michigan State Line and the elimination of the Elkhart-Kalamazoo Interstate Route, Indiana proceeded to study two alternative locations for Interstate 69 in the corridor of existing US 27. Referring to Figure 97, p.603, Alternative A was a relocation of US 27. Alternative B paralleled US 27 approximately two miles to the west leaving Alternate A at US 6 and rejoining Alternative A north of US 20.

The Indiana State Highway Department recommended Alternative B (the western line) on the basis of capital

FIGURE ICHIGAN STATE LINE

FIGURE 97. INTERSTATE 69: ALTERNATIVES FROM WATERLOO TO THE INDIANA-MICHIGAN STATE LINE

FIGURE 97 ,CON

and user cost on April 21, 1958. The capital cost for Alternative B at \$27,818,000 was \$6,156,000 less than Alternative A which was one mile longer. Despite muck pockets and numerous lakes, Alternative B was less costly due to a reduction in the number of interchanges and separations and the elimination of the need to relocate US 6 for an adequate interchange configuration. A reduction in the number of railroad separation structures was also a primary reason for reduced cost.

Alternative B provided a more direct alignment and served existing and future traffic as effectively as Alternative A. Alternative A had a lower road user cost, but it would have taken thirty-two years for the road user savings to amortize the additional capital cost of the location. From a community impact standpoint, Alternative B was preferable because the area west of Angola was less heavily developed as reflected in the right-of-way costs. The location of Alternative B also passed through more attractive terrain and was closer to a lake resort area.

On July 6, 1962, the Indiana State Highway Commission completed a study of alternative locations in the Lake Charles area north of Angola. The Bureau of Public Roads had requested a review of the approved location west of Angola because peat deposits near Lake Charles and Green Lake required bridging. Referring to Figure 98, p. 606, four alternative locations to the approved line were considered. All four alternative locations had more objectionable features than the approved line.

Although Alternative A avoided Lake Charles, it traversed more extensive peat deposit farther north; severed the Wing Haven Bird Sanctuary; failed to provide direct accessibility to Pokagan State Park; and resulted in higher user costs due to its longer length.

Alternative B was rejected because it divided the Lake James Golf Course, required the taking of several residences,

FIGURE 98. INTERSTATE 63: ALTERNATIVES IN THE LAKE CHARLES AREA⁶³

FIGURE 98.

INTERSTATE 69: ALTERNATIVES IN THE LAKE CHARLES AREA⁶³

and had an objectionable alignment. Although Alternative C avoided Lake Charles and had an acceptable alignment, it traversed heavy peat deposits and passed through the Wing Haven Bird Sanctuary.

Alternative D, which had been previously evaluated in July of 1961 and resembled the location east of Angola in the April of 1958 location study, was rejected because it was estimated to cost four and a half million dollars more than the approved line and had a lower benefit cost ratio than the approved line.

The approved location was retained because it minimized the objectionable features encountered by the other alternatives despite the difficulty encountered at Lake Charles.

In the summer of 1963, the Michigan State Highway Department encountered a location problem in crossing Silver Lake near the State Line. Local property owners opposed the location, and a new Michigan law stated that property owners along the lake had the rights to the lake bottom land. Consequently, Michigan relocated Interstate 69 to the east of Silver Lake as shown in Figure 99, page 608. Indiana subsequently requested the Bureau of Public Roads to approve a minor relocation in Indiana to accommodate the Michigan relocation.

Special Cases Involving Access Treatment

No events of historical significance occurred in Wells and Madison Counties.

Allen County. At the public hearing on the location of Interstate 69 from US 24 to the Allen-DeKalb County Line on March 7, 1958, local officials requested an additional interchange north of US 27 in Allen County. [Refer to Figure 96, p. 600]. In a subsequent conference with the Allen County Commissioners, the Indiana State Highway Department proposed an interchange at Dupont Road to serve

old SR 427 and SR 1. In return, the county agreed to upgrade Dupont Road west to old US 27 (now SR 327) and to eliminate any separation north of Dupont Road except Hursh Road which was part of a proposed outer belt of Fort Wayne.

In June of 1958, the Indiana State Highway Department requested two additional interchanges in the sixteen-mile stretch between the US 27 interchange north of Fort Wayne and the US 27 - SR 8 interchange west of Auburn: one at Dupont Road in Allen County three miles north of the US 27 interchange and the other four miles south of the US 27 - SR 8 interchange at **Butler** Center Road in DeKalb County.

As justification for the additional interchanges, Indiana stated that the lack of access in the sixteen mile stretch would seriously hamper the ability of Interstate 69 to serve communities in the corridor. Indiana also made a commitment to relocate SR 1 west on Dupont Road to Interstate 69. In exchange for a separation at Hursh Road and the interchange at Dupont Road, Allen County later stated it would not object to the elimination of separations at Union Chapel Road, Vandolah Road, and the Allen-DeKalb County Line Road, the result was a net decrease of one separation.

On September 18, 1958, the Allen County Commissioners requested the separation of Union Chapel Road on the basis of local service needs. The county initially considered the elimination of the Wallen Road separation in exchange; however, later that month, the county objected to the closure of Wallen Road. The Indiana State Highway Commission felt that there would be serious local objection to the closure of Wallen Road due to the construction of a new school and church on the road; therefore, an additional separation was requested at Union Chapel Road on the basis of local service and lower cost as compared to the cost of upgrading other roads to handle the traffic if the road was

closed. The addition of the separation was approved by the Bureau of Public Roads on December 2, 1958.

In February of 1959, local residents petitioned for the separation of Vandolah Road. The Indiana State Highway Department submitted justification for the addition of the separation in March of 1959. The bureau of Public Roads was reluctant to approve the request because the omission of the separation had been a warrant for adding interchanges at Dupont and Butler Center Roads and for the separation of Hursh Road.

The Bureau of Public Roads suggested elimination of the Hursh Road separation in exchange for addition of the Vandolah Road separation because the latter better satisfied the local circulation needs of the petitioners. Indiana replied that design plans had already been completed for Hursh Road and that the Hursh Road separation was approved in January of 1959 prior to discussion of the Vandolah Road separation. In May of 1959, the Bureau of Public Roads approved the separation of Vandolah Road.

At the March 1958 public hearing, local residents opposed the location of Interstate 69 in the vicinity of SR 14 because of disruption to existing and planned development. The Indiana State Highway Department stated in the subsequent public hearing review that there was no major opposition to the location and that the alignment south of SR 14 might require adjustment pending the results of location studies farther south. The Bureau of Public Roads approved Interstate 69 from the Allen-DeKalb County Line south to US 27 pending resolution of the objections.

Indiana completed a location study in July of 1958, as previously described, that resulted in the relocation of the line to the west. The residents along SR 14 were satisfied, but residents along US 24 near the relocation claimed that the proximity of the Interstate to their

property would depress property values and that the relocation conflicted with planned development near Hadley Road.

The Indiana State Highway Department replied that experience had shown that Interstate Routes benefited properties adjacent to the facility and those served by the facility.

In the fall of 1965, a developer on Yohne Road requested an interchange on that road. The Indiana State Highway Commission replied that existing development did not warrant the interchange and that an interchange one mile south of the US 24 interchange was undesirable interchange spacing. An interchange more equidistant between the US 24 interchange and the Lafayette Center Road interchange, a distance of 5.6 miles, would be preferable. The Indiana State Highway Commission felt that such an interchange would be necessary in the future for the South Bypass of Fort Wayne or the Baer Field Expressway to make either proposal feasible. Preliminary engineering began on the South Bypass in 1971 running from Interstate 69 to US 30.

Interchanges were initially planned at Lafayette Center Road, Lower Huntington Road and US 24. However, the Lower Huntington Road interchange was dropped because of spacing requirements. The Lafayette Center Road interchange was retained rather than the Lower Huntington Road interchange because of better service to the area and better interchange spacing intervals.

The design of the interchange of Interstate 69 with US 24 led to considerable public discontent. Without the availability of traffic volume data, the design consultant had originally suggested a tri-level directional interchange. When data was available on through and turning volumes, the Indiana State Highway Department felt a cloverleaf interchange would be adequate to handle projected traffic. When use of the cloverleaf design was discouraged in 1960 due to weaving problems, the interchange type was changed to a diamond interchange with a loop in the northwest quadrant.

Because all four interchanges north of US 24, having been designed before 1960, were of the cloverleaf design, the public felt the State had given them an inferior design at US 24.

In 1966 and 1967, local residents and the Safety Council of the Fort Wayne Chamber of Commerce requested a redesign of the interchange; however, local officials made no request in support of a redesign. The requests for redesign were based on the belief that the left turn from eastbound US 24 to northbound Interstate 69 was dangerous, that left turns from the interchange ramps onto US 24 were dangerous, and that the lack of acceleration lanes onto US 24 disrupted the free flow of traffic on US 24. The petitioners also felt that Interstate 69 served as a west and north bypass for Fort Wayne and that a loop or directional ramp should have been designed to handle the eastbound US 24 to northbound Interstate 69 movement to encourage use of Interstate 69 as a bypass.

The Indiana State Highway Commission replied that the low volume of eastbound US 24 to northbound Interstate 69 movement did not warrant specific treatment, that there was adequate sight distance and left turn lane storage and deceleration length to accommodate a safe left turn, that the number of accidents occurring at the interchange was abnormally high while the interchange was the temporary terminus of Interstate 69 from October of 1962 to June of 1966, and that the number of accidents dropped from five in 1965 to zero in 1966 when the remainder of Interstate 69 was opened.

DeKalb County. On May 7, 1958, the DeKalb County Commissioners requested an additional interchange at the Butler Center Road four miles south of the US 27 - SR 8 interchange to serve communities in Noble and DeKalb Counties. The county also preferred a separation of the east-west county road one mile north of the Allen-DeKalb County Line Road rather than at the Allen DeKalb County Line Road.

In June of 1958, Indiana requested the **Butler Center** Road interchange along with the Dupont Road interchange in Allen County stating that DeKalb County had promised to upgrade **Butler Center Road**. Indiana felt that the continuity and location of **Butler Center Road** was the best location for an interchange to serve the area south of Auburn. The Bureau of Public Roads ultimately approved the interchange and separation request.

At the public hearings, local residents opposed the closure of any county road. Consequently, the County Commissioners took a similar position and refused to sign the access control resolution until the objections were resolved. In August of 1958, the Auburn Chamber of Commerce submitted the following recommendations to the Indiana State Highway Department: (1) relocate the **Butler Center** Road interchange one mile to the north at County Road 56 because the right-of-way necessary for the improvement of **Butler Center Road** would involve structures in St. Johns and **Butler Center**, a new bridge was needed over Cedar Creeek for **Butler Center Road**, County Road 56 was an eastward extension of SR 205 from old US 27 to SR 427 and the more northerly interchange location would better serve the Auburn-Garrett area; (2) extend the **Baltimore** and Ohio Railroad separation over the future extension of Auburn Avenue to serve future development west of Interstate 69 and north of the railroad; (3) connect the Auburn-Ashley Road (County Road 27) to Interstate 69 to serve growth in the area north of Auburn; and (4) separate County Road 38 because it served the northern growth of Auburn and was designated a thoroughfare by the City Plan Commission.

The Indiana State Highway Commission replied that the interchange location at **Butler Center Road** provided greater service to the area, that the separation of the future extension of Auburn Avenue (which terminated 0.7 of a mile

cast of Interstate 69) was not warranted by future development because the area was predominately rural, that sufficient clearance at the railroad structure would be provided so that the road could be extended under the separation in the future with a minimum of revision, that a connection between the Auburn-Ashley Road and Interstate 69 was too close to the US 27-SR 8 interchange, and that the closure of County Road 38 would not hamper circulation as a separation was planned 1.5 miles north at the Auburn Ashley Road (and 0.5 mile south at county Road 36A).

In September of 1958, the County requested the separation of County Road 50-52 even though separations existed one mile to the north and to the south. County Road 50-52 was designated as a thoroughfare by the City Plan Commission to accommodate future growth. The Indiana State Highway Department considered the relocation of the road along the New York Central Railroad so that a combination separation structure could be provided; however, the combination separation and relocation was not economically feasible from the benefit-cost standpoint.

In May of 1959, the County requested the separation of County Roads 4 and 14 because only one separation existed in a six-mile stretch between US 6 and SR 4. Indiana requested a separation at County Road 14 in October of 1959; however, the Bureau of Public Roads did not approve the separation since separations were approved one mile to the north at SR 4 and 1.5 miles to the south at county road 10. The closing of County Road 14 created no adverse travel, and the request for a separation was denied.

In July of 1959, the Indiana State Highway Commission relocated the interchange at Butler Center Road north to the St. Johns-Auburn Road (County Road 11A); the latter road had a black top surface rather than a gravel surface, was a logical extension of SR 205 into Auburn, and would result in a less expensive interchange uncomplicated by soil

problems. The Bureau of Public Roads concurred in the relocation.

The US 27-SR 8 interchange was initially designed without on ramps. However, the State successfully justified the construction of the interchange for all movements in 1961, obtaining a change in design plans.

The County Commissioners and local residents made repeated attempts over another five years to get all county roads separated. However, they were not successful in getting additional separations.

Delaware County. At the public hearing on Interstate 69 through Delaware County, the State promised an additional interchange between the interchanges at SR 28 and SR 32. The interchange was tentatively located on the alignment of SR 128 (County Road 200N). With the completion of a Thoroughfare Study for Delaware County, Delaware County requested the relocation of the interchange from County Road 200N south to Division Road to be consistent with the Thoroughfare Plan of 1962.

In April of 1962, the Indiana State Highway Department asked the county to make a commitment to construct a four-lane road from Muncie to a location of their choice on Interstate 69. Since the county failed to make the commitment, the State would not justify the expenditure to relocate SR 128 extended. The county and State ultimately agreed that the present location of SR 128 extended would tie in adequately with the proposed Muncie Belt Route west of the city, and the matter was dropped.

Grant County. At the Marion hearing on Interstate 69, requests were made to improve SR 18 and US 35 to handle additional traffic to Marion from Interstate 69. The State recorded the requests in April of 1959.

In December of 1959, the Grant County Commissioners requested the separation of County Road 600N which was a black top farm to market road. The road was closed because of its lack of continuity and low traffic volume. In 1961, the county suggested that the County Road 400N separation be relocated to County Road 600N; however, the State denied the request because the relocation would inconvenience twice as many people.

In June of 1964, local residents applied considerable pressure for an interchange at County Road 400N to serve Van Buren and Landess. The State took no action since interchanges at SR 218 and SR 18 adequately served the area. In the fall of 1970, the request was again made. The Indiana State Highway Commission replied the county would have to commit their own funds to the construction of the interchange since Federal policy prohibited additions with Federal Aid Interstate funds on completed Interstate projects.

Hamilton County. At the public hearing of April 13, 1963 on Interstate 69 from SR 38 to Interstate 465, the State reported that interchanges were to be located at Interstate 465, SR 100, 96th Street, 116th Street, SR 37, SR 238, SR 13, and SR 38. In September of 1963, the Indiana State Highway Commission submitted justification for all the interchanges. The Bureau of Public Roads withheld approval of the 116th Street interchange pending submission of geometrics to resolve the problem of proximity of the 116th Street and SR 37 interchanges. [Refer to Figure 100 , p.617]. In October of 1964, Indiana resubmitted the request for approval of the interchange accompanied by a community service needs justification, local petitions, and revised interchange geometrics. The Bureau of Public Roads approved the interchange in September of 1964 based on the fact that interchange spacing on Interstate 69 was essentially the same as that previously approved and on the fact that

FIGURE 100. INTERSTATE 69: FISHERS AREA.

the interchange eliminated the need for two miles of frontage road.

On August 16, 1965, the Hamilton County Commissioners requested a frontage road on the east side of Interstate 69 from Lantern Road to 116th Street because the local street in Fishers (that served as a portion of the west frontage road from 106th Street to 116th Street) would be unable to carry the additional traffic of closed Lantern Road, the increased traffic on the local streets caused a traffic hazard through a residential area and by a school complex, the lack of an east frontage road caused increased congestion on 116th Street, and developers had requested the frontage road.

The developers had requested the construction of a frontage road the previous month, but the Indiana State Highway Commission had replied that construction of the frontage road was the responsibility of the developer. The State informed the county commissioners that the expenditures for the east frontage road was not justified since adequate circulation existed and volumes on the west frontage road would not expand sufficiently to cause problems in Fishers. The existence of the 96th Street interchange south of Fishers would minimize northward travel through Fishers to the 116th Street interchange.

Huntington County. At the preliminary access control review of November 10, 1960, the County Commissioners requested an additional separation at County Road 300E because the county had black topped the road and the road served as a mail and school bus route. The Bureau of Public Roads refused to approve the additional separation because the cost exceeded the 1960 estimate of the cost to complete that segment of the Interstate System.

The county eventually gave up a separation at County Road 800S in exchange for one at County Road 300E and County Road 800S was linked by a frontage road to Meridian Road which was separated. Since the 1960 Interstate cost estimate included separations at County Road 1000S, 900S, 800S, and Meridian Road, the County lost little in regard to traffic circulation and service.

Steuben County. Having completed an economic comparison of alternative locations east and west of Angola in April of 1958, the Indiana State Highway Department held a public hearing on the preferred western location on July 28, 1958 at Angola. The Mayor of Angola and the business interests of Angola strongly opposed the western location stating the eastern location would better serve the eastward expansion of Angola. Since other businessmen in the area supported the western location, the State retained the western location.

In May of 1959, the county commissioners stated that Interstate 69 would hamper circulation in the lake area northwest of Angola because the lack of adequate interchanges and separations would concentrate traffic only on a few county roads. In particular, traffic would be concentrated on County Road 37 via the US 20 interchange. County Road 37 was already the major service road to the lake area from US 20, and the County Road 37-US 20 intersection was already heavily loaded.

Referring to Figure 97, p. 603 , the county suggested a relocation of Interstate 69 with an additional interchange at US 27 near County Road 28 to distribute traffic more evenly to the lake area, or the addition of an interchange in the vicinity of County Road 37 and 28 and the addition of a separation at County Road 30 on the existing location. The County also requested that US 20 be widened to four lanes from Interstate 69 to Angola if the existing location

was retained and that County Road 22 (serving Buck Lane Ranch) be separated.

In August of 1959, the County requested four lanes on US 20 from Interstate 69 to Angola, a partial diamond at County Road 37 and County Road 28, the relocation of the Toll Road interchange to SR 120, and the relocation of the County Road 29A interchange south to County Road 33B.

In September of 1959, the State agreed to provide a structure for a divided highway at the US 20 interchange, to provide a full interchange at County Road 37, to give further study to an interchange at SR 120, to relocate the County Road 29A interchange to County Road 33B, which had greater continuity, and to separate County Road 30. The request to separate County Road 22, one mile north of US 20, was denied because the road carried insufficient traffic. The State eventually dropped consideration of an interchange at SR 120 due to its proximity to the Toll Road interchange, but provided a frontage roads to link SR 120 to the interchanges with the Toll Road and SR 727 (old SR 127). In 1965, local residents again requested an interchange at SR 120 but were told the interchange violated interchange spacing standards.

The owner of Buck Lake Ranch requested separation of County Road 22 to serve his holdings in 1963. The State again denied the request because of insufficient traffic to economically justify the separation; however, Indiana later requested the separation on the basis that property damages would have to be paid amounting to half the cost of the interchange. The Bureau of Public Roads, however, failed to approve the additional separation of County Road 22 since adequate circulation existed without it.

Interstate Route 70

Interstate 70 was designated as a route paralleling US 40. Consideration was initially given to the upgrading of US 40 to Interstate standards; however, the Indiana State Highway Department found that existing development would make the utilization of US 40 economically prohibitive and that it would be more economical to construct Interstate 70 on new right-of-way. The corridor for the location studies varied from five to ten miles in width and was centered on US 40. Indianapolis was a major control point in the location of Interstate 70, and Richmond and Terre Haute were intermediate control points.

Interstate 70 East

The eastern terminus of Interstate 70 was initially US 40 at the Ohio-Indiana State Line. When the States decided not to upgrade US 40 to Interstate standards, the control point at the State line was shifted south of US 40. The western terminus of Interstate 70 was Interstate 465 near 21st Street in Indianapolis.

Richmond Bypass. The Indiana State Highway Department considered locations both north and south of Richmond from the Ohio State Line. The northern location was eventually chosen because better service was provided to the major routes converging on Richmond and because terrain problems existed on the southern location. A majority of the traffic to Richmond came from the northwest. Consequently, if Interstate 70 were located to the south of Richmond, a majority of the through traffic would still have to pass through Richmond to get to US 40 or Interstate 70 aggravating the congestion problems in Richmond.

At the Richmond public hearing on November 8, 1957, two major interest groups requested relocations. A farm group in the area between Centerville Road and US 35 suggested

that Interstate 70 be located due west from the US 35 interchange, through the State Farm property, and along the west slope of Nolands Creek. This alternative would not require valuable farm land and would utilize non-taxable State Farm property.

Desiring that Interstate 70 swing back to US 40 west of the US 35 interchange, US 40 businessmen opposed the farm group. Manufacturing and business men also suggested that the bypass be located farther from the city on the northwest side to permit better industrial expansion. The proposed alignment passed through industrial sites owned by the Pennsylvania Railroad, and the SR 627 interchange required considerable industrial land.

The Indiana State Highway Department had not completed location studies west of the Richmond bypass, but tentative plans were to route Interstate 70 back toward US 40 near Centerville. Subsequently, Indiana made the decision to keep Interstate 70 north of US 40 for its route to Indianapolis and the swing back to US 40 near Centerville was no longer desirable. Consequently, the relocation requested by the farm group was adopted by the State.

The businessmen of Richmond had met with the Indiana State Highway Department prior to the public hearing and discussed the relocation of the bypass farther from the city so as to minimize the adverse effect on existing and potential industrial sites. By the time of the public hearing, the State had decided to relocate Interstate 70 farther north between SR 627 and US 35 to avoid the taking of valuable industrial property.

In December of 1957, the alignment of Interstate 70 was also altered northeast of Richmond to bypass a proposed reservoir.

A comparative cost study was made of the inner and outer bypass routes around the north of Richmond. The outer

bypass proved to be approximately three million dollars less due to the elimination of six grade separations and three stream crossings and provided a more favorable location near the Richmond reservoir, saving \$700,000.

Because the outer bypass was approximately a mile north of the original alignment from Centerville to SR 121, another public hearing was held on the new location on June 16, 1958 but proved to be uneventful.

Location of Interstate 70 in Central Indiana. West of Richmond, the Indiana State Highway Department had decided to continue the location of Interstate 70 approximately three miles north of US 40 because of the cost of crossing the Pennsylvania Railroad and US 40 west of Richmond and recrossing the railroad and highway to join Interstate 465, the additional length of locating to the south of US 40, and the adverse terrain south of US 40 near Richmond. In April of 1960, H. W. Lochner, Inc. was contracted to evaluate alternative locations for Interstate 70 from Woodpecker Road (relocated SR 1) to Interstate 465.

Prior to the contract with Lochner, the Indiana State Highway Department had completed several location studies from west of Richmond to Interstate 465; however, changes in design standards, the right-of-way acquisition process, the types and spacing of the interchanges, and the overall characteristics of the system necessitated a reappraisal of the original location. In evaluating the alternatives Lochner was to consider the capital cost, the economy to potential users, the impact on the surroundings, and the effect on the Interstate System in the Indianapolis area.

The Interstate 70 bypass of Richmond was under construction and design plans were being completed for the westward extension of the bypass to Woodpecker Road north of Cambridge. Woodpecker Road (relocated SR 1), therefore, was the eastern terminus for the Lochner location study;

21st Street on Interstate 465 was the western terminus of the location study because location studies for Interstate 70 in Indianapolis had been completed to that point. The width of the Interstate 70 corridor was generally limited by the service corridors of Interstates 69 and 74.

The Lochner study, which was completed in December of 1961, compared three general alternatives. Referring to Figure 101, p. 625, Alternative A, which was the original alignment recorded in the 1960 Estimate of the Cost of Completing the Interstate System, was an extension of the presently located facility around Richmond, remaining approximately two and a half miles north of and parallel to US 40 from Woodpecker Road to Interstate 465 near 21st Street.

Alternative B angled southwest from the Wayne-Henry County Line to Raleigh and paralleled US 40 two to three miles to the south from Raleigh to Interstate 74 near Franklin Road. Alternative C paralleled the New York, Chicago and St. Louis Railroad from the Wayne-Henry County Line to five miles north of US 40; continued west to the Cleveland, Cincinnati, Chicago and St. Louis Railroad near Shirley; and paralleled the railroad to the south, rejoining Alternative A near Mount Comfort.

Alternatives A and B created attractive corridors for development between Interstate 70 and US 40. The alternative north of US 40 generally traversed poorer farm land and served a greater population.

Alternative A was preferred from the standpoint of capital cost, user cost, community impact and compatibility with the Interstate system in Indianapolis. The capital costs were estimated to be \$29,965,000 for Alternative A, \$32,765,000 for Alternative B, and \$30,580,000 for Alternative C. The increased length of Alternatives B and C resulted in the greater construction costs. Alternative

FIGURE 101. INTER

FIGURE 101. INTERSTATE 70: ALTERNATIVE LOCATIONS FROM INDIANAPOLIS TO S.R. 164

FIGURE 101, CONT.

FIGURE 101, CONT.

C, passing through the poorest farm land, had the lowest right-of-way cost, followed by Alternatives A and B.

Alternative A had the lowest total annual capital and user cost at \$86,986,000 as compared to \$92,261,000 for Alternative B and \$88,287,000 for Alternative C. Although Alternative C offered superior service to New Castle, the directness of Alternative A resulted in the lowest user cost. Alternatives A and B were sufficiently removed from communities along US 40 so as not to restrict normal development and had an equal stimulating effect on the US 40 corridor. Each created an area between US 40 and Interstate 70 which had superior transportation facilities in close proximity to Indianapolis. Alternative C, on the other hand, was not considered as good a stimulus to development.

The diagonal lengths of Alternatives B and C caused considerable severance damage when compared to Alternative A. In the Indianapolis area Alternative A, which joined proposed Interstate 69 at that time, was preferred to Alternative B, which joined Interstate 74, on the basis of construction cost. Alternative B also necessitated the addition of two lanes to a section of six-lane Interstate 465 (see Figure 102, page 628).

Considering the overall effect of Alternative B on other Interstate facilities, Alternative B resulted in an additional \$3,670,000 in construction cost when compared to Alternative A. Interstate 70 was ultimately constructed on the alignment of Alternative A, the original location suggested by the Indiana State Highway Department prior to December of 1961.

Special Cases and Route Service. Hancock County requests were not significant in regard to location or access control on Interstate 70.

FIGURE 102. INTERSTATE 70: ADDITIONAL CONSTRUCTION COSTS AS A RESULT OF ALTERNATE B⁶⁵

Henry County. At a March 5, 1962 meeting between the Indiana State Highway Department and Henry County Commissioners, the County Commissioners requested that the State investigate the addition of a grade separation at County Road 25W because no separation existed between SR 3 and SR 103.

On March 13, 1962, the Indiana State Highway Department completed an economic study of the separation at County Road 25W. Because user savings due to the separation would amortize the cost of the separation within eleven years, Indiana requested Federal approval of the separation. The Bureau of Public Roads approved the separation at County Road 25W, provided the separation at Henry-Wayne County Line Road was eliminated as suggested by Wayne County. The County Road 25W separation, however, turned out to be an addition to the system because the Henry-Wayne County Line Road separation was later shifted to the Simonds Creek Road in Wayne County.

Henry County also requested a frontage road in the southeast quadrant of the SR 3 interchange to link SR 3 to County Road 550S. With the approval of the County Road 25W separation, the Bureau of Public Roads felt such a frontage road was no longer justified, and they denied the request.

Henry County also requested a shift of the County Road 1025W-750S separation to Kennard Road. The adjustment was made when the Access Control Resolution was signed on April 2, 1961.

In February of 1964, local residents requested the separation of Mill Road which was flanked by separations at County Road 350W and Greensboro. Because construction plans were already complete and there was insufficient traffic to justify the separation, the State denied the request.

In December of 1964, local residents requested the separation of County Road 225W between the Old Spiceland

Road and SR 3 separations. The Indiana State Highway Commission had closed County Road 225W because it lacked sufficient traffic and continuity and adequate traffic circulation was provided by other separations. Because these conditions had not changed, the separation request was denied.

In 1964, local citizens, civic organizations, local government officials, and State and Federal elected representatives requested the addition of an interchange at SR 103 between Lewisville and New Castle. The interchange had been included in the 1958 Estimate of the Cost of Completing the Interstate System, but was deleted in 1960 as a result of economic considerations and the new average spacing requirements.

Indiana submitted a request for the addition of the interchange to the Interstate System in March of 1965. However, the Bureau of Public Roads disapproved the interchange for any kind of funding. On May 28, 1965, Indiana resubmitted the interchange request with a detailed justification on the basis of local area needs, traffic generating potential, and estimated cost considerations.

A SR 103 interchange would serve the large commuting work force of the New Castle area and would aid in the implementation of industrial development as set forth by the New Castle Master Plan. The user benefit analysis revealed that user savings would exceed the additional cost of the interchange ramps approximately twenty-six times. On August 5, 1965, the Bureau of Public Roads approved the addition of the SR 103 interchange to the Interstate System but not with Federal Aid Interstate funds.

Wayne County. At the Spiceland public hearing of September 28, 1961 on the location of Interstate 70 from west of Woodpecker Road to the Henry-Hancock County Line, the Wayne County Commissioners objected to the closing of

East Cambridge Road because local residents had complained of an inadequate bridge and flood problems in the area. Wayne County residents also suggested the relocation of the Wayne-Henry County Line Road separation to the Simonds Creek Road which carried more traffic.

At a February 16, 1962 meeting with the Wayne County Commissioners, the Indiana State Highway Department stated that the separation of East Cambridge Road was uneconomical according to a December of 1961 study and that Henry County would be contacted in regard to movement of the separation from the Wayne-Henry County Line Road to Simonds Creek Road.

On April 2, 1962, Henry County agreed to the relocation of the Wayne-Henry County Line Road separation to Simonds Creek Road. The Wayne County Commissioners were contacted the next day to sign the Access Control Resolution, but refused to sign the Resolution because the separation of East Cambridge Road was not included.

In August of 1962, the Indiana State Highway Department reevaluated the economic feasibility of the separation at East Cambridge Road. Although the difference between the annual costs of the separation and the annual savings to road users was less in August of 1962 than reported in December of 1961, the annual cost still exceeded the annual road user savings. The existance of separations one mile to the east and west of East Cambridge Road made the separation of East Cambridge Road unfeasible.

Despite the new economic evaluation of the separation, the Wayne County Commissioners still refused to sign the Access Control Resolution. Indiana suggested relocating the SR 1 separation to East Cambridge Road; however, all parties felt this move would result in greater public opposition. The Wayne County Commissioners never signed the Resolution for that section of Interstate 70.

Interstate 70 West

The western terminus of Interstate 70 was US 40 at the Illinois-Indiana State Line. The eastern terminus of Interstate 70 was initially Interstate 465 midway between US 40 and US 36, but was later shifted south on Interstate 465 to near Seerley Road.

Terre Haute Bypass. Early Interstate 70 location studies considered alternatives north and south of Terre Haute. The southern bypass was chosen because it was shorter and was closer to downtown. Extensive industrial development north of Terre Haute would have required a bypass much farther from the city.

Consideration was once given to recrossing US 40 east of Seelyville and continuing parallel and north of US 40 to Indianapolis. However, the location south of US 40 was retained because it passed through more favorable terrain, was more direct, and eliminated the expensive structures over US 40 and the Pennsylvania Railroad.

In May of 1962, the Indiana State Highway Department reviewed the preliminary locations for Interstate 70 from the Illinois-Indiana State Line to SR 59. The western boundary of the study area was US 40 at the Illinois-Indiana State Line. To allow the alternative locations to converge on a common alignment, the Indiana State Highway Department selected SR 59 as the eastern boundary of the study area. No rigid northern and southern boundaries were established for the study although an attempt was made to locate the alternatives as close to Terre Haute as economically feasible. The section of alternatives around Terre Haute involved a balance between traffic service and initial construction costs. Besides Terre Haute, the Wabash River and Hulman Airport were major features controlling the location of alternatives.

Five alternative locations were compared: two north of Terre Haute and three south of Terre Haute. Referring to Figure 103, Alternative A followed the alignment of US 40 for 3.1 miles from the State Line; passed through the northwestern corner of Terre Haute, fringe development to the north, and the north edge of the United States Government Supply Depot; continued east along the half section line to Seelyville; then angled southeast across US 40 near the Vigo-Clay County Line and through idle strip mines to rejoin the other alternatives at SR 59.

Alternative B coincided with Alternative A from the State Line to relocated US 41 where it changed to a line south and parallel to Elizabeth Avenue in Terre Haute; continued parallel to Elizabeth Avenue through the New York Central Railroad's Duane Yards; angled southeast to Fruitridge Avenue; returned to an eastern alignment between the United State General Supply Depot and the Pennsylvania Railroad yards; angled southeast to cross US 40 between East Glen and West Seelyville; and continued southeast to SR 59.

Alternative C utilized the existing alignment of US 40 for 0.8 of a mile; shifted to an east-west line south of Larimer Hill; angled southeast to bypass West Terre Haute; shifted to an east-west line at US 41 near Margaret Avenue; continued parallel and two blocks south of Margaret Avenue outside Terre Haute; and angled northeast near the south edge of Hulman Airport to rejoin SR 59.

Because Alternative C conflicted with the disposal area of the Weston Paper Company southwest of Terre Haute, Alternative D was developed to pass south of the disposal area. Alternative D followed the alignment of US 40 for only 0.2 of a mile; continued on an east-west line passing south of the Wabash River Oxbow; and rejoined Alternative C at US 41.

FIGURE 103. INTERST

FIGURE 103. INTERSTATE 70: ALTERNATIVE LOCATIONS FOR TERRE HAUTE BYPASS⁶⁶

Alternative E angled southeast from US 40 to the Wabash River; straightened to an east-west line before crossing the Wabash River; and continued east for five and a half miles before turning northeast to rejoin Alternative C south of Hulman Airport.

Alternative E, 22.7 miles long, had the lowest capital cost at \$25,294,000 (\$1,894,000 for right-of-way) and was followed by 22.5-mile long Alternative C at \$27,232,000 (\$2,572,000 for right-of-way), 22.0-mile long Alternative D at \$29,728,000 (\$2,022,000 for right-of-way and \$6,700,000 for bridging and protective walls), 24.5-mile long Alternative A at \$31,772,000 (\$3,688,000 for right-of-way) and 24.0 mile-long Alternative B at \$34,491,000 (\$4,318,000 for right-of-way). Alternatives C, D and A passed through fringe areas of urban development near Terre Haute. The high right-of-way cost for Alternative B was a result of the fact that it passed through Terre Haute.

Alternative D had the lowest annual user cost at \$14,494,197 and was followed by Alternative C at \$14,494,197; Alternative E at \$14,935,483; Alternative B at \$16,221,459; and Alternative A at \$16,504,105. Alternative D had a lower annual user cost than Alternative C because it was a half mile shorter. The other Alternatives were of greater length or farther away from the center of Terre Haute resulting in higher user costs.

On the basis of total annual user, capital and maintenance cost, Alternative D was the lowest followed by Alternative C. Incremental benefit analysis, however, revealed that the additional capital cost of Alternative D over Alternative C was not justified. Alternative C was also favored because it had already been approved by the Bureau of Public Roads, was the location discussed at the public hearings, and provided a better crossing of the Wabash River. Over \$795,000 had already been expended on

preliminary engineering and right-of-way for Alternative C. Consequently, the previously recommended and approved location (Alternative C) was retained.

Strip Mining Conflicts. In the summer of 1960, the Ayrshire Collieries Corporation contacted the Indiana State Highway Commission to discuss the location of Interstate 70 through their holdings from three miles east to nine miles east of SR 46 and extending from one mile south to two miles north of Margaret Avenue Road. Because the original line bisected major coal deposits and right-of-way costs would be correspondingly high, an alternative location that would avoid coal deposits was pursued.

Through sounding studies, Ayrshire discovered that there were two major coal fields extending along the corridor of SR 42 which were uneconomical to mine. Consequently, the alignment of Interstate 70 was shifted from Margaret Avenue Road to the corridor of SR 42 in July of 1962, as shown in Figure 104, p. 637.

In October of 1964, the Indiana State Highway Commission learned that Ayrshire was going to resume strip mining operations in the area of Interstate 70 extending east from Stauton Road and south from SR 42. The State had already completed the final design plans for this section of Interstate 70 on the assumption that no further strip mining operations were contemplated.

If the strip mining operations were allowed to resume in this area, the State would have to resurvey and redesign a section of Interstate 70, thus delaying construction. Furthermore, the highway road bed would have to be constructed over spoil deposits necessitating considerable earthwork. To prevent the conflict, the Indiana State Highway Commission contacted Ayrshire to determine the feasibility of immediately acquiring the right-of-way needed for Interstate 70 or limiting the strip mining operations to land outside that needed for Interstate 70.

L ROAD
AL DEPOSITS

FIGURE 104. INTE

FIGURE 104. INTERSTATE 70: INITIAL RELOCATION IN STRIP MINING AREA

In April of 1965, Ayrshire suggested a relocation of Interstate 70 to avoid the proposed strip mining operations in the area east of Stauton Road and south of SR 42, as shown in Figure 104 (p. 637). Ayrshire felt the relocation would result in considerable right-of-way savings. However, the Indiana State Highway Commission considered the proposal relocation uneconomical because the relocation would cost an additional \$315,000 for plan revision and construction. Furthermore, the year delay in construction would result in a loss to the road user of \$5,417,000. The Bureau of Public Roads concurred with the Indiana State Highway Commission's position.

The State's offers for acquisition of the necessary right-of-way from Ayrshire Colliers Corporation did not obtain a response from the owners and condemnation proceedings were initiated. Court appraisers found very high damages would result if the right-of-way was acquired because of the loss of over 400,000 tons of coal. Ayrshire also submitted two alternative locations for consideration. The Attorney General's office advised that a jury award in the event the condemnation went to trial could be very high.

In November of 1965, the Indiana State Highway Commission reevaluated the alternative location proposed by Ayrshire in April of 1965. Although the construction cost of the alternative location was now \$708,000 more than the existing location, the State agreed to relocate Interstate 70 in order to obtain a settlement.

In accordance with the agreement in December of 1965, Ayrshire retained the coal under the original alignment, received a separation for a haul road, was granted permission to cross the Interstate with a dragline under certain conditions, agreed to sell right-of-way of two hundred feet in width along the new location at thirty dollars per acre, promised to sell land for twin rest parks

at one dollar per acre, agreed that other right-of-way required for the facility would be appraised as farm land, and waived its right to be reimbursed for coal in the property purchased for the Interstate. The State also obtained additional right-of-way for a wider median in the dragline crossing area so that a dragline would only block one pavement at a time.

Interstate 70 in Central Indiana. The original location of Interstate 70 in west central Indiana extended from the south bypass of Terre Haute, angled northeast at Margaret and Fruitridge Avenue bypassing Hulman Airport on the northwest and crossing US 40 west of Seelyville, turned east north of Seelyville, and continued parallel and one mile north of US 40 to Interstate 465 near Delmar Avenue. This location appeared in the 1958 Estimate of the Cost of Completing the Interstate System, but was soon changed.

A comparison of the original location north of US 40 with an alternative location south of US 40 revealed that the southern location passed through more favorable terrain, eliminated the expensive recrossing of US 40 and the Pennsylvania Railroad, and was more direct. The eastern terminus of Interstate 70 at Interstate 465 near Delmar Avenue was subsequently moved south on Interstate 465 to Seerly Road in 1959 to avoid residential development, the necessity to recross US 40 and the Pennsylvania railroad, and greater route length.

Special Cases and Route Service. No significant historical event occurred in Morgan County nor in Hendricks County during the development of Interstate 70.

Clay County. At the November 3, 1961, meeting with the Clay County Commissioners and Ayrshire Collieries, the Indiana State Highway Commission agreed to add highway grade separations at the Ayrshire Haul Road and the Clay-Putnam County Line Road. Because the separations were not included

in the 1960 Interstate Cost Estimate, the Indiana State Highway Department submitted economic justifications to the Bureau of Public Roads. Since the user benefits exceeded the separation costs in both cases, the Bureau of Public Roads approved their addition to the Interstate System.

As a result of discussions with the Bureau of Public Roads in April of 1962, the Indiana State Highway Commission agreed to compare the cost of twin structures over the Ayrshire Haul Road with the cost of linking the Ayrshire Haul Road to the nearest county road separation and designing the county road separation to carry the unusually heavy loads of Ayrshire Collieries. The State study revealed that a separate highway grade separation for the Ayrshire Haul Road was more economical and would separate the Ayrshire off-the-road vehicles from normal traffic on Stauton Road.

With the relocation of Interstate 70 near SR 42 and Stauton Road in December of 1965, the State suggested that the Stauton Road separation be eliminated and a frontage road be provided on the north side of the Interstate from Stauton Road to SR 42. The county objected to the elimination of the separation because adverse travel distance would result, and Stauton Road was a future arterial county highway.

Due to the proximity of the SR 42 separation to the intersection of Stauton Road and SR 42, the State found that it would be impractical to construct the Stauton Road separation to meet the grade on SR 42. Furthermore, a dangerous intersection would result if the SR 42 grade separation was constructed to meet the Stauton Road separation. The county agreed and Stauton Road was never separated.

At the Brazil public hearing on Interstate 70 through Clay County on November 9, 1961, local residents opposed the closing of Water Works Road. The State replied that there was insufficient traffic to warrant the separation of Water Works Road (one mile west of SR 59) or Turner Road (two miles west of SR 59). However, the separation of Turner Road was warranted on the basis of the separation spacing needed to provide adequate traffic circulation in the area.

The Turner Road was equidistant from adjacent separations on north-south roads, and therefore the separation of Turner Road would provide better traffic circulation than a separation at Water Works Road. The Indiana State Highway Commission stated that the separation at Turner Road would be shifted to Water Works Road if the county made such a request. The County Commissioners also opposed the relocation of the Turner Road separation, and the separation remained at Turner Road.

Putnam County. At the access control review meeting of November 10, 1961, the Putnam County Commissioners requested an additional interchange at Belle Union Road to serve a new feed mill one-half mile south of Interstate 70. The county contended that the county roads in the vicinity of Buis Feed and Grain, Inc. lacked sufficient strength to carry the grain trucks and that the heavy traffic to and from the feed mill justified an interchange with Interstate 70. Since the traffic count was only 282 vehicles per day and an interchange at that location had not been included in the 1960 Interstate Cost Estimate, the State noted that the interchange would be difficult to justify. However, the State Highway Department agreed to make a new traffic count and to review the request.

The Belle Union ARoad interchange request was strengthened by petitions at the public hearing on Interstate 70 through Putnam County on November 15, 1961. On May 4, 1962, the

Indiana State Highway Department completed an economic study of the interchange at Belle Union Road with negative results. The State denied the interchange request because the interchange served no major highway or large population area, the benefit-cost ratio of 1.34 was considered inadequate in comparison to similar facilities, and average interchange spacing requirements would be further exceeded by the addition of another interchange. Furthermore, the denial of interchange facilities would not burden existing county roads because the predominant traffic demand was for through movement rather than turning movement on Interstate 70.

Despite the economic study, the county officials declined to sign the Limited Access Control Resolution on May 10, 1962, because of continued local pressure for an interchange at Belle Union Road. Because the interchange at SR 243 served a low traffic volume and was only 3.7 miles west of the SR 43 interchange, the county officials suggested that the interchange at SR 243 be moved to Belle Union Road to serve a larger area.

The State replied that elimination of the SR 243 interchange would leave an area of seventeen miles between SR 59 and SR 43 without an interchange and that an interchange at Belle Union Road would be only 3.6 miles west of the Little Point interchange and 5.5 miles east of the SR 43 interchange. Nevertheless, the Indiana State Highway Department submitted justification for an interchange at Belle Union Road to the Bureau of Public Roads on May 28, 1962.

According to the interchange justification study, Indiana recommended the Belle Union Road interchange on the basis that the benefit-cost ratio for the interchange exceeded the minimum established justification value of one, that the distance of 9.1 miles between adjacent interchanges

indicated a need for an interchange at an intermediate point to allow optimum utilization of Interstate 70, that the absence of an interchange at Belle Union Road would result in damage to county roads by large trucks traveling to an adjacent interchange, and that local residents would benefit through reduced operating costs and increased convenience with an interchange at Belle Union Road.

On July 13, 1962, the Bureau of Public Roads advised the Indiana State Highway Department that the interchange was not considered to be justified for the following reasons: (1) the addition of the Belle Union Road interchange resulted in a distance to the Little Point interchange which was less than the recommended spacing; (2) the less than desirable interchange spacing could not be justified because of the very low traffic volumes utilizing the interchange; and (3) the traffic volumes would not justify an interchange at Belle Union Road regardless of the spacing. Requesting reconsideration of the decision, the Indiana State Highway Department replied that the Bureau of Public Road's reasons for refusing the request were without justification and inconsistent with the objectives of the Interstate System. The Bureau of Public Road's position remained the same. As the Belle Union Road interchange was not added to the access control plan, the Putnam County Commissioners refused to sign a Limited Access Control Resolution.

When construction began on Interstate 70 through Putnam County in August of 1965, the county complained that the contractor ignored load limits on county roads and closed off Belle Union Road. The Indiana State Highway Commission informed the county that the contractor was to observe all county road regulations and that the contractor would leave the adjacent county roads open during the construction of the Belle Union Road separation.

On March 25, 1965, the county commissioners passed a resolution objecting to the closure of Belle Union Road during construction. In April of 1965, the State agreed to provide a temporary run-around at Belle Union Road during construction of the separation; however, the county requested a run-around for the full length of the project.

Suspecting that the troubles were related to the interchange requested, the Indiana State Highway Commission informed the county that the interchange could not be built as a part of the original Interstate Program but would be considered after the System was completed. The county continued to complain about the temporary closure of county roads during the construction of Interstate 70, and to maintain pressure for the interchange, the local officials frequently contacted their State and United States representatives to intercede in the matter.

In February of 1968, local residents requested an additional interchange at the Poland-Manhattan Road. The State replied that the addition of an interchange to a completed Interstate project was not eligible for Federal Aid Interstate financing. However, the State agreed to submit justification for the interchange if the county agreed to improve the county road leading to the interchange. The county failed to make a commitment, and the State did not submit the interchange request to the Bureau of Public Roads.

Vigo County. Events in the Terre Haute Metropolitan Area focused on the belief of residents and civic groups that Terre Haute was shortchanged in the number and types of interchanges when Interstate 70 was built. As submitted in the 1958 Interstate Cost Estimate, the original access control plan for Interstate 70 through the Terre Haute area included interchanges at US 40, SR 63, US 41, SR 46, and SR 42. Because the ramps of the SR 63 interchange interfered with a proposed sewage treatment plant, the City of

Terre Haute requested the elimination of the interchange. The SR 63 interchange was shifted westward to Darwin Road prior to the Terre Haute public hearing on Interstate 70 from the Illinois-Indiana State Line to US 41 on June 19, 1958.

The decision in 1959 to locate Interstate 70 south of US 40 rather than north of US 40 resulted in replacement of the interchanges at SR 42 and SR 46 by a single interchange at Fruitridge Avenue. With the deemphasis of the cloverleaf type of interchange in 1960, a diamond interchange replaced the cloverleaf at US 41 in the design process.

At the public hearing on Interstate 70 from US 41 to the Honey Creek-Riley Township Line on January 18, 1961, there was a suggestion that SR 46 be extended to US 40 to remove truck traffic from Terre Haute. On March 7, 1961, the Vigo County Commissioners requested that the interchange at Fruitridge Avenue be moved to SR 46, provided SR 46 was extended northward to US 40. The county hoped to route truck traffic around Terre Haute via US 40, SR 46, and Interstate 70.

In April of 1961, the Bureau of Public Roads tentatively approved the relocation of the Fruitridge Avenue interchange to SR 46 provided the State extended SR 46 to US 40 prior to, or in conjunction with the construction of Interstate 70. In May of 1961, the State completed a comparison of the cost of improving Fruitridge Avenue from Davis Avenue to Poplar Street (SR 42-SR 46) with the cost of improving SR 46 from south of Interstate 70 to SR 72 and extending SR 46 from SR 42 to US 40. Although the improvement of SR 46 was 0.7 of a mile longer than Fruitridge Avenue, the cost of improving SR 46 was \$283,000 less than the cost of improving Fruitridge Avenue (\$1,260,000). Consequently, the State recommended the relocation of the interchange at Fruitridge Avenue to SR 46. The City of Terre Haute and Vigo County signed resolutions approving the interchange relocation.

The Bureau of Public Roads agreed to the interchange shift on June 15, 1961.

In April of 1962, the county commissioners refused to sign the Limited Access Control Resolution for Interstate 70 from SR 46 to the Vigo-Clay County Line until the State considered the request for a traffic signal at US 41 and Margaret Avenue. After evaluation of the warrants for a traffic signal at US 41 and Margaret Avenue, the State approved the request.

In July of 1963, the Terre Haute Chamber of Commerce initiated an effort to force the Indiana State Highway Commission to redesign the US 41 interchange and to add another interchange between US 41 and SR 46. The Chamber of Commerce felt the diamond interchange at US 41 was inferior to the cloverleaf and inadequate to handle heavy truck traffic. Another interchange was also claimed as needed to serve growing Terre Haute industry.

In a report on the interchanges in the Terre Haute area, the Indiana State Highway Commission stated that there were four interchanges along ten miles of Interstate 70 serving Terre Haute. A cloverleaf type interchange was originally considered for US 41. However, the cloverleaf interchange was disapproved because the turning movements were light, the character of US 41 changed from a four-lane divided highway south of Interstate 70 to a city street with frequent traffic signals north of Interstate 70, and capacity analysis indicated that a diamond type interchange would be adequate.

Furthermore the area needed for a cloverleaf interchange was partially developed south of Margaret Avenue, and the right-of-way would have been expensive. Because the Chicago, Milwaukee and St. Paul Railroad crossed 25th Street near Interstate 70, 25th Street (1.9 miles east of US 41 and a possible additional interchange location) was

considered a poor interchange location. The interchange at Fruitridge Avenue (2.8 miles east of US 41) was shifted to SR 46 (4.3 miles east of US 41) at the request of Vigo County. Traffic assignments indicated that the proposed interchanges were adequate to serve the Terre Haute area. Since Margaret Avenue paralleled Interstate 70 from SR 63 to SR 46, the State felt there was little adverse travel to the interchanges in the design plans.

In reply to comments of the Terre Haute Chamber of Commerce, the Indiana State Highway Commission stated that the planning of Interstate 70 was a cooperative effort between local, State and Federal agencies, that the diamond type interchange at US 41 was selected after a comparison with other interchange types, and that an additional interchange was not justified because there was little adverse travel to planned interchanges.

The Washington Office of the Bureau of Public Roads reviewed the adequacy of the diamond interchange at US 41, service to the Terre Haute area, and intergovernmental cooperation. The Bureau of Public Roads stated that the diamond type interchange was adequate for US 41 and the cost for the additional right-of-way for a cloverleaf type interchange was not warranted. The Federal agency concurred with the Indiana State Highway Commission on matters of service and intergovernmental cooperation.

In September of 1963, the Technical Committee of the Coordinated Transportation Planning Board for Terre Haute and Vigo County requested a full cloverleaf interchange at US 41 and the addition of an interchange between US 41 and SR 46. The Indiana State Highway Commission discussed the matter with the Board, and the Board made no further efforts to get the requests approved. However, local civic groups kept the matter alive.

With rapid commercial development (including a regional shopping center) in the vicinity of the US 41/Interstate 70 interchange, traffic congestion became a reality on US 41 in the interchange area in 1970. This led to new requests for an additional interchange in the Terre Haute area and the redesign of the US 41 interchange.

Traffic signals were added at the ramp terminals because the heavy flow on US 41 blocked the entrance of ramp traffic onto US 41. In 1973, TOPICS funds were used to widen US 41 to six lanes through the interchange area to relieve congestion. Until the Terre Haute Transportation Study is completed, the Indiana State Highway Commission plans no major action relative to Interstate 70.

In July of 1963, the Coordinated Transportation Planning Board requested the addition of a separation at McCollough Road to serve elementary and high school bus routes. The State replied that the separation could not be economically justified.

In January of 1968, an interchange was requested at Hyde Road, four miles east of SR 46. Because Interstate 70 had been completed, the ISHC replied that the interchange could only be considered as a future activity.

Interstate Route 74

According to the 1944 study Interregional Highways, Interstate 74 followed US 150 from Davenport, Iowa, to Danville, Illinois, and US 136 from Danville to Indianapolis. In 1947, Indiana received an extension of Interstate 74 from Indianapolis to Cincinnati along the corridor of US 52.

Interstate 74 East

Location Studies. Because there were no metropolitan areas to serve as intermediate control points for the location of Interstate 74 from Indianapolis to Cincinnati,

the Indiana State Highway Department investigated a wide corridor defined by the urban areas of Rushville (7,264 population) and Connersville (17,698 population) on the north and the urban areas of Shelbyville (14,317 population) and Greensburg (6,605 population) on the south. Since US 52 was the accepted control point at the Ohio-Indiana State Line, the study corridor was further defined by US 52 on the north, and US 421 and SR 46 on the south.

Alternative locations between US 52 and US 421 were eliminated because of adverse detour distance during staged construction of Interstate 74. Having reduced the location alternatives to a location paralleling US 52 or US 421-SR 46, the State selected the latter for the following reasons: design plans for a four-lane divided highway had been developed prior to 1956 to replace US 421 from Indianapolis to Shelbyville; four twin bridges had been constructed for new US 421 prior to the final location of Interstate 74 and could be utilized for Interstate 74; limited access control had already been purchased for new US 421 and could easily be converted to full access control by the elimination of at-grade intersections with county roads; Interstate 74 could be built in stages with little adverse travel to US 421 for traffic bypassing uncompleted sections of Interstate 74; US 421 would still have to be developed as a four-lane divided facility if Interstate 74 were located elsewhere; and a location farther south would serve a greater area because it would not overlap the service corridor of Interstate 70.

Design problems from geological and soil conditions in the corridor from St. Leon to the Ohio border delayed completion of Interstate 74 from SR 1 to US 52.

Special Cases. No event of historical significance occurred in Franklin and Ripley Counties.

Dearborn County. Because of the possibility of liability suits from the approval of road closures, the Dearborn County Commissioners refused to sign the Limited Access Control Resolution for Interstate 74 in Dearborn County. At the public hearing on the location of Interstate 74 through Dearborn County on September 17, 1958, the town of West Harrison requested that the US 52 interchange be moved closer to the town.

The proposed interchange at US 52 was complicated by a bluff and a railroad, and a trumpet interchange closer to West Harrison was investigated. However, a comparative cost study revealed the trumpet interchange was more expensive than building the westbound ramps over the railroad at the original interchange location.

The State reported interchanges at US 52, SR 46, and St. Peters Road near Lawrenceville at the public hearing, but the interchange at St. Peters Road was eliminated as a result of 1960 interchange spacing guidelines. In May of 1963, local residents petitioned for an interchange at St. Peters Road. The State denied the request because the area lacked the traffic generation to justify an interchange regardless of interchange spacing requirements.

Decatur County. The original access control plan for Decatur County included interchanges at St. Omer, US 421 northwest of Greensburg, SR 3, and New Point. After the public hearing on Interstate 74 through Decatur County on September 9, 1958, the New Point interchange was shifted west to Rosburg Road. In October of 1958, the Town Board of St. Paul and other civic groups requested the relocation of the St. Omer interchange to the Shelby-Decatur-Rush County Line Road north of St. Paul. The Decatur County Commissioners concurred in the request.

Because an interchange at the Shelby-Decatur-Rush County Line Road would provide greater traffic service to the area between the interchanges at SR 244 and US 421, the

State agreed to move the interchange from St. Omer to north of St. Paul. In 1963, the residents of St. Omer requested an interchange for their city. The State informed the residents that the original interchange at St. Omer had been shifted to the Shelby-Decatur-Rush County Line Road (two miles west of St. Omer) to provide better traffic service for the area and that an additional interchange could not be justified for St. Omer because US 421 minimized adverse travel distance to the existing interchanges.

Shelby County. According to the access control map of the 1958 Interstate Cost Estimate, interchanges with Interstate 74 were provided at the Marion-Shelby County Line Road, the Brookfield Road, Pumpkin Vine Road near London, Rang Road near London, Bush Road near Fairland, South Fairland Road, SR 9, SR 44, SR 244 and Middletown-Waldron Road. An interchange at Knightstown Road was considered later, but was eliminated because it conflicted with subdivision development, and adjacent interchanges at SR 9 and SR 44 provided adequate service to the area.

Prior to the public hearing on Interstate 74 through Shelby County on November 5, 1957, interchanges were eliminated at the Marion-Shelby County Line Road, Pumpkin Vine Road near London, and Bush Road north of Fairland. After the public hearing, consideration was given to the relocation of the interchange from Middletown-Waldron Road to Shelby-Decatur County Line Road which was more heavily traveled; however, the relocation was not accomplished because the adjacent interchanges at SR 244 and St. Omer provided adequate service to the area.

At the Shelby County public hearing, the Madison Chamber of Commerce requested that Interstate 74 be routed closer to Madison because the Michigan Road originated at Madison and the route was needed to serve industry in Madison. Because Indianapolis and Cincinnati were the

control points for Interstate 74, the movement of the route toward Madison would violate Federal standards. Consequently, Madison's request was denied.

Interstate 74 West

Location Studies. Because Illinois located Interstate 74 south of Danville, the border control point for Interstate 74 was south of US 136. In locating Interstate 74 from the Indiana-Illinois State Line to Interstate 465, the Indiana State Highway Department investigated a five-mile corridor parallel to US 136. In the Crawfordsville area, alternative locations north and south of Crawfordsville were considered. The location south of Crawfordsville was discarded because terrain problems increased capital costs and more grade separations were required than for the northern alternative.

In 1957, the Indiana State Highway Department compared the original location of Interstate 74 (which was approved in December of 1956) with two alternative locations from Layton to Lizton. Referring to Figure 105, p. 653, the original location angled northeast from the common point southwest of Layton crossing the Peoria and Eastern Railway and US 136, and remained north and parallel to US 136 from Layton to SR 39. The southern alternative remained two to three miles south of US 136 from west of Layton to west of Lizton and crossed US 136 and the Peoria and Eastern Railway one mile northwest of Lizton to rejoin the original location at SR 39. The second alternative location followed the original location to US 41 and angled south-west to join the southern alternative near SR 341.

On the basis of capital cost, the 45.5-mile southern alternative was the least costly at \$34,171,000 followed by the 45.6-mile second alternative at \$37,134,000 and the

ORIGINAL LOCATION
SOUTHERN ALTERNATIVE
SECOND ALTERNATIVE
NORTHERN ALTERNATIVE

OTHER BRIDGE
FRONTAGE ROAD
TERMINATED CROSS ROAD

FIGURE 105.

FIGURE 105.

INTERSTATE 74: ALTERNATIVES FROM COVINGTON TO INDIANAPOLIS⁶⁷

FIGURE 105 ,CONT.

FIGURE 105 ,CONT.

FIGURE 105 ,CONT.

FIGURE 105 ,CONT.

FIGURE 105, CONT.

46.4-mile original location at \$38,132,000. The greater cost of the original location was due to a third more highway grade separations, three more stream structures, and a greater length than the alternative locations. The southern alternative resulted in lower user costs than the original location. Over a twenty-year period, the total capital and user cost for the original location was \$9,664,835 greater than the southern alternative. The State, however, retained the original alignment because it provided a higher level of service to Crawfordsville and other small towns along US 136 and created a development corridor with US 136

In December of 1958, the Indiana State Highway Department completed another location study. Because of the capital cost of the original location and the terrain problems on the north side of Crawfordsville, an alternative location (northern alternative) was considered one to two miles north of the original location from one mile east of SR 341 to two miles northwest of SR 39. [Refer to Figure 105 , p. 653]. The estimated capital cost of the alternative location was found to be \$3,171,000 less than the original location (\$31,110,000).

The alternative location avoided a subdivision on SR 32 east of Crawfordsville, crossed the Sugar Creek Valley at a more favorable point, required six less highway grade separations, crossed the Pennsylvania Railroad and SR 47 with a single structure, and was 0.2 of a mile shorter. Because the alternative location was farther from the Peoria and Eastern Railway than the original location, five highway grade separations could be constructed over, rather than under, Interstate 74 at less cost. The alternative location also created a two-mile corridor between Interstate 74 and US 136 which would have a much greater potential for economic development than the original location. The Bureau of Public Roads approved the alternative location for Interstate 74 in January of 1960.

Special Cases. Nothing of historical significance occurred in Boone County during the development of Interstate 74.

Hendricks County. The request for an interchange at Clermont was previously discussed. In brief, the interchange was requested after Interstate 74 was completed and could not be added with Federal Aid Interstate funding. Since Marion County and Hendricks County failed to approve Federal Aid Secondary funds for the interchange, the interchange at the Marion-Hendricks County Line Road was never built.

In November of 1958, the Hendricks County Commissioners requested a service road on the north side of Interstate 74 from Georgetown Road to West Pittsboro Road, a service road on the north side of Interstate 74 from Middle Road to West Pittsboro Road, a new bridge within the approach limits of East Pittsboro Road, and a grade separation at Griswold Road.

The service road on the north side of Interstate 74 from Georgetown Road to the West Pittsboro Road was approved as it was included in the 1958 Interstate Cost Estimate. Since a separation at Middle Road was eliminated after the 1958 Interstate Cost Estimate, the State agreed to provide a service road on the north side of Interstate 74 from Middle Road to West Pittsboro Road. The Indiana State Highway Department stated that a separation at Griswold Road could not be economically justified because Griswold Road carried a low traffic volume and was flanked by separations at 56th Street and Hunter Road. Although Hunter Road carried less traffic, the State refused to shift the Hunter Road separation to Griswold Road because a separation at Hunter Road provided better separation spacing.

In September of 1959, local residents petitioned for a service road on the south side of Interstate 74 from 56th Street to Griswold Road. Since the two houses (which would be served by the frontage road) had access to Griswold Road, the State replied that the frontage road was unjustified.

On March 15, 1960, the Bureau of Public Roads approved the addition of an interchange at West Pittsboro Road to serve Pittsboro. The interchange was originally requested by local residents at the public hearing of April 22, 1958, on the location of Interstate 74 from SR 39 to Interstate 465. The interchange was not included in the 1958 Interstate Cost Estimate.

Fountain County. According to the access control map of the 1958 Interstate Cost Estimate, separations were provided at Salem Church Road and the Covington-Crawfordsville Road (Old Dixie Road) in the 3.5 miles between Stringtown Road and US 316. In June of 1958, the Regional Office of the Bureau of Public Roads withheld approval of the separation at Salem Church Road because adequate traffic service was provided by other road separations. The Federal agency requested further information on road user benefits to make a final decision.

The subsequent road user benefit-cost study revealed that it would take twenty-five years for road user savings to amortize the additional cost of the separation at Salem Church Road on at the Covington-Crawfordsville Road. Thus, Indiana could justify only one separation in the 3.5 miles between Stringtown Road and US 316 on the basis of grade separation spacing rather than user benefits. The separation at Covington-Crawfordsville Road was the only one constructed.

At the public hearing on the location of Interstate 74 from US 136 to SR 55 on November 16, 1960, local residents and officials requested an interchange at SR 341

to serve Hillsboro. The interchange was included in the 1958 Interstate Cost Estimate, but was eliminated because of the 1960 interchange spacing guidelines.

In June of 1961, the Indiana State Highway Department requested the addition of an interchange at SR 341 on the basis of a benefit-cost ratio of 2.55. The Bureau of Public Roads replied that the benefit-cost ratio was not sufficient warrant for an interchange. The Federal agency stated that they would reconsider their decision if actual conditions indicated the lack of area service and sufficient traffic demand after Interstate 74 was completed. Indiana was authorized to purchase right-of-way for a future interchange at SR 341. The Indiana State Highway Department replied that the matter would be discussed further with Washington officials.

In response to a petition for an interchange at SR 341 in April of 1963, the Federal Highway Administrator replied that the interchange was not justified because US 136 minimized adverse travel to existing interchanges at US 41 and SR 25. In December of 1963, the Indiana State Highway Commission reported that the interchange at Hillsboro could not be justified for the following reasons: the interchange would violate the eight-mile average spacing guideline for interchanges established to hold the cost of the Interstate System within the anticipated funding schedule; there was no adverse travel for the residents of Hillsboro because US 136 paralleled Interstate 74 to existing interchanges; and there were no major traffic generators on SR 341.

Local residents continued to request the interchange at SR 341 through 1964. Because Interstate 74 had been completed and the interchange would increase the cost of completing original System, the Bureau of Public Roads continued to deny the requests.

In September of 1964, further conversations between the Bureau of Public Roads and the Indiana State Highway Commission led to the possibility of Federal approval of at least four additional interchanges (Hillsboro on Interstate 74, New Ross on Interstate 74, Underwood on Interstate 65, and Lewisville on Interstate 70) in Indiana. On May 11, 1965, Indiana requested the addition of an interchange at SR 341 to completed Interstate 74 on the basis that actual conditions indicated a lack of area service by existing interchanges and a sufficient demand for an intermediate interchange.

On June 7, 1965, the Bureau of Public Roads approved the addition of the SR 341 interchange to the Interstate System provided Federal Aid Secondary funds were used to finance the construction. The Bureau of Public Roads stated that Indiana State Highway Commission studies prior to the preparation of construction plans did not indicate future development would justify the interchange and that the State's plans were accordingly approved without the interchange. Because development subsequent to the initial design made the additional access point desirable, the Bureau of Public Roads acceded to the State's interchange request.

Because Federal Aid Primary and Secondary funds were limited as a result of needed improvements on the Primary and Secondary System and commitments related to Interstate construction, the Indiana State Highway Commission stated in June of 1966 that the construction of additional interchanges on completed Interstate projects would have to be delayed until the Interstate System was completed. In 1970 and 1971, the Indiana State Highway Commission reported that the SR 341 interchange could not be constructed with Federal Aid Interstate funds and that the interchange would receive consideration when the Interstate System was completed and when Congress authorized funds for additions to the original system.

At the public hearing on the relocation of US 41 at Veedersburg in June of 1961, local residents objected to the closure of existing US 41 at Interstate 74. The State had found that it was more economical to extend US 136 to relocated US 41 and to extend the Dry Run Creek structure over Shale Pit Road than to provide a separation for existing US 41 (which was included in the 1960 Interstate Cost Estimate). Since the County Commissioners opposed the closing of Shale Pit Road, existing US 41 remained closed.

Montgomery County. Although the 1958 Interstate Cost Estimate included interchanges at SR 55 and at Porter Road north of New Ross, the interchanges were eliminated in 1960 as a result of economic considerations and average interchange spacing requirements. At the public hearing on the location of Interstate 74 from SR 55 to SR 39 on November 7, 1960, local residents requested an interchange at Porter Road near New Ross. County officials suggested an interchange at SR 55 northwest of Crawfordsville but did not press the matter. In December of 1960, the Indiana State Highway Department investigated the feasibility and need for an interchange at New Ross. Because the benefit-cost ratio for the interchange was less than one, the State did not forward the request to the Bureau of Public Roads.

In February of 1963, residents of New Ross again requested an interchange north of their town. The Indiana State Highway Commission asked the town to furnish information on economic conditions which would make the interchange desirable. This information was to be used in preparing an interchange feasibility study which would be submitted to the Bureau of Public Roads for review. The situation was similar to the request for an additional interchange at Hillsboro. Because US 136 paralleled Interstate 74 to existing interchanges at SR 32 and SR 75, there was little adverse travel for residents of New Ross desiring to use Interstate 74; therefore, the addition of an interchange at New Ross could not be justified.

In September of 1964, the Bureau of Public Roads indicated that four additional interchanges in Indiana might be approved on the basis of provision of better service to local areas. On March 22, 1965, the Indiana State Highway Commission requested the addition of interchanges at Underwood on Interstate 65, at Lewisville on Interstate 70, at Hillsboro on Interstate 74, and at New Ross on Interstate 74. The Bureau of Public Roads considered the documented justification for the interchanges inadequate.

On June 15, 1965, Indiana submitted a well documented request for an interchange at Porter Road north of New Ross. Justification for the interchange included the fact that the addition of interchange ramps at Porter Road would not materially increase the cost of completing the Interstate System, the interchange would substantially reduce user costs, and existing interchanges at SR 32 and SR 75 did not provide adequate service to the New Ross service area. According to the user benefit study, road user savings were eight times the cost of the interchange ramps. Consequently, the State felt that an intermediate interchange in the 12.1 mile distance between existing interchanges was needed to serve local demands.

On August 9, 1965, the Bureau of Public Roads approved the additional interchange at New Ross. Because Interstate 74 had been completed in the area, the cost of the interchange was not eligible for Federal Aid Interstate funds; however, the interchange could be financed with county Federal Aid Secondary funds. Since Porter Road was not in the State highway system, the financing of the interchange was the responsibility of the county. Montgomery County failed to fund the interchange. However, the Indiana State Highway Commission noted that the New Ross interchange would be considered in the future when the Interstate System was completed and when funds were provided for modifications to the original Interstate System.

Vermillion County. All county roads in Vermillion County were to be separated according to the strip map of the 1958 Interstate Cost Estimate. However, the separation at Foster Road was later eliminated for economic reasons. The county requested that the separation be reinstated, and the State submitted additional justification for the separation in May of 1958. The Regional office of the Bureau of Public Roads denied the separation request because the area was adequately served by proposed separations one mile to the east and west of Foster Road.

Tri-State Highway

On July 9, 1926, Illinois and Wisconsin officials met to discuss the location of the Chicago-Milwaukee Highway which was conceived in the 1926 plan of the Chicago Regional Planning Association. At the meeting, Illinois suggested that a belt route be studied from Chicago to South Bend. The Indiana State Highway Commission was invited to the planning sessions. On October 4, 1926, a resolution was adopted recommending a route from Milwaukee to Detroit which bypassed Chicago on the west and south and passed near Michigan City, LaPorte, and South Bend.

The 1939 study Toll Roads and Free Roads included an interstate route across northern Indiana from Chicago through Angola to Detroit. Because there were no metropolitan areas east of Elkhart on the interstate route across northern Indiana and because Michigan wanted a more direct interstate route to Detroit, the spur to Detroit was moved from a starting point at Angola to the South Bend-Elkhart area.

The study Interregional Highways of 1944 included an interstate route across northern Indiana from Chicago to Ohio to serve traffic bound to the eastern States and an interstate route from the South Bend-Elkhart area to Detroit

along US 112 (now US 12) to serve Chicago to Detroit traffic.

After World War Two, Michigan began promotion for an interstate route along old US 12 to serve the metropolitan areas of Ann Arbor, Jackson, Battle Creek, Kalamazoo, and Benton Harbor because the interstate route paralleling old US 112 served no metropolitan area in Michigan. Michigan favored the designation of the interstate route along old US 12 from Detroit to Michigan City as the Tri-State Highway; however, Indiana insisted that the Tri-State Highway be kept in Indiana as far east as Elkhart and be connected to the interstate route along old US 12 near Kalamazoo. The Indiana proposal routed the Tri-State Highway (known as the Chicago-Detroit Expressway) through metropolitan areas in both Indiana and Michigan.

After a conference with the Bureau of Public Roads, the interstate route along old US 112 was shifted to old US 12 from Detroit to Kalamazoo with a link from Kalamazoo to Elkhart. Michigan also received an extension of the interstate route along US 12 from Kalamazoo to Benton Harbor. When the Interstate Routes were designated in August of 1947, old US 12 was included in the Interstate System from Michigan City through Kalamazoo to Detroit together with the link from Kalamazoo to Elkhart.

In 1943, Illinois and Indiana made the decision to construct the Tri-State Highway near US 6 in the vicinity of the Illinois-Indiana State Line. Until Illinois completed the Tri-State Highway (now Tri-State Tollway) around Chicago; the Tri-State Highway terminated at the Calumet Expressway which leads into Chicago. When Indiana began construction on its portion of the Tri-State Highway in 1949, the facility was located south of Hammond and Gary from the Illinois-Indiana State Line to US 20 east of Gary and was designated to follow the existing multi-lane pavement of US 20 from Gary to the South Bend-Elkhart area, the

Elkhart-Kalamazoo link from Elkhart to Interstate 94 at Kalamazoo, and Interstate 94 from Kalamazoo to Detroit.

The designation of the Interstate Routes in 1947 resulted in two Chicago to Detroit routes with a common alignment from Detroit to Kalamazoo and from US 20 at Michigan City to the Calumet Expressway south of Hammond. The routes were approximately of equal length from Michigan City to Kalamazoo; however, the route through Elkhart served a greater population.

Michigan reported that it would build the route from Michigan City through Benton Harbor to Kalamazoo before the Kalamazoo-Elkhart link because the facility from Kalamazoo through Benton Harbor to Michigan City was a deficient two-lane facility and was considered more important than the Kalamazoo-Elkhart link. Indiana felt that Michigan's priorities might jeopardize the Kalamazoo-Elkhart link, but that US 131 carried sufficient traffic to justify the Kalamazoo-Elkhart link.

With the development of the Indiana East-West Toll Road in the early 1950's, the common alignment of the two Chicago-Detroit routes was eliminated from Michigan City to Gary. In 1956, Michigan suggested that the Elkhart-Kalamazoo Interstate Route be relocated to extend Interstate 69 from the Indiana East-West Toll Road to Interstate 94.

Because the extension of Interstate 69 would result in greater Interstate System continuity and would serve more traffic than the Elkhart-Kalamazoo Interstate Route, Indiana concurred in the suggestion to eliminate the Elkhart-Kalamazoo Interstate Route and to utilize the mileage in extending Interstate 69 to Interstate 94 near Marshall, Michigan. Consequently, the Chicago-Detroit Route through Elkhart was eliminated, and Interstate 94 through Benton Harbor became the Tri-State Highway.

After World War Two, the Tri-State Highway (Interstate 94) was located from the Illinois-Indiana State Line to US 20 east of Gary, passing south of existing development. In 1956, Interstate 94 was located in the corridor of US 20 from the Indiana East-West Toll Road to southeast of Michigan City and in the corridor between US 12 and SR 39 from southeast of Michigan City to the Michigan-Indiana State Line. [Refer to Figure 106, p. 674].

Lake County

The Tri-State Highway was open to traffic from the Illinois-Indiana State Line to Burr Street when the Federal Aid Highway Act of 1956 was signed. Most events in Lake County focused on the coordination of State and local improvements. Because the Tri-State Highway was located in the low-lying area along the Little Calumet River, there were few existing north-south roads that crossed the Little Calumet River and the proposed Tri-State Highway.

The county and city governments, however, were planning to build additional north-south roads in the future and desired grade separations with the Tri-State Highway for these planned new arterials. The State and Federal highway agencies agreed to provide the grade separations if the county and city governments made a commitment to construct the new roads to the grade separations.

Grand Boulevard Separation. On December 13, 1956, the Town Engineer of East Gary requested a grade separation at the proposed Grand Boulevard-Lake Street extension from Central Avenue to 15th Avenue. The Grand Boulevard Extension would provide a needed north-south arterial for East Gary, access to a proposed sewage treatment plant, and a link between East Gary and the steel mills to the north. The town made a direct request to the Bureau of Public Roads for the separation on January 17, 1957.

On February 24, 1957, the Federal, State and local governments met to coordinate the plans for the Tri-State Highway with the future development of local streets. The Bureau of Public Roads stated that it would approve additional grade separations, provided the local government constructed to adequate standards the new roads to the grade separations by the time the Interstate project was completed and upgraded existing roads to adequate capacity concurrently with Interstate construction or immediately thereafter.

In the case of the Grand Boulevard extension, the Federal and State agencies felt that the proposed sewage treatment could be served by service roads from Clay Street or SR 51. The requested separation, however, would be approved if the town would purchase the right-of-way for the facility and commit itself to an improvement schedule for the road.

In April of 1957, the Town of East Gary began construction of fill on right-of-way for the Grand Boulevard extension, to negotiate for the remainder of the right-of-way, to request permission of the New York Central Railroad for a grade crossing, and to obtain a county commitment for a bridge over Burns Ditch. The Town of East Gary, however, lacked the funds to carry out their commitment and subsequently suggested that the State build a service road on the north side of the Tri-State Highway from the Grand Boulevard extension to DeKalb Street since the city owned most of the right-of-way for DeKalb Street from the Interstate north to 15th Avenue.

At the public hearing on the location of Interstate 80-94 from Broadway Avenue to the Indiana East-West Toll Road on June 3, 1958, the Town of East Gary suggested that the Central Avenue interchange be relocated to Grand Boulevard to relieve congested Central Avenue.

In February of 1959, the Indiana State Highway Department informed the Town of East Gary that no grade separation would be built between Clay Street and SR 51 because the town had failed to make a commitment to extend Grand Boulevard to the grade separation. In March of 1959, the Bureau of Public Roads informed the Town of East Gary that national policy prohibited the construction of separation structures for future roads even though the extension of Grand Boulevard might be justified.

On March 28, 1960, Lake County agreed to provide funds for the construction of the Grand Boulevard bridge over Burns Ditch if the town purchased the right-of-way for the extension of Grand Boulevard. On May 5, 1961, the New York Central Railroad agreed to permit an at-grade crossing at Grand Boulevard if the town paved the street. In February of 1963, the town finally acquired the right-of-way for the extension of Grand Boulevard from Central Avenue to 15th Avenue and began construction on the subgrade of the facility.

In April of 1963, the Indiana State Highway Commission stated that a request for an additional grade separation at Grand Boulevard would be submitted to the Bureau of Public Roads but that an interchange at Grand Boulevard was not feasible because of the proximity of other interchanges. Lake County appropriated funds for the Grand Boulevard bridge over Burns Ditch, but indicated it would construct the bridge only when the State provided a grade separation at the Tri-State Highway.

Although the town had not committed itself to an improvement schedule, Indiana felt the town had made an adequate commitment and requested an additional separation at Grand Boulevard in August of 1963. Because the Interstate project in the vicinity of East Gary was completed in November of 1961, the Bureau of Public Roads denied the

additional grade separation in accordance with the policy to hold the cost of the Interstate System within the revenues of the Federal Trust Fund. The Bureau of Public Roads also stated that completion of the Grand Boulevard extension appeared indeterminate because there was no construction underway south of the Tri-State Highway.

In October of 1963, the Indiana State Highway Commission suggested that the programmed structure at Taft Street be shifted to Grand Boulevard so as not to increase the cost of the Interstate System. On October 18, 1963, Lake County requested the transfer of funds from the Taft Street separation to the Grand Boulevard separation because the City of Gary had taken no action to extend or improve Taft Street to the Tri-State Highway.

On November 26, 1963, the Indiana State Highway Commission requested Federal approval of the transfer of funds for the Taft Street separation to the Grand Boulevard separation. However, the Regional Office of the Bureau of Public Roads felt that the two separations served entirely different areas and that the Taft Street separation should be withdrawn from the program, if the Taft Street extension would not be built by local authorities, regardless of the outcome of the Grand Boulevard separation. Consequently, the transfer of funds from one separation to another unrelated separation was denied.

On April 20, 1964, Indiana requested approval of an additional grade separation at Grand Boulevard. Indiana felt that the additional grade separation was eligible for Federal Aid Interstate financing because the Tri-State Highway was being developed by stage construction. The Bureau of Public Roads replied that the original construction authorization was considered to be the ultimate design and that the additional grade separation was not eligible for Federal Aid Interstate funding. If the Town of East Gary

did not want to build the separation with its own funds, the town would have to wait until Congress authorized funds for additions to the Interstate System after the original System was completed.

Central Avenue Interchange. The Indiana State Highway Commission had planned to build a par-clo interchange at Central Avenue when the Interstate 65/Interstate 80-94 interchange was constructed. However, construction of the interchange was dependent on a commitment by local authorities to upgrade Central Avenue to a four-lane facility, as discussed at a March of 1959 meeting.

In September of 1962, the Town of East Gary objected to the closing of State Street at the Central Avenue interchange. Because State Street intersected an interchange ramp and Central Avenue within the interchange area, the Indiana State Highway Department had closed State Street in the early planning stages. On July 2, 1963, the town requested the elimination of an interchange ramp to keep State Street open. Indiana denied the request because the interchange ramp carried twice the volume of State Street, the two intersections would still exist if the ramp were terminated at State Street, and traffic on State Street could easily be routed over other streets to Central Avenue.

Because opposition to the closing of State Street continued and East Gary failed to make a commitment to upgrade Central Avenue, the interchange at Central Avenue was not built.

SR 51 Interchange. At the public hearing on the location of the Tri-State Highway from Broadway Avenue to SR 51 on June 3, 1958, East Gary objected to the SR 51 interchange design, which was a diamond interchange with an additional loop in the northeast quadrant. The interchange was built with only one loop; however, the Indiana State Highway Department designed the interchange so that a

full cloverleaf interchange could be constructed when SR 51 was improved to a four-lane facility beyond the interchange area.

In September of 1967, Indiana submitted a request to add the three remaining loops for the interchange. The Bureau of Public Roads approved the addition of loops in the southeast and southwest quadrants, but withheld approval of the northwest quadrant because of weaving conflicts. Reviewing the traffic assignments, the State replied that the weaving problem would not occur for another ten to fifteen years. On February 18, 1968, the Federal Highway Administration approved the loop in the northwest quadrant on the basis that adequate right-of-way existed to modify the interchange whenever operating conditions on the Interstate became substandard.

Commitments by Gary. On July 23, 1957, the City of Gary made commitments to provide four-lane facilities at Clark Street, Chase Street, Taft Street, Grant Street, Harrison Street, Indiana Street, and Georgia Street. Local officials requested further study on the Broadway Street interchange and suggested that the interchange be shifted to Georgia Street because Broadway Street might not be able to handle the additional load of terminating Interstate traffic. The following day, the city presented their request for the interchange relocation at the public hearing on the Tri-State Highway. The Indiana State Highway Department retained the interchange at Broadway Street because Broadway Street had the characteristics of an arterial street.

Clark Street, Chase Street, Taft Street, and Indiana Street lacked continuity and Chase and Taft Streets did not extend across the proposed location of the Tri-State Highway. Because the county and city had made commitments, the separations were programmed and included in the

Interstate Cost Estimates. When the county and city extended Clark Street from south of the Tri-State Highway to US 6 in accordance with their commitment, the State built the separation over the Tri-State Highway even though that section of Tri-State Highway from Burr Street to Broadway Street was completed a year earlier. The State constructed a separation at Chase Street in 1962 when the local authorities constructed the approaches to the separation from 25th Street and US 6 in accordance with their commitment. Although grade separations have been programmed for Taft Street and Indiana Street, the separations have not been built because the local authorities have not fulfilled their commitment to extend the streets to the Tri-State Highway. Lake County made a fruitless attempt in October of 1963 to relocate the approved Taft Street separation to the Grand Boulevard-Lake Street extension. .

Porter County

The location and design of Interstate 94 in Porter County was complicated by the holdings of various steel industries and by rapidly expanding communities who were attempting to develop their highway systems with greater continuity.

Bethlehem Steel. In May of 1957, the Bethlehem Steel Company requested a relocation of Interstate 94 in the vicinity of Samuelson Road so that the company could develop a four thousand-acre industrial plant north of US 20 from one mile west of Crisman Road to two miles east of SR 149. Because the proposed location of Interstate 94 bisected the holdings of Bethlehem Steel Company, the company suggested two southern alternatives to reduce severance damages. [Refer to Figure 106, p. 674]. The Indiana State Highway Department selected the most southern alternative (alternative B) because it caused the least separation damages.

FIGURE 106. TRI-STAT

FIGURE 106.,CONT.

FIGURE 106. CONT.

The Bureau of Public Roads approved the alternate location on July 30, 1957 provided the steel company reimbursed the State for the cost of abandoning the original plans (\$25,000). In August, Bethlehem Steel Company agreed to reimburse the State for the abandonment of plans and to sell the necessary right-of-way needed for the Interstate at the same price the company purchased the property. With the relocation of Interstate 94, the Bureau of Public Roads and Indiana State Highway Commission discussed the elimination of the Samuelson Road separation, the addition of an interchange with US 20 east of SR 149, and the relocation of the proposed US 20 interchange east of the Indiana East-West Toll Road to Crisman Road.

Alternate Location South of Indiana Toll Road. In April of 1963, Indiana evaluated an alternate location for Interstate 94 from SR 51 to west of Chesterton. The alternative location crossed the Indiana Toll Road near Crisman Road and rejoined the original location west of Chesterton. Further consideration of the alternative was dropped because the location was longer, required two additional railroad separations, caused greater damage to residential development, created a skewed interchange with the Indiana Toll Road, required the removal of the SR 51 interchange, would necessitate the abandonment of plans, and would parallel the Indiana Toll Road for three miles.

Samuelson Road Separation. When Interstate 94 was relocated in the vicinity of Samuelson Road in 1957, the highway grade separation at Samuelson Road was eliminated because Bethlehem Steel Company owned land on both sides of the road and intended to develop across the road. After a meeting with the Indiana State Highway Department on March 12, 1959, the Porter County Commissioners objected to the closing of several roads including Samuelson Road. Samuelson Road was designated as a primary arterial highway in the thoroughfare plan of the Porter County Plan Commission.

In July of 1960, H. W. Lochner, Incorporated completed a transportation plan for future highway development in northwest Porter County. Although the transportation plan assumed Samuelson Road would be closed at Interstate 94, the Indiana State Highway Department felt further study should be given to a separation at Samuelson Road because of the request by Porter County.

In January of 1962, Indiana completed an economic study for a separation at Samuelson Road. The study indicated that savings in road user costs would offset the cost of the separation in eleven and a half years and that the road could become a major artery for travel between residential areas south of Interstate 94 and industry around the proposed Port of Indiana.

Later, the Indiana State Highway Commission decided to close Samuelson Road because the local authorities had made no commitment to improve the road, the road was not being maintained by the county, and Bethlehem Steel Company contemplated development on both sides of the road. In December of 1965, the Town of Portage protested the proposed closing of Samuelson Road because its closing would be detrimental to the growth and development of Portage.

An interchange was also planned at nearby Crisman Road extension and US 12. On December 21, 1965, the Indiana State Highway Commission replied that it was not financially feasible to provide grade separations with every road intersecting the Interstate and that Samuelson Road could feasibly be closed at Interstate 94 because four-lane facilities between US 12 and US 20 were to be provided at Crisman Road (one mile west of Samuelson Road) and at SR 149 (one and a half miles east of Samuelson Road). In view of industrial and residential development and the multiple railroad crossings on Samuelson Road, the State had felt that the improvement of SR 149 and SR 249 from US 12 to US 6 was more practical.

In January of 1966, the Town of Portage requested reconsideration of the decision to close Samuelson Road because Crisman Road would be the only north-south road serving the area. On January 8, 1966, the Town of Portage requested reconsideration of a separation at Samuelson Road because the Crisman Road system would not alleviate the problem of insufficient crossings of Interstate 94.

Although multiple railroad crossings and the Little Calumet River crossing might pose problems for the future upgrading of Samuelson Road, the Town of Portage felt that Samuelson Road would relieve the traffic load on Crisman Road because the portion of Samuelson Road between US 20 and US 12 had no railroad crossings and a bridge over the Little Calumet River already existed. The State responded that the closing of Samuelson Road did not preclude the construction of a separation over Interstate 94 when future development justified the separation and local construction funds were available.

On January 27, 1966, the Porter County Commissioners conducted a public hearing on the closing of Samuelson Road. Bethlehem Steel Company supported the closure of the road because the development of the plant between US 12 and US 20 and from Crisman Road to SR 149 was based on the assumption that Samuelson Road would be closed. The Indiana State Highway Commission stated that an additional grade separation with Interstate 94 would be approved whenever local authorities upgraded the local road to thoroughfare standards.

The Portage area was not satisfied by the explanation of the Indiana State Highway Commission and proceeded to seek the aid of State and Federal elected representatives. The Indiana State Highway Commission and the Bureau of Public Roads' Regional and Washington offices agreed that additional crossings of Interstate 94 would be needed in the future due

to the rapid development of the area; however, the State could not build an additional grade separation until local authorities made a commitment to improve the crossroad to proper standards.

In March of 1966, the Town of Portage asked the Indiana State Highway if 1958 traffic counts had been used to plan Interstate 94. The State replied that the traffic projections of Lochner's 1960 study were used to plan facilities in Porter County. Portage forwarded 1966 traffic counts for Field Drive, Marine Drive and Samuelson Road to the State, and noted that these traffic counts justified additional grade separations in the area. The Bureau of Public Roads replied that traffic estimates were insufficient to warrant grade separations and that the planned separations would adequately provide for the future traffic of existing and firmly planned generators.

In January of 1968, Clyde E. Williams and Associates, Incorporated completed a feasibility study for additional grade separations across Interstate 94 at the request of the Town of Portage. The study described Marine Drive, Crisman Road, and Samuelson Road as major north-south thoroughfares. On the basis of the study, the Board of Public Works and Safety of Portage on February 1, 1968 committed itself to the construction of a four-lane facility along Marine Drive and Willow Creek Road from US 20 to US 12 provided the State would build a grade separation with Interstate 94 in 1972.

Without making a commitment to improve Samuelson Road, the Mayor of Portage stated that Portage would consent to the construction of Interstate 94 through the town if the State provided grade separations at Marine Drive and Samuelson Road. The State indicated a willingness to request Federal approval of a separation at Marine Drive on the basis of the local commitment.

In April of 1968, the Town of Portage requested the Washington Office of the Federal Highway Administration review the Samuelson Road matter. The town stated that Samuelson Road was designated as a thoroughfare in the Porter County Master Plan of 1959 and the Portage City Master Plan of 1960, that Bethlehem Steel Corporation would obtain the right-of-way to the road if it was vacated at Interstate 94, and that the State was constructing Interstate 94 according to plans ten years old.

The Federal Highway Administration requested that the Indiana State Highway Commission provide the latest information on traffic and land use to support present planning for Interstate 94 through Portage. The State replied that plans had been updated and modified since 1957 to reflect increased needs of the area.

On October 17, 1968, the Washington Office of the Federal Highway Administration informed the Indiana State Highway Commission that the construction of Interstate 94 would not be authorized until the State made assurances that the Town of Portage would not lose title to the right-of-way of Samuelson Road if the road was closed at Interstate 94, that the State's planning did not conflict with local planning, and that the State's planning would not result in additional Federal expenditures to provide an alternate north-south facility to Samuelson Road. The State provided these assurances.

The Federal Highway Administration informed the Mayor of Portage that the Federal government had no basis to withhold approval of construction, that the decision to close Samuelson Road was based on its substandard condition and the lack of plans to finance its improvement, and that the separation could be constructed as soon as it was justified by increased traffic.

On January 21, 1969, the Indiana Supreme Court overruled a Porter County Circuit Court restraining order granted in 1967 to halt construction of Interstate 94 in Portage. That same month, the Lake-Porter County Regional Transportation and Planning Commission in an A-95 Review of the Interstate project suggested that Samuelson Road be separated at Interstate 94 if feasible. The State informed the commission that additional grade separations would be provided when the crossroads were developed to adequate standards or when increased traffic volumes justified the additional separations. However, the State agreed to consider the comments of the commission and to defer construction of the project.

After a series of meetings of Federal, State and local officials in May of 1969, the Federal Highway Administration approved the utilization of Interstate funds for a grade separation at Samuelson Road when local authorities upgraded the road for projected traffic and provided that construction was completed before the original Interstate Program terminated. In June of 1969, the City of Portage committed itself to upgrading Samuelson Road.

Separation Requests. In March of 1959, Porter County protested the closing of all roads except Field Drive and Marine Drive. Because the State had planned a service road on the north side of Interstate 94 from Crisman Road to Marine Drive and Marine Drive terminated at Burns Ditch, the county did not initially object to the closing of Marine Drive.

The State noted that county objections to the closing of Boo Road and Salt Creek Road were unwarranted because a service road on the north side of Interstate 94 extended from SR 149 to Boo Road and Salt Creek Road. Additional study was given to the treatment of Mineral Springs Road, old SR 49, and Furnessville Road. In the case of Bayles

School Road and Carver Road, the State found that separations could not be justified because the roads were flanked by planned separations one mile to the east and west and the roads carried low traffic volumes. The resolution of the initial closing of Samuelson Road has already been discussed.

The July 1960 transportation study for Porter County by Lochner had suggested a future interchange at Marine Drive with Interstate 94 to serve the proposed Port of Indiana. In March of 1962, Porter County requested an additional grade separation between the Porter-Lake County Line and Crisman Road which would serve the proposed industrial area lying between the Porter-Lake County Line and the western terminus of the proposed Port of Indiana.

The State replied that an additional separation could not be justified until the local authorities made a definite commitment to improve a road in the area and the industrial site was planned to the point where traffic demands could be estimated. On the basis of a report on the feasibility of additional grade separations by Williams in January of 1968, the City of Portage committed itself to upgrading the Willow Creek Road-Marine Drive extension to a four-lane facility from US 20 to US 12 provided the State would build a grade separation with Interstate 94 before the end of the Interstate Program. The State indicated a willingness to request Federal approval for a separation at Marine Drive; however, the town made no commitment, perhaps because the nearby Samuelson Road separation controversy was resolved in May of 1969.

In December of 1961, the State found it might be desirable to provide highway grade separations at Mineral Springs Road and at Furnessville Road. Local objections to the closing of old SR 49 were satisfied when the State agreed to provide connections from old SR 49 to the SR 49 Bypass south of Interstate 94.

In January of 1962, the State reported that it would not be feasible to separate Mineral Springs Road because of the close proximity of separations at the New York Central Railroad and at Beam Street. Because of the proximity of adjacent grade separations, the State also found that proposed grade separations at Bayles School Road and at Carver Road could not be economically justified.

The county continued to press for the separation of several roads that were to be closed. On May 2, 1969, Porter County filed for an injunction to block the construction of Interstate 94. Because the State had provided only a frontage road from Bayles School Road to Furnessville Road and had not separated Furnessville Road, the county objected to the closure of Furnessville Road. The county also still wanted separations at Bayles School Road and at Carver Road. The county further objected to the relocation of Old Chicago Road, Brummit Road and Brown Road at their grade separations. At a conference on May 5 with the county, the State agreed to review the need for a separation structure at Carver Road and to consider a possible redesign of the connection of Brummit Road and Old Chicago Road although the separation design of Brummit Road would not be altered.

On June 4, 1969, the State requested Federal approval of a revision of the Old Chicago Road-Brummit Road connection an improvement of the Chesapeake and Ohio Railroad grade crossing at Brown Road, and a request for a future grade separation of Carver Road. The State suggested that the separation of Carver Road be considered a staged construction project because existing separations were inadequate to serve the traffic needs of the developing area and the county had agreed to upgrade the facility when the future separation was provided. Because the savings in user costs would require twenty-four years to offset the separation cost, the Federal Highway Administration disapproved the request for a future separation at Carver Road constructed with Interstate funds.

SR 149 Interchange Request. In July of 1960, the Lochner transportation study for Porter County had recommended a future interchange at the separation of SR 149 with Interstate 94. In the January of 1969 A-95 Review report on Interstate 94 by the Lake-Porter County Regional Transportation and Planning Commission, the agency recommended an interchange at SR 149 to relieve the load on Crisman Road (SR 249) interchange.

The State replied that an interchange at SR 149 was not feasible because the proposed interchange was too close to the US 20 interchange for proper signing and for proper weaving distances. In February of 1969, the State delayed construction of Interstate 94 to further review the comments of the planning commission.

On May 13, 1969, the Lake-Porter County Regional Transportation and Planning Commission suggested that the US 20 interchange be relocated to SR 149 because the US 20/Interstate 94 interchange served only the exchange of traffic between the two roads and failed to serve the surrounding area. The planning commission felt that the interchange at SR 149 would eliminate the indirection of travel to the Burns Harbor industrial area via the US 20 interchange and would relieve Crisman Road which was the only direct route to the Burns Harbor area from Interstate 94. The State retained the interchange at US 20.

Chesterton. At the public hearing on the location of Interstate 94 through Porter County on June 4, 1958, the towns of Chesterton and Porter expressed bitter opposition to the location of the Tri-State Highway between the two towns. In a resolution protesting the proposed location of Interstate 94, the two towns stated that the proposed location cut through four areas in Porter zoned for residential purposes destroying their potential development, that the Interstate would prevent the northern

expansion of Chesterton, that the location bisected Porter impeding efficient public services, that the Interstate would hamper protection services and the expansion of water and sewer services, that the Interstate would remove land from tax rolls and depress property values, and that the facility would eliminate the last direction of possible growth for Porter. The towns suggested a relocation of Interstate 94 south of Chesterton.

The Indiana State Highway Department had previously investigated a location for Interstate 94 south of Chesterton but had discarded the location because it resulted in adverse travel distance, crossed areas of poor soil condition, required four more railroad separations, duplicated the service of the Indiana Toll Road, and was less favorable to economic development of the area.

Nevertheless, the State completed another comparison of the original location to an alternative location south of Chesterton in September of 1958. [Refer to Figure 106, p. 674]. The capital cost of the southern alternative was \$551,000 less than the northern original location (\$13,235,000); however, the road user cost for the original location was \$315,000 less the first year. Since the average annual user savings of the original location exceeded the average annual additional capital cost of the original location, the original location was superior.

The towns continued to object to the original location of Interstate 94 and protested the planned closing of old SR 49 in March of 1959. In May of 1961, the Indiana State Highway Department compared the annual road user and capital cost of three alternatives to provide access to Chesterton from the SR 49 Bypass. [Refer to Figure 107 p. 686]. The total annual capital and user cost proved to be the lowest for the Indiana Boundary Road Alternative at \$157,187 followed by the combination alternative of

FIGURE 107. INTERSTATE 94: ACCESS ALTERNATIVES TO CHESTERTON

separating old SR 49 and improving Indiana Boundary Road at \$162,090 and by only the improvement of Indiana Boundary Road at \$185,847.

The Bureau of Public Roads, however, objected to the combination alternative, and the State requested approval of the Indiana Boundary Road Alternative. In 1962, the State discarded the Indiana Boundary Road Alternative because of grade separation problems with the Chesapeake and Ohio Railroad, relocated SR 49 resulted in unsafe grades on the ramps from relocated SR 49 to the Indiana Boundary Road Alternative, and the connection to relocated SR 49 resulted in weaving conflicts with the relocated SR 49/ Interstate 94 interchange. Consequently, the State decided to improve the Indiana Boundary Road as a connection for relocated SR 49 to old SR 49.

LaPorte County

Wagner Road Interchange. In October of 1964, local residents and the Michigan City Chamber of Commerce requested an additional interchange at County Road 1000N (Wagner Road) in the eight-mile stretch between planned interchanges at US 20-35 in Indiana and US 12 in Michigan on Interstate 94. The additional interchange was needed to serve residential and industrial growth between Michigan City and New Buffalo, to relieve congestion on US 12 and SR 212, and to provide increased accessibility for residents in the area.

In July of 1965, the State agreed to back Michigan City's request for an additional interchange although the State was not optimistic about the chances for an additional interchange. On September 16, 1965, the Indiana State Highway Commission requested an additional interchange at County Road 1000N (Wagner Road). The State felt that Wagner Road was one of the few major east-west local traffic

arteries serving northern LaPorte County and that Wagner Road would feed traffic into Interstate 94 from US 12, SR 212 and the area northeast of Michigan City.

The planned interchanges at US 20-35 and at Michigan SR 239 did not adequately serve the area because the connecting highway system was rapidly approaching capacity and the planned interchanges created considerable indirect travel. The Wagner Road interchange would not conflict with suburban minimum spacing requirements because approved interchanges were located 4.5 miles south of Wagner Road and 2.4 miles north of Wagner Road. The average interchange spacing from the Indiana Toll Road to Michigan SR 239 would be 4.43 miles with the Wagner Road interchange; this value would be 1.68 miles greater than the approved interchange spacing on Interstate 94 from Ann Arbor to the Indiana-Michigan State Line. Alternate routes would not provide an effective solution to the provision of access to the Interstate System, and the road user savings with the interchange would offset the capital cost of the interchange in 4.4 years.

On October 28, 1965, the Bureau of Public Roads approved an additional interchange at Wagner Road and suggested that the State include the county road in the Federal Aid Primary System. Indiana replied that the county road could not be included in the Primary System because several primary routes already served Michigan City and an additional Primary Route connecting the interchange to Michigan City was not warranted at that time. The State concluded that local authorities would be responsible for the upgrading of Wagner Road. The Bureau of Public Roads responded that Wagner Road would have to be developed as a four-lane controlled access facility from US 12 to Interstate 94 prior to or concurrent with Interstate construction and as a two-lane facility from Interstate 94 to SR 39 in accordance with the improvement priority of other roads in LaPorte County.

The State informed the county of the necessary commitment, and the county replied that the commitment would cripple the county highway program for several years and that the State and Federal agencies should be responsible for the cost of feeder routes to the Interstate System. The cost of improving Wagner Road would have required over half the county highway fund for a single year.

In a dilemma, the Publisher of the LaPorte Herald-Argus (who initiated the interchange request) contacted the Washington Office of the Bureau of Public Roads and received the reply that Federal policy required improvement of the crossroad to handle the anticipated traffic volumes from the interchange. The Indiana State Highway Commission informed the publisher that the improvement of the county road was a county responsibility and that the improvement of the county road by the State would divert funds from projects of higher priority in the area. The State noted that it had to fulfill commitments to improve crossroads to over 230 interchanges on the Interstate System.

Without a local commitment to improve Wager Road, the Indiana State Highway Commission decided to provide only a grade separation at Wagner Road and to purchase right-of-way for a future interchange with State funds. Since Interstate 94 was completed through LaPorte County and the interchange was not designated as staged construction, Federal Aid Interstate funds cannot be used to finance the addition of the interchange. If the county upgrades Wagner Road in the future, the State will need to consider the addition of interchange ramps.

Grade Separation Requests. At a meeting of the representatives of the Indiana State Highway Department, the Bureau of Public Roads and the LaPorte County Commissioners on February 19, 1959, the county requested additional grade separations at Bleck Road and Warneke Road and service roads

from County Road 850W to County Road 400N on the south side of the Tri-State Highway to replace County Road 375N and from County Road 660W to County Road 700W on the south side of the Tri-State Highway. On April 8, 1959, the State requested Federal approval of the additions.

On May 21, 1959, the Bureau of Public Roads approved the addition of a future separation at Warneke Road and the addition of a frontage road from County Road 850W to County Road 400N and disapproved the additional separation at Bleck Road and the additional frontage road from County Road 660W to County Road 700W because development in the area did not warrant the additions and adequate circulation was provided by existing roads and planned separations.

On March 10, 1965, the State met again with the county commissioners to discuss the construction of Interstate 94. The county requested the same additions as in February of 1959. On May 12, 1965, the State requested Federal approval of an additional separation at Bleck Road, the Warneke Road separation for initial construction, and an additional frontage road from County Road 850W to County Road 400N on the south side of Interstate 94. The Indiana State highway found that the additions were justified by the high average daily traffic volumes on the roads in 1965: 259 for the frontage road, 408 for Bleck Road, and 259 for Warneke Road. The Bureau of Public Roads replied that the frontage road had been previously approved in May of 1959, that the Warneke Road separation was also approved in May of 1959, and that the Bleck Road separation was not justified because of flanking separations.

On June 24, 1965, the State resubmitted the request for a grade separation at Bleck Road with a road user benefit analysis. The analysis revealed that the savings in road user cost would offset the capital cost of the separation in 3.4 years. On July 26, 1965, the Bureau of

Public Roads approved the grade separation at Bleck Road provided the frontage road from Bleck Road to County Road 600W on the north side of Interstate 94 was eliminated.

Additional Traffic Lanes

Because the portion of the Tri-State Highway from the Illinois-Indiana State Line to Burr Street had been designed immediately after World War Two, the facility had not been designed for the traffic volumes of 1975 as required in the original Interstate Program of 1956. When the new Interstate Program began in 1956, Indiana requested Federal Aid Interstate fund participation in the addition of lanes to bring the Tri-State Highway up to adequacy for traffic volumes of 1975. In January of 1959, the Bureau of Public Roads agreed to participate with Interstate funds in the improvement of the Tri-State Highway from the Illinois State Line to Crisman Road provided the Interstate 94/Indiana Toll Road interchange was placed under contract by July 1, 1961.

Because Michigan was designing Interstate 94 for two lanes each direction with sufficient median width for the addition of a third lane in the future, Indiana requested that structures over the Interstate from Crisman Road to the Indiana-Michigan State Line be designed to accommodate the addition of a third lane on the inside in the future. However, the Bureau of Public Roads only approved the design of three-lane structures to SR 49 in 1958. With a change in the design year of the Interstate System in October of 1963, Indiana was able to obtain approval of three-lane structures on all of Interstate 94.

In June of 1964, Indiana proposed the addition of the third lane to the Tri-State Highway from the Illinois-Indiana State Line to the Indiana Toll Road. The State estimated the cost of the third lane at \$7,412,000 and the

cost of widening nine twin structures to accommodate the third lane at \$2,075,000. Since four lanes of the facility would be open as far east as the Indiana Toll Road in late 1964, the Bureau of Public Roads suggested that the construction of the added lanes on the Tri-State Highway from the Illinois-Indiana State Line to the Indiana Toll Road be coordinated with the construction of Interstate 94 east from the Indiana Toll Road. In December of 1964, the Bureau of Public Roads clarified the coordination requirement as follows: the construction of the added lanes and widening bridges on Interstate 80-94 was to be concurrent with the construction of Interstate 94 from the Indiana Toll Road to US 20 east of Portage and from the Indiana-Michigan State Line to US 20-35 east of Michigan City.

In 1966, Indiana requested Federal participation in the redesign of bridges to shoulder width on the Tri-State Highway. Because the initial design of Interstate 94 east of the Indiana Toll Road became outdated as a result of a State decision to defer work on Interstate 94, the Federal government questioned the propriety of authorizing Interstate funds for the redesign. However, the Bureau of Public Roads agreed to participate in the redesign because the redesign incorporated safety features that were not included in the original design but which were now desirable.

In the case of the Tri-State Highway from the Illinois State Line to the Indiana Toll Road, the Bureau of Public Roads suggested that the widening of the structures to shoulder width on the right and the covering of the median opening between twin structures be placed in a contract separate from the construction of the inside third lane. The State followed the Bureau of Public Road recommendation. The widening of the structures on the inside of Interstate 80-94 was begun in June of 1967, and the addition of the third lane was begun in December of 1967. The widening of

the structures to shoulder width on the outside was then programmed after the third lane was constructed.

Indiana East-West Toll Road

The Federal Aid Highway Act of 1956 permitted the incorporation of toll roads in the Interstate System if they paralleled proposed Interstate Routes, if they were constructed to design standards in reasonable compliance with those adopted for the Interstate System, if there was a reasonably satisfactory free route by which the toll section could be bypassed, and if the toll road became free when the bonds were retired. On August 21, 1957, the 156.7-mile Indiana East-West Toll Road was incorporated into the Interstate System.

Historical Background

The conception of the Indiana East-West Toll Road was tied to the early conception of the Tri-State Highway in 1926. The Tri-State Highway was to parallel US 20 from east of Gary to Angola and to angle northeast to Detroit from Angola.

The Department of Commerce report Toll Roads and Free Roads of 1939 included a toll road across northern Indiana in the transcontinental toll road system. The portion of the System in Indiana was one of the ten most heavily traveled sections of 938.7 miles and was also one of the few sections of the system that could be feasibly financed with tolls. The Detroit spur of the transcontinental toll road system, which left the toll road across northern Indiana at Angola, was not considered financially feasible. Consequently, the Detroit spur was shifted from Angola to the South Bend-Elkhart area to parallel old US 112 (new US 12) in the interregional highway system proposed by the

Toll Roads and Free Roads study. When development of the Indiana Toll Road was considered in the late 1940's, the Tri-State Hlghway followed the proposed Indiana Toll Road along US 20 from East of Gary to Elkhart and angled north to Kalamazoo to follow Interstate 94 in Detroit.

Following action of other States on their toll road systems, Indiana created the Indiana Toll Road Commission in 1951. Indiana soon discussed the connection of the Indiana East-West Toll Road to the east-west toll roads of her sister States. Indiana and Illinois worked out an agreement whereby the Indiana Toll Road would link with the proposed Calumet Skyway. Ohio and Indiana agreed on a control point for the east-west toll road immediately south of US 20.

Location Studies

The termini of the Indiana Toll Road were established by statute. In locating the east-west toll road, Ohio had studied the corridor between US 6 and US 20. Hoping to connect Fort Wayne to the toll road, the consultant for the Indiana Toll Road Commission studied a corridor from US 30 to northern Indiana border in locating the Indiana Toll Road.

Referring to Figure 108, p. 695, the consultant investigated four basic alternatives (each with a connection to Fort Wayne) from Chesterton to the Ohio-Indiana border. Route A followed the traditional location of a proposed toll road across northern Indiana. Route B generally paralleled US 30 but passed south of the South Bend-Elkhart area. Route C fell between US 6 and US 30. Route D paralleled US 30. On the basis of capital cost, 115.0-mile Route B was the lowest at \$116,510,000 followed by 120.8-mile Route A at \$122,450,000, 133.9-mile Route C at \$133,050,000, and 149.1-mile Route D at \$149,200,000. The Routes ranked in the

FIGURE 108. ALTER

FIGURE 108. ALTERNATIVE INDIANA TOLL ROAD ROUTES⁶⁹

same order when capital, maintenance, and administrative cost were considered. Route C was the least expensive route with a link to Fort Wayne.

Muck areas posed the greatest problem to the development of Route D and the least problem to the development of Route A. Although Route A was longer and had a greater number of bridges than Route B, the cost per mile was approximately the same for Routes A and B. The consultant felt that the difference in capital cost per mile was not significant and that the selection of the best alternative would depend on comparative traffic potentialities. In April of 1953, the Indiana Toll Road Commission recommended Route A north of South Bend and Elkhart or Route B south of South Bend and Elkhart for the Governor's approval. Governor Craig approved Route A on April 15, 1953. At the time of the decision, the Tri-State Highway followed the Indiana Toll Road to the South Bend-Elkhart area and the Elkhart-Kalamazoo Interstate Route still existed.

The selection of the final location west of Chesterton depended on feeder routes, right-of-way and construction cost, and the present and future traffic demands of the urban area. The proposed Calumet Skyway was a possible high volume feeder into the Indiana Toll Road System and obviously influenced the final location of the Indiana Toll Road. The Indiana Toll Road was located south of Chesterton to avoid urban development which stretched to Lake Michigan. West of Chesterton, the final location weaved between the urban areas to the Tri-State Highway, followed the Grand Calumet River to the east city limits of Hammond, and angled north to join the Calumet Skyway near Indianapolis Boulevard. The consultant had originally recommended a location parallel to US 12 rather than the Grand Calumet River. Governor Craig approved the location of the Indiana Toll Road west of Chesterton on June 30, 1953.

Status

Because the Indiana Toll Road was designed in 1953 and 1954, the facility has some design deficiencies when compared to the Interstate Standards of today. Indiana may use Interstate funds to correct safety and pavement deficiencies on the Indiana Toll Road after the toll bonds have been liquidated and the highway becomes the responsibility of the State of Indiana.

Interstate Route 265

When the legislative limit of the Interstate System was increased from 40,000 to 41,000 miles by the Federal Aid Highway Act of 1956, the Bureau of Public Roads asked the States to submit possible additions to the System. Indiana suggested a bypass of New Albany and Jeffersonville to connect Interstate 64, Interstate 65 and Interstate 71.

Concurrently, the States selected detailed locations for the original 40,000 miles of the System which were approved in August of 1947 and September of 1955. Due to more direct alignments, the original 40,000 miles turned out to be only 38,548 miles by June 30, 1957.

With 2,452 miles remaining to be designated within the 41,000 mile limit, the Secretary of Commerce announced the addition of 2,102 miles of new routes to the System on October 18, 1957. The remaining 350 miles were withheld by the Secretary for adjustments in the final route lengths. Indiana received mileage for the northwest quadrant of the Louisville Belt Route (Interstate 265 in Indiana) from the 1,102 miles, designated from the 1,452-mile remainder of the original 40,000 miles.

The Indiana State Highway Department submitted a strip map of the New Albany-Jeffersonville Belt Route from Interstate 64 to Interstate 65 for formal approval of the route

on September 8, 1958. The Bureau of Public Roads approved 6.4 miles of the route from Interstate 64 to Interstate 65 on September 29, 1959 and stated that an extension of the route east of Interstate 65 was tentative. The balance of Interstate 265 from Interstate 65 east and south to Interstate 71 was to be submitted later. However, the 6.8 miles of Interstate 265 from Interstate 65 to Interstate 71 was never submitted because the Bureau of Public Roads has continued to consider the extension tentative.

Location Studies

In August of 1961, the Indiana State Highway Department compared the approved location of Interstate 265 with an alternative location farther from the urban area. The study corridor stretched from Interstate 64 to Interstate 65 and from two to three miles north of the urbanized area.

Referring to Figure 109, p. 699 Alternative A was the location submitted in the 1960 Interstate Cost Estimate. The relocation of US 150 was proposed in conjunction with Alternative A to provide US 150 with access to the Interstate System. Because of the proximity of US 150 to the Interstate 64/Interstate 265 interchange, an interchange on Interstate 265 at US 150 was not feasible in the case of Alternative A. Alternative B was suggested by local residents to reduce damage to residential development and to provide traffic service to a larger area. An interchange between US 150 and Interstate 265 was possible in the case of Alternative B.

Because Alternative A was closer to the urban area, Alternative A and relocated US 150 provided superior traffic service over Alternative B. Despite higher volumes on Alternative A, Alternative A had a lower average annual road user cost than Alternative B. The average annual capital cost for Alternative A and relocated US 150 was \$123,076

FIGURE

FIGURE 109. INTERSTATE 265: LOCATION ALTERNATIVES⁷⁰

less than Alternative B at \$639,718. Although the right-of-way cost for Alternative B was less than Alternative A, Alternative B was more destructive to existing development. Alternative B required forty-six buildings at an average cost of \$14,059 per building as compared to Alternative A which required twenty-seven buildings at an average cost of \$14,930 per building. Although both alternatives would provide a stimulus to development Alternative A provided service to the fringe area which had a predominant travel pattern to and from the south. Consequently, the State retained the original location of Interstate 265 (Alternative A).

Because of rapid development in the study area, Indiana reconsidered the original location to determine a location that would not result in increased costs from later developments. Referring to Figure 109, p. 699, Alternative A was the original location which was submitted in the 1960 Interstate Cost Estimate. Alternative A₁ was a variation of Alternative A to avoid recent residential development in the area of US 31W. Alternative B was a location farther out suggested by local residents. Alternative C was developed to avoid growth north of New Albany; it followed Alternative A to Green Valley Road and continued northeast to join Alternative B near US 31W.

Alternative B was discarded because of high construction cost, nonconformance to design standards and inferior traffic service. Alternatives A, A₁ and C were equally desirable from the standpoint of construction cost and traffic service. However, Alternative C had the lowest right-of-way cost and was least disruptive to existing development. Alternative C also had a slight capital cost advantage over the nearest alternative. The capital cost of Alternative C and relocated US 150 was \$218,000 less than Alternative A₁, \$587,000 less than Alternative A, and

\$5,041,000 less than Alternative B. On the basis of this analysis, Indiana requested Federal approval of Alternative C on November 28, 1962. The Bureau of Public Roads approved Alternative C for a public hearing on Interstate 265.

Route Service

SR 111 Interchange. In January of 1962, the City of New Albany requested an additional interchange at Grant Line Road (SR 111) to serve the existing and future industrial areas of New Albany. The State suggested that the interchange at Green Valley Road be shifted to Mount Tabor Road west of SR 111 and that access roads be provided from the interchange to SR 111. The Mayor of New Albany concurred in this alteration on January 23, 1962.

In January of 1963, the New Albany Chamber of Commerce requested a shift of the Green Valley Road interchange to SR 111 or Mount Tabor Road. The Chamber of Commerce stated that an interchange at SR 111 would serve heavy truck traffic to the New Albany industrial area, that traffic from US 150 to SR 111 would have to go through New Albany if an interchange was not provided at SR 111, that the interchange at SR 111 would serve present and future industrial development, that Green Valley Road would be expensive to upgrade because of its narrow right-of-way and encroaching residential development, and that truck traffic would have to use residential streets from US 31W to the industrial area.

The State initially replied that a full interchange at Mount Tabor Road was not feasible as a result of the proximity of the Monon Railroad and that the interchange at Green Valley Road provided better traffic service because the location provided better interchange spacing.

At the public hearing on the location of Interstate 265 on January 10, 1963, New Albany officials requested that the interchange at Green Valley Road be shifted to SR 111 or Mount Tabor Road or that access roads be provided from the US 31W interchange to SR 111. Clark County officials requested local access at the Interstate 65/265 interchange via US 31E to serve commercial and industrial development along US 31E.

The State agreed to shift the Green Valley Road interchange to SR 111, but denied the request for an interchange at US 31E because the interchange would have to be removed if Interstate 265 was extended eastward and because existing interchanges at US 131 and SR 60 adequately served the area. In February of 1963, the Indiana State Highway Commission requested Bureau of Public Roads' approval of the interchange shift from Green Valley Road to SR 111. The Federal agency approved the request.

Extension of Interstate 265. In reviewing the design of the Interstate 265/Interstate 65 interchange in April of 1965, the Bureau of Public Roads requested information on the possible extension of Interstate 265 with non-Interstate funds, the effect of such an extension on the interchange at Interstate 265/Interstate 65, and the treatment of US 31E if Interstate 265 was extended. Due to commitments to improve many existing Federal Aid Primary and Secondary roads, the State felt that the extension of Interstate 265 could only be considered in the future. The Indiana State Highway Commission also stated that actual studies on the extension of Interstate 265 and the treatment of US 31E would depend on the results of the Louisville Transportation Study.

Nevertheless, Indiana requested Federal approval to design the Interstate 265/Interstate 65 interchange to accommodate the extension of Interstate 265 within the next

twenty years. Because the State did not make a commitment to extend Interstate 265, the Bureau of Public Roads suggested that the Interstate 265/Interstate 65 interchange be designed to provide an adequate level of service for current operation and that accommodation of the future extension of Interstate 265 be only a consideration.

Louisville Transportation Study. The Louisville Transportation Study of 1969 recommended the extension of Interstate 265 to Interstate 71, the upgrading of SR 111 to four lanes from Interstate 265 south, the separation of Klerner Lane instead of a closing, and an additional interchange on Interstate 265 at old US 150. In response to local requests for these improvements, the Indiana State Highway Commission responded that the additional interchange at US 150 and the additional separation at Klerner Lane could not be included in the original construction of Interstate 265 but would be considered after the System was completed. In the case of SR 111 and the extension of Interstate 265, the improvements would have to be scheduled with other highway improvements in the area.

In 1972, the Indiana State Highway Commission requested Federal approval of the construction of four lanes through the SR 111 interchange area and a grade separation at Klerner Lane to provide better traffic circulation in the area. The Federal Highway Administration approved these changes in the design plans. The State has also recommended an additional interchange at State Street (old US 150) to remove cross-town traffic from local streets.

Interstate Route 275

When the Interstate Program began in August of 1956, only the portion of Interstate 275 (Cincinnati Circle Freeway) from Interstate 71 to Interstate 74 had been designated part of the Interstate System. As a result of the 1000-mile expansion of the System in 1956 and the 1,452-mile savings

from more detailed locations, Ohio received additional mileage in October of 1957 for the extension of Interstate 275 around one side of the Cincinnati Metropolitan Area. Kentucky and Ohio soon retained consultants to determine the side of the Metropolitan Area on which the belt route should be constructed. Because the west bypass might affect Indiana and conflicted with the proposed Ohio River Toll Bridge at Lawrenceburg, Indiana was involved in the location planning.

Location Studies

As a result of discussions between the three States during the location studies of 1959 and 1960, the States concluded that an agreement between the States would be difficult to reach. Indiana and Kentucky would realize greater benefits from the western bypass and Ohio would benefit more from the eastern bypass. Consequently, the States decided that the location studies be based on a complete circumferential route and that recommendations would be based on traffic service and needs rather than cost or location.

Referring to Figure 110, p. 705 , the consultant for Kentucky and Indiana considered four alternative routes from Interstate 71-75 east to the Ohio River and three alternative routes from Interstate 71-75 west to the Ohio River. Because Alternative 3 (California Route) served high volumes of urban and local traffic, the consultant felt that this alternative did not meet the characteristics of an Interstate highway. The consultant also discarded Alternative 2 because the Ohio River bridge was too close to the urban area. Alternative 1 was eliminated because it was too far south to serve as an Interstate bypass.

Fig. 5

FIGURE 110. INTERSTATE 275: ALTERNATIVES 71

Thus, the consultant favored Alternative 6 (Nine Mile Road or East Route) for the east bypass traffic. The consultant eliminated Alternative 4 because it would serve primarily urban and local traffic. Because Indiana had considered a crossing near Lawrenceburg for many years, Alternative 7 (Lawrenceburg or Alternate West Route) was developed to serve both Interstate bypass traffic and local traffic at Lawrenceburg. Alternative 5 (North Bend or West Route) provided the most favorable connection to the Ohio bypass according to the consultant. [Refer to Figure 111, p.707].

Because of the lack of comparable existing routes, the consultant had a difficult time developing benefit cost ratios. The consultant further felt that the construction of the circumferential route might not be justified by the anticipated traffic of 1975 according to road user benefit analysis and that the need for a circumferential route should be evaluated in a more comprehensive study of regional highway requirements.

Referring to Table 12, p. 708 , the consultant concluded that the West Route was preferable to the East Route because the West Route was shorter, had a lower capital cost, and resulted in a higher benefit-cost ratio. The consultant favored the West Route (North Bend Route) over the Alternate West Route (Lawrenceburg Route) on the basis of capital cost. Although the benefit-cost ratios were approximately the same for the two west routes, a large portion of the user benefits for the Lawrenceburg Route resulted from the diversion of radial traffic movements from US 50. The diversion of radial traffic was considered inconsistent with the bypass function of the route. However, on a total regional highway requirement basis, the Lawrenceburg route would probably best serve the local and bypass traffic functions.

FIGURE III. INTERSTATE 275: LOCATIONS SELECTED BY CONSULTANT

Reviewing the consultant's comparison of the eastern alternatives, Kentucky and Ohio favored the California Route (which was recommended by the Ohio consultant) over the Nine Mile Road Route (which was recommended by the Kentucky consultant) because the capital cost of the California Route was estimated to be \$16,709,300 less, and the Ohio River crossing of the California Route would serve six times the traffic in 1975. Kentucky and Indiana favored the Lawrenceburg Route from the standpoint of total regional highway service.

On May 31, 1960, Ohio recommended to the Bureau of Public Roads that the bypass facility on both sides of the Cincinnati Metropolitan Area be included in the Interstate System. The Bureau of Public Roads advised Ohio that only a bypass on one side could be approved. Consequently, Ohio submitted the east route in the 1960 Interstate Cost Estimate.

With the selection of the California Route, Kentucky evaluated a corridor from the California Ohio River crossing to the Lawrenceburg Ohio River crossing to link the California Route directly with the Lawrenceburg Route without utilizing a portion of the Interstate 71-75 in the Circle Freeway. A location was selected which passed south of the Covington-Newport area and north of the Greater Cincinnati Airport.

In March of 1962, the Ohio consultant completed a study to support the designation of a complete circumferential facility as part of the Interstate System. Although Cincinnati was the focal point of several Interstate Routes, the Cincinnati Metropolitan Area was one of the largest urban areas without a complete Interstate belt route.

The metropolitan area had grown twenty-five percent in ten years. Because of the location of present and future development of all major land uses, the location of the

Greater Cincinnati Airport and the movement of individuals to work from one sector to another, a complete belt route was needed to unite the metropolitan area and to provide the continuity necessary to realize the purpose of the Interstate System. An entire belt route would separate and balance traffic utilizing the Interstate System in the area. The complete belt route would also reduce the concentration of traffic near the Cincinnati CBD where the only Ohio River crossings existed at that time. Referring to Figure 112, p.711 , the 58.5-mile Cincinnati Circle Freeway from Interstate 71 northeast of Cincinnati around the south end of Cincinnati to interstate 74 was estimated to cost \$121,382,000. The 3.7 miles of the route in Indiana was estimated to cost \$15,724,000.

In April of 1962, the three States requested sufficient Interstate mileage for a complete belt route. In reply to Indiana's request of April 16, 1962, the Washington Office of the Bureau of Public Roads stated that approval of a route on both sides of Cincinnati would go beyond the intent of the 1957 System expansion and would constitute an additional route. The Bureau of Public Roads further felt that it would be inappropriate to utilize a portion of the small reserve of undesignated mileage because it was needed for adjustments to final route locations.

Consequently, the States had to make adjustments in the mileage already received to provide the additional mileage for a complete Cincinnati Circle Freeway. Ohio gave up a portion of Interstate 277 in Akron and all of Interstate 470 in Bridgeport. Although Indiana feared that it might have to sacrifice some mileage on Interstate 265 to get that portion of Interstate 275 in Indiana, it was given a small amount of additional mileage when the mileage for the belt route was finally adjusted. With the mileage adjustments, the Bureau of Public Roads approved a complete belt route on August 27, 1962.

FIGURE 112. INTERSTATE 275: FINAL LOCATION⁷³

In May of 1963, Ohio shifted Interstate 275 from the east to the west of Elizabethtown. As shown in Figure 113, p. 713, one alternative would have doubled the amount of Interstate 275 mileage in Indiana. However, the final location shift was entirely within Ohio.

Route Service

The public hearing on Interstate 275 in Indiana was held on September 27, 1962. The final location was subsequently approved on November 20, 1962.

In May of 1966, business interests in Lawrenceburg contacted the Indiana State Highway Commission about the utilization of Interstate 275 as a flood wall for the proposed Lawrenceburg Industrial Park. The State replied that it was inappropriate to utilize highway funds for flood control.

After several years of discussion, the Corps of Engineers initiated a survey in November of 1971 to determine possible modifications to Interstate 275 to provide flood protection for the proposed industrial park. If modifications to Interstate 275 for flood control increased its original cost, the additional cost would have to come from non-highway funds.

The discovery of the remains of an old Indian village along the alignment of Interstate 275 in Indiana resulted in the utilization of highway funds for archeological salvage.

Interstate System Additions in 1968

In reply to a Congressional request for a statement of Interstate needs, Indiana reported that 170 miles were needed for an extension of Interstate 69 from its present terminus at Interstate 465 northeast of Indianapolis to Interstate 64 northeast of Evansville. If Kentucky

FIGURE 113. INTERSTATE 275: RELOCATION WEST OF ELIZABETHTOWN

FIGURE 113. INTERSTATE 275: RELOCATION WEST OF ELIZABETHTOWN

completed the Pennyryle Parkway north to Evansville or requested an extension of Interstate 69 from Evansville to Interstate 24 near Paducah or the Kentucky Lake National Recreation Area, the extension of Interstate 69 would link the industrial metropolitan areas of Michigan and Ohio with the national recreation area near Paducah. Relative to the extension of Interstate 69, Kentucky stated that toll facilities were under construction which would connect Interstate 64 at Evansville with Interstate 24 near Paducah.

On August 23, 1968, Congress authorized an additional 1,500 miles for the Interstate System to close critical gaps which prevented the efficient operation of a continuous system of highways, to serve several urban areas of more than 100,000 population which were not linked directly to the Interstate System, to link several State capitals which were not served by the System, to reduce the missing segments of beltways and urban radials, and to eliminate missing segments in areas that carried heavy volumes of defense traffic. Since Congress made no additional authorization of funds for the new routes, any funds used for the construction of the new routes had to come from the existing apportionment of each State. Congress also authorized the addition of routes to the System without mileage charge if the proposed routes met the prescribed Interstate design and location criteria and were logical additions to the System; these additions, however, were not eligible for Federal Aid Interstate funding.

Request for Additions

On August 5, 1968, the Indiana State Highway Commission submitted information on additions to the Interstate System to the Administrator of the Department of Transportation. The additions of first priority, representing the minimum in critical needs of the System, were the Interstate 64 spur

(Interstate 164) from the Pennyrile Parkway at Henderson to Interstate 64 northeast of Evansville and the extension of Interstate 294 from the junction of Interstate 94 and SR 912 along SR 912 to Interstate 90.

The additions of second priority were the creation of Interstate 63 which extended from the junction of Interstate 64 and the Interstate 64 Spur to Interstate 70 near Terre Haute and the extension of Interstate 69 from Interstate 465 to the northeast interchange of the Indianapolis Inner Belt. The combination of the first and second priority requests were considered representative of the total needs and of Indiana's share of the additional 1500 miles. On September 5, 1968, the Federal Highway Administration returned the recommendations for resubmission according to criteria developed on August 28, 1968, after the Congressional expansion of the System.

On October 24, 1968, Indiana resubmitted the four routes with justification for addition to the Interstate System. On the same date, Indiana also submitted a request for the addition of the West Leg extension of Interstate 465 from Interstate 65 to the north leg of Interstate 465 without mileage charge.

Northeast Freeway in Indianapolis. Since Lochner recommended that Interstate 69 be located on the existing alignment of SR 37 to Interstate 465 near Castleton and onto the northeast interchange of the Indianapolis Inner Belt rather than located to Interstate 70 near German Church Road for a combination entry with Interstate 70 into the urban area in December of 1961, Indiana has sought the extension of Interstate 69 from Interstate 465 to the Inner Belt. When the relocation from Interstate 70 to SR 37 was requested, the Bureau of Public Roads had approved Interstate 69 only to the nearest Interstate Route (Interstate 465) because Interstate 69 had originally terminated at

Interstate 70 and had not extended into the urban area.

In January of 1964, Mayor John J. Barton of Indianapolis urged Governor Matthew E. Welsh to renew efforts in gaining approval for the extension of Interstate 69 as part of the Interstate System. In turn, Governor Welsh passed the request onto Senator Vance Hartke who contacted Secretary of Commerce, Luther M. Hodges. In support of the request, Governor Welsh stated that the study of Lochner in December of 1961 had recommended the extension of Interstate 69 from Interstate 465 at SR 37 to the Inner Belt over the utilization of Interstate 465 and Interstate 70 for Interstate 69 traffic to the Inner Belt. The Secretary of Commerce replied that no additional Interstate mileage was available and that the request would be considered when additional mileage became available.

In justifying the addition of the extension of Interstate 69 to the Interstate System in October of 1968, Indiana stated that the route would serve the most populous sector of Indianapolis, would traverse an area of high motor vehicle ownership, and would link the fringe area of the city with the proposed Interstate Routes in the core of the city and the core of the city with Interstate 465. [Refer to Figure 114, p. 717].

The route was not approved as an addition to the interstate System. However, the northeast interchange of the Inner Belt was modified to provide for future connection to the Northeast Freeway. The future Northeast Freeway was considered in traffic assignments when designing the Interstate System in Indianapolis and was considered a supplemental freeway to the Interstate freeways by IRTADS. The 8.7 miles of freeway were estimated to cost \$48,647,000.

Interstate 63. This route extended from the junction of Interstate 64 and the Interstate 64 spur (which joined Interstate 64 to the Pennyrile Parkway) north to I-70 and

US 40 east of Brazil. Interstate 63 was essentially another attempt to provide an Interstate Route from Evansville to Chicago paralleling US 41. In November of 1966, Wilbur Smith and Associates had completed a feasibility study for a proposed North-South Toll Road from Evansville to Interstate 65 northwest of Lafayette; however, the facility was found to be financially infeasible. Interstate 63 followed the corridor of the proposed North-South Toll Road as far as US 40. If Interstate 63 would be subsequently extended from US 40 northward to Interstate 65 in the future, the concept of the North-South Toll Road or an Interstate Route parallel to US 41 would be realized.

In justifying the addition of Interstate 63 to the Interstate System in October of 1968, Indiana stated that the route would connect the Interstate 64 spur to Interstate 70; would serve numerous urban areas, the metropolitan area of Evansville, Crane Naval Depot, one of the principal strip mine areas of the United States and numerous industries near Evansville; and would relieve the routes of highest traffic volume in southwestern Indiana. [Refer to Figure 115 p. 719]. The 92.1 miles of the facility from Interstate 64 to US 40 was estimated to cost \$131,177,000. The proposed North-South Toll Road from the Ohio River to Interstate 65 northwest of Lafayette was estimated to cost \$181,000,000 for 191 miles in 1966. Interstate 63 was not approved as an addition to the Interstate System.

Interstate 294 Extension. The proposed extension of Interstate 294 was to start at the present eastern terminus of Interstate 294 at Interstate 94 in Illinois, to follow Interstate 94 to SR 912 (Cline Avenue), to assume the location of SR 912 (a four-lane divided expressway with limited access control) from Interstate 94 to US 12 to continue northwest from US 12 to Interstate 90, and to follow 130th Street from Interstate 90 to Interstate 94.

NOTE: NUMBERS
ARE 1990 ADT

FIGURE 115. INTERSTATE 64 SPUR AND INTERSTATE 63:
TRAFFIC ASSIGNMENTS FOR 1990⁷⁵

Indiana asked Illinois to support the extension of Interstate 294 along 130th Street, but Illinois replied that it would not support the inclusion of Interstate 294 in the Interstate System because there were other routes of higher priority in Illinois. Consequently, Indiana terminated the extension of Interstate 294 at Interstate 90. [Refer to Figure 116, p. 721].

In justifying the addition of the Interstate 294 extension to the Interstate System, Indiana stated that the facility would only require extensive new construction from US 12 to Interstate 90 since the route would utilize Interstate 94 to SR 912 and SR 912 would be upgraded by the elimination of at-grade intersections, that the route would serve an area having a high density of population and the greatest industrial concentration in the Midwest, that the facility would relieve congestion on existing streets in the area of highest traffic volume concentration in Indiana, and the route was vital to defense due to the heavy industry in the area. The estimated cost of the 10.1-mile extension of Interstate 294 was \$42,664,000.

The route was not selected for inclusion in the Interstate System. However, local officials are continuing attempts to get special funding for the route as a "defense access" road.

Interstate 164. The Interstate 64 spur was envisioned to connect the Pennyrile Parkway near Henderson to Interstate 64 northeast of Evansville. The spur route was based on Indiana's desire in the 1940's to have an Interstate Route paralleling US 41 and Indiana's unsuccessful attempt to have Interstate 24 located to Evansville in 1961. In 1961, Kentucky routed Interstate 24 through Paducah to Interstate 57 for an Interstate connection with Chicago, however, Kentucky agreed to upgrade US 41 to Henderson. Consequently, the Interstate 64 spur to the Pennyrile Parkway

FIGURE 116.

would fulfill Indiana's desire for a limited access facility from Nashville to Evansville and connect Evansville to the Interstate System.

On September 9, 1968, Indiana requested the support of Kentucky for an Interstate spur from Interstate 64 to the Pennyryle Parkway. Kentucky replied that it would submit a request for the inclusion of the Kentucky portion of the Interstate 64 spur in the Interstate System. Kentucky requested Indiana's concurrence in the extension of Interstate 265 from Interstate 65 to Interstate 71 to complete the northeast quadrant of the Jefferson Freeway; however, Indiana responded that the extension of Interstate 265 would not be included in the requests for additional Interstate mileage because there were more critical needs for freeways elsewhere. Kentucky submitted requests for the Interstate 64 spur and the extension of Interstate 265.

In justifying the Interstate 64 spur, Indiana stated that the facility with the Pennyryle Parkway would link Evansville to Nashville, that the spur would provide Evansville with a direct link to the Interstate System, that the facility would serve manufacturing facilities in Evansville and that the route would relieve the congestion created by heavy traffic through Evansville. The 20.8 miles of the spur from Interstate 64 to the Ohio River east of Evansville was estimated to cost \$39,667,000.

On December 13, 1968, the Federal Highway Administration approved the addition of a spur from Interstate 64 south to Evansville as part of the Interstate System. Thus, Indiana received only a portion of its Interstate 64 spur (Interstate 164) request. Since the approved Interstate 164 terminated at SR 66 east of Evansville, Indiana, only 14.3 miles of additional Interstate mileage resulted. [Refer to Figure 117, p. 723].

In May of 1969, Indiana conducted a preliminary field review of the location of Interstate 164. Although it

FIGURE 117. INTER

FIGURE I17. INTERSTATE 164⁷⁷

appeared logical to locate Interstate 164 on the alignment of US 41 serving the core of Evansville and US 41 was being developed as a high type facility to bypass the CBD of Evansville, the upgrading of US 41 to Interstate standards was found to be uneconomical. On the other hand, if the facility paralleled existing dual lane US 41, it would merely duplicate service. A disadvantage of locating Interstate 164 outside the US 41 corridor, however, was that there might be insufficient traffic to justify the facility. As the majority of east-west long haul traffic has Louisville as a terminus, location of Interstate 164 east of Evansville has considerable favor.

At the time this report was written, the location of Interstate 164 was still in the planning stage. The route could be located east or west of Evansville. The Vanderburg County Area Plan Commission and Evansville Chamber of Commerce favor location of Interstate 164 east of Evansville. A western location would serve Mount Vernon, a rapidly growing Ohio River port. Local officials also favor a connection from Interstate 164 at SR 66 to US 41 south of Evansville. If Interstate 164 is linked to the Pennyrile Parkway via a new Ohio River bridge, the new bridge and approaches would cost \$20,640,000.

If Interstate 164 is routed west of Evansville, the route will have to cross the Ohio River flood plains to join the Pennyrile Parkway. If Interstate 164 is routed east of Evansville, the route might involve the Audubon State Park in joining the Pennyrile. At the present, Indiana and Evansville have no plans to build a new bridge over the Ohio River to link Interstate 164 to the Pennyrile Parkway.

Interstate 465 West Leg Extension. In June of 1968, Indiana requested Federal approval for the signing of the extension of the West Leg of Interstate 465 from Interstate 65 to the North Leg of Interstate 465 as a part of Interstate

465. The Federal Highway Administration replied in September of 1968 that a proposal should be submitted to add the extension to the Interstate System without mileage charge.

On August 24, 1968, Indiana requested that the connection be added to the Interstate System without mileage charge. The connection would eliminate the missing link of Interstate 465 and was to be built with Federal Aid Primary funds. The extension of the circumferential route was added to the Interstate System without mileage charge on January 7, 1970, when it was completed to Interstate standards. [Refer to Figure 114, p. 717].

Notes

1. Laws Relating to Federal Aid in Construction of Roads (Washington, D.C.: U.S. Government Printing Office, 1971), p. 146.
2. U.S. Department of Commerce, Bureau of Public Roads, General Location of National System of Interstate Highways (Washington, D.C.: U.S. Government Printing Office, September, 1955).
3. General Location of National System of Interstate Highways, p. 22.
4. Indiana State Highway Commission, Division of Planning, Interstate 65 and Interstate 70 In and Around the City of Indianapolis (Indianapolis, Ind.: ISHC; February 23, 1965), p. 2.
5. Interstate 65 and Interstate 70 In and Around the City of Indianapolis, p.13.
6. Indiana State Highway Commission, Division of Planning, Preliminary Location Study East Leg of Interstate 465, (Indianapolis, Ind.: ISHC; september 28, 1961), p. 23.
7. H. W. Lochner, Inc., A Plan for the Location of The North Leg of Interstate Route 465 in the Indianapolis Metropolitan Area (Chicago, Ill.: H.W. Lochner, Inc.; January, 19600, p. 11; and H. W. Lochner, Inc., Supplement to a Report on the Location Plan for the North Leg of Interstate Route 465 in the Indianapolis Metropolitan Area (Chicago, Ill.: H. W. Lochner, Inc.; August, 1960), p. 3.

8. A Plan for the Location of the North Leg of Interstate Route 465 in the Indianapolis Metropolitan Area, p. 9.
9. H. W. Lochner, Inc., Engineering Report for the Interstate Highway System in the Indianapolis Urban Area, (Chicago, Illinois: H. W. Lochner, Inc.; July, 1957), p. 2.
10. George W. Barton and Associates, Highway Transportation for the Indianapolis Metropolitan Area, (Chicago, Illinois: George W. Barton and Associates; August, 1957), p. 38.
11. Engineering Report for the Interstate Highway System in the Indianapolis Urban Area, p. 4.
12. Engineering Report for the Interstate Highway System in the Indianapolis Urban Area, p. 5.
13. Engineering Report for the Interstate Highway System in the Indianapolis Urban Area, p. 5.
14. H. W. Lochner, Inc., Supplement for West Route in Engineering Report for the Interstate Highway System in the Indianapolis Urban Area (Chicago, Illinois: H. W. Lochner, Inc.; August, 1959).
15. Engineering Report for the Interstate Highway System in the Indianapolis Urban Area.
16. H. W. Lochner, Inc., Supplement (for South Route) to the Engineering Report for the Interstate Highway System in the Indianapolis Urban Area (Chicago, Illinois: H. W. Lochner, Inc.; 1958).
17. Engineering Report for the Interstate Highway System in the Indianapolis Urban Area, p. 8.
18. Engineering Report for the Interstate Highway System in the Indianapolis Urban Area.
19. Engineering Report for the Interstate Highway System in the Indianapolis Urban Area.
20. Metropolitan Planning Department of Marion County Indiana, "Central Business District Plan For Metropolitan Indianapolis", Comprehensive Plan of Marion County (Indianapolis, Indiana: Metropolitan Planning Department, 1963), p. 17.
21. Barton-Aschman Associates, Inc., "A Summary Report", A Transportation and Land Development Plan for the Indianapolis Region, (Chicago, Illinois: Barton-Aschman Associates, Inc., October, 1968), p. 107.

22. "A Summary Report", p. 97.
23. Metropolitan Planning Department of Marion County Indiana, Indianapolis' Interstates: A Ten Year Review (Indianapolis Indiana: Metropolitan Planning Department of Marion County Indiana, 1967), p. 14.
24. Interstate 65 and Interstate 70 In and Around the City of Indianapolis, p. 10.
25. Indianapolis' Interstates, p. 12.
26. Indianapolis' Interstates, p. 12.
27. Indianapolis' Interstates, p. 28.
28. Indianapolis' Interstates, p. 29.
29. Indianapolis' Interstates, p. 29.
30. Indianapolis' Interstates, p. 29.
31. Interstate 65 and Interstate 70 In and Around the City of Indianapolis, p. 12.
32. H. W. Lochner, Inc., Alternate Location for Interstate 70 Through Stout Field (Chicago, Illinois: H. W. Lochner, Inc.; July, 1961).
33. Indianapolis' Interstates, p. 3.
34. Metropolitan Planning Department of Marion County Indiana, Review of I-65 between Greenwood Road and Thompson Road (Indianapolis, Indiana: Metropolitan Planning Department; July 3, 1968).
35. The Case for the More Southerly Relocation of Interstate Highway No. 64 (Evansville and Mount Vernon, Indiana: Evansville Chamber of Commerce and Mount Vernon Chamber of Commerce; May 23, 1958), p. 1.
36. Indiana State Highway Commission, Division of Planning, Route Comparison IR64 (F.A.I.06) New Albany to Indiana-Illinois State Line: An Economic Report on the Two Study Routes of Proposed IR64 (Indianapolis, Indiana: Indiana State Highway Commission, 1958 or 1959).
37. St. Louis-Vincennes-Louisville Interstate Highway Committee, Why We Need Interstate Highway 64 Where it was Originally Planned (Vincennes, Indiana: St. Louis-Vincennes-Louisville Interstate Highway Committee, 1959).

38. H. W. Lochner, Inc., Volume II: Report of Preliminary Engineering for Project I-64-1(23) in Vanderburg and Warrick Counties Indiana (Chicago, Illinois: H. W. Lochner, Inc.; November, 1965).
39. Volume II.
40. Harrison County Plan Commission. A Report on Alternate Corridor For I-64 Through Harrison County (Corydon, Indiana: Harrison County Plan Commission; September 29, 1964).
41. Indiana and Kentucky State Highway Departments, IR64, New Albany - Louisville, and IR65, Jeffersonville - Louisville (Indianapolis, Indiana and Frankfort, Kentucky: ISHD, KSHD, 1958).
42. Indiana State Highway Commission, Planning Division, F.A.I.06 (IR64) in New Albany - Economic Report for Bridge Location at New Albany (Indianapolis, Indiana: ISHC, 1958).
43. Indiana State Highway Commission, Planning Division, F.A.I. 03 (I-65) Line Studies from Muscatatuck River north to Interstate 465 South Leg (Indianapolis, ISHC; February 28, 1958); Indiana State Highway Commission, Planning Division, F.A.I. 03 (I-65) Revised Line Studies from 1.3 miles north of US 50 to Interstate 465 South Leg (Indianapolis: ISHC; April 28, 1958); and Indiana State Highway Commission, Planning Division, F.A.I. 03 (I65): Comparative Cost Estimate of Revised West Alternate Route versus Camp Alterbury Route (Indianapolis: ISHC; January 22, 1959).
44. Indiana State Highway Commission, Planning Division, Analytical Comparison of Two Routes for Interstate 65 in Bartholomew and Johnson Counties (Indianapolis: ISHC; September 17, 1959).
45. Jefferson, Request for a Southbound Ramp off Highway I-65 into the City of Jeffersonville, Indiana (Jeffersonville: Mayor's Office or Indianapolis: ISHC, Planning Division; May, 1967).
46. Request for a Southbound Ramp Off Highway I65.

47. Franklin City Plan Commission, Thoroughfare Plan for Franklin, Indiana (Franklin, Indiana: City Plan Commission, 1963).
48. Photronix, Inc., Preliminary Engineering Report: Federal Aid Interstate Route 65, Swanington to Gray (Columbus, Ohio: Photionix, Inc., 1958).
49. Preliminary Location Study for Interstate Route 65 from Lebanon to the vicinity of Fair Oaks, p. 6.
50. Indiana State Highway Commission, Planning Division, Preliminary Location Study for Interstate Route 65 from Lebanon to the vicinity of Fair Oaks (Indianapolis ISHC; July 19, 1961), p. 9.
51. Preliminary Location Study for Interstate Route 65 from Lebanon to the vicinity of Fair Oaks, p. 11.
52. Preliminary Location Study for Interstate Route 65 from Lebanon to the vicinity of Fair Oaks.
53. Indiana State Highway Commission, Planning Division, Supplementary Report: Preliminary Location Study for I-65 from Lebanon to a Point 0.5 Mile South of SR 10 (Indianapolis: ISHC; October 18, 1961, and May 10, 1962).
54. Indiana State Highway Commission, Planning Division, Second Supplement: Preliminary Location Study for I-65 from Lebanon to a Point 0.5 mile South of SR 10 (Indianapolis: ISHC; January 23, 1963).
55. Indiana State Highway Commission, Planning Division, Engineering Report on the I-65 Spur (Indianapolis: ISHC; July, 1968).
56. Clyde E. Williams and Associates, Inc., Location Study Report: Pendleton to Landess, Indiana, on Interstate Route No. 69 (Indianapolis: Clyde E. Williams and Associates, Inc.: July, 1958).
57. Indiana State Highway Commission, Planning Division, Report of Location Study for F.A.I. 04 - Interstate Route No. 69 from Pendleton to Fort Wayne (Indianapolis: ISHC; Decmeber 4, 1958).
58. Interstate Route No. 69 from Pendleton to Fort Wayne.
59. H. W. Lochner, Inc., A Location Plan for Interstate Routes 69 and 70 in Central Indiana (Chicago: H. W. Lochner, Inc., December, 1961), p. 27.

60. Indiana State Highway Commission, Planning Division, Analytical Comparison of Three Routes for I.R. 69 Between Common Points 2.2 Miles North of SR 18 and 2.25 Miles South of US 24 (Indianapolis: ISHC; November 9, 1959).
61. Indiana State Highway Commission, Planning Division F.A.I. 04/I-69: Summary of Comparative Cost Studies from 0.25 mile S.W. of SR 14 to Sec. A9, 0.7 mile S.W. of US 30, N.W. of Fort Wayne (Indianapolis: ISHC June 23, 1958).
62. Indiana State Highway Commission, Planning Division, Economic Study Report, F.A.I. 04, I.R.69 from Auburn to Indiana-Michigan State Line (Indianapolis: ISHC; September 23, 1958).
63. Indiana State Highway Commission, Planning Division, Review of Alternate Location Lines for Interstate Route 69 in Steuben County, Indiana (Indianapolis: ISHC; July 6, 1962), p. 10.
64. A Location Plan for Interstate Routes 69 and 70 in Central Indiana, p. 7.
65. A Location Plan for Interstate Routes 69 and 70 in Central Indiana, p. 15.
66. Indiana State Highway Commission, Planning Division, Review of Preliminary Locations for Interstate Route 70: Illinois-Indiana State Line to State Route 59 (Indianapolis: ISHC; May 28, 1962).
67. Indiana State Highway Commission, Division of Planning, I.R. 74 Report of Revised Line 2 Miles East of Chambersburg to Lizton (Indianapolis: ISHC; December 21, 1959) and I.R. 74 Report of Original Line versus Two Alternate Lines from Layton to Lizton (Indianapolis: ISHC 1957).
68. Indiana State Highway Commission, Division of Planning, F.A.I. 07 - I.R. 94: Economic Study Report for the Chesterton By-Pass (Indianapolis: ISHC; September 10, 1958).
69. J. E. Greiner Company, Final Draft Form - Civil Engineering Report: Indiana Toll Road (Baltimore, Md.: J. E. Greiner Company; October 15, 1953), plate 2.

70. Indiana State Highway Commission, Division of Planning, Preliminary Location Study for Interstate 265 in the New Albany - Jeffersonville Area (Indianapolis: ISHC August 24, 1961 and November, 1962).
71. Parsons, Brinckerhoff, Zuade, and Douglas, The Interstate Highway Bypass for the Cincinnati Metropolitan Area: Preliminary Engineering Report on the Location in Indiana and Kentucky (New York: Parsons, Brinckerhoff, Zuade, and Douglas; August, 1960), fig. 5.
72. The Interstate Highway Bypass for the Cincinnati Metropolitan Area.
73. Vogt, Ivers and Associates, Cincinnati Metropolitan Area Circle Freeway - Belt Route Report (Cincinnati: Vogt, Ivers and Associates; March, 1962).
74. Indiana State Highway Commission, Division of Planning, Additional Interstate System Mileage Designations Authorized in the Federal-Aid Highway Act of 1968 (Indianapolis: ISHC; October 24, 1968).
75. Additional Interstate System Mileage Designations.
76. Additional Interstate System Mileage Designations.
77. Additional Interstate System Mileage Designations.

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