HARTFORD METROPOLITAN AREA EXPRESSWAYS

A REPORT OF

AN ENGINEERING STUDY

FOR

EXPRESSWAYS

IN THE

HARTFORD

METROPOLITAN AREA

Bureau of Highway Planning Studies

CONNECTICUT STATE HIGHWAY DEPARTMENT

1945

C O N T E N T S

I L L U S T R A T I O N S

F O R E W O R D

The serious condition of the older cities of the east, of which Hartford is one, has been pointed out repeatedly by highway and city planning authorities. The decentralization of business to outlying districts which are accessible, the inevitable falling of central property values, the decadent areas near the centers of cities, and the consequently higher tax rates are matters of no small concern, if these cities are to survive. The situation is approaching the time, not of what CAN be done, but, of what MUST be done!

The major element in any plan to bring order into what has been a wasteful trend is to provide relief to the intolerable traffic congestion.

In the past the State Highway Department has undertaken very few highway improvements aimed at the relief of city traffic congestion. The same situation has existed in almost every state in the nation. It is now recognized, however, that the congestion on the principal city streets is more than a local problem -- that its proper solution is essential to the welfare of the State as well as of the cities. With most of the highway traffic in Connecticut either originating in or destined to the cities, fully efficient highway transportation can be obtained only when adequate extensions of our State routes are provided into the cities.

The recently enacted Federal-aid Highway Act of 1944, which provides for a large post-war highway program, specifically earmarks part of the allocations to the States for the improvement of major urban traffic arteries. Thus we see that the Federal Government which has aided the States for many years in the development of inter-city highways is now recognizing the urgent need for improvements in the cities. The post-war period will see the initiation, in cooperation with the cities and towns, of a new phase of Federal-State highway construction aimed at the logical extension of these inter-city routes into and through the congested urban centers.

Relief to the critical urban condition is no less difficult of solution than it is serious. It is with full cognizance of the magnitude of the problem and its importance to the individual cities and towns that a study of the highway needs and the development of an expressway plan for the Hartford Metropolitan Area have been undertaken by the State Highway Department.

Acknowledgement is made of the very cooperative assistance of local authorities, of Mayor Mortensen of Hartford, of Mayor Quigley of New Britain and particularly of Hartford City Engineer Robert J. Ross and members of his department and of the Hartford Flood Control and Improvement Commission. The ideas of these officials and the plans developed by them over the years constitute in large part the basis for the highway facilities proposed in this Report. Acknowledgement is made too of the fine work being done by the Planning Commissions and other local authorities in the development of realistic plans for off-street parking.

S U M M A R Y A N D C O N C L U S I O N S

Based on the comprehensive analysis of existing highway facilities, of present and future traffic densities, of traffic origins and destinations, of traffic benefits and of the estimated cost of alternate improvements in the Hartford Metropolitan Area, the following conclusions are drawn:

1. The modern highway improvements which are in use together with those which are scheduled for completion in the immediate post-war period will provide a modern integrated express highway system into Hartford from three directions, namely the north, the east and the south.

2. Routes entering Hartford from the west and southwest, all two-lane surface streets, carry some of the heaviest traffic loads which enter the City.

3. Traffic from West Hartford, the greatest individual source of traffic to Hartford, should be served directly by an expressway.

4. Traffic from Route 4 and present U.S. 6 should ultimately be served by a continuation of the Hartford - West Hartford expressway southwesterly from West Hartford center to Corbin Corner.

5. Traffic from Hartford to New Britain should be served by

an expressway easterly from New Britain to U.S. Route 5 in Newington.

6. Distribution facilities in both Hartford and New Britain must extend into the central area of each city in order to serve effectively the great bulk of traffic which is destined to these central areas.

7. Expressways and distribution facilities should be adequate, or provide flexibility in the design, to accommodate a 100% increase over the estimated 1940 traffic flows.

8. The development of adequate parking terminals and the development of express highways leading into cities are each a part of the same traffic congestion problem and are inseparable. Either improvement without the other cannot provide a wholly satisfactory solution to this critical urban traffic problem.

9. Priority section 1 in Hartford, the improvement from Bulkeley Bridge and the Hudson Street traffic circle westerly to Sisson Avenue, and priority section 2, the improvement from Main Street in New Britain easterly to U.S. Route 5 in Newington, are the most urgently needed improvements in the area.

10. The development of the proposed expressways, which is essential if traffic is to move and not to stall, will provide far reaching benefits. The motorists will travel in and through our cities with a freedom and degree of safety heretofore impossible. Great community and business benefits will result from improved traffic conditions.

PART I

I N T R O D U C T I O N

PURPOSE OF STUDY

This study was undertaken to provide a basis for:

(1) the determination of the location and character of major highway improvements that are needed to complete the system of express highways in the metropolitan area of Hartford, and

(2) the selection of those sections of the above improvements which are most urgently needed in order that the making of surveys and the drawing of plans may proceed in a logical and well integrated manner.

CHARACTER OF EXPRESSWAYS

It has been clearly demonstrated by expressway improvements now in service that they represent the only real solution of the problem of highway congestion. Piecemeal reconstructions such as widening or realignment of existing streets, channelization of traffic both at and between intersections, traffic signal controls, etc., may all improve existing conditions but they provide no panacea for the hazards and inefficiencies of our existing heavily traveled highways and streets. These highways and streets become effective arterials, truly consistent with the high state of development of the motor vehicles that use them, only when they permit the free and continuous flow of traffic. Toward this end the modern expressways have been developed.

What are the important characteristics of these facilities?

Expressways of the highest order of development are characterized by

(1) restriction of access to established entrances and exits,

(2) physical separation of opposing traffic movements, and

(3) elimination of cross traffic by construction of over-passes or underpasses, or by closing of minor streets.

The control of access to an expressway is probably its most important distinguishing characteristic, the one which will do most to prevent obsolescence of the highway and, of equal importance, prevent an undesirable road-bordering growth to our cities. There are examples throughout the country of roads built through open country adjacent to a city but almost immediately creating a mushroom development strung out into the previously undeveloped area. The road no longer provides the same character of service to the traffic for which it was built. The mushroom development is inconsistent with sound land use and with the character of expansion our cities need.

The other major characteristics of expressways, separation of opposing traffic movements on the facility and elimination of cross traffic, are essential to the provision of highways with the maximum capacity, and the minimum delay and hazard.

In general, expressways will be built on new locations. They will utilize undeveloped property in so far as is consistent with the traffic service for which they are built. Except in areas of intensive property development, wide rights of way are needed to permit the gentle slopes and landscape development which are desirable. Properly planned and constructed expressways, utilizing, as they will, some of the present run-down and deca-

dent areas, should not only give greatly increased efficiency to highway transportation but also provide a parklike development throughout the greater portion of their length.

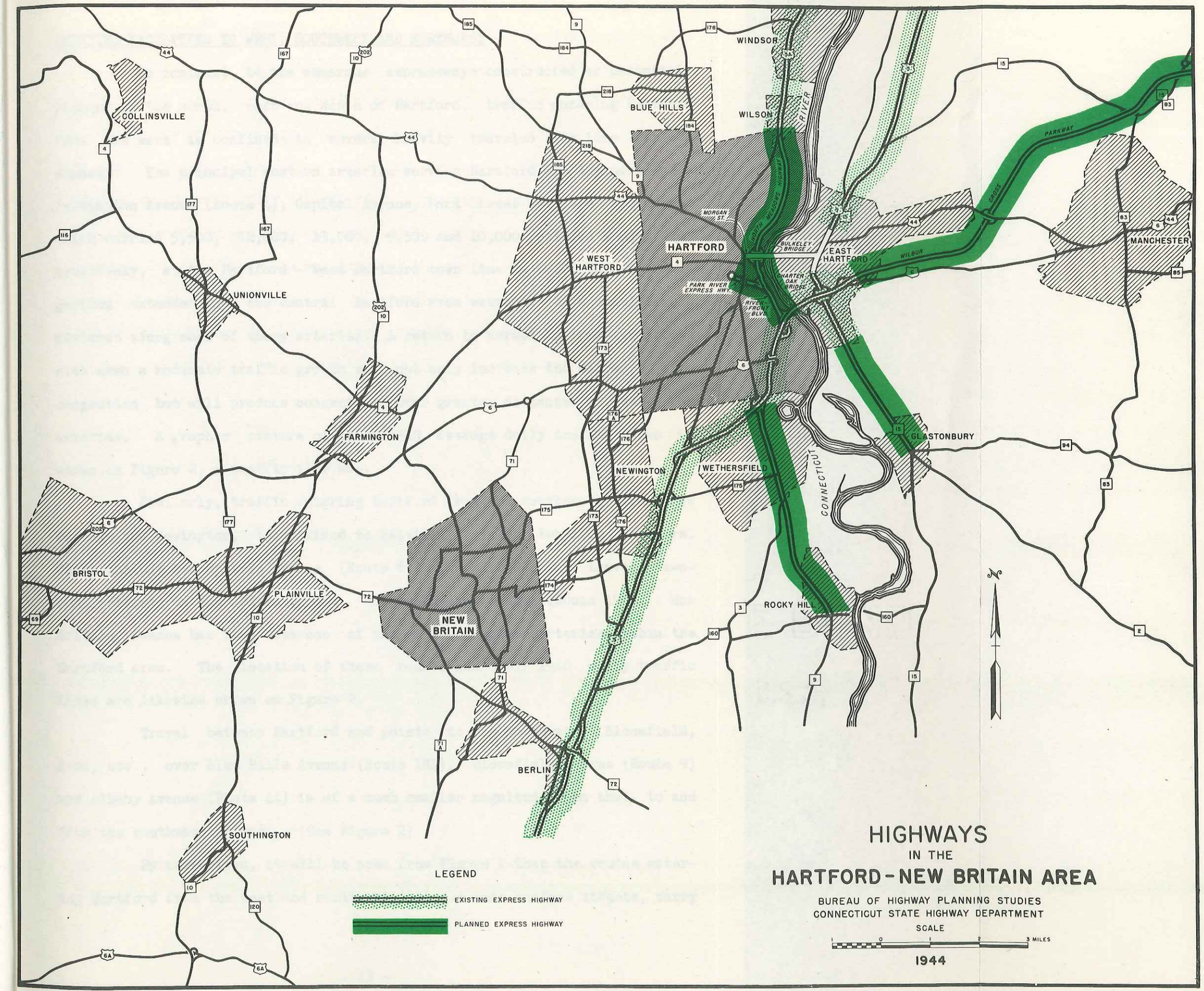
This is the conception of expressways upon which the Hartford Metropolitan Area study has been undertaken.

EXISTING EXPRESS HIGHWAY DEVELOPMENTS

Important progress has already been made in the planning and construction of a considerable portion of a modern expressway system in the Hartford Metropolitan Area. While the world conflict has temporarily delayed the completion of several sections of this system, the motoring public of this area can expect early completion of these sections with the termination of the emergency, provided funds become available.

To the east of Hartford there are the new Charter Oak Bridge, the Wilbur Cross Highway from East Hartford to Manchester and beyond, a section of U.S. Route 5 and Route 15 north from East Hartford, and Route 15 south to Glastonbury. To the south are the Berlin Turnpike (U.S. Route 5) to Meriden, Route 9 through Wethersfield to Rocky Hill, the Park River Express Highway, and the Riverfront Boulevard. To the north there is the North Meadows Highway connecting the Riverfront Boulevard with U.S. Route 5A in Windsor, with complete traffic interchange with Morgan Street and the Bulkeley Bridge.

These modern improvements, which are either in use or planned for completion in the immediate post-war period, will provide a modern integrated express highway system into Hartford from three directions, the north, the east and the south. These facilities, existing and planned, are shown on a map as Figure 1.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IN THE
HARTFORD - NEW BRITAIN AREA
BUREAU OF HIGHWAY PLANNING STUDIES
CONNECTICUT STATE HIGHWAY DEPARTMENT
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FIGURE 1

EXISTING FACILITIES TO WEST, SOUTHWEST AND NORTHWEST

In contrast to the numerous expressways constructed or definitely planned to the north, east and south of Hartford, traffic entering Hartford from the west is confined to several heavily traveled two-lane surface streets. The principal western arteries serving Hartford are Asylum Avenue, Farmington Avenue (Route 4), Capitol Avenue, Park Street and New Park Avenue which carried 5,500, 12,000, 13,000, 9,500 and 10,000 vehicles a day, respectively, at the Hartford - West Hartford town line in 1940. Pre-war congestion extended from the central Hartford area westerly for a considerable distance along each of these arteries. A return to normal traffic conditions with even a moderate traffic growth will not only increase the degree of this congestion but will produce congestion over greater distances of these same arteries. A graphic picture of these 1940 average daily traffic flows is shown on Figure 2, a traffic flow map.

Similarly, traffic entering Hartford from the southwest, from New Britain and Newington, is confined to heavily traveled two-lane highways. These include New Britain Avenue (Route 6), the most heavily traveled two-lane highway on the State system, and Newington Avenue (Route 176). New Britain Avenue has long been one of the most congested arteries within the Hartford area. The location of these routes and their 1940 daily traffic flows are likewise shown on Figure 2.

Travel between Hartford and points to the northwest, Bloomfield, Avon, etc., over Blue Hills Avenue (Route 184), Bloomfield Avenue (Route 9) and Albany Avenue (Route 44) is of a much smaller magnitude than that to and from the southwest or west. (See Figure 2)

By comparison, it will be seen from Figure 2 that the routes entering Hartford from the west and southwest, all two-lane surface streets, carry

some of the heaviest traffic loads which enter the city. In total there are on the streets and highways at the city line 11,400 daily vehicles in the north, 50,000 crossing the Connecticut River to the east, northeast and southeast of Hartford, and 24,200 in the south in comparison with 17,300 vehicles in the southwest, and 50,000 daily vehicles in the west on the five main arteries as shown. Obviously, the traffic arteries west and southwest from the city for which no relief has yet been provided or planned represent the most urgent traffic problem of the Hartford area. The report which follows is directed toward the analysis of the traffic which enters Hartford from the west and southwest and the determination of the location and character of express highway facilities to accommodate this traffic.

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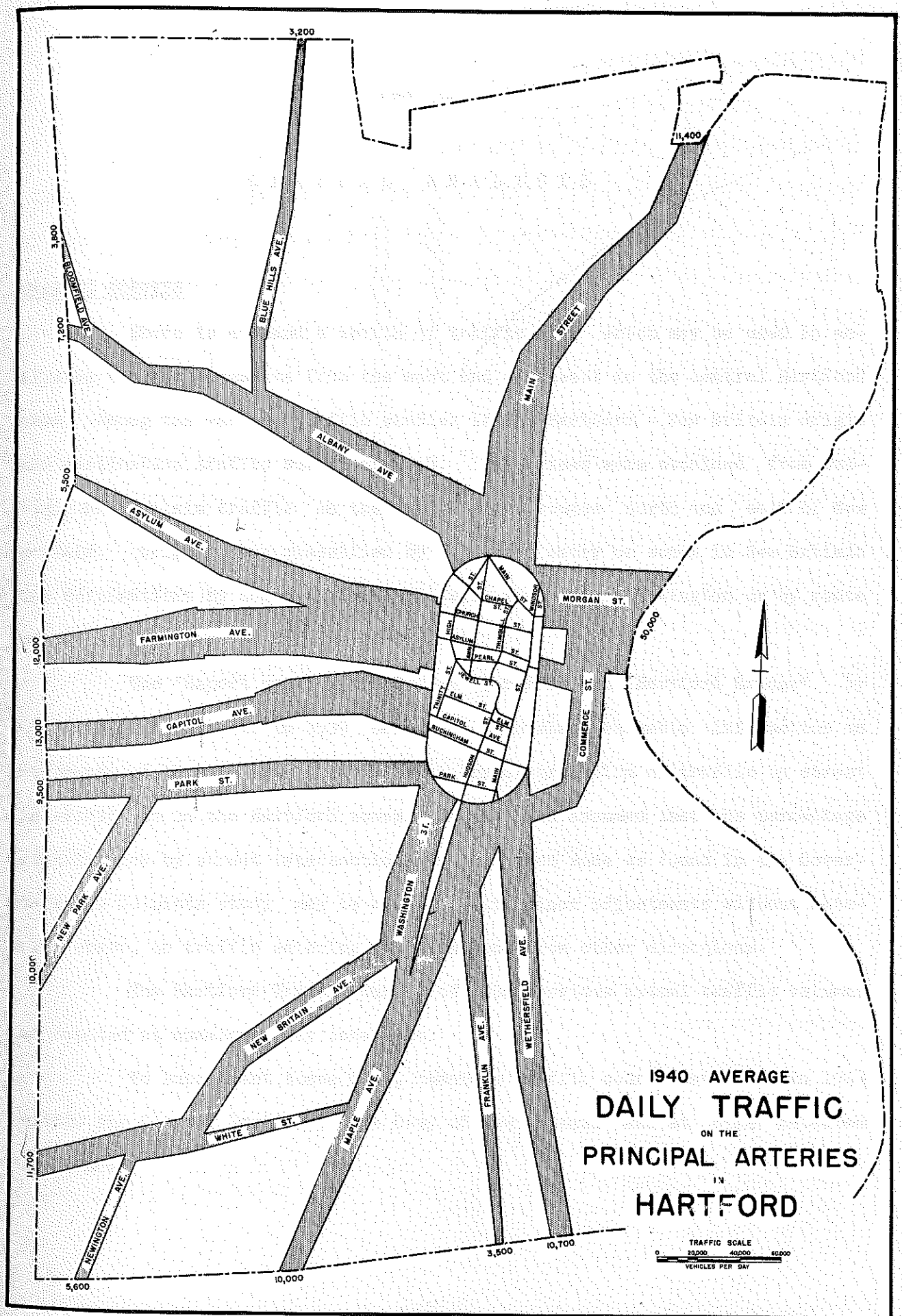

FIGURE 2

PART II

G E N E R A L A N A L Y S I S

TRAFFIC SURVEYS

There is at hand a wealth of traffic data which may be used in analyzing traffic movements from the west and southwest to the central Hartford area. Among the various traffic studies is the Hartford - New Britain origin and destination traffic survey of 1940. Interviews were obtained from outbound New Britain traffic on the three State routes north and east of New Britain. Origins were classified by route of entry or zones in New Britain and destinations by zones in Hartford, West Hartford or Newington or by route of exit in the case of through traffic.

The "Report on Traffic Survey for Proposed Hartford Bridge" by Coverdale and Colpitts in 1939 has also furnished valuable information on movements of through traffic as well as the distribution of traffic by street intersections in the Hartford zones. It has been assumed that the percentage distribution by street intersections in any given zone as found in the Coverdale and Colpitts study may be applied, with minor adjustments without material error, to traffic entering the same zone from other directions.

The Hartford Traffic Survey of 1934 provides actual traffic volumes as counted at numerous city locations.

To supplement these data, numerous traffic counts were made in 1943 within the City of Hartford, the City of New Britain and at other selected locations.

MAJOR TRAFFIC GENERATORS

Hartford: The most significant finding of all the traffic studies is the predominate position of the central business district of Hartford as the major traffic generator. This is brought out in Figure 3 which, in addition to showing the distribution of traffic origins by zones in West Hartford, Newington and New Britain and by route of entry for trips originating west of these towns, shows the distribution of destinations by zones in Hartford./1 It is seen that zone 1 in Hartford accounts for 29.5% of all traffic entering the city from the southwest and west. In addition a considerable portion of the traffic destined to each of zones 2, 3, and 7, the three zones contiguous to zone 1 and attracting 14.5%, 14.8% and 21.1% of the total, respectively, is known to be concentrated along the edge of zone 1. Expansion of zone 1 to include all the central business district of Hartford would show 50% or more of entering traffic to be destined to the central business district. Since the total of all Hartford zones (100%) represents 51,200 daily trips into and out of Hartford from the southwest and west, over 25,000 daily trips would originate in or be destined to the central business district from the southwest and west alone.

Figure 3 also shows that West Hartford accounts for 61% of all origins of traffic entering Hartford from the southwest and west. An additional 17% from Routes 4 and 6 passes through West Hartford. Newington accounts for 9% and New Britain accounts for the remaining 13% of the total from the southwest and west.

Further detail of Figure 3 is recorded in Figure 4 which shows the

1/ As used here and in Figures 3 and 5, "origins" is used to designate all trip termini outside the city. Actually, return trips would make origins the trip destinations and vice versa.

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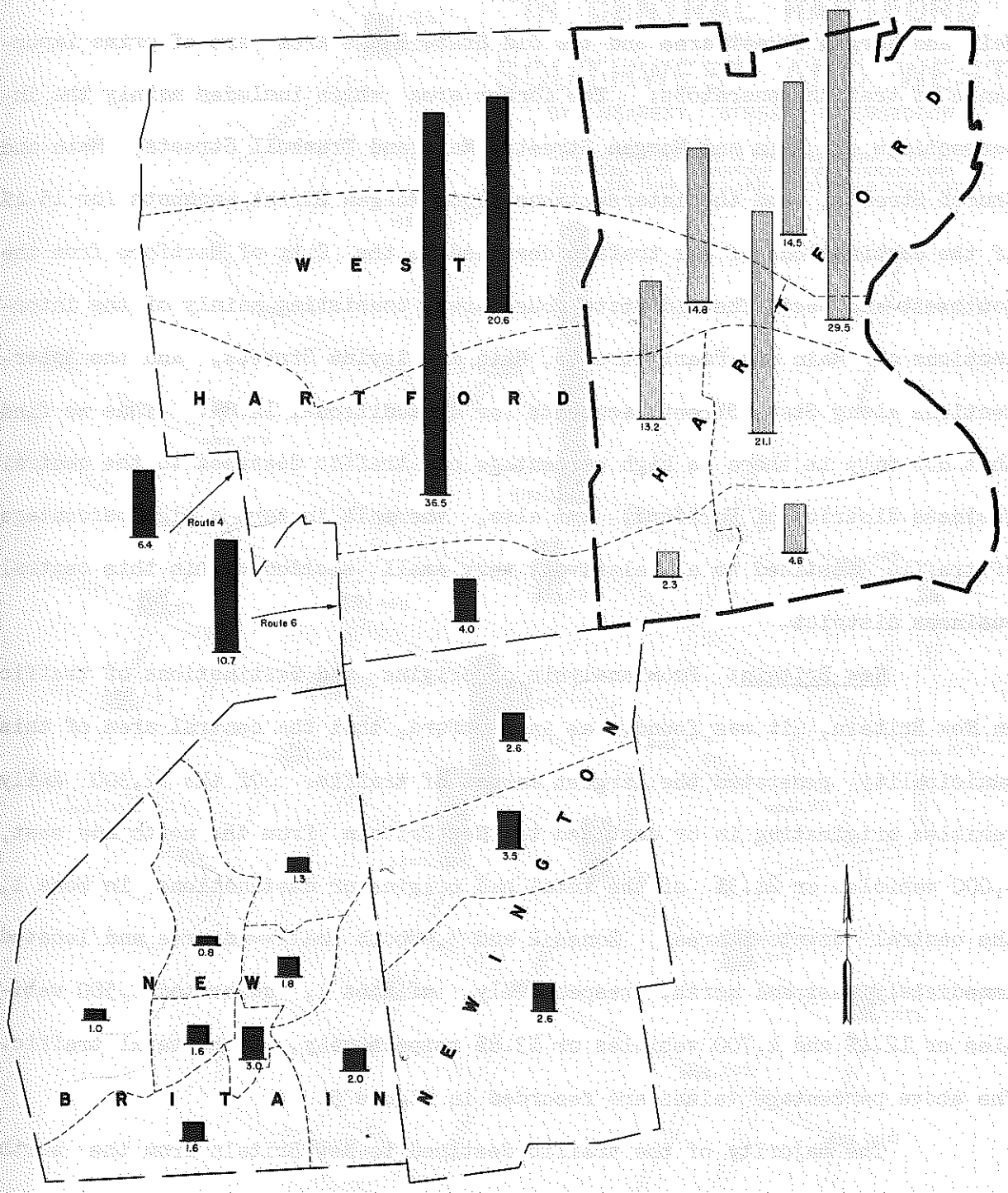

ORIGIN OF TRAFFIC
TO HARTFORD
FROM THE
SOUTHWEST AND WEST
BY ZONES AND ROUTES

Figures denote percent of traffic volume

FIGURE 3

destinations of traffic in central Hartford (zone 1 and adjacent portions of zone 2) from the southwest and west by the nearest street intersection. The Main and Morgan Street area and the Old State House area are of prime importance as traffic generators. The former area which includes mainly the intersections of Main and Morgan Streets, Main and Trumbull Streets, Main and Church Streets, and the intersections along Morgan Street accounts for 15.4% of the destinations of all traffic destined to the City of Hartford from the southwest and west. The Old State House area, consisting mainly of the intersections of Main and Pearl Streets, Main and Asylum Streets, and the intersections along State Street, accounts for an additional 14.8%. Thus we find that not only is there a high percentage of traffic destined to the central business district of Hartford, but also, there is in turn a high percentage of traffic destined to a relatively very small section within this central business district.

New Britain: From analysis of origins and destinations of traffic in New Britain, it was found, as in Hartford, that the central area of this municipality generated the largest amount of traffic. Of the 12,300 daily vehicles originating in or destined to New Britain from the north and east, 3,000 vehicles or 24.3% of the total had origins or destinations in zone 1, the central downtown area. Zones 2 and 3, both small in area and located immediately west and north, respectively, of zone 1, generated 1,500 vehicles or 12.4% and 1,700 vehicles or 13.8% respectively, of the total traffic. The above percentage values are recorded in Figure 5.

The majority of the traffic destined to New Britain from the north and east is seen from Figure 5 to originate in Hartford (55%) and particularly from or near the central business district. There was 15% of the total from zone 1 in Hartford, 9% from zone 2 and 14% from zone 7, or 38% of all

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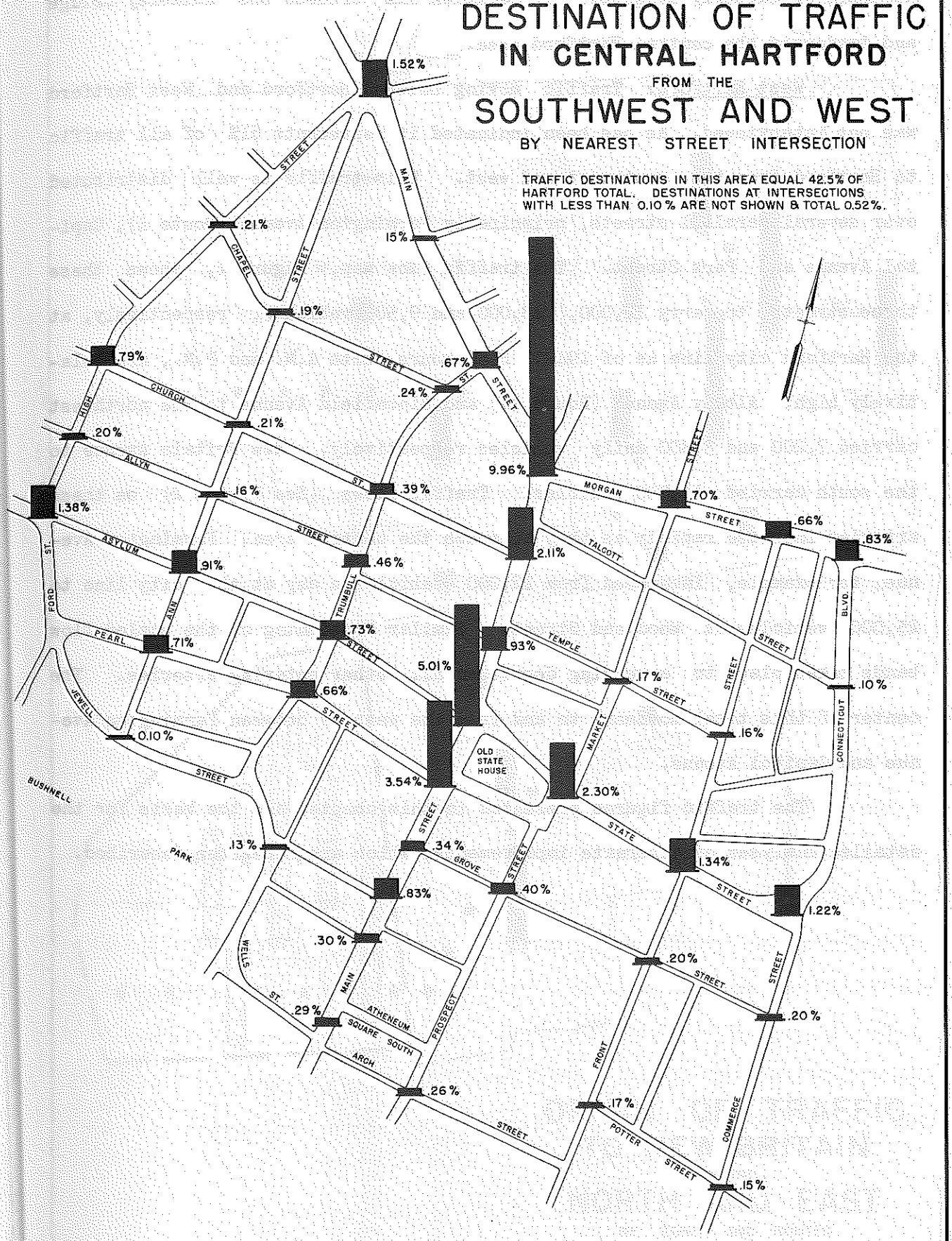

FIGURE 4

northern or easterly origins. In addition 11% crossed the Bulkeley Bridge and traversed the central Hartford area.

West Hartford: Traffic moving between Hartford and West Hartford was not interviewed. As has been indicated it represents 61% of all traffic to Hartford from the southwest and west. This traffic is well distributed over several parallel streets, principally Farmington Avenue (Route 4), Capitol Avenue and Park Street. The traffic flow map, Figure 2, shows these three streets to carry 12,000, 13,000 and 9,500 vehicles, respectively, at the Hartford city line as of 1940. Peak hours, both A.M. and P.M., are relatively high. Albany Avenue (Route 44) and Bloomfield Avenue to the northwest carried 7,200 and 3,800 daily vehicles respectively. New Britain Avenue to the south carried 11,700 vehicles. Traffic flows (See Figure 2) on these arteries increase rapidly as they approach the central area. Farmington Avenue, for example, increased from 12,000 vehicles a day at the city line to 25,000 vehicles at Woodland Street. Similar broadening of the scaled flow bands takes place to a varying degree on all other entering arteries. The center of this total movement to and from the west is between Farmington Avenue and Capitol Avenue.

The traffic figures presented in this chapter are the basis for the detailed analyses of alternate improvements, which are hereafter described.

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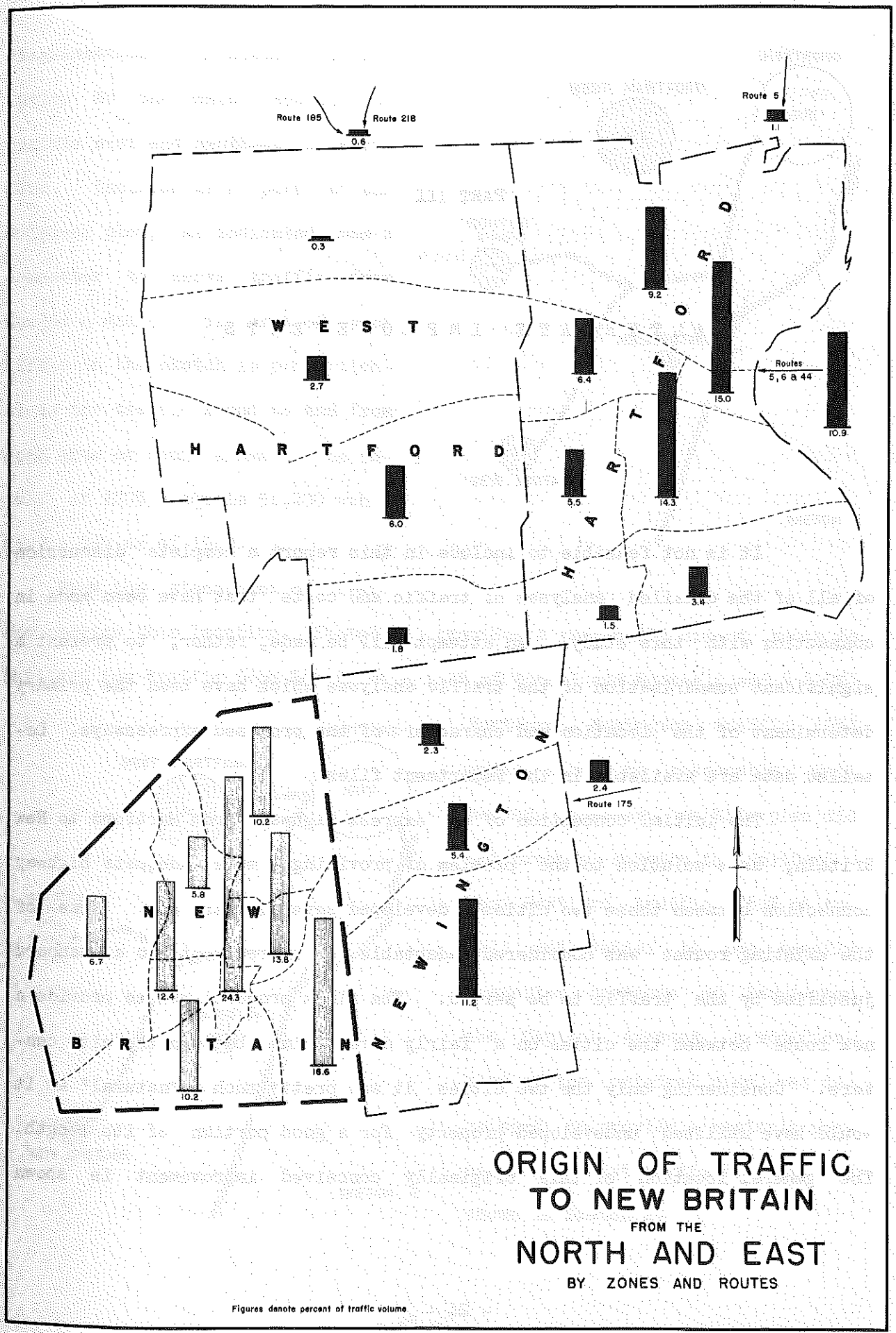


FIGURE 5

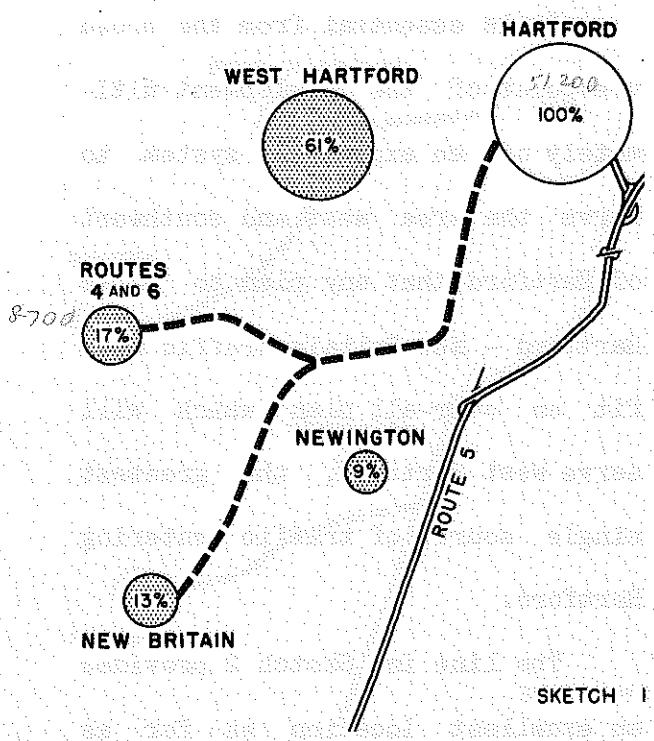
PART III

A L T E R N A T E I M P R O V E M E N T S

It is not feasible to include in this report a complete discussion of all of the detailed analyses of traffic and costs that have been made in connection with this study. An attempt will be made, rather, to present a significant summarization of the traffic analyses which have been the primary determinant of the location and character of the proposed expressways. Detailed data are available in the Department files.

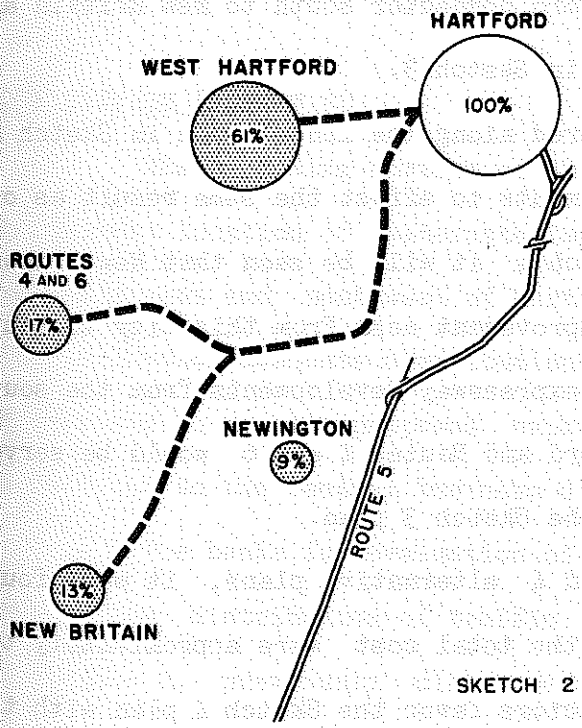
The initial conception of an express highway from Hartford to New Britain, as a solution to the problem of providing a more adequate highway connection between these two cities, developed several years ago. None of the existing routes was considered adaptable for improvement to a standard justified by the traffic to be served. The first proposal was to provide a new route between the cities on a fairly direct line between the city centers. Considering only the two cities it was pretty much a "natural" as it would have utilized undeveloped property for a good portion of its length. The general location of this originally conceived improvement is shown

diagrammatically in Sketch 1 in relation to the major sources of traffic west and southwest of Hartford. Included as a part of the original plan, as indicated, was a connector to serve traffic from Routes 4 and 6. The area of each circle in the sketch is proportional to the traffic bound to and from each area or route shown. The total, or 100%, equals 51,200 vehicles a day as of 1940.



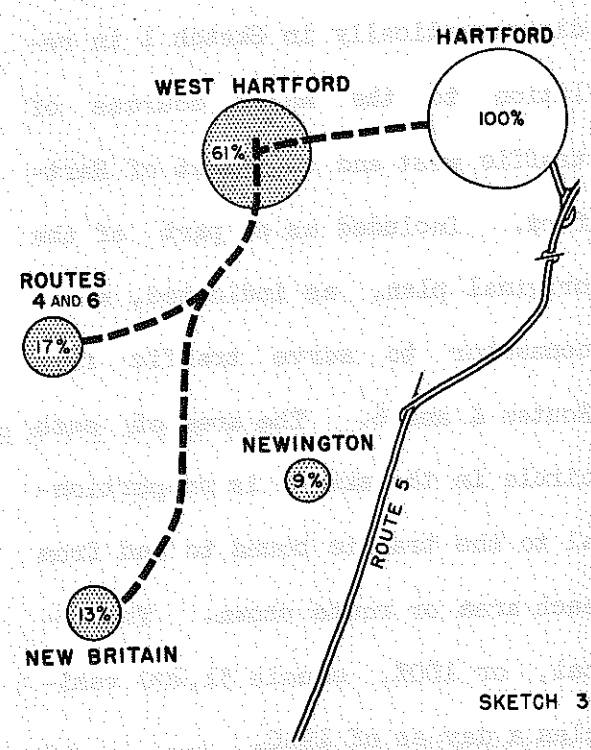
SKETCH 1

From the standpoint of traffic service this location (Sketch 1) provided a reasonably direct route to Hartford for traffic from New Britain (13% of total) and Routes 4 and 6 (17%). Hartford - Newington traffic (9%) would also be reasonably well served. However, as this plan did not provide service to Hartford - West Hartford traffic (61% of total) and relief to the heavily congested sections of Farmington and Capitol Avenues, a modification of the original plan was developed to provide a westerly connection to West Hartford. This is shown in Sketch 2.



SKETCH 2

It is essential from the broad viewpoint of the development ultimately of an expressway system to serve the area west and southwest of Hartford that any plan to serve Hartford - New Britain traffic must fit an over-all plan which will serve West Hartford, the greatest single source of traffic entering Hartford.

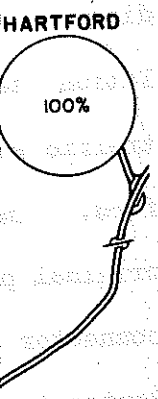


SKETCH 3

The line in Sketch 2 provides an excellent location as far as traffic service is concerned. However, in considering alternatives it was found that a large saving in cost could be effected by eliminating about three miles of construction through Hartford and continuing the West Hartford connector south to New Britain and to Routes 4 and 6. This plan is shown in Sketch 3.

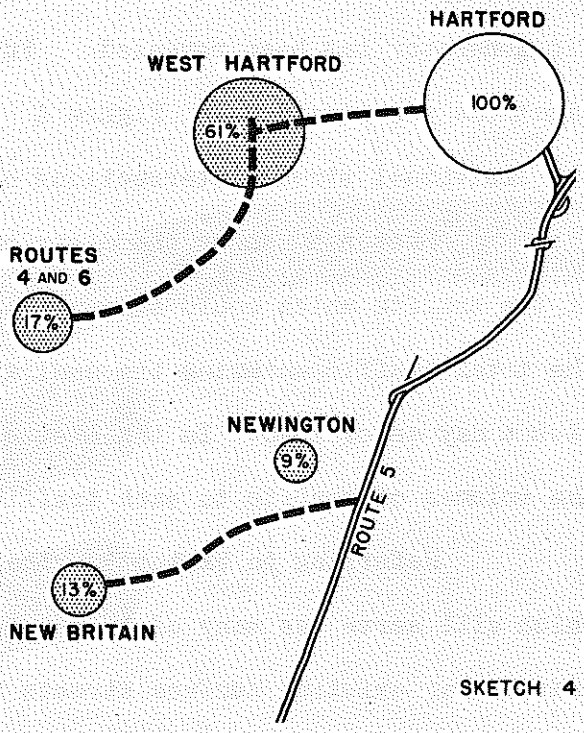
Another alternate was considered along the lines shown in Sketch 4. This plan provided two separate improvements to effect the same result as obtained in the Sketch 3 plan. In Sketch 4 it will be seen that New Britain traffic would be accommodated by an improvement east from this city to Route 5, utilizing the completed and planned expressway developments from the south for entrance to Hartford. West Hartford and Routes 4 and 6 would be served in the same manner as contemplated in the Sketch 3 plan.

In comparing the Sketch 3 and 4 alternative plans, it was found that the traffic service afforded and the total cost were approximately the same under both plans. However, two factors favor the Sketch 4 plan with the



SKETCH 3

separate improvement from New Britain east to Route 5. Under this plan the heavy traffic flow entering Hartford on the expressway from the west would be reduced. This is a very real advantage as distribution of the heavy flow from the west in the downtown area of Hartford presents a difficult problem. The other advantage of the separate improvement to Route 5 is that part of the plan can be completed to accommodate New Britain traffic without completing the entire facility. In other words, the Sketch 4 plan lends itself to development in stages whereas the Sketch 3 plan does not.



SKETCH 4

The general plan illustrated in Sketch 4 is recommended.

DISTRIBUTION FACILITIES

The preceding portion of this chapter is devoted to an analysis of the general location of alternate improvements to serve traffic to and from the areas west and southwest of Hartford. Traffic analyses have been made also to develop adequate distribution facilities for the traffic which could be expected to use the proposed expressways and which would originate in or be destined to the central business district of Hartford and beyond.

The basis for evaluation of alternative distribution plans in Hartford is the distribution of traffic origins and destinations in this area. In Figure 3, previously discussed under "Major Traffic Generators," the

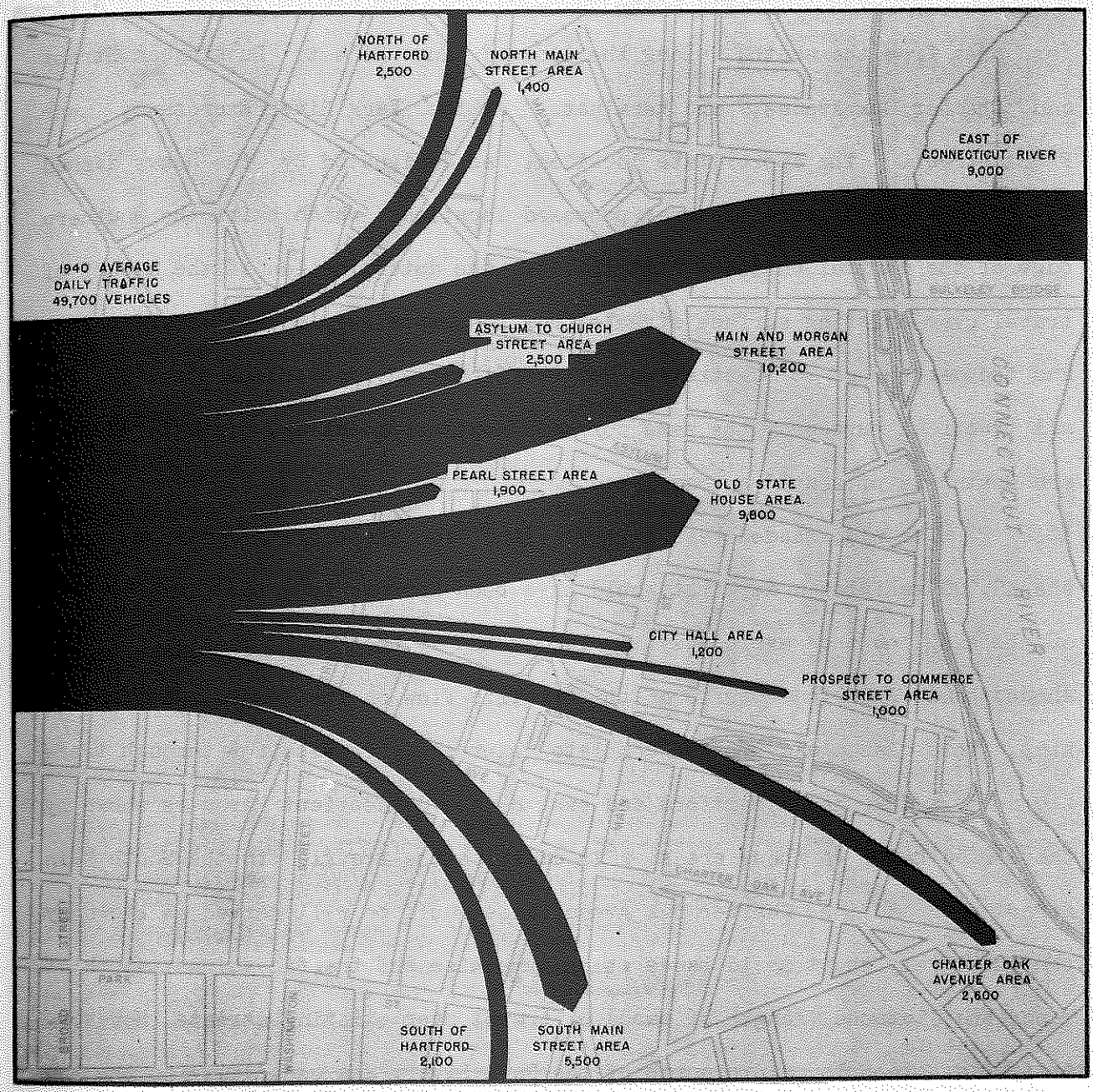
predominant position of the central business district of Hartford as a traffic generator has been revealed. Further detail of traffic origins and destinations was recorded in Figure 4 which showed the relative importance of the individual street intersections of the central area of Hartford.

Sketch 5 shows the distribution within and beyond central Hartford of the traffic which could be expected to use the proposed western expressway. The total traffic entering the central area on the expressway is 49,700 vehicles a day as of 1940. In the sketch the widths of bands are proportional to the volumes of traffic to each traffic area as indicated.

Referring to Sketch 5, the problem is to select a route or routes which will serve as many of these areas as practical with (1) a minimum of travel over existing surface streets from the expressway to each traffic area and (2) a minimum of concentration of traffic at any one access point. Property damage and construction costs are additional major factors to be considered in the selection of an adequate distribution system in the congested and highly developed central area of Hartford.

The study of distribution facilities was initiated with the idea that the expressway need only extend to the edge of the central business area, utilizing existing streets for distribution within the area. It was found, however, that great volumes of traffic would be discharged from the expressway on the existing streets -- many of which are already badly congested. The net effect of terminating the expressway at the edge of the central business area would be to make traffic conditions much worse in the very area of the city in which traffic relief is most urgently needed.

A graphical presentation which evaluates several general plans, in so far as traffic service is concerned, is given in the sketches which follow.

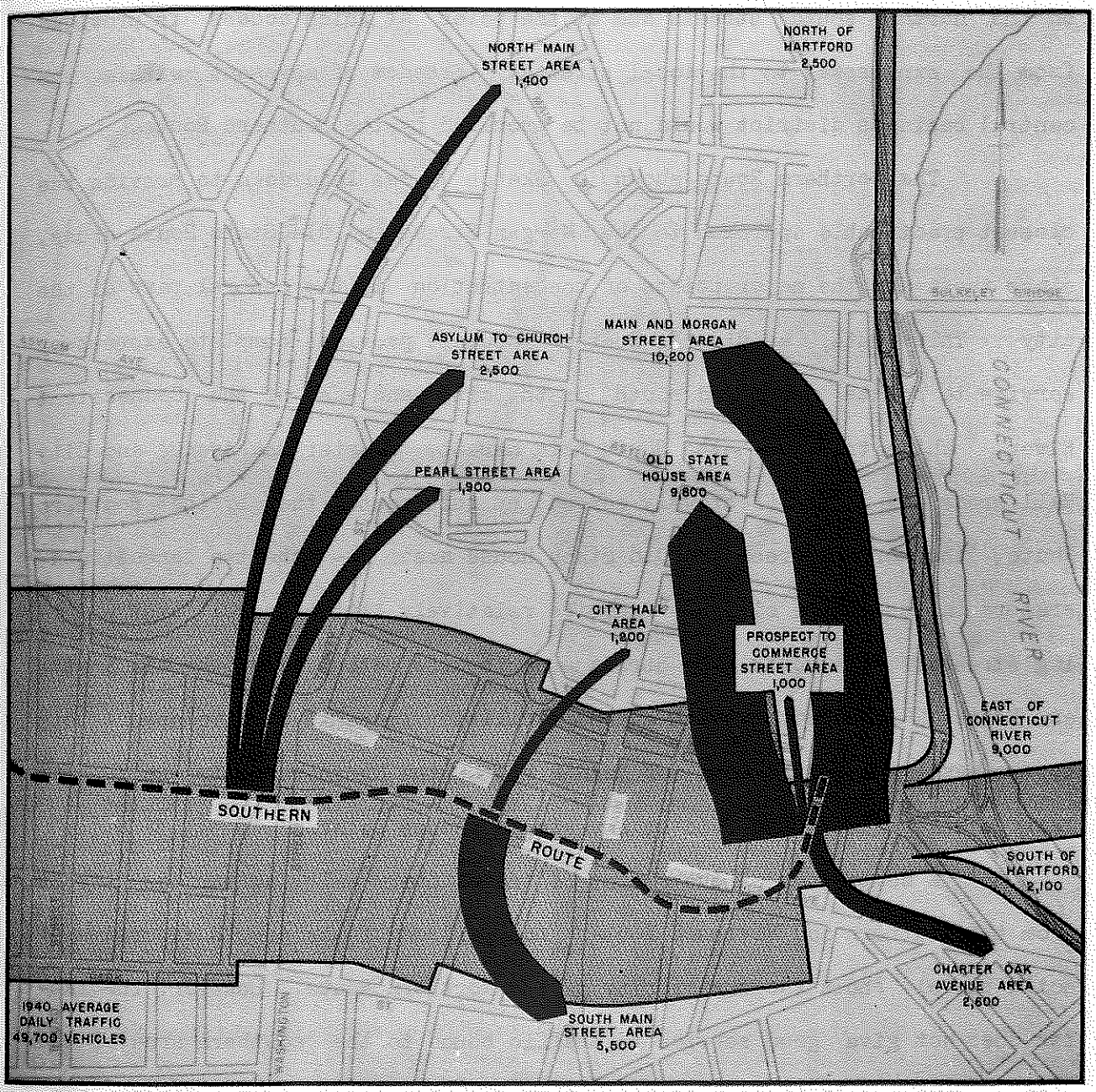


TRAFFIC FROM THE WEST SKETCH 5

This sketch shows by width of band the relative importance of the destinations of traffic within and beyond central Hartford. Of the 49,700 daily vehicles which could be expected on the western expressway, there are 10,200 daily vehicles, or 21% of the total, destined to the Main and Morgan Street area, 9,800 vehicles, or 20%, destined to the Old State House area and 9,000 vehicles, or 18%, destined to points east of the Connecticut River.

The Southern Route shown in Sketch 6 approaches the central Hartford area from the south, along the line of Russ Street, Buckingham Street and Charter Oak Avenue, and terminates at the Park River Expressway near Front Street. The approximate location, as designated by the heavy dashed line, is a composite of several proposed locations which skirt the southern edge of the central business district. As the determination of the amount of travel over existing surface streets from the expressway to each traffic area and the degree of concentration of traffic at any one access point is, for all practical purposes, the same for each southern location, a single "Southern Route" is presented and analyzed.

The wide shaded band at the left of the sketch represents, to scale, the 49,700 vehicles a day that would have been approaching the central area of the city on the expressway in 1940, had it then been completed. The shaded bands show the course of this traffic flow on the expressway facilities. This plan would provide complete expressway service for through traffic north and south of Hartford and east of the Connecticut River as shown by the shaded bands to these areas. In addition the traffic to the South Main Street area and the Charter Oak Avenue area would be well served as shown by the relatively short solid bands which symbolize the traffic volume (width of band) and distance (length of band) of travel over existing streets. However, traffic destined to points north of the Park River, and especially to the two major traffic generators, namely the Main and Morgan Street area and the Old State House area, would still have to travel considerable distances over existing streets as shown by the long lengths of the solid bands to these areas. In effect, the traffic to these two important areas would largely be removed from the east - west streets in the central area and added to the north - south streets. Traffic to these areas would cause serious congestion both



DISTRIBUTION FROM SOUTHERN ROUTE SKETCH 6

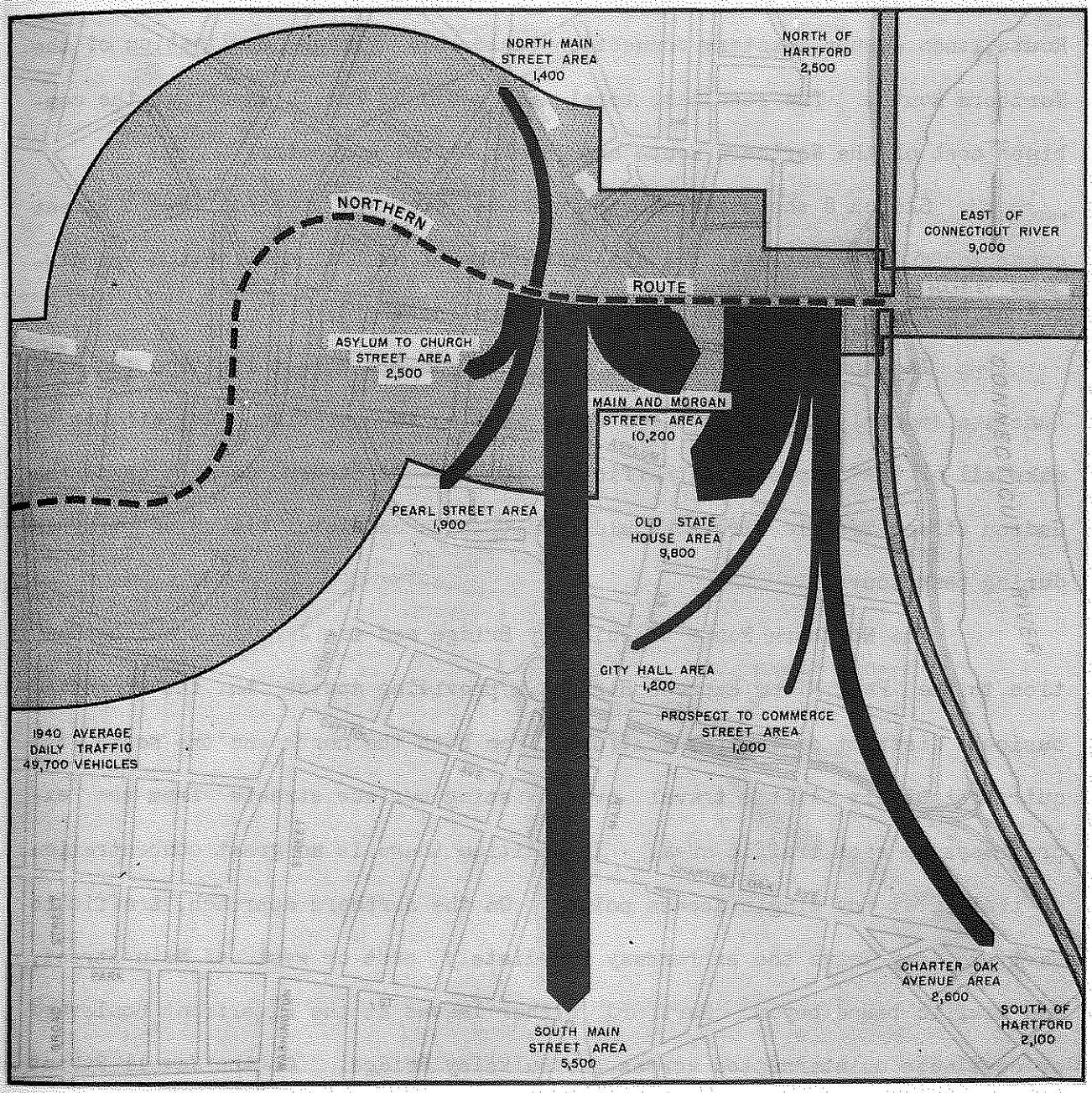
This sketch illustrates the ineffectiveness of a route which would skirt the southern edge of the central business district. Traffic destined to the Main and Morgan Street area and to the Old State House area -- the two major generators of traffic (note wide width of solid bands) -- would still have to travel considerable distances over existing surface streets (note long length of solid bands). The "Southern Route" would provide expressway service to the edge of the central business district but would not relieve congestion within the business district. Traffic would be largely removed from the east - west streets in the central area and added to the north - south streets.

on the north - south streets and at the point at which access is provided from the expressway to the local streets. Freedom of movement within the central business district would not be provided by the Southern Route.

The Northern Route shown in Sketch 7 was laid down to provide the closest practicable approach to the Morgan Street and Old State House areas, since these are the major points of concentration in the central part of the city. This route, as did the Southern Route, provides complete expressway service to points north and south of the city and east of the Connecticut River. While traffic to the South Main Street, Charter Oak Avenue and City Hall areas is less effectively served by this route than by the Southern Route, the Morgan Street and Old State House areas -- the two largest generators in the entire city -- require relatively little travel over existing streets. The North Main Street area is also better served by the Northern Route. In addition, with access facilities feasible of development both to the east and to the west of Main Street, the Northern Route would have less concentration of traffic at any single access point.

A comparison of the amount of travel over existing surface streets from the Southern and Northern Routes (comparison of the length and width of solid bands) shows the superiority of the Northern Route. However, the latter does not give good service to traffic bound to the southern area of the city. Fortunately it is possible, through a relatively inexpensive/1 supplementary connector from the Northern Route to Jewell Street, to provide closer connections to these more distant southern areas. On the other hand, while it is recognized that a supplementary connection to the Southern Route would provide service to the northern areas not adequately served by this

1/ See cost estimate, Page 62.



DISTRIBUTION FROM NORTHERN ROUTE SKETCH 7

This sketch shows the effect of the proposed "Northern Route" which was developed to provide the closest practicable approach to the major concentrations of traffic in central Hartford. This location requires relatively little travel over existing surface streets to central and northern destinations (note short length of solid bands to these areas). Southern destinations, especially the South Main Street area and the Charter Oak Avenue area, are not well served (note long length of solid bands to these areas).

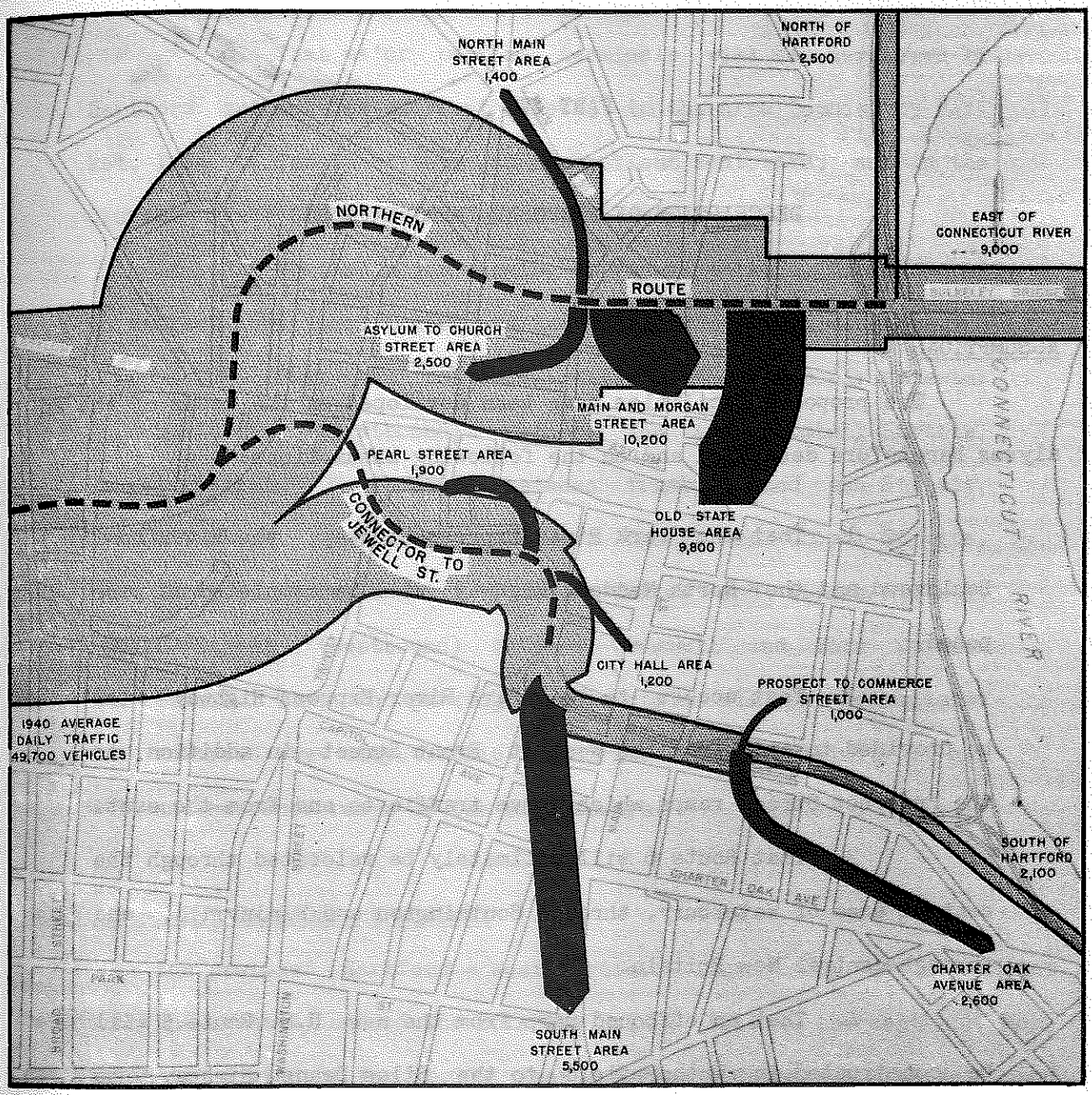
Route, such a supplementary connection would be a virtual duplication of the Northern Route. The resultant total cost would be far in excess of the combined cost of the Northern Route and Jewell Street connector.

Sketch 8 shows the Northern Route with the proposed Jewell Street connector and demonstrates the effectiveness of such a combination in distributing the traffic to all areas in central Hartford.

It should be pointed out that this Jewell Street location can only function smoothly if the Northern Route is also in operation. Any attempt to make all of the expressway traffic use the Jewell Street connection to the Hudson Street Traffic Circle would result in a complete tie-up of traffic during peak hours.

The Northern Route to Bulkeley Bridge and the Jewell Street connection to the Park River Express Highway, providing access to the congested business district of central Hartford from both the north and the south, require relatively little travel over existing surface streets from the expressways to each traffic area. In addition there is no great concentration of traffic at any single access point. On the northern approach, traffic to Hartford may leave the expressway immediately east or west of Main Street, and traffic bound beyond Hartford either leaves at the Riverfront Boulevard or continues uninterrupted across the Bulkeley Bridge. On the Jewell Street connection, traffic to Hartford may leave at Trumbull Street, the Hudson Street Traffic Circle and the Front Street interchange, and in the case of traffic bound beyond Hartford may continue uninterrupted along the Park River Express Highway to the Riverfront Boulevard.

These twin connections, therefore, are recommended as the basic pattern for a distribution system for traffic to central Hartford.



DISTRIBUTION FROM NORTHERN ROUTE AND CONNECTOR SKETCH 8

This sketch shows the effectiveness of the proposed "Northern Route" and the connector to Jewell Street in the distribution of traffic from the west into and beyond the central area of Hartford. Travel over existing surface streets from the "Northern Route" to the central and northern traffic areas is small (note short length of solid bands). Travel from the Jewell Street connector to the southern areas of Hartford is also well served. This plan reduces the concentration of traffic at any one access point to a minimum, and to volumes which can be accommodated on the adjacent streets.

PART IV

DESCRIPTION OF PROPOSED IMPROVEMENTS

ASSUMPTIONS

The proposed facilities have been developed on the basis of the analyses heretofore described and on the following assumptions:

1. That the Park River Express Highway, the Riverfront Boulevard and the North Meadows Highway will be completed as proposed.

2. That access to the Park River Express Highway will be provided to and from the west at Front Street in addition to the Prospect Street ramps which serve traffic to and from the east.

3. That Route 6 will ultimately be relocated through the central area of Waterbury, through Southington and Plainville, and through central New Britain.

4. That an offbound ramp from the new U.S. Route 5 will be constructed in Wethersfield to the Silas Deane Highway, to Wolcott Hill Road or to Hartford Avenue to serve traffic to southern Hartford and Wethersfield from the southwest.

5. That access will be provided to and from the new U.S. Route 5 in the vicinity of Wawarme Avenue, or, a service road will be provided parallel to U.S. Route 5 from the Maxim Road interchange to Wawarme Avenue, to serve traffic from the south to the Colt manufacturing company area.

6. That major parking terminals will be developed by Hartford authorities on Front Street, in the area bounded by Market, Talcott, Temple Streets and Connecticut Boulevard, and in the Church - Ann - Chapel - Trumbull Street area.

7. That no major parking improvement will be developed to attract additional traffic to the Hudson and Elm Street area.

8. That the following will be made one way streets: Church Street (Eastbound) between Ann and Trumbull Streets, Chapel Street (Westbound) between Trumbull and Ann Streets, Trumbull Street (Northbound) between Church and Chapel Streets, Ann Street (Southbound) between Chapel and Church Streets, Jewell Street (Westbound) between Trumbull and Ford Street.

9. That "no parking" restrictions will be established and enforced by city traffic authorities in the vicinity of all exit and entrance ramps of the expressways.

HARTFORD - WEST HARTFORD EXPRESSWAY

The proposed Hartford - West Hartford improvement of 9.3 miles begins at the westerly end of the Bulkeley Bridge, follows the center of Morgan Street on a viaduct for 1,000 feet and then underpasses the Main and Morgan Street intersection. After underpassing Trumbull Street, this improvement overpasses Ann Street and High Street, swings southwest around the Post Office and west of the railroad station, overpasses Asylum Street and continues south to the railroad right-of-way. At this location it is joined by the Jewell Street connector, an express highway along the northern edge of Bushnell Park from Trumbull and Jewell Streets. It underpasses Trinity Street at the Y.M.C.A. and the railroad immediately south of Asylum Street. Traffic

from the Charter Oak Bridge and the Riverfront Boulevard would use the Park River Express Highway, the Hudson Street traffic circle, and this Jewell Street connector to the West Hartford expressway.

From the junction at the northerly edge of the railroad right-of-way east of Broad Street, the westerly improvement follows the line and grade of the railroad to Laurel Street. Continuing due west, the improvement overpasses Sisson Avenue and South Whitney Street in the blocks bounded by West Boulevard and Warrenton Avenue. Leaving the City of Hartford on an overpass at Prospect Street, the improvement continues due west approximately in the middle of the block between Farmington Avenue and Boulevard, overpassing Arnoldale Road, and underpassing South Quaker Lane and Outlook Road. The improvement to central West Hartford terminates immediately east of Trout Brook where an interchange is proposed to collect traffic from Farmington Avenue and the Boulevard.

From the Trout Brook interchange the main line swings south and then southwest under South Main Street and over Ridgewood Road to Corbin Corner. Two additional lanes are proposed for one mile along U.S. Route 6 west of Corbin Corner, at the end of which a one mile connector to the west is proposed to Route 4. The general location of this proposed western expressway is shown on a map as Figure 6.

Exit and entrance roadways have been located at points which will best serve the interchange of traffic between the expressway and the local streets. Where required, complete interchange to and from all directions will be provided. Locations at which access roadways are proposed are the west end of the Bulkeley Bridge, Morgan Street immediately east of Main Street, the Church - Ann - Chapel - Trumbull Street block, Spring and Broad Streets, Sigourney Street, Sisson Avenue, Prospect Avenue, South Quaker Lane

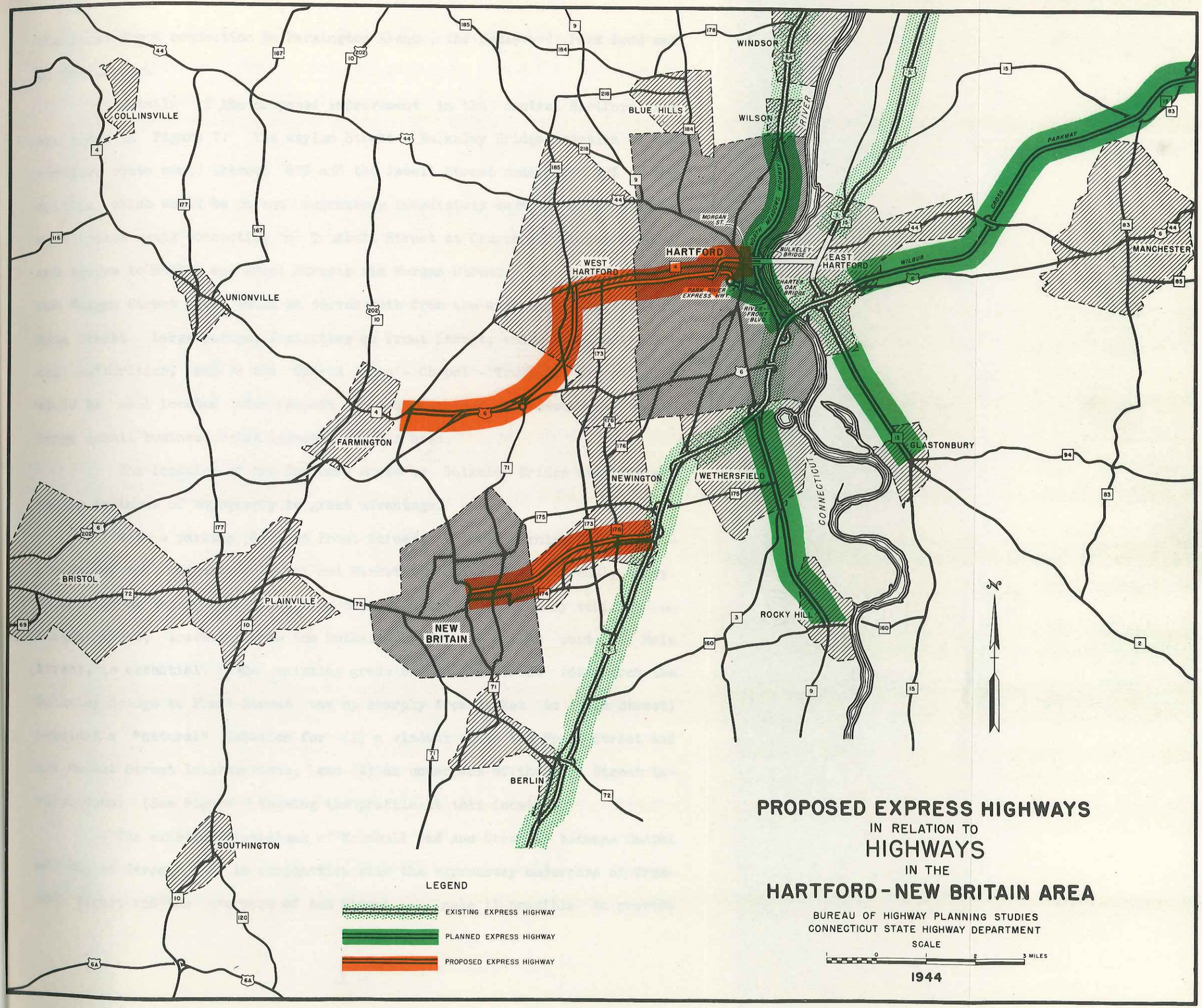

WINDSOR
BLUE HILLS
WILSON
COLLINSVILLE
HARTFORD
WEST HARTFORD
EAST HARTFORD
MANCHESTER
UNIONVILLE
FARMINGTON
NEWINGTON
WETHERSFIELD
GLASTONBURY
BRISTOL
PLAINVILLE
NEW BRITAIN
ROCKY HILL
BERLIN
SOUTHINGTON
CONNECTICUT RIVER
PARKWAY
WILBUR CROSS
PARK RIVER EXPRESS HWY
BULKELEY BRIDGE
CHARTER OAK BRIDGE
RIVER FRONT BLVD
MORGAN ST.
LEGEND
EXISTING EXPRESS HIGHWAY
PLANNED EXPRESS HIGHWAY
PROPOSED EXPRESS HIGHWAY
PROPOSED EXPRESS HIGHWAYS
IN RELATION TO
HIGHWAYS
IN THE
HARTFORD - NEW BRITAIN AREA
BUREAU OF HIGHWAY PLANNING STUDIES
CONNECTICUT STATE HIGHWAY DEPARTMENT
SCALE
0 1 2 3 MILES
1944

FIGURE 6

the Trout Brook connection to Farmington Avenue, the Boulevard, Park Road and Corbin Corner.

Details of the proposed improvement in the central Hartford area are shown in Figure 7. The Asylum Street - Bulkeley Bridge section of the northern route would attract 67% and the Jewell Street connector 33% of the traffic which would be on the expressway immediately east of Broad Street. With access ramps connecting to Trumbull Street at Church and Chapel Streets and access to Market and Front Streets via Morgan Street, the important Main and Morgan Street area would be served both from the west and east sides of Main Street. Large parking facilities on Front Street, where proposed by local authorities, and in the Church - Ann - Chapel - Trumbull Street area would be well located with respect to the proposed expressway and to the large retail business establishments in this area.

The location of the Northern Route to Bulkeley Bridge utilizes existing features of topography to great advantage.

With a parking plaza at Front Street, traffic turning left on Morgan Street into and out of Front and Market Streets will be extremely heavy. Separation of these left turns from the estimated 20,400 daily vehicles on Morgan Street, traveling from the Bulkeley Bridge to points west of Main Street, is essential. The existing grade on Morgan Street (down from the Bulkeley Bridge to Front Street and up sharply from Market to Main Street) provides a "natural" location for (1) a viaduct above the Front Street and the Market Street intersections, and (2) an underpass of the Main Street intersection. (See Figure 7 showing the profile at this location)

The existing elevations of Trumbull and Ann Streets between Chapel and Church Streets -- in conjunction with the expressway underpass of Trumbull Street and the overpass of Ann Street -- make it possible to provide

access ramps with easy grades from both the east and the west in the same block. One of the most perplexing problems in central Hartford has been to provide effective access with easy grades to the local streets in the existing short blocks.

The Northern Route obviously would provide a direct route for the vehicles from the west to the Bulkeley Bridge. In addition, with access ramps to Ann Street in the Church - Ann - Chapel - Trumbull Street block, traffic from Bulkeley Bridge to central Hartford would also utilize part of the westerly improvement without traversing the existing congested surface streets.

The Old State House area, the core of the central business district with its multistory office buildings, cannot be served directly except at prohibitive cost. Moreover, there appears to be little chance of development of any important parking areas within this intensely developed area. As a result, service to the Old State House area will be provided from the Northern Route as previously described, through Market Street and Trumbull Street.

The Jewell Street connection to the Park River Express Highway will serve the larger portion of the vehicles destined to southern Hartford from the west as well as those vehicles destined to points east of the Connecticut River which would use the Charter Oak Bridge. The Jewell Street connection as proposed is in part an existing surface street. While it should provide great relief to normal congestion as was experienced in pre-war times, future traffic requirements, and especially a "free" Charter Oak Bridge, may require a more direct and higher standard connection to the Park River Express Highway and to the Charter Oak Bridge than the surface connection as proposed (See Figure 7). This would be possible of development if needed.

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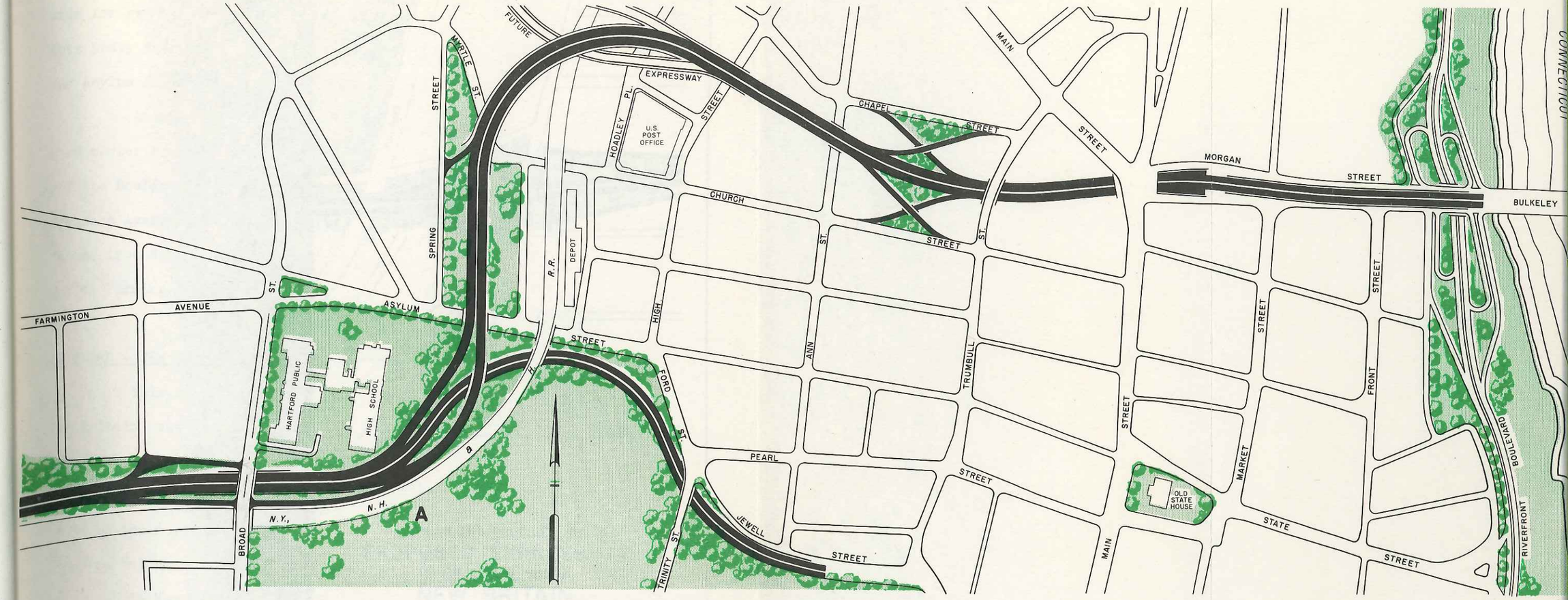
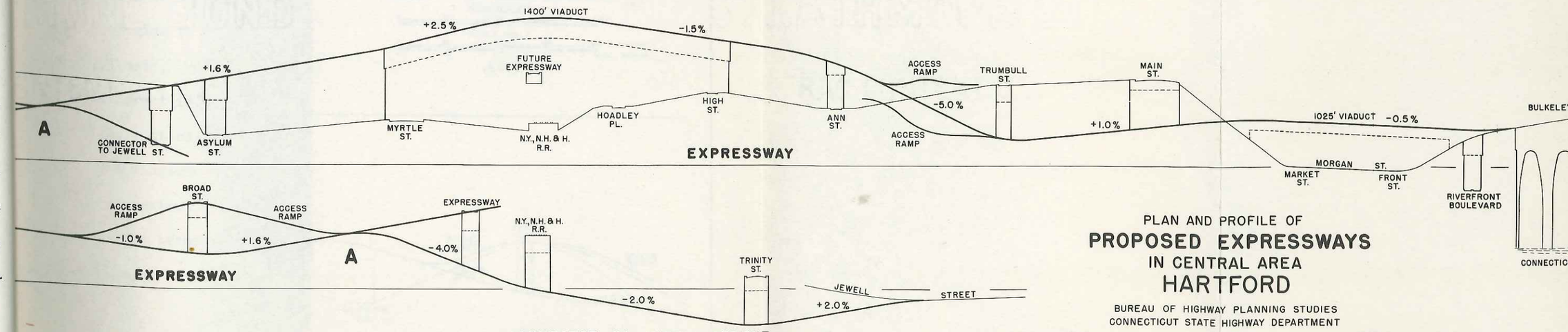
Broad Street area pro-





PLAN AND PROFILE OF

PROPOSED EXPRESSWAYS

IN CENTRAL AREA

HARTFORD

BUREAU OF HIGHWAY PLANNING STUDIES
CONNECTICUT STATE HIGHWAY DEPARTMENT

SCALES
PLAN 0 200 400 600 800 FT.
PROFILE 0 200 400 600 800 FT. HORIZONTAL; 0 20 40 60 80 FT. VERTICAL

1944

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vide for exiting westbound traffic on a ramp on Spring Street, in order that this heavy flow will be discharged on the right (north) side of Farmington and Asylum Avenues.

Access to the expressway for Hartford-bound traffic from West Hartford center is proposed immediately east of Trout Brook on Farmington Avenue and the Boulevard. Additional access is proposed at South Quaker Lane and Prospect Avenue for Hartford-bound traffic. For West Hartford traffic bound to and from New Britain and Routes 4 and 6, access is proposed at Park Road and at Farmington Avenue.

HARTFORD - NEW BRITAIN EXPRESSWAY

This proposed improvement commences at Clark and Winter Streets in New Britain and extends easterly for 4.2 miles through Newington to a junction with U.S. Route 5 near East Robbins Road. From the easterly terminus of the project at U.S. 5, traffic will use the recently improved portion of this route to the north and then continue over the Riverfront Boulevard to Hartford and beyond.

In New Britain, as in Hartford, traffic destinations require access facilities near the central downtown area. (See Figure 5 showing concentration of origins by zones in New Britain). Access is proposed at Clark and Winter Streets, which is one block east of Main Street, at Stanley Street and East Street in New Britain and at Willard Street (entering from and exiting to the east only) and Main Street (entering from and exiting to the west only) in Newington. Figure 8 shows the plan and profile of proposed expressway in the central area of New Britain.

The terminus of the improvement in New Britain is adaptable to future extension of the expressway to the west to connect with a proposed New

Britain - Plainville highway, which in turn will connect with and become part of the proposed relocation of U.S. Route 6 from Waterbury through Southington and Plainville. When the Hartford - New Britain expressway is continued to the west, there will be additional access points to serve New Britain traffic west of Main Street.

HARTFORD - NORTHWEST

The volume of traffic on routes leading from Hartford to Bloomfield and other towns northwest of Hartford, as shown on the traffic flow map, Figure 2, should be adequately served for some time to come by the existing facilities. Provision, however, has been made for the possible development of a future expressway (Figure 7) to this general northwest area to the extent that a separation of grades will be possible at a point on the Northern Road near the Hartford Post Office. Since traffic entering the city from Albany Avenue (Route 44) and Bloomfield Avenue (Route 9) has no other bearing in the planning now for the westerly improvement, it has been omitted in the following traffic considerations.

The locations as given for both western expressways in large areas represent general rather than specific locations. Field surveys are required to determine precise locations. It should be noted that only a change in the number of access points or a major change in the location of any of the proposed access points will affect materially the traffic service and benefits as developed in this study.

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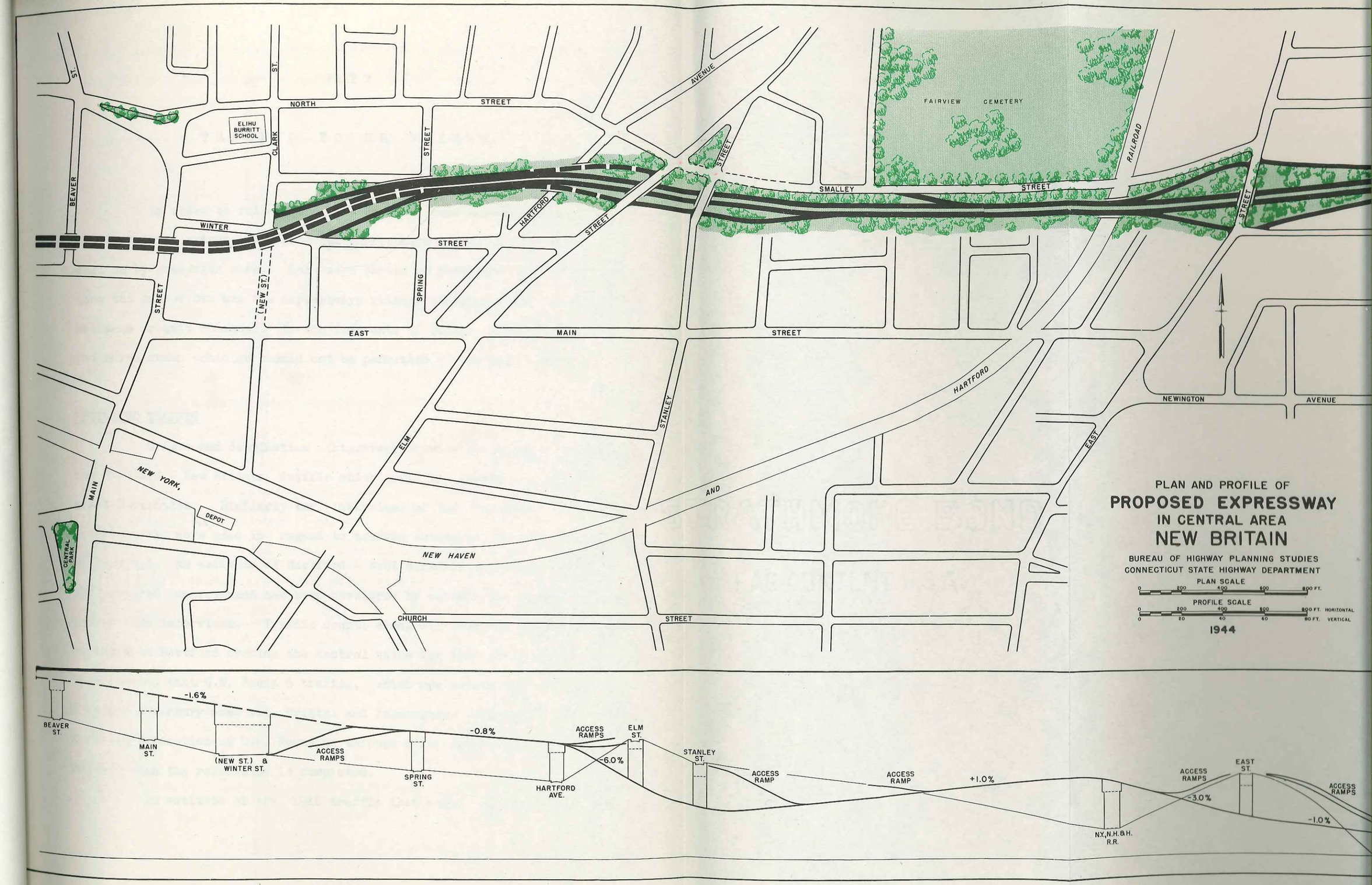

FIGUR

PART V

T R A F F I C T O B E S E R V E D

In order to relieve the traffic flow over existing surface streets to the fullest extent, the proposed expressways should be used by trucks as well as by passenger cars. Bus usage should be permitted only to the extent that the busses can use the expressways without stopping either on them or on entrance or exit roadways. In the interests of safety, pedestrians, bicycles and horse-drawn vehicles should not be permitted on the expressways.

ESTIMATED TRAFFIC

Origin and destination interviews provide the basis for estimating the Hartford - New Britain traffic which could be expected to use the proposed facilities. Similarly the interviews of the Coverdale and Colpitts bridge survey were used in regard to traffic estimates to and from the east of Hartford. An estimate of Hartford - West Hartford traffic expected to use the proposed improvement has been developed by correlation with the data obtained from interviews. Traffic counts along all arteries leading from West Hartford to Hartford provide the control value for this correlation. It has been assumed that U.S. Route 6 traffic, which now enters the Hartford area from the Waterbury area via Bristol and Farmington, will be diverted to the proposed relocation of U.S. Route 6 through Southington, Plainville and New Britain when the relocation is completed.

An estimate of the 1940 traffic that would be diverted to one or

more sections of the proposed improvement, based on the assumptions previously stated, is shown graphically by sections on the traffic profiles, Figure 9. Traffic on the westerly portion of the West Hartford expressway, i.e. from Route 4 to the Boulevard in West Hartford, is relatively light (8,300 maximum) as shown on the upper profile. From the Boulevard toward Hartford, however, the traffic which would use the expressway builds up rapidly until 42,000 daily vehicles is reached at Broad Street. At this point traffic divides -- 14,000 daily vehicles turning off at the Jewell Street connector and 28,000 daily vehicles continuing on the Northern Route toward the Bulkeley Bridge. The Jewell Street connector and the Park River Highway profile completes the loop around the southern portion of the Hartford central business district to the Riverfront Boulevard. The bottom profile covers the Hartford - New Britain improvement including traffic over the existing facilities south of Hartford which would be used by Hartford-bound traffic from New Britain. A traffic profile of the Riverfront Boulevard and North Meadows Highway shown at the right edge completes Figure 9.

In addition to presenting traffic values for individual sections of the expressway, this figure shows at a glance their relative importance. For example, traffic on the West Hartford Expressway between Trumbull and Market Streets is over twice the traffic on the Park River Express Highway at the Riverfront Boulevard, and over three times the amount on the North Meadows Highway.

The estimated traffic as of 1940 which could be expected to use each access point is likewise shown in Figure 9. Locations at which interchange traffic is proposed to and from one direction only are shown by a single step up or down in the traffic profile. Locations at which interchange traffic is proposed to and from both directions is shown by a

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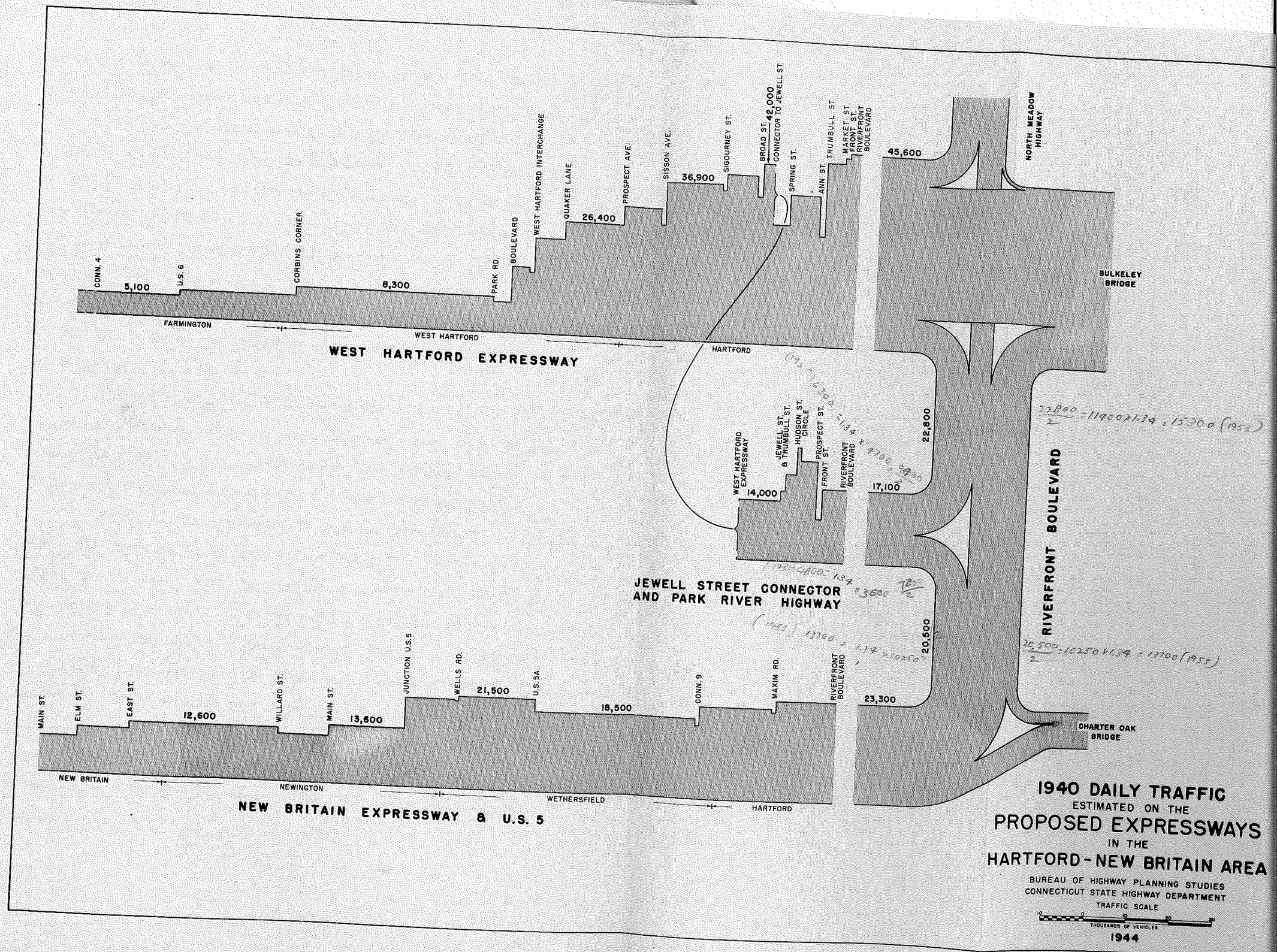


WEST HARTFORD EXPRESSWAY

JEWELL STREET CONNECTOR AND PARK RIVER HIGHWAY

NEW BRITAIN EXPRESSWAY & U.S. 5

1940 DAILY TRAFFIC
ESTIMATED ON THE
PROPOSED EXPRESSWAYS
IN THE
HARTFORD - NEW BRITAIN AREA

BUREAU OF HIGHWAY PLANNING STUDIES
CONNECTICUT STATE HIGHWAY DEPARTMENT

TRAFFIC SCALE
THOUSANDS OF VEHICLES

1944

double step in the profile, with the minimum traffic value representing the amount of traffic passing through the location on the expressway. At locations in and near the central area of Hartford where relatively large volumes of traffic will enter and leave the expressway, it will be necessary either to eliminate existing bottlenecks by widening, as in the case of Broad Street, or to provide added lane capacity by "one way" routings and "no parking" restrictions, as around the Church - Ann - Chapel - Trumbull Street interchange block. The necessity to provide for one-way street operation and to establish and enforce "no parking" restrictions in the vicinity of exit and entrance ramps of the expressway was covered in the assumptions listed at the beginning of Part IV.

Careful analyses of traffic movements on access roads and at street intersections adjacent to access points have been made. The ability of the planned improvement to handle peak traffic flows has been established. Flow diagrams for all critical locations are in the Department files.

Normal traffic growth on the proposed improvements should approximate a 50% increase for the period from 1940-1955. Such an increase is for NORMAL growth only. With the creation of superior approach facilities and the provision of adequate off-street parking terminals, as currently proposed and previously included under "Assumptions," there will be "induced" traffic in addition to that estimated for 1940. No estimates of induced traffic have been made. It is believed that provision for all contingencies will have been made if the expressways and the distribution facilities are adequate, or provide flexibility in design, to accommodate a 100% increase over the estimated 1940 traffic flows as shown. Such provision in the design is recommended.

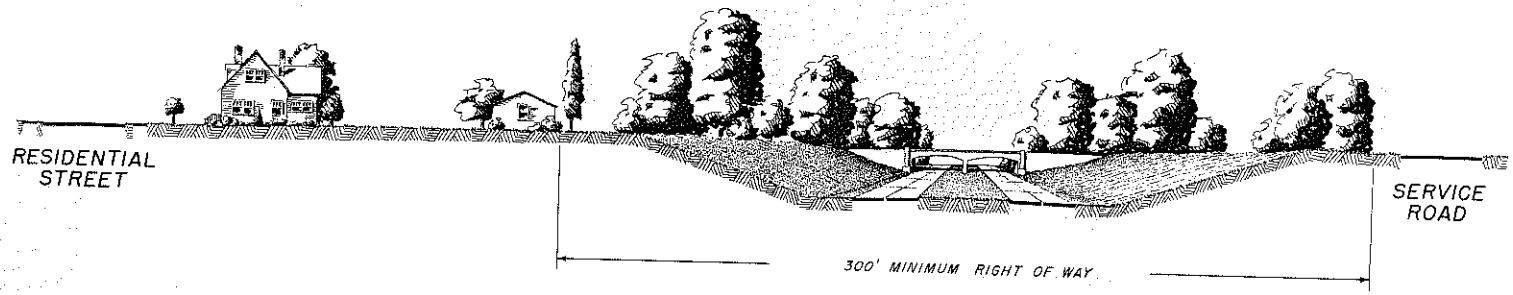
PART VI

CHARACTER OF LOCATION AND DESIGN

The general character of expressways, such as are proposed by this report, was indicated in the introduction. Special emphasis was placed on the control of access, and the need for such control. It is contemplated that the purchase of property for the proposed expressways will include the purchase of the right of access from abutting property.

A vast amount of study has been given by highway authorities to the standards of location and design required for efficient and safe movement of large volumes of traffic. For a complete and detailed coverage of this subject, reference is directed to the report INTERREGIONAL HIGHWAYS, which was transmitted to Congress by the President on January 12, 1944. The expressways proposed for development in the Hartford Metropolitan Area should have standards of location and design consistent with the recommendations in the Interregional Highways report. Certain of the more important features of location and design of the Hartford area expressways will be described.

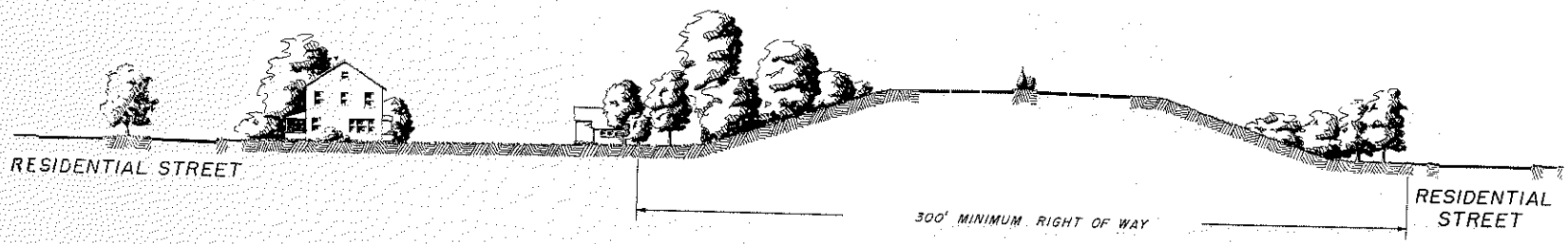
In order to provide a properly landscaped limited access highway, minimum right-of-way widths of 300 feet in rural and residential areas and 120 feet in business areas are recommended. The acquisition of such widths will make it possible to provide a pleasing parkway atmosphere along the greater portion of the proposed improvement. There is no need for elaborate landscape treatment, but adequate land for construction of gentle slopes and for planting is needed. For example, the proposed parkway treatment of a



PROPOSED TREATMENT

DEPRESSED SECTION OF EXPRESSWAY

RESIDENTIAL AREA - WEST HARTFORD

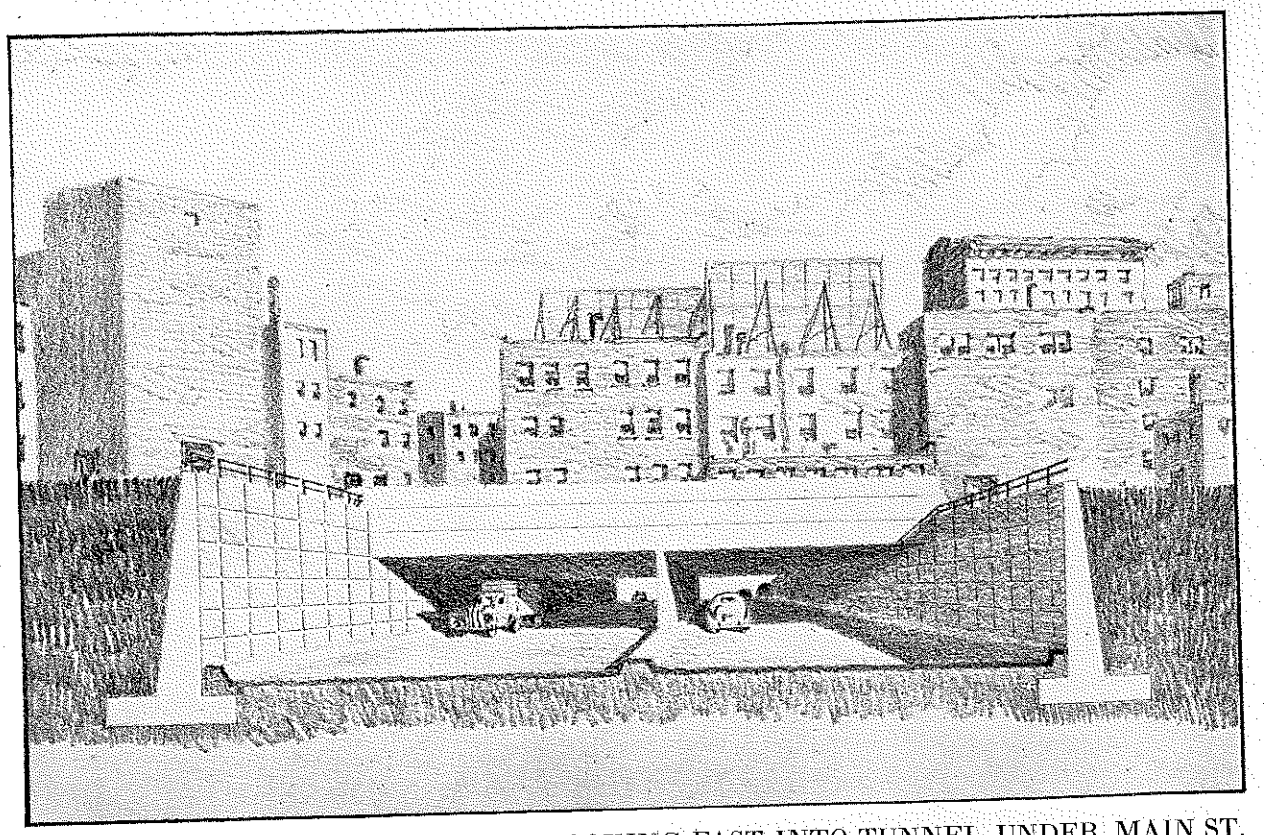


PROPOSED TREATMENT

FILLED SECTION OF EXPRESSWAY

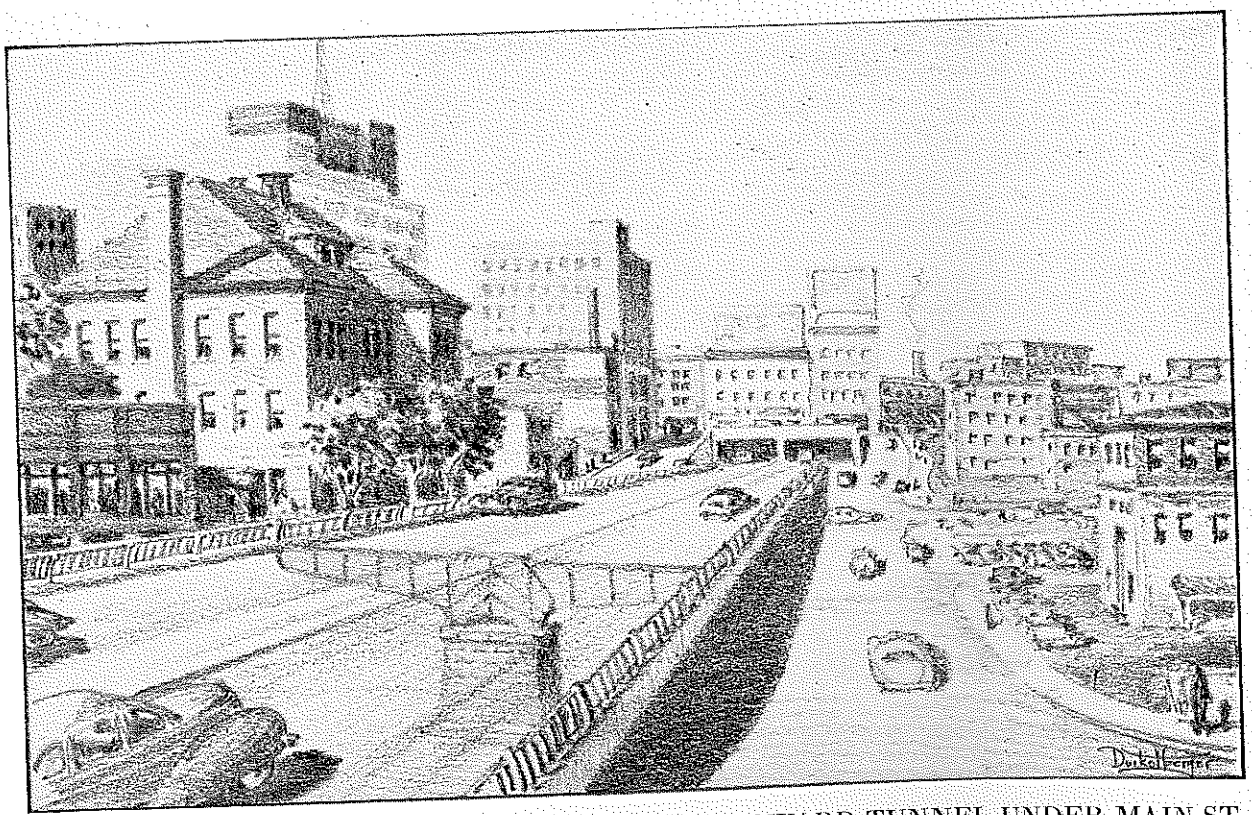
RESIDENTIAL AREA - HARTFORD

PLATE I



EXPRESSWAY IN BUSINESS BLOCK LOOKING EAST INTO TUNNEL UNDER MAIN ST.

This illustrates the use of retaining walls to minimize the property required. Buildings over the tunnel portal illustrate the possible utilization of valuable business frontage on Main St.



LOOKING WEST ALONG MORGAN ST. VIADUCT TOWARD TUNNEL UNDER MAIN ST.

This provides uninterrupted flow from the center lanes of Bulkeley Bridge to points west of Main St. Local traffic flows will be accommodated on the existing street levels with no hindrance from through traffic. The phantom view of the viaduct illustrates the character of support designed to afford maximum use of the existing street.

PLATE II

four-lane depressed section of the expressway through a residential area in West Hartford is illustrated in Plate I. The treatment of a six-lane filled section, as proposed for a residential section in Hartford, is likewise shown on Plate I. The gentle slopes with appropriate planting will provide an attractive view both from the expressway and from adjacent residential properties.

With the wide rights-of-way required for the proper development of limited access expressways, there will be small areas within the rights-of-way which may be used for incidental marginal improvements. Such marginal improvements might include small neighborhood parks and play areas. The importance of these incidental improvements cannot be overemphasized. Compactly fitted into the design of an expressway, these parks and play areas would contribute much to the improvement of living conditions and would help stabilize values of residential property. Full consideration of local needs for these incidental marginal improvements is necessary in the development of detailed expressway plans.

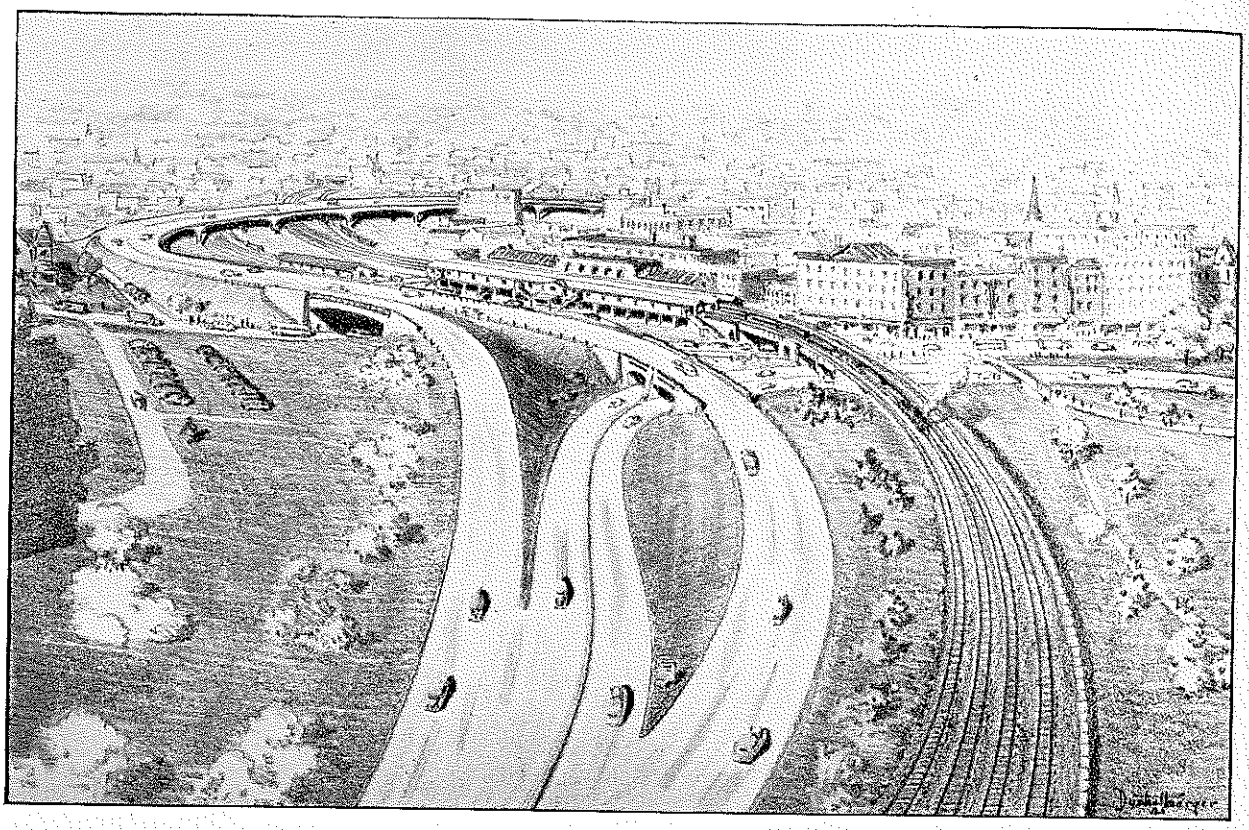
In congested business sections property values will not permit the extensive border treatment as described above. Furthermore, the character of such business sections does not require it. Retaining walls or viaducts will be used at critical locations to limit the amount of property needed.

An example of the proposed retaining wall treatment at a critical location is shown in the upper view of Plate II -- the section between Trumbull and Main Streets in Hartford. This proposed treatment requires a minimum right-of-way width. Business establishments can be maintained along the edges of the proposed expressway. As indicated by the buildings over the tunnel, there is the possibility of maintaining all of the valuable business frontage on Main Street.

Also shown on Plate II (lower view) is the proposed viaduct treatment along Morgan Street and the proposed Main Street tunnel as seen from the east. The heavy traffic concentration to and from Bulkeley Bridge and the need for freedom of movement to and from the important traffic area south of Morgan Street, make this section one of the most important in the entire expressway system. The abrupt change of grade on Morgan Street -- from Bulkeley Bridge down to Front and Market Streets and then up steeply to Main Street -- lends itself naturally to the development of the viaduct along Morgan Street and the tunnel under Main Street.

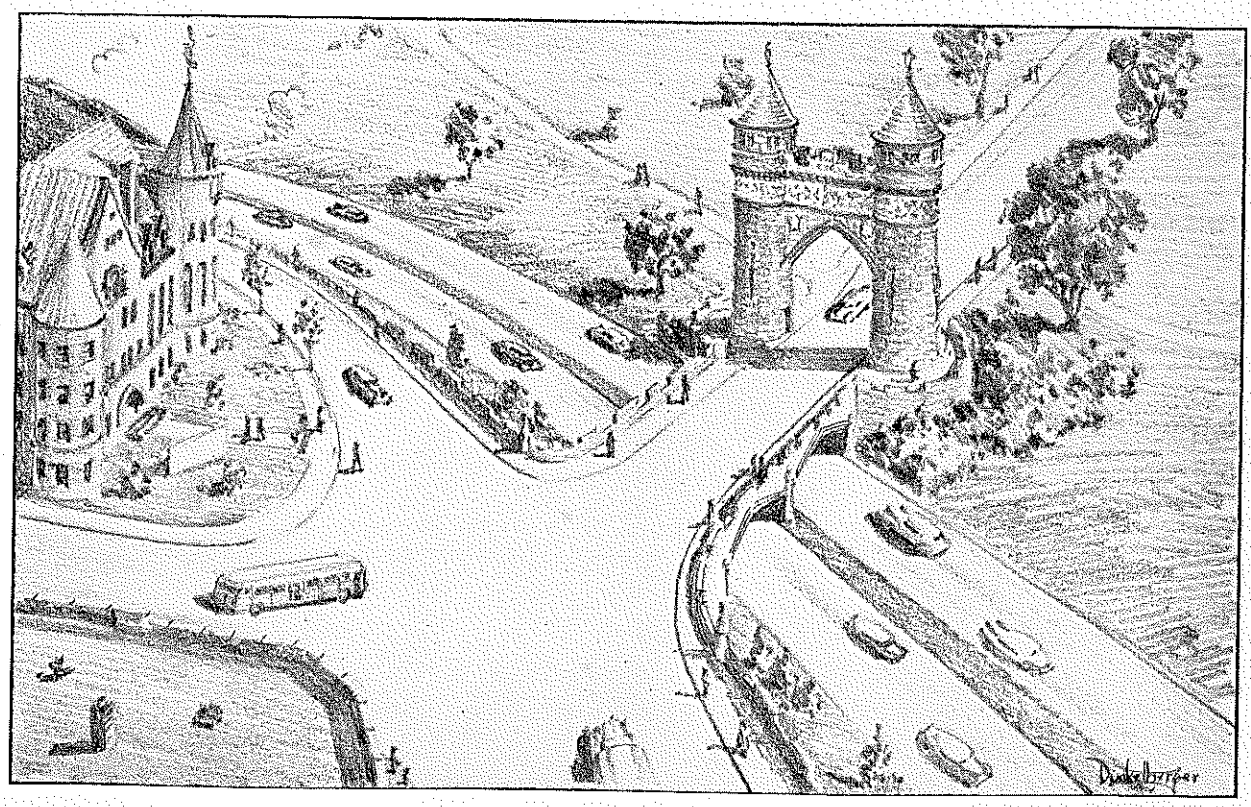
A perspective view of the western expressway as it enters downtown Hartford is shown on Plate III (upper view). Here the expressway divides. The northern route overpasses Asylum Street, passes the railroad station on the west and sweeps east on a viaduct over the railroad tracks and around the Post Office. The Jewell Street connector turns east, underpassing the railroad beside Asylum Street and extending along the northern edge of Bushnell Park. A footbridge opposite Union Place carries pedestrians into the Park. Viewed from the top of Asylum Street Hill, the expressway will provide an attractive view in place of the unsightly railroad structures. Also, it will be possible to utilize the area east of the high school for recreational purposes, or parking. (As shown in the left foreground)

The lower view of Plate III shows the Jewell Street connector as it underpasses Trinity Street. Located in the former Park River bed, this connector will provide convenient and easy access to the traffic generators of the southern portion of the central business area. The removal of considerable traffic from the local streets to the expressway, will permit the remaining local traffic and pedestrians to circulate freely. By providing gentle slopes and attractive planting, the expressway can be made to blend



WESTERN EXPRESSWAY ENTERING DOWNTOWN HARTFORD

This view from between the High School and State Capitol shows the expressway sweeping north over Asylum St. past the railroad station, then east to the center of the city. The Jewell St. connector swings under the railroad beside Asylum Street to the south edge of the business district.



JEWELL ST. CONNECTOR UNDERPASSING TRINITY ST.

This illustrates how the expressway, located at the north edge of Bushnell Park, will allow traffic to flow freely through what is now the heavily congested intersection of Trinity, Ford, Pearl and Jewell Sts.

harmoniously into the adjoining park.

Divided four-lane highways are recommended as the minimum width for initial construction, as the minimum 1940 traffic on all sections exceeds 5,000 daily vehicles. Divided six-lane designs are proposed from the Main and Morgan Street tunnel westerly for 2.5 miles to the city line at Prospect Street. Minimum traffic on this section would exceed 30,000 daily vehicles as of 1940.

It is recognized that road users desire to travel at speeds faster than those now generally possible on our existing roads. The fact that higher speeds in themselves substantially increase gasoline consumption, indicates a willingness of motor vehicle owners to pay for the higher speeds and the resulting saving in time. It is assumed that on the proposed express highways the speed of the average passenger vehicle in rural areas could be expected to approximate 50 miles per hour (assumed design speed of 70 miles per hour). Urban sections should be designed wherever feasible to provide safe travel for the average passenger vehicle at a speed of 35 miles per hour (assumed design speed of 50 miles per hour).

Treatment of intersections will vary with the conditions encountered. It is proposed that all major intersecting roadways be separated and that minor roadways be closed. Parallel service roads are proposed where necessary to provide circulation of local traffic.

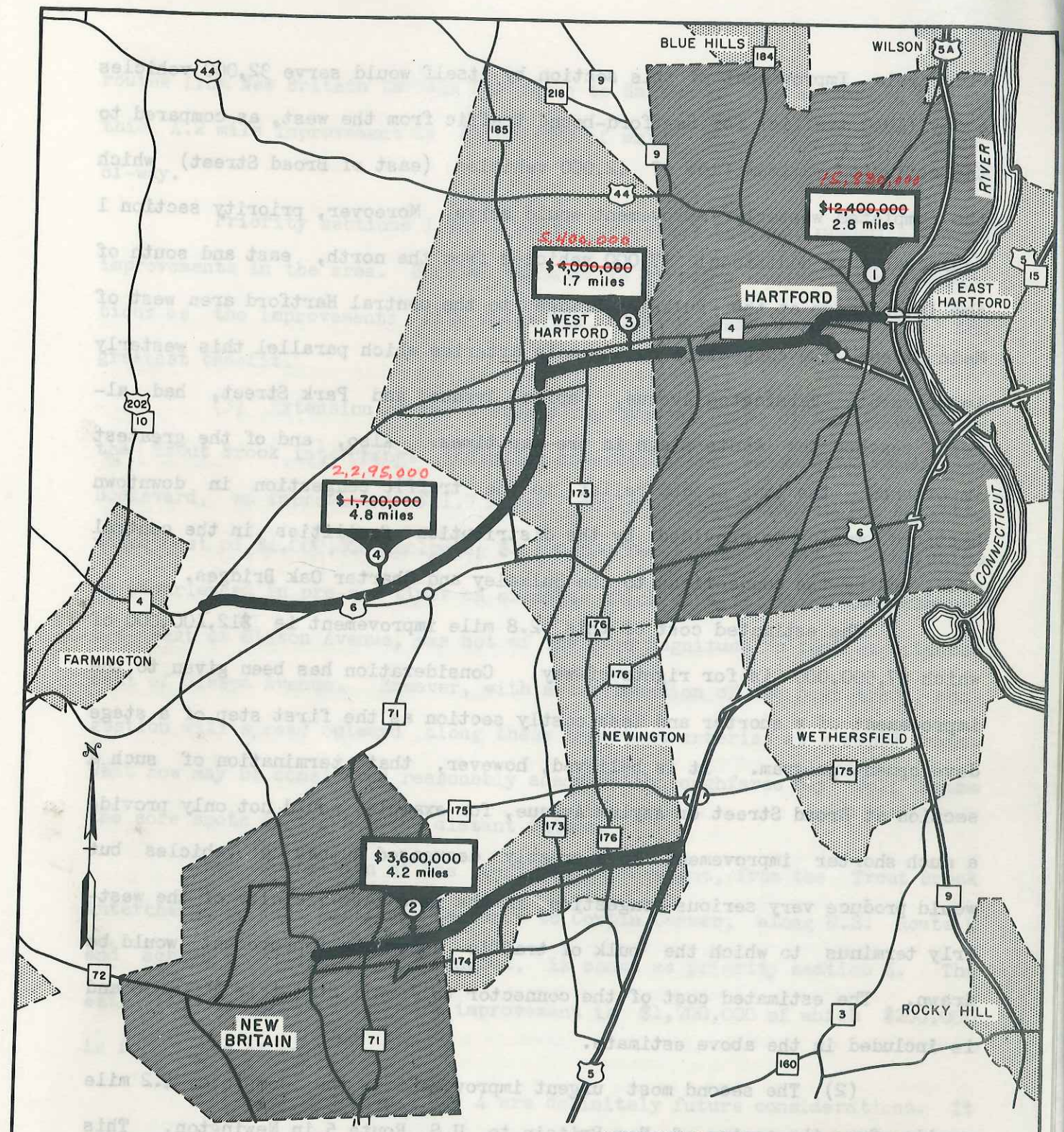
PART VII

ESTIMATED COST and STAGE DEVELOPMENT

The total estimated cost for 9.3 miles of improvement from the Bulkeley Bridge in Hartford to Route 4 in Farmington, including the Jewell Street connection to the Hudson Street traffic circle, is $18,100,000, of which $9,800,000 is estimated as the cost of rights-of-way. The total estimated cost of the 4.2 mile improvement from the central business district of New Britain to U.S. Route 5 in Newington is $3,600,000, of which $1,100,000 is estimated as the cost of rights-of-way. A breakdown by sections as construction might logically be undertaken is shown on Figure 10.

The long range purpose of this study has been to determine the location and character of major highway improvements that are needed to complete the existing express highway system in the Hartford Metropolitan Area. It is important, too, to evaluate the urgency of the highway needs of the area in order that surveys, plans and construction may be completed in a logical and well integrated manner. Evaluation and comparison of the traffic service which would be provided by the improvement of each section or combination of sections has been made. The improvements, in order of urgency of need, are described below and shown with priority ratings on Figure 10.

(1) The most urgent improvement, based on the magnitude of traffic service which would result and the urgency of need for congestion relief, is the 2.8 mile section in Hartford from the Bulkeley Bridge westerly to Sisson Avenue, including the Jewell Street connector to the Hudson Street traf-



Revised Estimates Shown In Red Pencil For Hartford, W. Hartford, Farmington Sections.
Per Paul Newton - 11/3/49

FIGURE 10

fic circle. Improvement of this section by itself would serve 32,000 vehicles a day (1940 traffic) for Hartford-bound traffic from the west, as compared to the estimated maximum flow of 42,000 vehicles (east of Broad Street) which the completed westerly improvement would serve. Moreover, priority section 1 would serve an additional 17,000 vehicles from the north, east and south of the interchange at the Bulkeley Bridge to the central Hartford area west of Main Street. The congestion on the main arteries which parallel this westerly improvement, Farmington Avenue, Capitol Avenue and Park Street, had already reached the acute stage in pre-war times. Also, and of the greatest importance, the long needed relief to the traffic congestion in downtown Hartford would be provided by the distribution facilities in the central area, and by the connections to the Bulkeley and Charter Oak Bridges.

The estimated cost of this 2.8 mile improvement is $12,400,000 of which $7,500,000 is for rights-of-way. Consideration has been given to the improvement of a shorter and less costly section as the first step of a stage development program. It is believed, however, that termination of such a section at Broad Street or Asylum Avenue, for example, would not only provide a much shorter improvement to a greatly decreased number of vehicles but would produce very serious congestion in the immediate vicinity of the westerly terminus to which the bulk of traffic using the improvement would be drawn. The estimated cost of the connector to Jewell Street is $600,000 and is included in the above estimate.

(2) The second most urgent improvement is the complete 4.2 mile section from the center of New Britain to U.S. Route 5 in Newington. This improvement, by itself, would provide service to a maximum of 14,000 vehicles per day, largely from New Britain and Newington to Hartford, and thus provide relief to such overburdened arteries as New Britain Avenue and the several

routes from New Britain through Newington to Hartford. The estimated cost of this 4.2 mile improvement is $3,600,000 of which $1,100,000 is for rights-of-way.

Priority sections 1 and 2 above represent the most urgently needed improvements in the area. Special emphasis is directed toward these two sections as the improvements from which the highway users would receive the greatest benefit.

(3) Extension of the westerly improvement from Sisson Avenue to the Trout Brook interchange including connections to Farmington Avenue and Boulevard, an improvement of 1.7 miles, could be accomplished for an estimated cost of $4,000,000 including $2,100,000 for rights-of-way. Congestion as experienced in pre-war times on arteries which parallel this improvement, i.e. west of Sisson Avenue, was not of the same magnitude as that experienced east of Sisson Avenue. However, with a continuation of the past trend, congestion will spread outward along these important arteries at a rapid rate. What now may be considered reasonably adequate thoroughfares may well become the sore spots in the not too distant future.

(4) Completion of the westerly improvement, from the Trout Brook interchange in West Hartford westerly to Corbin Corner, along U.S. Route 6 and across to Route 4 in Farmington, is shown as priority section 4. The estimated cost of this 4.8 mile improvement is $1,700,000 of which $200,000 is for rights-of-way.

Priority sections 3 and 4 are definitely future considerations. It is essential, however, to plan for these future improvements at this time in order that they will fit logically and economically into a well defined comprehensive plan.

PART VIII

B E N E F I T S

Expressways are located and designed primarily for the benefit of the highway user. As has been indicated in preceding parts of this report, they are located to provide the most direct service practicable, from origin to destination, for the maximum number of highway users. Standards of design for the expressways give the highway user real efficiency in highway travel -- speed with safety. But -- highway use is such an intimate and important factor in our community and business life that whatever gives great benefit to the highway user must give, directly and indirectly, great benefits to the people at large and to the business interests of the community.

GREATER SAFETY in highway travel is obtained on a limited access expressway than now exists on city streets because many of the potential causes of accidents -- many of the greatest hazards -- are simply eliminated. Well over half of the traffic deaths in our cities now involve pedestrians. With pedestrian movements separated from highway traffic on expressways, the potential reduction in fatal accidents through the construction of expressways is readily apparent. Likewise since the expressways contemplate no cross traffic at grade (cross streets are carried over or under), the hazard of intersection collision is eliminated. Further safeguards to traffic are provided by limiting entrance and exit to selected locations and by providing continuous physical separation of the opposing traffic movements on the expressways.

In addition to the greater safety provided traffic using the expressways proper, hazard will be reduced on all principal paralleling streets, simply because of the traffic having been moved from them to the expressways. For example, the three major east - west traffic arterials in Hartford, (1) Park Street, (2) Capitol Avenue, and (3) Farmington - Asylum - Pearl, were the locations on which 30 fatal accidents occurred in the 10 year period from 1935 through 1944. If one-half of the traffic is removed from these thoroughfares to an east - west expressway, the fatalities in a corresponding 10 year period might well be reduced to 15 or less, thereby saving 15 or more lives on these three arterial streets.

COMFORT OF TRAVEL will be increased greatly by the provision of expressways, largely through the elimination of the various congestion elements. There is nothing more aggravating to the average motorist than being "tied up" in traffic, whether it be by a stop light or by slow moving or stopped vehicles on a narrow street. On an expressway there will be no stop lights. There will be no cross traffic. There will be no stopping except on shoulders for emergency parking. Traffic lanes will be adequate to accommodate peak flows with dispatch. Isolated from pedestrian interference, as they will be, and largely free from the threat of collision with other vehicles, the city expressways will provide the ultimate in freedom of movement with security, through the very areas in which previous travel on existing crowded city streets has been the most inconvenient and uncomfortable.

There will be a direct benefit to many highway users through the SAVINGS IN TIME which will be derived from the expressways. This will be most important to business travel, but it has been demonstrated at highway and bridge toll facilities that even the pleasure driver is willing to pay

for time saving routes. Indicative of potential time savings on the expressways are the following estimated driving times, at any hour, from the Old State House on Main Street in central Hartford to the following points:

Prospect Street (West Hartford Town Line) . .	6 minutes
West Hartford Center	8 minutes
Corbin Corner	10 minutes
Central New Britain	15 minutes

The GREAT COMMUNITY BENEFITS to be derived from the expressways have already been indicated in a good many respects. Removal of much traffic from the existing streets will mean quieter as well as safer streets. The attractive character of roadside development on the expressways and the possibilities for marginal play and park areas will enhance property values in decadent areas and preserve existing values elsewhere.

Planning Commissions and other local organizations appropriately lay great stress on proper land use and the need for a more logical and desirable community growth. In these aims there is full accord. However, usual street and highway improvements of the past had almost no beneficial effect on the hit or miss pattern of community development. Modern expressways have changed this.

In such expressways as are here proposed, there will be provided great stimulus to logical over-all planning and desirable land use, as a direct result of the construction of highways. Sections of run-down property in and adjacent to the central business area of Hartford will be replaced by the expressway, which will be designed to a high aesthetic standard as well as to an efficient traffic arterial standard. Business property, which has become decadent through its inaccessibility, will be revitalized. Of great

importance in the now undeveloped areas (portions of Newington, West Hartford and Farmington) will be the salutary influence which the expressway will have in the encouragement of the most desirable character of community growth. The mushroom growth, usually occurring along main highways in the past, will be prevented. The new expressways will provide a framework around which the community can be planned and can grow in a manner devoid of the bad influences usually associated with heavily traveled highways.

Of primary importance to the business interests of both Hartford and New Britain is the effect of these new improvements on store sales and on downtown realty values. Easy access will be provided to the cities from the outlying towns. The distribution facilities proposed will serve the main generators of traffic as directly as practicable and will relieve congestion within the central business districts. The resulting accessibility of downtown stores should reverse the wasteful trend of decentralization of business to outlying districts -- of the falling of central property values -- of the decadence in the centers of the cities -- and of the increasing tax rates for all municipal property owners.

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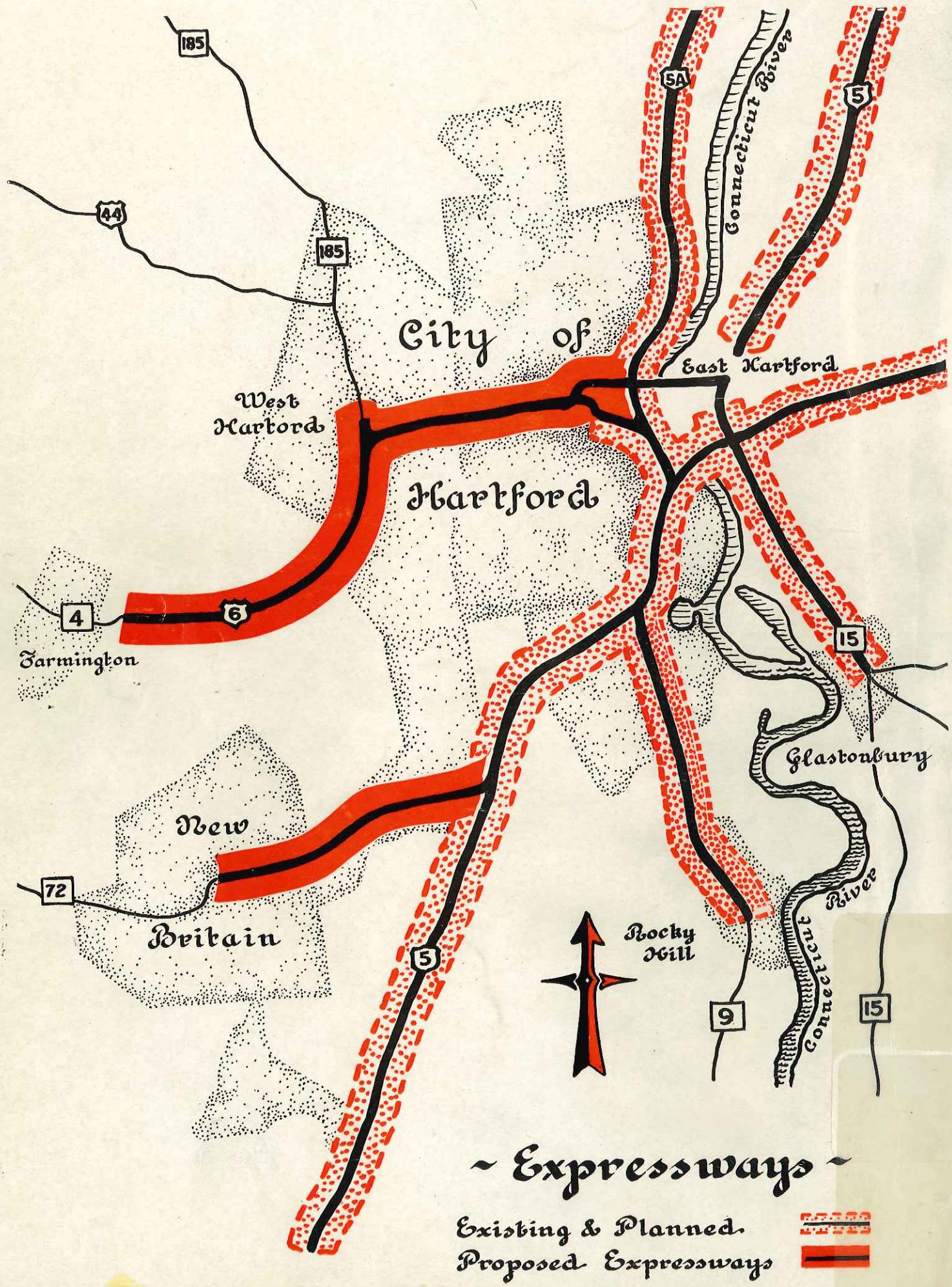
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~ Expressways ~
Existing & Planned
Proposed Expressways