GREATER FORT WORTH TRANSIT PROGRAM

[1975]

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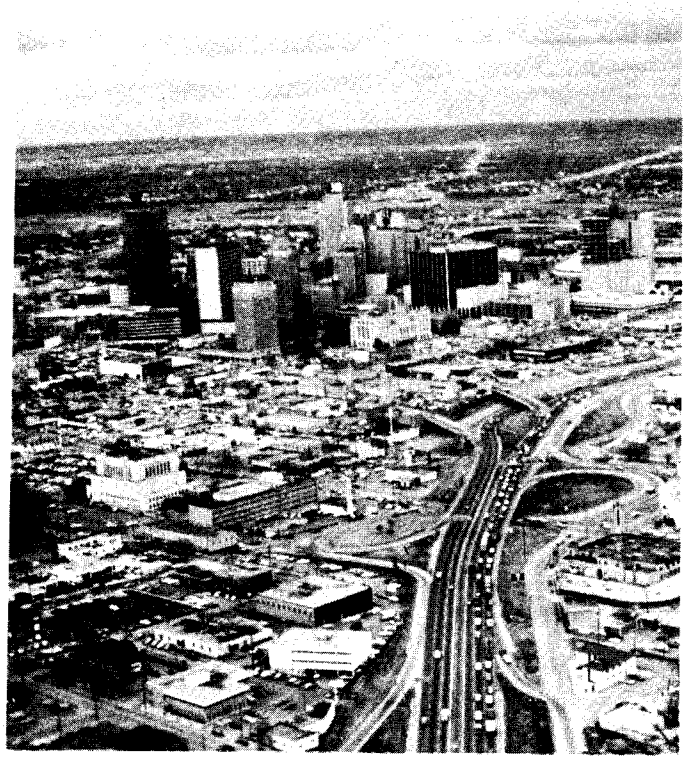
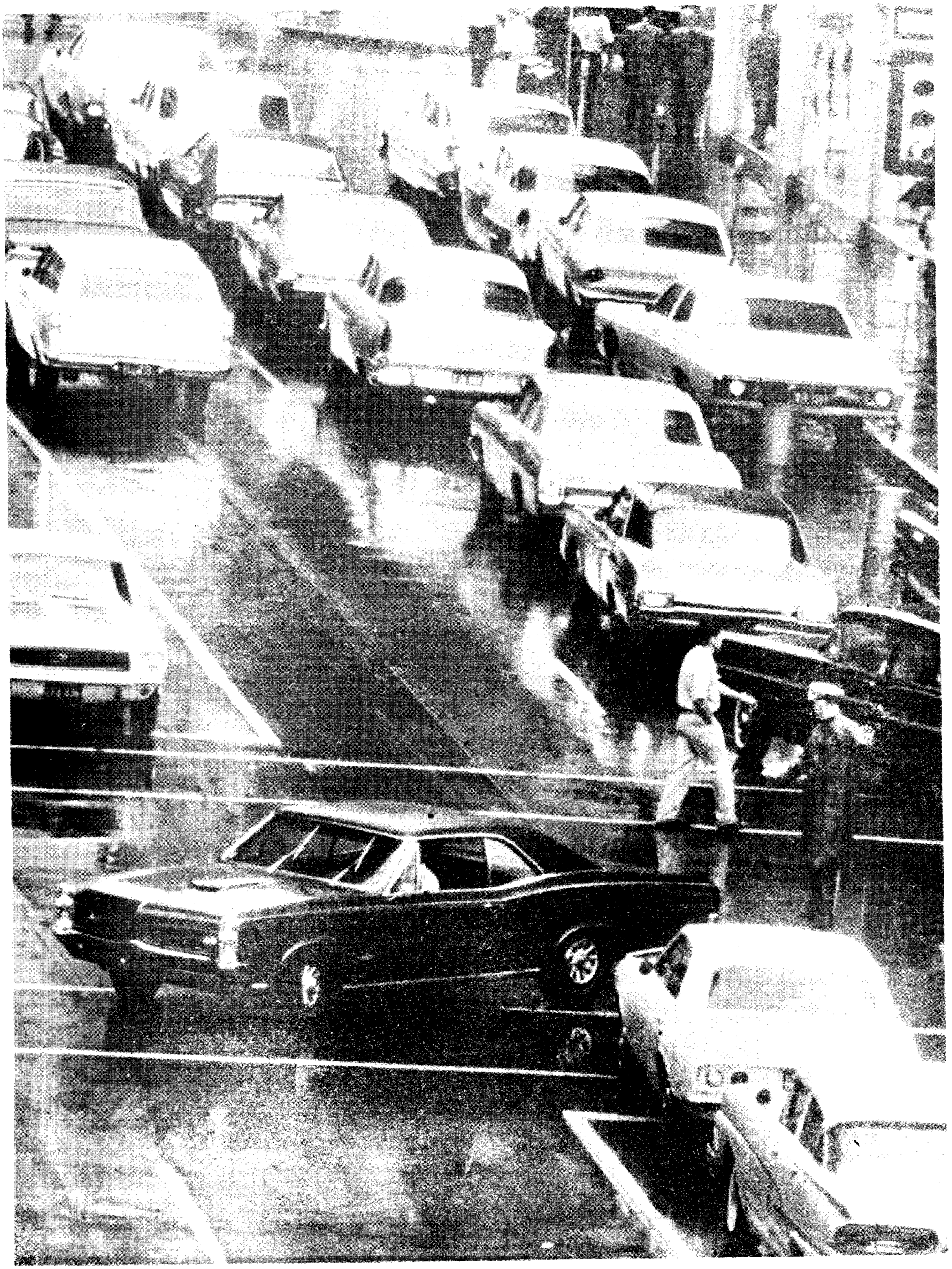




WHY RAPID TRANSIT ?

Greater Fort Worth transportation problems fall into several categories:

Traffic Congestion will make it difficult for the motorist to move on our streets and freeways.

Lack of Mobility will make it difficult for many people without cars to move about our city.

Energy - gasoline for automobiles, at the present usage rate, may be rationed in the near future.

Air Pollution has an adverse effect on both people and property. It contributes to respiratory and other diseases and makes it difficult for some people to live in our city.

Traffic Congestion

Greater Fort Worth transportation problems are getting worse. Traffic congestion results from too many motor vehicles trying to use freeways and arterials during the same period of the day. As population and employment in our area increase, so will the number of vehicles to a point where our streets will no longer operate efficiently. The increase in motor vehicles is most apparent during rush hours.

Several freeways are currently operating in excess of their planned capacity. Traffic forecasts indicate that traffic in the central area of Fort Worth will become severely congested in the late 1970's and early 1980's. The Texas Highway Department plans to make improvements to existing freeways and develop new ones. But these improvements are years away and even then may not be able to keep up with the anticipated traffic congestion. Rapid transit can decrease the traffic load on highways and streets.

Mobility

Even though there has been an increase in the number of automobiles, thousands of people in greater Fort Worth do not have a means to travel. They depend on friends, relatives and taxis to get around. In many cases, it may take several hours for them to get to work, especially in an outlying industrial district or office park, or other places they may want to go.

People without cars -- the young, the aged, the handicapped, the poor, and the housewife whose husband takes the family car to work -- face mobility problems. Rapid transit can assist in solving these mobility problems.

Air Pollution

Another problem facing this area is air pollution. The Environmental Protection Agency has directed that air pollution be reduced by 36% in our region and maintained at that level indefinitely in order to meet national health standards. This air pollution rollback can be achieved to meet the 1975 deadline by stationary sources and transportation controls. To reduce air pollution caused by the automobile we must either reduce vehicle miles travelled, make major traffic improvements to improve traffic flow, or reduce vehicle emissions.

Rapid transit can contribute to all three of these objectives, thus reducing air pollution. For example, it is projected that the proposed subway would reduce vehicle miles travelled downtown by 16% per day. When the entire recommended system is operational, it is projected that a 32% reduction will result in vehicle miles travelled downtown. Transit also would have a significant positive impact upon travel throughout greater Fort Worth.

Energy Crisis

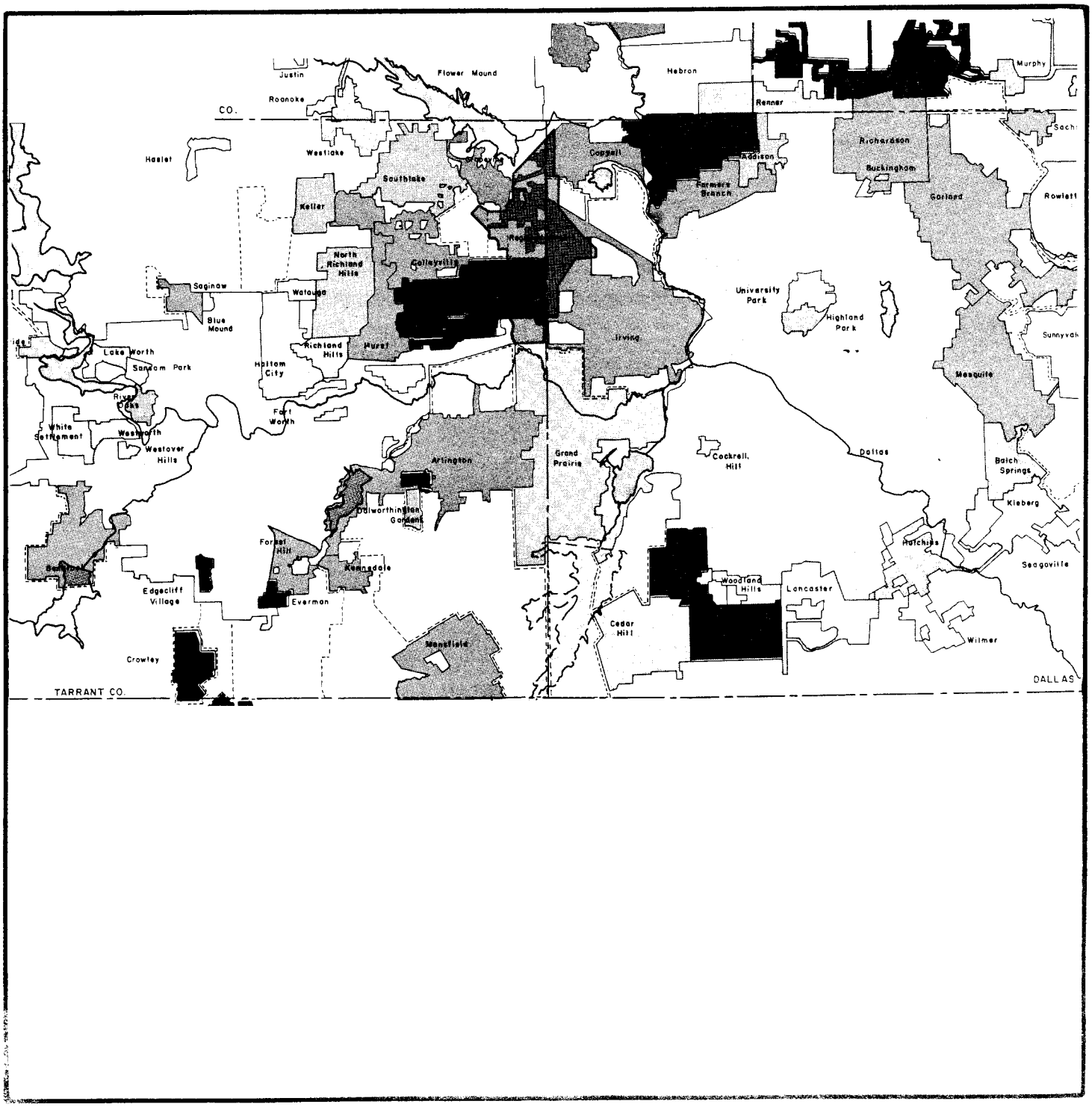
At the present rate of use, known oil reserves in the United States are expected to be depleted in seven to eleven years. We in this country import 28% of our oil needs and this is being increased each year.

As depletion of these reserves becomes a reality, the cost of fuel could increase to as much as $1.50 per gallon. This would have a massive impact on life style and travel habits leading to greatly increased potential utilization of rapid transit, as people will find it much more economical.

REGIONAL FRAMEWORK

As the Dallas/Fort Worth area has grown, residences and workplaces have increasingly spread out. The number of drivers on the road and the distances they travel in the course of daily activities have greatly increased. Traffic congestion has become an everyday nuisance with which a large portion of the region's inhabitants must contend. Less visible but just as severe is the lack of mobility facing non-drivers -- the young, elderly, handicapped, and economically disadvantaged.

Growth trends, travel patterns, and other pertinent factors have been analyzed to determine the potential of mass transit in this region. A primary conclusion is that a balanced system of transportation, with emphasis on both public and private modes, will offer relief from these problems. Based on the Joint Regional Public Transportation Study, a regional framework for transit has been developed. This framework will be finalized when each of the Sub-regional studies is completed.

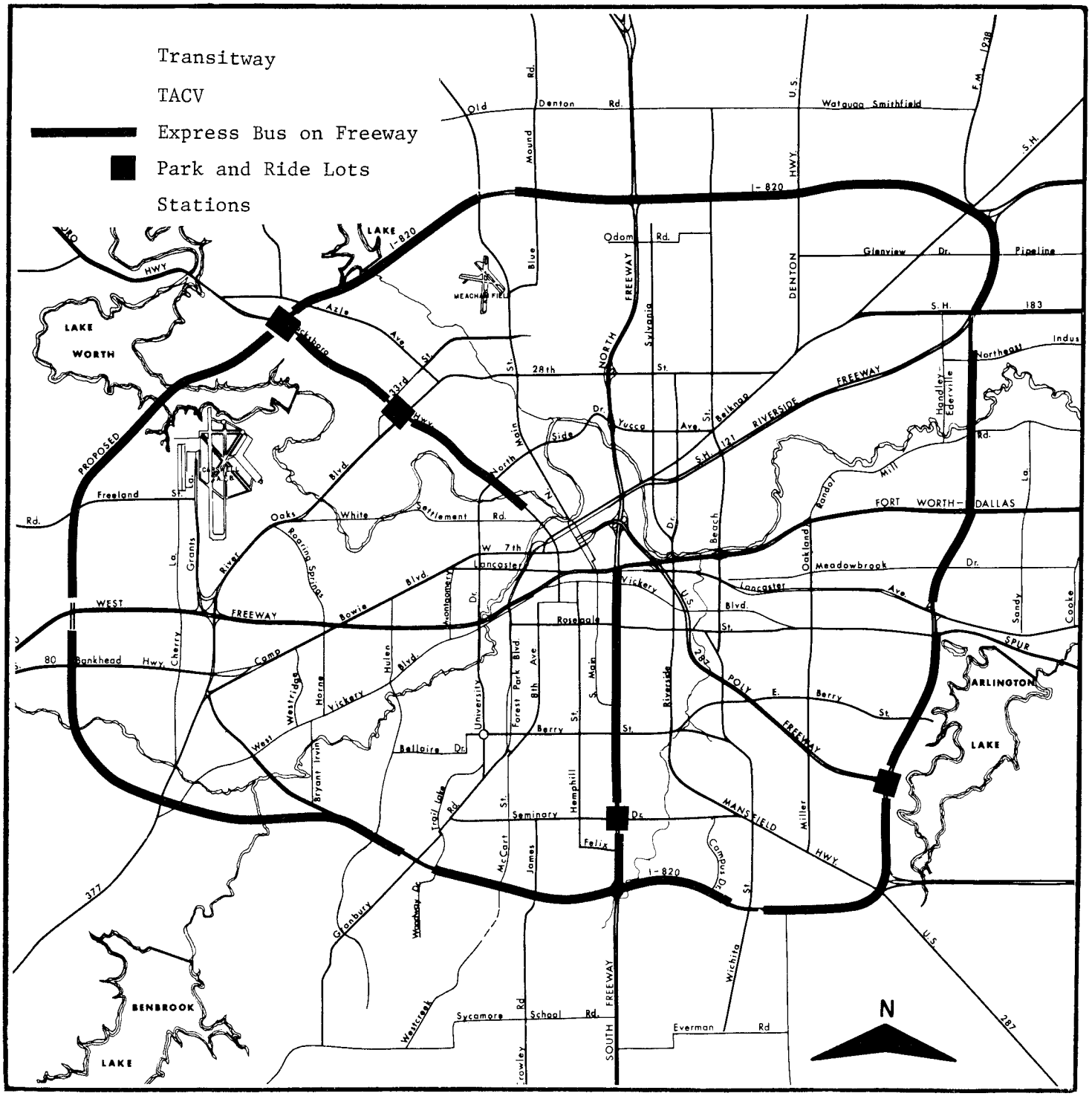


GREATER FORT WORTH TRANSIT PLAN

To serve the travel needs of greater Fort Worth, an integrated bus and rapid transit system is recommended.

The recommended Public Transportation Plan, shown below, includes the use of buses to provide service from residences to the rapid transit routes. The plan includes the following elements:

- Five radial rapid transit routes totaling 38 miles, including a CBD subway.
- A sixth radial route in the Northeast Corridor providing TACV service to the Regional Airport.
- Thirty eight rapid transit stations on the five routes of which nearly one-half would be park-and-ride stations.
- Approximately 490 miles of bus routes on local streets, providing feeder service throughout the city.
- Approximately 75 miles of express bus routes operating on freeways in mixed traffic, and buses with priority over other traffic on arterial streets.



The long range plan should be implemented in four phases, timed to coincide with critical energy, air pollution, and traffic problems of Fort Worth. The first phase could be operating by 1980.

The plan envisions a coordinated system of bus, air cushion, and other rapid transit vehicles. To accommodate the rapid transit and air cushion vehicles, transitways will be constructed along existing railroad and freeway rights-of-way. These transitways will converge on the Central Business District and support the City's linear corridor growth concept.

1. The East Transitway would parallel the Texas and Pacific Railroad. It could be extended to Arlington, Grand Prairie, and Dallas, when desired. With six stations, it would serve 132,000 persons and could provide access to the University of Texas at Arlington, the mid-cities entertainment area, and several large employment centers.

2. The Southeast Transitway would parallel the Missouri-Pacific and the Southern Pacific railroad. It would have five stations and would terminate at Loop 820. It would serve the Tarrant County Junior College South Campus and 109,500 residents.

3. The Southwest Transitway would parallel the Frisco Railroad. It would terminate at a Hulen Street station. In addition to serving 145,000 persons living in this area, the six stations would serve Texas Christian University, the Hospital District, and several other employment centers along the route. A small vehicle people mover would serve the Hospital District from the Rosedale Station.

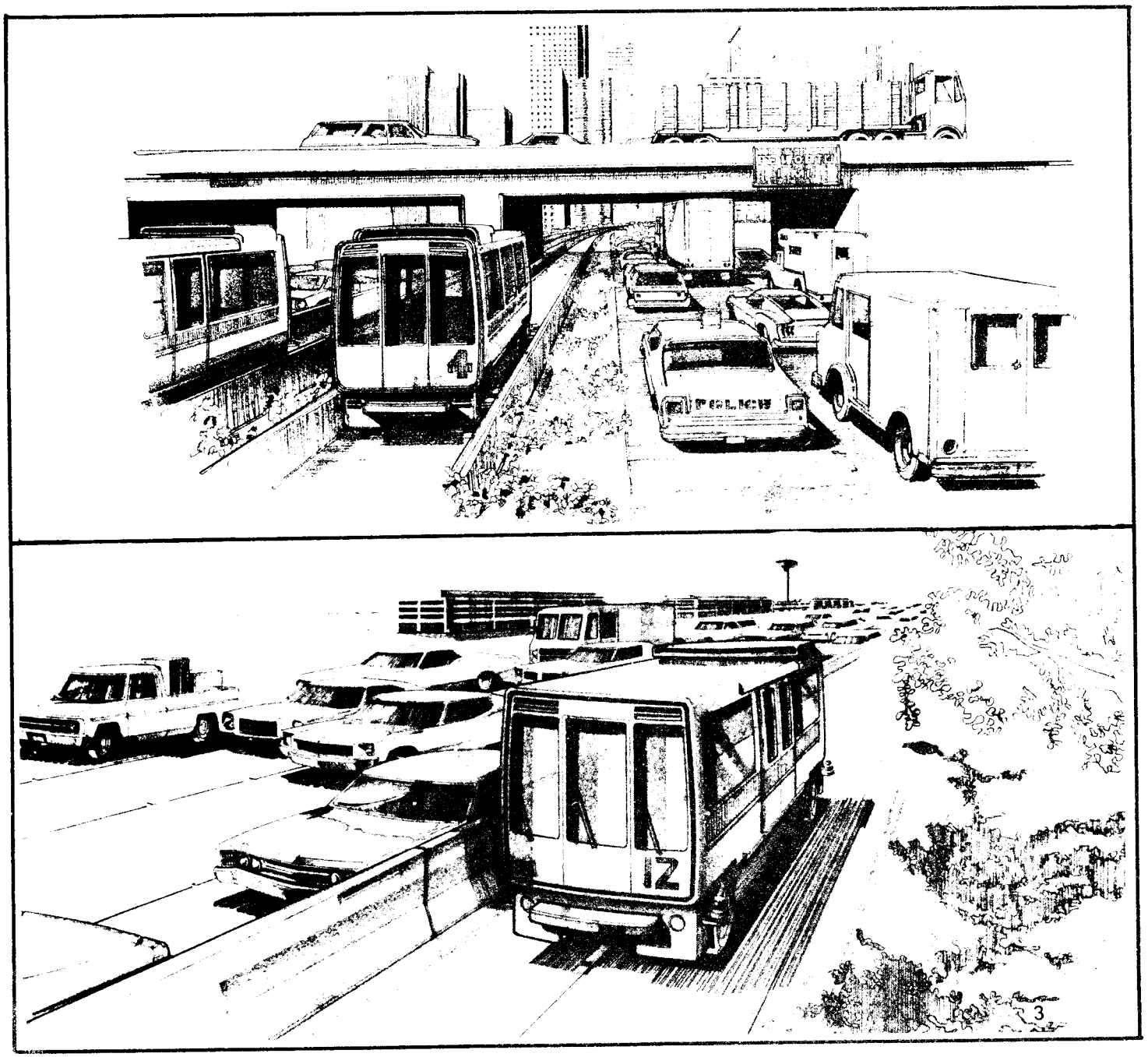
4. The North Transitway would parallel the Santa Fe and Frisco Railroads. It would terminate at Loop 820 with a branch to the east terminating at the North Freeway. It would serve residential, industrial, and employment areas

to the north with eight stations.

5. The West Transitway would follow the West Freeway alignment to Loop 820. This route would serve 129,000 persons living in this area as well as General Dynamics and the Camp Bowie shopping district with eight stations.

6. The Northeast Transitway route would follow the Rock Island Railroad. It would provide access to the Dallas/ Fort Worth Regional Airport, the mid-cities, and Dallas. The TACV system is proposed for the west and northeast routes.

Feeder bus service would be provided and express bus service would be expanded to serve all of greater Fort Worth. Express buses would operate on the South Freeway, Loop 820, and Jacksboro Highway. The present bus routes will be modified so that many will go to the nearest rapid transit station rather than to downtown. Gradually, the entire bus system will be coordinated with the faster rapid transit service so patrons will have the shortest travel times possible. As the rapid transit system is extended outward, the feeder bus services likewise will be extended until the entire urban area is served.



BENEFITS

Persons in greater Fort Worth will benefit from rapid transit in many ways. One set of benefits applies to the present bus rider; another to the motorist who switches to rapid transit; and still another to the person who continues to use his car.

The greatest value of a balanced transportation system with rapid transit and bus services is to the community as a whole. It may be the difference between a city that functions well and one that does not.

Employers would find labor more readily available and suburbanites would not be totally dependent upon the private automobile to get to employment centers.

Accessibility to the area's cultural and recreation sites will be increased. The recommended rapid transit system would strengthen the downtown area and permit individuals to have greater flexibility in their selection of housing due to faster travel time to work.

The recommended rapid transit system, when implemented, would make educational, recreational, and social facilities accessible to greater numbers of people and would produce positive impacts on the environment and on area development.

Rapid transit improves environmental protection by:

1) reducing air and noise pollution,
2) preservation of aesthetic values.

As transit diverts automobiles from highways, congestion decreases, speeds increase, and the amount of pollutants emitted from cars decreases. Electric powered rapid transit vehicles and new buses with anti-pollution devices pollute far less per passenger than do cars.

The demand for highways will be less with rapid transit than without it. Highways sometimes require vast right-of-way and the removal of homes and trees, while rapid transit requires relatively little right-of-way to develop much greater passenger carrying capacity.

Rapid transit benefits are as follows:

- Greater mobility and less reliance on one mode of transportation.
- Substantial time savings for both the motorist and the user of public transit.
- Reduced traffic congestion, especially during peak hours.
- More flexibility in transportation for everyone.
- Less need for a second car since more trips will be easily made by public transportation.
- Service to people presently not serviced by public transit.
- Less need for costly auto parking space in downtown and other activity centers. Outlying parking lots will permit transit to carry people into high density so land can be used more efficiently.
- A framework for orderly growth and development for the area. Transit can structure growth in the linear corridor pattern by providing high levels of accessibility in corridors comparable to freeway service. Orderly growth is very economical because it permits maximum utilization of urban capacities such as utilities, space, and transportation without congestion and breakdown in service.
- A stronger tax base through attraction of new business, housing and related development at stations, and throughout the city.
- Creation of new construction and transit operation jobs.
- A system that can be expanded in an orderly manner to serve increased growth and need.
- Reduced need for additional highway construction.
- Reduced highway accidents.
- Rapid transit offers highly expansible capacity without using much urban land. The rapid transit route which uses as much space as a two lane street can carry 30 to 40 times as many people. This means that rapid transit construction has a longer useful life than street facilities.

STATION DESIGN

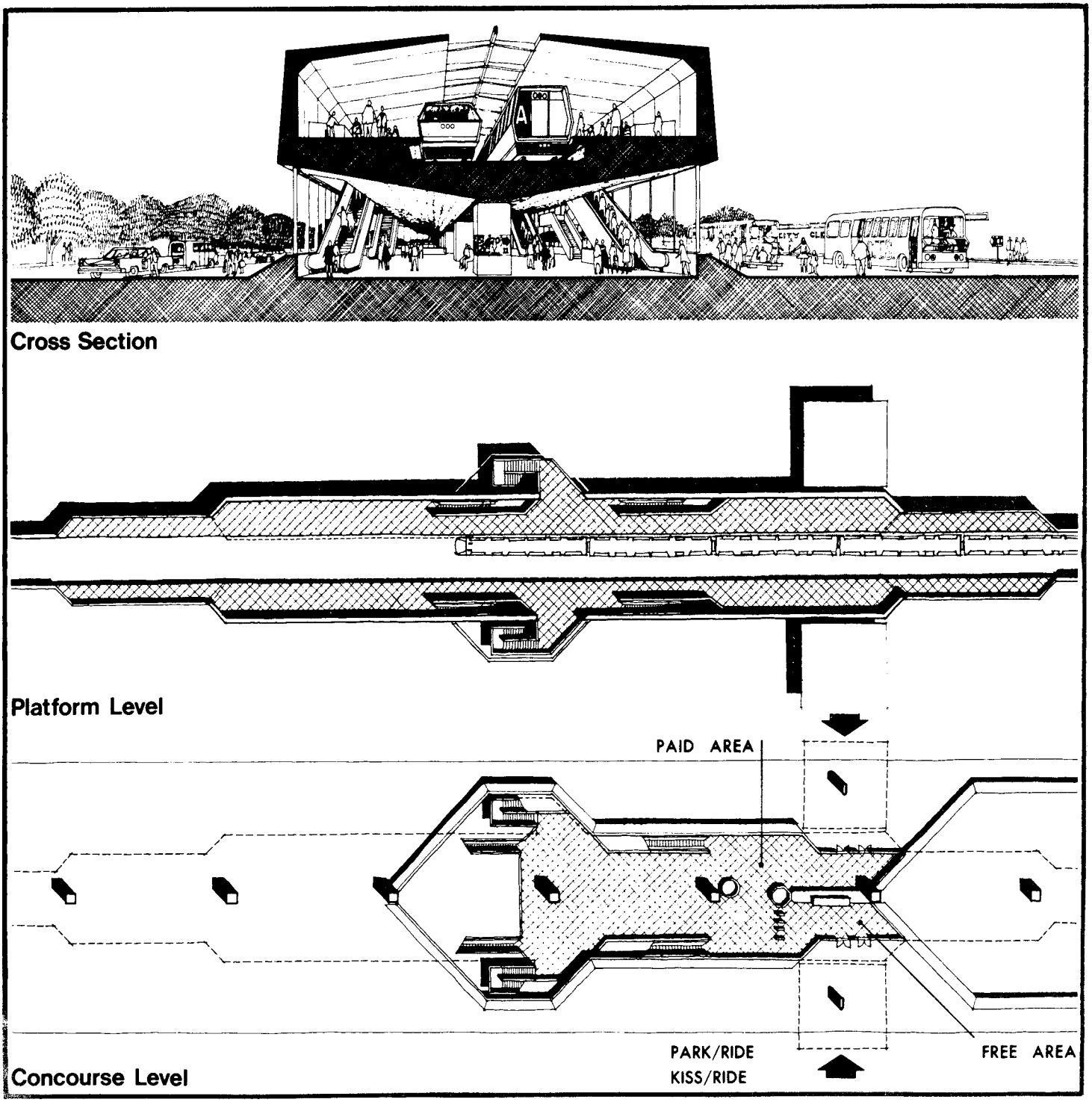
It is recommended that each transit station be designed to accommodate large numbers of people with minimum confusion and discomfort, as well as be a community asset and a center for activity.

Transit stations should have spacious interiors with year round air conditioning. Special loading and unloading ramps would enable riders to move easily from feeder buses to station platforms.

Turn-around areas for autos would accommodate "kiss-and-ride" trips, and turnstiles will be located at several points along the platform to minimize crowding. Well designed, color-coded signs would aid the rider in choosing the correct routes.

Stations would be designed to be visually and functionally integrated with their surroundings. The area would be landscaped and traffic engineering improvements would minimize auto congestion.

Parking lots would be constructed as a part



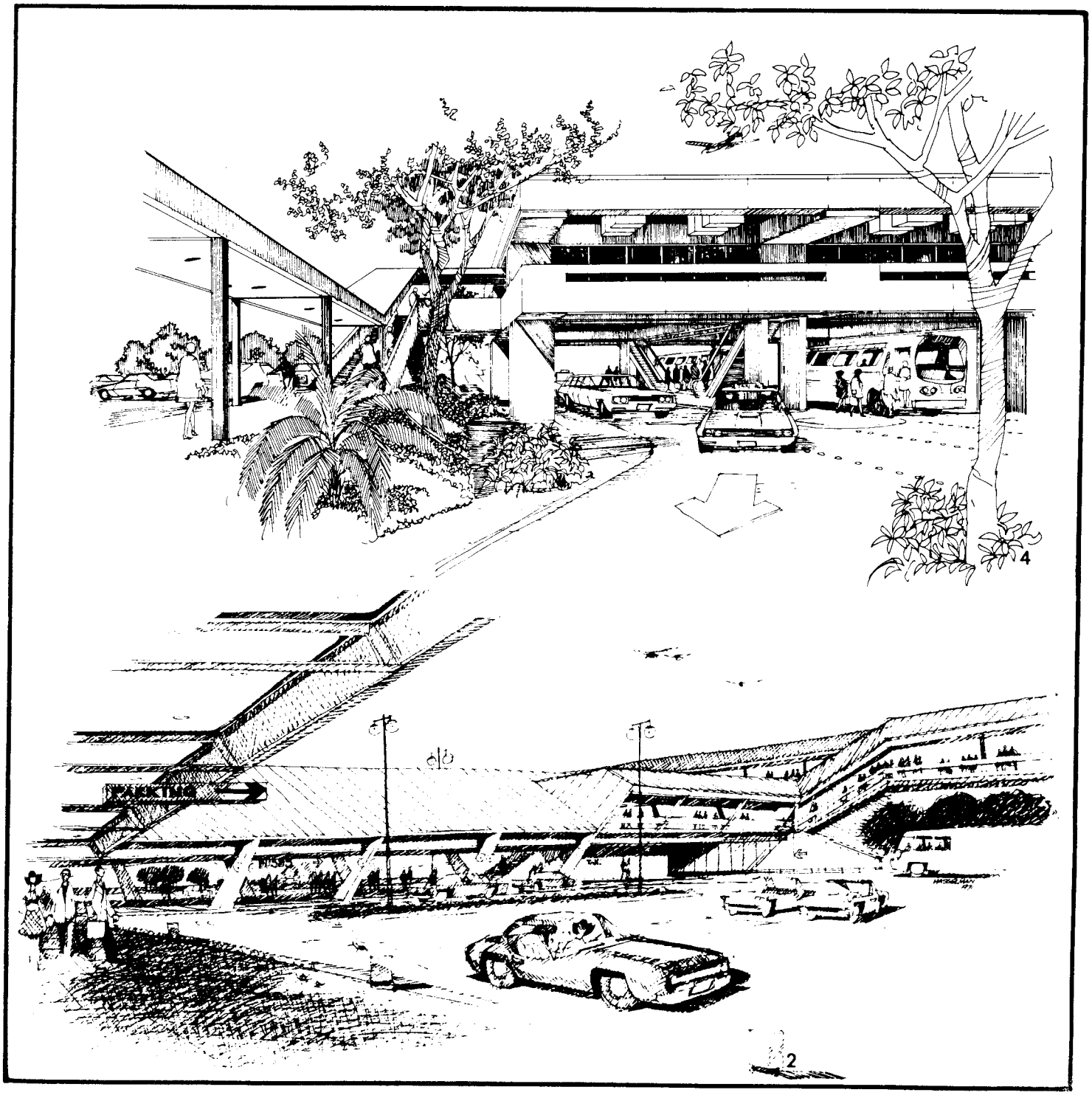
of the park-and-ride transit stations. Their size would vary from 200 to 3000 parking spaces.

Special facilities including covered walkways, good lighting, and entrance and exit structures would make use of these stations pleasant and convenient.

Direct access from transit stations to surrounding buildings should be provided. As natural "people centers", the transit stations will encourage private developers to construct apartments, office buildings, and other projects directly adjacent to them.

Bus shelters should be equipped with benches, lights, weatherproof enclosures, and lucid, color-coded maps showing the routes, schedules, and transfer points throughout the entire system.

Rapid transit structures and stations may take different forms as appropriate for topographic and development conditions along the routes. Stations will be at-grade, aerial, or subway.



VEHICLE DESIGN

Rapid Transit

It is recommended that a coordinated bus - transitway system be developed in greater Fort Worth. However, to maintain flexibility, the choice of the specific rapid transit vehicle should wait until final design plans are begun, so that the latest technological advances can be incorporated. Safety, operating and capital costs, reliability, speed attained from a grade separated system and compatibility with the environment provided the basis for this recommendation.

Modern, electric - powered cars, similar in design to the vehicles used at the new Regional Airport or cars similar to those used in the Bay Area Rapid Transit system (BART) in San Francisco, could be used. They would be smaller and lighter, but no less smooth or comfortable riding than the BART Rapid Transit cars. Wide doors permit quick loading and unloading, automated operation permits reliable scheduling, and top speeds of approximately 70 m.p.h. with very high acceleration and deceleration rates to be obtained.

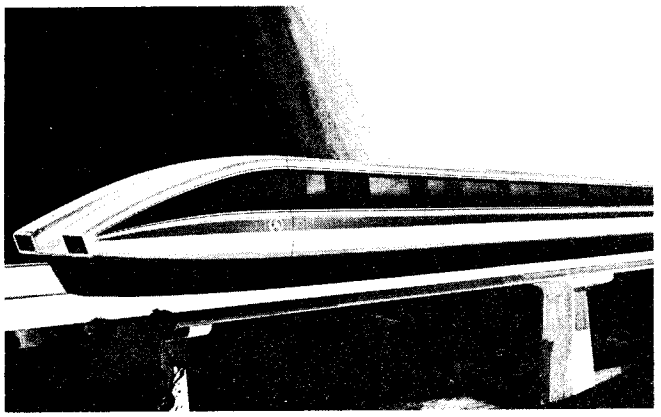
Each car should accommodate from 40 to 50 passengers in a comfortable interior. This would allow a two lane transitway to accommodate up to 20,000 persons per lane per hour - ten times that of one freeway lane of conventional automobile traffic.

U-TACV

A Tracked Air Cushion Vehicle may be used on a northeast corridor route linking the Fort Worth CBD with the Regional Airport and Dallas. Prototypes of this vehicle are being developed and tested by the United States Department of Transportation. Linear induction engines would enable these vehicles to glide along smoothly at speeds up to 150 mph. Feasibility of such vehicles for this route is currently being studied. It is also recommended that the TACV system be used in the west corridor if TACV is built in the northeast corridor.

Buses

To provide for greatly improved public transportation service within greater Fort Worth, it will be necessary to acquire a number of new buses to provide services proposed in Phases 3 and 4. These would be similar to those recently purchased as part of the immediate action transit improvement program. There would also be a need for special buses to provide high speed service on freeways and for small buses for circulation service in major activity centers.



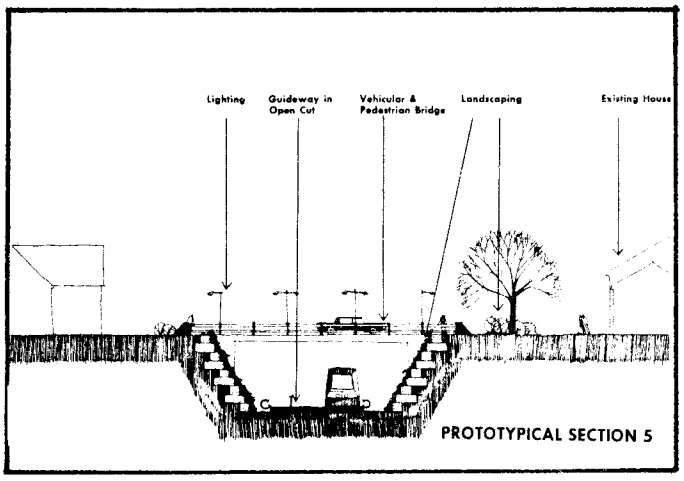
ROUTE DESIGN

It is recommended that the horizontal and vertical alignment of transit guideways be designed to minimize environmental impact on surrounding homes, businesses, institutions, and open spaces. Building transitways adjacent to or within existing rail and highway rights-of-way will minimize the negative impacts such as noise, community disruption, visual intrusion, and displacement of businesses and homes.

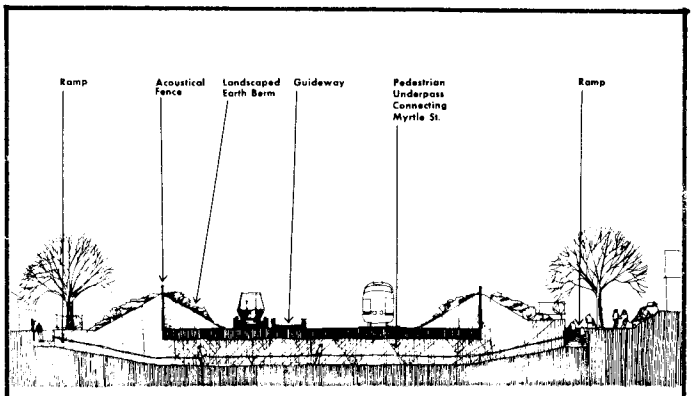
Transitways should also be visual and functional assets to the areas through which they pass. The method of construction will be varied to make the overall impact of the transitway beneficial and aesthetic.

- Limited amounts of underground structures will enable transitways to cross over street intersections and otherwise allow free passage across the route.
- Aerial structures will enable transitways to cross over street intersections and otherwise allow free passage across the route.
- Where a visual or noise problem might be created, the transitway can be depressed in an open cut.
- Where impact objectives dictate the transitway may be shielded by earth berms.

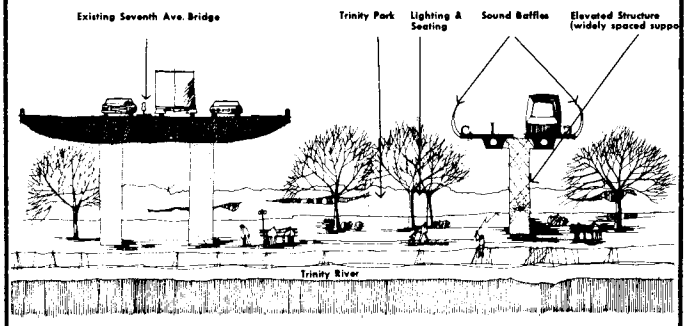
These proto typical cross sections illustrate some of the alternative conditions and the ways which will be used to insure the transit system is an asset to the community.



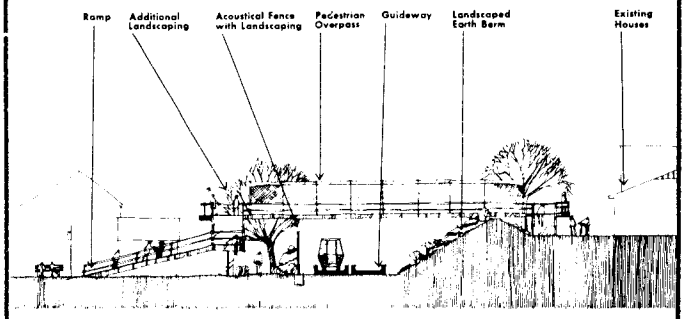
PROTOTYPICAL SECTION 5



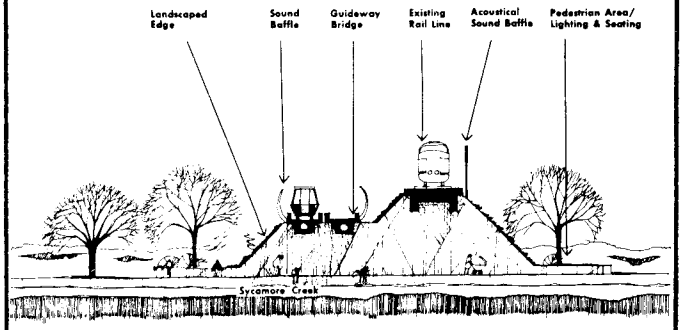
PROTOTYPICAL SECTION 1



PROTOTYPICAL SECTION 2



PROTOTYPICAL SECTION 3



PROTOTYPICAL SECTION 4

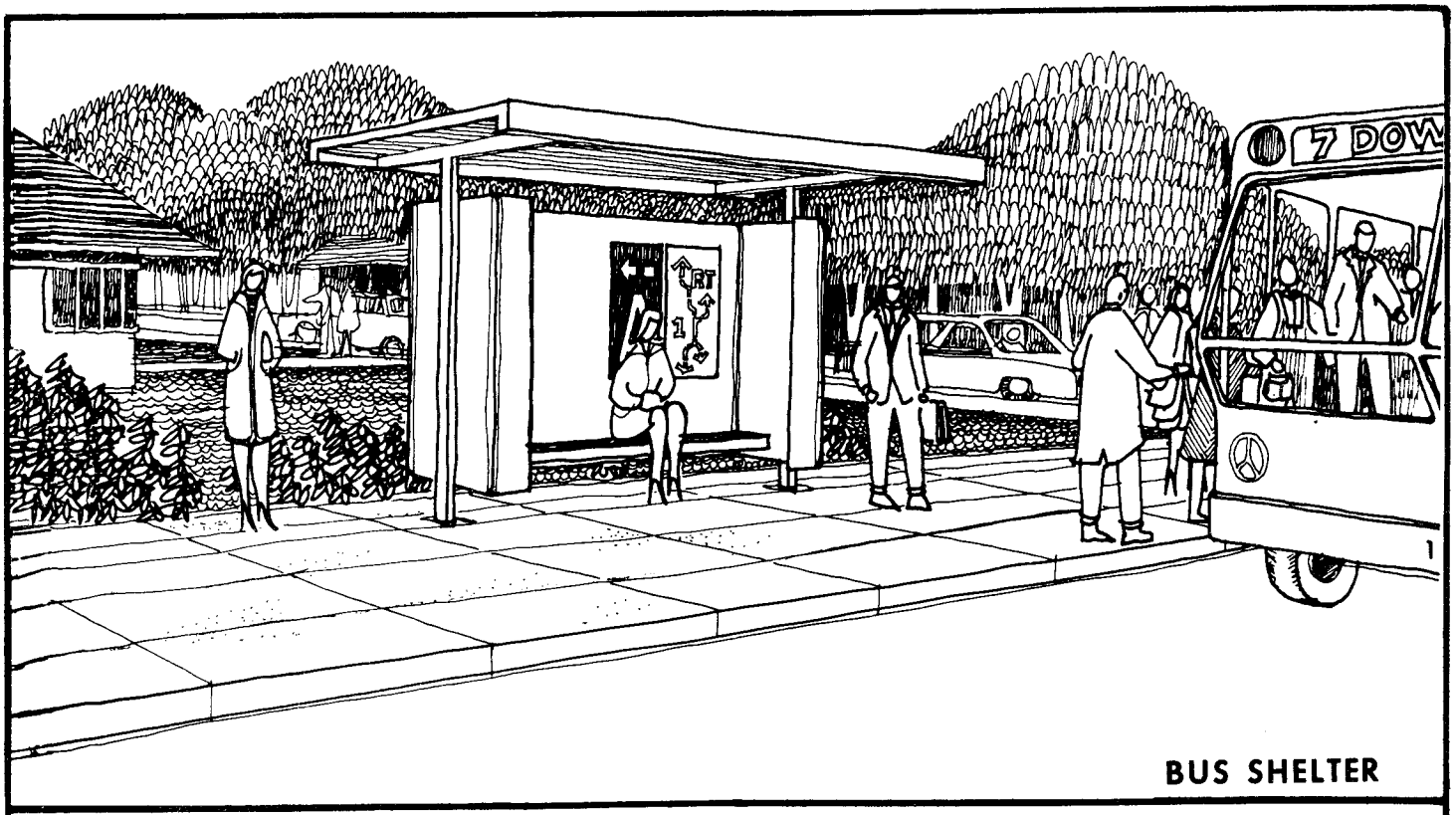
PASSENGER FACILITIES

It is recommended that the system be designed to ensure maximum passenger convenience and comfort, so that waiting and travel times are minimized.

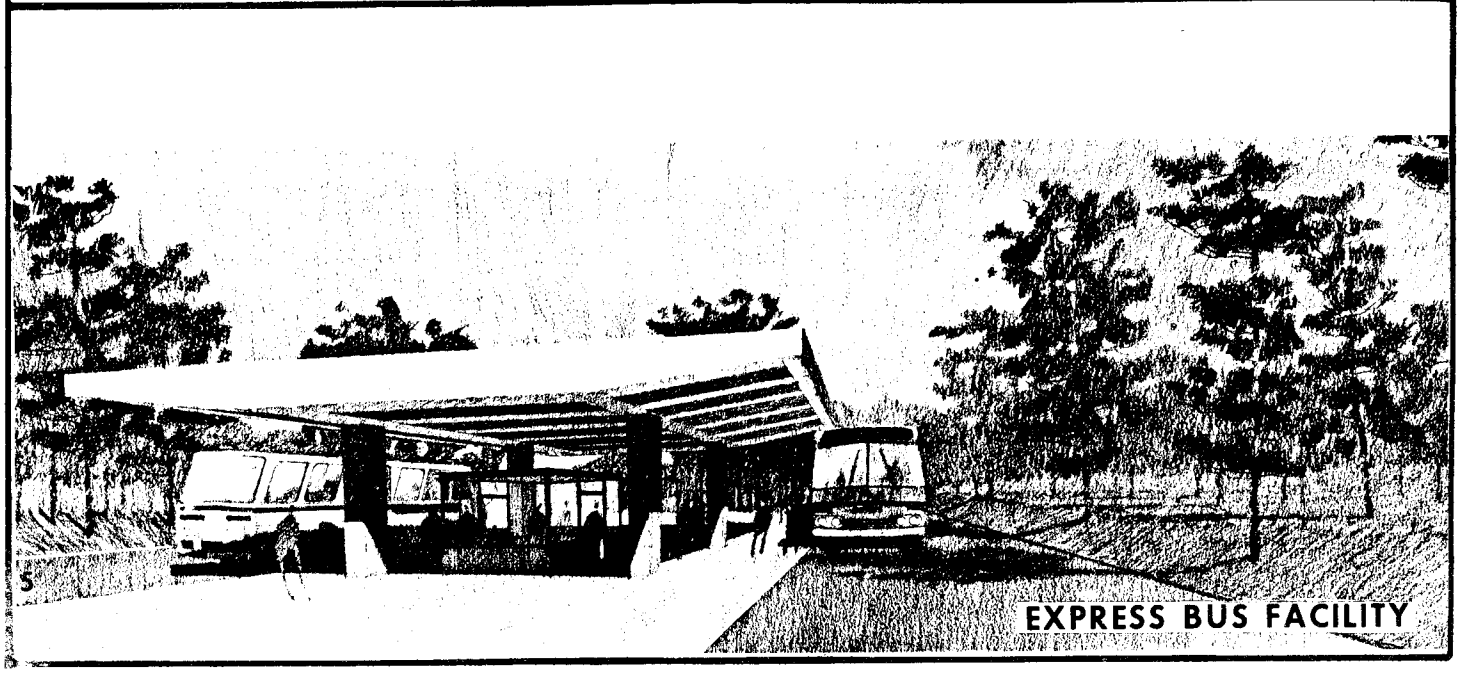
A person using the system in the morning will catch a local feeder bus at a convenient neighborhood shelter or drive his car to a park-and-ride transit station. The feeder bus will take its passengers right up to the station platform by means of a special loading ramp designed to enable riders to step directly off a feeder bus and onto a transitway vehicle.

At the station a person will have easy access into the station interior where he may purchase a newspaper before buying his ticket to ride rapid transit.

A wall-mounted ticket vendor will allow a person to buy a single ticket which will be good for several trips. Each time the person inserts his ticket in the automatic fare collection gate the value of that trip will be subtracted from his ticket.



BUS SHELTER



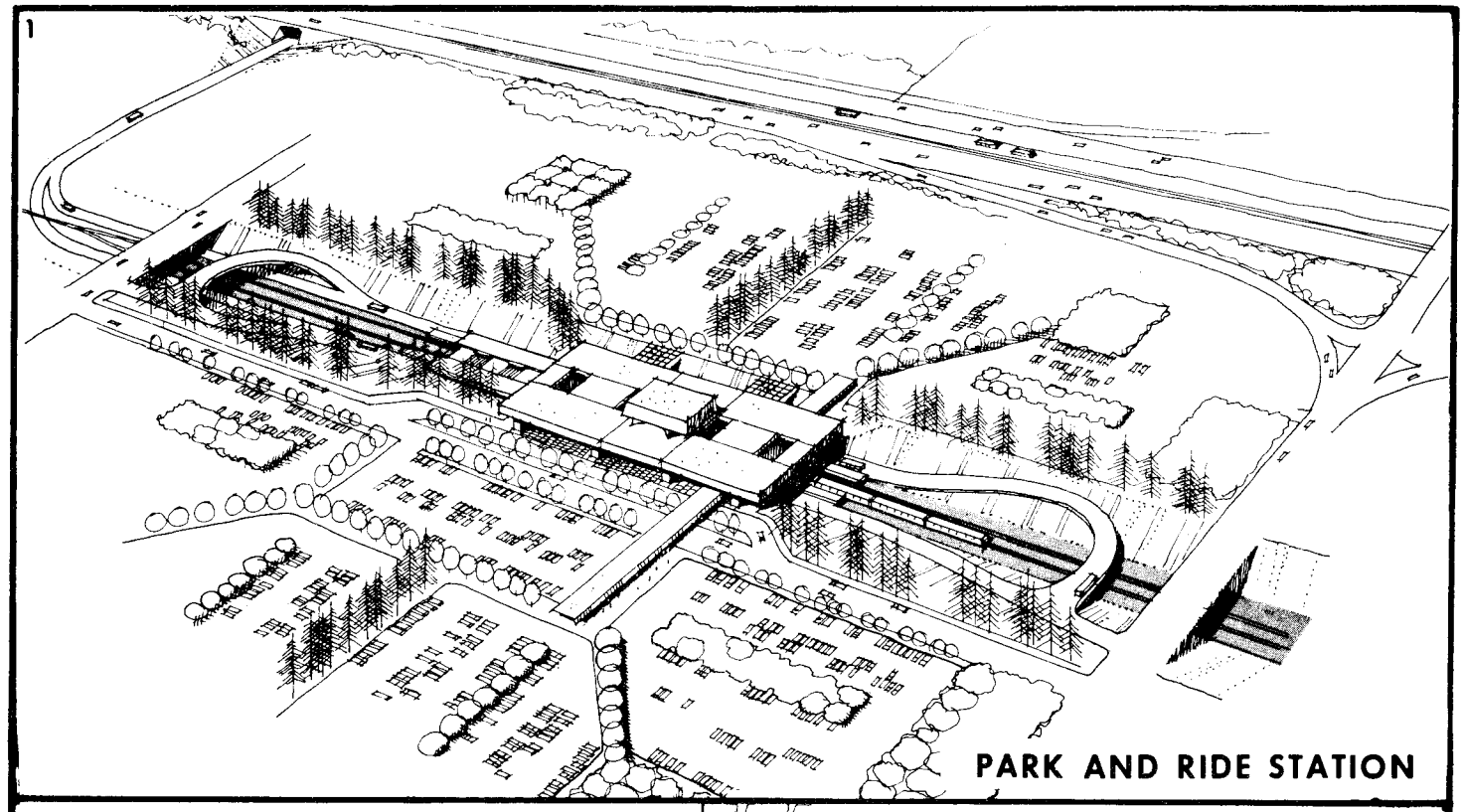
EXPRESS BUS FACILITY

After a short wait the passenger boards the rapid transit vehicle and sits down for a speedy trip to his destination. The car's interior is roomy and clean and comfortably air conditioned. The vehicle will stop at other stations, where other passengers board the vehicle, before arriving in downtown Fort Worth.

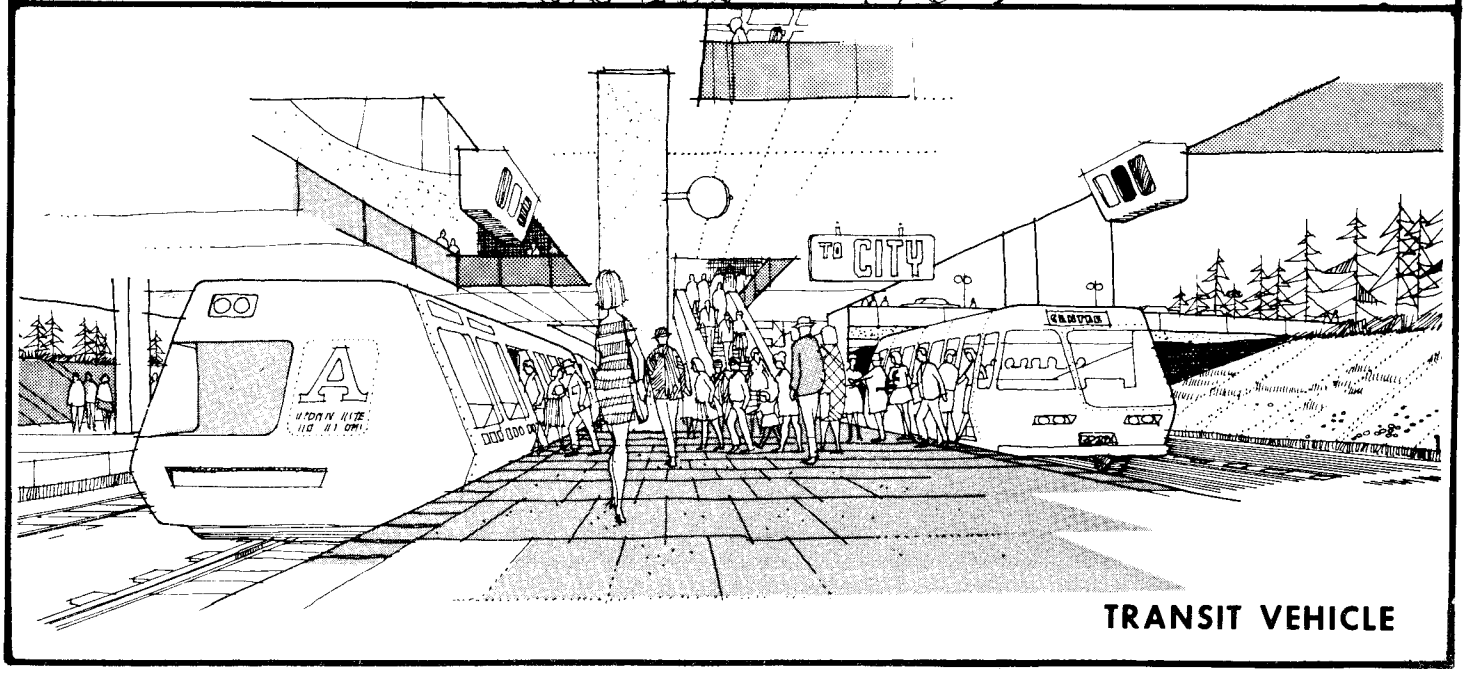
Many people will get off the system at one of the downtown stations. After arriving downtown the passenger passes through the mezzanine level and moves up an escalator to the street.

Elevators, ramps, and special parking will be provided at all stations so that aged and handicapped persons can use the transit system.

Feeder bus and rapid transit routes and schedules will be coordinated and posted at convenient locations in all transit stations. Feeder buses will cover a wide geographic area, passing within one-quarter mile of residences. Also buses could be flexible in operation and be routed by radio to meet unusual demands.



PARK AND RIDE STATION



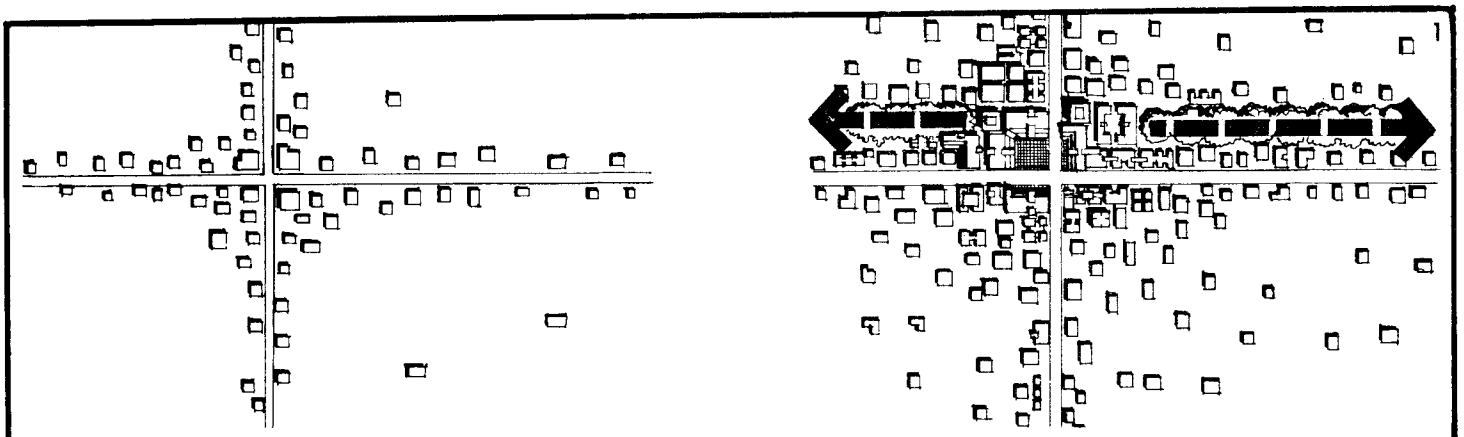
TRANSIT VEHICLE

COMMUNITY IMPACT

A rapid transit system has a major impact on the development and form of a community. This is especially true around transit stations since they function as collection points for many people. Transit can stimulate increased densities and give greater choice of places to live, work, and enjoy city living.

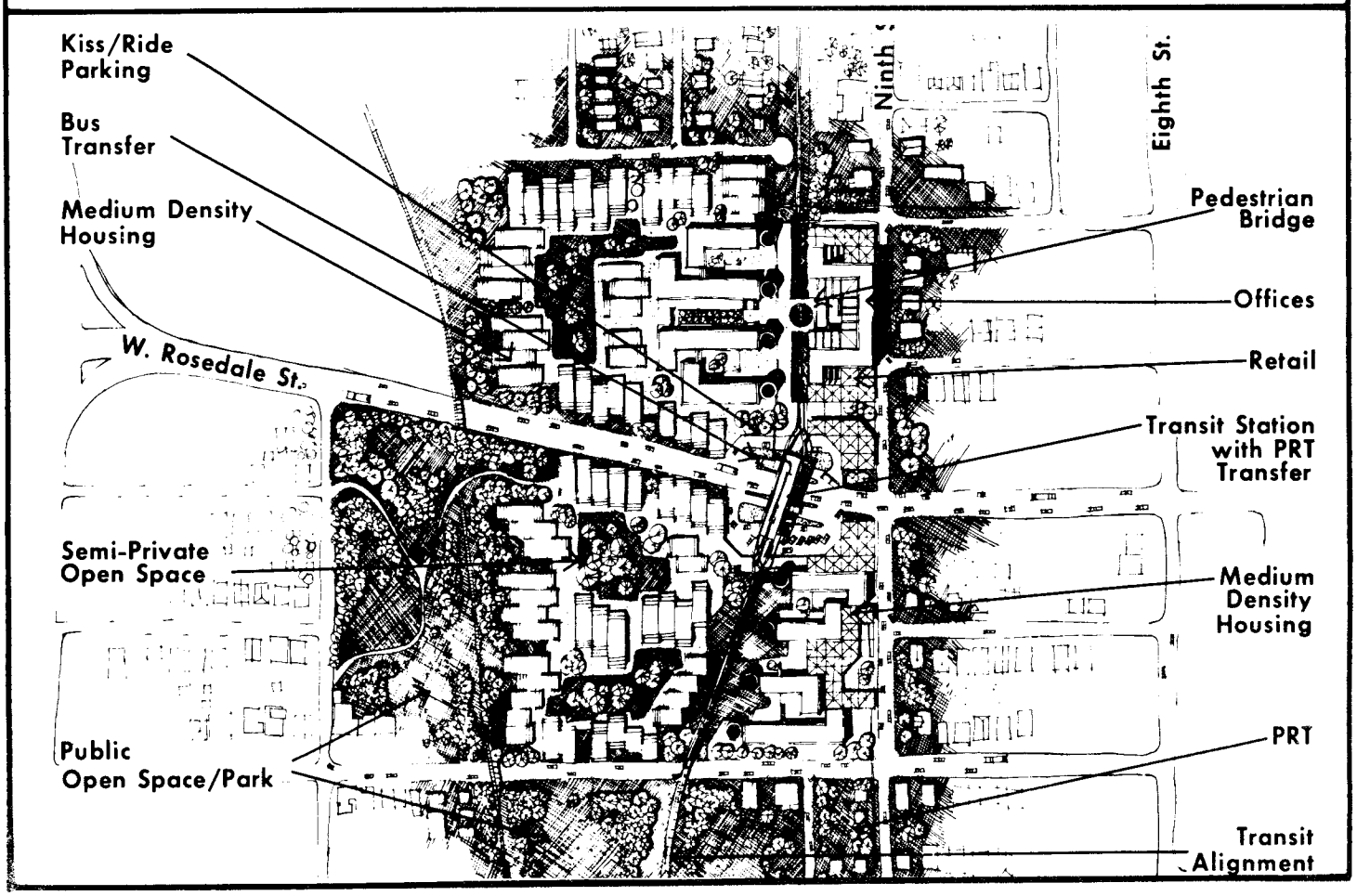
The future population will require more industrial and commercial facilities. Rapid transit is recommended as an effective tool to help channel this growth by attracting urban development into corridors and around stations.

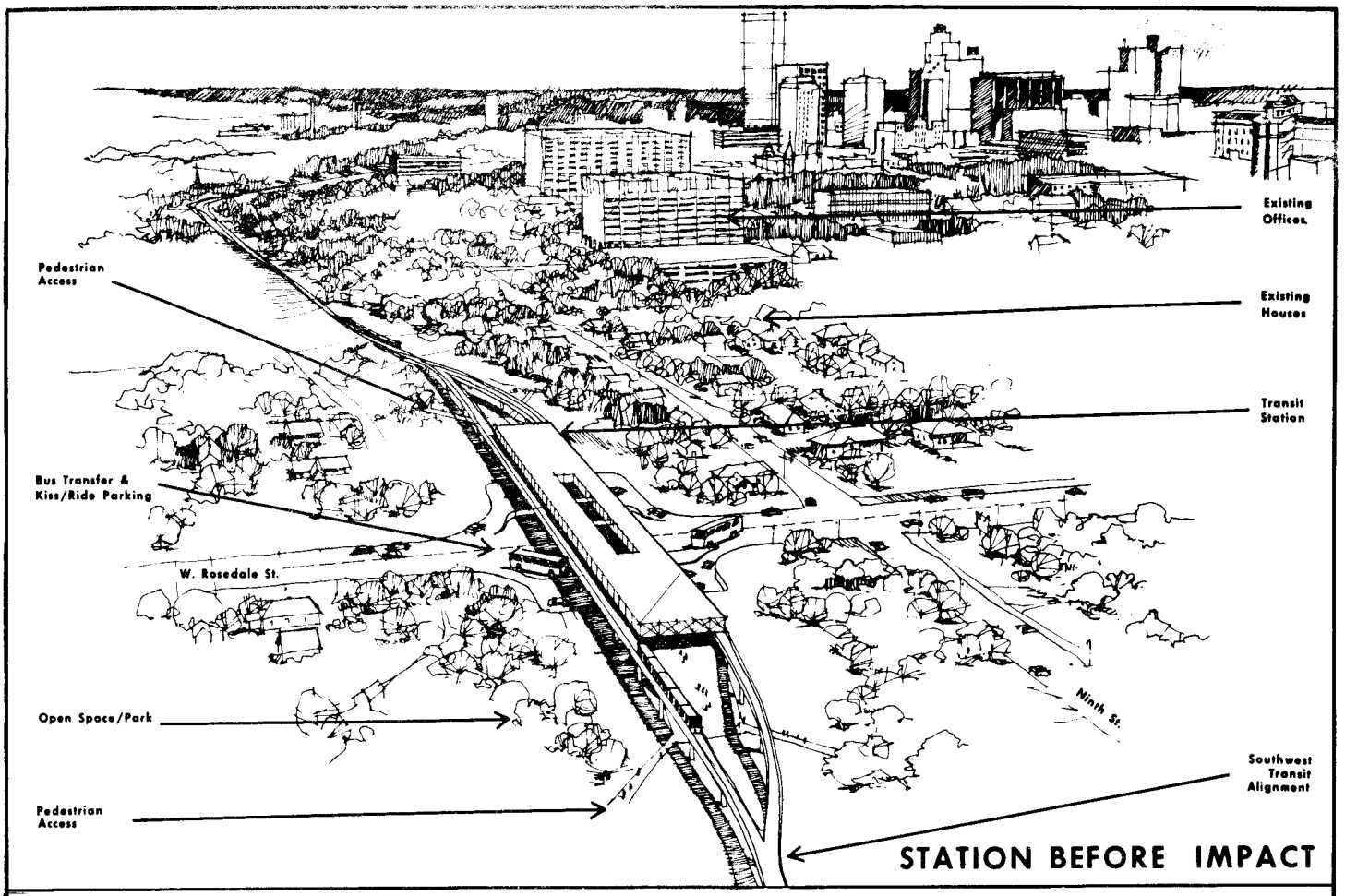
Detailed land use and zoning plans should be prepared as part of the next phase of planning to maximize the benefits of the development potential and to implement the linear corridor concept. In addition development of air rights at downtown and suburban transit stations should be encouraged.

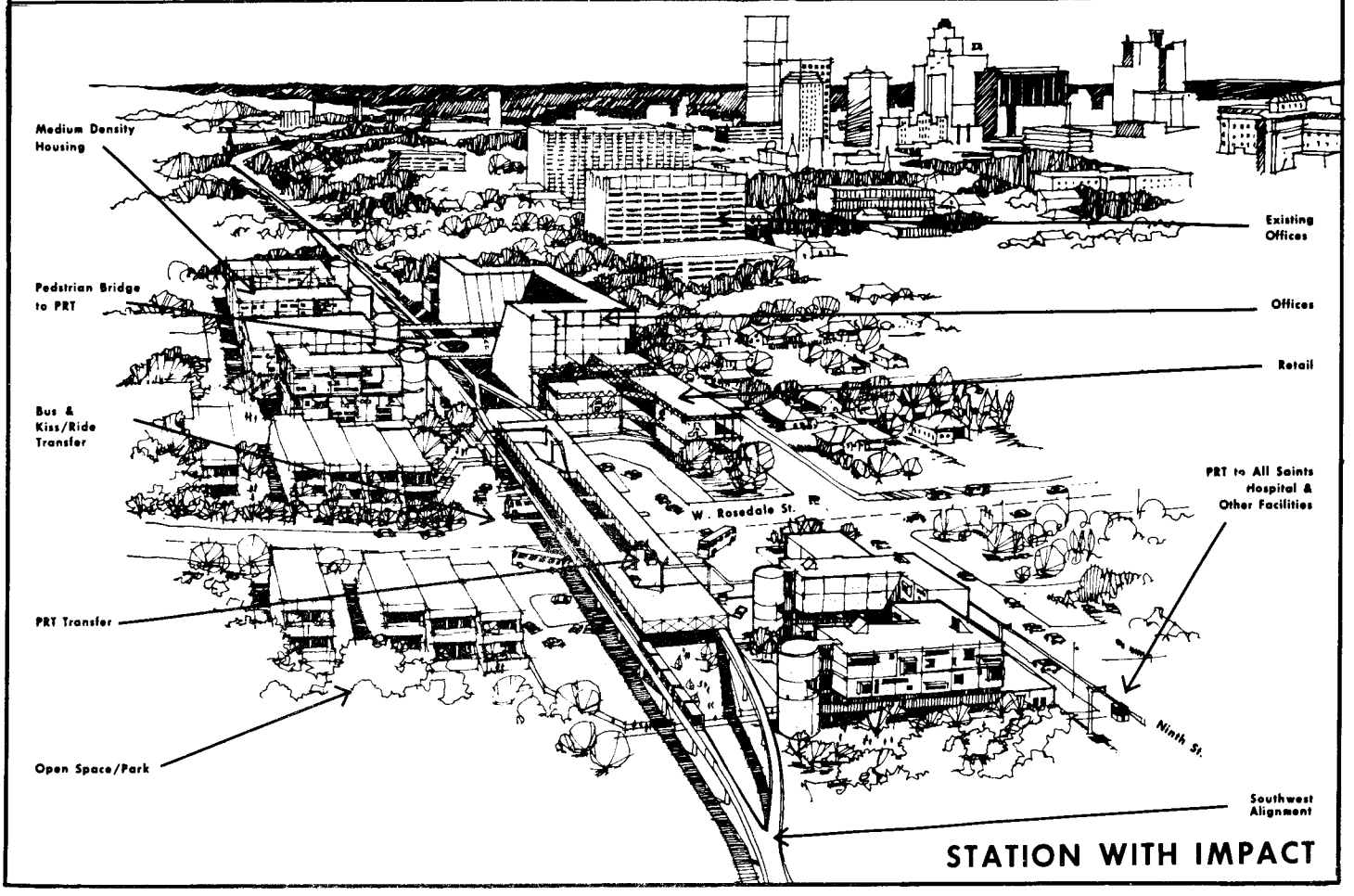


TYPICAL CROSSROAD, AUTO-ORIENTED DEVELOPMENT

TYPICAL CLUSTER DEVELOPMENT AROUND TRANSIT STATION




Existing Offices
Pedestrian Access
Existing Houses
Transit Station
Bus Transfer & Kiss/Ride Parking
W. Rosedale St.
Ninth St.
Open Space/Park
Southwest Transit Alignment
Pedestrian Access
STATION BEFORE IMPACT

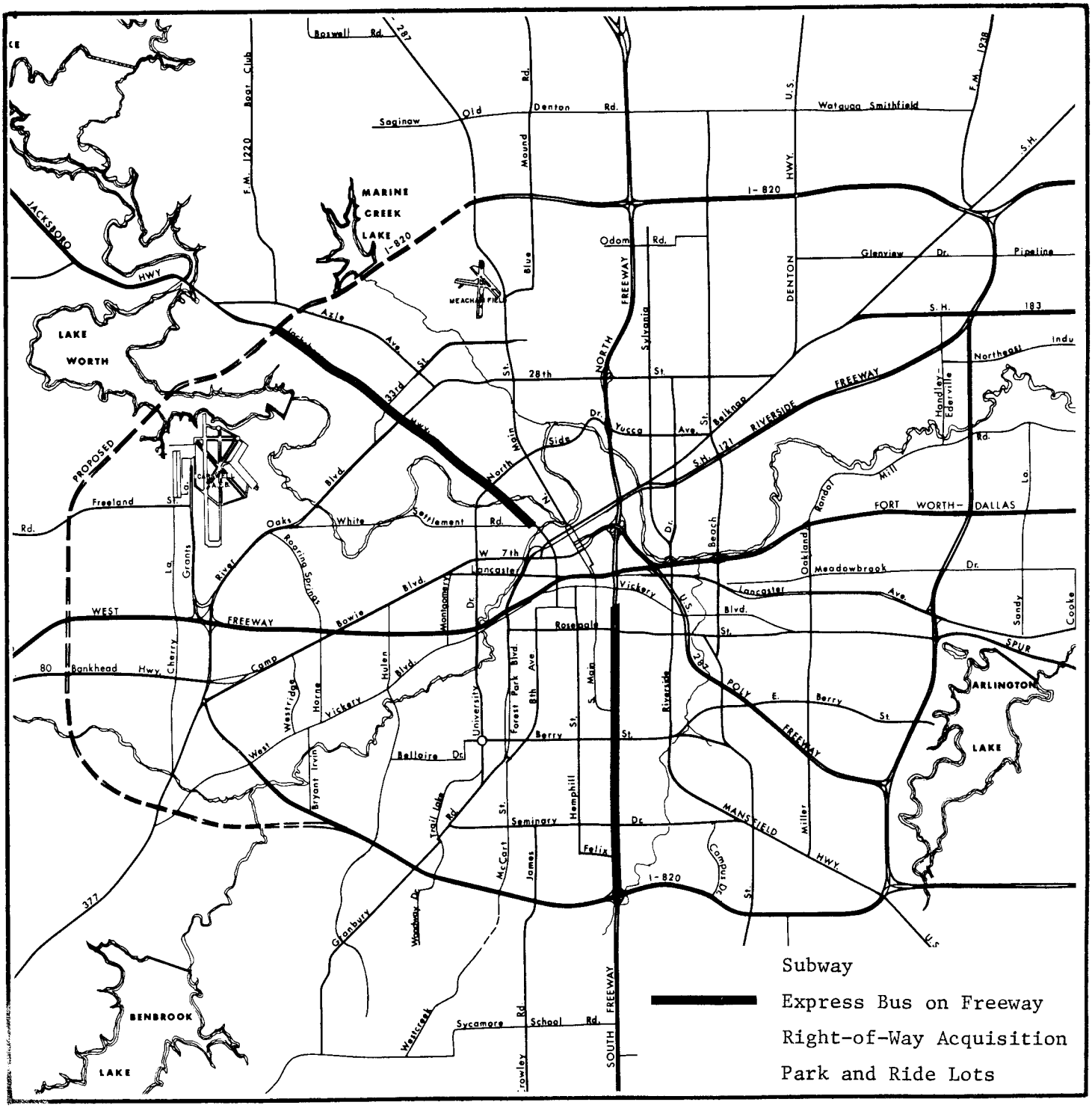

Medium Density Housing
Existing Offices
Pedstrian Bridge to PRT
Offices
Retail
Bus & Kiss/Ride Transfer
PRT to All Saints Hospital & Other Facilities
W. Rosedale St.
PRT Transfer
Ninth St.
Open Space/Park
Southwest Alignment
STATION WITH IMPACT

PHASE 1

The recommended Phase 1 Plan includes the acquisition and modernization of the existing Leonard's subway and construction of one mile of additional subway south to a new parking lot. Phase 1 would also include engineering and environmental studies and purchase of 38 miles of rapid transit right-of-way. Final design and acquisition of the existing subway could begin in 1974. It is recommended that the subway be open to traffic in 1980 in time to respond to downtown traffic problems.

To ensure system development, the purchase of right-of-way for the entire rapid transit system would follow more detailed engineering and environmental studies.

Within the Central Business District, a pedestrian and bus mall is planned on Throckmorton Street which will provide a central point for dispersing and gathering of transit riders. Transit circulation to the fringe areas of the core will be served by small buses operating in a figure eight loop pattern.

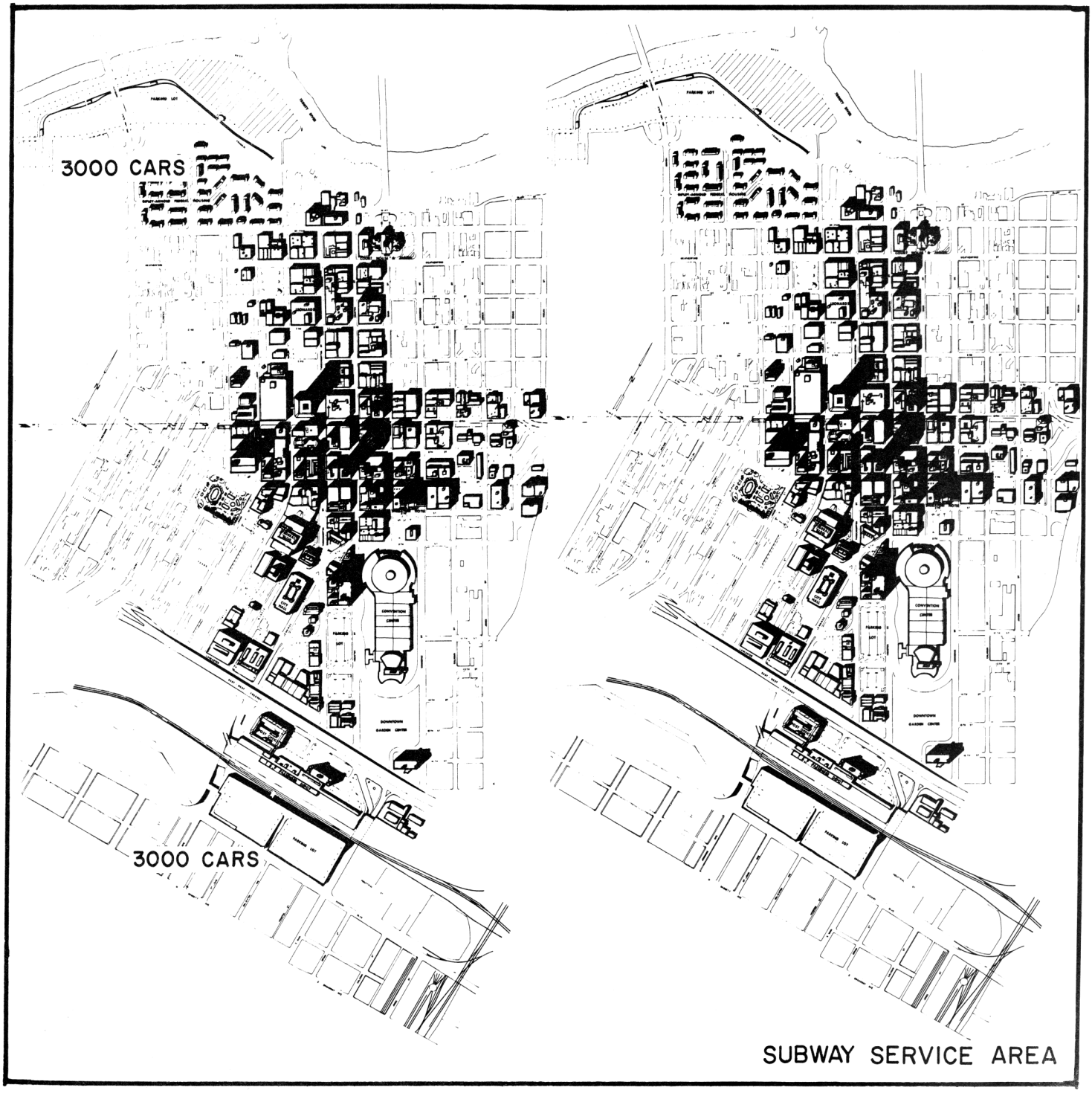


SUBWAY

The CBD Subway would run generally north-south beneath Taylor, Throckmorton, and Jennings Streets. It would connect large parking lots at the north and south ends of the CBD and have three intermediate stations. The Subway is located so as to permit extension of lines from it along radial corridors, ultimately forming the recommended long-range system. The downtown subway will serve, when constructed, 95% of the existing and projected high density.

Development of the CBD Subway system would include the following improvements:

- Construction of 5600 feet of new subway tunnel from the end of the existing subway to a terminal station near Vickery and Jennings Streets;
- Obtaining the existing Leonard's Subway system and properties;
- Remodeling the existing stations in the north parking lot and refurbishing of the existing Subway system;



- Construction of a new station near First and Taylor Streets within the proposed Tandy Plaza project;

- Construction of an interface station with the U-TACV system near Fourth and Throckmorton Streets;

- Construction of a subway station near Eighth and Throckmorton Streets;

- Refurbishing an existing building near Vickery and Jennings Streets for the south terminal station, administrative offices, and space for approximately 3000 car multi-level parking;

- Improvements to the existing street system to provide for adequate access to the parking and station facilities by both automobiles and buses;

- Construction of an improved storage and maintenance facility at the north end of the line; and

- Purchase of ten transit vehicles to operate the system.

The Central Business District is the City's single most important economic asset and its viability is essential to the entire city. It is the largest shopping, commercial, and governmental center. The subway extension will assist in maintaining its viability by:

- Reducing CBD traffic congestion, parking and access problems;

- Strengthening the downtown as a regional center by its impact upon retail and office space growth and development;

- Joining together each functional area of downtown with an easy to use people mover;

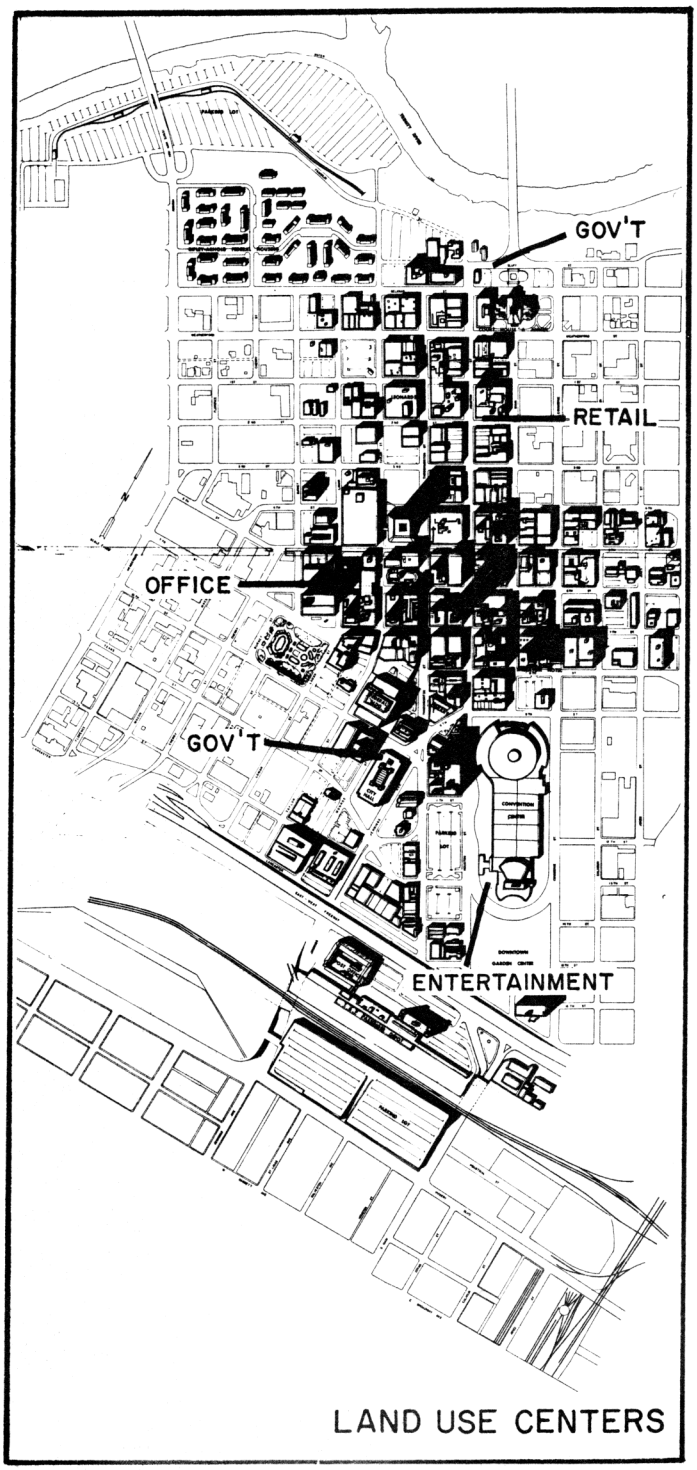
- Improving the CBD environment; and

- Reducing air pollution.

The subway would provide good access from two large parking lots to the core of CBD activities. By intercepting cars at the CBD periphery, it would reduce traffic in the core and the need for parking spaces. The subway would reduce 1980 CBD peak hour traffic by 27%, and daily traffic by 18%, the equivalent of the traffic on two CBD arterials.

Requirements for parking in the CBD would be reduced by the development of peripheral parking. The subway would improve access to the CBD by removing 3800 peak hour auto trips.

The subway would have significant impact on air pollution, particularly in the CBD. It is estimated that 35,000 persons would use the subway daily in 1980, of which



LAND USE CENTERS

24,000 persons would use park-and-ride facilities and 11,000 persons would use the system for internal circulation. This would reduce air pollution by 16% in the CBD. If in addition to the subway the total transit system is built, a 32.4% reduction in vehicle miles would result.

The subway would also have a measurable impact on the growth of downtown once funds are committed for its construction. It could cause an addition of 202,000 square feet of retail space adding $100,000 per year in ad valorem tax income and $130,000 per year in additional sales tax income. The subway could also generate an additional 400,000 square feet of office space, adding $233,000 per year in ad valorem tax income. These measurable benefits would result in an annual tax benefit of $1.52 per person living in Fort Worth.

Costs

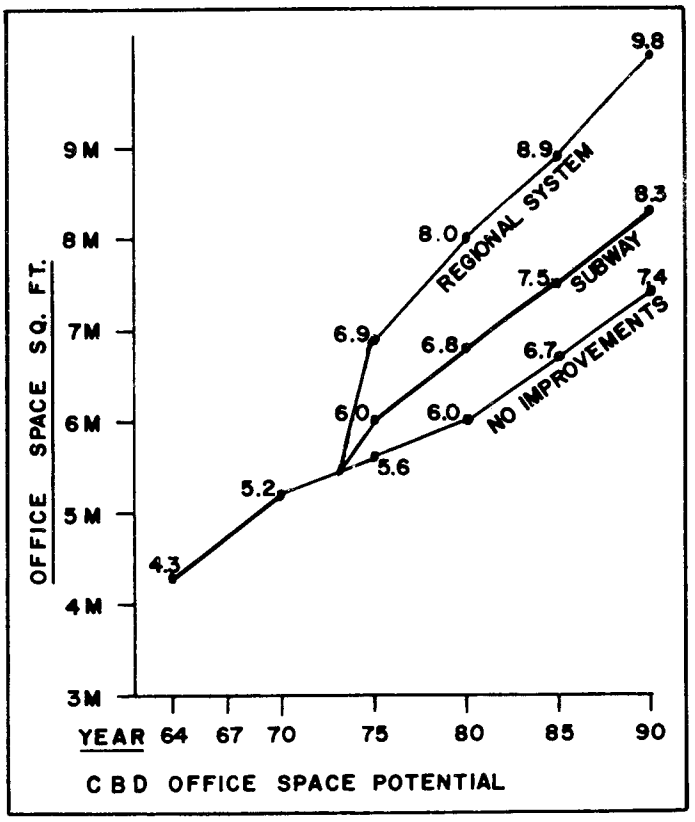
The total capital cost of the subway would be $50 million. Eighty percent of this amount would be eligible for a Federal grant. The 10 million local share would be offset by credit for existing property that may be given to the city. The average annual cost, including principal and interest, would be $398,000 per year or $0.99 per person.

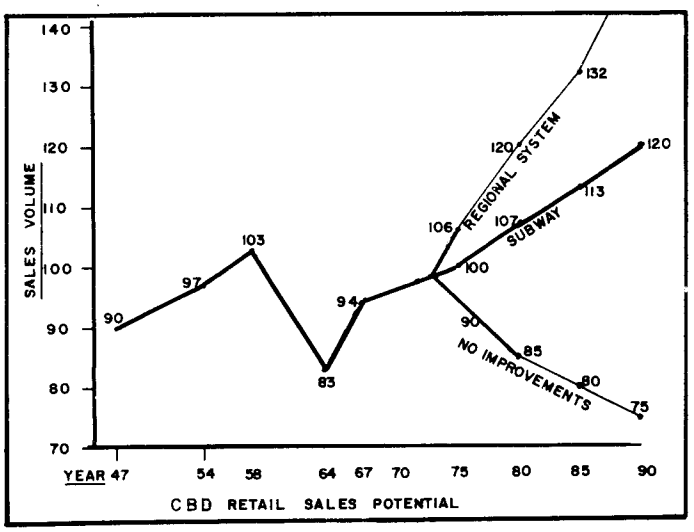
The estimated annual cost of operating the subway is $1.27 million. The ridership would vary according to the price charged for parking and fare to ride the system. For 35,000 daily passengers, the revenue projections would be $1.58 million, providing a surplus of $318,000 per year over operating expenses.

Right-of-Way Purchase

The essential ingredient of any high speed rapid transit system is an exclusive right-of-way.

It is recommended that route engineering and environmental impact studies should be initiated in 1974 and right-of-way purchase begun as soon as possible. Early right-of-way acquisition can be financed with low-interest Federal loans so that price escalation, land speculation, and uses inconsistent with the plan can be avoided. Early acquisition would also minimize the delay due to litigation and avoid unnecessary land use relocation. Any endangered right-of-way, and those routes adjacent to downtown, should be purchased first.



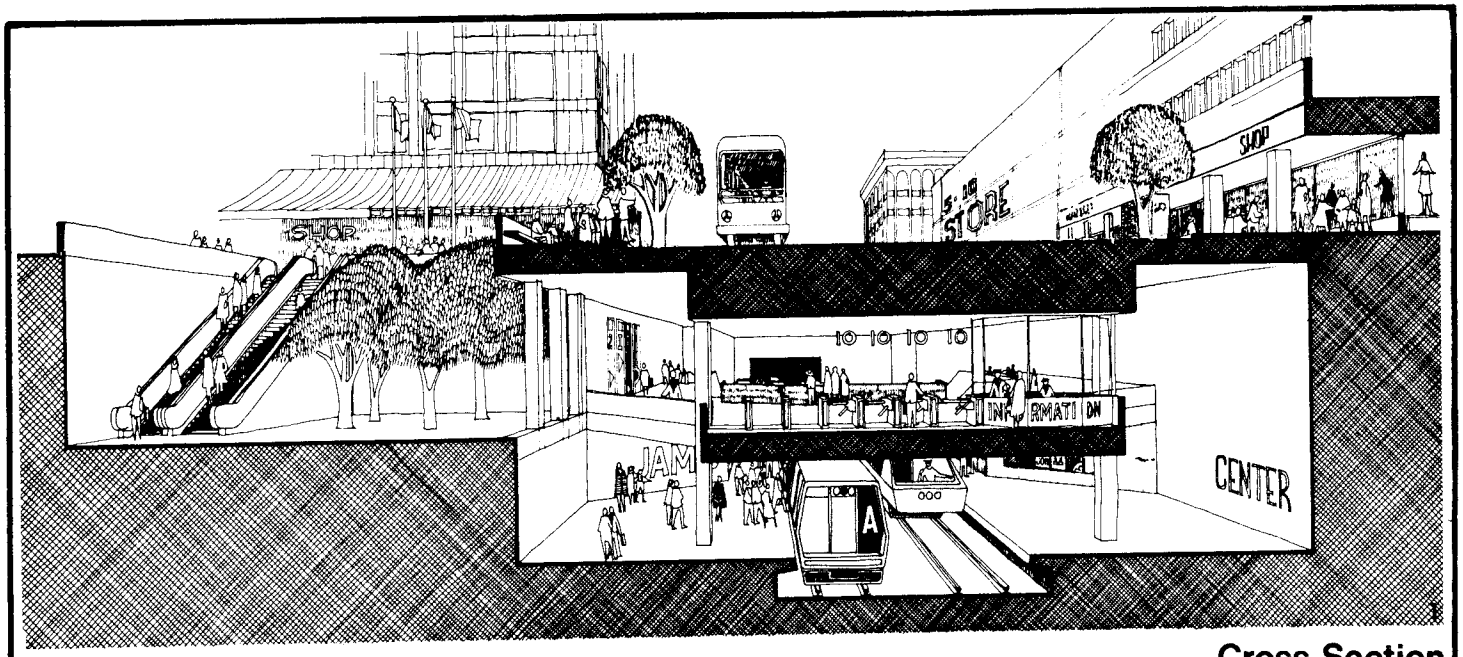


ECONOMIC IMPACT OF TRANSIT IMPROVEMENTS ON CBD

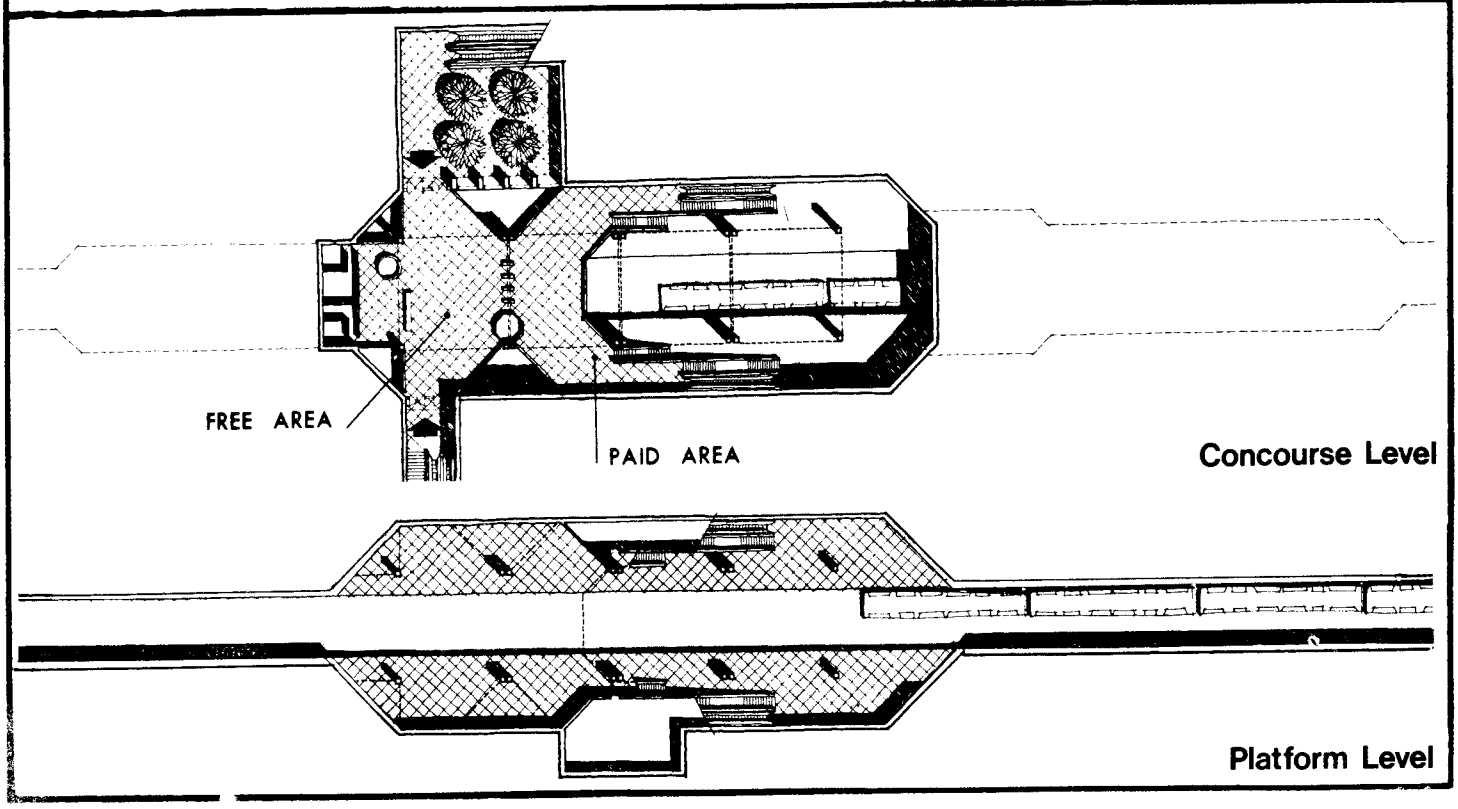
SUBWAY STATION

This downtown station will serve the heart of the downtown area. It will extend for 200 feet underneath Throckmorton. It is recommended that all downtown stations be designed so that they will be community assets as well as efficient in the movement of people. Acoustical treatment, indirect lighting, high ceilings, year-round air conditioning, wide corridors, durable, easy-to-clean structures, and quality design could make it an asset to the downtown area.

The layout of the two level station will minimize the crowding which characterizes some of the nation's older facilities. Access to the first level, or mezzanine, is by way of escalators opening onto city sidewalks. Turnstiles will be located at each end of the mezzanine. The remainder of space at this level will be treated as a concourse, where businesses can connect directly into the station. Escalators will lead to the platform at the second level where a person would board a transitway vehicle.



Cross Section



Concourse Level

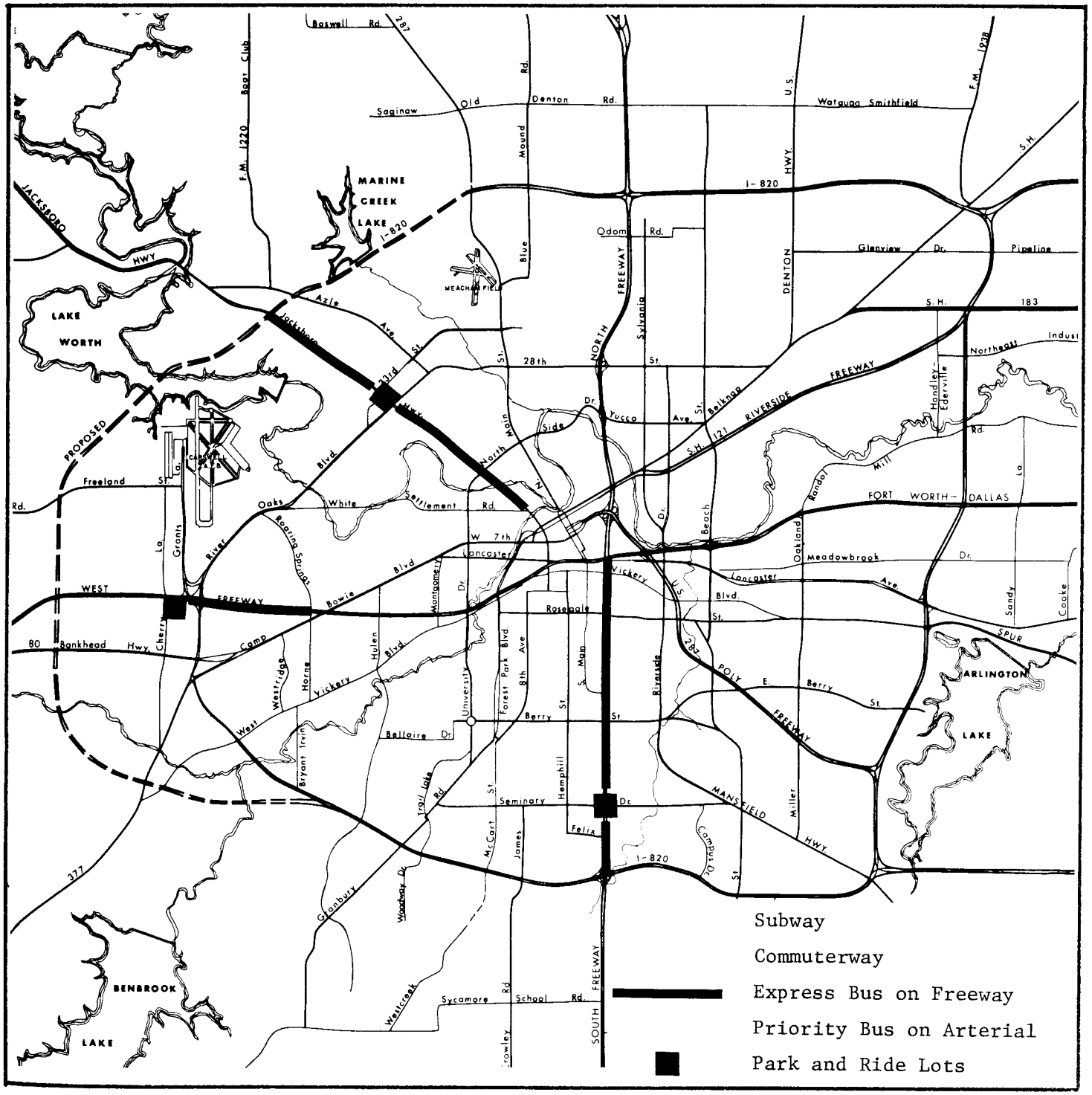
Platform Level

PHASE 2

The recommended Phase 2 Plan includes the construction of two lane commuterways in four of the major transit corridors. The commuterways would extend approximately half way out from the CBD and would be for exclusive use of buses and car pools. The commuterways would be convertible to transitway use and would be designed to provide easy access to the subway.

Phase 2 is the second step in transit facilities improvements, of which some portions could be initiated in response to community needs before completion of Phase 1.

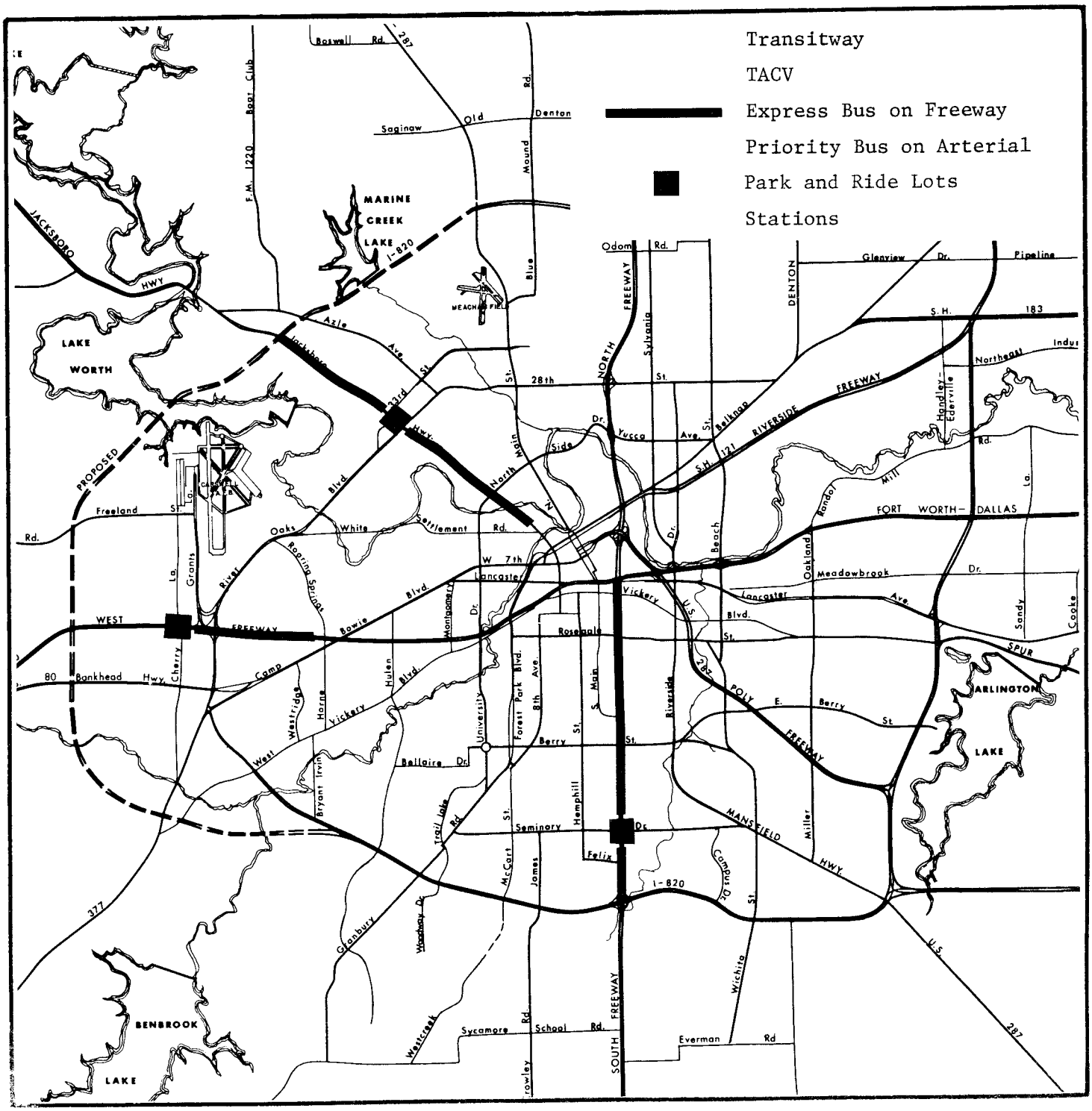
Phase 2 would also include bus service improvements and construction of park-and-ride lots. Intersection improvements would be made to speed bus operations on several arterial streets. These measures could include the installation of radio activivated traffic signals that would give buses priority for movement. Express buses would also be operated in mixed traffic on three freeways. The park-and-ride lots would be located where commuterways and express bus routes intersect major roads.



PHASE 3

The recommended Phase 3 Plan includes construction of 13 miles of transitways in four of the radial corridors. The Phase 3 program would be initiated when travel demands and community needs justify transitway development. These transitways would connect with the CBD subway, making it an integral part of the transit system. In addition, the Tracked Air Cushion Vehicle System could be extended from the Northeast Corridor through the CBD into the West Corridor to provide linkage with the Regional Rapid Transit System. The express bus service on freeways and priority bus routes on arterials developed in the Phase 2 Plan would be maintained. However, local bus service would be designed to serve transit stations.

Operating on the transitways would be modern electric-powered transit vehicles. The air cushion vehicle operating in the West and Northeast Corridors would provide quiet, efficient, high-speed service to the CBD with no transfer service to the Mid-Cities, Regional Airport, and Dallas.

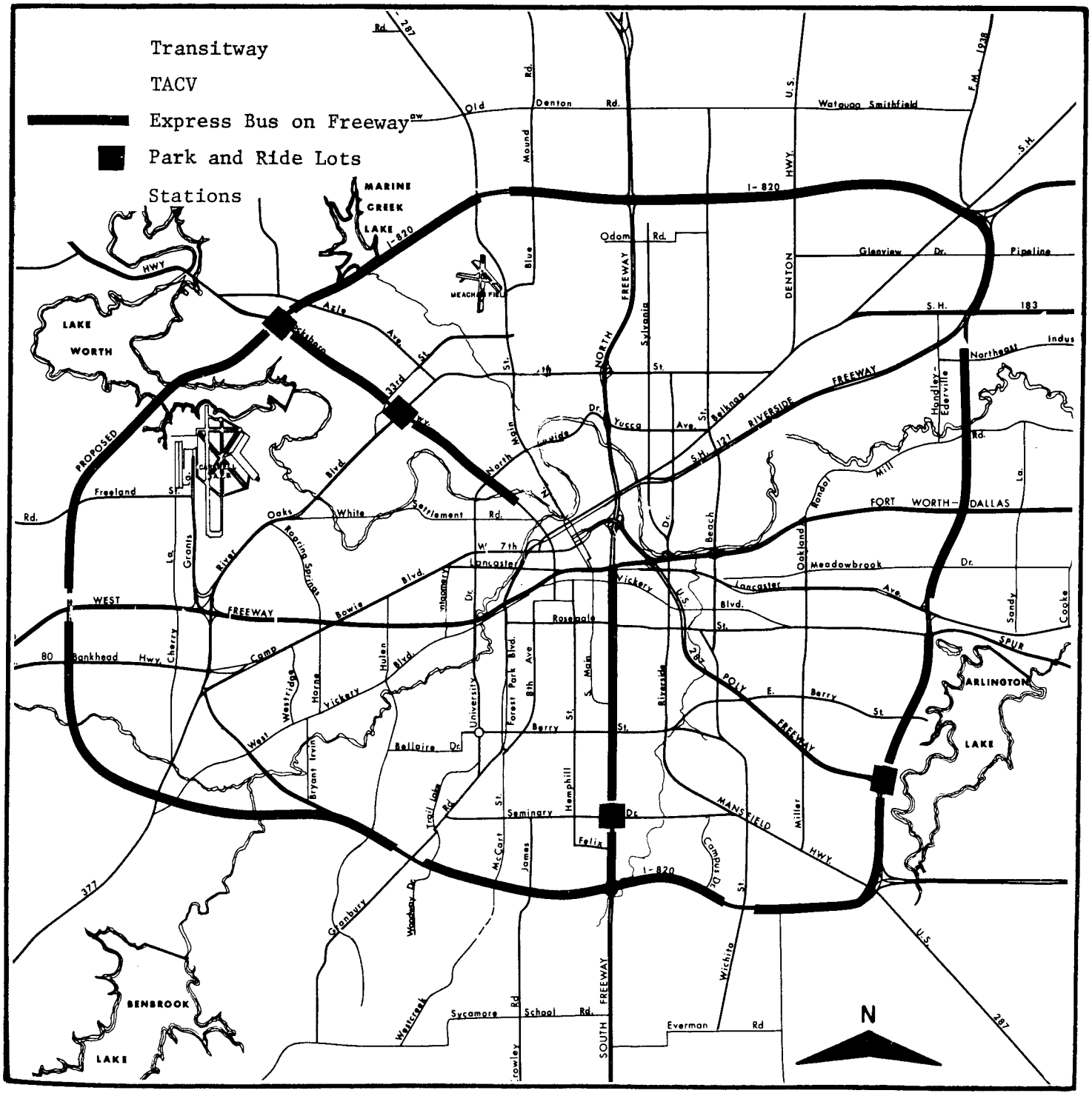


PHASE 4

The recommended Phase 4 Plan includes construction of the remaining 25 miles of transitway and stations and extension of the TACV to Loop 820 in the West Corridor. Phase 4 would be constructed when travel demand and community needs require high speed transit service further out than in Phase 3. Express bus service would continue on freeways designated in the Phase 2 Plan and would be provided on Loop 820 creating a continuous tie between the outer stations of the radial transitways.

Park-and-ride stations would be developed near Loop 820 to provide easy parking for the suburban commuter. Local bus routes would provide service to transitway stations and to crosstown interconnections. Ultimately the East Corridor transitway would be extended to the east to connect Fort Worth with Arlington, Grand Prairie, and Dallas.

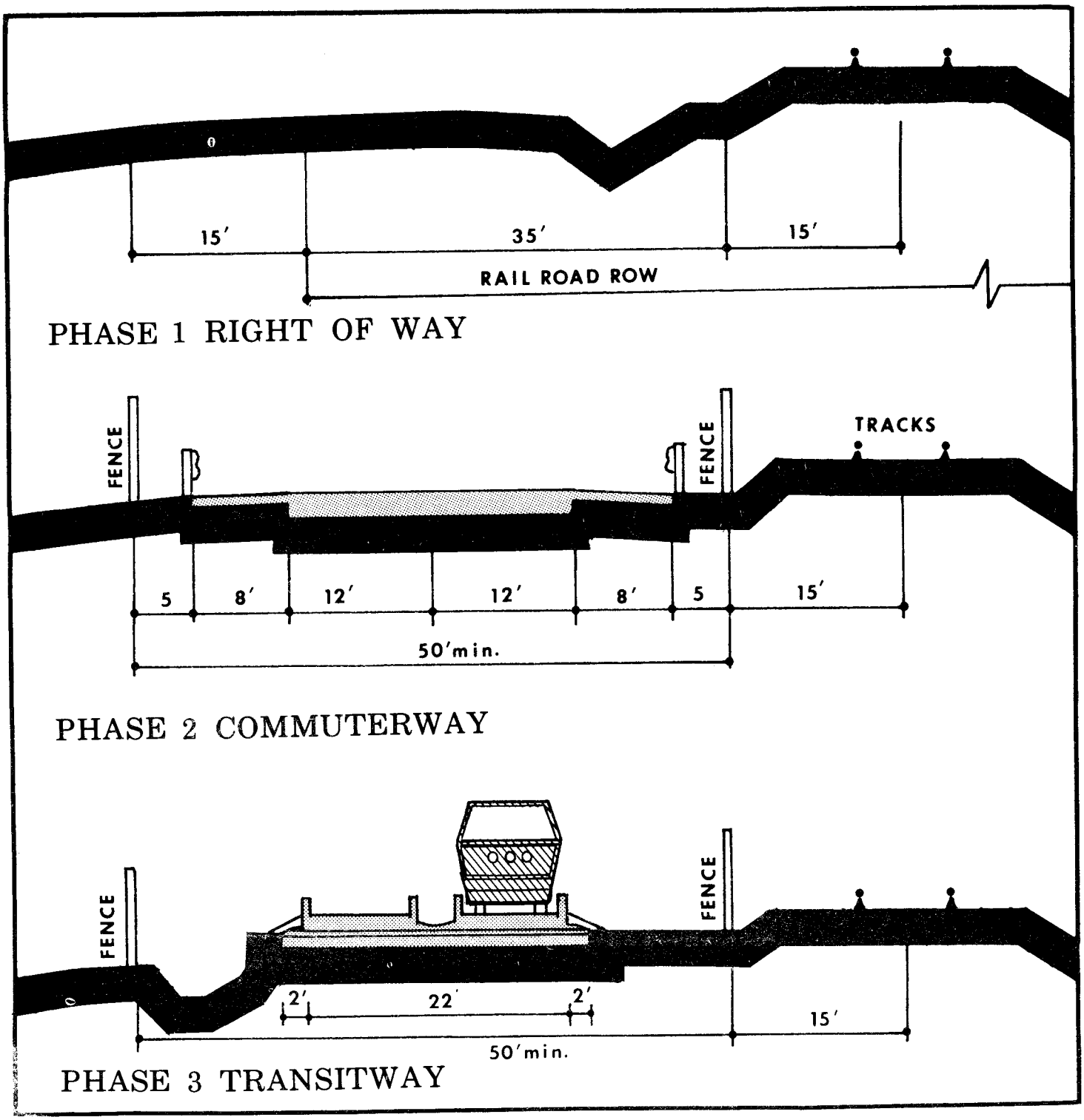
Stations would be built at convenient points along the transitways near residential, commercial, and employment centers.



PHASING

The diagram below shows how the initial phase transit improvements could be converted for use in the long-range system with minimum disruption and maximum utilization of facilities. In addition, most of the rapid transit routes could parallel existing railroads; thus, only requiring limited amounts of land beyond the railroad right-of-way for transitway development.

In Phase 1, right-of-way for transitways into the five radial corridors would be acquired. This right-of-way could be temporarily used as bikeways or parkways until needed for the transit system. In Phase 2, the two-lane commuterways would be constructed along the acquired right-of-way. Then, at such time as a higher level of service is needed, transitways may be constructed along the alignment utilizing the roadbed and structures already built for the commuterways.



FINANCING

Initial Capital Investment:

Acquiring the existing subway, constructing over one mile of new subway to a parking lot, purchasing 38 miles of rapid transit right-of-way, and making bus improvements will require an estimated capital investment of $70 million including contingency allowances.

Eighty percent of the capital investment or $56 million is expected to come from the Federal government through the Urban Mass Transportation Administration. Twenty percent, or $14 million, would come from local sources ($10 million for the subway and $4 million for right-of-way acquisition).

The City's portion cannot be funded from Revenue Bonds; therefore, only three funding sources have any immediate usefulness:

Time Warrants
Certificates of Obligation
General Obligation Bonds

Time Warrants and Certificates of Obligation could be issued without an election. General Obligation Bonds would require an election. Time Warrants and Certificates of Obligation, if issued, could be later refunded by issuing General Obligation Bonds, without an election, if it could be shown that such refunding would result in lower interest costs. Consideration should also be given to an Urban Mass Transportation Administration loan program that provides 100% long term financing at low interest rates for advance acquisition of right-of-way. Principal and interest payments are not required until construction of facilities begins or ten years have elapsed.

Long Term Capital Investment

Constructing 38 miles of rapid transit not including the TACV route to the airport and the portion of the route east of Loop 820 would require an additional capital investment of $297 million.

Eighty percent of the capital investment, $237.6 million, is expected to come from the Federal Government. Twenty percent, $59.4 million, would come from local or State sources. It is recommended that local matching funds to construct and operate the 1975 State Legislature.

Operating Expenses and Revenue

The total annual operating deficit of the Phase 1 Plan, including the present bus operation, is projected to total about $619,000. This includes operations, maintenance, equipment replacement, and administrative expenses.

The subway is projected to have an operating surplus of $318,000 per year and would therefore reduce the total system subsidy of $937,000 by this amount. As ridership on the subway increases, the revenues are projected to increase.

If the Phase 2 commuterway plan is implemented, the operating expense and revenues in 1980 would increase, but the subsidy required would be reduced only slightly to $598,000.

CAPITAL COST ($1,000,000)(1973 DOLLARS)

Investment	PHASE 1	PHASE 2	PHASE 3	PHASE 4	TOTAL	LOCAL SHARE
Bus Service						
Subway	50	-	10	-	60	12
Right-of-Way*	20	-	-	-	20	4
Commuterway**	-	32	-	-	32	6.4
Transitway**						
1	-	-	155	-	155	31
2	-	-	-	100	100	20
TOTAL	70	32	165	100	367	73.4

*Right-of-way acquisition occurs in Phase 1 but costs may not be incurred until construction begins due to temporary Federal loans.

**Includes costs for facilities to improve bus services.

OPERATING NET COST - REVENUE

	PHASE 1	PHASE 2	PHASE 3	PHASE 4
Bus Service	($937,000)	-	*	*
Subway	+$318,000	+$318,000	+$318,000	+$318,000
Right-of-Way				
Commuterway	-	($916,000)	-	-
Transitway				
1	-	-	*	-
2	-	-	-	*
TOTAL	($619,000)	($598,000)	*	*

*Operating cost and revenue for the Regional Long-range plan are being developed by computer simulation.

SUMMARY OF RECOMMENDATIONS

Rapid Transit Improvements

1. That the citizens of Fort Worth be provided with a public transportation system that will be progressively expanded and improved to meet the growing needs and opportunities of the area.

2. That the Fort Worth City Council strengthen the adopted policy of balanced transportation by all modes by implementing the recommended Public Transportation Plan and continue freeway and arterial construction and improvements.

3. That an integrated bus and rapid transit system for Greater Fort Worth be adopted as part of the Fort Worth General Plan.

4. That two rapid transit routes between downtown Fort Worth and downtown Dallas be developed. These will provide regional service to the new Regional Airport and the mid-cities to the north and Arlington and Grand Prairie to the south. Priority should be given to the northern TACV route if current studies show that it is feasible.

5. That the City Council submit the greater Fort Worth Transit Plan to the Regional Transportation Policy Committee and encourage its inclusion in the Regional Public Transportation Plan and Transit Development Program.

6. That each transit station and all transit routes be designed to accommodate large numbers of people, be a community asset, and be a center for community activity as described in the report.

7. That the choice of vehicles to be used on the proposed transitway alignments wait until final design of the transit system is completed, so that the latest technological advantages can be incorporated.

8. That transit passenger facilities be designed to ensure due regard for safety, convenience, comfort, travel time, and detrimental impact on the environment.

9. That land use and zoning plans be prepared and implemented as part of the next phase of planning to maximize the benefits from anticipated development around rapid transit stations.

Phasing Recommendation

1. That the following Phase 1 Plan be implemented as the most effective steps toward implementing the Public Transportation Plan.

   A. The acquisition of the existing Leonard's Subway and its extension to the proposed southern parking lot.

   B. Proceed with engineering studies regarding right-of-way and system developments.

   C. Purchase of 38 miles of rapid transit right-of-way.

2. That study and evaluation continue on Phase 2 and Phase 3 programs with a recommendation on further action to be made within two years.

Financing and Implementation

1. That the City of Fort Worth submit a capital grant and loan applications to the Federal Department of Transportation Administration as soon as possible for financing the subway extension and right-of-way acquisition of the entire mileage of the transit system.

2. The local share for the Phase 1 implementation could be as much as $14 million ($10 million for the Subway and $4 million for the necessary right-of-way). The City of Fort Worth could finance its local share of the Phase 1 program by General Obligation Bonds, Certificates of Obligation or Time Warrants. Consideration should be given to an UMTA program that provides 100% long term financing at low-interest rates for advance acquisition of R.O.W. under this program. Principal and in-

terest payments are not required until construction of facilities begin.

3. That Fort Worth in cooperation with the local governments of the region seek legislation to obtain local matching funds to construct and the authority to operate rapid transit facilities in our region.

4. That consideration be given to encouraging Tarrant County and other local governments to assist in the financing of rights-of-way for the long-range rapid transit system.

5. That an advisory committee be appointed to assist the city in continuing to develop a viable public transportation system.

6. That the City of Fort Worth continue its involvement in planning and development of a coordinated metropolitan area Transportation System. This function will continue to increase and will become more important. The responsibility for this planning and development should receive appropriate budget and staff immediately to accomplish this important function.

7. That the City should initiate continuing engineering and environmental studies for Phase 1 and Phase 2 programs and make application to the Department of Transportation for a new technical studies grant for this purpose.

CREDITS

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Draft, subject to revision; final approval of UMTA pending. Many sketches included in the report were obtained from reports prepared for other cities in studies sponsored by the Urban Mass Transportation Administration. In particular, materials were obtained from reports prepared for 1) the Metropolitan Council of Seattle; 2) County of Milwaukee; 3) Dallas/Fort Worth Airport Board; 4) Dallas Transit; and 5) Metropolitan Atlanta Rapid Transit Authority.