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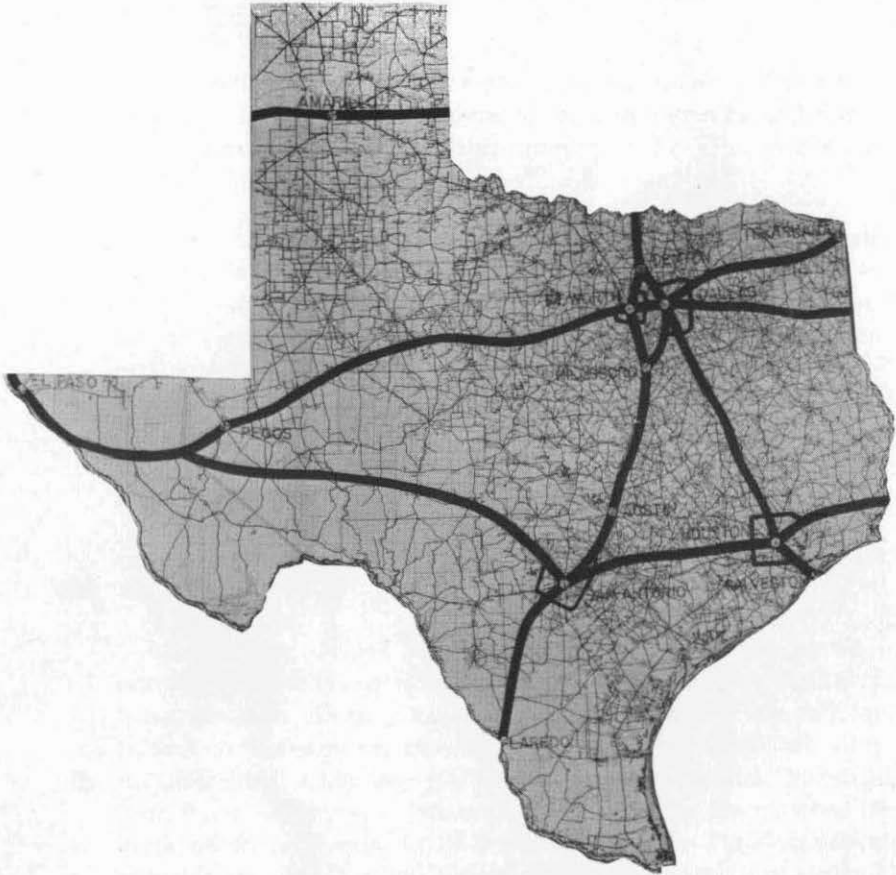
TEXAS

and the

INTERSTATE HIGHWAY SYSTEM

MARKLE STEEL COMPANY

TEXAS and the Interstate Highway System



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National Interstate Highway System

What It Means to the Nation

The nation's Number One road system, vital to the economy and defense of the United States. A network of heavy-duty highways for civilian and military traffic. The backbone of our highway systems.

That is the National Interstate Highway System. It consists of 41,000 miles of highways which within the next thirteen to fifteen years will be transformed into 41,000 miles of two, four, six and eight-lane expressways crisscrossing the nation from east to west and north to south, moving more traffic, and moving it faster and safer. The Federal Aid Highway Act of 1956 gave it top priority, moneywise, in an effort to modernize the entire system by 1969.

Why is this system so vital to the nation? And why is it so urgent that it be brought up to date? Here are some of the answers.

All over the United States the road picture is the same—obsolete highways and traffic congestion crippling highway transportation. During the years of World War II we fell far behind in highway construction, then the shortages that were an aftermath of the war put us even farther behind. In addition, there has been a tremendous increase in the number of vehicles on our roads. In 1920 there were only 9 million motor vehicles registered in the United States; today there are about 65 million. By 1969, when this program is finished, there will be an estimated 85 million, by 1975 more than 90 million.

THE INTERSTATE SYSTEM IN TEXAS

What It Means to the State

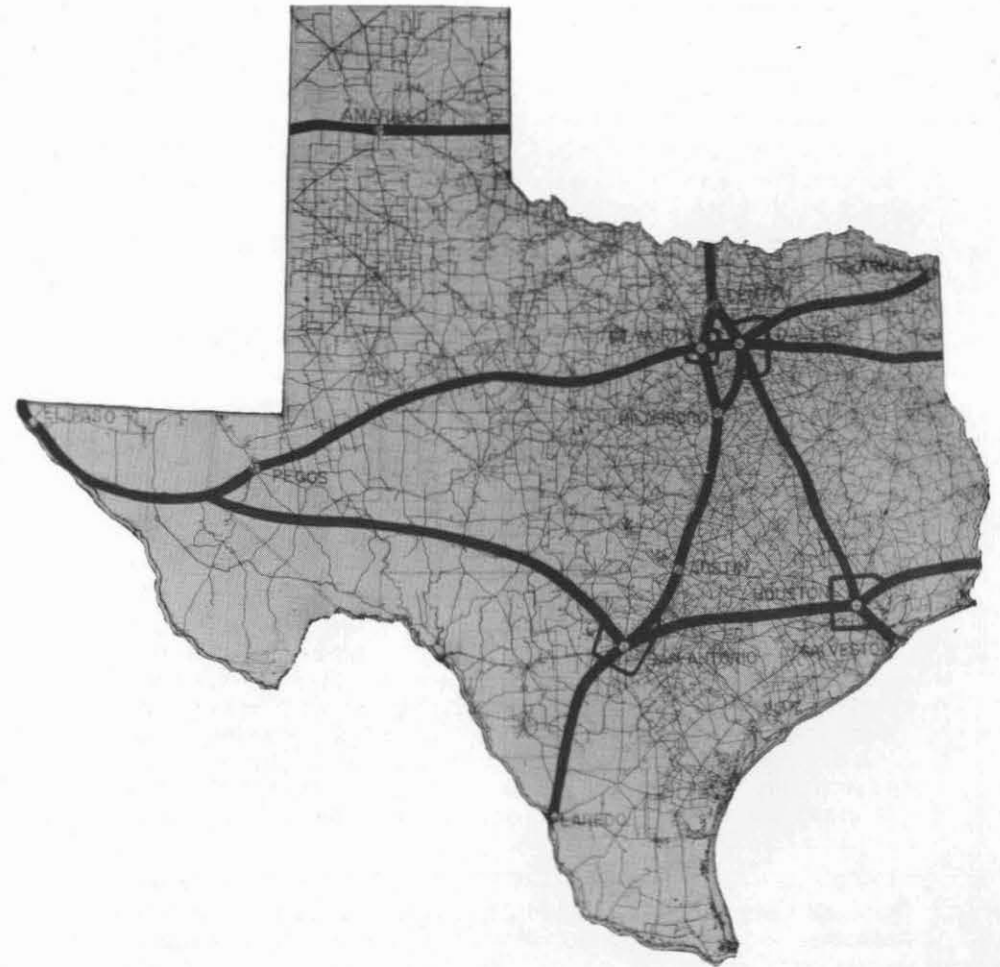
Texas will have 2,905 miles of these express highways, including about 150 miles which make up a part of the circle-cross expressway pattern forming loops around our four major cities—Houston, Dallas, Fort Worth and San Antonio. This is 7 per cent of the total interstate mileage. It is only about 6 per cent of the total mileage on the Texas Highway System but these highways carry more than 20 per cent of the state's traffic.

The map on the opposite page shows the general location of the interstate routes between cities and the loop routes to carry traffic around the four largest cities. The details can be determined only after a lot of local work, and the exact locations are based on careful and comprehensive engineering and economic studies as to the proper location. Then the United States Bureau of Public Roads gives final approval.

In an effort to speed construction of the Interstate System, the Congress that passed the new Federal Aid Act changed the old 60-40 federal-state money ratio. The states now have to put up only 10 per cent while the Federal Government pays 90 per cent of the cost. This means Texas' highway dollars will buy a lot more highway construction.

The new highway act also provided a revolving fund for advance right-of-way purchase. The government will advance Federal funds to the states for this purpose if the state agrees to build the road on such right of way within five years. As a result of this and the new 90-10 matching ratio, the Texas Highway Commission changed its policy on right-of-way purchase, and for the first time in its history, the state is participating in buying right of way—on the interstate highways only.

All this is designed to speed construction of this highly important system. Texas began using this new money for construction within a few weeks after the law was passed, making use of available right of way. The state is now in the process of acquiring right of way for future construction so that the program of building these expressways can continue uninterrupted.



What Will the System Look Like?

The interstate highways are being built to the highest standards that engineers can now devise, including all of the safety features that we know about. As insurance that the system will not be outgrown by the time it is completed, the highways are being designed to handle the expected types and volumes of traffic that will exist in 1975.



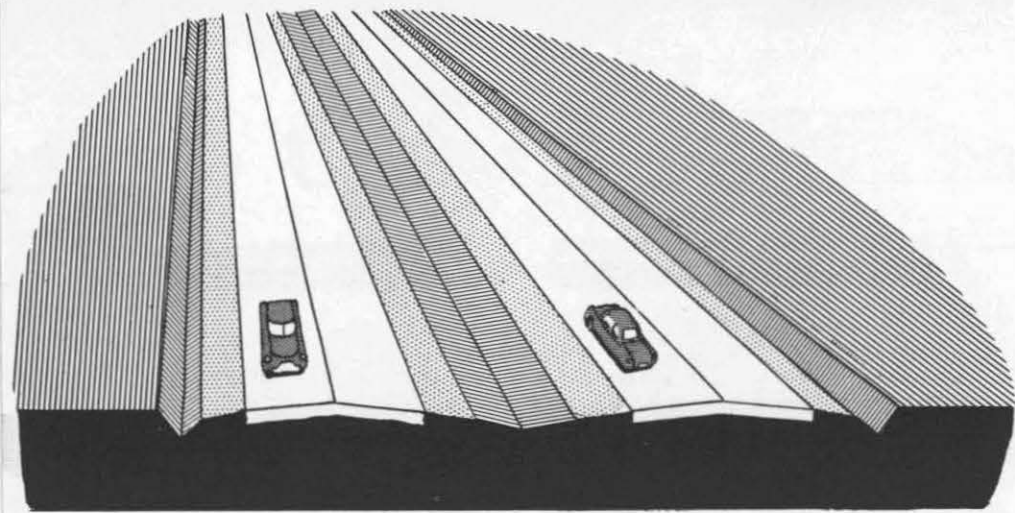
The entire 2,905 miles in Texas—and the 41,000 miles in the United States—will be built on the controlled access principle with very few grade crossings. This means you will be able to drive from border to border and coast to coast without interruption from traffic lights.

The roads will be two, four, six or eight lanes wide, depending upon the traffic they will carry in years to come. Most of the system will be multilane divided, and on the two-lane highways the right of way must be wide enough that more lanes can be added at a later date as traffic increases.

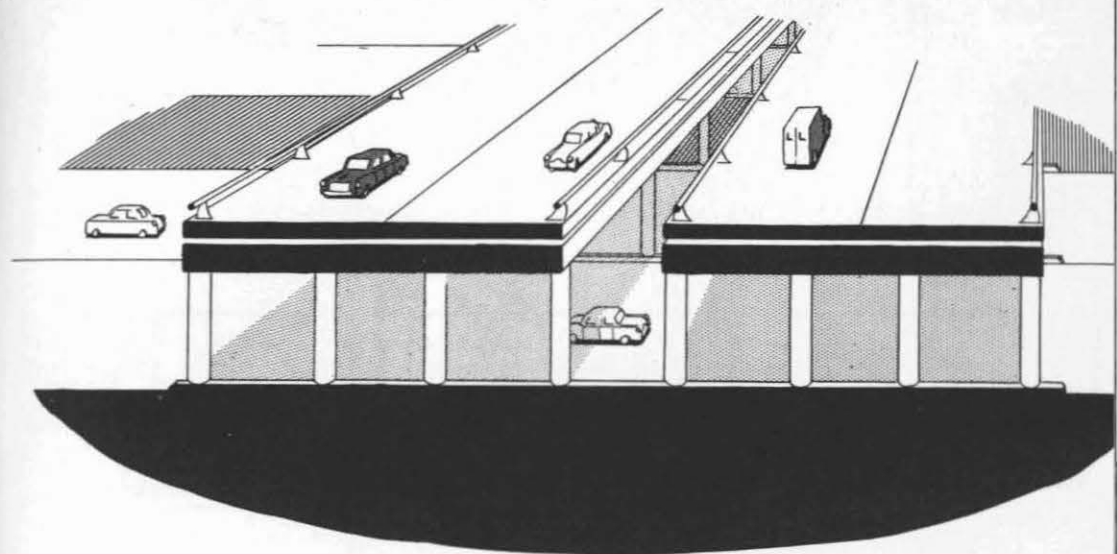
Only in those sparsely-populated areas where the very highest standards are not needed will the highways be two lane, and only in these low-traffic areas will there be crossings at grade. There will be no railroad crossings, no stop lights, bad curves or steep grades. There will be no driveways from homes or businesses leading to the expressway lanes to create traffic hazards.

Traffic lanes will be at least 12 feet wide and shoulders at least 10 feet wide. The median strip dividing the lanes will be 40 to 60 feet wide in flat rural areas, 20 feet wide in urban and mountainous areas.

The roads are being designed for speeds of 70 miles per hour on flat land, 60 miles on rolling terrain, and 50 in mountainous and urban areas.



Rural



Overhead

Types of Design

Design will vary with the locations of the highways and the traffic loads they carry.

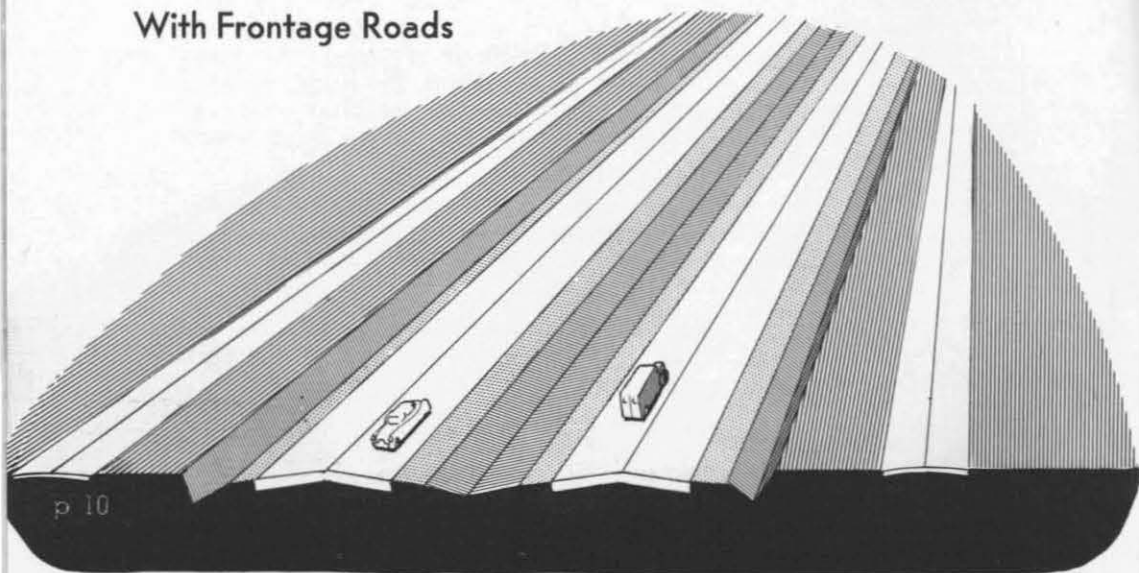
In low-traffic rural areas they may be conventional two-lane roads. Only about 7,000 miles in the entire nation will be in this category and they will be designed so that other lanes may be added. In higher traffic areas the highways will go to four, six or eight-lane divided de-

sign, some with frontage roads added.

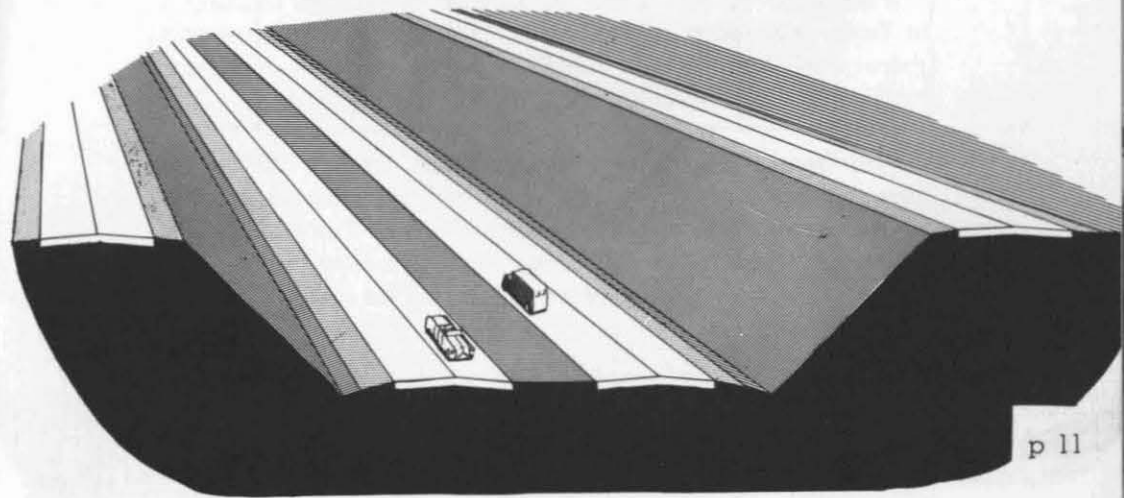
The width of medians dividing the traffic lanes and the width of shoulders will vary according to whether the road is crossing flat country or is in a mountainous or urban area.

In some localities the express lanes will be depressed while in others they will take to the air in an overhead design.

With Frontage Roads



Depressed



Basis for Design

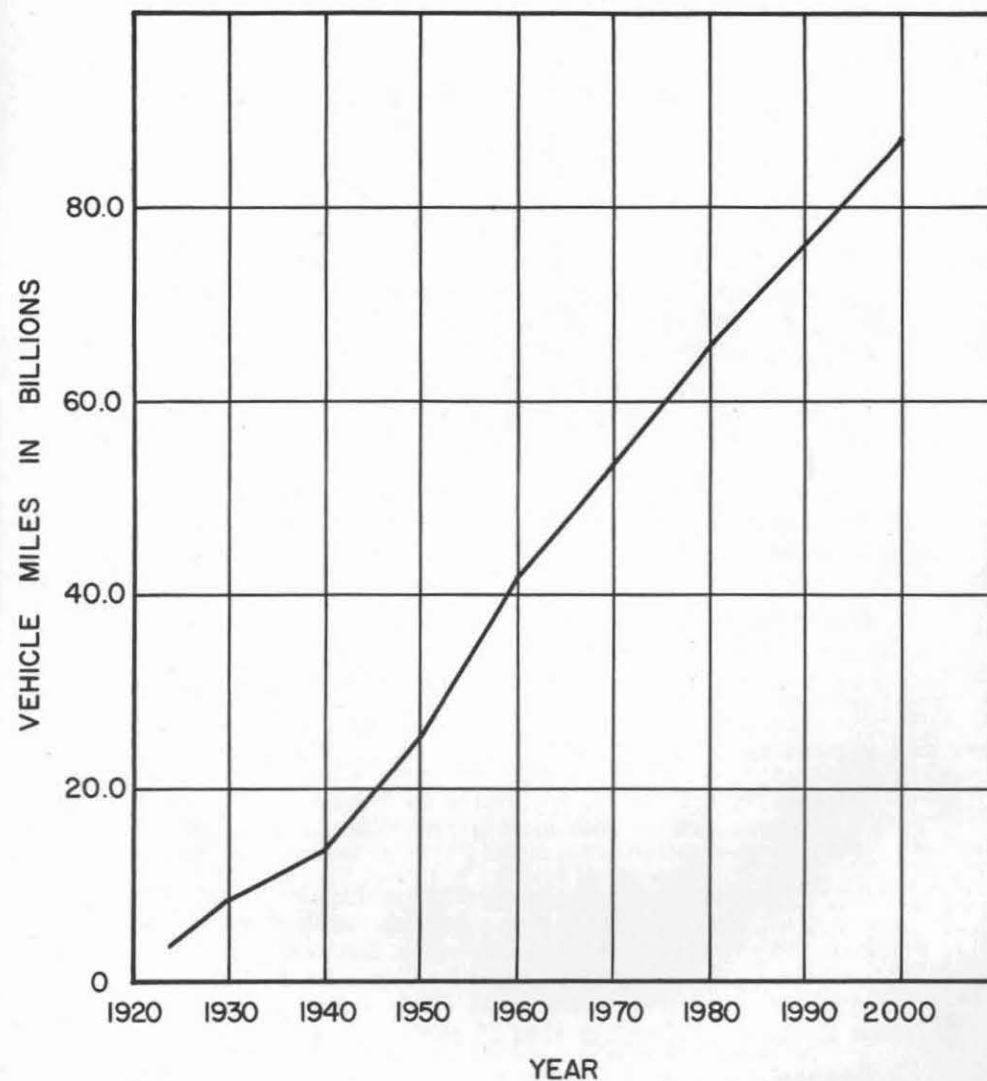
The Interstate System would do little to solve our highway problems, and certainly would not serve the purposes for which it was created, if it were built only to the standards demanded by present traffic volumes. It would soon become just more miles of overloaded highways.

This was the reason for the stipulation that the highways on the system be designed to accommodate the traffic that will exist in 1975.

The number of vehicles on the roads and the number of miles these vehicles travel are increasing at a rapid rate. The graph on the opposite page shows that in 1924 only 3.8 billion vehicle miles were traveled in Texas as compared with about 37 billion last year, and about 60 billion forecast for 1975. Just five years ago this figure was a little more than 30 billion.

It has been estimated that the number of vehicles registered in Texas will reach 5.8 million in 1975. Only ten years ago there were less than 2 million, and the number has now jumped to 4.2 million.

This tremendous, unexpected increase in the number of cars and in travel following World War II is partly responsible for the present inadequacies of our highways. The high design standards which all the interstate highways must meet insure that even in 1975 these highways will still be modern.



Control of Access

Controlled access means that there will be no intersections or cross roads on the highways. Entrance to and exit from these highways will be restricted to specific points where it can be allowed safely. Ramps that merge traffic into the expressway lanes with little interference and hazard will be used.

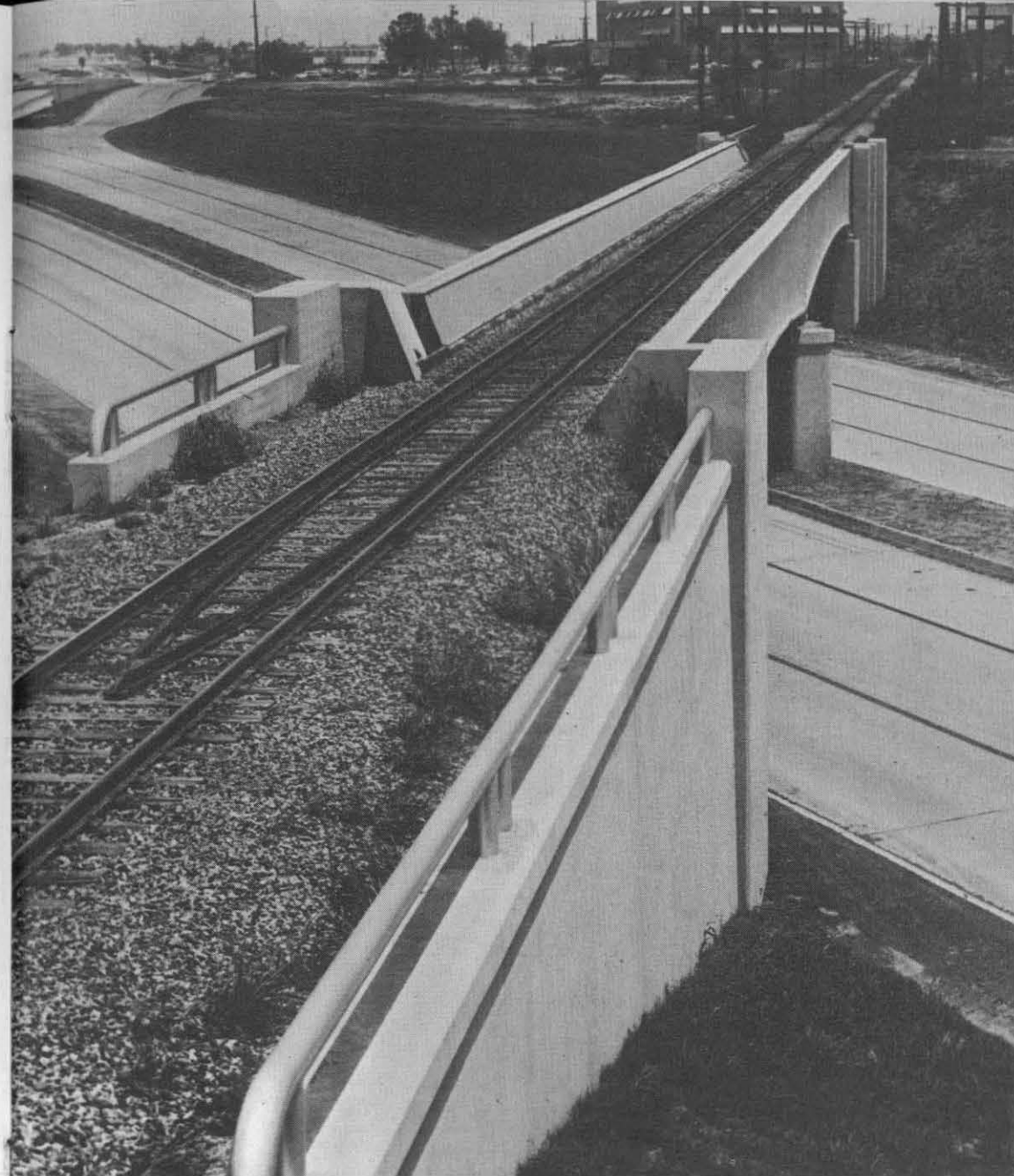
Control will be exercised in one of two ways. In the past it has been the policy of the Texas Highway Department to control access by building frontage roads on both sides of the freeway with ramps at certain intervals providing access to the through lanes as shown on Page 9. This allows property owners to have access to the frontage roads and in turn to the through lanes.

The other method of control which will be used in some cases involves the actual purchase of the right of access, or where no such right existed, the legal prohibition of access. This is illustrated on Page 27.

Control of access increases the safety of the highway by reducing the accident rate and protects the highway—keeps it from being reduced to the status of a busy street which gives poor service to both local establishments and through traffic.

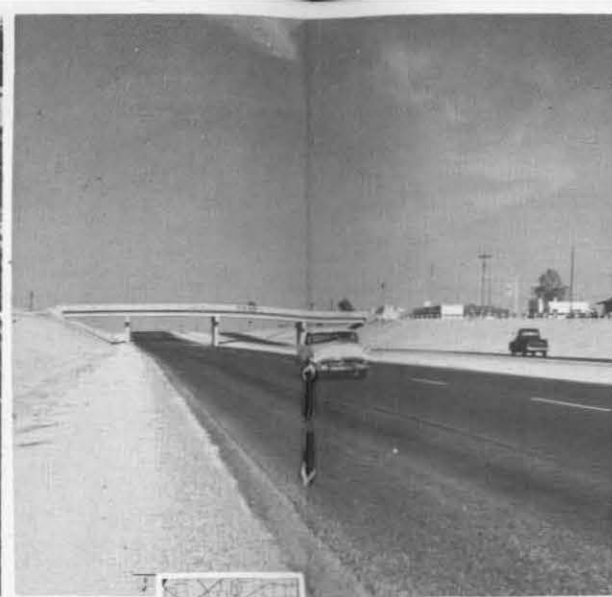
Entrances and exits on the interstate highways will be planned in the interest of the motorists using them; other roads and streets will continue to serve business. This type of highway allows through traffic to move swiftly and efficiently while business traffic uses other routes designed for that purpose and neither kind of traffic hampers the other.

Because of controlled access you will be able to drive faster, yet safer, and you will have a highway that will not be obsolete almost as soon as it is built.

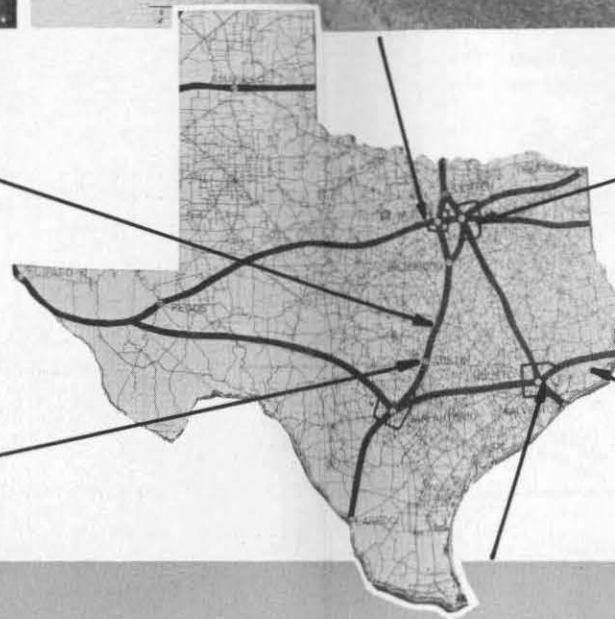


Railroad Grade Separations

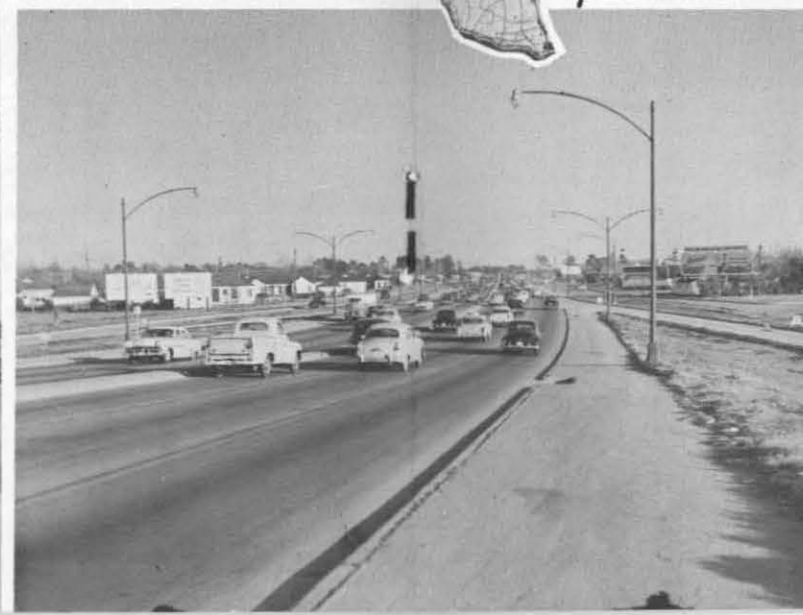
The interstate highways will go either over or under railroad crossings. There will be NO railroad crossings at grade.



Completed Sections

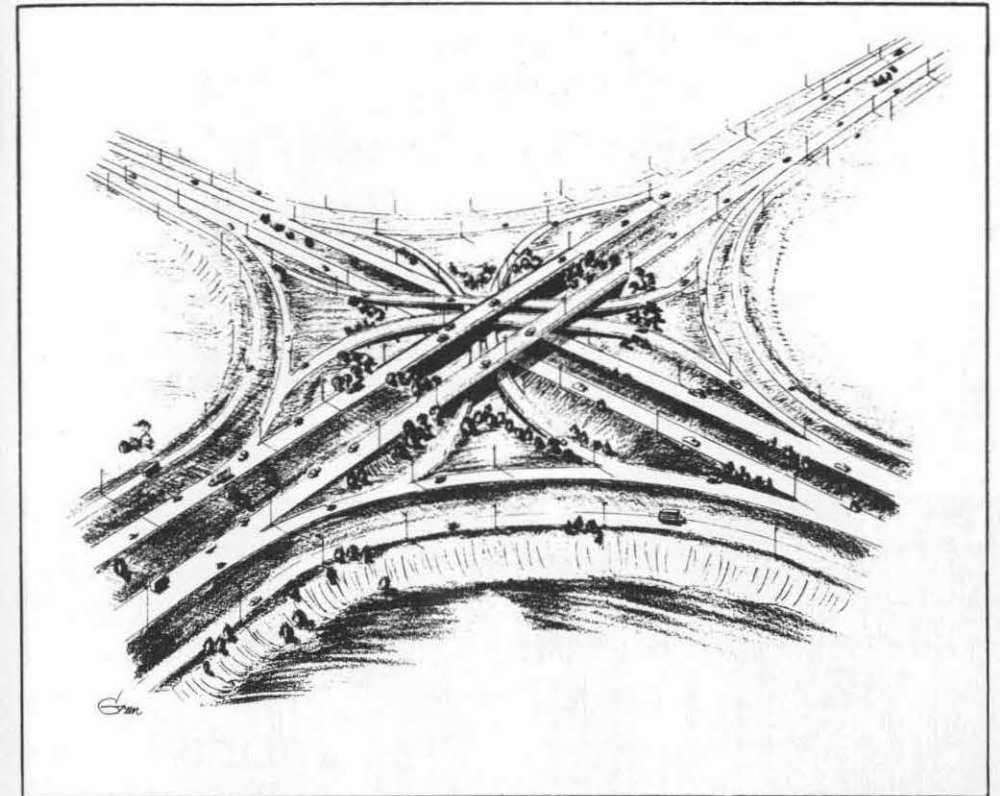
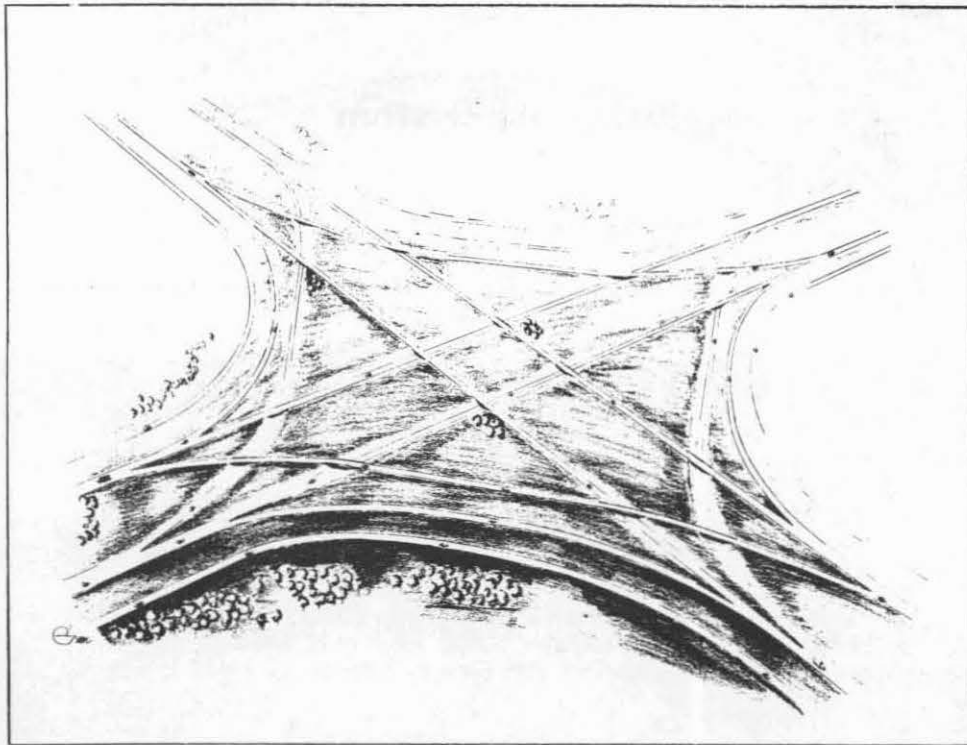


Interstate System



Major Interchanges

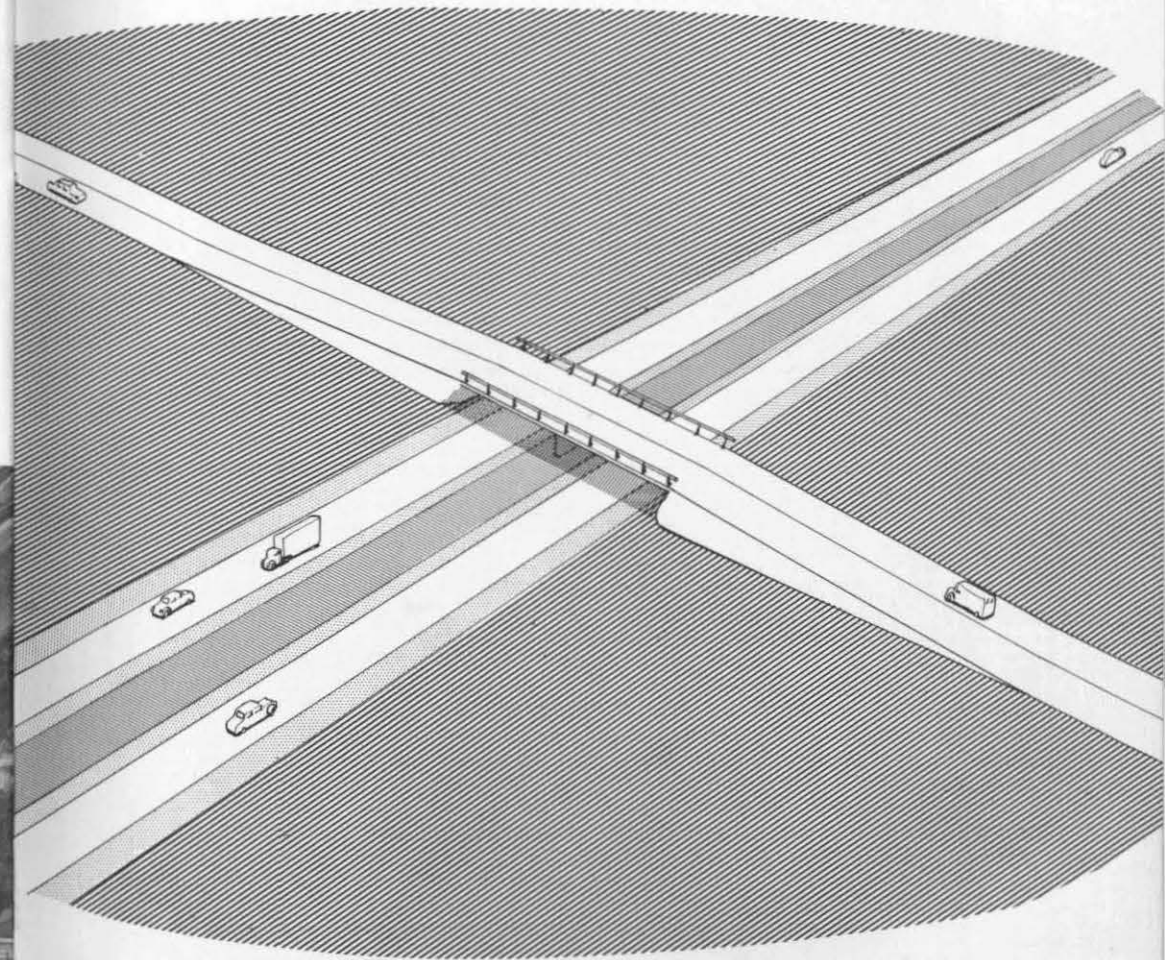
Interchanges such as these will be constructed where two freeways or high-type facilities intersect. Direct movement to and from all approach roads is possible without conflict.



These interchanges are a major safety feature. They eliminate the problems of vehicles crossing and turning onto highways at grade and will enable motorists to change highways without crossing a high speed traffic lane and without disrupting the normal flow of traffic on either route.

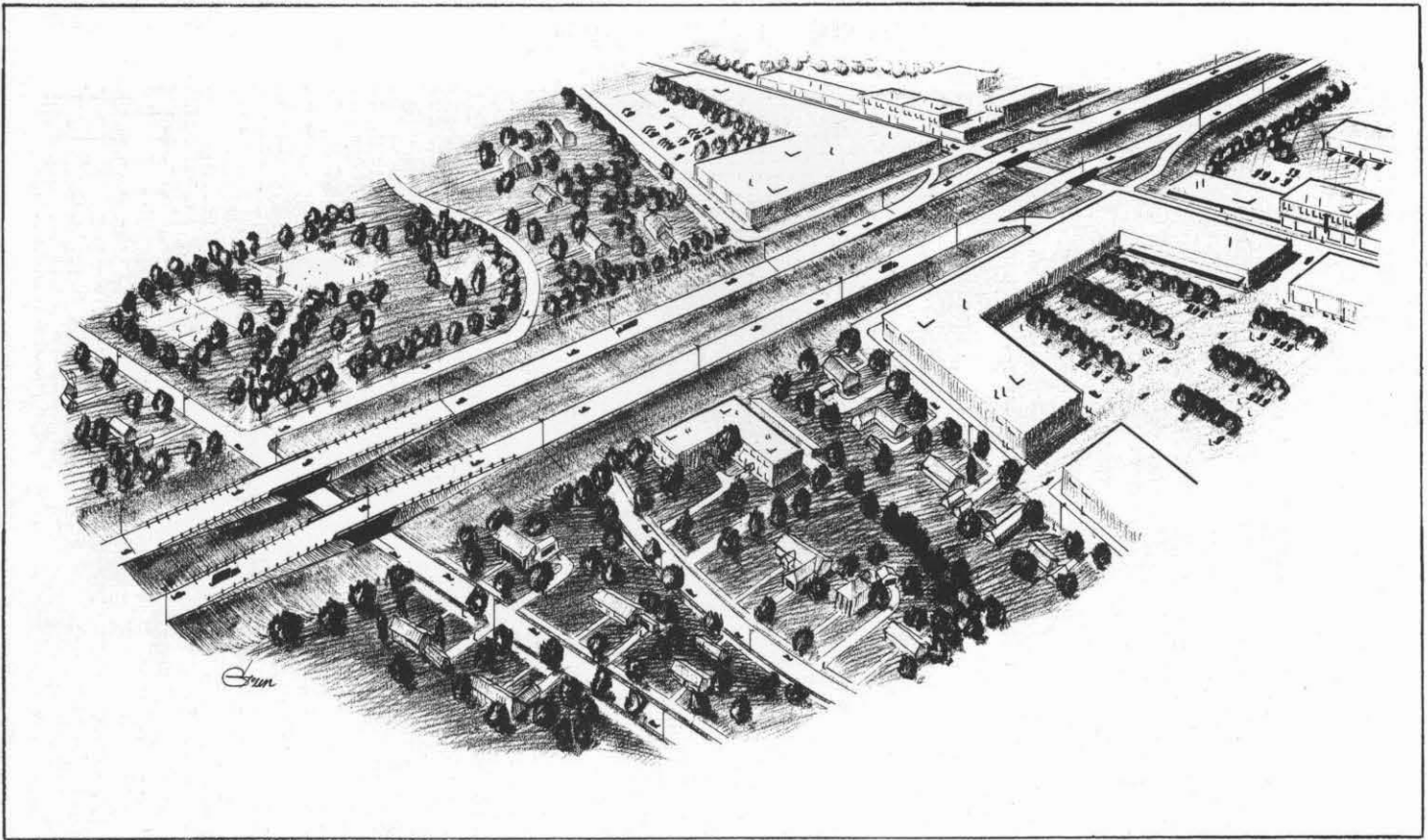
Major Road Crossing

Structures such as these will be built where other state highways and major local roads intersect and cross the interstate highways. By using the correct lane or ramp, motorists will be able to change routes, take any route they wish, without crossing any conflicting lane of traffic.



Minor Road Crossing

For a very low-traffic cross road where no interchange is needed a simple grade separation will be constructed to move cross traffic over or under the expressway lanes.



Typical Urban Section



Typical Rural Section



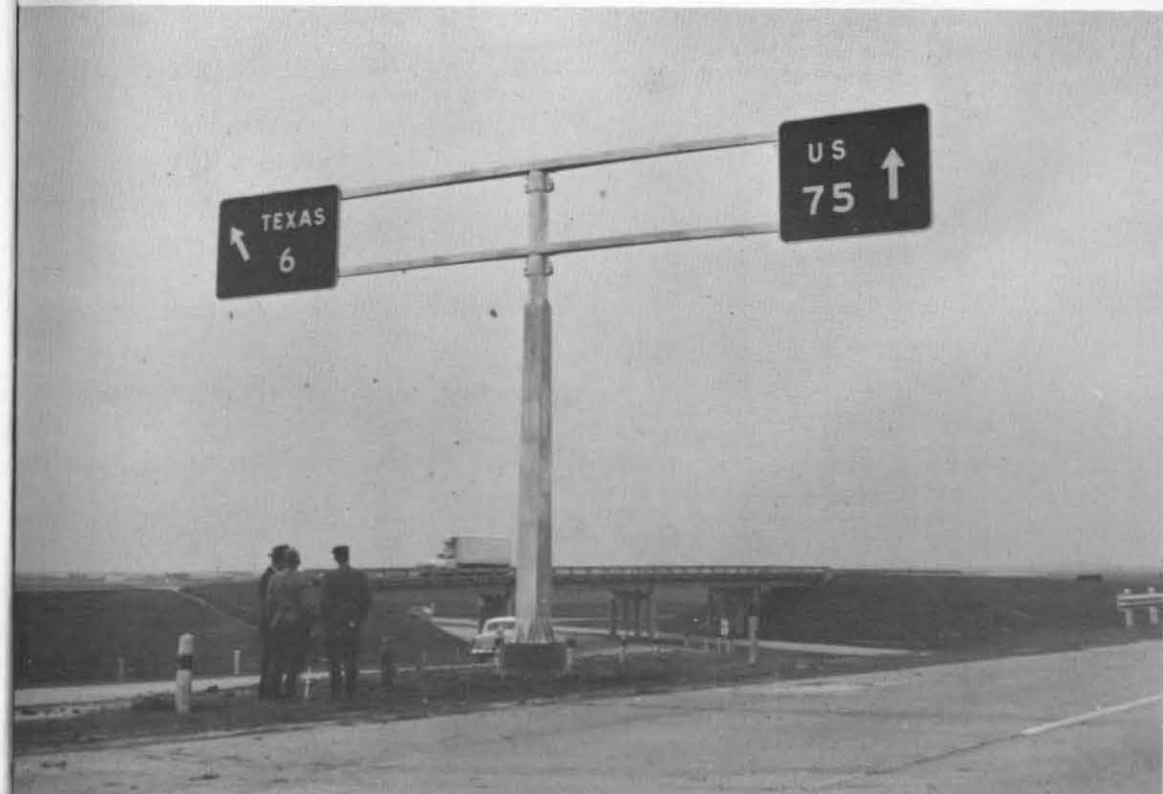
Signs

Driver habits and traffic patterns will change as a result of the design of these highways. Expressways are designed to move large volumes of traffic at high speeds and drivers tend to concentrate more and more on the road and traffic directly ahead, limiting their side vision. Since there will be no grade crossings on these controlled-access highways, except in very low-traffic areas, motorists will not need to watch for the unexpected on side roads and the tendency to limit side vision will be increased.

This calls for a new type of overhead sign which will be used on the interstate highways instead of the conventional roadside sign. The overhead position will be another safety factor, making it possible to place the signs close to the driver's line of sight so that he will have to remove his eyes from the road only for a minimum length of time. It also will make it possible to mark each lane of the highway when necessary.

Signs will be placed about a fourth of a mile ahead of any interchange approach providing a left turn so that motorists may get in the proper lane in time to turn. Lane signs will mark each lane with the proper highway number to avoid confusion.

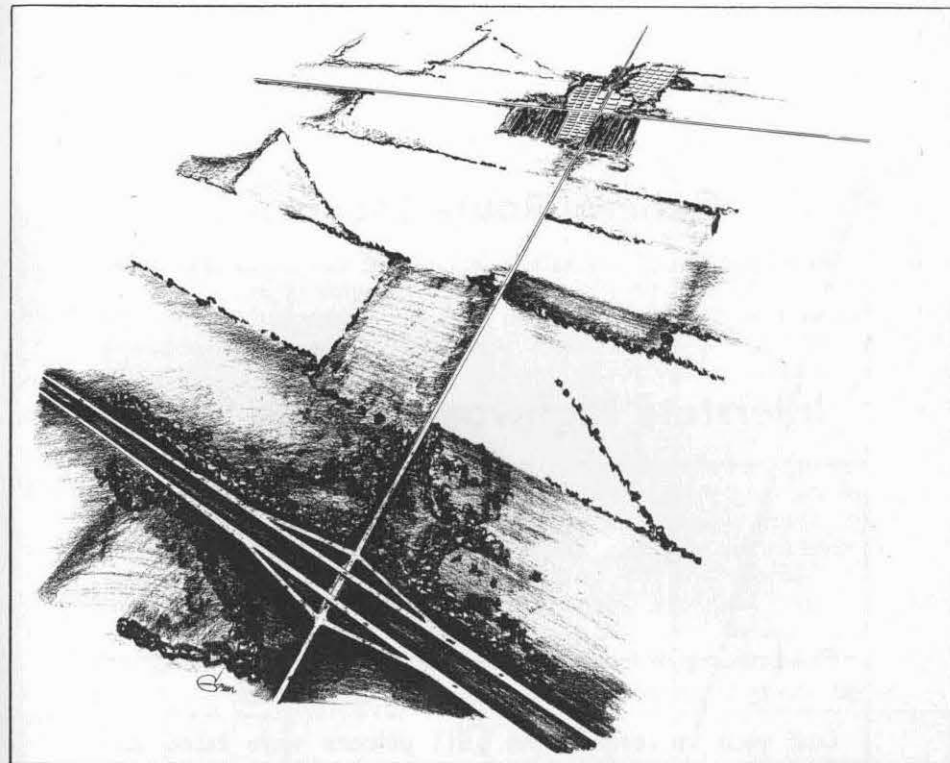
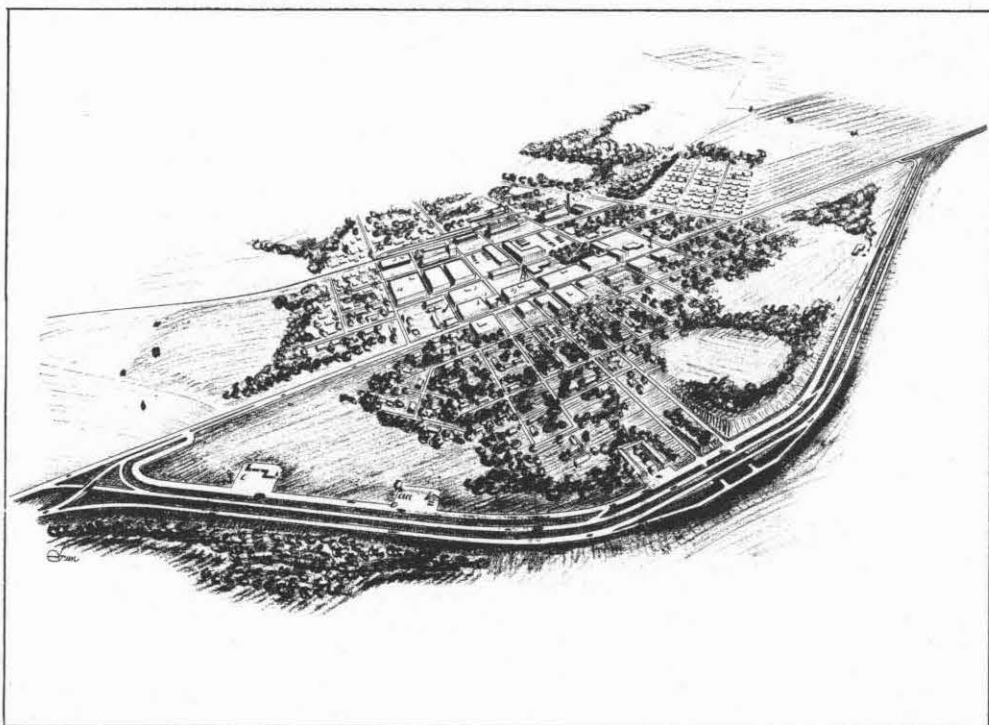
The messages will be short, probably limited to the highway number only, since the signs must be readable from a distance of more than 700 feet on high speed express highways. This means you will have to keep track of the highway number you are following. Since the letters and numerals must be large to be readable, most town names will be too long to be included.



General Route Location

Determination of the exact locations of the interstate routes will be a slow process. Problems of each locality will be taken into consideration and you will have an opportunity to air your views at public hearings. The new law requires that these hearings be held in every community that will be affected.

Generally, the highways will be located near but not through smaller communities. The wide right of way that will be necessary would wipe out some communities completely; in others property damage would be so high that it would result in the highway being a detriment rather than a benefit. Access will be provided for all communities with the present highway being retained as a business route in most cases.



In large cities the situation will be different. In many cases the route will pass through the developed areas since the downtown areas of large cities cannot be served adequately by circumferential routes. It must be near enough to the downtown district that it can help carry the heavy traffic load.

The smaller towns will benefit from the fact that these express highways will not pass through the business district. Business benefits from through traffic are largely mythical; this kind of traffic brings few customers. These motorists are mostly interested in getting through the town and on their way as quickly as possible.

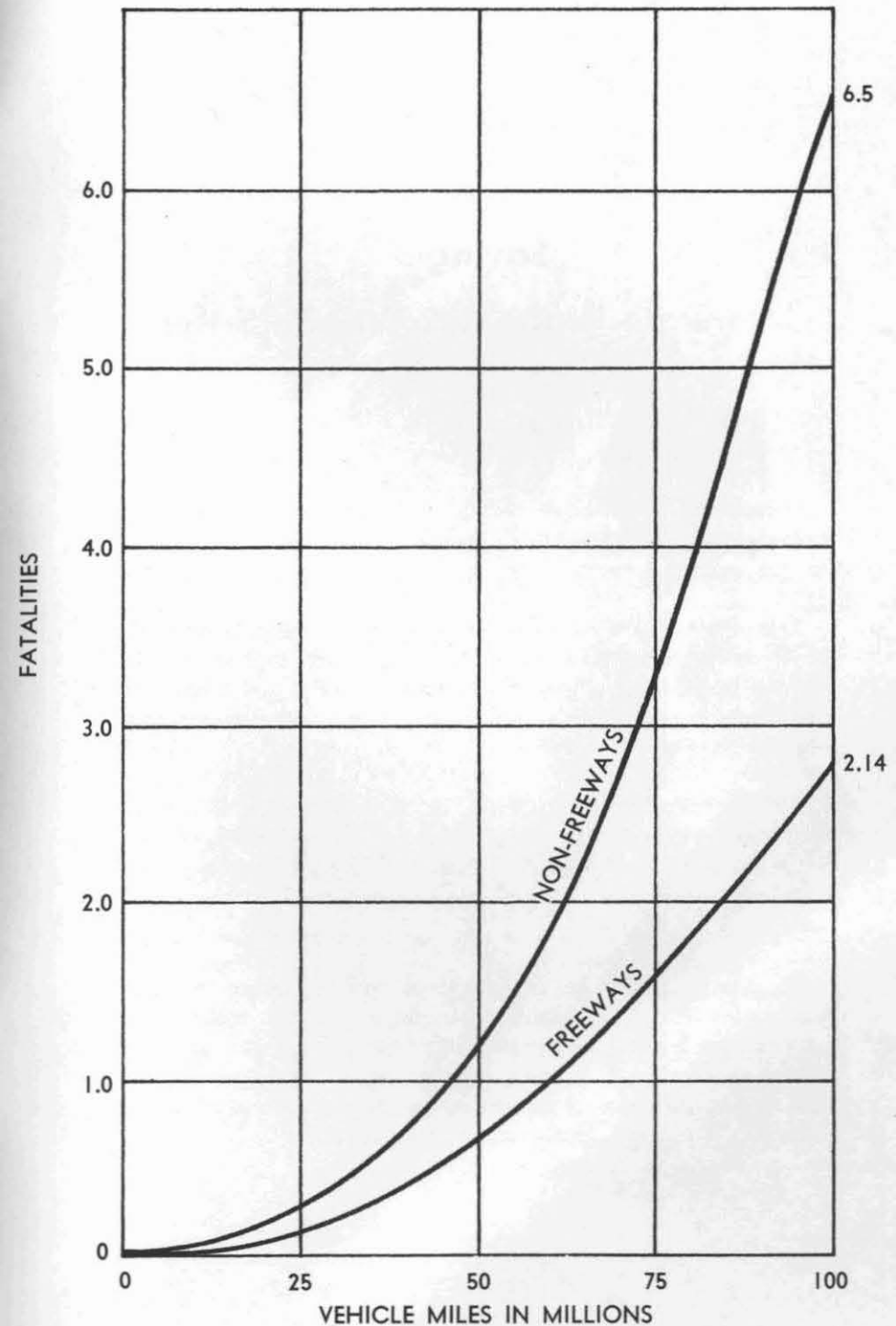
According to studies made by the Texas Highway Department and many others, including the California Division of Highways and the U. S. Chamber of Commerce, the removal of the fast, through traffic from the town's streets usually results in more business for the local businessmen. The residents of the community—the real customers—do more business when they find that they can drive to their stores without fighting traffic and find a place to park.

Interstate Highways Will Be Safer

The building of this Interstate Highway System is the greatest safety program that has ever been undertaken.

Last year in Texas alone 2,611 persons were killed and 112,600 were injured on highways and streets. About half of all highway accidents in Texas are caused by some type of friction either between automobiles or between automobiles and obstacles on the travelway resulting from turning movements, weaving, passing and head-on collisions. The highest percentage of accidents on our conventional highways falls in the last category—head-on collisions. A controlled-access, multilane divided highway is the greatest single factor in reducing accidents of this kind.

Experience over the nation shows that highways designed for full access control are three times as safe to travel as ordinary highways. On the basis of this experience, it has been estimated that construction of the Interstate System to modern standards will save one life each year for each ten miles of the system. Thus some 4,000 lives can be saved every year in the nation and about 290 lives can be saved in Texas, and, of course, there will be thousands fewer injured and property damage will be greatly reduced.



Savings

In addition to the other benefits you will enjoy, these controlled-access express highways will mean a direct saving to you in both time and money.

Expressways already in use are cutting travel time in half. Their design permits traffic to move at much higher speeds than is possible on conventional streets, and since there are no grade crossings or intersections, stop-and-go driving is eliminated.

All this helps to reduce the cost of operating your car as well as saving you time. From studies made on existing highways it has been estimated that the average motorist can save more than one cent per mile by traveling on these highways.

An analysis made by the trucking industry shows that the savings realized by highway truckers when traveling on expressway-type highways is at least five cents a vehicle mile. This will mean even greater savings to you when this reduction in trucking costs is passed on to you in the form of lower prices for the goods transported over the highways.

